



# PILOT'S INFORMATION MANUAL

TBM 850 – Edition 1



**TBM 850**  
**From S/N 434 to 999**  
**PILOT'S**  
**INFORMATION MANUAL**

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**The list of effective pages in this manual corresponds to that of the basic Pilot's Operating Handbook.**

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**PIM - DO NOT USE FOR FLIGHT OPERATIONS**

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## LIST OF NORMAL AMENDMENTS

Edition 1 of June 22, 2007

Revision 1 of October 15, 2007

Pages	Description
0.5A	Update of SOCATA modifications index
0.7 thru 0.9	List of amendments - Revision 1
0.11 thru 0.18	List of effective pages <u>Modifications relative to Global Air System (GAS) :</u>
3.4.2, 3.4.4, 3.6.5, 3.9.5, 3.10.4, 3.12.2, 3.12.3, 4.3.30, 4.3.47, 4.4.38, 4.4.66, 4.5.20, 4.5.21, 7.3.13	Modifications of ECS panel controls
4.3.30, 4.3.38, 4.3.41, 4.4.38, 4.4.52, 4.4.57, 7.3.10, 7.3.11	Cabin rate selector deleted
4.3.30, 4.3.33, 4.3.38, 4.3.41, 4.4.43, 4.4.52, 4.4.57, 7.3.10, 7.3.11	Cabin altitude selector replaced by cabin pressure control panel associated to new adjustments
5.8.1 thru 5.8.9	Engine operation performance tables : addition of a NOTE
5.8.7, 5.8.9, 5.11.2 thru 5.11.7, 5.11.11 thru 5.11.15	Modification of torque values for maximum cruise and normal cruise performance above FL 200



**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 1 of October 15, 2007 (Cont'd)

Pages	Description
3.10.3, 7.0.3, 7.9.1 thru 7.9.12	Modification of air conditioning and pressurization system description  <u>Other modifications :</u>
2.6.2, 2.6.3	Limitations concerning GPS or WAAS navigation using G1000 system under IFR deleted
1.3.3, 2.5.1, 2.9.2, 2.9.11, 4.3.12, 4.4.14, 6.3.1, 6.3.2, 6.4.3 thru 6.4.7, 7.3.27	Deletion of rear baggage compartment - Addition of FWD baggage compartment
3.9.7, 3.9.8, 7.8.5 thru 7.8.9	Correction of circuit breakers distribution
4.0.2, 4.5.26	Deletion of "Operation in RVSM conditions" paragraph due to removal of AM250 altimeters on TBM 850 airplanes equipped with G1000 system
7.8.3	Correction of description of the essential bus bars protection and supply
7.8.4	Electrical diagram completed
7.10.3	Modification of cabin altitude limit for automatic passengers masks actuation
4.3.49, 4.3.50, 7.9.13 thru 7.9.16	Deleted pages

## LIST OF NORMAL AMENDMENTS

Edition 1 of June 22, 2007

Revision 1 of October 15, 2007 (Cont'd)

Pages	Description
0.10, 2.0.1, 2.6.4 thru 2.6.12, 3.0.2, 4.0.1, 4.3.19, 4.3.24, 4.3.31 thru 4.3.48, 4.4.24, 4.4.30, 4.4.39, 4.4.40, 4.4.48, 4.4.49, 4.4.60, 7.3.1, 7.3.3, 7.3.4, 7.8.2, 7.8.3, 7.8.10, 7.10.2, 7.13.4, 7.14.1	Minor modifications (text moving, presentation or terminology)

**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 2 of December 15, 2007

Pages	Description
0.10	List of amendments – Revision 2
0.11 thru 0.13	List of effective pages
0.17	Approval page
2.6.10	Deletion of SB70-120-34 cross-reference due to RVSM capability integrated in G1000 system and addition of data required for RVSM operational approval
3.0.1, 3.0.2	Table of contents of Section 3 simplified (due to creation of sub-dividers for each chapter with their own table of contents)
3.1.0B, 3.2.0B, 3.3.0B, 3.4.0B, 3.5.0B, 3.6.0B, 3.7.0B, 3.8.0B, 3.9.0B, 3.10.0B, 3.11.0B, 3.12.0B, 3.13.0B	Creation of sub-dividers for each Section 3 chapter with table of contents containing chapter sub-titles at the back of the sub-divider
3.0.3 and 3.0.4	Deleted pages
0.14 thru 0.17, 2.0.1, 2.6.11	Minor modifications (text moving, presentation or terminology)

**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 3 of January 31st, 2008

Pages	Description
Title	Copyright update
0.11	List of amendments - Revision 3
0.13, 0.17, 0.19	List of effective pages
7.15.5, 7.15.6	Addition of the ELT ARTEX C406-1 (OPT70 25030C) description
0.12, 0.14 thru 0.16, 0.18, 0.20, 7.0.3, 7.15.2, 7.15.3	Minor modifications (terminology, text moving and/or presentation)

**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 4 of March 31, 2008

Pages	Description
0.5A, 0.5B	Update of SOCATA modifications index
0.12, 0.13	List of amendments - Revision 4
0.15 thru 0.20	List of effective pages
0.21	Approval page
2.9.2, 2.9.4	Update of markings
4.3.16, 4.3.21, 4.4.19, 4.4.25	Modification of "Starting engine using airplane power" and "Starting engine using external power (GPU)" normal procedures to limit maximum start-up ITT
4.3.46, 4.4.65	Modification of "After landing" normal procedure to improve occupants comfort during taxi maneuver
4.3.27, 4.3.47, 4.3.48, 4.4.32, 4.4.33, 4.4.66, 4.4.67	Modification of "Shut-down" and "Motoring" normal procedures as regards to high temperature
4.3.17, 4.3.19, 4.3.22, 4.3.24, 4.3.27, 4.4.20, 4.4.23, 4.4.26, 4.4.29, 4.4.33, 4.5.18	Correction of illumination type for "STARTER" cas message (FLASHING becomes ON)

## LIST OF NORMAL AMENDMENTS

Edition 1 of June 22, 2007

Revision 4 of March 31, 2008 (Cont'd)

Pages	Description
7.3.2, 7.3.7 thru 7.3.9, 7.3.12, 7.3.13, 7.3.22, 7.3.23, 7.8.16	Correction of some details according to upholstery new definition
7.9.5, 7.9.7 thru 7.9.9, 7.9.11	Correction of some details of components relative to Global Air System
0.14 thru 0.22, 4.3.16, 4.3.17, 4.3.20 to 4.3.22, 4.3.25, 4.3.47, 4.3.48, 4.4.19, 4.4.20, 4.4.24 to 4.4.26, 4.4.30, 4.4.31, 4.4.66, 4.4.67, 7.0.3, 7.3.3, 7.3.10, 7.3.12, 7.3.13, 7.9.1, 7.9.5, 7.9.7 thru 7.9.10	Minor modifications (terminology, text moving and/or presentation)

**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 5 of March 25, 2009

Pages	Description
Title, 0.1	Incorporation of DAHER-SOCATA logo instead of EADS SOCATA Approval date of Type Certificate Data Sheet deleted
0.14	List of amendments - Revision 5
0.15 , 0.21	List of effective pages

## LIST OF NORMAL AMENDMENTS

Edition 1 of June 22, 2007

Revision 6 of September 15, 2009

Pages	Description
0.1	Approval page
0.15 thru 0.18	List of amendments – Revision 6
0.19 thru 0.26	List of effective pages
1.2.1, 2.7.1, 2.9.1, 7.2.1	Removal of rear baggage compartment
1.4.1, 1.4.3, 1.4.7, 1.4.9, 1.4.10	Modification of abbreviations and terminology
2.0.1, 2.6.10	Addition of in-flight circuit breaker use limits
2.2.1	Modification of VMO and maximum inertial separator operating speeds
2.6.2	Modification of NOTE about autopilot use in descent Addition of Enroute and Terminal operations instructions
2.6.4	Sub-paragraph c) deleted in Instrument approach paragraph
2.6.6	Modification of Reverse utilization procedure
2.7.1	Addition of baggage limits in non pressurized forward section



**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 6 of September 15, 2009

Pages	Description
2.8.1	Modification of airspeed indicator markings
2.8.2	Modification of ITT instrument marking
3.3.5	Modification of Oil pressure drop procedure
3.3.10	Curve deleted and addition of information about illumination of ITT red warning during and after engine start
3.3.11	Curve deleted
3.3.13, 3.3.14	Deleted pages
3.8.1	Modification of red warning CAS message "FUEL PRESS" ON procedure
3.8.3	Addition of a CAUTION about maximum imbalance
3.10.5	Addition of information related to on ground red warning CAS message "DOOR" ON
3.11.1,3.11.2, 3.11.3, 3.11.4	Rewording of landing gear retraction discrepancy procedure, landing gear extension discrepancy procedure and associated emergency gear extension procedure

## LIST OF NORMAL AMENDMENTS

Edition 1 of June 22, 2007

Revision 6 of September 15, 2009

Pages	Description
4.3.42, 4.4.59	Addition of red warning light condition
7.8.6	Electrical distribution of bus bars new diagram
7.9.3	Addition of bleed air system automatic load shedding feature
7.15.3	ELT KANNAD data deleted
1.2.1, 1.4.2, 1.4.8, 2.5.1, 2.6.1, 2.6.3, 2.6.4, 3.3.0B, 3.3.11, 3.3.12, 3.8.2, 3.8.3, 3.9.1, 3.10.3, 3.10.5, 4. 3.11.0B, 3.11, 4.3.33, 4.4.43, 4.4.49, 4.4.59, 5.14.2, 5.14.3, 7.0.1, 7.0.2, 7.2.1, 7.4.7, 7.4.10, 7.5.2, 7.7.4, 7.8.5, 7.8.7 thru 7.8.22, 7.9.4, 7.13.2	Minor modifications (text moving, presentation or terminology)

**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 7 of September 15, 2010

Pages	Description
Title	Copyright update
0.1	Approval page
0.18 thru 0.20	List of amendments - Revision 7
0.21 thru 0.28	List of effective pages
1.1.1, 2.1.1, 5.8.1A thru 5.8.10A, 5.8.1 thru 5.8.10, 5.11.1A thru 5.11.22A, 5.11.1 thru 5.11.22, 7.1.1, 8.3.1	Incorporation of TR 01 R1 Garmin software evolution
1.3.3	Modification of standard empty weight and maximum useful load
2.9.1	Incorporation of TR 03 Windshield de-ice placard
2.9.11	Incorporation of TR 02 Addition of a placard related to potty seat curtain

## LIST OF NORMAL AMENDMENTS

Edition 1 of June 22, 2007

Revision 7 of September 15, 2010

Pages	Description
5.5.1	Incorporation of TR 01 R1 Correction of OAT values with respect to the SAT values
7.6.6	Incorporation of TR 05 Fuel condition lever
5.11.2A thru 5.11.8A, 5.11.10A thru 5.11.16A, 5.11.2 thru 5.11.8, 5.11.10 thru 5.11.16,	Minor modifications (text moving, presentation or terminology)

**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 8 of July 15, 2012

Pages	Description
Title	Copyright update
1	Temporary update integration table updating
0.1	Approval page
0.5B, 0.5C	SOCATA modifications - Index updating
0.20 thru 0.24	List of amendments - Revision 8
0.25 thru 0.32	List of effective pages
8.6.4 thru 8.6.6	Incorporation of TR 06 Control lock device
1.1.1A and 1.1.2A, 1.1.1 and 1.1.2, 2.0.1A and 2.0.2A, 2.0.1 and 2.0.2, 2.1.1A and 2.1.2A, 2.1.1 and 2.1.2, 2.6.1A thru 2.6.14A, 2.6.1 thru 2.6.12, 3.13.0B, 3.13.10 thru 3.13.18, 7.1.1A and 7.1.2A, 7.1.1 and 7.1.2	Incorporation of TR 07 V12.01

## LIST OF NORMAL AMENDMENTS

Edition 1 of June 22, 2007

Revision 8 of July 15, 2012 (Cont'd)

Pages	Description
2.9.9	Incorporation of TR 08 4-seat accommodation capability
4.3.34, 4.4.46	Incorporation of TR 09 Prop O'speed governor test
1.3.3, 2.0.1 and 2.0.2, 2.0.1A and 2.0.2A, 2.5.1 and 2.5.2, 2.7.1, 2.9.1 and 2.9.2, 2.9.2A and 2.9.2B, 4.3.7, 4.4.6, 6.0.1, 6.3.1 and 6.3.2, 6.4.1 thru 6.4.10, 7.0.1, 7.2.1 and 7.2.2, 7.2.1A and 7.2.2A, 7.3.26 thru 7.3.36, 7.15.2	Incorporation of TR 11 4-seat accommodation (MOD70-0315-25)
1.0.1A, 1.0.2A, 1.0.1, 1.0.2	Section 1 : Table of contents

**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 8 of July 15, 2012 (Cont'd)

Pages	Description
1.1.1A, 2.0.2, 2.0.2A, 2.1.1A, 2.8.1, 2.8.2, 2.8.4, 3.9.0B, 3.9.8, 3.9.10 thru 3.9.12, 3.10.6, 4.3.14, 4.3.28, 4.3.46, 4.4.18, 4.4.36, 4.4.66, 7.0.3, 7.3.1, 7.3.2, 7.3.8 thru 7.3.11, 7.3.11A thru 7.3.11D, 7.8.7, 7.8.9, 7.8.11, 7.11.1 thru 7.11.8, 7.12.1 thru 7.12.6	Addition of MOD70-0335-34 (ESI 2000)
1.3.3	Modification of oil consumption value
2.0.2A, 2.0.2, 2.7.1	Addition of chemical toilet cabinet
2.9.7	Modification of access door placard (internal side)
2.9.8	Modification of "pilot" door placard (internal side)
3.4.0B, 3.4.1	Modification of air start procedure

**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 8 of July 15, 2012 (Cont'd)

Pages	Description
4.3.45, 4.4.64	Modification of Shut-down procedure sequence order
4.3.19, 4.4.23	Modification of 2nd Caution in Starting engine using airplane power procedure
4.3.23, 4.4.29	Modification of 2nd Caution in Starting engine using external power (GPU) procedure
4.4.30	Modification of Motoring procedure
4.5.16	Modification of Utilization by cold weather and very cold weather procedure (Preflight Inspection)
4.5.26	Modification of GPS navigation procedure
7.3.23	Addition of indications about "FRONT CARGO DOOR" CAS message illumination
7.8.20, 7.8.21	Modification of Internal lighting controls key and Figure 7.8.6
7.15.2	Addition of MOD70-0336-26 (Relocation of fire extinguisher in cabin area)
8.6.3	Suppression of 3rd tie-down fitting



**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 8 of July 15, 2012 (Cont'd)

Pages	Description
3.4.5, 3.4.6, 4.3.47, 4.3.48, 4.4.67, 4.4.68	Deleted pages
0.5D, 1.4.6, 2.7.2, 2.8.3, 2.8.4, 3.2.1, 3.3.1, 3.3.2, 3.3.3, 3.3.12, 3.4.4, 3.5.1, 3.7.1, 3.7.5 thru 3.7.7, 3.7.10, 3.8.3, 3.13.8, 4.0.1, 4.0.2, 4.3.6, 4.3.16 thru 4.3.46, 4.4.5, 4.4.19 thru 4.4.66, 4.5.18, 5.0.1A, 5.0.2A, 5.0.1, 5.0.2, 7.0.2, 7.3.1, 7.3.3, 7.3.4, 7.5.4	Minor modifications (text moving, presentation or terminology)

## LIST OF NORMAL AMENDMENTS

Edition 1 of June 22, 2007

Revision 9 of March 01, 2013

Pages	Description
Title	Copyright update
0.1	Approval page
0.25 thru 0.26	List of amendments - Revision 9
0.27 thru 0.34	List of effective pages
2.7.1	Modification of "Maximum Occupancy" paragraph
4.3.14, 4.4.16	Modification of "Before Starting Engine" procedure (Addition of Passenger's seat backrest position)
4.3.33, 4.4.43	Modification of "Before Takeoff" procedure (Passenger's table and passenger's seat backrest)
4.3.39, 4.4.56	Modification of "Descent" procedure (Passenger's table and passenger's seat backrest)
0.5B, 6.4.2A thru 6.4.2D, 7.2.1, 7.3.26A, 7.3.26B	Addition of Post-MOD70-0315-25 multi-configuration possibilities
8.0.2, 8.10.1 thru 8.10.12	Addition of "Preparation of the airplane (equipment and furnishings)" paragraph for Post-MOD70-0315-25 airplane
4.3.15, 4.4.17, 6.4.3,	Minor modifications (text moving, presentation or terminology)

**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 10 of March 01, 2014

Pages	Description
Title	Copyright update
0.1	Approval page
0.5C	Updating of SOCATA Modifications - Index Addition of MOD70-0402-28 Fuel sequencer evolution
0.26 thru 0.28	List of amendments - Revision 10
0.29 thru 0.36	List of effective pages
1.4.6	Addition of abbreviation : FPL
3.7.1	Modification of "Forced landing (engine cut-off) procedure (Final approach speed modified for both weights)
3.9.10	Modification of "Total loss of electrical power" procedure. Modification of NOTE.
3.11.3	Modification of "Emergency gear extension" procedure. Precise details added in NOTE about the use of procedure.
3.12.2	Modification of "Inertial Separator failure" procedure. Addition of "INERT SEP FAIL" warning as a symptom.
4.3.7, 4.4.6	Modification of "Preflight Inspection" procedure. Addition of a check due to ESI-2000 modification.

## LIST OF NORMAL AMENDMENTS

Edition 1 of June 22, 2007

Revision 10 of March 01, 2014 (Cont'd)

Pages	Description
4.3.19, 4.3.20 4.3.24, 4.3.25 4.4.23, 4.4.24 4.4.30, 4.4.31	Modification of "Starting Engine Using Airplane Power" and "Starting Engine Using External Power" procedures. Caution change in case of engine stagnation during start-up.
4.4.52	Modification of "Climb" procedure (Addition of Modification MOD70-0402-28 : change in time sequence for tank automatic change)
4.4.54	Modification of "Cruise" procedure (Addition of specific data following installation of new fuel sequencer as per MOD70-0402-28)
4.5.1	Modification of OAT value to be consistent with that of "Ice protection procedures"
4.5.2	Modification of "Ice protection procedures" (new wording and new data)
7.0.1A thru 7.0.4A, 7.0.1 thru 7.0.4	Section 7 : Table of contents modified to be consistent with other sections due to GARMIN V12.01
7.7.4, 7.7.5	Modification of "Automatic Tank Selector" Paragraph (Addition of Paragraph following installation of new fuel sequencer as per MOD70-0402-28)
7.7.7	Addition of legend on drawing (Figure 7.7.3)
8.7.1	Modification of Maintenance Paragraph (Following New Maintenance Program, inspection interval details have been deleted)

**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 10 of March 01, 2014 (Cont'd)

Pages	Description
1.4.7 and 1.4.8, 2.3.2, 2.8.3, 2.9.1, 3.4.1, 3.6.0B, 3.6.1 thru 3.6.4, 3.8.1, 3.10.7, 3.12.2, 3.13.8, 4.3.16 thru 4.3.48 4.4.19 thru 4.4.68, 4.5.1, 4.5.19, 4.5.25, 5.0.1 and 5.0.2, 7.3.2, 7.3.20, 7.3.26A, 7.4.13, 7.5.7, 7.6.8, 7.8.9, 7.15.2, 8.7.2, 8.8.1	Minor modifications (text moving, presentation or terminology)
3.6.5, 3.6.6	Deleted pages

**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 11 of May 29, 2015

Pages	Description
Title	New logo
1	Updating of temporary update integration table
0.1	Approval page
0.29 and 0.30	List of normal amendments
0.31 thru 0.38	List of effective pages
2.9.11, 7.15.2 and 7.15.3	AIR TOTAL extinguisher (TR 17)
3.4.3	"Air start with starter" procedure : modification of IGNITION position when Ng ~ 50 % steady
3.11.5	"Flaps malfunction" procedure : modification of flap control lever position
4.3.6, 4.4.5	Landing gear panel : addition of 3 green lights ON
4.3.18, 4.3.23, 4.3.29, 4.4.22, 4.4.28, 4.4.35, 4.5.19	Modification of Ng Value : 70 % ( $\pm 2$ %) instead of 69 % ( $\pm 2$ %)
4.3.20, 4.3.25, 4.4.24, 4.4.31	Modification of Ng Value : 70 % ( $\pm 2$ %) instead of > 52 %
4.3.31, 4.3.39	Addition of MFD display setting
4.3.39	Modification of "Cruise" procedure (Addition of Modification MOD70-0402-28 : change in time sequence for tank automatic change)

**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 11 of May 29, 2015 (Cont'd)

Pages	Description
4.3.47, 4.4.66	Modification of "Shut-down" procedure : change of power lever IDLE duration
4.4.10	Addition of operation in filter contamination indicator check
4.4.45	Deletion of paragraph concerning fuel dissymmetry
4.4.52	Deletion of POST-MOD70-0402-28 paragraph
4.4.67, 7.7.8	Addition of tolerance of $\pm 2$ psi for the fuel pressure
7.5.4	Emergency landing gear extension control : modification of the number of cycles
7.9.11	Modification of cabin pressurization control panel Figure 7.9.2
7.13.1	Modification of "Wing and empennage deicing" procedure (parts deiced through 1st and 2nd cycles have been reversed)
3.3.10, 3.7.4, 3.11.3, 4.0.1 and 4.0.2, 4.3.48, 4.4.58, 4.4.67, 5.0.1A and 5.0.2A, 5.0.1 and 5.0.2, 5.9.1 thru 5.9.3, 5.14.1 thru 5.14.3	Terminology, text moving and/or presentation

## LIST OF NORMAL AMENDMENTS

Edition 1 of June 22, 2007

Revision 12 of June 15, 2016

Pages	Description
Title	Copyright
1, 2	Updating of temporary update integration table
0.1	Approval page
0.5C, 7.5.1	Modifications due to addition of MOD70-0342-52 "Lower main landing gear doors"
0.5C, 3.9.8, 3.10.0B, 3.10.1, 3.10.2 thru 3.10.4, 3.13.6, 3.13.8 thru 3.13.10, 7.3.2, 7.3.4 thru 7.3.7, 7.5.4, 7.8.7, 7.8.9, 7.10.1, 7.15.1	Modifications due to addition of MOD70-0407-00D "Aural warning evolution and software G1000 integrated Flight Deck V15.11"
0.31 and 0.32	List of normal amendments - Revision 12
0.33 thru 0.40	List of effective pages
1.3.3, 8.7.1 and 8.7.2	Clarification about engine oil use
1.4.6	Addition of abbreviation : EDM
3.10.5, 3.10.6	Modification of BLEED OFF and BLEED TEMP procedures (TR18)
3.12.3, 7.9.4	Modification of "CABIN TEMP/°C" selector position (TR18)



**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 12 of June 15, 2016 (Cont'd)

Pages	Description
4.3.46, 4.4.65	Modification of "AFTER LANDING" procedure : "BLEED SWITCH" position deleted
4.3.47, 4.4.66	Modification of "SHUT-DOWN" procedure (TR19)
6.0.1, 6.1.1, 6.3.1 thru 6.3.4, 6.4.1 thru 6.4.26	Modification of "WEIGHT AND BALANCE" procedure
7.3.2	Modification of hour meter location
7.15.3	Modification of optional equipment
1.4.7, 1.4.8, 3.10.7 thru 3.10.10, 3.13.0B, 3.13.11 thru 3.13.20, 4.4.31, 7.0.1A, 7.0.3A, 7.0.1, 7.0.3, 7.3.3, 7.3.8 thru 7.3.44 , 7.15.2	Terminology, text moving and/or presentation

## LIST OF NORMAL AMENDMENTS

Edition 1 of June 22, 2007

Revision 13 of April 8, 2019

Pages	Description
Title	Copyright
2	Updating of temporary update integration table
0.1	Approval page
0.2, 0.4	Modification of part number structure
0.3	Addition of a reference to MyTBM.aero website for consultation of the list of modifications.
0.5A thru 0.5D	Removal of the list of modifications from the POH.
0.33 thru 0.36	List of amendments
0.37 thru 0.44	List of effective pages
1.1.1A, 1.1.1, 2.1.1A, 2.1.1, 2.6.3, 3.13.14, 4.4.37, 4.4.38, 7.1.1A, 7.1.1, 7.3.1, 7.3.2, 7.3.4, 7.3.5, 7.6.7, 7.8.12, 7.13.3, 7.15.2, 7.15.3, 7.15.6, 8.3.1	Replacement of the reference to the Cockpit Reference Guide by the reference to the Pilot's Guide
1.1.1A, 1.1.1, 3.9.2, 3.9.3	Integration of PART 135 operations compliance (TR24)
1.1.1A	Deletion of ESI-2000 Pilot's Guide reference
1.4.9	Updating of ATC abbreviation

**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 13 of April 8, 2019 (Cont'd)

Pages	Description
2.0.2, 2.8.1, 2.8.2	Modification of airspeed indicator markings : addition of markings for standby airspeed indicator (TR27)
2.3.2	Clarification about engine oil use, update of oil limitation chapter
2.3.3, 4.5.23	Addition of CAUTION related to maximum time of sideslip condition
3.9.2, 3.9.3	Deletion of right windshield restriction for deicing systems
3.9.7, 7.0.4A, 7.8.5, 7.8.10, 7.8.11, 7.15.6	Introduction of Flight Stream 210 optional equipment (TR25)
3.10.3	Addition of Pre-MOD70-0657-34 validity
3.10.4	Addition of "EDM" procedure, Post-MOD70-0657-34
3.13.6	Addition of "AURAL WRN FAIL" procedure
3.13.7	Addition of "AURAL WRN 1 CHNL" procedure
4.3.33	Modification of Oxygen graph
4.3.15, 4.3.30, 4.4.18, 4.4.37	"FUEL SEL" switch and "SHIFT" push-button test sequences moved from "Before starting engine" procedure to "After starting engine" procedure
7.10.2	Addition of "OXYGEN" and "PASSENGERS OXYGEN" items

## LIST OF NORMAL AMENDMENTS

Edition 1 of June 22, 2007

Revision 13 of April 8, 2019 (Cont'd)

Pages	Description
2.3.3, 3.9.11, 3.9.12, 3.10.0B, 3.10.1 thru 3.10.10, 3.13.0B, 3.13.7 thru 3.13.22, 4.0.1, 4.3.30 thru 4.3.50, 4.4.18, 4.4.37 thru 4.4.39, 4.3.40, 4.4.52, 4.4.54, 7.0.1A, 7.0.1, 7.3.2, 7.3.4, 7.5.1, 7.5.4, 7.6.5, 7.7.4, 7.10.1, 7.15.1, 8.7.9	Terminology, text moving and/or presentation

**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 14 of February 14, 2020

Pages	Description
Title	Modification of the date of the copyright
0.1	Approval page
0.36 to 0.40	List of amendments
0.41 to 0.48	List of effective pages
1.4.6, 1.4.7, 1.4.9, 1.4.10	Addition of abbreviations
2.0.1A, 2.6.6A to 2.6.8A	Rewording of paragraph "GNSS (SBAS) navigation system limitations"
2.0.1A, 2.6.8A	Deletion of paragraph "SID/STAR" following rewording of paragraphs "GNSS (SBAS) navigation equipment approvals" and "GNSS (SBAS) navigation system limitations"
2.3.1	Correction of ITT limitation during start
2.6.2A to 2.6.5A	Rewording of paragraph "GNSS (SBAS) navigation equipment approvals"
2.9.11	Addition of placard for coat hanger retrofit (MOD70-0557-25C)
3.10.1 to 3.10.3	Addition of instruction to contact maintenance department
3.10.8	Precision on how to reduce cabin differential pressure
3.13.12	Addition of instruction to use standby instrument
4.0.2, 4.5.26	Addition of "GPS navigation" procedure Post-GARMIN software 12.01

## LIST OF NORMAL AMENDMENTS

Edition 1 of June 22, 2007

Revision 14 of February 14, 2020 (Cont'd)

Pages	Description
4.0.2, 4.5.27	Addition of applicability Pre-GARMIN software 12.01 to existing "GPS navigation" procedure
4.3.14, 4.4.16	Addition of instruction for the display backup use before starting the engine
4.3.30, 4.4.37	Addition of instruction for the display backup use after starting the engine
4.4.41	Correction of usable oxygen graph
4.4.62	Correction of attitude at which it is required to set flaps TO
5.0.2A	Correction of pages numbering for Cruise performance paragraph
5.4.1	Addition of a note explaining the curve for pressurization envelope
5.8.3A to 5.8.10A, 5.8.2 to 5.8.9	Integration of a fixed torque reduction instruction when BLEED HI message ON
5.9.1 to 5.9.3	Modification of rotation airspeed graph
5.10.1 to 5.10.4	Correction of conditions regarding BLEED HI message
5.10.5 to 5.10.16,	Integration of a fixed torque reduction instruction when BLEED HI message ON with associated impacts on climb performance

**LIST OF NORMAL AMENDMENTS**

Edition 1 of June 22, 2007

Revision 14 of February 14, 2020 (Cont'd)

Pages	Description
5.11.2A to 5.11.8A 5.11.10A to 5.11.16A, 5.11.2 to 5.11.8 5.11.10 to 5.11.16	Integration of a fixed torque reduction instruction when BLEED HI message ON with associated impacts on airspeed
7.0.1A to 7.0.4A, 7.1.1A, 7.1.2A	Deleted pages (same content as pages 7.0.1 to 7.0.4 since Revision 13)
7.0.1 to 7.0.4, 7.1.1, 7.1.2	Applicability removed in footer
7.0.4	Addition of Flight Deck Information System paragraph in the Table of content (was previously only on page 7.0.4A)
7.5.9	Addition of CAUTION and instructions related to parking brake release
7.5.11	Correction of brake system diagram (pipe between park brake valve and right wing)
7.9.1 to 7.9.14	Air conditioning and pressurization system : - Rewording of description paragraph - Integration of modifications due to GASC software evolution (MOD70-0689-21)
7.10.7	Addition of data for Smart Mike mask retrofit (MOD70-0696-35B)
7.11.7	Addition of information about alternate static pressure supply to instruments

## LIST OF NORMAL AMENDMENTS

Edition 1 of June 22, 2007

Revision 14 of February 14, 2020 (Cont'd)

Pages	Description
7.0.3, 7.15.3 to 7.15.5	Addition of description for GARMIN Integrated Flight Deck approaches
1.4.6 to 1.4.10, 2.0.1A, 2.0.2A, 2.6.2A, 2.6.2, 2.6.8A to 2.6.14A, 2.9.11, 2.9.12, 3.1.1, 3.9.4, 3.9.5, 4.3.14, 4.3.15, 4.3.30, 4.3.31, 4.4.16 to 4.4.18, 4.4.37 to 4.4.39, 4.5.28, 5.8.1A, 5.8.3A to 5.8.10A, 5.8.1, 5.8.2 to 5.8.9, 5.9.1 to 5.9.3, 5.10.12 to 5.10.18, 5.11.2A to 5.11.22A, 5.11.2 to 5.11.22, 7.0.3, 7.0.4, 7.5.9, 7.9.15 to 7.9.20, 7.10.8, 7.15.6 to 7.15.8	Terminology, text moving and/or presentation



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## LIST OF EFFECTIVE PAGES AND VALIDITIES

EDITION 1 OF JUNE 22, 2007

From S/N 434 to 999

*P/N DMNFM00EE1R14EN*

Page No.	Edit. - Rev. No.	Page No.	Edit. - Rev. No.	Page No.	Edit. - Rev. No.
Title	1 - 14	0.20	1 - 8		
		0.21	1 - 8	1.0.1A	1 - 8
1	1 - 12	0.22	1 - 8	1.0.2A	1 - 8
2	1 - 13	0.23	1 - 8	1.0.1	1 - 8
		0.24	1 - 8	1.0.2	1 - 8
A	1 - 0	0.25	1 - 9	1.1.1A	1 - 13
B	1 - 0	0.26	1 - 10	1.1.2A	1 - 8
C	1 - 0	0.27	1 - 10	1.1.1	1 - 13
D	1 - 0	0.28	1 - 10	1.1.2	1 - 8
		0.29	1 - 11	1.2.1	1 - 6
0.1	1 - 14	0.30	1 - 11	1.2.2	1 - 0
0.2	1 - 13	0.31	1 - 12	1.3.1	1 - 0
0.3	1 - 13	0.32	1 - 12	1.3.2	1 - 0
0.4	1 - 13	0.33	1 - 13	1.3.3	1 - 12
0.5	1 - 0	0.34	1 - 13	1.3.4	1 - 0
0.6	1 - 0	0.35	1 - 13	1.4.1	1 - 6
0.7	1 - 1	0.36	1 - 14	1.4.2	1 - 6
0.8	1 - 1	0.37	1 - 14	1.4.3	1 - 6
0.9	1 - 1	0.38	1 - 14	1.4.4	1 - 0
0.10	1 - 2	0.39	1 - 14	1.4.5	1 - 0
0.11	1 - 3	0.40	1 - 14	1.4.6	1 - 14
0.12	1 - 4	0.41	1 - 14	1.4.7	1 - 14
0.13	1 - 4	0.42	1 - 14	1.4.8	1 - 14
0.14	1 - 5	0.43	1 - 14	1.4.9	1 - 14
0.15	1 - 6	0.44	1 - 14	1.4.10	1 - 14
0.16	1 - 6	0.45	1 - 14	1.5.1	1 - 0
0.17	1 - 6	0.46	1 - 14	1.5.2	1 - 0
0.18	1 - 7	0.47	1 - 14	1.5.3	1 - 0
0.19	1 - 7	0.48	1 - 14	1.5.4	1 - 0

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1.6.1	1 - 0	2.6.3	1 - 13	3.2.0A	1 - blank
1.6.2	1 - 0	2.6.4	1 - 8	3.2.0B	1 - 2
		2.6.5	1 - 8	3.2.1	1 - 8
2.0.1A	1 - 14	2.6.6	1 - 8	3.2.2	1 - 0
2.0.2A	1 - 14	2.6.7	1 - 8	3.3.0A	1 - blank
2.0.1	1 - 8	2.6.8	1 - 8	3.3.0B	1 - 6
2.0.2	1 - 13	2.6.9	1 - 8	3.3.1	1 - 8
2.1.1A	1 - 13	2.6.10	1 - 8	3.3.2	1 - 8
2.1.2A	1 - 8	2.6.11	1 - 8	3.3.3	1 - 8
2.1.1	1 - 13	2.6.12	1 - 8	3.3.4	1 - 0
2.1.2	1 - 8	2.7.1	1 - 9	3.3.5	1 - 6
2.2.1	1 - 6	2.7.2	1 - 8	3.3.6	1 - 0
2.2.2	1 - 0	2.8.1	1 - 13	3.3.7	1 - 0
2.3.1	1 - 14	2.8.2	1 - 13	3.3.8	1 - 0
2.3.2	1 - 13	2.8.3	1 - 10	3.3.9	1 - 0
2.3.3	1 - 13	2.8.4	1 - 8	3.3.10	1 - 11
2.3.4	1 - 0	2.9.1	1 - 10	3.3.11	1 - 6
2.4.1	1 - 0	2.9.2	1 - 8	3.3.12	1 - 8
2.4.2	1 - 0	2.9.2A	1 - 8	3.4.0A	1 - blank
2.5.1	1 - 8	2.9.2B	1 - 8	3.4.0B	1 - 8
2.5.2	1 - 8	2.9.3	1 - 0	3.4.1	1 - 10
2.6.1A	1 - 8	2.9.4	1 - 4	3.4.2	1 - 1
2.6.2A	1 - 14	2.9.5	1 - 0	3.4.3	1 - 11
2.6.3A	1 - 14	2.9.6	1 - 0	3.4.4	1 - 8
2.6.4A	1 - 14	2.9.7	1 - 8	3.5.0A	1 - blank
2.6.5A	1 - 14	2.9.8	1 - 8	3.5.0B	1 - 2
2.6.6A	1 - 14	2.9.9	1 - 8	3.5.1	1 - 8
2.6.7A	1 - 14	2.9.10	1 - 0	3.5.2	1 - 0
2.6.8A	1 - 14	2.9.11	1 - 14	3.5.3	1 - 0
2.6.9A	1 - 14	2.9.12	1 - 14	3.5.4	1 - 0
2.6.10A	1 - 14			3.5.5	1 - 0
2.6.11A	1 - 14	3.0.1	1 - 2	3.5.6	1 - 0
2.6.12A	1 - 14	3.0.2	1 - 2	3.6.0A	1 - blank
2.6.13A	1 - 14	3.1.0A	1 - blank	3.6.0B	1 - 10
2.6.14A	1 - 14	3.1.0B	1 - 2	3.6.1	1 - 10
2.6.1	1 - 8	3.1.1	1 - 14	3.6.2	1 - 10
2.6.2	1 - 14	3.1.2	1 - 0	3.6.3	1 - 10

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3.6.4	1 - 10	■ 3.10.3	1 - 14	3.13.14	1 - 13
3.7.0A	1 - blank	3.10.4	1 - 13	3.13.15	1 - 13
3.7.0B	1 - 2	3.10.5	1 - 13	3.13.16	1 - 13
3.7.1	1 - 10	3.10.6	1 - 13	3.13.17	1 - 13
3.7.2	1 - 0	3.10.7	1 - 13	3.13.18	1 - 13
3.7.3	1 - 0	■ 3.10.8	1 - 14	3.13.19	1 - 13
3.7.4	1 - 11	3.10.9	1 - 13	3.13.20	1 - 13
3.7.5	1 - 8	3.10.10	1 - 13	3.13.21	1 - 13
3.7.6	1 - 8	3.11.0A	1 - blank	3.13.22	1 - 13
3.7.7	1 - 8	3.11.0B	1 - 6		
3.7.8	1 - 0	3.11.1	1 - 6	4.0.1	1 - 13
3.7.9	1 - 0	3.11.2	1 - 6	■ 4.0.2	1 - 14
3.7.10	1 - 8	3.11.3	1 - 11	4.1.1	1 - 0
3.8.0A	1 - blank	3.11.4	1 - 6	4.1.2	1 - 0
3.8.0B	1 - 2	3.11.5	1 - 11	4.2.1	1 - 0
3.8.1	1 - 10	3.11.6	1 - 0	4.2.2	1 - 0
3.8.2	1 - 6	3.12.0A	1 - blank	4.3.1	1 - 0
3.8.3	1 - 8	3.12.0B	1 - 2	4.3.2	1 - 0
3.8.4	1 - 0	3.12.1	1 - 0	4.3.3	1 - 0
3.9.0A	1 - blank	3.12.2	1 - 10	4.3.4	1 - 0
3.9.0B	1 - 8	3.12.3	1 - 12	4.3.5	1 - 0
3.9.1	1 - 6	3.12.4	1 - 0	4.3.6	1 - 11
3.9.2	1 - 13	3.13.0A	1 - blank	4.3.7	1 - 10
3.9.3	1 - 13	3.13.0B	1 - 13	4.3.8	1 - 0
■ 3.9.4	1 - 14	3.13.1	1 - 0	4.3.9	1 - 0
3.9.5	1 - 14	3.13.2	1 - 0	4.3.10	1 - 0
3.9.6	1 - 0	3.13.3	1 - 0	4.3.11	1 - 6
3.9.7	1 - 13	3.13.4	1 - 0	4.3.12	1 - 1
3.9.8	1 - 12	3.13.5	1 - 0	4.3.13	1 - 0
3.9.9	1 - 0	3.13.6	1 - 13	■ 4.3.14	1 - 14
3.9.10	1 - 10	3.13.7	1 - 13	4.3.15	1 - 14
3.9.11	1 - 13	3.13.8	1 - 13	4.3.16	1 - 10
3.9.12	1 - 13	3.13.9	1 - 13	4.3.17	1 - 10
3.10.0A	1 - blank	3.13.10	1 - 13	4.3.18	1 - 11
3.10.0B	1 - 13	3.13.11	1 - 13	4.3.19	1 - 10
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4.3.24	1 - 10	4.4.11	1 - 0	4.4.48	1 - 10
4.3.25	1 - 11	4.4.12	1 - 0	4.4.49	1 - 10
4.3.26	1 - 10	4.4.13	1 - 0	4.4.50	1 - 10
4.3.27	1 - 10	4.4.14	1 - 1	4.4.51	1 - 10
4.3.28	1 - 10	4.4.15	1 - 0	4.4.52	1 - 13
4.3.29	1 - 11	4.4.16	1 - 14	4.4.53	1 - 10
4.3.30	1 - 14	4.4.17	1 - 14	4.4.54	1 - 13
4.3.31	1 - 14	4.4.18	1 - 14	4.4.55	1 - 10
4.3.32	1 - 13	4.4.19	1 - 10	4.4.56	1 - 10
4.3.33	1 - 13	4.4.20	1 - 10	4.4.57	1 - 10
4.3.34	1 - 13	4.4.21	1 - 10	4.4.58	1 - 11
4.3.35	1 - 13	4.4.22	1 - 11	4.4.59	1 - 10
4.3.36	1 - 13	4.4.23	1 - 10	4.4.60	1 - 10
4.3.37	1 - 13	4.4.24	1 - 11	4.4.61	1 - 10
4.3.38	1 - 13	4.4.25	1 - 10	4.4.62	1 - 14
4.3.39	1 - 13	4.4.26	1 - 10	4.4.63	1 - 10
4.3.40	1 - 13	4.4.27	1 - 10	4.4.64	1 - 10
4.3.41	1 - 13	4.4.28	1 - 11	4.4.65	1 - 12
4.3.42	1 - 13	4.4.29	1 - 10	4.4.66	1 - 12
4.3.43	1 - 13	4.4.30	1 - 10	4.4.67	1 - 11
4.3.44	1 - 13	4.4.31	1 - 12	4.4.68	1 - 10
4.3.45	1 - 13	4.4.32	1 - 10	4.5.1	1 - 10
4.3.46	1 - 13	4.4.33	1 - 10	4.5.2	1 - 10
4.3.47	1 - 13	4.4.34	1 - 10	4.5.3	1 - 0
4.3.48	1 - 13	4.4.35	1 - 11	4.5.4	1 - 0
4.3.49	1 - 13	4.4.36	1 - 10	4.5.5	1 - 0
4.3.50	1 - 13	4.4.37	1 - 14	4.5.6	1 - 0
4.4.1	1 - 0	4.4.38	1 - 14	4.5.7	1 - 0
4.4.2	1 - 0	4.4.39	1 - 14	4.5.8	1 - 0
4.4.3	1 - 0	4.4.40	1 - 10	4.5.9	1 - 0
4.4.4	1 - 0	4.4.41	1 - 14	4.5.10	1 - 0
4.4.5	1 - 11	4.4.42	1 - 10	4.5.11	1 - 0
4.4.6	1 - 10	4.4.43	1 - 10	4.5.12	1 - 0
4.4.7	1 - 0	4.4.44	1 - 10	4.5.13	1 - 0
4.4.8	1 - 0	4.4.45	1 - 11	4.5.14	1 - 0

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4.5.16	1 - 8	5.8.7A	1 - 14	5.11.2A	1 - 14
4.5.17	1 - 0	5.8.8A	1 - 14	5.11.3A	1 - 14
4.5.18	1 - 8	5.8.9A	1 - 14	5.11.4A	1 - 14
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4.5.20	1 - 1	5.8.1	1 - 14	5.11.6A	1 - 14
4.5.21	1 - 1	5.8.2	1 - 14	5.11.7A	1 - 14
4.5.22	1 - 0	5.8.3	1 - 14	5.11.8A	1 - 14
4.5.23	1 - 13	5.8.4	1 - 14	5.11.9A	1 - 7
4.5.24	1 - 0	5.8.5	1 - 14	5.11.10A	1 - 14
4.5.25	1 - 10	5.8.6	1 - 14	5.11.11A	1 - 14
4.5.26	1 - 14	5.8.7	1 - 14	5.11.12A	1 - 14
4.5.27	1 - 14	5.8.8	1 - 14	5.11.13A	1 - 14
4.5.28	1 - 14	5.8.9	1 - 14	5.11.14A	1 - 14
5.0.1A	1 - 11	5.8.10	1 - 7	5.11.15A	1 - 14
5.0.2A	1 - 14	5.9.1	1 - 14	5.11.16A	1 - 14
5.0.1	1 - 11	5.9.2	1 - 14	5.11.17A	1 - 14
5.0.2	1 - 11	5.9.3	1 - 14	5.11.18A	1 - 14
5.1.1	1 - 0	5.9.4	1 - 0	5.11.19A	1 - 14
5.1.2	1 - 0	5.10.1	1 - 14	5.11.20A	1 - 14
5.2.1	1 - 0	5.10.2	1 - 14	5.11.21A	1 - 14
5.2.2	1 - 0	5.10.3	1 - 14	5.11.22A	1 - 14
5.3.1	1 - 0	5.10.4	1 - 14	5.11.1	1 - 7
5.3.2	1 - 0	5.10.5	1 - 14	5.11.2	1 - 14
5.4.1	1 - 14	5.10.6	1 - 14	5.11.3	1 - 14
5.4.2	1 - 0	5.10.7	1 - 14	5.11.4	1 - 14
5.5.1	1 - 7	5.10.8	1 - 14	5.11.5	1 - 14
5.5.2	1 - 0	5.10.9	1 - 14	5.11.6	1 - 14
5.6.1	1 - 0	5.10.10	1 - 14	5.11.7	1 - 14
5.6.2	1 - 0	5.10.11	1 - 14	5.11.8	1 - 14
5.7.1	1 - 0	5.10.12	1 - 14	5.11.9	1 - 7
5.7.2	1 - 0	5.10.13	1 - 14	5.11.10	1 - 14
5.8.1A	1 - 14	5.10.14	1 - 14	5.11.11	1 - 14
5.8.2A	1 - 7	5.10.15	1 - 14	5.11.12	1 - 14
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5.8.4A	1 - 14	5.10.17	1 - 14	5.11.14	1 - 14
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6.3.1	1 - 12	7.1.1	1 - 14	7.3.26	1 - 12
6.3.2	1 - 12	7.1.2	1 - 14	7.3.27	1 - 12
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7.5.2	1 - 6	7.8.5	1 - 13	7.9.20	1 - 14
7.5.3	1 - 0	7.8.6	1 - 6	7.10.1	1 - 13
7.5.4	1 - 13	7.8.7	1 - 12	7.10.2	1 - 13
7.5.5	1 - 0	7.8.8	1 - 6	7.10.3	1 - 1
7.5.6	1 - 0	7.8.9	1 - 12	7.10.4	1 - 0
7.5.7	1 - 10	7.8.10	1 - 13	7.10.5	1 - 0
7.5.8	1 - 0	7.8.11	1 - 13	7.10.6	1 - 0
7.5.9	1 - 14	7.8.12	1 - 13	7.10.7	1 - 14
7.5.10	1 - 0	7.8.13	1 - 6	7.10.8	1 - 14
7.5.11	1 - 14	7.8.14	1 - 6	7.11.1	1 - 8
7.5.12	1 - 0	7.8.15	1 - 6	7.11.2	1 - 8
7.6.1	1 - 0	7.8.16	1 - 6	7.11.3	1 - 8
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7.15.2	1 - 13	8.7.12	1 - 0		
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7.15.8	1 - 14	8.9.2	1 - 0		
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8.0.2	1 - 9	8.10.3	1 - 9		
8.1.1	1 - 0	8.10.4	1 - 9		
8.1.2	1 - 0	8.10.5	1 - 9		
8.2.1	1 - 0	8.10.6	1 - 9		
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8.4.1	1 - 0	8.10.10	1 - 9		
8.4.2	1 - 0	8.10.11	1 - 9		
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# SECTION 1

## GENERAL

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## 1.1 - GENERAL

This Handbook contains 9 Sections, and includes the material required by FAR Part 23 to be furnished to the pilot for operation of the TBM 850 airplane. It also contains supplemental data supplied by the manufacturer.

Section 1 provides basic data and information of general interest. It also contains definitions or explanations of abbreviations and terminology commonly used.

Whenever this POH refers to the GARMIN integrated Flight Deck Pilot's Guide, it states the one described in section 2.1.

Post-MOD70-0335-34 (ESI-2000)

Whenever this POH refers to the Electronic Standby Indicator MODEL ESI-2000 Pilot's Guide, it states the one described in section 2.1.

All

The general for complex optional systems are given in Section 9, "Supplements" of the Pilot's Operating Handbook.

### PART 135 OPERATIONS

For 14 CFR 135 operations, TBM aircraft alternative source of electric power is able to supply 150 percent of the electrical loads of all required instruments and equipment for safe emergency operation of the aircraft for at least 1 hour.

Electrical load shedding procedure provided in Section 3 of this POH must be followed in order to meet the requirements of that Paragraph under 14 CFR 135.163(f)(2).

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### **PART 135 OPERATIONS**

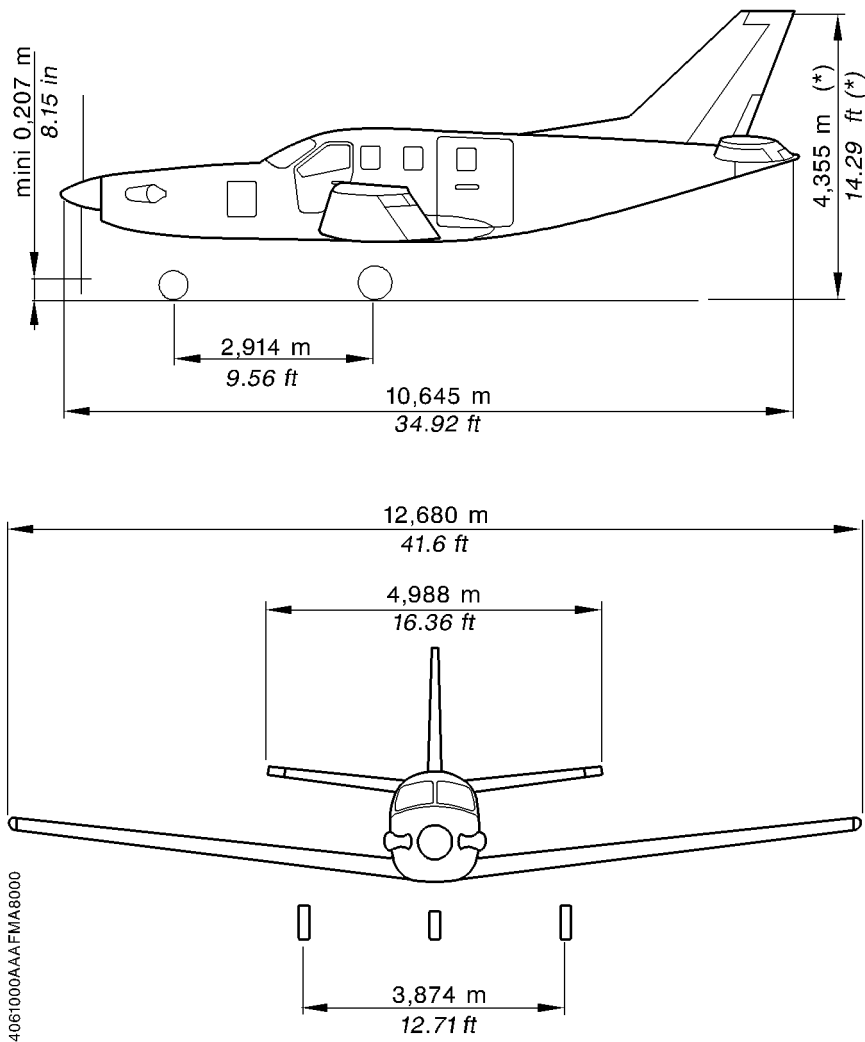
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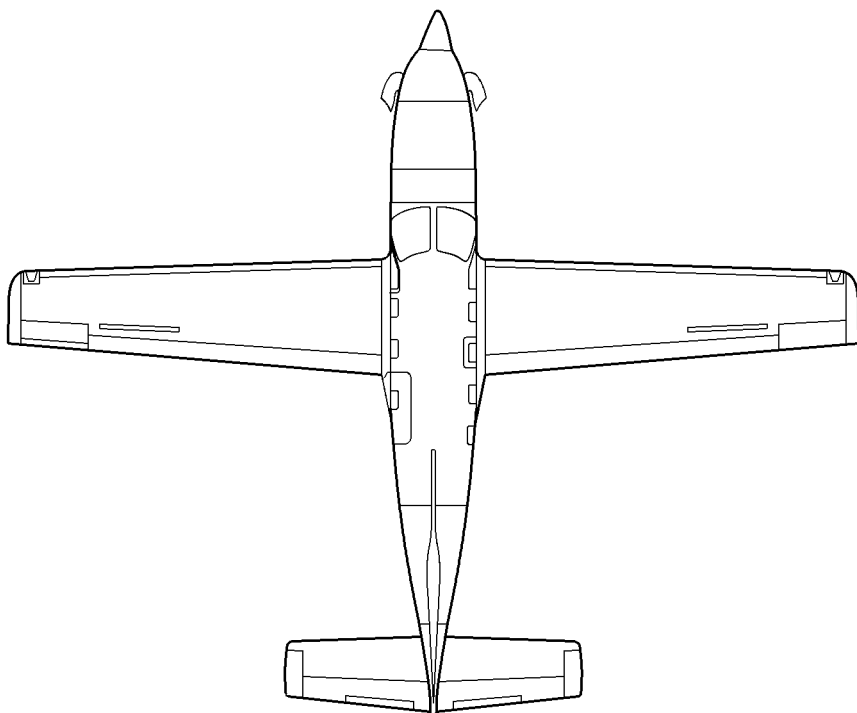
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## 1.2 - THREE VIEW DRAWING



\* Airplane on level field with fully extended FWD shock-absorber

Figure 1.2.1 (1/2) - THREE VIEW DRAWING



I4061000AAAFMA8101

Figure 1.2.1 (2/2) - THREE VIEW DRAWING

## 1.3 - DESCRIPTIVE DATA

### ENGINE

Number of engines : 1

Engine manufacturer : PRATT & WHITNEY CANADA

Engine model number : PT6A - 66D

Engine type : Free turbine, reverse flow and 2 turbine sections

Compressor type : 4 axial stages  
1 centrifugal stage

Combustion chamber type : Annular

Turbine type : 1 gas generator turbine stage  
2 power turbines stages

Horsepower rating and propeller speed : 850 SHP at 2000 RPM

### PROPELLER

Number of propellers : 1

Propeller manufacturer : HARTZELL

Propeller model number : HC-E4N-3 / E9083S (K)

Number of blades : 4

Propeller diameter :

Minimum : 90 inches (2.286 m)

Maximum : 91 inches (2.311 m)

Propeller type : Adjustable constant speed, with feathering and hydraulic control reverse

Propeller blade setting at 30 inches station

Low pitch : 21°

Feathering : 86°

Maximum reverse : - 11°

Propeller governor : 8210.007 WOODWARD

**FUEL**

Total capacity : 301 us gal (1140 Litres)  
 Total capacity each tank : 150.5 us gal (570 Litres)  
 Total usable : 292 us gal (1106 Litres)

**CAUTION**

**THE USED FUEL MUST CONTAIN AN ANTI-ICE ADDITIVE, IN ACCORDANCE WITH SPECIFICATION MIL-I-27686 or MIL-I-85470. ADDITIVE CONCENTRATIONS (EGME or DIEGME) SHALL BE COMPRISED BETWEEN A MINIMUM OF 0.06 % AND A MAXIMUM OF 0.15 % BY VOLUME. REFER TO SECTION 8 "HANDLING, SERVICING AND MAINTENANCE" FOR ADDITIONAL INFORMATION.**

**CAUTION**

**THE USE OF AVIATION GASOLINE (AVGAS) MUST BE RESTRICTED TO EMERGENCY PURPOSES ONLY. AVGAS SHALL NOT BE USED FOR MORE THAN 150 CUMULATIVE HOURS DURING ANY PERIOD BETWEEN ENGINE OVERHAUL PERIODS**

*NOTE :*

*Use of AVGAS to be recorded in engine module logbook*

US Specification (US)	French Specification (FR)	English Specification (UK)	NATO Code
ASTM-D1655 JET A ASTM-D1655 JET A1 ASTM-D1655 JET B	AIR 3405C Grade F35	DERD 2494 Issue 9	F35 without additive
MIL-DTL-5624 Grade JP-4	AIR 3407B	DERD 2454 Issue 4 Amdt 1	F40 with additive
MIL-DTL-5624 Grade JP-5	AIR 3404C Grade F44	DERD 2452 Issue 2 Amdt 1	F44 with additive when utilization
MIL-DTL-83133 Grade JP-8	AIR 3405C Grade F34	DERD 2453 Issue 4 Amdt 1	F34 with additive S748
	AIR 3404C Grade F43	DERD 2498 Issue 7	F43 without additive

Figure 1.3.1 - RECOMMENDED FUEL TYPES  
 (Reference : Service Bulletin P & W C. No. 14004)

## ENGINE OIL

System total capacity :

12.7 Quarts (12 Litres) (oil cooler included)

Usable capacity :

6 Quarts (5.7 Litres)

Maximum consumption in 10 hour period :

0.14 qt / hr (0.13 l / hr)

[0.3 lb / hr (136 cc / hr)]

Specification

Nominal Viscosity	Specification	NATO Code
5cSt	MIL-PRF-23699G	O.156 (STD) O.154 (HTS)

Figure 1.3.2 - RECOMMENDED ENGINE OIL TYPES

(Reference : Service Bulletin P & W - C. No. 14001 at the latest revision)

## MAXIMUM CERTIFICATED WEIGHTS

Ramp : 7430 lbs (3370 kg)

Takeoff : 7394 lbs (3354 kg)

Landing : 7024 lbs (3186 kg)

Baggage weight

- refer to Section 2 (Paragraph 2.5) for weight and C.G. limits

- refer to Section 6 for cargo loading instructions

## STANDARD AIRPLANE WEIGHTS

Standard empty weight : 4563 lbs (2070 kg)

With "pilot" door : 4608 lbs (2090 kg)

Maximum useful load : 2831 lbs (1284 kg)

With "pilot" door : 2787 lbs (1264 kg)

### **CABIN AND ENTRY DIMENSIONS**

Maximum cabin width : 3' 11.64" (1.21 m)

Maximum cabin length : 13' 3.45" (4.05 m)

Maximum cabin height : 4' (1.22 m)

Number of cabin entries : 1 (standard) + 1 "pilot" door (if installed)

Entry width (standard) : 3' 6.52" (1.08 m)

Entry height (standard) : 3' 10.85" (1.19 m)

"Pilot" entry mean width : 2' 3.6" (0.70 m)

"Pilot" entry mean height : 3' 2.16" (0.97 m)

### **SPECIFIC LOADINGS**

Wing loading : 38.16 lbs / sq.ft (186.3 kg / m<sup>2</sup>)

Power loading : 8.7 lbs / SHP (3.95 kg / SHP)

## 1.4 - ABBREVIATIONS AND TERMINOLOGY

### METEOROLOGICAL TERMINOLOGY

ISA : *International standard atmosphere*

OAT : *Outside air temperature*

SAT : *Static air temperature*

QFE : Atmospheric pressure at the airport reference point.

QNH : Atmospheric pressure at sea level, at aircraft position.

#### NOTE :

*On the ground, the altimeter will indicate "zero" if it is set to QFE ; it will indicate airport altitude if it is set to QNH.*

#### Standard Temperature :

Is 15°C (59°F) at sea level pressure altitude and decreases by 2°C (3.6°F) for each 1000 ft of altitude.

#### Pressure altitude :

Is the altitude read from an altimeter when the altimeter's barometric scale has been set to 29.92 inches of mercury (1013.2 hPa).

### GENERAL AIRSPEED TERMINOLOGY AND SYMBOLS

KCAS : *Knots Calibrated Airspeed* is the indicated airspeed expressed in knots corrected for position and instrument error. Knots calibrated airspeed is equal to KTAS in standard atmosphere at sea level.

KIAS : *Knots Indicated Airspeed* is the speed shown on the airspeed indicator and expressed in knots.

KTAS : *Knots True Airspeed* is the airspeed expressed in knots relative to undisturbed air which is KCAS corrected for altitude and temperature.

V<sub>A</sub> : *Maneuvering Speed* is the maximum speed at which full or abrupt control movements may be used.



- $V_{FE}$  : **Maximum Flap Extended Speed** is the highest speed permissible with wing flaps in a prescribed extended position.
- $V_{LE}$  : **Maximum Landing Gear Extended Speed** is the maximum speed at which an airplane can be safely flown with the landing gear extended.
- $V_{LO}$  : **Maximum Landing Gear Operating Speed** is the maximum speed at which the landing gear can be safely extended or retracted.
- $V_{MO}$  : **Maximum Operating Speed** is the speed limit that may not be deliberately exceeded in normal flight operations.
- $V_R$  : **Rotation Speed** is the speed at which rotation is initiated during takeoff to achieve takeoff safety speed at screen height.
- $V_{SO}$  : **Stalling Speed or the minimum steady flight speed** at which the airplane is controllable in the landing configuration.
- $V_{S1}$  : **Stalling Speed or the minimum steady flight speed** obtained in a specific configuration.
- $V_x$  : **Best Angle of Climb Speed** is the airspeed which delivers the greatest gain of altitude in the shortest possible horizontal distance.
- $V_Y$  : **Best Rate of Climb Speed** is the airspeed which delivers the greatest gain in altitude in the shortest possible time.

**POWER TERMINOLOGY****Recovery altitude :**

Maximum altitude at which it is possible, in standard temperature, to maintain a specified power.

**Overheated start :**

Engine start or attempt to start which causes the interturbine temperature to be higher than the maximum value permissible during start .

**Flame out :** Involuntary loss of the combustion chamber flame during operation.

**GPU :** *Ground power unit.*

**Feathering :** Action which reduces the drag of a propeller by positioning blades at the pitch angle allowing minimal drag.

**Maximum Cruise Power :**

Power developed corresponding to outside (Flight Level and Temperature) conditions (Refer to Chapter 5 "PERFORMANCE").

**Ng :** Gas generator RPM.

**Np :** Propeller rotation speed.

**Reverse :** Drag produced when the propeller blade setting is negative.

**RPM :** Revolutions per minute.

**SHP :** Shaft Horsepower.

**TRQ :** *Torque.*

## AIRPLANE PERFORMANCE AND FLIGHT PLANNING TERMINOLOGY

### **Climb gradient :**

Is the ratio of the change in height during a portion of climb, to the horizontal distance traversed in the same time interval.

### **Demonstrated crosswind velocity :**

Is the velocity of the crosswind component for which adequate control of the airplane during takeoff and landing was actually demonstrated during certification tests. The value shown is not considered to be limiting.

**g** : Is acceleration due to gravity.

**Usable fuel** : Total fuel which can be effectively consumed by the engine.

## WEIGHT AND BALANCE TERMINOLOGY

### **Reference datum :**

Datum perpendicular to the longitudinal airplane centerline from which all distances are measured for balance purpose.

**Arm** : Is the distance from the reference datum to the center of gravity (C.G.) of an item.

**Moment** : Is the product of the weight of an item multiplied by its arm.

### **Center of gravity (C.G.) :**

Airplane balance point. Its distance from the reference datum is found by dividing the total moment by the total weight of the airplane.

**C.G. limits :** *Center of Gravity Limits* are the extreme center of gravity locations within which the airplane must be operated at a given weight.

**Standard empty weight :**

Weight of a standard airplane including unusable fuel and full operating fluids (oil and hydraulic fluids).

**Basic empty weight :**

Standard empty weight plus optional equipment.

**Useful load :** Is the difference between maximum ramp weight and the basic empty weight.

**Maximum ramp weight :**

Is the maximum weight approved for ground maneuver. (It includes the weight of start, taxi and run up fuel).

**Maximum takeoff weight :**

Is the maximum weight approved at the beginning of the takeoff run.

**Maximum landing weight :**

Is the maximum weight approved for landing touchdown.

**GENERAL ABBREVIATIONS**

<b>A</b>	: Ampere or Amber
<b>ADC</b>	: Air Data Computer
<b>AGL</b>	: Above ground level
<b>ALT. SEL.</b>	: Altitude selector
<b>ALTI</b>	: Altimeter
<b>AMP.</b>	: Ampere
<b>AP</b>	: Autopilot
<b>AUTO SEL</b>	: Automatic selector
<b>AUX BP</b>	: Auxiliary boost pump
<b>BAT</b>	: Battery
<b>BATOVERHEAT</b>	: Battery overheat (only with Cadmium-Nickel battery)
<b>BRT</b>	: Brightness
<b>CAS</b>	: Crew Alerting System
<b>°C</b>	: Celsius degree
<b>CHiPS</b>	: Cable Harness Protection System
<b>CONT.</b>	: Control
<b>DIEGME</b>	: Diethylene glycol monomethyl ether
<b>DISC</b>	: Disconnect
<b>DN</b>	: Down
<b>ECS</b>	: Environmental control system
<b>EDM</b>	: Emergency Descent Mode
<b>EGME</b>	: Ethylene glycol monomethyl ether
<b>EMER</b>	: Emergency
<b>ENCOD. ALTI</b>	: Encoding altimeter
<b>ESHP</b>	: Estimated shaft horsepower
<b>ESS. BUS TIE</b>	: Essential BUS tie
<b>EXT. LIGHTS</b>	: Exterior lightings
<b>°F</b>	: Fahrenheit degree
<b>FCU</b>	: Fuel control unit
<b>FIRE EXTING</b>	: Fire extinguisher
<b>FL</b>	: Flight level
<b>FOB</b>	: Fuel On Board
<b>FPL</b>	: Flight Plan
<b>ft</b>	: Feet
<b>ft/min</b>	: Feet per minute
<b>G</b>	: Green
<b>GFID</b>	: Garmin Integrated Flight Deck
<b>HI</b>	: High

<b>HP</b>	: High pressure
<b>hPa</b>	: Hectopascal
<b>hr</b>	: Hour
<b>HTR</b>	: Heater
<b>IGNIT</b>	: Ignition
<b>in</b>	: Inch
<b>INERT SEP</b>	: Inertial separator
<b>INDIC</b>	: Indicator
<b>in.Hg</b>	: Inch of mercury
<b>INT. LIGHTS</b>	: Interior lightings
<b>INSTR.</b>	: Instrument
<b>ITT</b>	: Interturbine temperature
<b>kg</b>	: Kilogram
<b>kt</b>	: Knot (1 nautical mile/hr - 1852 m/hr)
<b>kW</b>	: Kilowatt
<b>l</b>	: Litre
<b>L</b>	: Left
<b>l/h</b>	: Litre / hour
<b>lb or lbs</b>	: Pound(s)
<b>L / D</b>	: Lift-to-drag
<b>LDG</b>	: Landing
<b>LDG GR</b>	: Landing gear
<b>LRCR</b>	: Long Range Cruise
<b>LO</b>	: Low
<b>LP</b>	: Low pressure
<b>LRN</b>	: Long range navigation
<b>LTS TEST</b>	: Lightings test
<b>m</b>	: Metre
<b>m.a.c.</b>	: Mean aerodynamic chord
<b>MAIN GEN</b>	: Main generation
<b>MAN</b>	: Manual
<b>MAN OVRD</b>	: Manual override
<b>MAX RPM</b>	: Maximum revolutions per minute
<b>MDA</b>	: Minimum Descent Altitude
<b>MFD</b>	: Multi-function Display
<b>MIN</b>	: Minimum
<b>min</b>	: Minute
<b>mm</b>	: Millimetre
<b>MLW</b>	: Maximum Landing Weight
<b>MRW</b>	: Maximum Ramp Weight

<b>MTOW</b>	: Maximum Takeoff Weight
<b>MXCR</b>	: Maximum Cruise
<b>MZFW</b>	: Maximum Zero Fuel Weight
<b>NM</b>	: Nautical mile
<b>NOCR</b>	: Normal cruise (recommended)
<b>NORM</b>	: Normal
<b>PFD</b>	: Primary Flight Display
<b>PHF</b>	: Plan Horizontal Fixe (Horizontal stabilizer)
<b>PRESS</b>	: Pressure
<b>PROP</b>	: Propeller
<b>psi</b>	: Pounds per square inch
<b>qt</b>	: Quart (¼ us gal)
<b>QTY</b>	: Quantity
<b>R</b>	: Red or Right
<b>RUD</b>	: Rudder
<b>s or sec</b>	: Second
<b>SEL</b>	: Selector
<b>SIG</b>	: Signalization
<b>SL</b>	: Sea level
<b>S/N</b>	: Serial number
<b>SPKR</b>	: Speaker
<b>ST - BY</b>	: Stand-by
<b>STALL HTR</b>	: Stall heater
<b>Std</b>	: Standard
<b>T°</b>	: Temperature
<b>TEMP</b>	: Temperature
<b>TO</b>	: Takeoff
<b>TURN COORD</b>	: Turn coordinator
<b>us gal</b>	: Gallon U.S
<b>V</b>	: Volt or Voltage
<b>WARN</b>	: Warning
<b>W / S</b>	: Windshield

**RADIO - NAVIGATION ABBREVIATIONS**

<b>ADF</b>	: Automatic Direction Finder System
<b>ADI</b>	: Attitude Director Indicator
<b>AFCS</b>	: Automated Flight Control System
<b>AHRS</b>	: Attitude and Heading Reference System
<b>AIRAC</b>	: Aeronautical Information Regulation And Control
<b>ATC</b>	: Air Traffic Control
<b>B RNAV</b>	: Basic aRea NAVigation
<b>CDI</b>	: Course Deviation Indicator
<b>COM</b>	: Communications Transceivers
<b>DME</b>	: Distance Measuring Equipment
<b>ELT</b>	: Emergency Locator Transmitter
<b>FDE</b>	: Fault Detection and Exclusion
<b>FMS</b>	: Flight Management System
<b>GNSS</b>	: Global Navigation Satellite System
<b>GPS</b>	: Ground Positioning System
<b>HF</b>	: High Frequency
<b>IFR</b>	: Instrument Flight Rules
<b>ILS</b>	: Instrument Landing System
<b>IMC</b>	: Instrument Meteorological Conditions
<b>L NAV</b>	: Lateral NAVigation
<b>LPV</b>	: Localizer Precision Vertical
<b>MKR</b>	: Marker Radio Beacon
<b>NAV</b>	: Navigation Indicators or Receivers
<b>P RNAV</b>	: Precision aRea NAVigation
<b>RAIM</b>	: Receiver Autonomous Integrity and Monitoring
<b>RF leg</b>	: Radius to Fix Leg



- R NAV** : Area NAVigation
- RNP** : Required Navigation Performance
- SBAS** : Satellite Based Augmentation System
- STAR** : Standard Terminal Arrival Route
- TAS** : Traffic Advisory System
- TAWS** : Terrain Awareness Warning System
- VFR** : Visual Flight Rules
- VHF** : Very High Frequency
- VMC** : Visual Meteorological Conditions
- V NAV** : Vertical NAVigation
- VOR** : VHF Omnidirectional Range
- VOR / LOC** : VHF Omnidirectional Range LOCalizer
- WAAS** : Wide Area Augmentation System
- WFDE** : WAAS Fault Detection and Exclusion
- WGS** : World Geodetic System
- WXR** : Weather surveillance radar
- XPDR** : Transponder

## 1.5 - CONVERSION FACTORS

IMPERIAL AND U.S UNITS TO METRIC UNITS			METRIC UNITS TO IMPERIAL AND U.S UNITS		
MULTIPLY	BY	TO OBTAIN	MULTIPLY	BY	TO OBTAIN
FEET	0.3048	METRE	METRE	3.2808	FEET
INCH	25.4	mm	mm	0.03937	INCH
Imp.Gal	4.546	Litre	Litre	0.220	Imp.Gal
us gal	3.785	Litre	Litre	0.264	us gal
lb	0.45359	kg	kg	2.2046	lb

Figure 1.5.1 - IMPERIAL AND U.S UNITS TO METRIC UNITS

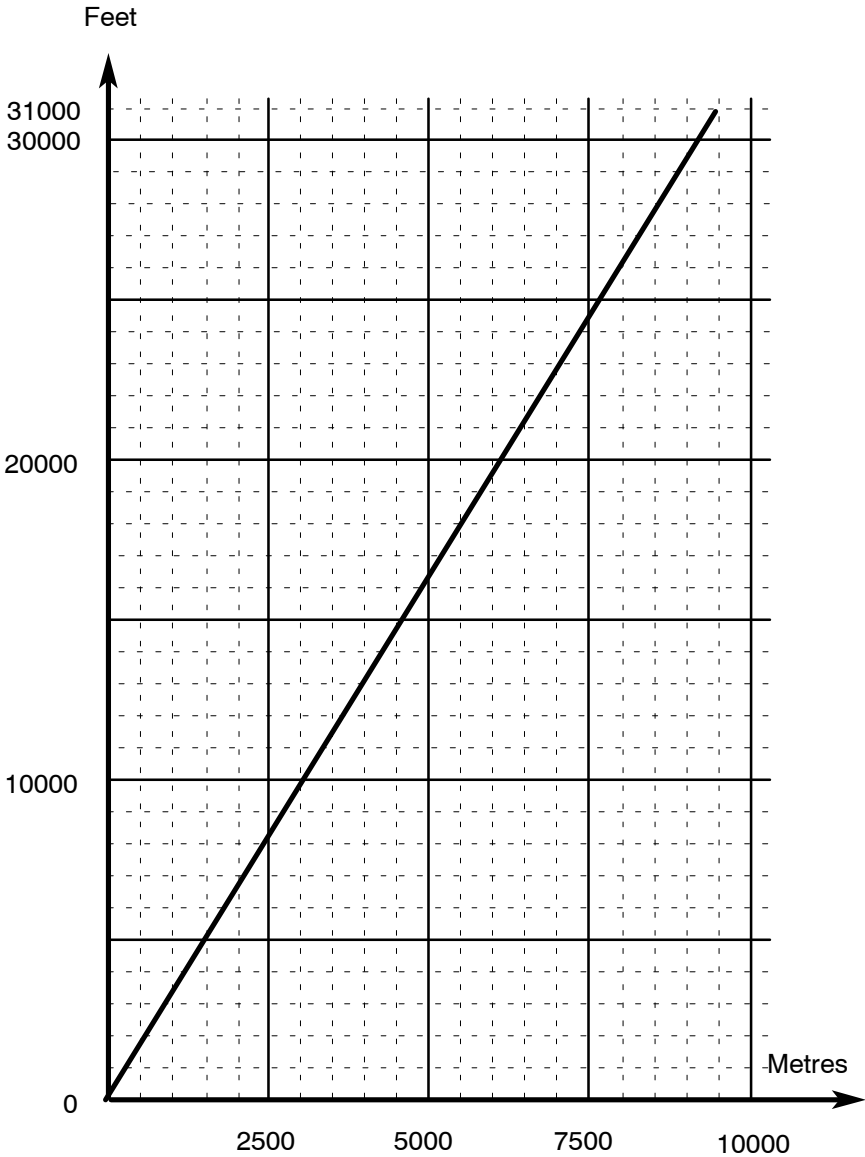


Figure 1.5.2 - FEET VERSUS METRES

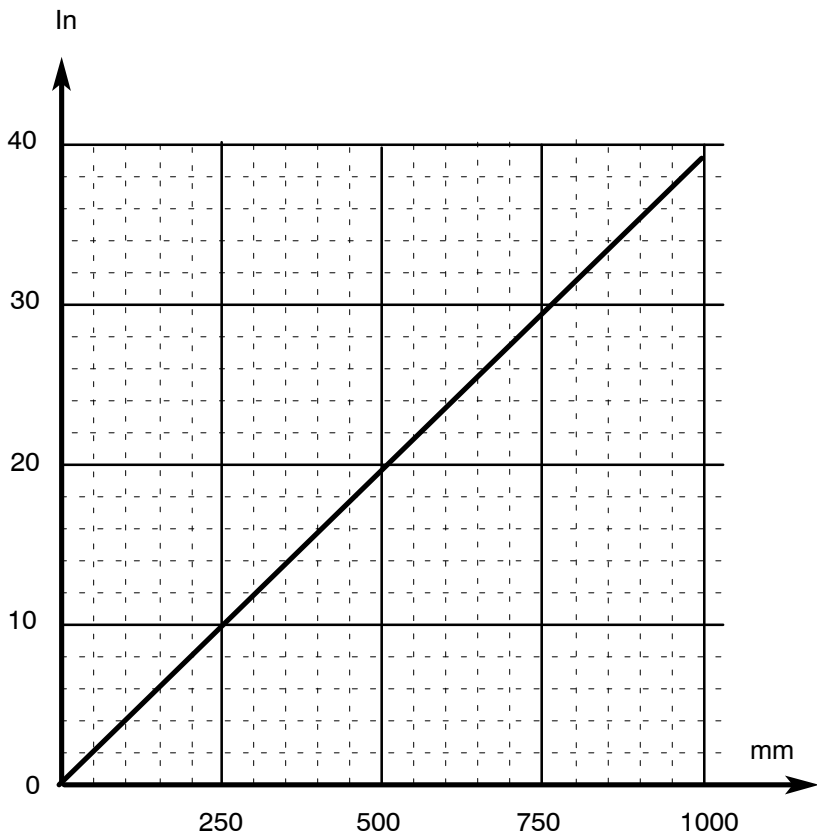


Figure 1.5.3 - INCHES VERSUS MILLIMETRES

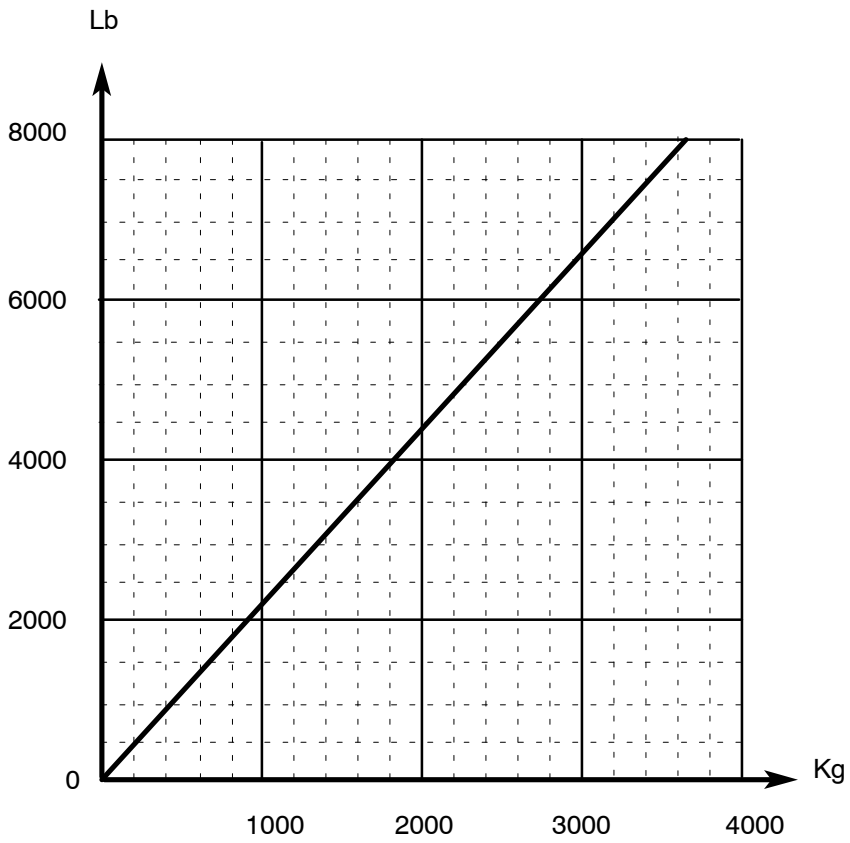


Figure 1.5.4 - POUNDS VERSUS KILOGRAMS

## 1.6 - PRESSURE AND STANDARD ATMOSPHERE

### STANDARD ATMOSPHERE

Pressure altitude (ft)	Pressure (hPa)	°C	°F
0	1013.2	+ 15.0	+ 59.0
2000	942.1	+ 11.0	+ 51.8
4000	875.0	+ 7.0	+ 44.6
6000	811.9	+ 3.1	+ 37.6
8000	752.6	- 0.8	+ 30.5
10000	696.8	- 4.8	+ 23.4
12000	644.3	- 8.7	+ 16.2
14000	595.2	- 12.7	+ 9.2
16000	549.1	- 16.6	+ 2.2
18000	505.9	- 20.6	- 5.0
20000	465.6	- 24.6	- 12.4
22000	427.8	- 28.5	- 19.3
24000	392.6	- 32.5	- 26.5
26000	359.8	- 36.5	- 33.6
28000	329.3	- 40.4	- 40.7
30000	300.8	- 44.4	- 47.8
31000	287.4	- 46.4	- 51.6

Figure 1.6.1 - STANDARD ATMOSPHERE

**PRESSURE CONVERSION TABLE**

**NOTE :**

*The standard pressure of 1013.2 hPa is equal to 29.92 inches of mercury.*

950 28.05	951 28.08	952 28.11	953 28.14	954 28.17	955 28.20	956 28.23	957 28.26	958 28.29	959 28.32
960 28.35	961 28.38	962 28.41	963 28.44	964 28.47	965 28.50	966 28.53	967 28.56	968 28.58	969 28.61
970 28.64	971 28.67	972 28.70	973 28.73	974 28.76	975 28.79	976 28.82	977 28.85	978 28.88	979 28.91
980 28.94	981 28.97	982 29.00	983 29.03	984 29.06	985 29.09	986 29.12	987 29.15	988 29.18	989 29.20
990 29.23	991 29.26	992 29.29	993 29.32	994 29.35	995 29.38	996 29.41	997 29.44	998 29.47	999 29.50
1000 29.53	1001 29.56	1002 29.59	1003 29.62	1004 29.65	1005 29.68	1006 29.71	1007 29.74	1008 29.77	1009 29.80
1010 29.83	1011 29.85	1012 29.88	1013 29.91	1014 29.94	1015 29.97	1016 30.00	1017 30.03	1018 30.06	1019 30.09
1020 30.12	1021 30.15	1022 30.18	1023 30.21	1024 30.24	1025 30.27	1026 30.30	1027 30.33	1028 30.36	1029 30.39
1030 30.42	1031 30.45	1032 30.47	1033 30.50	1034 30.53	1035 30.56	1036 30.59	1037 30.62	1038 30.65	1039 30.68
1040 30.71	1041 30.74	1042 30.77	1043 30.80	1044 30.83	1045 30.86	1046 30.89	1047 30.92	1048 30.95	1049 30.98

Figure 1.6.2 - PRESSURE CONVERSION TABLE

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## LIMITATIONS

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## LIMITATIONS

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## 2.1 - GENERAL

"TBM 850" is the trade name of the TBM 700 "N version" airplane (TBM 700 type), which is certified in the Normal Category.

This airplane must be flown in compliance with the limits specified by placards or markings and with those given in this Section and throughout the Pilot's Operating Handbook.

The "GARMIN" G1000 Integrated Flight Deck Pilot's Guide for the Socata TBM 850, No. 190-00709-07, or any later version as applicable, must be readily available to the pilot.

### Post-MOD70-0335-34 (ESI-2000)

The Pilot's Guide for the Electronic Standby Indicator MODEL ESI-2000 P/N 0040-32500-01 Rev. E or any later version as applicable, must be permanently kept in the airplane with the Pilot's Operating Handbook.

Departure into IMC is not authorized if the battery symbol is present with an amber battery symbol (less than 1 hour remaining), or an amber or red "X" over the battery symbol or a "CAL DUE" message by the battery symbol.

### All

This Section of the airplane Pilot's Operating Handbook presents the various operating limitations, the significance of such limitations, instrument markings, color coding, and basic placards necessary for the safe operation of the airplane, its powerplant and installed equipment.

The limitations included in this Section have been approved by the Federal Aviation Administration in accordance with 14 CFR Section 21.29.

The limitations for some optional systems are given in Section 9, "Supplements" of the Pilot's Operating Handbook.

TBM 700 airplane is certified under EASA.A.010 and FAA N° A60EU Type Certificates.

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## 2.1 - GENERAL

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## 2.2 - AIRSPEED LIMITATIONS

Airspeed limitations and their operational significance are shown in Figure 2.2.1.

	SPEED	KCAS	KIAS	REMARKS
V <sub>MO</sub>	Maximum operating speed	271	266	Do not intentionally exceed this speed in normal flight category
V <sub>A</sub>	Maneuvering speed	160	158	Do not make abrupt or full control movements above this speed
V <sub>FE</sub>	Maximum flaps extended speed : landing configuration takeoff configuration	120 180	122 178	Do not exceed these speeds depending on flaps position
V <sub>LO</sub>	Maximum landing gear operating speed : extension retraction	180 130	178 128	Do not extend or retract landing gear above this speed
V <sub>LE</sub>	Maximum landing gear extended speed	180	178	Do not exceed this speed with landing gear extended
	Maximum inertial separator operating speed	205	200	No limitation when inertial separator is in fixed position

Figure 2.2.1 - AIRSPEED LIMITATIONS



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## 2.3 - POWERPLANT LIMITATIONS

### ENGINE

Number of engines : 1

Engine manufacturer : PRATT & WHITNEY CANADA

Engine model number : PT6A - 66D

#### Maximum power :

Flaps set to UP, TO or LDG position	Flaps set to 850 position
- 100 % at Np = 2000 RPM - 110 % at Np = 1800 RPM	- 121.4 % at Np = 2000 RPM

#### Ng limitation :

104.1 %

#### Np limitation :

2000 RPM

#### ITT limitations :

- Take off : 850°C
- Maximum climb/cruise : 840°C
- During start : ≤ 840°C (no duration limitation)  
≤ 870°C for 20 seconds max.  
≤ 1000°C for 5 seconds max.

### CAUTION

**WHEN NORMALLY OPERATING, REFER TO CHAPTER 5.8  
"ENGINE OPERATION" TABLES**

## OIL

### CAUTION

**DO NOT MIX DIFFERENT VISCOSITIES OR SPECIFICATIONS OF OIL AS THEIR DIFFERENT CHEMICAL STRUCTURE CAN MAKE THEM INCOMPATIBLE.**

Maximum oil temperature : 104 °C

Oil pressure :

Minimum : 60 psi

Maximum : 135 psi

Oil capacity :

System total capacity : 12.7 Quarts (12 Litres) (Oil cooler included)

Usable capacity : 6 Quarts (5.7 Litres)

## FUEL

Fuel pressure :

Minimum : 10 psi

Maximum : 50 psi

Fuel limitations :

2 tanks : 150.5 us gal (570 Litres) each

Total fuel : 301 us gal (1140 Litres)

Usable fuel : 292 us gal (1106 Litres)

Unusable fuel : 9 us gal (34 Litres)

Maximum fuel unbalance : 15 us gal (57 Litres)

**NOTE :**

*Usable fuel can be safely used during all normal airplane maneuvers.*

## CAUTION

**THE FUEL USED MUST CONTAIN AN ANTI-ICE ADDITIVE, IN ACCORDANCE WITH SPECIFICATION MIL-I-27686 OR MIL-I-85470. ADDITIVE CONCENTRATIONS (EGME OR DIEGME) SHALL BE COMPRISED BETWEEN A MINIMUM OF 0.06 % AND A MAXIMUM OF 0.15 % BY VOLUME. REFER TO SECTION 8 "HANDLING, SERVICING AND MAINTENANCE" FOR ADDITIONAL INFORMATION.**

**THE USE OF AVIATION GASOLINE (AVGAS) MUST BE RESTRICTED TO EMERGENCY PURPOSES ONLY. AVGAS SHALL NOT BE USED FOR MORE THAN 150 CUMULATIVE HOURS DURING ANY PERIOD BETWEEN ENGINE OVERHAUL PERIODS**

*NOTE :*

*Use of AVGAS to be recorded in engine module logbook.*

## CAUTION

**MAXIMUM TIME FOR SIDESLIP CONDITION IS 30 SECONDS.**

US Specification (US)	French Specification (FR)	English Specification (UK)	NATO Code
ASTM-D1655 JET A ASTM-D1655 JET A1 ASTM-D1655 JET B	AIR 3405C Grade F35	DERD 2494 Issue 9	F35 without additive
MIL-DTL-5624 Grade JP-4	AIR 3407B	DERD 2454 Issue 4 Amdt 1	F40 with additive
MIL-DTL-5624 Grade JP-5	AIR 3404C Grade F44	DERD 2452 Issue 2 Amdt 1	F44 with additive when utilization
MIL-DTL-83133 Grade JP-8	AIR 3405C Grade F34	DERD 2453 Issue 4 Amdt 1	F34 with additive S748
	AIR 3404C Grade F43	DERD 2498 Issue 7	F43 without additive

Figure 2.3.1 - RECOMMENDED FUEL TYPES  
(Reference : Service Bulletin P & W C. No. 14004)

## **PROPELLER**

Number of propellers : 1

Propeller manufacturer : HARTZELL

Propeller model number : HC-E4N-3 / E9083S (K)

Propeller diameter :

Minimum : 90 inches (2.286 m)

Maximum : 91 inches (2.311 m)

Propeller blade setting at 30 inches station :

Low pitch : 21°

Feathering : 86°

Maximum reverse : - 11°

**2.4 - STARTER OPERATION LIMITS**

Starter operation sequence is limited as follows :

if Ng ≤ 30 % ..... 30 seconds

if Ng > 30 % ..... 60 seconds

Should several sequences be necessary, respect following spacing :

1st sequence

wait ..... 1 minute

2nd sequence

wait ..... 5 minutes

3rd sequence

wait ..... 30 minutes

4th sequence

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## 2.5 - WEIGHT AND C.G. LIMITS

### WEIGHT LIMITS

Maximum ramp weight (MRW) : 7430 lbs (3370 kg)

Maximum takeoff weight (MTOW) : 7394 lbs (3354 kg)

Maximum landing weight (MLW) : 7024 lbs (3186 kg)

Maximum zero fuel weight (MZFW) : 6032 lbs (2736 kg)

Maximum baggage weight :

- in FWD compartment (non pressurized) : 110 lbs (50 kg)

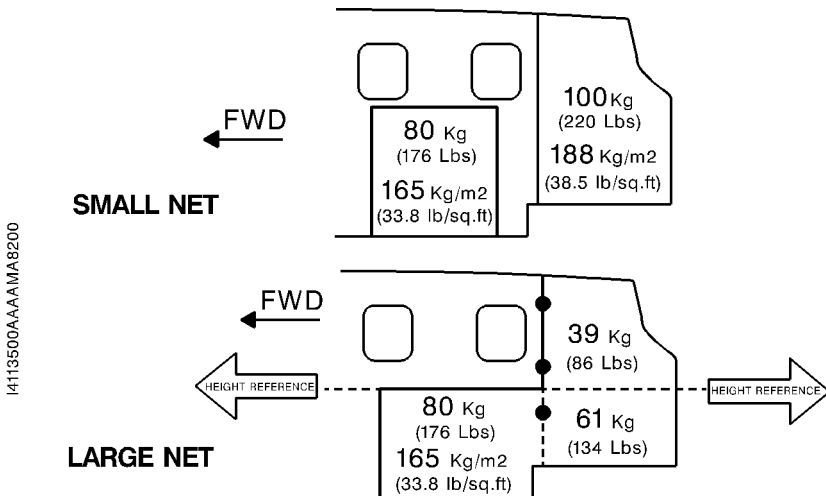
Pre-MOD 70-0315-25

Post-MOD 70-0315-25 with 6-seat accommodation

- in rear part of pressurized cabin : 220 lbs (100 kg)

Post-MOD 70-0315-25 with 4-seat accommodation

- in rear part of pressurized cabin : 396 lbs (180 kg), with small or large net (see sketch below)





**C.G. LIMITS** – see Figure 6.4.2

Center of gravity range with landing gear down and flaps up, attitude 0° :

Forward limits :

- 181.3 inches (4.604 m) aft of datum at 4409 lbs (2000 kg) or less (14 % of m.a.c)
- 183.6 inches (4.664 m) aft of datum at 6250 lbs (2835 kg) (18 % of m.a.c)
- 185.3 inches (4.707 m) aft of datum at 6579 lbs (2984 kg) (20.85 % of m.a.c)
- 187 inches (4.752 m) aft of datum at all weights above 7024 lbs (3186 kg) (23.8 % of m.a.c)

Aft limits :

- 194.9 inches (4.951 m) aft of datum at all weights below 6250 lbs (2835 kg) (37 % of m.a.c.)
- 194.3 inches (4.936 m) aft of datum at 6579 lbs (2984 kg) (36 % of m.a.c.)
- 193.65 inches (4.921 m) aft of datum at 7394 lbs (3354 kg) (35 % of m.a.c.)

Reference datum : 118.1 inches (3 m) in front of the firewall front face.

Straight line variation between points.

Leveling point : Cabin floor rails.

**NOTE :**

*It is the responsibility of the pilot to insure that the airplane is properly loaded. See Section 6 "Weight and Balance" for proper loading instructions.*

## 2.6 - OPERATION LIMITS

### MANEUVER LIMITS

This airplane is certified in the normal category.

The normal category is applicable to airplanes intended for non-aerobatic operations.

Non-aerobatic operations include any maneuvers incidental to normal flying, stalls (except whip stalls), lazy eights, chandelles, and steep turns in which the angle of bank is no more than 60°.

**Aerobatic maneuvers, including spins, are not approved.**

### TEMPERATURE LIMITS

Minimum temperature at start and takeoff : - 40°C (- 40°F)

Maximum temperature at start and takeoff :  
ISA + 37°C (+ 67°F) from 0 to 8000 ft pressure altitude

Maximum temperature in flight :  
ISA + 37°C (+ 67°F) from 0 to 8000 ft pressure altitude  
ISA + 30°C (+ 54°F) at 31000 ft pressure altitude  
Linear decrease between 8000 and 31000 ft

### FLIGHT LOAD FACTOR LIMITS

#### Flaps up

Weight below 6579 lbs (2984 kg) :  
- 1.5 ≤ n ≤ + 3.8 g

Weight above 6579 lbs (2984 kg) :  
- 1.5 ≤ n ≤ + 3.5 g

#### Flaps down

- 0 ≤ n ≤ + 2.0 g

### CAUTION

### INTENTIONAL NEGATIVE LOAD FACTORS PROHIBITED

### **GFC 700 AUTOPILOT LIMITS**

- During autopilot operation, a pilot with seat belt fastened must be seated at the left pilot position.
- The autopilot and yaw damper must be OFF during takeoff and landing.
- Do not engage autopilot below 1000 ft (300 m) AGL in cruise or climb.
- Do not use autopilot in approach below 200 ft (60 m) AGL.
- Do not use autopilot for airspeeds below 85 KIAS.

**NOTE :**

*Do not use the autopilot in descent below 2000 ft (600 m) AGL with a vertical speed in excess of 2000 ft/min.*

### **G1000 GNSS (GPS/SBAS) NAVIGATION EQUIPMENT APPROVALS**

The GARMIN GNSS navigation system installed in this airplane :

- is a GPS system with a Satellite Based Augmentation System (SBAS) comprised of :
  - . two TSO-C145a (or later) Class 3 approved GARMIN GIAs,
  - . TSO-C146a Class 3 approved GARMIN GDUs Display Units,
  - . GARMIN GA36 and GA37 antennas,
  - . GPS software version 3.0 or later approved version.
- is installed in this airplane in accordance with AC 20-138A.
- is, as installed in this airplane, approved for navigation using GPS and GPS/SBAS (within the coverage of a SBAS complying with ICAO Annex 10) for IFR enroute, terminal area, and RNP APCH operations (to LNAV, LNAV/VNAV and LPV minima).

- is, as installed in this airplane, complying with the equipment, performance, and functional requirements to conduct RNAV and RNP operations in accordance with the applicable requirements of the reference documents listed in the following table.

**NOTE :**

*Depending on the area of navigation, an operational approval may be required to use the navigation performance that are detailed in the table hereafter. The pilot is responsible to ensure compliance with current operational requirements.*

This table is accurate at the time it was published.

Phase of flight	Approved PBN Capability	Operational limitations	Reference Documents	ICAO Flight Plan Code		Notes
				Item 10a Code	Item 18 PBN/	
En-route, Oceanic and Remote continental (Class II Navigation)	RNAV 10 RNP 10	GNSS FDE availability must be verified prior to flight. Maximum predicted FDE unavailability is 34 minutes. <sup>1</sup>  Two GNSS systems required to be operational. <sup>2</sup>	FAA AC 90-105A	R	A1	Additional communication and surveillance equipment may be required to obtain operational approval to utilize RNP 10 / RNAV 10 performance.
En-route continental, Arrival	RNAV 5 (formerly designated as B-RNAV)	One GNSS system required to be operational.	JAA AMJ 20X2	R	B2	
En-route, Oceanic and Remote continental (Class II Navigation)	RNP 4	GNSS FDE availability must be verified prior to flight. Maximum predicted FDE unavailability is 25 minutes. <sup>1</sup>  Two GNSS systems required to be operational. <sup>2</sup>	FAA AC 90-105A	R	L1	Additional communication and surveillance equipment may be required to obtain operational approval to utilize RNP 4 performance.
Departure En-route continental, Arrival	RNAV 2 / RNAV 1	One GNSS system required to be operational,	JAA TGL-10  FAA AC 90-105A	R	C2 / D2	

Phase of flight	Approved PBN Capability	Operational limitations	Reference Documents	ICAO Flight Plan Code		Notes
				Item 10a Code	Item 18 PBN/	
Domestic, Offshore, Oceanic and Remote continental	RNP 2	GNSS FDE availability must be verified prior to oceanic or remote continental flight. Maximum predicted FDE unavailability is 5 minutes.  Two GNSS systems required to be operational. <sup>2</sup>  Only one operational GNSS system required for domestic and offshore operations areas.	FAA AC 90-105A	R	-	Additional communication and surveillance equipment may be required to obtain operational approval to utilize RNP 2 performance.
Departure, Arrival,	RNP 1 <i>(with and without RF legs)</i>	At a minimum, the flight director must be displayed and utilized when conducting procedures containing RF legs.	FAA AC 90-105A	R	O2	Includes RNP terminal departure and arrival procedures. This includes procedures with Radius-to-Fix legs (RF legs).
Approach	RNP APCH LNAV minima <i>(with and without RF legs)</i>	At a minimum, the flight director must be displayed and utilized when conducting procedures containing RF legs.	EASA AMC 20-27  FAA AC 90-105A	R	S1	Includes non-precision approaches based on conventional navigation aids with "or GPS" in the title and area navigation approaches titled "GPS", "RNAV (GPS)", and "RNAV (GNSS)". This includes procedures with RF legs.  RF legs may be used in the initial and intermediate legs of the approach procedure or the final leg of the missed approach procedure only.

Phase of flight	Approved PBN Capability	Operational limitations	Reference Documents	ICAO Flight Plan Code		Notes
				Item 10a Code	Item 18 PBN/	
Approach	RNP APCH LPV minima <i>(with and without RF legs)</i>	At a minimum, the flight director must be displayed and utilized when conducting procedures containing RF legs.	EASA AMC 20-28	B		RF legs may be used in the initial and intermediate legs of the approach procedure or the final leg of the missed approach procedure only.

<sup>1</sup> and <sup>2</sup>, see Note 1 and Note 2 hereafter

Table 2.6.1 - GNSS operational requirements

Note 1 FDE/RAIM availability worldwide can be determined using the WFDE Prediction program, part number 006-A0154-01 or later approved version with GARMIN GA36 and GA37 antennas selected, or :

- Within the United States, using the FAA's en-route and terminal RAIM prediction website : [www.raimprediction.net](http://www.raimprediction.net), or by contacting a Flight Service Station.
- Within Europe, using Europe's AUGUR GPS RAIM Prediction Tool at <http://augur.ecacnav.com/augur/app/home>.

Note 2 A "BOTH ON GPS1" or "BOTH ON GPS2" system annunciation does not necessarily mean that one GPS has failed. Refer to the MFD – GPS STATUS page to determine the state of the unused GPS.

### General considerations

The route planning and WFDE prediction program may be downloaded from the GARMIN website on the internet. For information on using the WFDE Prediction Program, refer to GARMIN WAAS FDE Prediction Program, part number 190-00643-01, 'WFDE Prediction Program Instructions'.

Garmin International holds an FAA Type 2 Letter of Acceptance (LOA) in accordance with RTCA/DO-200A and AC 20-153B for database integrity, quality, and database management processes for many of its aviation databases. LOA status and RTCA/DO-200A List of Applicable Avionics (190-01999-00) can be viewed at FlyGarmin.com.

Navigation information is referenced to WGS-84 reference system, and should only be used where the Aeronautical Information Publication (including electronic data and aeronautical charts) conform to WGS-84 or equivalent.

## **G1000 GNSS (GPS/SBAS) NAVIGATION SYSTEM LIMITATIONS**

### **Navigation database limitations**

The pilot must confirm at system initialization that the Navigation database is current.

If the AIRAC cycle will change during flight, the pilot must ensure the accuracy of navigation data, including suitability of navigation facilities used to define the routes and procedures for flight. If an amended chart affecting navigation data is published for the procedure, the database must not be used to conduct the procedure.

GPS/SBAS based IFR enroute, oceanic, and terminal navigation is prohibited unless the pilot verifies and uses a valid, compatible, and current Navigation database or verifies each waypoint for accuracy by reference to current approved data.

Discrepancies that invalidate a procedure must be reported to Garmin International. The affected procedure is prohibited from being flown using data from the Navigation database until a new Navigation database is installed in the airplane and verified that the discrepancy has been corrected.

Contact information to report Navigation database discrepancies can be found at [www.Garmin.com](http://www.Garmin.com)>Support>Contact Garmin Support>Aviation. Pilots and operators can view navigation data base alerts at [www.Garmin.com](http://www.Garmin.com)>In the Air>NavData Alerts.

RNP APCH including “GPS”, “or GPS”, “RNAV (GPS)” and “RNAV (GNSS)” instrument approaches using the Garmin integrated flight deck are prohibited unless the pilot verifies and uses the current Navigation database. GPS based instrument approaches must be flown in accordance with an approved instrument approach procedure that is loaded from the Navigation database into the flight plan by its name.

Not all published Instrument Approach Procedures (IAP) are in the Navigation database.

Manual entry of waypoints using latitude/longitude or place/bearing is prohibited for published RNP and RNAV routes.

Whenever possible, RNP and RNAV routes including Standard Instrument Departures (SIDs) and Obstacle Departure Procedures (ODPs), Standard Terminal Arrival (STAR), and enroute RNAV Q and RNAV T routes should be loaded into the flight plan from the database in their entirety, rather than loading route waypoints from the database into the flight plan individually. Selecting and inserting individual named fixes from the database is permitted, provided all fixes along the published route to be flown are inserted.

### **GNSS integrity limitations**

For flight planning purposes, in areas where SBAS coverage is not available, the pilot must check RAIM availability. The availability of GPS integrity RAIM shall be confirmed for the intended route of flight.

In the event of a predicted continuous loss of RAIM of more than five minutes for any part of the intended route of flight, the flight should be delayed, cancelled, or re-routed on a track where RAIM requirements can be met.

For flight planning purposes, in Remote Continental and Oceanic areas, the pilot must check FDE availability. Refer to the Table 2.6.1 – GNSS operational requirements, to check maximum authorized FDE unavailability and WFDE Prediction program references.

### **Approach operations limitations**

LNAV+V feature is a standard LNAV approach with advisory vertical guidance provided for assistance in maintaining a constant vertical glidepath similar to an ILS glideslope on approach. This guidance is displayed on the PFD in the same location as the ILS glideslope using a magenta diamond. In all cases where LNAV+V is indicated by the system during an approach, LNAV minima shall be used.

Use of the GARMIN GPS/SBAS receivers to provide navigation guidance during the final approach segment of an ILS, LOC, LOC-BC, LDA, SDF, MLS or any other type of approach not approved for “or GPS” navigation is prohibited.

When using the VOR/LOC/GS receivers to fly the final approach segment, VOR/LOC/GS navigation data must be selected and presented on the CDI of the pilot flying.



### Procedures with RF legs (Radius to Fix legs)

At a minimum, the flight director must be displayed and utilized when conducting procedures containing RF legs.

## SEVERE ICING CONDITIONS

### WARNING

**SEVERE ICING MAY RESULT FROM ENVIRONMENTAL CONDITIONS OUTSIDE OF THOSE FOR WHICH THE AIRCRAFT IS CERTIFICATED. FLIGHT IN FREEZING RAIN, FREEZING DRIZZLE, OR MIXED ICING CONDITIONS (SUPERCOOLED LIQUID WATER AND ICE CRYSTALS) MAY RESULT IN ICE BUILD-UP ON PROTECTED SURFACES EXCEEDING THE CAPABILITY OF THE ICE PROTECTION SYSTEM, OR MAY RESULT IN ICE FORMING AFT OF THE PROTECTED SURFACES. THIS ICE MAY NOT BE SHED USING THE ICE PROTECTION SYSTEMS, AND MAY SERIOUSLY DEGRADE THE PERFORMANCE AND CONTROLLABILITY OF THE AIRCRAFT**

During flight, severe icing conditions that exceed those for which the aircraft is certificated shall be determined by the following visual cues. If one or more of these visual cues exists, immediately request priority handling from Air Traffic Control to facilitate a route or an altitude change to exit the icing conditions.

- Unusually extensive ice accumulation on the airframe and windshield in areas not normally observed to collect ice.
- Accumulation of ice on the upper surface of the wing aft of the protected area.

Since the autopilot, when operating, may mask tactile cues that indicate adverse changes in handling characteristics, use of the autopilot is prohibited when any of the visual cues specified above exist, or when unusual lateral trim requirements or autopilot trim warnings are encountered while the aircraft is in icing conditions.

Refer to the list of "Equipment required depending on type of operation" in this same chapter.

In any case of icing conditions, first refer to particular procedures described in Chapter 4.5 (normal procedures) and in case of unforeseen icing conditions, refer in addition to the emergency procedure described in Chapter 3.13.

**FLAP OPERATING ENVELOPE**

The use of flaps is not authorized above 15 000 ft.

The use of flap control in "850" position is prohibited for takeoff and landing.

**REVERSE UTILIZATION**

The use of control reverse BETA ( $\beta$ ) range is prohibited :

- during flight,
- on ground, if the engine is not running.

**EQUIPMENT REQUIRED DEPENDING ON TYPE OF OPERATION**

The airplane is approved for day & night VFR and day & night IFR operations when appropriate equipment is installed and operating correctly.

The type certification for each use requires the following equipment. The equipment must be installed and operate perfectly according to the indicated type of use.

**CAUTION**

**IT IS THE PILOT'S RESPONSIBILITY TO CHECK THAT THE FOLLOWING EQUIPMENT LISTS ARE IN ACCORDANCE WITH THE SPECIFIC NATIONAL OPERATION RULES OF THE AIRPLANE REGISTRATION COUNTRY DEPENDING ON THE TYPE OF OPERATION.**

**NOTE :**

*Systems and equipment mentioned hereafter do not include specific flight and radio-navigation instruments required by decree concerning operation conditions for civil airplanes in general aviation or other foreign regulations (for example FAR PART 91 and 135).*

## Day VFR

### 8) Pilot instruments

- Airspeed indicator
- Sensitive and adjustable altimeter
- Magnetic compass with built-in compensator

### 9) CAS warning and caution messages

- Oil pressure
- Low fuel pressure
- Fuel selector OFF
- Fuel auxiliary pump ON
- L.H. and R.H fuel tank low level
- Non functioning of fuel timer
- Battery overheat
- Battery stop
- Main generator OFF
- Low voltage
- Ground power unit connected
- Inertial separator
- Starter
- Ignition
- Flaps
- Landing gears and doors

### 10) Aural warning

- $V_{MO}$  warning
- Landing gear warning
- Stall warning

### 11) Engine instruments

- Torquemeter
- Propeller tachometer
- Interturbine temperature indicator (ITT)
- Gas generator tachometer (Ng)
- Oil pressure indicator
- Oil temperature indicator

## 12) Various indicators

- Fuel gauge indicators (2)
- Fuel pressure indicator
- Voltmeter
- Ammeter
- Outside air temperature

## 13) Installations

- Fuel mechanical pump (main)
- Fuel electrical pump (auxiliary)
- Fuel shut-off valve
- Fuel timer
- Starter generator
- Inertial separator
- Stall warning
- Electrical aileron trim
- Electrical rudder trim
- Manual elevator pitch trim
- Engine ignition
- Landing gear electro-hydraulic unit
- Landing gear emergency hydraulic pump (manual)
- Flaps
- Overspeed regulator
- Manual feathering
- Battery

## 14) Miscellaneous

- Seats (each occupant)
- Belts (each occupant)
- Straps (each occupant)
- Pilot's operating handbook

### **Night VFR**

- 1) All equipment required for day VFR
- 2) Attitude display indicator
- 3) Instrument lighting
- 4) Instrument panel lighting
- 5) Emergency lighting
- 6) Vertical speed indicator
- 7) Navigation lights (4)
- 8) Anticollision lights (2)
- 9) Landing light

### **IFR**

- 1) All equipment required for day VFR
- 2) All equipment required for night VFR (if flight is performed during night)
- 3) Taxi light (if flight is performed during night)
- 4) Clock
- 5) 2nd altimeter
- 6) Emergency static source
- 7) Pitot static tube deicing

### **Pressurized flight**

- Cabin altimeter
- Cabin vertical speed indication
- Cabin differential pressure indication
- Pressurization control valve
- Safety valve
- Pressurization control
- Maximum cabin altitude and pressure warning light

### **Flight into icing conditions**

- - All equipment required for IFR flight
- Propeller deicing
- L.H. windshield deicing
- Airframe, stabilizer and elevator horn deicing
- Wing leading edge inspection light (if night flight)
- Stall warning deicing
- Inertial separator

**ALTITUDE OPERATING LIMITS**

Maximum altitude : 31000 ft (9449 m)

Maximum differential pressure : 6.2 psi

**Operation in RVSM area**

This airplane is approved for operations in Reduced Vertical Separation Minimum (RVSM) airspace when required equipment (refer to Section "List of equipment", § "List of critical RVSM equipment") is maintained in accordance with the airplane Maintenance Manual.

This does not constitute operational approval. Individual airplane and operational approval must be obtained in accordance with applicable operating rules.

Each operator must ensure compliance with required crew training and operating practices and procedures.

Moreover, the following equipment must be installed and operating normally upon entering RVSM airspace :

- Pilot and R.H. station primary altimeters
- Autopilot
- Altitude Alerter
- ATC transponder

**NOTE :**

- *Any changes to the pitot / static, air data computer, autopilot, altitude alerting and / or transponder systems, or other changes that affect operation of these systems must be evaluated for impact on the RVSM approval.*
- *The standby altimeter is not approved for RVSM operations.*

**IN-FLIGHT CIRCUIT BREAKER USE LIMITS**

A tripped circuit breaker should not be reset in flight unless deemed necessary for continued safe flight and landing. Only one reset should be attempted.

### ENHANCED MODE S

The installed Mode S system satisfies the data requirements of ICAO Doc 7030/4, Regional Supplementary Procedures for SSR Mode S Enhanced Surveillance in designated European airspace. The capability to transmit data parameters is shown in column 2 :

Parameter	Available (A) / Not Available (NA)
Magnetic Heading	A
Indicated Airspeed	A
Mach No	A
Vertical Rate	A
Roll Angle	A
True Airspeed	A
True Track Angle	A
Groundspeed	A
Selected Altitude	A
Barometric Pressure Setting	A

### CHARTVIEW SYSTEM OPERATING LIMITATIONS

The geographic-referenced airplane symbol on some charts must not be used for navigation.

**NOTE :**

*The airplane symbol displayed on some charts provides supplemental airplane situational awareness information. It is not intended as a means for navigation or flight guidance. The airplane symbol is not to be used for conducting instrument approaches or departures, and it should not be relied upon during low visibility taxi operations. Position accuracy, orientation, and related guidance must be assured by other means of required navigation.*

Operators must have back-up charts available to the flight crew.

Database currency must be verified prior to use via database effectivity page.

The flight crew is responsible for verifying availability of charts for the planned flight.

## 2.6 - OPERATION LIMITS

### MANEUVER LIMITS

This airplane is certified in the normal category.

The normal category is applicable to airplanes intended for non-aerobatic operations.

Non-aerobatic operations include any maneuvers incidental to normal flying, stalls (except whip stalls), lazy eights, chandelles, and steep turns in which the angle of bank is no more than 60°.

**Aerobatic maneuvers, including spins, are not approved.**

### TEMPERATURE LIMITS

Minimum temperature at start and takeoff : - 40°C (- 40°F)

Maximum temperature at start and takeoff :

ISA + 37°C (+ 67°F) from 0 to 8000 ft pressure altitude

Maximum temperature in flight :

ISA + 37°C (+ 67°F) from 0 to 8000 ft pressure altitude

ISA + 30°C (+ 54°F) at 31000 ft pressure altitude

Linear decrease between 8000 and 31000 ft

### FLIGHT LOAD FACTOR LIMITS

#### Flaps up

Weight below 6579 lbs (2984 kg) :

- 1.5 ≤ n ≤ + 3.8 g

Weight above 6579 lbs (2984 kg) :

- 1.5 ≤ n ≤ + 3.5 g

#### Flaps down

- 0 ≤ n ≤ + 2.0 g

### CAUTION

### INTENTIONAL NEGATIVE LOAD FACTORS PROHIBITED



### GFC 700 AUTOPILOT LIMITS

- During autopilot operation, a pilot with seat belt fastened must be seated at the left pilot position.
- The autopilot and yaw damper must be OFF during takeoff and landing.
- Do not engage autopilot below 1000 ft (300 m) AGL in cruise or climb.
- Do not use autopilot in approach below 200 ft (60 m) AGL.
- Do not use autopilot for airspeeds below 85 KIAS.

**NOTE :**

*Do not use the autopilot in descent below 2000 ft (600 m) AGL with a vertical speed in excess of 2000 ft/min.*

### GPS NAVIGATION LIMITS

Data base updating must be verified before each flight.

The navigation sources required for the anticipated flight shall be serviceable and allow an immediate crossed check on available ground aids or shall allow to return to primary navigation sources in case of GPS navigation loss.

Use of GPS as a navigation source is **PROHIBITED**, unless the pilot verifies the currency of the data base and the coordinates of each selected waypoint.

The aircraft is approved for Enroute and Terminal operations including RNAV5/BRNAV and RNAV1/PRNAV in accordance with JAA TGL-10, provided the FMS is receiving usable navigation information from one or more GPS receivers.

The two GARMIN G1000 GPS receivers installed on the aircraft are approved under TSO C145a Class 3. The GARMIN G1000 system has been demonstrated capable of, and has been shown to meet the accuracy requirements for Enroute, Terminal, non-precision instrument approach operations using GPS and WAAS (including "GPS" or "GPS and RNAV approaches"), and approach procedures with vertical guidance (including "LNAV/VNAV", "LNAV+V", and "LPV") within the U.S. National Airspace System in accordance with AC 20-138A.

**Procedures during flight preparation**

During flight preparation, the pilot must get information about GPS constellation, via aeronautical data (consultation of GPS NOTAM).

When less than 24 satellites are available (or less than 23 if equipment uses pressure altitude information), the pilot must make sure that RAIM function is available on the projected route and for the flight period in B-RNAV areas.

RAIM function prediction can be done using prediction software integrated into G1000 system or any other approved software such as the one provided for the users by EUROCONTROL on INTERNET.

If a loss of RAIM function is predicted on the chosen route for a period of more than 5 minutes, the flight cannot be done. In that case, the flight will either be postponed or another route will be chosen. The prediction software must then be used again.

**Preflight procedures**

During preflight checks, it is necessary to verify data base validity (updating of the last AIRAC cycle).

The onboard equipment must be initialized in compliance with manufacturer procedures (refer to the "GARMIN" G1000 Integrated Flight Deck Pilot's Guide).

In case a pre-programmed or an already stored flight plan is used, an accurate check of the waypoints is also required.

**General in-flight procedures**

Before entering a B-RNAV or P-RNAV area, the pilot must make sure that RAIM function is available.

Flight plan activation, WPT and LEG changes as well as any modification of initialization data must be done in compliance with equipment User's Manual.

For every navigation into areas reserved for B-RNAV or P-RNAV, the pilot must be provided with a predicted availability of RAIM on the route, if the constellation disposes of less than 23 satellites.

The check of navigation system information consistency must be regularly performed during the flight :

- . when reaching each waypoint or before reaching the position report point of the ATC,
- . before leaving a published route and then every 15 minutes during this type of operation (function "Direct To").

The check of position information consistency may be performed by comparing this position with the one determined by the primary radionavigation sources.

### **SID/STAR**

The use of SIDs and STARs stored in GPS data base is only authorized, if the pilot has checked that GPS procedure corresponds to the one given in the official documentation (coordinates of various points and paths between points).

### **Instrument approach (Non precision approach)**

Use of the GPS to perform an instrument approach is possible, as long as this use is approved by the air navigation local authority for the approach in question.

Instrument approaches performed with the GPS must be executed according to approved approach procedures given in the GPS data base. The data base must be kept up to date and base data accuracy checked with regard to the official documentation, preferably before the flight.

- a) GPS/RNAV instrument approaches must be performed in GPS approach mode and the RAIM must be available at the final approach fix (FAF).
- b) Precision approaches (ILS, LOC, LOC-BC, MLS ...) must not be performed with the GPS.

Instrument approaches can only be performed, as long as used point coordinates are referenced with regard to WGS 84 system or an equivalent system.

**SEVERE ICING CONDITIONS****WARNING**

**SEVERE ICING MAY RESULT FROM ENVIRONMENTAL CONDITIONS OUTSIDE OF THOSE FOR WHICH THE AIRCRAFT IS CERTIFICATED. FLIGHT IN FREEZING RAIN, FREEZING DRIZZLE, OR MIXED ICING CONDITIONS (SUPERCOOLED LIQUID WATER AND ICE CRYSTALS) MAY RESULT IN ICE BUILD-UP ON PROTECTED SURFACES EXCEEDING THE CAPABILITY OF THE ICE PROTECTION SYSTEM, OR MAY RESULT IN ICE FORMING AFT OF THE PROTECTED SURFACES. THIS ICE MAY NOT BE SHED USING THE ICE PROTECTION SYSTEMS, AND MAY SERIOUSLY DEGRADE THE PERFORMANCE AND CONTROLLABILITY OF THE AIRCRAFT**

During flight, severe icing conditions that exceed those for which the aircraft is certificated shall be determined by the following visual cues. If one or more of these visual cues exists, immediately request priority handling from Air Traffic Control to facilitate a route or an altitude change to exit the icing conditions.

- Unusually extensive ice accumulation on the airframe and windshield in areas not normally observed to collect ice.
- Accumulation of ice on the upper surface of the wing aft of the protected area.

Since the autopilot, when operating, may mask tactile cues that indicate adverse changes in handling characteristics, use of the autopilot is prohibited when any of the visual cues specified above exist, or when unusual lateral trim requirements or autopilot trim warnings are encountered while the aircraft is in icing conditions.

Refer to the list of "Equipment required depending on type of operation" in this same chapter.

In any case of icing conditions, first refer to particular procedures described in Chapter 4.5 (normal procedures) and in case of unforeseen icing conditions, refer in addition to the emergency procedure described in Chapter 3.13.

## **FLAP OPERATING ENVELOPE**

The use of flaps is not authorized above 15 000 ft.

The use of flap control in "850" position is prohibited for takeoff and landing.

## **REVERSE UTILIZATION**

The use of control reverse BETA ( $\beta$ ) range is prohibited :

- during flight,
- on ground, if the engine is not running.

## **EQUIPMENT REQUIRED DEPENDING ON TYPE OF OPERATION**

The airplane is approved for day & night VFR and day & night IFR operations when appropriate equipment is installed and operating correctly.

The type certification for each use requires the following equipment. The equipment must be installed and operate perfectly according to the indicated type of use.

### **CAUTION**

**IT IS THE PILOT'S RESPONSIBILITY TO CHECK THAT THE FOLLOWING EQUIPMENT LISTS ARE IN ACCORDANCE WITH THE SPECIFIC NATIONAL OPERATION RULES OF THE AIRPLANE REGISTRATION COUNTRY DEPENDING ON THE TYPE OF OPERATION.**

#### **NOTE :**

*Systems and equipment mentioned hereafter do not include specific flight and radio-navigation instruments required by decree concerning operation conditions for civil airplanes in general aviation or other foreign regulations (for example FAR PART 91 and 135).*

**Day VFR**

## 8) Pilot instruments

- Airspeed indicator
- Sensitive and adjustable altimeter
- Magnetic compass with built-in compensator

## 9) CAS warning and caution messages

- Oil pressure
- Low fuel pressure
- Fuel selector OFF
- Fuel auxiliary pump ON
- L.H. and R.H fuel tank low level
- Non functioning of fuel timer
- Battery overheat
- Battery stop
- Main generator OFF
- Low voltage
- Ground power unit connected
- Inertial separator
- Starter
- Ignition
- Flaps
- Landing gears and doors

## 10) Aural warning

- $V_{MO}$  warning
- Landing gear warning
- Stall warning

## 11) Engine instruments

- Torquemeter
- Propeller tachometer
- Interturbine temperature indicator (ITT)
- Gas generator tachometer (Ng)
- Oil pressure indicator
- Oil temperature indicator

12) Various indicators

- Fuel gauge indicators (2)
- Fuel pressure indicator
- Voltmeter
- Ammeter
- Outside air temperature

13) Installations

- Fuel mechanical pump (main)
- Fuel electrical pump (auxiliary)
- Fuel shut-off valve
- Fuel timer
- Starter generator
- Inertial separator
- Stall warning
- Electrical aileron trim
- Electrical rudder trim
- Manual elevator pitch trim
- Engine ignition
- Landing gear electro-hydraulic unit
- Landing gear emergency hydraulic pump (manual)
- Flaps
- Overspeed regulator
- Manual feathering
- Battery

14) Miscellaneous

- Seats (each occupant)
- Belts (each occupant)
- Straps (each occupant)
- Pilot's operating handbook

**Night VFR**

- 1) All equipment required for day VFR
- 2) Attitude display indicator
- 3) Instrument lighting
- 4) Instrument panel lighting
- 5) Emergency lighting
- 6) Vertical speed indicator
- 7) Navigation lights (4)
- 8) Anticollision lights (2)
- 9) Landing light

**IFR**

- 1) All equipment required for day VFR
- 2) All equipment required for night VFR (if flight is performed during night)
- 3) Taxi light (if flight is performed during night)
- 4) Clock
- 5) 2nd altimeter
- 6) Emergency static source
- 7) Pitot static tube deicing

**Pressurized flight**

- Cabin altimeter
- Cabin vertical speed indication
- Cabin differential pressure indication
- Pressurization control valve
- Safety valve
- Pressurization control
- Maximum cabin altitude and pressure warning light

**Flight into icing conditions**

- All equipment required for IFR flight
- Propeller deicing
- L.H. windshield deicing
- Airframe, stabilizer and elevator horn deicing
- Wing leading edge inspection light (if night flight)
- Stall warning deicing
- Inertial separator



## ALTITUDE OPERATING LIMITS

Maximum altitude : 31000 ft (9449 m)  
Maximum differential pressure : 6.2 psi

### Operation in RVSM area

This airplane is approved for operations in Reduced Vertical Separation Minimum (RVSM) airspace when required equipment (refer to Section "List of equipment", § "List of critical RVSM equipment") is maintained in accordance with the airplane Maintenance Manual.

This does not constitute operational approval. Individual airplane and operational approval must be obtained in accordance with applicable operating rules.

Each operator must ensure compliance with required crew training and operating practices and procedures.

Moreover, the following equipment must be installed and operating normally upon entering RVSM airspace :

- Pilot and R.H. station primary altimeters
- Autopilot
- Altitude Alerter
- ATC transponder

#### NOTE :

- *Any changes to the pitot / static, air data computer, autopilot, altitude alerting and / or transponder systems, or other changes that affect operation of these systems must be evaluated for impact on the RVSM approval.*
- *The standby altimeter is not approved for RVSM operations.*

## IN-FLIGHT CIRCUIT BREAKER USE LIMITS

A tripped circuit breaker should not be reset in flight unless deemed necessary for continued safe flight and landing. Only one reset should be attempted.

## ENHANCED MODE S

The installed Mode S system satisfies the data requirements of ICAO Doc 7030/4, Regional Supplementary Procedures for SSR Mode S Enhanced Surveillance in designated European airspace. The capability to transmit data parameters is shown in column 2 :

Parameter	Available (A) / Not Available (NA)
Magnetic Heading	A
Indicated Airspeed	A
Mach No	A
Vertical Rate	A
Roll Angle	A
True Airspeed	A
True Track Angle	A
Groundspeed	A
Selected Altitude	A
Barometric Pressure Setting	A

## CHARTVIEW SYSTEM OPERATING LIMITATIONS

The geographic-referenced airplane symbol on some charts must not be used for navigation.

### NOTE :

*The airplane symbol displayed on some charts provides supplemental airplane situational awareness information. It is not intended as a means for navigation or flight guidance. The airplane symbol is not to be used for conducting instrument approaches or departures, and it should not be relied upon during low visibility taxi operations. Position accuracy, orientation, and related guidance must be assured by other means of required navigation.*

Operators must have back-up charts available to the flight crew.

Database currency must be verified prior to use via database effectivity page.

The flight crew is responsible for verifying availability of charts for the planned flight.

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## 2.7 - MISCELLANEOUS LIMITS

### SEATING LIMITS C.G.

- 2 front seats at 178.5 in. (4.534 m)

#### Pre-MOD 70-0315-25

- 2 intermediate seats at 222.7 in. (5.656 m)

#### Post-MOD 70-0315-25 with 4-seat accommodation or 6-seat accommodation

- 2 intermediate seats at 224.8 in. (5.710 m)

#### Pre-MOD 70-0315-25 and Post-MOD 70-0315-25 with 6-seat accommodation

- Rear bench (2 seats) at 267.1 in. (6.785 m)

### BAGGAGE LIMITS

- Baggage in pressurized cabin at 303 inches (7.695 m)
- Baggage in non pressurized forward section at 128 inches (3.250 m)

### MINIMUM CREW

- One pilot

### MAXIMUM OCCUPANCY

The number of persons on board is limited by approved seating configuration installed but must not exceed six, including the pilot.

- The number of persons must be less than or equal to the number of seats.

### USE OF DOORS

Flight with door open or ajar is prohibited.

### CHEMICAL TOILET CABINET (if installed)

The cabinet must be stowed during take-off and landing. No baggage on the top of the cabinet for the whole flight.

### **CARGO NET INSTALLATION LIMITS**

Small cargo net : maximum loading height = 28 in (710 mm)

Large cargo net : maximum loading height = 22 in (565 mm) (in cabin, out of baggage compartment).

### **CAUTION**

**NO ITEM MAY EXTEND FORWARD OF THE CARGO NET SYSTEM TO PROTECT DOOR FROM OBSTRUCTION**

## 2.8 - MARKINGS

### AIRSPEED INDICATOR ON PFD(s)

Airspeed indicator markings and their color code significance are shown in Figure 2.8.1.

MARKING	KIAS (Value or range)	SIGNIFICANCE
Red strip	Below 65	/
White strip	65 - 122	Full Flap Operating Range Lower limit is maximum weight $V_{SO}$ in landing configuration.
Green strip	122 - 266	Normal operating airspeed range
Red/white barber pole strip	Above 266	266 = VMO

Figure 2.8.1 - AIRSPEED INDICATOR MARKINGS

Pre-MOD70-0335-34 (ESI-2000)

### STANDBY AIRSPEED INDICATOR

Indicated airspeed markings and their color code significance are shown in Figure 2.8.1A.

MARKING	KIAS (Value or range)	SIGNIFICANCE
White arc	65 - 122	Full Flap Operating Range Lower limit is maximum weight $V_{SO}$ in landing configuration.
Wide	65 - 81	Transition point between wide and narrow arcs is stall speeds with flaps UP.
Narrow	81 - 122	Upper limit is maximum speed with flaps LDG.
Red line	266	Maximum speed for all operations.

Figure 2.8.1A - STANDBY AIRSPEED INDICATOR MARKINGS

Post-MOD70-0335-34 (ESI-2000)

**STANDBY AIRSPEED INDICATOR**

Indicated airspeed markings and their color code significance are shown in Figure 2.8.1B.

MARKING	KIAS (Value or range)	SIGNIFICANCE
Red strip	Below 65	/
White strip	65 - 122	Full Flap Operating Range Lower limit is maximum weight $V_{SO}$ in landing configuration.
Green strip	122 - 266	Normal operating airspeed range
Red strip	266	Maximum speed for all operations.

Figure 2.8.1B - STANDBY AIRSPEED INDICATOR MARKINGS

All

**PRESSURIZATION**

MARKING	VALUE	SIGNIFICANCE
Red line	6.2 psi	Cabin $\Delta P$ limit

Figure 2.8.2 - PRESSURIZATION MARKING

## ENGINE INSTRUMENTS

Engine instrument markings and their color code significance are shown in Figure 2.8.3.

INDICATION	Red Line or Arc ----- Minimum Limit	Yellow Line or Arc ----- Caution Range	Green Line or Arc ----- Normal Operating	Red Line ----- Maximum Limit
Oil temperature	- 40 °C	- 40 to 0 °C 104 to 110 °C	0 to 104 °C	110 °C
Oil pressure	60 psi	60 to 100 psi	100 to 135 psi	135 psi
Fuel pressure	0 to 5 psi	---	10 to 50 psi	50 psi
Generator RPM (Ng)	---	---	51 to 104 %	104 %
Propeller RPM (Np)	---	450 to 1000 RPM	1600 to 2000 RPM	2000 RPM
ITT Engine start or off	---	840 to 1090 °C	400 to 840 °C	840 °C normal limit ----- 870 °C ( < 20 seconds limit) ----- 1090 °C (red line) absolute limit
Engine running	---	---	400 to 840 °C	840 °C normal limit
Torque (TRQ)	---	121.4 %	0 to 121.4 %	121.4 %

Figure 2.8.3 - ENGINE INSTRUMENT MARKINGS



■ **SUCTION GAGE** [PRE-MOD70-0335-34 (ESI-2000)]

MARKING	CORRESPONDING VALUE
Green	Normal operating from 4.4 to 5.2 in.Hg
Red lines	at 4.4 and 5.2 in.Hg

Figure 2.8.4 - SUCTION GAGE MARKINGS

## 2.9 - PLACARDS

(1) Under L.H. front side window

FLIGHT CONDITIONS :  
DAY AND NIGHT VFR AND IFR

**TBM 850**

THIS AIRPLANE MUST BE OPERATED AS A NORMAL CATEGORY AIRPLANE  
IN COMPLIANCE WITH THE OPERATING LIMITATIONS STATED IN THE FORM  
OF PLACARDS, MARKINGS AND PILOT OPERATING HANDBOOK

ICING CONDITIONS ALLOWED

<p>INVERTED FLIGHT _____ PROHIBITED</p> <p>ACROBATIC MANEUVERS _____ PROHIBITED</p> <p>INTENTIONAL SPINS _____ PROHIBITED</p> <p>MAXIMUM TAKEOFF WEIGHT _____ 3354 kg / 7394 lbs</p> <p>MAXIMUM LANDING WEIGHT _____ 3186 kg / 7024 lbs</p> <p>DESIGN LOAD FACTOR (MAXIMUM)</p> <p>FLAPS UP WEIGHT BELOW 2984 kg / 6579 lbs _____ 1.5 ≤ n ≤ + 3.0 g</p> <p style="padding-left: 20px;">ABOVE 2984 kg / 6579 lbs _____ 1.5 ≤ n ≤ + 3.5 g</p> <p>FLAPS DOWN _____ 0 ≤ n ≤ + 2 g</p>	<p>MANEUVERING SPEED V<sub>A</sub> _____ 158 KIAS</p> <p>MAXIMUM OPERATING SPEED V<sub>MO</sub> _____ 266 KIAS</p> <p>FLAPS EXTENDED MAXIMUM SPEED V<sub>FE</sub> _____</p> <p>TAKEOFF CONFIGURATION _____ 178 KIAS</p> <p>LANDING CONFIGURATION _____ 122 KIAS</p> <p>LANDING GEAR EXTENDED MAXIMUM SPEED V<sub>LE</sub> _____ 178 KIAS</p> <p>LANDING GEAR OPERATING MAXIMUM SPEED V<sub>LO</sub></p> <p>UP _____ 128 KIAS</p> <p>DOWN _____ 178 KIAS</p>
---	---

(2) Calibration chart on compass and on windshield post

**WARNING**

TURN WINDSHIELD  
DE-ICE OFF BEFORE  
COMPASS READING

For	N	30	60	E	120	150
Steer						
For	S	210	240	W	300	330
Steer						

DATE : \_\_\_\_\_ RADIO ON

(3) On pressurized baggage compartment partition wall

**100 kg - 220 lbs MAXIMUM**

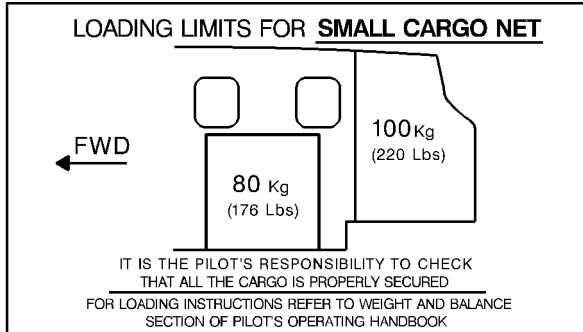
**IT IS THE PILOT'S RESPONSIBILITY TO  
CHECK THAT ALL THE BAGGAGES ARE  
PROPERLY SECURED**

**FOR LOADING INSTRUCTIONS  
SEE "WEIGHT AND BALANCE DATA"  
IN PILOT'S OPERATING HANDBOOK**

Post-MOD 70-0315-25

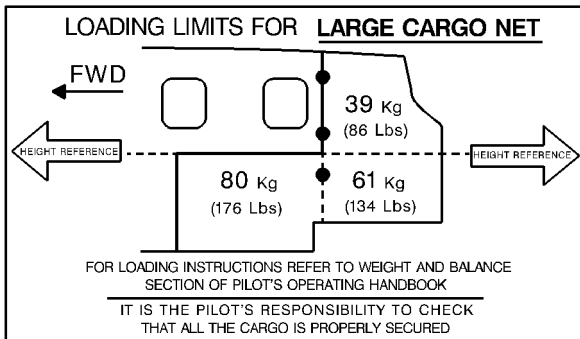
(3)a For the small cargo net, on frame C13bis

I4113500AAAAA MA18000



(3)b For the large cargo net, on R.H. side upholstery panel, in the rear baggage compartment

I4113500AAAAA MA18100



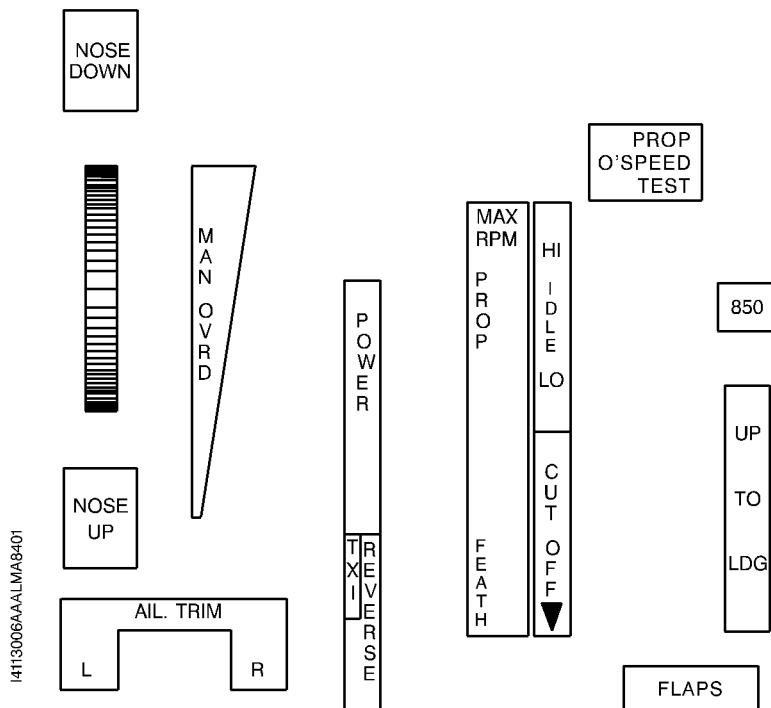
All

(3)c On FWD baggage compartment door frame (non pressurized)

**50 kg - 110 lbs MAXIMUM**

**FOR LOADING INSTRUCTIONS  
SEE "WEIGHT AND BALANCE DATA"  
IN PILOT'S OPERATING HANDBOOK**

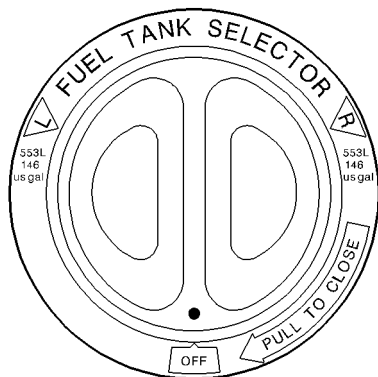
(4) Under GCU 475 control unit on pedestal console



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(5) On fuel selector

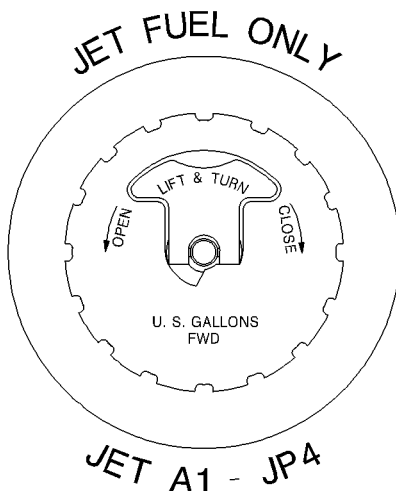
I4113006AAALM/A8300



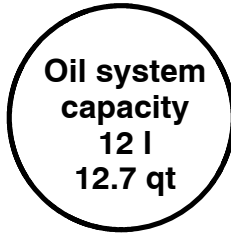
(6) Near fuel tank caps

I4112004AAAAMA8200

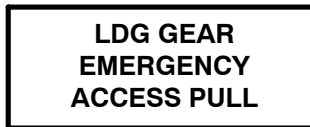
**JET-A-FUEL**  
TOTAL CAPACITY 150.5 us gal - 570 l  
ANTHCE ADDITIVE REQUIRED.SEE PILOT'S  
OPERATING HANDBOOK FOR OTHER APPROVED  
FUELS QUANTITY AND TYPE OF ADDITIVE



(7) On internal face of L.H. engine cowling



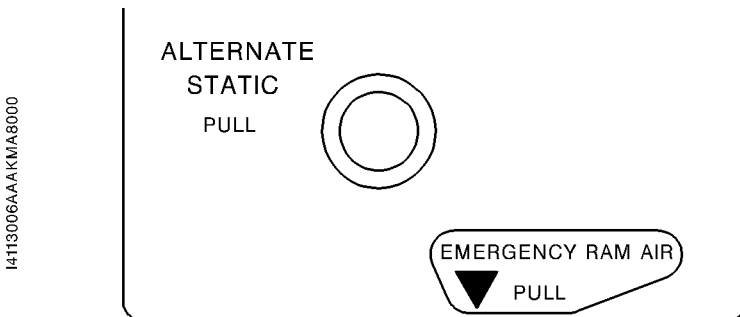
(8) On landing gear emergency control access door



(9) On rear passenger's table casing

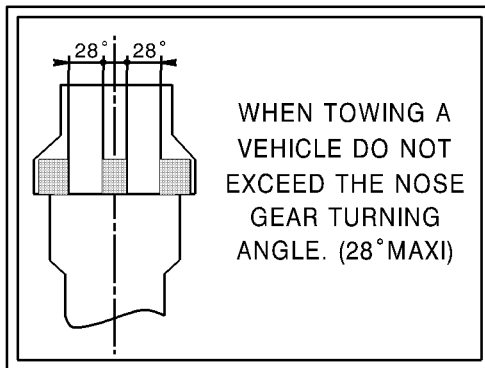


(10) Under R.H. control wheel



(11) On nose gear door

14112001AAACMA8000



(12) On nose gear leg

**NOSE LANDING GEAR  
TIRE PRESSURE : 6,5 bar  
94 psi**

(13) On main gear leg

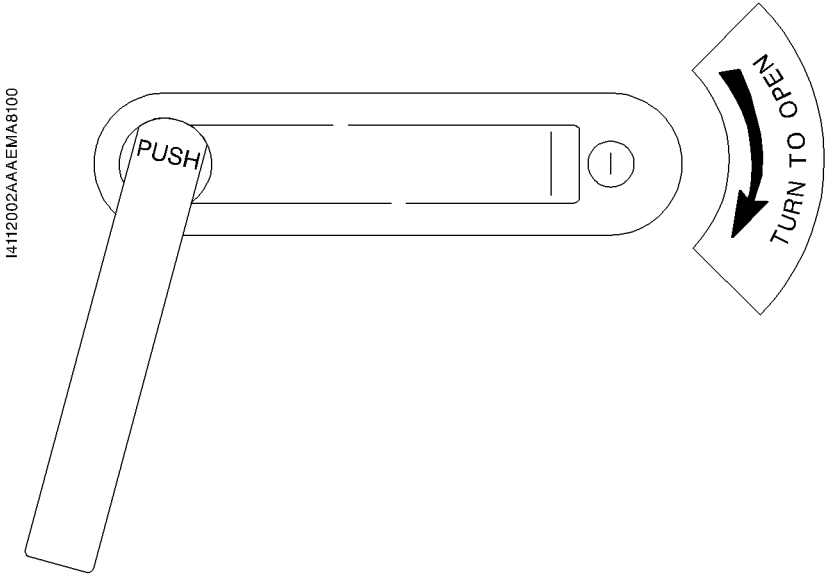
**MAIN LANDING GEAR  
TIRE PRESSURE : 8,96 bar  
130 psi**

(14) On engine cowling, in front of compartment door

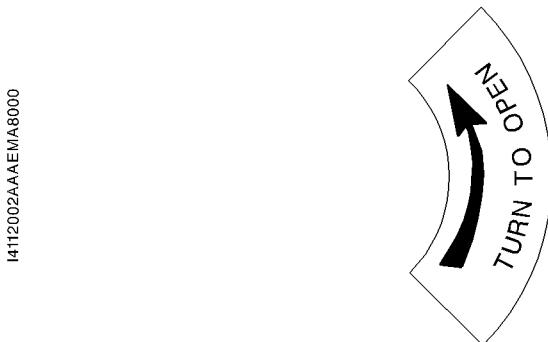
**EXTERNAL POWER  
28 VOLTS D.C. NOMINAL  
800 AMPS  
STARTING CAPACITY MIN  
DO NOT EXCEED 1400 AMPS**



(15) On "pilot" door - External side (if installed)

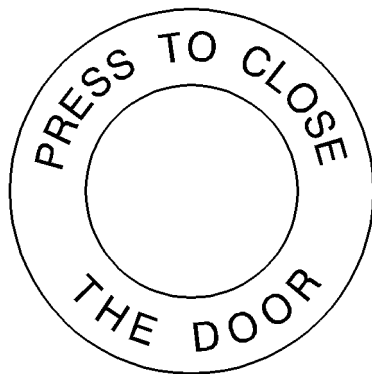


(16) On access door - External side



- (17) On outer fuselage skin aft of access door and in the cabin forward of access door

I4112002AAAADMA8000



- (18) On access door - Internal side

I4112002AAA BMA8100



**CAUTION:** UNLOCK BEFORE  
OPERATING THE HANDLE

TURN HANDLE  
TO OPEN



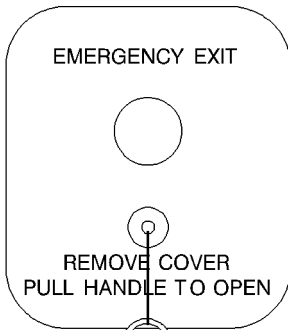
(19) On "pilot" door - Internal side (if installed)

14112002AAAABMIA8000

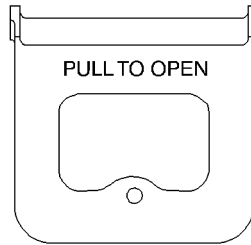


(20) On emergency exit handle

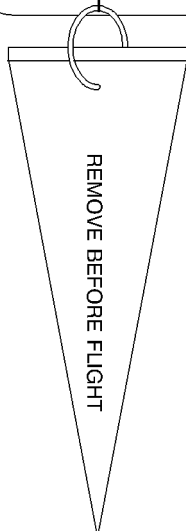
Marking on cover



Marking on handle



M4521000AAAALMAFM00



(21) On last step of stairs

**STAIRS MAX LOAD : ONE PERSON**

(22) On R.H. access door jamb

**DO NOT USE  
HAND RAIL  
TO RETRACT  
OR STOW  
STAIRS**

(23) On R.H. side at front seat level and on the first rear passengers masks container (R.H. side on the ceiling)

14113400AAAABMA8000

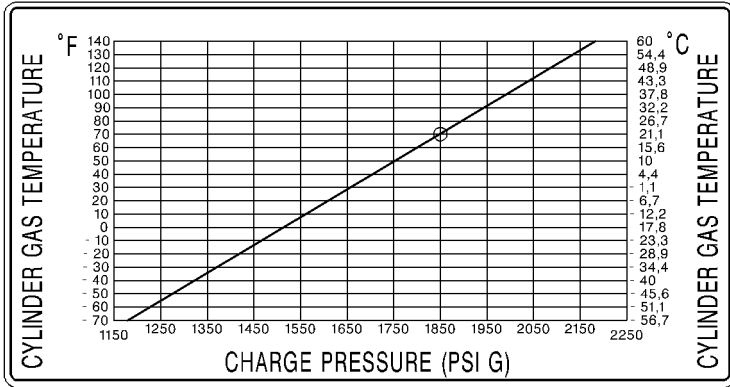
**WARNING**  
GREASY SUBSTANCES ARE CAPABLE  
OF SPONTANEOUS COMBUSTION  
ON CONTACT WITH OXYGEN  
DO NOT SMOKE WHILE OXYGEN IS IN USE

■ (24) On rear passengers masks containers

14113400AAAABMA8101

**OXYGEN MASKS INSIDE**  
PULL MASKS FOR  
OXYGEN SUPPLY ↓

(25) On internal face of the oxygen cylinder service door



I4112400AAAAMA8000

(26) On the oxygen service door

OXYGEN SERVICE POINT  
USE NO LUBRICANTS

I4112400AAAAMA8100

(27) On emergency locator transmitter inspection door

I4112200AAAAMIA8000



(28) On the potty seat curtain (if installed), on pilot's side

**CURTAIN MUST BE STOWED FOR TAKE-OFF AND LANDING**

Post-MOD70-0557-25C

(29) On the L.H. rear cargo compartment panel upper edge

I4113200AAAALMA8300

**MAX WEIGHT CAPACITY 4,5kg - 10 lbs**

Pre-MOD70-0336-26 and Post-MOD70-0391-26D

(30) On R.H. side at front seat level

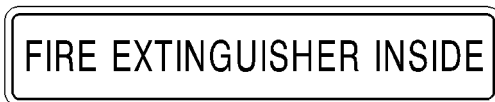
I4113207AAAAMIA8300

**FIRE EXTINGUISHER**

STORED IN LOWER DRAWER  
OF THE CABINET BEHIND  
THE RH STATION SEAT

- (31) On the lower drawer of the R.H. cabinet

I4113207AAAAIMA8000



# SECTION 3

## EMERGENCY PROCEDURES

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3.7 EMERGENCY LANDINGS .....	3.7.1
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3.9 ELECTRICAL SYSTEM .....	3.9.1
3.10 PRESSURIZATION AND AIR CONDITIONING .....	3.10.1
3.11 LANDING GEAR AND FLAPS .....	3.11.1
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**NOTE :**

*Sub-title for each Section 3 chapter is given at the back of their respective divider hereafter.*



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**SECTION 3.1**

**GENERAL**

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3.1 GENERAL .....	3.1.1

### **3.1 - GENERAL**

The recommended procedures for different failures or emergency situations are provided in this Section.

Emergency procedures associated with optional or particular equipment which require pilot's operating handbook supplements are provided in Section 9 "Supplements".

The pilot must know procedures given in this section and be prepared to take appropriate action should an emergency arise.

Some emergency procedures are a part of pilot basic training. Although these emergencies are discussed here, this information is not intended to replace such training, but only to provide a source of reference and review.

It is important for the pilot to be familiar with standard emergency procedures.

**Alarm system recall**

Main failure or state modification of the different systems are provided by warning or caution messages appearing on CAS display.

The CAS includes **red** messages indicating failures which require an immediate action from the pilot, and **amber** messages indicating failures or discrepancies which require an action as soon as practical.

Red or amber failure warnings are coupled with the lighting of

- a flashing red indicator



or - a fixed amber indicator



Both indicators are located on the upper part of the L.H. instrument panel. When either one lights up, press it once to reactivate. It will go out and is ready to signal in the event of another failure. On the CAS display, the corresponding failure message remains ON as long as the failed condition exists.



**SECTION 3.2**  
**REJECTED TAKEOFF PROCEDURE**

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3.2 REJECTED TAKEOFF PROCEDURE .....	3.2.1

## 3.2 - REJECTED TAKEOFF PROCEDURE

*Following an engine failure, refer to Chapter 3.3, Paragraph "ENGINE FAILURE AT TAKEOFF BEFORE ROTATION".*

*For any other reason :*

- 1 - Power lever ..... **IDLE**
- 2 - Reverse ..... **AS REQUIRED**
- 3 - Braking ..... **AS REQUIRED**

*If the airplane cannot be stopped on the remaining runway :*

- 4 - Power lever ..... **IDLE**
- 5 - Condition lever ..... **CUT OFF**
- 6 - Tank selector ..... **OFF**
- 7 - CRASH lever ..... **PULL DOWN**

*Evacuate if necessary, after the airplane has come to a stop.*



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## SECTION 3.3

### ENGINE FAILURES

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### 3.3 - ENGINE FAILURES

#### ENGINE FAILURE AT TAKEOFF BEFORE ROTATION

- 1 - Power lever ..... **IDLE**
- 2 - Braking ..... **AS REQUIRED**
- If the airplane cannot be stopped on the remaining runway :*
- 3 - Condition lever ..... **CUT OFF**
- 4 - Tank selector ..... **OFF**
- 5 - CRASH lever ..... **PULL DOWN**

### 3.3 - ENGINE FAILURES

## ENGINE FAILURE AFTER ROTATION (1/2)

- ***If altitude does not allow to choose a favourable runway or field :  
 Land straight ahead keeping flaps at TO and without changing  
 landing gear position.***

*Before touch-down :*

- 1 - Maintain :

Weight < 6579 lbs (2984 kg)	Weight ≥ 6579 lbs (2984 kg)
<b>IAS &gt; 80 KIAS</b>	<b>IAS &gt; 85 KIAS</b>

- 2 - Power lever ..... **IDLE**
- 3 - Condition lever ..... **CUT OFF**
- 4 - Tank selector ..... **OFF**
- 5 - CRASH lever ..... **PULL DOWN**

- ***If altitude allows to reach a favourable runway or ground :***

- 1 - LDG ..... **DN**
- 2 - Flaps ..... **AS REQUIRED**
- 3 - Maintain :

Weight < 6579 lbs (2984 kg)	Weight ≥ 6579 lbs (2984 kg)
<b>IAS &gt; 100 KIAS, Flaps UP</b>	<b>IAS &gt; 105 KIAS, Flaps UP</b>
<b>IAS &gt; 90 KIAS, Flaps TO</b>	<b>IAS &gt; 95 KIAS, Flaps TO</b>

- 4 - Power lever ..... **IDLE**
- 5 - Propeller governor lever ..... **FEATHER**



## 3.3 - ENGINE FAILURES

**ENGINE FAILURE AFTER ROTATION (2/2)***Before touch-down :*

- |                           |                  |
|---------------------------|------------------|
| 6 - Condition lever ..... | <b>CUT OFF</b>   |
| 7 - Tank selector .....   | <b>OFF</b>       |
| 8 - CRASH lever .....     | <b>PULL DOWN</b> |

3.3 - ENGINE FAILURES

<b>ENGINE FAILURE DURING FLIGHT</b>	
1 - If AP engaged :	
"AP / TRIM DISC INT" push-button .....	<b>PRESSED</b>
2 - Power lever .....	<b>IDLE</b>
3 - Propeller governor lever .....	<b>FEATHER</b>
4 - Condition lever .....	<b>CUT OFF</b>
5 - Remaining fuel .....	<b>CHECK</b>
6 - Tank selector .....	<b>SWITCH TANKS</b>
7 - "AUX BP" switch and fuel pressure .....	<b>CHECK / CORRECT</b>
8 - Air start (Refer to Chapter 3.4)	
9 - In case of high altitude (above 12000 ft), undertake an EMERGENCY DESCENT (Refer to Chapter 3.6)	
10 - If air start not successful, perform a FORCED LANDING (Refer to Chapter 3.7)	

## 3.3 - ENGINE FAILURES

**OIL PRESSURE DROP**

RED WARNING CAS MESSAGE "OIL PRESS" ON

OR

AMBER CAS MESSAGE "OIL PRESS" ON

Indicates that oil pressure is below 60 psi

1 - Oil pressure indicator ..... **CHECK*****If the indicated pressure is in the green sector :***

2 - Shorten the flight and monitor

***If the indicated pressure is not in the green sector :***

3 - Failure is confirmed

Due to the oil pressure drop, the propeller blade angle may go towards high pitch and therefore lead to a Np propeller rotation speed decrease.

**CAUTION**

**PREPARE FOR AN ENGINE STOP, SHORTLY ; REDUCE  
POWER TO THE MINIMUM NECESSARY, LAND AS SOON  
AS PRACTICAL**

***If engine loses power :***4 - Power lever ..... **IDLE**5 - Propeller governor lever ..... **FEATHER**6 - Condition lever ..... **CUT OFF**

Perform a FORCED LANDING (Refer to Chapter 3.7)



3.3 - ENGINE FAILURES

**ENGINE REGULATION DISCREPANCY,  
POWER LOSS,  
POWER LEVER CONTROL LOSS (1/2)**

- 1 - If circumstances allow :  
Power lever ..... **IDLE**
- 2 - Confirm engine still running
- 3 - Tank selector ..... **SWITCH TANKS**
- 4 - Check that no parameter exceeds allowed values
- 5 - "MAN OVRD" control ..... **ACTUATED  
progressively forward  
(Adjust power necessary to continue flight)**

If the available power is weak, extend the landing gear only on a glide path in final approach and extend full flaps only in short final. Do not perform a go-around.

**CAUTION**  
**IN "MANUAL OVERRIDE" ENGINE IS NEITHER PROTECTED AGAINST SLAM ACCELERATIONS, NOR AGAINST MAXIMUM SPEED OVERSHOOTING. AVOID RAPID CONTROL MOVEMENTS AND MANAGE ENGINE PARAMETERS**

**CAUTION**  
**IN SOME CASES, WHEN "MANUAL OVERRIDE" CONTROL IS USED, THE AVAILABLE POWER MAY NOT BE SUFFICIENT TO ENSURE A GO-AROUND IN LANDING CONFIGURATION, IN PARTICULAR IF THE WEIGHT IS NEAR THE MAXIMUM WEIGHT**

- 6 - Continue flight, SHORTEN if possible



3.3 - ENGINE FAILURES

**ENGINE REGULATION DISCREPANCY,  
POWER LOSS,  
POWER LEVER CONTROL LOSS (2/2)**

- 7 - Perform a normal landing WITHOUT REVERSE
- 8 - Braking ..... **AS REQUIRED**
- If minimum power obtained is excessive :***
- 1 - Reduce airspeed by setting airplane in nose-up attitude at IAS < 178 KIAS
- 2 - "INERT SEP" switch ..... **ON**
- 3 - If ITT > 840°C :  
"INERT SEP" switch ..... **OFF**
- 4 - Landing gear control ..... **DN**
- 5 - Flaps ..... **TO**
- 6 - Establish a long final or an ILS approach respecting IAS < 178 KIAS
- 7 - When runway is assured :  
Condition lever ..... **CUT OFF**
- 8 - Propeller governor lever ..... **FEATHER**  
**if necessary to extend trajectory**
- 9 - Flaps ..... **LDG as required**  
**(at IAS < 122 KIAS)**
- 10 - Land normally WITHOUT REVERSE
- 11 - Braking ..... **AS REQUIRED**

### 3.3 - ENGINE FAILURES

#### **GOVERNOR REGULATION CONTROL NOT OPERATING**

May indicate a rupture of the linkage of the governor control.

- 1 - Continue the flight.
- 2 - If  $N_p < 2000$  RPM, do not perform a go-around and do not use the reverse.

In that case, the go-around performance and the reverse efficiency might be lower than expected. The airplane repair is mandatory before any other flight.

## 3.3 - ENGINE FAILURES

**EXCESSIVE PROPELLER ROTATION SPEED**

Indicates :

- a propeller governor failure

In that case, the propeller overspeed limiter will limit initially the rotation speed to 2100 RPM approximately.

- or a propeller governor and overspeed limiter failure

In that case, only the torque limiter operates to limit the power. However, the pilot intervention is necessary to maintain  $N_p \leq 2000$  RPM. The propeller reducer is designed for a max.  $N_p$  of 2200 RPM.

- 1 - Reduce the power and the aircraft speed to avoid propeller rotation speeds higher than 2000 RPM.
- 2 - Land as soon as possible.
- 3 - Do not perform a go-around.

*A go-around would damage the engine reduction gearbox*

The airplane repair is mandatory before any other flight.

### 3.3 - ENGINE FAILURES

## RED WARNING CAS MESSAGE "ITT" ON

### **A - During engine start :**

Indicates :

ITT > 1000° C

1000° C > ITT > 870° C for more than 5 seconds

870° C > ITT > 840° C for more than 20 seconds

#### ***If the limits previously mentioned are exceeded :***

- 1 - Stop the starting procedure.
- 2 - Record the engine parameters displayed, as well as OAT conditions.
- 3 - Cancel the flight, inform maintenance department.

### **B - After engine start :**

Indicates that ITT has been higher than 840° C more than 2 seconds :

- 1 - Reduce power according to "Engine Operation" tables - Chapter 5.8

#### ***If ITT remains higher than 840° C :***

- 1 - Reduce power to maintain ITT < 840° C.
- 2 - Shorten the flight.
- 3 - Record the airplane and engine parameters displayed in case of overtemperature.
- 4 - Inform maintenance department at the end of the flight.

## 3.3 - ENGINE FAILURES

**RED WARNING CAS MESSAGE "TORQUE" ON**

Indicates that the torque is above 124.5 %.

- 1 - Reduce power according to "Engine Operation" tables - Chapter 5.8.
- 2 - Shorten the flight.
- 3 - Record the airplane and engine parameters read in case of overtorque.
- 4 - Inform maintenance department at the end of the flight.

3.3 - ENGINE FAILURES

<b>ENGINE DOES NOT STOP ON GROUND</b>	
If the engine does not stop when the condition lever is set to CUT OFF, proceed as follows :	
1 - "AP TRIMS" MASTER switch .....	<b>OFF</b>
2 - "AVIONICS" MASTER switch .....	<b>OFF</b>
3 - "INT LIGHTS" panel All switches .....	<b>OFF</b>
4 - "EXT LIGHTS" panel All switches .....	<b>OFF</b>
5 - "ECS" panel All switches .....	<b>OFF</b>
6 - Tank selector .....	<b>OFF</b>
Wait for engine stop due to lack of fuel in the pipes	
7 - "GENERATOR" selector .....	<b>OFF</b>
8 - "SOURCE" selector .....	<b>OFF</b>
9 - CRASH lever .....	<b>PULL DOWN</b>
10 - Inform the maintenance department	





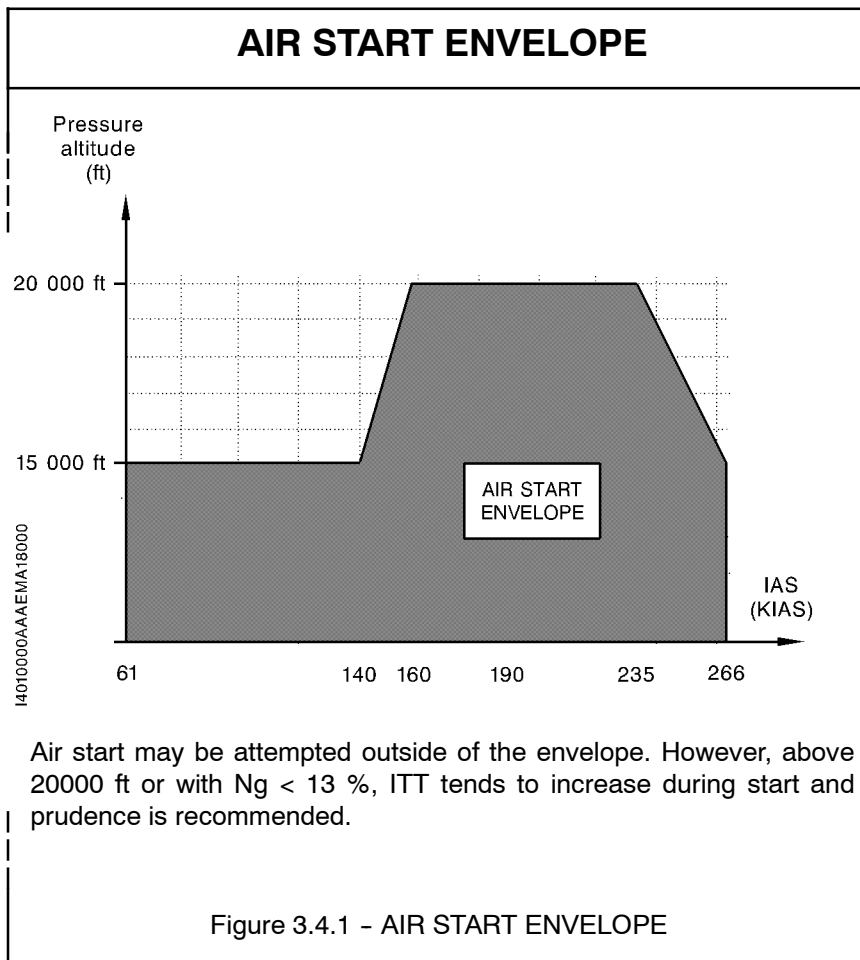
## SECTION 3.4

### AIR START

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## 3.4 - AIR START



3.4 - AIR START

**AIR START WITH STARTER (1/2)**

**CAUTION**  
**THE STARTER CANNOT OPERATE IF THE "GENERATOR" SELECTOR IS ON "ST-BY"**

**CAUTION**  
**IGNITION IS NOT AVAILABLE IF THE "ESS BUS TIE" SWITCH IS KEPT "EMER"**

*NOTE :*  
*The "AVIONICS MASTER" switch may be ON.*

1 - "BLEED" switch ..... OFF

**CAUTION**  
**"BLEED" SWITCH SET TO "AUTO" MAY CAUSE OVERTEMPERATURE OR ABNORMAL ACCELERATION**

- 2 - "AIR COND" switch ..... OFF
- 3 - Air start envelope ..... CHECKED
- 4 - Electric consumption ..... REDUCE
- 5 - Power lever ..... IDLE
- 6 - Propeller governor lever ..... FEATHER
- 7 - Condition lever ..... CUT OFF
- 8 - Tank selector ..... CHECK
- 9 - "AUX BP" fuel switch ..... ON



## 3.4 - AIR START

**AIR START WITH STARTER (2/2)**

- 10 - "IGNITION" switch ..... **AUTO or ON**
- 11 - "STARTER" switch ..... **ON**
- 12 - Condition lever ..... **LO / IDLE**  
when  $N_g \sim 13\%$
- 13 - ITT and  $N_g$  ..... **MONITOR**
- 14 - When  $N_g \sim 50\%$  steady ..... **STARTER OFF**  
**IGNITION AUTO**
- 15 - Condition lever ..... **HI / IDLE**
- 16 - Propeller governor lever ..... **MAX. RPM**
- 17 - Power lever ..... **AS REQUIRED**
- 18 - Electrical equipment ..... **AS REQUIRED**
- 19 - "AUX BP" fuel switch ..... **AUTO**
- 20 - "BLEED" switch ..... **AS REQUIRED**

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**SECTION 3.5**  
**FIRE AND SMOKE**

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## 3.5 - FIRE AND SMOKE

### ENGINE FIRE ON GROUND

Symptoms : ITT increasing, red warning CAS message "ITT" ON, smoke, ...

- 1 - Power lever ..... **IDLE**
- 2 - Condition lever ..... **CUT OFF**
- 3 - "BLEED" switch ..... **OFF**
- 4 - "AIR COND" switch ..... **OFF**
- 5 - Brakes ..... **AS REQUIRED**
- 6 - Tank selector ..... **OFF**
- 7 - Warn ground assistance, if necessary
- 8 - CRASH lever ..... **PULL DOWN**
- 9 - EVACUATE as soon as possible

### CABIN FIRE ON GROUND

- 1 - Power lever ..... **IDLE**
- 2 - Condition lever ..... **CUT OFF**
- 3 - Brakes ..... **AS REQUIRED**
- 4 - Warn ground assistance, if necessary
- 5 - CRASH lever ..... **PULL DOWN**
- 6 - Cabin extinguisher ..... **AS REQUIRED**
- 7 - EVACUATE as soon as possible



3.5 - FIRE AND SMOKE

<b>ENGINE FIRE IN FLIGHT</b>	
Symptoms : ITT increasing, red warning CAS message "ITT" ON, smoke, ...	
1 - Power lever .....	<b>IDLE</b>
2 - Propeller governor lever .....	<b>FEATHER</b>
3 - Condition lever .....	<b>CUT OFF</b>
4 - "AUX BP" fuel switch .....	<b>OFF</b>
5 - Tank selector .....	<b>OFF</b>
6 - "BLEED" switch .....	<b>OFF</b>
7 - "AIR COND" switch .....	<b>OFF</b>
8 - In case of high altitude (above 12000 ft), undertake an EMERGENCY DESCENT (Refer to Chapter 3.6)	
9 - Perform a FORCED LANDING (ENGINE CUT OFF) (Refer to Chapter 3.7)	

**WARNING**

**AFTER ENGINE FIRE, DO NOT ATTEMPT AN AIR START**

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3.5 - FIRE AND SMOKE

**CABIN ELECTRICAL FIRE OR  
SMOKE DURING FLIGHT (1/2)**

*If the origin is known :*

1 - Oxygen and goggles ..... **USE AS REQUIRED**  
**(pilot and passengers)**

2 - Defective equipment  
Corresponding circuit breaker ..... **PULL**

*Descend quickly below 12000 ft*

3 - Using the on board extinguisher, **EXTINGUISH** fire if necessary

4 - Smoke elimination  
(if necessary) ..... **UNDERTAKE PROCEDURE**  
**(Refer to this chapter)**

5 - **LAND** as soon as possible

*If the origin is unknown :*

1 - Oxygen and goggles ..... **USE AS REQUIRED**  
**(pilot and passengers)**

2 - "AIR COND" switch ..... **OFF**

3 - Not necessary equipment ..... **OFF**

4 - Smoke elimination  
(if necessary) ..... **UNDERTAKE PROCEDURE**  
**(Refer to this chapter)**

*If smoke or fire stops :*

*LAND as soon as possible.*



## 3.5 - FIRE AND SMOKE

### CABIN ELECTRICAL FIRE OR SMOKE DURING FLIGHT (2/2)

*If smoke or fire persists :*

- 5 - "SOURCE" selector ..... **OFF**
- 6 - "GENERATOR" selector ..... **OFF**
- 7 - Fire ..... **EXTINGUISH if necessary with the  
on board extinguisher**
- 8 - All circuit breakers ..... **PULL**
- 9 - All electrical equipment ..... **CUT OFF**
- 10 - "SOURCE" selector ..... **BAT**
- 11 - "GENERATOR" selector ..... **MAIN**
- 12 - Necessary circuit breakers ..... **ENGAGE  
one after the other checking for  
possible fire or smoke**
- 13 - Necessary electrical equipment ..... **ON  
one after the other checking for  
possible fire or smoke**
- 14 - Defective equipment  
Corresponding circuit breaker ..... **PULL**
- 15 - Not affected necessary equipment ..... **ON as required**
- 16 - LAND as soon as possible

3.5 - FIRE AND SMOKE

<b>SMOKE ELIMINATION</b>	
1 - Smoke origin .....	<b>IDENTIFY</b>
2 - Oxygen and goggles .....	<b>USE AS REQUIRED (pilot and passengers)</b>
3 - If smoke persists, undertake an EMERGENCY DESCENT (Refer to Chapter 3.6)	
4 - "BLEED" switch .....	<b>OFF</b>
5 - "AIR COND" switch .....	<b>OFF</b>
6 - "DUMP" switch .....	<b>ACTUATE</b>
Wait until the differential pressure drops	
7 - "RAM AIR" control knob .....	<b>PULL</b>
If smoke increases .....	<b>PUSH</b>
8 - LAND as soon as possible	



**SECTION 3.6**  
**EMERGENCY DESCENTS**

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MAXIMUM RANGE DESCENT .....	3.6.3

## 3.6 - EMERGENCY DESCENTS

Two types of descent are considered :

1 - Engine running, maximum descent rate, if necessary

The factors to be considered are :

- Cabin altitude and oxygen duration
- Electrical power endurance
- Distance to appropriate landing area
- Flight conditions IMC, VMC, ICING
- Minimum safe altitude
- Fuel reserves

2 - Engine failure, aircraft flown for maximum range

The pilot is in charge of evaluating the situation and priorities.

Refer to Figure 3.6.1 "EMERGENCY DESCENT PROFILES".

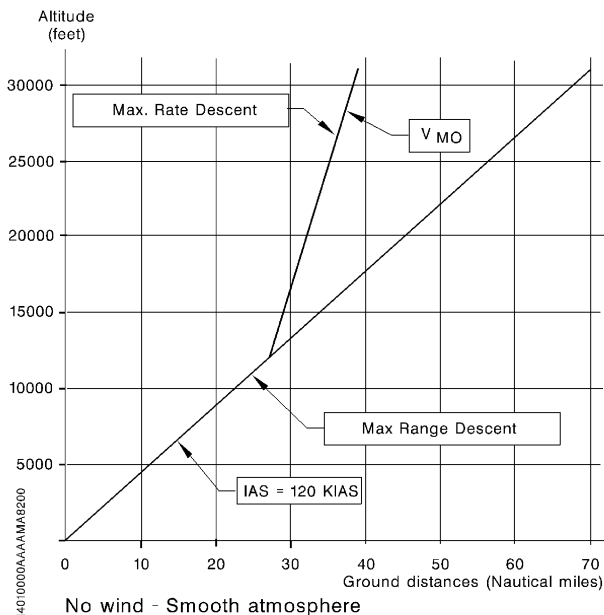


Figure 3.6.1 - EMERGENCY DESCENT PROFILES



3.6 - EMERGENCY DESCENTS

<b>MAXIMUM RATE DESCENT</b>	
1 - Power lever .....	<b>IDLE</b>
2 - Oxygen .....	<b>If necessary</b>
3 - Propeller governor lever .....	<b>MAX. RPM</b>
<b>Procedure in smooth air :</b>	
4 - Flaps .....	<b>UP</b>
5 - Landing gear .....	<b>UP</b>
6 - Speed .....	<b>V<sub>MO</sub> = 266 KIAS</b>
<b>Procedure in rough air or in case of structure problem :</b>	
7 - Reduce speed .....	<b>IAS ≤ 178 KIAS</b>
8 - Landing gear .....	<b>DN</b>
9 - Flaps .....	<b>UP</b>
10 - Keep .....	<b>IAS ≤ 178 KIAS</b>

## 3.6 - EMERGENCY DESCENTS

<b>MAXIMUM RANGE DESCENT (1/2)</b>	
1 - Power lever .....	<b>IDLE</b>
2 - Propeller governor lever .....	<b>FEATHER</b>
3 - Condition lever .....	<b>CUT OFF</b>
4 - Flaps .....	<b>UP</b>
5 - Landing gear .....	<b>UP</b>
6 - Speed .....	<b>IAS = 120 KIAS</b>
7 - Oxygen .....	<b>If necessary</b>
Check oxygen duration before reaching 12000 ft and check flow to passengers	
8 - "DUMP" switch .....	<b>ACTUATED</b>
9 - "RAM AIR" control knob .....	<b>PULLED</b>
<b>If conditions allow : VMC and non icing conditions :</b>	
10 - "ESS BUS TIE" reverse switch .....	<b>Cover up EMER position</b>
11 - Prepare a forced landing .....	<b>Refer to Chapter 3.7</b>
<b>If flight conditions do not allow :</b>	
12 - "ESS BUS TIE" reverse switch .....	<b>NORMAL</b>
13 - Manually disconnect ancillary systems as follows :	
- "AIRFRAME DE ICE" switch .....	<b>OFF</b>
- "ICE LIGHT" switch .....	<b>OFF</b>
- "PROP DE ICE" switch .....	<b>OFF</b>
- "WINDSHIELD" switch .....	<b>OFF</b>



3.6 - EMERGENCY DESCENTS

**MAXIMUM RANGE DESCENT (2/2)**

- "PITOT R & STALL HTR" switch ..... **OFF**
- "L.LDG / TAXI / R.LDG / PULSE SYST" switches ..... **OFF**
- "STROBE" switch ..... **OFF**
- "BLEED / AIR COND" switches ..... **OFF**
- "AUX BP" switch ..... **OFF**
- "FUEL SEL" switch ..... **MAN**
- "AP TRIMS" MASTER switch ..... **OFF**
- PFD 2 breaker ..... **PULL**
- ADC 2 breaker ..... **PULL**
- "CD" player ..... **OFF**
- "INSTR / CABIN / ACCESS" controls ..... **OFF**
- XPDR 2 breaker ..... **PULL**

***If icing conditions :***

- "PITOT L HTR" switch ..... **Checked ON**
- "WINDSHIELD" switch ..... **ON**
- Maintain minimum recommended speeds (Chapter 4.5 - "Flight into known icing conditions", Paragraph "Ice protection procedures", Point 3)

***If time permits :***

- "SVC PLUGS" breaker ..... **PULL**
  - "AIR COND" breaker ..... **PULL**
- 14 - Prepare a forced landing ..... **Refer to Chapter 3.7**



## SECTION 3.7

### EMERGENCY LANDINGS

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## 3.7 - EMERGENCY LANDINGS

### FORCED LANDING (ENGINE CUT OFF)

- 1 - Power lever ..... IDLE
- 2 - Propeller governor lever ..... FEATHER
- 3 - Condition lever ..... CUT OFF
- 4 - Tank selector ..... OFF
- 5 - "AUX BP" fuel switch ..... OFF
- 6 - "BLEED" switch ..... OFF
- 7 - "AIR COND" switch ..... OFF
- 8 - "DUMP" switch ..... ACTUATED
- 9 - Glide speed ..... 120 KIAS maintained until favourable ground approach

***If ground allows it :***

- 10 - "ESS BUS TIE" reverse switch ..... NORMAL  
in order to have GEAR and FLAPS available
- 11 - Landing gear ..... DN

***If night conditions :***

- 12 - L.LDG / R.LDG ..... ON

***If ground does not allow it :***

- 13 - Keep landing gear ..... UP
- 14 - When chosen ground is assured ..... FLAPS LDG
- 15 - CRASH lever ..... PULL DOWN
- 16 - Final approach : Weight < 6250 lbs (2835 kg) : IAS = 80 KIAS  
Weight ≥ 6250 lbs (2835 kg) : IAS = 85 KIAS
- 17 - Land flaring out
- 18 - EVACUATE after stop

3.7 - EMERGENCY LANDINGS

**TIRE BLOWOUT DURING LANDING**

- 1 - Control direction with brakes and nose wheel steering
- 2 - REVERSE ..... **AS REQUIRED**
- 3 - Stop airplane to minimize damages
- 4 - Perform engine SHUT-DOWN procedure (Refer to Chapter 4.3)

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3.7 - EMERGENCY LANDINGS

**LANDING WITH UNLOCKED MAIN LANDING GEAR (1/2)**

- 1 - Ask control tower or another airplane to visually check landing gear position

**CAUTION**  
**IF ONE MAIN LANDING GEAR IS NOT DOWN, IT IS BETTER TO LAND WITH GEAR UP.**

***If defective gear is down but unlocked :***

- 2 - "BLEED" switch ..... **OFF**
- 3 - "DUMP" switch ..... **ACTUATED**
- 4 - Maintain tank selector on defective landing gear side to lighten corresponding wing [maximum fuel unbalance 15 us gal (57 litres)]
- 5 - Choose a runway with headwind or crosswind blowing from defective gear side
- 6 - Align the airplane to land on the runway edge opposite to the defective landing gear
- 7 - Land and set nose gear immediately on ground to assure lateral control
- 8 - Use full aileron during roll-out to lift the wing with the defective landing gear
- 9 - Preferably do not use reverse
- 10 - Complete taxiing with a slight turn toward defective landing gear



## 3.7 - EMERGENCY LANDINGS

### LANDING WITH UNLOCKED MAIN LANDING GEAR (2/2)

- 11 - Condition lever ..... **CUT OFF**
- 12 - Engine stop procedure ..... **COMPLETE**
- 13 - EVACUATE

***If landing gear drags during landing :***

- 14 - Condition lever ..... **CUT OFF**
- 15 - CRASH lever ..... **PULL DOWN**
- 16 - Tank selector ..... **OFF**
- 17 - EVACUATE after airplane comes to a stop

3.7 - EMERGENCY LANDINGS

**LANDING WITH DEFECTIVE NOSE LANDING GEAR (DOWN UNLOCKED OR NOT DOWN)**

- 1 - Transfer passengers to the rear, if necessary
- 2 - Approach ..... **Flaps TO**

Weight < 6250 lbs (2835 kg)	Weight ≥ 6250 lbs (2835 kg)
<b>IAS = 90 KIAS</b>	<b>IAS = 95 KIAS</b>

- 3 - Land with nose-up attitude, keep nose high
- 4 - Condition lever ..... **CUT OFF**
- 5 - Propeller governor lever ..... **FEATHER**
- 6 - Touch-down slowly with nose wheel and keep elevator at nose-up stop
- 7 - Moderate braking
- 8 - CRASH lever ..... **PULL DOWN**
- 9 - EVACUATE after airplane comes to a stop

3.7 - EMERGENCY LANDINGS

<b>LANDING WITH GEAR UP</b>					
1 - Final approach .....	<b>Standard</b>				
2 - Flaps .....	<b>LDG</b>				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px; width: 50%;">Weight &lt; 6250 lbs (2835 kg)</td> <td style="padding: 5px; width: 50%;">Weight ≥ 6250 lbs (2835 kg)</td> </tr> <tr> <td style="text-align: center; padding: 5px;"><b>IAS = 80 KIAS</b></td> <td style="text-align: center; padding: 5px;"><b>IAS = 85 KIAS</b></td> </tr> </table>		Weight < 6250 lbs (2835 kg)	Weight ≥ 6250 lbs (2835 kg)	<b>IAS = 80 KIAS</b>	<b>IAS = 85 KIAS</b>
Weight < 6250 lbs (2835 kg)	Weight ≥ 6250 lbs (2835 kg)				
<b>IAS = 80 KIAS</b>	<b>IAS = 85 KIAS</b>				
3 - "BLEED" switch .....	<b>OFF</b>				
4 - "DUMP" switch .....	<b>ACTUATED</b>				
<i>When runway is assured :</i>					
5 - Power lever .....	<b>IDLE</b>				
6 - Propeller governor lever .....	<b>FEATHER</b>				
7 - Condition lever .....	<b>CUT OFF</b>				
8 - Tank selector .....	<b>OFF</b>				
9 - Flare out					
10 - After touch-down, CRASH lever .....	<b>PULL DOWN</b>				
11 - EVACUATE after airplane comes to a stop					

3.7 - EMERGENCY LANDINGS

<b>LANDING WITHOUT ELEVATOR CONTROL</b>	
1 - Configuration .....	<b>LANDING GEAR DN - FLAPS LDG</b>
2 - Airspeed .....	<b>Maintain IAS = 95 KIAS</b>
3 - Power as necessary to maintain airspeed according to an easy approach slope $\simeq$ 300 ft / min	
4 - Adjust elevator by using manual pitch trim wheel	
5 - When ground approaches, decrease slope progressively	
6 - Reduce power progressively	

## 3.7 - EMERGENCY LANDINGS

### LANDING WITH FLAPS MALFUNCTION

**For flaps deflections from "UP" to "TO" position :**

Proceed as for a normal landing, maintaining approach airspeed :

Weight < 6250 lbs (2835 kg)	Weight ≥ 6250 lbs (2835 kg)
<b>IAS = 100 KIAS</b>	<b>IAS = 105 KIAS</b>

Provide for a landing distance increased up to about 60 %

**For flaps deflections greater than "TO" position :**

Proceed as for a normal landing, maintaining approach airspeed :

Weight < 6250 lbs (2835 kg)	Weight ≥ 6250 lbs (2835 kg)
<b>IAS = 95 KIAS</b>	<b>IAS = 100 KIAS</b>

Provide for a landing distance increased up to about 50 %

### 3.7 - EMERGENCY LANDINGS

<b>DITCHING</b>	
1 - Landing gear .....	<b>UP</b>
<i>In heavy swell with light wind, land parallel to the swell (rollers).</i>	
<i>In heavy wind, land facing wind.</i>	
2 - Flaps .....	<b>LDG</b>
3 - Maintain a descent rate as low as possible when approaching the water	
4 - Airspeed :	
Weight < 6579 lbs (2984 kg)	Weight ≥ 6579 lbs (2984 kg)
<b>IAS = 80 KIAS</b>	<b>IAS = 85 KIAS</b>
5 - "BLEED" switch .....	<b>OFF</b>
6 - "DUMP" switch .....	<b>ACTUATED</b>
7 - CRASH lever .....	<b>PULL DOWN</b>
8 - Maintain attitude without rounding off until touch-down	
9 - EVACUATE through EMERGENCY EXIT	





**SECTION 3.8**  
**FUEL SYSTEM**

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### 3.8 - FUEL SYSTEM

#### RED WARNING CAS MESSAGE "FUEL PRESS" ON

Indicates a fuel pressure drop at "HP" engine pump inlet

- 1 - Remaining fuel ..... **CHECK**
- 2 - Tank selector ..... **SWITCH TANKS**
- 3 - Fuel pressure indication ..... **CHECK**
- 4 - "AUX BP" fuel switch ..... **AUTO**

*If alarm persists :*

- 5 - "AUX BP" fuel switch ..... **ON**  
Warning CAS message "**AUX BOOST PMP ON**" ON . **CHECK**
- 6 - Fuel pressure ..... **CHECK**

*If pressure is normal again and warning light is off, mechanical pump has failed.*

- 7 - Maintain "AUX BP" fuel switch ..... **ON**

*If pressure remains at 0 (or drops to 0 after "AUX BP" pump operation) and if warning "FUEL PRESS" remains ON :*

- 8 - Tank selector ..... **SWITCH TANKS**

*If pressure is normal again, a supply problem may have occurred from the tank selected first (air vent, fuel icing, etc ...).*

*If pressure remains at 0 and if warning "FUEL PRESS" remains ON :*

- 9 - Fullest tank ..... **SELECT**
- 10 - Avoid high power and rapid movements of the power lever.
- 11 - Descend to an altitude below 18000 ft.
- 12 - Land as soon as possible.

3.8 - FUEL SYSTEM

**AMBER WARNING CAS MESSAGE  
"AUX BOOST PMP ON" ON**

(Indication is normal if "AUX BP" fuel switch is in ON position)

*If "AUX BP" fuel switch is in AUTO position :*

1 - Reset to ..... **ON**

2 - Then to ..... **AUTO**

*If "AUX BOOST PMP ON" warning CAS message goes out,  
continue flight normally*

*If "AUX BOOST PMP ON" warning CAS message remains ON,  
mechanical booster pump has failed*

3 - "AUX BP" fuel switch ..... **ON**

4 - Shorten flight

3.8 - FUEL SYSTEM

**AMBER WARNING CAS MESSAGE  
"FUEL LOW L" OR "FUEL LOW R" ON**

Indicates level drop in the corresponding tank

- 1 - Corresponding gage ..... **CHECK**
- 2 - Check the other tank has been automatically selected

*If not :*

- 3 - "FUEL SEL" switch ..... **MAN**
- 4 - Select tank manually as required

**AMBER WARNING CAS MESSAGE  
"AUTO SEL" ON**

Indicates there is no more automatic control mode running

- 1 - "FUEL SEL" switch ..... **AUTO**

*If it is on "AUTO", failure is confirmed*

- 2 - "FUEL SEL" switch ..... **MAN**
- 3 - Select tanks manually as required

**CAUTION**

**MAXIMUM UNBALANCE IS 15 USG**

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## SECTION 3.9

### ELECTRICAL SYSTEM

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### 3.9 - ELECTRICAL SYSTEM

#### **AMBER WARNING CAS MESSAGE "BAT OFF" ON**

Indicates that :

- the "SOURCE" selector has been positioned on OFF or GPU or
- the battery plug is disconnected

- 1 - If necessary ..... **CORRECT**
- 2 - If warning persists ..... **SHORTEN FLIGHT**
- 3 - Monitor airplane mains voltage



3.9 - ELECTRICAL SYSTEM

**AMBER WARNING CAS MESSAGE  
"MAIN GEN" ON**

Indicates that "GENERATOR" selector has been positioned to OFF or ST-BY, or main generator is cut off

- 1 - If necessary ..... **CORRECT**
- 2 - If warning persists ..... **"MAIN GEN" switching confirmed**
- 3 - "MAIN GENERATOR RESET" push-button ..... **PUSH**

*In case of failure :*

- 4 - Keep the following systems connected :
  - A/P system
  - Deicing systems
  - STROBE and NAV lights
  - Cockpit emergency lights
  - VHF 1
  - NAV/GPS 1
  - BLEED
  - Landing lights on short final

This will allow keeping electrical consumption below maximum standby capacity.

All other not necessary equipment can be disconnected.

- 5 - "GENERATOR" selector ..... **ST- BY**  
**(RESET if necessary)**

## 3.9 - ELECTRICAL SYSTEM

### **AMBER WARNING CAS MESSAGE "LOW VOLTAGE" ON normal functioning on "MAIN GEN"**

1 - Voltmeter voltage ..... **CHECK**

2 - If voltage is < 26 Volts, monitor a possible drop or any indication of battery run-down

*In that case :*

3 - Keep the following systems connected :

- A/P system
- Deicing systems
- STROBE and NAV lights
- Cockpit emergency lights
- VHF 1
- NAV/GPS 1
- BLEED
- Landing lights on short final

This will allow keeping electrical consumption below maximum standby capacity.

All other not necessary equipment can be disconnected.

4 - "GENERATOR" selector ..... **ST-BY**  
**(RESET if necessary)**

5 - Voltage and battery charge ..... **MONITOR**

3.9 - ELECTRICAL SYSTEM

**AMBER WARNING CAS MESSAGE  
"LOW VOLTAGE" ON  
functioning on "ST-BY GENERATOR"  
(after "MAIN GEN" failure) (1/3)**

Amber warning CAS messages "MAIN GEN and "LOW VOLTAGE" ON with "GENERATOR" selector on "ST-BY"

- 1 - "GENERATOR" selector ..... **MAIN**
- 2 - "MAIN GENERATOR RESET" push-button ..... **PRESS**

**If successful :**

- 3 - Disconnect electrical systems not essential
- 4 - Monitor voltmeter and ammeter

*Prepare to SHORTEN FLIGHT*

**If not successful :**

- 5 - "GENERATOR" selector ..... **ST-BY**
- 6 - "ST-BY GENERATOR RESET" push-button ..... **PRESS**

**If successful :**

- 7 - Disconnect electrical systems not essential
- 8 - Monitor voltmeter and ammeter

*Prepare to SHORTEN FLIGHT*

**If not successful, both generators failure is confirmed. If possible, return to VMC conditions**

- 9 - "GENERATOR" selector ..... **OFF**



## 3.9 - ELECTRICAL SYSTEM

### AMBER WARNING CAS MESSAGE "LOW VOLTAGE" ON functioning on "ST-BY GENERATOR" (after "MAIN GEN" failure) (2/3)

***If conditions allow : VMC and non icing conditions***

- 10 - If altitude  $\geq$  12000 ft : "OXYGEN" switch ..... **ON**
- 11 - "ESS BUS TIE" reverse switch ..... **Cover up  
EMER position**

*In this configuration, only both "ESS BUS" bars and "BUS BAT" bar are directly supplied by the battery*

■ Available systems - see Figure 3.9.1

- 12 - LAND as soon as possible

■ *If use of other systems is required :*

- "ESS BUS TIE" reverse switch ..... **NORMAL**

***If flight conditions do not allow :***

■ 13 - Manually disconnect systems as follows :

- "AIRFRAME DE ICE" switch ..... **OFF**
- "ICE LIGHT" switch ..... **OFF**
- "PROP DE ICE" switch ..... **OFF**
- "WINDSHIELD" switch ..... **OFF**
- "PITOT R & STALL HTR" switch ..... **OFF**
- "L.LDG / TAXI / R.LDG / PULSE SYST" switches ..... **OFF**
- "STROBE" switch ..... **OFF**
- "BLEED / AIR COND" switches ..... **OFF**
- "AUX BP" switch ..... **OFF**
- "FUEL SEL" switch ..... **MAN**
- "AP TRIMS" MASTER switch ..... **OFF**
- PFD 2 breaker ..... **PULL**



3.9 - ELECTRICAL SYSTEM

**AMBER WARNING CAS MESSAGE  
"LOW VOLTAGE" ON  
functioning on "ST-BY GENERATOR"  
(after "MAIN GEN" failure) (3/3)**

- ADC 2 breaker ..... **PULL**
- TAS breaker ..... **PULL**
- DATA LINK breaker ..... **PULL**
- "CD" player ..... **OFF**
- "INSTR / CABIN / ACCESS" controls ..... **OFF**
- XPDR 2 breaker ..... **PULL**

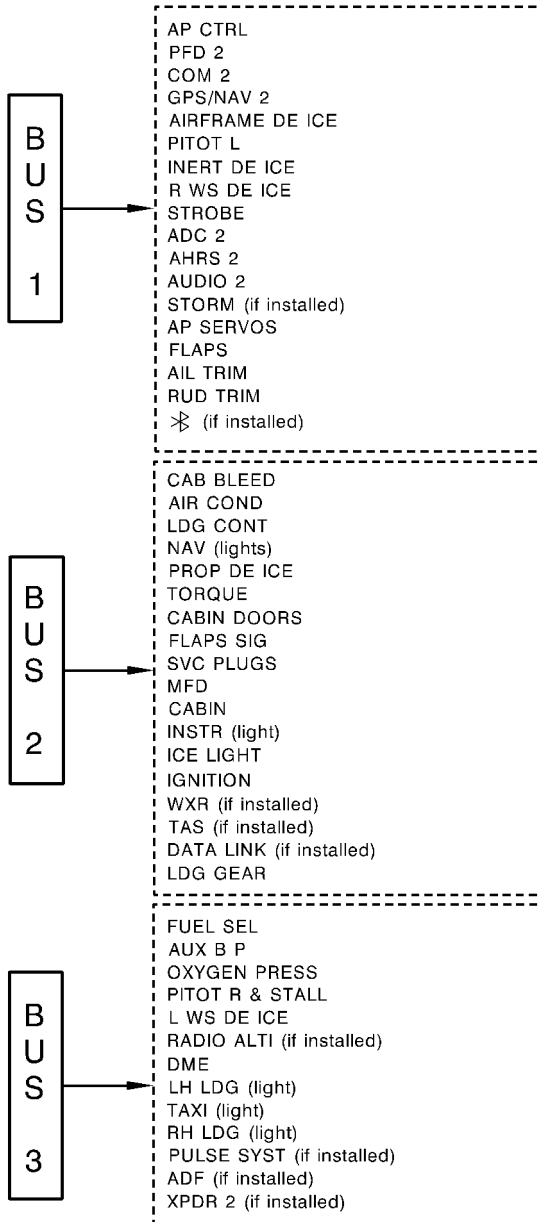
***If icing conditions :***

- "PITOT L HTR" switch ..... **Checked ON**
- "WINDSHIELD" switch ..... **ON**
- Maintain minimum recommended speeds (Chapter 4.5 - "Flight into known icing conditions", Paragraph "Ice protection procedures", Point 3)

***If time permits :***

- "SVC PLUGS" breaker ..... **PULL**
- "AIR COND" breaker ..... **PULL**

14 - LAND as soon as possible



14246000AAA CMM8401

Figure 3.9.1 (1/2) - ELECTRICAL DISTRIBUTION OF BUS BARS

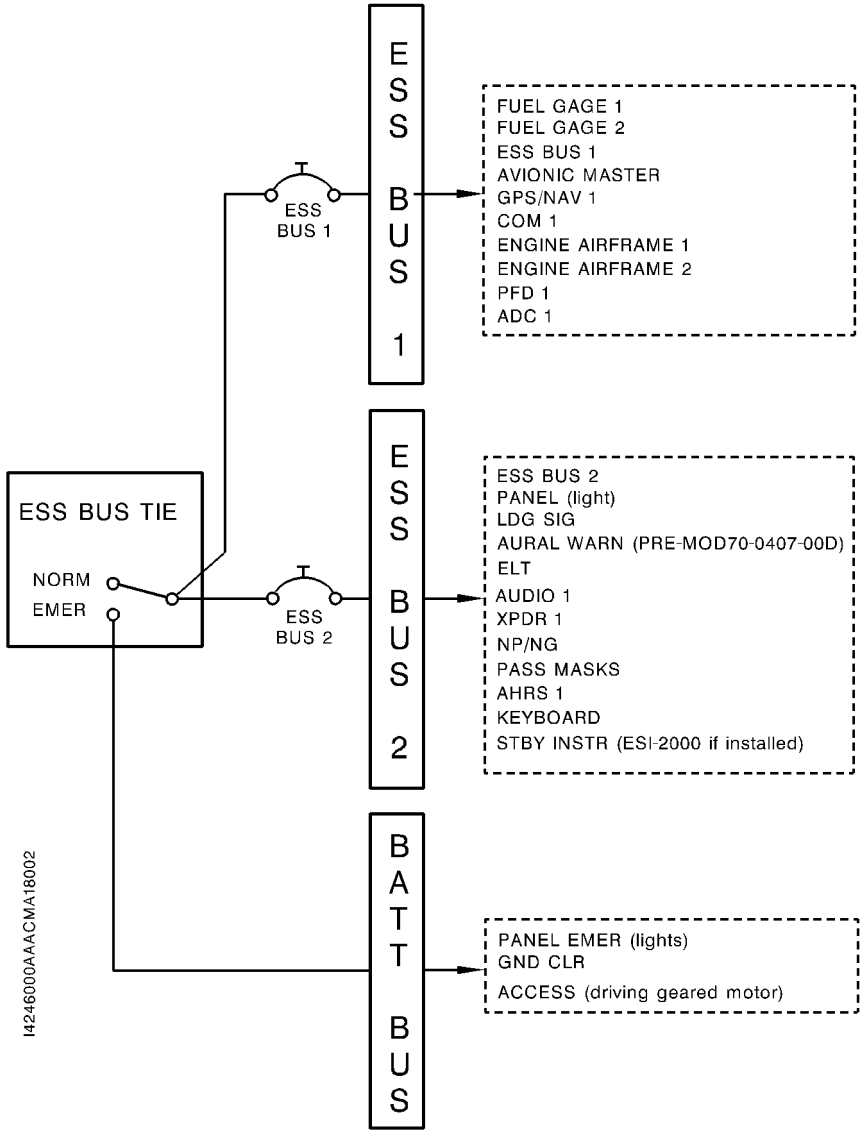


Figure 3.9.1 (2/2) - ELECTRICAL DISTRIBUTION OF BUS BARS

## 3.9 - ELECTRICAL SYSTEM

**"AVIONICS" MASTER SWITCH FAILURE**

*In case of "AVIONICS" MASTER switch malfunction, leading to the impossibility of energizing the radionavigation equipment :*

1 - "AVIONICS MASTER" circuit breaker ..... **PULL**

The radionavigation equipment are supplied again and the flight can continue.



### 3.9 - ELECTRICAL SYSTEM

Post-MOD70-0335-34 (ESI-2000)

#### **TOTAL LOSS OF ELECTRICAL POWER**

- 1 - Maintain aircraft control.
- 2 - Follow display instruction to "PRESS ANY KEY FOR BATTERY POWER".
- 3 - Use the ESI-2000 for attitude, airspeed and/or altitude.
- 4 - Land as soon as possible.

**NOTE :**

*Aircraft power is provided to the ESI-2000 display for normal operation. Operation of the basic ESI system is automatic - the system is powered ON anytime aircraft power is ON. The internal battery will provide power to the ESI-2000 if aircraft power is lost.*

*Press any key to allow the ESI-2000 to continue operation using the internal battery. If no key is pressed, the ESI-2000 will shut down automatically within (5) minutes.*

## 3.9 - ELECTRICAL SYSTEM

### ESI-2000 FAILURES (1/2)

#### 1 - Battery indicator symbol meaning

BATTERY INDICATOR	DESCRIPTION
Not shown	Normal operation - No information needs to be conveyed
Green	More than one hour of operation remains
Amber	Less than one hour of operation remains
Amber "X"	Battery is not available to power unit (over temperature or low battery voltage condition exists)
Red "X"	Battery has failed - Service is required

#### 2 - ESI-2000 Attitude invalid in flight

- Maintain straight and level flight at a constant airspeed.
- Press the M button twice.
- Press the S button once
- The ESI-2000 will initiate the alignment process.
- When a normal attitude display is available, resume normal flight.
- If attitude information remains invalid, use attitude information from the primary attitude display.

#### 3 - Primary Attitude and/or Air Data Source has failed or is unreliable

- Maintain control of the aircraft.
- Land as soon as practicable.
- Use the ESI-2000 for attitude, airspeed and altitude information.



### 3.9 - ELECTRICAL SYSTEM

#### ESI-2000 FAILURES (2/2)

- 4 - Internal Battery Failure (red X'd battery indicator) in flight
  - Remain clear of IMC.
  - If in visual meteorological conditions :
    - . Cycle power on ESI-2000 (including internal power)
    - . Maintain straight and level while unit aligns
    - . If red "X" reappears, remain clear of IMC.
- 5 - Internal Battery not available (amber X'd battery indicator) in flight (battery above 55°C)
  - Reduce temperature of cockpit environment.
  - Remain clear of IMC until amber "X" is removed from the display.
- 6 - Internal Battery state of charge low (amber battery symbol displayed) in flight
  - Remain clear of IMC until amber battery symbol is removed from display signifying battery is charged sufficiently to have one hour of discharge ability.
- 7 - ESI-2000 in flight shutdown (Manual Procedure)
  - Maintain control of the aircraft using aircraft primary instruments.
  - Remove all aircraft power to the ESI-2000 by opening the 3 Amps "STBY INSTR" circuit breaker.
  - Press any key (button) as stated by the on screen message.
  - Press the M (Menu) button repeatedly until Shutdown menu is shown.
  - Press and hold the + (Hold) button until "SHUTTING DN" message is shown in the upper left corner of the screen.



**SECTION 3.10**  
**PRESSURIZATION AND AIR CONDITIONING**

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## 3.10 - PRESSURIZATION AND AIR CONDITIONING

<b>RED WARNING CAS MESSAGE "CABIN DIFF PRESS" ON</b>	
1 - Pressurization indicator .....	<b>CHECK</b>
<i>If <math>\Delta P &gt; 6.2</math> psi :</i>	
2 - "BLEED" switch .....	<b>OFF</b>
3 - EMERGENCY DESCENT (Refer to Chapter 3.6)	

Pre-MOD70-0407-00D (V15.11 GARMIN software)

<b>RED WARNING CAS MESSAGE "CABIN ALTITUDE" ON</b>	
1 - Pressurization indicator .....	<b>CHECK</b>
<i>If cabin altitude &gt; 10000 ft :</i>	
2 - Oxygen .....	<b>USE</b>
3 - "BLEED" switch .....	<b>CHECK AUTO</b>
4 - "DUMP" switch .....	<b>CHECK UNDER GUARD</b>
5 - "RAM AIR" control knob .....	<b>CHECK PUSHED</b>
6 - Limit flight altitude to maintain cabin altitude < 12000 ft	
7 - If necessary EMERGENCY DESCENT (Refer to Chapter 3.6)	
Inform maintenance department before next flight.	

Post-MOD70-0407-00D (V15.11 GARMIN software)

**RED WARNING CAS MESSAGE  
"CABIN ALTITUDE" ON AND AMBER WARNING  
CAS MESSAGE "USE OXYGEN MASK" ON**

*NOTE :*

*"CABIN ALTITUDE" warning CAS message is followed by "USE OXYGEN MASK" amber CAS message and 3 voice messages "USE OXYGEN MASK / USE OXYGEN MASK".*

1 - Pressurization indicator ..... **CHECK**

*If cabin altitude > 10000 ft :*

2 - Oxygen ..... **USE**

3 - "BLEED" switch ..... **CHECK AUTO**

4 - "DUMP" switch ..... **CHECK UNDER GUARD**

5 - "RAM AIR" control knob ..... **CHECK PUSHED**

6 - Limit flight altitude to maintain cabin altitude < 12000 ft

7 - If necessary EMERGENCY DESCENT (Refer to Chapter 3.6)

Inform maintenance department before next flight.

Post-MOD70-0407-00D (V15.11 GARMIN software) and  
Pre-MOD70-0657-34 (EDM evolution patch)

## RED WARNING CAS MESSAGE "CABIN ALTITUDE" AND "EDM" ON AND AMBER WARNING CAS MESSAGE "USE OXYGEN MASK" ON

**NOTE :**

"CABIN ALTITUDE" warning CAS message is followed by "USE OXYGEN MASK" amber CAS message and 3 voice messages "USE OXYGEN MASK / USE OXYGEN MASK".

1 - Pressurization indicator ..... **CHECK**

*If cabin altitude > 10000 ft :*

2 - Oxygen ..... **USE**

3 - "BLEED" switch ..... **CHECK AUTO**

4 - "DUMP" switch ..... **CHECK UNDER GUARD**

5 - "RAM AIR" control knob ..... **CHECK PUSHED**

6 - Limit flight altitude to maintain cabin altitude < 12000 ft

7 - If necessary EMERGENCY DESCENT (Refer to Chapter 3.6)

Inform maintenance department before next flight.

**NOTE :**

- EDM makes a 90° left heading change and descent to 15000 ft.
- EDM override is possible by pressing twice "AP/TRIMS DISC" switch and other AP modes are usable.
- Power reduction to speed up the descent is recommended.



Post-MOD70-0657-34 (EDM evolution patch)

**RED WARNING CAS MESSAGE "EDM" ON**

**NOTE :**

*"EDM" warning CAS message may come on 45 s after "CABIN ALTITUDE" warning CAS message and "USE OXYGEN MASK" amber CAS message.*

- 1 - Pressurization indicator ..... **CHECK**  
*If cabin altitude > 10000 ft :*
- 2 - Oxygen ..... **USE**
- 3 - "BLEED" switch ..... **CHECK AUTO**
- 4 - "DUMP" switch ..... **CHECK UNDER GUARD**
- 5 - "RAM AIR" control knob ..... **CHECK PUSHED**
- 6 - Limit flight altitude to maintain cabin altitude < 12000 ft
- 7 - If necessary EMERGENCY DESCENT (Refer to Chapter 3.6)

**NOTE :**

- EDM makes a 90° left heading change and descent to 15000 ft.
- EDM override is possible by pressing twice "AP/TRIMS DISC" switch and other AP modes are usable.
- Power reduction to speed up the descent is recommended.

## 3.10 - PRESSURIZATION AND AIR CONDITIONING

All

### **CABIN NOT DEPRESSURIZED AFTER LANDING**

**$\Delta P$  cabin > 0**

- 1 - "DUMP" switch ..... **ACTUATED**
- 2 - "BLEED" switch ..... **OFF**
- 3 - "RAM AIR" control knob ..... **PULLED if necessary**
- 4 - Wait for complete cabin depressurization before opening the door

3.10 - PRESSURIZATION AND AIR CONDITIONING

**AMBER WARNING CAS MESSAGE  
"BLEED OFF" ON**

Possibly due to :

- system malfunction
- "BLEED" switch on "OFF" position

- 1 - Oxygen ..... **USE**
- 2 - If necessary ..... **CORRECT**
- 3 - If possible, reduce power
- 4 - "BLEED" switch ..... **OFF/RST**
- 5 - "BLEED" switch ..... **AUTO**

If in flight :

- 6 - If warning "**BLEED OFF**" still displayed, and if EMERGENCY DESCENT is required, refer to Chapter 3.6 or continue flight at an altitude below 12000 ft)
- 7 - Continue flight

If on the ground :

- 6 - "BLEED" switch ..... **OFF/RST**
- 7 - Taxi back to the apron
- 8 - Normal engine shut-down
- 9 - Inform maintenance department

## 3.10 - PRESSURIZATION AND AIR CONDITIONING

### RED WARNING CAS MESSAGE "BLEED TEMP" ON

Indicates overheat of bleed air system. Normally this leads to BLEED cutoff and to "BLEED OFF" amber warning CAS message appearance.

*Should automatic cutoff occur or not :*

- 1 - If possible ..... **REDUCE POWER**
- 2 - "AIR FLOW" distributor ..... **CABIN**
- 3 - "CABIN CTRL" selector ..... **OVERRIDE**
- 4 - "CABIN TEMP/° C" selector ..... **MINI**
- 5 - "BLEED" switch ..... **OFF/RST**
- 6 - "BLEED" switch ..... **AUTO**

If "BLEED TEMP" and "BLEED OFF" warnings still ON :

- 7 - If necessary EMERGENCY DESCENT - refer to Chapter 3.6 or continue flight at an altitude < 12000 ft
- 8 - Continue flight

If "BLEED TEMP" warning ON (No "BLEED OFF") :

- 9 - Shorten the flight
- 10 - Inform maintenance department

3.10 - PRESSURIZATION AND AIR CONDITIONING

**RED WARNING CAS MESSAGE  
"DOOR" ON**

Indicates that one of the door latches of the access door or (if installed) of the "pilot" door is not correctly locked

***On ground :***

- Check the correct locking, as well as the latches position of the access door and (if installed) of the pilot door
- Do not take off if warning CAS message "DOOR" is ON

***In flight :***

- 1 - Start a slow descent
- 2 - Decrease cabin pressure differential by selecting a higher cabin altitude

*If a real failure of one of the doors is noted :*

- 3 - "BLEED" switch ..... **OFF**
- 4 - "DUMP" switch ..... **ACTUATED**
- 5 - If necessary, undertake "IN ROUGH ATMOSPHERE" EMERGENCY DESCENT type (Refer to Chapter 3.6)

## 3.10 - PRESSURIZATION AND AIR CONDITIONING

Pre-MOD70-0335-34 (ESI-2000)

<b>AMBER WARNING CAS MESSAGE "VACUUM LOW" ON</b>	
Suction gage indicator .....	<b>CHECK</b>
Low vacuum may lead to malfunctioning of leading edge deicing, pressurization and gyroscopic vacuum-operated instruments .....	<b>MONITOR</b>
If necessary, fly to an altitude $\leq$ 12000 ft and return to VMC conditions as soon as possible.	
"BLEED" switch .....	<b>OFF</b>

Post-MOD70-0335-34 (ESI-2000)

<b>AMBER WARNING CAS MESSAGE "VACUUM LOW" ON</b>	
Low vacuum may lead to malfunctioning of leading edge deicing, pressurization .....	<b>MONITOR</b>
If necessary, fly to an altitude $\leq$ 12000 ft and return to VMC conditions as soon as possible.	
"BLEED" switch .....	<b>OFF</b>

3.10 - PRESSURIZATION AND AIR CONDITIONING

**DEFOG MALFUNCTION**

If moisture starts to quickly cover the inside of the windscreen with the distributor already positioned on "DEFOG" :

- 1 - "AIR FLOW" distributor ..... **Set to around a 10 o'clock position**

*If moisture continues :*

- 2 - "AIR FLOW" distributor ..... **HOT**
- 3 - "WINDSHIELD" switch ..... **ON**

*If there is no improvement and if the flight safety is engaged :*

- 4 - Altitude ..... **≤12000 ft**
- 5 - "BLEED" switch ..... **OFF**

**NOTE :**

*If in flight, the cabin will quickly be depressurized. Therefore, the cabin vertical speed indicator and altimeter indications will rapidly meet those of respectively the aircraft VSI and altimeter.*





**SECTION 3.11**  
**LANDING GEAR AND FLAPS**

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## 3.11 - LANDING GEAR AND FLAPS

### LANDING GEAR RETRACTION DISCREPANCY

*NOTE :*

*Symptoms have to be considered at the end of the sequence.*

**A - Symptoms :**

Steady red warning light ON **and** 0 to 3 green light(s) ON.

**- Actions :**

Refer to "EMERGENCY GEAR EXTENSION".

**B - Symptoms :**

Red warning light flashing **and** 3 green lights OFF.

**- Actions :**

1 - "LDG GEAR" circuit breaker ..... **PULL**

*If the red warning light goes off :*

The flight may be continued without any restriction.

Before extending the landing gear, refer to "EMERGENCY GEAR EXTENSION".

*If the red warning light becomes steady ON :*

"LDG GEAR" circuit breaker ..... **PUSH**

Refer to "EMERGENCY GEAR EXTENSION".

3.11 - LANDING GEAR AND FLAPS

**LANDING GEAR EXTENSION DISCREPANCY**

*NOTE :*

*Symptoms have to be considered at the end of the sequence.*

**- Symptoms**

Steady red warning light ON **and** 0 to 3 green light(s) OFF.

or

Red warning light flashing **and** 0 to 3 green light(s) OFF.

**- Actions**

Refer to "EMERGENCY GEAR EXTENSION".

## 3.11 - LANDING GEAR AND FLAPS

### EMERGENCY GEAR EXTENSION (1/2)

**NOTE :**

*This procedure has to be followed in case of any discrepancy or doubt about the gear extension or retraction.*

Maintain IAS  $\leq$  128 KIAS

- 1 - Landing gear control ..... **DN**
- 2 - "LDG GEAR" circuit breaker ..... **PULL**
- 3 - Floor hatch ..... **OPEN**
- 4 - By-pass selector ..... **FULLY PULL / LOCKED**

#### CAUTION

**THE ENTIRE EXTENSION OF THE LANDING GEAR MAY TAKE UP TO 110 CYCLES. IT IS MANDATORY TO HAVE A CLEAR HARDENING OF THE MANUAL CONTROL AT THE END OF THE MANEUVER**

- 5 - Hand pump ..... **ACTUATE with maximum amplitude**

*If landing gear is down and locked (red light not illuminated, three green lights illuminated) :*

Continue flight if necessary at a speed BELOW 178 KIAS, exit and/or remain outside icing conditions.

Land.

#### CAUTION

**DO NOT ENTER ICING CONDITIONS (THIS COULD ADVERSELY INCREASE DRAG AND WEIGHT DUE TO ICE ACCUMULATION, AND LOCK WHEELS AND STRUTS).**

**CLIMB PERFORMANCE WILL BE DEGRADED BY 50 %.**

**INDICATED CRUISE AIRSPEED WILL BE REDUCED COMPARED TO A CLEAN AIRCRAFT, BECAUSE OF THE DRAG.**

**THIS SHOULD BE TAKEN INTO ACCOUNT WHEN CALCULATING THE AIRCRAFT RANGE.**



3.11 - LANDING GEAR AND FLAPS

**EMERGENCY GEAR EXTENSION (2/2)**

*If landing gear does not lock (other than 3 green indicator lights illuminated) :*

- 6 - "LDG GEAR" circuit breaker ..... **PUSH**
- 7 - "CHECK DN" switch ..... **ACTUATE**

*If the hardening of the manual lever is marked and if the normal indicating shows 3 green indicator lights or the "CHECK DN" indicating shows 3 green indicator lights :*

- 8 - LAND.

*If manual extension bar remains soft or if one (or more) green indicator light(s) does(do) not illuminate and upon pressing "CHECK DN", then a gear unlock condition is confirmed. Recycle the landing gear as follows :*

- 9 - By-pass selector ..... **UNLOCK / PUSH**
- 10 - Wait one minute.
- 11 - Landing gear control (IAS ≤ 128 KIAS) ..... **UP**

*Perform landing gear extension attempts in the NORMAL mode while applying positive load factors during the maneuver as well as skidding.*

*In case of failure, refer to Chapter 3.7 "EMERGENCY LANDINGS", Paragraph "LANDING WITH UNLOCKED MAIN LANDING GEAR" or Paragraph "LANDING WITH DEFECTIVE NOSE LANDING GEAR".*

*Indication :*

*If one main landing gear leg is not in the down position, it is preferable to land with landing gear up (Refer to Chapter 3.7, Paragraph "LANDING WITH GEAR UP").*

## 3.11 - LANDING GEAR AND FLAPS

### RED WARNING CAS MESSAGE "FLAPS ASYM" ON

Indicates a dissymmetry of flap deflection. This immediately stops the flap motor and prevents further operation of the flaps

- 1 - "FLAPS" circuit breaker ..... **PULL**
- 2 - Flap control lever ..... **UP**
- 3 - SHORTEN flight maintaining airspeeds :
  - $IAS \leq 178$  KIAS for deflections between "UP" and "TO" positions
  - $IAS \leq 122$  KIAS for deflections greater than "TO" position
- 4 - For landing, refer to Chapter 3.7, Paragraph "LANDING WITH FLAPS MALFUNCTION".

### FLAPS MALFUNCTION

**In case of blockage of flaps or inoperant flap control lever between "UP" and "LDG" positions, with no flaps warning light illumination :**

- 1 - "FLAPS" circuit breaker ..... **PULL**
- 2 - Flap control lever ..... **UP**
- 3 - SHORTEN flight maintaining airspeeds :
  - $IAS \leq 178$  KIAS for deflections between "UP" and "TO" positions
  - $IAS \leq 122$  KIAS for deflections greater than "TO" position
- 4 - For landing, refer to Chapter 3.7, Paragraph "LANDING WITH FLAPS MALFUNCTION".

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## SECTION 3.12

### DEICING SYSTEM

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## 3.12 - DEICING SYSTEM

### LEADING EDGES DEICING FAILURE

Symptoms : Failure on one of the two pneumatic deicing pulses :

- Ice on wing outboard sections
- Or ice on wing inboard sections and stabilizers
- One of the two cycling green lights is not lit

1 - LEAVE icing conditions as soon as possible

2 - "AIRFRAME DE ICE" switch ..... **OFF**

### PROPELLER DEICING FAILURE

Symptoms : - Propeller deicing green light is not lit  
- Propeller vibrations

1 - REDUCE power

2 - ACTUATE propeller governor lever to vary RPM within operating range

3 - LEAVE icing conditions as soon as possible

3.12 - DEICING SYSTEM

**INERTIAL SEPARATOR FAILURE**

- Symptoms :
- Warning **"INERT SEP FAIL"** may appear
  - Warning **"INERT SEP ON"** does not appear within 30 seconds following "INERT SEP" switch setting ON
  - Neither torque drop, nor increase of ITT observed during maneuver

*LEAVE icing conditions as soon as possible*

**WINDSHIELD DEICING FAILURE**

- Symptoms :
- Windshield being covered uniformly by ice
  - No perception of heat when touching deiced section
  - Windshield deicing green light is not lit

Symptoms may result from overheat. In that case :

- 1 - "WINDSHIELD" switch ..... **OFF / ON**  
**when necessary**

In case of total failure :

- 1 - "CABIN TEMP/° C" selector (pilot) ..... **Maxi warm**  
2 - "AIR FLOW" distributor ..... **HOT**

Before landing wait for a sufficient visibility

## 3.12 - DEICING SYSTEM

### WINDSHIELD MISTING OR INTERNAL ICING

Symptoms : - Mist or ice on windshield internal face

- 1 - "CABIN TEMP/° C" selector (pilot) .. **Set to 12 o'clock position**
- 2 - "AIR FLOW" distributor ..... **DEFOG**
- 3 - "WINDSHIELD" switch ..... **ON**

*If not successful, to gain sufficient visibility :*

- 4 - "AIR FLOW" distributor ..... **HOT**
- 5 - Manually clean a sufficient visibility area.
- 6 - If necessary, clean L.H. side window and conduct a sideslip approach (rudder pedals to the right) in order to get sufficient landing visual references.
- 7 - For landing with flaps LDG, maintain :

Weight < 6250 lbs (2835 kg)	Weight ≥ 6250 lbs (2835 kg)
<b>IAS ≥ 90 KIAS</b>	<b>IAS ≥ 95 KIAS</b>

#### CAUTION

**IN CASE OF SIDESLIP APPROACH WITH PEDAL ON THE RIGHT DURING A LONG PERIOD, SELECT R.H. FUEL TANK**

3.12 - DEICING SYSTEM

**AMBER WARNING CAS MESSAGES  
“PITOT NO HT L”, “PITOT NO HT R”  
OR “STALL NO HEAT” ON**

Indicates a heating failure of the corresponding probe

**“PITOT NO HT L”**

Icing conditions may alter L.H. airspeed indications

- 1 - AVOID icing conditions

*If it is not possible :*

- 2 - Perform moderate descent or climb attitudes

*V<sub>MO</sub> overshooting and stall warning lights are always operating*

**“PITOT NO HT R”**

V<sub>MO</sub> overshoot warning may be altered by icing conditions

*Monitor maximum airspeed ..... ≤ 266 KIAS*

**“STALL NO HEAT”**

Correct operation of the aural stall warning may be altered by severe or prolonged icing

*MONITOR and MAINTAIN minimum airspeed according to airplane configuration and icing conditions*



## SECTION 3.13

### MISCELLANEOUS

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**3.13 - MISCELLANEOUS**

**RUNAWAY OF ONE OF THE THREE ELECTRICAL TRIM TABS**

- 1 - "AP / DISC TRM INT" push button . . . . . **PRESSED AND HOLD**

The three trim tabs are disconnected and runaway stops

- 2 - "AP TRIMS" MASTER switch . . . . . **OFF**

- 3 - "AP / DISC TRM INT" push button . . . . . **RELEASED**

- 4 - Pitch trim may be used manually

- 5 - Reduce airspeed if necessary to reduce control forces

*If pitch trim runaway*

- 6 - "AP TRIMS" MASTER switch . . . . . **AP OFF**

The pitch trim may be used manually, the two other trim tabs may be used again electrically

*If rudder or aileron trim runaway*

- 7 - PULL circuit breaker corresponding to the defective trim tab

- 8 - "AP TRIMS" MASTER switch . . . . . **ON**

Two other trim tabs may be used again electrically

**CRACK IN COCKPIT WINDOW OR WINDOW PANEL**

- 1 - Descend slowly

- 2 - Reduce cabin ΔP by selecting a higher cabin altitude and the maximum cabin rate



3.13 - MISCELLANEOUS

**EMERGENCY EXIT USE**

1 - Check that the anti-theft safety pin has been removed

Pre-MOD70-0793-25

2 - Remove the upholstery panel of the emergency exit. Pull it firmly through the access area to the opening handle (Refer to paragraph Emergency exit in Chapter 7.3).

All

3 - Lift up the opening handle

4 - Pull emergency exit assembly toward oneself to release it from its recess

5 - Put the emergency exit door inside fuselage or throw it away from the fuselage through the opening

6 - EVACUATE airplane

**EMERGENCY BEACON USE (ELT)**

*Before a forced landing :*

1 - On COM VHF 121.5 MHZ or on a known air traffic control frequency, transmit the "MAY DAY" signal if possible

*After landing :*

2 - "ELT" remote control switch ..... **ON**  
**(maintain it ON until aid arrives)**

3.13 - MISCELLANEOUS

<b>EMERGENCY EXIT USE</b>
1 - Check that the anti-theft safety pin has been removed
2 - Lift up the opening handle
3 - Pull emergency exit assembly toward oneself to release it from its recess
4 - Put the emergency exit door inside fuselage or throw it away from the fuselage through the opening
5 - EVACUATE airplane

<b>EMERGENCY BEACON USE (ELT)</b>
<i>Before a forced landing :</i>
1 - On COM VHF 121.5 MHZ or on a known air traffic control frequency, transmit the "MAY DAY" signal if possible
<i>After landing :</i>
2 - "ELT" remote control switch ..... <b>ON</b> <b>(maintain it ON until aid arrives)</b>

## 3.13 - MISCELLANEOUS

**TOTAL COMMUNICATION FAILURE**

- 1 - Refer to PARTICULAR TRANSPONDER USES procedures
- 2 - Apply air traffic control procedures in case of communications failure :
  - code 7700 during 1 minute, then
  - code 7600
- 3 - Try to restore communications by using all possible combinations of the headset, micro and loudspeaker

**PARTICULAR TRANSPONDER USES**

- 1 - Check transponder mode selector . . . . . **ON or ALT**
- 2 - Codes selector :

7700	EMERGENCY DISTRESS
7600	COMMUNICATIONS FAILURE
7500	HIJACKING

3.13 - MISCELLANEOUS

**AUTOPILOT OR ELECTRIC PITCH TRIM  
MALFUNCTION**

- 1 - "AP / TRIMS DISC INT" push-button ..... **PRESSED  
and HELD**
- 2 - "AP TRIMS" MASTER switch ..... **OFF**
- 3 - "AP / TRIMS DISC INT" push-button ..... **RELEASED**
- 4 - If necessary, control wheel ..... **RETRIM**

**CAUTION**  
**WHEN DISCONNECTING THE AUTOPILOT AFTER A PITCH  
TRIM MALFUNCTION, HOLD THE CONTROL WHEEL FIRMLY ;  
UP TO 30 POUNDS OF FORCE ON THE CONTROL WHEEL  
MAY BE NECESSARY TO HOLD THE AIRPLANE LEVEL**

## 3.13 - MISCELLANEOUS

### INADVERTENT SPINS

***(Voluntary spins are prohibited)***

*In case of inadvertent spins*

- 1 - Control wheel ..... **NEUTRAL : PITCH AND ROLL**
- 2 - Rudder ..... **FULLY OPPOSED TO THE SPIN**
- 3 - Power lever ..... **IDLE**
- 4 - Flaps ..... **UP**  
**when rotation is stopped**
- 5 - Level the wings and ease out of the dive

3.13 - MISCELLANEOUS

Post-MOD70-0407-00D (V15.11 GARMIN software)

**RED WARNING CAS MESSAGE  
"AURAL WRN FAIL" ON**

*Indicates that no aural warning alerts are available.*

**CAUTION**

**NO AURAL STALL WARNING.  
NO AURAL OVERSPEED WARNING.  
NO LANDING GEAR WARNING.**

1 - Maintain airspeeds

Flaps UP	105 < KIAS < 266
Flaps TO	100 < KIAS < 178
Flaps LDG	85 < IAS < 122



3.13 - MISCELLANEOUS

■ Pre-MOD70-0407-00D (V15.11 GARMIN software)

OXYGEN USE (1/2)

WARNING

SMOKING IS STRICTLY PROHIBITED ANY TIME OXYGEN SYSTEM IS USED.  
BEFORE USING OXYGEN, REMOVE ANY TRACE OF OIL, GREASE, SOAP AND OTHER FATTY SUBSTANCES (INCLUDING LIPSTICK, MAKE UP, ETC...)

**Front seats**

- 1 - Take a mask on the opposite seat side (pilot : R.H. side ; R.H. front passenger : L.H. side) : draw it out of the stowage cup and uncoil tube totally. Press on the red side vanes to inflate the harness. Put the mask on the face.
- 2 - No smokes :  
3-position selector ..... **NORMAL**  
**(100 % as required)**
- 3 - In case of smokes :  
3-position selector ..... **EMERGENCY**  
**Don the smoke goggles onto the face**
- 4 - "PASSENGERS OXYGEN" switch ..... **ON**
- 5 - Check the oxygen flow indicator for the front seats (the blinker is transparent) and for the rear passengers (the blinker is green).
- 6 - "NORMAL/MASK" micro inverter ..... **MASK**
- 7 - Perform an emergency descent to the "En route" minimum altitude and, if possible, below 10000 ft.





## 3.13 - MISCELLANEOUS

**OXYGEN USE (2/2)****Passengers**

- 1 - Take a mask.
- 2 - Uncoil tube totally.
- 3 - Pull on the lanyard cord to take out the lanyard pin.
- 4 - Put the mask on the face.

3.13 - MISCELLANEOUS

■ Post-MOD70-0407-00D (V15.11 GARMIN software)

**OXYGEN USE (1/2)**

*NOTE :*

*With or without amber CAS message "USE OXYGEN MASK".*

**WARNING**  
**SMOKING IS STRICTLY PROHIBITED ANY TIME OXYGEN SYSTEM IS USED.  
BEFORE USING OXYGEN, REMOVE ANY TRACE OF OIL, GREASE, SOAP AND OTHER FATTY SUBSTANCES (INCLUDING LIPSTICK, MAKE UP, ETC...)**

**Front seats**

- 1 - Take a mask on the opposite seat side (pilot : R.H. side ; R.H. front passenger : L.H. side) : draw it out of the stowage cup and uncoil tube totally. Press on the red side vanes to inflate the harness. Put the mask on the face.
- 2 - No smokes :  
3-position selector ..... **NORMAL**  
**(100 % as required)**
- 3 - In case of smokes :  
3-position selector ..... **EMERGENCY**  
**Don the smoke goggles onto the face**
- 4 - "PASSENGERS OXYGEN" switch ..... **ON**
- 5 - Check the oxygen flow indicator for the front seats (the blinker is transparent) and for the rear passengers (the blinker is green).
- 6 - "NORMAL/MASK" micro inverter ..... **MASK**



## 3.13 - MISCELLANEOUS

**OXYGEN USE (2/2)**

7 - Perform an emergency descent to the "En route" minimum altitude and, if possible, below 10000 ft.

**Passengers**

- 1 - Take a mask.
- 2 - Uncoil tube totally.
- 3 - Pull on the lanyard cord to take out the lanyard pin.
- 4 - Put the mask on the face.

3.13 - MISCELLANEOUS

All

**AIRSPD INDICATING SYSTEM FAILURE**

Symptoms : erroneous indication in flight

- 1 - "PITOT L HTR" switch ..... **CHECK ON**
- 2 - "PITOT R & STALL HTR" switch ..... **CHECK ON**

**If symptoms persist :**

- 3 - "ALTERNATE STATIC" selector ..... **PULL THOROUGHLY**
- 4 - Use standby instrument only

If symptoms persist, as well as on the airspeed indicator of the L.H instrument panel, carry out a precautionary approach maintaining an adequate speed.

## 3.13 - MISCELLANEOUS

**FLIGHT INTO SEVERE ICING CONDITIONS**

Severe icing conditions, particularly freezing rain and freezing drizzle, can be identified by :

- unusually extensive ice accumulation on the airframe and windshield in areas not normally observed to collect ice,
- accumulation of ice on the upper surface of the wing aft of the protected area.

Procedures for exiting freezing rain or freezing drizzle conditions :

- 1 - Inform Air Traffic Control to exit severe icing conditions by changing the route or the altitude.
- 2 - Avoid any sudden maneuver on flight controls.
- 3 - Do not engage the autopilot.
- 4 - If the autopilot is engaged, hold the control wheel firmly and disengage the autopilot.
- 5 - If an unusual roll response or uncommanded roll control movement is observed, reduce the angle-of-attack.
- 6 - Do not extend flaps when holding in icing conditions. Operation with flaps extended can result in a reduced wing angle-of-attack, with the possibility of ice forming on the upper surface further aft on the wing than normal, possibly aft of the protected area.
- 7 - If the flaps are extended, do not retract them until the airframe is clear of ice.

3.13 - MISCELLANEOUS

**DUAL GPS/SBAS FAILURE (AMBER "DR" OR "LOI") ON HSI (1/2)**

**LOSS OF GPS/SBAS NAVIGATION DATA**

When both GPS/SBAS receivers are inoperative or GPS navigation information is not available or invalid, the G1000 system will enter one of two modes: Dead Reckoning mode (DR) or Loss Of Integrity mode (LOI). The mode is indicated on the HSI by an amber "DR" or "LOI". Which mode is active depends on the distance from the destination airport in the active flight plan.

If the LOI annunciation is displayed, revert to an alternate means of navigation appropriate to the route and phase of flight.

In Dead Reckoning mode, the MAP – NAVIGATION MAP will continue to be displayed with a ghosted aircraft icon in the center and an amber 'DR' overwriting the icon. Aircraft position will be based upon the last valid GPS position, then estimated by Dead Reckoning methods. Changes in true airspeed, altitude, or winds aloft can affect the estimated position substantially. Dead Reckoning is only available in Enroute mode; Terminal and Approach modes do not support DR. Course deviation information will be displayed as an amber CDI on both PFDs and will remain for up to 20 minutes after GPS position data has been lost. The autopilot and/or flight director may be coupled in GPS mode while the system is in Dead Reckoning mode.

Refer to the G1000 Pilot's Guide for further information. Revert to an alternate means of navigation appropriate to the route and phase of flight.

*If Alternate Navigation Sources (ILS, LOC, VOR, DME, ADF) are available :*

- 1 - Navigation ..... **USE ALTERNATE SOURCES**



## 3.13 - MISCELLANEOUS

**DUAL GPS/SBAS FAILURE (AMBER "DR" OR "LOI")  
ON HSI (2/2)**

*If no Alternate Navigation Sources are available :*

**Dead Reckoning (DR) Mode - Active when the airplane is greater than 30 NM from the destination airport :**

- 1 - Navigation . . . . . **USE THE AIRPLANE SYMBOL, MAGENTA COURSE LINE ON THE MAP DISPLAY AND THE AMBER CDI FOR COURSE INFORMATION**

**NOTE :**

- All information normally derived from GPS turns amber. All of this information will become less accurate over time.
- TAWS is inoperative.
- DR mode uses heading, true airspeed, last known wind data, and the last known GPS position to estimate the airplane's current position. DR information will be available for a maximum of 20 minutes.
- MAP - TRAFFIC MAP display is not dependent on GPS information. The position of displayed traffic relative to the airplane symbol on the map is still accurate.

**Loss Of Integrity (LOI) Mode - Active when the airplane is within 30 NM of departure airport (as calculated from the previous GPS or DR position)**

- 1 - Navigation . . . **FLY TOWARDS KNOWN VISUAL CONDITIONS, USE ATC OR OTHER INFORMATION SOURCES AS POSSIBLE**

**NOTE :**

- All information derived from GPS or DR will be removed from the displays.
- TAWS is inoperative.
- The airplane symbol is removed from all maps. The map will remain centered at the last known position. "NO GPS POSITION" will be annunciated in the center of the map.

3.13 - MISCELLANEOUS

**GPS APPROACH ALARM LIMITS EXCEEDED**

During a GPS LPV, LNAV/VNAV, or LNAV+V approach, if the Horizontal or Vertical alarm limits are exceeded, the G1000 System will downgrade the approach. This will be annunciated in the ALERTS window and by an annunciation change on the HSI from LPV, L/VNAV, or LNAV+V to LNAV. GPS glide path vertical guidance will be removed from the PFD. The approach may be continued using the LNAV only minimums.

During any GPS approach in which both precision and non-precision alarm limits are exceeded, the G1000 System will flag the lateral guidance and display a system message "ABORT APPROACH loss of navigation". Immediately upon viewing the message, the unit will revert to Terminal navigation mode alarm limits. If the position integrity is within these limits lateral guidance will be restored and the GPS may be used to execute the missed approach, otherwise alternate means of navigation must be utilized.



## 3.13 - MISCELLANEOUS

**LEFT PFD FAILURE (1/2)****Symptoms :**

- Left screen is black
- AUTOPILOT is disconnected

**Lost systems : LEFT PFD**

- AUTOPILOT (AP) and FLIGHT DIRECTOR (FD)
- COM 1
- NAV 1
- DME 1
- XPDR 1

**Actions :**

## TRAJECTORY :

- 1 - "AP DISC" switch (on control wheel) **PRESS** (to mute aural tone associated to Auto pilot disconnection)
- 2 - Fly the aircraft manually using stand-by instruments information
- 3 - "PFD 1" CIRCUIT BREAKER **CHECKED "IN"**
- 4 - RIGHT PFD REVERSIONARY mode **ENGAGED**  
( "DISPLAY BACK UP" button "OUT" )
- 5 - "XFR" (on AFCS control unit ) **PRESS** / Check green arrow to right side  
(to connect AFCS to RIGHT PFD if engaged)
- 6 - Autopilot **NORMAL USE** ( as desired)



3.13 - MISCELLANEOUS

**LEFT PFD FAILURE (2/2)**

COM and NAVAIDS (selected on RIGHT PFD) :

- 1 - "COM 2" frequency **SELECTED and ACTIVATED**
- 2 - "COM 2 MIC + COM 2" key (audio control panel) **SELECTED**
- 3 - RADIO CHECK with ATC **PERFORMED**
- 4 - "NAV 2" frequency **SELECTED and ACTIVATED**
- 5 - "DME 2" source **SELECTED**
- 6 - "XPDR 2" **SELECTED** (check squawk and mode)
- 7 - "CDI" source (NAV/LOC or GPS) **SELECTED** as desired
- 8 - Shorten flight

**CAUTION**

- 1 - In case of ILS approach, don't forget to select "LOC2" on CDI source (on RIGHT PFD)**
- 2 - Use of reversionary mode will report LEFT PFD information on MFD and disable supplementary functions as weather radar, stormscope,.....**

## 3.13 - MISCELLANEOUS

**AHRS FAILURE (1/2)****Symptoms : Autopilot is disconnected**

- On PFD(S) : COMPARATOR WINDOW (**WHITE ANNUNCIATION**) :  
"HDG NO COMP" and/or "PIT NO COMP" and/or "ROL NO COMP"
- On PFD(S) : REVERSIONARY SENSOR WINDOW (**YELLOW ANNUNCIATION**) : "BOTH ON AHRS1" or "BOTH ON AHRS2"

**Lost systems :**

- AHRS1 or AHRS2
- AUTOPILOT (AP)

**Systems still operative :**

- FLIGHT DIRECTOR (FD), when engaged again

**Actions : AUTOPILOT IS NOT OPERATIVE**

- 1 - AHRS1 and/or AHRS2 circuit breaker **CHECKED "IN"**

A - If **yellow** annunciation "BOTH ON AHRS1" or "BOTH ON AHRS2" is associated to **white** annunciation "HDG NO COMP" and/or "PIT NO COMP" and/or "ROL NO COMP" :

- 1 - Fly the aircraft manually
- 2 - AHRS1 and/or AHRS2 circuit breaker **CHECKED "IN"**



3.13 - MISCELLANEOUS

**AHRS FAILURE (2/2)**

***If pilot wishes :***

- 3 - "FD" (default mode : "PITCH" and ROLL")      **ENGAGED**
- 4 - "FD" (specifics modes : "HDG",  
"NAV", "ALT", ...)      **ENGAGED as DESIRED**
- 5 - Fly the aircraft manually to follow Command Bars

*If ALL white annunciations, ("HDG NO COMP" and/or "PIT NO COMP" and/or "ROL NO COMP"), GO "OFF", refer to following "B" procedure.*

- B - If **yellow** annunciation "BOTH ON AHRS1" or "BOTH ON AHRS2" **ONLY** (not associated to **white** annunciation "HDG NO COMP" and/or "PIT NO COMP" and/or "ROL NO COMP") :

- |   |                                |
|---|--------------------------------|
| 1 - PFD1 and PFD2 "SENSOR" softkey's                                  | <b>PRESSED</b>                 |
| 2 - AHRS1 on PFD1 and/or AHRS2 on PFD2                                | <b>RESET</b>                   |
| 3 - "BOTH ON AHRS1" or "BOTH ON AHRS2"<br>annunciation's - <b>OFF</b> | <b>CHECKED</b>                 |
| 4 - <b>Autopilot</b>  | <b>NORMAL USE (as desired)</b> |

## 3.13 - MISCELLANEOUS

**ADC FAILURE****Symptoms :**

- On PFD(S) : COMPARATOR WINDOW (**WHITE ANNUNCIATION**) :  
"IAS NO COMP" and/or "ALT NO COMP"
- On PFD(S) : REVERSIONARY SENSOR WINDOW (**YELLOW ANNUNCIATION**) : "BOTH ON ADC1" or "BOTH ON ADC2"

**Lost systems :**

- ADC1 or ADC2

**Actions : AUTOPILOT IS STILL OPERATIVE**

- 1 - ADC1 and/or ADC2 circuit breaker **CHECKED "IN"**

A - If **yellow** annunciation "BOTH ON ADC1" or "BOTH ON ADC2" is associated to **white** annunciation "IAS NO COMP" and/or "ALT NO COMP" :

- 1 - NO action required

*If ALL white annunciations, ("IAS NO COMP" and/or "ALT NO COMP"), GO "OFF", refer to following "B" procedure.*

B - If **yellow** annunciation "BOTH ON ADC1" or "BOTH ON ADC2" **ONLY** (not associated to **white** annunciation "IAS NO COMP" and/or "ALT NO COMP"), pilot may do following actions :

- 1 - PFD1 and PFD2 "SENSOR" softkey's **PRESSED**
- 2 - ADC1 on PFD1 and/or ADC2 on PFD2 **RESET**
- 3 - "BOTH ON ADC1" or  
BOTH ON ADC2" annunciation's – **OFF** **CHECKED**

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## SECTION 4

# NORMAL PROCEDURES

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## **4.1 - GENERAL**

This Section provides procedures for the conduct of normal operation of TBM 850 airplane.

The first part of this Section lists the normal procedures required as a check list.

The amplified procedures are developed in the second part of the Section.

The normal procedures for optional systems are given in Section 9, "Supplements" of the Pilot's Operating Handbook.

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## 4.2 - AIRSPEEDS FOR NORMAL OPERATION

CONDITIONS :		
- Takeoff weight :	6579 lbs (2984 kg)	7394 lbs (3354 kg)
- Landing weight :	6250 lbs (2835 kg)	7024 lbs (3186 kg)
1 Rotation airspeed ( $V_R$ )	Depending on weight	
- Flaps TO	(See "Takeoff distances" Chapter 5.9)	
2 Best rate of climb speed ( $V_Y$ )		
- Landing gear UP, flaps UP	123 KIAS	124 KIAS
3 Best angle of climb speed ( $V_X$ )	95 KIAS	100 KIAS
4 Maximum speed :		
- Flaps TO	178 KIAS	178 KIAS
- Flaps LDG	122 KIAS	122 KIAS
5 Maximum speed with landing gear down	178 KIAS	178 KIAS
6 Maximum landing gear operating speed		
- Extension	178 KIAS	178 KIAS
- Retraction	128 KIAS	128 KIAS
7 Approach speed		
- Flaps LDG	80 KIAS	85 KIAS
8 Maximum operating speed ( $V_{MO}$ )	266 KIAS	266 KIAS
9 Glide speed (maximum L / D ratio)		
- Landing gear UP, flaps UP	120 KIAS	120 KIAS
10 Maximum inertial separator operating speed	200 KIAS	200 KIAS

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## 4.3 - CHECK-LIST PROCEDURES

### **PREFLIGHT INSPECTION**

(See Figure 4.3.1)

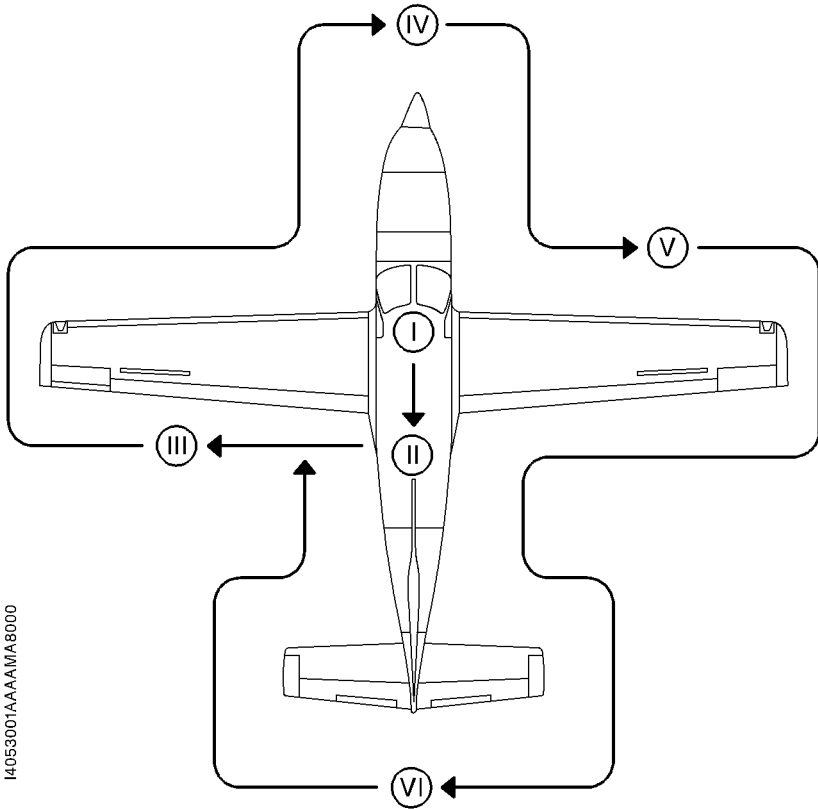
#### **IMPORTANT**

- \* During outside inspection, visually check inspection doors and airplane general condition.
- \* In cold weather, remove even small accumulations of frost, ice or snow from wing, tail and control surfaces.
- \* In case of night flight, check good operation of all navigation lights, landing lights, strobe lights and make sure that an emergency lamp is on board.
- \* If icing conditions are foreseen, particularly check good functioning of all electrical and pneumatic ice protection systems
- \* Check that type and quantity of fuel used for refueling are correct.
- \* Remove covers on :
  - pitots (2)
  - static ports (3)
  - engine air inlet and propeller locking (1).
- \* Remove tie-downs.
- \* Refer to Section 8 for quantities, products and specifications of products and materials currently used.



CHECK-LIST PROCEDURES

PREFLIGHT INSPECTION (Cont'd)



14053001AAAAMA8000

Figure 4.3.1 - PREFLIGHT INSPECTION



CHECK-LIST PROCEDURES

PREFLIGHT INSPECTION (Cont'd)

**A - INSIDE INSPECTIONS**

**Cockpit** (1)

- 1 - DE ICE SYSTEM panel
  - All switches ..... **OFF**
- 2 - ELT ..... **ARM**
- 3 - "NORMAL/MASK" micro inverter ..... **NORMAL**
- 4 - Flight control lock ..... **REMOVED / STOWED**
- 5 - Flight controls ..... **Deflections checked**
- 6 - Parking brake ..... **SET**
- 7 - Landing gear control ..... **DN**
- 8 - Engine controls
  - "MAN OVRD" control ..... **OFF (Notched)**

**CAUTION**

**WHEN THE ENGINE IS SHUTDOWN, THE POWER LEVER  
MUST NOT BE MOVED BEHIND THE FLIGHT IDLE  
POSITION**

- Power lever ..... **IDLE**  
**(Flight idle stop)**
- Propeller governor lever ..... **MAX. RPM**
- Condition lever ..... **CUT OFF**
- 9 - Flaps control ..... **UP**
- 10 - Fuel tank selector ..... **L or R**



CHECK-LIST PROCEDURES

PREFLIGHT INSPECTION (Cont'd)

- 11 - Landing gear emergency control
  - Lever ..... **PULLED DOWN**
  - By-pass selector ..... **PUSHED**
  - Door ..... **IN PLACE**
- 12 - ECS panel
  - "BLEED" switch ..... **OFF**
  - "AIR COND" switch ..... **OFF**
  - "DUMP" switch ..... **GUARDED**
- 13 - Static Air control knob ..... **PUSHED**
- 14 - "RAM AIR" control knob ..... **PUSHED**
- 15 - Breakers panel
  - All breakers ..... **ENGAGED**
- 16 - "AVIONICS" MASTER switch ..... **OFF**
- 17 - "AP TRIMS" MASTER switch ..... **OFF**
- 18 - Fuel
  - "FUEL SEL" selector ..... **MAN**
  - "AUX BP" switch ..... **OFF**
- 19 - ENGINE START panel
  - "IGNITION" switch ..... **AUTO or OFF**
  - "STARTER" switch ..... **OFF**
- 20 - ELECTRIC POWER panel
  - CRASH lever ..... **UP**
  - "GENERATOR" selector ..... **MAIN**
  - "SOURCE" selector ..... **OFF**
- 21 - Access lighting ..... **CHECKED**
- 22 - INT LIGHTS panel ..... **OFF**





## CHECK-LIST PROCEDURES

### PREFLIGHT INSPECTION (Cont'd)

- 23 - EXT LIGHTS panel
  - All switches ..... OFF
- 24 - Pilots "OXYGEN" switch ..... OFF
- 25 - "PASSENGERS OXYGEN" switch ..... OFF
- 26 - Emergency lighting ..... CHECKED

### CAUTION

#### BEFORE SELECTING SOURCE, CHECK :

- 27 - "IGNITION" switch ..... AUTO or OFF
- 28 - "STARTER" switch ..... OFF
- 29 - Landing gear control ..... DN

- 30 - "SOURCE" selector ..... BAT or GPU
- 31 - Voltage ..... CHECK
  - BAT .....  $\geq 24.5$  Volts
  - GPU .....  $\approx 28$  Volts
- 32 - EXT LIGHTS panel
  - "LTS TEST" push button ..... PRESS  
(All instrument panel lamps ON  
except on landing gear control panel)
  - "L.LDG / TAXI / R.LDG" switches ..... ON  
(3 green lamps ON)
  - "L.LDG / TAXI / R.LDG" switches ..... OFF
  - "STROBE" ..... ON
  - "NAV" ..... ON



**CHECK-LIST PROCEDURES**

PREFLIGHT INSPECTION (Cont'd)

*From outside the airplane, check operation of all lights and the stall warning horn*

Reentering the airplane

- 33 - EXT LIGHTS panel ..... **ALL SWITCHES OFF**
- 34 - DE ICE SYSTEM panel
  - All switches ..... **OFF**
  - "ICE LIGHT" ..... **ON**
- 35 - "AVIONICS" MASTER switch ..... **START**
- 36 - CAS display ..... **CHECK**
- 37 - Left and right fuel quantities ..... **CHECK**
- 38 - EXT LIGHTS panel
  - "LTS TEST" push button ..... **PRESS**  
**(red and amber MASTER warnings ON)**
- 39 - Flaps ..... **LDG**
- 40 - Landing gear panel ..... **Warning lights : 3 GREEN ON**  
**Test 1, then 2 : RED FLASHING + 3 GREEN ON**
- 41 - DE ICE SYSTEM panel
  - "PITOT L HTR" switch ..... **ON**  
**WARNING CAS MESSAGE "PITOT HT L" ON**
  - "PITOT R & STALL HTR" switch ..... **ON**  
**WARNING CAS MESSAGE "PITOT HT ON L-R" ON**
  - WARNING CAS MESSAGE "STALL HEAT ON" ON**
  - "PITOT L HTR" switch ..... **OFF**
  - "PITOT R & STALL HTR" switch ..... **OFF**



## CHECK-LIST PROCEDURES

PREFLIGHT INSPECTION (Cont'd)

### **WARNING**

**DO NOT TOUCH PITOTS NOR STALL WARNING VANE.  
THEY COULD BE HOT ENOUGH TO BURN SKIN**

- 42 - "AVIONICS" MASTER switch ..... OFF
- 43 - "SOURCE" selector ..... OFF

#### Post-MOD70-0335-34 (ESI-2000)

- 44 - ESI-2000 battery indicator symbol ..... NOT DISPLAYED

#### **Cabin** (II)

- 1 - Cabin fire extinguisher ..... CHECK  
(Pressure / Attachment)
- 2 - Seats / belts ..... CHECK
- 3 - Windows ..... CHECK  
(General condition / No crack)
- 4 - Emergency exit ..... CLOSED / LOCKED
  - Anti-theft safety ..... REMOVE / STOW
- 5 - Baggage compartment ..... STRAPS IN PLACE
- 6 - Partition net (if 6-seat accommodation) ..... IN PLACE  
CHECK general condition
- 7 - Large net or small net (if 4-seat accommodation  
and if baggage transportation) ..... IN PLACE  
CHECK general condition
- 8 - Doors operation ..... CHECK
- 9 - Stairs condition ..... CHECK (Condition / Play)



CHECK-LIST PROCEDURES

PREFLIGHT INSPECTION (Cont'd)

**B - AIRPLANE OUTSIDE**

**L.H. wing (III)**

- 1 - Flap ..... **CHECK**  
**(Condition / Play)**
- 2 - Aileron and trim / Spoiler ..... **CHECK**  
**(Condition / Free movement / Deflection)**
- 3 - Trailing edge static discharger ..... **CHECK**  
**(Condition / Attachment)**
- 4 - Wing tip / nav. lights /  
Strobe / landing light ..... **Condition - CHECK**
- 5 - OAT probe ..... **Condition - CHECK**
- 6 - Fuel tank ..... **CAP CLOSED / LOCKED**
- 7 - Fuel tank air vent ..... **Unobstructed - CHECK**
- 8 - Left pitot ..... **Condition - CHECK**
- 9 - Wing lower surface ..... **CHECK**  
**(No leak)**
- 10 - Wing deicer boots ..... **CHECK**  
**(Condition / Attachment)**
- 11 - Fuel tank drain (two on each wing) ..... **DRAIN**  
**(Fuel free of water and contamination)**
- 12 - L.H. main landing gear
  - Shock absorber / doors /  
tire / wheel well ..... **CHECK**



## CHECK-LIST PROCEDURES

PREFLIGHT INSPECTION (Cont'd)

### **Fuselage forward section** (IV)

- 1 - Forward compartment
  - Inside ..... **CONTROLLED**
  - Door ..... **CLOSED / LOCKED**
- 2 - GPU door ..... **CLOSED**  
(If not used)
- 3 - Fuel circuit drain ..... **DRAIN**  
(Fuel free of water and contamination)
  - Filter contamination indicator ..... **CHECK**
- 4 - L.H. exhaust stub ..... **CHECK**  
(Condition / No crack)
- 5 - Upper engine cowls ..... **OPEN**  
For the first flight of the day :
  - Oil cap ..... **CLOSED/LOCKED**
  - Engine oil level ..... **CHECK**
  - Fuel pipes ..... **CHECK**  
(No leak, deterioration, wear)
- 6 - Engine cowls ..... **Condition - CHECK**  
**CLOSED / LOCKED**
- 7 - Air inlets
  - Main ..... **No crack - UNOBSTRUCTED**
  - Lateral / upper ..... **UNOBSTRUCTED**
- 8 - Propeller and spinner ..... **CHECK**  
(No nicks, cracks or oil leaks / Attachment)



CHECK-LIST PROCEDURES

PREFLIGHT INSPECTION (Cont'd)

- 9 - Nose gear
  - Landing light / shock absorber / doors /  
tire / wheel well ..... **CHECK**
- 10 - R.H. exhaust stub ..... **CHECK**  
**(Condition / No cracks)**

**R.H. wing** (V)

- 1 - Fuel tank drain (two on each wing) ..... **DRAIN**  
**(Fuel free of water and contamination)**
- 2 - Main landing gear
  - Shock absorber / doors /  
tire / wheel well ..... **CHECK**
- 3 - Wing deicer boots ..... **CHECK**  
**(Condition / Attachment)**
- 4 - Stall warning ..... **CHECK**  
**(Condition / Deflection)**
- 5 - Wing lower surface ..... **CHECK**  
**(No leaks)**
- 6 - Fuel tank ..... **CAP CLOSED / LOCKED**
- 7 - Fuel tank air vent ..... **Unobstructed - CHECK**
- 8 - Right pitot ..... **Condition - CHECK**
- 9 - Wing tip / nav. light /  
strobe / landing light ..... **Condition - CHECK**
- 10 - Trailing edge static discharger ..... **CHECK**  
**(Condition / Number / Attachment)**



## CHECK-LIST PROCEDURES

### PREFLIGHT INSPECTION (Cont'd)

- 11 - Aileron / spoiler ..... **CHECK**  
**(Condition / Free movement / Deflection)**
- 12 - Flap ..... **CHECK**  
**(Condition / Play)**
- 13 - Rear R.H. karman
  - Oxygen cylinder ..... **OPEN**
  - Oxygen quantity ..... **CHECKED**
- 14 - Oxygen pressure ..... **CHECK**

### ***Fuselage rear section / Empennages*** (VI)

- 1 - ELT ..... **OFF**
  - ELT door ..... **CLOSED/LOCKED**
- 2 - Static pressure ports ..... **CLEAN - CHECK**
- 3 - Ventral fins ..... **CHECK**  
**(Condition / Attachments)**
- 4 - Inspection door under fuselage ..... **CLOSED - CHECK**  
**(Attachments)**
- 5 - Horizontal stabilizer  
deicer boots (R.H. side) ..... **CHECK**  
**(Condition / Attachments)**
- 6 - Elevator and trim ..... **CHECK**  
**(Condition / Deflection free movement / Trim position)**
- 7 - Static dischargers ..... **CHECK**  
**(Condition)**
- 8 - Vertical stabilizer deicer boots ..... **CHECK**  
**(Condition / Attachments)**



CHECK-LIST PROCEDURES

PREFLIGHT INSPECTION (Cont'd)

9 - Rudder and trim ..... **CHECK**  
**(Condition / Trim position)**

10 - Static dischargers ..... **CHECK**  
**(Condition)**

11 - Tail cone ..... **Condition - CHECK**

12 - Static pressure ports ..... **Clean - CHECK**



## CHECK-LIST PROCEDURES

### BEFORE STARTING ENGINE (1/3)

#### CAUTION

**"BLEED" SWITCH SET TO "AUTO" MAY CAUSE  
OVERTEMPERATURE OR ABNORMAL ACCELERATION  
AT START**

#### CAUTION

**MAKE SURE THAT "MAN OVRD" CONTROL IS OFF TO AVOID  
OVERTEMPERATURE RISKS AT START**

- 1 - Preflight inspection ..... **COMPLETED**
- 2 - Cabin access door ..... **CLOSED / LOCKED**
- 3 - "Pilot" door (if installed) ..... **CLOSED / LOCKED**
- 4 - Baggage ..... **STOWED**
- 5 - Parking brake ..... **SET**
- 6 - Weight and balance ..... **COMPUTED / CHECKED**
- 7 - Pilot seat and R.H. front seat (if occupied)
  - Height adjustment ..... **Maximum UP**
  - Fore and aft adjustment ... **ADJUST and CHECK LOCKING**
  - Height adjustment ..... **ADJUST**

#### CAUTION

**IT IS MANDATORY TO ADJUST SEAT IN FORE-AFT  
MOVEMENT WHEN SEAT IS IN MAXIMUM HIGH  
PERMISSIBLE POSITION, TO AVOID INTERFERENCE  
BETWEEN SIDE UPHOLSTERY PANEL AND SEAT  
HOUSING IN LOW AND INTERMEDIATE POSITIONS**



CHECK-LIST PROCEDURES

**BEFORE STARTING ENGINE (2/3)**

- 8 - R.H and L.H. pedals ..... **ADJUSTED**
- 9 - Belts and harnesses (Pilot and passengers) ..... **FASTENED**
- 10 - Passengers' seat backrest ..... **UPRIGHT**
- 11 - "NORMAL/MASK" micro inverter ..... **NORMAL**
- 12 - Landing gear control ..... **DN**
- 13 - "AVIONICS" MASTER switch ..... **START**
- 14 - LEFT PFD REVERSIONARY mode ..... **ENGAGED**  
("DISPLAY BACK UP" button "OUT")
- 15 - RADIO VHF ..... **ON - ADJUSTED**
- 16 - "IGNITION" switch ..... **AUTO or OFF**
- 17 - "STARTER" switch ..... **OFF**
- 18 - "SOURCE" selector ..... **BAT (or GPU)**
- 19 - Authorization for engine starting ..... **ASKED**
- 20 - Pilots "OXYGEN" switch ..... **ON**
- 21 - "PASSENGERS OXYGEN" switch ..... **OFF**
- 22 - Copilot and pilot masks ..... **Press push-button**  
**"PRESS TO TEST" : the blinker shall turn red**  
**momentarily, then turns transparent**
- 23 - Passengers briefing ..... **AS REQUIRED**



## CHECK-LIST PROCEDURES

### BEFORE STARTING ENGINE (3/3)

- 24 - CAS display
  - Access door and (if installed) "pilot" door  
WARNING CAS MESSAGE "DOOR" OFF
  - Oxygen emergency system  
WARNING CAS MESSAGE "OXYGEN" OFF
  - Vacuum system  
CAUTION CAS MESSAGE "VACUUM LOW" ON
- 25 - Fuel
  - Quantity ..... CHECKED
  - Tank selector ..... L or R - CHECKED
- 26 - EXT LIGHTS panel
  - "STROBE" ..... AS REQUIRED
- 27 - In case of night flight
  - INT LIGHTS panel : "INSTR" + "PANEL" ..... ADJUSTED
  - Navigation lights ..... ON
  - Flashlight (if necessary) ..... IN PLACE

CHECK-LIST PROCEDURES

**STARTING ENGINE USING  
AIRPLANE POWER (1/5)**

**CAUTION**

**BEFORE SELECTING SOURCE, CHECK :**

- 1 - "IGNITION" switch ..... **AUTO or OFF**
  - 2 - "STARTER" switch ..... **OFF**
  - 3 - "INERT SEP" switch ..... **OFF**
  - 4 - Landing gear control ..... **DN**
- 
- 5 - ELECTRIC POWER panel
    - "SOURCE" selector ..... **BAT**
    - Voltage ..... **CHECKED**  
 $\geq 24.5$  Volts
  - 6 - Engine controls
    - "MAN OVRD" control ..... **OFF (Notched)**

**CAUTION**

**WHEN THE ENGINE IS SHUTDOWN, THE POWER LEVER  
MUST NOT BE MOVED BEHIND THE FLIGHT IDLE  
POSITION**

- Power lever ..... **IDLE**  
**(Flight idle stop)**
- Propeller governor lever ..... **MAX RPM**
- Condition lever ..... **CUT OFF**



CHECK-LIST PROCEDURES

**STARTING ENGINE USING  
AIRPLANE POWER (2/5)**

7 - Flaps ..... UP

<b><u>WARNING</u></b>
<b>IT IS PROHIBITED TO SET FLAPS CONTROL LEVER TO "850" POSITION ON GROUND AND FOR TAKEOFF</b>

8 - FUEL panel  
- "AUX BP" switch ..... ON

WARNING CAS MESSAGE "AUX BOOST PMP ON" ON

WARNING CAS MESSAGE "FUEL PRESS" OFF

9 - Propeller ..... AREA CLEAR

10 - ENGINE START panel  
- "IGNITION" switch ..... AUTO  
- "STARTER" switch ..... ON

WARNING CAS MESSAGE "STARTER" ON

WARNING CAS MESSAGE "IGNITION" ON

*NOTE :*  
*The utilization of the starter is bound by limitations mentioned in Chapter 2.4 "STARTER OPERATION LIMITS".*

Ng  $\simeq$  13 %  
- Condition lever ..... LO / IDLE

Monitor increase of :  
- ITT ..... (max. ITT :  $\leq$  870°C for 20 seconds max.  
 $\leq$  1000°C for 5 seconds max.)

- Ng  
- Oil pressure  
WARNING CAS MESSAGE "OIL PRESS" OFF



CHECK-LIST PROCEDURES

**STARTING ENGINE USING  
AIRPLANE POWER (3/5)**

11 - "STARTER" switch ..... **OFF**  
Check Ng > 52 %

12 - Condition lever ..... **HI / IDLE**

13 - Engine instruments ..... **CHECK : Ng  $\simeq$  70 % ( $\pm$  2 %)**  
**(Oil pressure / Oil temperature / ITT = green sector)**

14 - FUEL panel  
- "AUX BP" switch ..... **AUTO**

**WARNING CAS MESSAGE "AUX BOOST PMP ON" OFF**

15 - Generator  
**WARNING CAS MESSAGE "MAIN GEN" OFF**

	<b>RESET if necessary</b>
- Ammeters .....	<b>CHARGE CHECKED</b>
- Voltmeters .....	<b>VOLTAGE CHECKED</b>
	<b>(V <math>\simeq</math> 28 Volts)</b>

CHECK-LIST PROCEDURES

**STARTING ENGINE USING  
AIRPLANE POWER (4/5)**

**CAUTION**

**IF 10 SECONDS AFTER HAVING POSITIONED CONDITION LEVER TO "LO / IDLE" THERE IS NO IGNITION OR IF DURING IGNITION SEQUENCE, OVERTEMPERATURE INDICATION APPEARS (MAX. ITT ≤ 870°C FOR MORE THAN 20 SECONDS ; ≤ 1000°C FOR MORE THAN 5 SECONDS),**

**INTERRUPT STARTING PROCEDURE :**

**Condition lever ..... CUT OFF**

**"IGNITION" switch ..... OFF (or AUTO)**

**Wait ITT < 850°C, then :**

**"STARTER" switch ..... OFF**

**BEFORE ANY RESTARTING ATTEMPT, CARRY OUT A MOTORING (Refer to paragraph "MOTORING")**

**CAUTION**

**IF ENGINE STAGNATES,**

**INTERRUPT STARTING PROCEDURE :**

**Condition lever ..... CUT OFF**

**"IGNITION" switch ..... OFF (or AUTO)**

**"STARTER" switch ..... OFF**

**WAIT FOR 1 MINUTE (Refer to Chapter 2.4 "STARTER OPERATION LIMITS"), THEN TRY TO RESTART**



## STARTING ENGINE USING AIRPLANE POWER (5/5)

ENGINE START panel

- "IGNITION" switch ..... **AUTO**
- "STARTER" switch ..... **ON**

WARNING CAS MESSAGE	<b>"STARTER"</b>	<b>ON</b>
WARNING CAS MESSAGE	<b>"IGNITION"</b>	<b>ON</b>

Ng  $\simeq$  13 %

- Condition lever ..... **HI / IDLE**

Monitor increase of :

- ITT ..... (max. ITT :  $\leq 870^{\circ}\text{C}$  for 20 seconds max.  
 $\leq 1000^{\circ}\text{C}$  for 5 seconds max.)
- Ng
- Oil pressure

WARNING CAS MESSAGE	<b>"OIL PRESS"</b>	<b>OFF</b>
---------------------	--------------------	------------

Ng  $\simeq$  50 %

- "STARTER" switch ..... **OFF**

WARNING CAS MESSAGE	<b>"STARTER"</b>	<b>OFF</b>
WARNING CAS MESSAGE	<b>"IGNITION"</b>	<b>OFF</b>

■ Engine instruments ..... **CHECK : Ng  $\simeq$  70 % ( $\pm 2$  %)**  
 (Oil pressure / ITT = green sector)

**NOTE :**  
*This behaviour should only be observed with outside low temperature (OAT < 0 °C), cold engine.  
 This procedure may be used for the first starting of the day.*



CHECK-LIST PROCEDURES

**STARTING ENGINE USING  
EXTERNAL POWER (GPU) (1/5)**

1 - GPU ..... **CONNECTED**

**CAUTION**

**BEFORE SELECTING SOURCE, CHECK :**

- 2 - "IGNITION" switch ..... **AUTO or OFF**
- 3 - "STARTER" switch ..... **OFF**
- 4 - "INERT SEP" switch ..... **OFF**
- 5 - Landing gear control ..... **DN**

6 - "SOURCE" selector ..... **GPU**

WARNING CAS MESSAGE "GPU DOOR" **ON**

WARNING CAS MESSAGE "BAT OFF" **ON**

- Voltmeter ..... **VOLTAGE CHECKED**  
(V ≈ 28 Volts)

7 - Engine controls

- "MAN OVRD" control ..... **OFF (Notched)**

**CAUTION**

**WHEN THE ENGINE IS SHUTDOWN, THE POWER LEVER  
MUST NOT BE MOVED BEHIND THE FLIGHT IDLE  
POSITION**

- Power lever ..... **IDLE**  
(Flight idle stop)

- Propeller governor lever ..... **MAX RPM**

- Condition lever ..... **CUT OFF**



CHECK-LIST PROCEDURES

**STARTING ENGINE USING  
 EXTERNAL POWER (GPU) (2/5)**

8 - Flaps ..... UP

**WARNING**  
**IT IS PROHIBITED TO SET FLAPS CONTROL LEVER TO  
 "850" POSITION ON GROUND AND FOR TAKEOFF**

9 - FUEL panel  
 - "AUX BP" switch ..... ON

**WARNING CAS MESSAGE "AUX BOOST PMP ON" ON**

**WARNING CAS MESSAGE "FUEL PRESS" OFF**

- Fuel pressure indicator ..... CHECK

10 - Propeller ..... AREA CLEAR

11 - ENGINE START panel  
 - "IGNITION" switch ..... AUTO  
 - "STARTER" switch ..... ON

**WARNING CAS MESSAGE "STARTER" ON**

**WARNING CAS MESSAGE "IGNITION" ON**

*NOTE :*  
*The utilization of the starter is bound by limitations mentioned in  
 Chapter 2.4 "STARTER OPERATION LIMITS".*

Ng  $\simeq$  13 %  
 - Condition lever ..... LO / IDLE

Monitor increase of :  
 - ITT ..... (max. ITT :  $\leq$  870°C for 20 seconds max.  
 $\leq$  1000°C for 5 seconds max.)

- Ng  
 - Oil pressure  
**WARNING CAS MESSAGE "OIL PRESS" OFF**





CHECK-LIST PROCEDURES

**STARTING ENGINE USING  
EXTERNAL POWER (GPU) (4/5)**

**CAUTION**

**IF 10 SECONDS AFTER HAVING POSITIONED CONDITION LEVER TO "LO / IDLE" THERE IS NO IGNITION OR IF DURING IGNITION SEQUENCE, OVERTEMPERATURE INDICATION APPEARS (MAX. ITT  $\leq$  870°C FOR MORE THAN 20 SECONDS ;  $\leq$  1000°C FOR MORE THAN 5 SECONDS),**

**INTERRUPT STARTING PROCEDURE :**

**Condition lever ..... CUT OFF**

**"IGNITION" switch ..... OFF (or AUTO)**

**Wait ITT < 850°C, then :**

**"STARTER" switch ..... OFF**

**BEFORE ANY RESTARTING ATTEMPT, CARRY OUT A MOTORING  
(Refer to paragraph "MOTORING")**

**CAUTION**

**IF ENGINE STAGNATES,**

**INTERRUPT STARTING PROCEDURE :**

**Condition lever ..... CUT OFF**

**"IGNITION" switch ..... OFF (or AUTO)**

**"STARTER" switch ..... OFF**

**WAIT FOR 1 MINUTE (Refer to Chapter 2.4 "STARTER OPERATION LIMITS"), THEN TRY TO RESTART**



## STARTING ENGINE USING EXTERNAL POWER (5/5)

ENGINE START panel

- "IGNITION" switch ..... **AUTO**
- "STARTER" switch ..... **ON**

WARNING CAS MESSAGE      **"STARTER"**      **ON**

WARNING CAS MESSAGE      **"IGNITION"**      **ON**

Ng  $\simeq$  13 %

**[- Condition lever ..... **HI / IDLE**]**

Monitor increase of :

- ITT ..... (max. ITT :  $\leq 870^{\circ}\text{C}$  for 20 seconds max.  
 $\leq 1000^{\circ}\text{C}$  for 5 seconds max.)

- Ng
- Oil pressure

WARNING CAS MESSAGE      **"OIL PRESS"**      **OFF**

Ng  $\simeq$  50 %

- "STARTER" switch ..... **OFF**

WARNING CAS MESSAGE      **"STARTER"**      **OFF**

WARNING CAS MESSAGE      **"IGNITION"**      **OFF**

Engine instruments ..... **CHECK : Ng  $\simeq$  70 % ( $\pm 2$  %)**  
**(Oil pressure / ITT = green sector)**

**NOTE :**

*This behaviour should only be observed with outside low temperature (OAT < 0 °C), cold engine.*

*This procedure may be used for the first starting of the day.*

CHECK-LIST PROCEDURES

MOTORING (1/2)

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CAUTION

AFTER ANY STARTING INTERRUPT PROCEDURE :

- WAIT FOR ENGINE TOTAL SHUT-DOWN
- WAIT AT LEAST 30 SECONDS BEFORE INITIATING A MOTORING

- 1 - Engine controls
  - "MAN OVRD" control ..... **OFF (Notched)**

CAUTION

WHEN THE ENGINE IS SHUTDOWN, THE POWER LEVER  
MUST NOT BE MOVED BEHIND THE FLIGHT IDLE  
POSITION

- Power lever ..... **IDLE**  
(Flight idle stop)
- Propeller governor lever ..... **MAX. RPM**
- Condition lever ..... **CUT OFF**
- 2 - Fuel
  - Tank selector ..... **L or R**
  - "AUX BP" switch ..... **ON**
- WARNING CAS MESSAGE "AUX BOOST PMP ON"            ON**
- WARNING CAS MESSAGE "FUEL PRESS"                OFF**



## CHECK-LIST PROCEDURES

### MOTORING (2/2)

- 3 - "IGNITION" switch ..... OFF  
WARNING CAS MESSAGE "IGNITION" OFF

*To clear fuel and vapor internally trapped :*

- 4 - "STARTER" switch ..... ON  
during 15 sec maxi  
WARNING CAS MESSAGE "STARTER" ON

*To cool engine following shut-down in high temperature environment :*

- 4 - "STARTER" switch ..... ON  
during 30 sec  
WARNING CAS MESSAGE "STARTER" ON

- 5 - "STARTER" switch ..... OFF  
WARNING CAS MESSAGE "STARTER" OFF

- 6 - FUEL panel  
- "AUX BP" switch ..... OFF  
WARNING CAS MESSAGE "AUX BOOST PMP ON" OFF  
WARNING CAS MESSAGE "FUEL PRESS" ON

CHECK-LIST PROCEDURES

**MOTORING FOLLOWED BY  
AN ENGINE START (1/2)**

Within starter operating limits (continuous max. 1 minute), it is possible to initiate a starting procedure from a motoring procedure.

- 1 - Engine controls
  - "MAN OVRD" control ..... **OFF (Notched)**

**CAUTION**

**WHEN THE ENGINE IS SHUTDOWN, THE POWER LEVER  
MUST NOT BE MOVED BEHIND THE FLIGHT IDLE  
POSITION**

- Power lever ..... **IDLE**  
**(Flight idle stop)**
- Propeller governor lever ..... **MAX. RPM**
- Condition lever ..... **CUT OFF**
- 2 - Fuel
  - Tank selector ..... **L or R**
  - "AUX BP" switch ..... **ON**
- WARNING CAS MESSAGE "AUX BOOST PMP ON"      ON**
- WARNING CAS MESSAGE "FUEL PRESS"      OFF**
- 3 - "IGNITION" switch ..... **OFF**
- 4 - "STARTER" switch ..... **ON during 15 sec**





## CHECK-LIST PROCEDURES

### MOTING FOLLOWED BY AN ENGINE START (2/2)

- 5 - After 15 seconds :
  - "IGNITION" switch ..... **AUTO**
  - Ng ..... **Check at  $\approx 13\%$**
  - Condition lever ..... **LO / IDLE**

- 6 - Monitor increase of :
  - ITT ..... **(max. ITT :  $\leq 870^{\circ}\text{C}$  for 20 seconds max.  
 $\leq 1000^{\circ}\text{C}$  for 5 seconds max.)**

- Ng
- Oil pressure

**WARNING CAS MESSAGE "OIL PRESS" OFF**

Ng  $\approx 50\%$  stable

- "STARTER" switch ..... **OFF**

**WARNING CAS MESSAGE "STARTER" OFF**

**WARNING CAS MESSAGE "IGNITION" OFF**

- 7 - Engine instruments ..... **CHECK : Ng > 52%**  
**(Oil pressure / ITT = green sector)**

- 8 - Condition lever ..... **HI / IDLE**

- 9 - Engine instruments ..... **CHECK : Ng  $\approx 70\%$  ( $\pm 2\%$ )**  
**(Oil pressure / Oil temperature / ITT = green sector)**

- 10 - FUEL panel
  - "AUX BP" switch ..... **AUTO**

**WARNING CAS MESSAGE "AUX BOOST PMP ON" OFF**

- 11 - Generator
  - WARNING CAS MESSAGE "MAIN GEN" OFF**

**RESET if necessary**

- Ammeters ..... **CHARGE CHECKED**
- Voltmeters ..... **VOLTAGE CHECKED**  
**(V  $\approx 28$  Volts)**

CHECK-LIST PROCEDURES

**AFTER STARTING ENGINE (1/3)**

- 1 - "GENERATOR" selector
  - On "MAIN" ..... **Voltage and current checked**  
when current  $\leq$  50 amps :
  - on "ST-BY" ..... **Voltage and current checked**  
**(reset if necessary)**
  - then again on "MAIN"
- 2 - "AVIONICS" MASTER switch ..... **ON**
- 3 - "AP TRIMS" MASTER switch ..... **ON**
- 4 - "FUEL SEL" switch ..... **AUTO**
- 5 - "SHIFT" push-button ..... **PRESS**  
**Verify rotation of FUEL TANK SELECTOR**
- 6 - Oxygen supply ..... **Available for the planned flight**  
**(see tables of paragraph "IN-FLIGHT AVAILABLE**  
**OXYGEN QUANTITY" in this Chapter**  
**and Chapter 7.10 for a FAR 135 type operation)**
- 7 - LEFT PFD REVERSIONARY mode ..... **DISENGAGED**  
**("DISPLAY BACK UP" button "IN")**
- 8 - PFD 1, MFD and PFD 2
  - Brightness ..... **ADJUST if necessary**
  - DISPLAY BACKUP button ..... **CHECK**  
**then return to NORMAL mode**

*When ammeter < 100 A :*

- 9 - ECS panel
  - "BLEED" switch ..... **AUTO**
  - "AIR COND" switch ..... **AUTO**
  - "CABIN CTRL" selector ..... **AS REQUIRED**
  - "CABIN TEMP/°C" selectors ..... **ADJUST**
  - "AIR FLOW" distributor ..... **AS REQUIRED**
  - Cabin pressure control panel ..... **Airfield altitude**



CHECK-LIST PROCEDURES

**AFTER STARTING ENGINE (2/3)**

- 10 - Stand-by instruments ..... **CHECKED**
  - Suction gage [PRE-MOD70-0335-34 (ESI-2000)] .. **CHECKED**
- 11 - ADI/HSI on PFD1 / PFD2 ..... **CHECKED**
- 12 - Altimeter setting ..... **CHECKED**
- 13 - VHF/VOR/GPS ..... **ADJUSTED - TESTED**
  - Radar/Stormscope/TAS/TAWS/  
Radio altimeter (if installed) ..... **ADJUSTED - TESTED**
- 14 - MFD flight management
  - Weight computing ..... **SET/CHECKED**
  - FOB synchro ..... **SET**
  - FPL (if requested) ..... **SET**
- 15 - AP / TRIMS
  - "AP TRIMS" MASTER operation ..... **CHECK**
  - Pitch trim ..... **UP / DN, then ADJUSTED**
  - Yaw trim ..... **L / R, then ADJUSTED**
  - Roll trim ..... **L / R, then ADJUSTED**
- 16 - DE ICE SYSTEM panel
  - MFD on system page
  - "PROP DE ICE" switch ..... **ON**  
**Check illumination of the green light located above the switch**
  - "PROP DE ICE" switch ..... **OFF**
  - "WINDSHIELD" switch ..... **ON**  
**Check illumination of the green lights located above the switch (except if hot conditions)**
  - "WINDSHIELD" switch ..... **OFF**



CHECK-LIST PROCEDURES

**AFTER STARTING ENGINE (3/3)**

Increase power so as to get  $N_g \geq 80\%$  to check AIRFRAME DE ICE

- "AIRFRAME DE ICE" switch ..... **ON**  
**Visually check functioning of deicer boots during 1 total cycle and illumination of the two green lights located above the switch**
- "AIRFRAME DE ICE" switch ..... **OFF**
- "INERT SEP" switch ..... **ON**

**WARNING CAS MESSAGE "INERT SEP ON" ON**

**after 30 seconds**

CHECK-LIST PROCEDURES

**IN-FLIGHT AVAILABLE  
 OXYGEN QUANTITY**

Oxygen pressure ..... **Read**

Outside air temperature (OAT) ..... **Read**

1 - Determine the usable oxygen percent using the chart Figure 4.3.5.

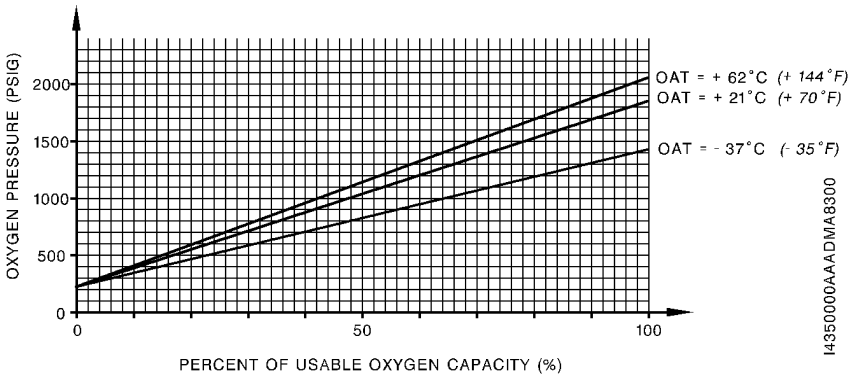


Figure 4.3.5

2 - Determine the oxygen duration in minutes by multiplying the values read on table Figure 4.3.6 by the percent obtained with the chart Figure 4.3.5.

Number of passengers	Duration : Passengers, plus 1 pilot	Duration : Passengers, plus 2 pilots
0	226	113
1	162	94
2	127	81
3	104	71
4	88	65

Figure 4.3.6

CHECK-LIST PROCEDURES

<b>TAXIING</b>			
1 -	"TAXI" light .....		<b>ON</b>
2 -	"INERT SEP" switch .....	<b>CHECKED ON</b>	
	<b>CHECK WARNING CAS MESSAGE</b>	<b>"INERT SEP ON"</b>	<b>ON</b>
3 -	Passenger briefing .....	<b>AS REQUIRED</b>	
4 -	Parking brake .....	<b>RELEASED</b>	
	<b>WARNING CAS MESSAGE</b>	<b>"PARK BRAKE"</b>	<b>OFF</b>
5 -	L.H. and R.H. seats brakes .....	<b>CHECKED</b>	
6 -	Nose wheel steering .....	<b>CHECKED</b>	
7 -	Power lever .....	<b>AS REQUIRED</b>	
<b>CAUTION</b>			
<b>AVOID USING REVERSE DURING TAXIING</b>			
8 -	Flight instruments .....	<b>CHECK</b>	
9 -	CAS display .....	<b>CHECK</b>	
10 -	Cabin pressurization control panel .	<b>Cruise altitude + 1000 feet</b>	

## CHECK-LIST PROCEDURES

### BEFORE TAKEOFF (1/2)

1 - Parking brake ..... SET

WARNING CAS MESSAGE "PARK BRAKE" ON

2 - Condition lever ..... HI / IDLE

[Ng : 69 % (± 2 %)]

3 - Propeller governor lever ..... FEATHER twice,  
then MAX. RPM

4 - Flaps ..... TO

5 - DE ICE SYSTEM panel

- "AIRFRAME DE ICE" switch ..... As required

- "PROP DE ICE" switch ..... As required

*If runway is in good condition, without icing conditions :*

- "INERT SEP" switch ..... OFF

WARNING CAS MESSAGE "INERT SEP ON" OFF

*If there is standing water or other contamination on the runway :*

- "INERT SEP" switch ..... Leave ON

WARNING CAS MESSAGE "INERT SEP ON" ON

- "WINDSHIELD" switch ..... As required

- "PITOT L HTR" switch ..... ON

- "PITOT R & STALL HTR" switch ..... ON

6 - Flight controls ..... DEFLECTIONS CHECKED

7 - Trims

- Pitch ..... ADJUSTED

- Yaw ..... ADJUSTED

- Roll ..... ADJUSTED



CHECK-LIST PROCEDURES

**BEFORE TAKEOFF (2/2)**

- 8 - Pilot's / Passengers' belts ..... **CHECK**
  - Passengers' table ..... **STOWED**
  - Passengers' seat backrest ..... **CHECK**
  
- 9 - "STROBE" switch ..... **ON**
  
- 10 - CAS display ..... **CHECK**

**All messages OFF,**

<b>except</b>	<b>"PARK BRAKE"</b>	<b>ON</b>
<b>and, if used</b>	<b>"INERT SEP ON"</b>	<b>ON</b>
  
- 11 - Fuel
  - Gages : quantity, symmetry ..... **CHECKED**
  - "FUEL SEL" switch ..... **CHECK AUTO**
  - "AUX BP" fuel switch ..... **CHECK AUTO**
  
- 12 - Flight instruments ..... **CHECKED**
  - Altimeter setting ..... **ADJUSTED/CHECKED**
  - "ALT SEL" ..... **ADJUSTED/CHECKED**
  
- 13 - VHF/VOR/GPS/XPDR ..... **ADJUSTED/CHECKED**
  - Radar/Stormscope/TAS/TAWS/ADF  
 (if installed) ..... **ADJUSTED/CHECKED**
  - Radio altimeter (if installed) ..... **ADJUSTED/CHECKED**
  - Transponder code ..... **ADJUSTED/CHECKED**
  
- 14 - Engine instruments ..... **CHECK**
  
- 15 - Battery charge ..... **< 50 Amperes**

**CAUTION**

**DO NOT TAKE OFF IF BATTERY CHARGE > 50 Amperes**

- 16 - Parking brake ..... **RELEASED**

<b>WARNING CAS MESSAGE</b>	<b>"PARK BRAKE"</b>	<b>OFF</b>
----------------------------	---------------------	------------



## CHECK-LIST PROCEDURES

### TAKEOFF (1/2)

#### WHEN LINED UP

#### CAUTION

- IF HEAVY PRECIPITATION, TURN IGNITION AND INERT SEP ON.
- IF ICING CONDITIONS ARE FORESEEN, REFER TO CHAPTER 4.5, PARAGRAPH "FLIGHT INTO KNOWN ICING CONDITIONS"

- 1 - Horizon ..... **CHECK attitude**  $\simeq + 2^\circ$
- 2 - Heading - HSI - Stand-by compass ..... **CHECK**
  - Altimeter setting ..... **CHECK**
- 3 - Lights
  - "L.LDG / TAXI / R.LDG" ..... **ON**
- 4 - Engine instruments ..... **CHECK**  
(ITT = green sector)
- 5 - CAS display ..... **CHECK**  
**All messages OFF,**  
**except "INERT SEP ON" if used**  
**except "IGNITION" if used**
- 6 - PROP O' SPEED GOVERNOR TEST
  - Increase power until propeller RPM reaches 1900 RPM
  - PROP O' SPEED ..... **TEST : Maintain engaged**
  - Observe that propeller RPM decreases by 50 to 250 RPM
  - PROP O' SPEED ..... **TEST : Release**
  - Check that propeller RPM increases by a minimum of 50 RPM when compared to minimum value during PROP O'SPEED test.



CHECK-LIST PROCEDURES

**TAKEOFF (2/2)**

- 7 - Brakes ..... **RELEASED**
- 8 - Power lever ..... **TRQ = 100 %**
- 9 - Takeoff ..... **ROTATION : See "Takeoff distances" Chapter 5.9**
  - Normal takeoff ..... **ATTITUDE : 7°5**
  - Short takeoff
    - . Weight < 6579 lbs (2984 kg) ..... **ATTITUDE : 15°**
    - . Weight ≥ 6579 lbs (2984 kg) ..... **ATTITUDE : 12°5**
- 10 - Vertical speed indicator ..... **POSITIVE**
- 11 - Brakes ..... **APPLY (Briefly)**
- 12 - Landing gear control ..... (IAS < 128 KIAS) ..... **UP**  
**At sequence end, check : All warning lights OFF**
- 13 - Initial climb speed ..... Weight < 6579 lbs (2984 kg) : **110 KIAS**  
Weight ≥ 6579 lbs (2984 kg) : **115 KIAS**
- 14 - Flaps ..... **UP**  
*Only when flaps are confirmed UP :*
- 15 - Flap control ..... **850**
- 16 - Power lever ..... **TRQ =121.4 %**
- 17 - Climb speed (recommended) ..... **130 KIAS**
  - Trims (Pitch, Roll and Yaw) **ADJUSTED**
- 18 - "YAW DAMPER" push-button ..... **ON**
- 19 - Lights
  - "TAXI" ..... **OFF**
  - "L.LDG / R.LDG" ..... **AS REQUIRED**

CHECK-LIST PROCEDURES

**CLIMB**

- 1 - Power lever ..... **ADJUST according to engine operation tables - Chapter 5.8 or to MXCL indicator on the PFDs**

**CAUTION**

**OBSERVE TRQ / Ng / Np / ITT / T°  
AND OIL PRESSURE LIMITATIONS.  
USE OPTIMUM TORQUE  
AND / OR REFER TO TABLES IN CHAPTER 5.8**

- 2 - Climb speed ..... **AS REQUIRED**
- 3 - ECS panel
  - Cabin pressure control panel ... **Cruise altitude + 1000 feet**
  - Pressurization ..... **CHECK**
  - "CABIN TEMP/°C" selectors ..... **ADJUST**
- 4 - Fuel tank gages ..... **CHECK / CORRECT (Quantity / Symmetry)**
- 5 - DE ICE SYSTEM ..... **As required Refer to Chapter 4.5 "PARTICULAR PROCEDURES"**

**CAUTION**

**IF HEAVY PRECIPITATION, TURN IGNITION AND INERT SEP ON**

CHECK-LIST PROCEDURES

**CRUISE**

- 1 - Power lever ..... **ADJUST according to engine operation tables - Chapter 5.8 or to Cruise index on the PFDs**

**CAUTION**  
**OBSERVE TRQ / Ng / Np / ITT / T°**  
**AND OIL PRESSURE LIMITATIONS.**  
**USE OPTIMUM TORQUE**  
**AND / OR REFER TO TABLES IN CHAPTER 5.8**

- 2 - Pressurization ..... **CHECK**

- 3 - Fuel  
- Gages ..... **CHECK**

**REGULARLY CHECK :**  
**- consumption**



Pre-MOD70-0402-28 (Fuel sequencer evolution)  
**- tank automatic change (every 10 minutes)**



Post-MOD70-0402-28 (Fuel sequencer evolution)  
**- tank automatic change (every 5 minutes)**

All

- expected fuel at destination**
- symmetry [max. dissymmetry 15 us gal (57 Litres)]**

- 4 - Cruise parameters / engine data ..... **CHECK/RECORD**

- 5 - DE ICE SYSTEM ..... **As required**  
**Refer to Chapter 4.5 "PARTICULAR PROCEDURES"**

**CAUTION**  
**IF HEAVY PRECIPITATION, TURN IGNITION**  
**AND INERT SEP ON**

## CHECK-LIST PROCEDURES

**FLAP CONTROL TRANSITION  
FROM "UP" TO "850"**

- |                              |  |
|------------------------------|--|
| 1 - Flaps .....              | <b>CHECKED UP</b>                            |
| 2 - Propeller RPM .....      | <b>2000</b>                                  |
| 3 - Power lever .....        | <b>TRQ ≤ 100 %</b>                           |
| 4 - Flap control lever ..... | <b>From UP to 850</b>                        |
| 5 - Power lever .....        | <b>As required<br/>TRQ less than 121.4 %</b> |

**FLAP CONTROL TRANSITION  
FROM "850" TO "UP"**

- |                              |   |
|------------------------------|---|
| 1 - Altitude .....           | <b>At or above 1500 ft AGL</b>                            |
| 2 - Propeller RPM .....      | <b>2000</b>   |
| 3 - Power lever .....        | <b>TRQ ≤ 100 %</b>  |
| 4 - Flap control lever ..... | <b>From 850 to UP</b>                                     |
| 5 - Power lever .....        | <b>As required<br/>TRQ less than 100 %<br/>(2000 RPM)</b> |

CHECK-LIST PROCEDURES

<b>DESCENT</b>	
1 - Flaps .....	<b>UP</b>
2 - Altimeter settings .....	<b>COMPLETE</b>
3 - "ALT SEL" .....	<b>SELECTED</b>
4 - ECS panel	
- Cabin pressure control panel .....	<b>Airfield altitude</b>
5 - DE ICE SYSTEM .....	<b>As required</b>
	<b>Refer to Chapter 4.5</b>
	<b>"PARTICULAR PROCEDURES"</b>
<b>CAUTION</b> <b>IF HEAVY PRECIPITATION, TURN IGNITION</b> <b>AND INERT SEP ON</b>	
<b>CAUTION</b> <b>USE OF CONTROL REVERSE BETA (<math>\beta</math>) RANGE (BEHIND</b> <b>THE FLIGHT IDLE POSITION) IS PROHIBITED DURING</b> <b>FLIGHT</b>	
6 - Windshield misting protection system .....	<b>As required</b>
7 - Fuel	
- Gages .....	<b>CHECK(Quantity / Symmetry)</b>
- Fullest tank .....	<b>SELECT</b>
8 - Passengers briefing .....	<b>As required</b>
9 - Seats, belts and harnesses .....	<b>LOCKED</b>
10 - Passengers' table .....	<b>STOWED</b>
11 - Passengers' seat backrest .....	<b>CHECK</b>

## CHECK-LIST PROCEDURES

**BEFORE LANDING****Long final**

- |   |                              |
|---|------------------------------|
| 1 - Altimeters .....                                  | <b>CHECK</b>                 |
| 2 - Fuel  |                              |
| - Gages .....   | <b>CHECK</b>                 |
|   | <b>(Quantity / Symmetry)</b> |
| - Fullest tank .....                                  | <b>SELECT</b>                |
| 3 - "INERT SEP" switch ..... (IAS ≤ 200 KIAS) .....   | <b>ON</b>                    |
| 4 - Propeller lever .....                             | <b>MAX RPM</b>               |
| 5 - Landing gear control ..... (IAS ≤ 178 KIAS) ..... | <b>DN</b>                    |
| - Green indicator lights .....                        | <b>ON</b>                    |
| - Red warning light .....                             | <b>OFF</b>                   |
| 6 - Flaps ..... (IAS ≤ 178 KIAS) .....                | <b>TO</b>                    |
| 7 - Lights  |                              |
| - "L.LDG / TAXI / R.LDG" .....                        | <b>ON</b>                    |

**Short final**

- |  |  |
|--|--|
| 8 - Autopilot .....                    | <b>DISCONNECT</b>                            |
| 9 - Flaps ..... (IAS ≤ 122 KIAS) ..... | <b>LDG</b>                                   |
| 10 - Approach speed                    |  |
| (Flaps LDG) .....                      | Weight < 6250 lbs (2835 kg) : <b>80 KIAS</b> |
|  | Weight ≥ 6250 lbs (2835 kg) : <b>85 KIAS</b> |
| (Flaps LDG) .....                      | With AP engaged : ..... ≥ <b>85 KIAS</b>     |
| 11 - "YAW DAMPER" push-button .....    | <b>OFF</b>                                   |

CHECK-LIST PROCEDURES

<b>LANDING</b>	
1 - Power lever .....	<b>IDLE</b>
<b><i>After wheels touch</i></b>	
2 - Reverse .....	<b>As required</b>
(Reverse may be applied as soon as the wheels touch the ground.) To avoid ingestion of foreign objects, come out the reverse as speed reduces and use the brakes if necessary for further deceleration.	
<b>CAUTION</b>	
<b>ON SNOWY OR DIRTY RUNWAY, IT IS BETTER NOT TO USE REVERSE BELOW 40 KIAS</b>	
3 - Brakes .....	<b>As required</b>



## CHECK-LIST PROCEDURES

<b>GO-AROUND</b>	
1 - GO AROUND push-button .....	<b>PUSHED</b>
2 - Simultaneously	
- Power lever .....	<b>TRQ = 100 %</b>
- Attitude .....	<b>7° 5</b>
3 - Flaps .....	<b>TO</b>
<u>Weight below 6579 lbs (2984 kg)</u>	
<i>If the vertical speed is positive and if IAS is at or above 85 KIAS :</i>	
4 - Landing gear control .....	<b>UP</b>
	<b>All warning lights OFF</b>
<i>If IAS is at or above 110 KIAS :</i>	
5 - Flaps .....	<b>UP</b>
6 - Climb speed .....	<b>AS REQUIRED</b>
<u>Weight above 6579 lbs (2984 kg)</u>	
<i>If the vertical speed is positive and if IAS is at or above 90 KIAS :</i>	
7 - Landing gear control .....	<b>UP</b>
	<b>All warning lights OFF</b>
<i>If IAS is at or above 115 KIAS :</i>	
8 - Flaps .....	<b>UP</b>
9 - Climb speed .....	<b>AS REQUIRED</b>
10 - Power .....	<b>AS REQUIRED</b>

CHECK-LIST PROCEDURES

<b>TOUCH AND GO</b>	
<b><i>After wheels touch</i></b>	
1 - Flaps .....	<b>TO</b>
2 - Elevator trim .....	<b>Green sector</b>
3 - Power lever .....	<b>Display TRQ = 100 %</b>
4 - Takeoff .....	<b>ROTATION : See "Takeoff distances" Chapter 5.9</b>
- Normal takeoff .....	<b>ATTITUDE : 7°5</b>
- Short takeoff	
. Weight < 6579 lbs (2984 kg) .....	<b>ATTITUDE : 15°</b>
. Weight ≥ 6579 lbs (2984 kg) .....	<b>ATTITUDE : 12°5</b>

## CHECK-LIST PROCEDURES

**AFTER LANDING**

## RUNWAY CLEAR - AIRPLANE STOPPED

- |                                      |                        |
|--------------------------------------|------------------------|
| 1 - DE ICE SYSTEM panel              |                        |
| - "AIRFRAME DE ICE" switch .....     | <b>OFF</b>             |
| - "PROP DE ICE" switch .....         | <b>OFF</b>             |
| - "INERT SEP" switch .....           | <b>CHECKED ON</b>      |
| - "WINDSHIELD" switch .....          | <b>As required</b>     |
| - "PITOT L HTR" switch .....         | <b>OFF</b>             |
| - "PITOT R & STALL HTR" switch ..... | <b>OFF</b>             |
| 2 - Radar (if installed) .....       | <b>CHECKED STANDBY</b> |
| 3 - Transponder .....                | <b>CHECKED SBY</b>     |
| 4 - Flaps .....                      | <b>UP</b>              |
| 5 - "STROBE" switch .....            | <b>OFF</b>             |
| 6 - Lights                           |                        |
| - "L.LDG / R.LDG" .....              | <b>OFF</b>             |
| - "TAXI" .....                       | <b>ON</b>              |
| 7 - "OXYGEN" switch .....            | <b>OFF</b>             |

CHECK-LIST PROCEDURES

<b>SHUT-DOWN (1/2)</b>		
1 - Parking brake .....		<b>SET</b>
	<b>WARNING CAS MESSAGE "PARK BRAKE"</b>	<b>ON</b>
2 - ECS panel		
- "BLEED" switch .....		<b>OFF</b>
- Check for cabin depressurization		
- "AIR COND" switch .....		<b>OFF</b>
3 - Condition lever .....		<b>HI /IDLE</b>
4 - Power lever .....		<b>IDLE for 2 minutes</b>
5 - "TAXI" light .....		<b>OFF</b>
6 - "AP TRIMS" MASTER switch .....		<b>OFF</b>

<p style="text-align: center;"><b>CAUTION</b></p> <p style="text-align: center;"><b>IN CASE OF SHUT-DOWN ON A CONTAMINATED AREA:</b></p> <ul style="list-style-type: none"><li>- <b>Condition lever</b> ..... <b>CUT OFF</b></li><li>- <b>Propeller governor lever</b> ..... <b>FEATHER</b></li></ul>
---

- 7 - Propeller governor lever ..... **FEATHER for 15 seconds**
- 8 - Condition lever ..... **CUT OFF**
- 9 - "INERT SEP" switch ..... **OFF**
- 10 - "AVIONICS" MASTER switch ..... **OFF**
- 11 - EXT LIGHTS panel
  - All switches ..... **OFF**
- 12 - INT LIGHTS panel
  - All switches ..... **OFF**



## CHECK-LIST PROCEDURES

**SHUT-DOWN (2/2)**

- 13 - Fuel
- "AUX BP" switch ..... **OFF**
  - "FUEL SEL" switch ..... **MAN**
  - Tank selector ..... **OFF**
- 14 - "GENERATOR" selector ..... **OFF**
- 15 - "SOURCE" selector ..... **OFF**
- 16 - CRASH lever ..... **PULL DOWN**
- 17 - Parking brake ..... **As required**

**CAUTION**

**IN CASE OF HIGH OAT [ABOVE 35° C (95° F)], IT IS REQUIRED TO PERFORM 30 SECONDS DRY MOTORING RUN AFTER SHUT-DOWN TO IMPROVE COOLING OF THE BEARING CAVITIES AND MINIMIZE OIL COKING (REFER TO PARAGRAPH "MOTORING")**

Post-MOD70-0335-34 (ESI-2000)

- ESI-2000 - NORMAL PROCEDURE

No pilot action required for normal shutdown. The ESI-2000 will shut down within 5 minutes.

- ESI-2000 - MANUAL PROCEDURE

The ESI-2000 can be manually shut down when in the discharge mode to conserve battery power :

- . Remove all aircraft power from the ESI
- . Press any key (button) as stated by the on screen message
- . Press the M (Menu) button repeatedly until shutdown menu is shown.
- . Press and hold the + (Hold) button until "SHUTTING DN" message is shown in the upper left corner of the screen.

INTENTIONALLY LEFT BLANK

### 4.4 - AMPLIFIED PROCEDURES

## PREFLIGHT INSPECTION

### A - INSIDE INSPECTIONS

#### *Cockpit* (1)

- 1 - DE ICE SYSTEM panel
  - All switches ..... **OFF**
- 2 - ELT ..... **ARM**
- 3 - "NORMAL/MASK" micro inverter ..... **NORMAL**
- 4 - Flight control lock ..... **REMOVED / STOWED**  
The flight control lock is normally stowed in the front cargo compartment with the towing bar and the blanking covers.
- 5 - Flight controls ..... **Deflections checked**
- 6 - Parking brake ..... **SET**
- 7 - Landing gear control ..... **DN**
- 8 - Engine controls
  - "MAN OVRD" control ..... **OFF (Notched)**

**CAUTION**

**WHEN THE ENGINE IS SHUTDOWN, THE POWER LEVER  
MUST NOT BE MOVED BEHIND THE FLIGHT IDLE  
POSITION**

When engine is shut-off, a lack of hydraulic pressure prevents movement into reverse range. Trying to force the mechanism will cause damage.

- Power lever ..... **IDLE**  
**(Flight idle stop)**
- Propeller governor lever ..... **MAX. RPM**
- Condition lever ..... **CUT OFF**



**AMPLIFIED PROCEDURES**

PREFLIGHT INSPECTION (Cont'd)

- 9 - Flaps control ..... **UP**
- 10 - Fuel tank selector ..... **L or R**
- 11 - Landing gear emergency control  
Open door of emergency landing compartment :
  - Lever ..... **PULLED DOWN**
  - By-pass selector ..... **PUSHED**
  - Door ..... **IN PLACE**  
By-pass selector must be pushed at its maximum stop, so as to have the door in place.
- 12 - ECS panel
  - "BLEED" switch ..... **OFF**
  - "AIR COND" switch ..... **OFF**
  - "DUMP" switch ..... **GUARDED**
- 13 - Static Air control knob ..... **PUSHED**
- 14 - "RAM AIR" control knob ..... **PUSHED**
- 15 - Breakers panel
  - All breakers ..... **ENGAGED**
- 16 - "AVIONICS" MASTER switch ..... **OFF**
- 17 - "AP TRIMS" MASTER switch ..... **OFF**
- 18 - Fuel
  - "FUEL SEL" selector ..... **MAN**
  - "AUX BP" switch ..... **OFF**
- 19 - ENGINE START panel
  - "IGNITION" switch ..... **AUTO or OFF**  
The "IGNITION" switch is normally selected to AUTO. This ensures ignition, whenever the "STARTER" switch is set to ON.
  - "STARTER" switch ..... **OFF**  
If not, starter is going to operate as soon as "SOURCE" selector is moved to BAT or GPU (if connected).





**AMPLIFIED PROCEDURES**

PREFLIGHT INSPECTION (Cont'd)

- 20 - ELECTRIC POWER panel
  - CRASH lever ..... **UP**
  - "GENERATOR" selector ..... **MAIN**
  - "SOURCE" selector ..... **OFF**
- 21 - Access lighting ..... **CHECKED**  
This check allows to ensure that the fuse of the "BAT BUS" operates correctly.
- 22 - INT LIGHTS panel ..... **OFF**
- 23 - EXT LIGHTS panel
  - All switches ..... **OFF**
- 24 - Pilots "OXYGEN" switch ..... **OFF**
- 25 - "PASSENGERS OXYGEN" switch ..... **OFF**
- 26 - Emergency lighting ..... **CHECKED**

<b>CAUTION</b>	
<b>BEFORE SELECTING SOURCE, CHECK :</b>	
<b>27 - "IGNITION" switch</b> .....	<b>AUTO or OFF</b>
<b>28 - "STARTER" switch</b> .....	<b>OFF</b>
<b>29 - Landing gear control</b> .....	<b>DN</b>

- 30 - "SOURCE" selector ..... **BAT or GPU**



**AMPLIFIED PROCEDURES**

PREFLIGHT INSPECTION (Cont'd)

- 31 - Voltage ..... **CHECK**
  - BAT ..... **≥ 24.5 Volts**  
If not, use a GPU or charge battery. This minimum voltage is not an absolute guarantee for a correctly charged battery. It is recommended to use a GPU in cold weather, when airplane has been stopped more than 3 hours at a temperature below - 10°C (+14°F).
  - GPU ..... **≈ 28 Volts**  
If using a GPU, ensure that it provides a 28-volt regulated voltage, with negative on earth, as well as it supplies 800 amperes minimum and 1400 amperes maximum. See placard located near ground power receptacle door.
  
- 32 - EXT LIGHTS panel
  - "LTS TEST" push button ..... **PRESS**  
**(All instrument panel lamps ON  
except on landing gear control panel)**
  - "L.LDG / TAXI / R.LDG" switches ..... **ON**  
**(3 green lamps ON)**  
The illuminated three green lamps located on switches prove the correct operation of the three landing lights.
  - "L.LDG / TAXI / R.LDG" switches ..... **OFF**
  - "STROBE" ..... **ON**
  - "NAV" ..... **ON**

*From outside the airplane, check operation of all lights and the stall warning horn*

Reentering the airplane

- 33 - EXT LIGHTS panel ..... **ALL SWITCHES OFF**
  
- 34 - DE ICE SYSTEM panel
  - All switches ..... **OFF**
  - "ICE LIGHT" ..... **ON**



## AMPLIFIED PROCEDURES

### PREFLIGHT INSPECTION (Cont'd)

- 35 - "AVIONICS" MASTER switch ..... **START**
- 36 - CAS display ..... **CHECK**
- 37 - Left and right fuel quantities ..... **CHECK**
- 38 - EXT LIGHTS panel  
"LTS TEST" push button ..... **PRESS**  
**(red and amber MASTER warnings ON)**
- 39 - Flaps ..... **LDG**
- 40 - Landing gear panel ..... **Warning lights : 3 GREEN ON**  
**Test 1, then 2 : RED FLASHING + 3 GREEN ON**  
"Test 1" and "2" correspond to BUS bars 1 or 2, which feed them respectively.
- 41 - DE ICE SYSTEM panel  
"PITOT L HTR" switch ..... **ON**  
**WARNING CAS MESSAGE "PITOT HT L" ON**  
"PITOT R & STALL HTR" switch ..... **ON**  
Correct operation of pitot (PITOT L and R) tube heating elements and of stall aural warning system (STALL HTR) is indicated by display of corresponding CAS message, when control switches are ON.  
**WARNING CAS MESSAGE "PITOT HT ON L-R" ON**  
**WARNING CAS MESSAGE "STALL HEAT ON" ON**  
"PITOT L HTR" switch ..... **OFF**  
"PITOT R & STALL HTR" switch ..... **OFF**

**WARNING**

**DO NOT TOUCH PITOTS NOR STALL WARNING VANE.  
THEY COULD BE HOT ENOUGH TO BURN SKIN**



AMPLIFIED PROCEDURES

PREFLIGHT INSPECTION (Cont'd)

- 42 - "AVIONICS" MASTER switch ..... OFF
- 43 - "SOURCE" selector ..... OFF

Post-MOD70-0335-34 (ESI-2000)

- 44 - ESI-2000 battery indicator symbol ..... NOT DISPLAYED

**Cabin** (II)

- 1 - Cabin fire extinguisher ..... CHECK  
**(Pressure / Attachment)**
- 2 - Seats / belts ..... CHECK
- 3 - Windows ..... CHECK  
**(General condition / No crack)**
- 4 - Emergency exit ..... CLOSED / LOCKED  
Anti-theft safety ..... REMOVE / STOW
- 5 - Baggage compartment ..... STRAPS IN PLACE
- 6 - Partition net (if 6-seat accommodation) ..... IN PLACE  
**CHECK general condition**
- 7 - Large net or small net (if 4-seat accommodation  
and if baggage transportation) ..... IN PLACE  
**CHECK general condition**
- 8 - Doors operation ..... CHECK
- 9 - Stairs condition ..... CHECK  
**(Condition / Play)**



AMPLIFIED PROCEDURES

PREFLIGHT INSPECTION (Cont'd)

**B - AIRPLANE OUTSIDE**

The preflight inspection described in Figure 4.3.1 is recommended before each flight.

**NOTE :**

*If a preflight inspection is performed, just after the engine shut-off, be careful because the leading edge of engine air inlet, as well as exhaust stubs may be very hot.*

If the airplane was in long term storage or if it has undergone major maintenance or if it has been used from emergency airfields, a thorough outside inspection is recommended.

When the airplane is stored outside, the use of the flight control lock and blanking covers is recommended. Propeller should be tied down to prevent rotation without oil pressure.

When the airplane is stored for extended periods of time, a thorough preflight inspection is recommended. Particular attention should be paid to possible blockages in airspeed sensing lines, foreign objects in engine intake and exhaust stubs and water contamination of the fuel system.

**L.H. wing (III)**

- 1 - Flap ..... **CHECK (Condition / Play)**

Also inspect the lower surface, as well as flap fairing, where pebbles (and even ice in case of slush on the runway) may have accumulated.

- 2 - Aileron and trim / Spoiler ..... **CHECK (Condition / Free movement / Deflection)**

Ensure there are no foreign objects in the spoiler recess. When ailerons are in the neutral position, it is normal that spoilers are lightly extended at upper surface.



AMPLIFIED PROCEDURES

PREFLIGHT INSPECTION (Cont'd)

- 3 - Trailing edge static discharger ..... **CHECK**  
**(Condition / Attachment)**
  
- 4 - Wing tip / nav. lights /  
Strobe / landing light ..... **Condition - CHECK**
  
- 5 - OAT probe ..... **Condition - CHECK**
  
- 6 - Fuel tank ..... **CAP CLOSED / LOCKED**  
Fuel tank caps must be tight (which is characterized by a consequent exertion to lock and unlock them) to avoid water infiltration in case of rain on ground, and to avoid fuel loss in flight.
  
- 7 - Fuel tank air vent ..... **Unobstructed - CHECK**  
Air vent is not likely to be obstructed by ice or water, as it is located in a wing lower surface recess.
  
- 8 - Left pitot ..... **Condition - CHECK**
  
- 9 - Wing lower surface ..... **CHECK**  
**(No leak)**
  - Check fuel tank access doors for leaks
  - Check for surface damage.
  
- 10 - Wing deicer boots ..... **CHECK**  
**(Condition / Attachment)**  
Care must be taken when refuelling the airplane to avoid damaging the wing deicer boots. A protective apron should be used if possible.



**AMPLIFIED PROCEDURES**

PREFLIGHT INSPECTION (Cont'd)

- 11 - Fuel tank drain (two on each wing) . . . . . **DRAIN**  
**(Fuel free of water and contamination)**

In case of water in fuel system, drain it carefully using the four drain valves of tank sumps, and the fuel filter drain valve, till every trace of water or deposit has disappeared.

A long term storage of the airplane causes water accumulation in fuel, which absorbs additive. This phenomenon occurs when an excessive quantity of water accumulates in fuel tank sumps. Refer to Section 8 for servicing operations relative to fuel additives.

- 12 - L.H. main landing gear
  - Shock absorber / doors /  
tire / wheel well . . . . . **CHECK**

If airplane has been used from muddy airfields or in snow, check wheel wells to make sure they are clean and not obstructed.

Check frequently all landing gear retraction mechanism components, shock-absorbers, tires and brakes. This is particularly important for airplanes used from hilly fields.

Improperly serviced or worn shock-absorbers may result in excessive loads being transmitted to the airplane structure during ground operations. Without passengers and baggages on board, the unpainted surface of the main gear shock absorber tube must be visible about :

- 55 mm (2.17 in.) of minimum height with half tank,
- 40 mm (1.57 in.) of minimum height with full tanks.

**Fuselage forward section (IV)**

- 1 - Forward compartment
  - Inside . . . . . **CONTROLLED**
  - Door . . . . . **CLOSED / LOCKED**
- 2 - GPU door . . . . . **CLOSED**  
**(If not used)**



AMPLIFIED PROCEDURES

PREFLIGHT INSPECTION (Cont'd)

- 3 - Fuel circuit drain ..... **DRAIN**  
**(Fuel free of water and contamination)**  
Filter contamination indicator ..... **CHECK**  
**Open the inspection door located on**  
**L.H. side under front baggage compartment**
  
- 4 - L.H. exhaust stub ..... **CHECK**  
**(Condition / No crack)**  
Inspect if possible pressure port located inside exhaust stub. A missing port or a cracked port may hinder correct operation of continuous heating of air inlet lip.
  
- 5 - Upper engine cowls ..... **OPEN**  
For the first flight of the day :  
Oil cap ..... **CLOSED/LOCKED**  
Engine oil level ..... **CHECK**  
Fuel pipes ..... **CHECK**  
**(No leak, deterioration, wear)**
  
- 6 - Engine cowls ..... **Condition - CHECK**  
**CLOSED / LOCKED**
  
- 7 - Air inlets  
Main ..... **No crack - UNOBSTRUCTED**  
Check for no cracks, which are sometimes put in evidence by traces of soot resulting from exhaust gases.  
Lateral / upper ..... **UNOBSTRUCTED**  
Lateral air inlets, which supply air conditioning system and oil cooler, are provided with blanking covers. It is not the case for upper air inlets of RAM AIR system (circular grille located in front of R.H. windshield) and of vapor cycle cooling system (two rectangular grilles located forward of the circular grille).





## AMPLIFIED PROCEDURES

### PREFLIGHT INSPECTION (Cont'd)

- 8 - Propeller and spinner ..... **CHECK**  
**(No nicks, cracks or oil leaks / Attachment)**

In case of operation from contaminated runways, it is necessary to carefully examine propeller blades, where traces of abrasion may be found. Propeller damage may reduce blade life time and degrade performance. Any propeller damage should be referred to maintenance personnel.

- 9 - Nose gear
  - Landing light / shock absorber / doors /  
tire / wheel well ..... **CHECK**

Without passengers and baggages on board, the unpainted surface of the nose gear shock absorber tube must be visible about :

- 57 mm (2.22 in) of minimum height with full tanks,
- 63 mm (2.46 in) of minimum height with half tank.

**NOTE :**

*Crush or relieve the shock absorber one time or twice before the inspection to remove possible sticking.*

In case of doubt, request a check of the shock absorber pressure.

- 10 - R.H. exhaust stub ..... **CHECK**  
**(Condition / No cracks)**

**R.H. wing** (V)

Additional remarks are identical to those of L.H. wing.

- 1 - Fuel tank drain (two on each wing) ..... **DRAIN**  
**(Fuel free of water and contamination)**
- 2 - Main landing gear
  - Shock absorber / doors /  
tire / wheel well ..... **CHECK**



**AMPLIFIED PROCEDURES**

PREFLIGHT INSPECTION (Cont'd)

- 3 - Wing deicer boots ..... **CHECK**  
**(Condition / Attachment)**
- 4 - Stall warning ..... **CHECK**  
**(Condition / Deflection)**
- 5 - Wing lower surface ..... **CHECK**  
**(No leaks)**
- 6 - Fuel tank ..... **CAP CLOSED / LOCKED**
- 7 - Fuel tank air vent ..... **Unobstructed - CHECK**
- 8 - Right pitot ..... **Condition - CHECK**
- 9 - Wing tip / nav. light /  
strobe / landing light ..... **Condition - CHECK**
- 10 - Trailing edge static discharger ..... **CHECK**  
**(Condition / Number / Attachment)**
- 11 - Aileron / spoiler ..... **CHECK**  
**(Condition / Free movement / Deflection)**
- 12 - Flap ..... **CHECK**  
**(Condition / Play)**
- 13 - Rear R.H. karman
  - Oxygen cylinder ..... **OPEN**
  - Oxygen quantity ..... **CHECKED**
- 14 - Oxygen pressure ..... **CHECK**



## AMPLIFIED PROCEDURES

PREFLIGHT INSPECTION (Cont'd)

### **Fuselage rear section / Empennages** (VI)

Check that outside handle of emergency exit is flush with door skin.

- 1 - ELT ..... **OFF**
  - ELT door ..... **CLOSED/LOCKED**Access to ELT is possible through an inspection door located on R.H. side of fuselage rear section.
- 2 - Static pressure ports ..... **CLEAN - CHECK**
- 3 - Ventral fins ..... **CHECK**  
**(Attachment condition)**

Ventral fins are made of two parts (one fixed part and one removable part with rear lower inspection door). Check that these two parts are connected by the locking roller.
- 4 - Inspection door under fuselage ..... **CLOSED - CHECK**  
**(Attachments)**
- 5 - Horizontal stabilizer  
deicer boots (R.H. side) ..... **CHECK**  
**(Condition / Attachments)**
- 6 - Elevator and trim ..... **CHECK**  
**(Condition / Deflection free movement / Trim position)**

To check the deflection, hold the two half-elevators near fuselage, inside both elevator trims to avoid stresses.
- 7 - Static dischargers ..... **CHECK**  
**(Condition)**
- 8 - Vertical stabilizer deicer boots ..... **CHECK**  
**(Condition / Attachments)**



AMPLIFIED PROCEDURES

PREFLIGHT INSPECTION (Cont'd)

9 - Rudder and trim ..... **CHECK**  
**(Condition / Trim position)**

10 - Static dischargers ..... **CHECK**  
**(Condition)**

11 - Tail cone ..... **Condition - CHECK**

12 - Static pressure ports ..... **Clean - CHECK**

AMPLIFIED PROCEDURES

**BEFORE STARTING ENGINE (1/4)**

Check that the weight and balance are within the correct limits. Brief passengers about use of seat belts and the emergency oxygen system, as well as opening the access door and the emergency exit.

**CAUTION**

**"BLEED" SWITCH SET TO "AUTO" MAY CAUSE  
OVERTEMPERATURE OR ABNORMAL ACCELERATION AT  
START**

**CAUTION**

**MAKE SURE THAT "MAN OVRD" CONTROL IS "OFF" TO AVOID  
OVERTEMPERATURE RISKS AT START**

- 1 - Preflight inspection ..... **COMPLETED**
- 2 - Cabin access door ..... **CLOSED / LOCKED**
- 3 - "Pilot" door (if installed) ..... **CLOSED / LOCKED**
- 4 - Baggage ..... **STOWED**
- 5 - Parking brake ..... **SET**  
"PARK BRAKE" CAS message appearance does not indicate that parking brake is set. For that, press on brake pedals before turning parking brake selector to the right.
- 6 - Weight and balance ..... **COMPUTED / CHECKED**  
In addition these data will be set in the MFD after starting.



AMPLIFIED PROCEDURES

**BEFORE STARTING ENGINE (2/4)**

- 7 - Pilot seat and R.H. front seat (if occupied)
  - Height adjustment . . . . . **Maximum UP**
  - Fore and aft adjustment . . . . **ADJUST and CHECK LOCKING**
  - Height adjustment . . . . . **ADJUST**

**CAUTION**

**IT IS MANDATORY TO ADJUST SEAT IN FORE-AFT MOVEMENT WHEN SEAT IS IN MAXIMUM HIGH PERMISSIBLE POSITION, TO AVOID INTERFERENCE BETWEEN SIDE UPHOLSTERY PANEL AND SEAT HOUSING IN LOW AND INTERMEDIATE POSITIONS**

Adjust pilot's and R.H. front station seats and harnesses, so as to permit access to all flight controls. The pilot at L.H. station must be able to easily reach ECS panel.

- 8 - R.H and L.H. pedals . . . . . **ADJUSTED**
- 9 - Belts and harnesses (Pilot and passengers) . . . . . **FASTENED**  
Check belt buckles for correct locking, as well as automatic locking of shoulder harness by exerting a rapid pull on the latter.
- 10 - Passengers' seat backrest . . . . . **UPRIGHT**
- 11 - "NORMAL/MASK" micro inverter . . . . . **NORMAL**
- 12 - Landing gear control . . . . . **DN**
- 13 - "AVIONICS" MASTER switch . . . . . **START**  
Provides illumination of PFD 1.
- 14 - LEFT PFD REVERSIONARY mode . . . . . **ENGAGED**  
**("DISPLAY BACK UP" button "OUT")**
- 15 - RADIO VHF . . . . . **ON - ADJUSTED**  
The function "GND CLR" (ground clearance) enables, when "AVIONICS" MASTER switch is ON, to obtain VHF1 supply without having selected battery contact.



AMPLIFIED PROCEDURES

**BEFORE STARTING ENGINE (3/4)**

- 16 - "IGNITION" switch . . . . . **AUTO or OFF**  
The "IGNITION" switch is normally selected to AUTO. This ensures ignition, whenever the starter is activated.
- 17 - "STARTER" switch . . . . . **OFF**  
If not, starter is going to operate as soon as "SOURCE" selector is positioned on BAT or GPU in case of supplying by GPU.
- 18 - "SOURCE" selector . . . . . **BAT (or GPU)**
- 19 - Authorization for engine starting . . . . . **ASKED**
- 20 - Pilots "OXYGEN" switch . . . . . **ON**
- 21 - "PASSENGERS OXYGEN" switch . . . . . **OFF**
- 22 - Copilot and pilot masks . . . . . **Press push-button "PRESS TO TEST" : the blinker shall turn red momentarily, then turns transparent**
- 23 - Passengers briefing . . . . . **AS REQUIRED**
- 24 - CAS display  
Access door and (if installed) "pilot" door

**WARNING CAS MESSAGE "DOOR" OFF**

If "DOOR" CAS message is not OFF, open the access door and (if installed) the "pilot" door and reclose it (them). Check locking pins are in place (green band is visible). Do not take off with "DOOR" CAS message ON.

- Oxygen emergency system

**WARNING CAS MESSAGE "OXYGEN" OFF**

If not, open isolation valve of the oxygen cylinder in R.H. karman. Oxygen emergency system in good operation condition must be imperatively taken on board during all flights, even at low altitude in order to be used in case of smoke in the cabin.



AMPLIFIED PROCEDURES

**BEFORE STARTING ENGINE (4/4)**

- Vacuum system

**CAUTION CAS MESSAGE "VACUUM LOW" ON**

If not, recycle power to PFD by setting the "AVIONICS MASTER" switch to "OFF" then "START". If "VACUUM LOW" CAS message is still not ON, then do not take off and check vacuum system.

- 25 - Fuel  
Quantity ..... **CHECKED**  
Tank selector ..... **L or R - CHECKED**

- 26 - EXT LIGHTS panel  
"STROBE" ..... **AS REQUIRED**  
The use of strobe lights may generate discomfort to personnel on ground, particularly by night.

- 27 - In case of night flight  
INT LIGHTS panel : "INSTR" + "PANEL" ..... **ADJUSTED**  
Navigation lights ..... **ON**  
Flashlight (if necessary) ..... **IN PLACE**

To maintain battery power for starting, and only when "GND CLR" (ground clearance) is available on airplane, VHF1 can be operated by setting "SOURCE" selector to OFF and "AVIONICS" MASTER switch to ON. If battery voltage is low (near 24.5 volts), turn off all unessential electrical equipment before selecting the starter ON.

By night, emergency lighting, provided by two luminous spot lights located above front seats, is sufficient to illuminate crew documents and instrument panel.





CHECK-LIST PROCEDURES

**STARTING ENGINE USING  
AIRPLANE POWER (2/6)**

7 - Flaps ..... **UP**

**WARNING**  
**IT IS PROHIBITED TO SET FLAPS CONTROL LEVER TO  
"850" POSITION ON GROUND AND FOR TAKEOFF**

8 - FUEL panel  
"AUX BP" switch ..... **ON**

**WARNING CAS MESSAGE "AUX BOOST PMP ON" ON**

**WARNING CAS MESSAGE "FUEL PRESS" OFF**

9 - Propeller ..... **AREA CLEAR**

10 - ENGINE START panel  
"IGNITION" switch ..... **AUTO**

"STARTER" switch ..... **ON**

**WARNING CAS MESSAGE "STARTER" ON**

**WARNING CAS MESSAGE "IGNITION" ON**

**NOTE :**

*The utilization of the starter is bound by limitations mentioned in Chapter 2.4 "STARTER OPERATION LIMITS".*

Ng  $\simeq$  13 %

Condition lever ..... **LO / IDLE**

When condition lever is positioned on LO / IDLE before having obtained 13 % of Ng, there is a risk of overtemperature further to an excessive accumulation of fuel inside the combustion chamber before ignition.



## AMPLIFIED PROCEDURES

**STARTING ENGINE USING  
AIRPLANE POWER (3/6)**

Monitor increase of :

ITT ..... (max. ITT :  $\leq 870^{\circ}\text{C}$  for 20 seconds max.  
 $\leq 1000^{\circ}\text{C}$  for 5 seconds max.)

The absolute limit read on the indicator is  $1090^{\circ}\text{C}$  during the starting sequence (red triangle). However, the ITT limits during the starting sequence are :

- .  $870^{\circ}\text{C}$  for 20 seconds max.
- .  $1000^{\circ}\text{C}$  for 5 seconds max.

In case of starting with hot engine, an ITT decrease comprised between  $150^{\circ}\text{C}$  and  $170^{\circ}\text{C}$  (within starter operation limits), before opening of the condition lever, may allow to stay within above mentioned ITT limits.

In case of higher temperature and longer time, stop immediately the starting procedure as indicated in the following caution and inform the maintenance department.

If starting engine procedure is aborted further to overtemperature indications (max. ITT :  $870^{\circ}\text{C}$  for more than 20 seconds -  $1000^{\circ}\text{C}$  for more than 5 seconds), maintaining during few seconds "STARTER" switch ON (within starter operating limits) may reduce max. ITT obtained by ventilating combustion chamber.

**NOTE :**

*No action is required for the following conditions :*

*ITT : from  $850^{\circ}\text{C}$  to  $870^{\circ}\text{C}$  limited to 20 seconds,  
from  $870^{\circ}\text{C}$  to  $1000^{\circ}\text{C}$  limited to 5 seconds.*



AMPLIFIED PROCEDURES

**STARTING ENGINE USING  
 AIRPLANE POWER (4/6)**

- Ng  
 The start sequence must be timed to ensure starter limits are not exceeded. Lengthy operation of the starter results in excessive temperature of the engine :
  - If Ng does not reach 30 % within 30 seconds, after the starter is selected ON, abort the start.
  - If Ng does not reach 50 % within 1 minute, abort the start.
  - Before starting a new test, respect delays indicated in Chapter 2.4 "STARTER OPERATION LIMITS".
- Oil pressure

**WARNING CAS MESSAGE "OIL PRESS" OFF**

11 - "STARTER" switch ..... **OFF**  
 Check Ng > 52 %

12 - Condition lever ..... **HI / IDLE**

13 - Engine instruments ..... **CHECK : Ng  $\simeq$  70 % ( $\pm$  2 %)**  
**(Oil pressure / Oil temperature / ITT = green sector)**

14 - FUEL panel  
 "AUX BP" switch ..... **AUTO**  
 At this time, observing a drop in the fuel pressure is normal.

**WARNING CAS MESSAGE "AUX BOOST PMP ON" OFF**

15 - Generator  
**WARNING CAS MESSAGE "MAIN GEN" OFF**

**RESET if necessary**

"MAIN GEN" CAS message normally goes out, as soon as "STARTER" CAS message goes out.

If not, increase Ng over 70 % to start main generator.

Ammeters ..... **CHARGE CHECKED**

Voltmeters ..... **VOLTAGE CHECKED**

**(V  $\simeq$  28 Volts)**

AMPLIFIED PROCEDURES

**STARTING ENGINE USING  
AIRPLANE POWER (5/6)**

**CAUTION**

**IF 10 SECONDS AFTER HAVING POSITIONED CONDITION LEVER TO "LO / IDLE" THERE IS NO IGNITION OR IF DURING IGNITION SEQUENCE, OVERTEMPERATURE INDICATION APPEARS (MAX. ITT  $\leq$  870°C FOR MORE THAN 20 SECONDS ;  $\leq$  1000°C FOR MORE THAN 5 SECONDS),**

**INTERRUPT STARTING PROCEDURE :**

**Condition lever ..... CUT OFF**

**"IGNITION" switch ..... OFF (or AUTO)**

**Wait ITT < 850°C, then :**

**"STARTER" switch ..... OFF**

**BEFORE ANY RESTARTING ATTEMPT, CARRY OUT A MOTORING (Refer to paragraph "MOTORING")**

**CAUTION**

**IF ENGINE STAGNATES,**

**INTERRUPT STARTING PROCEDURE :**

**Condition lever ..... CUT OFF**

**"IGNITION" switch ..... OFF (or AUTO)**

**"STARTER" switch ..... OFF**

**WAIT FOR 1 MINUTE (Refer to Chapter 2.4 "STARTER OPERATION LIMITS"), THEN TRY TO RESTART**



## STARTING ENGINE USING AIRPLANE POWER (6/6)

ENGINE START panel

- "IGNITION" switch .....	<b>AUTO</b>	
- "STARTER" switch .....	<b>ON</b>	
<b>WARNING CAS MESSAGE</b>	<b>"STARTER"</b>	<b>ON</b>
<b>WARNING CAS MESSAGE</b>	<b>"IGNITION"</b>	<b>ON</b>

Ng  $\simeq$  13 %

- Condition lever .....	<b>HI / IDLE</b>	
-------------------------	------------------	--

Monitor increase of :

- ITT .....	(max. ITT : $\leq$ 870°C for 20 seconds max. $\leq$ 1000°C for 5 seconds max.)	
- Ng		
- Oil pressure		
<b>WARNING CAS MESSAGE</b>	<b>"OIL PRESS"</b>	<b>OFF</b>

Ng  $\simeq$  50 %

- "STARTER" switch .....	<b>OFF</b>	
<b>WARNING CAS MESSAGE</b>	<b>"STARTER"</b>	<b>OFF</b>
<b>WARNING CAS MESSAGE</b>	<b>"IGNITION"</b>	<b>OFF</b>

■ Engine instruments ..... **CHECK : Ng  $\simeq$  70 % ( $\pm$  2 %)**  
 (Oil pressure / ITT = green sector)

**NOTE :**  
*This behaviour should only be observed with outside low temperature (OAT < 0 °C), cold engine.  
 This procedure may be used for the first starting of the day.*

AMPLIFIED PROCEDURES

**STARTING ENGINE USING  
EXTERNAL POWER (GPU) (1/7)**

1 - GPU ..... **CONNECTED**

**CAUTION**

**BEFORE SELECTING SOURCE, CHECK :**

- 2 - "IGNITION" switch ..... **AUTO or OFF**
- 3 - "STARTER" switch ..... **OFF**
- 4 - "INERT SEP" switch ..... **OFF**
- 5 - Landing gear control ..... **DN**

6 - "SOURCE" selector ..... **GPU**

**WARNING CAS MESSAGE "GPU DOOR" ON**

**WARNING CAS MESSAGE "BAT OFF" ON**

Voltmeter ..... **VOLTAGE CHECKED**  
**(V ≈ 28 Volts)**

If voltage is ≥ 30 volts, immediately turn "SOURCE" selector to OFF. Radio navigation equipment may be damaged before main fuse failure.

7 - Engine controls  
"MAN OVRD" control ..... **OFF (Notched)**

**CAUTION**

**WHEN THE ENGINE IS SHUTDOWN, THE POWER LEVER  
MUST NOT BE MOVED BEHIND THE FLIGHT IDLE POSITION**

Power lever ..... **IDLE**  
**(Flight idle stop)**

Propeller governor lever ..... **MAX RPM**

Condition lever ..... **CUT OFF**



AMPLIFIED PROCEDURES

**STARTING ENGINE USING  
EXTERNAL POWER (GPU) (2/7)**

8 - Flaps ..... UP

**WARNING**  
**IT IS PROHIBITED TO SET FLAPS CONTROL LEVER TO  
"850" POSITION ON GROUND AND FOR TAKEOFF**

9 - FUEL panel  
"AUX BP" switch ..... ON

**WARNING CAS MESSAGE "AUX BOOST PMP ON" ON**

**WARNING CAS MESSAGE "FUEL PRESS" OFF**

Fuel pressure indicator ..... CHECK

10 - Propeller ..... AREA CLEAR

11 - ENGINE START panel  
"IGNITION" switch ..... AUTO  
"STARTER" switch ..... ON

**WARNING CAS MESSAGE "STARTER" ON**

**WARNING CAS MESSAGE "IGNITION" ON**

*NOTE :*  
*The utilization of the starter is bound by limitations mentioned in  
Chapter 2.4 "STARTER OPERATION LIMITS".*

Ng  $\simeq$  13 %  
Condition lever ..... LO / IDLE

When condition lever is positioned on LO / IDLE before having obtained 13 % of Ng, there is a risk of overtemperature further to an excessive accumulation of fuel inside the combustion chamber before ignition.

Avoid staying at or above 13 %, Ng is usually stabilized after leaving starter ON during 10 seconds.





## AMPLIFIED PROCEDURES

**STARTING ENGINE USING  
EXTERNAL POWER (GPU) (3/7)**

Monitor increase of :

ITT ..... (max. ITT :  $\leq 870^{\circ}\text{C}$  for 20 seconds max.  
 $\leq 1000^{\circ}\text{C}$  for 5 seconds max.)

The absolute limit read on the indicator is  $1090^{\circ}\text{C}$  during the starting sequence (red triangle). However, the ITT limits during the starting sequence are :

- .  $870^{\circ}\text{C}$  for 20 seconds max.
- .  $1000^{\circ}\text{C}$  for 5 seconds max.

In case of starting with hot engine, an ITT decrease comprised between  $150^{\circ}\text{C}$  and  $170^{\circ}\text{C}$  (within starter operation limits), before opening of the condition lever, may allow to stay within above mentioned ITT limits.

In case of higher temperature and longer time, stop immediately the starting procedure as indicated in the following caution and inform the maintenance department.

This starting engine procedure must be also applied in case of drop in voltage supplied by GPU. This drop will be shown by a low or zero Ng acceleration.

If starting engine procedure is aborted further to overtemperature indications (max. ITT :  $870^{\circ}\text{C}$  for more than 20 seconds -  $1000^{\circ}\text{C}$  for more than 5 seconds), maintaining during few seconds "STARTER" switch ON (within starter operating limits) may reduce max. ITT obtained by ventilating combustion chamber.

*NOTE :*

*No action is required for the following conditions :*

- ITT from  $850^{\circ}\text{C}$  to  $870^{\circ}\text{C}$  limited to 20 seconds,
- ITT from  $870^{\circ}\text{C}$  to  $1000^{\circ}\text{C}$  limited to 5 seconds.



AMPLIFIED PROCEDURES

**STARTING ENGINE USING  
EXTERNAL POWER (GPU) (4/7)**

- Ng  
The start sequence must be timed to ensure starter limits are not exceeded. Lengthy operation of the starter results in excessive temperature of the engine :
  - If Ng does not reach 30 % within 30 seconds, after the starter is selected ON, abort the start.
  - If Ng does not reach 50 % within 1 minute, abort the start.
  - Before starting a new test, respect delays indicated in Chapter 2.4 "STARTER OPERATION LIMITS".

- Oil pressure

**WARNING CAS MESSAGE      "OIL PRESS"      OFF**

- 12 - "SOURCE" selector ..... **BAT**

**WARNING CAS MESSAGE      "BAT OFF"      OFF**

- 13 - Propeller governor lever ..... **FEATHER**

- 14 - GPU ..... **HAVE IT DISCONNECTED**

**WARNING CAS MESSAGE      "GPU DOOR"      OFF**

This means that ground power receptacle door has been correctly locked.

- 15 - Condition lever ..... **HI / IDLE**

- 16 - Propeller governor lever ..... **MAX. RPM**

- 17 - Engine instruments ..... **CHECK : Ng ≈ 70 % (± 2 %)**  
**(Oil pressure / Oil temperature / ITT = green sector)**

- 18 - FUEL panel  
"AUX BP" switch ..... **AUTO**

At this time, observing a drop in the fuel pressure is normal.

**WARNING CAS MESSAGE      "AUX BOOST PMP ON"      OFF**



AMPLIFIED PROCEDURES

**STARTING ENGINE USING  
EXTERNAL POWER (GPU) (5/7)**

19 - Generator

**WARNING CAS MESSAGE "MAIN GEN" OFF**

**RESET if necessary**

"MAIN GEN" CAS message normally goes out, as soon as "STARTER" CAS message goes out.

If not, increase Ng over 70 % to start main generator.

Ammeters ..... **CHARGE CHECKED**

Voltmeters ..... **VOLTAGE CHECKED**

**(V ≈ 28 Volts)**

**CAUTION**

**IF 10 SECONDS AFTER HAVING POSITIONED CONDITION LEVER TO "LO / IDLE" THERE IS NO IGNITION OR IF DURING IGNITION SEQUENCE, OVERTEMPERATURE INDICATION APPEARS (MAX. ITT ≤ 870°C FOR MORE THAN 20 SECONDS ; ≤ 1000°C FOR MORE THAN 5 SECONDS),**

**INTERRUPT STARTING PROCEDURE :**

**Condition lever ..... CUT OFF**

**"IGNITION" switch ..... OFF (or AUTO)**

**Wait ITT < 850°C, then :**

**"STARTER" switch ..... OFF**

**BEFORE ANY RESTARTING ATTEMPT, CARRY OUT A  
MOTORING**

**(Refer to paragraph "MOTORING")**



AMPLIFIED PROCEDURES

**STARTING ENGINE USING  
EXTERNAL POWER (GPU) (6/7)**

**CAUTION**

**IF ENGINE STAGNATES,  
INTERRUPT STARTING PROCEDURE :**

**Condition lever ..... CUT OFF**  
**"IGNITION" switch ..... OFF (or AUTO)**  
**"STARTER" switch ..... OFF**

**WAIT FOR 1 MINUTE (Refer to Chapter 2.4 "STARTER OPERATION  
LIMITS"), THEN TRY TO RESTART**

ENGINE START panel

- "IGNITION" switch ..... **AUTO**
- "STARTER" switch ..... **ON**

WARNING CAS MESSAGE	<b>"STARTER"</b>	ON
WARNING CAS MESSAGE	<b>"IGNITION"</b>	ON

Ng  $\simeq$  13 %

- Condition lever ..... **HI / IDLE**

Monitor increase of :

- ITT ..... (max. ITT :  $\leq$  870°C for 20 seconds max.  
 $\leq$  1000°C for 5 seconds max.)
- Ng
- Oil pressure

WARNING CAS MESSAGE	<b>"OIL PRESS"</b>	OFF
---------------------	--------------------	-----



## AMPLIFIED PROCEDURES

### STARTING ENGINE USING EXTERNAL POWER (GPU) (7/7)

Ng  $\simeq$  50 %

- "STARTER" switch ..... **OFF**

**WARNING CAS MESSAGE "STARTER" OFF**

**WARNING CAS MESSAGE "IGNITION" OFF**

Engine instruments ..... **CHECK : Ng  $\simeq$  70 % ( $\pm$  2 %)**  
**(Oil pressure / ITT = green sector)**

**NOTE :**

*This behaviour should only be observed with outside low temperature (OAT < 0 °C), cold engine.*

*This procedure may be used for the first starting of the day.*

AMPLIFIED PROCEDURES

**MOTORING (1/2)**

To drain fuel accumulated inside the combustion chamber, a motoring procedure is required following an aborted start.

A 15-second dry motoring run is sufficient to clear any fuel pooled in the engine. The fuel is removed in liquid or vapor form, through an airflow intended to dry combustion chamber, turbines and exhaust nozzles.

To improve cooling of the bearing cavities and prevent oil coking after shut-down in high OAT [above 35°C (95°F)] environment, it is recommended to perform a 30-second dry motoring run.

It is possible that no trace of drainage be observed under engine, due to the drainage collector intended to prevent parking area from contamination.

**CAUTION**

**AFTER ANY STARTING INTERRUPT PROCEDURE :**

- **WAIT FOR ENGINE TOTAL SHUT-DOWN**
- **WAIT AT LEAST 30 SECONDS BEFORE INITIATING A MOTORING**

- 1 - Engine controls  
"MAN OVRD" control ..... **OFF (Notched)**

**CAUTION**

**WHEN THE ENGINE IS SHUTDOWN, THE POWER LEVER MUST NOT BE MOVED BEHIND THE FLIGHT IDLE POSITION**

- Power lever ..... **IDLE**  
**(Flight idle stop)**
- Propeller governor lever ..... **MAX. RPM**
- Condition lever ..... **CUT OFF**



AMPLIFIED PROCEDURES

MOTING (2/2)

- 2 - Fuel
  - Tank selector ..... L or R
  - "AUX BP" switch ..... ON

WARNING CAS MESSAGE "AUX BOOST PMP ON" ON

WARNING CAS MESSAGE "FUEL PRESS" OFF

Fuel pressure is necessary for lubrication of HP pump.

- 3 - "IGNITION" switch ..... OFF

WARNING CAS MESSAGE "IGNITION" OFF

**To clear fuel and vapor internally trapped :**

- 4 - "STARTER" switch ..... ON  
during 15 sec maxi

WARNING CAS MESSAGE "STARTER" ON

**To cool engine following shut-down in high temperature environment :**

- 4 - "STARTER" switch ..... ON  
during 30 sec

WARNING CAS MESSAGE "STARTER" ON

*If ignition symptoms occur (ITT increasing), check that "IGNITION" switch is OFF, that condition lever is on CUT OFF and continue motoring.*

- 5 - "STARTER" switch ..... OFF

WARNING CAS MESSAGE "STARTER" OFF

- 6 - FUEL panel
  - "AUX BP" switch ..... OFF

WARNING CAS MESSAGE "AUX BOOST PMP ON" OFF

WARNING CAS MESSAGE "FUEL PRESS" ON

AMPLIFIED PROCEDURES

**MOTING FOLLOWED BY  
 AN ENGINE START (1/3)**

Amplified procedures stated in starting engine sequences using airplane power or with GPU are also to be applied to hereunder procedure.

Within starter operating limits (continuous max. 1 minute), it is possible to initiate a starting procedure from a motoring procedure.

This procedure will conserve the battery by taking advantage of first Ng acceleration.

- 1 - Engine controls
  - "MAN OVRD" control ..... **OFF (Notched)**

**CAUTION**  
**WHEN THE ENGINE IS SHUTDOWN, THE POWER LEVER  
 MUST NOT BE MOVED BEHIND THE FLIGHT IDLE  
 POSITION**

- Power lever ..... **IDLE**  
**(Flight idle stop)**
- Propeller governor lever ..... **MAX. RPM**
- Condition lever ..... **CUT OFF**

- 2 - Fuel
  - Tank selector ..... **L or R**
  - "AUX BP" switch ..... **ON**

**WARNING CAS MESSAGE "AUX BOOST PMP ON" ON**

**WARNING CAS MESSAGE "FUEL PRESS" OFF**

- 3 - "IGNITION" switch ..... **OFF**
- 4 - "STARTER" switch ..... **ON during 15 sec**





## AMPLIFIED PROCEDURES

### MOTORING FOLLOWED BY AN ENGINE START (2/3)

- 5 - After 15 seconds :
- "IGNITION" switch ..... **AUTO**
  - Ng ..... **Check at  $\approx 13\%$**
  - Condition lever ..... **LO / IDLE**

- 6 - Monitor increase of :
- ITT ..... (**max. ITT :  $\leq 870^\circ\text{C}$  for 20 seconds max.**  
 **$\leq 1000^\circ\text{C}$  for 5 seconds max.)**)
  - Ng
  - Oil pressure

**WARNING CAS MESSAGE "OIL PRESS" OFF**

*NOTE :*  
*No action is required for the following conditions :*

- ITT from  $850^\circ\text{C}$  to  $870^\circ\text{C}$  limited to 20 seconds,
- ITT from  $870^\circ\text{C}$  to  $1000^\circ\text{C}$  limited to 5 seconds.

- Ng  $\approx 50\%$  stable
- "STARTER" switch ..... **OFF**

**WARNING CAS MESSAGE "STARTER" OFF**

**WARNING CAS MESSAGE "IGNITION" OFF**

- 7 - Engine instruments ..... **CHECK : Ng > 52 %**  
**(Oil pressure / ITT = green sector)**

- 8 - Condition lever ..... **HI / IDLE**

- 9 - Engine instruments ..... **CHECK : Ng  $\approx 70\%$  ( $\pm 2\%$ )**  
**(Oil pressure / Oil temperature / ITT = green sector)**



AMPLIFIED PROCEDURES

**MOTING FOLLOWED BY  
AN ENGINE START (3/3)**

10 - FUEL panel  
"AUX BP" switch ..... **AUTO**

**WARNING CAS MESSAGE "AUX BOOST PMP ON" OFF**

At this time, observing a drop in the fuel pressure is normal.

11 - Generator  
**WARNING CAS MESSAGE "MAIN GEN" OFF**

**RESET if necessary**

"MAIN GEN" CAS message normally goes out, as soon as  
"STARTER" CAS message goes out.

If not, increase Ng over 70 % to start main generator.

Ammeters ..... **CHARGE CHECKED**

Voltmeters ..... **VOLTAGE CHECKED**

**(V ≈ 28 Volts)**

AMPLIFIED PROCEDURES

**AFTER STARTING ENGINE (1/4)**

- 1 - "GENERATOR" selector  
For these tests, "BLEED" switch must be left OFF, to unload the generator circuit.  
On "MAIN" ..... **Voltage and current checked**  
when current ≤ 50 amps :  
on "ST-BY" ..... **Voltage and current checked**  
**(reset if necessary)**  
If the indicated voltage on the "ST BY" generator is low (close to 27 volts), reset the "ST BY" generator and recheck the voltage.  
The indicated voltage should be in the green range.  
then again on "MAIN"
- 2 - "AVIONICS" MASTER switch ..... **ON**
- 3 - "AP TRIMS" MASTER switch ..... **ON**
- 4 - "FUEL SEL" switch ..... **AUTO**
- 5 - "SHIFT" push-button ..... **PRESS**  
**Verify rotation of FUEL TANK SELECTOR**
- 6 - Oxygen supply ..... **Available for the planned flight**  
**(see tables of paragraph "IN-FLIGHT AVAILABLE**  
**OXYGEN QUANTITY" in this Chapter**  
**and Chapter 7.10 for a FAR 135 type operation)**
- 7 - LEFT PFD REVERSIONARY mode ..... **DISENGAGED**  
**("DISPLAY BACK UP" button "IN")**
- 8 - PFD 1, MFD and PFD 2  
Detailed control procedures of G1000 avionics system are described in the "GARMIN" G1000 Integrated Flight Deck Pilot's Guide for the Socata TBM 850.  
Brightness ..... **ADJUST**  
**If necessary**  
DISPLAY BACKUP button ..... **CHECK**  
**then return to NORMAL mode**



AMPLIFIED PROCEDURES

**AFTER STARTING ENGINE (2/4)**

*When ammeter < 100 A :*

- 9 - ECS panel
  - "BLEED" switch ..... **AUTO**
  - "AIR COND" switch ..... **AUTO**  
A cabin temperature good regulation will only be obtained, if "AIR COND" switch is set to AUTO.
  - "CABIN CTRL" selector ..... **AS REQUIRED**
  - "CABIN TEMP/° C" selectors ..... **ADJUST**
  - "AIR FLOW" distributor ..... **AS REQUIRED**  
Usually selected to CABIN. However, if canopy misting is evident, select DEFOG or HOT to increase demisting efficiency.
  - Cabin pressure control panel ..... **Airfield altitude**
  
- 10 - Stand-by instruments ..... **CHECKED**  
Suction gage [PRE-MOD70-0335-34 (ESI-2000)] .... **CHECKED**
  
- 11 - ADI/HSI on PFD1 / PFD2 ..... **CHECKED**
  
- 12 - Altimeter setting .....
  
- 13 - VHF/VOR/GPS ..... **ADJUSTED - TESTED**  
Radar/Stormscope/TAS/TAWS/**CHECKED**  
Radio altimeter (if installed) ..... **ADJUSTED - TESTED**
  
- 14 - MFD flight management
  - Weight computing ..... **SET/CHECKED**
  - FOB synchro ..... **SET**
  - FPL (if requested) ..... **SET**
  
- 15 - AP / TRIMS
  - "AP TRIMS" MASTER operation ..... **CHECK**  
Detailed control procedures of autopilot and electrical pitch trim are described in the "GARMIN" G1000 Integrated Flight Deck Pilot's Guide for the Socata TBM 850.

(See next page for the other trims)



## AMPLIFIED PROCEDURES

### AFTER STARTING ENGINE (3/4)

- Pitch trim ..... **UP / DN, then ADJUSTED**  
Adjust the indicator in green range (graduated from 12 to 37 %).
- Yaw trim ..... **L / R, then ADJUSTED**  
Adjust the indicator in green range TO (TAKEOFF).
- Roll trim ..... **L / R, then ADJUSTED**  
Adjust the indicator first at neutral position (horizontal marker).

#### ■ 16 - DE ICE SYSTEM panel

Flight into known icing conditions is authorized only when all ice protection equipment are operating correctly. This equipment may be activated before takeoff, even during taxiing, in case of icing conditions on ground. Refer to Chapter 4.5 "PARTICULAR PROCEDURES" of this Section.

- MFD on system page
- "PROP DE ICE" switch ..... **ON**  
**Check illumination of the green light located above the switch**

Illumination of the green light shows that power supplied to blade root electric resistors is between 8 and 10 amperes. It is advised to wait at least a whole half cycle (90 seconds) to check that both blade pairs are correctly deiced.

- "PROP DE ICE" switch ..... **OFF**
- "WINDSHIELD" switch ..... **ON**  
**Check illumination of the green lights located above the switch (except if hot conditions)**

This light may remain OFF, if cabin temperature is very high, for example after a prolonged parking in hot conditions (see Chapter 7.13 for operational principle).

- "WINDSHIELD" switch ..... **OFF**



AMPLIFIED PROCEDURES

**AFTER STARTING ENGINE (4/4)**

Increase power so as to get  $N_g \geq 80\%$  to check AIRFRAME DE ICE

Theoretically, necessary air bleed to inflate wing and empennage leading edges, as well as depression necessary to their deflation are sufficient when power lever is positioned on IDLE. However, it is advised for check to choose a  $N_g$  power  $\geq 80\%$  in order to obtain operation design pressure, which enables illuminating surely the two green lights and avoiding "VACUUM LOW" untimely alarms.

- "AIRFRAME DE ICE" switch ..... **ON**  
**Visually check functioning of deicer boots during 1 total cycle and illumination of the two green lights located above the switch**

The cycle lasts 67 seconds. Check both inflation impulses, and illumination of each corresponding green light :  
the first impulse inflates the external and middle wing boots,  
the second impulse inflates the leading edge boots of empennages and inner wing.

- "AIRFRAME DE ICE" switch ..... **OFF**
- "INERT SEP" switch ..... **ON**

**WARNING CAS MESSAGE "INERT SEP ON" ON**

**full deflection takes about 30 seconds**

"INERT SEP" switch is kept on while taxiing in order to avoid ingestion of particles by the engine.

AMPLIFIED PROCEDURES

**IN-FLIGHT AVAILABLE  
 OXYGEN QUANTITY**

Oxygen pressure ..... **Read**

Outside air temperature (OAT) ..... **Read**

1 - Determine the usable oxygen percent using the chart Figure 4.4.1.

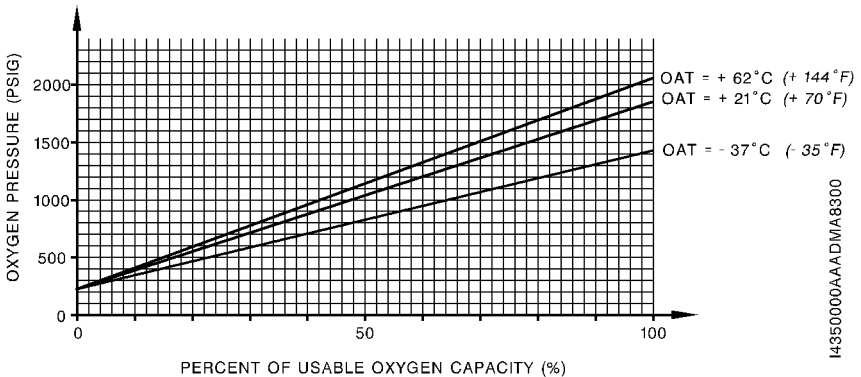


Figure 4.4.1

2 - Determine the oxygen duration in minutes by multiplying the values read on table Figure 4.4.2 by the percent obtained with the chart Figure 4.4.1.

Number of passengers	Duration : Passengers, plus 1 pilot	Duration : Passengers, plus 2 pilots
0	226	113
1	162	94
2	127	81
3	104	71
4	88	65

Figure 4.4.2

AMPLIFIED PROCEDURES

**TAXIING (1/2)**

- 1 - "TAXI" light ..... **ON**
- 2 - "INERT SEP" switch ..... **CHECKED ON**
- CHECK WARNING CAS MESSAGE "INERT SEP ON" OFF**

It is recommended that the inertial separator be used during all ground operations, in order to avoid ingestion of particles inside the air intake, above all on dirty taxiway when Beta ( $\beta$ ) range / reverse is selected with the power lever.

- 3 - Passenger briefing ..... **AS REQUIRED**
- 4 - Parking brake ..... **RELEASED**  
 Make sure that chocks are removed (if used).  

**WARNING CAS MESSAGE "PARK BRAKE" OFF**

- 5 - L.H. and R.H. seats brakes ..... **CHECKED**
- 6 - Nose wheel steering ..... **CHECKED**  
 Check the control wheel move (roll) in the same direction as the rudder pedals due to the rudder / aileron interconnect.

- 7 - Power lever ..... **AS REQUIRED**  
 After initial acceleration, power lever may be in the "TAXI RANGE" sector, avoiding excessive movements in order to keep a constant ground speed.  
 The condition lever must be in the HI / IDLE position to keep the propeller RPM (Np) out of the caution (yellow) range while taxiing.





AMPLIFIED PROCEDURES

**TAXIING (2/2)**

**CAUTION**  
**AVOID USING REVERSE DURING TAXIING**

Operation in the Beta ( $\beta$ ) range / reverse is not restricted during ground operations. However, foreign particles (dust, sand, grass, gravel, etc...) may be blown into the air, ingested by the engine (above all if "INERT SEP" switch is turned OFF) and cause damage to the propeller.

- 8 - Flight instruments ..... **CHECK**  
Check navigation and communication systems before or during taxiing, check gyroscopic instruments on PFDs 1 / 2 and stand-by ADI during ground turns.
- 9 - CAS display ..... **CHECK**
- 10 - Cabin pressurization control panel . **Cruise altitude + 1000 feet**

AMPLIFIED PROCEDURES

**BEFORE TAKEOFF (1/3)**

1 - Parking brake ..... **SET**

**WARNING CAS MESSAGE "PARK BRAKE" ON**

2 - Condition lever ..... **HI / IDLE**

**[Ng : 69 % (± 2 %)]**

3 - Propeller governor lever ..... **FEATHER twice, then MAX. RPM**

During this test, the power lever must be at flight idle. Keep the time spent with the propeller RPM in the caution (yellow) range at a minimum.

4 - Flaps ..... **TO**

5 - DE ICE SYSTEM panel

"AIRFRAME DE ICE" switch ..... **As required**

"PROP DE ICE" switch ..... **As required**

*If runway is in good condition, without icing conditions :*

"INERT SEP" switch ..... **OFF**

**WARNING CAS MESSAGE "INERT SEP ON" OFF**

CAS message goes out immediately, but it takes 30 seconds to retract the separator.

*If there is standing water or other contamination on the runway :*

"INERT SEP" switch ..... **Leave ON**

**WARNING CAS MESSAGE "INERT SEP ON" ON**

"WINDSHIELD" switch ..... **As required**

"PITOT L HTR" switch ..... **ON**

"PITOT R & STALL HTR" switch ..... **ON**



AMPLIFIED PROCEDURES

**BEFORE TAKEOFF (2/3)**

*If icing conditions are foreseen, refer to Chapter 4.5 "PARTICULAR PROCEDURES" of this Section, Paragraph "Flight into known icing conditions".*

- 6 - Flight controls ..... **DEFLECTIONS CHECKED**
- 7 - Trims
  - Pitch ..... **ADJUSTED**  
Adjust inside green index sector, depending on the current balance condition.
  - Yaw ..... **ADJUSTED**  
Adjust abeam "TO" index.
  - Roll ..... **ADJUSTED**  
Adjust at neutral position.
- 8 - Pilot's / Passengers' belts ..... **CHECK**  
Passengers' table ..... **STOWED**  
Passengers' seat backrest ..... **CHECK**
- 9 - "STROBE" switch ..... **ON**
- 10 - CAS display ..... **CHECK**  
**All messages OFF,**  
**except "PARK BRAKE" ON**  
**and, if used "INERT SEP ON" ON**
- 11 - Fuel
  - Gages : quantity, symmetry ..... **CHECKED**
  - "FUEL SEL" switch ..... **CHECK AUTO**
  - "AUX BP" fuel switch ..... **CHECK AUTO**



AMPLIFIED PROCEDURES

**BEFORE TAKEOFF (3/3)**

- 12 - Flight instruments ..... **CHECKED**
  - Altimeter setting ..... **ADJUSTED/CHECKED**
  - "ALT SEL" ..... **ADJUSTED/CHECKED**
  
- 13 - VHF/VOR/GPS/XPDR ..... **ADJUSTED/CHECKED**
  - Radar/Stormscope/TAS/TAWS/ADF  
(if installed) ..... **ADJUSTED/CHECKED**
  - On ground, maintain radar (if installed) on STANDBY in order not  
to generate radiations prejudicial to outside persons.
  - Radio altimeter (if installed) ..... **ADJUSTED/CHECKED**
  - Transponder code ..... **ADJUSTED/CHECKED**
  
- 14 - Engine instruments ..... **CHECK**
  - All engine parameters must be in green range, except propeller  
RPM, which will be about 1000 RPM or more with power lever at  
IDLE.
  
- 15 - Battery charge ..... **< 50 Amperes**

**CAUTION**  
**DO NOT TAKE OFF IF BATTERY CHARGE > 50 Amperes**

After starting engine with airplane power, a battery charge above 50 amperes is normal. If this indication remains steady at a high value, it may be then a battery or generation system failure. Do not take off in these conditions.

- 16 - Parking brake ..... **RELEASED**
  - WARNING CAS MESSAGE "PARK BRAKE" OFF**

AMPLIFIED PROCEDURES

**TAKEOFF (1/4)**

WHEN LINED UP

**CAUTION**

- IF HEAVY PRECIPITATION, TURN IGNITION AND INERT SEP ON.
- IF ICING CONDITIONS ARE FORESEEN, REFER TO CHAPTER 4.5, PARAGRAPH "FLIGHT INTO KNOWN ICING CONDITIONS"

- 1 - Horizon ..... **CHECK attitude  $\approx + 2^\circ$**   
Horizon has been set so as to indicate a  $2^\circ$  nose up attitude, when airplane center of gravity is at a middle average.
- 2 - Heading - HSI - Stand-by compass ..... **CHECK**  
The indication of the stand-by compass is disturbed when windshield deice systems are activated.  
Altimeter setting on PFDs 1 / 2 ..... **CHECK**
- 3 - Lights  
"L.LDG / TAXI / R.LDG" ..... **ON**
- 4 - Engine instruments ..... **CHECK**  
(ITT = green sector)
- 5 - CAS display ..... **CHECK**  
**All messages OFF,**  
**except "INERT SEP ON" if used**  
**except "IGNITION" if used**



AMPLIFIED PROCEDURES

**TAKEOFF (2/4)**

- 6 - PROP O' SPEED GOVERNOR TEST  
Increase power until propeller RPM reaches 1900 RPM  
PROP O' SPEED ..... **TEST : Maintain engaged**  
Observe that propeller RPM decreases by 50 to 250 RPM  
PROP O' SPEED ..... **TEST : Release**  
Check that propeller RPM increases by a minimum of 50 RPM  
when compared to minimum value during PROP O'SPEED test.
  
- 7 - Brakes ..... **RELEASED**  
It is not necessary to reduce power at the end of OVERSPEED test ;  
torque will be about 40 % before brake release. For a normal  
takeoff, maximum torque (100 %) will be applied after brake  
release. On short runway, maximum torque will be applied before  
brake release.
  
- 8 - Power lever ..... **TRQ = 100 %**
  
- 9 - Takeoff ..... **ROTATION : See "Takeoff  
distances" Chapter 5.9**  
Normal takeoff ..... **ATTITUDE : 7° 5**  
Short takeoff  
    . Weight < 6579 lbs (2984 kg) ..... **ATTITUDE : 15°**  
    . Weight ≥ 6579 lbs (2984 kg) ..... **ATTITUDE : 12° 5**  
Rotation speed at takeoff, according to airplane weight, is also  
given in Chapter 5.9.
  
- 10 - Vertical speed indicator ..... **POSITIVE**
  
- 11 - Brakes ..... **APPLY  
(Briefly)**



## AMPLIFIED PROCEDURES

### TAKEOFF (3/4)

12 - Landing gear control . . . . . (IAS < 128 KIAS) . . . . . **UP**

During the sequence :

The red warning light flashes ; it indicates that the landing gear motor is running. It goes off when the 3 landing gears are locked.

Steady ON red warning light indicates an anomaly (refer to EMERGENCY PROCEDURES).

It is possible that the 3 landing gear position green indicator lights flash unevenly then go off at the end of the sequence.

**At sequence end, check : All warning lights OFF**

13 - Initial climb speed . . . . . Weight < 6579 lbs (2984 kg) : **110 KIAS**  
Weight ≥ 6579 lbs (2984 kg) : **115 KIAS**

In case of initial climb at Vx, it is recommended not to retract flaps to UP before 500 ft AGL

Weight < 6579 lbs (2984 kg) : **95 KIAS**

Weight ≥ 6579 lbs (2984 kg) : **100 KIAS**

14 - Flaps . . . . . **UP**

*Only when flaps are confirmed UP :*

15 - Flap control . . . . . **850**

In case of air leak between the solenoid valve and the torque limiter, the available torque might be below 100 %. Consequently, it is strongly recommended not to select "850" position :

for a new approach or visual circuit

for staying below 1500 ft AGL



AMPLIFIED PROCEDURES

**TAKEOFF (4/4)**

- 16 - Power lever ..... **TRQ =121.4 %**
- 17 - Climb speed (recommended) ..... **130 KIAS**  
Trims (Pitch, Roll and Yaw) ..... **ADJUSTED**
- 18 - "YAW DAMPER" push-button ..... **ON**
- 19 - Lights
  - "TAXI" ..... **OFF**
  - "L.LDG / R.LDG" ..... **AS REQUIRED**



AMPLIFIED PROCEDURES

**CLIMB (1/2)**

- 1 - Power lever ..... **ADJUST according to engine operation tables - Chapter 5.8 or to MXCL indicator on the PFDs**

**CAUTION**

**OBSERVE TRQ / Ng / Np / ITT / T°  
AND OIL PRESSURE LIMITATIONS.  
USE OPTIMUM TORQUE  
AND / OR REFER TO TABLES IN CHAPTER 5.8)**

Torque setting during climb must be adjusted according to engine operation tables in Chapter 5.8. These tables give the max. climb power torque setting (MXCL). For each engine, when torque is reduced below 121.4 % at high altitude according to the tables, during the final climb, reaching the maximum permitted Ng (104 %) is possible and the ITT will be approximately constant, giving a particular value of ITT.

For a simplified engine operation during climb, power may be set first of all by torque, using 121.4 %, then, when the ITT typical value for climb is reached, by indicated ITT, using this particular value. The margin between this indicated ITT and 790°C (recommended ITT limit during continuous operation) will gradually reduce as flight time is performed.

- 2 - Climb speed ..... **AS REQUIRED**
  - If weight is below 6579 lbs (2984 kg), best climb speed is 123 KIAS.
  - If weight is above 6579 lbs (2984 kg), best climb speed is 124 KIAS.

Performance tables concerning climb at 130 and 160 KIAS are given in Chapter 5.10.



AMPLIFIED PROCEDURES

**CLIMB (2/2)**

- 3 - ECS panel
  - Cabin pressure control panel . . . . . **Cruise altitude + 1000 feet**
  - Pressurization . . . . . **CHECK**
  - "CABIN TEMP/° C" selectors . . . . . **ADJUST**
- 4 - Fuel tank gages . . . . . **CHECK / CORRECT**  
**(Quantity / Symmetry)**

■ Pre-MOD70-0402-28 (Fuel sequencer evolution)

In spite of fuel selector automatic operation, a non-negligible dissymmetry may be observed at the end of climb, for example when 10 minutes of climb have been performed on the same fuel tank. Consequently, it is recommended to select the fullest tank by pushing the "SHIFT" push-button, at the beginning of the climb. Tolerated maximum dissymmetry is 15 us gal (57 Litres).

- 5 - DE ICE SYSTEM . . . . . **As required**  
**Refer to Chapter 4.5**  
**"PARTICULAR PROCEDURES"**

**CAUTION**

**IF HEAVY PRECIPITATION, TURN IGNITION  
AND INERT SEP ON**

AMPLIFIED PROCEDURES

**CRUISE (1/2)**

- 1 - Power lever ..... **ADJUST according to engine operation tables - Chapter 5.8 or to Cruise index on the PFD's**

As indicated in lower part of these tables, reducing propeller RPM is possible (without touching power lever), in order to improve sound comfort without significant performance change (speed, consumption).

FLAPS set to UP position (Active torque limiter)

However, at the time of this setting, limit permitted by torque limiter may be reached. This limit is 110 % at sea level and drops to about 100 % at 31000 ft. Therefore, any propeller RPM reducing performed in altitude from a torque close to 100 % (if ITT limit permits it) will be followed by a non-negligible power (and performance) decrease owing to torque limiter.

FLAPS set to 850 position (Not active torque limiter)

Propeller RPM reducing is possible, until 121.4 % maximum torque is reached (red line on indicator).

**CAUTION**

**OBSERVE TRQ / Ng / Np / ITT / T°  
AND OIL PRESSURE LIMITATIONS.  
USE OPTIMUM TORQUE  
AND / OR REFER TO TABLES IN CHAPTER 5.8)**

Engine operation tables (Chapter 5.8) give torque to be applied according to OAT, in order not to exceed authorized maximum power.

When "INERT SEP" switch is OFF, a more accurate setting of power must then be performed according to cruise performance tables presented in Chapter 5.11.



AMPLIFIED PROCEDURES

**CRUISE (2/2)**

2 - Pressurization ..... CHECK

3 - Fuel  
Gages ..... CHECK

**REGULARLY CHECK :**

- consumption
- **expected fuel at destination**

Pre-MOD70-0402-28 (Fuel sequencer evolution)

- **tank automatic change (every 10 minutes)**

Post-MOD70-0402-28 (Fuel sequencer evolution)

- **tank automatic change (every 5 minutes)**

All

- **symmetry [max. dissymmetry 15 us gal (57 Litres)]**

When the cruise parameters are stabilized (after 4 min minimum)

4 - Cruise parameters / engine data ..... CHECK/RECORD

5 - DE ICE SYSTEM ..... **As required**

**Refer to Chapter 4.5**

**"PARTICULAR PROCEDURES"**

**CAUTION**

**IF HEAVY PRECIPITATION, TURN IGNITION  
AND INERT SEP ON**

AMPLIFIED PROCEDURES

**FLAP CONTROL TRANSITION  
FROM "UP" TO "850"**

- 1 - Flaps ..... **CHECKED UP**
- 2 - Propeller RPM ..... **2000**
- 3 - Power lever ..... **TRQ ≤ 100 %**
- 4 - Flap control lever ..... **From UP to 850**

The torque limiter is deactivated.

**CAUTION**

**OBSERVE TRQ / Ng / Np / ITT / T°  
AND OIL PRESSURE LIMITATIONS  
(Refer to tables in Chapter 5.8)**

Engine operation tables (Chapter 5.8) give torque to be applied according to OAT, in order not to exceed authorized maximum power.

When "INERT SEP" switch is OFF, a more accurate setting of power must then be performed according to cruise performance tables presented in Chapter 5.11.

- 5 - Power lever ..... **As required  
TRQ less than 121.4 %**

AMPLIFIED PROCEDURES

**FLAP CONTROL TRANSITION  
FROM "850" TO "UP"**

1 - Altitude . . . . . **At or above 1500 ft AGL**

In case of air leak between the solenoid valve and the torque limiter, the available torque might be below 100 %. Consequently, it is strongly recommended not to operate the flap control from "850" to "UP" below 1500 ft AGL.

2 - Propeller RPM . . . . . **2000**

3 - Power lever . . . . . **TRQ ≤ 100 %**

4 - Flap control lever . . . . . **From 850 to UP**  
The torque limiter is activated and limits torque to 110 %.

5 - Power lever . . . . . **As required**  
**TRQ less than 100 %**  
**(2000 RPM)**

## AMPLIFIED PROCEDURES

<b>DESCENT (1/2)</b>	
1 - Flaps .....	<b>UP</b>
2 - Altimeter settings .....	<b>COMPLETE</b>
3 - "ALT SEL" .....	<b>SELECTED</b>
4 - ECS panel Cabin pressure control panel .....	<b>Airfield altitude</b>
5 - DE ICE SYSTEM .....	<b>As required</b> <b>Refer to Chapter 4.5</b> <b>"PARTICULAR PROCEDURES"</b>

**CAUTION**  
**IF HEAVY PRECIPITATION, TURN IGNITION**  
**AND INERT SEP ON**

The maximum speed for changing the position of the inertial separator is 200 KIAS. Prior to descending into or through known or suspected icing conditions, select "INERT SEP" switch ON prior to accelerating beyond 200 KIAS. There are no special speed limitations with the inertial separator secured in either position.

**CAUTION**  
**USE OF CONTROL REVERSE BETA ( $\beta$ ) RANGE (BEHIND**  
**THE FLIGHT IDLE POSITION) IS PROHIBITED DURING**  
**FLIGHT**



AMPLIFIED PROCEDURES

**DESCENT (2/2)**

- 6 - Windshield misting protection system . . . . . **As required**  
Prior to descent in moist conditions, turn "AIR FLOW" distributor in DEFOG section and set "WINDSHIELD" switch to ON to avoid canopy misting.  
If misting continues, set "AIR FLOW" distributor to HOT or refer to Chapter 3.12 Paragraph "WINDSHIELD MISTING OR INTERNAL ICING".
  
- 7 - Fuel  
Gages . . . . . **CHECK**  
**(Quantity / Symmetry)**  
Fullest tank . . . . . **SELECT**
  
- 8 - Passengers briefing . . . . . **As required**
  
- 9 - Seats, belts and harnesses . . . . . **LOCKED**
  
- 10 - Passengers' table . . . . . **STOWED**
  
- 11 - Passengers' seat backrest . . . . . **CHECK**



## AMPLIFIED PROCEDURES

<b>BEFORE LANDING (1/2)</b>	
<b>Long final</b>	
1 - Altimeters .....	<b>CHECK</b>
2 - Fuel	
Gages .....	<b>CHECK</b>
	<b>(Quantity / Symmetry)</b>
Fullest tank .....	<b>SELECT</b>
Maximum tolerated dissymmetry is 15 us gal (57 Litres).	
3 - "INERT SEP" switch ..... (IAS ≤ 200 KIAS) .....	<b>ON</b>
4 - Propeller lever .....	<b>MAX RPM</b>
5 - Landing gear control ..... (IAS ≤ 178 KIAS) .....	<b>DN</b>
Green indicator lights .....	<b>ON</b>
Red warning light .....	<b>OFF</b>
During the sequence :	
- The red warning light flashes ; it indicates that the landing gear motor is running. It goes off when the 3 landing gears are locked. Steady ON red warning light indicates an anomaly (refer to EMERGENCY PROCEDURES).	
- It is possible that the 3 landing gear position green indicator lights flash unevenly then come on at the end of the sequence.	
6 - Flaps .....	(IAS ≤ 178 KIAS) ..... <b>TO</b>
7 - Lights	
"L.LDG / TAXI / R.LDG" .....	<b>ON</b>



AMPLIFIED PROCEDURES

**BEFORE LANDING (2/2)**

**Short final**

- 8 - Autopilot ..... **DISCONNECT**
  
- 9 - Flaps ..... (IAS ≤ 122 KIAS) ..... **LDG**  
However, when autopilot is engaged, in APR mode, with coupled GS, flaps must be extended in landing position before crossing the OUTER MARKER.
  
- 10 - Approach speed  
(Flaps LDG) ..... Weight < 6250 lbs (2835 kg) : **80 KIAS**  
Weight ≥ 6250 lbs (2835 kg) : **85 KIAS**  
(Flaps LDG) ..... With AP engaged : ..... ≥ **85 KIAS**  
This is to avoid any vertical deviation in case of late flaps extension to LDG position in short final.  
To ensure positive and rapid engine response to throttle movement, it is recommended that a minimum of 10 % torque be maintained on final approach until landing is assured.
  

- 11 - "YAW DAMPER" push-button ..... **OFF**  
The pilot effort required to use the rudder pedals is reduced if the yaw damper is turned off. This is particularly significant when landing in a crosswind.

AMPLIFIED PROCEDURES

**LANDING**

- 1 - Power lever ..... **IDLE**  
Avoid three-point landings. Adopt a positive flight attitude in order to touch runway first with main landing gear.

**After wheels touch**

- 2 - Reverse ..... **As required**  
(Reverse may be applied as soon as the wheels touch the ground.)  
To avoid ingestion of foreign objects, come out the reverse as speed reduces and use the brakes if necessary for further deceleration.  
High power reverse at low speed can throw loose material into the air, and can cause control problems and decrease the comfort of crew and passengers. If permitted by the runway length, it is better to adopt a moderate reverse.

**CAUTION**

**ON SNOWY OR DIRTY RUNWAY, IT IS BETTER NOT TO USE REVERSE BELOW 40 KIAS**

- 3 - Brakes ..... **As required**  
It is advised not to brake energetically, as long as speed has not reached 40 KIAS, as otherwise wheels may be locked.

AMPLIFIED PROCEDURES

**GO-AROUND (1/2)**

1 - GO AROUND push-button ..... **PUSHED**  
It provides the moving up of the flight director to + 7° 5.

2 - Simultaneously  
Power lever ..... **TRQ = 100 %**  
Attitude ..... **7° 5**  
The airplane will tend to yaw to the left when power is applied. Right rudder pressure will be required to maintain coordinated straight flight until the rudder trim can be adjusted.

3 - Flaps ..... **TO**

Weight below 6579 lbs (2984 kg)  
If speed has been maintained at 80 KIAS or more and TRQ 100 %, select TO flaps as soon as the 7° 5 attitude has been attained.

*If the vertical speed is positive and if IAS is at or above 85 KIAS :*

4 - Landing gear control ..... **UP**  
**All warning lights OFF**

*If IAS is at or above 110 KIAS :*

5 - Flaps ..... **UP**

6 - Climb speed ..... **AS REQUIRED**

Weight above 6579 lbs (2984 kg)  
If speed has been maintained at 85 KIAS or more and TRQ 100 %, select TO flaps as soon as the 7° 5 attitude has been attained.

*If the vertical speed is positive and if IAS is at or above 90 KIAS :*

7 - Landing gear control ..... **UP**  
**All warning lights OFF**



AMPLIFIED PROCEDURES

**GO-AROUND (2/2)**

*If IAS is at or above 115 KIAS :*

8 - Flaps ..... **UP**

In case of air leak between the solenoid valve and the torque limiter, the available torque might be below 100 %. Consequently, it is strongly recommended not to select "850" :  
for a new approach or visual circuit  
for staying below 1500 ft AGL

9 - Climb speed ..... **AS REQUIRED**

10 - Power ..... **AS REQUIRED**



AMPLIFIED PROCEDURES

**TOUCH AND GO**

***After wheels touch***

- 1 - Flaps ..... **TO**  
Check that flaps have well reached the TO position before increasing power. Do not increase power with full flaps, as airplane may lift off prematurely at low speed.
  
- 2 - Elevator trim ..... **Green sector**  
To use elevator trim manual control is faster than to use electric control. Ensure that runway length is sufficient to complete this sequence.
  
- 3 - Power lever ..... **Display TRQ = 100 %**
  
- 4 - Takeoff ..... **ROTATION : See "Takeoff distances" Chapter 5.9**
  - Normal takeoff ..... **ATTITUDE : 7°5**
  - Short takeoff
    - . Weight < 6579 lbs (2984 kg) ..... **ATTITUDE : 15°**
    - . Weight ≥ 6579 lbs (2984 kg) ..... **ATTITUDE : 12°5**

Rotation speed at takeoff, according to airplane weight, is also given in Chapter 5.9.

However, the pilot's operating handbook does not supply distances concerning touch and go. These distances are let to pilot's initiative.

In case of air leak between the solenoïd valve and the torque limiter, the available torque might be below 100 %. Consequently, it is strongly recommended not to select "850" position of the flap control lever :

- for a new approach or visual circuit
- for staying below 1500 ft AGL

AMPLIFIED PROCEDURES

<b>AFTER LANDING</b>	
<b>RUNWAY CLEAR - AIRPLANE STOPPED</b>	
1 - DE ICE SYSTEM panel	
- "AIRFRAME DE ICE" switch .....	<b>OFF</b>
- "PROP DE ICE" switch .....	<b>OFF</b>
- "INERT SEP" switch .....	<b>CHECKED ON</b>
- "WINDSHIELD" switch .....	<b>As required</b>
- "PITOT L HTR" switch .....	<b>OFF</b>
- "PITOT R & STALL HTR" switch .....	<b>OFF</b>
2 - Radar (if installed) .....	<b>CHECKED STANDBY</b>
Maintain radar (if installed) on STANDBY in order not to generate radiations prejudicial to outside persons. The radar is automatically set to STANDBY after the touch-down.	
3 - Transponder .....	<b>CHECKED SBY</b>
The transponder is automatically set to SBY after the touch-down.	
4 - Flaps .....	<b>UP</b>
5 - "STROBE" switch .....	<b>OFF</b>
6 - Lights	
"L.LDG / R.LDG" .....	<b>OFF</b>
"TAXI" .....	<b>ON</b>
7 - "OXYGEN" switch .....	<b>OFF</b>

AMPLIFIED PROCEDURES

<b>SHUT-DOWN (1/3)</b>
------------------------

- |   |                           |
|---|---------------------------|
| 1 - Parking brake .....   | <b>SET</b>                |
| <b>WARNING CAS MESSAGE "PARK BRAKE"</b>   | <b>ON</b>                 |
|   |                           |
| 2 - ECS panel   |                           |
| "BLEED" switch .....  | <b>OFF</b>                |
| Check for cabin depressurization  |                           |
| "AIR COND" switch .....   | <b>OFF</b>                |
|   |                           |
| 3 - Condition lever .....   | <b>HI /IDLE</b>           |
|   |                           |
| 4 - Power lever .....   | <b>IDLE for 2 minutes</b> |
| This allows the engine to stabilize at minimum obtainable ITT in order to minimize the likelihood of oil coking in the #3 bearing area. |                           |
|   |                           |
| 5 - "TAXI" light .....  | <b>OFF</b>                |
|   |                           |
| 6 - "AP TRIMS" MASTER switch .....  | <b>OFF</b>                |

<b>CAUTION</b>
<b>IN CASE OF SHUT-DOWN ON A CONTAMINATED AREA :</b>
- <b>Condition lever</b> ..... <b>CUT OFF</b>
- <b>Propeller governor lever</b> ..... <b>FEATHER</b>

- 7 - Propeller governor lever ..... **FEATHER for 15 seconds**  
Keep propeller governor lever on FEATHER position for 15 seconds minimum before shutting down engine.





AMPLIFIED PROCEDURES

**SHUT-DOWN (2/3)**

- 8 - Condition lever ..... **CUT OFF**
- 9 - "INERT SEP" switch ..... **OFF**
- 10 - "AVIONICS" MASTER switch ..... **OFF**
- 11 - EXT LIGHTS panel  
All switches ..... **OFF**
- 12 - INT LIGHTS panel  
All switches ..... **OFF**
- 13 - Fuel  
When fuel pressure is below 10 psi  $\pm$  2 psi, check "AUX BP"  
pump is operating.  
"AUX BP" switch ..... **OFF**  
"FUEL SEL" switch ..... **MAN**  
Tank selector ..... **OFF**
- 14 - "GENERATOR" selector ..... **OFF**
- 15 - "SOURCE" selector ..... **OFF**
- 16 - CRASH lever ..... **PULL DOWN**
- 17 - Parking brake ..... **As required**

**CAUTION**

**IN CASE OF HIGH OAT [ABOVE 35° C (95° F)], IT IS  
REQUIRED TO PERFORM 30 SECONDS DRY  
MOTORING RUN AFTER SHUT-DOWN TO IMPROVE  
COOLING OF THE BEARING CAVITIES AND MINIMIZE  
OIL COKING (REFER TO PARAGRAPH "MOTORING")**



AMPLIFIED PROCEDURES

**SHUT-DOWN (3/3)**

Post-MOD70-0335-34 (ESI-2000)

- ESI-2000 - NORMAL PROCEDURE

No pilot action required for normal shutdown. The ESI-2000 will shut down within 5 minutes.

- ESI-2000 - MANUAL PROCEDURE

The ESI-2000 can be manually shut down when in the discharge mode to conserve battery power :

- . Remove all aircraft power from the ESI
- . Press any key (button) as stated by the on screen message
- . Press the M (Menu) button repeatedly until shutdown menu is shown.
- . Press and hold the + (Hold) button until "SHUTTING DN" message is shown in the upper left corner of the screen.

## 4.5 - PARTICULAR PROCEDURES

### REMARK :

The procedures and procedure elements given in this Chapter "PARTICULAR PROCEDURES" supplement the normal procedures or complete certain elements of the normal procedures described in Chapter(s) 4.3 and/or 4.4.

### FLIGHT INTO KNOWN ICING CONDITIONS (1/5)

#### General

- 1 - Icing conditions exist when the OAT on the ground or in flight is + 5°C or below, and visible moisture in any form is present (clouds, fog with visibility of one mile (1.6 km) or less, rain, snow, sleet or ice crystals).
- 2 - Icing conditions also exist when the OAT on the ground is + 5°C or below and when operating on ramps, taxiways or runways where surface snow, ice, standing water or slush may be ingested by the engine or freeze on engine or cowlings.

#### NOTE :

Refer to Figure 5.5.1 to convert OAT to SAT in flight.

$SAT = OAT - 2^{\circ}C$  on the ground.

- 3 - Flight into known icing conditions is authorized when all airplane equipment provided for ice protection is operating correctly. This includes :
  - Pneumatic deice system for inboard and outboard wing, for stabilizers and for elevator horns.
  - Propeller electrical deice system.
  - Electrical heating system for both pitots and for the stall warning incidence sensor.
  - Windshield electrical deice system.
  - Inertial separator.

Description of deice systems is presented in Chapter 7.13.

Ice accumulation thickness is monitored by the pilot on the L.H. wing leading edge.

At night, a leading edge icing inspection light located on the fuselage L.H. side, activated by the "ICE LIGHT" switch, is provided.

PARTICULAR PROCEDURES

**FLIGHT INTO KNOWN ICING CONDITIONS (2/5)**

Boots are automatically cycling at the optimum time to assure proper ice removal. Correct operation of the system can be checked observing the corresponding green advisory light illumination at each boot inflation impulse. If correct operation cannot be confirmed, do not enter or leave as soon as possible icing conditions.

Apply "LEADING EDGES DEICING FAILURE" emergency procedure.

**Ice protection procedures**

- 1 - Prior to entering IMC, as a preventive :

*If OAT ≤ 5° C :*

- "INERT SEP" switch ..... **ON**
- "IGNITION" switch ..... **ON**
- "PROP DE ICE" switch ..... **ON**
- "AIRFRAME DE ICE" switch ..... **ON**
- "WINDSHIELD DE ICE" switch ..... **ON**

- 2 - When operating under IMC :

- "INERT SEP" switch ..... **ON**
- "IGNITION" switch ..... **ON**
- "PROP DE ICE" switch ..... **ON**
- "AIRFRAME DE ICE" switch ..... **ON**
- "WINDSHIELD DE ICE" switch ..... **ON**

**NOTE :**

*When OAT is below - 35° C, avoid operations of the "AIRFRAME DEICE SYSTEM" for a too long period because the boots could be damaged. The "INERT SEP" switch must be left ON while the airplane remains in icing conditions.*

## PARTICULAR PROCEDURES

## FLIGHT INTO KNOWN ICING CONDITIONS (3/5)

**CAUTION**

**SHOULD CONDITIONS REQUIRE IT, APPLY THESE DIRECTIVES  
FROM BEGINNING OF TAXI ONWARDS**

**CAUTION**

**DO NOT OPERATE THE INERTIAL SEPARATOR IF THE AIRSPEED  
EXCEEDS 200 KIAS. THERE IS NO SPEED LIMITATION WHEN  
THE INERTIAL SEPARATOR IS IN FIXED POSITION**

If a high speed descent (> 200 KIAS) is anticipated into known icing conditions, position "INERT SEP" switch to ON before accelerating. This will avoid reducing speed below 200 KIAS during descent to set the inertial separator.

**IF AIRPLANE LEAVES ICING CONDITIONS, MAINTAIN "INERT SEP" ON  
AS LONG AS ICE THICKNESS ON NON-DEICED VISIBLE PARTS  
EXCEEDS 15 mm (OR ½ INCH)**

This will avoid ice fragments coming from propeller spinner and being ingested by engine.

**INERTIAL SEPARATOR POSITION AFFECTS ENGINE PARAMETERS  
(PARTICULARLY TRQ AND ITT). CARE MUST BE EXERCISED WHEN  
OPERATING THE INERTIAL SEPARATOR OR WHEN INCREASING  
POWER WITH THE INERTIAL SEPARATOR ON, TO AVOID EXCEEDING  
ENGINE LIMITATIONS**

**NOTE :**

*"IGNITION" switch may be left ON for a long period.*

*Standby compass indications are altered when windshield deicing system(s) operate(s).*

PARTICULAR PROCEDURES

**FLIGHT INTO KNOWN ICING CONDITIONS (4/5)**

- 3 – Procedures for holding, approach and landing in icing conditions :
  - Minimum recommended speeds are :

	Weight	
	< 6579 lbs (2984 kg)	> 6579 lbs (2984 kg)
Flaps UP	130 KIAS	135 KIAS
Flaps TO	110 KIAS	110 KIAS
Flaps LDG	90 KIAS	95 KIAS

- If there is ice on the unprotected surfaces of the airplane, during flight end phase, conduct holding with the flaps up. Use flaps as required for final approach and landing at minimum speeds noted above.

**Ice accumulation effects**

When ice has accumulated on the unprotected surfaces of the airplane, aerodynamic characteristics may be changed.

Particularly stall speeds may increase by up to :

- Flaps UP            20 KIAS
- Flaps TO            15 KIAS
- Flaps LDG          10 KIAS

Correct operation of the aural stall warning may be altered by severe or prolonged icing.

Indeed, in case of severe or prolonged icing, an ice concretion due to refreezing around the heated stall warning may appear. Above-recommended speeds take into account, on one side, the stall speed increase due to profile shape deterioration and, on the other side, the weight increase of the iced-up airplane (taking as a basis the airplane maximum weight when not iced-up).

**PARTICULAR PROCEDURES****FLIGHT INTO KNOWN ICING CONDITIONS (5/5)**

Rate of climb values with ice accumulation on the unprotected surfaces are to be decreased by 10 %.

Cruise speeds may be decreased by 10 %, if cruise power is not changed, or more, if cruise power setting should be decreased due to the additional inertial separator limitations (ITT limitation).

Because of the higher landing speed, landing distances will be increased. In the landing configuration, using 90 KIAS approach speed increases landing distance by 20 % - refer to Chapter 5.14 "LANDING DISTANCES".

## PARTICULAR PROCEDURES

### FLIGHT INTO SEVERE ICING CONDITIONS (1/2)

**THE FOLLOWING WEATHER CONDITIONS MAY BE CONDUCTIVE  
TO SEVERE IN-FLIGHT ICING :**

- Visible rain at temperatures below 0°C ambient air temperature,
- Droplets that splash or splatter on impact at temperatures below 0°C ambient air temperature.

#### **Procedures for exiting the severe icing environment**

*REMARK :*

*These procedures are applicable to all flight phases from takeoff to landing.*

Monitor the ambient air temperature. While severe icing may form at temperatures as cold as - 18°C, increased vigilance is warranted at temperatures around freezing with visible moisture present. If the visual cues specified in Section 2 "Limitations" for identifying severe icing conditions are observed, accomplish the following :

- 1 - Immediately request priority handling from Air Traffic Control to facilitate a route or an altitude change to exit the severe icing conditions in order to avoid extended exposure to flight conditions more severe than those for which the aircraft has been certificated.
- 2 - Avoid abrupt and excessive maneuvering that may exacerbate control difficulties.
- 3 - Do not engage the autopilot.
- 4 - If the autopilot is engaged, hold the control wheel firmly and disengage the autopilot.
- 5 - If an unusual roll response or uncommanded roll control movement is observed, reduce the angle-of-attack.



## PARTICULAR PROCEDURES

**FLIGHT INTO SEVERE ICING CONDITIONS (2/2)**

- 6 - Do not extend flaps when holding in icing conditions. Operation with flaps extended can result in a reduced wing angle-of-attack, with the possibility of ice forming on the upper surface further aft on the wing than normal, possibly aft of the protected area.
- 7 - If the flaps are extended, do not retract them until the airframe is clear of ice.
- 8 - Report these weather conditions to Air Traffic Control.

PARTICULAR PROCEDURES

**FLIGHT UNDER HEAVY PRECIPITATIONS**

- 1 - "IGNITION" switch ..... **ON**  
This action is intended, in highly improbable case of an engine flame-out further to an important ingestion, to ensure immediate restarting without action of the pilot.
- 2 - "INERT SEP" switch ..... **ON**

**UTILIZATION ON RUNWAYS COVERED WITH WATER**

If takeoff or landing must be performed on a runway covered with water :

- 1 - "IGNITION" switch ..... **ON**
- 2 - "INERT SEP" switch ..... **ON**

**PARTICULAR PROCEDURES**

**UTILIZATION ON RUNWAYS COVERED WITH MELTING OR NOT TAMPED SNOW (1/2)**

*Refer if required to paragraph "UTILIZATION BY COLD WEATHER AND VERY COLD WEATHER".*

**Preflight inspection**

- 1 - Remove any snow or ice from the wings, stabilizers and movable surfaces, landing gear wells and gear doors, as well as flap tracks, actuators and their fairings.
- 2 - Spray anti-icing fluid on the wings, stabilizers and movable surfaces (upper and lower surfaces) and in the landing gear wells, shortly before takeoff.

**Taxiing**

- 1 - "INERT SEP" switch ..... **ON**
- 2 - Taxi at very slow speed (max. 5 KIAS), flaps up, brake occasionally to maintain the brake pads warm (this will prevent any subsequent locking due to freezing after takeoff).

**Before takeoff**

- 1 - If the runway is long enough, takeoff should be performed with the flaps in the up position. In that case, rotation speed must be increased by 5 KIAS.

*NOTE :*

*Takeoff distances must be increased to take into account the flap position (+ 15 % compared to the takeoff position) and the runway condition.*

*The ground roll may be multiplied by 3 in some melting or not tamped snow cases.*

- 2 - "IGNITION" switch ..... **ON**
- 3 - "INERT SEP" switch ..... **ON**

PARTICULAR PROCEDURES

**UTILIZATION ON RUNWAYS COVERED WITH MELTING  
OR NOT TAMPED SNOW (2/2)**

**Takeoff**

- 1 - Lightly lift up nose wheel during takeoff run in order to reduce the forward resistance due to snow accumulation against the wheel.
- 2 - After takeoff, normally retract the landing gear, then perform a complete cycle (extension / retraction) at IAS  $\leq$  128 KIAS.

**Before landing**

- 1 - "IGNITION" switch ..... **ON**
- 2 - "INERT SEP" switch ..... **ON**

**Touch and Go**

Prohibited

**On the ramp, after landing or taxiing :**

- 1 - Do not use the parking brake to prevent brake lock.
- 2 - Use chocks and / or tie-down the airplane.

## PARTICULAR PROCEDURES

### UTILIZATION ON ICY OR COVERED WITH TAMPED SNOW RUNWAYS (1/2)

Refer if required to paragraph "UTILIZATION BY COLD WEATHER AND VERY COLD WEATHER".

#### Preflight inspection

- 1 - Remove any snow or ice from the wings, stabilizers and movable surfaces, landing gear wells and gear doors, as well as flap tracks, actuators and their fairings.
- 2 - Spray anti-icing fluid on the wings, stabilizers and movable surfaces (upper and lower surfaces), shortly before takeoff.

#### Taxiing

- 1 - "INERT SEP" switch ..... **ON**
- 2 - Taxi at very slow speed (max. 5 KIAS).  
Use  $\beta$  area of power lever to adjust speed.  
Apply very smooth variations using power lever.
- 3 - Steer the airplane using the rudder.  
Make turns at a very low speed, engine torque tends to make the airplane turn to the left.
- 4 - Use brakes only at very low speed and progressively.

#### Before takeoff

- 1 - "IGNITION" switch ..... **ON**
- 2 - "INERT SEP" switch ..... **ON**

#### Takeoff

- 1 - After takeoff, normally retract the landing gear, then perform a complete cycle (extension / retraction) at IAS  $\leq$  128 KIAS.

#### Before landing

- 1 - "IGNITION" switch ..... **ON**
- 2 - "INERT SEP" switch ..... **ON**

## PARTICULAR PROCEDURES

### UTILIZATION ON ICY OR COVERED WITH TAMPED SNOW RUNWAYS (2/2)

#### **Landing**

After wheel touch

- 1 - Use reverse only if necessary and very progressively by monitoring the airplane behaviour.  
The engine torque tends to make the airplane turn to the left.
- 2 - Taxi at very slow speed (max. 5 KIAS).  
Use  $\beta$  area of power lever to adjust speed.  
Apply very smooth variations using power lever.
- 3 - Steer the airplane using the rudder.  
Make turns at a very low speed, engine torque tends to make the airplane turn to the left.
- 4 - Use brakes only at very low speed and progressively.

#### **On the ramp, after landing or taxiing :**

- 1 - Do not use the parking brake to prevent brake lock.
- 2 - Use chocks and / or tie-down the airplane.

PARTICULAR PROCEDURES

**UTILIZATION BY COLD WEATHER (- 0°C TO - 25°C) AND VERY COLD WEATHER (- 25°C TO - 40°C) (1/10)**

**REMARK :**

*The procedures hereafter supplement the normal procedures for the airplane use when operating under temperatures between 0°C and - 40°C on ground.*

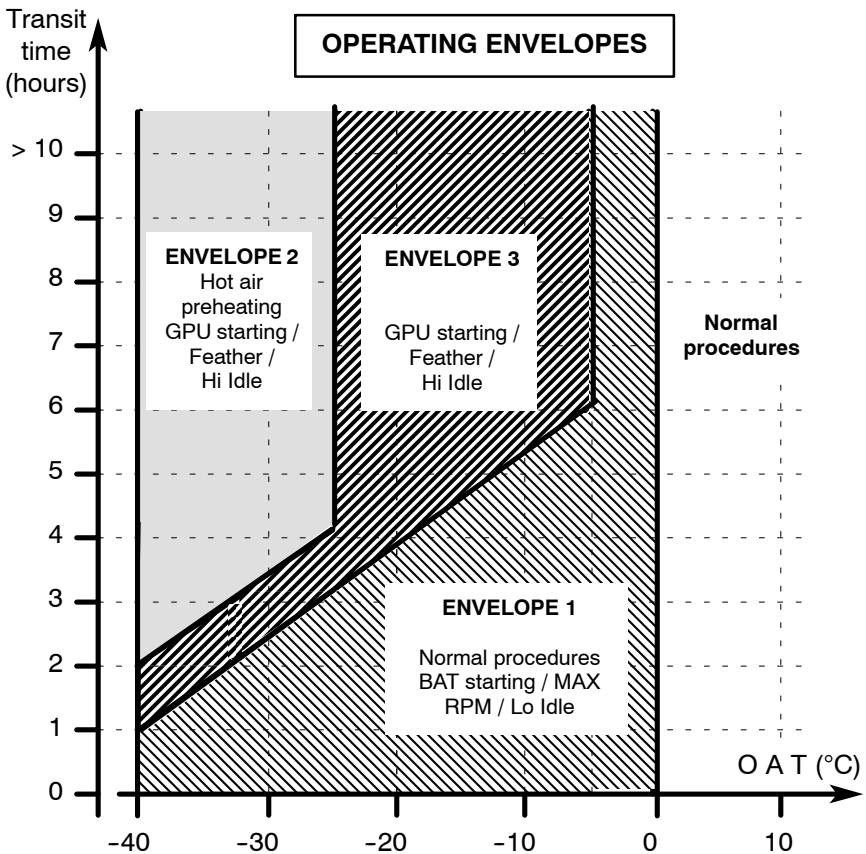


Figure 4.5.1 - OPERATING ENVELOPES BY COLD WEATHER (- 0°C to - 25°C) AND VERY COLD WEATHER (- 25°C to - 40°C)

## PARTICULAR PROCEDURES

### UTILIZATION BY COLD WEATHER (- 0°C TO - 25°C) AND VERY COLD WEATHER (- 25°C TO - 40°C) (2/10)

#### **ENVELOPE 1**

The procedures hereafter supplement the normal procedures for the airplane use when operating in the "envelope 1" defined in Figure 4.5.1.

#### **Preflight inspection**

- 1 - Remove any snow or ice from the wings, stabilizers and movable surfaces.

Apply, according to the condition of runways and taxiways, the procedures "UTILIZATION ON RUNWAYS COVERED WITH MELTING OR NOT TAMPED SNOW" or the procedures "UTILIZATION ON ICY OR COVERED WITH TAMPED SNOW RUNWAYS".

- 2 - Carry out a complete rotation of the propeller to check its free rotation.
- 3 - Do not perform a fuel draining. If the airplane is operating permanently under negative temperatures, drainings will have to be performed once a week after having parked the airplane in a heated hangar.
- 4 - Remove chocks and / or release ties from the airplane.
- 5 - Check the free deflection of the flight controls and of the elevator trim.
- 6 - Check the free deflection of the power lever and of the propeller governor lever.

#### **Before starting the engine / Starting the engine / After starting the engine**

Apply normal procedures defined in Chapter(s) 4.3 and / or 4.4.



PARTICULAR PROCEDURES

**UTILIZATION BY COLD WEATHER (- 0°C TO - 25°C) AND VERY COLD WEATHER (- 25°C TO - 40°C) (3/10)**

**Taxiing / Before takeoff / Takeoff**

- 1 - On "DE-ICE SYSTEM" panel :
  - "INERT SEP" switch ..... **ON**
  - WARNING CAS MESSAGE "INERT SEP ON" ON**
  - "PITOT L HTR" switch ..... **ON**
  - "PITOT R & STALL HTR" switch ..... **ON**
  - "PROP DE-ICE" switch ..... **ON**
- 2 - Apply normal procedures
- 3 - Apply, according to the condition of runways and taxiways, the procedures "UTILIZATION ON RUNWAYS COVERED WITH MELTING OR NOT TAMPED SNOW" or the procedures "UTILIZATION ON ICY OR COVERED WITH TAMPED SNOW RUNWAYS".

**Landing / After landing**

- 1 - Apply normal procedures defined in Chapter(s) 4.3 and / or 4.4.
- 2 - Apply, according to the condition of runways and taxiways, the procedures "UTILIZATION ON RUNWAYS COVERED WITH MELTING OR NOT TAMPED SNOW" or the procedures "UTILIZATION ON ICY OR COVERED WITH TAMPED SNOW RUNWAYS".

**Shut down**

- 1 - Parking brake ..... **RELEASED**
- WARNING CAS MESSAGE "PARK BRAKE" OFF**
- It is recommended not to use the parking brake by cold or very cold weather, so that the brakes do not stick when cooling.
- 2 - Apply normal procedures defined in Chapter(s) 4.3 and / or 4.4.
- 3 - Use chocks and / or tie-down the airplane using anchor points on ground.
- 4 - Put blanking caps and plugs on air inlets, exhaust stubs, pitots and static ports.

PARTICULAR PROCEDURES

**UTILIZATION BY COLD WEATHER (- 0° C TO - 25° C) AND VERY COLD WEATHER (- 25° C TO - 40° C) (4/10)**

**ENVELOPE 2**

The procedures hereafter supplement or replace the normal procedures for the airplane use when operating in the "envelope 2" defined in Figure 4.5.1.

**Preflight inspection**

- 1 - Preheat the engine and the cabin.

Preheating the engine and the cabin during at least 30 minutes is necessary using a heater (70°C mini). Hot air pipes must be installed :

- in the air inlet,
- on engine rear table by opening the upper cowling,
- in the cabin by half-opening the door.

- 2 - Remove any snow or ice from the wings, stabilizers and movable surfaces.

Apply, according to the condition of runways and taxiways, the procedures "UTILIZATION ON RUNWAYS COVERED WITH MELTING OR NOT TAMPED SNOW" or the procedures "UTILIZATION ON ICY OR COVERED WITH TAMPED SNOW RUNWAYS".

Spray anti-icing fluid on the wings, stabilizers and movable surfaces (upper and lower surfaces), shortly before takeoff.

- 3 - Carry out a complete rotation of the propeller to check its free rotation.
- 4 - Do not perform a fuel draining. If the airplane is operating permanently under negative temperatures, drainings will have to be performed once a week after having parked the airplane in a heated hangar.

## PARTICULAR PROCEDURES

### UTILIZATION BY COLD WEATHER (- 0°C TO - 25°C) AND VERY COLD WEATHER (- 25°C TO - 40°C) (5/10)

- 5 - Remove chocks and / or release ties from the airplane.
- 6 - Check the free deflection of the flight controls and of the elevator trim.
- 7 - Check the free deflection of the power lever and of the propeller governor lever.

8 - "IGNITION" switch .....	<b>ON during 30 seconds</b>
WARNING CAS MESSAGE	<b>"IGNITION" ON</b>
then "IGNITION" switch .....	<b>AUTO</b>
WARNING CAS MESSAGE	<b>"IGNITION" OFF</b>

This enables to preheat spark igniters before starting the engine.

#### Before starting the engine

Apply normal procedures defined in Chapter(s) 4.3 and / or 4.4.

#### Starting the engine

The starting must be mandatorily performed using an external power source (GPU).

- 1 - Ground power unit ..... **CONNECTED**
- 2 - "SOURCE" selector ..... **GPU**
- WARNING CAS MESSAGE **"GPU DOOR" ON**
- WARNING CAS MESSAGE **"BAT OFF" ON**
- Voltmeter ..... **VOLTAGE CHECKED**  
**(V = 28 Volts)**

PARTICULAR PROCEDURES

**UTILIZATION BY COLD WEATHER (- 0° C TO - 25° C) AND VERY COLD WEATHER (- 25° C TO - 40° C) (6/10)**

- 3 - Engine controls
  - "MAN OVRD" control ..... **OFF (Notched)**

**CAUTION**

**WHEN THE ENGINE IS SHUTDOWN, THE POWER LEVER MUST NOT BE MOVED BEHIND THE FLIGHT IDLE POSITION**

- Power lever ..... **IDLE**
- Propeller governor lever ..... **Feather**
- Condition lever ..... **CUT OFF**

- 4 - Fuel panel
  - "AUX BP" switch ..... **ON**
  - WARNING CAS MESSAGE "AUX BOOST PMP ON" ON**
  - WARNING CAS MESSAGE "FUEL PRESS" OFF**
  - Fuel pressure indicator ..... **Check**

- 5 - Propeller ..... **AREA CLEAR**

- 6 - "ENGINE START" panel
  - "IGNITION" switch ..... **ON**
  - WARNING CAS MESSAGE "IGNITION" ON**
  - "STARTER" switch ..... **ON**
  - WARNING CAS MESSAGE "STARTER" ON**

PARTICULAR PROCEDURES

**UTILIZATION BY COLD WEATHER (- 0° C TO - 25° C) AND VERY COLD WEATHER (- 25° C TO - 40° C) (7/10)**

Ng ≈ 13 %

- Condition lever ..... **HI / IDLE**

Move directly condition lever to HI / IDLE

**NOTE :**

*The more the temperature is low, the more the selector is hard to move.*

*Starter limits and checks of starting sequence are unchanged.*

7 - Engine instruments ..... **Check NG = 70 % (± 2%)**  
**(Oil pressure / ITT = green sector)**

8 - "SOURCE" selector ..... **BAT**  
**WARNING CAS MESSAGE "BAT OFF" OFF**

9 - "IGNITION" switch ..... **AUTO**  
**WARNING CAS MESSAGE "IGNITION" OFF**

10 - Ground power unit ..... **HAVE IT DISCONNECTED**  
**WARNING CAS MESSAGE "GPU DOOR" OFF**

11 - "FUEL" panel  
- "AUX BP" switch ..... **AUTO**  
**WARNING CAS MESSAGE "AUX BOOST PMP ON" OFF**

12 - Generator  
**WARNING CAS MESSAGE "MAIN GEN" OFF**  
**RESET if necessary**

PARTICULAR PROCEDURES

**UTILIZATION BY COLD WEATHER (- 0°C TO - 25°C) AND VERY COLD WEATHER (- 25°C TO - 40°C) (8/10)**

**After starting the engine**

- 1 - On "ECS" panel

As soon as the current flow is lower than 100 A :

- "BLEED" switch ..... **AUTO**
- "CABIN CTRL" selector ..... **VERRIDE**
- "CABIN TEMP/°C" selector ..... **FULL HOT**

- 2 - Propeller governor lever

As soon as the oil temperature is greater than 0°C :

- Propeller governor lever ..... **MAX. RPM**
- Perform 2 propeller regulations

- 3 - Apply normal procedures defined in Chapter(s) 4.3 and / or 4.4.

**Taxiing / Before takeoff / Takeoff**

Apply procedures defined for Envelope 1.

**Landing / After landing / Shut down**

Apply procedures defined for Envelope 1.

PARTICULAR PROCEDURES

**UTILIZATION BY COLD WEATHER (- 0°C TO - 25°C) AND VERY COLD WEATHER (- 25°C TO - 40°C) (9/10)**

**ENVELOPE 3**

The procedures defined for the "envelope 2" are also applicable for the "envelope 3". However it is possible to start the engine using GPU **without preheating of the engine and the cabin** with a heater. In that case the procedure "After starting the engine" is modified as follows :

**Preflight inspection / Before starting the engine / Starting the engine**

Apply the procedures defined for the Envelope 2.

**After starting the engine**

- 1 - On "ECS" panel

As soon as the current flow is lower than 100 A :

- "BLEED" switch ..... **AUTO**
- "CABIN CTRL" selector ..... **OVERRIDE**
- "CABIN TEMP/°C" selector ..... **FULL HOT**

Preheat the cabin respecting time defined in Figure 4.5.2 before switching on the navigation and monitoring systems. This allows to respect minimum temperatures necessary for the equipment operation.

- 2 - Propeller governor lever

As soon as the oil temperature is greater than 0°C :

- Propeller governor lever ..... **MAX. RPM**
- Perform 2 propeller regulations

- 3 - Apply normal procedures defined in Chapter(s) 4.3 and / or 4.4.

PARTICULAR PROCEDURES

**UTILIZATION BY COLD WEATHER (- 0°C TO - 25°C) AND VERY COLD WEATHER (- 25°C TO - 40°C) (10/10)**

**Taxiing / Before takeoff / Takeoff**

Apply procedures defined for Envelope 1.

**Landing / After landing / Shut down**

Apply procedures defined for Envelope 1.

**Complement**

If landing is foreseen by cold or very cold weather, or in case of prolonged operation of the airplane in such conditions, it is recommended to prepare the airplane as specified in Chapter 8.9.

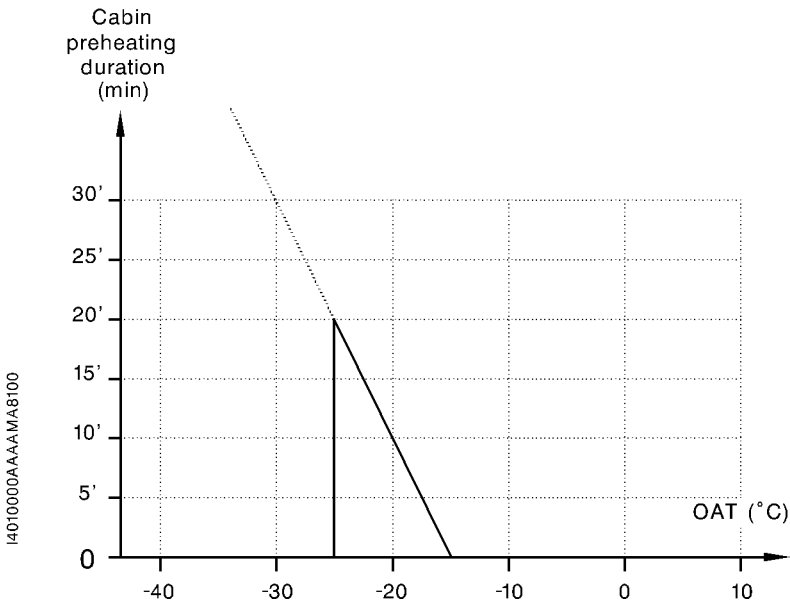


Figure 4.5.2 - PREHEATING DURATION



## PARTICULAR PROCEDURES

**LANDING PROCEDURE WITH STRONG HEADWIND OR CROSSWIND  
(1/2)**

If landing must be performed with strong headwind or crosswind, increase approach speed by the greatest of these 2 following values :

$$- \Delta V = \frac{(\text{WIND DOWN} - 10)}{2} \quad (\text{Ex. WIND DOWN} = 30 \text{ kt i.e. } \Delta V = 10 \text{ kt})$$

*The wind down is the longitudinal component of the wind.*

- Gust amplitude

Use flaps LDG.

It is not desirable to adopt configuration with flaps TO. Lateral control is not improved, and flare phase is lengthened in time and in distance, with increase of piloting difficulties and landing performance.

During approach with crosswind, maintain airplane in drift correction at the latest until the beginning of flare.

**CAUTION****MAXIMUM TIME FOR SIDESLIP CONDITION IS 30 SECONDS.**

In short final, on a short runway, it is necessary to use normal approach speed (80 KIAS) with flaps LDG, in order to avoid an excessive speed. Indeed, in this case, landing distance indicated in Chapter 5.14, would not be respected.

Before touch-down, generate a slideslip with the rudder in order to align fuselage with the runway (ie left crosswind, left wing low).

Do not use or select the fuel tank on the low wing side during prolonged sideslips with a fuel low warning or gage indicating low.

Retract flaps immediately after landing.

Flap travel is slow and will not have an appreciable effect on landing performance.

## PARTICULAR PROCEDURES

### LANDING PROCEDURE WITH STRONG HEADWIND OR CROSSWIND (2/2)

Do not try to stabilize the airplane by pushing down the elevator control just after the touch ; this operation may provide pitch oscillations while increasing the yaw movement to the wind.

Do not deflect ailerons into wind while taxiing. This will raise spoilers and have a detrimental effect. A good solution is to maintain ailerons to neutral position during second taxi phase after landing and during first taxi phase before takeoff.

**Maximum demonstrated crosswind for landing is 20 kt.**

The most restrictive situation is as follows :

- takeoff with wind coming from the left,
- wet runway,
- aft C.G.

## PARTICULAR PROCEDURES

### UTILIZATION ON GRASS RUNWAY

**CAUTION**

**THE SMALL WHEELS OF THE AIRPLANE AND ITS WEIGHT MAY  
LEAD IT TO SINK IN SOPPY OR LOOSE GROUND**

Before planning the landing, ensure that the field is hard, smooth and dry enough. Landing and, a fortiori, takeoff shall not be envisaged if any doubt exists about the condition of such a runway.

#### Particular directives

##### TAXI / TAKEOFF

- 1 - "INERT SEP" switch ..... **ON**
- 2 - Reverse ..... **Do not use**  
In fact, on a flat runway with grass, it is necessary to adopt a power greater than the one obtained when the power lever is set to IDLE, so the pilot will not be tempted to use the reverse.

##### LANDING

- 1 - "INERT SEP" switch ..... **ON**

*After wheel touch down :*

- 2 - Reverse ..... **Only if necessary**

Do not maintain reverse at speeds below 40 KIAS to avoid ingestion of foreign matter.

Indeed, under this speed, using the reverse makes a cloud of solid particles (dusts, sand, gravels, trocken grass, and so on ...) appear around the front face of the airplane. This will damage the propeller and, after ingestion, the engine internal components (compressor and turbine blades).

## PARTICULAR PROCEDURES

Post-GARMIN software version 12.01 or any later

### GPS NAVIGATION

#### Set up conditions

- Verify if the data base is current.
- Verify that altitude data is valid for the GPS prior to flight.

Check the systems availability requirements in the Table 2.6.1 in Section 2.6 "GNSS (GPS/SBAS) navigation equipment approvals", depending on the planned navigation performance.

#### GPS flight plan

In the active flight plan, addition of a STAR or an approach is always made at the end of the flight plan. In the scope of these additions, the pilot must pay attention not to duplicate points.

## PARTICULAR PROCEDURES

■ Pre-GARMIN software version 12.01**GPS NAVIGATION (1/2)****Set up conditions**

- Verify if the data base is current.
- Verify that altitude data is valid for the GPS prior to flight.
- In case of B-RNAV use :

During the preflight planning phase, the availability of GPS integrity (RAIM) shall be confirmed for the intended flight (route and time). RAIM computation is automatically done by G1000 system.

B-RNAV flight dispatch shall not be made in the event of a continuous loss of RAIM for more than 5 minutes predicted in any part of the intended flight.

When less than 24 satellites are available (or less than 23 if equipment uses pressure altitude information), the pilot must make sure that RAIM function is available on the projected route and for the flight period in B-RNAV areas. An alarm is provided by G1000 system in that case.

When 23 or more satellites are available, the prediction of satellite position is valid for 7 days. Their predicted availability is ensured for 48 hours by EUROCONTROL.

When less than 23 satellites are available, the predicted availability of RAIM shall be confirmed short before each flight.

**GPS flight plan**

In the active flight plan, addition of a STAR or an approach is always made at the end of the flight plan. In the scope of these additions, the pilot must pay attention not to duplicate points.

## PARTICULAR PROCEDURES

### GPS NAVIGATION (2/2)

#### Non precision approach with coupled autopilot

Coupling with autopilot may be made in "NAV" mode, except in the following cases :

- holding pattern,
- landing pattern turn,
- interrupted approach,

which have to be made in "HDG" mode.

For memory, the approach particular point name in the GARMIN system is as follows :

- IA = IAF
- FA = FAF ou FAP
- MA = MAP
- MH = MAHP

## SECTION 5

### PERFORMANCE

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### PERFORMANCE

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## **5.1 - GENERAL**

This Section provides all of the required and additional performance data for airplane operations.

The Section 9, "Supplements" of the Pilot's Operating Handbook, provides specific airplane performance associated with optional equipment and systems.

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## 5.2 - NOISE LEVEL

	Maximum noise level permissible	Demonstrated noise level
FAR PART 36, Appendix G - Amdt 25	<b>88 dB(A)</b>	<b>79.6 dB(A)</b>
ICAO, Annex 16, Vol. 1, 3rd edition, Amdt 8 Chapter 10, Appendix 6	<b>85 dB(A)</b>	<b>79.2 dB(A)</b>

Approved noise levels for TBM 850 are stated in EASA.A.010 Type Certificate Data Sheet.

**NOTE :**

*No determination has been made by the Federal Aviation Administration that the noise levels of this airplane are or should be acceptable or unacceptable for operation at, into or out of any airport.*

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## 5.3 - AIRSPEED CALIBRATION

NOTE :

Indicated airspeeds (IAS) : instrument error supposed to be null (power configuration for cruise condition flight).

FLAPS UP LDG GR UP		FLAPS TO LDG GR DN		FLAPS LDG LDG GR DN	
KIAS	KCAS	KIAS	KCAS	KIAS	KCAS
125	128	70	69	60	58
150	154	80	80	70	68
175	179	90	90	80	78
200	205	100	101	90	88
225	230	120	121	100	98
250	255	140	141	110	108
266	271	160	162	120	118
MPH IAS	MPH CAS	MPH IAS	MPH CAS	MPH IAS	MPH CAS
144	147	81	79	69	67
173	177	92	92	81	78
201	206	104	104	92	90
230	236	115	116	104	101
259	264	138	139	115	113
288	293	161	162	127	124
307	312	184	187	138	136

Figure 5.3.1 - NORMAL STATIC SOURCE

FLAPS UP LDG GR UP		FLAPS TO LDG GR DN		FLAPS LDG LDG GR DN	
KIAS	KCAS	KIAS	KCAS	KIAS	KCAS
125	124	70	70	60	59
150	149	80	80	70	69
175	174	90	90	80	79
200	199	100	100	90	90
225	224	120	120	100	100
250	249	140	139	110	110
271	270	160	159	120	120
MPH IAS	MPH CAS	MPH IAS	MPH CAS	MPH IAS	MPH CAS
144	142	81	81	69	68
173	171	92	92	81	79
201	200	104	104	92	91
230	229	115	115	104	104
259	258	138	138	115	115
288	287	161	160	127	127
312	311	184	183	138	138

Figure 5.3.2 - ALTERNATE STATIC SOURCE (BLEED AUTO)



5.4 - CABIN PRESSURIZATION ENVELOPE

NOTE :

The cabin pressurization envelope below characterizes the cabin altitude that could be sustained by the fuselage at different flight levels. The curve shows the minimum cabin altitude as a function of flight level, corresponding to the maximum differential pressure. The maximum differential pressure is limited by the pressurization system protection function.

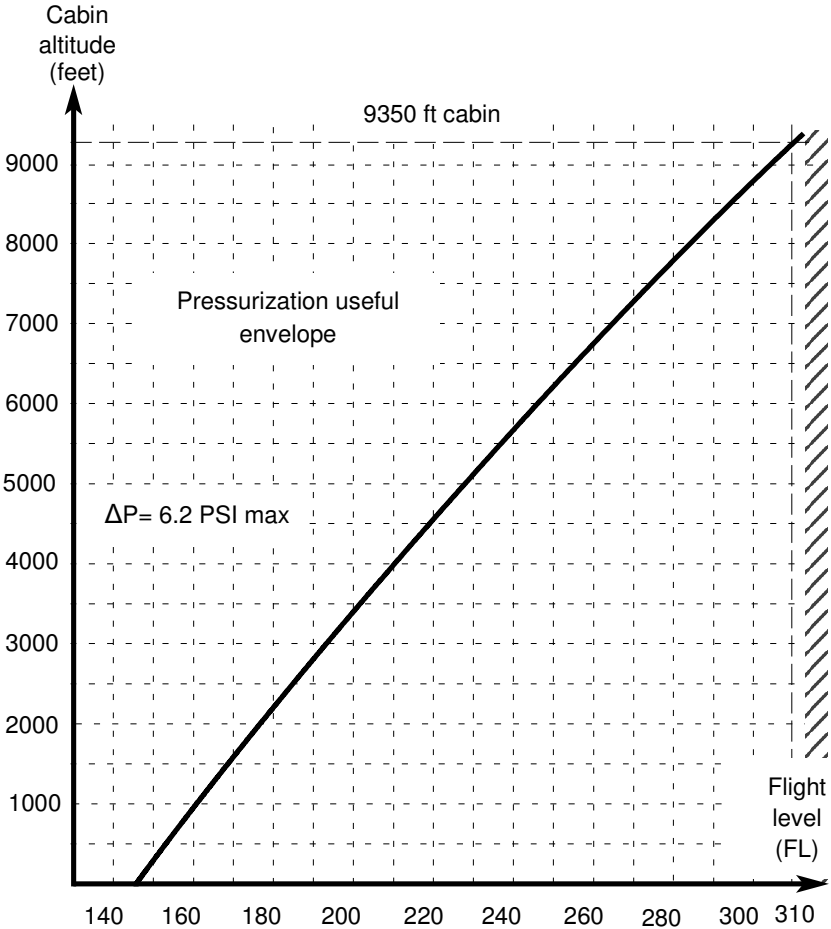


Figure 5.4.1 - CABIN PRESSURIZATION ENVELOPE

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## 5.5 - SAT - OAT CONVERSIONS

NOTE :

*These indicated temperatures are available for stabilized cruise at normal operating power.*

Pressure altitude (feet)	ISA - 20°C		ISA - 10°C		ISA		ISA + 10°C		ISA + 20°C	
	SAT	OAT	SAT	OAT	SAT	OAT	SAT	OAT	SAT	OAT
SL	- 05	- 04	05	06	15	16	25	26	35	36
2000	- 09	- 08	01	02	11	12	21	22	31	32
4000	- 13	- 12	- 03	- 02	07	08	17	18	27	28
6000	- 17	- 16	- 07	- 06	03	04	13	14	23	24
8000	- 21	- 20	- 11	- 10	- 01	00	09	10	19	20
10000	- 25	- 24	- 15	- 14	- 05	- 04	05	06	15	16
12000	- 29	- 28	- 19	- 18	- 09	- 08	01	02	11	12
14000	- 33	- 32	- 23	- 22	- 13	- 12	- 03	- 02	07	08
16000	- 37	- 36	- 27	- 26	- 17	- 16	- 07	- 06	03	04
18000	- 41	- 40	- 31	- 30	- 21	- 20	- 11	- 10	- 01	00
20000	- 45	- 44	- 35	- 34	- 25	- 24	- 15	- 14	- 05	- 04
22000	- 49	- 48	- 39	- 38	- 29	- 28	- 19	- 18	- 09	- 08
24000	- 53	- 52	- 43	- 42	- 33	- 32	- 23	- 22	- 13	- 12
26000	- 57	- 56	- 47	- 46	- 37	- 36	- 27	- 26	- 17	- 16
28000	- 61	- 60	- 51	- 50	- 41	- 40	- 31	- 30	- 21	- 20
30000	- 65	- 64	- 55	- 54	- 45	- 44	- 35	- 34	- 25	- 24
31000	- 67	- 66	- 57	- 56	- 47	- 46	- 37	- 36	- 27	- 26

Figure 5.5.1 - SAT - OAT CONVERSIONS

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## 5.6 - STALL SPEEDS

AIR- PLANE WEIGHT	CONFIG.		BANK											
	FLIGHT IDLE		0°			30°			45°			60°		
	LDG GR	Flaps	KIAS	KCAS	MPH IAS	KIAS	KCAS	MPH IAS	KIAS	KCAS	MPH IAS	KIAS	KCAS	MPH IAS
4850 lbs (2200 kg)	UP	UP	65	66	75	70	71	81	78	79	90	91	93	105
	DN	TO	62	63	71	67	68	77	73	75	84	87	89	100
	DN	LDG	53	53	61	57	57	66	63	63	73	75	75	86
5512 lbs (2500 kg)	UP	UP	70	71	81	75	76	86	82	84	94	98	100	113
	DN	TO	66	67	76	71	72	82	78	80	90	93	95	107
	DN	LDG	57	57	66	61	61	70	68	68	78	81	81	93
6579 lbs (2984 kg)	UP	UP	75	76	86	80	82	92	88	90	101	105	107	121
	DN	TO	71	72	82	75	77	86	84	86	97	100	102	115
	DN	LDG	61	61	70	66	66	76	73	73	84	86	86	99
7394 lbs (3354 kg)	UP	UP	81	83	93	88	89	101	97	99	112	119	117	137
	DN	TO	77	77	89	81	83	93	91	92	105	108	109	124
	DN	LDG	65	65	75	69	70	79	76	77	88	92	92	106

Figure 5.6.1 - STALL SPEEDS

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## 5.7 - WIND COMPONENTS

EXAMPLE : Angle between wind direction and flight path : 50°  
 Headwind : 8 kts  
 Crosswind : 10 kts  
 Wind speed : 13 kts

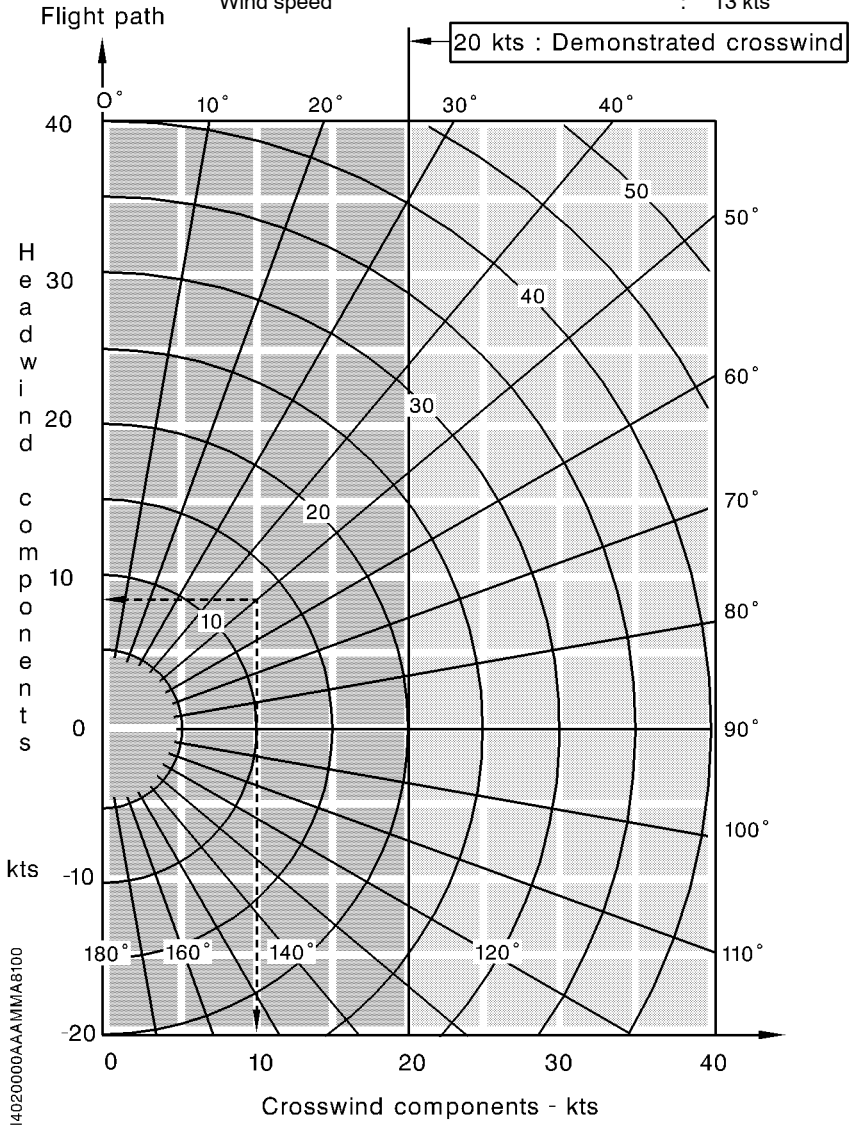


Figure 5.7.1 - WIND COMPONENTS

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## 5.8 - ENGINE OPERATION

The following tables or/and the optimum torque indicator must be used during normal operation of the airplane.

### IMPORTANT

**It is the responsibility of the Operator to make sure that the required version of Garmin System Software is installed prior to using the hereafter Engine Operation tables.**

**The Garmin System Software required for this revision of the Engine Operation tables is the version 0719.06 or later.**

**This information is displayed on the MFD Power-up page upon system start.**

The following conditions are given :

- Np = 2000 RPM,
- BLEED switch on AUTO.

The torque must be set at or below the value corresponding to the local conditions of flight level and temperature.

#### NOTE :

*Inertial separator must be OFF and BLEED HI msg OFF.*

Example : for FL = 260 and OAT = - 22°C, the following tables give the maximum torque to be set.

Maximum climb power :	TRQ = 92 % for IAS = 130 KIAS (Add 1 % of TRQ for each additional 10 KIAS on climb airspeed) (cf. tables Figures 5.8.1 and 5.8.1A)
-----------------------	--

Climb at 700 SHP power :	TRQ = 92 % for IAS = 130 KIAS (Add 1 % of TRQ for each additional 10 KIAS on climb airspeed) (cf. tables Figures 5.8.2 and 5.8.2A)
--------------------------	--

Maximum cruise power :	TRQ = 108 % (cf. tables Figures 5.8.3 and 5.8.3A)
------------------------	--

Recommended cruise power :	TRQ = 103 % (cf. tables Figures 5.8.4 and 5.8.4A)
----------------------------	--

**CAUTION**

**THE TRQ SETTING MUST NEVER EXCEED 121.4 % FOR  
NP = 2000 RPM.  
WHEN SETTING TRQ, NG MUST NEVER EXCEED 104 %**

*REMARK :*

*The engine ITT limit at 840°C during continuous operation may be used in case of operational need.*

## Maximum climb power (FL ≤ 200)

Conditions :  represents the ISA conditions at the flight level  
 Landing gear and flaps UP  
 IAS = 130 KIAS - Np = 2000 RPM - BLEED switch on AUTO  
 If BLEED HI msg ON, reduce TRQ by 6 %

NOTE : Add 1 % of TRQ for each additional 10 KCAS on climb airspeed.  
 This table is not valid if inertial separator and/or BLEED HI msg are ON.

T° (°C)	FLIGHT LEVEL (FL)												
	OAT	100	110	120	130	140	150	160	170	180	190	200	
- 24	<b>CAUTION</b>												
- 22	<b>TRQ MAX 121.4 % FOR Np = 2000 RPM</b>												121
- 20												120	
- 18												118	
- 16			<b>TRQ = 121 %</b>								121	117	
- 14										120	115		
- 12										118	114		
- 10									121	117	112		
- 08									120	115	109		
- 06									118	113	108		
- 04								121	116	111	106		
- 02								119	114	109	104		
+ 0							121	117	112	106	101		
+ 02							120	115	109	103	97		
+ 04							118	112	106	100	95		
+ 06						121	115	109	103	97	92		
+ 08					121	117	112	106	100	95	89		
+ 10					120	114	108	103	97	92	87		
+ 12				121	117	111	106	100	94	89	84		
+ 14				119	114	108	102	97	91	86			
+ 16			121	116	111	105	99	94	88				
+ 18			119	113	107	102	96	91					
+ 20		121	115	109	104	98	93						
+ 22	121	117	111	106	100	95							
+ 24	119	114	108	103	97								
+ 26	116	110	105	99									
+ 28	112	107	101										
+ 30	109	103											
+ 32	105												

Figure 5.8.1 - Maximum climb power (FL ≤ 200)

**Maximum climb power (FL ≥ 200)**

Conditions :  represents the ISA conditions at the flight level

Landing gear and flaps UP

IAS = 130 KIAS - Np = 2000 RPM - BLEED switch on AUTO

If BLEED HI msg ON, reduce TRQ by 6 %

*NOTE : Add 1 % of TRQ for each additional 10 KCAS on climb airspeed.*

*This table is not valid if inertial separator and/or BLEED HI msg are ON.*

T° (°C)	FLIGHT LEVEL (FL)												
	OAT	200	210	220	230	240	250	260	270	280	290	300	310
- 66		<b>CAUTION</b>							116	110	105	100	95
- 64		<b>TRQ MAX 121.4 % FOR Np = 2000 RPM</b>							114	109	104	99	94
- 62							119	113	108	103	98	93	
- 60							118	112	107	102	97	92	
- 58			<b>TRQ = 121 %</b>					116	111	106	100	96	91
- 56						121	115	109	104	99	94	90	
- 54						120	114	108	103	98	93	89	
- 52						118	113	107	102	97	92	88	
- 50						117	111	106	101	96	91	87	
- 48					121	115	110	104	100	95	90	86	
- 46					119	114	108	103	99	94	89	85	
- 44					118	112	107	102	97	93	88	84	
- 42				121	116	111	106	101	96	92	87	83	
- 40				120	115	110	105	100	95	90	86	82	
- 38				118	113	108	103	98	94	89	85	80	
- 36			121	117	112	107	102	97	92	88	83	79	
- 34			120	115	110	106	101	96	91	87	82	78	
- 32			119	114	109	104	99	95	90	86	81	77	
- 30		121	117	112	107	103	98	93	89	84	80	76	
- 28		120	115	111	106	102	97	92	87	83	79	75	
- 26		119	114	109	105	100	95	91	86	82	77	73	
- 24		118	113	108	103	99	94	89	85	80	76	72	
- 22	121	116	111	107	102	98	92	88	83	79	74	70	
- 20	120	115	110	105	101	96	91	87	82	77	72	68	
- 18	118	113	109	104	99	95	89	85	80	75	71	66	
- 16	117	112	107	102	98	93	88	83	78	73	69	64	
- 14	115	110	105	100	96	91	86	81	76	71	67	62	
- 12	114	108	103	98	94	89	84	79	74	69	64		
- 10	112	106	101	97	92	87	82	77	72	67	62		
- 08	109	104	100	95	90	85	79	74	69	65			
- 06	108	103	98	92	87	82	77	72	67				
- 04	106	101	95	90	85	79	74	70	65				
- 02	104	98	92	87	82	77	72	68					
+ 0	101	95	89	84	79	75	70						
+ 02	97	92	87	82	77	72							
+ 04	95	89	85	80	75								
+ 06	92	87	82	77									
+ 08	89	84	79										
+ 10	87	81											
+ 12	84												

Figure 5.8.1A - Maximum climb power (FL ≥ 200)

## Climb at 700 SHP power (FL ≤ 200)

Conditions :  represents the ISA conditions at the flight level  
 Landing gear and flaps UP  
 IAS = 130 KIAS - Np = 2000 RPM - BLEED switch on AUTO  
 If BLEED HI msg ON, reduce TRQ by 6 %

*NOTE : Add 1 % of TRQ for each additional 10 KCAS on climb airspeed.  
 This table is not valid if inertial separator and/or BLEED HI msg are ON.*

T° (°C)	FLIGHT LEVEL (FL)										
	100	110	120	130	140	150	160	170	180	190	200
- 24											
- 22											
- 20											
- 18											
- 16											
- 14											
- 12											
- 10											
- 08											
- 06											
- 04											
- 02											
+ 0											100
+ 02											97
+ 04										100	95
+ 06										97	92
+ 08									100	95	89
+ 10									97	92	87
+ 12								100	94	89	84
+ 14							100	97	91	86	
+ 16							99	94	88		
+ 18						100	96	91			
+ 20						98	93				
+ 22					100	95					
+ 24				100	97						
+ 26				99							
+ 28			100								
+ 30		100									
+ 32	100										

Figure 5.8.2 - Climb at 700 SHP power (FL ≤ 200)

**Climb at 700 SHP power (FL ≥ 200)**

Conditions :  represents the ISA conditions at the flight level  
 Landing gear and flaps UP  
 IAS = 130 KIAS - Np = 2000 RPM - BLEED switch on AUTO  
 If BLEED HI msg ON, reduce TRQ by 6 %

*NOTE : Add 1 % of TRQ for each additional 10 KCAS on climb airspeed.  
 This table is not valid if inertial separator and/or BLEED HI msg are ON.*

T° (°C)	FLIGHT LEVEL (FL)												
	OAT	200	210	220	230	240	250	260	270	280	290	300	310
- 66												100	95
- 64												99	94
- 62												98	93
- 60												97	92
- 58											100	96	91
- 56											99	94	90
- 54											98	93	89
- 52											97	92	88
- 50											96	91	87
- 48									100	95	90	86	
- 46									99	94	89	85	
- 44									97	93	88	84	
- 42									96	92	87	83	
- 40								100	95	90	86	82	
- 38								98	94	89	85	80	
- 36								97	92	88	83	79	
- 34							100	96	91	87	82	78	
- 32							99	95	90	86	81	77	
- 30							98	93	89	84	80	76	
- 28							97	92	87	83	79	75	
- 26						100	95	91	86	82	77	73	
- 24						99	94	89	85	80	76	72	
- 22						98	92	88	83	79	74	70	
- 20					100	96	91	87	82	77	72	68	
- 18					99	95	89	85	80	75	71	66	
- 16					98	93	88	83	78	73	69	64	
- 14				100	96	91	86	81	76	71	67	62	
- 12				98	94	89	84	79	74	69	64		
- 10				97	92	87	82	77	72	67	62		
- 08			100	95	90	85	79	74	69	65			
- 06			98	92	87	82	77	72	67				
- 04		100	95	90	85	79	74	70	65				
- 02		98	92	87	82	77	72	68					
+ 0	100	95	89	84	79	75	70						
+ 02	97	92	87	82	77	72							
+ 04	95	89	85	80	75								
+ 06	92	87	82	77									
+ 08	89	84	79										
+ 10	87	81											
+ 12	84												

Figure 5.8.2A - Climb at 700 SHP power (FL ≥ 200)

## Maximum cruise power (FL ≤ 200)

Conditions :  represents the ISA conditions at the flight level  
 Landing gear and flaps UP  
 Np = 2000 RPM - BLEED switch on AUTO  
 If BLEED HI msg ON, reduce TRQ by 10 % above FL 200

NOTE : Use preferably recommended engine power.  
 This table is not valid if inertial separator and/or BLEED HI msg are ON.

T° (°C)	FLIGHT LEVEL (FL)											
	OAT	100	110	120	130	140	150	160	170	180	190	200
- 24	<b>CAUTION</b> <b>TRQ MAX 121.4 % FOR Np = 2000 RPM</b> <b>NG MAX 104 %</b>											
- 22												
- 20												
- 18	<b>TRQ = 121 %</b>											
- 16												
- 14												
- 12												
- 10												
- 08												
- 06												
- 04												
- 02												121
+ 0												120
+ 02											121	116
+ 04											119	113
+ 06									121	116	110	110
+ 08									119	113	107	
+ 10								121	116	110	104	
+ 12								119	113	106	100	
+ 14							121	115	109	103	97	
+ 16							118	112	106	100		
+ 18						121	115	108	103			
+ 20					121	118	111	105				
+ 22					120	114	108					
+ 24				121	117	111						
+ 26				119	113							
+ 28			121	115								
+ 30		121	117									
+ 32	121	120										

Figure 5.8.3 - Maximum cruise power (FL ≤ 200)

**Maximum cruise power (FL ≥ 200)**

Conditions :  represents the ISA conditions at the flight level  
 Landing gear and flaps UP  
 Np = 2000 RPM - BLEED switch on AUTO  
 If BLEED HI msg ON, reduce TRQ by 10 % above FL 200

*NOTE : Use preferably recommended engine power.  
 This table is not valid if inertial separator and/or BLEED HI msg are ON.*

T° (°C)	FLIGHT LEVEL (FL)																	
	OAT	200	210	220	230	240	250	260	270	280	290	300	310					
- 66	<b>CAUTION</b> <b>TRQ MAX 121.4 % FOR Np = 2000 RPM</b> <b>NG MAX 104 %</b>										117	112	107					
- 64																116	111	106
- 62																	115	110
- 60									121	114	109	105						
- 58			<b>TRQ = 121 %</b>						120	113	108	104						
- 56									119	112	107	103						
- 54									118	111	106	102						
- 52								121	117	110	105	101						
- 50								120	116	109	104	100						
- 48								119	114	108	103	99						
- 46								118	113	107	102	98						
- 44								117	112	106	101	96						
- 42							121	116	111	105	100	95						
- 40							120	115	110	104	99	93						
- 38							119	114	109	102	97	92						
- 36							118	112	107	101	96	91						
- 34						121	116	111	106	100	95	89						
- 32						120	115	110	105	99	93	88						
- 30						119	114	109	103	97	92	86						
- 28						118	113	108	101	96	90	85						
- 26						117	112	106	100	94	89	84						
- 24					121	116	110	104	98	93	87	82						
- 22					120	114	108	102	96	91	85	80						
- 20					118	112	106	100	95	89	83	78						
- 18				121	116	110	104	99	93	87	81	76						
- 16				120	114	108	102	96	90	84	79	74						
- 14				118	112	106	100	94	88	82	77	71						
- 12			121	116	110	104	98	92	86	80	74	69						
- 10			120	114	108	102	95	90	83	77	72	66						
- 08		121	117	111	105	99	93	86	80	75	69	64						
- 06		120	115	109	103	96	90	84	78	72	67							
- 04		119	113	106	100	93	87	81	75	70								
- 02	121	116	109	103	97	91	84	79	73									
+ 0	120	113	106	100	94	88	82	76										
+ 02	116	109	103	97	91	85	79											
+ 04	113	107	100	94	88	82												
+ 06	110	104	97	91	85													
+ 08	107	101	94	88														
+ 10	104	97	91															
+ 12	100	94																
+ 14	97																	

Figure 5.8.3A - Maximum cruise power (FL ≥ 200)



## Normal (recommended) cruise power (FL ≤ 200)

Conditions :  represents the ISA conditions at the flight level  
 Landing gear and flaps UP  
 Np = 2000 RPM - BLEED switch on AUTO  
 If BLEED HI msg ON, reduce TRQ by 12 % above FL 160

*NOTE : This table is not valid if inertial separator and/or BLEED HI msg are ON.*

T° (°C)	FLIGHT LEVEL (FL)										
	100	110	120	130	140	150	160	170	180	190	200
- 24	<b>CAUTION</b>										
- 22	<b>TRQ MAX 121.4 % FOR Np = 2000 RPM</b>										
- 20											
- 18											
- 16											
- 14											
- 12											
- 10											
- 08											121
- 06											120
- 04										121	117
- 02										120	114
+ 0										117	111
+ 02									121	114	108
+ 04								121	117	111	105
+ 06								120	114	108	101
+ 08							121	117	110	104	98
+ 10							120	113	107	101	95
+ 12						121	116	110	104	98	92
+ 14						119	113	106	100	95	89
+ 16					121	115	109	103	97	91	
+ 18				121	118	112	106	99	94		
+ 20				120	114	108	102	96			
+ 22			121	117	111	105	99				
+ 24			119	113	107	101					
+ 26		121	115	109	103						
+ 28	121	118	111	106							
+ 30	120	114	108								
+ 32	116	110									

Figure 5.8.4 - Normal (recommended) cruise power (FL ≤ 200)

**Normal (recommended) cruise power (FL ≥ 200)**

Conditions :  represents the ISA conditions at the flight level  
 Landing gear and flaps UP  
 Np = 2000 RPM - BLEED switch on AUTO  
 If BLEED HI msg ON, reduce TRQ by 12 % above FL 160

*NOTE : This table is not valid if inertial separator and/or BLEED HI msg are ON.*

T° (°C)	FLIGHT LEVEL (FL)												
	OAT	200	210	220	230	240	250	260	270	280	290	300	310
- 66										118	113	108	103
- 64										117	112	107	102
- 62										116	111	106	101
- 60									121	115	110	105	100
- 58									120	114	109	104	99
- 56									118	113	108	103	98
- 54								121	116	112	107	102	97
- 52								120	115	111	106	100	96
- 50								119	114	110	104	99	95
- 48								118	113	109	103	98	94
- 46								117	112	108	102	97	93
- 44							121	116	111	107	101	96	92
- 42							120	115	110	105	100	95	91
- 40							118	114	109	104	99	94	89
- 38							117	113	108	103	97	93	88
- 36							116	112	106	101	96	92	86
- 34							115	110	105	100	95	90	85
- 32						121	114	109	104	99	94	89	84
- 30						120	113	108	103	98	93	87	82
- 28						118	112	107	102	97	91	86	81
- 26						116	111	106	101	95	89	84	79
- 24						121	115	110	105	99	93	88	82
- 22						119	114	108	103	97	91	86	80
- 20						117	112	107	101	95	89	84	78
- 18						121	115	110	105	99	93	87	81
- 16						117	114	108	102	97	91	85	79
- 14						116	112	106	101	94	88	82	76
- 12						121	114	110	104	98	92	85	79
- 10						119	113	108	101	95	89	83	77
- 08						117	111	105	98	92	86	80	74
- 06						120	114	108	101	95	89	83	77
- 04						117	111	105	98	92	87	81	75
- 02						114	108	102	96	90	84	78	72
+ 0						111	105	99	93	87	81	75	70
+ 02						108	102	96	90	84	78	72	
+ 04						105	99	93	87	81	75		
+ 06						101	95	90	84	78			
+ 08						98	92	87	81				
+ 10						95	89	84					
+ 12						92	86						
+ 14						89							

Figure 5.8.4A - Normal (recommended) cruise power (FL ≥ 200)

## 5.8 - ENGINE OPERATION

The following tables or/and the optimum torque indicator must be used during normal operation of the airplane.

The following conditions are given :

- Np = 2000 RPM,
- BLEED switch on AUTO.

The torque must be set at or below the value corresponding to the local conditions of flight level and temperature.

*NOTE :*

*Inertial separator must be OFF and BLEED HI msg OFF.*

Example : for FL = 260 and OAT = - 21°C, the following tables give the maximum torque to be set.

Maximum climb power : TRQ = 92 % for IAS = 130 KIAS  
(Add 1 % of TRQ for each additional 10 KIAS on climb airspeed)  
(cf. tables Figures 5.8.1 and 5.8.1A)

Climb at 700 SHP power : TRQ = 92 % for IAS = 130 KIAS  
(Add 1 % of TRQ for each additional 10 KIAS on climb airspeed)  
(cf. tables Figures 5.8.2 and 5.8.2A)

Maximum cruise power : TRQ = 106 %  
(cf. tables Figures 5.8.3 and 5.8.3A)

Recommended cruise power : TRQ = 101 %  
(cf. tables Figures 5.8.4 and 5.8.4A)

### CAUTION

**THE TRQ SETTING MUST NEVER EXCEED 121.4 % FOR  
NP = 2000 RPM.  
WHEN SETTING TRQ, NG MUST NEVER EXCEED 104 %**

*REMARK :*

*The engine ITT limit at 840°C during continuous operation may be used in case of operational need.*

**Maximum climb power (FL ≤ 200)**

Conditions :    represents the ISA conditions at the flight level  
 Landing gear and flaps UP  
 IAS = 130 KIAS - Np = 2000 RPM - BLEED switch on AUTO  
 If BLEED HI msg ON, reduce TRQ by 6 %

*NOTE : Add 1 % of TRQ for each additional 10 KCAS on climb airspeed.  
 This table is not valid if inertial separator and/or BLEED HI msg are ON.*

T° (°C)	FLIGHT LEVEL (FL)											
	100	110	120	130	140	150	160	170	180	190	200	
- 23	<b>CAUTION</b>											
- 21	<b>TRQ MAX 121.4 % FOR Np = 2000 RPM</b>											121
- 19												120
- 17												118
- 15	<b>TRQ = 121 %</b>											121 117
- 13												120 115
- 11												118 114
- 09												121 117 112
- 07												120 115 109
- 05												118 113 108
- 03												121 116 111 106
- 01												119 114 109 104
+ 01												121 117 112 106 101
+ 03												120 115 109 103 97
+ 05												118 112 106 100 95
+ 07												121 115 109 103 97 92
+ 09												121 117 112 106 100 95 89
+ 11												120 114 108 103 97 92 87
+ 13												121 117 111 106 100 94 89 84
+ 15												119 114 108 102 97 91 86
+ 17												121 116 111 105 99 94 88
+ 19												119 113 107 102 96 91
+ 21												121 115 109 104 98 93
+ 23												121 117 111 106 100 95
+ 25												119 114 108 103 97
+ 27												116 110 105 99
+ 29												112 107 101
+ 31												109 103
+ 33												105

Figure 5.8.1 - Maximum climb power (FL ≤ 200)

## Maximum climb power (FL ≥ 200)

Conditions :  represents the ISA conditions at the flight level

Landing gear and flaps UP

IAS = 130 KIAS - Np = 2000 RPM - BLEED switch on AUTO

If BLEED HI msg ON, reduce TRQ by 6 %

NOTE : Add 1 % of TRQ for each additional 10 KCAS on climb airspeed.

This table is not valid if inertial separator and/or BLEED HI msg are ON.

T° (°C)	FLIGHT LEVEL (FL)												
	OAT	200	210	220	230	240	250	260	270	280	290	300	310
- 65		<b>CAUTION</b>							116	110	105	100	95
- 63		<b>TRQ MAX 121.4 % FOR Np = 2000 RPM</b>							114	109	104	99	94
- 61							119	113	108	103	98	93	
- 59							118	112	107	102	97	92	
- 57			<b>TRQ = 121 %</b>				116	111	106	100	96	91	
- 55						121	115	109	104	99	94	90	
- 53						120	114	108	103	98	93	89	
- 51						118	113	107	102	97	92	88	
- 49						117	111	106	101	96	91	87	
- 47					121	115	110	104	100	95	90	86	
- 45					119	114	108	103	99	94	89	85	
- 43					118	112	107	102	97	93	88	84	
- 41				121	116	111	106	101	96	92	87	83	
- 39				120	115	110	105	100	95	90	86	82	
- 37				118	113	108	103	98	94	89	85	80	
- 35			121	117	112	107	102	97	92	88	83	79	
- 33			120	115	110	106	101	96	91	87	82	78	
- 31			119	114	109	104	99	95	90	86	81	77	
- 29		121	117	112	107	103	98	93	89	84	80	76	
- 27		120	115	111	106	102	97	92	87	83	79	75	
- 25		119	114	109	105	100	95	91	86	82	77	73	
- 23		118	113	108	103	99	94	89	85	80	76	72	
- 21	121	116	111	107	102	98	92	88	83	79	74	70	
- 19	120	115	110	105	101	96	91	87	82	77	72	68	
- 17	118	113	109	104	99	95	89	85	80	75	71	66	
- 15	117	112	107	102	98	93	88	83	78	73	69	64	
- 13	115	110	105	100	96	91	86	81	76	71	67	62	
- 11	114	108	103	98	94	89	84	79	74	69	64		
- 09	112	106	101	97	92	87	82	77	72	67	62		
- 07	109	104	100	95	90	85	79	74	69	65			
- 05	108	103	98	92	87	82	77	72	67				
- 03	106	101	95	90	85	79	74	70	65				
- 01	104	98	92	87	82	77	72	68					
+ 01	101	95	89	84	79	75	70						
+ 03	97	92	87	82	77	72							
+ 05	95	89	85	80	75								
+ 07	92	87	82	77									
+ 09	89	84	79										
+ 11	87	81											
+ 13	84												

Figure 5.8.1A - Maximum climb power (FL ≥ 200)

**Climb at 700 SHP power (FL ≤ 200)**

Conditions :  represents the ISA conditions at the flight level  
 Landing gear and flaps UP  
 IAS = 130 KIAS - Np = 2000 RPM - BLEED switch on AUTO  
 If BLEED HI msg ON, reduce TRQ by 6 %

*NOTE : Add 1 % of TRQ for each additional 10 KCAS on climb airspeed.  
 This table is not valid if inertial separator and/or BLEED HI msg are ON.*

T° (°C)	FLIGHT LEVEL (FL)										
	100	110	120	130	140	150	160	170	180	190	200
- 23											
- 21											
- 19											
- 17											
- 15											
- 13											
- 11											
- 09											
- 07											
- 05											
- 03											
- 01											
+ 01											100
+ 03											97
+ 05										100	95
+ 07										97	92
+ 09									100	95	89
+ 11									97	92	87
+ 13								100	94	89	84
+ 15							100	97	91	86	
+ 17							99	94	88		
+ 19						100	96	91			
+ 21						98	93				
+ 23					100	95					
+ 25				100	97						
+ 27				99							
+ 29			100								
+ 31		100									
+ 33	100										

Figure 5.8.2 - Climb at 700 SHP power (FL ≤ 200)

### Climb at 700 SHP power (FL ≥ 200)

Conditions :  represents the ISA conditions at the flight level  
 Landing gear and flaps UP  
 IAS = 130 KIAS - Np = 2000 RPM - BLEED switch on AUTO  
 If BLEED HI msg ON, reduce TRQ by 6 %

NOTE : Add 1 % of TRQ for each additional 10 KCAS on climb airspeed.

This table is not valid if inertial separator and/or BLEED HI msg are ON.

T° (°C)	FLIGHT LEVEL (FL)												
	OAT	200	210	220	230	240	250	260	270	280	290	300	310
- 65												100	95
- 63												99	94
- 61												98	93
- 59												97	92
- 57											100	96	91
- 55											99	94	90
- 53											98	93	89
- 51											97	92	88
- 49											96	91	87
- 47										100	95	90	86
- 45										99	94	89	85
- 43										97	93	88	84
- 41										96	92	87	83
- 39									100	95	90	86	82
- 37									98	94	89	85	80
- 35									97	92	88	83	79
- 33								100	96	91	87	82	78
- 31								99	95	90	86	81	77
- 29								98	93	89	84	80	76
- 27								97	92	87	83	79	75
- 25							100	95	91	86	82	77	73
- 23							99	94	89	85	80	76	72
- 21							98	92	88	83	79	74	70
- 19						100	96	91	87	82	77	72	68
- 17						99	95	89	85	80	75	71	66
- 15						98	93	88	83	78	73	69	64
- 13				100	96	91	86	81	76	71	67	62	
- 11				98	94	89	84	79	74	69	64		
- 09				97	92	87	82	77	72	67	62		
- 07			100	95	90	85	79	74	69	65			
- 05			98	92	87	82	77	72	67				
- 03		100	95	90	85	79	74	70	65				
- 01		98	92	87	82	77	72	68					
+ 01	100	95	89	84	79	75	70						
+ 03	97	92	87	82	77	72							
+ 05	95	89	85	80	75								
+ 07	92	87	82	77									
+ 09	89	84	79										
+ 11	87	81											
+ 13	84												

Figure 5.8.2A - Climb at 700 SHP power (FL ≥ 200)

**Maximum cruise power (FL ≤ 200)**

Conditions :  represents the ISA conditions at the flight level  
 Landing gear and flaps UP  
 Np = 2000 RPM - BLEED switch on AUTO  
 If BLEED HI msg ON, reduce TRQ by 10 % above FL 200

*NOTE : Use preferably recommended engine power.  
 This table is not valid if inertial separator and/or BLEED HI msg are ON.*

T° (°C)	FLIGHT LEVEL (FL)													
	OAT	100	110	120	130	140	150	160	170	180	190	200		
- 23	<b>CAUTION</b> <b>TRQ MAX 121.4 % FOR Np = 2000 RPM</b> <b>NG MAX 104 %</b>													
- 21														
- 19														
- 17														
- 15			<b>TRQ = 121 %</b>											
- 13														
- 11														
- 09														
- 07														
- 05														
- 03														
- 01											121			
+ 02											120			
+ 03										121	117			
+ 05										120	114			
+ 07									121	117	111			
+ 09									120	114	107			
+ 11								121	117	110	104			
+ 13								119	113	107	101			
+ 15							121	115	110	104	97			
+ 17							118	112	106	100				
+ 19						121	115	108	103					
+ 21					121	118	111	105						
+ 23					120	114	108							
+ 25				121	117	111								
+ 27				119	113									
+ 29			121	115										
+ 31		121	117											
+ 33	121	120												

Figure 5.8.3 - Maximum cruise power (FL ≤ 200)



## Maximum cruise power (FL ≥ 200)

- Conditions :  represents the ISA conditions at the flight level  
 Landing gear and flaps UP  
 Np = 2000 RPM - BLEED switch on AUTO  
 If BLEED HI msg ON, reduce TRQ by 10 % above FL 200

NOTE : Use preferably recommended engine power.  
 This table is not valid if inertial separator and/or BLEED HI msg are ON.

T° (°C)	FLIGHT LEVEL (FL)												
	OAT	200	210	220	230	240	250	260	270	280	290	300	310
- 65	<b>CAUTION</b> <b>TRQ MAX 121.4 % FOR Np = 2000 RPM</b> <b>NG MAX 104 %</b>										117	112	107
- 63											116	111	106
- 61											115	110	106
- 59								121	114	109	105		
- 57			<b>TRQ = 121 %</b>						120	113	108	104	
- 55									119	112	107	103	
- 53								118	111	106	102		
- 51								121	117	110	105	101	
- 49								120	116	109	104	100	
- 47								119	114	108	103	99	
- 45								118	113	107	102	98	
- 43								117	112	106	101	97	
- 41							121	116	111	105	100	96	
- 39							120	115	110	104	99	95	
- 37							119	114	109	102	98	94	
- 35							118	112	107	101	97	93	
- 33						121	116	111	106	100	96	91	
- 31						120	115	110	105	99	95	90	
- 29						119	114	109	103	98	94	89	
- 27						118	113	108	101	97	93	87	
- 25						117	112	106	100	95	92	86	
- 23					121	116	110	104	99	94	90	84	
- 21					120	114	108	102	97	92	88	83	
- 19					118	112	106	100	96	91	86	81	
- 17				121	116	110	104	99	95	89	84	79	
- 15				120	114	108	102	98	93	88	82	77	
- 13				118	112	106	101	96	91	85	79	61	
- 11			121	116	110	104	100	94	88	82	77	58	
- 09			120	114	108	103	98	91	85	80	61	56	
- 07		121	117	112	107	101	95	89	83	77	58	53	
- 05		120	115	110	104	98	92	86	80	75	56		
- 03		119	113	107	101	95	89	84	78	59			
- 01	121	117	110	104	98	92	87	81	75				
+ 01	120	113	107	101	95	90	84	78					
+ 03	117	110	104	99	93	87	81						
+ 05	114	108	101	95	90	84							
+ 07	111	104	98	92	87								
+ 09	107	101	95	89									
+ 11	104	98	92										
+ 13	101	95											

Figure 5.8.3A - Maximum cruise power (FL ≥ 200)

**Normal (recommended) cruise power (FL ≤ 200)**

Conditions :  represents the ISA conditions at the flight level  
 Landing gear and flaps UP  
 Np = 2000 RPM - BLEED switch on AUTO  
 If BLEED HI msg ON, reduce TRQ by 12 % above FL 160

*NOTE : This table is not valid if inertial separator and/or BLEED HI msg are ON.*

T° (°C)	FLIGHT LEVEL (FL)										
	100	110	120	130	140	150	160	170	180	190	200
- 23	<b>CAUTION</b>										
- 21	<b>TRQ MAX 121.4 % FOR Np = 2000 RPM</b>										
- 19											
- 17											
- 15											
- 13											
- 11											
- 09											
- 07											121
- 05											120
- 03										121	117
- 01										120	114
+ 01										117	111
+ 03									121	114	108
+ 05								121	118	111	105
+ 07								120	114	108	101
+ 09							121	117	110	104	98
+ 11							120	113	107	101	95
+ 13						121	116	110	104	98	92
+ 15						119	113	106	100	95	89
+ 17					121	115	109	103	97	91	
+ 19				121	118	112	106	99	94		
+ 21				120	114	108	102	96			
+ 23			121	117	111	105	99				
+ 25			119	113	107	101					
+ 27		121	115	109	104						
+ 29	121	118	112	106							
+ 31	120	114	108								
+ 33	116	110									

Figure 5.8.4 - Normal (recommended) cruise power (FL ≤ 200)

## Normal (recommended) cruise power (FL ≥ 200)

Conditions :  represents the ISA conditions at the flight level

Landing gear and flaps UP

Np = 2000 RPM - BLEED switch on AUTO

If BLEED HI msg ON, reduce TRQ by 12 % above FL 160

NOTE : This table is not valid if inertial separator and/or BLEED HI msg are ON.

T° (°C)	FLIGHT LEVEL (FL)												
	OAT	200	210	220	230	240	250	260	270	280	290	300	310
- 65	<b>CAUTION</b> <b>TRQ MAX 121.4 % FOR Np = 2000 RPM</b>									118	113	108	103
- 63										117	112	107	102
- 61								116	111	106	101		
- 59								121	115	110	105	100	
- 57			<b>TRQ = 121 %</b>						120	114	109	104	99
- 55												118	113
- 53							121	116	112	107	102	97	
- 51							120	115	111	106	100	96	
- 49							119	114	110	104	99	95	
- 47							118	113	109	103	98	94	
- 45							117	112	108	102	97	93	
- 43						121	116	111	107	101	96	92	
- 41						120	115	110	105	100	95	91	
- 39						118	114	109	104	99	94	90	
- 37						117	113	108	103	97	93	89	
- 35						116	112	106	101	96	92	88	
- 33						115	110	105	100	95	91	87	
- 31					121	114	109	104	99	94	90	86	
- 29					120	113	108	103	98	93	89	85	
- 27					118	112	107	102	97	92	88	83	
- 25					116	111	106	101	96	91	87	81	
- 23				121	115	110	105	100	95	89	85	80	
- 21				119	114	108	103	98	94	87	83	78	
- 19				117	112	107	101	95	91	86	81	76	
- 17			121	115	110	105	99	94	89	84	78	60	
- 15			117	114	109	104	98	93	87	81	76	57	
- 13			116	113	108	101	96	90	84	78	61	55	
- 11		121	114	112	107	99	93	87	81	76	58	52	
- 09		120	113	108	104	96	90	84	79	73	55	50	
- 07	121	117	111	105	100	93	87	82	77	58	52	47	
- 05	120	114	108	102	96	91	85	79	74	55			
- 03	117	111	105	99	93	88	82	77	71				
- 01	114	108	102	96	91	85	79	74	55				
+ 01	111	105	99	93	88	82	76	71					
+ 03	107	102	96	90	85	79	74						
+ 05	105	99	93	87	82	76							
+ 07	101	95	90	84	79								
+ 09	98	92	87	82									
+ 11	95	90	84										
+ 13	92	87											

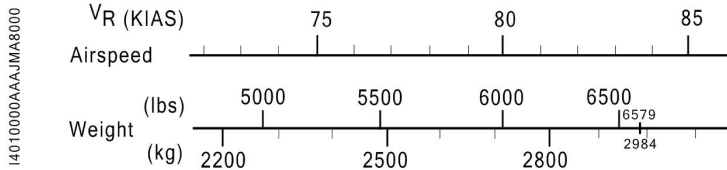
Figure 5.8.4A - Normal (recommended) cruise power (FL ≥ 200)

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## 5.9 - TAKEOFF DISTANCES

### WEIGHT : 5512 lbs (2500 kg)

- Associated conditions :
- Landing gear DN and flaps TO
  - 15° of attitude - TRQ = 100 %
  - Np = 2000 RPM - BLEED switch on AUTO
  - Hard, dry and level runway
  - GR = Ground roll (in ft)
  - D50 = Takeoff distance (clear to 50 ft) (in ft)
  - Rotation speed choice (V<sub>R</sub>)



WEIGHT : 5512 lbs (2500 kg) At 50 ft = 91 KIAS - 105 MPH IAS								
PRESSURE ALTITUDE ft	ISA - 35°C		ISA - 20°C		ISA - 10°C		ISA	
	GR	D50	GR	D50	GR	D50	GR	D50
0	787	1280	886	1411	951	1493	1017	1591
2000	886	1411	984	1558	1066	1657	1132	1772
4000	984	1558	1099	1722	1181	1837	1280	1968
6000	1099	1722	1230	1903	1329	2051	1444	2215
8000	1230	1903	1394	2149	1526	2329	1657	2510
PRESSURE ALTITUDE ft	ISA + 10°C		ISA + 20°C		ISA + 30°C		ISA + 37°C	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1083	1690	1148	1788	1214	1903	1247	1969
2000	1214	1870	1296	1985	1378	2133	1444	2231
4000	1363	2100	1476	2247	1575	2411	1640	2526
6000	1575	2379	1690	2559	1837	2756	1919	2887
8000	1804	2707	1968	2920	2100	3133	2198	3281

Figure 5.9.1 - TAKEOFF DISTANCES - 5512 lbs (2500 kg)

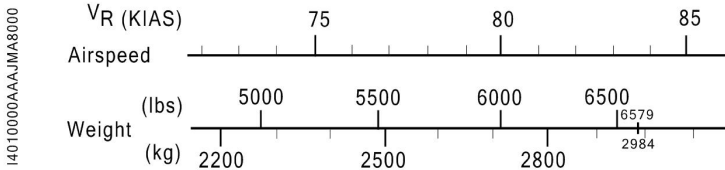
- Corrections :
- . Reduce total distances of 10 % every 10 kts of headwind
  - . Increase total distances of 30 % every 10 kts of tail-wind
  - . Increase by :
    - 7 % on hard sod
    - 25 % on high grass
    - 10 % on short grass
    - 30 % on slippery runway
    - 15 % on wet runway

**NOTE :**

Between ISA + 30°C and ISA + 37°C, it may be necessary to cut-off the Bleed in order to set TRQ = 100 % during takeoff while respecting the engine limitations. In this case, reduce power after takeoff to set the Bleed to AUTO.

**WEIGHT : 6579 lbs (2984 kg)**

- Associated conditions :
- Landing gear DN and flaps TO
  - 15° of attitude - TRQ = 100 %
  - Np = 2000 RPM - BLEED switch on AUTO
  - Hard, dry and level runway
  - GR = Ground roll (in ft)
  - D50 = Takeoff distance (clear to 50 ft) (in ft)
  - Rotation speed choice (VR)



<b>WEIGHT : 6579 lbs (2984 kg)    At 50 ft = 94 KIAS - 108 MPH IAS</b>								
PRESSURE ALTITUDE ft	ISA - 35°C		ISA - 20°C		ISA - 10°C		ISA	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1083	1673	1214	1870	1280	2001	1378	2133
2000	1214	1870	1345	2067	1444	2198	1542	2362
4000	1345	2067	1509	2297	1640	2461	1739	2625
6000	1509	2297	1706	2559	1837	2723	1968	2920
8000	1706	2559	1903	2854	2067	3051	2231	3281
PRESSURE ALTITUDE ft	ISA + 10°C		ISA + 20°C		ISA + 30°C		ISA + 37°C	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1476	2264	1575	2395	1690	2559	1755	2657
2000	1673	2493	1772	2657	1903	2854	1969	2953
4000	1870	2789	2001	2953	2149	3182	2231	3314
6000	2100	3117	2297	3346	2461	3609	2543	3740
8000	2428	3543	2657	3839	2854	4134	2969	4298

Figure 5.9.2 - TAKEOFF DISTANCES - 6579 lbs (2984 kg)

- Corrections :
- Reduce total distances of 10 % every 10 kts of headwind
  - Increase total distances of 30 % every 10 kts of tail-wind
  - Increase by :
 

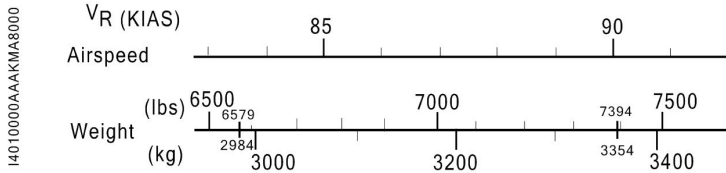
7 %	on hard sod	25 %	on high grass
10 %	on short grass	30 %	on slippery runway
15 %	on wet runway		

**NOTE :**

*Between ISA + 30°C and ISA + 37°C, it may be necessary to cut-off the Bleed in order to set TRQ = 100 % during takeoff while respecting the engine limitations. In this case, reduce power after takeoff to set the Bleed to AUTO.*

## WEIGHT : 7394 lbs (3354 kg)

- Associated conditions :
- Landing gear DN and flaps TO
  - 12°5 of attitude - TRQ = 100 %
  - Np = 2000 RPM - BLEED switch on AUTO
  - Hard, dry and level runway
  - GR = Ground roll (in ft)
  - D50 = Takeoff distance (clear to 50 ft) (in ft)
  - Rotation speed choice (VR)



WEIGHT : 7394 lbs (3354 kg) At 50 ft = 99 KIAS - 114 MPH IAS								
PRESSURE ALTITUDE ft	ISA - 35°C		ISA - 20°C		ISA - 10°C		ISA	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1575	2250	1755	2495	1905	2675	2035	2840
2000	1755	2495	1970	2755	2120	2955	2280	3150
4000	1970	2755	2200	3055	2380	3285	2545	3510
6000	2185	3035	2480	3415	2675	3675	2890	3955
8000	2460	3380	2790	3825	3055	4135	3315	4445
PRESSURE ALTITUDE ft	ISA + 10°C		ISA + 20°C		ISA + 30°C		ISA + 37°C	
	GR	D50	GR	D50	GR	D50	GR	D50
0	2165	3020	2315	3200	2480	3415	2560	3530
2000	2445	3365	2595	3580	2780	3805	2920	3990
4000	2740	3760	2955	4035	3185	4300	3330	4480
6000	3135	4235	3380	4530	3625	4825	3805	5055
8000	3560	4760	3855	5105	4170	5450	4380	5710

Figure 5.9.3 – TAKEOFF DISTANCES – 7394 lbs (3354 kg)

- Corrections :
- . Reduce total distances of 10 % every 10 kts of headwind
  - . Increase total distances of 30 % every 10 kts of tail-wind
  - . Increase by :
 

7 %	on hard sod	25 %	on high grass
10 %	on short grass	30 %	on slippery runway
15 %	on wet runway		

**NOTE :**

Between ISA + 30°C and ISA + 37°C, it may be necessary to cut-off the Bleed in order to set TRQ = 100 % during takeoff while respecting the engine limitations. In this case, reduce power after takeoff to set the Bleed to AUTO.

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## 5.10 - CLIMB PERFORMANCE

### MXCL - SPEEDS (IAS = 130 KIAS)

Conditions : Maximum climb power (850 SHP)

Landing gear and flaps UP

IAS = 130 KIAS - BLEED switch on AUTO and BLEED HI msg OFF

Airplane weight	Pressure altitude (feet)	RATE OF CLIMB (ft/min)					
		ISA - 20°C	ISA - 10°C	ISA	ISA + 10°C	ISA + 20°C	ISA + 30°C
5794 lbs (2628 kg)	SL	3050	2915	2800	2685	2580	2480
	2000	3025	2890	2765	2655	2545	2445
	4000	2995	2860	2735	2615	2505	2405
	6000	2960	2820	2695	2575	2465	2360
	8000	2930	2790	2655	2535	2425	2320
6594 lbs (2991 kg)	SL	2585	2470	2365	2270	2175	2090
	2000	2560	2445	2335	2240	2145	2055
	4000	2530	2415	2305	2205	2110	2020
	6000	2500	2380	2265	2165	2070	1980
	8000	2465	2345	2230	2125	2035	1945
7394 lbs (3354 kg)	SL	2195	2095	2005	1920	1840	1765
	2000	2170	2070	1975	1890	1810	1730
	4000	2140	2035	1945	1855	1770	1695
	6000	2110	2005	1905	1820	1735	1660
	8000	2075	1970	1870	1780	1700	1620

Figure 5.10.1 - MXCL - SPEEDS (IAS = 130 KIAS)

**MXCL - SPEEDS (IAS = 160 KIAS)**

Conditions : Maximum climb power (850 SHP)  
Landing gear and flaps UP  
IAS = 160 KIAS up to 20000 ft, then - 2 KIAS/1000 ft  
BLEED switch on AUTO and BLEED HI msg OFF

Airplane weight	Pressure altitude (feet)	RATE OF CLIMB (ft/min)					
		ISA - 20°C	ISA - 10°C	ISA	ISA + 10°C	ISA + 20°C	ISA + 30°C
5794 lbs (2628 kg)	SL	2850	2720	2600	2490	2385	2285
	2000	2815	2680	2560	2445	2335	2235
	4000	2770	2635	2510	2395	2285	2180
	6000	2725	2590	2460	2340	2230	2130
	8000	2680	2540	2405	2290	2180	2080
6594 lbs (2991 kg)	SL	2430	2320	2215	2115	2025	1940
	2000	2395	2280	2175	2075	1985	1895
	4000	2355	2240	2130	2030	1935	1845
	6000	2315	2195	2085	1980	1885	1800
	8000	2270	2150	2035	1935	1840	1755
7394 lbs (3354 kg)	SL	2080	1980	1890	1805	1725	1650
	2000	2045	1945	1855	1765	1685	1610
	4000	2010	1910	1810	1725	1640	1560
	6000	1970	1865	1770	1675	1595	1520
	8000	1930	1820	1720	1635	1550	1475

Figure 5.10.2 - MXCL - SPEEDS (IAS = 160 KIAS)

## 700 SHP - CLIMB SPEEDS (IAS = 130 KIAS)

Conditions : 700 SHP climb power

Landing gear and flaps UP

IAS = 130 KIAS - BLEED switch on AUTO and BLEED HI msg OFF

Airplane weight	Pressure altitude (feet)	RATE OF CLIMB (ft/min)					
		ISA - 20°C	ISA - 10°C	ISA	ISA + 10°C	ISA + 20°C	ISA + 30°C
5794 lbs (2628 kg)	SL	2445	2335	2235	2145	2060	1980
	2000	2420	2310	2210	2115	2030	1945
	4000	2390	2280	2175	2085	1995	1910
	6000	2360	2245	2145	2050	1960	1875
	8000	2330	2215	2110	2015	1925	1845
6594 lbs (2991 kg)	SL	2050	1955	1875	1795	1720	1640
	2000	2025	1925	1840	1765	1690	1620
	4000	1995	1900	1815	1735	1660	1585
	6000	1970	1870	1780	1700	1625	1555
	8000	1935	1840	1745	1665	1590	1520
7394 lbs (3354 kg)	SL	1725	1645	1570	1500	1435	1380
	2000	1700	1615	1540	1470	1405	1345
	4000	1670	1590	1510	1440	1375	1315
	6000	1640	1555	1480	1410	1340	1280
	8000	1610	1525	1445	1375	1310	1250

Figure 5.10.3 - 700 SHP - CLIMB SPEEDS (IAS = 130 KIAS)

**700 SHP - CLIMB SPEEDS (IAS = 160 KIAS)**

Conditions : 700 SHP climb power  
 Landing gear and flaps UP  
 IAS = 160 KIAS up to 20000 ft, then - 2 KIAS/1000 ft  
 BLEED switch on AUTO and BLEED HI msg OFF

Airplane weight	Pressure altitude (feet)	RATE OF CLIMB (ft/min)					
		ISA - 20°C	ISA - 10°C	ISA	ISA + 10°C	ISA + 20°C	ISA + 30°C
5794 lbs (2628 kg)	SL	2160	2055	1955	1865	1785	1705
	2000	2120	2010	1915	1825	1740	1665
	4000	2075	1970	1875	1780	1695	1620
	6000	2035	1925	1830	1735	1650	1570
	8000	1995	1880	1785	1690	1605	1515
6594 lbs (2991 kg)	SL	1820	1730	1650	1570	1490	1415
	2000	1780	1690	1600	1530	1460	1380
	4000	1740	1650	1560	1490	1410	1345
	6000	1700	1610	1520	1450	1370	1305
	8000	1660	1570	1480	1400	1330	1255
7394 lbs (3354 kg)	SL	1540	1460	1390	1320	1255	1200
	2000	1510	1430	1355	1285	1225	1165
	4000	1470	1390	1315	1245	1185	1125
	6000	1430	1350	1275	1205	1140	1080
	8000	1395	1315	1240	1170	1105	1035

Figure 5.10.4 - 700 SHP - CLIMB SPEEDS (IAS = 160 KIAS)

## MXCL - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 130 KIAS)

Conditions : **ISA - 20°C**

Maximum climb power (850 SHP)

Landing gear and flaps UP

IAS = 130 KIAS - Np = 2000 RPM - BLEED switch on AUTO

**NOTE :** Time, consumption and distance from the 50 ft

If BLEED HI msg ON, reduce TRQ by 6%. This TRQ reduction will result in :

- Time to climb increased by 7 %
- Climb distance increased by 7 %
- Fuel consumption increased by 4 %

Pressure altitude (feet)	WEIGHT 5794 lbs (2628 kg)					WEIGHT 6579 lbs (2984 kg)					WEIGHT 7394 lbs (3354 kg)				
	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)
		l	kg	us gal			l	kg	us gal			l	kg	us gal	
SL	00.00	0	0	0	0	00.00	0	0	0	0	00.00	0	0	0	0
2000	00.45	4	3	0.9	1	00.45	4	3	1.1	2	01.00	5	4	1.3	2
4000	01.15	7	6	1.9	3	01.45	8	7	2.2	3	01.45	10	8	2.6	4
6000	02.00	10	8	2.8	4	02.30	12	10	3.3	5	02.45	15	11	3.9	6
8000	02.45	14	11	3.6	6	03.15	16	13	4.3	7	03.45	19	15	5.1	8
10000	03.15	17	13	4.5	7	04.00	20	16	5.3	9	04.45	24	19	6.3	10
12000	04.00	20	16	5.4	9	04.45	24	19	6.4	11	05.45	29	22	7.5	13
14000	04.45	24	19	6.2	11	05.45	28	22	7.4	13	06.45	33	26	8.8	15
16000	05.30	27	21	7.1	13	06.30	32	25	8.4	15	07.45	38	30	10.0	18
18000	06.15	30	24	8.0	15	07.15	36	28	9.4	17	08.45	42	33	11.2	21
20000	07.00	33	26	8.8	17	08.15	40	31	10.5	20	09.45	47	37	12.5	24
22000	07.45	37	29	9.7	19	09.15	44	34	11.5	22	11.00	52	41	13.7	27
24000	08.30	40	31	10.5	21	10.00	48	37	12.6	25	12.00	57	45	15.0	30
26000	09.15	43	34	11.4	23	11.00	52	40	13.6	28	13.15	62	48	16.3	34
28000	10.00	47	37	12.3	26	12.00	56	44	14.7	31	14.30	67	52	17.6	38
30000	11.00	50	39	13.3	29	13.15	60	47	15.9	35	15.45	72	57	19.1	42
31000	11.30	52	41	13.8	31	13.45	62	49	16.5	37	16.45	75	59	19.9	45

Figure 5.10.5 - MXCL - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 130 KIAS) / ISA - 20°C

**MXCL - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 130 KIAS)**

Conditions : **ISA**

Maximum climb power (850 SHP)

Landing gear and flaps UP

IAS = 130 KIAS - Np = 2000 RPM - BLEED switch on AUTO

**NOTE :** Time, consumption and distance from the 50 ft

If BLEED HI msg ON, reduce TRQ by 6 %. This TRQ reduction will result in :

Below FL 240 From FL 240 to FL 310

- Time to climb increased by 7 % 7 % to 11 %
- Climb distance increased by 7 % 7 % to 12 %
- Fuel consumption increased by 5 % 5 % to 7 %

Pressure altitude (feet)	WEIGHT 5794 lbs (2628 kg)					WEIGHT 6579 lbs (2984 kg)					WEIGHT 7394 lbs (3354 kg)				
	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)
		l	kg	us gal			l	kg	us gal			l	kg	us gal	
SL	00.00	0	0	0	0	00.00	0	0	0	0	00.00	0	0	0	0
2000	00.45	4	3	1.0	2	00.45	5	4	1.2	2	01.00	6	4	1.5	2
4000	01.30	8	6	2.1	3	01.45	9	7	2.5	4	02.00	11	9	2.9	4
6000	02.15	12	9	3.1	5	02.30	14	11	3.7	6	03.00	16	13	4.3	7
8000	03.00	15	12	4.1	7	03.30	18	14	4.8	8	04.00	22	17	5.7	9
10000	03.45	19	15	5.1	8	04.30	23	18	6.0	10	05.15	27	21	7.1	12
12000	04.30	23	18	6.0	10	05.15	27	21	7.2	12	06.15	32	25	8.5	15
14000	05.15	26	21	7.0	12	06.15	31	25	8.3	15	07.30	37	29	9.9	18
16000	06.00	30	24	8.0	15	07.15	36	28	9.5	17	08.30	43	34	11.3	21
18000	06.45	34	27	8.9	17	08.15	40	32	10.7	20	09.45	48	38	12.7	24
20000	07.45	38	29	9.9	19	09.15	45	35	11.8	23	11.00	53	42	14.1	28
22000	08.30	41	32	10.9	22	10.15	49	39	13.0	26	12.00	59	46	15.6	31
24000	09.30	45	35	11.9	24	11.15	54	42	14.2	29	13.30	65	51	17.1	35
26000	10.15	49	38	12.9	27	12.30	59	46	15.5	33	15.00	70	55	18.6	40
28000	11.30	53	42	14.0	31	13.45	64	50	16.8	38	16.45	77	60	20.3	46
30000	12.45	57	45	15.2	35	15.15	69	54	18.3	43	18.45	84	66	22.2	53
31000	13.30	60	47	15.8	38	16.15	72	57	19.1	46	20.00	88	69	23.3	57

Figure 5.10.6 - MXCL - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 130 KIAS) / ISA

## MXCL - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 130 KIAS)

Conditions : **ISA + 20°C**

Maximum climb power (850 SHP)

Landing gear and flaps UP

IAS = 130 KIAS - Np = 2000 RPM - BLEED switch on AUTO

**NOTE :** Time, consumption and distance from the 50 ft

If BLEED HI msg ON, reduce TRQ by 6 %. This TRQ reduction will result in :  
Below FL 200 From FL 200 to FL 310

- Time to climb increased by 7 % 7 % to 25 %
- Climb distance increased by 7 % 7 % to 27 %
- Fuel consumption increased by 5 % 5 % to 17 %

Pressure altitude (feet)	WEIGHT 5794 lbs (2628 kg)					WEIGHT 6579 lbs (2984 kg)					WEIGHT 7394 lbs (3354 kg)				
	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)
		l	kg	us gal			l	kg	us gal			l	kg	us gal	
SL	00.00	0	0	0	0	00.00	0	0	0	0	00.00	0	0	0	0
2000	00.45	4	3	1.2	2	01.00	5	4	1.4	2	01.00	6	5	1.6	2
4000	01.30	9	7	2.3	4	02.00	10	8	2.7	4	02.15	12	10	3.2	5
6000	02.30	13	10	3.4	5	02.45	15	12	4.1	7	03.15	18	14	4.8	8
8000	03.15	17	13	4.5	7	03.45	20	16	5.4	9	04.30	24	19	6.4	11
10000	04.00	21	17	5.6	10	04.45	25	20	6.7	11	05.45	30	24	8.0	14
12000	04.45	25	20	6.7	12	05.45	30	24	8.0	14	07.00	36	28	9.5	17
14000	05.45	30	23	7.8	14	06.45	35	28	9.3	17	08.15	42	33	11.1	20
16000	06.30	34	26	8.9	17	08.00	40	32	10.6	20	09.30	48	38	12.7	24
18000	07.30	38	30	10.0	19	09.00	45	36	12.0	23	10.45	54	43	14.3	28
20000	08.30	42	33	11.1	22	10.15	50	40	13.3	27	12.15	60	47	16.0	32
22000	09.30	47	37	12.3	25	11.30	56	44	14.7	31	13.45	67	53	17.7	37
24000	10.45	51	40	13.5	29	13.00	61	48	16.2	35	15.45	74	58	19.6	43
26000	12.15	56	44	14.8	34	14.45	68	53	17.9	41	17.45	82	64	21.7	50
28000	13.45	61	48	16.2	39	16.45	74	58	19.6	48	20.30	91	71	24.1	59
30000	15.30	67	53	17.7	46	19.00	82	64	21.6	57	23.45	102	80	26.9	72
31000	16.30	70	55	18.5	50	20.30	86	68	22.8	62	26.00	108	85	28.5	79

Figure 5.10.7 - MXCL - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 130 KIAS) / ISA + 20°C

**MXCL - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 160 KIAS)**

Conditions : **ISA - 20°C**

Maximum climb power (850 SHP)

Landing gear and flaps UP

IAS = 160 KIAS up to 20000 ft ; - 2 KIAS / 1000 ft then

Np = 2000 RPM - BLEED switch on AUTO

**NOTE :** Time, consumption and distance from the 50 ft

If BLEED HI msg ON, reduce TRQ by 6%. This TRQ reduction will result in :

- Time to climb increased by 8 %
- Climb distance increased by 8 %
- Fuel consumption increased by 6 %

Pressure altitude (feet)	WEIGHT 5794 lbs (2628 kg)					WEIGHT 6579 lbs (2984 kg)					WEIGHT 7394 lbs (3354 kg)				
	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)
		l	kg	us gal			l	kg	us gal			l	kg	us gal	
SL	00.00	0	0	0	0	00.00	0	0	0	0	00.00	0	0	0	0
2000	00.45	4	3	1.0	2	00.45	4	4	1.2	2	01.00	5	4	1.4	3
4000	01.30	8	6	2.0	4	01.45	9	7	2.3	4	02.00	10	8	2.7	5
6000	02.15	11	9	3.0	6	02.30	13	10	3.5	7	03.00	15	12	4.1	8
8000	03.00	15	12	3.9	8	03.30	17	14	4.6	9	04.00	20	16	5.4	11
10000	03.45	18	15	4.9	10	04.15	22	17	5.7	12	05.00	26	20	6.7	14
12000	04.30	22	17	5.8	12	05.15	26	20	6.9	14	06.00	31	24	8.1	17
14000	05.15	26	20	6.8	15	06.15	30	24	8.0	17	07.15	36	28	9.4	20
16000	06.00	29	23	7.7	17	07.00	35	27	9.1	20	08.15	41	32	10.7	24
18000	06.45	33	26	8.7	20	08.00	39	30	10.3	23	09.30	46	36	12.1	28
20000	07.45	37	29	9.7	23	09.00	43	34	11.4	27	10.45	51	40	13.5	32
22000	08.30	40	32	10.6	25	10.00	47	37	12.5	30	11.45	56	44	14.8	36
24000	09.15	44	34	11.5	28	11.00	52	41	13.7	34	13.00	61	48	16.2	40
26000	10.15	47	37	12.5	31	12.00	56	44	14.8	37	14.15	66	52	17.5	44
28000	11.00	51	40	13.4	34	13.00	60	47	15.9	41	15.30	72	56	18.9	49
30000	12.00	55	43	14.4	38	14.15	65	51	17.1	45	17.00	77	61	20.4	54
31000	12.30	56	44	14.9	40	14.45	67	53	17.8	47	17.45	80	63	21.2	57

Figure 5.10.8 - MXCL - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 160 KIAS) / ISA - 20°C



## MXCL - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 160 KIAS)

Conditions : **ISA**

Maximum climb power (850 SHP)

Landing gear and flaps UP

IAS = 160 KIAS up to 20000 ft ; - 2 KIAS / 1000 ft then

Np = 2000 RPM - BLEED switch on AUTO

**NOTE :** Time, consumption and distance from the 50 ft

If BLEED HI msg ON, reduce TRQ by 6 %. This TRQ reduction will result in :

Below FL 220    From FL 220 to FL 310

- Time to climb increased by                    9 %                    9 % to 13 %
- Climb distance increased by                8 %                    8 % to 12 %
- Fuel consumption increased by            7 %                    7 % to 9 %

Pressure altitude (feet)	WEIGHT 5794 lbs (2628 kg)					WEIGHT 6579 lbs (2984 kg)					WEIGHT 7394 lbs (3354 kg)				
	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)
		l	kg	us gal			l	kg	us gal			l	kg	us gal	
SL	00.00	0	0	0	0	00.00	0	0	0	0	00.00	0	0	0	0
2000	00.45	4	3	1.1	2	00.45	5	4	1.3	2	01.00	6	5	1.6	3
4000	01.45	8	7	2.2	4	01.45	10	8	2.6	5	02.15	12	9	3.1	6
6000	02.30	13	10	3.3	7	02.45	15	12	3.9	8	03.15	17	14	4.6	9
8000	03.15	17	13	4.4	9	03.45	20	16	5.2	11	04.30	23	18	6.1	12
10000	04.00	21	16	5.5	11	04.45	25	19	6.5	14	05.45	29	23	7.6	16
12000	05.00	25	20	6.6	14	05.45	29	23	7.8	17	06.45	35	27	9.2	20
14000	05.45	29	23	7.7	17	06.45	34	27	9.1	20	08.00	40	32	10.7	24
16000	06.45	33	26	8.8	20	07.45	39	31	10.4	24	09.15	46	36	12.2	28
18000	07.30	37	29	9.9	23	09.00	44	35	11.7	27	10.45	52	41	13.8	32
20000	08.30	42	33	11.0	26	10.15	49	39	13.0	31	12.00	58	46	15.4	37
22000	09.30	46	36	12.1	30	11.15	54	43	14.3	35	13.15	64	50	17.0	42
24000	10.30	50	39	13.2	33	12.15	59	46	15.6	40	14.45	70	55	18.6	47
26000	11.30	54	42	14.3	37	13.45	64	51	17.0	44	16.15	77	60	20.3	53
28000	12.45	59	46	15.5	41	15.15	70	55	18.4	50	18.15	84	66	22.1	60
30000	14.00	63	50	16.7	46	16.45	76	59	20.0	56	20.15	91	72	24.1	68
31000	14.45	66	52	17.3	49	17.45	79	62	20.8	59	21.30	95	75	25.2	72

Figure 5.10.9 - MXCL - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 160 KIAS) / ISA

**MXCL - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 160 KIAS)**

Conditions : **ISA + 20°C**

Maximum climb power (850 SHP)

Landing gear and flaps UP

IAS = 160 KIAS up to 20000 ft ; - 2 KIAS / 1000 ft then

Np = 2000 RPM - BLEED switch on AUTO

**NOTE :** Time, consumption and distance from the 50 ft

If BLEED HI msg ON, reduce TRQ by 6 %. This TRQ reduction will result in :

Below FL 180 From FL 180 to FL 310

- Time to climb increased by 9 % 9 % to 37 %
- Climb distance increased by 9 % 9 % to 39 %
- Fuel consumption increased by 7 % 7 % to 27 %

Pressure altitude (feet)	WEIGHT 5794 lbs (2628 kg)					WEIGHT 6579 lbs (2984 kg)					WEIGHT 7394 lbs (3354 kg)				
	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)
		l	kg	us gal			l	kg	us gal			l	kg	us gal	
SL	00.00	0	0	0	0	00.00	0	0	0	0	00.00	0	0	0	0
2000	00.45	5	4	1.3	2	01.00	6	4	1.5	3	01.15	7	5	1.7	3
4000	01.45	9	7	2.5	5	02.00	11	9	3.0	6	02.30	13	10	3.5	7
6000	02.45	14	11	3.7	7	03.00	17	13	4.4	9	03.45	20	15	5.2	10
8000	03.30	19	15	5.0	10	04.00	22	17	5.9	12	05.00	26	21	6.9	14
10000	04.30	23	18	6.2	13	05.15	28	22	7.3	15	06.15	33	26	8.6	18
12000	05.30	28	22	7.4	16	06.15	33	26	8.7	19	07.30	39	31	10.3	23
14000	06.15	33	26	8.6	19	07.30	39	30	10.2	23	09.00	46	36	12.1	27
16000	07.15	37	29	9.9	23	08.45	44	35	11.7	27	10.15	52	41	13.9	32
18000	08.15	42	33	11.1	26	10.00	50	39	13.2	31	11.45	59	47	15.7	37
20000	09.30	47	37	12.4	31	11.15	56	44	14.8	36	13.30	67	52	17.6	44
22000	10.45	52	41	13.8	35	12.45	62	49	16.5	42	15.15	74	58	19.6	51
24000	12.15	58	45	15.2	41	14.30	69	54	18.2	49	17.30	83	65	21.8	59
26000	13.45	63	50	16.7	47	16.30	76	60	20.1	56	20.00	92	72	24.2	68
28000	15.30	69	54	18.3	53	18.45	84	66	22.1	65	23.00	102	80	27.0	80
30000	17.30	76	60	20.0	61	21.30	92	73	24.4	76	26.45	114	90	30.1	95
31000	18.45	79	62	21.0	66	23.15	97	76	25.7	82	29.15	121	95	32.0	104

Figure 5.10.10 - MXCL - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 160 KIAS) / ISA + 20°C

## 700 SHP - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 130 KIAS)

Conditions : **ISA - 20°C**

700 SHP climb power

Landing gear and flaps UP

IAS = 130 KIAS - Np = 2000 RPM - BLEED switch on AUTO

**NOTE :** Time, consumption and distance from the 50 ft

If BLEED HI msg ON, reduce TRQ by 6%. This TRQ reduction will result in :

- Time to climb increased by 10 %
- Climb distance increased by 10 %
- Fuel consumption increased by 7 %

Pressure altitude (feet)	WEIGHT 5794 lbs (2628 kg)					WEIGHT 6579 lbs (2984 kg)					WEIGHT 7394 lbs (3354 kg)				
	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)
		l	kg	us gal			l	kg	us gal			l	kg	us gal	
SL	00.00	0	0	0	0	00.00	0	0	0	0	00.00	0	0	0	0
2000	00.45	4	3	1.1	2	01.00	5	4	1.3	2	01.15	6	4	1.5	2
4000	01.30	8	6	2.1	3	02.00	9	7	2.5	4	02.15	11	9	3.0	5
6000	02.30	12	9	3.1	5	03.00	14	11	3.7	6	03.30	17	13	4.4	8
8000	03.15	15	12	4.1	7	04.00	18	14	4.9	9	04.45	22	17	5.8	10
10000	04.15	19	15	5.0	9	05.00	23	18	6.0	11	06.00	27	21	7.2	13
12000	05.15	23	18	6.0	11	06.00	27	21	7.2	14	07.15	33	26	8.6	17
14000	06.00	26	21	6.9	14	07.15	31	25	8.3	16	08.45	38	30	10.0	20
16000	06.45	30	23	7.9	16	08.15	36	28	9.5	19	10.00	43	34	11.4	23
18000	07.45	33	26	8.8	18	09.30	40	31	10.6	22	11.15	48	38	12.8	27
20000	08.45	37	29	9.7	21	10.30	44	35	11.7	25	12.45	54	42	14.2	31
22000	09.45	40	32	10.7	24	11.45	49	38	12.9	29	14.00	59	46	15.6	35
24000	10.45	44	35	11.6	26	13.00	53	42	14.0	32	15.30	64	50	17.0	39
26000	11.45	48	37	12.5	30	14.00	57	45	15.2	36	17.00	70	55	18.4	44
28000	12.45	51	40	13.5	33	15.15	62	49	16.3	40	18.45	75	59	19.9	49
30000	13.45	55	43	14.5	36	16.30	66	52	17.5	44	20.15	81	64	21.4	54
31000	14.15	57	44	15.0	38	17.15	69	54	18.2	46	21.15	84	66	22.2	57

Figure 5.10.11 - 700 SHP - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 130 KIAS) / ISA - 20°C

**700 SHP - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 130 KIAS)**

Conditions : **ISA**

700 SHP climb power

Landing gear and flaps UP

IAS = 130 KIAS - Np = 2000 RPM - BLEED switch on AUTO

**NOTE :** Time, consumption and distance from the 50 ft

If BLEED HI msg ON, reduce TRQ by 6 %. This TRQ reduction will result in :

Below FL 240 From FL 240 to FL 310

- Time to climb increased by 10 % 10 % to 12 %
- Climb distance increased by 10 % 10 % to 11 %
- Fuel consumption increased by 8 % 8 % to 9 %

Pressure altitude (feet)	WEIGHT 5794 lbs (2628 kg)				WEIGHT 6579 lbs (2984 kg)				WEIGHT 7394 lbs (3354 kg)						
	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)
		l	kg	us gal			l	kg	us gal			l	kg	us gal	
SL	00.00	0	0	0	0	00.00	0	0	0	0	00.00	0	0	0	0
2000	01.00	4	4	1.2	2	01.00	5	4	1.4	2	01.15	6	5	1.7	3
4000	01.45	9	7	2.3	4	02.15	11	8	2.8	5	02.30	13	10	3.4	6
6000	02.45	13	10	3.5	6	03.15	16	12	4.1	7	04.00	19	15	5.0	9
8000	03.45	17	14	4.6	8	04.30	21	16	5.5	10	05.20	25	20	6.6	12
10000	04.45	21	17	5.7	11	05.30	26	20	6.8	13	06.40	31	24	8.2	15
12000	05.45	25	20	6.7	13	06.45	31	24	8.1	16	08.00	37	29	9.7	19
14000	06.30	30	23	7.8	16	08.00	36	28	9.4	19	09.30	43	34	11.3	23
16000	07.30	34	26	8.9	18	09.00	40	32	10.7	22	11.00	49	38	12.9	27
18000	08.30	38	30	9.9	21	10.30	45	36	12.0	26	12.30	55	43	14.5	31
20000	09.45	42	33	11.0	24	11.45	50	39	13.3	29	14.00	61	48	16.1	36
22000	10.45	46	36	12.1	27	13.00	55	43	14.6	33	15.45	67	53	17.8	41
24000	11.45	50	39	13.1	31	14.15	60	47	15.9	37	17.30	74	58	19.4	46
26000	13.00	54	42	14.2	34	15.45	65	51	17.3	42	19.15	80	63	21.1	51
28000	14.00	58	46	15.3	38	17.15	71	55	18.7	47	21.00	87	68	22.9	58
30000	15.15	62	49	16.5	42	18.45	76	60	20.1	52	23.00	94	74	24.8	65
31000	16.00	65	51	17.1	45	19.45	79	62	20.9	55	24.15	98	77	25.8	69

Figure 5.10.12 - 700 SHP - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 130 KIAS) / ISA

## 700 SHP - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 130 KIAS)

Conditions : **ISA + 20°C**

700 SHP climb power

Landing gear and flaps UP

IAS = 130 KIAS - Np = 2000 RPM - BLEED switch on AUTO

**NOTE :** Time, consumption and distance from the 50 ft

If BLEED HI msg ON, reduce TRQ by 6 %. This TRQ reduction will result in :

Below FL 180 From FL 180 to FL 310

- Time to climb increased by 10 % 10 % to 24 %
- Climb distance increased by 10 % 10 % to 26 %
- Fuel consumption increased by 8 % 8 % to 18 %

Pressure altitude (feet)	WEIGHT 5794 lbs (2628 kg)				WEIGHT 6579 lbs (2984 kg)				WEIGHT 7394 lbs (3354 kg)						
	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)
		l	kg	us gal			l	kg	us gal			l	kg	us gal	
SL	00.00	0	0	0	0	00.00	0	0	0	0	00.00	0	0	0	0
2000	01.00	5	4	1.3	2	01.15	6	5	1.6	3	01.30	7	6	1.9	3
4000	02.00	10	8	2.6	4	02.15	12	9	3.1	5	02.45	14	11	3.8	7
6000	03.00	15	11	3.9	7	03.30	18	14	4.6	8	04.15	21	17	5.6	10
8000	04.00	19	15	5.1	9	04.45	23	18	6.1	11	05.45	28	22	7.4	14
10000	05.00	24	19	6.3	12	06.00	29	23	7.6	15	07.15	35	27	9.2	18
12000	06.00	28	22	7.5	15	07.30	34	27	9.1	18	09.00	42	33	11.0	22
14000	07.15	33	26	8.7	18	08.45	40	31	10.5	21	10.30	48	38	12.8	26
16000	08.15	38	30	9.9	21	10.00	45	36	12.0	25	12.00	55	43	14.6	31
18000	09.30	42	33	11.1	24	11.30	51	40	13.5	29	13.45	62	49	16.4	36
20000	10.30	47	37	12.4	28	12.45	57	45	15.0	34	15.45	69	54	18.3	41
22000	11.45	51	40	13.6	31	14.15	62	49	16.5	38	17.30	76	60	20.2	47
24000	13.00	56	44	14.8	35	15.45	68	53	18.0	43	19.30	84	66	22.1	53
26000	14.15	61	48	16.1	40	17.30	74	58	19.6	48	21.30	91	72	24.1	60
28000	15.45	66	52	17.5	45	19.15	81	63	21.3	55	24.00	100	78	26.3	69
30000	17.45	72	56	19.0	52	21.45	88	69	23.3	64	27.15	110	87	29.1	81
31000	18.45	75	59	19.8	56	23.00	92	73	24.4	69	29.30	116	91	30.8	88

Figure 5.10.13 - 700 SHP - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 130 KIAS) / ISA + 20°C

**700 SHP - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 160 KIAS)**

Conditions : **ISA - 20°C**

700 SHP climb power

Landing gear and flaps UP

IAS = 160 KIAS up to 20000 ft ; - 2 KIAS / 1000 ft then

Np = 2000 RPM - BLEED switch on AUTO

**NOTE :** Time, consumption and distance from the 50 ft

*If BLEED HI msg ON, reduce TRQ by 6 %. This TRQ reduction will result in :*

- Time to climb increased by 14 %
- Climb distance increased by 14 %
- Fuel consumption increased by 11 %

Pressure altitude (feet)	WEIGHT 5794 lbs (2628 kg)					WEIGHT 6579 lbs (2984 kg)					WEIGHT 7394 lbs (3354 kg)				
	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)
		l	kg	us gal			l	kg	us gal			l	kg	us gal	
SL	00.00	0	0	0	0	00.00	0	0	0	0	00.00	0	0	0	0
2000	01.00	5	4	1.2	2	01.00	5	4	1.4	3	01.15	6	5	1.7	3
4000	02.00	9	7	2.4	5	02.15	11	8	2.8	6	02.30	13	10	3.3	7
6000	02.45	13	11	3.5	8	03.30	16	12	4.2	9	04.00	19	15	5.0	11
8000	03.45	18	14	4.7	10	04.30	21	17	5.6	12	05.20	25	20	6.6	15
10000	04.45	22	17	5.8	13	05.45	26	21	6.9	16	07.00	31	24	8.2	19
12000	06.00	26	21	6.9	16	07.00	31	25	8.3	20	08.30	37	29	9.9	23
14000	07.00	31	24	8.1	20	08.15	36	29	9.6	24	10.00	43	34	11.5	28
16000	08.00	35	27	9.2	23	09.30	42	33	11.0	28	11.30	50	39	13.1	33
18000	09.00	39	31	10.3	27	11.00	47	37	12.4	32	13.05	56	44	14.8	39
20000	10.15	44	34	11.5	31	12.30	52	41	13.8	37	14.45	63	49	16.5	45
22000	11.30	48	37	12.6	35	13.45	57	45	15.1	42	16.30	69	54	18.2	50
24000	12.30	52	41	13.7	39	15.15	62	49	16.5	47	18.15	75	59	19.9	56
26000	13.45	56	44	14.8	43	16.30	67	53	17.8	51	20.00	81	64	21.5	62
28000	14.45	60	47	15.8	46	17.45	72	57	19.0	56	21.45	87	69	23.1	68
30000	16.00	64	50	16.8	50	19.15	77	60	20.3	61	23.30	93	73	24.7	75
31000	16.30	66	52	17.3	52	20.00	79	62	21.0	64	24.15	96	76	25.5	78

Figure 5.10.14 - 700 SHP - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 160 KIAS) / ISA - 20°C

## 700 SHP - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 160 KIAS)

Conditions : **ISA**

700 SHP climb power

Landing gear and flaps UP

IAS = 160 KIAS up to 20000 ft ; - 2 KIAS / 1000 ft then

Np = 2000 RPM - BLEED switch on AUTO

**NOTE :** Time, consumption and distance from the 50 ft

If BLEED HI msg ON, reduce TRQ by 6 %. This TRQ reduction will result in :

Below FL 180    From FL 180 to FL 310

- Time to climb increased by                    14 %                    14 % to 16 %
- Climb distance increased by                14 %                    14 % to 16 %
- Fuel consumption increased by          11 %                    11 % to 12 %

Pressure altitude (feet)	WEIGHT 5794 lbs (2628 kg)					WEIGHT 6579 lbs (2984 kg)					WEIGHT 7394 lbs (3354 kg)				
	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)
		l	kg	us gal			l	kg	us gal			l	kg	us gal	
SL	00.00	0	0	0	0	00.00	0	0	0	0	00.00	0	0	0	0
2000	01.00	5	4	1.4	3	01.15	6	5	1.6	3	01.30	7	6	1.9	4
4000	02.00	10	8	2.7	6	02.30	12	10	3.2	7	03.00	14	11	3.8	8
6000	03.15	15	12	4.0	9	03.45	18	14	4.8	10	04.30	22	17	5.7	12
8000	04.15	20	16	5.3	12	05.00	24	19	6.3	14	06.00	29	22	7.6	17
10000	05.30	25	20	6.6	15	06.30	30	23	7.9	18	07.45	36	28	9.4	22
12000	06.30	30	23	7.9	19	08.00	36	28	9.4	23	09.30	43	34	11.3	27
14000	07.45	35	27	9.2	23	09.15	42	33	11.0	27	11.00	50	39	13.2	33
16000	09.00	40	31	10.5	27	10.45	48	37	12.6	32	13.00	57	45	15.1	39
18000	10.15	45	35	11.8	31	12.30	54	42	14.2	38	14.45	65	51	17.1	46
20000	11.30	50	39	13.2	36	14.00	60	47	15.9	43	16.45	73	57	19.2	53
22000	13.00	55	43	14.5	41	15.30	66	52	17.5	49	18.45	80	63	21.2	60
24000	14.15	60	47	15.8	45	17.15	72	57	19.0	55	20.45	87	69	23.1	67
26000	15.30	64	50	17.0	50	18.45	78	61	20.5	61	22.45	95	74	25.0	74
28000	16.45	69	54	18.2	55	20.15	84	66	22.1	66	24.45	102	80	26.9	82
30000	18.00	74	58	19.4	60	22.00	89	70	23.6	72	27.00	109	86	28.9	90
31000	18.45	76	60	20.1	63	23.00	92	73	24.4	75	28.15	114	89	30.0	94

Figure 5.10.15 - 700 SHP - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 160 KIAS) / ISA

**700 SHP - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 160 KIAS)**

Conditions : **ISA + 20°C**

700 SHP climb power

Landing gear and flaps UP

IAS = 160 KIAS up to 20000 ft ; - 2 KIAS / 1000 ft then

Np = 2000 RPM - BLEED switch on AUTO

**NOTE :** Time, consumption and distance from the 50 ft

*If BLEED HI msg ON, reduce TRQ by 6 %. This TRQ reduction will result in :*

*Below FL 140 From FL 140 to FL 310*

- Time to climb increased by 14 % 14 % to 34 %
- Climb distance increased by 14 % 14 % to 36 %
- Fuel consumption increased by 12 % 12 % to 26 %

Pressure altitude (feet)	WEIGHT 5794 lbs (2628 kg)					WEIGHT 6579 lbs (2984 kg)					WEIGHT 7394 lbs (3354 kg)				
	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)
		l	kg	us gal			l	kg	us gal			l	kg	us gal	
SL	00.00	0	0	0	0	00.00	0	0	0	0	00.00	0	0	0	0
2000	01.00	6	5	1.5	3	01.15	7	5	1.8	4	01.30	8	6	2.2	4
4000	02.15	11	9	3.0	6	02.45	14	11	3.6	8	03.15	16	13	4.3	9
6000	03.30	17	13	4.5	10	04.15	20	16	5.4	12	05.00	24	19	6.4	14
8000	04.45	23	18	6.0	14	05.30	27	21	7.2	16	06.45	32	25	8.6	20
10000	06.00	28	22	7.4	18	07.15	34	27	8.9	21	08.30	41	32	10.7	25
12000	07.15	34	27	8.9	22	08.45	40	32	10.7	26	10.30	49	38	12.9	32
14000	08.30	39	31	10.4	26	10.15	47	37	12.5	32	12.30	57	45	15.1	38
16000	10.00	45	35	11.9	31	12.00	54	43	14.4	38	14.30	66	52	17.4	45
18000	11.30	51	40	13.5	36	13.45	61	48	16.2	44	16.45	75	58	19.7	53
20000	13.00	57	45	15.0	42	15.45	69	54	18.2	51	19.00	84	66	22.1	62
22000	14.30	63	49	16.5	47	17.30	76	60	20.0	58	21.15	92	73	24.4	71
24000	15.45	68	54	18.0	53	19.15	83	65	21.9	65	23.30	101	79	26.7	79
26000	17.30	74	58	19.5	59	21.15	90	71	23.7	72	26.00	110	87	29.1	89
28000	19.15	80	63	21.1	66	23.30	98	77	25.8	81	29.15	120	95	31.8	100
30000	21.15	86	68	22.8	74	26.15	106	83	28.0	91	33.00	132	104	34.9	115
31000	22.30	90	70	23.7	78	27.45	111	87	29.3	98	35.15	139	109	36.8	124

Figure 5.10.16 - 700 SHP - TIME, CONSUMPTION AND CLIMB DISTANCE (IAS = 160 KIAS) / ISA + 20°C



## CLIMB PERFORMANCE AFTER GO-AROUND

Conditions : 700 SHP climb power  
Landing gear DN and flaps LDG  
**IAS = 90 KIAS**

Airplane weight	Pressure altitude (feet)	RATE OF CLIMB (ft/min)						
		ISA - 35°C	ISA - 20°C	ISA - 10°C	ISA	ISA + 10°C	ISA + 20°C	ISA + 30°C
6594 lbs (2991 kg)	SL	1410	1300	1230	1165	1105	1045	985
	2000	1380	1265	1195	1130	1065	1010	955
	4000	1345	1230	1155	1090	1025	970	915
	6000	1310	1190	1115	1050	985	925	870
	8000	1270	1145	1070	1000	940	880	825

Conditions : 700 SHP climb power  
Landing gear DN and flaps LDG  
**IAS = 95 KIAS**

Airplane weight	Pressure altitude (feet)	RATE OF CLIMB (ft/min)						
		ISA - 35°C	ISA - 20°C	ISA - 10°C	ISA	ISA + 10°C	ISA + 20°C	ISA + 30°C
7394 lbs (3354 kg)	SL	1120	1025	960	905	850	805	760
	2000	1085	985	920	865	810	765	715
	4000	1045	945	880	825	770	720	675
	6000	1010	905	840	780	730	680	630
	8000	965	860	795	740	685	630	580

Figure 5.10.17 - CLIMB PERFORMANCE AFTER GO-AROUND

**CLIMB PERFORMANCE - FLAPS TO**

Conditions : 700 SHP climb power  
Landing gear UP and flaps TO  
**IAS = 110 KIAS**

Airplane weight	Pressure altitude (feet)	RATE OF CLIMB (ft/min)						
		ISA - 35°C	ISA - 20°C	ISA - 10°C	ISA	ISA + 10°C	ISA + 20°C	ISA + 30°C
6594 lbs (2991 kg)	SL	2140	2000	1910	1830	1750	1680	1600
	2000	2120	1975	1880	1800	1720	1650	1585
	4000	2100	1950	1860	1775	1700	1620	1555
	6000	2075	1925	1830	1750	1670	1595	1525
	8000	2050	1895	1805	1720	1640	1565	1495

Conditions : 700 SHP climb power  
Landing gear UP and flaps TO  
**IAS = 115 KIAS**

Airplane weight	Pressure altitude (feet)	RATE OF CLIMB (ft/min)						
		ISA - 35°C	ISA - 20°C	ISA - 10°C	ISA	ISA + 10°C	ISA + 20°C	ISA + 30°C
7394 lbs (3354 kg)	SL	1825	1695	1615	1545	1475	1415	1355
	2000	1800	1670	1590	1515	1450	1390	1325
	4000	1775	1640	1560	1490	1420	1360	1300
	6000	1750	1620	1540	1465	1395	1330	1270
	8000	1720	1585	1505	1430	1360	1295	1230

Figure 5.10.18 - CLIMB PERFORMANCE - FLAPS TO

## 5.11 - CRUISE PERFORMANCE

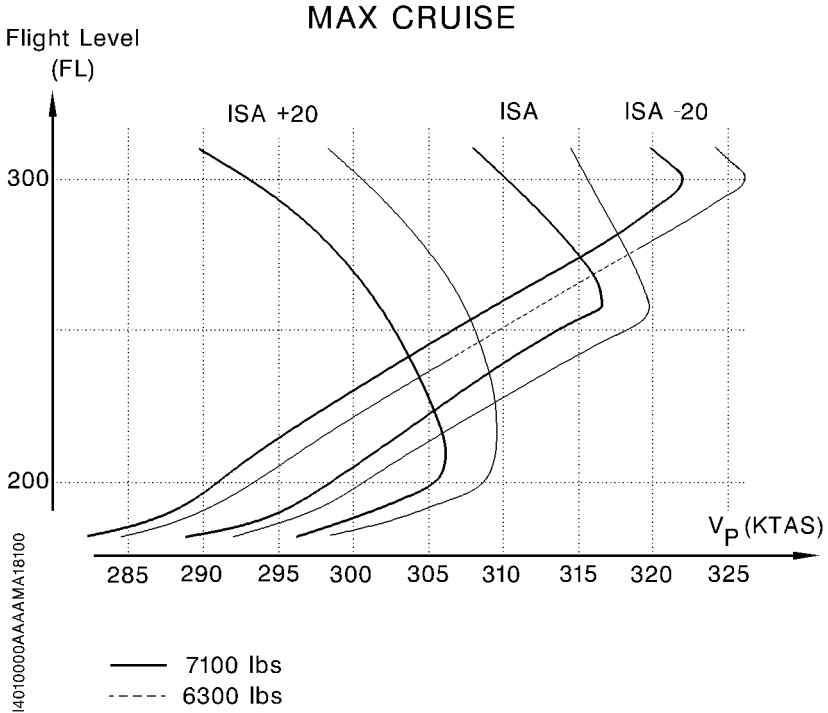


Figure 5.11.1 - CRUISE PERFORMANCE (Maximum cruise)

**Maximum cruise**

Conditions : **ISA - 20°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

*NOTE : Use preferably recommended cruise power*

*If BLEED HI msg ON :*

*. Below FL 200 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 200 to FL 310 : reduce TRQ by 10 %. This TRQ reduction will result in an airspeed reduction of 7 to 9 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS	IAS	TAS
0	- 04	121	329	258	86.9	246	241	245	240	244	238
5000	- 14	121	303	238	80.0	241	253	240	252	239	250
10000	- 24	121	282	221	74.5	236	265	234	264	233	262
15000	- 34	121	270	212	71.4	230	280	229	278	227	276
18000	- 40	121	262	205	69.1	227	289	226	287	224	285
20000	- 44	121	256	201	67.7	225	295	224	293	222	291
21000	- 46	121	254	200	67.2	224	298	222	296	221	294
22000	- 48	121	252	198	66.7	223	302	221	299	219	297
23000	- 50	121	251	197	66.2	222	305	220	303	218	300
24000	- 52	121	249	196	65.9	221	308	219	306	217	303
25000	- 54	121	248	195	65.6	220	312	218	309	216	307
26000	- 56	121	247	194	65.3	219	315	217	313	215	310
27000	- 58	121	247	194	65.2	218	319	216	316	213	313
28000	- 60	121	247	194	65.2	216	322	214	321	212	318
29000	- 62	115	247	194	65.3	215	326	213	323	211	320
30000	- 64	111	247	194	65.3	214	329	211	326	209	322
31000	- 66	107	238	187	62.9	209	328	207	324	204	320

Figure 5.11.2 – CRUISE PERFORMANCE -  
Maximum cruise / ISA – 20°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

## Maximum cruise

Conditions : **ISA - 10°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Use preferably recommended cruise power**

*If BLEED HI msg ON :*

*. Below FL 200 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 200 to FL 310 : reduce TRQ by 10 %. This TRQ reduction will result in an airspeed reduction of 7 to 9 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l / h	kg / h	<sup>us</sup> gal / h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 06	121	332	261	87.8	245	244	244	242	242	241
5000	- 04	121	306	240	80.8	240	256	238	255	237	253
10000	- 14	121	285	223	75.2	234	269	232	267	231	265
15000	- 24	121	273	214	72.1	229	283	227	281	225	279
18000	- 30	121	264	207	69.8	225	292	224	290	222	288
20000	- 34	121	259	203	68.4	223	299	221	297	219	294
21000	- 36	121	257	201	67.8	222	302	220	300	218	297
22000	- 38	121	255	200	67.3	221	305	219	303	217	300
23000	- 40	121	253	198	66.8	220	309	218	306	216	304
24000	- 42	121	252	198	66.5	219	312	217	310	215	307
25000	- 44	121	251	197	66.2	217	316	216	313	213	310
26000	- 46	121	249	196	65.9	216	319	214	316	212	313
27000	- 48	119	249	196	65.8	215	322	213	321	211	318
28000	- 50	116	249	195	65.7	214	326	212	323	209	320
29000	- 52	110	241	189	63.6	210	325	207	322	204	318
30000	- 54	106	232	182	61.2	205	324	203	321	200	317
31000	- 56	103	223	175	58.9	201	323	198	319	196	315

Figure 5.11.3 – CRUISE PERFORMANCE –  
Maximum cruise / ISA – 10°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

**Maximum cruise**

Conditions : **ISA - 5°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

*NOTE : Use preferably recommended cruise power*

*If BLEED HI msg ON :*

*. Below FL 200 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 200 to FL 310 : reduce TRQ by 10 %. This TRQ reduction will result in an airspeed reduction of 7 to 10 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	us gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 11	121	334	262	88.3	244	245	243	244	242	243
5000	+ 01	121	307	241	81.2	239	257	238	256	236	255
10000	- 09	121	286	225	75.6	233	270	232	269	230	267
15000	- 19	121	274	215	72.5	228	285	226	283	224	281
18000	- 25	121	265	208	70.1	224	294	223	292	221	290
20000	- 29	121	260	204	68.7	222	301	220	298	218	296
21000	- 31	121	258	203	68.2	221	304	219	302	217	299
22000	- 33	121	256	201	67.6	220	307	218	305	216	302
23000	- 35	121	254	200	67.2	219	311	217	308	215	305
24000	- 37	121	253	198	66.8	217	314	216	312	213	309
25000	- 39	121	252	198	66.5	216	317	214	315	212	312
26000	- 41	121	251	197	66.3	215	321	213	319	211	316
27000	- 43	117	250	196	66.1	214	324	212	322	209	319
28000	- 45	113	243	191	64.2	210	324	208	322	205	318
29000	- 47	108	234	184	61.9	206	323	203	321	200	317
30000	- 49	104	226	177	59.7	202	323	199	319	197	314
31000	- 51	101	218	171	57.6	198	322	196	319	192	313

Figure 5.11.4 – CRUISE PERFORMANCE –  
Maximum cruise / ISA – 5°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

## Maximum cruise

Conditions : **ISA**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Use preferably recommended cruise power**

*If BLEED HI msg ON :*

*. Below FL 200 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 200 to FL 310 : reduce TRQ by 10 %. This TRQ reduction will result in an airspeed reduction of 7 to 10 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 16	121	336	264	88.8	243	246	242	245	241	244
5000	+ 06	121	309	242	81.6	238	259	237	257	235	256
10000	- 04	121	288	226	76.0	232	272	231	270	229	269
15000	- 14	121	276	216	72.8	227	287	225	285	223	283
18000	- 20	121	267	209	70.5	223	296	222	294	220	291
20000	- 24	121	261	205	69.0	221	302	219	300	217	298
21000	- 26	121	259	203	68.4	220	306	218	303	216	301
22000	- 28	121	257	202	68.0	219	309	217	307	215	304
23000	- 30	121	256	201	67.5	218	312	216	310	214	307
24000	- 32	121	254	199	67.1	216	316	215	313	212	310
25000	- 34	121	253	198	66.8	215	319	213	318	211	314
26000	- 36	118	252	198	66.6	214	323	212	320	210	317
27000	- 38	114	245	192	64.6	210	323	208	319	205	315
28000	- 40	110	236	185	62.4	206	322	204	319	201	315
29000	- 42	105	228	179	60.1	202	321	199	317	197	313
30000	- 44	101	220	172	58.0	198	320	196	316	193	311
31000	- 46	98	211	166	55.8	194	319	192	315	188	309

Figure 5.11.5 – CRUISE PERFORMANCE –  
Maximum cruise / ISA

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

**Maximum cruise**

Conditions : **ISA + 5°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

*NOTE : Use preferably recommended cruise power*

*If BLEED HI msg ON :*

*. Below FL 200 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 200 to FL 310 : reduce TRQ by 10 %. This TRQ reduction will result in an airspeed reduction of 7 to 10 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	us gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 21	121	338	265	89.3	243	248	241	247	240	245
5000	+ 11	121	310	244	82.0	237	260	236	259	234	257
10000	+ 01	121	289	227	76.4	231	273	230	272	228	270
15000	- 09	121	277	218	73.2	226	288	224	286	222	284
18000	- 15	121	268	210	70.8	222	297	221	295	219	293
20000	- 19	121	263	206	69.4	220	304	218	302	216	299
21000	- 21	121	260	204	68.8	219	307	217	305	215	302
22000	- 23	121	259	203	68.3	218	311	216	308	214	305
23000	- 25	121	257	201	67.8	216	314	215	312	213	309
24000	- 27	121	255	200	67.4	215	317	213	316	211	313
25000	- 29	119	254	199	67.1	214	321	212	319	210	316
26000	- 31	115	247	194	65.2	210	321	208	319	206	315
27000	- 33	111	238	187	62.9	206	320	204	318	201	314
28000	- 35	107	229	180	60.6	202	320	200	317	197	312
29000	- 37	102	221	174	58.5	198	319	196	315	193	310
30000	- 39	98	213	167	56.3	195	318	192	314	188	309
31000	- 41	94	205	161	54.2	190	316	187	313	183	306

Figure 5.11.6 – CRUISE PERFORMANCE -  
Maximum cruise / ISA + 5°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.



## Maximum cruise

Conditions : **ISA + 10°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

*NOTE : Use preferably recommended cruise power*

*If BLEED HI msg ON :*

*. Below FL 200 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 200 to FL 310 : reduce TRQ by 10 %. This TRQ reduction will result in an airspeed reduction of 7 to 11 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	us gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 26	121	340	267	89.8	242	249	241	248	239	247
5000	+ 16	121	312	245	82.5	236	261	235	260	233	259
10000	+ 06	121	291	228	76.8	230	275	229	273	227	272
15000	- 04	121	279	219	73.6	225	290	223	288	221	286
18000	- 10	121	269	211	71.1	221	299	220	297	218	295
20000	- 14	121	264	207	69.7	219	306	217	304	215	301
21000	- 16	121	262	205	69.1	218	309	216	307	214	304
22000	- 18	121	260	204	68.6	217	312	215	310	213	307
23000	- 20	121	258	202	68.1	215	316	214	313	212	310
24000	- 22	120	256	201	67.7	214	319	212	317	210	314
25000	- 24	116	249	196	65.9	211	320	208	317	206	314
26000	- 26	112	240	189	63.5	207	319	204	316	201	312
27000	- 28	108	232	182	61.2	202	318	200	315	197	311
28000	- 30	103	223	175	59.0	198	317	197	313	193	308
29000	- 32	99	215	169	56.8	195	316	192	312	189	306
30000	- 34	95	207	163	54.7	191	315	188	311	184	305
31000	- 36	91	199	157	52.7	187	314	183	308	179	302

Figure 5.11.7 - CRUISE PERFORMANCE -  
Maximum cruise / ISA + 10°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

**Maximum cruise**

Conditions : **ISA + 20°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

*NOTE : Use preferably recommended cruise power*

*If BLEED HI msg ON :*

*. Below FL 200 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 200 to FL 310 : reduce TRQ by 10 %. This TRQ reduction will result in an airspeed reduction of 7 to 12 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	us gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 36	121	344	270	90.8	240	252	239	251	238	249
5000	+ 26	121	316	248	83.4	234	264	233	263	232	261
10000	+ 16	121	294	231	77.6	229	278	227	276	226	274
15000	+ 06	121	281	221	74.3	223	293	221	291	220	289
18000	+ 00	121	272	213	71.8	220	302	218	300	216	298
20000	- 04	121	266	209	70.4	217	309	215	307	213	304
21000	- 06	120	264	207	69.8	216	312	214	310	212	307
22000	- 08	117	257	202	67.9	213	313	211	310	208	307
23000	- 10	114	249	195	65.7	209	313	207	310	204	306
24000	- 12	110	241	189	63.6	205	313	203	310	200	305
25000	- 14	106	233	183	61.5	202	312	199	309	197	304
26000	- 16	102	224	176	59.3	198	312	196	308	193	303
27000	- 18	99	217	170	57.3	195	311	192	307	188	302
28000	- 20	95	209	164	55.3	191	310	188	306	184	300
29000	- 22	91	202	158	53.3	187	309	183	304	179	298
30000	- 24	87	195	153	51.4	182	308	179	302	174	295
31000	- 26	84	187	147	49.5	178	307	174	300	169	292

Figure 5.11.8 – CRUISE PERFORMANCE -  
Maximum cruise / ISA + 20°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

## NORMAL CRUISE (recommended)

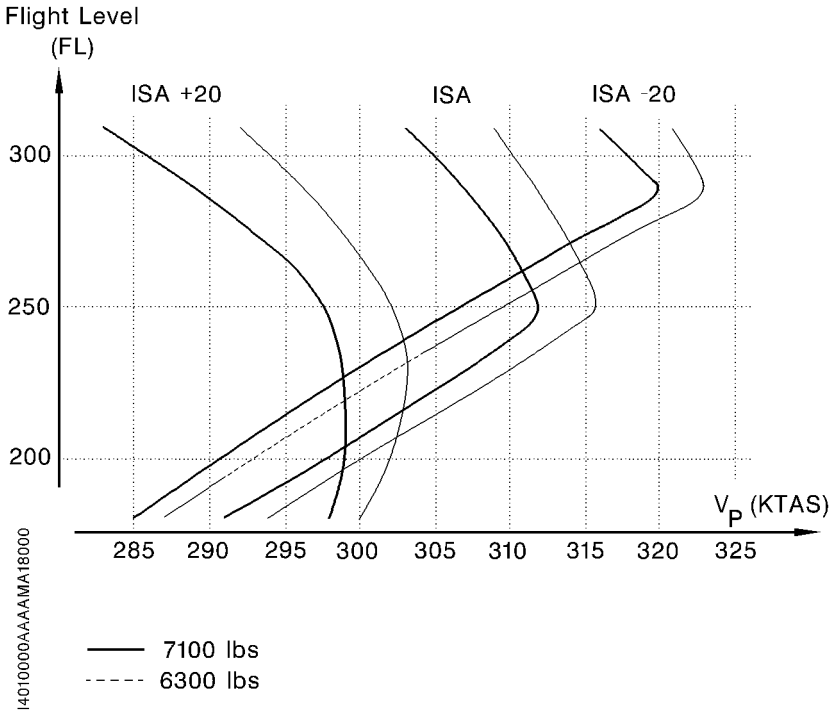


Figure 5.11.9 - CRUISE PERFORMANCE (Recommended cruise)

**Normal (recommended) cruise**

Conditions : **ISA - 20°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Power recommended by PRATT & WHITNEY CANADA**

*If BLEED HI msg ON :*

*. Below FL 160 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 160 to FL 310 : reduce TRQ by 12 %. This TRQ reduction will result in an airspeed reduction of 9 to 11 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	us gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	- 04	121	329	258	86.9	246	241	245	240	244	238
5000	- 14	121	303	238	80.0	241	253	240	252	239	250
10000	- 24	121	282	221	74.5	236	265	234	264	233	262
15000	- 34	121	270	212	71.4	230	280	229	278	227	276
18000	- 40	121	262	205	69.1	227	289	226	287	224	285
20000	- 44	121	256	201	67.7	225	295	224	293	222	291
21000	- 46	121	254	200	67.2	224	298	222	296	221	294
22000	- 48	121	252	198	66.7	223	302	221	299	219	297
23000	- 50	121	251	197	66.2	222	305	220	303	218	300
24000	- 52	121	249	196	65.9	221	308	219	306	217	303
25000	- 54	121	248	195	65.6	220	312	218	309	216	307
26000	- 56	121	247	194	65.3	219	315	217	313	215	310
27000	- 58	120	247	194	65.2	218	319	216	316	213	313
28000	- 60	115	247	194	65.2	216	322	214	320	212	317
29000	- 62	111	247	194	65.2	215	326	213	323	211	320
30000	- 64	107	240	188	63.3	211	326	209	322	206	318
31000	- 66	103	231	181	60.9	207	324	204	321	201	316

Figure 5.11.10 - CRUISE PERFORMANCE -  
Normal cruise / ISA - 20°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

## Normal (recommended) cruise

Conditions : **ISA - 10°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Power recommended by PRATT & WHITNEY CANADA**

*If BLEED HI msg ON :*

*. Below FL 160 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 160 to FL 310 : reduce TRQ by 12 %. This TRQ reduction will result in an airspeed reduction of 9 to 12 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	us gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 06	121	332	261	87.8	245	244	244	242	242	241
5000	- 04	121	306	240	80.0	240	256	238	255	237	253
10000	- 14	121	285	223	75.2	234	269	232	267	231	265
15000	- 24	121	273	214	72.1	229	283	227	281	225	279
18000	- 30	121	264	207	69.8	225	292	224	290	222	288
20000	- 34	121	259	203	68.4	223	299	221	297	219	294
21000	- 36	121	257	201	67.8	222	302	220	300	218	297
22000	- 38	121	255	200	67.3	221	305	219	303	217	300
23000	- 40	121	253	198	66.8	220	309	218	306	216	304
24000	- 42	121	252	198	66.5	219	312	217	310	215	307
25000	- 44	121	251	197	66.2	217	316	216	313	213	310
26000	- 46	117	249	196	65.9	216	319	214	316	212	313
27000	- 48	113	248	195	65.5	215	322	212	319	210	315
28000	- 50	110	240	188	63.3	210	321	208	318	206	314
29000	- 52	106	231	182	61.1	206	321	204	317	201	313
30000	- 54	102	223	175	58.9	202	320	200	316	197	312
31000	- 56	98	215	169	56.8	198	319	196	315	193	310

Figure 5.11.11 - CRUISE PERFORMANCE -  
Normal cruise / ISA - 10°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

**Normal (recommended) cruise**

Conditions : **ISA - 5°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Power recommended by PRATT & WHITNEY CANADA**

*If BLEED HI msg ON :*

*. Below FL 160 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 160 to FL 310 : reduce TRQ by 12 %. This TRQ reduction will result in an airspeed reduction of 9 to 12 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	us gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 11	121	334	262	88.3	244	245	243	244	242	243
5000	+ 01	121	307	241	81.2	239	257	238	256	236	255
10000	- 09	121	286	225	75.6	233	270	232	269	230	267
15000	- 19	121	274	215	72.5	228	285	226	283	224	281
18000	- 25	121	265	208	70.1	224	294	223	292	221	290
20000	- 29	121	260	204	68.7	222	301	220	298	218	296
21000	- 31	121	258	203	68.2	221	304	219	302	217	299
22000	- 33	121	256	201	67.6	220	307	218	305	216	302
23000	- 35	121	254	200	67.2	219	311	217	308	215	305
24000	- 37	121	253	198	66.8	217	314	216	312	213	309
25000	- 39	118	252	198	66.5	216	317	214	316	212	313
26000	- 41	115	250	196	66.0	215	320	212	318	210	315
27000	- 43	111	241	189	63.7	210	320	208	317	206	314
28000	- 45	108	232	182	61.4	206	319	204	317	201	312
29000	- 47	103	224	176	59.3	202	318	200	315	197	310
30000	- 49	99	217	170	57.2	198	317	196	313	193	308
31000	- 51	96	209	164	55.1	195	316	192	312	188	306

Figure 5.11.12 - CRUISE PERFORMANCE -  
Normal cruise / ISA - 5°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

## Normal (recommended) cruise

Conditions : **ISA**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Power recommended by PRATT & WHITNEY CANADA**

*If BLEED HI msg ON :*

*. Below FL 160 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 160 to FL 310 : reduce TRQ by 12 %. This TRQ reduction will result in an airspeed reduction of 9 to 13 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	<sup>us</sup> gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 16	121	336	264	88.8	243	246	242	245	241	244
5000	+ 06	121	309	242	81.6	238	259	237	257	235	256
10000	- 04	121	288	226	76.0	232	272	231	270	229	269
15000	- 14	121	276	216	72.8	227	287	225	285	223	283
18000	- 20	121	267	209	70.5	223	296	222	294	220	291
20000	- 24	121	261	205	69.0	221	302	219	300	217	298
21000	- 26	121	259	203	68.4	220	306	218	303	216	301
22000	- 28	121	257	202	68.0	219	309	217	307	215	304
23000	- 30	121	256	201	67.5	218	312	216	310	214	307
24000	- 32	121	254	199	67.1	216	316	215	313	212	310
25000	- 34	115	252	198	66.5	215	319	213	316	210	312
26000	- 36	112	243	191	64.2	211	318	208	315	206	311
27000	- 38	108	234	184	61.9	206	317	204	314	201	310
28000	- 40	104	226	177	59.7	202	317	200	313	197	308
29000	- 42	100	218	171	57.6	198	316	197	312	193	307
30000	- 44	96	210	165	55.5	195	315	192	310	189	305
31000	- 46	93	202	159	53.4	191	314	188	309	184	303

Figure 5.11.13 - CRUISE PERFORMANCE -  
Normal cruise / ISA

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

**Normal (recommended) cruise**

Conditions : **ISA + 5°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Power recommended by PRATT & WHITNEY CANADA**

*If BLEED HI msg ON :*

*. Below FL 160 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 160 to FL 310 : reduce TRQ by 12 %. This TRQ reduction will result in an airspeed reduction of 9 to 13 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	<sup>us</sup> gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 21	121	338	265	89.3	243	248	241	247	240	245
5000	+ 11	121	310	244	82.0	237	260	236	259	234	257
10000	+ 01	121	289	227	76.4	231	273	230	272	228	270
15000	- 09	121	277	218	73.2	226	288	224	286	222	284
18000	- 15	121	268	210	70.8	222	297	221	295	219	293
20000	- 19	121	263	206	69.4	220	304	218	302	216	299
21000	- 21	121	260	204	68.8	219	307	217	305	215	302
22000	- 23	121	259	203	68.3	218	311	216	308	214	305
23000	- 25	121	257	201	67.8	216	314	215	312	213	309
24000	- 27	117	253	199	66.9	215	317	213	315	210	311
25000	- 29	113	245	193	64.8	211	316	209	314	206	311
26000	- 31	109	236	185	62.4	207	316	204	313	202	309
27000	- 33	105	228	179	60.2	202	315	200	312	197	308
28000	- 35	101	220	173	58.1	198	314	197	311	193	306
29000	- 37	97	212	166	55.9	195	313	192	309	189	303
30000	- 39	94	204	160	53.9	191	312	188	307	184	301
31000	- 41	90	196	154	51.9	187	311	183	305	179	299

Figure 5.11.14 - CRUISE PERFORMANCE -  
Normal cruise / ISA + 5°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.



## Normal (recommended) cruise

Conditions : **ISA + 10°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Power recommended by PRATT & WHITNEY CANADA**

*If BLEED HI msg ON :*

*. Below FL 160 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 160 to FL 310 : reduce TRQ by 12 %. This TRQ reduction will result in an airspeed reduction of 9 to 14 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l / h	kg / h	<sup>us</sup> gal / h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 26	121	340	267	89.8	242	249	241	248	239	247
5000	+ 16	121	312	245	82.5	236	261	235	260	233	259
10000	+ 06	121	291	228	76.8	230	275	229	273	227	272
15000	- 04	121	279	219	73.6	225	290	223	288	221	286
18000	- 10	121	269	211	71.1	221	299	220	297	218	295
20000	- 14	121	264	207	69.7	219	306	217	304	215	301
21000	- 16	121	262	205	69.1	218	309	216	307	214	304
22000	- 18	121	260	204	68.6	217	312	215	310	213	307
23000	- 20	117	254	200	67.2	214	314	212	311	210	308
24000	- 22	114	246	193	65.1	211	314	208	311	206	307
25000	- 24	110	239	188	63.1	207	314	205	311	202	307
26000	- 26	106	230	181	60.8	203	313	200	310	197	305
27000	- 28	102	222	174	58.7	199	312	197	309	194	304
28000	- 30	98	214	168	56.5	195	311	193	307	189	302
29000	- 32	94	206	161	54.3	191	310	188	306	184	300
30000	- 34	90	198	156	52.4	187	309	184	304	180	297
31000	- 36	86	191	150	50.4	183	308	179	301	174	294

Figure 5.11.15 - CRUISE PERFORMANCE -  
Normal cruise / ISA + 10°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

**Normal (recommended) cruise**

Conditions : **ISA + 20°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Power recommended by PRATT & WHITNEY CANADA**

*If BLEED HI msg ON :*

*. Below FL 160 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 160 to FL 310 : reduce TRQ by 12 %. This TRQ reduction will result in an airspeed reduction of 9 to 16 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	<sup>us</sup> gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 36	121	344	270	90.8	240	252	239	251	238	249
5000	+ 26	121	316	248	83.4	234	264	233	263	232	261
10000	+ 16	121	294	231	77.6	229	278	227	276	226	274
15000	+ 06	121	281	221	74.3	223	293	221	291	220	289
18000	+ 00	121	272	213	71.8	220	302	218	300	216	298
20000	- 04	117	259	203	68.4	214	305	212	302	210	299
21000	- 06	114	251	197	66.4	211	305	209	302	207	299
22000	- 08	111	244	191	64.4	207	306	205	303	203	299
23000	- 10	108	237	186	62.5	204	306	202	303	199	299
24000	- 12	104	229	180	60.5	201	306	198	302	196	298
25000	- 14	101	222	174	58.6	197	306	195	302	192	297
26000	- 16	97	214	168	56.5	194	305	191	301	188	296
27000	- 18	93	207	162	54.6	190	304	187	299	183	294
28000	- 20	89	199	156	52.6	186	303	183	298	178	291
29000	- 22	86	192	150	50.6	182	302	178	296	174	289
30000	- 24	82	185	145	48.8	178	301	174	294	169	286
31000	- 26	79	178	140	47.0	174	299	169	292	164	283

Figure 5.11.16 - CRUISE PERFORMANCE -  
Normal cruise / ISA + 20°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

## Long Range Cruise (5500 lbs - 2495 kg)

Conditions : Landing gear and flaps UP  
Np = 2000 RPM (\*)  
BLEED switch on AUTO and BLEED HI msg OFF

LEGEND :	OAT : °C	IAS : KIAS
	FF : us gal/h	
	FF : kg/h	TAS : KTAS

Pressure altitude (feet)	TRQ (%)	ISA - 20°C		ISA - 10°C		ISA		ISA + 10°C		ISA + 20°C	
		OAT	FF	OAT	FF	OAT	FF	OAT	FF	OAT	FF
15000	45	- 34	156	- 24	154	- 14	152	- 4	150	+ 6	148
		42.2	125	42.6	127	43.2	128	43.7	130	44.2	131
18000	45	- 40	152	- 30	150	- 20	148	- 10	146	+ 0	145
		39.7	118	40.2	120	40.8	121	41.2	122	41.7	124
19000	45	- 42	150	- 32	148	- 22	147	- 12	145	- 2	144
		39.0	116	39.4	117	39.9	119	40.4	120	40.9	121
20000	45	- 44	149	- 34	147	- 24	146	- 14	144	- 4	143
		38.2	113	38.7	115	39.1	116	39.6	118	40.1	119
21000	45	- 46	148	- 36	146	- 26	145	- 16	143	- 6	142
		37.4	111	37.9	112	38.4	114	38.8	115	39.3	117
22000	45	- 48	147	- 38	145	- 28	144	- 18	142	- 8	140
		36.7	109	37.1	110	37.5	112	38.1	113	38.6	115
23000	45	- 50	146	- 40	144	- 30	142	- 20	141	- 10	139
		35.9	107	36.4	108	36.8	109	37.3	111	37.8	112
24000	45	- 52	145	- 42	143	- 32	141	- 22	139	- 12	138
		35.3	105	35.7	106	36.1	107	36.6	109	37.0	110

Figure 5.11.17 (1/2) - CRUISE PERFORMANCE -  
Long Range Cruise (5500 lbs - 2495 kg) (Altitude ≤ 24000 ft)

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

**Long Range Cruise (5500 lbs - 2495 kg) (Cont'd)**

Conditions : Landing gear and flaps UP  
Np = 2000 RPM (\*)  
BLEED switch on AUTO and BLEED HI msg OFF

LEGEND :	OAT : °C	IAS : KIAS
	FF : us gal/h	
	FF : kg/h	TAS : KTAS

Pressure altitude (feet)	TRQ (%)	ISA - 20° C		ISA - 10° C		ISA		ISA + 10° C		ISA + 20° C	
24000	45	- 52	145	- 42	143	- 32	141	- 22	139	- 12	138
		35.3		35.7		36.1		36.6		37.0	
		105	204	106	206	107	208	109	210	110	212
25000	49	- 54	150	- 44	148	- 34	146	- 24	145	- 14	143
		35.9		36.4		36.9		37.4		37.9	
		107	215	108	217	110	219	111	222	113	224
26000	52	- 56	153	- 46	151	- 36	150	- 26	148	- 16	147
		36.6		37.1		37.6		38.0		38.5	
		109	223	110	226	112	229	113	231	114	233
27000	54	- 58	155	- 48	153	- 38	152	- 28	150	- 18	148
		36.8		37.3		37.8		38.2		38.8	
		109	230	111	232	112	235	114	237	115	240
28000	55.5	- 60	156	- 50	154	- 40	153	- 30	151	- 20	149
		36.9		37.4		37.9		38.3		38.8	
		110	235	111	238	113	241	114	243	115	245
29000	56	- 62	156	- 52	154	- 42	152	- 32	150	- 22	148
		36.6		37.1		37.5		38.0		38.5	
		109	238	110	241	111	244	113	246	114	248
30000	56.5	- 64	155	- 54	154	- 44	152	- 34	150	- 24	148
		36.4		36.9		37.3		37.8		38.3	
		108	242	110	245	111	247	112	250	114	252
31000	57	- 66	155	- 56	153	- 46	151	- 36	149	- 26	147
		36.1		36.6		37.0		37.5		38.0	
		107	246	109	248	110	250	111	253	113	255

Figure 5.11.17 (2/2) - CRUISE PERFORMANCE -  
Long Range Cruise (5500 lbs - 2495 kg) (Altitude ≥ 24000 ft)

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

## Long Range Cruise (6300 lbs - 2858 kg)

Conditions : Landing gear and flaps UP  
Np = 2000 RPM (\*)  
BLEED switch on AUTO and BLEED HI msg OFF

LEGEND :	OAT : °C	IAS : KIAS
	FF : us gal/h	
	FF : kg/h	TAS : KTAS

Pressure altitude (feet)	TRQ (%)	ISA - 20°C		ISA - 10°C		ISA		ISA + 10°C		ISA + 20°C	
		OAT	FF	OAT	FF	OAT	FF	OAT	FF	OAT	FF
15000	50	- 34	159	- 24	156	- 14	154	- 4	153	+ 6	151
		44.4		44.9		45.4		46.0		46.5	
		132	193	134	194	135	196	137	198	138	200
18000	50	- 40	154	- 30	153	- 20	151	- 10	149	+ 0	148
		41.8		42.3		42.8		43.4		43.9	
		124	197	126	199	127	201	129	203	130	205
19000	50	- 42	153	- 32	151	- 22	150	- 12	148	- 2	146
		41.0		41.5		42.0		42.5		43.1	
		122	199	123	201	125	203	126	205	128	206
20000	50	- 44	152	- 34	150	- 24	149	- 14	147	- 4	145
		40.2		40.8		41.2		41.7		42.2	
		120	201	121	203	122	205	124	206	125	208
21000	50	- 46	151	- 36	149	- 26	147	- 16	145	- 6	143
		39.4		39.9		40.5		40.9		41.4	
		117	202	119	204	120	206	121	208	123	209
22000	50	- 48	149	- 38	148	- 28	146	- 18	144	- 8	142
		38.7		39.1		39.6		40.1		40.6	
		115	204	116	206	118	208	119	209	121	210
23000	50	- 50	148	- 40	146	- 30	144	- 20	142	- 10	140
		38.0		38.4		38.9		39.3		39.8	
		113	206	114	207	116	209	117	210	118	212
24000	50	- 52	147	- 42	145	- 32	143	- 22	141	- 12	139
		37.3		37.8		38.2		38.6		39.1	
		111	207	112	209	113	210	115	212	116	214

Figure 5.11.18 (1/2) - CRUISE PERFORMANCE -  
Long Range Cruise (6300 lbs - 2858 kg) (Altitude ≤ 24000 ft)

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

**Long Range Cruise (6300 lbs - 2858 kg) (Cont'd)**

Conditions : Landing gear and flaps UP  
Np = 2000 RPM (\*)  
BLEED switch on AUTO and BLEED HI msg OFF

LEGEND :	OAT : °C	IAS : KIAS
	FF : us gal/h	
	FF : kg/h	TAS : KTAS

Pressure altitude (feet)	TRQ (%)	ISA - 20° C		ISA - 10° C		ISA		ISA + 10° C		ISA + 20° C	
24000	50	- 52	147	- 42	145	- 32	143	- 22	141	- 12	139
		37.3		37.8		38.2		38.6		39.1	
		111	207	112	209	113	210	115	212	116	214
25000	53	- 54	151	- 44	149	- 34	147	- 24	145	- 14	143
		37.6		38.0		38.5		39.0		39.5	
		112	216	113	218	114	220	116	221	117	223
26000	56	- 56	154	- 46	152	- 36	150	- 26	148	- 16	146
		38.2		38.6		39.2		39.7		40.2	
		114	224	115	227	116	229	118	231	119	232
27000	58.5	- 58	157	- 48	155	- 38	153	- 28	151	- 18	148
		38.7		39.1		39.6		40.1		40.6	
		115	232	116	234	118	236	119	238	121	240
28000	60.5	- 60	158	- 50	156	- 40	154	- 30	152	- 20	150
		39.0		39.5		40.0		40.5		41.0	
		116	238	117	241	119	243	120	244	122	246
29000	61	- 62	157	- 52	155	- 42	153	- 32	151	- 22	149
		38.7		39.1		39.7		40.1		40.7	
		115	241	116	243	118	245	119	247	121	249
30000	61.5	- 64	157	- 54	155	- 44	153	- 34	150	- 24	148
		38.5		39.0		39.4		39.9		40.4	
		114	244	116	247	117	249	119	251	120	253
31000	62	- 66	156	- 56	154	- 46	152	- 36	150	- 26	147
		38.2		38.7		39.2		39.7		40.2	
		114	247	115	250	116	252	118	254	119	256

Figure 5.11.18 (2/2) - CRUISE PERFORMANCE -  
Long Range Cruise (6300 lbs - 2858 kg) (Altitude ≥ 24000 ft)

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

## Long Range Cruise (7100 lbs - 3220 kg)

Conditions : Landing gear and flaps UP  
Np = 2000 RPM (\*)  
BLEED switch on AUTO and BLEED HI msg OFF

LEGEND :	OAT : °C	IAS : KIAS
	FF : us gal/h	
	FF : kg/h	TAS : KTAS

Pressure altitude (feet)	TRQ (%)	ISA - 20°C		ISA - 10°C		ISA		ISA + 10°C		ISA + 20°C	
15000	55	- 34	161	- 24	159	- 14	157	- 4	155	+ 6	153
		46.6		47.1		47.6		48.3		48.8	
		138	196	140	198	142	199	143	201	145	202
18000	55	- 40	157	- 30	155	- 20	153	- 10	151	+ 0	149
		43.9		44.4		44.9		45.6		46.1	
		130	201	132	202	134	204	135	205	137	207
19000	55	- 42	155	- 32	154	- 22	152	- 12	149	- 2	147
		43.1		43.6		44.1		44.6		45.1	
		128	202	129	204	131	205	133	207	134	208
20000	55	- 44	154	- 34	152	- 24	150	- 14	148	- 4	146
		42.2		42.7		43.3		43.8		44.3	
		125	203	127	205	129	206	130	208	132	209
21000	55	- 46	153	- 36	150	- 26	148	- 16	146	- 6	144
		41.5		41.9		42.4		43.0		43.5	
		123	205	125	206	126	208	128	209	129	210
22000	55	- 48	151	- 38	149	- 28	147	- 18	145	- 8	143
		40.8		41.2		41.7		42.1		42.6	
		121	206	122	208	124	209	125	211	127	212
23000	55	- 50	150	- 40	147	- 30	145	- 20	143	- 10	141
		40.0		40.6		41.0		41.5		41.9	
		119	208	121	209	122	211	123	212	125	212
24000	55	- 52	148	- 42	146	- 32	144	- 22	141	- 12	139
		39.4		39.8		40.4		40.8		41.3	
		117	209	118	211	120	212	121	213	123	214

Figure 5.11.19 (1/2) - CRUISE PERFORMANCE -  
Long Range Cruise (7100 lbs - 3220 kg) (Altitude ≤ 24000 ft)

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

**Long Range Cruise (7100 lbs - 3220 kg) (Cont'd)**

Conditions : Landing gear and flaps UP  
Np = 2000 RPM (\*)  
BLEED switch on AUTO and BLEED HI msg OFF

LEGEND :	OAT : °C	IAS : KIAS
	FF : us gal/h	
	FF : kg/h	TAS : KTAS

Pressure altitude (feet)	TRQ (%)	ISA - 20° C		ISA - 10° C		ISA		ISA + 10° C		ISA + 20° C	
		OAT	FF	OAT	FF	OAT	FF	OAT	FF	OAT	FF
24000	55	- 52	148	- 42	146	- 32	144	- 22	141	- 12	139
		39.4		39.8		40.4		40.8		41.3	
		117	209	118	211	120	212	121	213	123	214
25000	58	- 54	152	- 44	149	- 34	148	- 24	145	- 14	143
		39.6		40.0		40.6		41.1		41.6	
		118	218	119	219	121	221	122	222	124	223
26000	61	- 56	155	- 46	153	- 36	151	- 26	149	- 16	146
		40.2		40.7		41.2		41.7		42.2	
		119	226	121	228	122	229	124	231	125	232
27000	63.5	- 58	158	- 48	155	- 38	153	- 28	151	- 18	149
		40.8		41.2		41.7		42.3		42.8	
		121	234	122	235	124	237	126	239	127	240
28000	65.5	- 60	159	- 50	157	- 40	154	- 30	152	- 20	150
		41.1		41.6		42.0		42.6		43.1	
		122	240	124	241	125	243	127	245	128	246
29000	66	- 62	158	- 52	156	- 42	153	- 32	151	- 22	149
		40.8		41.3		41.8		42.2		42.8	
		121	242	123	244	124	246	125	248	127	249
30000	66.5	- 64	158	- 54	155	- 44	153	- 34	150	- 24	148
		40.6		41.1		41.6		42.1		42.6	
		121	245	122	247	124	249	125	251	127	252
31000	67	- 66	157	- 56	154	- 46	152	- 36	149	- 26	147
		40.3		40.8		41.3		41.9		42.4	
		120	248	121	250	123	252	125	253	126	255

Figure 5.11.19 (2/2) - CRUISE PERFORMANCE -  
Long Range Cruise (7100 lbs - 3220 kg) (Altitude ≥ 24000 ft)

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.



## 5.11 - CRUISE PERFORMANCE

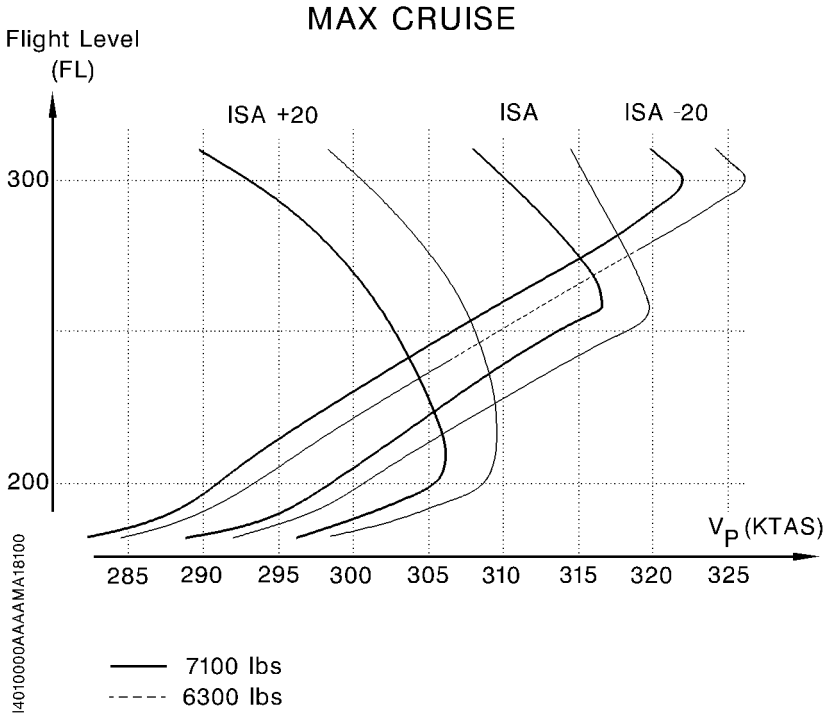


Figure 5.11.1 - CRUISE PERFORMANCE (Maximum cruise)

**Maximum cruise**

Conditions : **ISA - 20°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

*NOTE : Use preferably recommended cruise power*

*If BLEED HI msg ON :*

*. Below FL 200 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 200 to FL 310 : reduce TRQ by 10 %. This TRQ reduction will result in an airspeed reduction of 7 to 9 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	us gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	- 03	121	329	258	86.9	246	241	245	240	244	238
5000	- 13	121	303	238	80.0	241	253	240	252	239	250
10000	- 23	121	282	221	74.5	236	265	234	264	233	262
15000	- 33	121	270	212	71.4	230	280	229	278	227	276
18000	- 39	121	262	205	69.1	227	289	226	287	224	285
20000	- 43	121	256	201	67.7	225	295	224	293	222	291
21000	- 45	121	254	200	67.2	224	298	222	296	221	294
22000	- 46	121	252	198	66.7	223	302	221	299	219	297
23000	- 48	121	251	197	66.2	222	305	220	303	218	300
24000	- 50	121	249	196	65.9	221	308	219	306	217	303
25000	- 52	121	248	195	65.6	220	312	218	309	216	307
26000	- 54	121	247	194	65.3	219	315	217	313	215	310
27000	- 56	121	247	194	65.2	218	319	216	316	213	313
28000	- 58	120	247	194	65.2	216	322	214	321	212	318
29000	- 60	114	247	194	65.3	215	326	213	323	211	320
30000	- 62	110	247	194	65.3	214	329	211	326	209	322
31000	- 64	106	238	187	62.9	209	328	207	324	204	320

Figure 5.11.2 – CRUISE PERFORMANCE –  
Maximum cruise / ISA – 20°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

## Maximum cruise

Conditions : **ISA - 10°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Use preferably recommended cruise power**

**If BLEED HI msg ON :**

. Below FL 200 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.

. From FL 200 to FL 310 : reduce TRQ by 10 %. This TRQ reduction will result in an airspeed reduction of 7 to 9 KIAS.

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 07	121	332	261	87.8	245	244	244	242	242	241
5000	- 03	121	306	240	80.8	240	256	238	255	237	253
10000	- 13	121	285	223	75.2	234	269	232	267	231	265
15000	- 23	121	273	214	72.1	229	283	227	281	225	279
18000	- 29	121	264	207	69.8	225	292	224	290	222	288
20000	- 33	121	259	203	68.4	223	299	221	297	219	294
21000	- 35	121	257	201	67.8	222	302	220	300	218	297
22000	- 36	121	255	200	67.3	221	305	219	303	217	300
23000	- 38	121	253	198	66.8	220	309	218	306	216	304
24000	- 40	121	252	198	66.5	219	312	217	310	215	307
25000	- 42	121	251	197	66.2	217	316	216	313	213	310
26000	- 44	121	249	196	65.9	216	319	214	316	212	313
27000	- 46	118	249	196	65.8	215	322	213	321	211	318
28000	- 48	114	249	195	65.7	214	326	212	323	209	320
29000	- 50	109	241	189	63.6	210	325	207	322	204	318
30000	- 52	105	232	182	61.2	205	324	203	321	200	317
31000	- 54	102	223	175	58.9	201	323	198	319	196	315

Figure 5.11.3 – CRUISE PERFORMANCE -  
Maximum cruise / ISA – 10°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

**Maximum cruise**

Conditions : **ISA - 5°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

*NOTE : Use preferably recommended cruise power*

*If BLEED HI msg ON :*

*. Below FL 200 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 200 to FL 310 : reduce TRQ by 10 %. This TRQ reduction will result in an airspeed reduction of 7 to 10 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	us gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 12	121	334	262	88.3	244	245	243	244	242	243
5000	+ 02	121	307	241	81.2	239	257	238	256	236	255
10000	- 08	121	286	225	75.6	233	270	232	269	230	267
15000	- 18	121	274	215	72.5	228	285	226	283	224	281
18000	- 24	121	265	208	70.1	224	294	223	292	221	290
20000	- 28	121	260	204	68.7	222	301	220	298	218	296
21000	- 30	121	258	203	68.2	221	304	219	302	217	299
22000	- 31	121	256	201	67.6	220	307	218	305	216	302
23000	- 33	121	254	200	67.2	219	311	217	308	215	305
24000	- 35	121	253	198	66.8	217	314	216	312	213	309
25000	- 37	121	252	198	66.5	216	317	214	315	212	312
26000	- 39	120	251	197	66.3	215	321	213	319	211	316
27000	- 41	116	250	196	66.1	214	324	212	322	209	319
28000	- 43	112	243	191	64.2	210	324	208	322	205	318
29000	- 45	107	234	184	61.9	206	323	203	321	200	317
30000	- 47	103	226	177	59.7	202	323	199	319	197	314
31000	- 49	100	218	171	57.6	198	322	196	319	192	313

Figure 5.11.4 – CRUISE PERFORMANCE –  
Maximum cruise / ISA – 5°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

## Maximum cruise

Conditions : **ISA**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Use preferably recommended cruise power**

*If BLEED HI msg ON :*

. Below FL 200 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.

. From FL 200 to FL 310 : reduce TRQ by 10 %. This TRQ reduction will result in an airspeed reduction of 7 to 10 KIAS.

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	us gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 17	121	336	264	88.8	243	246	242	245	241	244
5000	+ 07	121	309	242	81.6	238	259	237	257	235	256
10000	- 03	121	288	226	76.0	232	272	231	270	229	269
15000	- 13	121	276	216	72.8	227	287	225	285	223	283
18000	- 19	121	267	209	70.5	223	296	222	294	220	291
20000	- 23	121	261	205	69.0	221	302	219	300	217	298
21000	- 25	121	259	203	68.4	220	306	218	303	216	301
22000	- 26	121	257	202	68.0	219	309	217	307	215	304
23000	- 28	121	256	201	67.5	218	312	216	310	214	307
24000	- 30	121	254	199	67.1	216	316	215	313	212	310
25000	- 32	120	253	198	66.8	215	319	213	318	211	314
26000	- 34	116	252	198	66.6	214	323	212	320	210	317
27000	- 36	112	245	192	64.6	210	323	208	319	205	315
28000	- 38	109	236	185	62.4	206	322	204	319	201	315
29000	- 40	104	228	179	60.1	202	321	199	317	197	313
30000	- 42	100	220	172	58.0	198	320	196	316	193	311
31000	- 44	97	211	166	55.8	194	319	192	315	188	309

Figure 5.11.5 – CRUISE PERFORMANCE –  
Maximum cruise / ISA

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

**Maximum cruise**

Conditions : **ISA + 5°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

*NOTE : Use preferably recommended cruise power*

*If BLEED HI msg ON :*

*. Below FL 200 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 200 to FL 310 : reduce TRQ by 10 %. This TRQ reduction will result in an airspeed reduction of 7 to 10 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	us gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 22	121	338	265	89.3	243	248	241	247	240	245
5000	+ 12	121	310	244	82.0	237	260	236	259	234	257
10000	+ 02	121	289	227	76.4	231	273	230	272	228	270
15000	- 08	121	277	218	73.2	226	288	224	286	222	284
18000	- 14	121	268	210	70.8	222	297	221	295	219	293
20000	- 18	121	263	206	69.4	220	304	218	302	216	299
21000	- 20	121	260	204	68.8	219	307	217	305	215	302
22000	- 21	121	259	203	68.3	218	311	216	308	214	305
23000	- 23	121	257	201	67.8	216	314	215	312	213	309
24000	- 25	121	255	200	67.4	215	317	213	316	211	313
25000	- 27	118	254	199	67.1	214	321	212	319	210	316
26000	- 29	114	247	194	65.2	210	321	208	319	206	315
27000	- 31	110	238	187	62.9	206	320	204	318	201	314
28000	- 33	106	229	180	60.6	202	320	200	317	197	312
29000	- 35	101	221	174	58.5	198	319	196	315	193	310
30000	- 37	98	213	167	56.3	195	318	192	314	188	309
31000	- 39	95	205	161	54.2	190	316	187	313	183	306

Figure 5.11.6 – CRUISE PERFORMANCE -  
Maximum cruise / ISA + 5°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

## Maximum cruise

Conditions : **ISA + 10°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Use preferably recommended cruise power**

*If BLEED HI msg ON :*

. Below FL 200 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.

. From FL 200 to FL 310 : reduce TRQ by 10 %. This TRQ reduction will result in an airspeed reduction of 7 to 11 KIAS.

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	us gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 27	121	340	267	89.8	242	249	241	248	239	247
5000	+ 17	121	312	245	82.5	236	261	235	260	233	259
10000	+ 07	121	291	228	76.8	230	275	229	273	227	272
15000	- 03	121	279	219	73.6	225	290	223	288	221	286
18000	- 09	121	269	211	71.1	221	299	220	297	218	295
20000	- 13	121	264	207	69.7	219	306	217	304	215	301
21000	- 15	121	262	205	69.1	218	309	216	307	214	304
22000	- 16	121	260	204	68.6	217	312	215	310	213	307
23000	- 18	121	258	202	68.1	215	316	214	313	212	310
24000	- 20	119	256	201	67.7	214	319	212	317	210	314
25000	- 22	115	249	196	65.9	211	320	208	317	206	314
26000	- 24	111	240	189	63.5	207	319	204	316	201	312
27000	- 26	107	232	182	61.2	202	318	200	315	197	311
28000	- 28	102	223	175	59.0	198	317	197	313	193	308
29000	- 30	98	215	169	56.8	195	316	192	312	189	306
30000	- 32	96	207	163	54.7	191	315	188	311	184	305
31000	- 34	92	199	157	52.7	187	314	183	308	179	302

Figure 5.11.7 - CRUISE PERFORMANCE -  
Maximum cruise / ISA + 10°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

**Maximum cruise**

Conditions : **ISA + 20°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

*NOTE : Use preferably recommended cruise power*

*If BLEED HI msg ON :*

*. Below FL 200 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 200 to FL 310 : reduce TRQ by 10 %. This TRQ reduction will result in an airspeed reduction of 7 to 12 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	us gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 37	121	344	270	90.8	240	252	239	251	238	249
5000	+ 27	121	316	248	83.4	234	264	233	263	232	261
10000	+ 17	121	294	231	77.6	229	278	227	276	226	274
15000	+ 07	121	281	221	74.3	223	293	221	291	220	289
18000	+ 01	121	272	213	71.8	220	302	218	300	216	298
20000	- 03	121	266	209	70.4	217	309	215	307	213	304
21000	- 05	120	264	207	69.8	216	312	214	310	212	307
22000	- 06	117	257	202	67.9	213	313	211	310	208	307
23000	- 08	113	249	195	65.7	209	313	207	310	204	306
24000	- 10	109	241	189	63.6	205	313	203	310	200	305
25000	- 12	106	233	183	61.5	202	312	199	309	197	304
26000	- 14	102	224	176	59.3	198	312	196	308	193	303
27000	- 16	99	217	170	57.3	195	311	192	307	188	302
28000	- 18	95	209	164	55.3	191	310	188	306	184	300
29000	- 20	92	202	158	53.3	187	309	183	304	179	298
30000	- 22	89	195	153	51.4	182	308	179	302	174	295
31000	- 24	86	187	147	49.5	178	307	174	300	169	292

Figure 5.11.8 – CRUISE PERFORMANCE -  
Maximum cruise / ISA + 20°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.



## NORMAL CRUISE (recommended)

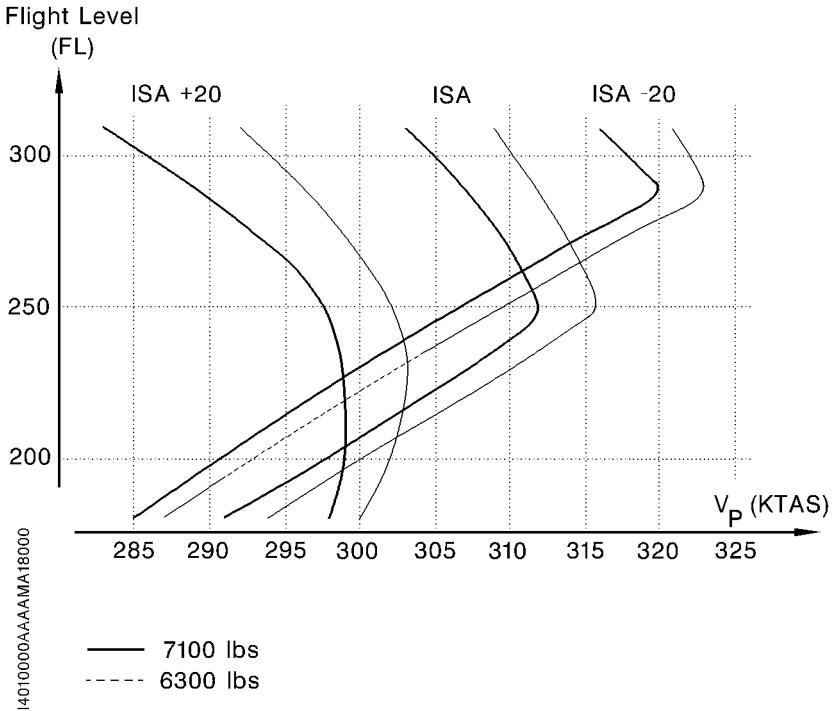


Figure 5.11.9 - CRUISE PERFORMANCE (Recommended cruise)

**Normal (recommended) cruise**

Conditions : **ISA - 20°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Power recommended by PRATT & WHITNEY CANADA**

*If BLEED HI msg ON :*

*. Below FL 160 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 160 to FL 310 : reduce TRQ by 12 %. This TRQ reduction will result in an airspeed reduction of 9 to 11 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	us gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	- 03	121	329	258	86.9	246	241	245	240	244	238
5000	- 13	121	303	238	80.0	241	253	240	252	239	250
10000	- 23	121	282	221	74.5	236	265	234	264	233	262
15000	- 33	121	270	212	71.4	230	280	229	278	227	276
18000	- 39	121	262	205	69.1	227	289	226	287	224	285
20000	- 43	121	256	201	67.7	225	295	224	293	222	291
21000	- 45	121	254	200	67.2	224	298	222	296	221	294
22000	- 46	121	252	198	66.7	223	302	221	299	219	297
23000	- 48	121	251	197	66.2	222	305	220	303	218	300
24000	- 50	121	249	196	65.9	221	308	219	306	217	303
25000	- 52	121	248	195	65.6	220	312	218	309	216	307
26000	- 54	120	247	194	65.3	219	315	217	313	215	310
27000	- 56	118	247	194	65.2	218	319	216	316	213	313
28000	- 58	114	247	194	65.2	216	322	214	320	212	317
29000	- 60	110	247	194	65.2	215	326	213	323	211	320
30000	- 62	106	240	188	63.3	211	326	209	322	206	318
31000	- 64	102	231	181	60.9	207	324	204	321	201	316

Figure 5.11.10 - CRUISE PERFORMANCE -  
Normal cruise / ISA - 20°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

## Normal (recommended) cruise

Conditions : **ISA - 10°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Power recommended by PRATT & WHITNEY CANADA**

*If BLEED HI msg ON :*

*. Below FL 160 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 160 to FL 310 : reduce TRQ by 12 %. This TRQ reduction will result in an airspeed reduction of 9 to 12 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	us gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 07	121	332	261	87.8	245	244	244	242	242	241
5000	- 03	121	306	240	80.0	240	256	238	255	237	253
10000	- 13	121	285	223	75.2	234	269	232	267	231	265
15000	- 23	121	273	214	72.1	229	283	227	281	225	279
18000	- 29	121	264	207	69.8	225	292	224	290	222	288
20000	- 33	121	259	203	68.4	223	299	221	297	219	294
21000	- 35	121	257	201	67.8	222	302	220	300	218	297
22000	- 36	121	255	200	67.3	221	305	219	303	217	300
23000	- 38	121	253	198	66.8	220	309	218	306	216	304
24000	- 40	121	252	198	66.5	219	312	217	310	215	307
25000	- 42	120	251	197	66.2	217	316	216	313	213	310
26000	- 44	116	249	196	65.9	216	319	214	316	212	313
27000	- 46	112	248	195	65.5	215	322	212	319	210	315
28000	- 48	109	240	188	63.3	210	321	208	318	206	314
29000	- 50	105	231	182	61.1	206	321	204	317	201	313
30000	- 52	101	223	175	58.9	202	320	200	316	197	312
31000	- 54	97	215	169	56.8	198	319	196	315	193	310

Figure 5.11.11 - CRUISE PERFORMANCE -  
Normal cruise / ISA - 10°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

**Normal (recommended) cruise**

Conditions : **ISA - 5°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Power recommended by PRATT & WHITNEY CANADA**

*If BLEED HI msg ON :*

*. Below FL 160 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 160 to FL 310 : reduce TRQ by 12 %. This TRQ reduction will result in an airspeed reduction of 9 to 12 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	us gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 12	121	334	262	88.3	244	245	243	244	242	243
5000	+ 02	121	307	241	81.2	239	257	238	256	236	255
10000	- 08	121	286	225	75.6	233	270	232	269	230	267
15000	- 18	121	274	215	72.5	228	285	226	283	224	281
18000	- 24	121	265	208	70.1	224	294	223	292	221	290
20000	- 28	121	260	204	68.7	222	301	220	298	218	296
21000	- 30	121	258	203	68.2	221	304	219	302	217	299
22000	- 31	121	256	201	67.6	220	307	218	305	216	302
23000	- 33	121	254	200	67.2	219	311	217	308	215	305
24000	- 35	121	253	198	66.8	217	314	216	312	213	309
25000	- 37	117	252	198	66.5	216	317	214	316	212	313
26000	- 39	114	250	196	66.0	215	320	212	318	210	315
27000	- 41	110	241	189	63.7	210	320	208	317	206	314
28000	- 43	107	232	182	61.4	206	319	204	317	201	312
29000	- 45	102	224	176	59.3	202	318	200	315	197	310
30000	- 47	98	217	170	57.2	198	317	196	313	193	308
31000	- 49	95	209	164	55.1	195	316	192	312	188	306

Figure 5.11.12 - CRUISE PERFORMANCE -  
Normal cruise / ISA - 5°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

## Normal (recommended) cruise

Conditions : **ISA**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Power recommended by PRATT & WHITNEY CANADA**

*If BLEED HI msg ON :*

*. Below FL 160 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 160 to FL 310 : reduce TRQ by 12 %. This TRQ reduction will result in an airspeed reduction of 9 to 13 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	<sup>us</sup> gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 17	121	336	264	88.8	243	246	242	245	241	244
5000	+ 07	121	309	242	81.6	238	259	237	257	235	256
10000	- 03	121	288	226	76.0	232	272	231	270	229	269
15000	- 13	121	276	216	72.8	227	287	225	285	223	283
18000	- 19	121	267	209	70.5	223	296	222	294	220	291
20000	- 23	121	261	205	69.0	221	302	219	300	217	298
21000	- 25	121	259	203	68.4	220	306	218	303	216	301
22000	- 26	121	257	202	68.0	219	309	217	307	215	304
23000	- 28	121	256	201	67.5	218	312	216	310	214	307
24000	- 30	121	254	199	67.1	216	316	215	313	212	310
25000	- 32	114	252	198	66.5	215	319	213	316	210	312
26000	- 34	110	243	191	64.2	211	318	208	315	206	311
27000	- 36	106	234	184	61.9	206	317	204	314	201	310
28000	- 38	103	226	177	59.7	202	317	200	313	197	308
29000	- 40	99	218	171	57.6	198	316	197	312	193	307
30000	- 42	95	210	165	55.5	195	315	192	310	189	305
31000	- 44	92	202	159	53.4	191	314	188	309	184	303

Figure 5.11.13 - CRUISE PERFORMANCE -  
Normal cruise / ISA

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

**Normal (recommended) cruise**

Conditions : **ISA + 5°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Power recommended by PRATT & WHITNEY CANADA**

*If BLEED HI msg ON :*

*. Below FL 160 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 160 to FL 310 : reduce TRQ by 12 %. This TRQ reduction will result in an airspeed reduction of 9 to 13 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	us gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 22	121	338	265	89.3	243	248	241	247	240	245
5000	+ 12	121	310	244	82.0	237	260	236	259	234	257
10000	+ 02	121	289	227	76.4	231	273	230	272	228	270
15000	- 08	121	277	218	73.2	226	288	224	286	222	284
18000	- 14	121	268	210	70.8	222	297	221	295	219	293
20000	- 18	121	263	206	69.4	220	304	218	302	216	299
21000	- 20	121	260	204	68.8	219	307	217	305	215	302
22000	- 21	121	259	203	68.3	218	311	216	308	214	305
23000	- 23	121	257	201	67.8	216	314	215	312	213	309
24000	- 25	116	253	199	66.9	215	317	213	315	210	311
25000	- 27	112	245	193	64.8	211	316	209	314	206	311
26000	- 29	108	236	185	62.4	207	316	204	313	202	309
27000	- 31	104	228	179	60.2	202	315	200	312	197	308
28000	- 33	100	220	173	58.1	198	314	197	311	193	306
29000	- 35	96	212	166	55.9	195	313	192	309	189	303
30000	- 37	93	204	160	53.9	191	312	188	307	184	301
31000	- 39	90	196	154	51.9	187	311	183	305	179	299

Figure 5.11.14 - CRUISE PERFORMANCE -  
Normal cruise / ISA + 5°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

## Normal (recommended) cruise

Conditions : **ISA + 10°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Power recommended by PRATT & WHITNEY CANADA**

*If BLEED HI msg ON :*

*. Below FL 160 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 160 to FL 310 : reduce TRQ by 12 %. This TRQ reduction will result in an airspeed reduction of 9 to 14 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	<sup>us</sup> gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 27	121	340	267	89.8	242	249	241	248	239	247
5000	+ 17	121	312	245	82.5	236	261	235	260	233	259
10000	+ 07	121	291	228	76.8	230	275	229	273	227	272
15000	- 03	121	279	219	73.6	225	290	223	288	221	286
18000	- 09	121	269	211	71.1	221	299	220	297	218	295
20000	- 13	121	264	207	69.7	219	306	217	304	215	301
21000	- 15	121	262	205	69.1	218	309	216	307	214	304
22000	- 16	121	260	204	68.6	217	312	215	310	213	307
23000	- 18	116	254	200	67.2	214	314	212	311	210	308
24000	- 20	113	246	193	65.1	211	314	208	311	206	307
25000	- 22	108	239	188	63.1	207	314	205	311	202	307
26000	- 24	105	230	181	60.8	203	313	200	310	197	305
27000	- 26	101	222	174	58.7	199	312	197	309	194	304
28000	- 28	97	214	168	56.5	195	311	193	307	189	302
29000	- 30	93	206	161	54.3	191	310	188	306	184	300
30000	- 32	90	198	156	52.4	187	309	184	304	180	297
31000	- 34	87	191	150	50.4	183	308	179	301	174	294

Figure 5.11.15 - CRUISE PERFORMANCE -  
Normal cruise / ISA + 10°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

**Normal (recommended) cruise**

Conditions : **ISA + 20°C**

Landing gear and flaps UP

Np = 2000 RPM (\*) - BLEED switch on AUTO and BLEED HI msg OFF

**NOTE : Power recommended by PRATT & WHITNEY CANADA**

*If BLEED HI msg ON :*

*. Below FL 160 : fuel flow will increase by 2 %. Reduce TRQ only to respect the maximum power of 121.4 %.*

*. From FL 160 to FL 310 : reduce TRQ by 12 %. This TRQ reduction will result in an airspeed reduction of 9 to 16 KIAS.*

Pressure altitude (feet)	OAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)					
						5500 lbs (2495 kg)		6300 lbs (2858 kg)		7100 lbs (3220 kg)	
			l/h	kg/h	<sup>us</sup> gal/h	IAS	TAS	IAS	TAS	IAS	TAS
0	+ 37	121	344	270	90.8	240	252	239	251	238	249
5000	+ 27	121	316	248	83.4	234	264	233	263	232	261
10000	+ 17	121	294	231	77.6	229	278	227	276	226	274
15000	+ 07	121	281	221	74.3	223	293	221	291	220	289
18000	+ 01	121	272	213	71.8	220	302	218	300	216	298
20000	- 03	117	259	203	68.4	214	305	212	302	210	299
21000	- 05	114	251	197	66.4	211	305	209	302	207	299
22000	- 06	111	244	191	64.4	207	306	205	303	203	299
23000	- 08	108	237	186	62.5	204	306	202	303	199	299
24000	- 10	105	229	180	60.5	201	306	198	302	196	298
25000	- 12	101	222	174	58.6	197	306	195	302	192	297
26000	- 14	98	214	168	56.5	194	305	191	301	188	296
27000	- 16	94	207	162	54.6	190	304	187	299	183	294
28000	- 18	91	199	156	52.6	186	303	183	298	178	291
29000	- 20	87	192	150	50.6	182	302	178	296	174	289
30000	- 22	84	185	145	48.8	178	301	174	294	169	286
31000	- 24	81	178	140	47.0	174	299	169	292	164	283

Figure 5.11.16 - CRUISE PERFORMANCE -  
Normal cruise / ISA + 20°C

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.



## Long Range Cruise (5500 lbs - 2495 kg)

Conditions : Landing gear and flaps UP  
 Np = 2000 RPM (\*)  
 BLEED switch on AUTO and BLEED HI msg OFF

LEGEND :	OAT : °C	IAS : KIAS
	FF : us gal/h	
	FF : kg/h	TAS : KTAS

Pressure altitude (feet)	TRQ (%)	ISA - 20°C		ISA - 10°C		ISA		ISA + 10°C		ISA + 20°C	
		OAT	FF	OAT	FF	OAT	FF	OAT	FF	OAT	FF
15000	45	- 33	156	- 23	154	- 13	152	- 3	150	+ 7	148
		42.2		42.6		43.2		43.7		44.2	
		125	190	127	192	128	194	130	195	131	196
18000	45	- 39	152	- 29	150	- 19	148	- 9	146	+ 1	145
		39.7		40.2		40.8		41.2		41.7	
		118	194	120	196	121	197	122	199	124	202
19000	45	- 41	150	- 31	148	- 21	147	- 11	145	- 1	144
		39.0		39.4		39.9		40.4		40.9	
		116	195	117	197	119	199	120	201	121	203
20000	45	- 43	149	- 33	147	- 23	146	- 13	144	- 3	143
		38.2		38.7		39.1		39.6		40.1	
		113	197	115	199	116	201	118	203	119	205
21000	45	- 45	148	- 35	146	- 25	145	- 15	143	- 5	142
		37.4		37.9		38.4		38.8		39.3	
		111	198	112	201	114	203	115	205	117	207
22000	45	- 46	147	- 36	145	- 26	144	- 16	142	- 6	140
		36.7		37.1		37.5		38.1		38.6	
		109	200	110	202	112	205	113	207	115	208
23000	45	- 48	146	- 38	144	- 28	142	- 18	141	- 8	139
		35.9		36.4		36.8		37.3		37.8	
		107	202	108	205	109	206	111	208	112	210
24000	45	- 50	145	- 40	143	- 30	141	- 20	139	- 10	138
		35.3		35.7		36.1		36.6		37.0	
		105	204	106	206	107	208	109	210	110	212

Figure 5.11.17 (1/2) - CRUISE PERFORMANCE -  
 Long Range Cruise (5500 lbs - 2495 kg) (Altitude ≤ 24000 ft)

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

**Long Range Cruise (5500 lbs - 2495 kg) (Cont'd)**

Conditions : Landing gear and flaps UP  
Np = 2000 RPM (\*)  
BLEED switch on AUTO and BLEED HI msg OFF

LEGEND :	OAT : °C	IAS : KIAS
	FF : us gal/h	
	FF : kg/h	TAS : KTAS

Pressure altitude (feet)	TRQ (%)	ISA - 20° C		ISA - 10° C		ISA		ISA + 10° C		ISA + 20° C	
24000	45	<b>- 50</b>	<b>145</b>	<b>- 40</b>	<b>143</b>	<b>- 30</b>	<b>141</b>	<b>- 20</b>	<b>139</b>	<b>- 10</b>	<b>138</b>
		35.3		35.7		36.1		36.6		37.0	
		105	<b>204</b>	106	<b>206</b>	107	<b>208</b>	109	<b>210</b>	110	<b>212</b>
25000	49	<b>- 52</b>	<b>150</b>	<b>- 42</b>	<b>148</b>	<b>- 32</b>	<b>146</b>	<b>- 22</b>	<b>145</b>	<b>- 12</b>	<b>143</b>
		35.9		36.4		36.9		37.4		37.9	
		107	<b>215</b>	108	<b>217</b>	110	<b>219</b>	111	<b>222</b>	113	<b>224</b>
26000	52	<b>- 54</b>	<b>153</b>	<b>- 44</b>	<b>151</b>	<b>- 34</b>	<b>150</b>	<b>- 24</b>	<b>148</b>	<b>- 14</b>	<b>147</b>
		36.6		37.1		37.6		38.0		38.5	
		109	<b>223</b>	110	<b>226</b>	112	<b>229</b>	113	<b>231</b>	114	<b>233</b>
27000	54	<b>- 56</b>	<b>155</b>	<b>- 46</b>	<b>153</b>	<b>- 36</b>	<b>152</b>	<b>- 26</b>	<b>150</b>	<b>- 16</b>	<b>148</b>
		36.8		37.3		37.8		38.2		38.8	
		109	<b>230</b>	111	<b>232</b>	112	<b>235</b>	114	<b>237</b>	115	<b>240</b>
28000	55.5	<b>- 58</b>	<b>156</b>	<b>- 48</b>	<b>154</b>	<b>- 38</b>	<b>153</b>	<b>- 28</b>	<b>151</b>	<b>- 18</b>	<b>149</b>
		36.9		37.4		37.9		38.3		38.8	
		110	<b>235</b>	111	<b>238</b>	113	<b>241</b>	114	<b>243</b>	115	<b>245</b>
29000	56	<b>- 60</b>	<b>156</b>	<b>- 50</b>	<b>154</b>	<b>- 40</b>	<b>152</b>	<b>- 30</b>	<b>150</b>	<b>- 20</b>	<b>148</b>
		36.6		37.1		37.5		38.0		38.5	
		109	<b>238</b>	110	<b>241</b>	111	<b>244</b>	113	<b>246</b>	114	<b>248</b>
30000	56.5	<b>- 62</b>	<b>155</b>	<b>- 52</b>	<b>154</b>	<b>- 42</b>	<b>152</b>	<b>- 32</b>	<b>150</b>	<b>- 22</b>	<b>148</b>
		36.4		36.9		37.3		37.8		38.3	
		108	<b>242</b>	110	<b>245</b>	111	<b>247</b>	112	<b>250</b>	114	<b>252</b>
31000	57	<b>- 64</b>	<b>155</b>	<b>- 54</b>	<b>153</b>	<b>- 44</b>	<b>151</b>	<b>- 34</b>	<b>149</b>	<b>- 24</b>	<b>147</b>
		36.1		36.6		37.0		37.5		38.0	
		107	<b>246</b>	109	<b>248</b>	110	<b>250</b>	111	<b>253</b>	113	<b>255</b>

Figure 5.11.17 (2/2) - CRUISE PERFORMANCE -  
Long Range Cruise (5500 lbs - 2495 kg) (Altitude ≥ 24000 ft)

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

## Long Range Cruise (6300 lbs - 2858 kg)

Conditions : Landing gear and flaps UP  
Np = 2000 RPM (\*)  
BLEED switch on AUTO and BLEED HI msg OFF

LEGEND :	OAT : °C	IAS : KIAS
	FF : us gal/h	
	FF : kg/h	TAS : KTAS

Pressure altitude (feet)	TRQ (%)	ISA - 20°C		ISA - 10°C		ISA		ISA + 10°C		ISA + 20°C	
		OAT	FF	OAT	FF	OAT	FF	OAT	FF	OAT	FF
15000	50	- 33	159	- 23	156	- 13	154	- 3	153	+ 7	151
		44.4		44.9		45.4		46.0		46.5	
		132	193	134	194	135	196	137	198	138	200
18000	50	- 39	154	- 29	153	- 19	151	- 9	149	+ 1	148
		41.8		42.3		42.8		43.4		43.9	
		124	197	126	199	127	201	129	203	130	205
19000	50	- 41	153	- 31	151	- 21	150	- 11	148	- 1	146
		41.0		41.5		42.0		42.5		43.1	
		122	199	123	201	125	203	126	205	128	206
20000	50	- 43	152	- 33	150	- 23	149	- 13	147	- 3	145
		40.2		40.8		41.2		41.7		42.2	
		120	201	121	203	122	205	124	206	125	208
21000	50	- 45	151	- 35	149	- 25	147	- 15	145	- 5	143
		39.4		39.9		40.5		40.9		41.4	
		117	202	119	204	120	206	121	208	123	209
22000	50	- 46	149	- 36	148	- 26	146	- 16	144	- 6	142
		38.7		39.1		39.6		40.1		40.6	
		115	204	116	206	118	208	119	209	121	210
23000	50	- 48	148	- 38	146	- 28	144	- 18	142	- 8	140
		38.0		38.4		38.9		39.3		39.8	
		113	206	114	207	116	209	117	210	118	212
24000	50	- 50	147	- 40	145	- 30	143	- 20	141	- 10	139
		37.3		37.8		38.2		38.6		39.1	
		111	207	112	209	113	210	115	212	116	214

Figure 5.11.18 (1/2) - CRUISE PERFORMANCE -  
Long Range Cruise (6300 lbs - 2858 kg) (Altitude ≤ 24000 ft)

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

**Long Range Cruise (6300 lbs - 2858 kg) (Cont'd)**

Conditions : Landing gear and flaps UP  
Np = 2000 RPM (\*)  
BLEED switch on AUTO and BLEED HI msg OFF

LEGEND :	OAT : °C	IAS : KIAS
	FF : us gal/h	
	FF : kg/h	TAS : KTAS

Pressure altitude (feet)	TRQ (%)	ISA - 20° C		ISA - 10° C		ISA		ISA + 10° C		ISA + 20° C	
24000	50	- 50	147	- 40	145	- 30	143	- 20	141	- 10	139
		37.3		37.8		38.2		38.6		39.1	
		111	207	112	209	113	210	115	212	116	214
25000	53	- 52	151	- 42	149	- 32	147	- 22	145	- 12	143
		37.6		38.0		38.5		39.0		39.5	
		112	216	113	218	114	220	116	221	117	223
26000	56	- 54	154	- 44	152	- 34	150	- 24	148	- 14	146
		38.2		38.6		39.2		39.7		40.2	
		114	224	115	227	116	229	118	231	119	232
27000	58.5	- 56	157	- 46	155	- 36	153	- 26	151	- 16	148
		38.7		39.1		39.6		40.1		40.6	
		115	232	116	234	118	236	119	238	121	240
28000	60.5	- 58	158	- 48	156	- 38	154	- 28	152	- 18	150
		39.0		39.5		40.0		40.5		41.0	
		116	238	117	241	119	243	120	244	122	246
29000	61	- 60	157	- 50	155	- 40	153	- 30	151	- 20	149
		38.7		39.1		39.7		40.1		40.7	
		115	241	116	243	118	245	119	247	121	249
30000	61.5	- 62	157	- 52	155	- 42	153	- 32	150	- 22	148
		38.5		39.0		39.4		39.9		40.4	
		114	244	116	247	117	249	119	251	120	253
31000	62	- 64	156	- 54	154	- 44	152	- 34	150	- 24	147
		38.2		38.7		39.2		39.7		40.2	
		114	247	115	250	116	252	118	254	119	256

Figure 5.11.18 (2/2) - CRUISE PERFORMANCE -  
Long Range Cruise (6300 lbs - 2858 kg) (Altitude ≥ 24000 ft)

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

## Long Range Cruise (7100 lbs - 3220 kg)

Conditions : Landing gear and flaps UP  
 Np = 2000 RPM (\*)  
 BLEED switch on AUTO and BLEED HI msg OFF

LEGEND :	OAT : °C	IAS : KIAS
	FF : us gal/h	
	FF : kg/h	TAS : KTAS

Pressure altitude (feet)	TRQ (%)	ISA - 20° C		ISA - 10° C		ISA		ISA + 10° C		ISA + 20° C	
		OAT	FF	OAT	FF	OAT	FF	OAT	FF	OAT	FF
15000	55	- 33	161	- 23	159	- 13	157	- 3	155	+ 7	153
		46.6	138	47.1	140	47.6	142	48.3	143	48.8	145
18000	55	- 39	157	- 29	155	- 19	153	- 9	151	+ 1	149
		43.9	130	44.4	132	44.9	134	45.6	135	46.1	137
19000	55	- 41	155	- 31	154	- 21	152	- 11	149	- 1	147
		43.1	128	43.6	129	44.1	131	44.6	133	45.1	134
20000	55	- 43	154	- 33	152	- 23	150	- 13	148	- 3	146
		42.2	125	42.7	127	43.3	129	43.8	130	44.3	132
21000	55	- 45	153	- 35	150	- 25	148	- 15	146	- 5	144
		41.5	123	41.9	125	42.4	126	43.0	128	43.5	129
22000	55	- 46	151	- 36	149	- 26	147	- 16	145	- 6	143
		40.8	121	41.2	122	41.7	124	42.1	125	42.6	127
23000	55	- 48	150	- 38	147	- 28	145	- 18	143	- 8	141
		40.0	119	40.6	121	41.0	122	41.5	123	41.9	125
24000	55	- 50	148	- 40	146	- 30	144	- 20	141	- 10	139
		39.4	117	39.8	118	40.4	120	40.8	121	41.3	123

Figure 5.11.19 (1/2) - CRUISE PERFORMANCE -  
 Long Range Cruise (7100 lbs - 3220 kg) (Altitude ≤ 24000 ft)

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

**Long Range Cruise (7100 lbs - 3220 kg) (Cont'd)**

Conditions : Landing gear and flaps UP  
Np = 2000 RPM (\*)  
BLEED switch on AUTO and BLEED HI msg OFF

LEGEND :	OAT : °C	IAS : KIAS
	FF : us gal/h	
	FF : kg/h	TAS : KTAS

Pressure altitude (feet)	TRQ (%)	ISA - 20° C		ISA - 10° C		ISA		ISA + 10° C		ISA + 20° C	
24000	55	<b>- 50</b>	<b>148</b>	<b>- 40</b>	<b>146</b>	<b>- 30</b>	<b>144</b>	<b>- 20</b>	<b>141</b>	<b>- 10</b>	<b>139</b>
		39.4		39.8		40.4		40.8		41.3	
		117	<b>209</b>	118	<b>211</b>	120	<b>212</b>	121	<b>213</b>	123	<b>214</b>
25000	58	<b>- 52</b>	<b>152</b>	<b>- 42</b>	<b>149</b>	<b>- 32</b>	<b>148</b>	<b>- 22</b>	<b>145</b>	<b>- 12</b>	<b>143</b>
		39.6		40.0		40.6		41.1		41.6	
		118	<b>218</b>	119	<b>219</b>	121	<b>221</b>	122	<b>222</b>	124	<b>223</b>
26000	61	<b>- 54</b>	<b>155</b>	<b>- 44</b>	<b>153</b>	<b>- 34</b>	<b>151</b>	<b>- 24</b>	<b>149</b>	<b>- 14</b>	<b>146</b>
		40.2		40.7		41.2		41.7		42.2	
		119	<b>226</b>	121	<b>228</b>	122	<b>229</b>	124	<b>231</b>	125	<b>232</b>
27000	63.5	<b>- 56</b>	<b>158</b>	<b>- 46</b>	<b>155</b>	<b>- 36</b>	<b>153</b>	<b>- 26</b>	<b>151</b>	<b>- 16</b>	<b>149</b>
		40.8		41.2		41.7		42.3		42.8	
		121	<b>234</b>	122	<b>235</b>	124	<b>237</b>	126	<b>239</b>	127	<b>240</b>
28000	65.5	<b>- 58</b>	<b>159</b>	<b>- 48</b>	<b>157</b>	<b>- 38</b>	<b>154</b>	<b>- 28</b>	<b>152</b>	<b>- 18</b>	<b>150</b>
		41.1		41.6		42.0		42.6		43.1	
		122	<b>240</b>	124	<b>241</b>	125	<b>243</b>	127	<b>245</b>	128	<b>246</b>
29000	66	<b>- 60</b>	<b>158</b>	<b>- 50</b>	<b>156</b>	<b>- 40</b>	<b>153</b>	<b>- 30</b>	<b>151</b>	<b>- 20</b>	<b>149</b>
		40.8		41.3		41.8		42.2		42.8	
		121	<b>242</b>	123	<b>244</b>	124	<b>246</b>	125	<b>248</b>	127	<b>249</b>
30000	66.5	<b>- 62</b>	<b>158</b>	<b>- 52</b>	<b>155</b>	<b>- 42</b>	<b>153</b>	<b>- 32</b>	<b>150</b>	<b>- 22</b>	<b>148</b>
		40.6		41.1		41.6		42.1		42.6	
		121	<b>245</b>	122	<b>247</b>	124	<b>249</b>	125	<b>251</b>	127	<b>252</b>
31000	67	<b>- 64</b>	<b>157</b>	<b>- 54</b>	<b>154</b>	<b>- 44</b>	<b>152</b>	<b>- 34</b>	<b>149</b>	<b>- 24</b>	<b>147</b>
		40.3		40.8		41.3		41.9		42.4	
		120	<b>248</b>	121	<b>250</b>	123	<b>252</b>	125	<b>253</b>	126	<b>255</b>

Figure 5.11.19 (2/2) - CRUISE PERFORMANCE -  
Long Range Cruise (7100 lbs - 3220 kg) (Altitude ≥ 24000 ft)

(\*) Propeller RPM utilization between 1600 and 2000 RPM is possible without changing performance. Display the TRQ indicated in table with Np = 2000 RPM, then reduce Np without exceeding 121.4 % TRQ.

## 5.12 - TIME, CONSUMPTION AND DESCENT DISTANCE

Conditions : Power as required to maintain constant Vz  
Landing gear and flaps UP  
CAS = 230 KCAS - 2000 RPM - BLEED AUTO

Pressure altitude (feet)	Vz = 1500 ft/min					Vz = 2000 ft/min					Vz = 2500 ft/min				
	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)
		l	kg	us gal			l	kg	us gal			l	kg	us gal	
31000	20.40	73	58	19.4	101	15.30	49	39	13.1	75	12.25	35	28	9.3	60
30000	20.00	71	56	18.7	97	15.00	48	38	12.6	72	12.00	34	27	9.1	58
28000	18.40	66	52	17.5	89	14.00	45	35	11.8	66	11.10	32	25	8.5	53
26000	17.20	62	49	16.3	81	13.00	42	33	11.0	61	10.25	30	24	7.9	49
24000	16.00	57	45	15.1	74	12.00	39	30	10.2	55	09.35	28	22	7.4	44
22000	14.40	52	41	13.8	66	11.00	36	28	9.5	50	08.50	26	20	6.8	40
20000	13.20	48	38	12.8	59	10.00	33	26	8.6	44	08.00	24	19	6.2	36
18000	12.00	44	34	11.5	53	09.00	30	23	7.8	39	07.10	21	17	5.7	31
16000	10.40	39	31	10.3	46	08.00	27	21	7.0	34	06.25	19	15	5.0	28
14000	09.20	35	27	9.1	40	07.00	23	18	6.2	30	05.35	17	13	4.5	24
12000	08.00	30	23	7.9	33	06.00	20	16	5.4	25	04.50	15	11	3.8	20
10000	06.40	25	20	6.6	27	05.00	17	13	4.5	21	04.00	12	10	3.2	16
8000	05.20	20	16	5.4	22	04.00	14	11	3.6	16	03.10	10	8	2.6	13
6000	04.00	15	12	4.0	16	03.00	10	8	2.7	12	02.25	8	6	2.0	10
4000	02.40	10	8	2.7	10	02.00	7	6	1.9	8	01.35	5	4	1.3	6
2000	01.20	5	4	1.4	5	01.00	4	3	0.9	4	00.50	3	2	0.7	3
SL	00.00	0	0	0	0	00.00	0	0	0	0	00.00	0	0	0	0

Figure 5.12.1 - TIME, CONSUMPTION AND DESCENT DISTANCE

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## 5.13 - HOLDING TIME

Conditions : Landing gear and flaps UP  
 IAS = 120 KIAS - 2000 RPM - BLEED AUTO  
 TRQ ≈ 35 %

Pressure altitude (feet)	FUEL USED DURING HOLDING TIME											
	Weight 5500 lbs (2495 kg)						Weight 6300 lbs (2858 kg)					
	10 min			30 min			10 min			30 min		
	l	kg	us gal	l	kg	us gal	l	kg	us gal	l	kg	us gal
SL	32	25	8.4	95	75	25.1	32	25	8.4	96	75	25.3
5000	28	22	7.3	83	65	22.0	29	23	7.6	86	68	22.7
10000	25	20	6.6	75	59	19.8	26	20	6.8	77	61	20.4
15000	23	18	6.1	69	54	18.3	24	19	6.3	72	57	19.0
20000	21	17	5.6	63	50	16.8	22	17	5.9	66	52	17.6

Figure 5.13.1 - HOLDING TIME

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## 5.14 - LANDING DISTANCES

**WEIGHT : 7024 lbs (3186 kg)**

- Associated conditions :
- Landing gear DN and flaps LDG
  - Approach speed IAS = 85 KIAS
  - Touch-down speed IAS = 78 KIAS
  - Maximum braking without reverse
  - Hard, dry and level runway
  - GR = Ground roll (in ft)
  - D<sub>50</sub> = Landing distance (clear to 50 ft) (in ft)

PRESSURE ALTITUDE ft	ISA - 35°C		ISA - 20°C		ISA - 10°C		ISA	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1575	2135	1675	2265	1740	2330	1840	2430
2000	1675	2265	1805	2395	1870	2495	1970	2590
4000	1805	2395	1940	2560	2035	2660	2135	2790
6000	1940	2560	2100	2725	2200	2855	2300	2955
8000	2100	2725	2265	2920	2360	3020	2495	3180
PRESSURE ALTITUDE ft	ISA + 10°C		ISA + 20°C		ISA + 30°C		ISA + 37°C	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1905	2530	2000	2625	2070	2690	2135	2790
2000	2070	2690	2135	2790	2230	2890	2300	2955
4000	2230	2890	2330	2985	2430	3085	2495	3185
6000	2395	3050	2530	3215	2625	3315	2690	3380
8000	2590	3280	2725	3410	2855	3570	2920	3640

Figure 5.14.1 - LANDING DISTANCES - 7024 lbs (3186 kg)

- Corrections :
- Reduce total distances of 10 % every 10 kt of headwind
  - Increase total distances of 30 % every 10 kt of tail-wind

Other runway surfaces require the following correction factors :

- Increase by :
- |      |                |      |                    |
|------|----------------|------|--------------------|
| 7 %  | on hard grass  | 25 % | on high grass      |
| 10 % | on short grass | 30 % | on slippery runway |
| 15 % | on wet runway  |      |                    |

**LANDING DISTANCES**

**WEIGHT : 6250 lbs (2835 kg)**

- Associated conditions: - Landing gear DN and flaps LDG  
 - Approach speed IAS = 80 KIAS  
 - Touch-down speed IAS = 65 KIAS  
 - Maximum braking without reverse  
 - Hard, dry and level runway  
 - GR = Ground roll (in ft)  
 - D<sub>50</sub> = Landing distance (clear to 50 ft) (in ft)

PRESSURE ALTITUDE ft	ISA - 35°C		ISA - 20°C		ISA - 10°C		ISA	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1050	1900	1115	2000	1180	2070	1215	2135
2000	1115	2000	1215	2100	1245	2200	1310	2265
4000	1180	2100	1280	2230	1345	2330	1410	2395
6000	1280	2230	1380	2360	1445	2460	1510	2525
8000	1380	2360	1475	2490	1540	2590	1610	2690
PRESSURE ALTITUDE ft	ISA + 10°C		ISA + 20°C		ISA + 30°C		ISA + 37°C	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1280	2200	1310	2300	1380	2360	1445	2430
2000	1345	2330	1410	2430	1475	2495	1540	2560
4000	1445	2460	1510	2560	1575	2655	1640	2755
6000	1575	2645	1640	2720	1705	2820	1770	2920
8000	1705	2790	1770	2885	1835	2985	1900	3085

Figure 5.14.2 - LANDING DISTANCES - 6250 lbs (2835 kg)

- Corrections : . Reduce total distances of 10 % every 10 kt of headwind  
 . Increase total distances of 30 % every 10 kt of tail-wind

Other runway surfaces require the following correction factors :

- Increase by : 7 % on hard grass      25 % on high grass  
 10 % on short grass      30 % on slippery runway  
 15 % on wet runway

## LANDING DISTANCES

**WEIGHT : 5071 lbs (2300 kg)**

- Associated conditions :
- Landing gear DN and flaps LDG
  - Approach speed IAS = 80 KIAS
  - Touch-down speed IAS = 60 KIAS
  - Maximum braking without reverse
  - Hard, dry and level runway
  - GR = Ground roll (in ft)
  - D<sub>50</sub> = Landing distance (clear to 50 ft) (in ft)

PRESSURE ALTITUDE ft	ISA - 35°C		ISA - 20°C		ISA - 10°C		ISA	
	GR	D50	GR	D50	GR	D50	GR	D50
0	885	1900	950	2000	1000	2070	1030	2135
2000	950	2000	1030	2100	1065	2200	1115	2265
4000	1000	2100	1080	2230	1150	2330	1200	2395
6000	1080	2230	1180	2360	1230	2460	1280	2525
8000	1180	2360	1245	2490	1310	2590	1360	2690
PRESSURE ALTITUDE ft	ISA + 10°C		ISA + 20°C		ISA + 30°C		ISA + 37°C	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1080	2200	1115	2300	1180	2360	1230	2430
2000	1150	2330	1200	2430	1245	2495	1310	2560
4000	1230	2460	1280	2560	1345	2655	1395	2755
6000	1345	2645	1395	2720	1445	2820	1510	2920
8000	1445	2790	1510	2885	1560	2985	1610	3085

Figure 5.14.3 - LANDING DISTANCES - 5071 lbs (2300 kg)

- Corrections :
- Reduce total distances of 10 % every 10 kt of headwind
  - Increase total distances of 30 % every 10 kt of tail-wind

Other runway surfaces require the following correction factors :

- Increase by :
- 7 % on hard grass
  - 10 % on short grass
  - 15 % on wet runway
  - 25 % on high grass
  - 30 % on slippery runway

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# SECTION 6

## WEIGHT AND BALANCE

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## 6.1 - GENERAL

This section is intended to provide the pilot with the procedure to determine the weight and balance of the airplane.

TBM850 G1000 (Post-MOD70-0315-25) allows multiple cabin seat configurations between 2 seats and 6 seats, as required by the operator.

All

A list of equipment available for this airplane is referenced at the end of this Pilot's Operating Handbook – refer to Chapter 6.5.

The list of specific optional equipment installed on your airplane as delivered from the factory can be found in the records carried in the airplane.

**IT IS THE PILOT'S RESPONSIBILITY TO ENSURE THAT THE AIRPLANE IS PROPERLY LOADED AND THE WEIGHT AND BALANCE LIMITS ARE ADHERED TO.**

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## **6.2 - AIRPLANE WEIGHING PROCEDURES**

Refer to Maintenance Manual for the procedures to use.

**NOTE :**

*Weighing carried out at the factory takes into account all equipment installed on the airplane. The list of this equipment and the total weight is noted in the Individual Inspection Record.*

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### 6.3 - BAGGAGE LOADING

There are two baggage compartments :

- one in fuselage non pressurized forward section, between firewall and cockpit with maximum baggage capacity of 110 lbs (50 kg),
- one located in the rear of the pressurized cabin with following characteristics :

Pre-MOD70-0315-25 or Post-MOD70-0315-25 with 6-seat configuration

- . In the baggage compartment, behind the rear seats, with maximum loading capacity of 220 lbs (100 kg).
- . Stowing straps are provided for securing parcels and baggage on compartment floor. A partition net separating the cabin from the baggage compartment is attached to frame C14.

Post-MOD70-0315-25 with other allowed seat accommodation

There are two loading areas :

- . One in place of the two removed rear seats, with maximum loading capacity of 176 lbs (80 kg),
- . One in the baggage compartment behind the rear seats area, with maximum loading capacity of 220 lbs (100 kg).

Two types of baggage securing nets can be used :

- . The Small Cargo Net is attached through nine anchoring points on seat rails, between frame C11 and frame C13bis (refer to Section 2 for limitations) (Figure 7.2.1B).
- . The Large Cargo Net is attached through seven anchoring points on seat rails, between frame C11 and frame C13bis and six anchoring points on fuselage sides, at frame C14 (refer to Section 2 for limitations) (Figure 7.2.1A).

14113500AAA BMAI8400

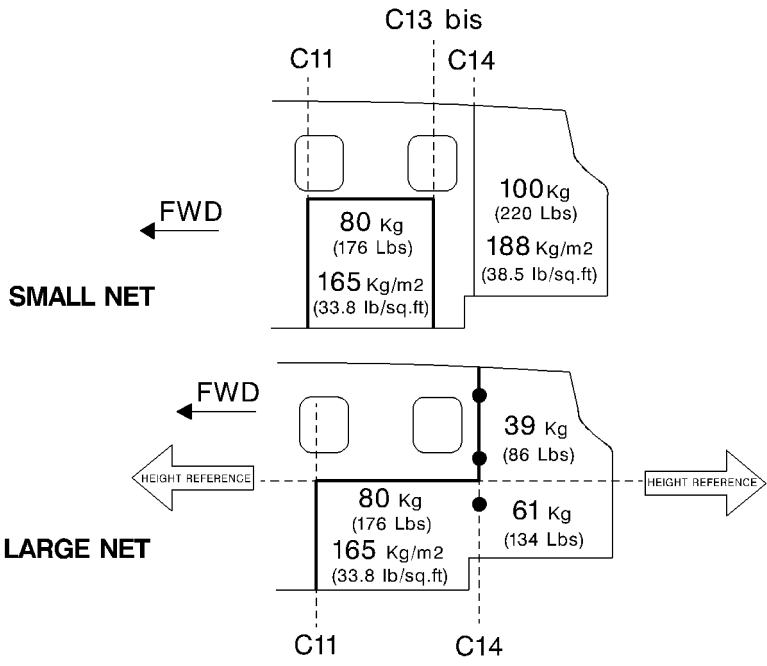


Figure 6.3.1 - Baggage limits

Authorized anchoring points are identified with green self-adhesive labels affixed to the inside of the rail.

A placard indicates loading limits for each securing net.

Evenly distribute the load within the cargo zone and ensure that overall weight is centered.

When using the large net, distribute the weight in each zone (delineated by the step in the floor) according to the zone limits.

■ All

### **WARNING**

■ **IT IS THE PILOT'S RESPONSIBILITY TO CHECK THAT ALL PARCELS AND BAGGAGES ARE PROPERLY SECURED IN THE CABIN**

■ **TRANSPORT OF DANGEROUS PRODUCT IS NORMALLY PROHIBITED, HOWEVER IF TRANSPORT OF SUCH PRODUCT IS NECESSARY, IT MUST BE PERFORMED IN COMPLIANCE WITH REGULATIONS CONCERNING TRANSPORT OF DANGEROUS PRODUCT AND ANY OTHER APPLICABLE REGULATION**

Baggage compartments loading must be done in accordance with the weight and balance limits of the airplane (refer to Section 2 for limitations).

Generally, if rear seats are not used (or removed), first load AFT compartment, then, if required, FWD compartment. If rear seats are used, first load FWD compartment, then, if required, AFT compartment.

Compute and check weight and balance diagram to ensure the airplane is within the allowable limits.

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## 6.4 - DETERMINING WEIGHT AND BALANCE

### GENERAL

This section is intended to provide the pilot with the procedure to determine the weight and balance of the airplane.

IT IS THE PILOT'S RESPONSIBILITY TO ENSURE THAT THE AIRPLANE IS PROPERLY LOADED AND THE WEIGHT AND BALANCE LIMITS ARE ADHERED TO.

This procedure requires the following data related to the basic characteristics of the empty airplane to be obtained from the last airplane Weight and Balance Report :

- the empty weight, expressed in kg or lbs,
- the moment, expressed in m.kg or in.lbs,
- the CG, expressed in MAC %.

If the airplane empty weight has varied since last Weight and Balance Report (for example, due to installation of optional equipment), refer to paragraph "DETERMINING EMPTY AIRPLANE CHARACTERISTICS" to determine the new empty weight and the corresponding moment.

### USING THE WEIGHT AND BALANCE FORM AND DIAGRAM

This procedure determines the airplane weight and balance characteristics for flight.

Select the units for the Weight and Balance determination, either m and kg, or lb and in, and use the dedicated form (Figures 6.4.3 or 6.4.4 or 6.4.5 or 6.4.6), appropriate to the chosen units and airplane configuration.

- 1) Record the basic empty weight (1a), moment (1b) and CG (MAC %) (1c) from the last Weight and Balance Report (see sample of Weight and Balance reports Figures 6.4.1 and 6.4.2).
- 2) Record the expected loading (2a) and compute each associated moment (2b). If **Post-MOD70-0315-25 calculation is used**, depending on seat accommodation (from 2 to 6 seats), use negative values : - 17 kg (- 37.5 lbs) per intermediate seat removed and - 24 kg (- 52.9 lbs) per rear seat removed.
- 3) Compute Zero Fuel Weight (3a) and moment (3b) as sum of all the above weights (1a) + (2a) and moments (1b) + (2b).

- 4) Check value (3a) to be below Maximum Zero Fuel Weight.
- 5) Compute Zero Fuel Weight arm (5) and CG (MAC %) (5c) using given formulas.
- 6) Record the loaded Fuel (6a) and compute associated moment (6b).
- 7) Compute Ramp Weight (7a) and moment (7b) as sum of Zero Fuel Weight (3a) + loaded Fuel (6a) and moments (3b) + (6b).
- 8) Check value (7a) to be below Maximum Ramp Weight.
- 9) Compute Ramp Weight arm (9) and CG (MAC %) (9c) using given formulas.
- 10) Record the expected Taxi Fuel (negative value) (10a) and compute associated moment (10b).
- 11) Compute Takeoff Weight (11a) and moment (11b) as sum of Ramp Weight (7a) + Taxi Fuel (10a) and moments (7b) + (10b).
- 12) Check value (11a) to be below Maximum Takeoff Weight.
- 13) Compute Takeoff Weight arm (13) and CG (MAC %) (13c) using given formulas.
- 14) Record the expected Trip Fuel (negative value) (14a) and compute associated moment (14b).
- 15) Compute Landing Weight (15a) and moment (15b) as sum of Takeoff Weight (11a) + Trip Fuel (14a) and moments (11b) + (14b).
- 16) Check value (15a) to be below Maximum Landing Weight.
- 17) Compute Landing Weight arm (17) and CG (MAC %) (17c) using given formulas.
- 18) Plot Zero Fuel Weight, Takeoff Weight and Landing Weight on Weight and Balance Diagram.
- 19) Check that all points are within the weight and balance limits and that they are vertically aligned.
- 20) Record these data on your navigation log.

## AIRPLANE LOADING FORM (m, kg) - Pre-MOD70-0315-25

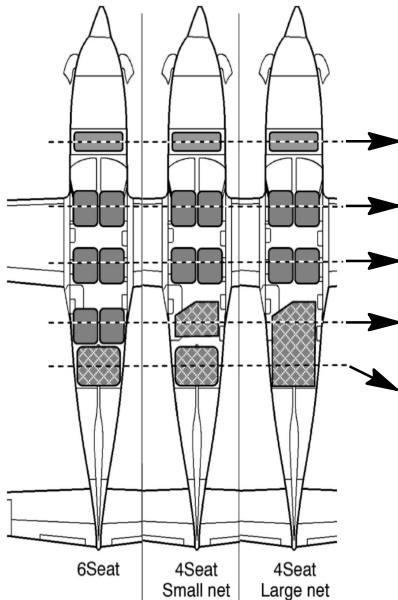
Moment = Weight x Arm

$$CG (MAC \%) = \frac{(Arm (m) - 4.392)}{1.51} \times 100$$

Item	Weight (kg)	Arm (m)	Moment (m.kg)	CG (MAC %)
Empty Weight (kg)	(1a)		(1b)	(1c)
Baggage FWD (< 50 kg)	(2a)	3.250	(2b)	
Front Seats (kg)	(2a)	4.534	(2b)	
Inter. Seats (kg)	(2a)	5.656	(2b)	
Rear bench (kg)	(2a)	6.785	(2b)	
Baggage AFT (< 100 kg)	(2a)	7.695	(2b)	
Zero Fuel Weight (< 2 736 kg)	(3a)	(5)	(3b)	(5c)
Fuel (kg)	(6a)	4.820	(6b)	
Ramp Weight (< 3 370 kg)	(7a)	(9)	(7b)	(9c)
Taxi Fuel (kg)	(10a)	4.820	(10b)	
Takeoff Weight (< 3 354 kg)	(11a)	(13)	(11b)	(13c)
Trip Fuel (kg)	(14a)	4.820	(14b)	
Landing Weight (< 3 186 kg)	(15a)	(17)	(15b)	(17c)

**AIRPLANE LOADING FORM (m, kg) - Post-MOD70-0315-25**

Item		Weight (kg)	Arm (m)	Moment (m.kg)	CG (% MAC)
Empty Weight	(kg)	(1a)		(1b)	(1)
Baggage FWD	(< 50 kg)	(2a)	3.250	(2b)	
Front Seats	(kg)	(2a)	4.534	(2b)	
Inter. Seats	-17 kg per seat removed	(2a)	5.710	(2b)	
	Pax	(2a)		(2b)	
Rear bench	-24 kg per seat removed	(2a)	6.785	(2b)	
	Pax	(2a)		(2b)	
	Cargo (< 80 kg)	(2a)		(2b)	
Baggage AFT	(< 100 kg)	(2a)	7.695	(2b)	
Zero Fuel Weight	(< 2 736 kg)	(3a)	(5)	(3b)	(5c)
Fuel	(kg)	(6a)	4.820	(6b)	
Ramp Weight	(< 3 370 kg)	(7a)	(9)	(7b)	(9c)
Taxi Fuel	(kg)	(10a)	4.820	(10b)	
Takeoff Weight	(< 3 354 kg)	(11a)	(13)	(11b)	(13c)
Trip Fuel	(kg)	(14a)	4.820	(14b)	
Landing Weight	(< 3 186 kg)	(15a)	(17)	(15b)	(17c)



Item		Weight (kg)
Empty Weight		(1a)
Baggage FWD	(< 50 kg)	(2a)
Front Seats		(2a)
Inter. Seats	-17 kg per seat removed	(2a)
	Pax	(2a)
Rear bench/net	-24 kg per seat removed	(2a)
	Pax	(2a)
	Cargo (< 80 kg)	(2a)
Baggage AFT	(< 100 kg)	(2a)

### EXAMPLE OF AIRPLANE WEIGHT AND BALANCE REPORT

NOTE :

*Airplane original report shall be kept with the airplane POH*

REGISTRE INDIVIDUEL DE CONTROLE INDIVIDUAL INSPECTION RECORD		TBM 700																				
FICHE DE PESEE CONFIGURATION 6 PLACES		S/N : F : 8																				
Mise de niveau :	Rails de sieges	SEULEMENT POUR INFORMATION, SE REFERER A LA LIMITATION DU MANUEL DE VOL SECTION 2																				
<p> <math>d_1 = 2,985 \text{ m (177.5 in)}</math>  <math>d_2 = 5,397 \text{ m (308.5 in)}</math> </p>		<p><b>LIMITATION</b></p> <p>Masse maxi au décollage : 3354 Kg   H</p> <p>Masse maxi à l'atterrissage : 3186 Kg   H</p> <p><b>Centrage (trains sortis et volets rentrés)</b></p> <p>2000 Kg   14 à 35,5 %   H</p> <p>2835 Kg   18 à 35,5 %   H</p> <p>2984 Kg   20 à 35,5 %   H</p>																				
Point de levage avant	Points de levage gauche et droit																					
<b>PESEE EFFECTUEE SUR POINTS DE LEVAGE</b>		DISTANCE DU C.G. A LA REFERENCE																				
<p>Avion non peint Sans huile moteur</p> <table border="1"> <thead> <tr> <th>Masse lue (Kg)</th> <th>Tare (Kg)</th> <th>Masse nette (Kg)</th> <th>P</th> </tr> </thead> <tbody> <tr> <td>793,5</td> <td></td> <td>P2</td> <td></td> </tr> <tr> <td>825</td> <td></td> <td>P3</td> <td></td> </tr> <tr> <td>499,5</td> <td></td> <td>P1</td> <td></td> </tr> <tr> <td colspan="2">Masse P0 (Kg) = 2118,0</td> <td></td> <td></td> </tr> </tbody> </table>		Masse lue (Kg)	Tare (Kg)	Masse nette (Kg)	P	793,5		P2		825		P3		499,5		P1		Masse P0 (Kg) = 2118,0				$D_0 = \frac{(P1 \times d1) + (P2 + P3) \times d2}{P_0}$ $D_0 = \frac{(499,5 \times 2,985) + (793,5 + 825) \times 5,297}{2118,0} = 4,752$
Masse lue (Kg)	Tare (Kg)	Masse nette (Kg)	P																			
793,5		P2																				
825		P3																				
499,5		P1																				
Masse P0 (Kg) = 2118,0																						
<b>CORRECTION</b>		<b>CENTRAGE A VIDE (EN % DE LA CMA)</b>																				
<table border="1"> <thead> <tr> <th>Masse (Kg)</th> <th>Bras Levier (m)</th> <th>Moment (m * Kg)</th> </tr> </thead> <tbody> <tr> <td>2118,0</td> <td>4,752</td> <td>10064,74</td> </tr> <tr> <td>90</td> <td>4,873</td> <td>146,19</td> </tr> <tr> <td>11,2</td> <td>2,09</td> <td>23,41</td> </tr> <tr> <td>27,2</td> <td>4,7</td> <td>127,84</td> </tr> </tbody> </table>		Masse (Kg)	Bras Levier (m)	Moment (m * Kg)	2118,0	4,752	10064,74	90	4,873	146,19	11,2	2,09	23,41	27,2	4,7	127,84	$CG = \frac{D_0 - 4,392}{1,51} \times 100$ $CG = \frac{4,751 - 4,392}{1,51} \times 100 = 23,8$					
Masse (Kg)	Bras Levier (m)	Moment (m * Kg)																				
2118,0	4,752	10064,74																				
90	4,873	146,19																				
11,2	2,09	23,41																				
27,2	4,7	127,84																				
<b>RESULTATS</b> W: 2145,2 D0: 4,751 M: 10192,58 (1b)																						
<b>CALCUL DE L'INDEX DE BASE</b> Cf section 6 du manuel de vol																						
Masse à vide (W) 2145,2 Kg (1a) Centrage à Vide (CG) 23,8 % (1c) Moment (M): 10192,58																						
1 - Rayer la mention inutile. 2 - Valeur non prise en compte si l'avion était peint lors de la pesée. 3 - Valeur non prise en compte si l'avion a été pesé avec huile.																						
DATE :		VISA DE CONTRÔLE :																				

Figure 6.4.1 – Example of Weight and Balance Report and basic airplane characteristics, in kg and m

**NOTE :**  
*Airplane original report shall be kept with the airplane POH*

REGISTRE INDIVIDUEL DE CONTROLE INDIVIDUAL INSPECTION RECORD		TBM 700																											
WEIGHT AND BALANCE REPORT		S/N :																											
6-SEAT CONFIGURATION		F : 6																											
<p>Levelling : Seat rails</p> <p>Front wheel Left and right Wheel points</p> <p><u>WEIGHING CARRIED OUT ON JACK POINTS</u></p> <p>Not painted airplane Without engine oil</p> <table border="1"> <thead> <tr> <th></th> <th>Gross Weight (lb)</th> <th>Tare (lb)</th> <th>Net Weight (lb)</th> </tr> </thead> <tbody> <tr> <td>Left point</td> <td>1749.4</td> <td>P2</td> <td></td> </tr> <tr> <td>Right point</td> <td>1818.8</td> <td>P3</td> <td></td> </tr> <tr> <td>Front point</td> <td>1101.2</td> <td>P1</td> <td></td> </tr> <tr> <td colspan="2">Weight P0 (lbs) =</td> <td colspan="2">4669.4</td> </tr> </tbody> </table> <p><math>d_0 = \frac{(P1 \times d1) + (P2 + P3) \times d2}{P0}</math></p> <p><math>d_0 = \frac{(1101.2 \times 117.5) + (1749.4 + 1818.8) \times 208.5}{4669.4} = 187.0</math></p>			Gross Weight (lb)	Tare (lb)	Net Weight (lb)	Left point	1749.4	P2		Right point	1818.8	P3		Front point	1101.2	P1		Weight P0 (lbs) =		4669.4		<p>ONLY FOR INFORMATION, REFER TO LIMITATIONS SECTION 2 OF POH</p> <p><u>LIMITATIONS</u></p> <p>Maximun take off weight : 7294,3 lbs H</p> <p>Maximun landing weight : 7024 lbs H</p> <p><u>Balance ( landing gears down and flaps up )</u></p> <table border="1"> <tbody> <tr> <td>4400 lbs</td> <td>14 - 35,5 %</td> </tr> <tr> <td>6250 lbs</td> <td>18 - 35,5 %</td> </tr> <tr> <td>6579 lbs</td> <td>20 - 35,5 %</td> </tr> </tbody> </table> <p>DISTANCE FROM C.G. TO REFERENCE</p>		4400 lbs	14 - 35,5 %	6250 lbs	18 - 35,5 %	6579 lbs	20 - 35,5 %
	Gross Weight (lb)	Tare (lb)	Net Weight (lb)																										
Left point	1749.4	P2																											
Right point	1818.8	P3																											
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4400 lbs	14 - 35,5 %																												
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<p><u>CORRECTIONS</u></p> <table border="1"> <thead> <tr> <th></th> <th>Weight (lb)</th> <th>Arm (in.)</th> <th>Moment (in" lb)</th> </tr> </thead> <tbody> <tr> <td>Weight P0</td> <td>4669.4</td> <td>187.0</td> <td>873360.7</td> </tr> <tr> <td>Paint (2)</td> <td>66.2</td> <td>191.8</td> <td>12697.2</td> </tr> <tr> <td>Engine oil (3)</td> <td>24.7</td> <td>82.3</td> <td>2032.8</td> </tr> <tr> <td>Unusable fuel</td> <td>60</td> <td>185</td> <td>11100.0</td> </tr> </tbody> </table> <p><math>CG = \frac{D0 - 173}{59,5} \times 100</math></p> <p><math>CG = \frac{187 - 173}{59,5} \times 100 = 23.8</math></p>			Weight (lb)	Arm (in.)	Moment (in" lb)	Weight P0	4669.4	187.0	873360.7	Paint (2)	66.2	191.8	12697.2	Engine oil (3)	24.7	82.3	2032.8	Unusable fuel	60	185	11100.0	<p><u>BALANCE</u> MAC (%)</p>							
	Weight (lb)	Arm (in.)	Moment (in" lb)																										
Weight P0	4669.4	187.0	873360.7																										
Paint (2)	66.2	191.8	12697.2																										
Engine oil (3)	24.7	82.3	2032.8																										
Unusable fuel	60	185	11100.0																										
<p><u>RESULTS</u> W: 4729,4 D0: 187 M: 884460,7 (1b)</p>																													
<p><u>BASIC INDEX CALCULATION</u> See section 6 of Pilot's Operating Handbook</p> <p>Empty weight ( W ) : 4729,4 lb (1a)</p> <p>Balance ( CG ) : 23,8 % (1c)</p> <p>Moment ( M ) : 884460,7</p>																													
<p>1 - Scratch useless mention. 2 - Values not taken into account if the airplane was painted when weighed. 3 - Values not taken account if the oil tank was full when the airplane was weighed.</p> <p>DATE : INSPECTION VISA :</p>																													

Figure 6.4.2 – Example of Weight and Balance Report and basic airplane characteristics, in lb and in

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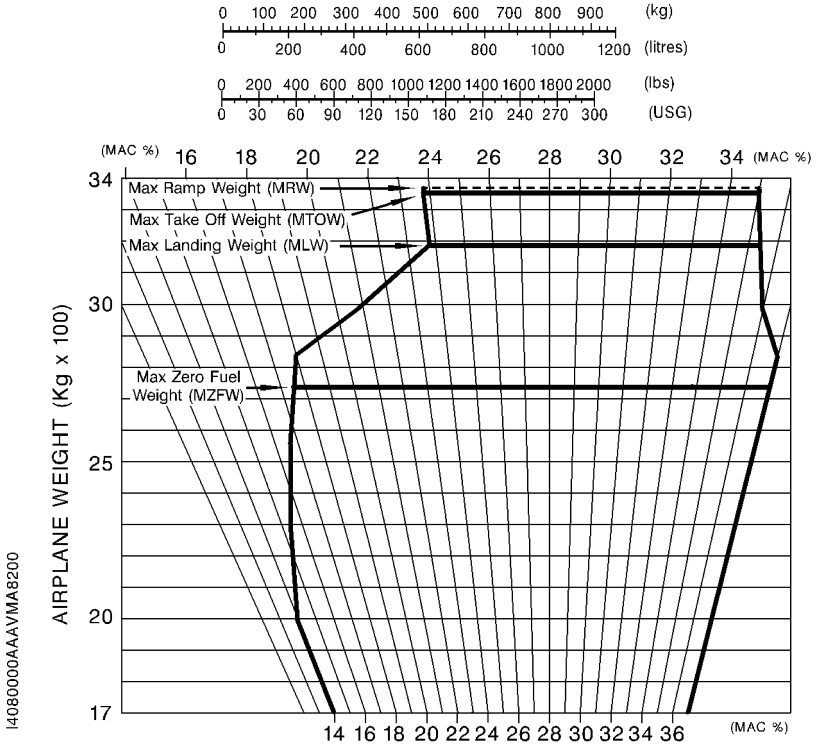
**WEIGHT AND BALANCE FORM AND DIAGRAM (m, kg) - Pre-MOD70-0315-25**

Moment = Weight x Arm

$$CG (MAC \%) = \frac{(Arm (m) - 4.392)}{1.51} \times 100$$

Item	Weight (kg)	Arm (m)	Moment (m.kg)	CG (MAC %)
Empty Weight (kg)				
Baggage FWD (< 50 kg)		3.250		
Front Seats (kg)		4.534		
Inter. Seats (kg)		5.656		
Rear bench (kg)		6.785		
Baggage AFT (< 100 kg)		7.695		
Zero Fuel Weight (< 2 736 kg)				
Fuel (kg)		4.820		
Ramp Weight (< 3 370 kg)				
Taxi Fuel (kg)		4.820		
Takeoff Weight (< 2 354 kg)				
Trip Fuel (kg)		4.820		
Landing Weight (< 3 186 kg)				





14080000AAA\MA8200

Figure 6.4.3 – Weight and Balance diagram

**WEIGHT AND BALANCE FORM AND DIAGRAM (m, kg) -  
Post-MOD70-0315-25**

Moment = Weight x Arm

$$CG (MAC\%) = \frac{(Arm (m) - 4.392)}{1.51} \times 100$$

Item	Weight (kg)	Arm (m)	Moment (m.kg)	CG (% MAC)
Empty Weight (kg)				
Baggage FWD (< 50 kg)		3.250		
Front Seats (kg)		4.534		
Inter. Seats	-17 kg per seat removed	5.710		
	Pax			
Rear bench	-24 kg per seat removed	6.785		
	Pax			
	Cargo (< 80 kg)			
Baggage AFT (< 100 kg)		7.695		
Zero Fuel Weight (< 2 736 kg)				
Fuel (kg)		4.820		
Ramp Weight (< 3 370 kg)				
Taxi Fuel (kg)		4.820		
Takeoff Weight (< 3 354 kg)				
Trip Fuel (kg)		4.820		
Landing Weight (< 3 186 kg)				

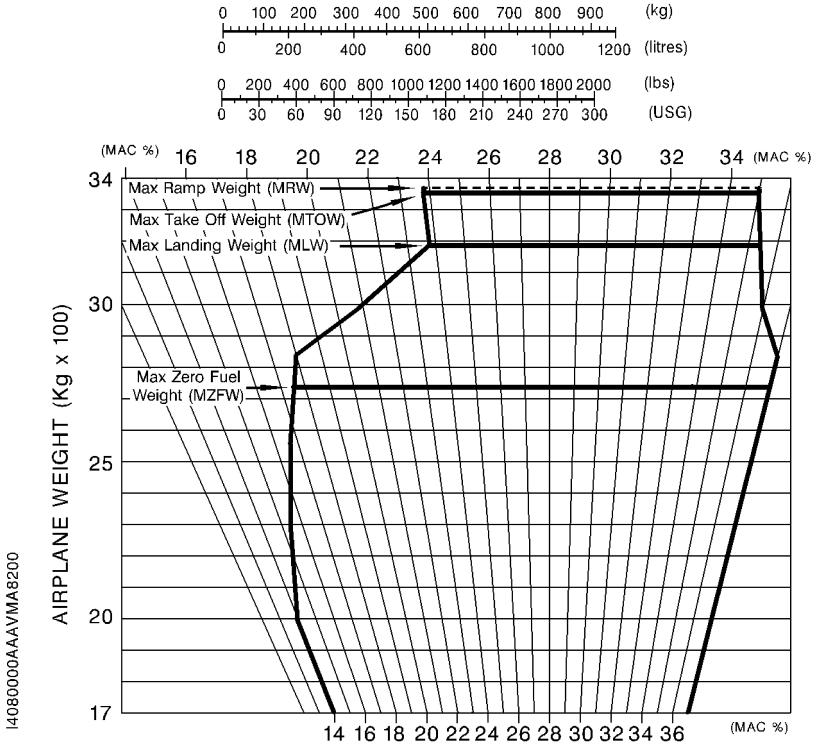


Figure 6.4.4 - Weight and Balance diagram

**WEIGHT AND BALANCE FORM AND DIAGRAM (in, lbs) -  
Pre-MOD70-0315-25**

Moment = Weight x Arm

$$CG (MAC\%) = \frac{(Arm (in) - 172.93)}{59.45} \times 100$$

Item	Weight (lbs)	Arm (in)	Moment (in.lbs)	CG (MAC %)
Empty Weight (lbs)				
Baggage FWD (< 110 lbs)		128.0		
Front Seats (lbs)		178.5		
Inter. Seats (lbs)		222.7		
Rear bench (lbs)		267.1		
Baggage AFT (< 220 lbs)		303.0		
Zero Fuel Weight (< 6 032 lbs)				
Fuel (lbs)		189.8		
Ramp Weight (< 7 430 lbs)				
Taxi Fuel (lbs)		189.8		
Takeoff Weight (< 7 394 lbs)				
Trip Fuel (lbs)		189.8		
Landing Weight (< 7 024 lbs)				

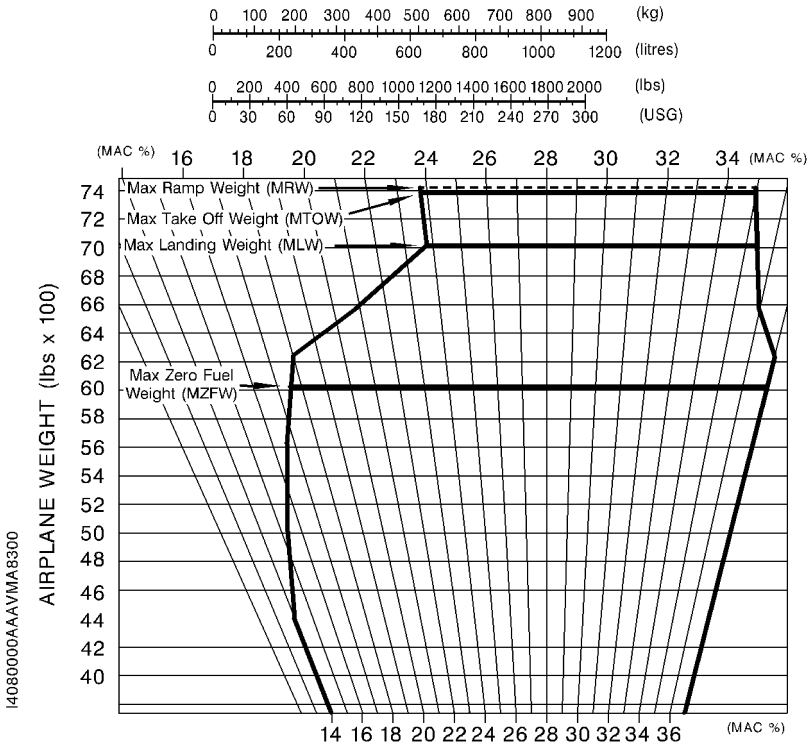


Figure 6.4.5 – Weight and Balance diagram

**WEIGHT AND BALANCE FORM AND DIAGRAM (in, lbs) -  
Post-MOD70-0315-25**

Moment = Weight x Arm

$$CG (MAC \%) = \frac{(Arm (in) - 172.93)}{59.45} \times 100$$

Item	Weight (lbs)	Arm (in)	Moment (in.lbs)	CG (MAC %)
Empty Weight (lbs)				
Baggage FWD (< 110 lbs)		128.0		
Front Seats (lbs)		178.5		
Inter. Seats	-37.5 lbs per seat removed	224.8		
	Pax			
Rear bench	- 52.9 lbs per seat removed	267.1		
	Pax			
	Cargo (< 176 lbs)			
Baggage AFT (< 220 lbs)		303.0		
Zero Fuel Weight (< 6 032 lbs)				
Fuel (lbs)		189.8		
Ramp Weight (< 7 430 lbs)				
Taxi Fuel (lbs)		189.8		
Takeoff Weight (< 7 394 lbs)				
Trip Fuel (lbs)		189.8		
Landing Weight (< 7 024 lbs)				

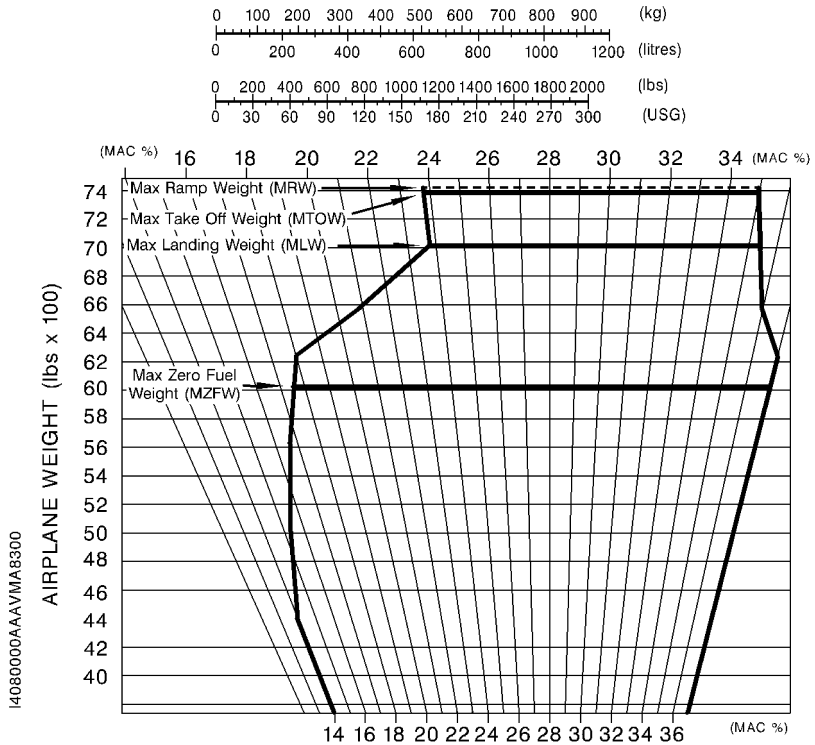


Figure 6.4.6 – Weight and Balance diagram

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## WEIGHT AND BALANCE SAMPLES (m, kg) - Pre-MOD70-0315-25

### CAUTION

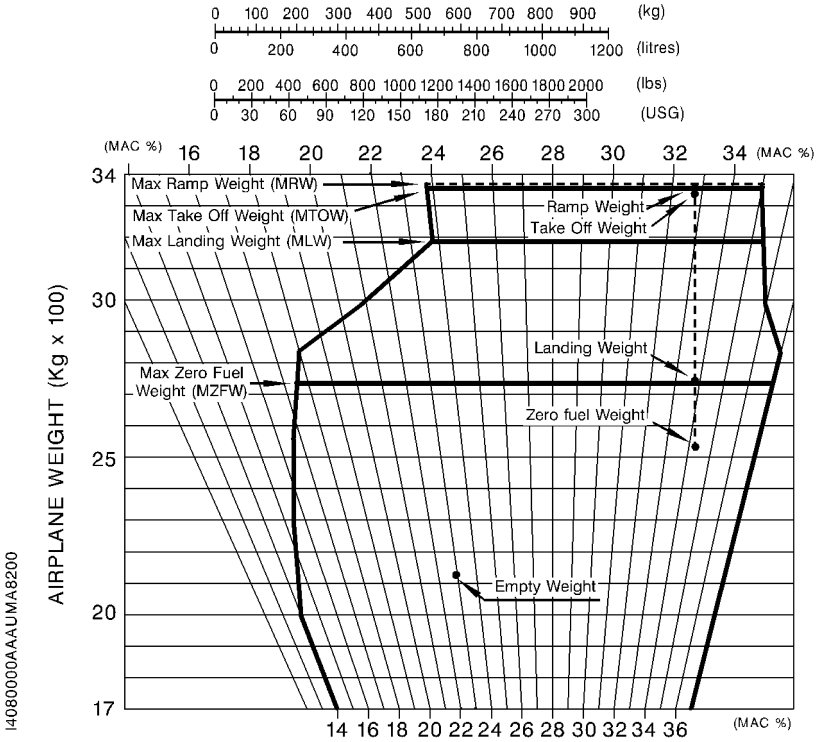
**LOADING SAMPLES (FIGURE 6.4.7 OR 6.4.8) ARE ONLY GIVEN AS AN EXAMPLE ; FOR CALCULATION CONCERNING YOUR AIRPLANE, REFER TO THE DIAGRAM CORRESPONDING TO ITS VALIDITY**

	Fig. 6.4.7
1 - Airplane basic characteristics : W = Empty weight Moment Balance Arm CG (MAC %)	2 126 kg 10 073 m.kg 4.738 m 22.9 %
2 - Foreseen loading : 1 Pilot and 1 front Passenger 2 Rear Passengers AFT Cargo in baggage compartment Fuel	200 kg 160 kg 50 kg 820 kg
3 - Foreseen fuel : Taxi Fuel Trip Fuel	- 16 kg - 600 kg

Moment = Weight x Arm

$$CG (MAC \%) = \frac{(Arm (m) - 4.392)}{1.51} \times 100$$

Item	Weight (kg)	Arm (m)	Moment (m.kg)	CG (MAC %)
Empty Weight (kg)	2 126	4.738	10 073	22.9
Baggage FWD (< 50 kg)	0	3.250	0	
Front Seats (kg)	200	4.534	907	
Inter. Seats (kg)	0	5.656	0	
Rear bench (kg)	160	6.785	1 086	
Baggage AFT (< 100 kg)	50	7.695	385	
Zero Fuel Weight (< 2 736 kg)	2 536	4.910	12 451	34.3
Fuel (kg)	820	4.820	3 952	
Ramp Weight (< 3 370 kg)	3 356	4.888	16 403	32.8
Taxi Fuel (kg)	- 16	4.820	- 77	
Takeoff Weight (< 3 354 kg)	3 340	4.888	16 326	32.8
Trip Fuel (kg)	- 600	4.820	- 2 892	
Landing Weight (< 3 186 kg)	2 740	4.903	13 434	33.8



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Figure 6.4.7 - Loading sample

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## WEIGHT AND BALANCE SAMPLES (in, lbs) - Post-MOD70-0315-25

	Fig. 6.4.8
1 - Airplane basic characteristics : W = Empty weight Moment Balance Arm CG (MAC %)	4 638 lbs 864 173 in.lbs 186.3 in 22.6 %
2 - Foreseen loading : FWD compartment 1 Pilot and 1 front Passenger 1 Intermediate Passenger 2 Rear seats removed Rear cargo AFT Cargo in baggage compartment Fuel	100 lbs 400 lbs 220 lbs - 105.8 lbs 176 lbs 120 lbs 1 850 lbs
3 - Foreseen fuel : Taxi Fuel Trip Fuel	- 36 lbs - 1 400 lbs

SECTION 6  
WEIGHT AND BALANCE

**TBM**

PILOT'S OPERATING HANDBOOK 850

Moment = Weight x Arm

$$CG (MAC \%) = \frac{(Arm (in) - 172.93)}{59.45} \times 100$$

Item		Weight (lbs)	Arm (in)	Moment (in.lbs)	CG (MAC %)
Empty Weight	(lbs)	4 638	186.3	864 173	22.6
Baggage FWD	(< 110 lbs)	100	128.0	12 800	
Front Seats	(lbs)	400	178.5	71 400	
Inter. Seats	-37.5 lbs per seat removed	0	224.8	0	
	Pax	220		49 456	
Rear bench	-52.9 lbs per seat removed	- 105.8	267.1	- 28 259	
	Pax	0		0	
	Cargo (< 176 lbs)	100		26 710	
Baggage AFT	(< 220 lbs)	120	303.0	36 360	
Zero Fuel Weight	(< 6 032 lbs)	5 472	188.7	1 032 640	26.5
Fuel	(lbs)	1 850	189.8	351 130	
Ramp Weight	(< 7 430 lbs)	7 322	189.0	1 383 770	27
Taxi Fuel	(lbs)	- 36	189.8	- 6 831	
Takeoff Weight	(< 7 394 lbs)	7 286	189.0	1 397 237	27
Trip Fuel	(lbs)	- 1 400	189.8	- 265 720	
Landing Weight	(< 7 024 lbs)	5 886	188.8	1 111 217	26.7

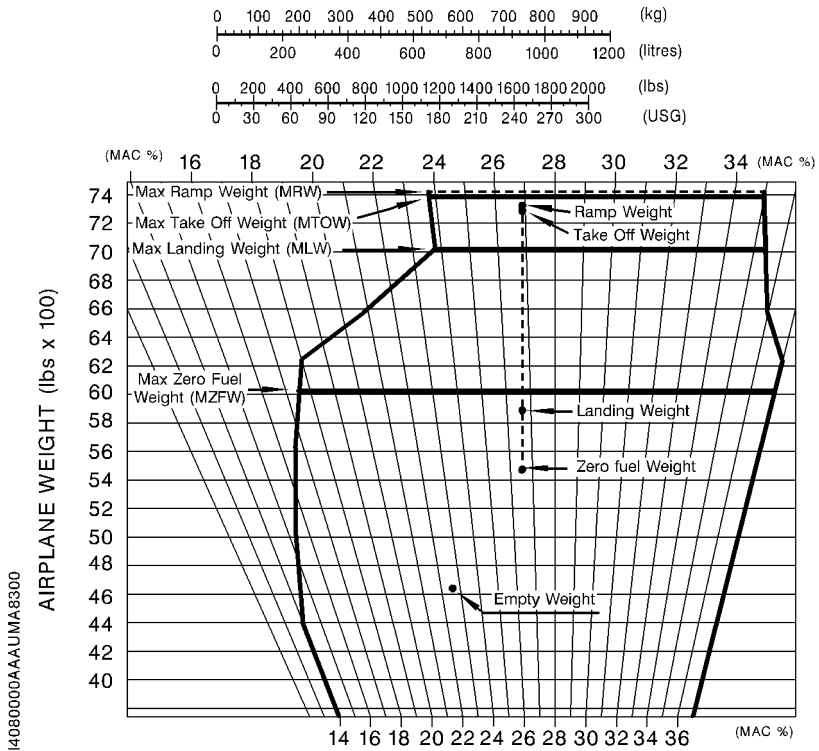


Figure 6.4.8 – Weight and Balance diagram

**DETERMINING EMPTY AIRPLANE CHARACTERISTICS**

Empty airplane characteristics (weight and balance) may vary with regard to those indicated on weighing form according to installed optional equipment and installed seats.

List of equipment (refer to paragraph 6.5) contains the standard and optional equipment, as well as their characteristics (weight, arm).

Use the chart below to compute new empty weight and corresponding balance if necessary.

DATE	EQUIPMENT OR MODIFICATION DESCRIPTION	(+) (-)	WEIGHT MODIFICATION			BASIC EMPTY WEIGHT		
			Weight lb	Arm in.	Moment lb.in/1000	Weight W	Arm "d <sub>o</sub> "	Moment
	According to delivery							

Figure 6.4.9 - SAMPLE WEIGHT AND BALANCE RECORD

$$CG \text{ m.a.c.\%} = \frac{(d_o - 172.93)}{59.45} \times 100$$

Use the above formula to express arm "d<sub>o</sub>" in % of mean aerodynamic chord.

**NOTE :**

*Arm expressed in inches with regard to reference.*

FWD baggage compartment : 128.0 in. (3.250 m)

Front seats : 178.5 in. (4.534 m)

Pre-MOD 70-0315-25

Intermediate seats : 222.7 in. (5.656 m)

Post-MOD 70-0315-25 with 4-seat accommodation or 6-seat accommodation

Intermediate seats : 224.8 in. (5.710 m)



Pre-MOD 70-0315-25 and Post-MOD 70-0315-25

Rear bench (2 seats)/net : 267.1 in. (6.785 m)

All

Baggage compartment in  
pressurized cabin : 303.0 in. (7.695 m)

Fuel : 189.8 in. (4.820 m)

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## **6.5 - LIST OF EQUIPMENT**

The list of equipment is available in SOCATA Report reference NAV No. 34/90-RJ-App 1, located at the end of this POH.

A separate list of equipment of items installed at the factory in your specific airplane is provided in your airplane file.

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## SECTION 7

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## 7.1 - GENERAL

This Section provides description and operation of the TBM 850 airplane and its systems.

Some of the equipment described herein is optional and may not be installed in the airplane.

Complete description and operation of the GARMIN G1000 integrated flight deck are detailed in the "GARMIN" G1000 Integrated Flight Deck Pilot's Guide. References to this Guide are often made all along this Section to get more details about some systems.

Details of other optional systems and equipment are presented in Section 9 "Supplements" of the Pilot's Operating Handbook.

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## 7.2 - AIRFRAME (Figures 7.2.1, 7.2.1A, 7.2.1B)

The TBM 850 is a six-place, low wing airplane.

### Post-MOD 70-0315-25

The airplane can be changed into 2, 3, 4 or 5-seat accommodation.

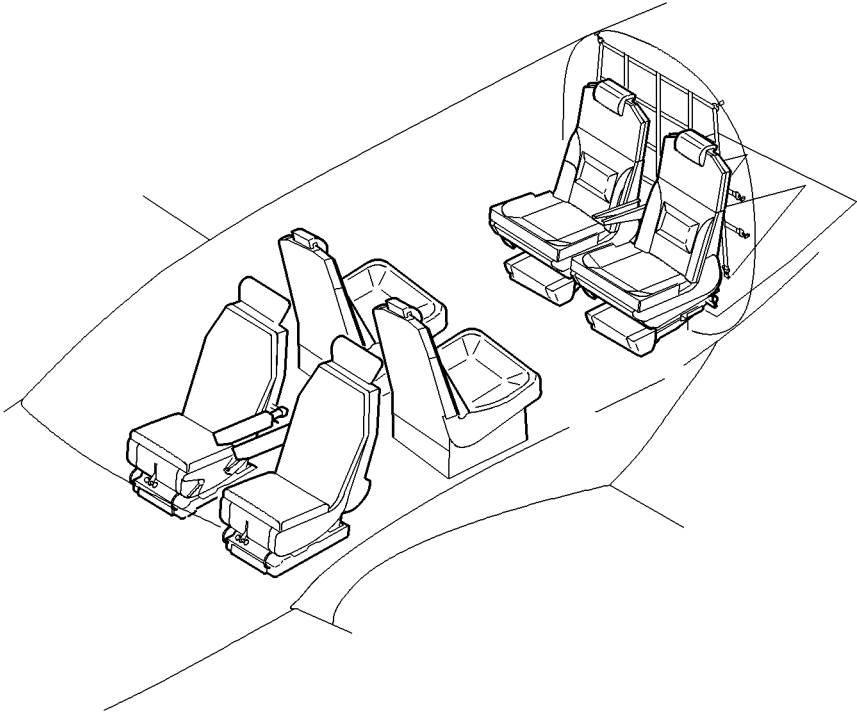
### All

The structure is a semi-monocoque all-metal construction and is equipped with a retractable tricycle landing gear.

The pressurized cabin is equipped, on the left side of fuselage, with a one-piece access door and folding stairs comprising a hand rail allowing pilot and passengers boarding. The occupants have access to cockpit and to rear seats through a central aisle.

An optional "pilot" door located forward of the cabin on the left side allows access to the cockpit by means of folding stairs.

The aft cabin section is a baggage compartment.



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Figure 7.2.1 - CABIN ARRANGEMENT  
Pre-MOD70-0315-25  
and Post-MOD70-0315-25 with 6-seat accommodation

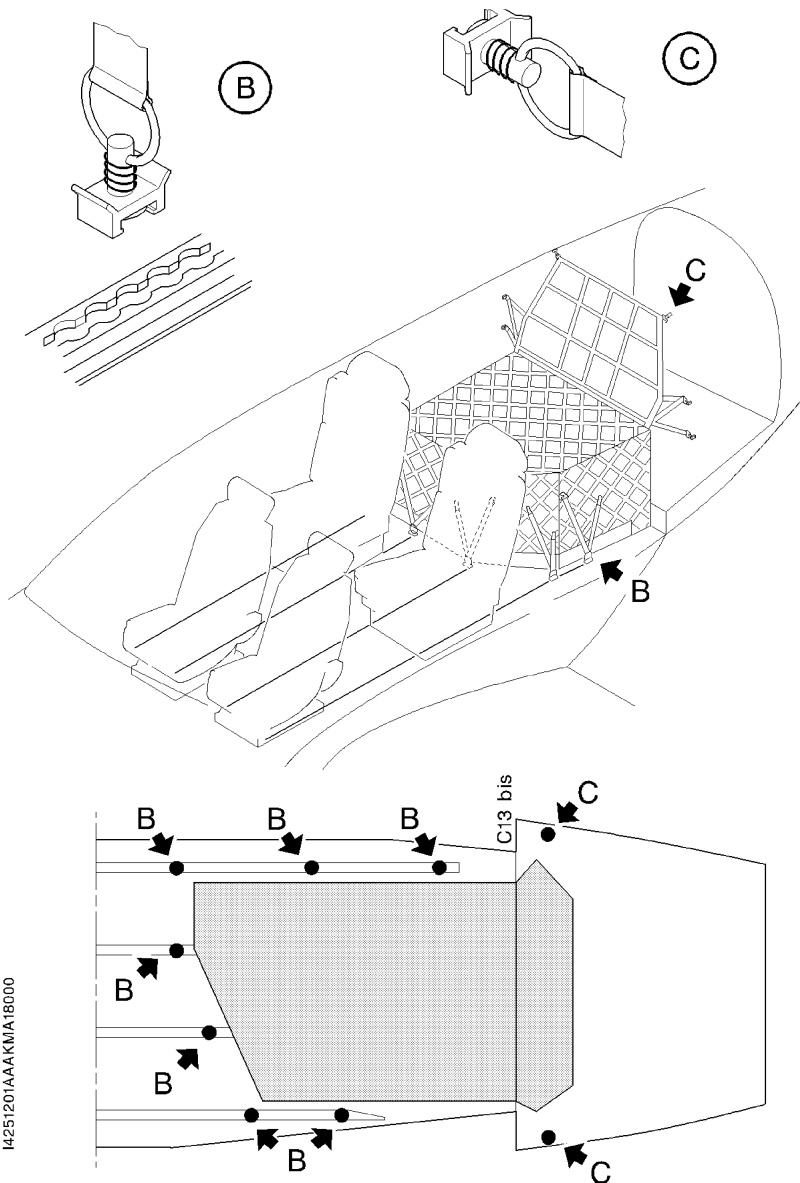
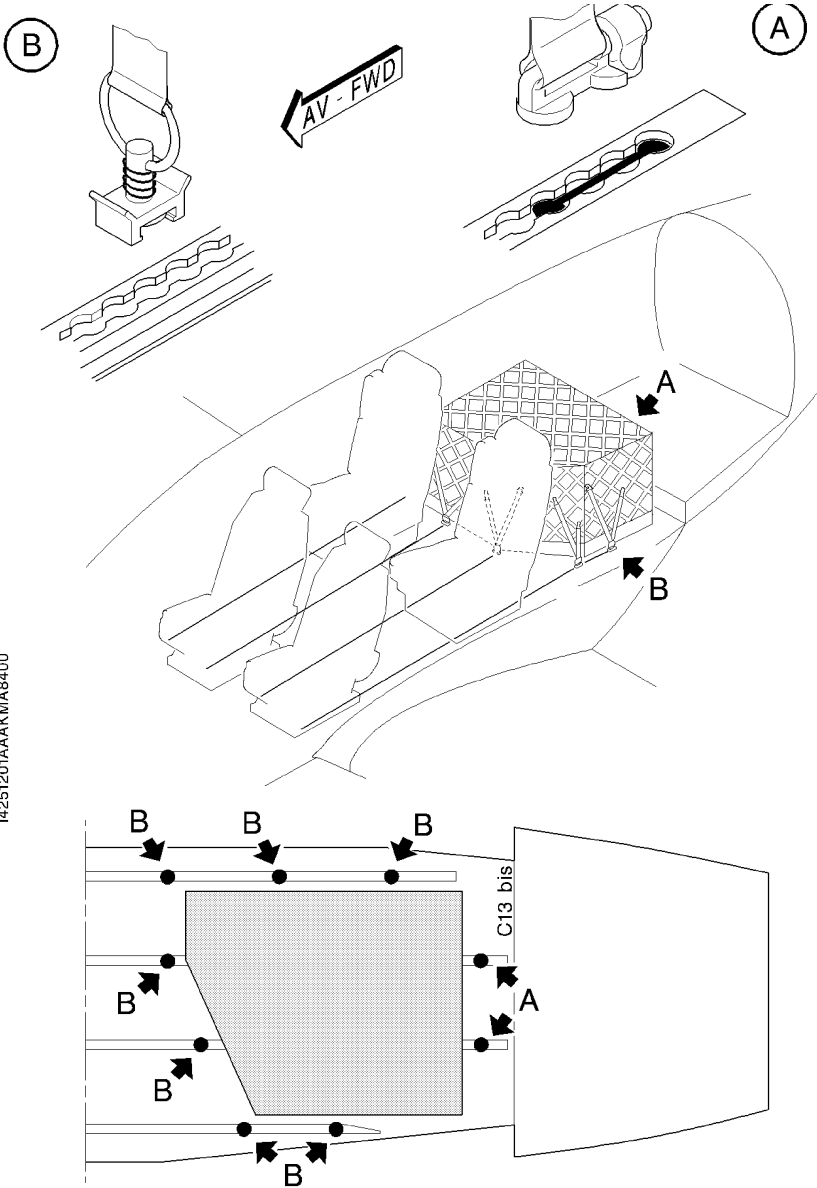


Figure 7.2.1A - CABIN ARRANGEMENT  
Post-MOD70-0315-25 with 4-seat accommodation  
with large securing net



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Figure 7.2.1B - CABIN ARRANGEMENT  
Post-MOD70-0315-25 with 4-seat accommodation  
with small securing net

**WINGS**

The wings are monocoque, bi-spar structures. Main spars of each wing are linked to the fuselage by two integral attach fittings. Each wing contains a main landing gear well and sealed casings forming the fuel tank. The wing leading edge is equipped with a deicing system.

**AILERONS, SPOILERS AND PITCH TRIM TAB**

The ailerons located on external trailing edge of each wing are hinged on two attach fittings fixed on the rear spar. They allow airplane lateral control and are controlled mechanically through control wheel rotation.

The spoilers located in front of flaps, on top skin side, are mechanically linked to the ailerons.

Trim tab knob attached on the trailing edge of L.H. aileron is electrically activated by a trim knob, through an actuator.

**WING FLAPS** (Figure 7.2.2)

The wing flaps are large span slotted flaps with a single rotation point. They are activated by actuating rod-controlled screw jacks linked to an electric motor located under the floor, inside the fuselage.

A preselection control located on the right side of pedestal console allows the pilot to select one of the three positions (UP - TO - LDG). For each control position, a deflection angle is defined (0°, 10°, 34°).

The flap control knob is protected by a casing to avoid accidental operation.

A monitoring device interrupts flaps movement as soon as a deflection dissymmetry is detected.

**Wings characteristics :**

Area	193.75 sq. ft (18 m <sup>2</sup> )
Wing loading	38.16 lb/sq.ft (186.3 kg / m <sup>2</sup> )
Root chord at y = 2.13 ft (0.650 m)	5.79 ft (1.765 m)
Tip chord	3.67 ft (1.120 m)
Mean aerodynamic chord at y = 9.16 ft (2.793 m)	4.95 ft (1.510 m)
Rigging angle to fuselage horizontal datum	2°
Sweep-angle (at 25 % chord)	0°
Dihedral (at datum plane)	6.5°
Aspect ratio (platform reference)	8.216
Taper ratio	0.608
Airfoil section (at wing root)	RA 16-43
Airfoil section (at wing tip)	RA 13.3-43
Twist	0°

**Aileron - spoilers characteristics :**

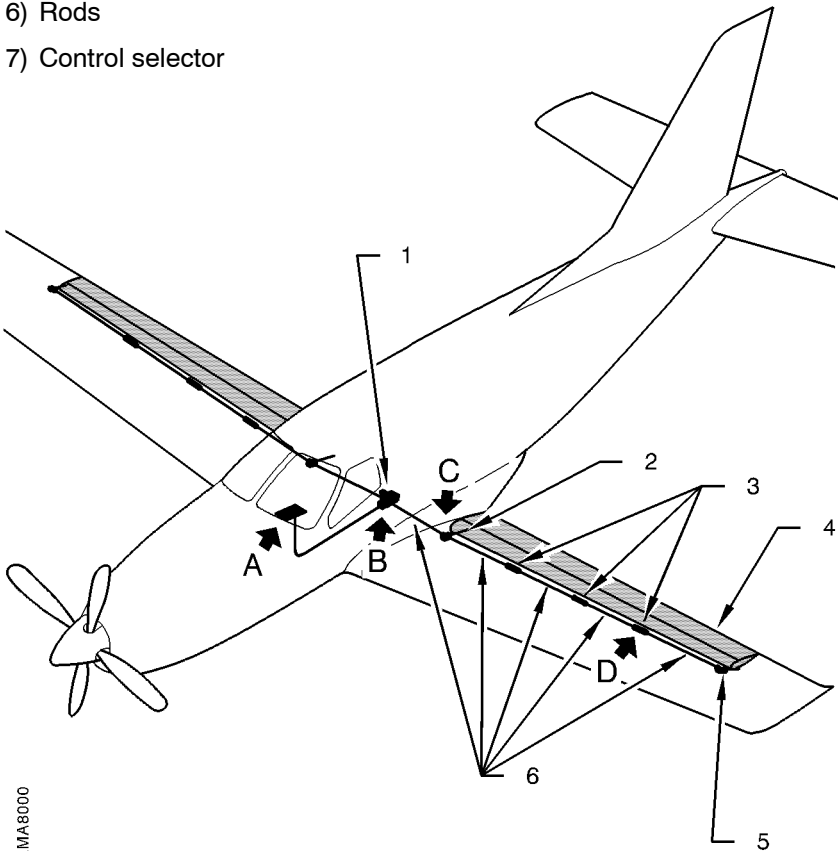
Global aileron area (including trim tab)	9.65 sq.ft (0.897 m <sup>2</sup> )
Aileron trim tab area	0.78 sq.ft (0.072 m <sup>2</sup> )
Spoiler area	1.80 sq.ft (0.167 m <sup>2</sup> )

**Flaps characteristics :**

Type	Single-slotted, rotational
Global flap area	40.68 sq.ft (3.780 m <sup>2</sup> )



- 1) Geared motor
- 2) Internal actuator
- 3) Intermediate bearings
- 4) Wing flap
- 5) External actuator
- 6) Rods
- 7) Control selector



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Figure 7.2.2 (1/2) - WING FLAPS

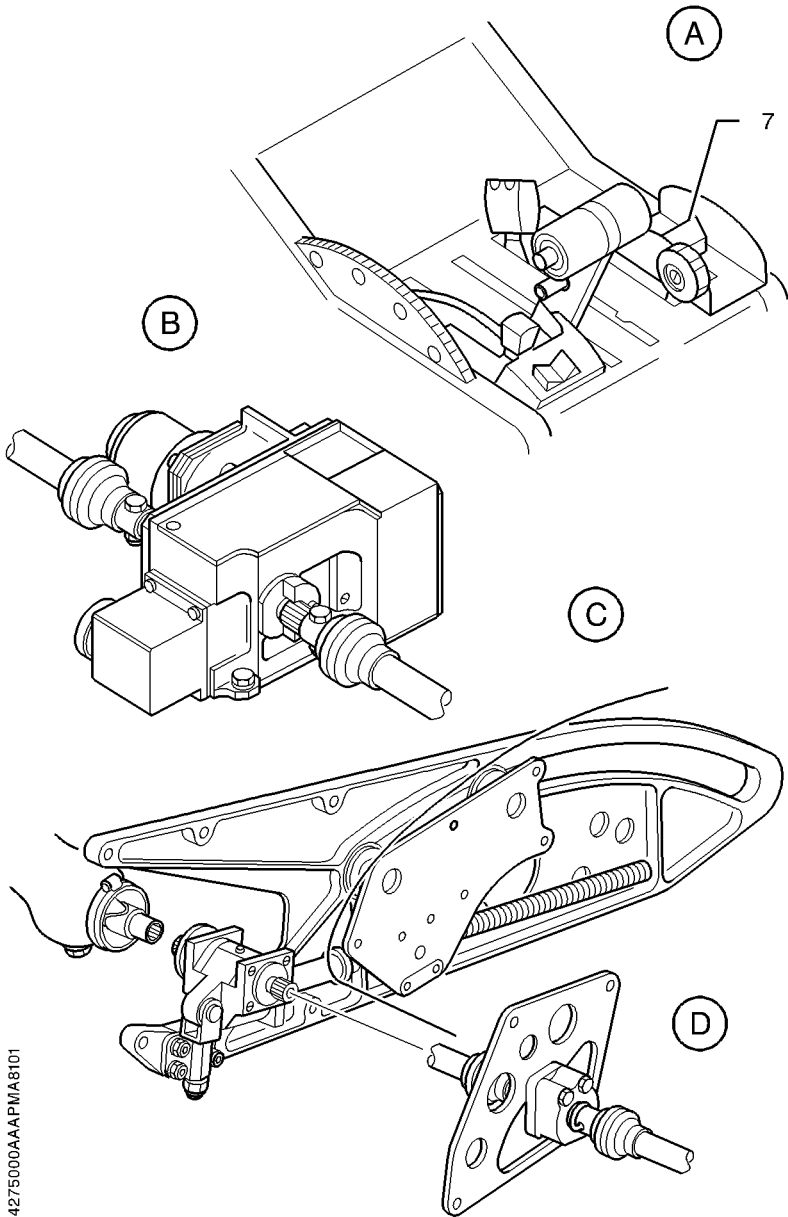


Figure 7.2.2 (2/2) - WING FLAPS

**EMPENNAGES**

Empennages are composite structures. The horizontal empennage consists of a horizontal stabilizer (PHF), control surfaces and elevator trim tabs ; the vertical empennage consists of a vertical stabilizer, the rudder and the rudder trim tab. The empennage leading edge is equipped with a deicing system.

**Horizontal stabilizer characteristics :**

Overall span	16.36 ft (4.988 m)
Global area	52.52 sq.ft (4.879 m <sup>2</sup> )
Chord	3.89 ft (1.186 m)
Tip chord	2.60 ft (0.795 m)
Mean aerodynamic chord at y = 3.76 ft (1.147 m)	3.26 ft (0.995 m)
Airfoil section	NACA 64 <sub>2</sub> -A415 modified
Dihedral	6.5°
Rigging angle (leading edge up)	0.5°
Aspect ratio	5.034
Elevator global area (including trim tabs)	21.76 sq.ft (2.022 m <sup>2</sup> )
Elevator trim tab area (right datum plane)	3.47 sq.ft (0.322 m <sup>2</sup> )

**Vertical stabilizer characteristics :**

Global area	33.28 sq.ft (3.092 m <sup>2</sup> )
Construction root chord	6.95 ft (2.120 m)
Reference tip chord	2.54 ft (0.775 m)
Mean aerodynamic chord	5.08 ft (1.551 m)
Construction airfoil section	NACA 63 <sub>1</sub> -A012 modified
Sweep angle (at leading edge)	45°
Aspect ratio	1.481
Rudder area (including trim tab)	11.87 sq.ft (1.103 m <sup>2</sup> )
Rudder trim tab area	1.36 sq.ft (0.126 m <sup>2</sup> )

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## 7.3 - ACCOMMODATIONS

### INSTRUMENT PANEL

The instrument panel contains instruments and controls necessary for flight monitoring. The typical instrument panel consists of all standard equipment, as well as additional optional equipment.

#### Upper panel (Figure 7.3.2)

The upper panel located at the top part of the windshield, contains electrical generation control panels, engine starting, ancillary electrical systems, MASTERS switches and the "FUEL" control panel.

Rearwards of upper panel, the central part of cockpit overhead panel provides loud-speakers, a warning buzzer and cockpit floodlights.

#### Instrument panel (Figure 7.3.1)

The instrument panel consists of the G1000 integrated flight deck composed of three screens [two Primary Flight Displays (PFD) and one Multi-Function Display (MFD)] – refer to the "GARMIN" G1000 Pilot's Guide for detailed description. Apart from the G1000 system, equipment listed below complete the instrument panel.

- Left area instrument panel includes (Figures 7.3.3 or 7.3.3A) :

##### Pre-MOD70-0335-34 (ESI-2000)

- . on top : stand-by airspeed indicator and stand-by attitude indicator,
- . at bottom : deicing controls and indicators, suction gage, NORMAL/MASK inverter, ELT remote control switch, landing gear control panel, parking brake control and left station control wheel.

##### Post-MOD70-0335-34 (ESI-2000)

- . on top : electronic stand-by indicator,
- . at bottom : deicing controls and indicators, NORMAL/MASK inverter, ELT remote control switch, landing gear control panel, parking brake control and left station control wheel.

##### All

- Central area instrument panel includes (Figures 7.3.4 or 7.3.4A) :

##### Pre-MOD70-0335-34 (ESI-2000)

- . on top : surmounted by the stand-by compass, stand-by altimeter and AFCS control unit,

Post-MOD70-0335-34 (ESI-2000)

- . on top : surmounted by the stand-by compass, AFCS control unit,

All

- . at bottom : GCU 475 control unit and outflow valve controller.
- Right area instrument panel includes (Figure 7.3.5) :
  - . on top : locations for optional equipment,
  - . at bottom : "ECS" control panel (partial), alternate static source selector and the right station control wheel.
- Emergency air control is located under the right area instrument panel.

An hour meter is located on the right side of instrument panel.

An adjustable air outlet is located on both sides of instrument panel lower part.

Reception-micro jacks are located inside the recess under the arm-rest on both lateral sides of the cockpit, on R.H. side of intermediate R.H. passenger's seat and on the arm-rest of rear R.H. passenger's seat.

**Pedestal console** (Figure 7.3.6)

The pedestal console, under the GCU 475 control unit, comprises flaps controls, pitch trim tab control wheel, aileron trim switch, engine controls and fuel tank selector.

**Circuit breakers panel** (Figures 7.3.7 and 7.8.3)

Circuit breakers for all electrical equipment supplied by bus bars are located on a separate panel installed on the right side of cockpit.

■ Pre-MOD70-0407-00D (V15.11 GARMIN software)

**General alarms warning lights and CAS messages**

Warning (red) and Caution (yellow) messages appear on the GDU 1500 MFD CAS display to alert crew about monitored systems discrepancies. As a message appears, an aural tone is heard. Refer to the GARMIN G1000

■ Pilot's Guide to know all possible CAS messages.

A "MASTER WARNING" red flashing indicator and a "MASTER CAUTION" amber indicator located on instrument panel (see Figure 7.3.8) in front of the pilot, illuminate as soon as one or several messages of same color light on.

To cancel and reset a general alarm, press on the red or amber indicator. A pressure on the red indicator also stops red message associated aural tones.

### **Aural warnings** (Figure 7.3.2)

The aural warnings are intended to alert the pilot during some configurations. The aural signals are heard through the loud-speakers or the buzzer installed in cockpit overhead panel.

The aural warnings consist of :

- the aural warning box,
- the buzzer and loud-speakers.

The system uses :

- the stall warning horn,
- the VMO alarm,
- the landing gear control unit,
- the flap geared motor.

### **Aural warning box**

The aural warning box consists of a box including logic circuits, which create the signals heard in the aural warning loud-speakers.

According to the airplane configuration, different signals are produced by the logic circuits :

- gear up and idle → high-pitched sound
- gear up and extended flaps → high-pitched sound
- stall → low-pitched sound
- gear up, idle and stall → alternate high-pitched and low-pitched sounds
- gear up, extended flaps and stall → alternate high-pitched and low-pitched sounds

The aural warning box is fixed under cabin floor, on L.H. side, between frames C5 and C6.

It is electrically supplied by "ESS BUS 2" bar and protected by "AURAL WARN" circuit breaker.

**Cockpit overhead panel** (Figure 7.3.2)

This panel includes following elements :

- the loud-speaker of GMA # 1,
- the loud-speaker of GMA # 2,
- the VMO alarm buzzer,
- the "HORN TEST" knob,
- the emergency lighting rheostat.

It is attached to the cabin upper part between frames C6 and C7.

The VMO alarm buzzer is electrically supplied by "ESS BUS 2" bar and protected by "AURAL WARN" circuit breaker and the emergency lighting rheostat is electrically supplied by "BATT BUS" bar and protected by "PANEL EMER" circuit breaker.

**Aural warning operation**

The GMA # 1 and # 2 audio control panels receive signals from the aural warning box. According to the airplane configuration, these signals are low-pitched and / or high-pitched.

The "HORN TEST" knob allows to test the correct operation of aural warnings :

- Set the "SOURCE" selector to BAT or to GPU.
- Set the "AVIONICS" MASTER switch to ON.
- Push and hold the "HORN TEST" knob :
  - . the VMO buzzer emits "bips",
  - . the loud-speakers emit alternate low-pitched and high-pitched sounds.
- Release the knob to stop the alarms.

**■ Post-MOD70-0407-00D (V15.11 GARMIN software)**

**General alarms warning lights and CAS messages**

Warning (red) and Caution (yellow) messages appear on the GDU 1500 MFD CAS display to alert crew about monitored systems discrepancies. As a message appears, a chime is heard. Refer to the GARMIN G1000 Pilot's Guide to know all possible CAS messages.



A "MASTER WARNING" red flashing indicator and a "MASTER CAUTION" amber indicator located on instrument panel (see Figure 7.3.8) in front of the pilot, illuminate as soon as one or several messages of same color light on.

To cancel and reset a general alarm, press on the red or amber indicator. A pressure on the red indicator also stops red message associated chimes.

### **Aural warnings** (Figure 7.3.2)

The aural warnings are intended to alert the pilot during some configurations. The aural signals are heard through the loud-speakers installed in cockpit overhead panel and through the pilot's and R.H. station headsets.

The aural warnings consist of :

- the G1000 system (GIA and GMA),
- the loud-speakers.

The system uses :

- the stall warning system,
- the airspeed indicator,
- the landing gear control unit,
- the flap geared motor,
- the idle position sensor.

### **Aural warning alerts**

According to the airplane configuration, different aural warning alerts sound :

- gear up and idle → "landing gear / landing gear"
- gear up and extended flaps → "landing gear / landing gear"
- stall → "stall / stall"
- gear up, idle and stall → "stall / landing gear"
- gear up, extended flaps and stall → "stall / landing gear"
- IAS > 269 ± 3 KIAS → "overspeed / overspeed"

■ Refer to the GARMIN G1000 Pilot's Guide for description of other aural warning alerts.

**Cockpit overhead panel** (Figure 7.3.2)

This panel includes following elements :

- the loud-speaker of GMA # 1,
- the loud-speaker of GMA # 2,
- the "HORN TEST" knob,
- the emergency lighting rheostat.

It is attached to the cabin upper part between frames C6 and C7.

The emergency lighting rheostat is electrically supplied by "BATT BUS" bar and protected by "PANEL EMER" circuit breaker.

The "HORN TEST" push-button allows to test the correct operation of aural warnings :

- set the "SOURCE" selector to BATT or GPU,
- push and hold the "HORN TEST" push-button :
  - . The loud-speakers emit "stall / stall" aural warning alert
- release the knob to stop the alarms.

All

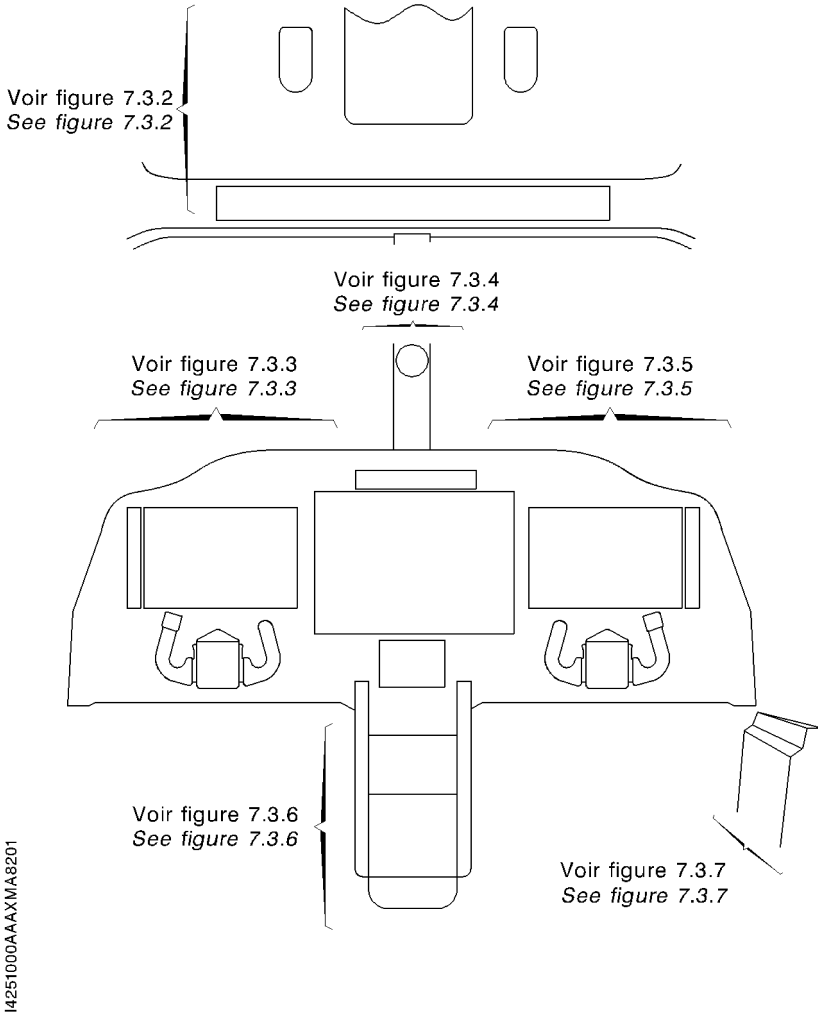
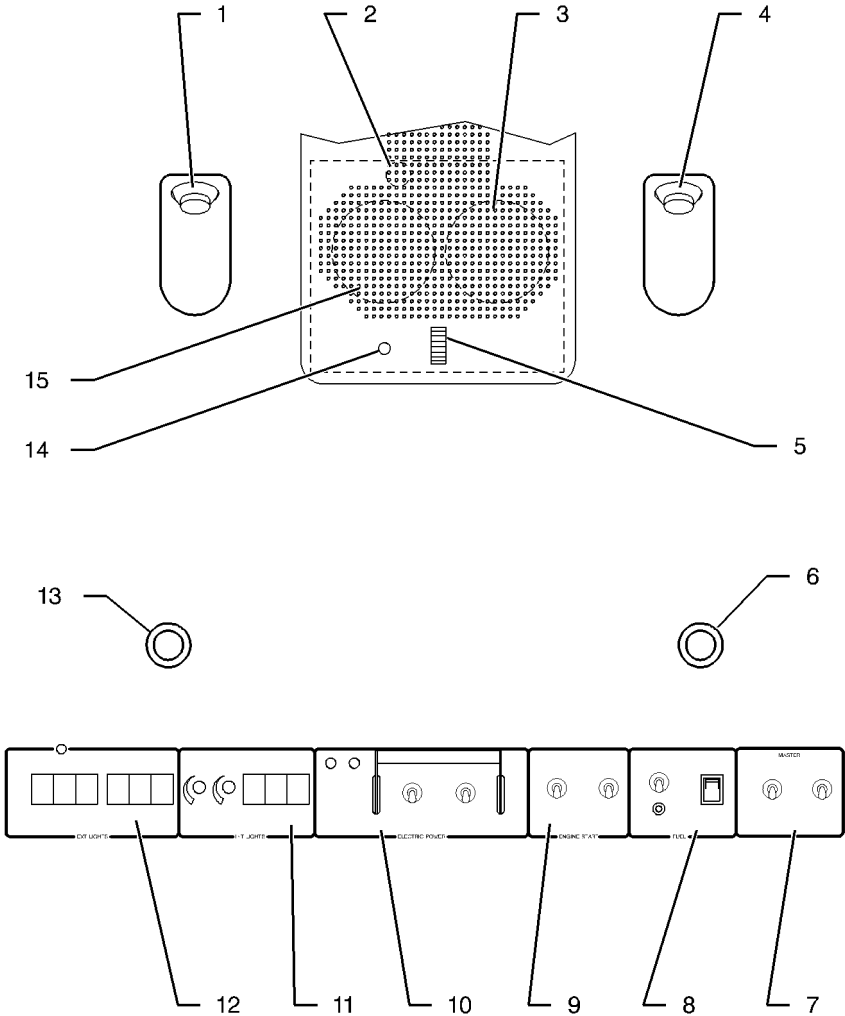


Figure 7.3.1 - INSTRUMENT PANEL ASSEMBLY  
(Typical arrangement)

- 1) L.H. instrument panel emergency lighting
- 2) Buzzer ( $V_{MO}$  alarm)
- 3) Loud-speaker of GMA # 2
- 4) R.H. instrument panel emergency lighting
- 5) Cockpit floodlight switches (rheostats)
- 6) R.H. cockpit floodlight
- 7) MASTERS controls ("AVIONICS" and "AP TRIMS")
- 8) "FUEL" control panel (Figure 7.7.3)
- 9) "ENGINE START" switches (Figure 7.6.3)
- 10) "ELECTRIC POWER" switches (Figure 7.8.4)
- 11) "INT LIGHTS" internal lighting switches (Figure 7.8.6)
- 12) "EXT LIGHTS" external lighting switches (Figure 7.8.5)
- 13) L.H. cockpit floodlight
- 14) "HORN TEST" aural warning test knob
- 15) Loud-speaker of GMA # 1

Figure 7.3.2 (1/2) - UPPER PANEL AND COCKPIT OVERHEAD PANEL

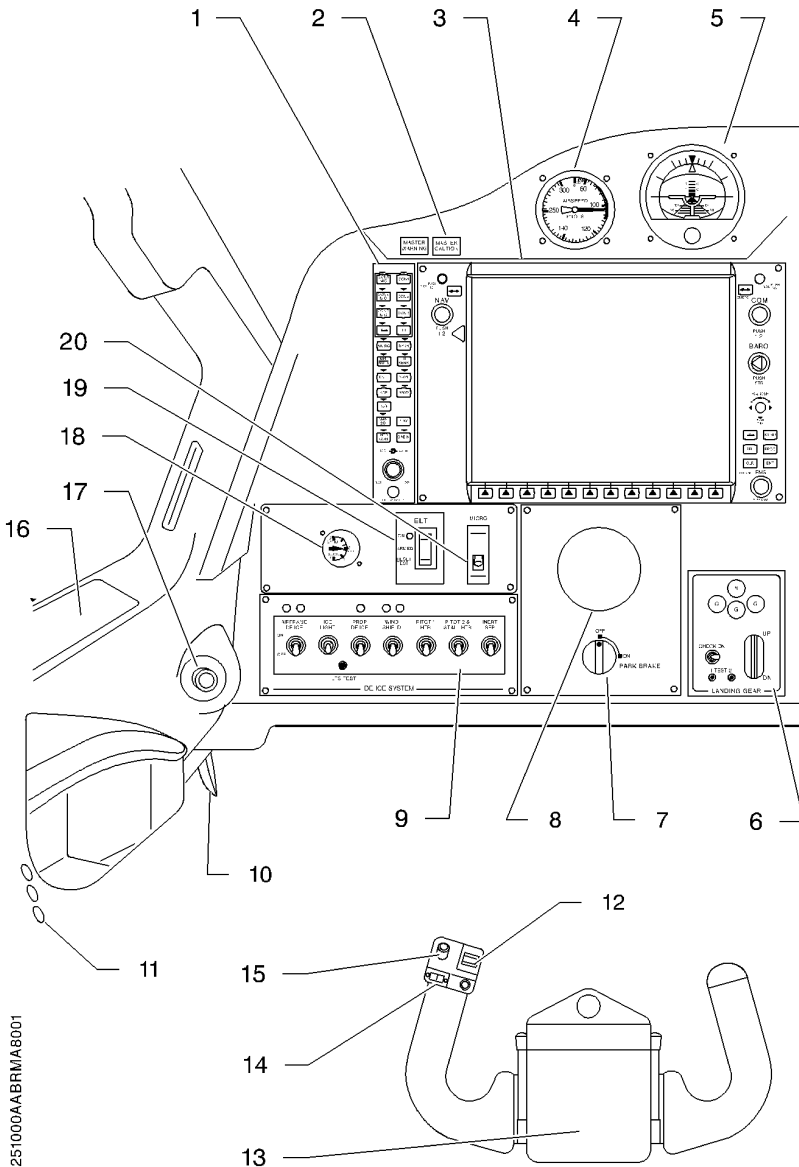


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Figure 7.3.2 (2/2) - UPPER PANEL AND COCKPIT OVERHEAD PANEL

- |  |   |
|--|---|
| 1) L.H. GMA 1347 audio panel                                   | 11) Left station reception-micro jacks            |
| 2) General alarm red and amber indicators                      | 12) Electric pitch trim control                   |
| 3) GDU 1040 PFD1   | 13) Maps reading tablet                           |
| 4) Stand-by airspeed indicator                                 | 14) Electric rudder trim control                  |
| 5) Stand-by attitude indicator                                 | 15) "AP / DISC TRM INT" red push-button           |
| 6) Landing gear configuration and control panel (Figure 7.5.1) | 16) Flight conditions and instruction placard     |
| 7) Parking brake control (Figure 7.5.6)                        | 17) Adjustable air outlet                         |
| 8) Left station control wheel tube                             | 18) Suction indicator                             |
| 9) Deicing control and check panel (Figure 7.13.1)             | 19) ELT remote control switch                     |
| 10) L.H. station rudder pedals adjusting handle                | 20) Oxygen mask microphone switch (Figure 7.10.1) |

Figure 7.3.3 (1/2) - LEFT INSTRUMENT PANEL  
Pre-MOD70-0335-34 (ESI-2000)



I4251000AA BRM/A 8001

Figure 7.3.3 (2/2) - LEFT INSTRUMENT PANEL  
(Typical arrangement)  
Pre-MOD70-0335-34 (ESI-2000)

- |  |   |
|--|---|
| 1) L.H. GMA 1347 audio panel                                   | 10) Left station reception-micro jacks            |
| 2) General alarm red and amber indicators                      | 11) Electric pitch trim control                   |
| 3) GDU 1040 PFD1   | 12) Maps reading tablet                           |
| 4) Electronic Stand-by indicator                               | 13) Electric rudder trim control                  |
| 5) Landing gear configuration and control panel (Figure 7.5.1) | 14) "AP / DISC TRM INT" red push-button           |
| 6) Parking brake control (Figure 7.5.6)                        | 15) Flight conditions and instruction placard     |
| 7) Left station control wheel tube                             | 16) Adjustable air outlet                         |
| 8) Deicing control and check panel (Figure 7.13.1)             | 17) ELT remote control switch                     |
| 9) L.H. station rudder pedals adjusting handle                 | 18) Oxygen mask microphone switch (Figure 7.10.1) |

Figure 7.3.3A (1/2) - LEFT INSTRUMENT PANEL  
Post-MOD70-0335-34 (ESI-2000)



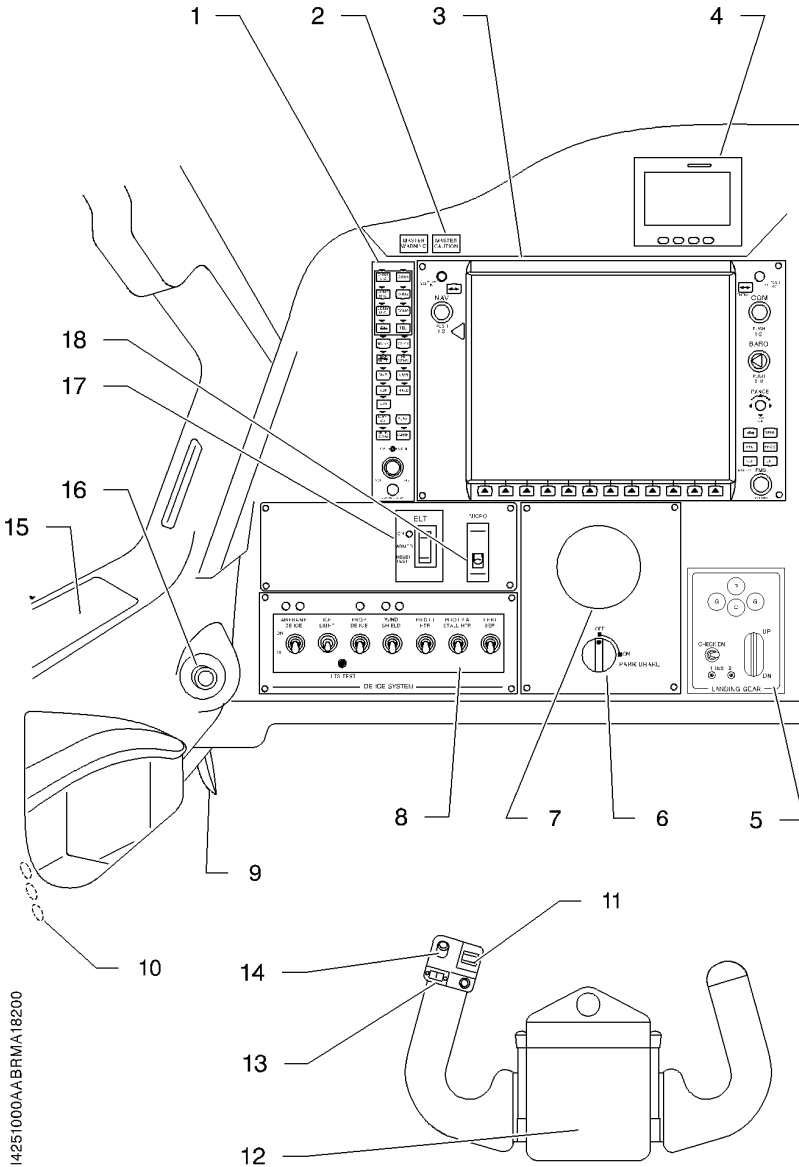
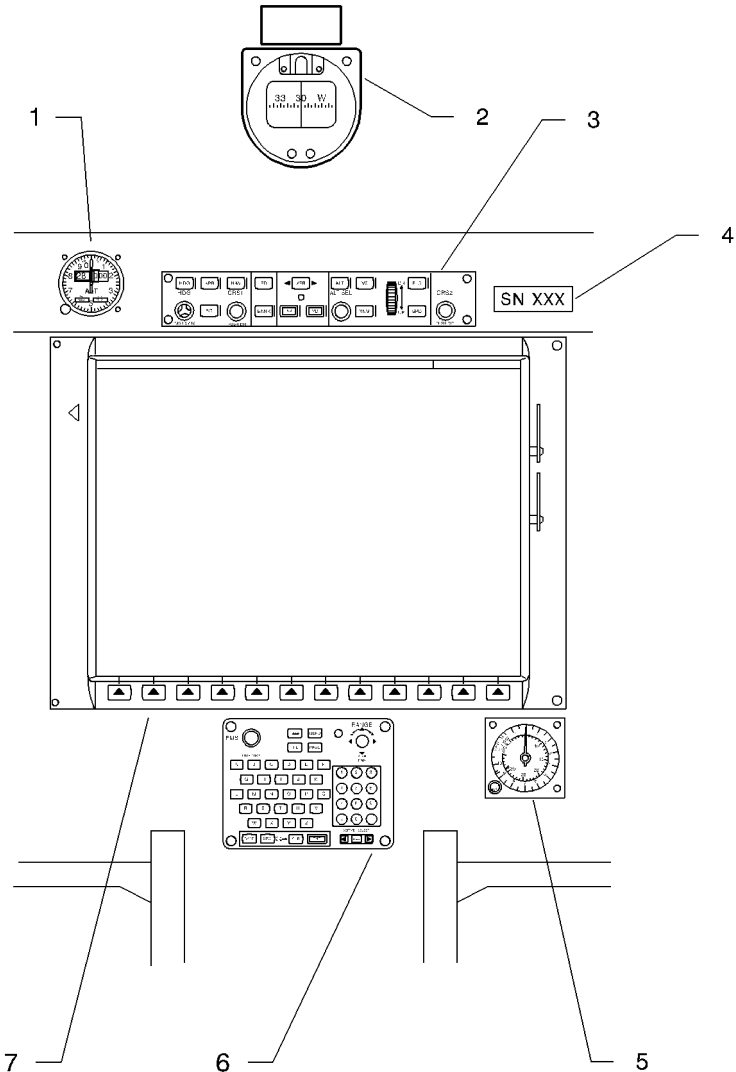


Figure 7.3.3A (2/2) - LEFT INSTRUMENT PANEL  
(Typical arrangement)  
Post-MOD70-0335-34 (ESI-2000)

- 1) Stand-by altimeter
- 2) Stand-by compass
- 3) GMC 710 AFCS mode controller
- 4) Registration
- 5) Cabin pressurization control panel (Figure 7.9.2)
- 6) GCU 475 remote controller
- 7) GDU 1500 MFD

Figure 7.3.4 (1/2) - CENTRAL INSTRUMENT PANEL  
Pre-MOD70-0335-34 (ESI-2000)

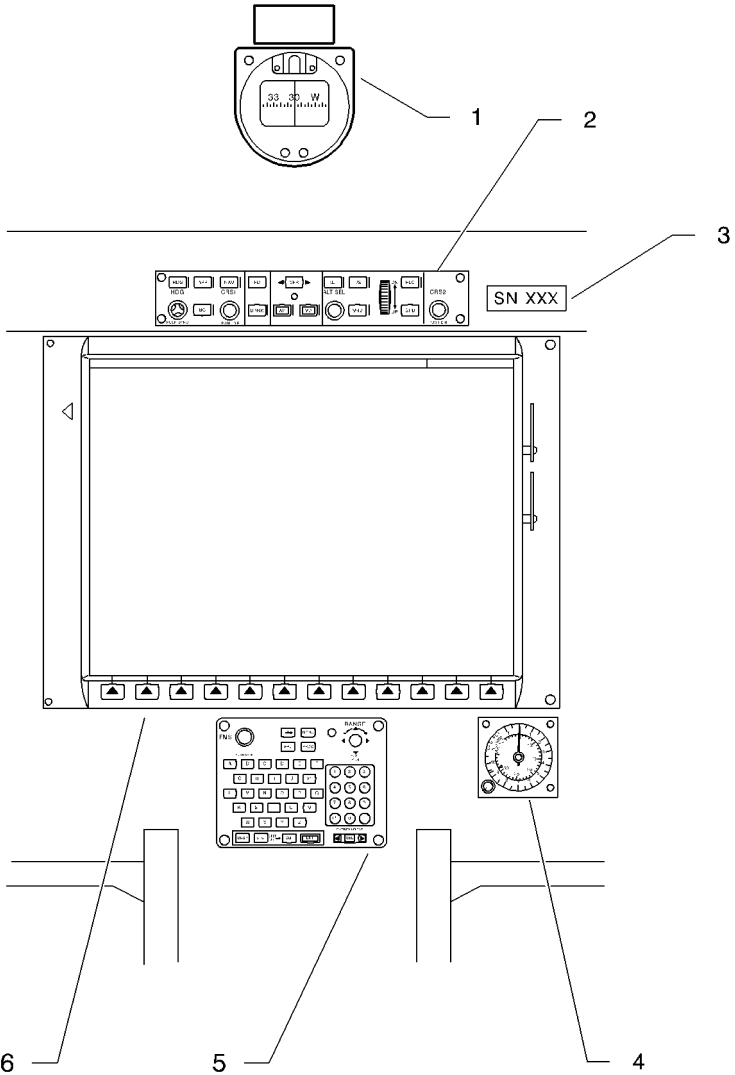


14251000AA.BRM/A.8100

Figure 7.3.4 (2/2) - CENTRAL INSTRUMENT PANEL  
(Typical arrangement)  
Pre-MOD70-0335-34 (ESI-2000)

- 1) Stand-by compass
- 2) GMC 710 AFCS mode controller
- 3) Registration
- 4) Cabin pressurization control panel (Figure 7.9.2)
- 5) GCU 475 remote controller
- 6) GDU 1500 MFD

Figure 7.3.4A (1/2) - CENTRAL INSTRUMENT PANEL  
Post-MOD70-0335-34 (ESI-2000)

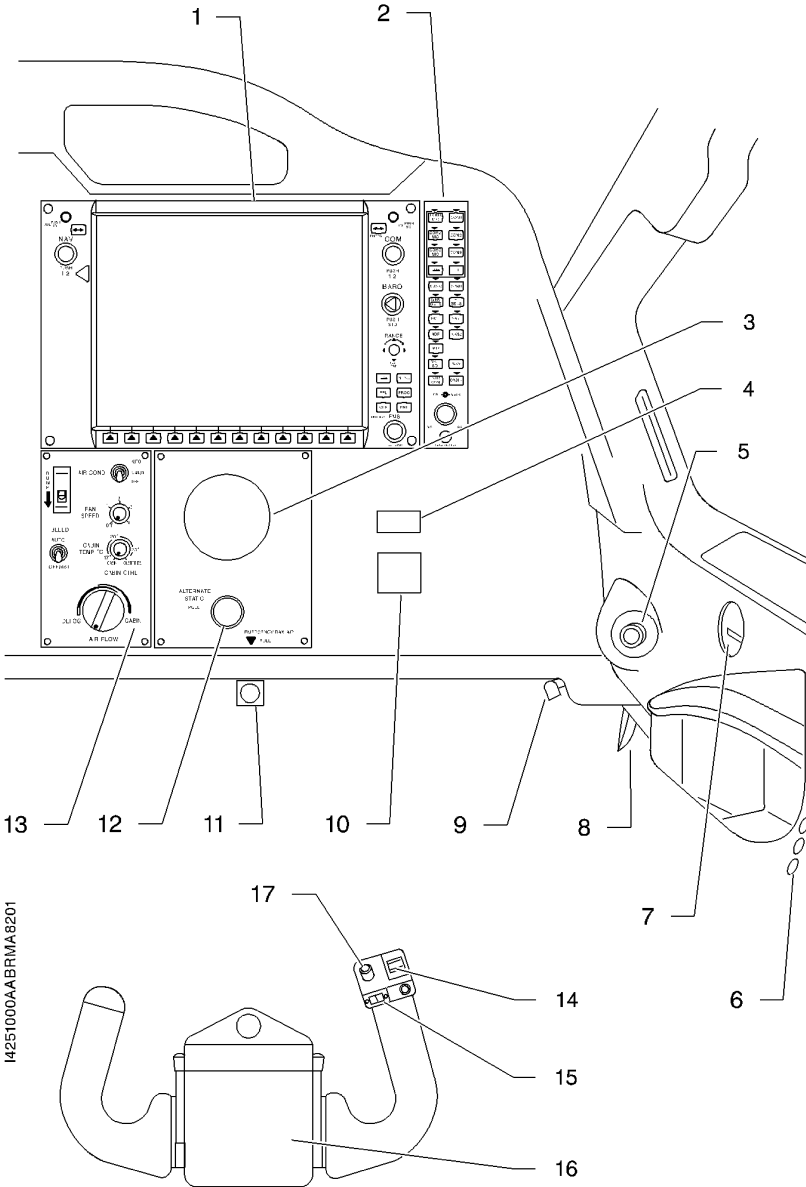


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Figure 7.3.4A (2/2) - CENTRAL INSTRUMENT PANEL  
(Typical arrangement)  
Post-MOD70-0335-34 (ESI-2000)

- 1) GDU 1040 PFD2
- 2) R.H. GMA 1347 audio panel
- 3) Right station control wheel tube
- 4) Crew music
- 5) Adjustable air outlet
- 6) Right station reception-micro jacks
- 7) Hour meter
- 8) R.H. station rudder pedals adjusting handle
- 9) Circuit breakers panel postlight
- 10) Servicing plug
- 11) Cabin emergency air control ("RAM AIR" control knob)
- 12) Static source selector
- 13) "ECS" air conditioning control panel (Figure 7.9.2)
- 14) Electric pitch trim control
- 15) Electric rudder trim control
- 16) Maps reading tablet
- 17) "AP / DISC TRM INT" red push-button

Figure 7.3.5 (1/2) - RIGHT INSTRUMENT PANEL



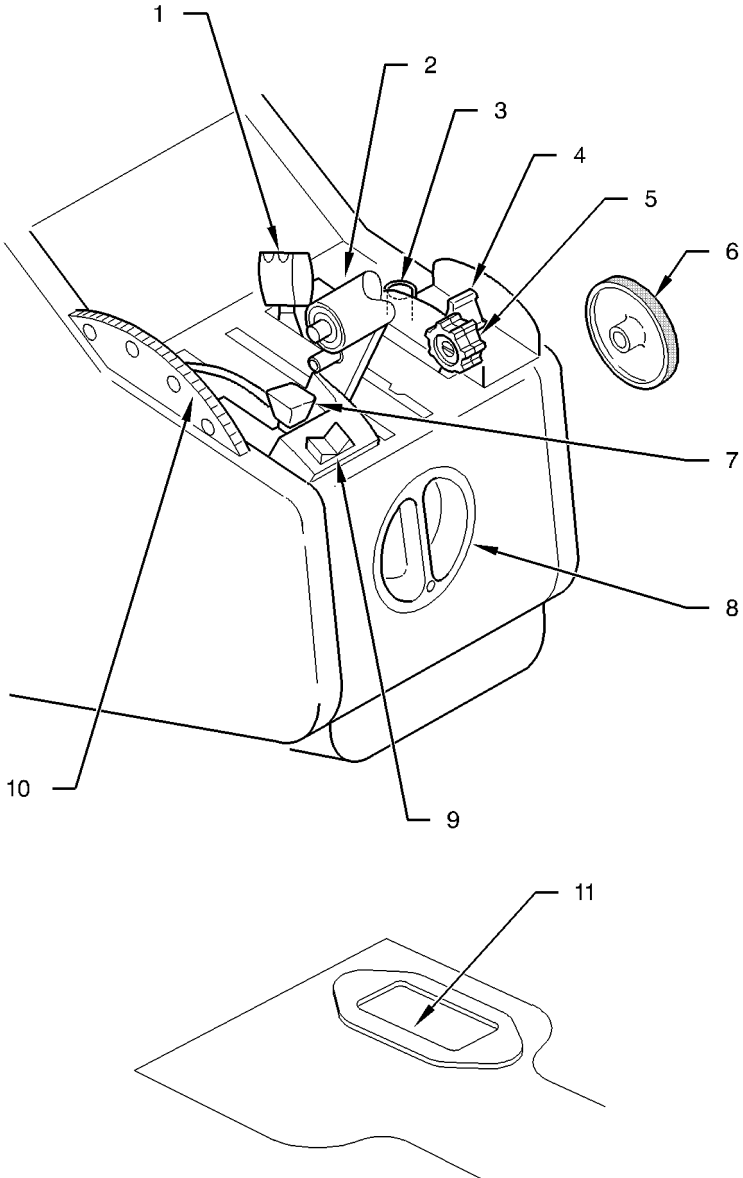
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Figure 7.3.5 (2/2) - RIGHT INSTRUMENT PANEL  
(Typical arrangement)

- 1) Propeller governor lever
- 2) Power lever
- 3) "PROP O' SPEED TEST" push-button
- 4) Flaps control
- 5) Condition lever
- 6) Levers friction adjustment
- 7) Emergency fuel control
- 8) Manual fuel tank selector (Figure 7.7.2)
- 9) Roll trim tab control
- 10) Pitch trim tab control
- 11) Lock for access door to landing gear emergency pump (Figure 7.5.2)

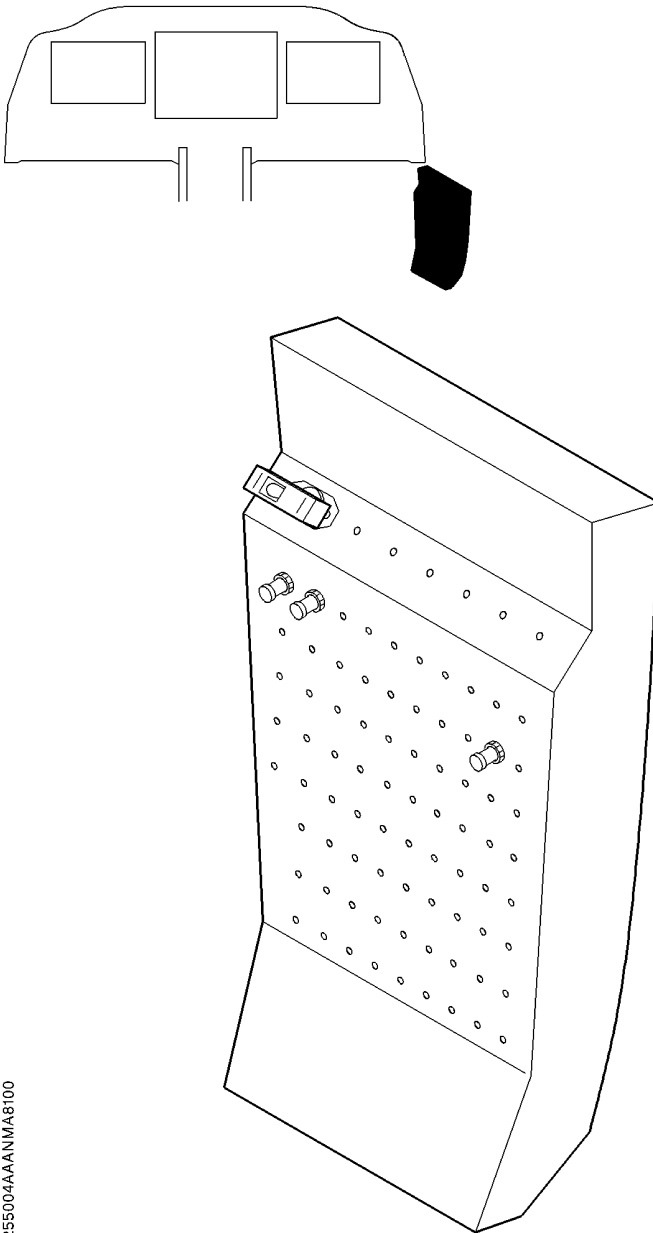
Figure 7.3.6 (1/2) - PEDESTAL CONSOLE





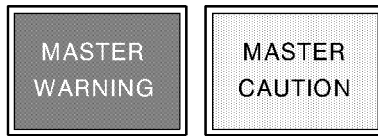
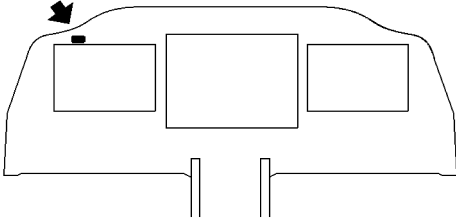
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Figure 7.3.6 (2/2) - PEDESTAL CONSOLE  
(Typical arrangement)

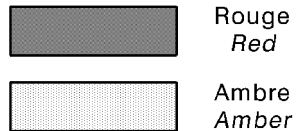


I4255004AAANMA8100

Figure 7.3.7 - CIRCUIT BREAKERS PANEL



Légende voyants  
*Lights key*



14315001AAA/BM/A8400

Figure 7.3.8 - GENERAL ALARMS WARNING LIGHTS

## **DOORS, WINDOWS AND EMERGENCY EXIT**

### **Cabin access door (Figure 7.3.9)**

The cabin one-piece access door, located on the left side of fuselage aft of the wings, opens outside. The retractable stairs and hand rail make boarding easier.

To open the door from outside the airplane (make sure the door is not locked), press on front end of the handle embedded in door (this pressure disengages the handle from its recess), then turn the handle upwards. Raise the door helping it to open. Two compensation actuators bring and maintain the door at its maximum opening position.

After door opening, tilt stairs downwards. Stairs down movement is damped by means of two gas struts and leads the hand rail to extend.

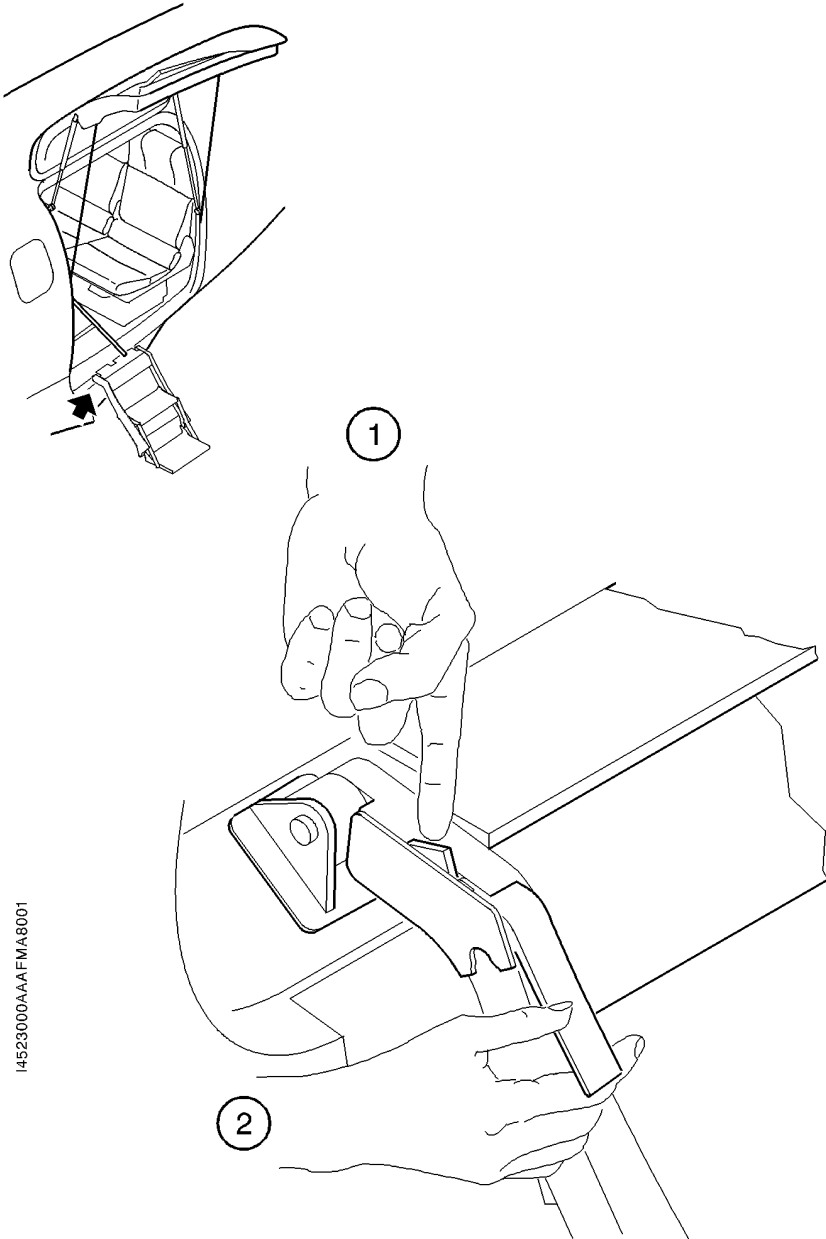
### **CAUTION**

#### **RETRACT STAIRS BEFORE CLOSING ACCESS DOOR AND MAKE SURE DOOR DEFLECTION AREA IS CLEAR**

To retract stairs, press on locking pin located on stairs front string board (see detail "1"), raise retractable handle (see detail "2") and pull stairs inside cabin. While stairs are retracted, the hand rail folds up.

To close the door from inside the airplane, press on knob inside cabin forward of the door. The door driven by a geared motor tilts downwards up to a position near the complete closing. Pull the door until it aligns with fuselage and lock it by moving inside handle downwards. Check that all latch pins and hooks are correctly engaged (visible green marks).

The "DOOR" CAS message lights on as long as the door is not correctly locked.



14523000AAA-FMA8001

Figure 7.3.9 - CABIN ACCESS DOOR

**CAUTION**

**BEFORE OPENING ACCESS DOOR, MAKE SURE DOOR  
DEFLECTION AREA IS CLEAR**

To open door from inside the cabin, unlock the handle by pressing on knob located on its left side, pull the handle toward inside and move it upwards. Open the door by pushing it upwards.

After door opening, tilt stairs downwards which leads the hand rail to extend.

**CAUTION**

**RETRACT STAIRS BEFORE CLOSING ACCESS DOOR AND MAKE  
SURE DOOR DEFLECTION AREA IS CLEAR**

To retract stairs from outside the airplane, raise stairs by pushing them upwards from the lower part and fold them inside cabin. While stairs are retracted, the hand rail folds up.

To close the door from outside the airplane, press on knob on outside fuselage at the right side of the door. The door driven by a geared motor tilts downwards up to a position near the complete closing. Push the door until it aligns with fuselage and lock it by moving outside handle downwards, then fold handle in its recess.

Check that all latch pins and hooks are correctly engaged (visible green marks).

In case of geared motor failure, the door can be manually tilted downwards by pulling sufficiently to override action of compensating struts.

**Cockpit access door** (Figure 7.3.9A)

The cockpit access door, so-called "pilot" door, (if installed) located on the left side of fuselage forward of the wings, opens outside. Retractable footstep makes boarding easier.

**WARNING****AS THE "PILOT" DOOR IS LOCATED IN A DANGEROUS AREA, WAIT FOR COMPLETE ENGINE STOP BEFORE OPERATING THIS DOOR**

To open the door from outside the airplane (make sure the door is not locked), press on front end of the handle embedded in door (this pressure disengages the handle from its recess), then turn the handle downwards. Pull the door helping it to open until it reaches its maximum opening position.

After door opening, tilt and unfold footstep.

**CAUTION****RETRACT FOOTSTEP BEFORE CLOSING ACCESS DOOR**

Fold and tilt footstep upwards.

To close the door from inside the airplane, pull the door until it aligns with fuselage and lock it by moving inside handle downwards. Check that each latch is correctly engaged in its recess (visible green marks).

The "DOOR" CAS message lights on as long as cabin access door and "pilot" access door (if installed) are not correctly locked.

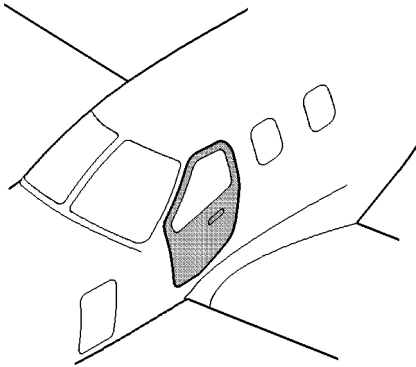
To open door from inside the cockpit, unlock the handle by pressing on knob located on its right side, pull the handle inwards and move it upwards. Open the door helping it to open until it reaches its maximum opening position.

After door opening, tilt and unfold footstep.

**CAUTION****RETRACT FOOTSTEP BEFORE CLOSING ACCESS DOOR**

Fold and tilt footstep upwards.

To close the door from outside the airplane, push the door until it aligns with fuselage and lock it by moving outside handle upwards, then fold handle in its recess.



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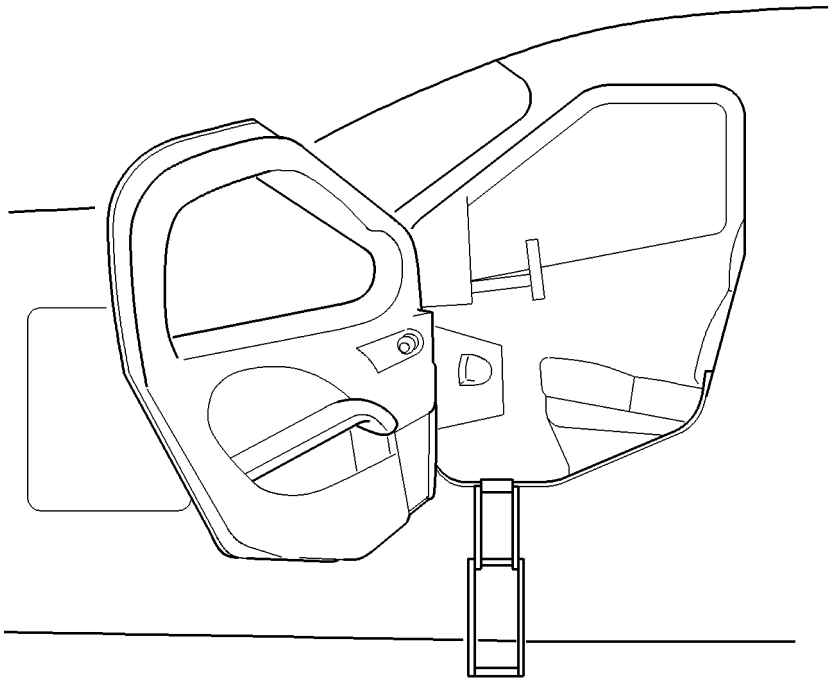


Figure 7.3.9A - COCKPIT ACCESS DOOR ("PILOT" DOOR)



**FWD compartment door**

The FWD compartment door is located on the airplane left side between the firewall and the front pressure bulkhead. It is hinged at the top. It is maintained in the up position by a compensation rod. Two interlocking-type latches ensure its closing and it is equipped with a lock [same key as for the access door and the "pilot" door (if installed)]. When the door is closed, latches are flush with the fuselage profile.

The "FRONT CARGO DOOR" CAS message lights on as long as FWD compartment door is not locked.

**Windows**

Windows do not open. The windshield consists of two parts electrically deiced.

**Emergency exit** (Figure 7.3.10)

The emergency exit is installed on the right side of the fuselage and opens towards the inside. It is equipped with two handles, one inside and the other outside, each located on the upper frame.

When the airplane is parked, the closing system may be locked by a safety pin provided with a flag marker. The handle is then inoperable.

**WARNING****TAXIING AND FLYING WITH THIEF-PROOF SAFETY PIN INSTALLED IS FORBIDDEN.**

To open the emergency exit, pull one of the two handles and tilt the emergency exit from top to bottom towards inside of airplane.

Pre-MOD70-0793-25

**CAUTION**

**BEFORE OPENING THE EMERGENCY EXIT FROM THE INSIDE OF THE AIRPLANE, REMOVE THE UPHOLSTERY PANEL OF THE EMERGENCY EXIT.**

**USING THE TWO HANDS, PULL FIRMLY THE UPHOLSTERY PANEL THROUGH THE ACCESS AREA TO THE OPENING HANDLE - SEE FIGURE 7.3.10A.**

All

**FWD compartment door**

The FWD compartment door is located on the airplane left side between the firewall and the front pressure bulkhead. It is hinged at the top. It is maintained in the up position by a compensation rod. Two interlocking-type latches ensure its closing and it is equipped with a lock [same key as for the access door and the "pilot" door (if installed)]. When the door is closed, latches are flush with the fuselage profile.

The "FRONT CARGO DOOR" CAS message lights on as long as FWD compartment door is not locked.

**Windows**

Windows do not open. The windshield consists of two parts electrically deiced.

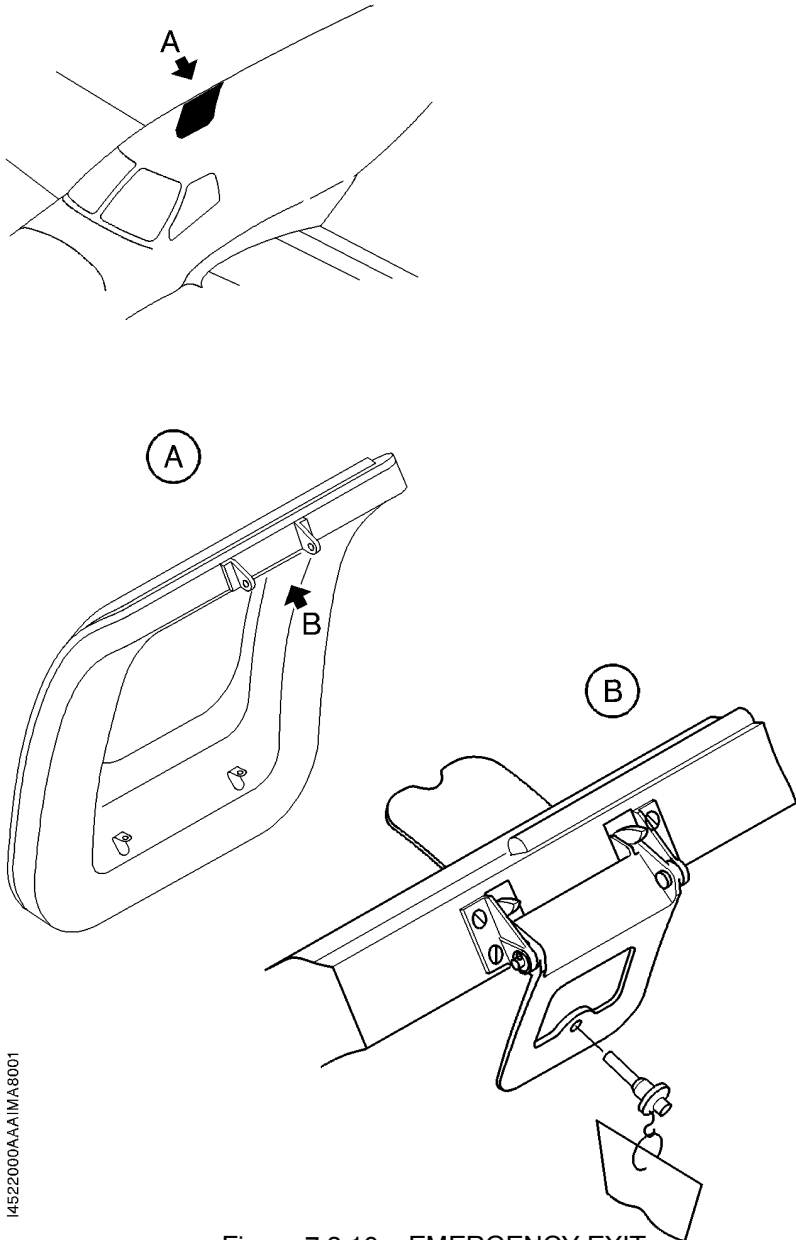
**Emergency exit** (Figure 7.3.10)

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**WARNING****TAXIING AND FLYING WITH THIEF-PROOF SAFETY PIN INSTALLED IS FORBIDDEN.**

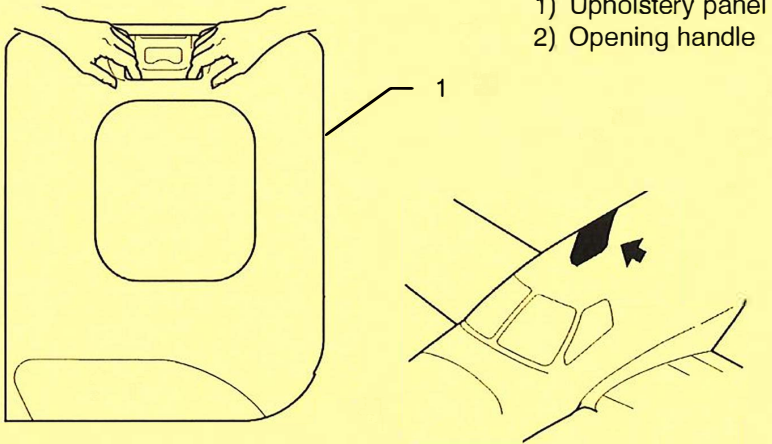
To open the emergency exit, pull one of the two handles and tilt the emergency exit from top to bottom towards inside of airplane.



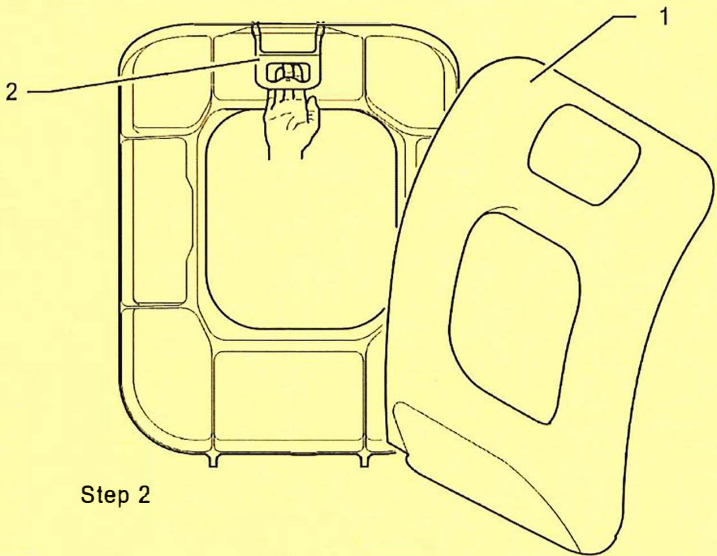
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Figure 7.3.10 - EMERGENCY EXIT

Pre-MOD70-0793-25



Step 1



Step 2

C4252100AAA AFMA8000

Figure 7.3.10A - REMOVAL OF THE UPHOLSTERY PANEL OF THE EMERGENCY EXIT

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## ■ All

**SEATS, BELTS AND HARNESSSES****Cockpit seats** (Figure 7.3.11)

L.H. and R.H. front seats are mounted on rails attached to the structure. Longitudinal position, height and back-rest tilting of each seat can be adjusted and the arm-rest is hinged.

Pull up the handle located forward for longitudinal setting.

The seat height is adjusted by pulling up side forward handle while relieving the seat from the body weight.

The seat back angle is adjusted by pulling up side rearward handle.

**Passengers' seats** (Figures 7.3.11 and 7.3.11A)Pre-MOD 70-0315-25Post-MOD 70-0315-25 with 6-seat accommodation

The accommodation consists of :

- two individual seats, installed back to the flight direction, mounted on the same rails as the front seats.

The seat back angle is adjusted by pulling up side handle.

- two rear seats arranged as a bench, mounted on the same rails as the front seats.

The seat back-rests tilt forward by pulling up the handle located forward on L.H. side of each seat which may tilt forwards by pulling up a rear handle to ease baggage loading in baggage compartment.

For longitudinal setting pull up the handle located forward, on R.H. side.

Post-MOD 70-0315-25 with 4-seat accommodation

The accommodation consists of :

- two individual seats, installed facing flight direction, mounted on the same rails as the front seats.

The seat back angle is adjusted by pulling up side handle.

**SEATS, BELTS AND HARNESSSES****Cockpit seats** (Figure 7.3.11)

L.H. and R.H. front seats are mounted on rails attached to the structure. Longitudinal position, height and back-rest tilting of each seat can be adjusted and the arm-rest is hinged.

Pull up the handle located forward for longitudinal setting.

The seat height is adjusted by pulling up side forward handle while relieving the seat from the body weight.

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**Passengers' seats** (Figures 7.3.11 and 7.3.11A)Pre-MOD 70-0315-25Post-MOD 70-0315-25 with 6-seat accommodation

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The seat back angle is adjusted by pulling up side handle.
- two rear seats arranged as a bench, mounted on the same rails as the front seats.  
The seat back-rests tilt forward by pulling up the handle located forward on L.H. side of each seat which may tilt forwards by pulling up a rear handle to ease baggage loading in baggage compartment.  
For longitudinal setting pull up the handle located forward, on R.H. side.

Post-MOD 70-0315-25 with 4-seat accommodation

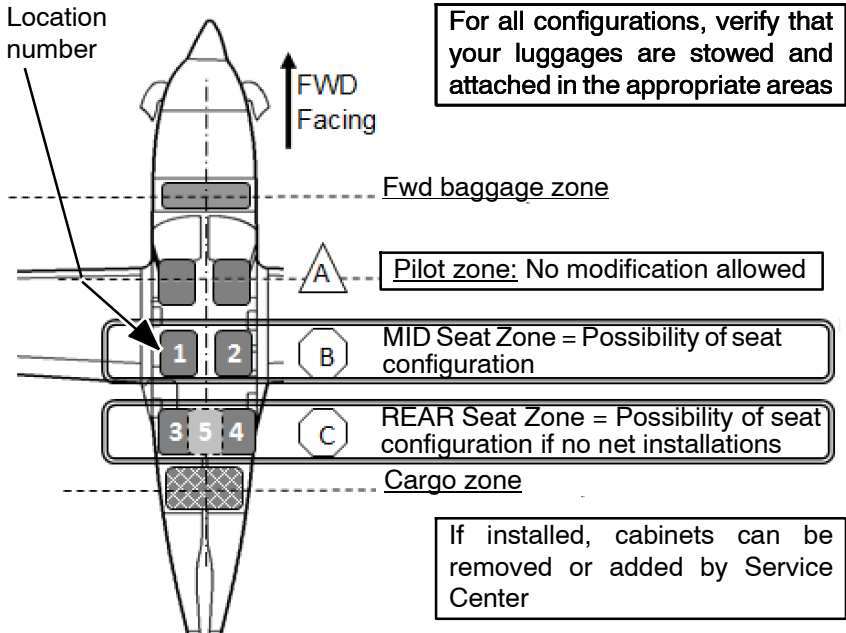
The accommodation consists of :

- two individual seats, installed facing flight direction, mounted on the same rails as the front seats.  
The seat back angle is adjusted by pulling up side handle.

Post-MOD70-0315-25

Many accommodations are possible. They are described hereafter

ONLY zone (B) and zone (C) can be modified for seat configurations.  
This possibility is valid ONLY for Post-MOD70-0315-25.



**For the MID Seat zone (B):**  
ONLY the Middle Seats can be installed in MID Seat Zone.  
This zone accepts Fwd and Aft Facing Mid Seat when rear seats are installed ONLY per MOD 70-0315-25.  
The zone (B) accepts zero or 1 or 2 seats.  
(The zone (B) is not a luggage area).

Location number	FWD Facing	AFT Facing	Number of seat can be installed
1	YES	YES	1 or 0
2	YES	YES	1 or 0

**For the REAR Seat zone (C):**  
ONLY the Rear Seat can be installed in Rear Seat Zone.

The Zone (C) accepts zero or 1 or 2 seats.

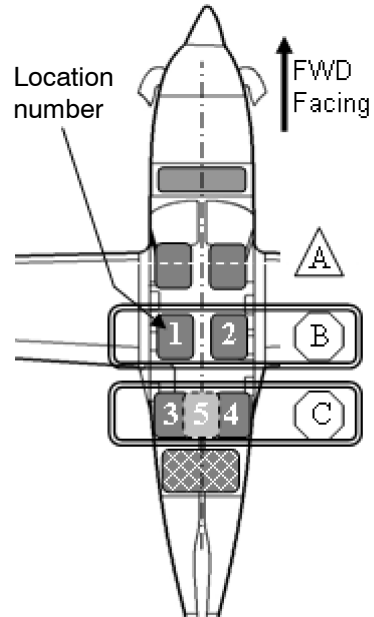
Location number	FWD Facing	Number of seat can be installed
3	YES	1 or 0
4	YES	1 or 0
5 *(1)	YES *(1)	1 or 0 *(1)

\*(1) Centered on the fuselage axis



Here are all the configurations possibilities (for Post-MOD70-0315-25 airplane) :

Configuration name	Location number				
	1	2	3	4	5
C1	X	X	X	X	
C2	X	X			X
C3	X	X		X	
C4 <sup>(1)</sup>	X	X			
C5	X	X	X		
C6	X		X	X	
C7	X		X		
C8	X			X	
C9	X				X
C10 <sup>(1)</sup>	X				
C11		X	X	X	
C12		X			X
C13		X	X		
C14		X		X	
C15 <sup>(1)</sup>		X			
C16			X	X	
C17			X		
C18				X	
C19					X
C20 <sup>(1)</sup>					
	Zone (B)		Zone (C)		



(1) This configuration accepts small net or large net from MOD70-0315-25

Each cross indicates that you have a seat at the correspondent location number.

**Belts and harnesses** (Figure 7.3.12)

**WARNING**

**INCORRECT CLOSURE OF THE SAFETY BELT MAY INTRODUCE A RISK. MAKE SURE IT IS TIGHTENED WHEN BUCKLED. TO BE MOST EFFICIENT, THE BELT MUST NOT BE TWISTED. CHECK THAT THERE IS NO CONSTRAINT WHEN OPERATED. AFTER A SERIOUS ACCIDENT, REPLACE ALL BELTS**

Each cockpit seat is equipped with a four-point restraint system consisting of an adjustable lap belt and a dual-strap inertia reel-type shoulder harness.

Each passenger seat is equipped with a three-point restraint system consisting of an adjustable lap belt and an inertia reel-type shoulder harness.

**BAGGAGE COMPARTMENTS**

Pre-MOD 70-0315-25

Post-MOD 70-0315-25 with 6-seat accommodation

There are two baggage compartments :

- An AFT compartment located in the pressurized cabin between rear passenger seats and rear pressure bulkhead.
- A FWD compartment (non-pressurized) located between firewall and fwd pressure bulkhead.

The AFT compartment is accessible through the cabin by tilting forward the L.H. rear seat and / or L.H. or R.H. rear seat back-rests. Rings fitted with lashing straps are provided for securing parcels and baggage on compartment floor.

The FWD compartment is accessible by opening the external door located on the left side of the airplane.

These locations are designed for the carrying of low density loads ; loading and unloading must be carried out with caution to avoid any damage to airplane.

The cabin is separated from the baggage compartment by a partition net intended to protect the passengers from injuries that could be caused by improper tie-down of a content.

The partition net is mounted at frame C14 (Figure 7.2.1), it is secured at the bottom to 4 points of the floor and on the sides to 6 points of the structure.

Maximum loads allowable in the baggage compartments depend on airplane equipment, refer to Section 6 "Weight and balance".

**WARNING**

**ANY PARCEL OR BAGGAGE MUST BE STOWED BY STRAPS.**

**IT IS THE PILOT'S RESPONSIBILITY TO CHECK THAT ALL THE PARCELS AND BAGGAGE ARE PROPERLY SECURED IN THE CABIN.**

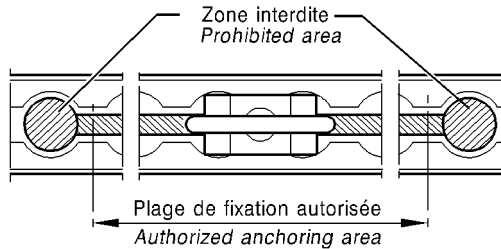
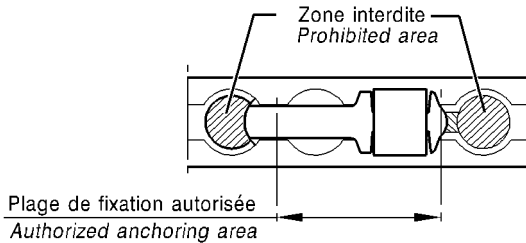
**IN CASE OF TRANSPORT OF DANGEROUS MATERIALS, RESPECT THE LAW CONCERNING TRANSPORT OF DANGEROUS MATERIALS AND ANY OTHER APPLICABLE REGULATION**

Post-MOD 70-0315-25 with 4-seat accommodation

Two cargo nets are available for the pilot to safely secure and transport baggage :

- the Small Cargo Net is attached through nine anchoring points on seat rails, between frame C11 and frame C13bis (Figure 7.2.1B).

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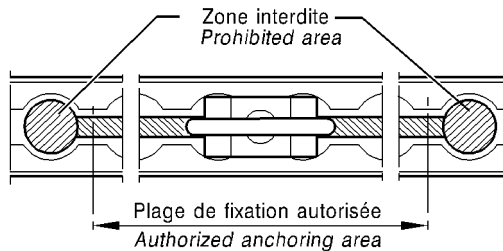


- the Large Cargo Net is attached through seven anchoring points on seat rails, between frame C11 and frame C13bis and six anchoring points on fuselage sides, at frame C14 (Figure 7.2.1A).

**NOTE :**

*Original Partition Net must be disconnected from side walls and placed on the floor.*

I4113500AAAAMIA18300



Authorized anchoring points are identified with green self-adhesive labels affixed to the inside of the seat rail.

A placard indicates loading limits for each cargo net :

- for the Small Cargo Net, it is affixed on frame C13bis,
- for the Large Cargo Net, it is affixed on R.H. side upholstery panel, in the rear baggage compartment.

Maximum loads allowable in the baggage compartments depend on airplane equipment, refer to Section 6 "Weight and balance".

### **WARNING**

**ANY PARCEL OR BAGGAGE IN CABIN MUST BE STOWED BY CARGO NET AND STRAPS.**

**IT IS THE PILOT'S RESPONSIBILITY TO CHECK THAT ALL THE PARCELS AND BAGGAGE ARE PROPERLY SECURED.**

**IN CASE OF TRANSPORT OF DANGEROUS MATERIALS, RESPECT THE LAW CONCERNING TRANSPORT OF DANGEROUS MATERIALS AND ANY OTHER APPLICABLE REGULATION.**

### **USE OF CARGO NETS**

#### **Net inspection**

Before each use, visually inspect net for :

- webbing condition,
- seam condition of tensioning strap
- metallic part condition.

#### **Installation instructions**

Tensioning straps must be installed so that they make a V with a minimum angle of 40° between both strands attached on the net. The net must be properly tight

### Damage acceptance criteria

If any damage is detected, such as :

- damage or absence of hook, buckle or stud on tensioning strap : strap must **mandatorily** be discarded and replaced,
- webbing frayed or cut on less than 30 % of its surface : reduce maximum load by 50 %,
- seam of vertical net tensioning straps damaged on less than 30 % of its length : reduce maximum load by 50 %,
- seam of tensioning straps attached on the rails damaged on less than 30 % of its length : reduce maximum load by 50 %,
- beyond 30% damage for above-mentioned cases, defective element must **mandatorily** be discarded and replaced,
- netting cut or torn on less than 3.9 in (100 mm) : still serviceable, no impact
- netting cut or torn on more than 3.9 in (100 mm) : do not carry small objects which dimensions are smaller than 4.9 x 4.9 x 4.9 in (125 x 125 x 125 mm)

- 1) Front passenger's seat
- 2) L.H. pilot's seat
- 3) R.H. intermediate passenger's seat (back to flight direction)
- 4) L.H. intermediate passenger's seat (back to flight direction)
- 5) R.H. rear passenger's seat
- 6) L.H. rear passenger's seat } Rear bench
- 7) Front seat(s) longitudinal shift control
- 8) Front seat(s) height control
- 9) Front seat(s) back-rest tilt control
- 10) Drawer for pilot's piddle pak (if installed)  
(front side : new bags, rear side : used bags)
- 11) Intermediate seat(s) back-rest tilt control
- 12) Rear bench seat(s) back-rest tilt control
- 13) Rear bench L.H. seat tilt control
- 14) Rear bench seat(s) adjustment control handle

**NOTE :**

*To have access to the baggage compartment, pull forwards the back-rest of rear bench L.H. seat, then pull forwards control (Item 13) to tilt L.H. seat assembly forwards.*

*If necessary, pull forwards the back-rest of rear bench R.H. seat.*

Figure 7.3.11 (1/2) - SEATS

Pre-MOD70-0315-25

Post-MOD70-0315-25 with 6-seat accommodation

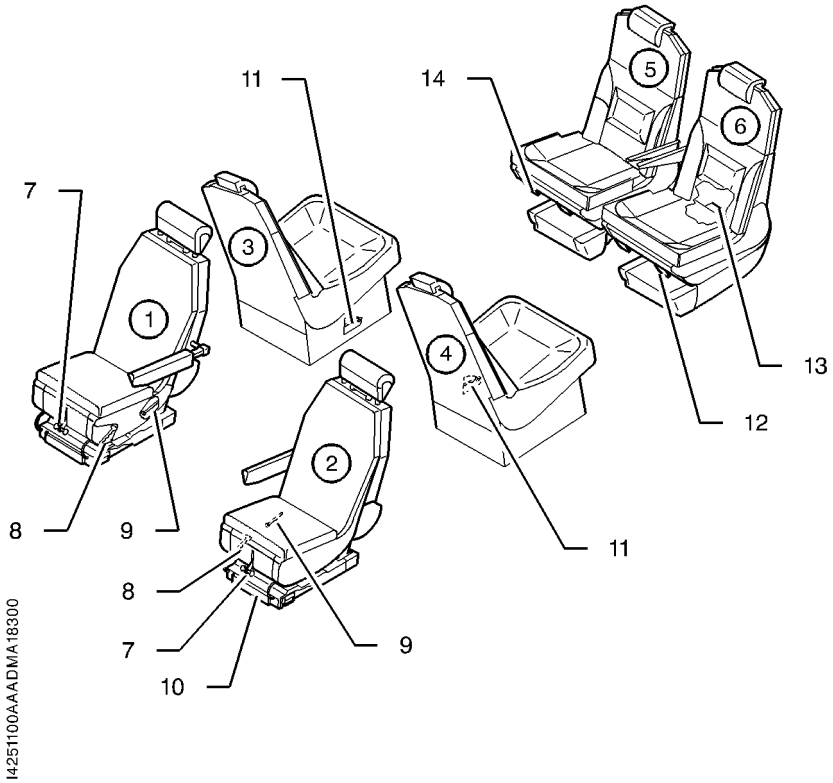
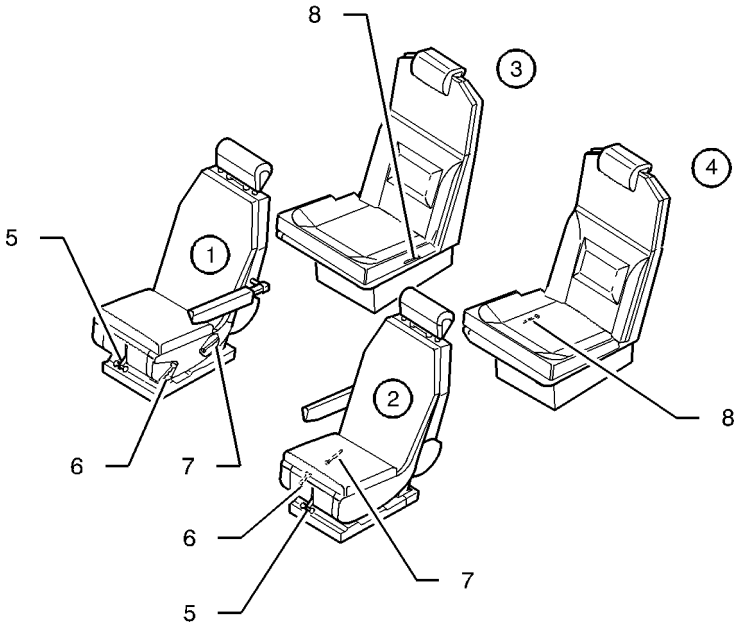


Figure 7.3.11 (2/2) - SEATS  
Pre-MOD70-0315-25  
Post-MOD70-0315-25 with 6-seat accommodation



- 1) Front passenger's seat
- 2) L.H. pilot's seat
- 3) R.H. intermediate passenger's seat (facing flight direction)
- 4) L.H. intermediate passenger's seat (facing flight direction)
- 5) Front seat(s) longitudinal shift control
- 6) Front seat(s) height control
- 7) Front seat(s) back-rest tilt control
- 8) Intermediate seat(s) back-rest tilt control

Figure 7.3.11A (1/2) - SEATS  
Post-MOD70-0315-25 with 4-seat accommodation



I4251100AAADMA18200

Figure 7.3.11A (2/2) - SEATS  
Post-MOD70-0315-25 with 4-seat accommodation

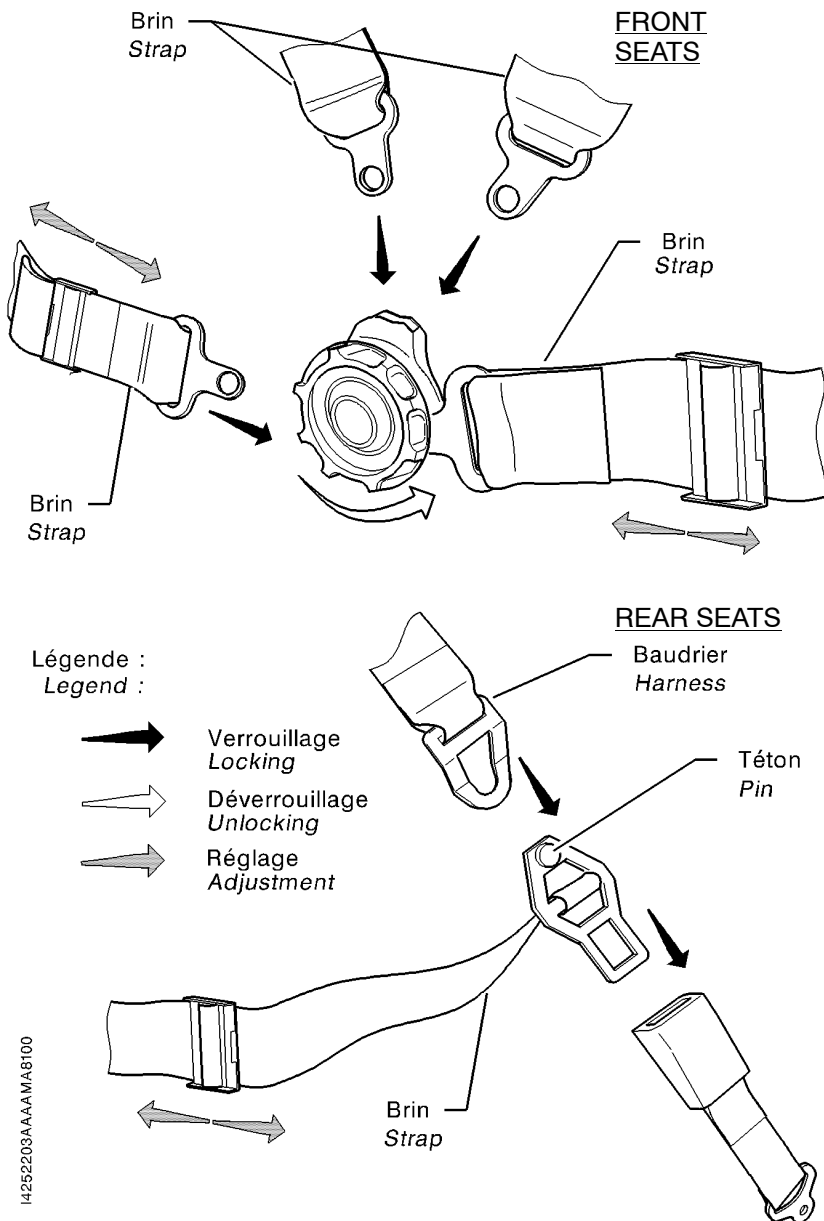


Figure 7.3.12 - FRONT AND REAR SEAT BELTS (with movable straps) AND HARNESSSES

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## 7.4 - FLIGHT CONTROLS

Flight controls consist of roll, pitch and rudder controls, as well as roll trim tab, pitch trim tab and rudder trim tab controls.

**NOTE :**

*During airplane parking, it is recommended to lock flight controls (see Figure 8.6.2)*

### **ROLL** (Figure 7.4.1)

The roll control is activated by an assembly of rods and cables which links control wheels with the ailerons and the spoilers.

Aileron displacement is combined with that of spoilers, located at upper surface of each wing forward of flaps.

The spoiler rises from wing upper surface profile, when the aileron is deflected upwards and remains in wing profile, when the aileron is deflected downwards.

Control wheel movement is transmitted through rods to fuselage roll lever located under the floor. The movement is then transmitted through cables to the spoiler mechanism and from the spoiler mechanism to wing roll lever which activates the aileron through a rod.

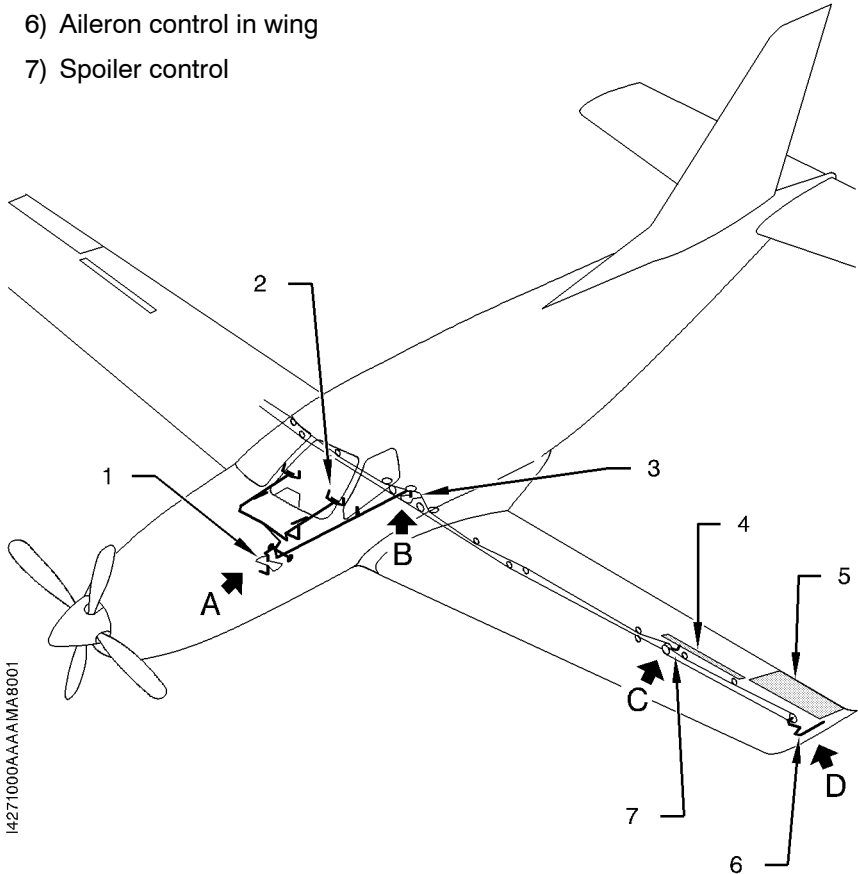
A rudder / roll combination spring-type system induces roll deflection at the time of pedals movement and vice versa.

### **ROLL TRIM** (Figure 7.4.2)

The roll trim is controlled by a trim tab attached at trailing edge of the L.H. aileron. The trim tab is connected through two links to an electric actuator located in the aileron. A trim switch located on pedestal controls the roll trim tab maneuver.

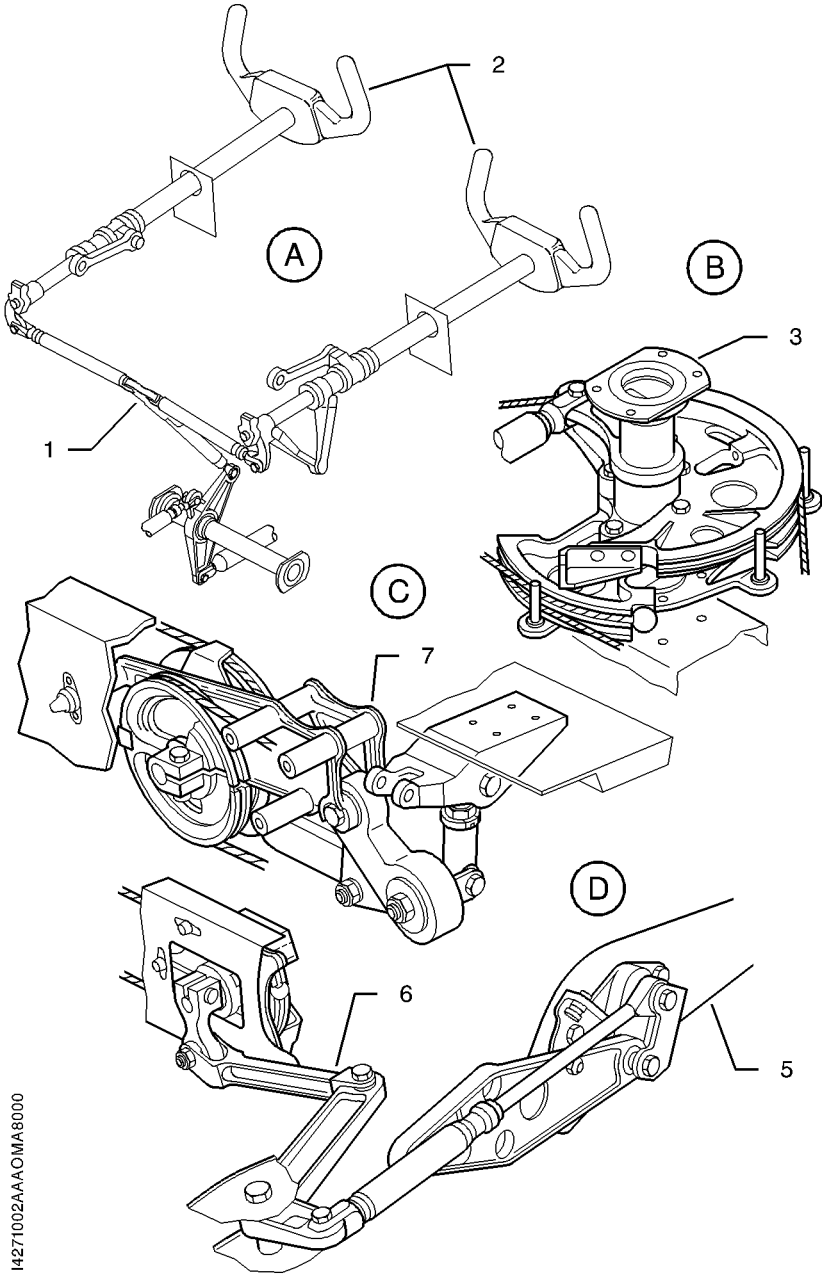
Roll trim tab electrical circuit is protected by the "AIL TRIM" circuit breaker.

- 1) Pedestal assembly
- 2) Control wheels
- 3) Fuselage roll lever
- 4) Spoiler
- 5) Aileron
- 6) Aileron control in wing
- 7) Spoiler control



I4271000AAAAA MA8001

Figure 7.4.1 (1/2) - ROLL



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Figure 7.4.1 (2/2) - ROLL

- 1) Roll trim tab
- 2) Aileron
- 3) Adjustable rods
- 4) Actuator
- 5) Trim tab control wiring
- 6) Trim switch on pedestal console

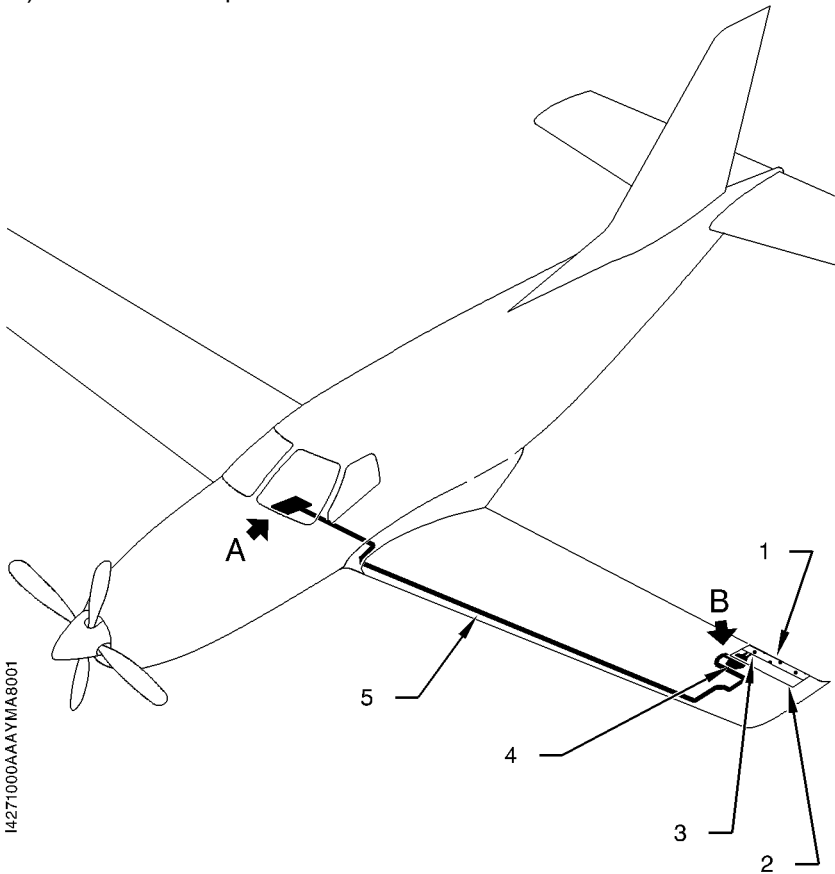


Figure 7.4.2 (1/2) - LATERAL TRIM



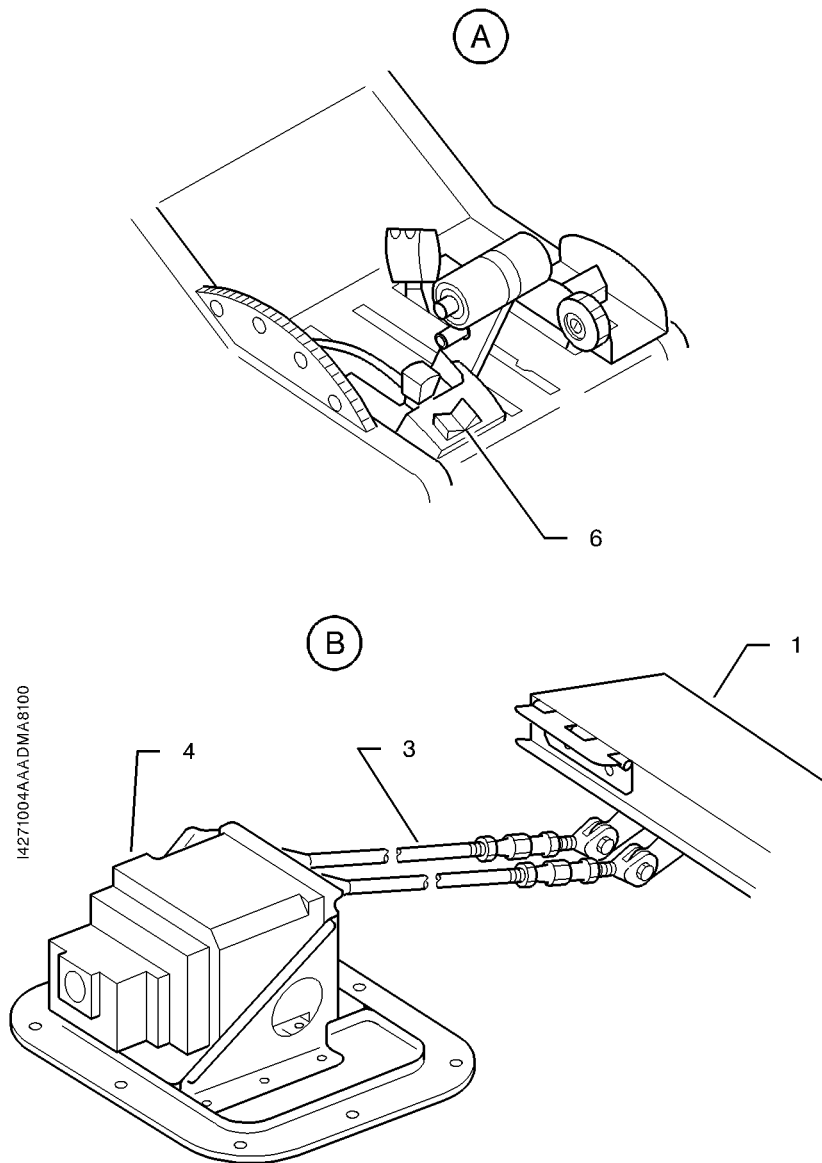


Figure 7.4.2 (2/2) - LATERAL TRIM

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**ELEVATOR** (Figure 7.4.3)

Both elevators are activated simultaneously by the same control. Each control surface is hinged at three points to the rear part of horizontal stabilizer.

The control wheel controls the two elevators through rods, bearings and bellcranks.

A spring actuator creates a "nose-down" artificial force which allows a better static stability.

Each control surface is provided with an automatic anti-tab (automaticity about 0.3), which is also used as trim tab.

**PITCH TRIM** (Figure 7.4.4)

The pitch trim is accomplished through the two anti-tabs located on left and right elevators.

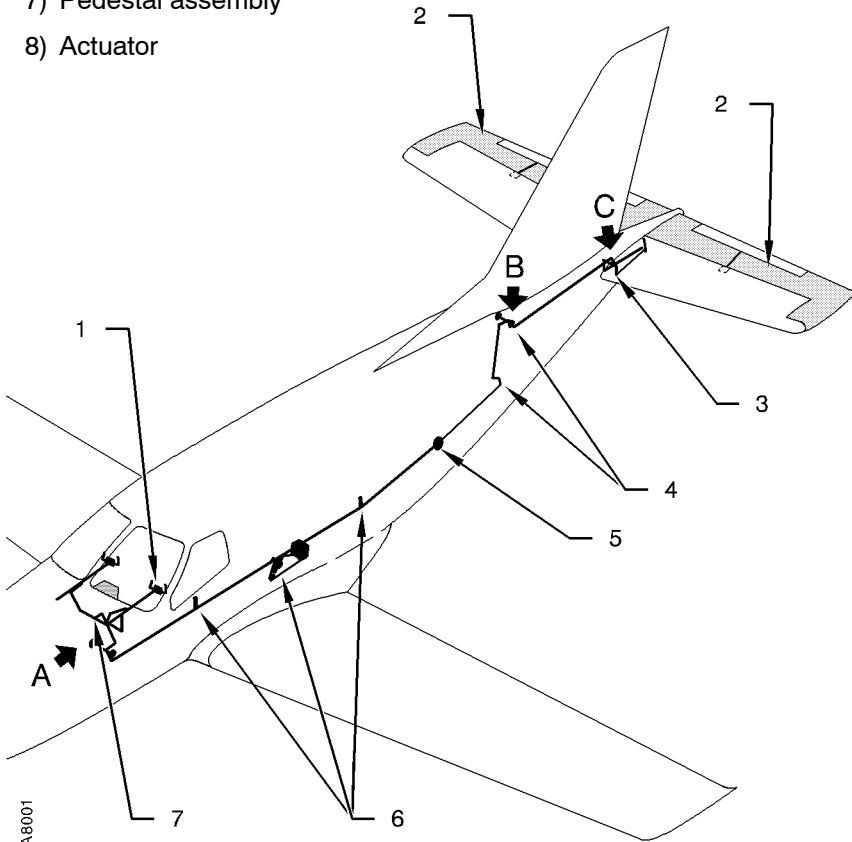
The trim tab can be controlled electrically or manually. It is activated through cables and a chain on two screw actuators attached to the horizontal empennage.

The electrical control consists of a switch located on the pilot control wheel and a servo-motor attached under the pedestal.

The electrical circuit for pitch trims is protected by the "AP SERVOS" circuit breaker.

Manual control wheel is installed vertically on left side of pedestal console.

- 1) Control wheel assembly
- 2) Elevators
- 3) Lever assembly, fuselage rear part
- 4) Elevator bellcrank
- 5) Rod with presseal connection
- 6) Lever assembly under floor
- 7) Pedestal assembly
- 8) Actuator



I4273000AAA-MAA8001

Figure 7.4.3 (1/2) - ELEVATOR

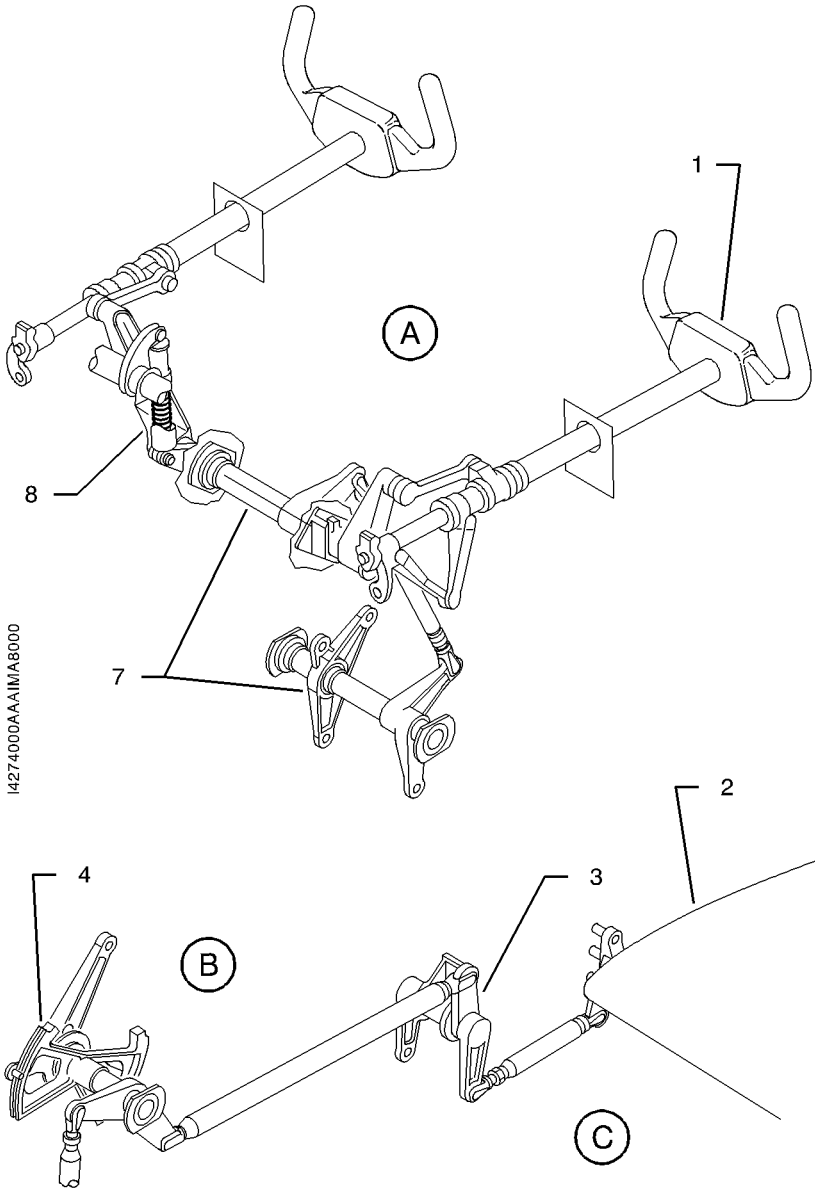
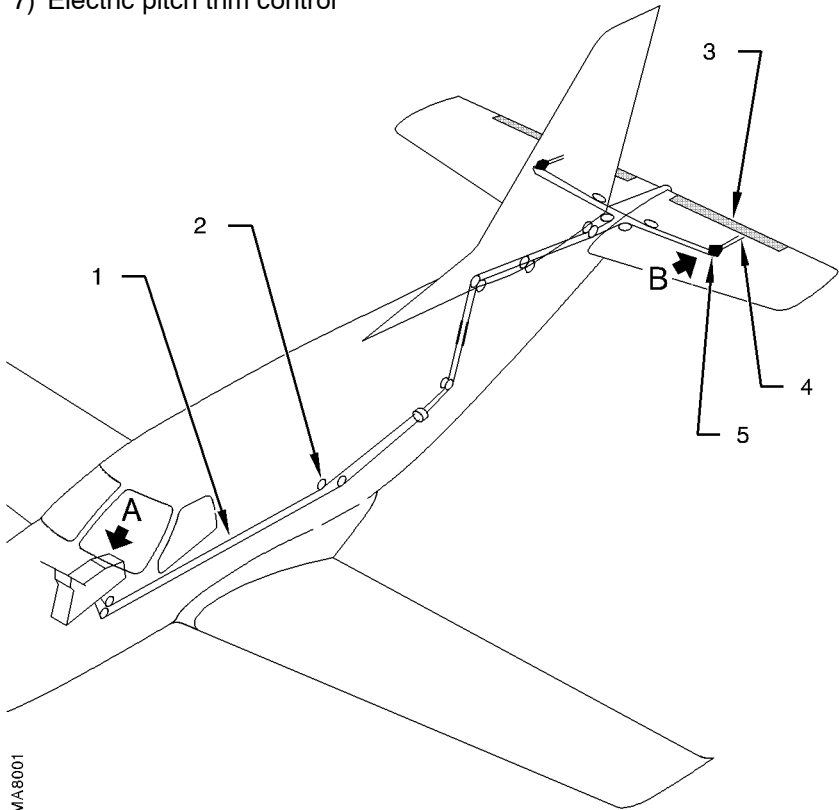


Figure 7.4.3 (2/2) - ELEVATOR

- 1) Cables
- 2) Pulleys
- 3) Pitch trim tabs
- 4) Actuating rods
- 5) Actuator
- 6) Pitch trim manual control wheel
- 7) Electric pitch trim control



I4274000AAABMA8001

Figure 7.4.4 (1/2) - PITCH TRIM

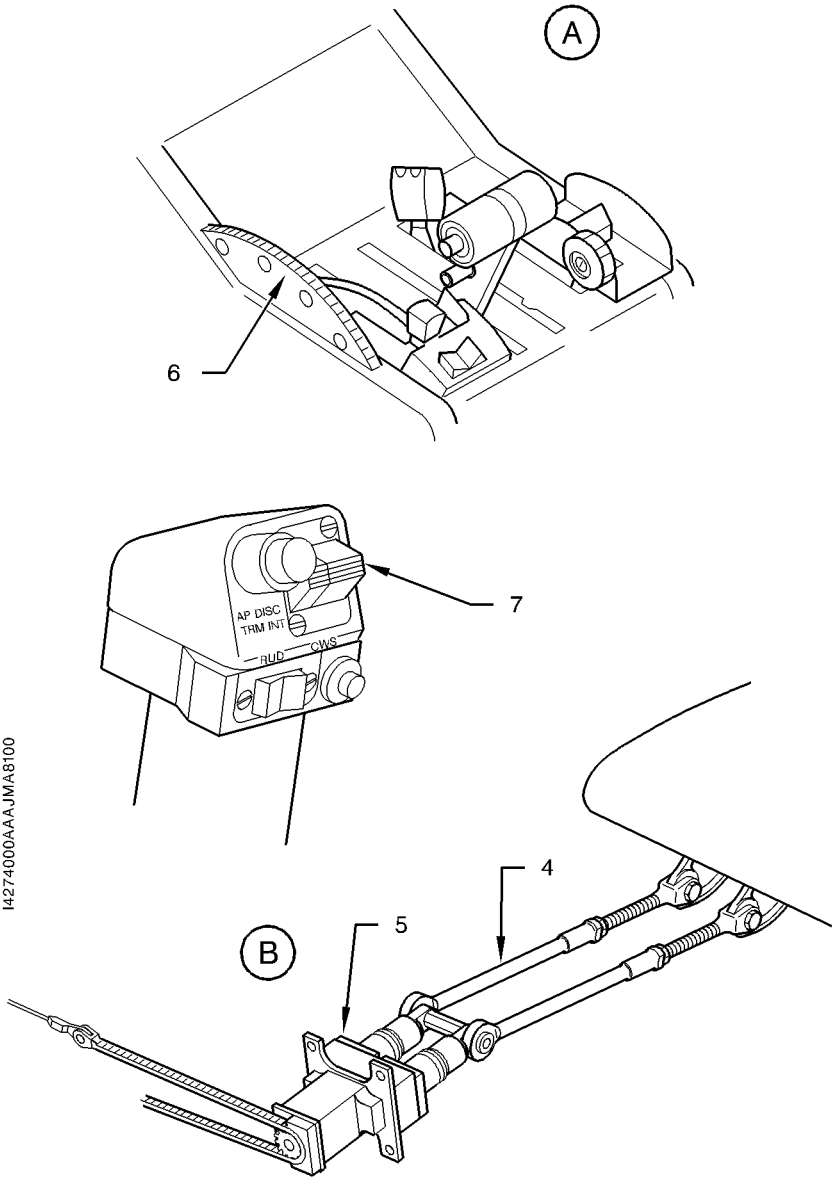


Figure 7.4.4 (2/2) - PITCH TRIM

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**RUDDER** (Figure 7.4.5)

The rudder is hinged on three fittings attached to the vertical stabilizer rear spar.

- The rudder pedals / rudder linkage is ensured through cables and a rod.

Pilot and R.H. station rudder pedal positions are adjustable at each station. The rudder pedal adjustment mechanism (for piloting comfort purposes) includes a manual control located against the external bulkhead beneath the instrument panel and a locking device on the rudder pedals. This ball locking device allows selecting six different positions.

When landing gear is down, rudder pedals are linked to nose gear steering system.

Spring system of rudder / roll combination induces aileron deflection at the time of pedal displacement and vice versa.

**RUDDER TRIM** (Figure 7.4.6)

A trim tab hinged at two points located at rudder trailing edge provides rudder trim.

Trim tab is linked by two rods to an electric actuator attached to rudder. It is controlled by "RUD" switch (L / R) located on pilot control wheel.

Electrical circuit of rudder trim tab is protected by "RUD TRIM" circuit breaker.

- 1) Roll / rudder combination bellcrank installation
- 2) Rudder pedals assembly
- 3) Control cables
- 4) Pulleys
- 5) Rudder lever assembly
- 6) Rod
- 7) Rudder
- 8) Nose gear steering rod

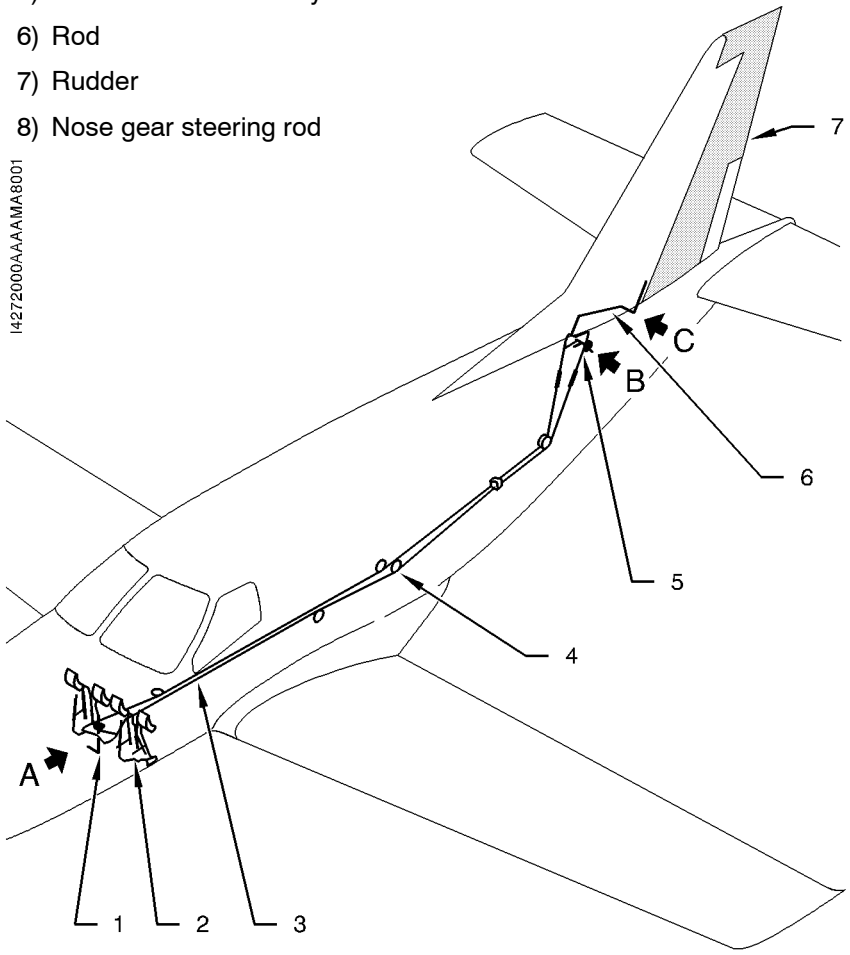


Figure 7.4.5 (1/2) - RUDDER

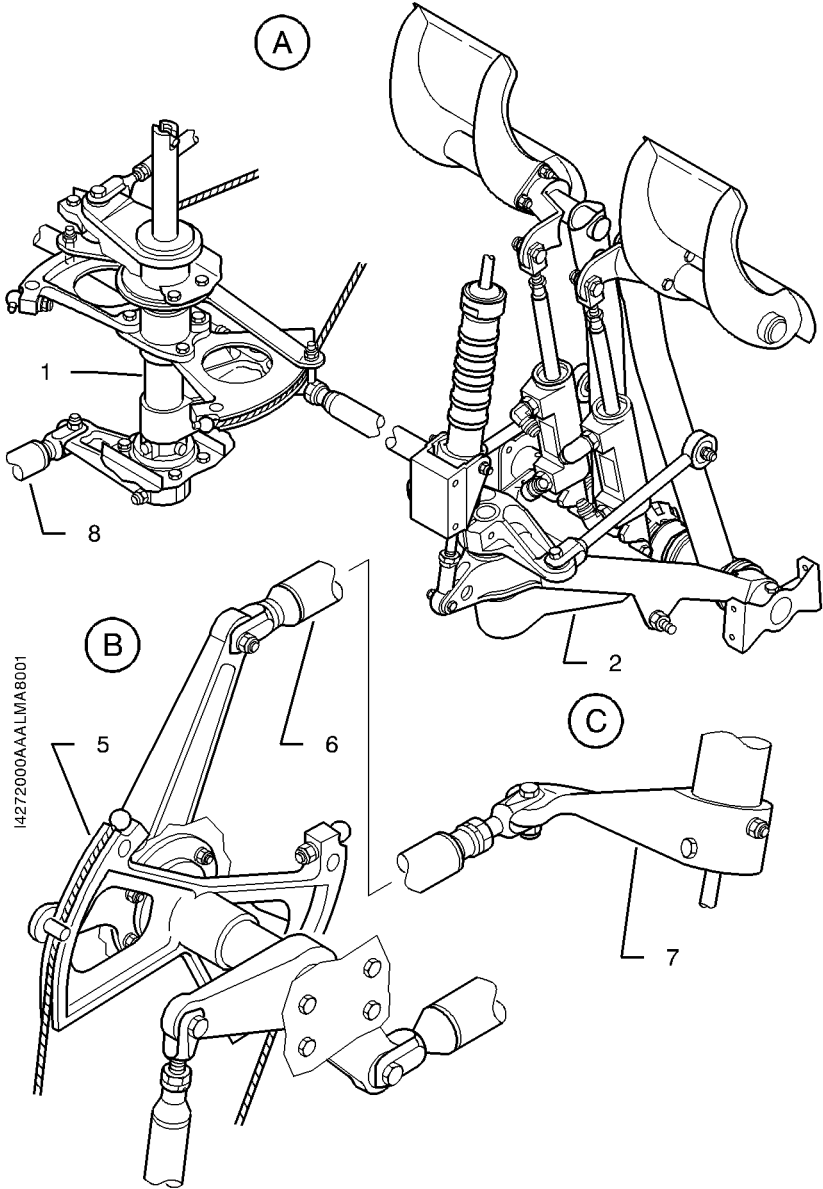


Figure 7.4.5 (2/2) - RUDDER

- 1) Trim switch on control wheel
- 2) Actuator
- 3) Rudder trim tab
- 4) Rods
- 5) Rudder trim control wiring

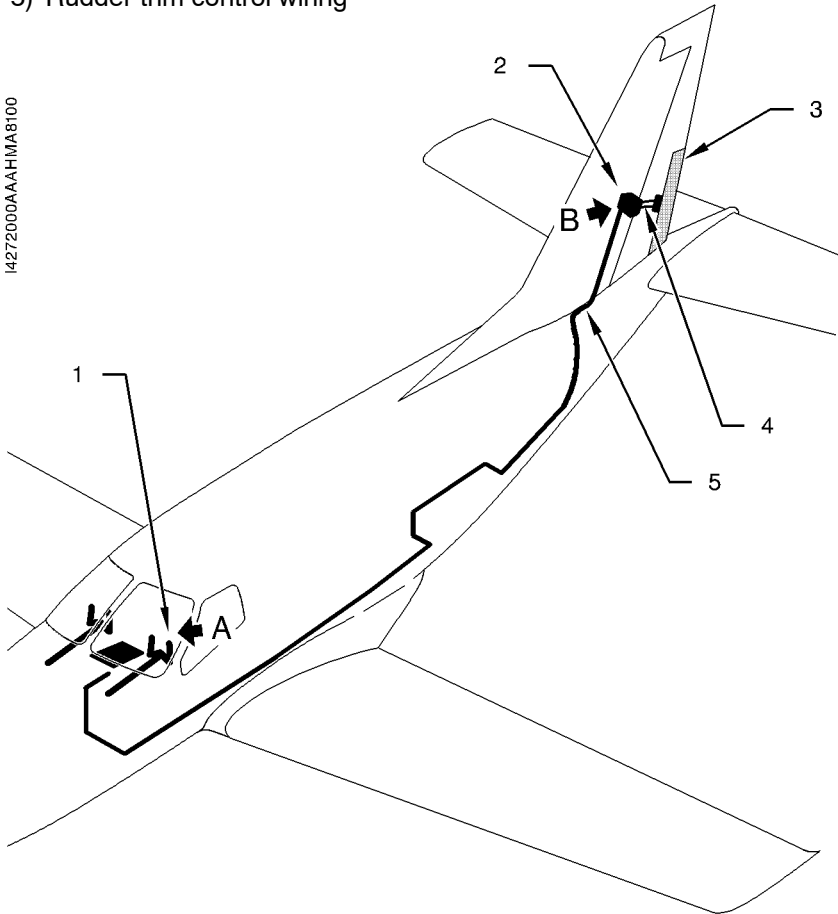
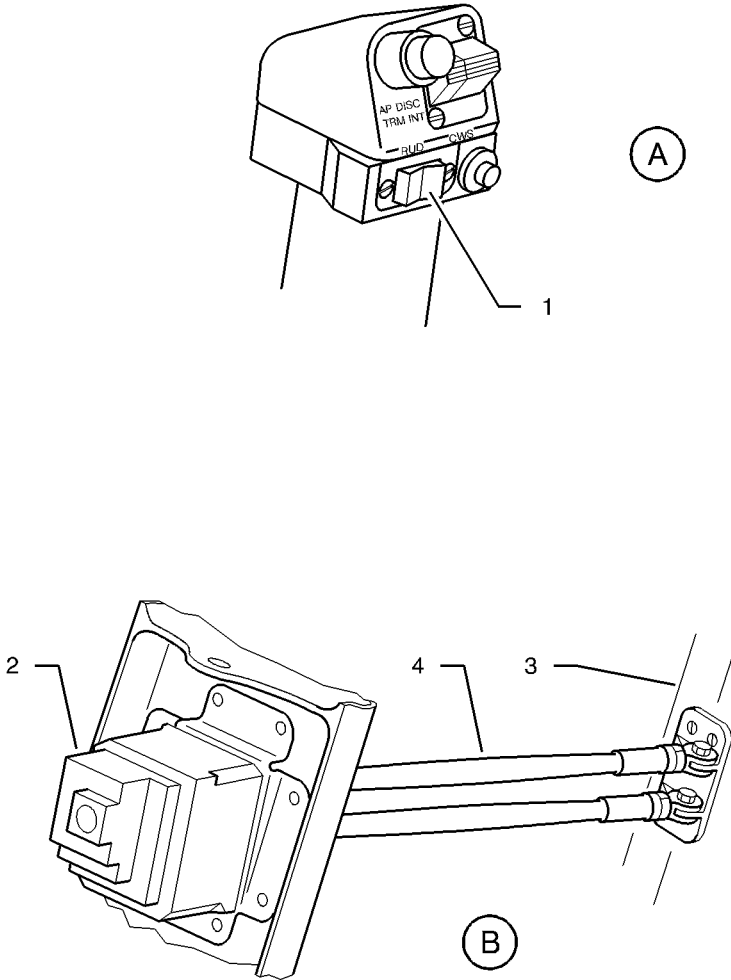


Figure 7.4.6 (1/2) - RUDDER TRIM



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Figure 7.4.6 (2/2) - RUDDER TRIM

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## 7.5 - LANDING GEAR

The TBM 850 is equipped with electro-hydraulically actuated, fully retractable tricycle landing gear.

Each landing gear is equipped with one wheel and an oil-air shock absorber integrated in the strut.

**Main landing gears** swivel on two ball joints installed on wing spars. Each landing gear retracts toward airplane centerline. The operation is accomplished by a hydraulic actuating cylinder which also provides up and down locking.

**Nose gear** swivels on two ball joints installed on a tubular steel mount frame. Its operation is accomplished by a hydraulic actuating cylinder which also provides up and down locking. The nose wheel is steerable. It is connected to pedals through a spring rod and is provided with a shimmy damper. In UP position, nose wheel is automatically disconnected.

**Actuating cylinders** have a locking device integrated at both ends. This device maintains landing gear in up or down position.

■ Pre-MOD70-0342-52 (Lower main landing gear doors)

**Landing gear doors**, two on the nose gear, one on each main landing gear, are driven and kept in UP position by the landing gear itself.

■ Post-MOD70-0342-52 (Lower main landing gear doors)

**Landing gear doors**, two on the nose gear, two on each main landing gear, are driven and kept in UP position by the landing gear itself.

All

All doors are mechanically kept in down position.

## HYDRAULIC PRESSURE

- **Hydraulic pressure** required for landing gear operation is provided :
  - during normal operation, by an electro-hydraulic generator with integrated reservoir,
  - during emergency extension operation by a hand pump supplied with an auxiliary reservoir.

## LANDING GEAR CONTROL (Figure 7.5.1)

Landing gear control, located on "LANDING GEAR" panel at the bottom of instrument panel left part, is accomplished by an electric selector actuated through a lever ending with a knob representing a wheel. Operation is carried out by pulling on lever and by putting it in the desired "UP" (retracted) or "DN" (extended) position. This selector controls hydraulic generator.

## ■ LANDING GEAR POSITION INDICATOR (Figure 7.5.1)

Landing gear position indication is accomplished by 4 warning lights :

- - 3 green indicator lights (one per landing gear),
- 1 red warning light.

*NOTE :*

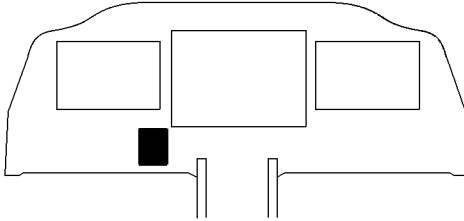
*The red warning light flashes as soon as landing gears are operating and remains continuously on in case of locking problem.*

When landing gear is correctly retracted, all warning lights are OFF.

- Down-locked correct indication is when there are 3 green indicator lights ON and 1 red warning light OFF on the landing gear indicator. All other cases mean the gear is not down-locked.  
In case of doubt about "landing gear down-locked" position, an independant electrical circuit provides a countercheck capability of the indication system. Pressing the "CHECK DN" switch located on the same panel as the warning lights allows testing of the control circuit.

Indication panel is provided with two tests which allow checking green indicator lights and red warning light bulbs through two distinct electric power supplies.





- 1) Red warning light (LDG GR)
- 2) Green indicator light (LDG GR)
- 3) Landing gear control selector
- 4) Test switch
- 5) Test knobs

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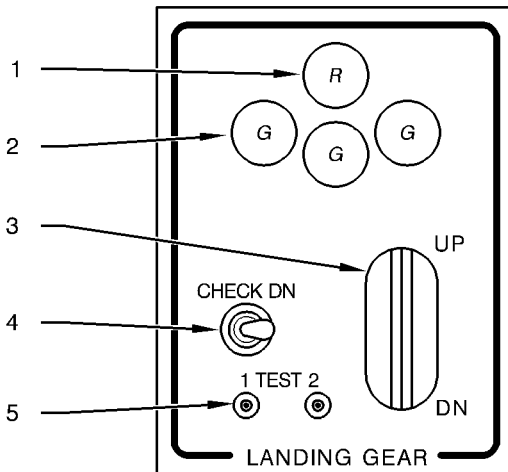


Figure 7.5.1 - CONTROL PANEL AND LANDING GEAR INDICATING

## SAFETY

### Safety switch (landing gear retraction)

A safety switch installed on each main landing gear prevents, by detecting shock strut compression, landing gear accidental retraction when airplane is on ground.

#### ■ Pre-MOD70-0407-00D (V15.11 GARMIN software)

##### Landing gear horn

Landing gear horn is controlled by power lever and / or flaps. It sounds (continuous high-pitched sound) when :

- power lever is on IDLE position and landing gear is not down-locked,
- flaps are beyond "TO" position (Takeoff) and landing gear is not down-locked.

##### NOTE :

*If one of above conditions exists and airplane is in stall configuration, the audio-warning signal becomes alternated (high-pitched sound / low-pitched sound).*

#### ■ Post-MOD70-0407-00D (V15.11 GARMIN software)

##### Landing gear aural warning

"Landing gear / Landing gear" aural warning alert sounds when :

- throttle is on IDLE position and landing gear is not down-locked,
- flaps are beyond "TO" position (Takeoff) and landing gear is not down-locked.

##### NOTE :

*If one of above conditions exists and airplane is in stall configuration, the "Stall / Landing gear" aural warning alert sounds.*

## All

### Emergency landing gear extension control (Figure 7.5.2)

Emergency landing gear extension control consists of a hand pump and a by-pass selector.

This control is accessible by removing the floor panel located aft of the pedestal.

After bypass selector closing, hand pump operation sends hydraulic fluid directly into landing gear actuators ; landing gear full extension and locking requires up to 110 cycles.

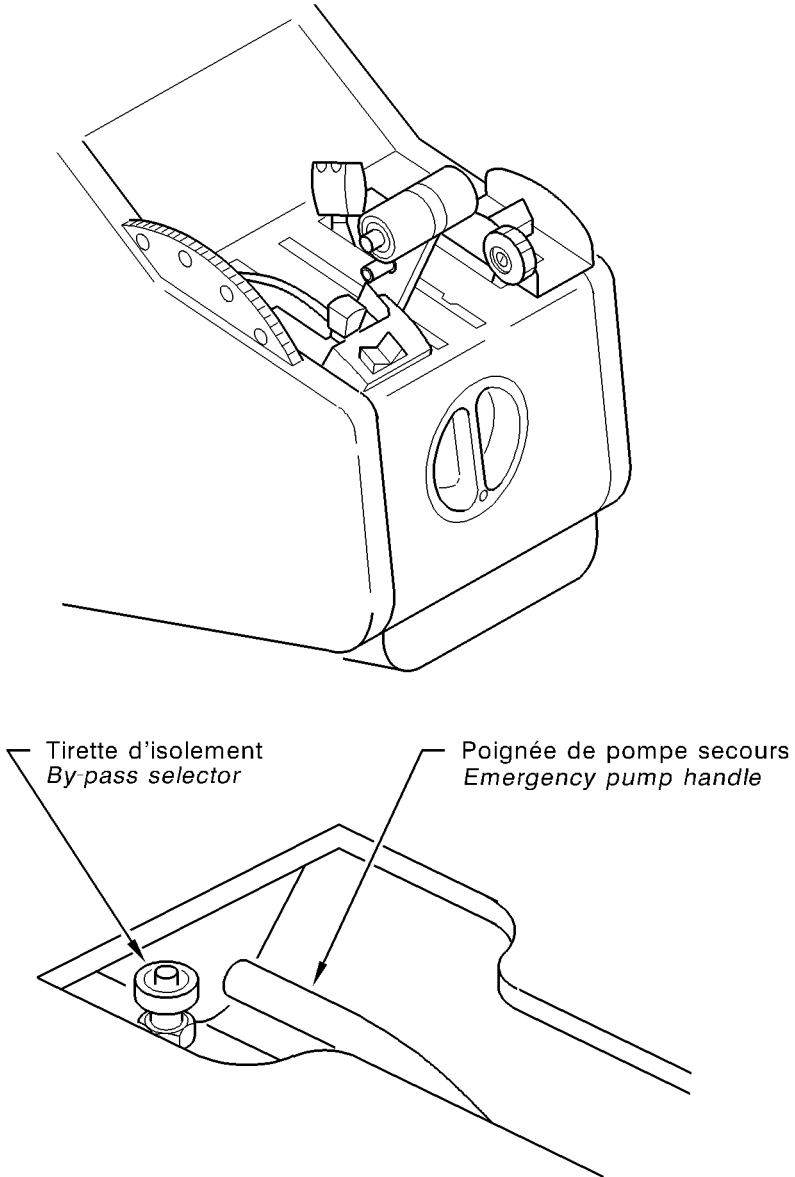


Figure 7.5.2 - EMERGENCY LANDING GEAR EXTENSION CONTROL

## **GROUND MANEUVERS**

### **Nose gear steering control** (Figures 7.5.3 and 7.5.4)

Nose gear steering control is combined with rudder pedals and is fitted with a shimmy damper. When one of rudder pedals is fully pushed, nose wheel swivels about 20°. Steering may be increased up to 28° by applying differential braking to each side.

Airplane may be towed by attaching a steering or towing bar on nose gear (Refer to Chapter 8.6 for operation). In that case nose wheel steering angle is limited to  $\pm 28^\circ$ .

### **Minimum turn diameter**

Minimum turn diameter, Figure 7.5.4, is obtained by using nose gear steering and differential braking. Since tight turns lead to untimely tire wear, turns should be made using the largest possible turning radius.

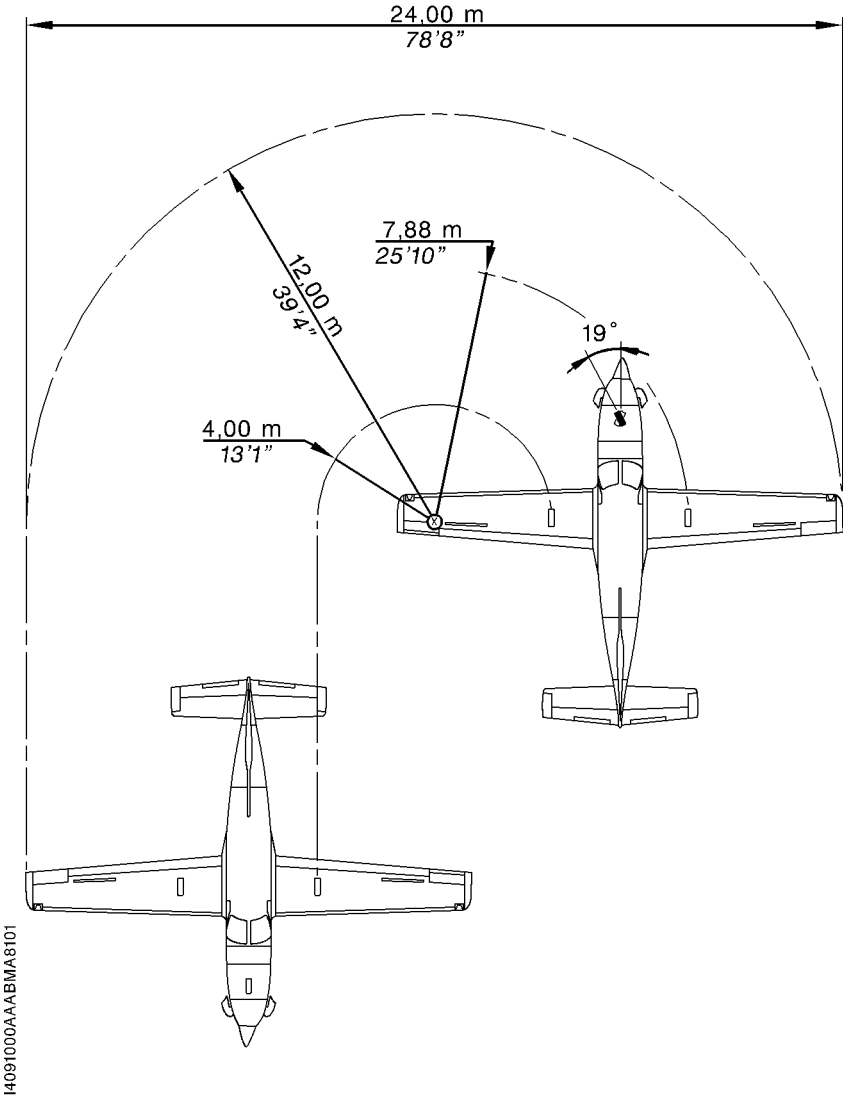


Figure 7.5.3 - MINIMUM TURN DIAMETER  
(Full rudder pedals travel without  
using differential braking)

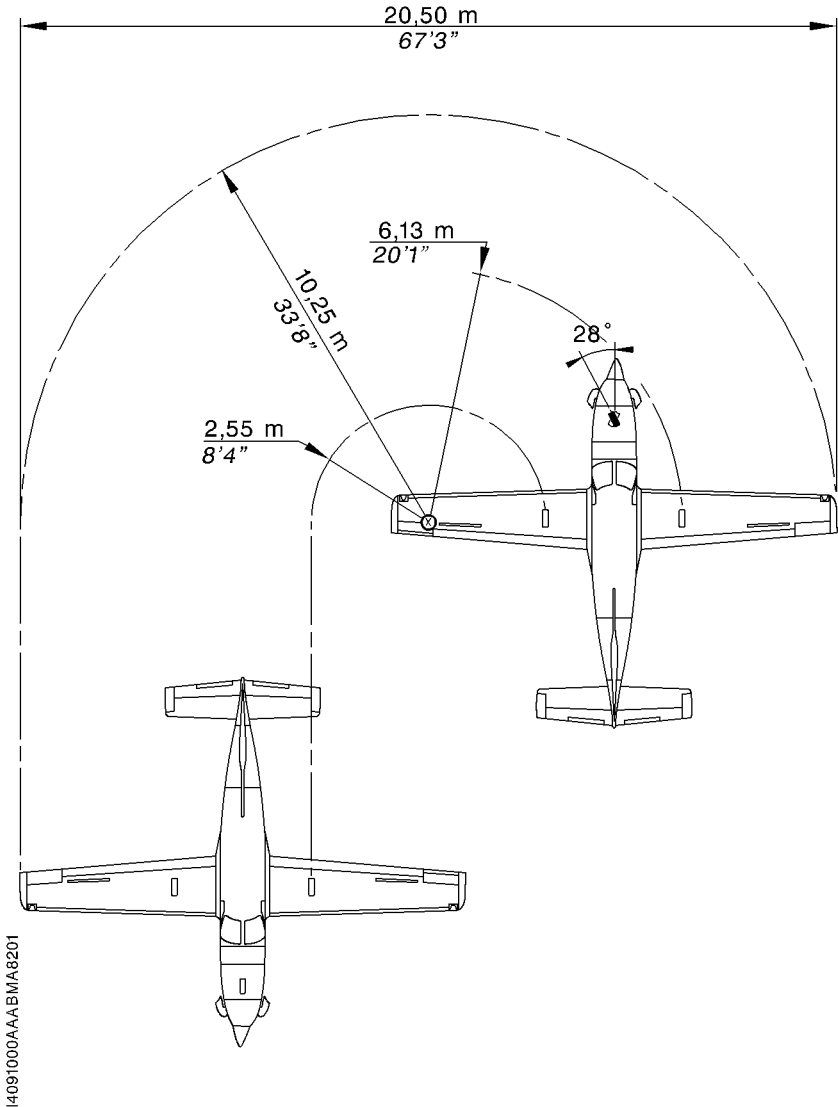


Figure 7.5.4 - MINIMUM TURN DIAMETER  
(Full rudder pedals travel by  
using differential braking)

**BRAKE SYSTEM** (Figure 7.5.5)

Airplane is equipped with a hydraulically actuated disc braking system installed on the main landing gear wheels.

Each toe brake at L.H. and R.H. stations is equipped with a master cylinder which sends hydraulic pressure to the corresponding disc brake : L.H. pedals L.H. brake ; R.H. pedals R.H. brake. This differential braking helps maneuvering during taxiing.

**PARKING BRAKE** (Figures 7.5.5 and 7.5.6)

Parking brake control consists of a control knob located on pilot's side lower instrument panel and a valve which regulates brake pressure.

To apply the parking brake, press on toe brake of rudder pedals and set the control knob to ON.

"PARK BRAKE" CAS message lights on when the control knob is set to ON.

**NOTE :**

*Operating the parking brake knob without applying pressure on rudder pedals does not cause the wheels to be braked.*

**CAUTION**

**FAILURE TO APPLY BRAKE PRESSURE WHILE RELEASING THE PARKING BRAKE CAN DAMAGE THE PARKING BRAKE VALVE. THIS DAMAGE CAN CAUSE THE PARKING BRAKE VALVE TO NOT RELEASE THE PRESSURE.**




To release the parking brake, press on toe brake of rudder pedals and set the control knob to OFF. Check at the same time that "PARK BRAKE" CAS message disappears.

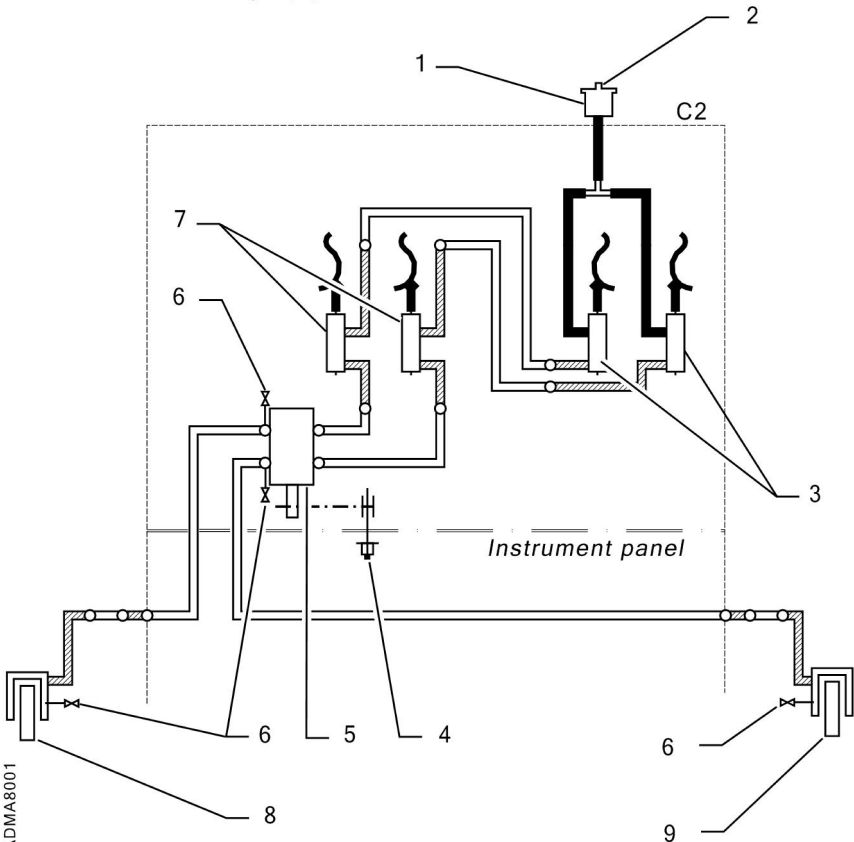
- 1) Reservoir
- 2) Vent
- 3) R.H. station master cylinders
- 4) Parking brake control knob
- 5) Parking brake valve
- 6) Drain
- 7) Pilot's station master cylinders
- 8) L.H. brake assembly
- 9) R.H. brake assembly

Figure 7.5.5 (1/2) - BRAKE SYSTEM

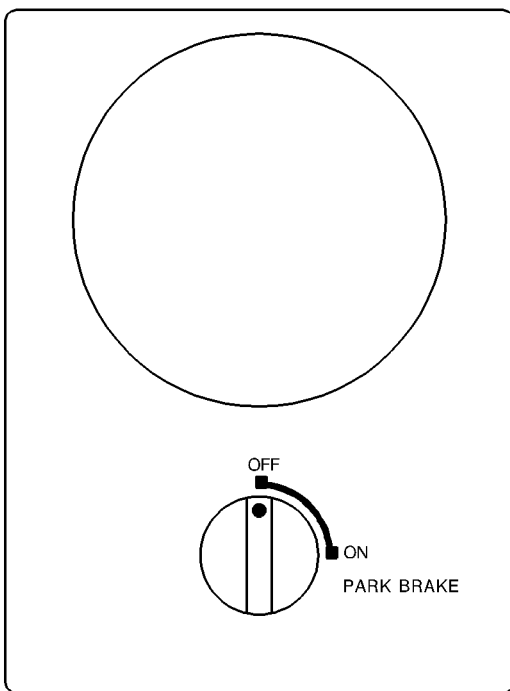
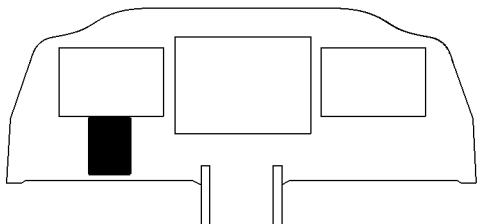


Légende - Key

-  Tuyauterie souple alimentation  
*Supply hose*
-  Tuyauterie flexible pression  
*Pressure flexible pipe*
-  Tuyauterie rigide pression  
*Pressure rigid pipe*



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14351000AAAAA8302

Figure 7.5.6 - PARKING BRAKE

## **7.6 - POWERPLANT**

### **TURBOPROP ENGINE OPERATION (Figure 7.6.1)**

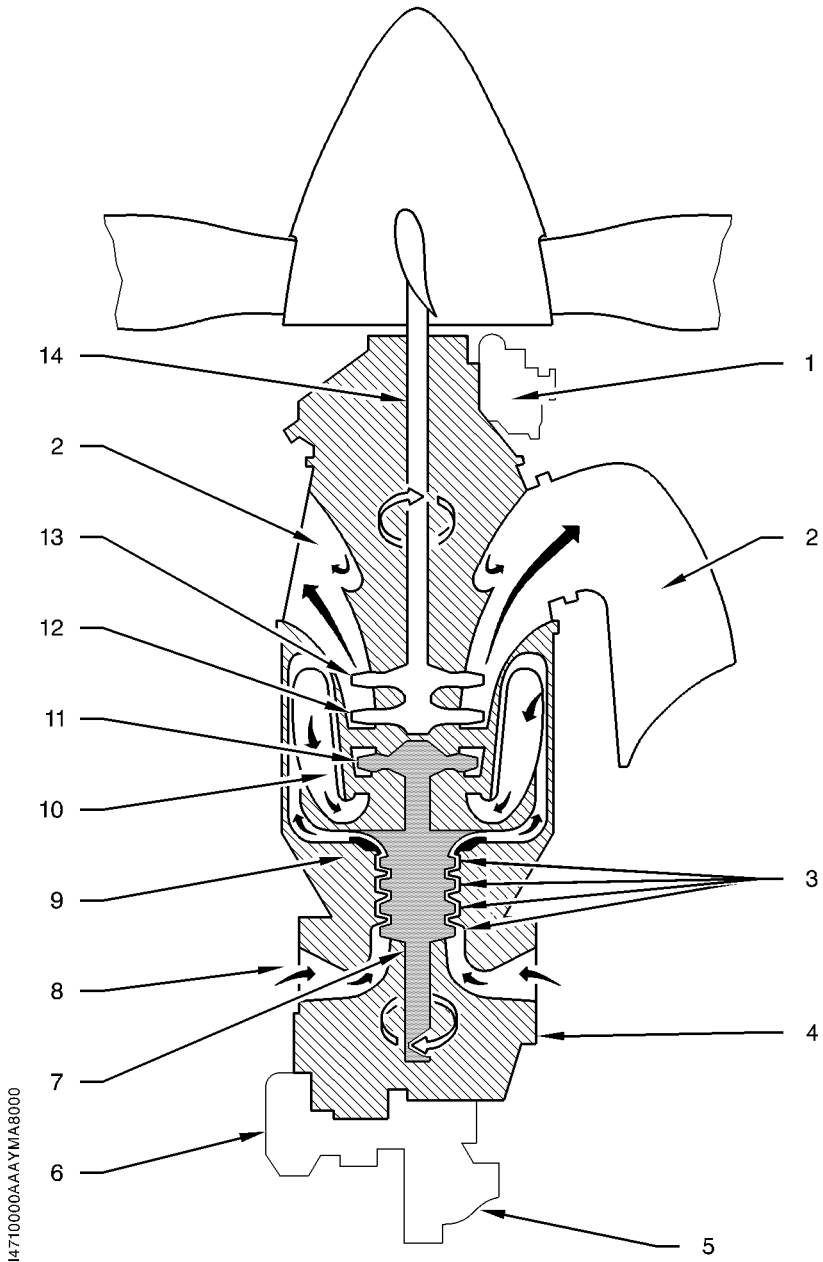
The PRATT & WHITNEY CANADA turboprop engine (PT6A-66D model) is a free turbine engine rated at 850 SHP and developing a thermodynamic power of 1825 ESHP. An electrically driven device limits the power of the engine to 770 SHP (110 % TRQ - 2000 RPM) at sea level, when the flap control lever is not on "850" position (UP/TO/LDG).

Intake air enters engine through an annular casing and is then ducted toward compressor. The latter consists of four axial stages and one single centrifugal stage assembly to form a whole assembly. Compressed air and fuel are mixed and sprayed into combustion chamber by fuel nozzles. The mixture is first ignited by two spark igniter plugs, then combustion continues as a result of air-fuel mixture flow. Gases resulting from combustion expand through a series of turbines. The first one (gas generator turbine) drives compressor assembly and accessories, the two other ones (power turbines), independent from the first one, drive propeller shaft through a reduction gear box. Hot gases are evacuated through two exhaust stubs located laterally on both sides forward of engine cowling.

All engine driven accessories, except power turbine tachometer and propeller governor, are installed on accessory gearbox located rearward of engine.

- 1) Propeller governor
- 2) Exhaust stub
- 3) Axial compressors
- 4) Accessory gearbox
- 5) FCU Fuel control unit
- 6) Oil to fuel heater
- 7) Input coupling shaft
- 8) Air intake
- 9) Centrifugal impeller
- 10) Combustion chamber
- 11) Compressor turbine
- 12) Power turbine 1st stage
- 13) Power turbine 2nd stage
- 14) Power turbine shaft

Figure 7.6.1 (1/2) - POWERPLANT



14710000AAAYMA8000

Figure 7.6.1 (2/2) - POWERPLANT

**ENGINE CONTROLS (LEVERS)** (Figure 7.6.2)

Engine operation requires use of four levers located on pedestal console in cabin :

- power lever (Item 2), and its detent for reverse (Item 6)
- propeller governor lever (Item 1),
- condition lever (Item 3),
- "MAN OVRD" emergency fuel regulation lever (Item 5).

**NOTE :**

*Thumbwheel for lever friction (Item 4)*

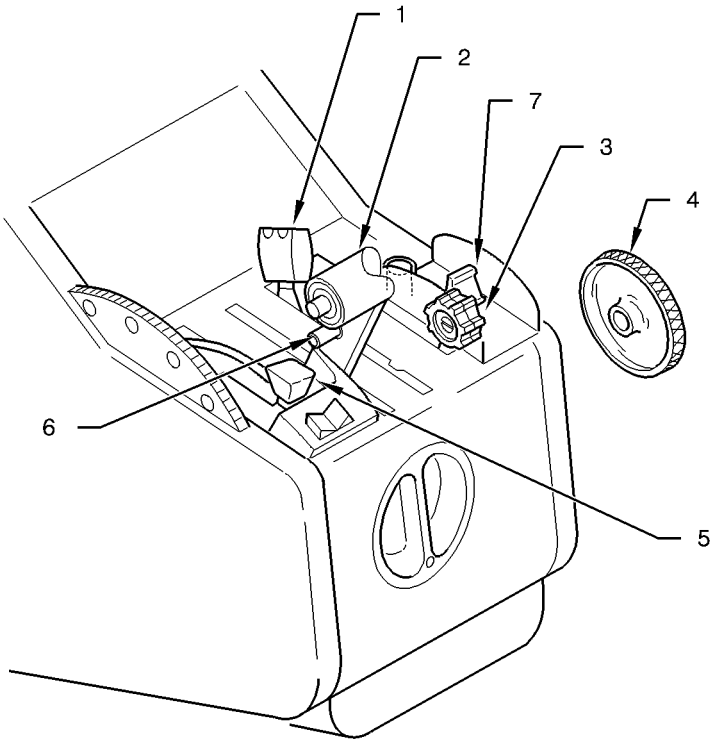


Figure 7.6.2 - ENGINE CONTROLS (LEVERS)

14251400AAABMA 8201

**Power control lever**

The power control lever is linked to fuel control unit. It modulates engine power from full reverse to takeoff.

Engine running, the power control lever rearward displacement, past the lock using the detent, allows to control :

- the engine power in the Beta range from idle to maximum reverse,
- the Beta valve to select the propeller pitch in reverse.

Return to idle position is accomplished by pushing the power control lever forward.

**CAUTION**

**DO NOT MOVE THE COCKPIT POWER CONTROL LEVER INTO THE PROPELLER REVERSE POSITION OR DAMAGE TO THE LINKAGE WILL RESULT.**

**REVERSE MAY ONLY BE SELECTED WITH ENGINE RUNNING AND PROPELLER TURNING**

When engine is shutdown, there is no oil pressure in the propeller and the feathering spring locks the Beta ring and the propeller reversing interconnect linkage on the engine.

Any rearward effort on the power control lever, past the idle stop, may damage or break the flexible control cable.

**Propeller governor lever**

The propeller governor lever activates the propeller governor located forward of the engine to select and maintain any propeller speed between 1600 and 2000 RPM. This lever allows propeller feather. Changing from normal range to feather position requires "FEATH" stop by moving lever toward left side and back. The lever being locked in feather position, unlocking requires moving the lever toward left side and forward.

### Condition lever

The fuel condition lever is linked to FCU. It can be positioned to cutoff, idle LO / IDLE or idle HI / IDLE. Change from idle LO / IDLE to cutoff position is only possible after having overridden the idle gate. To override idle gate, raise lever and move it rearwards. If the lever is locked in cutoff position, unlocking is performed by raising lever and moving it forward.

#### Post-MOD70-0256-76

The fuel condition lever has a "HI / IDLE" locked position. Change from idle "HI / IDLE" to "LO / IDLE" position is only possible after having overridden the idle gate. To override idle gate, raise lever and move it rearwards.

#### **"MAN OVRD" emergency fuel regulation lever**

Emergency fuel regulation lever is normally in locked position. In case of FCU or power lever failure, it allows setting engine power manually. Unlocking and locking are performed by pulling lever knob up.

#### *NOTE :*

*The power available if the power lever fails will be limited by the position of the lever.*

#### **Lever friction** (Figure 7.6.2)

A thumbwheel (Item 4) located on right side of pedestal console increases friction to avoid control slip after setting.

#### **Maximum power mode** (Figure 7.6.2)

850 SHP maximum power is selected by the pilot for climb and cruise, only with retracted flaps, by moving flap control lever (Item 7) past the lock to the 850 position.

Unlocking is performed by raising the lever and moving it forward.



## ENGINE INSTRUMENTS

Engine indicating consists of :

- engine torque expressed in percent (%),
- propeller speed in RPM,
- generator rotation speed expressed in percent (%),
- ITT expressed in °C,
- oil pressure expressed in PSI.
- oil temperature expressed in °C.

### NOTE :

*Engine monitoring is ensured by CAS messages : "TORQUE", "ITT" and "OIL PRESS". Refer to the "GARMIN" G1000 Pilot's Guide for further details.*

**"PROP O' SPEED TEST" push-button** allows checking the overspeed valve for correct operation.

## ENGINE LUBRICATION

Engine oil is in a tank incorporated into the powerplant. It ensures lubrication and engine cooling. A cooler located on left side in engine compartment maintains oil temperature within limits. Oil flow into the cooler is metered by a thermostatic valve. Engine oil also supplies propeller governor and engine torquemeter.

Lubrication system content, cooler included, is 12.7 quarts (12 litres). A graduated dipstick allows checking oil quantity in system. A visual oil sight glass, located on engine left side, allows a rapid checking of oil level.

### NOTE :

*For checking and oil filling-up, refer to Section 8.*

**ENGINE STARTING** (Figure 7.6.3)

**Ignition function**

Ignition system consists of an ignition unit and two spark igniter plugs in powerplant, a three-position "IGNITION" switch OFF - AUTO - ON located on "ENGINE START" panel at upper panel.

Ignition unit supplies, from 28-Volt source, high voltage current necessary to spark igniter plugs. When "IGNITION" switch is positioned to AUTO, ignition unit supply is ensured as long as "STARTER" switch located on left side of "IGNITION" switch is maintained ON : this is normal procedure for ground starting or flight air start with starter.

ON position for "IGNITION" switch is used in case of flight air start without starter. In this configuration, ignition unit is supplied permanently. In any case, "IGNITION" CAS message lights on as long as ignition unit is supplied.

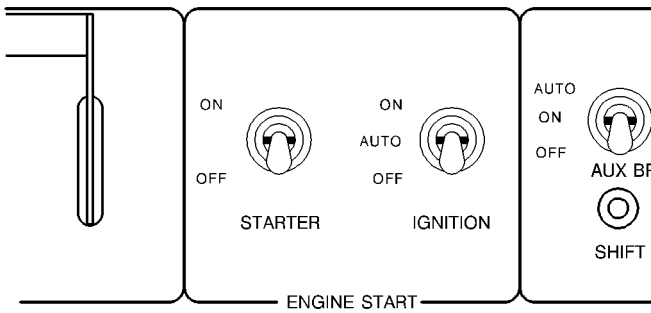
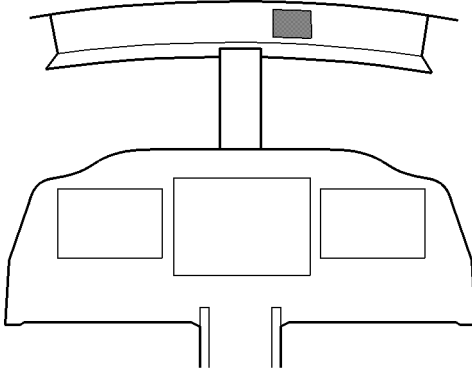
**Starter function**

Starting system consists of "STARTER" switch located on "ENGINE START" panel, starter generator and ignition circuit (Refer to Paragraph "Ignition function").

Starting procedure is manual. Setting "STARTER" switch to ON connects the starter generator which drives powerplant. "STARTER" CAS message lights on indicating that the starter generator is operating.

**WARNING**

**ENGINE STARTING MUST BE PERFORMED BY QUALIFIED PERSONNEL AND BY FOLLOWING PROCEDURES AND PARAMETERS DESCRIBED IN SECTION 4 "NORMAL PROCEDURES"**



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Figure 7.6.3 - ENGINE STARTING

## **ENGINE AIR INLET**

Engine air inlet is located at front lower section of engine cowling. Air inlet port is protected against icing by a hot air flux provided by engine. Air is driven throughout a duct in engine casing before entering engine through a protective screen. An inertial separator system inside the air duct protects the engine from ingesting dense particles (water, ice, fine gravels, sand).

Separator consists of two movable vanes. During normal operation, air is conducted directly towards engine air inlet. To separate particles suspended in the air, vanes are positioned to force engine induction air to execute a sharp turn : under the effect of centrifugal force denser particles separate from the air and are discharged overboard through two apertures located under engine cowling.

Operation of inertial separator vanes is electrically controlled by "INERT SEP" inverter located on "DE-ICE SYSTEM" panel. When inverter is set to ON, an electric actuator activates vanes ; "INERT SEP ON" CAS message lights on when vanes have reached their maximum deflection and remains visible as long as switch remains ON. Full deflection takes about 30 seconds.

## **EXHAUST SYSTEM**

Exhaust gases are evacuated through exhaust stubs located on sides of engine cowlings.

## **ENGINE ACCESSORIES**

All engine driven accessories [except power turbine tacho-generator (Np) and propeller governor] are installed on accessory gearbox located rearwards of engine.

### **Oil pump**

Oil pump is a self-controlled gear pump located at the bottom of oil casing.

### **Fuel high pressure pump (HP)**

Fuel high pressure pump is installed on accessory gearbox. It supplies fuel nozzles, flow being controlled by fuel regulator (FCU). Fuel provided by engine driven main pump (mechanical) enters high pressure pump through a filter, then it is discharged under pressure into fuel regulator (FCU) through a second filter. In case of contamination of this second filter, a by-pass valve allows fuel to go directly from high pressure pump to the regulator.

**Compressor turbine tacho-generator (Ng)**

Compressor turbine tacho-generator (Ng) is attached on accessory gearbox. It supplies a voltage which is transmitted to the G1000 system for display on the MFD (under normal display conditions).

**Power turbine tacho-generator (Np)**

Power turbine tacho-generator is attached on the right side of the reduction gearbox. It supplies a voltage which is transmitted to the G1000 system for display on the MFD (under normal display conditions).

**Torque transmitter**

Torque transmitter is attached on the torque limiter, it measures torque produced by the power turbine by comparing oil pressures (reduction gear and power turbine) and converts pressure difference into a voltage. This voltage is transmitted to the G1000 system for display on the MFD (under normal display conditions).

**Propeller overspeed limiter**

Propeller overspeed limiter is installed on left side of the reduction gear box. It prevents a propeller overspeed in case of main propeller governor failure.

Propeller overspeed limiter is equipped with a test solenoid which allows performing ground tests by arming limiter under normal overspeed power.

"PROP O'SPEED TEST" propeller test push-button (Figure 7.3.6) of overspeed limiter is located near flap control lever on the pedestal console.

**Torque limiter**

Torque limiter is located on right side of the reduction gear box. It is rated to limit engine torque to 110 % at sea level. The torque limiter is deactivated when the flap control lever is on "850" position.

## **PROPELLER**

Airplane is equipped with an all-metal, four-bladed, constant-speed and full-feathering propeller.

### **Regulation**

Propeller governor located on engine maintains rotation speed selected by pilot with propeller governor lever. Regulation is obtained through propeller blade pitch variation : counterweights drive propeller blades toward high pitch (low RPM) whereas oil pressure delivered by governor drives back blades toward low pitch (high RPM).

Propeller governor allows feathering either by voluntary pilot action via the propeller governor lever or automatically in case of engine failure or shutdown.

Propeller reverse pitch allows reduced taxiing speed or landing roll. Change from idle to reverse position is performed with power lever (Refer to Paragraph "ENGINE CONTROLS").

### **Propeller overspeed regulator tests** (Figure 7.3.6)

"PROP O'SPEED TEST" push-button located on pedestal console near flap control lever is used on ground to check proper operation of propeller overspeed regulator. This push-button activates a solenoid, attached on propeller overspeed regulator, which limits propeller rotation speed when power lever is positioned forwards.

## 7.7 - FUEL SYSTEM (Figure 7.7.1)

The fuel system comprises fuel tanks, fuel unit, selectors (manual and automatic), electric and mechanical boost pumps, engine fuel system, gaging installation, monitoring installation and drains.

### FUEL TANKS

Fuel tanks are formed by sealed casings in each wing. Each fuel tank comprises a filling port located at the end of wing upper surface, two drain valves located at the lower surface (one near main landing gear, at trailing edge side, the second one near wing root side, at leading edge), a vent valve located on the lower surface, a suction strainer and three level gages.

### FUEL UNIT

The fuel unit combines shut-off valve, tank selector and filter functions. It is connected to the manual selector through a mechanical control. The fuel filter is located in a bowl at the lower part of the unit. It is fitted with a by-pass valve, a clogging indicator and a drain valve.

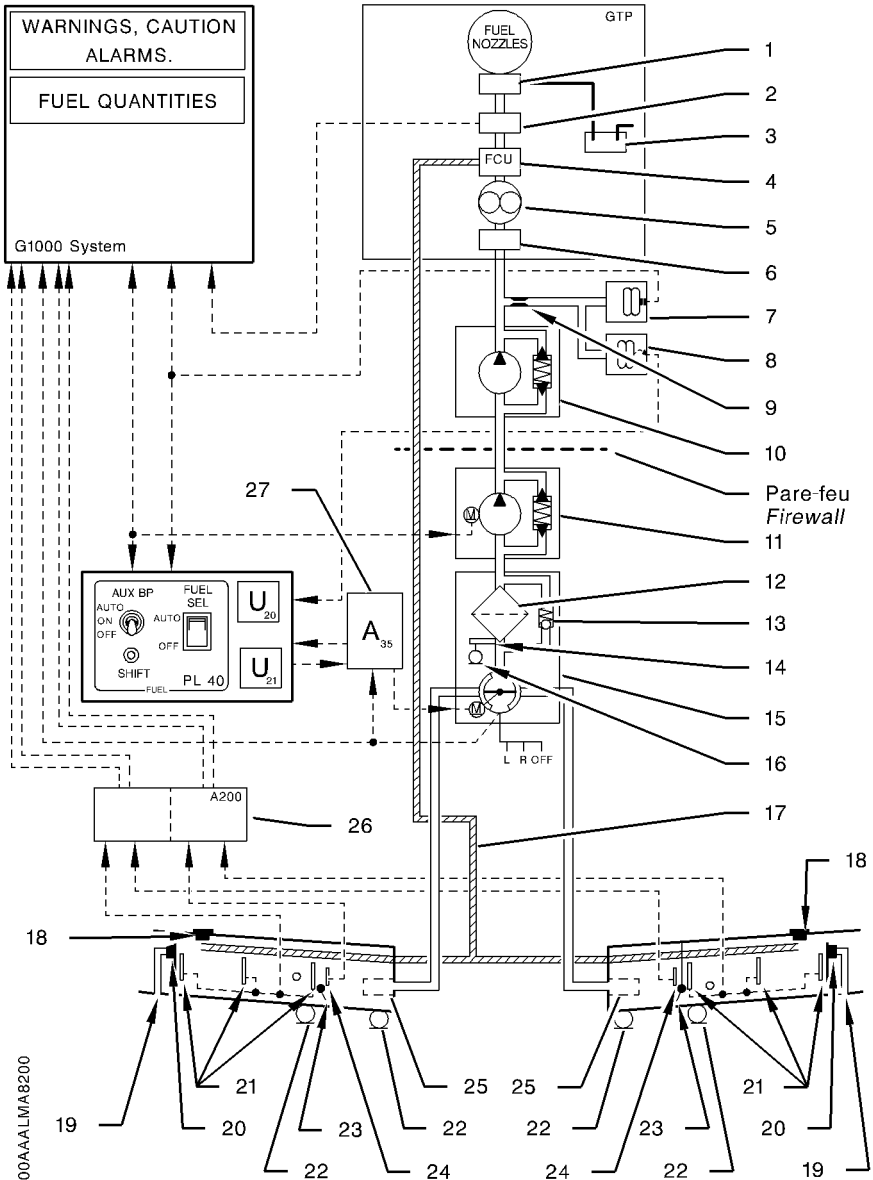
### TANK MANUAL SELECTOR (Figure 7.7.2)

The tank manual selector is located on the pedestal rear face. It allows selecting the tank (R or L) to be used and setting unit to OFF. To change from L position to OFF position, turn the selector clockwise (L → R → OFF) ; change from R position to OFF position requires a voluntary action from the pilot (pull and turn). The "pull and turn" maneuver prevents involuntary operation. When the unit is set to OFF, the "FUEL OFF" CAS message remains visible.

- |                                   |                        |
|-----------------------------------|------------------------|
| 1) Flow divider                   | 15) Fuel unit          |
| 2) Flowmeter                      | 16) Filter drain       |
| 3) Collector tank                 | 17) Fuel return pipe   |
| 4) Fuel regulator                 | 18) Filling port       |
| 5) High pressure pump (HP)        | 19) NACA scoop         |
| 6) Oil to fuel heater             | 20) Tank vent valve    |
| 7) Low pressure switch            | 21) Fuel level gages   |
| 8) Pressure transmitter           | 22) Tank drain valve   |
| 9) Fuel jet                       | 23) Check-valve        |
| 10) Main mechanical boost pump    | 24) Low level detector |
| 11) Electric boost pump           | 25) Suction strainer   |
| 12) Fuel filter                   | 26) Fuel amplifier     |
| 13) Filter clogging by-pass valve | 27) Sequencer          |
| 14) Filter clogging indicator     |                        |

Figure 7.7.1 (1/2) - FUEL SYSTEM





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Figure 7.7.1 (2/2) - FUEL SYSTEM

### **AUTOMATIC TANK SELECTOR** (Figures 7.7.2 and 7.7.3)

Automatic tank selection allows, without pilot's intervention, feeding the engine from one tank or the other in predetermined sequences. These sequences depend on airplane configuration (ground, in-flight, fuel low level CAS messages appearance).

Automatic tank selection system comprises an electronic sequencer, an actuator attached on the fuel unit, "FUEL SEL" two-position selector (AUTO, MAN) and "SHIFT" knob located on "FUEL" panel.

To operate the automatic selector, set "FUEL SEL" switch to AUTO position and manual selector to R or L.

#### **Selector operation**

When the system is operated, "AUTO SEL" CAS message disappears ; the sequencer chooses a tank (R or L) and through the actuator, positions the fuel unit selector on the selected tank. The sequencer controls the time during which the selected tank will operate. This time varies, depending on airplane conditions.

Airplane on ground : tank is changed every minute and 15 seconds.

#### ■ Pre-MOD70-0402-28 (Fuel sequencer evolution)

Airplane in flight : tank is changed every ten minutes, as long as a fuel low level CAS message does not appear. When the first low level CAS message lights on, the sequencer immediately selects the other tank. The selected tank will operate until the second low level CAS message lights on. When both low level CAS messages are visible, the sequencer changes tanks every minute and 15 seconds.

#### ■ Post-MOD70-0402-28 (Fuel sequencer evolution)

Airplane in flight : tank is changed every five minutes, as long as a fuel low level CAS message does not appear. When the first low level CAS message lights on, the sequencer immediately selects the other tank. The selected tank will operate until the second low level CAS message lights on. When both low level CAS messages are visible, the sequencer changes tanks every minute and 15 seconds.

■ All**NOTE :**

*The manual selector is driven by the fuel unit and is positioned on R or L mark corresponding to the tank selected by the sequencer. Therefore, the pilot continuously knows the tank which is operating.*

**Test for system proper operation**

"SHIFT" push-knob allows the pilot to test system proper operation anytime.

When the system operates, the fuel tank is changed when "SHIFT" push-knob is pressed once.

If airplane is on ground or in flight, low level CAS messages not visible, the new selected tank remains operating and a new sequence is initiated.

**NOTE :**

*This procedure allows the pilot to preferably choose the tank from which he wants to take fuel.*

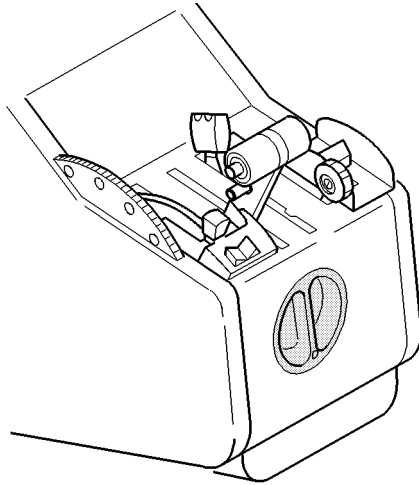
In all cases, proper system operation is indicated by rotation of the manual selector.

Setting "FUEL SEL" switch to MAN position or setting manual selector to OFF position leads to system de-activating and appearance of "AUTO SEL" CAS message. "AUTO SEL" CAS message also lights on when order given by the sequencer has not been executed after 12 seconds.

**ELECTRIC BOOST PUMP ("AUX BP")**

Electric boost pump is an auxiliary pump located between fuel unit and main mechanical boost pump. It is controlled through "AUX BP" switch located on "FUEL" panel. This switch allows stopping or selecting the two pump operating modes :

- when set to ON, electric boost pump operates permanently
- when set to AUTO, electric boost pump is automatically operated in case of fuel pressure drop at the mechanical boost pump outlet.



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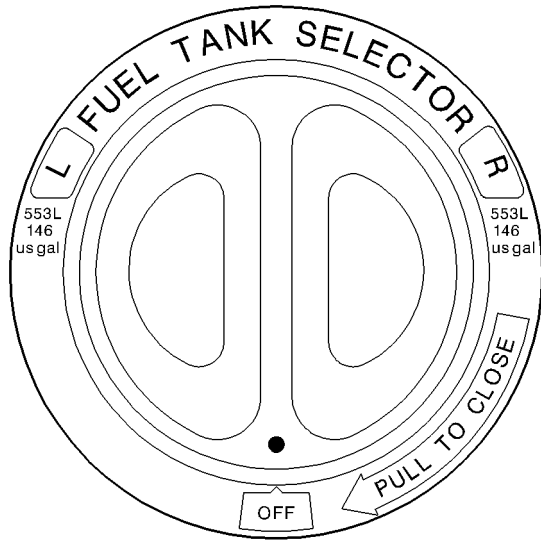
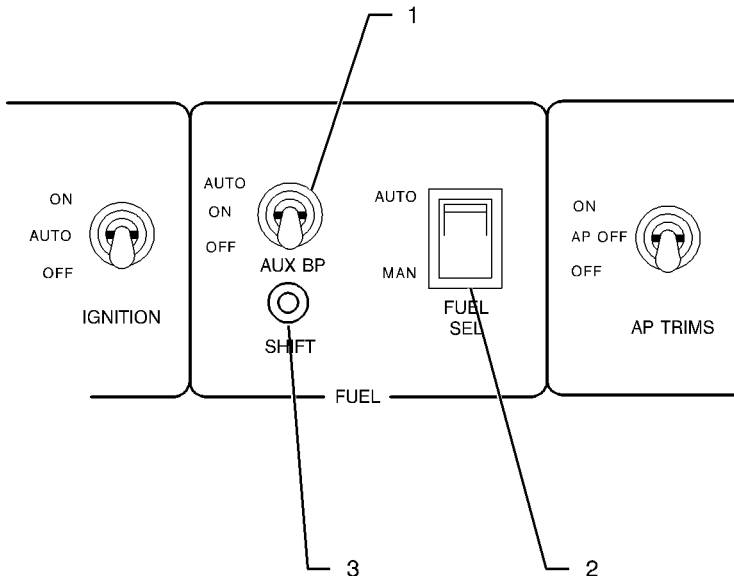
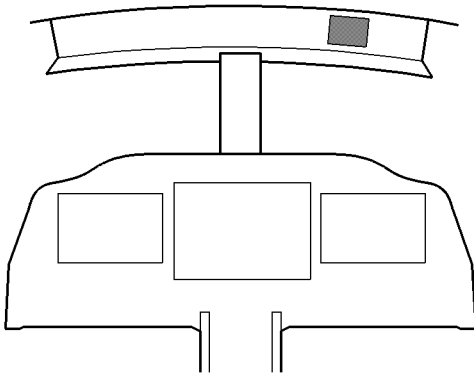


Figure 7.7.2 - MANUAL SELECTOR OF FUEL TANKS

- 1) Electric boost pump switch
- 2) Fuel selector
- 3) "SHIFT" push-knob



14240000AAA EMA18400

Figure 7.7.3 - FUEL CONTROL PANEL

## MAIN MECHANICAL BOOST PUMP

The mechanical boost pump is attached to accessory gearbox and supplies fuel necessary for engine operation.

## ENGINE FUEL SYSTEM

The engine fuel system consists of a fuel regulator, pumps, filters, a fuel divider and fuel nozzles. The system provides the fuel flow necessary to satisfy the engine power and rating needs.

The fuel coming from airplane system goes through a heater which is automatically controlled by a thermostatic valve.

## FUEL GAGING INSTALLATION

Fuel gaging installation is a capacitive type. Fuel data are displayed in us gallons. Three fuel level gages are installed in each tank. The wing root side fuel level gage is equipped with a low level detector which leads to fuel low level CAS messages appearance, when usable fuel quantity remaining in the concerned fuel tank is under about 9 us gal (34 Litres).

## FUEL SYSTEM MONITORING

Fuel system monitoring is ensured by CAS messages :

- "FUEL OFF" : Fuel tank selector set to OFF
- "FUEL PRESS" : Fuel pressure at mechanic pump outlet under 10 psi ( $\pm$  2 psi)
- "AUX BOOST PMP ON" :  
Electric fuel pump running (manual or automatic mode)
- "FUEL LOW L-R"\* : Fuel quantity less than or equal to 9 us gal (34 Litres) of usable fuel in specified tank
- "AUTO SEL" : Sequencer inactive or operating defect

\* Only affected side (L, R or L-R) displayed in CAS message

**FUEL SYSTEM DRAINING AND CLOGGING INDICATOR** (Figure 7.7.4)

The fuel system comprises five drain points, a drain on the filter bowl, two drain valves on each tank, located on wing lower surface, one at wing root and the other past main landing gear well.

These drains allow draining water or sediments contained in fuel.

Fuel tank drain valves are provided with a slot which allows opening them with a screwdriver.

Fuel system draining shall be performed prior to the first flight of the day and after each tank refueling, using a sampler to pick off fuel at the two drain valves of each tank and at the filter vent valve.

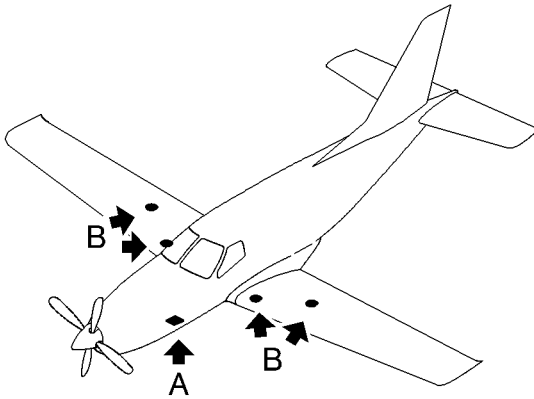
A red filter bypass flag on the fuel unit and visible from outside, when an inspection door located on L.H. side under front baggage compartment is open, indicates filter clogging. A push-button, adjacent to the inspection door, controls the illumination of a light provided to improve visibility of the clogging indicator. This indicator shall be observed during preflight inspection.

**NOTE :**

*When filter gets clogged in flight, the filter is by-passed in order not to deprive power plant from fuel. The power plant is then supplied with non-filtered fuel.*

- |                        |                 |
|------------------------|-----------------|
| 1) Lighting switch     | 5) Filter drain |
| 2) Mirror door         | 6) Tank drain   |
| 3) Clogging indicator  | 7) Drain bowl   |
| 4) Central access door |                 |

Figure 7.7.4 (1/2) - FUEL SYSTEM DRAINING POINTS AND CLOGGING INDICATOR



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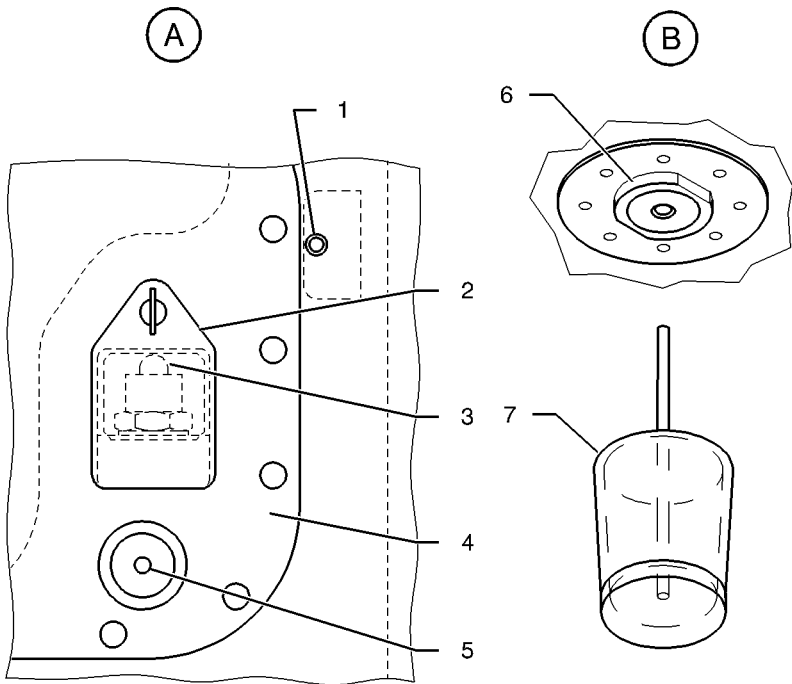


Figure 7.7.4 (2/2) - FUEL SYSTEM DRAINING POINTS AND CLOGGING INDICATOR



**7.8 - ELECTRICAL SYSTEM** (Figures 7.8.1 and 7.8.4)

The airplane is fitted with a direct-current electrical system rated to 28 volts with negative pole at ground.

Airplane mains supply is obtained from various power supplies :

- an engine driven starter generator
- a stand-by generator driven by the engine through a belt
- a battery located in engine compartment
- a ground power receptacle located in engine compartment, on L.H. side. It is accessible from outside through a door.

Connection relays, main bus bar, generator regulation and protection systems and control logic systems are grouped in electrical power center attached to front baggage compartment upper section.

Electrical system indicating is displayed on the GDU 1500 MFD and monitoring is ensured by CAS messages.

**STARTER GENERATOR**

The starter generator is the main electrical power source. It only performs its generator function when starting sequence is completed.

Generator connection with main bus bar is controlled through "GENERATOR" selector set to MAIN position. It will be effective when connection conditions are met. Generator connection is indicated by "MAIN GEN" CAS message disappearance.

### **STAND-BY GENERATOR**

Stand-by generator supplies a 28-volt stand-by direct current which may be used in case of main generator failure.

Generator connection with main bus bar is controlled through "GENERATOR" selector set to ST-BY, it will be effective when connection conditions are met.

*NOTE :*

*In order to prevent possible errors during flight, access to ST-BY position requires a double action from the pilot (pull to unlock).*

### **BATTERY**

The battery provides the power required for starting when no ground power unit is available and is a power supply source when engine driven generators are stopped.

- The battery is always connected to "BATT BUS" bus bar except when CRASH lever is pulled down.

Battery connection to main bus bar is controlled through "SOURCE" selector set to BAT position.

"BAT OFF" CAS message lights on when battery is isolated from the main bus and when main bus is supplied through another source.

### **GROUND POWER RECEPTACLE**

The ground power receptacle allows connection to a ground power unit. Ground power receptacle connection with main bus bar is controlled through "SOURCE" selector when set to GPU position, it will be effective when connection conditions are met.

*NOTE :*

*Ground power receptacle has priority on other generators.*

Ground power receptacle door opening is indicated by "GPU DOOR" CAS message appearance.

## DISTRIBUTION

Airplane electrical systems are connected to "BUS" bars and protected by "pull-off" type circuit breakers located on R.H. side panel (See Figure 7.8.3). In case of overload of a system, the circuit breaker triggers and switches the system off. Allow it to cool for about three minutes, then the circuit breaker may be reengaged (pressed down).

"BUS 1", "BUS 2" and "BUS 3" bus bars are directly connected to main bus bar and protected by fuses located in electrical power center.

The "ESS BUS 1" and "ESS BUS 2" essential bus bars are connected to main bus bar through "ESS BUS TIE" selector set to NORM position. "ESS BUS TIE" selector is attached to circuit breaker panel ; NORM position is protected and locked by a cover. Common power supply to both essential bus bars is protected by a fuse, each bar being individually protected by a circuit breaker.

"BATT BUS" bar is directly connected to the battery ; it is protected by a fuse located in electrical power center.

### NOTE :

*The electrical distribution of bus bars is described in Figure 7.8.2.*

## EMERGENCY USE

With both generators de-activated in flight, it is still possible to use battery power to supply all airplane systems maintaining "SOURCE" selector on "BAT" position.

In order to save battery power, it is possible to shed the charges which are not essential for flight safety, for that set :

- "ESS BUS TIE" selector to EMER position

In this configuration, only "ESS BUS 1", "ESS BUS 2" and "BATT BUS" bars are supplied.

### NOTE :

*Supplying "BUS 1", "BUS 2" and "BUS 3" bars is always possible, resetting temporarily "ESS BUS TIE" selector to NORM position.*

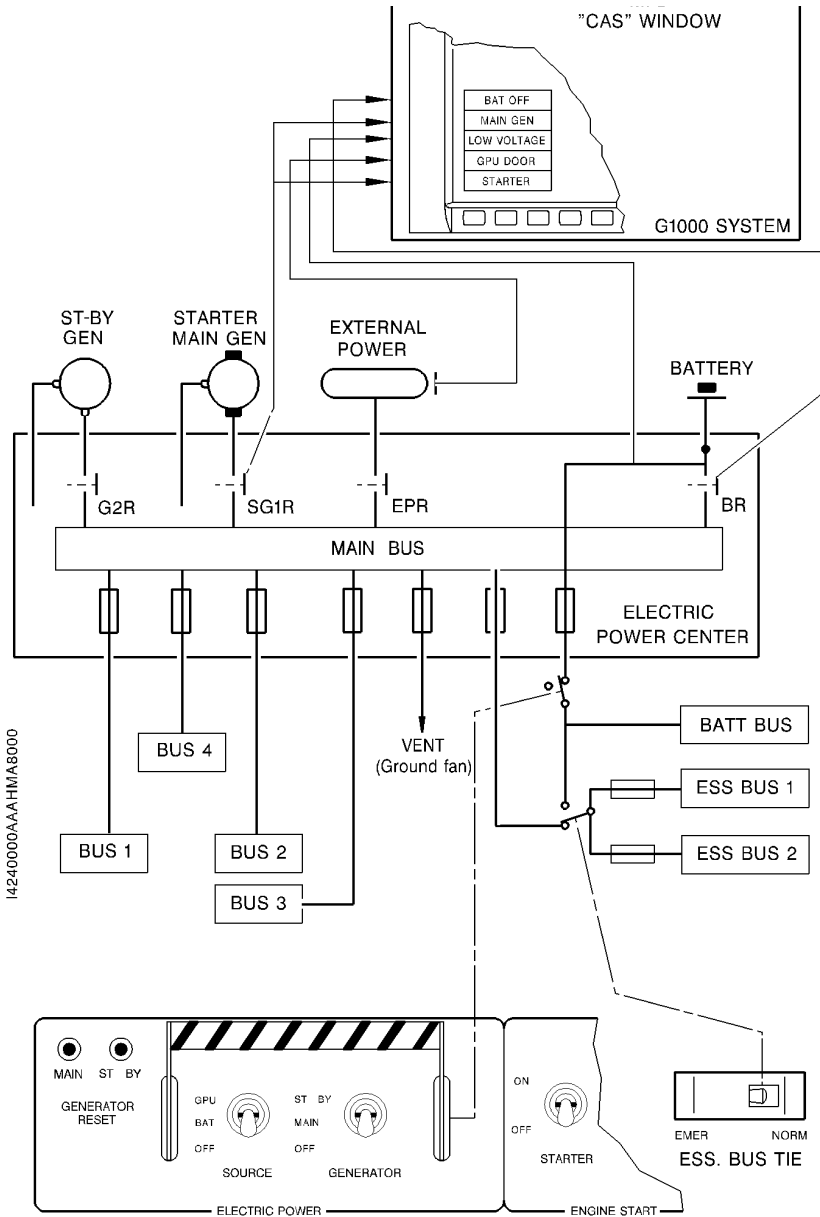
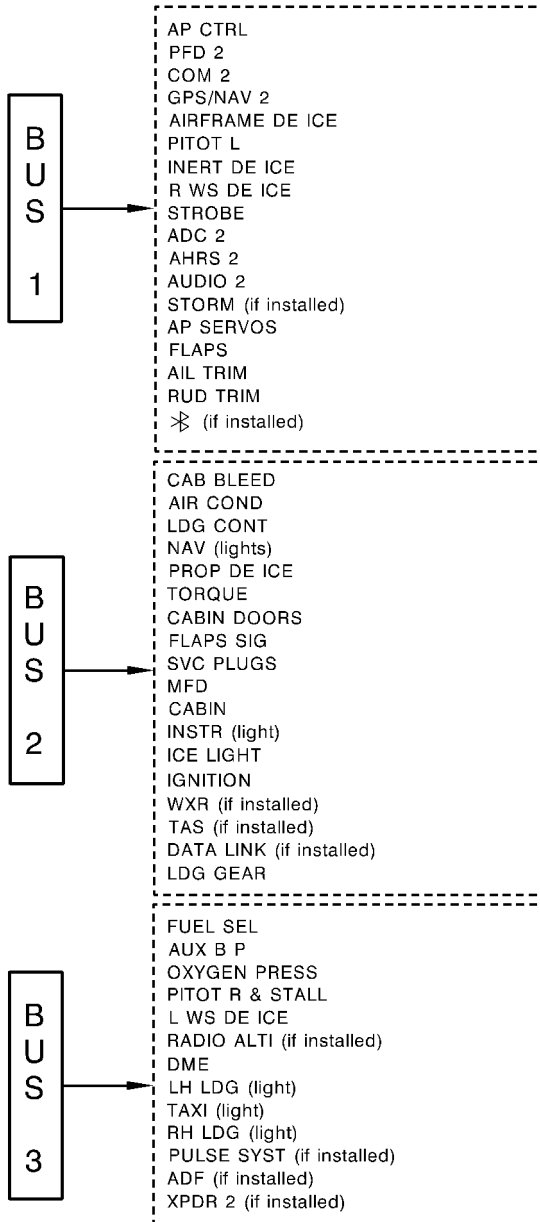
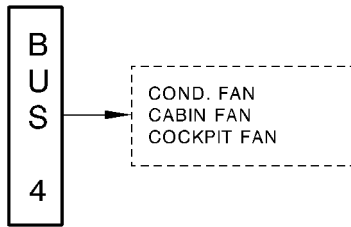


Figure 7.8.1 - ELECTRICAL DIAGRAM

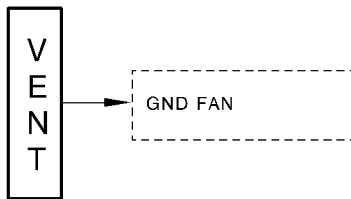


14246000AAA CMM8401

Figure 7.8.2 (1/3) - ELECTRICAL DISTRIBUTION OF BUS BARS



NOTE: CIRCUIT BREAKERS ON A1 SUPPORT PLATE



NOTE: CIRCUIT BREAKER ON A1 SUPPORT PLATE

Figure 7.8.2 (2/3) - ELECTRICAL DISTRIBUTION OF BUS BARS

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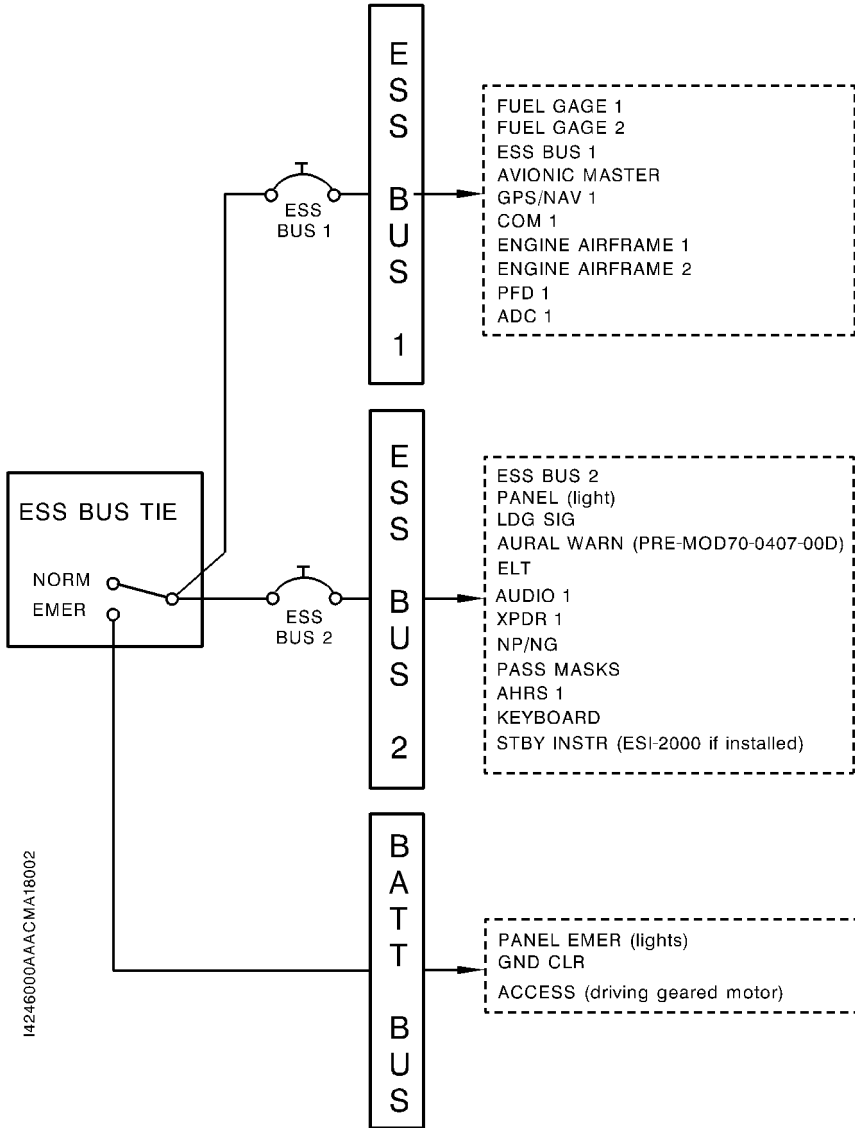


Figure 7.8.2 (3/3) - ELECTRICAL DISTRIBUTION OF BUS BARS

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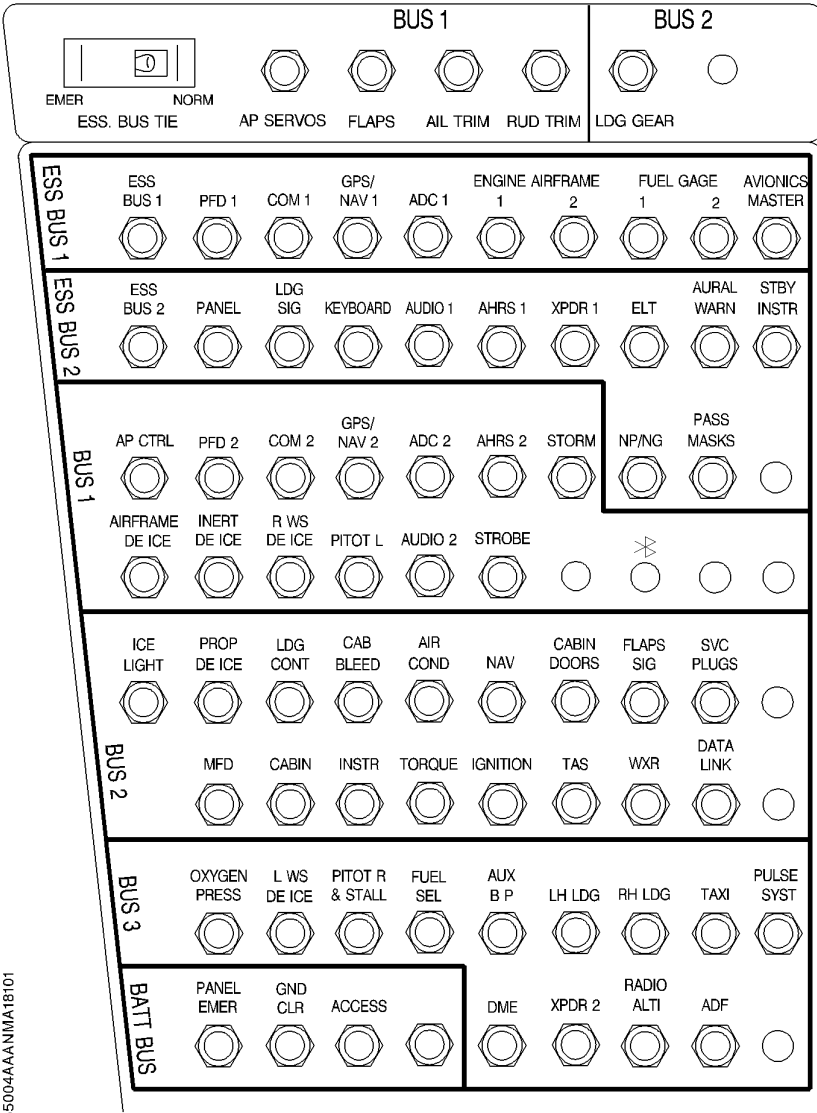


<b>ESS BUS TIE</b>	Essential bus NORM & EMER switch
<b>BUS 1</b>	
<b>AP SERVOS</b>	Autopilot servo protection
<b>FLAPS</b>	Flaps protection
<b>AIL TRIM</b>	Aileron trim protection
<b>RUD TRIM</b>	Pitch trim protection
<b>BUS 2</b>	
<b>LDG GEAR</b>	Landing gear general supply protection
<b>ESS BUS 1</b>	
<b>ESS BUS 1</b>	Essential bus 1 circuit protection
<b>PFD 1</b>	Primary Flight Display 1 protection
<b>COM 1</b>	VHF 1 protection
<b>GPS/NAV 1</b>	GPS NAV 1 protection
<b>ADC 1</b>	Air Data Computer 1 protection
<b>ENGINE</b>	Powerplant cont. protec. : Oil temp. & pres., torque, propeller
<b>AIRFRAME 1</b>	
<b>ENGINE</b>	Powerplant cont. protection : Ng, flowmeter & ITT
<b>AIRFRAME 2</b>	
<b>FUEL GAGE 1</b>	L.H. fuel gage protection
<b>FUEL GAGE 2</b>	R.H fuel gage protection
<b>AVIONICS MASTER</b>	"AVIONICS MASTER" switch protection
<b>ESS BUS 2</b>	
<b>ESS BUS 2</b>	Essential bus 2 circuit protection
<b>PANEL</b>	Instrument panel normal lighting protection
<b>LDG SIG</b>	Landing gear indicating system protection
<b>KEYBOARD</b>	Keyboard protection
<b>AUDIO 1</b>	Audio control panel 1 protection
<b>AHRS 1</b>	Attitude and Heading Reference System 1 protection
<b>XPDR 1</b>	Transponder 1 protection
<b>ELT</b>	Emergency Locator Transmitter protection
<b>AURAL WARN</b>	Aural warnings protection (Pre-MOD70-0407-00D)
<b>NP/NG</b>	Tachometer signal conditioner protection
<b>PASS MASKS</b>	Passengers' oxygen masks protection
<b>STBY INSTR</b>	Electronic Standby Indicator (ESI-2000) protection (if installed)
<b>BUS 1</b>	
<b>AP CTRL</b>	Flight controller protection
<b>PFD 2</b>	Primary Flight Display 2 protection
<b>COM 2</b>	VHF 2 & radio protection
<b>GPS/NAV 2</b>	GPS NAV 2 protection
<b>ADC 2</b>	Air Data Computer 2 protection
<b>AHRS 2</b>	Attitude and Heading Reference System 2 protection
<b>STORM</b>	Stormscope protection (if installed)
<b>AIRFRAME DE ICE</b>	Empennage and wing leading edges deicing
(Cont'd on next page)	

Figure 7.8.3 (1/3) - CIRCUIT BREAKER PANEL (Typical arrangement)

<b>BUS 1</b> (Continued)	
<b>INERT SEP DE ICE</b>	Inertial separator protection
<b>R WS DE ICE</b>	R.H. windshield deicing protection
<b>PITOT L</b>	Pitot L heating protection
<b>AUDIO 2</b>	Audio control panel 2 protection
<b>STROBE</b>	Strobe lights protection
<b>BLUETOOTH</b>	Flight stream (FS210) protection (if installed)
<b>BUS 2</b>	
<b>ICE LIGHT</b>	L.H. wing leading edge lighting and lighting test protection
<b>PROP DE ICE</b>	Propeller deicing protection
<b>LDG CONT</b>	Landing gear control protection
<b>CAB BLEED</b>	Cabin pressurization protection
<b>AIR COND</b>	Cabin ventilation and vapor cycle system protection
<b>NAV</b>	Navigation lights protection
<b>CABIN DOORS</b>	Cabin doors opening protection
<b>FLAPS SIG</b>	Trim and flaps regulator protection
<b>SVC PLUGS</b>	28 VDC plugs (std) or 12 VDC plugs (optional) protection
<b>MFD</b>	Multifunction display protection
<b>CABIN</b>	Passenger's reading lamps protection
<b>INSTR</b>	Instruments lighting protection
<b>TORQUE</b>	Torque control protection
<b>IGNITION</b>	Powerplant ignition protection
<b>TAS</b>	TAS (if installed) protection
<b>WXR</b>	Weather radar (if installed) protection
<b>DATA LINK</b>	Data Link (if installed) protection
<b>BUS 3</b>	
<b>OXYGEN PRESS</b>	Oxygen/Pressure indication protection
<b>L WS DE ICE</b>	L.H. windshield deicing protection
<b>PITOT R &amp; STALL</b>	Pitot R and stall warning heating protection
<b>FUEL SEL</b>	Tank selector timer protection
<b>AUX BP</b>	Electrical fuel pump protection
<b>LH LDG</b>	L.H. landing light protection
<b>RH LDG</b>	R.H. landing light protection
<b>TAXI</b>	Taxi light protection
<b>PULSE SYST</b>	Pulse lite system protection (if installed)
<b>DME</b>	DME protection (if installed)
<b>XPDR 2</b>	Transponder 2 (if installed) protection
<b>RADIO ALTI</b>	RADIO ALTI (if installed) protection
<b>ADF</b>	ADF protection (if installed)
<b>BATT BUS</b>	
<b>PANEL EMER</b>	Instrument panel emergency lighting protection
<b>GND CLR</b>	Ground clearance protection
<b>ACCESS</b>	Cabin access lighting protection

Figure 7.8.3 (2/3) – CIRCUIT BREAKER PANEL (Typical arrangement)



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**NOTE :**

*If an additional equipment is installed, its circuit breaker is installed on a free location.*

Figure 7.8.3 (3/3) - CIRCUIT BREAKER PANEL  
(typical arrangement)

## INDICATING

Electrical system indicating consists of voltage and ampere indicating – refer to GARMIN G1000 Pilot's Guide for further details.

Following CAS messages may appear on the MFD CAS display :

- "BAT OFF" : Battery is not connected to main bus bar and the latter is supplied by another power source
- "MAIN GEN" : Starter generator is not connected to main bus bar
- "LOW VOLTAGE" : Battery voltage is below the minimum value and main bus bar is supplied
- "GPU DOOR" : Ground power receptacle access door is not closed

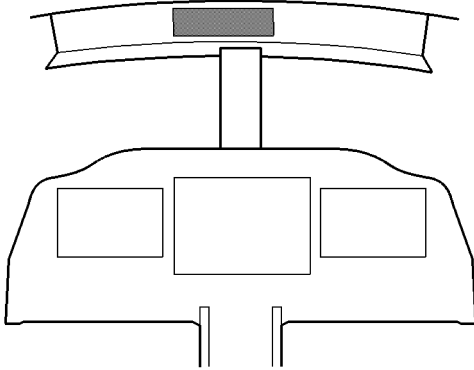
## PROTECTION - SAFETY (Figure 7.8.4)

The electrical power center provides systems protection in case of :

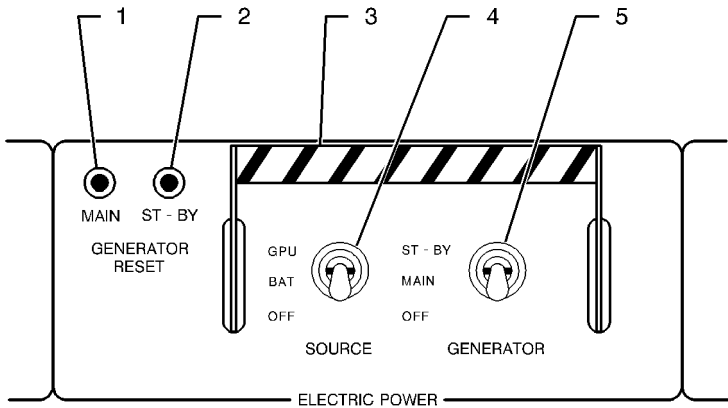
- overvoltage coming from the starter generator, the stand-by generator or the ground power receptacle
- short-circuit in starter generator feeder
- starter generator undervoltage

In case of disconnection of starter generator or stand-by generator following a failure, it is possible to re-activate the system by pressing on "MAIN" or "ST-BY" knob of "GENERATOR RESET".

A **crash lever** located on upper panel center part allows isolating simultaneously "BATT BUS" bar and setting to OFF "SOURCE" and "GENERATOR" selectors when lowered. All bus bars are isolated from generators.



- 1) "MAIN" reset knob
- 2) "ST-BY" reset knob
- 3) Crash lever
- 4) "SOURCE" selector
- 5) "GENERATOR" selector



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Figure 7.8.4 - ELECTRICAL CONTROL

**EXTERIOR LIGHTING** (Figure 7.8.5)

The airplane is equipped with two navigation lights, two strobe lights, two landing lights, a taxi light, a wing leading edge icing inspection light.

A "LTS TEST" test-knob located above lights switches allows checking proper operation of warning lights ; their brightness may be dimmed by the "DIMMER" switch (if installed).

**Landing lights**

Landing lights are located at each wing tip and located in leading edges. Lights illumination is controlled by "L. LDG" and "R. LDG" switches located on upper panel. A warning light is incorporated in each switch to indicate proper operation of used landing light.

The Pulse lite system (if installed) enables the pilot to control landing light flashing to be seen by the control tower or in heavy traffic areas.

**Taxi light**

The taxi light is attached to the nose gear, it is controlled by "TAXI" switch located on upper panel. A warning light is incorporated in this switch to indicate proper operation of used light.

**Navigation lights and strobe lights**

Navigation lights and strobe lights are installed on wing tips. They are controlled by "NAV" and "STROBE" switches located on upper panel.

*NOTE :*

*By night, do not use anticollision lights in fog, clouds or mist as light beam reflexion may lead to dizziness and loss of sense of orientation.*

**Leading edge icing inspection light**

The leading edge icing inspection light is installed on fuselage L.H. side, its beam illuminates the wing leading edge. It is controlled by the "ICE LIGHT" switch installed on "DE-ICE SYSTEM" panel (Figure 7.13.1).

**FWD compartment light**

The dome light of the FWD compartment has two positions :

- the first allows automatic illumination via the switch located in the upper section of the door frame,
- the second maintains the dome light permanently off regardless of the door position.

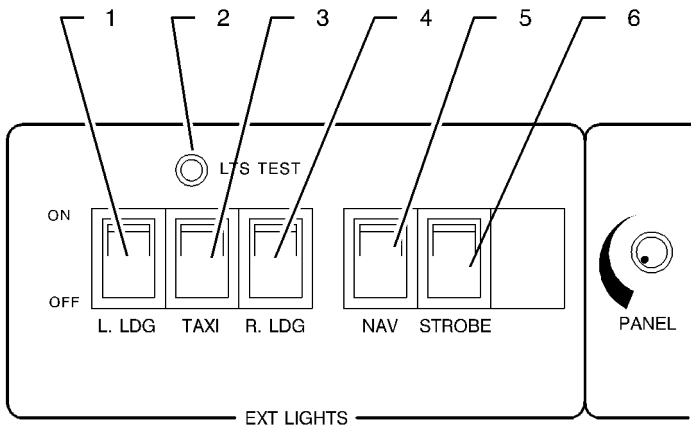
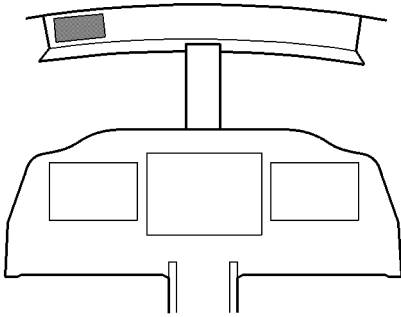
**Fuel unit compartment light**

The lighting of the fuel unit compartment allows improving the visibility of the clogging indicator by pressing the push-button located besides the inspection door.

- 1) L.H. landing light switch
- 2) Test knob (test light integrated to switches)
- 3) Taxi light switch
- 4) R.H. landing light switch
- 5) Navigation lights switch
- 6) Strobe lights switch

Figure 7.8.5 (1/2) - EXTERNAL LIGHTING CONTROLS





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Figure 7.8.5 (2/2) - EXTERNAL LIGHTING CONTROLS

## **INTERIOR LIGHTING** (Figure 7.8.6)

Interior lighting consists of access, cabin, instrument panel, instruments, baggage compartment and emergency lighting.

### **Access lighting**

Access lighting consists of two floodlights located on the ceiling upholstery (one at the level of the access door, the other at the level of the storage cabinet) and the L.H. dome light of baggage compartment. "ACCESS" push-button on "INT LIGHTS" panel and the push-button located on access door rear frame control these 3 lights via a delayed breaker.

If the CRASH lever is down, access lighting is automatically cut out after 3 minutes.

If the CRASH lever is up, there is no access lighting automatic cut out.

### **Cabin lighting**

Cabin lighting consists of two swiveling floodlights for front seats, six individual floodlights for rear passenger seats and the baggage compartment R.H. dome light. Each floodlight is controlled by a push-button located near. The floodlight above the table is controlled by two switches which are two-way switches type. The pilot can switch off the cabin floodlights and the baggage compartment dome light with the "CABIN" switch.

### **Instrument panel lighting**

Instrument panel lighting is controlled by the "PANEL" rheostat located on "INT LIGHTS" panel. This lighting consists of visor lighting tubes.

### **Stand-by instruments lighting**

The lighting integrated in stand-by instruments is controlled by the "INSTR" rheostat located on "INT LIGHTS" panel.

**Emergency lighting**

Emergency lighting consists of two swiveling floodlights located on both sides of the cockpit overhead panel above front seats. It illuminates instrument panel assembly in case of visor lighting tubes and / or instrument integrated lighting failure.

A rheostat located on the cockpit overhead panel controls emergency lighting operation and intensity. Forward rotation of control knob allows changing from OFF position to minimum lighting then increasing lighting to maximum brightness.

**Map reading light illumination**

The illumination of the map reading lights located on control wheels is controlled by the switch (rheostat) located on each light.


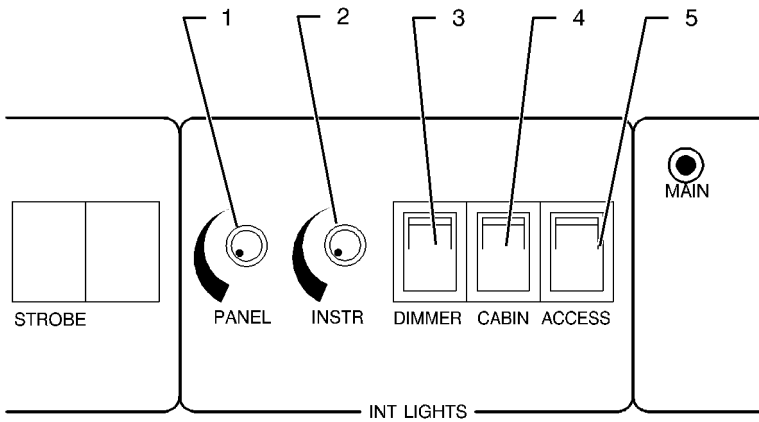
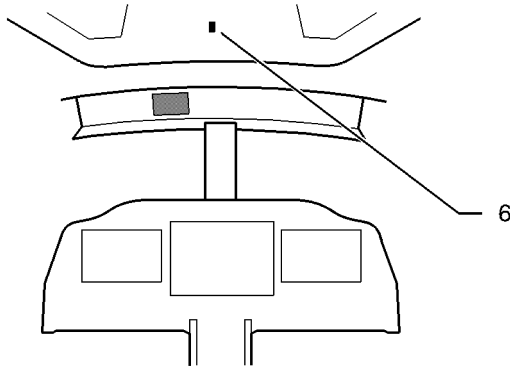
- 
- 1) Instrument panel lighting switch (rheostat)
  - 2) Instrument lighting switch (rheostat)
  - 3) "DIMMER" switch
  - 4) Cabin lighting switch (rear seats reading light)
  - 5) Access door, baggage compartment and FWD dome light (delayed breaker) push-button
  - 6) Emergency lighting switch

Figure 7.8.6 (1/2) - INTERNAL LIGHTING CONTROLS



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Figure 7.8.6 (2/2) - INTERNAL LIGHTING CONTROLS

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## 7.9 - AIR CONDITIONING AND PRESSURIZATION

### NOTE :

*A list of abbreviations used in this chapter is given in Figure 7.9.2.*

The airplane is equipped with a Global Air System (GAS), which ensures air conditioning and pressurization control – see Figure 7.9.2.

- Air conditioning corresponds to the cockpit / cabin air temperature management.
- Pressurization corresponds to the cabin altitude / rate of change management.

The GAS is composed of 3 sub-systems :

- Engine bleed air system,
- Cabin pressurization control system,
- Dual zones Environmental Control System, which includes heating and cooling functions.

These sub-systems are managed by a single digital controller, the GASC, which receives information from :

- the sensors within the sub-systems,
- the human interfaces set in the airplane.

The GASC elaborates the proper commands to the sub-systems actuators and indication or warning elements.

GAS controls are located on :

- the ECS panel on the left side of the right control wheel,
- a control panel above the arm rest of the L.H. side passenger's seat.

The pilot monitors the system through gauges and CAS messages appearing on the MFD. These indications are independent of the GASC controls and internal sensors.

### ENGINE BLEED AIR SYSTEM

The engine bleed air system is designed to ensure the following functions :

- to regulate the bleed air from the engine,
- to ensure a controlled airflow in the cabin,
- to adjust the bleed air temperature for cabin heating.

#### To regulate the bleed air from the engine

The engine bleed air system operates from either P2.5 or P3 engine bleed ports.

The system normally operates on the P2.5 port as long as the pressure or temperature demands are met by this port.

If one of these conditions is not met, the system automatically switches to the P3 port.

When the pressure or temperature demand can be met by the P2.5 port, the system automatically returns to using the P2.5 port.

The Inlet Pressure Port Sensor (IPPS) measures the pressure at the P2.5 port and sends the value to the GASC which manages the ports switching on condition with the Shut Off Valve (SOV).

A Non Return Valve (NRV) prevents P3 air from entering the P2.5 port when the P3 port is opened.

To ensure a controlled airflow in the cabin

The bleed air flow is controlled by the Flow Control and Shut Off Valve (FCSOV) driven by the GASC.

To adjust the temperature of the bleed air

The bleed air outlet temperature control is ensured by the By-Pass Valve (BPV) in association with the Main Heat Exchanger (MHX).

Based on pilot's or passengers' CABIN TEMP/°C selector position, the GASC computes the appropriate cabin air inlet temperature target and compares it to the actual measured inlet temperature in order to set the BPV position. The BPV derives a part of the bleed air through the MHX to cool it and mixes it to the remaining cabin air.

System operation

See Figure 7.9.3.

The BLEED switch allows selection of the engine bleed air system provided that the engine is running.

The Ground Fan (GF) operates until takeoff, when BLEED switch is set to AUTO, and "MAIN GEN" amber CAS message is OFF.

The BLEED switch is fitted with a blocking device between AUTO and OFF/RST positions. This prevents the operator from inadvertently setting the BLEED switch to OFF/RST position.

To reset the system, set BLEED switch to OFF/RST, then back to AUTO.



### System protection

Power for the engine bleed air system is supplied by the BUS 2 bar and is protected by the CAB BLEED breaker.

## **CABIN PRESSURIZATION CONTROL SYSTEM**

In flight, the GASC controls the modulation of the Outflow Valve (OFV) in order to reach the computed cabin altitude.

### System operation

See Figure 7.9.3.

The BLEED switch allows to activate the pressurization system.

The expected flight altitude (A/C ALT) is selected by the pilot through the Cabin Pressurization Control Panel (CPCP) which computes the cabin altitude to be managed by the GASC. The set cabin altitude is reported in the information display on the MFD as ALT SEL FT.

The GASC controls the OFV through a torque motor on the valve.

### Cabin altitude management

In order to maximize comfort during all phases of flight, the cabin altitude is automatically computed by the GASC using flight parameters (such as aircraft altitude, altitude rate of change) sent by the avionics.

The cabin altitude rates of change during climb or descent phases are set by default to +/- 525 ft/min at sea level.

### System monitoring

The pilot monitors information related to the pressurization system through gauges and information displayed on the MFD :

- computed cabin altitude in ft,
- cabin altitude in ft,
- cabin climb speed in ft/min,
- cabin differential pressure ( $\Delta P$ ) in PSI.

These gauges are independent of the GASC controls and internal sensors.

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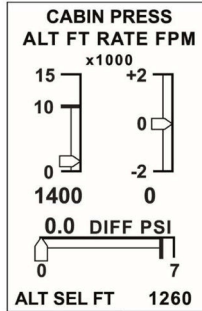


Figure 7.9.1 - Cabin altitude monitoring

**CAS messages** are displayed in the MFD CAS window :

- "BLEED TEMP" red CAS message indicates that an overtemperature was detected by either the Bleed Temperature Switch (BTSW) or the Overheat Thermal Switch (OTSW).
- "BLEED OFF" amber CAS message indicates that either the BLEED switch is in OFF position or that a system malfunction was detected by the GASC. The Flow Control and Shut Off Valve (FCSOV) is automatically closed in flight if either a cabin inlet overtemperature, or a BDPS or FCSOV failure is detected.
- "BLEED OFF" amber CAS message is displayed 45 seconds after landing if a fault on the Overheat Thermal Switch was detected by the GASC during flight.
- "CABIN ALTITUDE" red CAS message indicates that the cabin altitude is over 10000 ft.
- "CABIN DIFF PRESS" red CAS message indicates that the cabin differential pressure is over 6.4 psi (441 mb). The DUMP switch could be used in case of necessity to depressurize the cabin.

Protection - Safety

Cabin is automatically depressurized as soon as the airplane is on ground through landing gear switches (airplane on ground) or, if necessary, by actuating DUMP switch located on ECS panel (in normal operation, this switch is protected and locked by a cover).

Overpressure and negative relief safety are managed by both OFV and SFV. The safety functions are ensured by independent pneumatic modules fitted on both valves, which override the GASC control when necessary.

The DUMP switch allows the pilot to open the OFV in order to depressurize the cabin.

The OFV is fitted with a cabin altitude limitation device which overrides the DUMP function and forces the closure of the OFV if the cabin altitude reaches 14500 ft.

### **DUAL ZONES ENVIRONMENTAL CONTROL SYSTEM (ECS)**

The ECS ensures both Cockpit and Cabin heating and cooling functions.

The ECS consists of two independent air circuits :

- Heating circuit, controlled by Temperature Conditioning System (TCS)
- Cooling circuit, controlled by Vapor Cycle Cooling System (VCCS)

#### Heating circuit

The TCS regulates hot air coming from the bleed air system (also used for pressurization) and mixes it with the recirculating cabin air at the Mixing Ejector (MIXEJ) in order to lower the delivered air temperature.

The resultant air flow enters the Hot Air Distributor (HAD) and is distributed in the cockpit / cabin zones depending on the demand.

The air is distributed :

- into the cockpit zone through :
  - . ports located on pedestal sides,
  - . ports under each seat or
  - . the demisting outlets.
- into the cabin zone through :
  - . ports located on the lower section of the L.H. side and R.H. side cabin upholstery.

### Cooling circuit

The VCCS is selected on only when the GASC receives a cooling request. It is composed of two independent circuits :

- one for the cockpit zone
- one for the cabin zone

For each circuit, air is sucked by means of a variable speed electrical fan and then blown through an evaporator and ducted to the different zones :

- cockpit circuit, by passing through :
  - . the upper panel equipped with swivelling and adjustable air outlets,
  - . air outlets located on arm rests of pilot and R.H. side front passenger stations and
  - . ports located under instrument panel.
- cabin circuit, by passing through :
  - . the overhead duct equipped with swivelling and adjustable air outlets,
  - . ports located on the floor between the cabinets and the intermediate passenger's seats.

### System operation

See Figure 7.9.3 and paragraph Air temperature management.

#### ECS control panel selection :

If the AIR COND switch is set to OFF :

#### Before GASC software evolution (Pre-MOD70-0689-21)

- Temperature is set by default by the GASC to 23°C,

#### After GASC software evolution (Post-MOD70-0689-21)

- The system maintains the cabin air inlet temperature previously selected.  
The pilot can modulate this temperature by using the CABIN TEMP/°C selector on ECS panel,

#### All

- Cockpit / Cabin evaporator fans are OFF,
- VCCS is inhibited.

If the AIR COND switch is set to AUTO :

- Temperature of each zone is controlled by the GASC, using inputs from both CABIN TEMP/°C selectors and temperature sensors for reference,
- Fan speed is controlled by the GASC.

If the AIR COND switch is set to MANUAL :

- Each zone is controlled by its own control panel (depending on the CABIN CTRL selector position).

CABIN CTRL selector positions :

- OVERRIDE : controls located in the cabin zone are inhibited.
- CABIN : each zone is controlled by its own settings.

FAN SPEED selectors positions :

- OFF : prevents recirculation of cold air through the cold air circuit (VCCS).
- 1 - 4 : Cockpit / Cabin fan speeds are selectable.

CABIN TEMP/°C selectors :

- Allow adjustment of the temperature for the cockpit and cabin zones.

After GASC software evolution (Post-MOD70-0689-21)

- If the pilot or passengers set the CABIN TEMP/°C selector to the maximum heat position, the bleed air system automatically switches from the P2.5 to the P3 bleed port to increase the temperature and flow rate of the incoming bleed air. Except in the case of very cold environmental conditions, this switching is inhibited below 25000 ft.

All

“ECS - Service required” advisory message appears on the MFD when the GASC detects a faulty operation of ECS system.

**NOTE :**

*If “ECS - Service required” advisory message appears : Inform maintenance department.*

AIR FLOW distributor :

The AIR FLOW distributor selects between windshield defog or cabin heating.

**NOTE :**

*For maximum efficiency, the AIR FLOW distributor should be set either in defog position (fully turned to the left) or in cabin position (fully turned to the right).*

After GASC software evolution (Post-MOD70-0689-21)

When the AIR FLOW distributor is set in defog position (fully turned to the left), the bleed air system automatically switches from the P2.5 to the P3 bleed port to increase the temperature and flow rate of the incoming bleed air.

Except in the case of very cold environmental conditions, this switching is inhibited below 25000 ft.

All

Emergency air system

An emergency ventilation valve allows outside air to enter the cabin when the EMERGENCY RAM AIR control knob is pulled out. The EMERGENCY RAM AIR control knob is located under the right side of instrument panel near the right control wheel.

- In NORMAL position, the valve is closed and the control is locked.
- To open the emergency ventilation valve, press the locking button on the knob and pull out.

*NOTE :*

*Reduce the cabin differential pressure, if necessary by depressurizing the cabin, to be able to operate the EMERGENCY RAM AIR control knob.*

System protection

Power for the ECS is supplied by the BUS 2 bar and is protected by the AIR COND breaker.

Three fans are supplied by BUS 4 bar and protected respectively by following breakers : COND FAN, CABIN FAN and COCKPIT FAN. The ground fan is supplied by VENT bar and protected by GND FAN breaker.

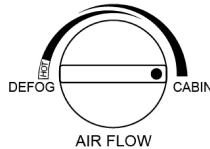
The system includes an automatic load shedding feature which :

- when "MAIN GEN" amber CAS message is ON or AIRFRAME DE ICE is ON, or PROP DE ICE is ON :
  - . turns off the Ground Fan (GF),
  - . turns off the Condenser Fan (COND FAN),
  - . opens compressor clutch.
- during engine start :
  - . turns off all the Vapor Cycle Cooling System (VCCS)

## Air temperature management

### Cockpit and cabin heating / cooling

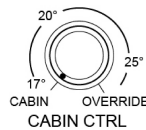
Cockpit and cabin air temperature management is operated by selecting :



For optimal air temperature management, select AIR COND switch to MANUAL and CABIN CTRL selector to CABIN :



and



Air temperature expectations		Cockpit panel selection		Cabin panel selection	
		CABIN TEMP/°C	FAN SPEED	CABIN TEMP/°C	FAN SPEED
Cockpit area	<b>Warm</b>				
Cabin area	<b>Hot</b>				

### Results

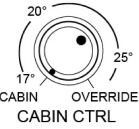

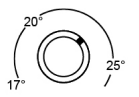

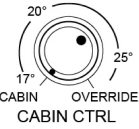

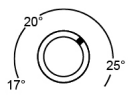

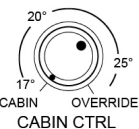

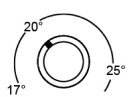

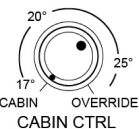

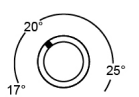

#### Mixed Bleed Air Circuit :

Warm air is distributed to both cockpit and cabin. More warm air is directed to cabin due to the greater temperature demand.

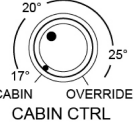

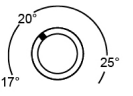

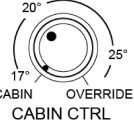

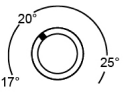

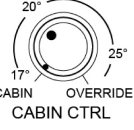

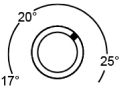

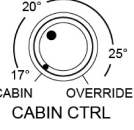

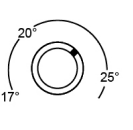

#### Cold Air Circuit :

Not active, as no CABIN TEMP/°C selector is set below 22°C.

FANS select OFF. Selecting a FAN speed will reduce cabin air temperature.

Air temperature expectations		Cockpit panel selection		Cabin panel selection	
		CABIN TEMP/°C	FAN SPEED	CABIN TEMP/°C	FAN SPEED
Cockpit area	<b>Warm</b>				
Cabin area	<b>Warm</b>				
<p><b>Results</b></p> <p><u>Mixed Bleed Air Circuit</u> :</p> <p>Warm air is distributed to both cockpit and cabin equally due to equal temperature demand.</p> <p><u>Cold Air Circuit</u> :</p> <p>Not active, as no CABIN TEMP/°C selector is set below 22°C.</p> <p><u>FANS</u> select OFF. Selecting a FAN speed will reduce cabin air temperature.</p>					
Cockpit area	<b>Warm</b>				
Cabin area	<b>Cool</b>				
<p><b>Results</b></p> <p><u>Mixed Bleed Air Circuit</u> :</p> <p>Warm air is distributed to both cockpit and cabin. More warm air is directed to cockpit due to the greater temperature demand.</p> <p><u>Cold Air Circuit</u> :</p> <p>Cabin CABIN TEMP/°C selector is set below 22°C resulting in cabin air conditioning system supplying the cabin area.</p> <p><u>Cockpit FAN</u> : select OFF.</p> <p><u>Cabin FAN</u> : select 1 or more to circulate the cooled air.</p>					



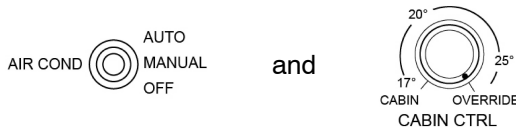
Air temperature expectations		Cockpit panel selection		Cabin panel selection	
		CABIN TEMP/°C	FAN SPEED	CABIN TEMP/°C	FAN SPEED
Cockpit area	<b>Cool</b>				
Cabin area	<b>Cool</b>				
<b>Results</b>					
<u>Mixed Bleed Air Circuit :</u>					
With the cockpit and cabin CABIN TEMP/°C selectors set below 22°C, the Hot Air Distributor discharges the mixed bleed air below the floor towards the cold air circuit fans and evaporators to reduce the air to the desired temperature.					
<u>Cold Air Circuit :</u>					
Both cockpit and cabin CABIN TEMP/°C selectors are set below 22°C resulting in both cockpit and cabin air conditioning systems supplying their respective area.					
<u>Cockpit and cabin FANS :</u>					
Select 1 or more to circulate the cooled air.					
Cockpit area	<b>Cool</b>				
Cabin area	<b>Warm</b>				
<b>Results</b>					
<u>Mixed Bleed Air Circuit :</u>					
Warm air is distributed to both cockpit and cabin. More warm air is directed to cabin due to the greater temperature demand.					
<u>Cold Air Circuit :</u>					
Cockpit CABIN TEMP/°C selector is set below 22°C resulting in cockpit air conditioning system supplying the cockpit area.					
<u>Cockpit FAN :</u> select 1 or more to circulate the cooled air.					
<u>Cabin FAN :</u> select OFF.					

**NOTE :**

*FANS selected to OFF ensures that no cool air is recirculated when trying to maximize the heating of the cockpit and / or cabin zones.*

Cabin override

Select AIR COND switch to MANUAL and CABIN CTRL selector to OVERRIDE.



Setting the CABIN CTRL selector to OVERRIDE position disables CABIN TEMP/°C and FAN SPEED selectors in the cabin area.

The OVERRIDE position also distributes warm air equally to the cockpit and cabin.

Only the cockpit CABIN TEMP/°C and FAN SPEED selectors inputs are used by the GASC for air temperature management.

Air temperature expectations		Cockpit panel selection		Cabin panel selection	
		CABIN TEMP/°C	FAN SPEED	CABIN TEMP/°C	FAN SPEED
Cockpit area	<b>Warm</b>				
Cabin area	/				

Results

Mixed Bleed Air Circuit :

Warm air is distributed equally to both cockpit and cabin. The temperature is selected by the cockpit CABIN TEMP/°C selector.

Cold Air Circuit :

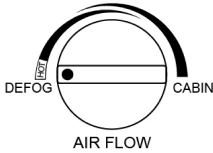
Not active, as the cockpit CABIN TEMP/°C selector is set above 22°C and cabin CABIN TEMP/°C selector is inhibited.

Cockpit FAN : select OFF. Selecting a FAN speed will reduce cabin air temperature.

Air temperature expectations		Cockpit panel selection		Cabin panel selection	
		CABIN TEMP/°C	FAN SPEED	CABIN TEMP/°C	FAN SPEED
Cockpit area	<b>Cool</b>				
Cabin area	/				
<p><u>Results</u></p> <p><u>Mixed Bleed Air Circuit :</u></p> <p>With the cockpit CABIN TEMP/°C selector set below 22°C, the Hot Air Distributor discharges the mixed bleed air below the floor towards the cold air circuit fans and evaporators to reduce the air to the desired temperature.</p> <p><u>Cold Air Circuit :</u></p> <p>Cockpit CABIN TEMP/°C selector is set below 22°C resulting in both cockpit and cabin air conditioning systems to supply their respective area.</p> <p><u>Cockpit FAN :</u> select 1 or more to circulate the cooled air.</p> <p>Cockpit FAN SPEED selector determines cabin FAN speed.</p>					

Windshield DEFOG

Windshield defog is operated by selecting :



Air temperature expectations		Cockpit panel selection		Cabin panel selection	
		CABIN TEMP/°C	FAN SPEED	CABIN TEMP/°C	FAN SPEED
Cockpit area	/				
Cabin area	/				

**Results**

Mixed Bleed Air Circuit :

Air is distributed to the windshields and cockpit side windows at a fixed temperature regardless of CABIN TEMP/°C selector settings.

Cold Air Circuit :

Inhibited when DEFOG is selected.

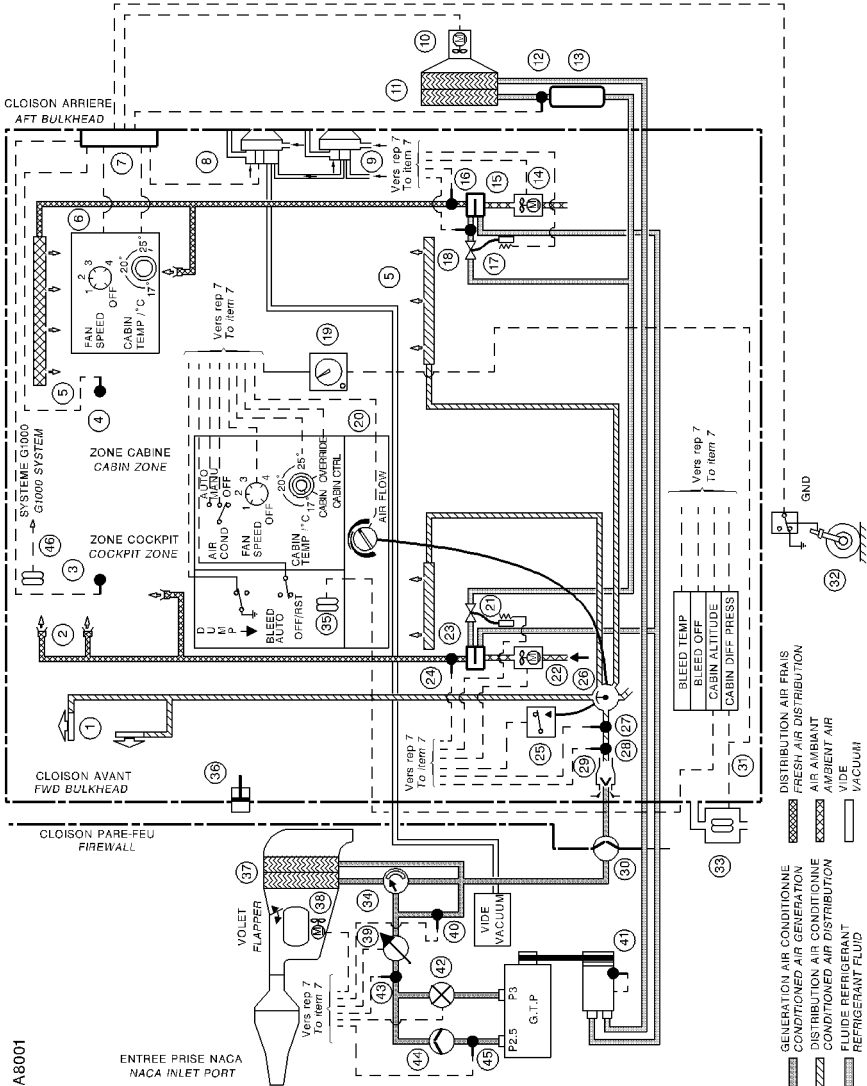
FANS will continue to operate if selected to 1 or more for air circulation.

- 1 - Demisting outlets
- 2 - Front vents
- 3 - Cockpit ventilated temperature sensor (CKVTS)
- 4 - Cabin ventilated temperature sensor (CBVTS)
- 5 - Air ports
- 6 - Cabin control panel
- 7 - Global air system controller (GASC)
- 8 - Out-flow valve (OFV)
- 9 - Safety valve (SFV)
- 10 - Condenser fan
- 11 - Condenser
- 12 - High pressure switch
- 13 - Drier filter
- 14 - Cabin fan
- 15 - Cabin evaporator
- 16 - Cabin blown temperature sensor (CBBTS)
- 17 - Cabin thermostatic valve
- 18 - Low pressure switch
- 19 - Cabin pressurization control panel (CPCP)
- 20 - ECS panel
- 21 - Cockpit thermostatic valve
- 22 - Cockpit fan
- 23 - Cockpit evaporator
- 24 - Cockpit blown temperature sensor (CKBTS)

Figure 7.9.2 (1/3) - Global Air System items list and Abbreviations

- 25 - Demisting microswitch
- 26 - Hot air distributor (HAD)
- 27 - (Cabin) Inlet temperature Sensor (ITS)
- 28 - (Cabin) Bleed temperature switch (BTSW)
- 29 - Mixing ejector (MIXEJ)
- 30 - Check valve
- 31 - MFD unit
- 32 - Ground safety microswitch
- 33 - Differential pressure switch
- 34 - By-pass valve (BPV)
- 35 - Cabin altitude alarm switch
- 36 - Emergency air supply system (RAM AIR)
- 37 - Main heat exchanger (MHX)
- 38 - Ground fan (GF)
- 39 - Flow control shut off valve (FCSOV)
- 40 - Bleed differential pressure sensor (BDPS)
- 41 - Compressor
- 42 - Shut-off valve (SOV)
- 43 - Overheat thermal switch (OTSW)
- 44 - Non return valve (NRV)
- 45 - Intermediate port pressure sensor (IPPS)
- 46 - Cabin pressure sensor

Figure 7.9.2 (2/3) - Global Air System items list and Abbreviations



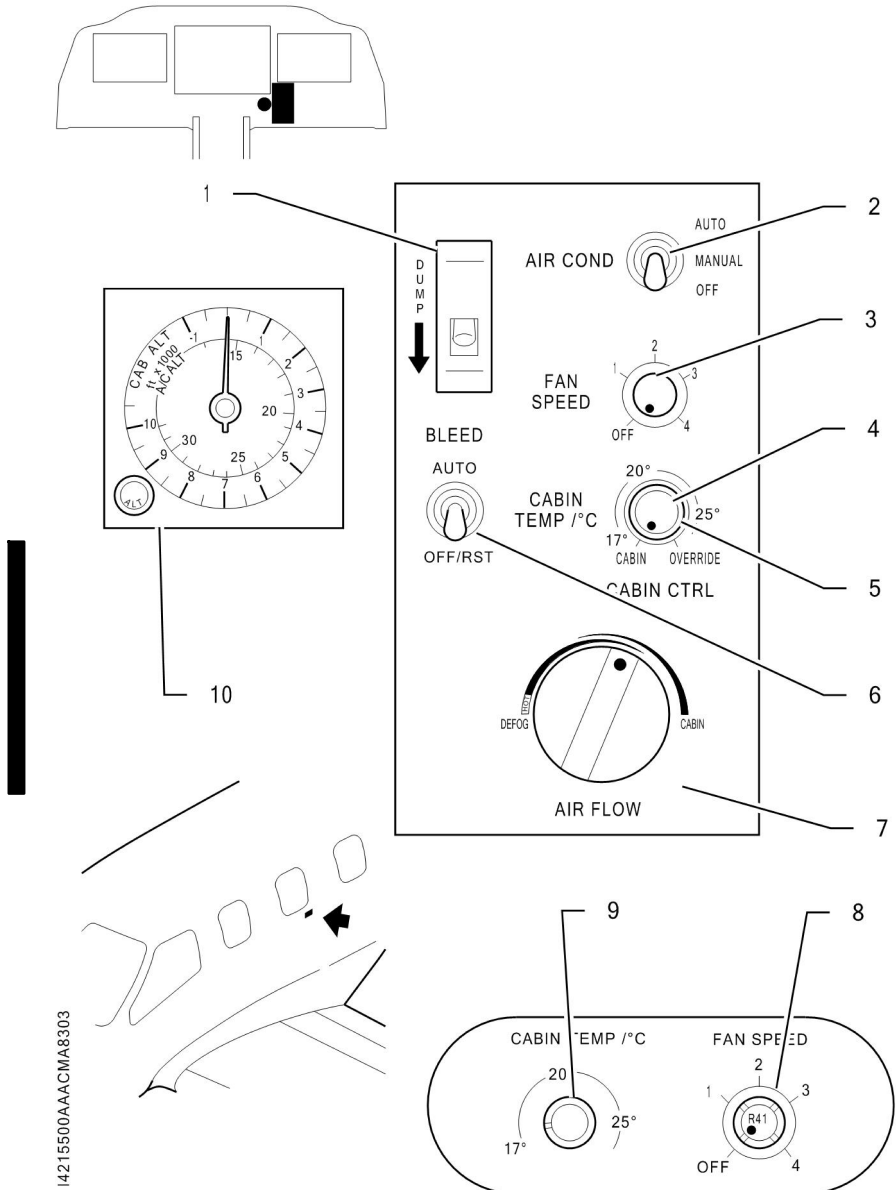
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Figure 7.9.2 (3/3) - Global Air System

- 1) "DUMP" switch
- 2) "AIR COND" switch
- 3) "FAN SPEED" selector (cockpit)
- 4) "CABIN CTRL" selector
- 5) "CABIN TEMP/° C" selector (cockpit)
- 6) "BLEED" switch
- 7) "AIR FLOW" distributor
- 8) "FAN SPEED" selector (cabin)
- 9) "CABIN TEMP/° C" selector (cabin)
- 10) Cabin pressurization control panel

Figure 7.9.3 (1/2) - GAS controls





I4215500AAACMA8303

Figure 7.9.3 (2/2) - GAS controls

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## 7.10 - EMERGENCY OXYGEN SYSTEM (Figure 7.10.1)

The gaseous oxygen system will be used by the crew and the passengers, when the cabin altitude is greater than 10000 ft following a loss of pressurization or in case of cabin air contamination.

### ■ Post-MOD70-0407-00D (V15.11 GARMIN software)

The "USE OXYGEN MASK" amber CAS message appears in the GDU 1500 MFD "CAS" window (in normal conditions) and the "USE OXYGEN MASK / USE OXYGEN MASK" aural warning alert sounds when the red warning CAS message "CABIN ALTITUDE" is ON.

### All

The oxygen reserve is contained in an oxygen cylinder made of composite material and located outside of the pressurized cabin into the R.H. karman. Its capacity is 50.3 cu.ft (1425 litres) "STPD" (Standard Temperature Pressure Dry) and use limit pressures are :

- maximum pressure 1850 PSIG (127 bars) at 70° F (21° C).  
Evolution of this pressure according to the outside temperature is given in Section 8, Figure 8.7.4, as well as on a placard on the inside of the cylinder service door,
- minimum pressure 217 PSIG (15 bars).

The oxygen cylinder head is equipped with :

- a hand-controlled isolation valve to permit cylinder installation and removal,
- a microswitch causing the "OXYGEN" CAS message to light on. This message lights on, when the isolation valve is closed,
- a graduated pressure gage,
- a charging valve - refer to the replenishment procedure in Section 8,
- an overpressure system consisting of a safety disc. This disc is designed to rupture between 2500 and 2775 PSIG (172 and 191 bars) discharging the cylinder contents outboard,
- a pressure reducing valve adjusting utilization pressure to a value comprised between 64 and 85 PSIG (4.4 and 5.9 bars),
- a low pressure safety valve calibrated to 116 PSIG (8 bars).

- 1) Microphone switch
- 2) OXYGEN switch
- 3) PASSENGERS OXYGEN switch

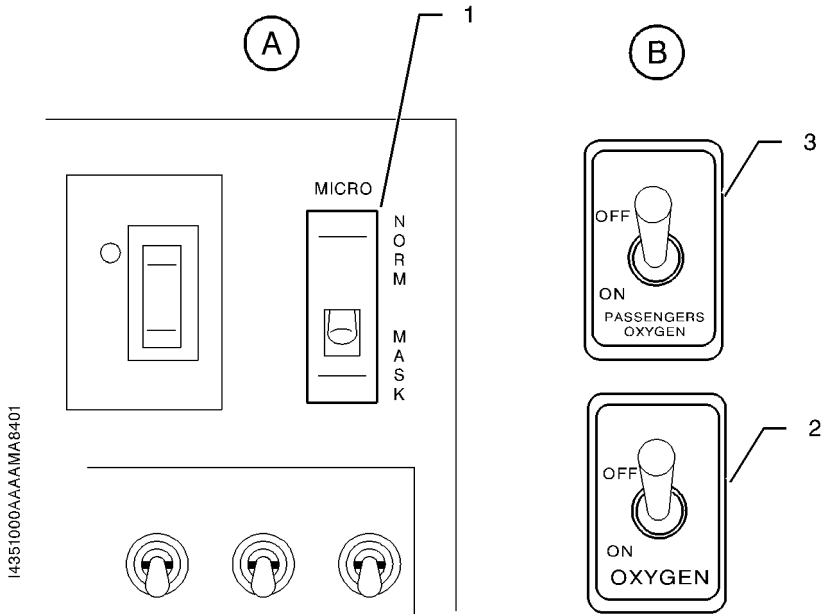
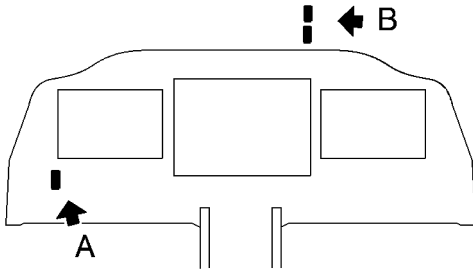


Figure 7.10.1 - EMERGENCY OXYGEN SYSTEM

A control panel located in the cockpit overhead panel at the disposal of the pilot includes :

- a two-position valve ON/OFF ("OXYGEN" switch) to permit the supply of the front seats occupiers masks,
- a two-position valve ON/OFF ("PASSENGERS OXYGEN" switch) with guard to permit the supply of the passengers four masks, when the first valve is open.

Oxygen pressure is displayed on the GDU 1500 MFD.

An altimetric valve provides an automatic passengers masks actuation function at a cabin altitude between 13000 and 14000 ft when "OXYGEN" switch is set to ON.

Two pressure-demand type masks allowing quick donning with only one hand, covering the nose and the mouth, as well as two pairs of smoke goggles are at disposal of the pilot and of the R.H. front seat occupier. Masks are installed in cups on the cabin walls aft of the front seats. Permanently connected to the oxygen system, they are equipped with a micro controlled by the switch ("NORMAL/MASK" micro inverter) under cover located on the instrument panel near the pilot's control wheel, with a three-position selector NORMAL, 100 % and EMERGENCY and with a push-button "PRESS TO TEST". The proper flow is signaled by a flow indicator (blinker) into the oxygen tubing.

The smoke goggles are stowed in the drawer of the cabinet at the rear of the pilot.

Four passengers constant-flow type masks, covering the nose and the mouth and permanently connected, are installed in two containers on the cabin ceiling. The opening of these containers and the descent of the masks are controlled by the pilot, when both switches at its disposal are set to ON, or automatically at a cabin altitude between 13000 and 14000 ft with the "OXYGEN" switch set to ON. The oxygen flow is obtained by pulling on the mask bounded by a lanyard cord to a pin. A proper flow is signaled by the filling of the green bag located on each passenger mask.

**WARNING**

**DO NOT SMOKE DURING OXYGEN SYSTEM USE.**

**OIL, GREASE, SOAP, MAKE UP, LIPSTICK AND ANY OTHER GREASY SUBSTANCES CONSTITUTE A SERIOUS FIRE OR BURNING HAZARD, WHEN ON CONTACT WITH OXYGEN**

**FLIGHT ABOVE 15000 FT WITH EMERGENCY DESCENT**

Number of occupants		OUTSIDE TEMPERATURE						
Cockpit	Cabin	110°F/ 43°C	90°F/ 32°C	70°F/ 21°C	50°F/ 10°C	30°F/ -1°C	10°F/ -12°C	-10°F/ -23°C
1	0	631	614	<b>597</b>	580	563	546	529
1	1	759	736	<b>713</b>	691	668	646	623
1	2	885	856	<b>828</b>	799	771	743	715
1	3	1010	976	<b>941</b>	907	873	839	806
1	4	1137	1096	<b>1056</b>	1015	975	935	897
2	0	1037	1001	<b>965</b>	930	894	859	825
2	1	1164	1122	<b>1080</b>	1038	997	956	916
2	2	1289	1241	<b>1192</b>	1144	1097	1050	1004
2	3	1416	1361	<b>1306</b>	1252	1198	1145	1093
2	4	1541	1480	<b>1418</b>	1357	1297	1238	1180

(Values in PSIG)

*Conditions :*

1. 4 minutes from 31000 to 15000 ft. All equipment used from 31000 ft.
2. Plus 30 minutes usage by each pilot and passenger at 15000 ft.
3. Plus 86 minutes usage by each pilot at 10000 ft.

*NOTE :*

*After a long parking time in the sunshine, increase pressures indicated in the table here above by 8 %.*

## WHEN REQUIRED TO REMAIN ABOVE 15000 FT DUE TO MINIMUM "EN ROUTE" ALTITUDE

Number of occupants		OUTSIDE TEMPERATURE						
Cockpit	Cabin	110°F/ 43°C	90°F/ 32°C	70°F/ 21°C	50°F/ 10°C	30°F/ -1°C	10°F/ -12°C	-10°F/ -23°C
1	0	618	602	<b>585</b>	569	552	536	520
1	1	842	816	<b>789</b>	763	736	710	685
1	2	1067	1029	<b>992</b>	955	918	882	846
1	3	1513	1240	<b>1192</b>	1144	1097	1050	1004
1	4	1513	1452	<b>1392</b>	1333	1275	1217	1161
2	0	992	958	<b>925</b>	891	858	825	793
2	1	1215	1170	<b>1125</b>	1081	1037	994	952
2	2	1439	1382	<b>1326</b>	1270	1215	1161	1108
2	3	1662	1593	<b>1525</b>	1457	1391	1326	1262
2	4	1888	1807	<b>1725</b>	1645	1567	1490	1415

(Values in PSIG)

*Conditions :*

1. *Flight above 15000 ft. All equipment used.*
2. *1 hour usage by each pilot and passenger.*
3. *Plus 1 hour usage by each pilot under 15000 ft.*

*NOTE :*

*After a long parking time in the sunshine, increase pressures indicated in the table here above by 8 %.*

**FLIGHT BETWEEN 15000 FT AND 10000 FT**

Number of occupants		OUTSIDE TEMPERATURE						
Cockpit	Cabin	110°F/ 43°C	90°F/ 32°C	70°F/ 21°C	50°F/ 10°C	30°F/ -1°C	10°F/ -12°C	-10°F/ -23°C
1	0	618	602	<b>585</b>	569	552	536	520
1	1	961	929	<b>896</b>	864	833	801	770
1	2	961	929	<b>896</b>	864	833	801	770
1	3	961	929	<b>896</b>	864	833	801	770
1	4	961	929	<b>896</b>	864	833	801	770
2	0	992	958	<b>925</b>	891	858	825	793
2	1	1333	1282	<b>1231</b>	1181	1131	1083	1035
2	2	1333	1282	<b>1231</b>	1181	1131	1083	1035
2	3	1333	1282	<b>1231</b>	1181	1131	1083	1035
2	4	1333	1282	<b>1231</b>	1181	1131	1083	1035

(Values in PSIG)

*Conditions :*

1. *Flight under 15000 ft.*
2. *90 minutes usage by each pilot and one passenger.*
3. *Plus 30 minutes usage by each pilot at 10000 ft.*

*NOTE :*

*After a long parking time in the sunshine, increase pressures indicated in the table here above by 8 %.*



**O<sub>2</sub> SMART MIKE MASK (if installed)**

The two cockpit masks, O<sub>2</sub> smart mike masks, are equipped with a system that detects when a communication is made operating one of the push-to-talk buttons. It activates a noise reduction system that attenuates the oxygen flow noise in the headsets.

Noise reduction function operates when the switch located on O<sub>2</sub> connecting line is set to ON.

1435T100AAAEMA8000

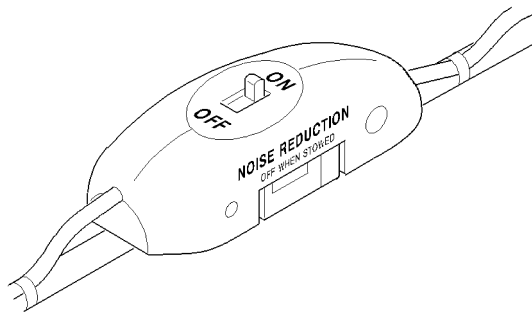


Figure 7.10.1 – Noise reduction switch

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## 7.11 - AIR DATA SYSTEM AND INSTRUMENTS

### ■ Pre-MOD70-0335-34 (ESI-2000) (Figure 7.11.1)

Airplane air data system consists of :

- two separate static pressure systems supplying an altimeter, an airspeed indicator and air data computers (ADC).

A part of system 1 is backed up by an alternate system which operation is controlled by a switching valve (normal / alternate) attached to instrument panel under R.H. control wheel. In case of obstruction or icing of ports, this selector isolates airplane normal static system. When selector is on alternate position (pulled rearwards), static pressure is picked from a port located in airplane rear fuselage.

- two separate dynamic pressure systems supplying the airspeed indicator system and air data computers.

### STATIC PRESSURE SYSTEMS

#### Primary systems

Two dual static ports (one on either side of the fuselage tail part) supply a dual system routed towards the cockpit.

System 1 part, which is connected to the switching valve (normal / alternate), supplies the altimeter, the  $\Delta P$  cabin and the airspeed indicator. The system remainder directly supplies one of the air data computers.

System 2 is directly connected to the second ADC.

Systems feature a drain valve located under the instrument panel on R.H. side.

- 1) Pitot L
- 2) Dynamic system drain
- 3) Airspeed indicator
- 4) GDC 74B ADC
- 5) GDC 74B ADC
- 6) FWD pressure bulkhead
- 7) Static system drain
- 8) Static system drain
- 9) Static system drain
- 10) Emergency static system drain
- 11) Emergency static valve (Normal / Alternate)
- 12) Altimeter
- 13) Instrument panel
- 14) Dynamic system drain
- 15) Pitot R
- 16) Rear pressure bulkhead
- 17) Static port
- 18) Emergency static port
- 19) Static port

Figure 7.11.1 (1/2) - AIR DATA SYSTEM  
Pre-MOD70-0335-34 (ESI-2000)

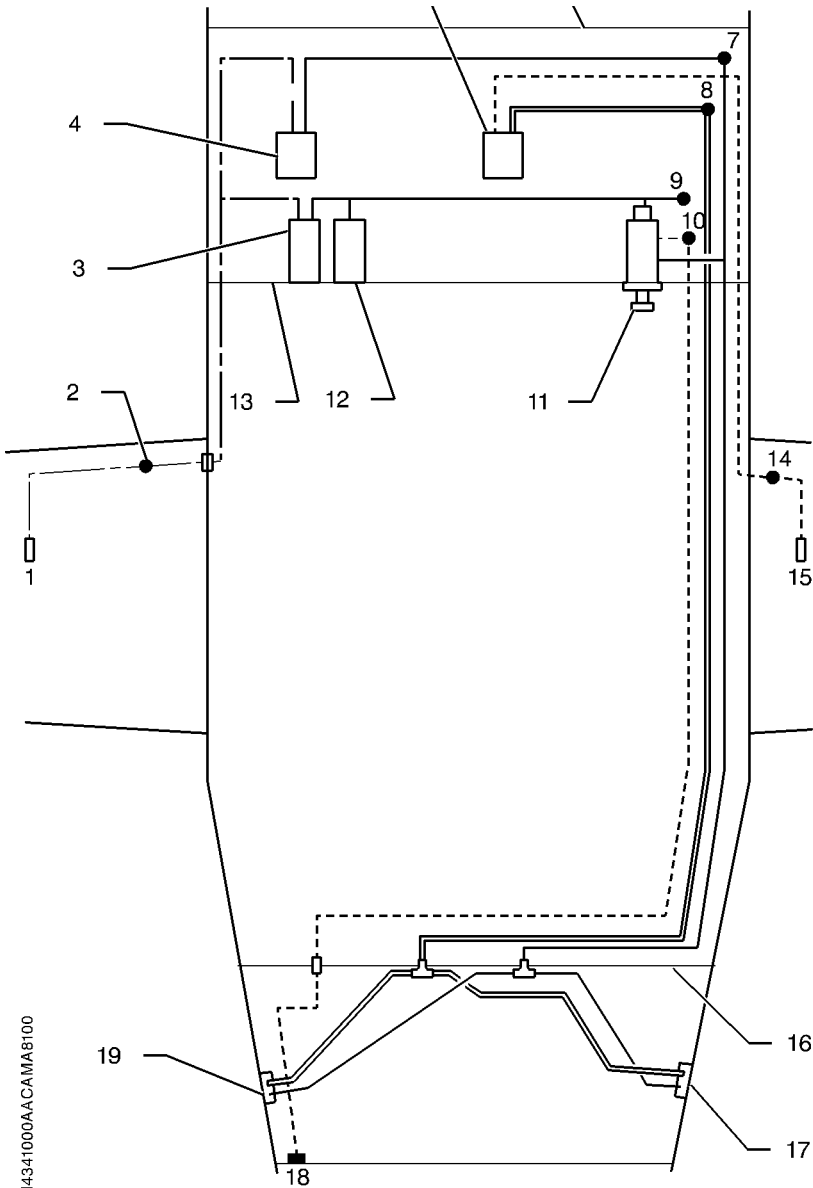


Figure 7.11.1 (2/2) - AIR DATA SYSTEM  
Pre-MOD70-0335-34 (ESI-2000)

Post-MOD70-0335-34 (ESI-2000) (Figure 7.11.2)

Airplane air data system consists of :

- two separate static pressure systems supplying an electronic standby indicator and air data computers (ADC).

A part of system 1 is backed up by an alternate system which operation is controlled by a switching valve (normal / alternate) attached to instrument panel under R.H. control wheel. In case of obstruction or icing of ports, this selector isolates airplane normal static system. When selector is on alternate position (pulled rearwards), static pressure is picked from a port located in airplane rear fuselage.

- two separate dynamic pressure systems supplying the electronic standby indicator and air data computers.

## **STATIC PRESSURE SYSTEMS**

### **Primary systems**

Two dual static ports (one on either side of the fuselage tail part) supply a dual system routed towards the cockpit.

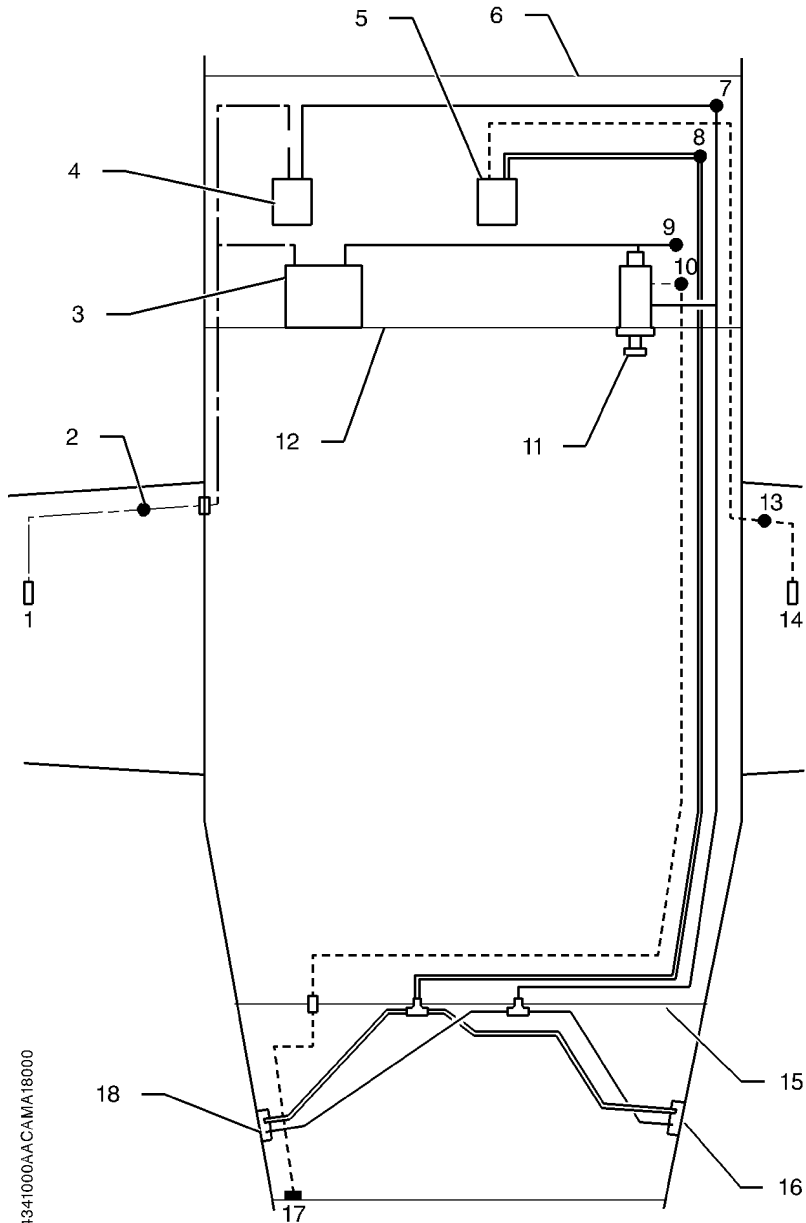
System 1 part, which is connected to the switching valve (normal / alternate), supplies the  $\Delta P$  cabin and the electronic standby indicator. The system remainder directly supplies one of the air data computers.

System 2 is directly connected to the second ADC.

Systems feature a drain valve located under the instrument panel on R.H. side.

- 1) Pitot L
- 2) Dynamic system drain
- 3) Electronic Standby Indicator (ESI-2000)
- 4) GDC 74B ADC
- 5) GDC 74B ADC
- 6) FWD pressure bulkhead
- 7) Static system drain
- 8) Static system drain
- 9) Static system drain
- 10) Emergency static system drain
- 11) Emergency static valve (Normal / Alternate)
- 12) Instrument panel
- 13) Dynamic system drain
- 14) Pitot R
- 15) Rear pressure bulkhead
- 16) Static port
- 17) Emergency static port
- 18) Static port

Figure 7.11.2 (1/2) - AIR DATA SYSTEM  
Post-MOD70-0335-34 (ESI-2000)



I4341000AACAMA18000

Figure 7.11.2 (2/2) - AIR DATA SYSTEM  
Post-MOD70-0335-34 (ESI-2000)



All

### **Alternate static source**

The alternate static port located in the rear fuselage supplies a system routed to the switching valve (normal / alternate) in order to replace static system 1.

The alternate line incorporates a drain plug located under the instrument panel on R.H. side.

- Static pressure from alternate line is only provided to standby instrument.

### **DYNAMIC PRESSURE SYSTEM**

#### Pre-MOD70-0335-34 (ESI-2000)

One heated pitot probe is installed under the L.H. wing. The second one is installed under the R.H. wing. The first one supplies the airspeed indicator and one ADC.

#### Post-MOD70-0335-34 (ESI-2000)

One heated pitot probe is installed under the L.H. wing. The second one is installed under the R.H. wing. The first one supplies the electronic standby indicator and one ADC.

All

The second one supplies the other ADC.

Both lines incorporate a drain plug located in the root of L.H. and R.H. wings.

### **Pitot heating**

Pitot heating is controlled by "PITOT L HTR" and "PITOT R & STALL HTR" switches, installed on "DE-ICE SYSTEM" panel. Refer to Chapter 7.13 for further details.

#### **NOTE :**

*Do not use heating during prolonged periods on ground to avoid pitot overheat.*

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## 7.12 - VACUUM SYSTEM AND INSTRUMENTS

### ■ Pre-MOD70-0335-34 (ESI-2000) (Figure 7.12.1)

The airplane is fitted with a vacuum system providing the suction necessary to operate the stand-by attitude indicator, the cabin pressurization and the leading edge deicing.

Vacuum system includes :

- A pressure regulator
- An ejector
- A regulating and relief valve
- - A pressure switch
- A suction gage indicator

Compressed air necessary for the ejector to create decompressed air is taken from the powerplant. The air flow is regulated before going into the ejector which creates necessary vacuum by venturi effect.

■ A relief valve fixed in cabin to frame C2, maintains the vacuum for pressurization and instrument systems. In case of pressure drop, a pressure switch, installed in the system, indicates the failure by causing the "VACUUM LOW" CAS message to light on.

### **STAND-BY ATTITUDE INDICATOR**

The stand-by attitude indicator, equipped with a slip indicator, provides a visual reference of actual airplane flight attitude. An index at the top of the indicator shows bank attitude relative to the bank scale which has index marks at 10°, 20°, 30°, 60° and 90° either side of the center mark.

Pitch and roll attitudes are shown by a miniature airplane superimposed over a symbolic horizon area divided into two sections by a white horizon bar. The upper "sky blue" area and the lower "ground" area have arbitrary pitch reference lines useful for pitch attitude control.

- 1) Pressure regulator
- 2) Ejector
- 3) Valve
- 4) Regulating and relief valve
- 5) Pressure switch
- 6) Failure CAS message

Figure 7.12.1 (1/2) - VACUUM SYSTEM  
Pre-MOD70-0335-34 (ESI-2000)

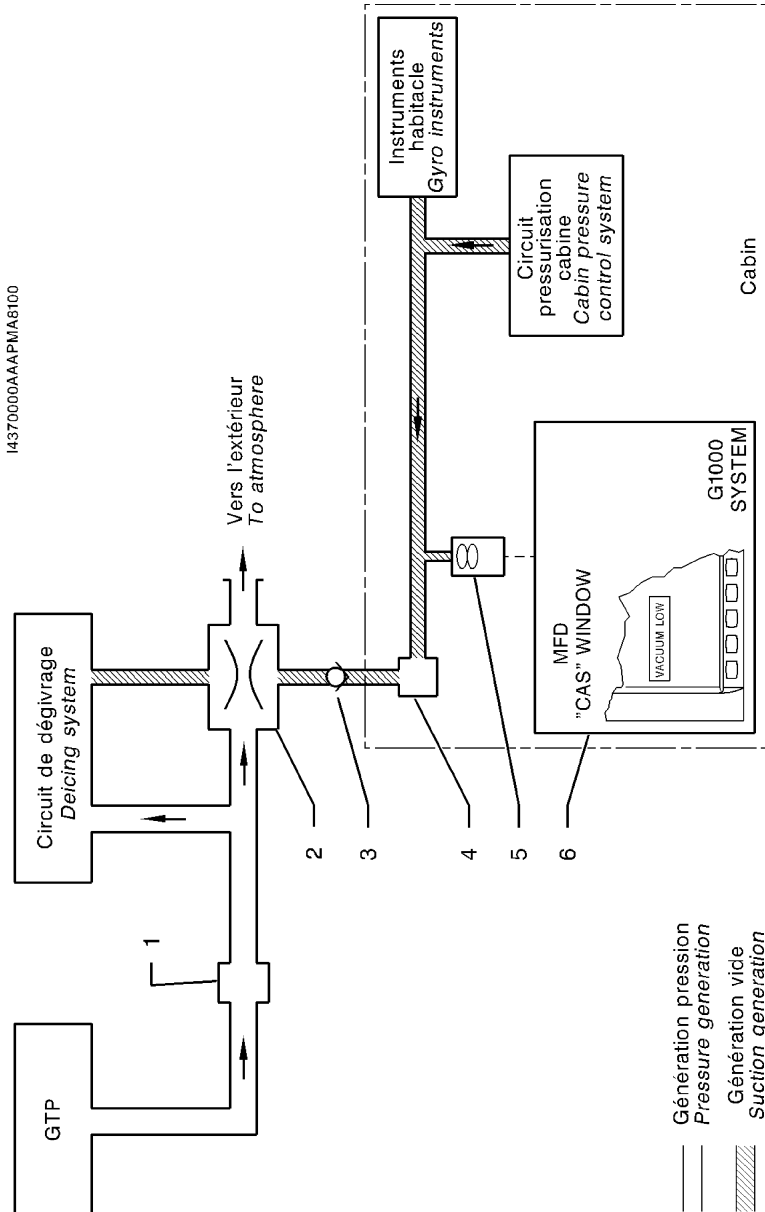


Figure 7.12.1 (2/2) - VACUUM SYSTEM  
Pre-MOD70-0335-34 (ESI-2000)

## **SUCTION GAGE**

The suction gage is calibrated in inches of mercury and indicates the suction available for operation of the stand-by attitude indicator. The desired vacuum range is 4.4 to 5.2 in.Hg.

A vacuum reading out of this range may indicate a system malfunction or improper adjustment. In this case, the stand-by attitude indicator should be considered unreliable.

The suction gage is located on L.H. pilot's instrument panel strip.

### Post-MOD70-0335-34 (ESI-2000) (Figure 7.12.1A)

The airplane is fitted with a vacuum system providing the suction necessary to operate the cabin pressurization and the leading edge deicing.

Vacuum system includes :

- A pressure regulator
- An ejector
- A regulating and relief valve
- A pressure switch

Compressed air necessary for the ejector to create decompressed air is taken from the powerplant. The air flow is regulated before going into the ejector which creates necessary vacuum by venturi effect.

A relief valve fixed in cabin to frame C2, maintains the vacuum for pressurization system. In case of pressure drop, a pressure switch, installed in the system, indicates the failure by causing the "VACUUM LOW" CAS message to light on.

## **ELECTRONIC STANDBY INDICATOR (ESI-2000)**

The L-3 Communications Avionics Systems ESI-2000 Electronic Standby Instrument System consists of an AMLCD display. An air data sensor is integral to the ESI-2000 housing. A replaceable battery assembly provides back up power. The Electronic Standby Indicator displays attitude (pitch and roll), along with altitude and airspeed. The ESI-2000 is powered from the "ESSENTIAL BUS 2", or internal battery ensuring that the aircraft can continue safe flight and landing in the event of a loss of primary attitude and air data displays. Pitot and static pressures are provided to the ESI-2000 using the aircraft's pitot probe and static sources.

- 1) Pressure regulator
- 2) Ejector
- 3) Valve
- 4) Regulating and relief valve
- 5) Pressure switch
- 6) Failure CAS message

Figure 7.12.1A (1/2) - VACUUM SYSTEM  
Post-MOD70-0335-34 (ESI-2000)

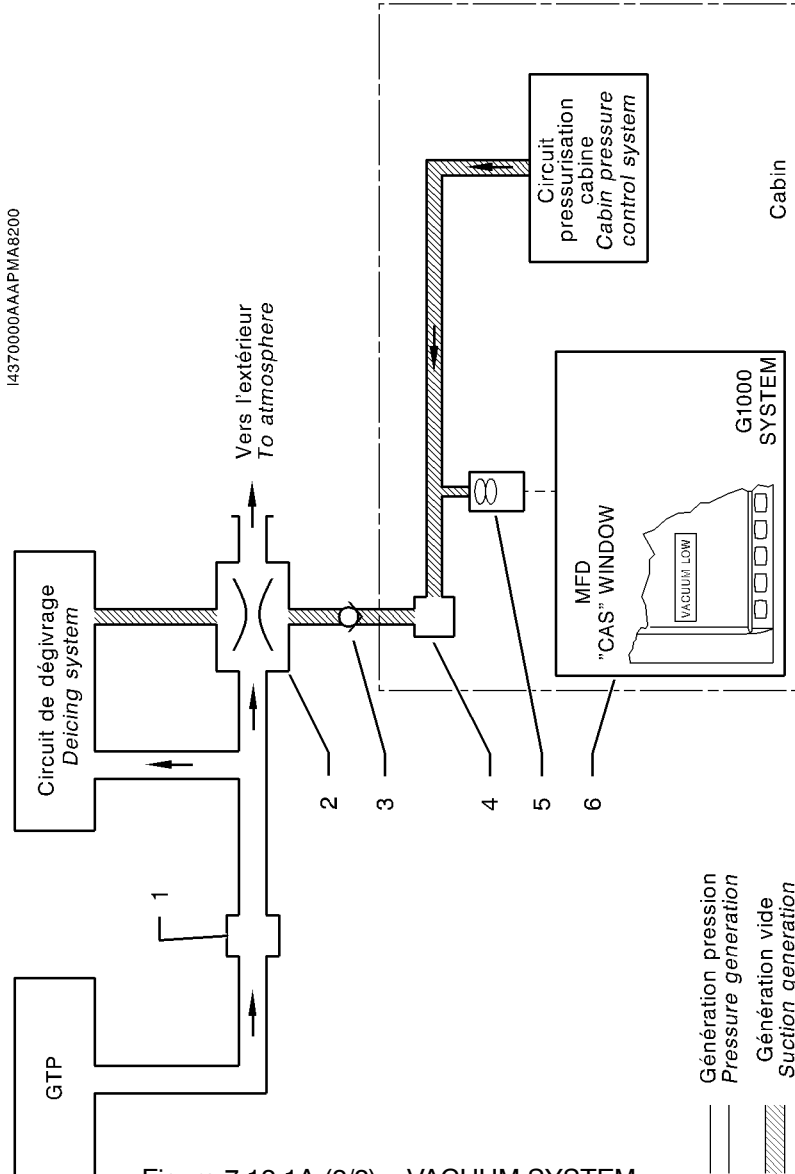


Figure 7.12.1A (2/2) - VACUUM SYSTEM  
Post-MOD70-0335-34 (ESI-2000)



**7.13 - ICE PROTECTION EQUIPMENT** (Figure 7.13.1)

Ice protection equipment is as follows :

- Pneumatic deice system for inboard, central and outboard wing and for stabilizers : "AIRFRAME DE-ICE"
- Propeller electrical deice system : "PROP DE-ICE"
- Windshield electrical deice system : "WINDSHIELD"
- Electrical heating system for both pitots and for the stall warning sensor : "PITOT L HTR" and "PITOT R & STALL HTR"
- Turbine air inlet deice systems : "INERT SEP"

Deicing check and control panel is located on the lower L.H. side of the instrument panel.

**WING AND EMPENNAGE DEICING**

A pneumatic deice system assures protection of wing leading edges, horizontal stabilizer, elevator horns and vertical stabilizer. The system automatically cycles when "AIRFRAME DE-ICE" switch is set to ON. The 67-second cycle breaks down in two inflation cycles :

- a first cycle induces inflation of leading edges deicer boots in wing central and outboard sections,
- the second cycle induces inflation of leading edges deicer boots in horizontal stabilizer, elevator horns, vertical stabilizer and wing inboard section.

During each inflation cycle, one of the two corresponding warning lights located above "AIRFRAME DE-ICE" switch, remains illuminated.

Wing leading edge icing inspection light - see Chapter 7.8 Paragraph "EXTERIOR LIGHTING".

### **PROPELLER DEICING**

Propeller deicing is accomplished through electrical heating of blade roots. This system operates cyclically and alternately on two opposite blades at the same time. Each cycle is 180 seconds long. The system operation is correct when green warning light located above "PROP DE ICE" switch illuminates. The cycles continue as long as the switch remains set to ON.

### **WINDSHIELD DEICING**

The windshields are deiced electrically by integrated heating resistors. The system includes a controller and two heat probes embedded in each windshield. They are operated by the "WINDSHIELD" switch.

When the switch is positioned to ON, the controller supplies the heating resistors, the windshield temperature is monitored by probe # 1. When the temperature reaches 45°C (113°F), the controller cuts the electrical supply to the heating resistors and resumes supply when the temperature falls below 30°C (86°F). The cycle continues as long as the switch remains set to ON.

In the event of failure of probe # 1, the controller receives the temperature data from probe # 2. The electrical supply to the heating resistors is cut when the windshield temperature reaches 56°C (133°F). In that case, the windshield is no longer heated, the pilot can reset the system by setting the switch to OFF, then to ON.

Two green lights located above the "WINDSHIELD" switch go on when the corresponding heating resistors are being supplied.

**HEATING OF PITOTS AND STALL WARNING SENSOR ("PITOT L HTR" AND "PITOT R & STALL HTR")**

The two pitots, which supply ADCs, the airspeed indicator and the stall warning sensor are electrically heated. This deice equipment must be used even during flight into non-icing conditions.

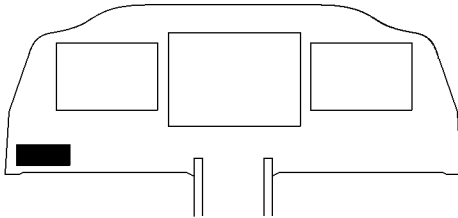
The system condition messages ("PITOT NO HT L" or "...R", "PITOT HT ONL" or "...R", "STALL HEAT ON" or "STALL NO HEAT") are displayed on the GDU 1500 MFD CAS window. Refer to the "GARMIN" G1000 Pilot's Guide for further details.

**NOTE :**

*Correct operation of the audible stall warning may be altered by severe or prolonged icing.*

**TURBINE AIR INLET PROTECTION**

Operation and description are set forth in Chapter 7.6 Paragraph "ENGINE AIR INLET".



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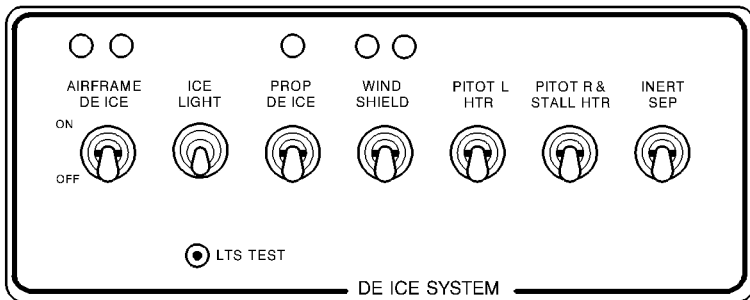


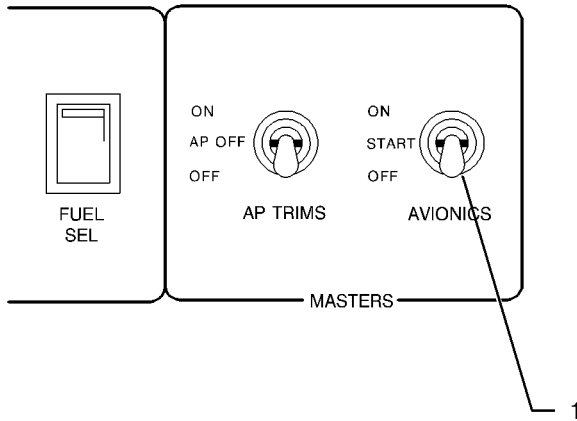
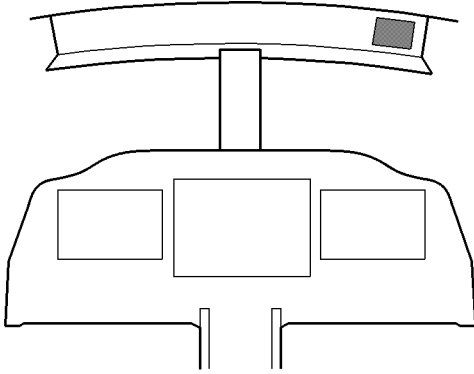
Figure 7.13.1 - DEICING CONTROL AND CHECK PANEL

### 7.14 - AVIONICS MASTER (Figure 7.14.1)

The electrical supply of avionic equipment assembly is controlled by the "AVIONICS MASTER" switch located on the upper panel.

When the "AVIONICS MASTER" switch is set to START, it allows to electrically supply, from the "BATT BUS" bar, a limited number of equipment. One single COM, engine monitoring data and fuel indicating functions are available. The L.H. station PFD only displays a reduced quantity of information.

1) "AVIONICS MASTER" switch



14240000AAE/EMA18300

Figure 7.14.1 - "AVIONICS MASTER"

## 7.15 - MISCELLANEOUS EQUIPMENT

### STALL WARNING SYSTEM

The airplane is equipped with an electrically deiced stall sensor in the leading edge of the right wing. This sensor fitted with a vane is electrically connected to an audible warning. The vane senses the change in airflow over the wing and operates the warning unit, which produces an alert over the alarm speaker. This warning tone begins between 5 and 10 knots above the stall in all configurations.

The stall warning system should be checked during the preflight inspection by momentarily turning on the "SOURCE" selector and by manipulating the vane in the wing.

#### ■ Pre-MOD70-0407-00D (V15.11 GARMIN software)

The system is operational if a continuous tone (low-pitched sound) is heard on the alarms speaker.

#### ■ Post-MOD70-0407-00D (V15.11 GARMIN software)

The system is operational if a "stall" aural warning alert is heard on the alarms speaker.

All

*NOTE :*

*The audible stall warning may be altered by severe or prolonged icing.*

### STATIC DISCHARGERS

As an aid in flight, static dischargers are installed to improve radio communications during flight by reducing interference from dust or various forms of precipitations (rain, snow or ice crystals).

Under these conditions, the build-up and discharge of static electricity from the trailing edges of the wings (flaps and ailerons), rudder, stabilator, propeller tips and radio antennas can result in loss of usable radio signals on all communications and navigation radio equipment. Usually, the ADF is first and VHF communication equipment is the last to be affected.

Installation of static dischargers reduces interference from precipitation static, but it is possible to encounter severe precipitation static conditions which might cause the loss of radio signals, even with static dischargers installed. Whenever possible, avoid known severe precipitation areas to prevent loss of dependable radio signals. If avoidance is impractical, minimize airspeed and anticipate temporary loss of radio signals while in these areas.

## **CABIN FIRE EXTINGUISHER**

### Pre-MOD70-0336-26

The fire extinguisher is located behind FWD R.H. seat.

If there is no R.H. cabinet, the fire extinguisher is located behind FWD R.H. seat, it is attached on the floor by means of a quick-disconnect support.

#### - Pre-MOD70-0391-26D

If there is R.H. cabinet, the fire extinguisher is fixed on the cabinet.

#### - Post-MOD70-0391-26D

The fire extinguisher is located in the lower drawer of the R.H. cabinet, inserted in foam.

### Post-MOD70-0336-26

The fire extinguisher is located on R.H. front station side panel.

### All

A pressure gage allows checking the fire extinguisher condition. Follow the recommendations indicated on the extinguisher.

## **AUTOPILOT**

Autopilot control panel is located above the GDU 1500 MFD. Refer to Section 2 "Limitations" of this Pilot's Operating Handbook and to GARMIN G1000 Pilot's Guide for further details.

## **GPS**

GPS navigation is performed through the GARMIN G1000 system. Refer to Section 2 "Limitations" and Section 4 "Normal procedures" of this Pilot's Operating Handbook and to GARMIN G1000 Pilot's Guide for further details.



## **GARMIN INTEGRATED FLIGHT DECK (GIFD) APPROACHES**

The purpose of this section is to provide an overview of the GIFD capabilities and operation related to GIFD Approaches.

Detailed descriptions as well as operating instructions of these approaches are provided in the applicable Pilot's Guide and Cockpit Reference Guide.

### **RNP approaches operation**

The GIFD is capable of performing approaches with GNSS guidance also designated as RNP approaches.

RNAV (GPS) or RNAV (GNSS) – LNAV, LNAV+V magenta annunciations in CDI

LNAV approaches provide lateral GPS-based guidance to legs defined by the navigation database.

Vertical deviations may be available if the necessary information to construct a vertical path is contained in the database.

Any vertical path information for LNAV approaches is strictly advisory.

There is no guarantee that stepdown fix altitudes will be honored and the crew must level off at the MDA if the runway is not visible.

LNAV approaches may be executed with or without SBAS, and advisory vertical guidance is dependent on sufficient GPS vertical error estimates rather than SBAS vertical integrity.

LNAV+V approaches do not downgrade in general because they do not require SBAS, although high GPS vertical error estimate anomalies could result in loss of advisory vertical guidance.

If GPS is lost the LNAV approach will be aborted.

RNAV (GPS) or RNAV (GNSS) – L/VNAV magenta annunciation in CDI

LNAV/VNAV approaches add published vertical guidance in addition to LNAV guidance. They are different from LNAV+V in that the vertical deviations are not advisory, but rather published guidance.

The minimums of an LNAV/VNAV approach represent a DA rather than an MDA.

Execution of an LNAV/VNAV approach does not require SBAS integrity, as long as a system is configured to support barometric VNAV for approach.

If SBAS integrity is available, it will be used to provide vertical guidance.

During execution of a GPS approach with LNAV/VNAV service levels, while the aircraft is between the FAF and MAP, excessive deviation indicators appear as white vertical lines to indicate an area where the vertical deviation exceeds 75 feet.

If the glide-path indicator is within an area of excessive deviation, the glide-path indicator becomes yellow and the vertical lines also become yellow.

RNAV (GPS) or RNAV (GNSS) – LPV magenta annunciation in CDI

LPV approaches provide both localizer precision lateral guidance and a vertical path definition.

SBAS integrity is required to execute the approach.

### **Approach level downgrade**

Some automatic approach service downgrade may be performed automatically upon loss of SBAS or GPS approach alarm limits being exceeded, depending on the approach service level that has been loaded in the flight plan and activated.

This automatic downgrade is annunciated to the pilot through an APR DWNGRADE advisory message and a change in the annunciated service level in the HSI.

As the APR DWNGRADE advisory message may not be triggered under certain circumstances, the HSI annunciation shall be considered as the primary mean to annunciate any approach downgrade.

Under certain circumstances, when the GNSS integrity requirement are not met nor approach level is available the approach may be aborted.

This is annunciated through an ABORT APR advisory message and the service level annunciation being removed from the HSI.

If SBAS becomes unavailable on an RNAV LNAV/VNAV approach, L/VNAV yellow annunciation is shown, the system will downgrade to LNAV service level (LNAV shown in magenta) and the APR DWNGRADE advisory message will be generated. The VDI will be flagged NO GP.

If SBAS becomes unavailable on an RNAV LPV approach, LPV yellow annunciation will be shown, but the CDI and VDI will continue to be shown. At one minute to the FAF, an APR DWNGRADE advisory message will be generated.

The VDI will be flagged NO GP. Depending on the available lines of minima for the approach, the system will switch to either LNAV/VNAV or LNAV service level.

### **OPTIONAL EQUIPMENT**

For optional equipment such as weather radar, stormscope, TAWS, TAS or SVS system, refer to Section 9 "Supplements".

Other optional equipment such as radio altimeter or chartview system are described in the GARMIN G1000 Pilot's Guide.

**NOTE :**

*Refer to Section 2 "Limitations" for chartview system operating limitations.*

### **EMERGENCY LOCATOR TRANSMITTER**

The airplane is equipped with an emergency locator transmitter which enables to locate it in case of distress. It is located in fuselage rear section with a service door on fuselage R.H. side.

The emergency locator transmitter assembly is constituted of a transmitter supplied by a battery, of an antenna attached on upper fuselage and of a remote control located on R.H. instrument panel.

**NOTE :**

*For test sequences, refer to manufacturer manual.*

ELT ARTEX ME 406

Operation of the emergency locator transmitter is obtained as follows :

- from the instrument panel by setting "ON/ARM" remote control switch to ON (locator transmitter "ON/ARM" switch set to ARM),
- from the locator transmitter by setting its "ON/ARM" control switch to ON,
- automatically in case of shock, when remote control switch is set to ARM and locator transmitter switch is set to ARM.

A red indicator light located on "ELT" remote control switch in the cockpit indicates to the pilot the emergency locator transmitter is transmitting.

A red indicator light located on R.H. side of locator transmitter switch and a buzzer located in the fuselage rear section indicate the emergency locator transmitter is transmitting.

**Reset after an inadvertent activation**

- |   |  |
|---|--|
| 1) Set remote control switch or ELT switch to ON.         | a) The ELT keeps on transmitting emergency signal.   |
|   | b) On remote control box, red indicator light flashes.                                       |
|   | c) On ELT, red indicator light flashes.  |
|   | d) Near ELT, the buzzer sounds.  |
| 2) Wait approximately for 1 second.                       |  |
| 3) Set remote control switch to ARM or ELT switch to ARM. | a) The ELT does not transmit emergency signal any longer.                                    |
|   | b) On remote control box, red indicator light illuminates for about 1 second, then goes off. |
|   | or   |
|   | c) On ELT, red indicator light goes off.   |
|   | d) Near ELT, the buzzer does no more sound.  |

## ELT ARTEX C406-1

Operation of the emergency locator transmitter is obtained as follows :

- from the instrument panel by setting "ON/ARM" remote control switch to "ON" (locator transmitter "ON/OFF" switch set to "OFF"),
- from the locator transmitter by setting its "ON/OFF" control switch to "ON",
- automatically in case of shock, when remote control switch is set to "ARM" and locator transmitter switch is set to "OFF".

A red indicator light located on "ELT" remote control switch in the cockpit indicates to the pilot the emergency locator transmitter is transmitting.

A red indicator light located above locator transmitter switch and a buzzer located in the fuselage rear section indicate the emergency locator transmitter is transmitting.

### **Reset after an inadvertent activation**

- |  |   |
|--|---|
| <p>1) Set remote control switch or ELT switch to "ON".</p>           | <p>a) The ELT keeps on transmitting emergency signal.</p> <p>b) On remote control box, red indicator light flashes.</p> <p>c) On ELT, red indicator light flashes.</p> <p>d) Near ELT, the buzzer sounds.</p> |
| <p>2) Wait approximately for 1 second.</p>                           |   |
| <p>3) Set remote control switch to "ARM" or ELT switch to "OFF".</p> | <p>a) The ELT does not transmit emergency signal any longer.</p> <p>b) On remote control box, red indicator light illuminates for about 1 second, then goes off.</p> <p>or<br/>(see page here after)</p>      |

3) (Cont'd)

- c) On ELT, red indicator light goes off.
- d) Near ELT, the buzzer does no more sound.

**FLIGHT DECK INFORMATION SYSTEM (FS 210) (If installed)**

The airplane is equipped with a flight deck information system allowing portable electronics devices to stream data to and from the G1000 system.

For the system description and its utilization, refer to GARMIN G1000 Pilot's Guide

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## **8.1 - GENERAL**

This section contains the procedures recommended by the manufacturer for the proper ground handling and routine care and servicing of TBM 850 airplane. Also included in this section are the inspection and maintenance requirements which must be followed if your airplane is to retain its performance and dependability.

It is recommended that a planned schedule of lubrication and preventive maintenance be followed, and that this schedule be tailored to the climatic or flying conditions to which the airplane is subjected.

For this, see Manufacturer's Maintenance Manual.

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## **8.2 - IDENTIFICATION PLATE**

Any correspondence regarding your airplane should include its serial number. This number together with the model number, type certificate number and production certificate number are stamped on the identification plate attached to the left side of the fuselage beneath the horizontal stabilizer.

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### **8.3 - PUBLICATIONS**

When the airplane is delivered from the factory, it is supplied with a Pilot's Operating Handbook, the "GARMIN G1000 Integrated Flight Deck Pilot's Guide and supplemental data covering optional equipment installed in the airplane (refer to Section 9 "Supplements" and pilot's guides).

In addition, the owner may purchase the following :

- Maintenance Manual
- Wiring Manual
- Illustrated Parts Catalog (Bilingual)
- Illustrated Tool and Equipment Manual
- Catalog of Service Bulletins, Service Letters and Service Information Letters

#### **CAUTION**

**PILOT'S OPERATING HANDBOOK MUST ALWAYS  
BE IN THE AIRPLANE**

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## **8.4 - INSPECTION PERIODS**

Refer to regulations in force in the certification country for information concerning preventive maintenance to be carried out.

A maintenance Manual must be obtained prior to performing any preventive maintenance to make sure that proper procedures are followed. Maintenance must be accomplished by licensed personnel.

INTENTIONALLY LEFT BLANK



## **8.5 - ALTERATIONS OR REPAIRS**

It is essential that the Airworthiness authorities be contacted prior to any alterations or repairs on the airplane to make sure that airworthiness of the airplane is not violated. Alterations or repairs must be accomplished by licensed personnel.

INTENTIONALLY LEFT BLANK

**8.6 - GROUND HANDLING****CAUTION**

**ONLY MOVE OR TOW THE AIRPLANE WITH SOMEONE IN THE  
COCKPIT**

**TOWING****CAUTION**

**USING THE PROPELLER FOR GROUND HANDLING COULD RESULT  
IN SERIOUS DAMAGE, ESPECIALLY IF PRESSURE OR PULL IS  
EXERTED ON BLADE TIPS**

The airplane should be moved on the ground with a towing bar and a suitable vehicle in order not to damage the nose gear steering mechanism. Nose gear fork is equipped with an integrated towing fitting.

**CAUTION**

**DO NOT TOW THE AIRPLANE WHEN CONTROLS ARE SECURED  
WHEN TOWING WITH A VEHICLE, DO NOT EXCEED THE NOSE  
GEAR TURNING ANGLE, AS THIS MAY RESULT IN DAMAGE TO THE  
GEAR AND STEERING MECHANISM**

(see Figure 8.6.1)

**PARKING**

When parking the airplane, head it into the wind. Do not set the parking brake when brakes are overheated or during cold weather when accumulated moisture may freeze the brakes. Care should be taken when using the parking brake for an extended period of time during which an air temperature rise or drop could cause difficulty in releasing the parking brake or damage the brake system.

Make sure that the fuel selector is set to "OFF".

14091000AAAABMA8000

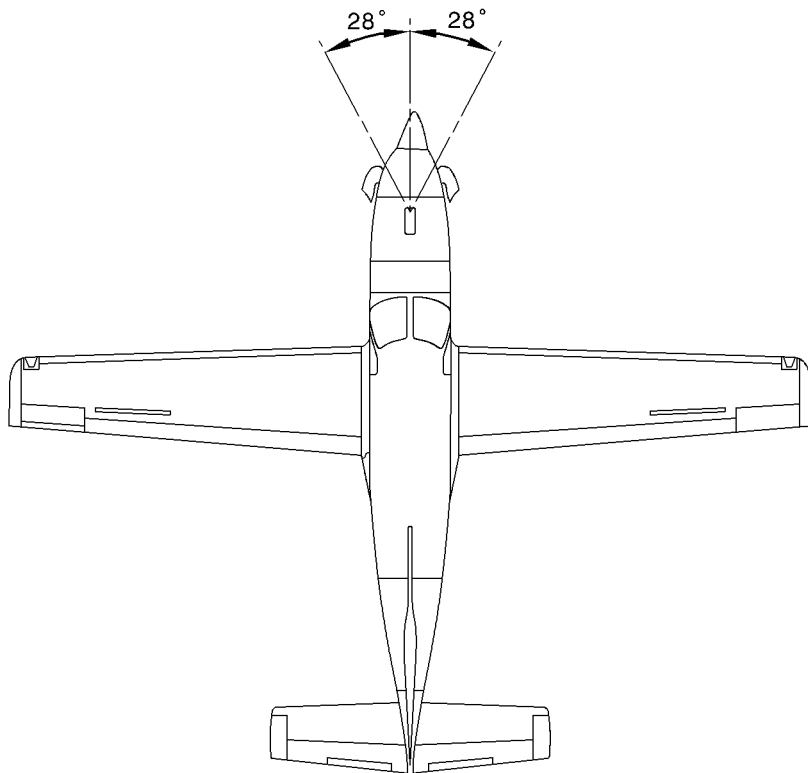


Figure 8.6.1 - TURNING ANGLE LIMITS

**NOTE :**

*Do not use solar screens or shields installed on the airplane inside, or leave sun visors down against windshield when airplane on ground. The reflected heat from these items causes a temperature increase which accelerates the crack growth or crazing and may cause the formation of bubbles in the inner layer of multilayer windshields.*

Beyond 24 hours parking, use windshield protection screen provided with lateral and underside straps.

For long term parking, blanking covers (static ports, pitot, engine air inlet), cockpit cover, tie-downs, wheel chocks and control lock are recommended.

In severe weather and high wind conditions, tie the airplane down as outlined in the following paragraph.

**TIE-DOWN**

Proper tie-down procedure is the best protection against damage to the airplane by gusty or strong winds. To tie-down the airplane securely, proceed as follows :

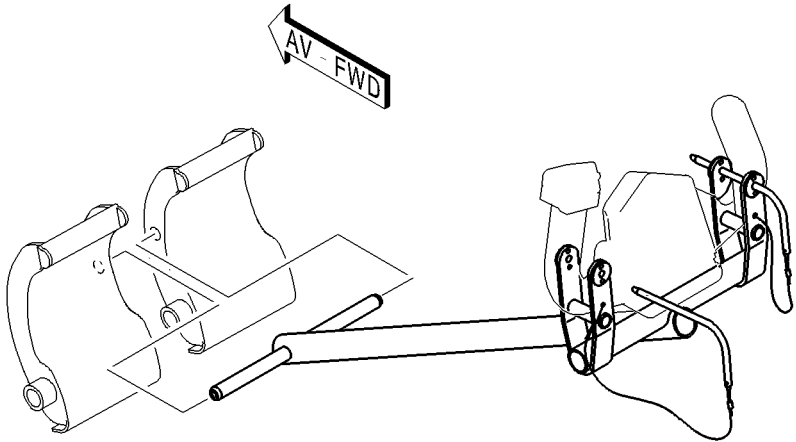
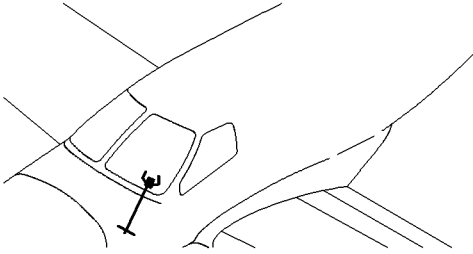
- Install control lock (see Figure 8.6.2).
- Chock all wheels.
- Tie sufficiently strong ropes or chains to hold airplane down ; insert a rope in each tie-down hole located on flap hinge arm ; secure each rope to a ramp tie-down or to mooring rod.
- Check that doors are closed and locked.

**JACKING**

When it is necessary to jack the airplane off the ground, refer to Maintenance Manual for specific procedures and equipment required.

**LEVELING**

Level the airplane as described in Maintenance Manual.



I4101000AAADMA8002

Figure 8.6.2 - CONTROL LOCK DEVICE  
Pre-MOD70-0279-00

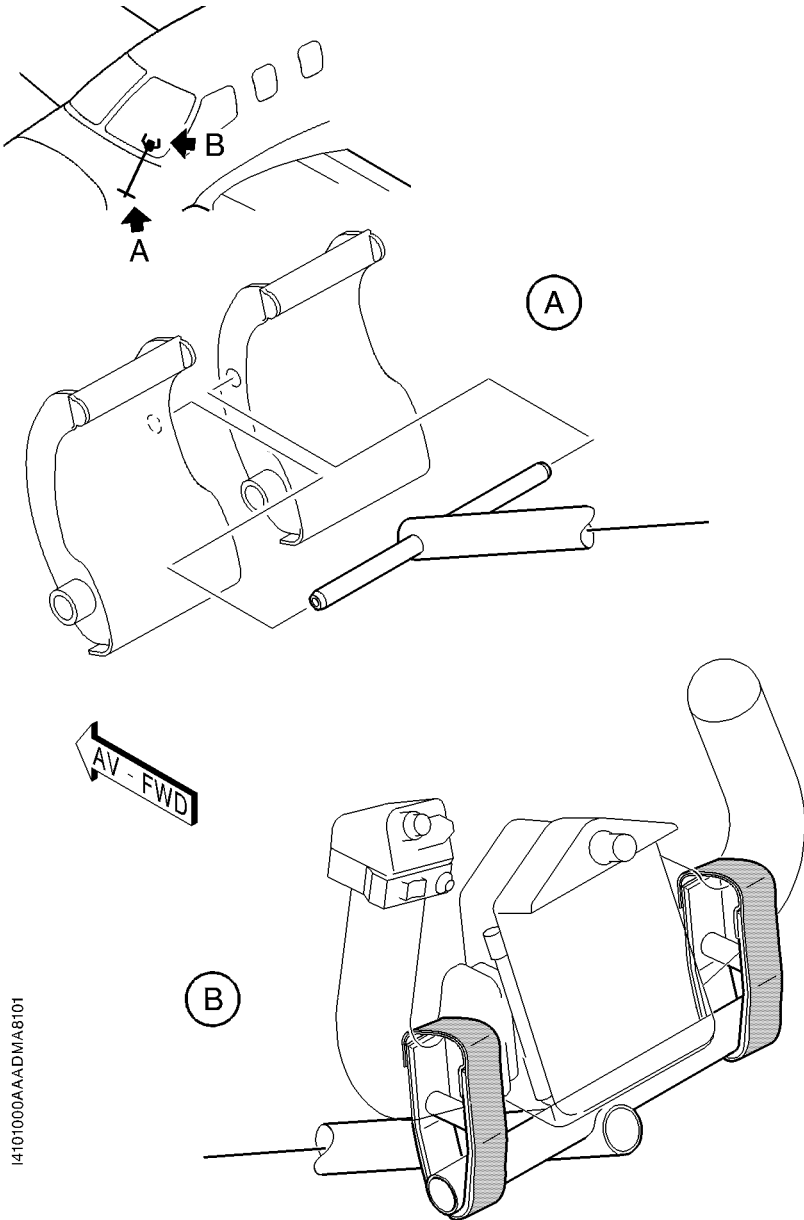


Figure 8.6.2A - CONTROL LOCK DEVICE  
Post-MOD70-0279-00

### **FLYABLE STORAGE**

Airplanes placed in storage for a maximum of 28 days are considered in flyable storage.

Storage from 0 to 7 days :

- Engine : according to Maintenance Manual P & W C.

Airplane fueling :

- Keep fuel tanks full to minimize condensation in the tanks. Keep the battery fully charged to prevent the electrolyte from freezing in cold weather.  
Close oxygen cylinder isolation valve.

Storage from 8 to 28 days :

- Engine : according to Maintenance Manual P & W C.

Airplane fueling :

- Keep fuel tanks full to minimize condensation in the tanks. Keep the battery fully charged to prevent the electrolyte from freezing in cold weather.  
Close oxygen cylinder isolation valve.

Battery (remaining in the airplane or removed) :

- Disconnect battery and check its charge level at regular intervals.

### **LONG TERM STORAGE WITHOUT FLYING**

Refer to Maintenance Manual for the procedures to follow.



## 8.7 - SERVICING

### MAINTENANCE

In addition to the preflight inspection (refer to Section 4, "Normal Procedures"), servicing, inspection and test requirements for the airplane are detailed in the Maintenance Manual.

Maintenance Manual outlines all items which require servicing, inspection or testing or overhaul.

### ENGINE OIL

#### Oil type :

#### CAUTION

**DO NOT MIX DIFFERENT VISCOSITIES OR SPECIFICATIONS OF OIL AS THEIR DIFFERENT CHEMICAL STRUCTURE CAN MAKE THEM INCOMPATIBLE**

Specification

Nominal Viscosity	Specification	NATO Code
5cSt	MIL-PRF-23699G	O.156 (STD) O.154 (HTS)

Figure 8.7.1 - RECOMMENDED ENGINE OIL TYPES

(Reference : Service Bulletin P & W - C. No. 14001 at the latest revision)

#### Oil capacity :

System total capacity :

12.7 Quarts (12 Litres) (oil cooler included)

Usable capacity :

6 Quarts (5.7 Litres)

#### Servicing :

The engine oil should be changed and the oil filter cleaned/replaced at intervals recommended in Pratt & Whitney Canada Engine Maintenance Manual (EMM) (Ref. Chapter 72-00-00, Table 601, Periodic Inspections).

**Oil level check :**

To avoid overfilling of oil tank, and high oil consumption, an oil level check is recommended within 30 minutes after engine shutdown. Ideal interval is 15 to 20 minutes. If more than 30 minutes have passed and the dipstick indicates that oil is needed, start the engine and run at LO-IDLE for five minutes, and recheck oil level.

Check oil level against marking on dipstick and top-up as required. Normal oil level is between MAX HOT and one US quart (0.83 Imp. Quart, 0.95 litres) below MAX HOT, with engine in horizontal attitude.

*NOTE :*

*Filling the oil to the maximum level may result in high consumption rate, with the oil exiting through the accessory gearbox breather.*

**CAUTION**

**WHEN FILLER CAP ASSEMBLY IS INSTALLED AND LOCKED, NO  
MOVEMENT IS ALLOWED**

**FUEL**

**Total capacity each tank : 150.5 us gal (570 l).**

*NOTE :*

*To minimize condensation, it is recommended that airplane be refueled after each flight, respecting weight and balance limits.*

**CAUTION**

**NEVER FLY THE AIRPLANE WITH CONTAMINATED (WATER, SAND,  
RUST, DUST...) OR UNAPPROVED FUEL**

Before each flight and after each fueling, use a sampler to bleed off some fuel through each tank and fuel filter drain to detect possible contamination and be sure that fuel used is the proper quality. If contamination is present, continue draining through all draining points until fuel is free of contamination. If quality of fuel used is not correct, defuel airplane completely and refuel with proper quality fuel.

## CAUTION

**DURING FUELING OPERATIONS, TAKE CARE NOT TO DAMAGE PNEUMATIC DEICER BOOTS LOCATED ON WING LEADING EDGE.**

**THE USE OF AVIATION GASOLINE (AVGAS) MUST BE RESTRICTED TO EMERGENCIES ONLY. AVGAS WILL NOT BE USED FOR MORE THAN 150 CUMULATIVE HOURS DURING ANY PERIOD BETWEEN ENGINE OVERHAUL**

## WARNING

**DURING ALL FUELING OPERATIONS, FIRE FIGHTING EQUIPMENT MUST BE AVAILABLE ; ATTACH GROUNDING WIRE TO AN UNPAINTED METALLIC PART OF THE AIRPLANE.**

**DO NOT OPERATE ANY AVIONICS OR ELECTRICAL EQUIPMENT ON THE AIRPLANE DURING FUELING. DO NOT ALLOW OPEN FLAME OR SMOKING IN THE VICINITY OF THE AIRPLANE WHILE FUELING**

### NOTE :

*Use of AVGAS must be recorded in engine module logbook*

US Specification (US)	French Specification (FR)	English Specification (UK)	NATO Code
ASTM-D1655 JET A ASTM-D1655 JET A1 ASTM-D1655 JET B	AIR 3405C Grade F35	DERD 2494 Issue 9	F35 without additive
MIL-DTL-5624 Grade JP-4	AIR 3407B	DERD 2454 Issue 4 Amdt 1	F40 with additive
MIL-DTL-5624 Grade JP-5	AIR 3404C Grade F44	DERD 2452 Issue 2 Amdt 1	F44 with additive when utilization
MIL-DTL-83133 Grade JP-8	AIR 3405C Grade F34	DERD 2453 Issue 4 Amdt 1	F34 with additive S748
	AIR 3404C Grade F43	DERD 2498 Issue 7	F43 without additive

Figure 8.7.2 - RECOMMENDED FUEL TYPES  
(Reference : Service Bulletin P & W C. No. 14004)

### **Fuel additives**

Fuel used must contain an anti-ice additive conforming to MIL-I-27686 or MIL-I-85470 specification.

Strict adherence to recommended preflight draining instructions as called for in Section 4 will eliminate any free water accumulations from the tank sumps. While small amounts of water may still remain emulsified in the gasoline, it will normally be consumed and go unnoticed in the operation of the engine.

One exception to this can be encountered when operating under the combined effect of use of certain fuels, with high humidity conditions on the ground followed by flight at high altitude and low temperature. Under these unusual conditions, small amounts of water emulsified can precipitate from the fuel stream and freeze in sufficient quantities to induce partial icing of the engine fuel system.

While these conditions are quite rare and will not normally be a problem to owners and operators, they do exist in certain areas of the world and consequently must be dealt with, when encountered.

Therefore, to alleviate the possibility of fuel icing occurring under these unusual conditions, it is required to add an ethylene glycol monomethyl ether (EGME or DIEGME) compound to the fuel supply.

The introduction of an EGME or DIEGME compound into the fuel provides two distinct effects :

- it absorbs the dissolved water from the fuel
- alcohol has a freezing temperature depressant effect.

EGME or DIEGME must be carefully mixed with the fuel in concentration, it must be between a minimum of 0.06 % and a maximum of 0.15 % by volume. Figure 8.7.3 provides EGME or DIEGME / fuel mixing ratio information.

**CAUTION**

**DO NOT PERMIT THE CONCENTRATE OF EGME OR DIEGME TO COME IN CONTACT WITH THE AIRPLANE FINISH OR FUEL TANK MIXING OF THE EGME OR DIEGME WITH THE FUEL IS EXTREMELY IMPORTANT. AN EXCESSIVE CONCENTRATION (GREATER THAN 0.15 % BY VOLUME MAXIMUM) WILL RESULT IN DETRIMENTAL EFFECTS TO THE FUEL TANKS BY DETERIORATION OF PROTECTIVE PRIMER, SEALANTS AND SEALS OF SYSTEM AND ENGINE COMPONENTS. USE ONLY BLENDING EQUIPMENT RECOMMENDED BY THE MANUFACTURER TO OBTAIN PROPER PROPORTIONING.**

Prolonged storage of the airplane will result in a water buildup in the fuel which "leeches out" the additive. An indication of this is when an excessive amount of water accumulates in the fuel tank sumps. The concentration can be checked using a differential refractometer. It is imperative that the technical manual for the differential refractometer be followed explicitly when checking the additive concentration.

**Fuel and fuel additives in Ukraine and CIS countries**

It is possible to use kerosene GOST 10227 RT with addition of anti-icing liquid :

- liquid "И" - GOST 8313-88

Above-mentioned liquid is added in the quantity equal to 0.3 percent per volume.

**CAUTION**

**REFER TO SERVICE BULLETIN P & WC No. 14004 AT ITS LATEST REVISION FOR APPROPRIATE QUANTITIES**

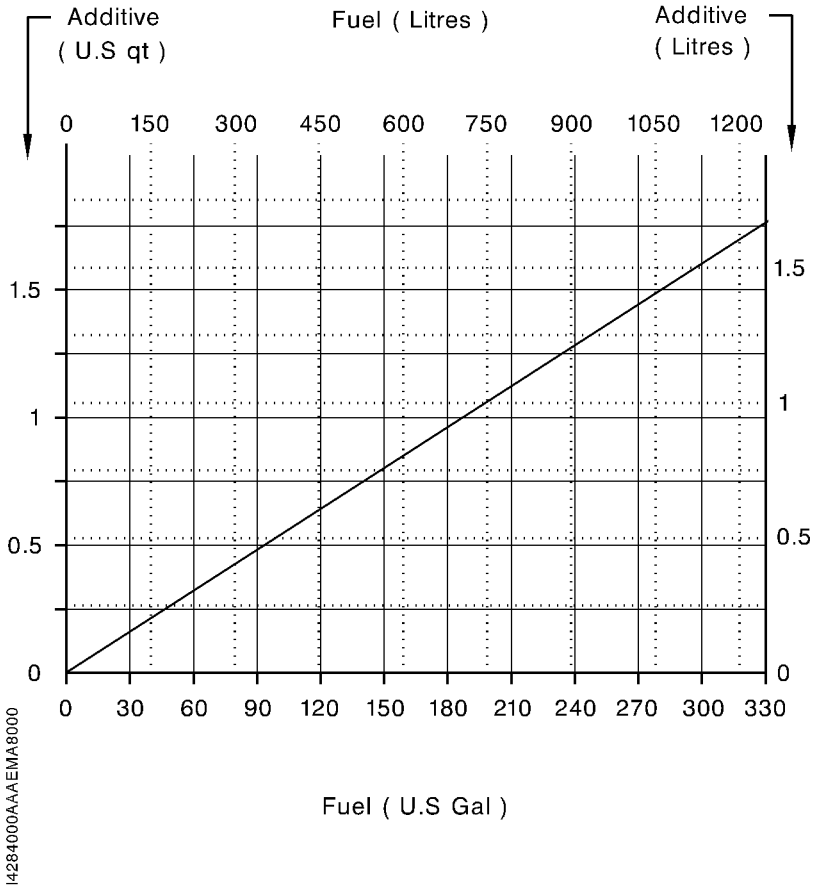


Figure 8.7.3 - ADDITIVE MIXING RATIO (EGME or DIEGME)

**LANDING GEAR****Nose gear tire :**

5.00-5 10 PR – Inflation pressure : 98 psi (6.7 bars) \*

**Main gear tires :**

18 5.5 10 PR – Inflating pressure : 135 psi (9.32 bars) \*

**Nose gear shock absorber :**

Fill with hydraulic fluid AIR 3520 B (MIL.H5606E) ; inflate with nitrogen to 87 psi (6 bars).

**Main gear shock absorbers :**

Fill with hydraulic fluid AIR 3520 B (MIL.H5606E) ; inflate with nitrogen to 160 psi (11 bars).

**Hydraulic system :**

Check every 100 hours and service with AIR 3520 B (MIL.H5606E) hydraulic fluid.

**Brakes :**

Service as required with AIR 3520 B (MIL.H5606E) hydraulic fluid.

**NOTE :**

*A higher inflation pressure has to be applied to tires and shock absorbers when in very cold conditions (refer to Chapter 8.9).*

- (\*) Tire inflation pressures are given for an airplane on ground at 21°C.  
An ambient temperature change of 3°C produces approximately 1 % pressure change.

**OXYGEN**

The replenishment device of the oxygen cylinder is installed directly on the cylinder head. It consists of a charging valve and of a pressure gage graduated from 0 to 2000 PSIG. A chart - see Figure 8.7.4, located on the inside of the cylinder service door, gives the cylinder charge maximum pressure according to the environment temperature.

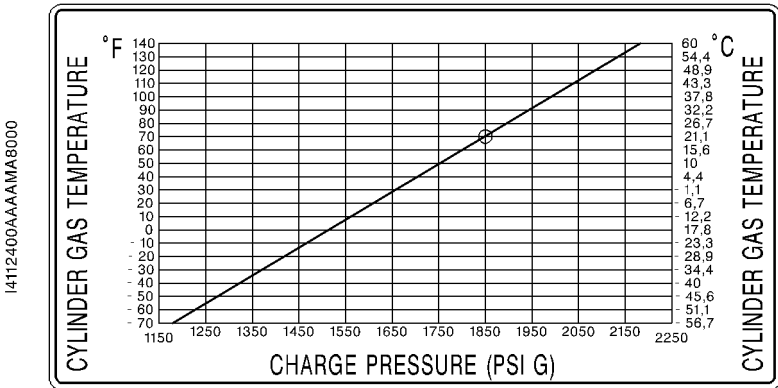


Figure 8.7.4 - Charge pressure chart



**Replenishment procedure****WARNING**

**MAKE SURE THAT THE AIRPLANE IS FITTED WITH A GROUNDING CABLE AND IS PROPERLY GROUNDED. THE OXYGEN CART MUST BE ELECTRICALLY BONDED TO THE AIRPLANE.**

**DO NOT OPERATE THE AIRPLANE ELECTRICAL SWITCHES OR CONNECT/DISCONNECT GROUND POWER DURING OXYGEN SYSTEM REPLENISHMENT.**

**DO NOT OPERATE THE OXYGEN SYSTEM DURING REFUELING/DEFUELING OR PERFORM ANY OTHER SERVICING PROCEDURE THAT COULD CAUSE IGNITION.**

**INTRODUCTION OF PETROLEUM BASED SUBSTANCES SUCH AS GREASE OR OIL TO OXYGEN CREATES A SERIOUS FIRE HAZARD. USE NO OIL OR GREASE WITH THE OXYGEN REPLENISHMENT EQUIPMENT.**

**ALWAYS OPEN SHUT-OFF VALVE SLOWLY TO AVOID GENERATING HEAT AND REPLENISH THE SYSTEM SLOWLY AT A RATE NOT EXCEEDING 200 PSIG (13.7 BARS) PER MINUTE**

**CAUTION**

**REPLENISHMENT OF THE OXYGEN SYSTEM SHOULD ONLY BE CARRIED OUT BY QUALIFIED PERSONNEL**

**NOTE :**

*The cylinder full charge is assured for a pressure of 1850 PSIG (127 bars) at a temperature of 70° F (21° C). If the cylinder temperature differs from 70° F (21° C), refer to Figure 8.7.4 which lists the required pressures according to the cylinder temperature.*

Open the oxygen service door on the R.H. rear karman.

Measure the oxygen cylinder temperature.

Make sure the thermometer indication is constant. Note the indication.

Refer to the temperature/pressure chart for the correct oxygen cylinder pressure.

If the pressure on the oxygen cylinder gage is lower, fill the oxygen cylinder.

Make sure the area around the oxygen cylinder charging valve is clean. Remove the cap from the charging valve.

Make sure the oxygen supply hose is clean and connect it to the charging valve.

Slowly pressurize the oxygen cylinder to the correct pressure.

Close the oxygen supply and let the cylinder temperature become stable.

Monitor the oxygen pressure on the gage and fill to the correct pressure if necessary.

Release the pressure in the oxygen supply hose and disconnect from the charging valve.

Install the cap on the charging valve.

Make sure all the tools and materials are removed and the work area is clean and free from debris.

Close the oxygen service door.

**Passengers' masks repacking instructions**

**WARNING**

**DO NOT USE OIL OR OTHER PETROLEUM BASED LUBRICANTS ON PASSENGER OXYGEN MASK OR DEPLOYMENT CONTAINER. OIL BASED LUBRICANTS ARE A FIRE HAZARD IN OXYGEN-RICH ENVIRONMENTS**

**WARNING**

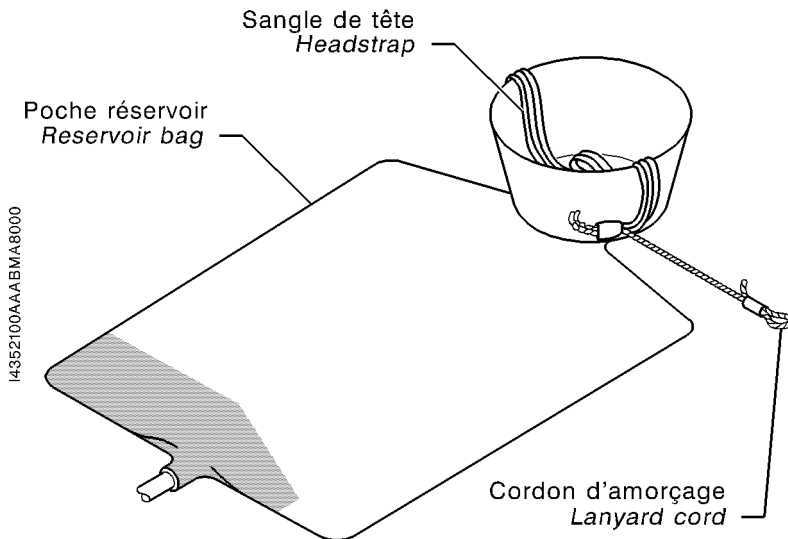
**REPACKING PROCEDURES SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH THE INSTRUCTIONS AND WARNINGS IN THIS DOCUMENT. IMPROPERLY PACKED MASKS CAN DAMAGE THE MASKS OR RESULT IN FAILURE OF THE MASKS TO DEPLOY**

**WARNING****MASKS SHALL BE REPACKED IN AN AREA FREE OF OIL, GREASE,  
FLAMMABLE SOLVENTS OR OTHER CONTAMINANTS**

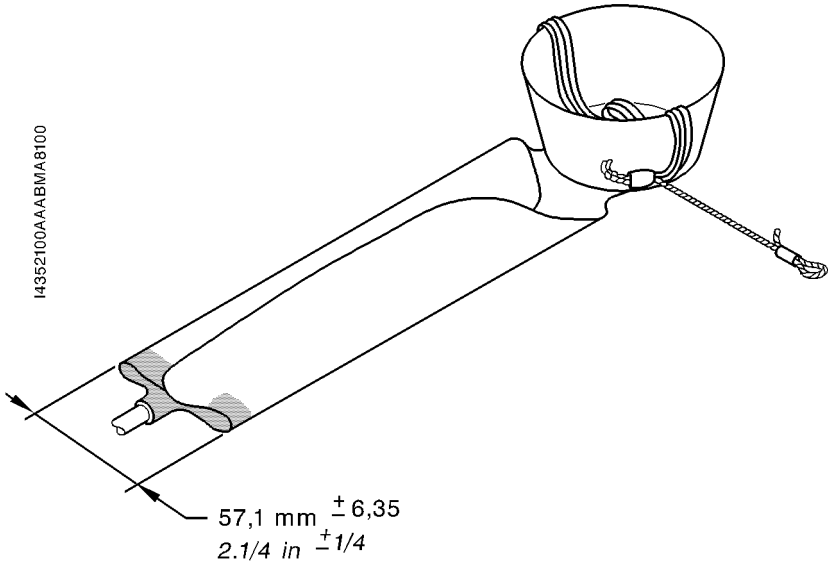
Inspect and disinfect mask and deployment container with an aqueous solution of Zephiran Chloride ("Scott Aviation" P/N 00-2572) or with disinfection cleaners ("EROS" P/N SAN50). After disinfecting and thoroughly drying the mask, lightly dust the outside of the facepiece with Neo-Novacite powder ("Scott Aviation" P/N 00-736). Contamination can be removed with mild soap and water solution.

Fold headstrap into facepiece. Pull lanyard cord out to side of facepiece so that it does not interfere with repacking.

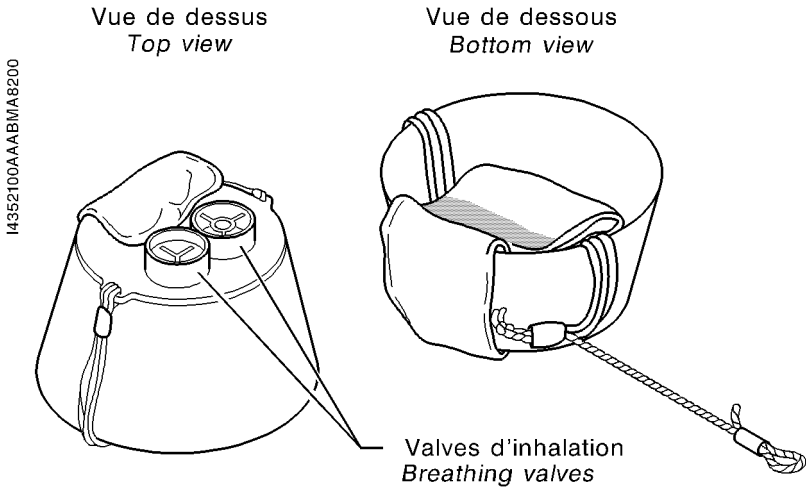
Lay reservoir bag on flat surface and smooth out wrinkles.



Gently fold reservoir bag lengthwise into thirds (outside edges folded inward over center of bag). Do not crease bag.

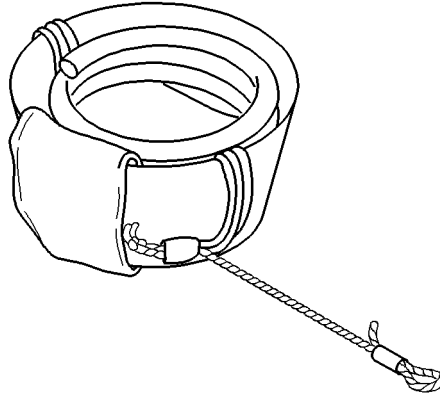


Fold reservoir bag away from breathing valves and into facepiece. Make sure bag does not cover breathing valves.



Coil oxygen tubing inside facepiece over reservoir bag.

14352100AAA BMA 18000



Connect oxygen tubing to manifold oxygen fitting.

### **WARNING**

**MAKE SURE LANYARD PIN IS INSERTED INTO CORRECT CHECK VALVE FOR MASK BEING INSTALLED. CROSS CONNECTED PINS WILL RESULT IN PASSENGERS PULLING LANYARD CORDS ONLY TO INITIATE OXYGEN FLOW TO ANOTHER MASK**

Insert lanyard pin into corresponding check valve.

Place mask facepiece - first in deployment container. Make sure that oxygen tubing and lanyard cord are free to deploy and are not caught between the container and lid.

Close and latch deployment container lid.

INTENTIONALLY LEFT BLANK

## 8.8 - AIRPLANE CLEANING AND CARE

### WINDSHIELD AND WINDOWS

The windshield and windows should be cleaned with an airplane windshield cleaner.

*NOTE :*

*Refer to the Maintenance Manual for products and procedures to apply.*

Apply the cleaner sparingly with soft cloths and rub with moderate pressure until all dirt, oil scum and bug stains are removed. Allow the cleaner to dry, then wipe it off with soft flannel cloth.

### CAUTION

**DO NOT USE ANY OF THE FOLLOWING PRODUCTS ON, OR FOR CLEANING WINDOWS : METHANOL, METHYLATED ALCOHOL, GASOLINE, BENZENE, XYLENE, METHYL-ETHYL-KETONE, ACETONE, CARBON TETRACHLORIDE, LACQUER PAINT THINNERS, COMMERCIAL OR HOUSEHOLD WINDOW CLEANING SPRAYS. IN CASE OF DOUBT CONCERNING A PRODUCT, DO NOT USE IT.**

**DURING CLEANING OPERATION, AVOID WEARING OBJECTS SUCH AS RING, WATCH, BRACELET AND EXERCISE CARE TO PREVENT BUTTONS, BUCKLES AND ANY HARD OBJECTS FROM TOUCHING THE WINDSHIELD AND THE WINDOWS.**

**ADHESIVE TAPES OTHER THAN MINNESOTA 3M TYPE 670 SHALL NOT BE USED ON ACRYLIC SURFACES.**

**NEVER USE BUFFING MACHINES AS EXCESSIVE FORCES OR SPEEDS MIGHT PRODUCE REDHIBITORY DEFECTS**

Follow by carefully washing with a mild detergent and plenty of water. Rinse thoroughly, then dry with a clean moist chamois. Do not rub the plastic with a dry cloth since this builds up an electrostatic charge which attracts dust. Waxing will finish the cleaning operation. A thin, even coat of wax polished out by hand with clean soft flannel cloth will fill in minor scratches and help prevent further scratching.

Do not use a canvas cover on the windshield unless freezing rain or sleet is anticipated since the cover may scratch the plastic surface.

### **PAINTED SURFACES**

Refer to Maintenance Manual for the products and procedures to apply.

### **PROPELLER CARE**

Preflight inspection of propeller blades for nicks and cleaning them occasionally with a cloth soaked with soapy water to clean off grass and bug stains will assure long blade life. Small nicks on the propeller, particularly near the tips and on the leading edges, should be dressed out as soon as possible since these nicks produce stress concentrations, and if not removed, may result in cracks. Never use an alkaline cleaner on the blades ; remove grease and dirt.

### **ENGINE CARE**

Refer to Maintenance Manual for the procedures to follow.

### **INTERIOR CARE**

To remove dust and loose dirt from the upholstery and carpet, clean the interior regularly with a vacuum cleaner.

For additional information, refer to Maintenance Manual.



**8.9 - UTILIZATION BY COLD WEATHER (- 0°C TO - 25°C)  
OR VERY COLD WEATHER (- 25°C TO - 40°C)****NOTE :**

*Check pressure values in a hangar heated at about 15°C with control equipment at room temperature.*

If a landing is foreseen by cold or very cold weather or in case of airplane prolonged operation in such conditions, it is recommended to prepare the airplane as follows :

- 1 - Smear with silicone grease the door and engine cowlings seals, as well as the leading edge deicers.
- 2 - Apply engine oil on the engine cowling latches.
- 3 - Inflate main landing gear shock absorbers to 247 psi (17 bars) at a room temperature of 15°C.
- 4 - Position a 0.59 in (15 mm) shim at the bottom of the piston tube and against forward landing gear half-fork to reduce shock absorber travel. Refill with hydraulic liquid. Remove the shim and inflate shock absorber to 138 psi (9.5 bars) at a room temperature of 15°C.
- 5 - Inflate main landing gear tires to 130 psi (8.96 bars) and nose tire to 102 psi (7 bars) at a room temperature of 15°C.

**NOTE :**

*See Table 1 hereafter to check pressure values and to inflate tires and shock absorbers.*

Check pressure values and inflate, if necessary, according to following table 1 during operation in cold weather only :

		OAT (°C)	- 40°	- 30°	- 20°	- 10°	+ 15°
<b>P R E S S U R E  p s i  (bars)</b>	Main landing gear shock absorber	189 (13)	196 (13.5)	203 (14)	218 (15)	247 (17)	
	Nose gear shock absorber	102 (7)	109 (7.5)	116 (8)	123 (8.5)	138 (9.5)	
	Main landing gear tire	144 (9.96)	144 (9.96)	130 (8.96)	130 (8.96)	130 (8.96)	
	Nose gear tire	94 (6.5)	94 (6.5)	102 (7)	102 (7)	102 (7)	

Table 1

Post-MOD 70-0315-25

## **8.10 - PREPARATION OF THE AIRPLANE (EQUIPMENT AND FURNISHINGS)**

### **WARNING**

**IN ANY ACCOMMODATION, MAKE SURE ACCESS TO EMERGENCY EXIT IS FREE.**

### **CAUTION**

**REMOVED EQUIPMENT ITEMS MUST BE STOWED IN A PLACE WHICH ENSURES THEIR INTEGRITY.**

Many accommodations are authorized by Daher Socata. They are enumerated in Section 7.

This procedure specifies how to change your 6-seat accommodation into 4-seat accommodation, and conversely. However, it can be used partly to remove or install an equipment item.

However, the pilot must ensure that he gets all necessary authorizations from his regulatory authority.

### **1. CONVERSION OF 6-SEAT ACCOMMODATION INTO 4-SEAT ACCOMMODATION (Figures 8.10.1, 8.10.2, 8.10.3 and 8.10.4)**

#### **A. Tools and consumable materials**

- Seat protective covers

#### **B. Preparation**

- 1) Make sure the "SOURCE" selector is set to "OFF".

**C. Removal of rear seats (Figure 8.10.1)**

- 1) To remove rear seats, perform the following operations

**CAUTION**

**IN ORDER TO PREVENT CUSHION COVERING DAMAGE,  
PROTECTIVE COVERS SHOULD BE PUT ON SEATS.**

- a) Install protective covers.
- b) Unlock backrest using backrest tilting handle (6) and fold it forward.

**NOTE : For the R.H. rear seat, backrest tilting handle is located behind backrest.**

- c) Clear the carpet from under the seat to facilitate moving in rails.
- d) Unlock seat using seat tilting handle (1) and tilt it forward.
- e) Hold the seat in tilted position and unscrew quick links (7) of strap (9) located under L.H. seatpan.

**NOTE : This operation is specific to L.H. seat.**

- f) Pull up and hold L.H. and R.H. rings (2), and turn knobs (8) by 90° in order to release and keep locks (3) in up position.
- g) Move the seat in the rails to line up pads (4) with rail (5) apertures.
- h) Remove the seat.

**NOTE : Ensure proper storage of strap (9) with L.H. rear seat to avoid loosing part.**

**D. Removal of intermediate seats (Figures 8.10.2 and 8.10.3)**

- 1) To remove intermediate seats, perform the following operations
  - a) Install protective covers.
  - b) Pull backrest bottom upholstery (25) to remove it.
  - c) Clear the carpet from under the seat to facilitate moving in rails.
  - d) Pull up locking handle (21) located under the pan, on the seat rear side, to unlock it.
  - e) Move the seat in the rails to line up pads (23) with rail (24) apertures.
  - f) Remove the seat.
  - g) Install backrest bottom upholstery (25).

**CAUTION : IN ORDER TO PREVENT DEFLECTORS DAMAGE, IT IS NECESSARY TO REMOVE THEM.**

- 2) Remove deflector (34) maintained with Velcro-type strap.
- 3) If necessary, remove the cabin central carpet.

**NOTE : If one of two cargo nets must be installed, it is necessary to use the carpet with appropriate cuttings.**

**E. Removal of a cabinet**

**NOTE : This operation must be carried out by a service center.**

**F. Cabin comfort (Figure 8.10.3)**

- 1) Blank off the hot air outlet, located forward the large door, with blanking device assy (33) stored in storage bag - see Figure 8.10.3 Detail A.
- 2) Remove blanking plugs (32) located forward the large door and store them into storage bag - see Figure 8.10.3 Detail B.

- 3) Remove blanking plugs (31) located in line with R.H. front side window – see Figure 8.10.3 Detail C, and install them on holes located in line with card table – see Figure 8.10.3 Detail D.

**G. Installation of intermediate seats (Figures 8.10.2, 8.10.3 and 8.10.4)**

- 1) Install deflector (34), ensuring that both red marks (36) are aligned with the deflector holes (35) – see Figure 8.10.4.

**NOTE : Position deflectors (34) as indicated on label, according to future position of intermediate seat.**

- 2) Install intermediate seats.

**NOTE : If seats are installed facing flight direction (frontwards), the L.H. seat must be installed on the right and the R.H. seat on the left in order to have the armrest on aisle side.**

- a) Pull backrest bottom upholstery (25) to remove it.
- b) Clear the carpet from seat area to facilitate moving in rails.
- c) Position the seat and put lock (22) near the color mark (37) made on rail bottom on aisle side.

**NOTE : The color mark (37) in the rail is aligned with red marks (36).**

- d) Pull up locking handle (21), insert pads (23) into rail (24) apertures and then, move the seat so that lock (22) is in front of the color mark (37).
- e) Release locking handle (21) to lock the seat.

**WARNING : VERIFY THAT LOCK (22) AND ALL PADS (23) ARE ENGAGED AND LOCKED INTO RAILS, TRYING TO MOVE SEAT FORWARD AND BACKWARD.**

- f) Install backrest bottom upholstery (25).

**NOTE : Adjust it properly; make sure not to obstruct deflector (34) outlet.**

- g) Slide properly the carpet under the seat.
- h) Remove protective covers.

#### H. Final operations

- 1) If removed, install cabin central carpet suited to the intended use.

**NOTE : Slide properly the carpet under doorstep.**

- 2) If necessary, remove the baggage compartment partition net and install the small or large cargo net (refer to Section 7).
- 3) Make sure the work area is clean and free from debris.
- 4) Determine weight and balance (refer to Section 6).

## 2. CONVERSION OF 4-SEAT ACCOMMODATION INTO 6-SEAT ACCOMMODATION (Figures 8.10.1, 8.10.2, 8.10.3 and 8.10.4)

### A. Tools and consumable materials

- Seat protective covers

### B. Preparation

- 1) Make sure the "SOURCE" selector is set to "OFF".
- 2) If installed, remove the cargo net.
- 3) Remove intermediate seats – refer to Paragraph 1.D.
- 4) Remove the deflectors (34) maintained with Velcro-type strap.
- 5) If necessary, remove the cabin central carpet.

### C. Cabin comfort (Figure 8.10.3)

- 1) Remove blanking plugs (32) from their storage bag and install them on holes located forward the large door – see Figure 8.10.3 Detail B.
- 2) Remove blanking device assy (33) from the hot air outlet, located forward the large door, and store it into storage bag – see Figure 8.10.3 Detail A.

- 3) Remove blanking plugs (31) located in line with card table – see Figure 8.10.3 Detail D, and install them on holes located in line with R.H. front side window – see Figure 8.10.3 Detail C.

**D. Installation of cabinet**

**NOTE : This operation must be carried out by a service center.**

**E. Installation of intermediate seats**

- 1) Install intermediate seats – refer to Paragraph 1 G.
- 2) If removed, install the baggage compartment partition net.
- 3) If removed, install cabin central carpet.

**F. Installation of rear seats (Figure 8.10.1)**

- 1) Make sure the work area is clean and free from debris.
- 2) Clear the carpet from seat area to facilitate moving in rails.
- 3) Check that knobs (8) maintain locks (3) in up position.
- 4) Position the seat, fold it forward, refer to Detail B, and insert pads (4) into rail (5) apertures.
- 5) Move the seat so that locks (3) are in front of the color mark made on rail bottom.
- 6) Pull up and hold L.H. and R.H. rings (2) and turn knobs (8) by 90° in order to insert locks (3) into rail (5) apertures.
- 7) Make sure the seat is correctly locked on rails (5).
- 8) Tilt seat forward, hold it and slip strap (9) around the locking control hinge pin. Screw quick links (7).
- 9) Tilt the seat rearward and lock it using seat tilting handle (1).
- 10) Fold up the backrest and lock it using backrest tilting handle (6).
- 11) Slide properly the carpet under the seat.
- 12) Remove protective covers.



## G. Reconditioning

- 1) Make sure the work area is clean and free from debris.
- 2) Determine weight and balance (refer to Section 6).

### 3. ADDITIONAL CONFIGURATIONS

**WARNING : REMOVED SEATS CAN ONLY BE INSTALLED AT THEIR ORIGINAL LOCATION. REAR SEAT (L.H. OR R.H.) IS THE ONLY ONE WHICH CAN BE INSTALLED IN CABIN AXIS, ON BOTH CENTRAL RAILS – REFER TO SECTION 7.**

**NOTE : Many combinations of accommodations are authorized with seats (rear and intermediate) by pilot or service centers and cabinet(s) by service centers only. However, the pilot must ensure that he gets all necessary authorizations from his regulatory authority.**

**NOTE : To remove or install these elements, use Paragraph 1 or 2 – (refer to Table 1).**

**NOTE : After these operations, determine weight and balance with the new index (refer to Section 6).**

EQUIPMENT	ACTION	DESCRIPTION OPERATION
REAR SEAT	REMOVAL	Paragraph 1.C.
	INSTALLATION	Paragraph 2. F.
INTERMEDIATE SEAT	REMOVAL	Paragraph 1.D.
	INSTALLATION	Paragraph 1.G.
CARGO NET	INSTALLATION	SECTION 7

Table 1

- 1) Seat tilting handle
- 2) Ring
- 3) Lock
- 4) Pad
- 5) Rail
- 6) Backrest tilting handle
- 7) Quick link
- 8) Knob
- 9) Strap

Figure 8.10.1 (1/2) - Removal/Installation of rear seat



- 21 - Locking handle
- 22 - Lock
- 23 - Pad
- 24 - Rail
- 25 - Backrest bottom upholstery

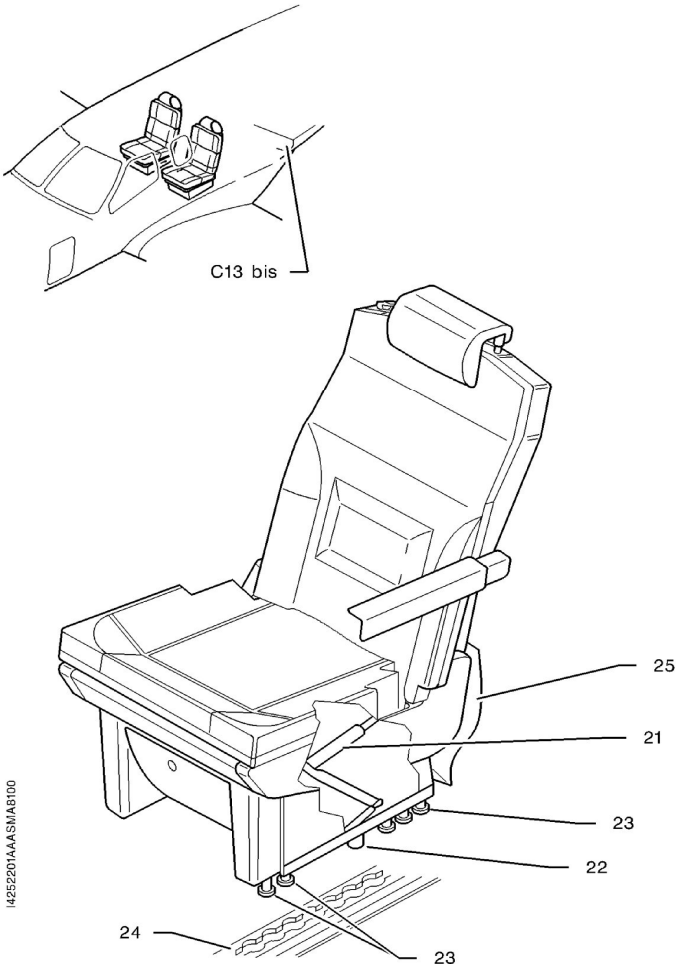


Figure 8.10.2 - Removal/Installation of intermediate seat

- 31 - Blanking plug
- 32 - Blanking plug
- 33 - Blanking device assy
- 34 - Deflector

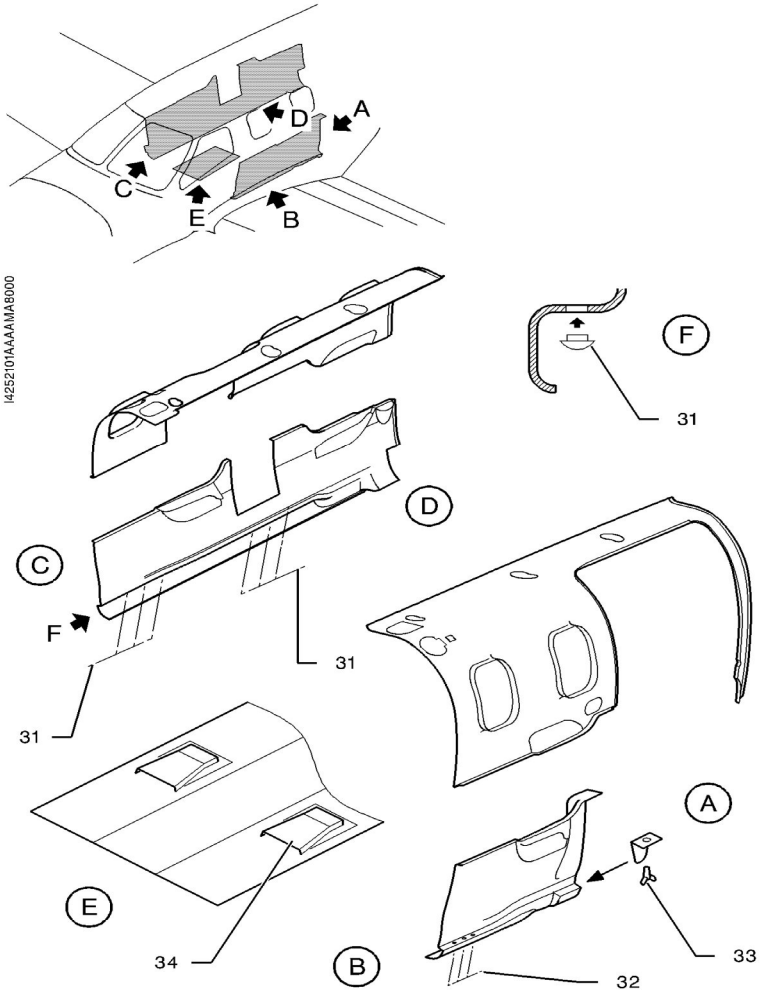


Figure 8.10.3 - Cabin comfort – Installation of blanking plugs and deflector

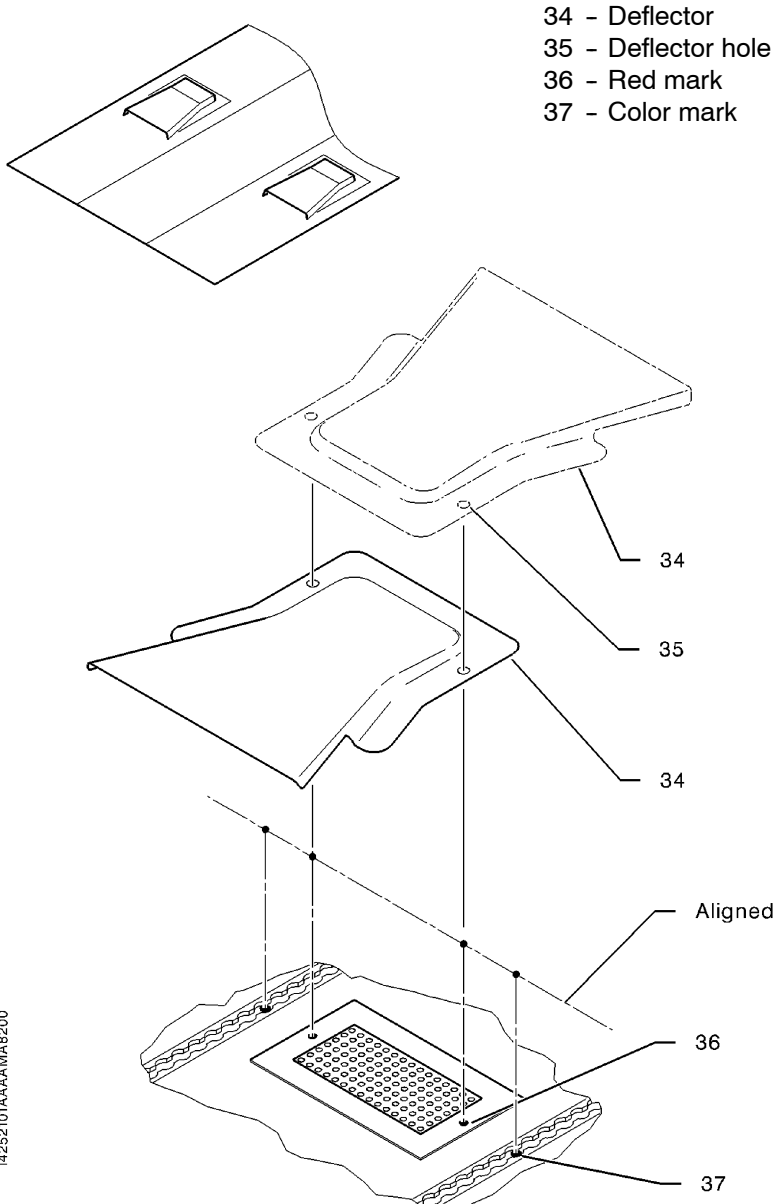


Figure 8.10.4 - Cabin comfort – Installation of deflector



# **TBM 850**

# **LIST OF EQUIPMENT**

**Report NAV No. 34/90 – RJ – App1**

**From S/N 434 to 999**

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**AMENDMENTS**

Edition 1 of June 22, 2007

Revision 1 of October 15, 2007

Pages	Description
0A	List of amendments
4 and 5	Chapter 21 "Environmental System" modified : New global air system (including air conditioning and pressurization) installed on airplane
9	Chapter 25 "Equipment and furnishings" modified : New cabin furnishings and carpet installed on airplane
16	Addition of sub-chapter "Aural warning"
25	Chapter 35 "Oxygen" modified : New oxygen system installed on airplane
20, 21	Correction or addition of weights and arms
1, 10 to 15, 17 to 19, 22 to 24, 26 to 32	Presentation, terminology or text moving



**AMENDMENTS**

Edition 1 of June 22, 2007

Revision 2 of December 15, 2007

Pages	Description
0B	List of amendments
2	Addition of the list of critical RVSM equipment
20	Removal of modification MOD70-0160-34A (with cross-reference to SB70-120-34)

**AMENDMENTS**

Edition 1 of June 22, 2007

Revision 3 of January 31st, 2008

Pages	Description
0C	List of amendments
10	Modification of OPT70-25030 option version : OPT70 25030A replaced by OPT70 25030C valid for airplanes equipped with G1000 system
11	Addition of option MOD70-0153-25C ELT KANNAD 406 AF
0D	Minor modifications (text moving, presentation or terminology)

**AMENDMENTS**

Edition 1 of June 22, 2007

Revision 4 of March 31, 2008

Pages	Description
0D	List of amendments
4, 11, 22, 24	Addition of optional equipment
9, 10, 17 thru 19, 22, 23	Correction of data concerning some already listed equipment

**AMENDMENTS**

Edition 1 of June 22, 2007

Revision 5 of March 25, 2009

Pages	Description
Title	Incorporation of DAHER-SOCATA logo instead of EADS SOCATA
0E	List of amendments

**AMENDMENTS**

Edition 1 of June 22, 2007

Revision 6 of September 15, 2010

Pages	Description
Title	Copyright update
0F	List of amendments
10	Addition of option OPT70-25030D ELT C406-1
11	Suppression of option MOD70-0153-25C ELT KANNAD 406 AF
22	Addition of option MOD70-0270-34 radioaltimeter
23	Addition of option MOD70-0258-00 TAS system GTS 820
24	Text moving

## AMENDMENTS

Edition 1 of June 22, 2007

Revision 7 of July 15, 2012

Pages	Description
Title	Copyright update
0G	List of amendments
7	Addition of option OPT70-0331-23A GARMIN GSR 56
9, 10	Modifications due to incorporation of MOD70-0315-25 "TBM Elite Edition (6 pax club or 4 pax + cargo) (TR11)
11	Relocation of portable fire extinguisher unit (MOD70-336-26)
12	Suppression of Trim and Flap indicator equipment
19, 20	Modification due to validity for bulb strobe/nav lights and led strobe/nav lights
21,22	Addition of validities due to incorporation of MOD70-0335-34 (ESI-2000)
9, 23 to 32	Minor modifications (terminology, text moving)

**AMENDMENTS**

Edition 1 of June 22, 2007

Revision 8 of March 1, 2014

Pages	Description
Title	Copyright update
0H	List of amendments
22	Addition of variant for Stand-by ADI equipped with slip indicator

**AMENDMENTS**

Edition 1 of June 22, 2007

Revision 9 of June 15, 2016

Pages	Description
Title	Copyright and logo update
0I, 0J	List of amendments
16	Addition of Pre-MOD70-0407-00D validity for Aural warning system



**AMENDMENTS**

Edition 1 of June 22, 2007

Revision 10 of April 8, 2019

Pages	Description
Title	Company identity name change
0J	List of amendments
1, 28	Introduction of Flight Stream 210 optional equipment (TR25)
2, 29 thru 34	Terminology, text moving and/or presentation

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The following list contains standard equipment installed on each airplane and available optional equipment.

A separate list of equipment of items installed at the factory in your specific airplane is provided in your airplane file.

Columns showing weight (in pounds) and arm (in inches) provide the weight and center of gravity location for the equipment.

In the list of Required, Standard or Optional equipment (not restrictive), a letter "R", "S", "O" or "A" allows classifying the equipment :

"R" : equipment items required for certification

"S" : standard equipment items

"A" : optional equipment items which are in addition to required or standard items

"O" : optional equipment items replacing required or standard items

### LIST OF CRITICAL RVSM EQUIPMENT

Equipment listed hereafter, or later approved versions, is required for RVSM operation.

Equipment	*	**	P/N
Barometric altimeter :			
- GDC74B (Air data computer)	2	2	P/N 011-01110-00
- GDU1XXX (Display)	3	2	P/N 011-00916-00 or P/N 011-01108-00
Autopilot Altitude Hold function :			
- GMC710 (AFCS mode controller)	1	1	P/N 011-01020-10
- GIA63W (Integrated Avionics Computer)	2	2	P/N 011-01105-00
- GRS77	2	2	P/N 011-00868-10
ATC transponder :			
- Altitude reporting transponder	1	1	TSO C-74c

(\*) Quantity installed

(\*\*) Quantity required

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
S		<b>01 - SPECIFIC OPTIONAL EQUIPMENT</b>  Flight ceiling at 31000 ft	/	/

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>21 - ENVIRONMENTAL SYSTEM</b>		
S		General air system controller      82024A020101	1.98 (0.900)	311.02 (7.900)
		<b>21-20 - Distribution</b>		
S		Mixing unit      9723A010001	0.53 (0.240)	151.57 (3.850)
S		Hot Air Distributor      6044A010001	4.06 (1.840)	153.54 (3.900)
S		Bleed temperature switch      92244A010002	0.13 (0.060)	153.54 (3.900)
		<b>21-30 - Pressurization control</b>		
S		Cabin altitude warn switch      214 C40.3.261	0.08 (0.035)	153.94 (3.910)
S		Cabin pressure control panel      22297A010001	0.66 (0.300)	167.32 (4.250)
S		Cabin differential pressure switch      17-600-01	0.14 (0.065)	139.76 (3.550)
S		Outflow valve      81146A010101	3.97 (1.800)	317.32 (8.060)
S		Safety valve      81147A010101	3.31 (1.500)	317.32 (8.060)
A	0176-001	Selected cabin altitude repeater potentiometer interface	/	/
		<b>21-50 - Temperature conditioning system</b>		
S		Flow control shut-off valve      6784A010001	4.74 (2.150)	114.17 (2.900)
S		Non-return valve      7085A010002	0.11 (0.050)	102.36 (2.600)
S		Shut-off valve      4589A010001	2.37 (1.075)	114.17 (2.900)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
S		Intermediate pressure sensor 93557A010001	0.33 (0.150)	110.24 (2.800)
S		Overheat thermal switch A042010300-5	0.18 (0.080)	110.24 (2.800)
S		Main heat exchanger 81249A010001	7.72 (3.500)	108.27 (2.750)
S		Ground Fan 8031A010001	3.95 (1.790)	90.55 (2.300)
<b>21-55 - Vapor cycle system</b>				
S		Compressor 1377A010001	14.77 (6.700)	98.43 (2.500)
S		Cockpit Evaporator Assembly 14720A010001	9.06 (4.111)	200.79 (5.100)
S		Cabin Evaporator Assembly 14719A010001	12.90 (5.850)	311.02 (7.900)
S		Condenser Assembly 81250A010001	24.80 (11.250)	330.71 (8.400)
<b>21-60 - Temperature regulation</b>				
S		By-pass valve 6043A010001	3.31 (1.500)	106.30 (2.700)
S		Bleed differential pressure sensor 93558A010001	0.44 (0.200)	114.17 (2.900)
S		Inlet temperature sensor 93276A010001	0.11 (0.050)	153.54 (3.900)
S		Cockpit ventilated sensor 92279A010002	0.18 (0.080)	182.09 (4.625)
S		Cabin ventilated sensor 92279A010002	0.18 (0.080)	250.00 (6.350)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>22 - AUTO FLIGHT</b>		
S	0176-00A	G1000 AFCS composed of :		
		GFC 700		
		. Pitch servo and Servo mount	GSA 81 GMS 85	3.86 (1.75) 247.40 (6.284)
		. Roll servo and Servo mount	GSA 81 GMS 85	3.86 (1.75) 231.10 (5.870)
		. Yaw servo and Servo mount	GSA 81 GMS 85	3.86 (1.75) 253.70 (6.444)
		. Pitch trim servo and Servo mount	GSA 81 GMS 85	4.04 (1.83) 157.87 (4.010)
		. Trim adapter	GTA 82	1.30 (0.59) 240.87 (6.118)
		. AFCS Control Unit	GMC 710	0.91 (0.41) 156.61 (3.978)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
<b>23 - COMMUNICATIONS</b>				
S		Cockpit loud-speaker (Qty 2) AB 100 SC	0.77 (0.350)	181.10 (4.600)
S	0176-00A	G1000 dual audio system with integrated Marker Beacon Receiver # 1 GMA 1347C	2.59 (1.71)	153.35 (3.895)
S	0176-00A	G1000 dual audio system with integrated Marker Beacon Receiver # 2 GMA 1347C	2.59 (1.71)	153.35 (3.895)
S	0176-00A	G1000 COM # 1 system . Transceiver (integrated in the GIA 63W Integrated Avionics Unit # 1 : refer to ATA 34-28) . VHF antenna (under fuselage) 16-21B-P3	0.86 (0.390)	271.65 (6.900)
S	0176-00A	G1000 COM # 2 system . Transceiver (integrated in the GIA 63W Integrated Avionics Unit # 2 : refer to ATA 34-28) . VHF antenna (upper fuselage) 16-21B-P3	0.86 (0.390)	271.65 (6.900)
S	23011G	Radio stereo-headset HMEC 25-6A	/	/
S		Static dischargers Type 2-16SC-1	Neglig.	/
A	23009A	Additional equipment for electrostatic dischargers	Neglig.	/
A	0176-00B	Data link XM Radio GDL 69A interfaced with G1000 system	2.55 (1.16)	150.67 (3.827)
O	0331-23A	GARMIN GSR 56 Weather Data Link and Satellite Phone	3.80 (1.736)	58.00 (1.474)



S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>24 - ELECTRICAL POWER</b>		
		<b>24-30 - DC generation</b>		
R		Electric power center                    160GC02Y05	11.02 (5.000)	127.95 (3.250)
R		Stand-by generator                    T700A243008000601	12.13 (5.500)	102.36 (2.600)
R		Starter generator                    8012F	24.47 (11.100)	110.24 (2.800)
S	24002	Lead-Acid battery                    RG-380E/44	85.98 (39.000)	112.20 (2.850)
		<b>24-40 - External power supply</b>		
S		Ground power receptacle                    MS 3506-1	0.79 (0.360)	114.17 (2.900)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
<b>25 - EQUIPMENT AND FURNISHINGS</b>				
S		Map holder	0.46 (0.210)	167.72 (4.260)
S		28 V plugs	/	/
S	25026B	Partition net between the cabin and the baggage compartment	3.64 (1.650)	289.53 (7.354)
A	171-25	Cabinets		
		- Vers. A : L.H. low cabinet	9.48 (4.300)	203.74 (5.175)
		- Vers. B : R.H. low cabinet	9.48 (4.300)	203.74 (5.175)
		- Vers. C : Removable (low) insulated picnic bag	9.48 (4.300)	203.74 (5.175)
		- Vers. D : L.H. top storage cabinet	7.72 (3.500)	203.74 (5.175)
		- Vers. E : R.H. top storage cabinet	7.72 (3.500)	203.74 (5.175)
		- Vers. F : R.H. top storage cabinet + audio	7.94 (3.600)	203.74 (5.175)
		- Vers. G : L.H. top baggage cabinet	3.09 (1.400)	203.74 (5.175)
		- Vers. H : R.H. top baggage cabinet	3.09 (1.400)	203.74 (5.175)
S	0207-00	- Carpet	35.27 (16.000)	211.42 (5.370)
		- Cabin furnishings	302.45 (137.19)	211.42 (5.370)
A	0207-00	2nd Carpet	35.27 (16.000)	211.42 (5.370)
A	25032	Front seats ease covers	2.76 (1.250)	183.78 (4.668)
A	0151-25	CD reader PCD 7100	2.20 (1.00)	205.04 (5.208)
A	174-25B	Optional 12 V plugs	3.31 (1.500)	195.28 (4.960)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>Leather seats - Belts</b>		
S		. Pilot's seat T700C2500002000	55.12 (25.00)	183.90 (4.671)
S		. Front R.H. seat T700C2500002001	55.12 (25.00)	183.90 (4.671)
		<u>Pre-MOD70-0315-25</u>		
S		. L.H. Intermediate seat (back to flight direction) T700C2500003002	35.27 (16.00)	220.94 (5.612)
		. R.H. Intermediate seat (back to flight direction) T700C2500003003	35.27 (16.00)	220.94 (5.612)
		<u>Post-MOD70-0315-25</u>		
S		. L.H. Intermediate seat T700G2500005000	37.48 (17.00)	224.80 (5.710)
		. R.H. Intermediate seat T700G2500005001	37.48 (17.00)	224.80 (5.710)
		<u>All</u>		
S		. Double chair		
		. L.H. seat T700C2500005002	52.91 (24.00)	278.19 (7.066)
		. R.H. seat T700C2500005003	52.91 (24.00)	278.19 (7.066)
S		Reels	1.79 (0.810)	192.91 or 287.40 (4.900 or 7.300)
S		. Small cargo net GP SOCT704CC-10	15.00 (7.00)	/
S		. Large cargo net GP SOCT704CS-10	13.00 (6.00)	/
S		. Partition net at Frame 14 T700B259000100000	1.70 (0.77)	287.80 (7.310)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
<b>25-61 - Emergency locator transmitter</b>				
S	0208-25B	Emergency Locator Transmitter (installed in tail area) ME-406	4.10 (1.86)	336.46 (8.546)
O	25030C	Emergency Locator Transmitter (with base) C406-1	4.46 (2.021)	354.72 (9.010)
		. ELT/NAV interface box 453-6500	2.69 (1.220)	353.15 (8.970)
		. Antenna 21-41	0.31 (0.140)	318.70 (8.095)
O	25030D	Emergency Locator Transmitter (with base) C406-1	4.46 (2.021)	354.72 (9.010)
		. Antenna 21-41	0.31 (0.140)	318.70 (8.095)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
<b>26 - FIRE PROTECTION</b>				
<u>Pre-MOD70-0336-26</u>				
S	26001B	Portable fire extinguisher unit 863520-00	3.64 (1.650)	194.17 (4.932)
<u>Post-MOD70-0336-26</u>				
S	336-26	Portable fire extinguisher unit 863520-00	3.64 (1.650)	170.11 (4.321)
<u>All</u>				
A	26002C	Engine fire detection system	1.45 (0.660)	96.06 (2.440)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>27 - FLIGHT CONTROLS</b>		
		<b>27-10 - Roll control</b>		
R		Roll trim actuator 145700.02	1.54 (0.700)	212.60 (5.400)
		<b>27-20 - Yaw control</b>		
R		Rudder trim actuator 145700.02	1.54 (0.700)	395.27 (10.040)
S		AFC and electric trim control on R.H. control wheel	0.88 (0.400)	157.48 (4.000)
		<b>27-30 - Pitch control</b>		
S		Pitch trim actuator 145400-02	1.21 (0.550)	425.20 (10.800)
		<b>27-50 - Wing flaps (control)</b>		
R		Flap control including :	15.52 (7.040)	218.50 (5.550)
		. Flap motor 6157-1	2.87 (1.300)	216.54 (5.500)
		. Flap actuator 1-5295/2-5295	1.92 (0.870)	216.54 (5.500)
		or 1-5297/2-5297	1.83 (0.830)	220.47 (5.600)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>28 - FUEL SYSTEM</b>		
		<b>28-20 - Fuel supply</b>		
R		Electric boost pump 2022-B	3.48 (1.580)	129.92 (3.300)
R		Electric boost pump 1B9-5	4.41 (2.000)	129.92 (3.300)
R		Engine driven fuel pump 1127-01A	1.54 (0.700)	110.24 (2.800)
R		Fuel sequencer unit	1.10 (0.500)	125.98 (3.200)
R		Fuel unit L88A15-651	4.59 (2.080)	133.07 (3.380)
		<b>28-40 - Fuel indication</b>		
R	0158-28	Fuel gage amplifier (in us gal)	1.08 (0.49)	278.74 (7.080)
R		Inboard L.H. probe 768-403 or 762 438.1.0	0.33 (0.150)	183.07 (4.650)
R		Inboard R.H. probe 768-404 or 762 439.1.0	0.33 (0.150)	183.07 (4.650)
R		Intermediate probe 766-976-1 or 762 440.1.0	0.22 (0.100)	190.94 (4.850)
R		Low level probe 722-447	0.11 (0.050)	183.07 (4.650)
R		Outboard probe 766-977-1 or 762 441.1.0	0.22 (0.100)	190.94 (4.850)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
<b>30 - ICE AND RAIN PROTECTION</b>				
S		Deicer, L.H. horizontal stabilizer T700A3013003000	4.19 (1.900)	398.42 (10.120)
S		Deicer, R.H. horizontal stabilizer T700A3013003001	4.19 (1.900)	398.42 (10.120)
S		Deicer, vertical stabilizer T700A3014003000	3.97 (1.800)	374.02 (9.500)
S		Deicer, inboard L.H. wing T700A3010001002	5.73 (2.600)	173.23 (4.400)
S		Deicer, inboard R.H. wing T700A3010001003	5.73 (2.600)	173.23 (4.400)
S		Deicer, middle L.H. wing T700A3010001004	3.75 (1.700)	173.23 (4.400)
S		Deicer, middle R.H. wing T700A3010001005	3.75 (1.700)	173.23 (4.400)
S		Deicer, outboard L.H. wing T700A3010012000	2.65 (1.200)	173.23 (4.400)
S		Deicer, outboard R.H. wing T700A3010001007	3.31 (1.500)	173.23 (4.400)
S		Dual port distribution valve 1532-10C	2.43 (1.100)	125.98 (3.200)
S		Timer 42E25-2A	0.77 (0.350)	177.17 (4.500)
S		Water separator and filter 44E21-2A	1.10 (0.500)	125.98 (3.200)
<b>30-40 - Windshield deicing</b>				
S		Windshield heater controller (Qty 2) TWH 93-01	0.99 (0.450)	149.61 (3.800)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>30-60 - Propeller deicing</b>		
S		Modular brush assy 3E2044-2	0.44 (0.200)	47.05 (1.195)
S		Timer 3E2311-4	0.44 (0.200)	200.79 (5.100)



S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>31 - INDICATING/RECORDING SYSTEMS</b>		
		<b>31-20 - Independent instruments</b>		
S	31002B	Hourmeter (flying time) 56457-3	0.55 (0.250)	156.30 (3.970)
O	31002A	Hourmeter (engine running time) 56457-3	0.55 (0.250)	156.30 (3.970)
		<b>31-50 - Aural warning</b>		
R		Aural warning system T700A3155011000 (Pre-MOD70-0407-00D)	0.66 (0.300)	183.07 (4.650)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>32 - LANDING GEARS</b>		
		<b>32-10 - Main landing gear</b>		
R		L.H. main landing gear                      D23767000	51.59 (23.400)	200.39 (5.090)
R		R.H. main landing gear                      D23768000	51.59 (23.400)	200.39 (5.090)
		<b>32-20 - Nose landing gear</b>		
R		Nose gear                                      D23766000	53.57 (24.300)	93.70 (2.380)
		<b>32-30 - Extension and retraction</b>		
R		Door actuator                                      EC 6230	1.35 (0.610)	192.91 (4.900)
R		Main locking actuator                              08-1480	13.23 (6.000)	208.07 (5.285)
R		Nose locking actuator                              08-1480	13.23 (6.000)	110.24 (2.800)
R		Hand pump    914-8D27	2.33 (1.055)	181.10 (4.600)
		<b>32-35 - Hydraulic generation</b>		
R		Hydraulic power pack assy                      1118-04	10.36 (4.700)	84.65 (2.150)
		<b>32-40 - Wheels and brakes</b>		
R		Brake assembly                                      030-19100	14.99 (6.800)	204.33 (5.190)
R		Main tire P/N 033-631-1                      18x5.5-10PR or P/N 033-631-0                      18x5.5-10PR	13.50 (6.123)	204.33 (5.190)
R		Master cylinder                                      010-07801	0.88 (0.400)	145.67 (3.700)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
R		Master cylinder 010-07802	0.88 (0.400)	145.67 (3.700)
R		Nose tire P/N 071-311-1 5.00-5-10PR TL	5.60 (2.540)	89.57 (2.275)
R		Nose tire P/N 505T01-1 5.00-5-10PR TL	6.30 (2.858)	89.57 (2.275)
R		Nose wheel 40-262A	2.98 (1.350)	89.57 (2.275)
R		Main wheel (Model 40-434)	11.28 (5.120)	204.33 (5.190)
R		Parking brake valve T700A3240010 or T700B3240001	0.33 (0.150)	157.48 (4.000)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>33 - LIGHTS</b>		
		<b>33-10 - Instrument panel lighting</b>		
S		L.H. tube 67135 U290 C62S	Neglig.	/
S		R.H. tube 67135 U290 C63S	Neglig.	/
S		DC/AC inverter T700A3310021	0.33 (0.150)	153.54 (3.900)
S		Intensity control T700A3310022	0.22 (0.100)	157.48 (4.000)
S		Instruments emergency lighting 2240-3	0.11 (0.050)	181.10 (4.600)
A	33001B	PULSELITE control	1.27 (0.574)	202.60 (5.146)
		<b>33-40 - External lighting</b>		
S		L.H. wing inspection light (icing detection) T700A3340012	0.20 (0.090)	151.57 (3.850)
S		Landing lights 4596	0.79 (0.360)	179.13 (4.550)
S		Taxi light assy T700A3340006	1.10 (0.500)	93.70 (2.380)
S		NAV/Anticollision system :		
		<u>With bulb strobe/nav lights :</u>		
S		- Anticollision power supply A413A HDA-CF-14/28	3.00 (1.360)	204.72 (5.200)
S		- R.H. or L.H. navigation light assy T700A3341019	0.51 (0.230)	185.04 (4.700)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
S		<u>With LED strobe/nav lights :</u> - R.H. or L.H. navigation light assy 11-1100-L-SA 11-1100-R-SA	0.32 (0.145)	185.04 (4.700)
A	33002	<u>All</u> Halogen landing lights Q5596 Halogen taxi lights Q5587	0.79 (0.360) 1.10 (0.500)	179.13 (4.550) 93.70 (2.380)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>34 - NAVIGATION</b>		
		<b>34-11 - Air data systems</b>		
R		Lift transducer 799-8	0.88 (0.400)	173.23 (4.400)
S		Pitot L heated probe AN 5812-1	0.75 (0.340)	200.79 (5.100)
S		Pitot R heated probe AN 5812-1	0.75 (0.340)	200.79 (5.100)
S		Static reference selector TB30 77010000	0.22 (0.100)	157.48 (4.000)
		<u>Pre-MOD70-0335-34 (ESI-2000)</u>		
R		Stand-by altimeter 3A43.22.35F.28.1	1.10 (0.500)	154.45 (3.923)
R		Stand-by airspeed indicator 5A58.22.30K.28.1	0.57 (0.260)	155.20 (3.942)
		<b>34-21 - Heading reference system</b>		
S	0176-00A	Attitude and Heading Reference System # 1 GRS 77	3.46 (1.57)	171.77 (4.363)
S	0176-00A	Attitude and Heading Reference System # 2 GRS 77	3.46 (1.57)	171.77 (4.363)
S	0176-00A	Magnetometer # 1 GMU 44	0.48 (0.22)	180.98 (4.597)
S	0176-00A	Magnetometer # 2 GMU 44	0.48 (0.22)	180.98 (4.597)
		<b>34-23 - Magnetic compass</b>		
R		Stand-by compass C2350 L4CM23	0.55 (0.250)	163.39 (4.150)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>34-24 - ADI and standby horizon</b>		
		<u>Pre-MOD70-0335-34 (ESI-2000)</u>		
S		Stand-by ADI 1U149-019-19	4.19 (1.900)	152.56 (3.875)
		or		
		Stand-by ADI 102-0071-003 equipped with slip indicator 444-0010-01	4.44 (2.010)	152.56 (3.875)
		<u>Post-MOD70-0335-34 (ESI-2000)</u>		
R		Electronic Standby Indicator	2.75 (1.250)	154.29 (3.919)
		<b>34-28 - Electronic flight instrumentation system</b>		
S	0176-00A	Integrated Flight Deck System G1000 composed of :		
		. PFD1 GDU 1040A	6.53 (2.96)	155.71 (3.955)
		. PFD2 GDU 1040A	6.53 (2.96)	155.71 (3.955)
		. MFD GDU 1500A	8.66 (3.93)	155.20 (3.942)
		. Engine/Airframe Interface Unit # 1 GEA 71	2.53 (1.15)	150.63 (3.826)
		. Engine/Airframe Interface Unit # 2 GEA 71	2.53 (1.15)	150.63 (3.826)
		. Integrated Avionics Unit # 1 GIA 63W	7.21 (3.27)	149.37 (3.794)
		. Integrated Avionics Unit # 2 GIA 63W	7.21 (3.27)	149.37 (3.794)
		. MFD remote controller GCU 475	0.82 (0.37)	157.83 (4.009)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
<b>34-31 - Marker</b>				
S		MARKER antenna DM N27-3	0.75 (0.340)	129.92 (3.300)
S		Receiver (integrated in the GMA 1347C dual audio systems : refer to ATA 23-11)	/	/
<b>34-41 - Stormscope</b>				
A	34056B	Stormscope, G1000 coupled	4.94 (2.240)	232.28 (5.900)
		. Antenna NY163	0.84 (0.380)	311.02 (7.900)
		. Processor WX500	2.27 (1.030)	255.91 (6.500)
<b>34-42 - Weather radar</b>				
A	0176-00C	Weather radar, G1000 coupled GWX 68	9.36 (4.25)	173.46 (4.406)
<b>34-43 - Radioaltimeter</b>				
A	34037L	Radioaltimeter, EFIS coupled :		
		. Transceiver KRA 405B	2.80 (1.270)	231.18 (5.872)
		. Antenna DM 19-2-1	0.20 (0.090)	181.10 and 204.72 (4.600 and 5.200)
A	0270-34	Radioaltimeter		
		. Transceiver RA 4500	1.90 (0.862)	228.00 (5.812)
		. Antenna	0.30 (0.136)	182.00 (4.625)
		. Antenna	0.30 (0.136)	205.00 (5.228)



S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>34-44 - Traffic advisory system</b>		
A	34061D	TAS system KTA 870, G1000 coupled, of which :	11.40 (5.170)	132.16 (3.357)
		. Processor KA 810	9.06 (4.110)	133.07 (3.380)
		. Antenna (upper fuselage) KA 815	0.95 (0.430)	230.67 (5.859)
		. Antenna (under fuselage) KA 815	0.95 (0.430)	256.69 (6.520)
A	0176-00F	G1000 TAWS system	/	/
A	0258-00	TAS system GTS 820, G1000 coupled, of which :	22.05 (10.220)	177.00 (4.513)
		. Processor GTS 820	9.90 (4.500)	143.00 (3.635)
		. Power amplifier / low noise amplifier GPA 65	1.89 (0.860)	221.00 (5.624)
		. Antenna (upper fuselage) GA 58	0.79 (0.360)	230.00 (5.860)
		. Antenna (under fuselage) GA 58	0.79 (0.360)	260.00 (6.620)
		<b>34-51 - NAV 1 installation</b>		
S		GS-NAV VHF antenna DM N4-17N	3.31 (1.500)	401.57 (10.200)
S		Receiver (integrated in the GIA 63W Integrated Avionics Unit # 1 : refer to ATA 34-28)	/	/
		<b>34-52 - NAV 2 installation</b>		
S		Receiver (integrated in the GIA 63W Integrated Avionics Unit # 2 : refer to ATA 34-28)	/	/

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
<b>34-53 - Transponder</b>				
S	0176-00A	Transponder # 1 Mode S non diversity GTX 33	3.87 (1.75)	149.65 (3.801)
		Antenna KA 61	0.40 (0.18)	193.22 (4.908)
A	0176-00D	Transponder # 1 Mode S diversity GTX 33D	4.12 (1.87)	149.65 (3.801)
		Antenna (under fuselage) KA 61	0.40 (0.18)	150.08 (3.812)
		Antenna (upper fuselage) KA 61	0.40 (0.18)	193.22 (4.908)
A	0176-00E	Transponder # 2 Mode S non diversity GTX 33	3.87 (1.75)	149.65 (3.801)
		Antenna KA 61	0.40 (0.18)	193.22 (4.908)
<b>34-54 - Automatic Direction Finder (ADF)</b>				
A	0176-00H	ADF RA 3500 system (European countries only)	7.61 (3.45)	214.65 (5.452)
<b>34-55 - DME installation</b>				
A	34014E	DME KN63, G1000 coupled	2.80 (1.27)	232.28 (5.900)
		Antenna KA 61	0.40 (0.18)	238.82 (6.066)
<b>34-57 - Global Positioning System (GPS)</b>				
S	0176-00A	GPS/WAAS antenna GA 36	0.50 (0.210)	204.84 (5.203)
		GPS/WAAS antenna GA 37	0.54 (0.230)	204.84 (5.203)
<b>34-62 - Multifunction display</b>				
A	0176-00G	G1000 Chartwiew function	/	/

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
S	0207-00	<b>35 - OXYGEN</b> Gaseous oxygen system	22.73 (10.310)	226.77 (5.760)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>37 - VACUUM</b>		
S		Air ejector valve 19E17-5A	0.66 (0.300)	116.14 (2.950)
S		Gyro suction gage 3-310-5	0.14 (0.065)	157.48 (4.000)
S		Gyro vacuum air filter 1J7-2	0.38 (0.170)	139.76 (3.550)
S		Regulator and relief valve 38E-96-2D	1.32 (0.600)	116.14 (2.950)
S		Vacuum relief valve 691-21A	0.33 (0.150)	139.76 (3.550)
S		Valve 557-18 E	0.35 (0.160)	118.11 (3.000)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>46 - INFORMATION SYSTEMS</b>		
O	0459-46B	Flight stream transceiver FS 210 GARMIN	0.264 (0.120)	151.18 (3.840)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
A	52002A	<b>52 - DOORS</b> "Pilot" door	44.092 (20.000)	171.26 (4.350)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>61 - PROPELLER</b>		
		<b>61-10 - Propeller assembly</b>		
S		Propeller HC-E4N.3 / E 9083 S (K)	153.22 (69.500)	43.11 (1.095)
		<b>61-20 - Controls</b>		
R		Overspeed governor A210632	2.73 (1.240)	59.06 (1.500)
S		Propeller governor 8210.007	2.65 (1.200)	59.06 (1.500)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>71 - POWERPLANT</b>		
R		Turboprop engine PT6 A-66D	497.30 (226.000)	79.72 (2.025)
S		Silentblocks 95007-16	2.92 (1.325)	79.72 (2.025)
		<b>71-60 - Air inlet</b>		
R		Inertial separator actuator 148600-09A	1.72 (0.780)	62.99 (1.600)



S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>77 - ENGINE INDICATING</b>		
R		Compressor turbine tachogenerator (Ng) MIL-G-26611C GEU-7/A	0.981 (0.445)	108.27 (2.750)
R		Power turbine tachogenerator MIL-G-26611C GEU-7/A	0.981 (0.445)	55.12 (1.400)
R		Torque transducer 8107.200.00.10 or CZ52E8-G	0.463 (0.210)	53.54 (1.360)
		<b>77-12 - Fuel management</b>		
S		Fuel transmitter 660 526A	1.000 (0.454)	110.20 (2.799)

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>79 - LUBRICATION</b>		
		<b>79-20 - Distribution</b>		
R		Oil cooler L8538233	10.472 (4.750)	90.55 (2.300)
		<b>79-30 - Indicating</b>		
R		Oil pressure transmitter 8107-400-00-10	0.441 (0.200)	106.30 (2.700)

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**SUPPLEMENT****"BFG" WX-500 OR WX-950 OR  
WX-1000 OR 1000+ OR 1000E  
STORMSCOPE****TABLE OF CONTENTS**

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**"BFG" STORMSCOPE****SECTION 1****GENERAL**

This supplement supplies information to the pilot about limitations, normal and emergency procedures when the optional "BFG" WX-500 or WX-950 or WX-1000 or 1000+ or 1000E stormscope is installed on the TBM airplane. The stormscope must be used within limits of this supplement.

**SECTION 2****LIMITATIONS**

These limitations supplement those of standard airplane described in Section 2 "Limitations" of the basic Pilot's Operating Handbook.

The "BFG" stormscope systems signal displays are not intended for the purpose of penetrating thunderstorm areas or areas of severe turbulence ; such intentional use is prohibited.

**NOTE :**

*Range selection determines receiver sensitivity and therefore relative range. Displayed range is based on signal strength and is not to be used for accurate determination of thunderstorm location.*

**WX-1000 or 1000+ or 1000E**

The "BFG" stormscope checklist functions are for reference only.

**All****CAUTION**

**THE STORMSCOPE MUST NOT BE USED FOR THUNDERSTORM  
PENETRATION**

- The Stormscope "BFG" Pilot's Handbook, Series II, No. 75-0299-7690-1 (WX-1000 or 1000+ or 1000E),  
or
- The WX-950 Pilot's guide, Series II, No. 009-10951-001,  
or
- The WX-500 Pilot's guide, Series II, No. 009-11501-001 and the "GARMIN" GNS 530 Pilot's Guide, No. 190-00181-00,  
or
- The WX-500 Pilot's guide, Series II, No. 009-11501-001 and the "HONEYWELL" KMD 550/850 Pilot's Guide P/N 006-18222-0000,  
or
- The WX-500 Pilot's guide, Series II, No. 009-11501-001 and the "GARMIN" GMX 200 Pilot's Guide, No. 190-00607-02,  
or
- Airplane equipped with GARMIN G1000 flight deck (MOD70-0176-00)
- The WX-500 Pilot's guide, Series II, No. 009-11501-001 and the "GARMIN" G1000 Integrated Flight Deck Cockpit Reference Guide for the TBM 850, P/N 190-00708-00,  
or
- Airplane retrofited with GARMIN G1000 NXi flight deck (MOD70-0539-00)
- The WX-500 Pilot's guide, Series II, No. 009-11501-001 and the "GARMIN" G1000 Nxi Integrated Flight Deck Cockpit Reference Guide for the TBM 850/900, P/N 190-02349-00,

at their last revision, shall be readily available to the pilot, each time the "BFG" stormscope operation is foreseen.

### **SECTION 3**

#### **EMERGENCY PROCEDURES**

Installation and operation of "BFG" stormscope do not change the basic emergency procedures of the airplane described in Section 3 "Emergency procedures" of the basic Pilot's Operating Handbook.

## SECTION 4

### NORMAL PROCEDURES

Normal operating procedures of the "BFG" stormscope are outlined in :

- the Pilot's Handbook, Series II, No. 75-0299-7690-1 at its last revision for "BFG" stormscope model WX-1000 or 1000+ or 1000E  
or
- the WX-950 Pilot's Guide, Series II, No. 009-10951-001 at its last revision for "BFG" stormscope model WX-950  
or
- the WX-500 Pilot's Guide, Series II, No. 009-11501-001 at its last revision for "BFG" stormscope model WX-500.

## SECTION 5

### PERFORMANCE

Installation and operation of "BFG" stormscope do not change the basic emergency procedures of the airplane described in Section 5 "Performance" of the basic Pilot's Operating Handbook.

## SECTION 6 WEIGHT AND BALANCE

Informations hereafter supplement the ones given for the standard airplane in Section 6 "Weight and balance" of the basic Pilot's Operating Handbook.

A or O	OPTIONAL EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
	<b>34 - NAVIGATION</b>			
A	Stormscope (OPT 70 34009A)                      WX-1000+	BFG	16.535 (7.500)	228.35 (5.800)
A	Stormscope (OPT 70 34009B)                      WX-1000	BFG	15.432 (7.000)	230.71 (5.860)
A	Stormscope EFIS coupled (OPT 70 34009C)                      WX-1000+	BFG	15.432 (7.000)	230.71 (5.860)
A	Stormscope EFIS coupled - Remote installed control (OPT 70 34009D)                      WX-1000E	BFG	9.502 (4.310)	269.09 (6.835)
A	Stormscope EFIS coupled (OPT 70 34009E)                      WX-1000E	BFG	15.939 (7.230)	230.94 (5.866)
A	Stormscope shared with the SKYWATCH (OPT 70 34009F)                      WX-1000E	BFG	15.939 (7.230)	230.94 (5.866)
A	Stormscope shared with the SKYWATCH (OPT 70 34009G)                      WX-1000+	BFG	16.535 (7.500)	228.35 (5.800)
A	Stormscope (OPT 70 34041)    WX-950	BFG	4.696 (2.130)	191.85 (4.873)



A or O	OPTIONAL EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
A	Stormscope WX-500 - shared with the GNS 530 GPS or with the KMD 850 or GMX 200 MFD (OPT 70 34056A)	BFG	4.94 (2.240)	232.28 (5.900)
A	Stormscope WX-500 - shared with the GARMIN flight deck system (OPT 70 34056B)	BFG	4.94 (2.240)	232.28 (5.900)

## **SECTION 7**

### **DESCRIPTION**

The "BFG" (Series II) stormscope, weather mapping system provides a visual screen readout of the electrical discharges associated with thunderstorms. This information with proper interpretation, will allow the pilot to detect severe thunderstorm activity. A series of green dots or of strike points will be displayed on the screen to indicate the electrical discharge areas.

Dots or strike points may be displayed on two selectable views : 360° view of surrounding airspace and 120° view of forward airspace only.

The display scope provides full scale selectable ranges of 200, 100, 50 and 25 NM.

#### **Post-MOD70-125-23 and without GARMIN G1000 or G1000 NXi flight deck**

Stormscope setting to ON or OFF is performed by using the "RADIO MASTER" switch.

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# SUPPLEMENT

## ENGINE FIRE DETECTION SYSTEM

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## ENGINE FIRE DETECTION SYSTEM

**SECTION 1****GENERAL**

This supplement is intended to inform the pilot about the equipment limitations, description and operations necessary to operation when the TBM airplane is equipped with the option "ENGINE FIRE DETECTION SYSTEM".

The generalities hereafter supplement those of the standard airplane described in Section 1 "General" of the basic Pilot's Operating Handbook when the TBM airplane is equipped with the option "ENGINE FIRE DETECTION SYSTEM".

The fire detection system allows engine fire monitoring and indicating.

**SECTION 2****LIMITATIONS**

The limitations of the TBM airplane equipped with the engine fire detection system are those of the standard airplane described in Section 2 "Limitations" of the basic Pilot's Operating Handbook.

**SECTION 3****EMERGENCY PROCEDURES**

The emergency procedures hereafter supplement those of the standard airplane described in Section 3 "Emergency procedures" of the basic Pilot's Operating Handbook when the TBM airplane is equipped with the option "ENGINE FIRE DETECTION SYSTEM".

<b>ENGINE FIRE ON GROUND</b>	
<p>Indications : ITT increasing, red warning <b>"ITT"</b> ON or <b>"ITT"</b> CAS message, red warning <b>"FIRE"</b> ON or <b>"FIRE"</b> CAS message, smoke, ...</p>	
1 - Power lever .....	<b>IDLE</b>
2 - Condition lever .....	<b>CUT OFF</b>
3 - "BLEED VALVE" or "BLEED" switch .....	<b>OFF</b>
4 - "FREON" or "AIR COND" switch (if installed) .....	<b>OFF</b>
5 - Brakes .....	<b>AS REQUIRED</b>
6 - Tank selector .....	<b>OFF</b>
7 - Ask for ground assistance, if necessary	
8 - CRASH lever .....	<b>PULL DOWN</b>
9 - EVACUATE as soon as possible	

**ENGINE FIRE IN FLIGHT**

Indications : **"FIRE"** red warning ON or **"FIRE"** CAS message  
 Try to confirm the fire warning by looking for other indications such as ITT increase, **"ITT"** red warning ON or **"ITT"** CAS message, smoke from engine cowls or air conditioning system.

*If the fire alarm is not confirmed :*

- 1 - Monitor the engine parameters, ITT in particular
- 2 - Look for smoke coming through engine cowls or from air conditioning system
- 3 - Land as soon as possible.

*If the fire alarm is confirmed :*

- 1 - Power lever ..... **IDLE**
- 2 - Propeller governor lever ..... **FEATHER**
- 3 - Condition lever ..... **CUT OFF**
- 4 - "AUX BP" fuel switch ..... **OFF**
- 5 - Tank selector ..... **OFF**
- 6 - "BLEED VALVE" or "BLEED" switch ..... **OFF**
- 7 - "FREON" or "AIR COND" switch (if installed) ..... **OFF**
- 8 - At high altitude (above 12000 ft), undertake an EMERGENCY DESCENT (Refer to Chapter 3.6 of basic Pilot's Operating Handbook).
- 9 - Perform a FORCED LANDING (ENGINE SHUT DOWN) (Refer to Chapter 3.7 of basic Pilot's Operating Handbook).

**WARNING**

**AFTER AN ENGINE FIRE, DO NOT ATTEMPT AN AIR START**

**SECTION 4****NORMAL PROCEDURES**

The normal procedures hereafter supplement those of the standard airplane described in Section 4 "Normal procedures" of the basic Pilot's Operating Handbook when the TBM airplane is equipped with the option "ENGINE FIRE DETECTION SYSTEM".

- Before starting the engine

"FIRE DETECT TEST" push-button . . . . . DEPRESS

■ The "FIRE" red warning goes on or the "FIRE" CAS message lights on and causes the illumination of the "MASTER WARNING" light.

**SECTION 5****PERFORMANCE**

Installation and operation of the engine fire detection system do not modify the performance of the airplane described in Section 5 "Performance" of the basic Pilot's Operating Handbook.



**SECTION 6**  
**WEIGHT AND BALANCE**

Information hereafter supplement the one given for the standard airplane in Section 6 "Weight and balance" of the basic Pilot's Operating Handbook.

A or O	OPTIONAL EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
<b>34 - FIRE PROTECTION</b>				
A	Engine fire detection system (OPT70 26002A) <u>TBM 700A &amp; TBM 700B (without GARMIN flight deck system)</u>	L'HOTELLIER	1.455 (0.66)	96.06 (2.440)
A	Engine fire detection system (OPT70 26002D) <u>TBM 700A &amp; TBM 700B (with GARMIN flight deck system)</u>	L'HOTELLIER	1.455 (0.66)	96.06 (2.440)
A	Engine fire detection system (OPT70 26002B) <u>TBM 700C &amp; TBM 850 (without GARMIN flight deck system)</u>	L'HOTELLIER	1.455 (0.66)	96.06 (2.440)
A	Engine fire detection system (OPT70 26002C) <u>TBM 850 (with GARMIN flight deck system)</u>	L'HOTELLIER	1.455 (0.66)	96.06 (2.440)

## **SECTION 7**

### **DESCRIPTION**

#### **■ Airplane without GARMIN flight deck**

The engine fire detection system enables the monitoring and indication of a fire in the engine area.

The system includes :

- 7 detectors
- the control relay
- the test push-button

The system also uses the advisory panel. The system is electrically supplied by "ESS BUS 1" bus bar and is protected by "ADVISORY2" circuit breaker.

#### **DETECTORS**

The 7 detectors are secured on supports positioned in the most sensitive engine areas. They consist of thermal switches detecting a temperature greater than 200°C.

#### **RELAY**

The relay controls the illumination of the "FIRE" warning light located on the advisory panel. It is positioned on a base plate secured under the floorboard.

#### **PUSH-BUTTON**

The push-button enables the pilot to test the detection system by opening the grounding circuit supplying the relay. It is connected in series with the 7 detectors. The push-button is located on the instrument panel on the L.H. side of the advisory panel near the "FIRE DETECT TEST" placard.

#### **DISPLAY**

The pilot is informed of the engine fire detection by the illumination of the "FIRE" warning light on the advisory panel, located in the upper central portion of the instrument panel.

### ■ **Airplane with GARMIN flight deck**

The engine fire detection system enables the monitoring and indication of a fire in the engine area.

The system includes :

- 7 detectors
- the test push-button
- - the G1000 or G1000 NXi system.

### **DETECTORS**

The 7 detectors are secured on supports positioned in the most sensitive engine areas. They consist of thermal switches detecting a temperature greater than 200°C.

### **PUSH-BUTTON**

The push-button enables the pilot to test the detection system by opening the grounding circuit. It is connected in series with the 7 detectors. The push-button is located on the L.H. side instrument panel the "FIRE DETECT TEST" placard.

### **DISPLAY**

#### ■ **Airplane equipped with GARMIN G1000 flight deck (MOD70-0176-00)**

Refer to the "GARMIN G1000 Integrated Flight Deck Cockpit Reference Guide for TBM 850", P/N 190-00708-00, at its latest revision.

#### ■ **Airplane retrofited with GARMIN G1000 flight deck (MOD70-0276-00)**

Refer to the "GARMIN G1000 Integrated Flight Deck Cockpit Reference Guide for TBM 700", P/N 190-01247-00, at its latest revision.

#### **Airplane retrofited with GARMIN G1000 NXi flight deck (MOD70-0539-00)**

Refer to the "GARMIN G1000 NXi Integrated Flight Deck Cockpit Reference Guide for TBM 850/900", P/N 190-02349-00, at its latest revision.



# SUPPLEMENT

## CHIP DETECTION SYSTEM

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**SECTION 1****GENERAL**

This supplement is intended to inform the pilot about the equipment limitations, description and operations necessary to the operation when the TBM airplane is equipped with the option "CHIP DETECTION SYSTEM".

**SECTION 2****LIMITATIONS**

The installation and the operation of the CHIP DETECTION SYSTEM do not change the limitations of the airplane described in Section 2 "Limitations" of the basic Pilot's Operating Handbook.

### SECTION 3

## EMERGENCY PROCEDURES

The emergency procedures hereafter supplement those of the standard airplane described in Section 3 "Emergency procedures" of the basic Pilot's Operating Handbook, when the TBM airplane is equipped with the option "CHIP DETECTION SYSTEM".

### OIL CONTAMINATION CHIP

Indication : "**CHIP**" amber warning on

#### **On ground**

*Before engine start :*

1 - Do not start engine.

*After engine start or after landing :*

1 - Return to parking area.

2 - Shut down engine.

3 - Inspect chip detector(s) and engine, if required.

#### **In flight**

1 - Check and monitor engine parameters.

2 - Land as soon as practical.

3 - Shut down engine.

4 - Inspect chip detector(s) and engine, if required.

**SECTION 4**  
**PROCEDURES NORMALES**

The normal procedures hereafter supplement those of the standard airplane described in Section 4 "Normal procedures" of the basic Pilot's Operating Handbook, when the TBM airplane is equipped with the option "CHIP DETECTION SYSTEM".

When "CHIP" amber warning goes on, it causes the illumination of the "Master Caution" light.

**SECTION 5**  
**PERFORMANCE**

The installation and the operation of the CHIP DETECTION SYSTEM do not change the basic performance of the airplane described in Section 5 "Performance" of the basic Pilot's Operating Handbook.

**SECTION 6**  
**WEIGHT AND BALANCE**

Information hereafter supplement those given for the standard aircraft in Section 6 "Weight and balance" of the basic Pilot's Operating Handbook.

A or O	OPTIONAL EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
<b>79 - LUBRICATION</b>				
A	Chip detection system (2 detectors) (MOD70-0169-79A)		Negligible	/
A	Chip detection system (1 detector) (MOD70-0169-79B)		Negligible	/
A	Chip detection system (2 detectors) with GARMIN flight deck system (MOD70-0169-79C)		Negligible	/

**SECTION 7**  
**DESCRIPTION**

The chip detection system enables the monitoring of engine oil system.

The system includes one chip detector installed on propeller reduction gear box and, if installed, a second chip detector installed on engine accessory gear box.

■ In case of chip detection, amber warning light “CHIP” on advisory panel or amber CAS message “CHIP” on GARMIN flight deck system screen goes on.



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## MEXICO SPECIFICS

### MOD70-0212-11

This supplement includes the general, limitations, emergency procedures, normal procedures, performance, weight and balance and description in addition to those of TBM airplane in its standard version.

This Supplement includes information to be furnished to the pilot as required by the certification conditions.

***This Supplement Revision 2 meeting the Mexico DGAC requirements is approved under the authority of DOA EASA.21J.013.  
Approval Number : EASA.21J.013 17275 T/N DOA***

Date : September 28, 2017

THIS DOCUMENT MUST BE EMBODIED IN SECTION 9 OF THE PILOT'S OPERATING HANDBOOK AND BE PERMANENTLY KEPT IN THE AIRPLANE

## LIST OF EFFECTIVE PAGES AND VALIDITIES

ORIGINAL ISSUE OF SEPTEMBER 30, 2011

From S/N 1 to S/N 999, except S/N 687

*P/N Z00.DMAFM45EE0R2MX*

Page No.	Revision No.	Page No.	Revision No.
9.45A	2	9.45.15	2
9.45B	2	9.45.16	2
9.45C	1	9.45.17	2
9.45D	2	9.45.18	2
9.45.1	2	9.45.19	2
9.45.2	0	9.45.20	2
9.45.3	0	9.45.21	2
9.45.4	0	9.45.22	2
9.45.5	0	9.45.23	2
9.45.6	0	9.45.24	2
9.45.7	0	9.45.25	2
9.45.8	0	9.45.26	2
9.45.9	0	9.45.27	2
9.45.10	0	9.45.28	2
9.45.11	0	9.45.29	2
9.45.12	0	9.45.30	2
9.45.13	0	9.45.31	2
9.25.13A	1	9.45.32	2
9.25.13B	1	9.45.33	2
9.45.14	2	9.45.34	2

***This Supplement Revision 2 meeting the Mexico DGAC requirements is approved under the authority of DOA EASA.21J.013.***

***Approval Number : EASA.21J.013 17275 T/N DOA***

Date : September 28, 2017

**LIST OF AMENDMENTS**

Revision 1 of April 29, 2016

Pages	Description
9.45A	Approval page
9.45B	List of effective pages and validities
9.45C	List of amendments
9.45.13A and 9.45.13B	Integration of TR17 "AIR TOTAL extinguisher"
9.45.17	Modification of "OILS - ACEITES" placard : addition of AEROSHELL 560
9.45.15, 9.45.16, 9.45.18, 9.45.20	Terminology

## LIST OF AMENDMENTS

Revision 2 of July 17, 2017

Pages	Description
9.45A	Approval page
9.45B	List of effective pages and validities
9.45D	List of amendments
9.45.1	Table of contents
9.45.14 to 9.45.17	Addition of placards for MOD70-0505-25
9.45.14, 9.45.18 thru 9.45.34	Text moving

# SUPPLEMENT

## MEXICO SPECIFICS

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**SECTION 1**  
**GENERAL**

This supplement is intended to inform the pilot about the airplane specifics, among others those required by the relevant Certification Authorities (limitations, description and operations necessary to the operation of the TBM airplane).

**SECTION 2**  
**LIMITATIONS**

The limitations hereafter supplement or replace those of the standard airplane described in Section 2 "Limitations" of the basic Pilot's Operating Handbook.

**PLACARDS**

**Internal placards**

- 1) Rear pressurized baggage compartment (in cabin)
- d) On bottom bulkhead

**TBM 700A, TBM 700B**

I4112003AAAE/MA8001

**MÁXIMO 100 kg - (220 lbs)**  
**ES RESPONSABILIDAD DEL PILOTO**  
**COMPROBAR QUE TODO EL EQUIPAJE ESTÁ**  
**ASEGURADO CORRECTAMENTE.**  
**PARA INSTRUCCIONES DE CARGA REFIERASE**  
**A LOS "DATOS DE PESO Y BALANCE"**  
**DEL MANUAL DE OPERACIÓN DEL PILOTO.**

e) On partition wall

**TBM 700C1, TBM 850**

I4112003AAAEMA8001

**MÁXIMO 100 kg - (220 lbs)**  
ES RESPONSABILIDAD DEL PILOTO  
COMPROBAR QUE TODO EL EQUIPAJE ESTÁ  
ASEGURADO CORRECTAMENTE.  
PARA INSTRUCCIONES DE CARGA REFIERASE  
A LOS "DATOS DE PESO Y BALANCE"  
DEL MANUAL DE OPERACIÓN DEL PILOTO.

or

I4112003AAAAGMA8201

**MÁXIMO 100 kg - (220 lbs)**  
ES RESPONSABILIDAD DEL PILOTO  
COMPROBAR QUE TODO EL EQUIPAJE ESTÁ  
ASEGURADO CORRECTAMENTE.  
PARA INSTRUCCIONES DE CARGA REFIERASE  
A LOS "DATOS DE PESO Y BALANCE" DEL MANUAL  
DE OPERACIÓN DEL PILOTO Y LA GRÁFICA DE AL LADO.

COMPARTIMIENTO DE CABINA

Weight (lbs)	Weight (kg)
220	25
187	35

**TBM 700C2** (Refer to POH Supplement 41)

With partition net version A (refer to Section 6 of TBM 700C1 Pilot's Operating Handbook)

I4112003AAAAGMA8301

**MÁXIMO 45 kg - (100 lbs)**  
ES RESPONSABILIDAD DEL PILOTO  
COMPROBAR QUE TODO EL EQUIPAJE  
ESTÁ ASEGURADO CORRECTAMENTE.  
PARA INSTRUCCIONES DE CARGA  
REFIERASE A LOS "DATOS DE PESO Y BALANCE"  
DEL MANUAL DE OPERACIÓN DEL PILOTO.



With partition net version B (refer to Section 6 of TBM 700C1 Pilot's Operating Handbook)

14112003AAAAGMA8201

<p><b>MÁXIMO 100 kg - (220 lbs)</b></p> <p>ES RESPONSABILIDAD DEL PILOTO COMPROBAR QUE TODO EL EQUIPAJE ESTÁ ASEGURADO CORRECTAMENTE.</p> <p>PARA INSTRUCCIONES DE CARGA REFIERASE A LOS "DATOS DE PESO Y BALANCE" DEL MANUAL DE OPERACIÓN DEL PILOTO Y LA GRÁFICA DE AL LADO.</p>	
--	--

- 2) Non pressurized FWD baggage compartment
  - a) On baggage compartment door frame

**TBM 700A, TBM 700B and TBM 850 S/N 269 and from S/N 434**

14112003AAAEMA8100

<p><b>MÁXIMO 50 kg - (110 lbs)</b></p> <p>PARA INSTRUCCIONES DE CARGA REFIERASE A LOS "DATOS DE PESO Y BALANCE" DEL MANUAL DE OPERACIÓN DEL PILOTO.</p>
---

- 3) Non pressurized rear baggage compartment  
a) On internal face of the baggage compartment door

**TBM 700C, TBM 850 up to S/N 433 except S/N 269**

14112003AAAAGIMA8000

**MÁXIMO 35 kg - (77 lbs)**

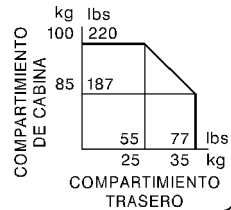
PARA INSTRUCCIONES DE CARGA REFIERASE  
A LOS "DATOS DE PESO Y BALANCE"  
DEL MANUAL DE OPERACIÓN DEL PILOTO.

or

14112003AAAAGMA8101

**MÁXIMO 35 kg - (77 lbs)**

PARA INSTRUCCIONES DE CARGA  
REFIERASE A LOS "DATOS DE PESO Y  
BALANCE" DEL MANUAL DE OPERACIÓN  
DEL PILOTO Y LA GRÁFICA DE AL LADO.



- 4) On cockpit R.H. side, at front seat level

**TBM 700A, TBM 700B (chemical oxygen)**

14112003AAAEMA18001

**OXÍGENO DE EMERGENCIA**

EN EL CAJÓN BAJO EL ASIENTO; JALE  
COMPLETAMENTE LA MÁSCARA FUERA DEL CAJÓN;  
CUANDO ESTÁ TOTALMENTE EXTENDIDA DÉ UN  
TIRÓN A LA CUERDA. MÁXIMA DURACIÓN: 12 MIN.  
REFERASE AL MANUAL DE OPERACIÓN DEL PILOTO.  
NO FUMAR CUANDO ESTÉ EN USO.

- 5) Under seating of intermediate and rear passenger seats (on FWD side), which are fitted with oxygen

**TBM 700A, TBM 700B (chemical oxygen)**

I4112003AAAEMA8500

<p><b>PUSH TO OPEN</b> <b>EMPUJE PARA ABRIR</b></p>
<p><b>OXÍGENO DE EMERGENCIA</b> EN EL CAJÓN BAJO EL ASIENTO; JALE COMPLETAMENTE LA MÁSCARA FUERA DEL CAJÓN; CUANDO ESTÁ TOTALMENTE EXTENDIDA DÉ UN TIRÓN A LA CUERDA. MÁXIMA DURACIÓN: 12 MIN. REFIERASE AL MANUAL DE OPERACIÓN DEL PILOTO. NO FUMAR CUANDO ESTÉ EN USO.</p>

- 6) On R.H. side at front seat level and on the first rear passengers masks container (R.H. side on the ceiling)

**TBM 700C, TBM 850 (standard definition)**

I4112003AAAFMA18101

<p><b>WARNING</b> GREASY SUBSTANCES ARE CAPABLE OF SPONTANEOUS COMBUSTION ON CONTACT WITH OXYGEN DO NOT SMOKE WHILE OXYGEN IS IN USE</p>	<p><b>ADVERTENCIA</b> SUSTANCIAS GRASOSAS PUEDEN PROVOCAR COMBUSTIÓN ESPONTÁNEA AL ESTAR EN CONTACTO CON OXÍGENO NO FUMAR CUANDO EL OXÍGENO ESTÁ EN USO</p>
--	---

- 7) On rear passengers masks containers (on R.H. side on the ceiling)

**TBM 700C, TBM 850 (standard definition)**

I4112003AAAFMA18201

<p>OXYGEN MASKS INSIDE</p>	<p>MÁSCARAS DE OXÍGENO DENTRO</p>
<p>PULL MASKS FOR OXYGEN SUPPLY</p>	<p>JALE LAS MÁSCARAS PARA SUMINISTRO DE OXÍGENO</p>

8) On rear passenger's table casing

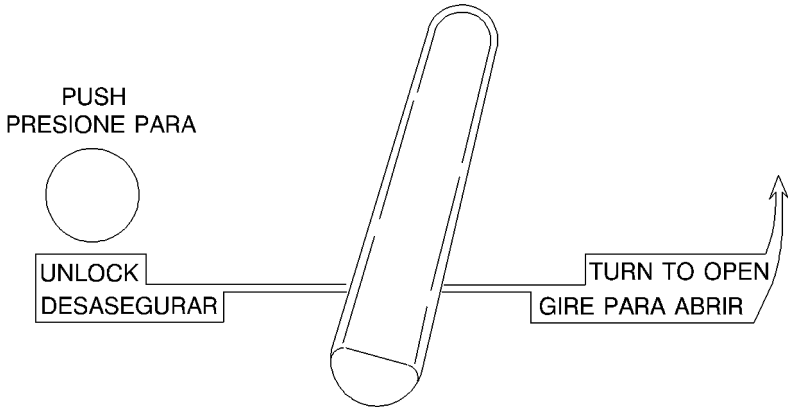
**ALL**

LA MESA DEBE ESTAR GUARDADA DURANTE EL DESPEGUE Y ATERRIZAJE.

I4112003AAEM/A8400

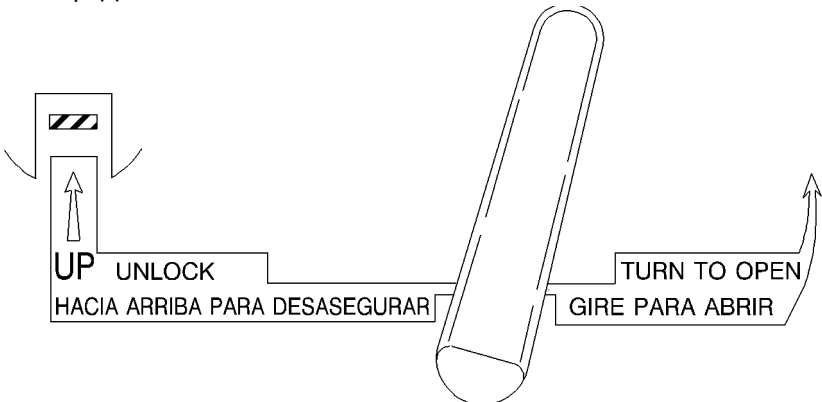
9) Door internal side

a) On access door - **TBM 700A** from S/N 1 to S/N 49, except airplanes equipped as a retrofit with modification No. MOD70-019-25



I4112002AAAFMA8201

b) On access door - **TBM 700A** from S/N 50 to S/N 125, plus airplanes equipped as a retrofit with modification No. MOD70-019-25



I4112002AAAFMA8301

c) On access door - **TBM 700A** S/N 30, 35 and from S/N 50 to S/N 125

I4112003AAAUMAB100



d) On access door - **TBM 700B, TBM 700C, TBM 850 up to S/N 433**  
**except S/N 269**

I4112003AAAUFMA8101



CAUTION: UNLOCK BEFORE OPERATING THE HANDLE  
PRECAUCIÓN: DESASEGURE ANTES DE OPERAR LA MANIJA

TURN HANDLE TO OPEN  
GIRE LA MANIJA PARA ABRIR

e) On access door - **TBM 850 S/N 269 and from S/N 434**

I4112003AAAQMA8300



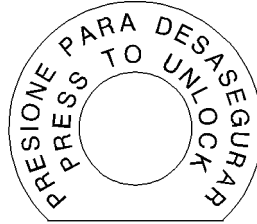
CAUTION: UNLOCK BEFORE OPERATING THE HANDLE  
PRECAUCIÓN: DESASEGURE ANTES DE OPERAR LA MANIJA

TURN HANDLE TO OPEN  
GIRE LA MANIJA PARA ABRIR

f) On "pilot" door (if installed)

**TBM 700B, TBM 700C, TBM 850 up to S/N 433 except S/N 269**

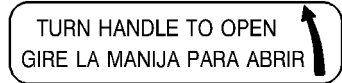
I4112003AAAFMA8201



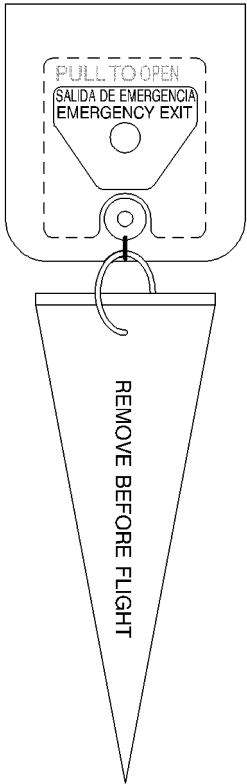
g) On "pilot" door (if installed)

**TBM 850 S/N 269 and from S/N 434**

I4112003AAQMA8200



- 10) On emergency exit handle
  - a) **TBM 700A** From S/N 1 to 23, 25, 28, 33 and 35, except airplanes equipped as a retrofit with modification No. MOD 70-019-25

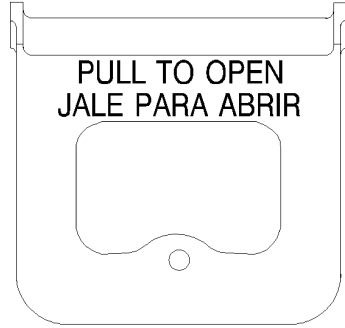
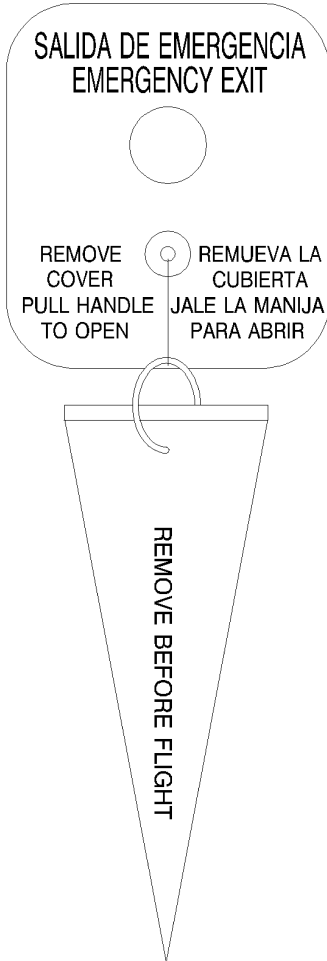


I4112003AAAFMA18500

- b) **ALL** From S/N 24, 26, 27, 29 to 32, 34, 36 to 9999, plus airplanes equipped as a retrofit with modification No. MOD 70-019-25

Marking on cover

Marking on handle



141T2003AAAF/M/A8401



11) On landing gear emergency control access door

- a) **TBM 700A, 700B, TBM 700C, TBM 850 not equipped with MOD70-0189-53**

I4112003AAAAMA8401

LDG GEAR EMERGENCY  
UNDER HATCH  
TREN DE ATERRIZAJE  
DE EMERGENCIA  
DEBAJO DE LA ESCOTILLA

- b) **TBM 850 equipped with MOD70-0189-53**

I4112003AAAAMA18400

LDG GEAR EMERGENCY  
ACCESS PULL  
TREN DE ATERRIZAJE  
DE EMERGENCIA  
JALE AQUI

12) At the upper corner of the window on each side of the cockpit

**ALL**

I4112003AAAAMA8301

HANDLE  
HERE  
MANIJA  
AQUI

13) On cabinet drawer

**ALL**

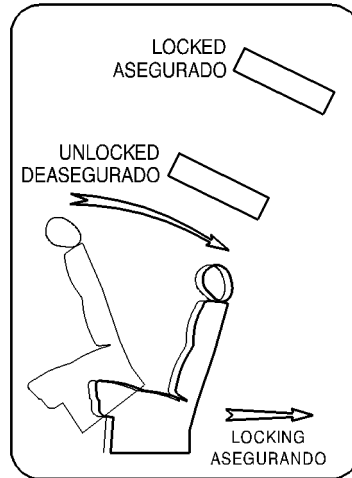
I4112003AA-IMA18000

**GAFAS PARA HUMO**

14) On aisle side of rear seats

**TBM 700A - PRE-MOD70-019-25**

I4112003AA-IMA18301



Pre-MOD70-0336-26 and Post-MOD70-0391-26D

14A) On R.H. side at front seat level

I4113207AAAAA8401

**EXTINTOR**  
ALMACENADO EN EL  
CAJÓN INFERIOR DEL GABINETE  
QUE ESTÁ DETRÁS DEL ASIENTO DERECHO

14B) On the lower drawer of the R.H. cabinet

I4113207AAAAA8101

**EXTINTOR ADETRO**

**TBM 850** Airplanes from S/N 434 and equipped with MOD70-0505-25  
“Lavatory compartment”

15) - On fixed panel, cabin side

I4113200AAAKMA8300

**EL DIVISOR DEBE ESTAR ALMACENADO DURANTE EL DESPEGUE Y EL ATERRIZAJE**

- 16) - On fixed panel, toilet side

I4113200AAAKMA8000

EL INODORO NO DEBE  
ESTAR OCUPADO DURANTE EL  
DEPEGUE Y EL ATERRIZAJE  
  
CIERRE Y ASEGURE LA TAPA  
DEL INODORO CUANDO NO ESTÉ EN USO  
  
NO CUELGUE O GUARDE OBJETOS  
EN EL BAÑO O DIVISOR  
  
EL DIVISOR DEBE ESTAR ALMACENADO  
DURANTE EL DESPEGUE Y EL ATERRIZAJE  
  
USE LOS AURICULARES CUANDO EL  
DIVISOR ESTÉ DESPLEGADO

- 17) - On access door, cabin side and toilet side

I4113200AAAKMA8200

EMERGENCY  
STOWAGE  
ALMACENADO  
DE  
EMERGENCIA  
  
REMOVE  
COVER  
REMUEVA LA  
CUBIERTA

18) - Behind access door, cabin side

I4113200AAA KMA8100



19) - Behind access door, toilet side

I4113200AAA LMA8100



20) - Front face of lavatory compartment, near opening / closing switches

I4113200AAA KMA18000



I4113200AAA KMA8400



21) - On the magazine rack and on side wall of storage volume

I4113200AAAKMA18100

1,5 KG (3.3 LBS)

**ALL**

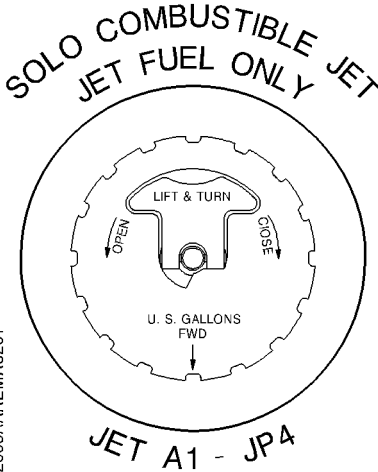
**External placards**

- 22) Under engine cowling and under each wing

I4112003AAAAMA1B300



- 23) Near fuel tank caps
  - a) **ALL up to S/N 433 except S/N 269**



I4112003AAAEMA8201

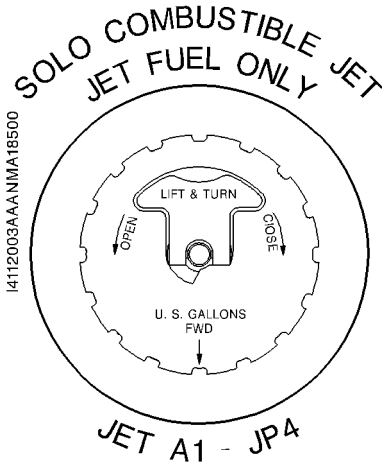
**COMBUSTIBLE JET A**

**CAPACIDAD TOTAL 550 L (145.3 us gal.)**

SE NECESITA ADITIVO ANTICONGELANTE. REFIERASE AL  
MANUAL DE OPERACIÓN DEL PILOTO PARA OTRAS CANTIDADES  
DE COMBUSTIBLE Y TIPOS DE ADITIVOS APROBADOS.

- OPEN ↔ ABRA
- CLOSE ↔ CIERRE
- LIFT & TURN ↔ LEVANTE Y GIRE
- LOCK ↔ ASEGURAR
- FWD ↔ ADELANTE

b) TBM 850 S/N 269 and from S/N 434



**COMBUSTIBLE JET A**

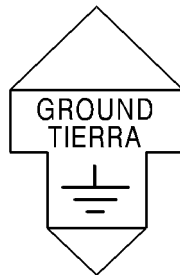
CAPACIDAD TOTAL 570 L (150.5 us gal.)

SE NECESITA ADITIVO ANTICONGELANTE. REFERASE AL MANUAL DE OPERACIÓN DEL PILOTO PARA OTRAS CANTIDADES DE COMBUSTIBLE Y TIPOS DE ADITIVOS APROBADOS.

OPEN ← ABRA  
CLOSE ← CIERRE  
LIFT & TURN ← LEVANTE Y GIRE  
LOCK ← CERRAR  
FWD ← ADELANTE

c) ALL

I4112003AAAHMA8201





**ALL**

- 24) Above brakes hydraulic fluid reservoir against firewall

I4112003AAAHHMA18101

FRENOS  
MIL - H - 5606  
AIR 3520  
FLUIDO HIDRÁULICO

- 25) On langing gear hydraulic fluid reservoir

I4112003AAAHHMA18001

GEARS  
TRENES  
MIL - H - 5606  
AIR 3520  
HYDRAULIC FLUID  
FLUIDO HIDRÁULICO

- 26) On fuse box in engine cowling

I4112003AAAHHMA18200

CAJA DE FUSIBLES  
Y FOCOS

- 27) On internal face of L.H. engine cowling
  - a) **ALL**

I4112003AAAEMA8300



I4112003AAAHMA8101

OILS - ACEITES	
<input type="checkbox"/>	AEROSHELL 560
<input type="checkbox"/>	EXXON 2380 OR ESSO 2380 OR BPTO 2380
<input type="checkbox"/>	MOBIL JET OIL II
<input type="checkbox"/>	MOBIL JET OIL 254
<input type="checkbox"/>	AERO SHELL TURBINE OIL 500
<input type="checkbox"/>	ROYCO TURBINE OIL 500
<input type="checkbox"/>	CASTROL 5000
<input type="checkbox"/>	TURBONYCOIL 525-2A

- b) **TBM 700A, 700B, TBM 700C**

I4112003AAAJMA8301

BATERÍA	
<input type="checkbox"/>	NÍQUEL-CADMIO
<input type="checkbox"/>	PLOMO-ÁCIDO EN ESTE CASO LA LUZ ROJA DE ADVERTENCIA "BAT OVHT" ESTÁ DESACTIVADA.

**ALL**

- 28) On front lower portion of firewall L.H. side

I4112003AAA.HIMA.8401



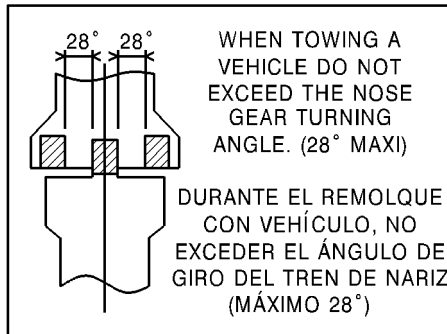
- 29) On engine cowling, in front of compartment door

I4112003AAA.EMA.18200

**ALIMENTACIÓN EXTERNA:  
28 VOLTS C.D. NOMINAL.  
CAPACIDAD MÍNIMA DE ARRANQUE:  
800 AMPS  
NO EXCEDER 1400 AMPS**

- 30) On nose gear door

I4112003AAA.EMA.18101



- 31) On nose gear leg

**ALL**

I4112003AAA IMA8200

TREN DE ATERRIZAJE  
DE NARIZ  
PRESIÓN DE LLANTA: 6,5 bar  
94 psi

- 32) On main gear leg

**TBM 700A, TBM 700B, TBM 700C1**

I4112003AAA IMA8100

TREN DE ATERRIZAJE  
PRINCIPAL  
PRESIÓN DE LLANTA: 8,25 bar  
120 psi

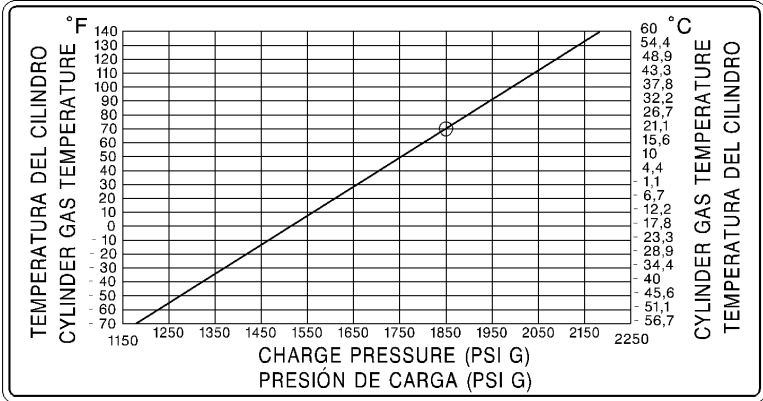
**TBM 700C2, TBM 850**

I4112003AAA IMA8300

TREN DE ATERRIZAJE  
PRINCIPAL  
PRESIÓN DE LLANTA: 8,96 bar  
130 psi

33) On internal face of the oxygen cylinder service door

**TBM 700C, TBM 850 (standard definition)**



34) On the oxygen service door

**TBM 700C, TBM 850 (standard definition)**

I4112003AAA IMA18101

PUNTO DE SERVICIO PARA  
OXÍGENO. NO USAR LUBRICANTES

35) Near air data system port

**ALL**

I4112003AAA HMA8001

MANTENGA LIMPIO

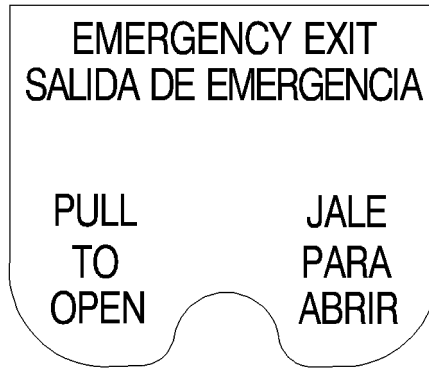
- 36) On external side of emergency locator transmitter inspection door  
ALL

I4112003AAA AHMA18400



- 37) On emergency exit external side  
ALL

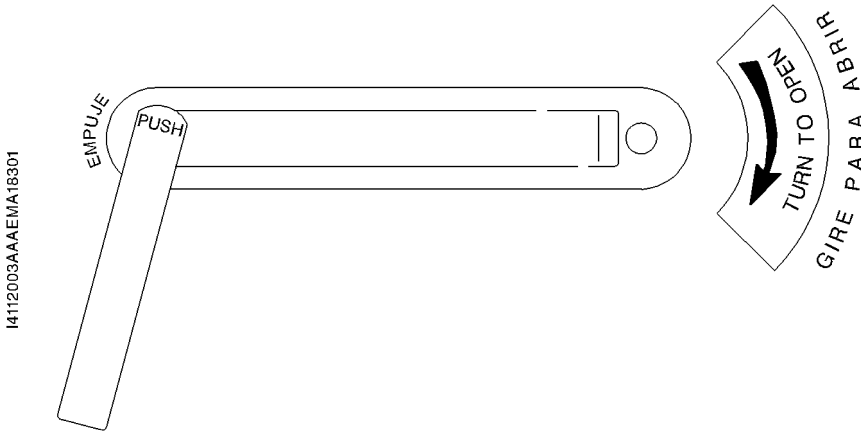
I4112003AAA FMA8500



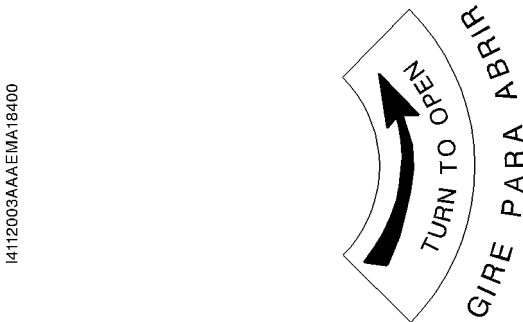
■ 38) Door external side

a) **TBM 700A** - On access door

**TBM 700B, TBM 700C, TBM 850** - On "pilot" door (if installed)



b) **TBM 700B, TBM 700C, TBM 850** - On access door



- c) **TBM 700B, TBM 700C, TBM 850** - On outer fuselage skin aft of access door and in the cabin forward of access door

I4112003AAA AFMA 8000



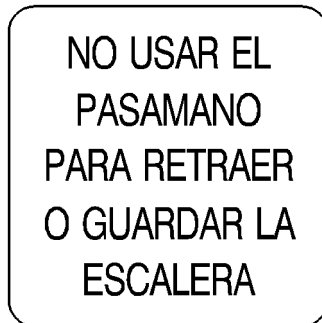
- 39) **ALL** - On last step of stairs

I4112003AAA AFMA 8300

CARGA MÁXIMA SOBRE LA ESCALERA : UNA PERSONA

- 40) On R.H. access door jamb  
**TBM 700B, TBM 700C, TBM 850**

I4112003AAA AFMA 18001





**Placards relative to optional equipment**

- 41) Airplanes equipped with option OPT70 25002 :  
“7-place accomodation” (refer to POH Supplement 7)
  - a) **Specific for S/N 7**
    - On cockpit R.H. side, at front seat level

I4112003AAAEMA18001

**OXÍGENO DE EMERGENCIA**  
EN EL CAJÓN BAJO EL ASIENTO; JALE  
COMPLETAMENTE LA MÁSCARA FUERA DEL CAJÓN;  
CUANDO ESTÁ TOTALMENTE EXTENDIDA DÉ UN  
TIRÓN A LA CUERDA. MÁXIMA DURACIÓN: 12 MIN.  
REFERIRASE AL MANUAL DE OPERACIÓN DEL PILOTO.  
NO FUMAR CUANDO ESTÉ EN USO.

- Under seating of intermediate and R.H. rear seats (on FWD side)  
equipped with oxygen

I4112003AAAEMA8500

**PUSH TO OPEN  
EMPUJE PARA ABRIR**

**OXÍGENO DE EMERGENCIA**  
EN EL CAJÓN BAJO EL ASIENTO; JALE  
COMPLETAMENTE LA MÁSCARA FUERA DEL CAJÓN;  
CUANDO ESTÁ TOTALMENTE EXTENDIDA DÉ UN  
TIRÓN A LA CUERDA. MÁXIMA DURACIÓN: 12 MIN.  
REFERIRASE AL MANUAL DE OPERACIÓN DEL PILOTO.  
NO FUMAR CUANDO ESTÉ EN USO.

- On FWD side of the rear divan seating

I4112003AAAGMA18300

**OXÍGENO DE EMERGENCIA**  
MÁXIMA DURACIÓN: 12 MIN  
REFERIRASE AL MANUAL DE OPERACIÓN DEL PILOTO.  
NO FUMAR CUANDO ESTÉ EN USO.

- On the rear divan middle seating

I4:112003AAAJMA8201

**OXÍGENO DE EMERGENCIA**

EN EL CAJÓN ENTRE LOS ASIENTOS, JALE  
COMPLETAMENTE LA MÁSCARA; CUANDO ESTÁ  
TOTALMENTE EXTENDIDA DÉ UN TIRÓN A LA CUERDA.  
MÁXIMA DURACIÓN - 12 MIN  
REFIERASE AL MANUAL DE OPERACIÓN DEL PILOTO.  
NO FUMAR CUANDO ESTÉ EN USO

**b) From S/N 68 to S/N 243, except S/N 72 to 75 and S/N 205 and 240**

- On cockpit R.H. side, at front seat level

I4:112003AAAEMA18001

**OXÍGENO DE EMERGENCIA**

EN EL CAJÓN BAJO EL ASIENTO; JALE  
COMPLETAMENTE LA MÁSCARA FUERA DEL CAJÓN;  
CUANDO ESTÁ TOTALMENTE EXTENDIDA DÉ UN  
TIRÓN A LA CUERDA. MÁXIMA DURACIÓN: 12 MIN.  
REFIERASE AL MANUAL DE OPERACIÓN DEL PILOTO.  
NO FUMAR CUANDO ESTÉ EN USO.

- Under seating of L.H. intermediate seat, R.H. rear seat and rear seats (on FWD side)

I4:112003AAAEMA18500

**PULL TO OPEN  
JALE PARA ABRIR****OXÍGENO DE EMERGENCIA**

EN EL CAJÓN BAJO EL ASIENTO; JALE  
COMPLETAMENTE LA MÁSCARA FUERA DEL CAJÓN;  
CUANDO ESTÁ TOTALMENTE EXTENDIDA DÉ UN  
TIRÓN A LA CUERDA. MÁXIMA DURACIÓN: 12 MIN.  
REFIERASE AL MANUAL DE OPERACIÓN DEL PILOTO.  
NO FUMAR CUANDO ESTÉ EN USO.

c) **S/N 7 and from S/N 68 to S/N 243, except S/N 72 to 75 and S/N 205 and 240**

- On bottom bulkhead of rear pressurized baggage compartment (in cabin)

VERSIÓN 6-ASIENTOS : MÁXIMO 100 kg - (220 lbs)  
VERSIÓN 7-ASIENTOS : MÁXIMO 35 kg - (77 lbs)  
ES RESPONSABILIDAD DEL PILOTO  
COMPROBAR QUE TODO EL EQUIPAJE  
ESTÁ ASEGURADO CORRECTAMENTE.  
PARA INSTRUCCIONES DE CARGA REFIERASE  
A LOS "DATOS DE PESO Y BALANCE"  
DEL MANUAL DE OPERACIÓN DEL PILOTO

- On L.H. side, under R.H and L.H intermediate seat seatings or on L.H. intermediate seat back-rest

JALE LA MANIJA HACIA ARRIBA Y EMPUJE EL  
RESPALDO DEL ASIENTO HACIA ADELANTE

I4112003AAAAGM18401

I4112003AAAAIM18200

- 42) **TBM 700B & TBM 700C1 with pilot door** Airplanes equipped with option OPT70 25027 : “Cargo transportation capability” (refer to POH Supplement 30)

- On the raiser at frame 13bis, inside the cabin

### LÍMITES DE CARGA

<p style="text-align: center;"><b>CONTENEDORES, PLATAFORMAS Y CAJAS PESADAS</b></p> <p style="text-align: center;">MÁXIMO 330 Kg (727 Lbs)</p> <p style="text-align: center;">MÁXIMO 188 Kg/m<sup>2</sup> (38.5 Lb/Sq.ft)</p>	<p style="text-align: center;"><b><u>CARGAMENTO A GRANEL</u></b></p> <p style="text-align: center;">200 Kg (441 Lbs)</p> <p style="text-align: center;">ENTRE REDES DE SEPARACIÓN</p> <p style="text-align: center;">100 Kg (220 Lbs)</p> <p style="text-align: center;">DETRÁS DE LA RED DE</p> <p style="text-align: center;">SEPARACIÓN TRASERA</p> <p style="text-align: center;">100 Kg/m<sup>3</sup> (6.24 Lb/Cu.ft)</p>
---	--

---

PARA INSTRUCCIONES DE CARGA REFIERASE AL SUPLEMENTO  
APLICABLE EN EL MANUAL DE OPERACIÓN DEL PILOTO.

---

ES RESPONSABILIDAD DEL PILOTO COMPROBAR QUE  
TODA LA CARGA ESTÁ ASEGURADA CORRECTAMENTE.

I4112003AAAAGMA18101

- Under L.H. front side window

### LÍMITES DE OPERACIÓN VERSIÓN CARGA

---

SI LA SALIDA DE EMERGENCIA NO ESTÁ ACCESIBLE,  
NO USE EL ASIENTO DELANTERO DERECHO

I4112003AAAAGMA18001

- 43) **TBM 700B without pilot door** Airplanes equipped with option OPT70 25031 : “Cargo transportation capability without pilot door” (refer to POH Supplement 40)
  - On the raiser at frame 13bis, inside the cabin

**LÍMITES DE CARGA**

<p style="text-align: center;"><u>CONTENEDORES, PLATAFORMAS Y CAJAS PESADAS</u></p> <p style="text-align: center;">MÁXIMO 180 Kg (396 Lbs)</p> <p style="text-align: center;">MÁXIMO 188 Kg/m<sup>2</sup> (38.5 Lb/Sq.ft)</p>	<p style="text-align: center;"><u>CARGAMENTO A GRANEL</u></p> <p style="text-align: center;">100 Kg (220 Lbs)</p> <p style="text-align: center;">DETRÁS DE LA RED DE SEPARACIÓN TRASERA</p> <p style="text-align: center;">MÁXIMO 100 Kg/m<sup>3</sup> (6.24 Lb/Cu.ft)</p>
---	--

---

PARA INSTRUCCIONES DE CARGA, REFIERASE AL SUPLEMENTO  
APLICABLE EN EL MANUAL DE OPERACIÓN DEL PILOTO.

---

ES RESPONSABILIDAD DEL PILOTO COMPROBAR QUE  
TODA LA CARGA ESTÁ ASEGURADA CORRECTAMENTE.

I4112003AAA GMA 18201

- 44) **TBM 700B** Airplanes equipped with option OPT70 35001 : “EROS/INTERTECHNIQUE” gaseous oxygen system” (refer to POH Supplement 29 or 37)
  - On R.H. side at front seat level and on the first rear passengers masks container (R.H. side on the ceiling)

<p><b>WARNING</b></p> <p>GREASY SUBSTANCES ARE CAPABLE OF SPONTANEOUS COMBUSTION ON CONTACT WITH OXYGEN</p> <p>DO NOT SMOKE WHILE OXYGEN IS IN USE</p>	<p><b>ADVERTENCIA</b></p> <p>SUSTANCIAS GRASOSAS PUEDEN PROVOCAR COMBUSTIÓN ESPONTÁNEA AL ESTAR EN CONTACTO CON OXÍGENO</p> <p>NO FUMAR CUANDO EL OXÍGENO ESTÁ EN USO</p>
--	---

I4112003AAA FMA 18101

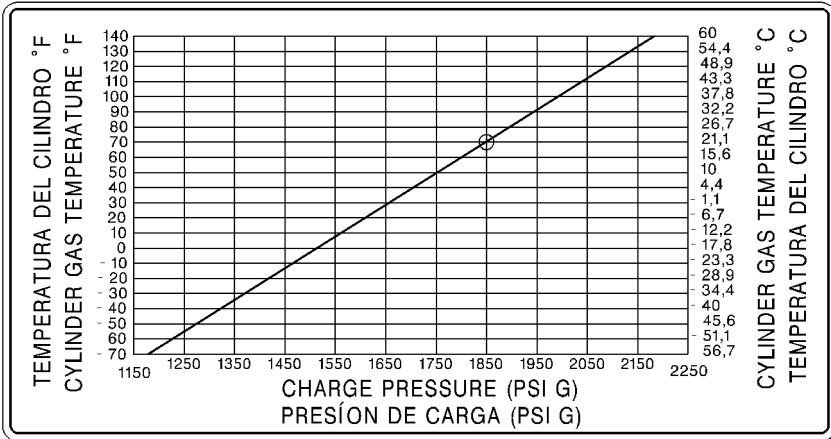
- On rear passengers masks containers (on R.H. side on the ceiling)

<p><b>OXYGEN MASKS INSIDE</b></p> <p>PULL MASKS FOR OXYGEN SUPPLY</p>	<p><b>MÁSCARAS DE OXÍGENO DENTRO</b></p> <p>JALE LAS MÁSCARAS PARA SUMINISTRO DE OXÍGENO</p>
---	--

I4112003AAA FMA 18201

- On internal face of the oxygen cylinder service door

I4112003AAAFMA18301



### SECTION 3

#### EMERGENCY PROCEDURES

No specifics

### SECTION 4

#### PROCEDURES NORMALES

No specifics

### SECTION 5

#### PERFORMANCE

No specifics

### SECTION 6

#### WEIGHT AND BALANCE

No specifics

**SECTION 7**  
**DESCRIPTION**

No specifics



**SUPPLEMENT****"AIRBORNE" GWX 68**  
**COLOR WEATHER RADAR****TABLE OF CONTENTS**

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5 - PERFORMANCE .....	9.47.5
6 - WEIGHT AND BALANCE .....	9.47.5
7 - DESCRIPTION .....	9.47.6



**SECTION 1****GENERAL**

This supplement supplies information necessary for the operation of the airplane when the optional “AIRBORNE” GWX 68 color weather radar system is installed in the TBM airplanes equipped with GARMIN flight deck.

**SECTION 2****LIMITATIONS**

These limitations supplement those of standard airplane described in Section 2 “Limitations” of the basic Pilot’s Operating Handbook.

On ground, the radar radiation is inhibited, when the landing gear shock absorbers are compressed. However, it is important to obey the following restrictions :

- Do not operate the radar during refueling operations or in the vicinity of trucks or containers containing flammables or explosives.
- Do not allow personel within 12 feet of area being scanned by antenna when system is transmitting.

**Airplane equipped with GARMIN G1000 flight deck (MOD70-0176-00)**

The “GARMIN” G1000 Integrated Flight Deck Cockpit Reference Guide for the TBM 850 P/N 190-00708-00 at its latest revision shall be readily available to the pilot whenever the operation of the radar system is predicted.

**Airplane retrofited with GARMIN G1000 flight deck (MOD70-0276-00)**

The “GARMIN” G1000 Integrated Flight Deck Cockpit Reference Guide for the TBM 700 P/N 190-01247-00 at its latest revision shall be readily available to the pilot whenever the operation of the radar system is predicted.

**Airplane retrofited with GARMIN G1000 NXi flight deck (MOD70-0539-00)**

The “GARMIN” G1000 NXi Integrated Flight Deck Cockpit Reference Guide for the TBM 850/900 P/N 190-02349-00 at its latest revision shall be readily available to the pilot whenever the operation of the radar system is predicted.

**SECTION 3**  
**EMERGENCY PROCEDURES**

Installation and operation of "AIRBORNE" GWX 68 color weather radar system do not change the basic emergency procedures of the airplane described in Section 3 "Emergency procedures" of the basic Pilot's Operating Handbook.

**CAUTION**

**IN REVERSIONARY MODE, THE WEATHER RADAR SYSTEM  
AUTOMATICALLY SWITCHES TO STANDBY MODE. THE SYSTEM  
REMAINS IN STANDBY MODE UNTIL BOTH DISPLAYS ARE  
RESTORED.**

**IN REVERSIONARY MODE, THE WEATHER RADAR SYSTEM  
CANNOT BE CONTROLLED**

**SECTION 4**  
**NORMAL PROCEDURES**

The normal procedures hereafter supplement those of the standard airplane described in Section 4 "Normal procedures" of the basic Pilot's Operating Handbook.

Normal operating procedures for "AIRBORNE" GWX 68 color weather radar system are outlined in the Pilot's Guide, the references of which are given in Section 2 "Limitations" of this Supplement.

**CAUTION**

**IN REVERSIONARY MODE, THE WEATHER RADAR SYSTEM  
 AUTOMATICALLY SWITCHES TO STANDBY MODE. THE SYSTEM  
 REMAINS IN STANDBY MODE UNTIL BOTH DISPLAYS ARE  
 RESTORED.**

**IN REVERSIONARY MODE, THE WEATHER RADAR SYSTEM  
 CANNOT BE CONTROLLED**

**AFTER ENGINE STARTING**

- Radar Mode Softkey ..... **STANDBY**  
 (A one-minute warm up period is initiated. The count down is displayed on the screen)

**AFTER TAKE OFF**

- Radar Mode Softkey ..... **As required**

<b>BEFORE LANDING</b>
- Radar Mode Softkey ..... <b>STANDBY</b>

<b>ENGINE SHUT-DOWN</b>
- Radar Mode Softkey ..... <b>OFF</b>

**SECTION 5**  
**PERFORMANCE**

Installation of “AIRBORNE” GWX 68 color weather radar system results in a 5 KIAS decrease in maximum cruise performance and a 3 KIAS decrease in Long Range cruise performance described in Section 5 “Performance” of the basic Pilot’s Operating Handbook.

**SECTION 6**  
**WEIGHT AND BALANCE**

Information hereafter supplement the one given for the standard airplane in Section 6 “Weight and balance” of the basic Pilot’s Operating Handbook.

A or O	OPTIONAL EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
<b>34 - NAVIGATION</b>				
A	Weather radar GWX 68 (MOD70-0176-00 Version C) (MOD70-0276-00 Version C)	AIRBORNE	9.36 (4.246)	173.46 (4.406)

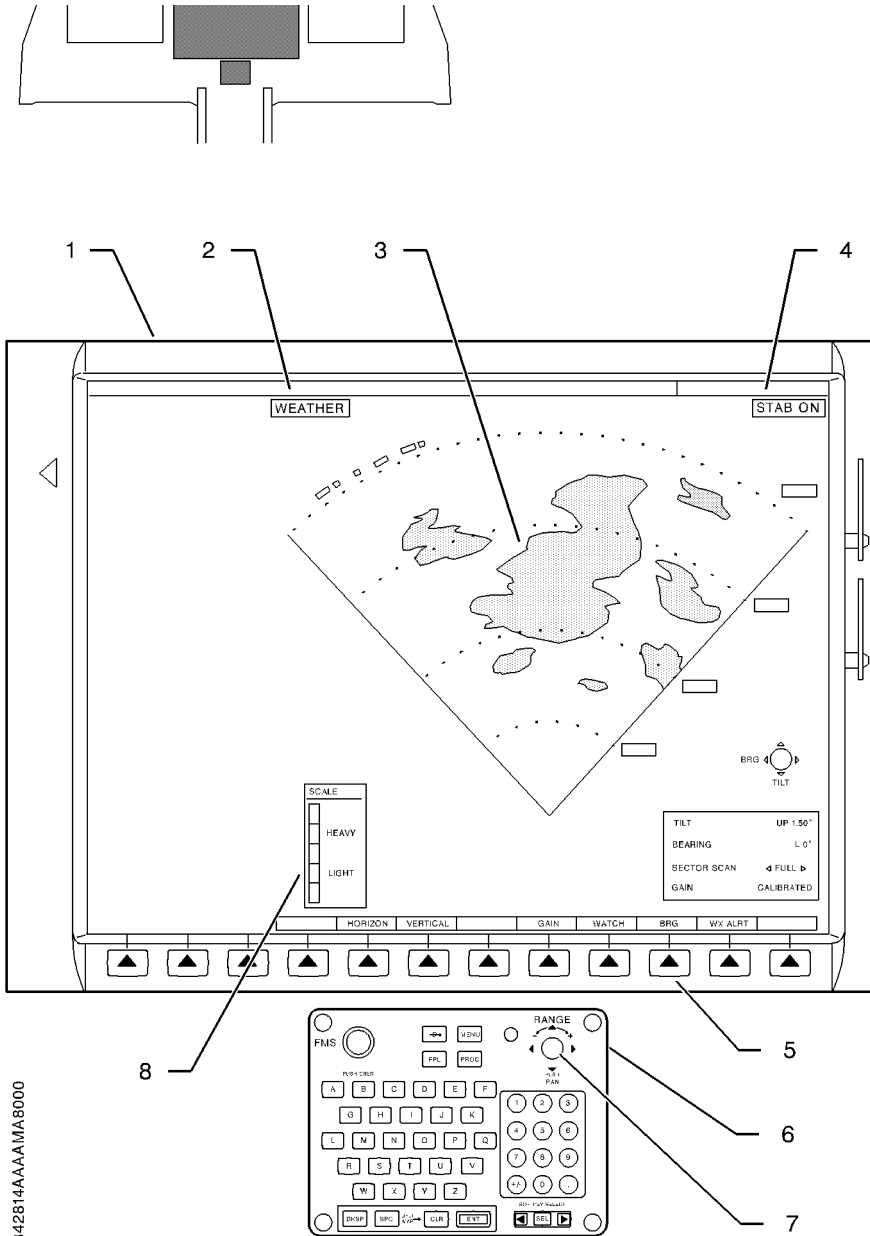
**SECTION 7**  
**DESCRIPTION**

The weather information are displayed only on the MFD.

The controls for the MFD are located on both the MFD bezel and the MFD control unit.

- 1) MFD
- 2) Radar mode
- 3) Area of weather display
- 4) Antenna stabilization status
- 5) MFD bezels
- 6) MFD control unit
- 7) Changes radar range, TILT and bearing
- 8) Scale for weather display

Figure 9.47.1 (1/2) – GWX 68 weather radar display and controls



14342814AAAAWA8000

Figure 9.47.1 (2/2) - GWX 68 weather radar display and controls

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# SUPPLEMENT

## "HONEYWELL" KTA 870 TAS SYSTEM

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6 - WEIGHT AND BALANCE .....	9.48.5
7 - DESCRIPTION .....	9.48.6



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**SECTION 1****GENERAL**

This supplement is intended to inform the pilot about the equipment limitations, description and operations necessary to the operation when the TBM 850 airplane is equipped with the option "HONEYWELL" KTA 870 TAS SYSTEM.

The KTA 870 TAS function enables to monitor the traffic by relying on information obtained from nearby airplane transponders. This function does neither detect, nor track airplanes which are not equipped with an operating ATCRBS transponder.

**SECTION 2****LIMITATIONS**

The limitations hereafter supplement those of the standard airplane described in Section 2 "Limitations" of the basic Pilot's Operating Handbook, when the TBM 850 airplane is equipped with the option "HONEYWELL" KTA 870 TAS SYSTEM.

**REMARK :**

*The KTA 870 TAS function is an advisory means, not a TCAS.*

Following documents or any further edition applicable to the latter, shall be readily available to the pilot, each time the KTA 870 system is used :

- KTA 870/KMH 880 Traffic Advisory System/Multi-Hazard Awareness System Pilot's Guide, P/N 006-18265-0000 Revision 0 dated 03/01,

and

**■** Airplane equipped with GARMIN G1000 flight deck (MOD70-0176-00)

- "GARMIN" G1000 Integrated Flight Deck Cockpit Reference Guide for the TBM 850 P/N 190-00708-00.

**■** Airplane retrofitted with GARMIN G1000 NXi flight deck (MOD70-0539-00)

- "GARMIN" G1000 NXi Integrated Flight Deck Cockpit Reference Guide for the TBM 850/900 P/N 190-02349-00.

**SECTION 3**  
**EMERGENCY PROCEDURES**

The installation and the operation of "HONEYWELL" KTA 870 TAS system do not change the basic emergency procedures of the airplane described in Section 3 "Emergency procedures" of the basic Pilot's Operating Handbook.

**SECTION 4**  
**NORMAL PROCEDURES**

The normal procedures hereafter supplement those of the standard airplane described in Section 4 "Normal procedures" of the basic Pilot's Operating Handbook, when the TBM airplane is equipped with the option "HONEYWELL" KTA 870 TAS SYSTEM.

<b>BEFORE TAKEOFF</b>	
- Traffic Page TEST Softkey .....	<b>PUSH</b>
- "TAS system test OK" voice alert .....	<b>HEARD</b>

**WARNING**

**DO NOT ATTEMPT EVASIVE MANEUVERS BASED SOLELY ON TRAFFIC INFORMATION SHOWN ON DISPLAY ASSOCIATED TO THE KTA 870 TAS FUNCTION. INFORMATION ON THE DISPLAY IS PROVIDED TO THE FLIGHT CREW AS AN AID IN VISUALLY ACQUIRING TRAFFIC; IT IS NOT A REPLACEMENT FOR ATC AND SEE & AVOID TECHNIQUES**

When the KTA 870 TAS function issues a Traffic Alert (aural or visual), look outside for the intruder airplane. When you spot an intruder airplane, use normal right-of-way procedures to maintain separation.

**SECTION 5**  
**PERFORMANCE**

The installation and the operation of the "HONEYWELL" KTA 870 TAS SYSTEM do not change the basic performance of the airplane described in Section 5 "Performance" of the basic Pilot's Operating Handbook.

**SECTION 6**  
**WEIGHT AND BALANCE**

Information hereafter supplement the one given for the standard airplane in Section 6 "Weight and balance" of the basic Pilot's Operating Handbook.

A or O	OPTIONAL EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
A	<b>34 - NAVIGATION</b>  TAS system KTA 870 coupled with GARMIN G1000 system (OPT70-034-061D)	HONEYWELL	9.17 (4.160)	133.07 (3.380)

## SECTION 7 DESCRIPTION

### 7.1 COMPONENTS OF THE OPTION

The KTA 870 option is constituted of the following components :

- a KTA 810 computer,
- two KA 815 antennas.

Traffic information can be displayed on a dedicated screen (MFD) and traffic annunciation is displayed on both MFD and PFD.

### 7.2 KTA 870 TAS FUNCTION





Traffic detected is displayed, when the vertical separation between your own airplane altitude and the intruder altitude ranges :

MODE	From	Up to
ABOVE (Look up)	- 2700 ft	+ 9000 ft
NORMAL (Normal)	- 2700 ft	+ 2700 ft
Below (Below)	- 9000 ft	+ 2700 ft
UNREST (Unrestricted)	- 9000 ft	+ 9000 ft

Traffic Advisory (TA) criteria, which initiate a visual and/or an aural alert, are (sensitivity level B) :

- detection of an intruder airplane within a 0.55 NM horizontal radius and a  $\pm$  800 ft relative altitude,
- approach of an intruder airplane on a course that will intercept your course within 20 to 30 seconds.

Traffic is displayed according to TCAS symbology, however track vector information is not displayed. The KTA 870 TAS system uses the following symbols :

TAS symbol	Description
	Non-Threat Traffic
	Proximity Advisory (PA)
	Traffic Advisory (TA)
	Traffic Advisory Off Scale

I4342814AAAAA08200

### Airplanes equipped with the radio altimeter

When the airplane is at a ground height lower than 2000 ft, Traffic Advisory (TA) criteria, which initiate a visual and/or an aural alert, are (sensitivity level A) :

- detection of an intruder airplane within a 0.2 NM horizontal radius and a  $\pm$  600 ft relative altitude,
- approach of an intruder airplane on a course that will intercept your course within 15 to 20 seconds.

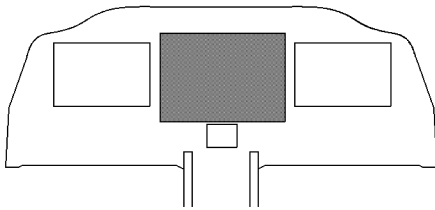
The aural traffic alert is inhibited when the height detected by the radio altimeter is below 600 ft.

TAS function will be automatically activated, if one of the following conditions is met (G1000 system logic) :

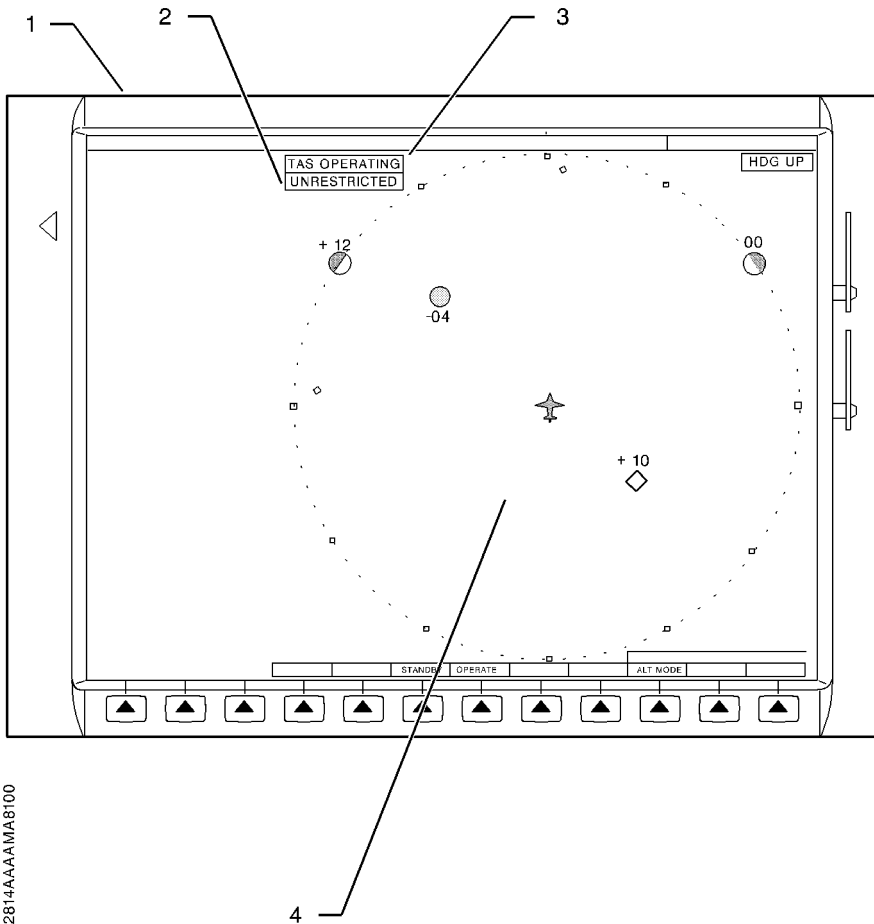
- radio altimeter height is greater than 50 ft,

or

- airplane is in air.



- 1) MFD
- 2) TAS altitude mode
- 3) TAS operating mode
- 4) Area of TAS display



I4342814AAA MAB100

Figure 9.48.1 - KTA 870 System display and controls

**SUPPLEMENT****"GARMIN" TAWS SYSTEM****TABLE OF CONTENTS**

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7 - DESCRIPTION .....	9.49.8



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## SECTION 1

### GENERAL

This supplement is intended to inform the pilot about the equipment limitations, description and operations necessary to the operation when the airplane is equipped with the option "GARMIN" TAWS SYSTEM.

The TAWS function enables to detect if the airplane path is in compliance with the overflown terrain relief.

## SECTION 2

### LIMITATIONS

The limitations hereafter supplement those of the standard airplane described in Section 2 "Limitations" of the basic Pilot's Operating Handbook, when the airplane is equipped with the option "GARMIN" TAWS SYSTEM.

The TAWS function provides terrain proximity alerting and detection to the pilot. It must not be used for airplane vertical and horizontal navigation.

AC 2318 recommendation : in order to avoid unwillingly warnings, TAWS function must be inhibited for any landing on a terrain which is not mentioned in the data base.

The use of the terrain awareness warning and terrain display functions is prohibited during QFE (atmospheric pressure at airport elevation) operations.

The following document or any further edition applicable to the latter, shall be readily available to the pilot, each time the TAWS system is used :

Airplane equipped with GARMIN G1000 flight deck (MOD70-0176-00)

- "GARMIN" G1000 Integrated Flight Deck Cockpit Reference Guide for the TBM 850 P/N 190-00708-00.

Airplane retrofitted with GARMIN G1000 flight deck (MOD70-0276-00)

- "GARMIN" G1000 Integrated Flight Deck Cockpit Reference Guide for the TBM 700 P/N 190-01247-00.

Airplane retrofitted with GARMIN G1000 NXi flight deck (MOD70-0539-00)

- "GARMIN" G1000 NXi Integrated Flight Deck Cockpit Reference Guide for the TBM 850/900 P/N 190-02349-00.

**SECTION 3**  
**EMERGENCY PROCEDURES**

The emergency procedures hereafter supplement those of the standard airplane described in Section 3 "Emergency procedures" of the basic Pilot's Operating Handbook, when the airplane is equipped with the option "GARMIN" TAWS SYSTEM.

**"TAWS FAIL" ANNUNCIATION**

The TAWS function is not operational.

**SECTION 4**  
**NORMAL PROCEDURES**

The normal procedures hereafter supplement those of the standard airplane described in Section 4 "Normal procedures" of the basic Pilot's Operating Handbook, when the airplane is equipped with the option "GARMIN" TAWS SYSTEM.

**BEFORE TAKEOFF**

- "TAWS System Test OK" voice message ..... **HEARD**

#### 4.1 - WARNINGS OF THE TAWS FUNCTION

### **"PULL UP" AURAL WARNING**

The red "PULL-UP" PFD/MFD annunciation and MFD pop-up alert light on.

- 1 - Level the wings.
- 2 - Display the maximum power.
- 3 - Choose the optimum rate of climb adapted to airplane configuration and speed, until the warning disappears.

### **"Terrain Terrain, Pull up Pull up", "Obstacle Obstacle, Pull up Pull up", AURAL WARNINGS**

The red "PULL-UP" PFD/MFD annunciation and "TERRAIN/OBSTACLE PULL-UP" pop-up alerts light on.

Adjust airplane path in order to make the warning disappear.

#### 4.2 - CAUTIONS OF THE TAWS FUNCTION

### **"Caution terrain", "Caution obstacle", "Too low terrain" AURAL WARNINGS**

The amber "TERRAIN" PFD/MFD annunciation and "CAUTION TERRAIN/OBSTACLE" or "TOO LOW TERRAIN" pop-up alerts light on.

Adjust airplane path in order to make the warning disappear.

**"Don't sink" AURAL WARNING**

The amber "TERRAIN" PFD/MFD annunciation and "DON'T SINK" pop-up alert light on.

Re-establish a positive rate of climb.

**"Sink rate" AURAL WARNING**

The amber "TERRAIN" PFD/MFD annunciation and "SINK RATE" pop-up alert light on.

Reduce rate of descent.

**SECTION 5****PERFORMANCE**

The installation and the operation of the "GARMIN" TAWS SYSTEM do not change the basic performance of the airplane described in Section 5 "Performance" of the basic Pilot's Operating Handbook.

**SECTION 6**  
**WEIGHT AND BALANCE**

Information hereafter supplement the one given for the standard airplane in Section 6 "Weight and balance" of the basic Pilot's Operating Handbook.

A or O	OPTIONAL EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
A	<b>34 - NAVIGATION</b>  TAWS system (MOD70-0176-00 Version F) (MOD70-0276-00 Version F)	GARMIN	/	/

**SECTION 7**  
**DESCRIPTION**

■ The TAWS function has 7 modes.

**FORWARD LOOKING TERRAIN AVOIDANCE ALERT**

The Forward Looking Terrain Avoidance (FLTA) alert is used by TAWS and is composed of :

- **Reduced Required Terrain Clearance and Reduced Required Obstacle Clearance**

Reduced Required Terrain Clearance (RTC) and Reduced Required Obstacle Clearance (ROC) alerts are issued when the airplane flight path is above terrain, yet is projected to come within the minimum clearance values in table 7.1. When an RTC or ROC alert is issued, a potential impact point is displayed on the TAWS Page.

- **Imminent Terrain Impact and Imminent Obstacle Impact**

Imminent Terrain Impact (ITI) and Imminent Obstacle Impact (IOI) alerts are issued when the airplane is below the elevation of a terrain or obstacle cell in the airplane's projected path. ITI and IOI alerts are accompanied by a potential impact point displayed on the TAWS Page. The alert is annunciated when the projected vertical flight path is calculated to come within minimum clearance altitudes in table 7.1.

Phase of flight	Minimum Clearance Altitude Level Flight (ft)	Minimum Clearance Altitude Descending (ft)
Enroute	700	500
Terminal	350	300
Approach	150	100
Departure	100	100

Table 7.1 - Minimum Terrain and Obstacle Clearance values for FLTA alerts

During the final approach phase of flight, FLTA alerts are automatically inhibited when the airplane is below 200 feet AGL while within 0.5 Nm of the approach runway or below 125 feet AGL while within 1.0 Nm of the runway threshold.

The aural/displayed messages associated with the FLTA function are described in the table 7.2.

Alert Type	PFD/MFD TAWS Page Annun- cia- tion	MFD Map Page Pop-Up Alert	Aural Message
Reduced Required Terrain Clearance Warning (RTC) (Red)	PULL UP	TERRAIN - PULL-UP	"Terrain, Terrain ; Pull up, Pull up"
Imminent Terrain Impact Warning (ITI) (Red)	PULL UP	TERRAIN AHEAD - PULL-UP	"Terrain Ahead, Pull up ; Terrain Ahead, Pull up"
Reduced Required Obstacle Clearance Warning (ROC) (Red)	PULL UP	OBSTACLE - PULL-UP	"Obstacle, Obstacle ; Pull up, Pull up"
Imminent Obstacle Impact Warning (IOI) (Red)	PULL UP	OBSTACLE AHEAD - PULL-UP	"Obstacle Ahead, Pull up ; Obstacle Ahead, Pull up"
Reduced Required Terrain Clearance Caution (RTC) (Amber)	TERRAIN	CAUTION - TERRAIN	"Caution, Terrain ; Caution, Terrain"
Imminent Terrain Impact Caution (ITI) (Amber)	TERRAIN	TERRAIN AHEAD	"Terrain Ahead ; Terrain Ahead"
Reduced Required Obstacle Clearance Caution (ROC) (Amber)	TERRAIN	CAUTION - OBSTACLE	"Caution, Obstacle ; Caution, Obstacle"
Imminent Obstacle Impact Caution (IOI) (Amber)	TERRAIN	OBSTACLE AHEAD	"Obstacle Ahead ; Obstacle Ahead"

Table 7.2 - FLTA alerts



**PREMATURE DESCENT ALERTING**

A Premature Descent Alert (PDA) is issued when the system detects that the airplane is significantly below the normal approach path to a runway (Figure 9.49.1).

PDA alerting begins when the airplane is within 15 Nm of the destination airport. PDA alerting ends when the airplane is either :

- . 0.5 Nm from the runway threshold

OR

- . at an altitude of 125 feet AGL while within 1.0 Nm of the threshold.

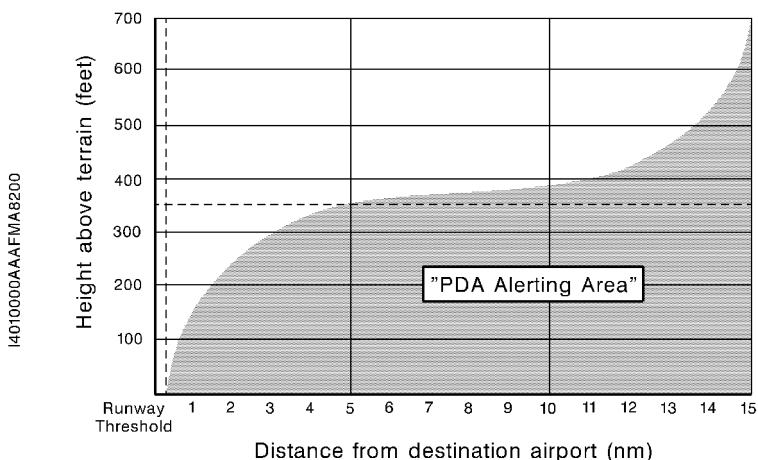


Figure 9.49.1 - PDA alerting threshold

The aural/displayed messages associated with the PDA function are described in the table 7.3.

Alert Type	PFD/MFD TAWS Page Annuncia- tion	MFD Map Page Pop-Up Alert	Aural Message
Premature Descent Alert Caution (PDA) (Amber)	<b>TERRAIN</b>	TOO LOW - TERRAIN	"Too low, Terrain"

Table 7.3 - PDA alerts

## EXCESSIVE DESCENT RATE ALERT

The purpose of the Excessive Descent Rate (EDR) alert is to provide suitable notification when the airplane is determined to be closing (descending) upon terrain at an excessive speed. Figure 9.49.2 shows the parameters for the alert as defined by TSO-C151b.

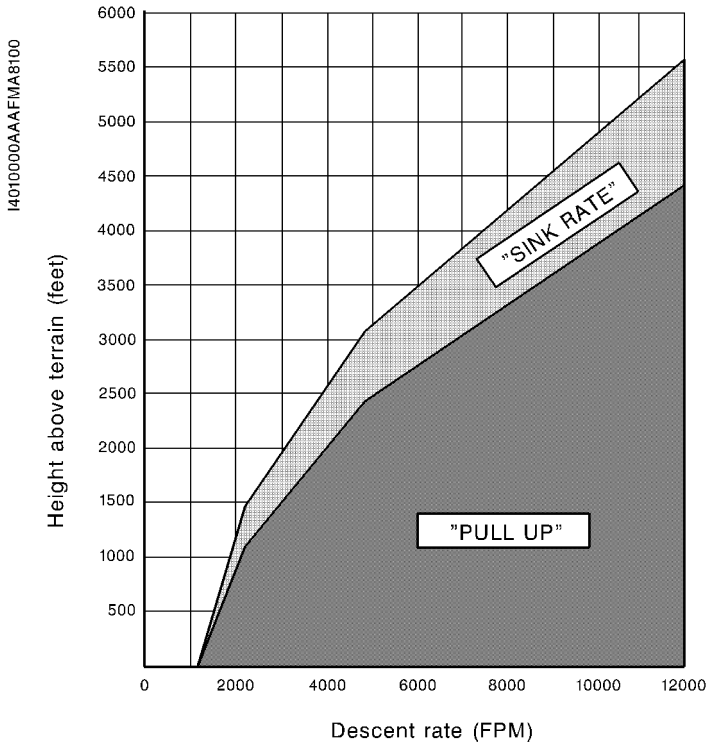


Figure 9.49.2 - Excessive Descent Rate Alert Criteria

The aural/displayed messages associated with the EDR function are described in the table 7.4.

Alert Type	PFD/MFD TAWS Page Annunciation	MFD Map Page Pop-Up Alert	Aural Message
Excessive Descent Rate Warning (EDR) (Red)	PULL UP	PULL-UP	"Pull up"
Excessive Descent Rate Caution (EDR) (Amber)	TERRAIN	SINK RATE	"Sink rate"

Table 7.4 - EDR alerts

**NEGATIVE CLIMB RATE AFTER TAKEOFF ALERT (NCR)**

The purpose of the Negative Climb Rate (NCR) After Takeoff alert (also referred to as "Altitude Loss After Takeoff") is to provide suitable alerts to the pilot when the system determines that the airplane is losing altitude (closing upon terrain) after takeoff. The aural message "Don't sink" is given for NCR alerts, accompanied by an annunciation and a pop-up terrain alert on the display. NCR alerting is only active when departing from an airport and when the following conditions are met :

- . The height above the terrain is less than 700 feet.
- . The distance from the departure airport is 2 Nm or less.
- . The heading change from the heading at the time of departure is less than 110 degrees.

Figure 9.49.3 shows two figures which illustrate the NCR alerting parameters as defined by TSO-C151b.

The NCR alert is issued when the altitude loss and height are within the range in the first figure, or when the sink rate (negative vertical speed) and height are within the range in the second figure.

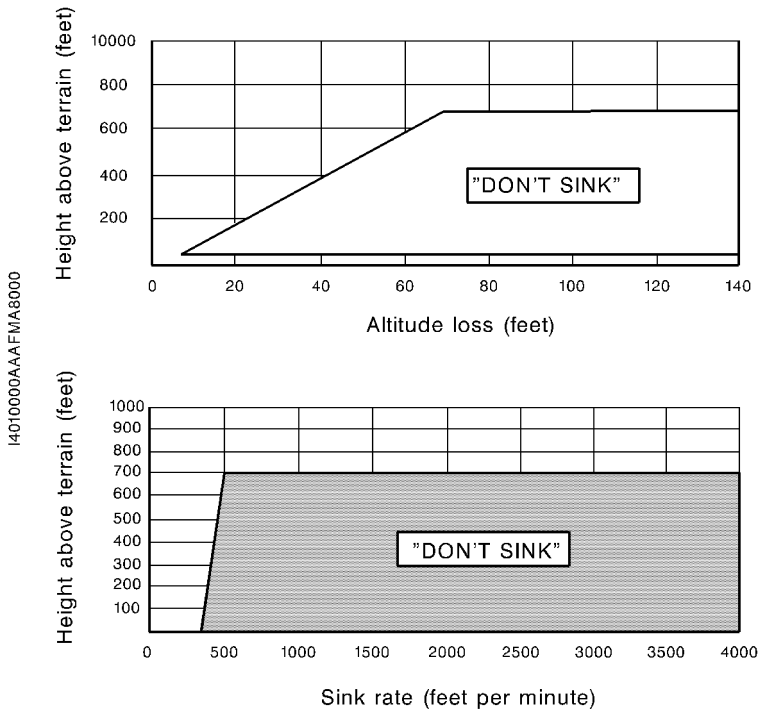


Figure 9.49.3 - Negative Climb Rate (NCR) Alert Criteria

The aural/displayed messages associated with the NCR function are described in the table 7.5.

Alert Type	PFD/MFD TAWS Page Annuncia- tion	MFD Map Page Pop-Up Alert	Aural Message
Negative Climb Rate Caution (NCR) (Amber)	TERRAIN	DON'T SINK	"Don't sink"

Table 7.5 - NCR alert

**"FIVE-HUNDRED" AURAL ALERT**

The purpose of the aural alert message "Five-Hundred" is to provide an advisory alert to the pilot that the airplane is 500 feet above terrain. When the airplane descends within 500 feet of terrain, the aural message "Five-Hundred" is generated. There are no display annunciations or pop-up alerts that accompany the aural message.

**TAWS NOT AVAILABLE ALERT**

TAWS requires a 3-D GPS navigation solution along with specific vertical accuracy minimums. Should the navigation solution become degraded or if the airplane is out of the database coverage area, the annunciation "TAWS N/A" is generated in the annunciation window and on the TAWS Page. The aural message "TAWS Not Available" is generated. When the GPS signal is re-established and the airplane is within the database coverage area, the aural message "TAWS Available" is generated.

**TAWS Inhibit**

TAWS also has an inhibit mode that deactivates the PDA/FLTA aural and visual alerts. Pilots should use discretion when inhibiting TAWS and always remember to enable the system when appropriate. Only the PDA and FLTA alerts are disabled in the inhibit mode.

**SUPPLEMENT****"GARMIN" SYNTHETIC VISION SYSTEM****TABLE OF CONTENTS**

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4 - NORMAL PROCEDURES .....	9.50.6
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**SECTION 1****GENERAL**

This supplement is intended to inform the pilot about the equipment limitations, description and operations necessary to the operation when the airplane is equipped with the option "GARMIN" SYNTHETIC VISION SYSTEM (SVS).

The SVS does not replace and is not intended to be used independently of the TAS and/or TAWS system(s).

The SVS does not replace and is not intended to be used independently of the horizontal and vertical primary flight instruments.

The SVS does not replace and is not intended to be used independently of the Course Deviation Indicator and the Vertical Deviation Indicator.



**"GARMIN" SYNTHETIC VISION SYSTEM****SECTION 2  
LIMITATIONS**

The limitations hereafter supplement those of the standard airplane described in Section 2 "Limitations" of the basic Pilot's Operating Handbook, when the airplane is equipped with the option "GARMIN" SYNTHETIC VISION SYSTEM.

The following document, or any further edition applicable to the latter, shall be readily available to the pilot, each time the SVS is used :

Airplane equipped with GARMIN G1000 flight deck (MOD70-0176-00)

- "GARMIN" G1000 Integrated Flight Deck Cockpit Pilot's Guide for the TBM 850 P/N 190-00709-01 or any later revision as applicable.

Airplane retrofitted with GARMIN G1000 flight deck (MOD70-0276-00)

- "GARMIN" G1000 Integrated Flight Deck Cockpit Pilot's Guide for the TBM 700 P/N 190-01247-00 or any later revision as applicable.

Airplane retrofitted with GARMIN G1000 NXi flight deck (MOD70-0539-00)

- "GARMIN" G1000 NXi Integrated Flight Deck Cockpit Pilot's Guide for the TBM 850/900 P/N 190-02348-00 or any later revision as applicable.

The use of the Synthetic Vision system display elements alone for aircraft control without reference to the primary flight instruments is prohibited.

The use of the Synthetic Vision system alone for vertical and/or horizontal navigation, or obstacle or terrain avoidance is prohibited.

Pathway boxes must be selected OFF when flying an instrument approach. Turn Pathways OFF when ACTIVATE VECTORS-TO-FINAL, ACTIVATE APPROACH is selected, or the airplane is established on any segment of the approach.

The use of the Synthetic Vision system traffic display alone to avoid other aircraft is prohibited.

The Terrain Database has an area of coverage from North 75° Latitude to South 60° Latitude in all longitudes.

**SECTION 3**  
**EMERGENCY PROCEDURES**

The procedures hereafter supplement those of the standard airplane described in Section 3 "Emergency procedures" of the basic Pilot's Operating Handbook, when the airplane is equipped with the option "GARMIN" SYNTHETIC VISION SYSTEM.

Airplane equipped with GARMIN G1000 flight deck (MOD70-0176-00) or airplane retrofited with GARMIN G1000 flight deck (MOD70-0276-00)

<b>INCONSISTENT DISPLAY BETWEEN SVS AND PRIMARY FLIGHT INSTRUMENTS</b>	
- "PFD" key .....	<b>Press</b>
- "SYN VIS" key .....	<b>Press</b>
- "SYN TERR" key .....	<b>Press</b>
- SVS is removed from the PFD .....	<b>Verify</b>
Use GARMIN system primary displays for navigation and aircraft control.	

Airplane retrofited with GARMIN G1000 NXi flight deck (MOD70-0539-00)

<b>INCONSISTENT DISPLAY BETWEEN SVS AND PRIMARY FLIGHT INSTRUMENTS</b>	
- "PFD Opt" key .....	<b>Press</b>
- "SVT" key .....	<b>Press</b>
- "Terrain" key .....	<b>Press</b>
- SVS is removed from the PFD .....	<b>Verify</b>
Use GARMIN system primary displays for navigation and aircraft control.	

"GARMIN" **SYNTHETIC VISION SYSTEM**

**SECTION 4**

**NORMAL PROCEDURES**

The normal procedures hereafter supplement those of the standard airplane described in Section 4 "Normal procedures" of the basic Pilot's Operating Handbook, when the airplane is equipped with the option "GARMIN" SYNTHETIC VISION SYSTEM.

**CAUTION**

**SVS INFORMATION IS NOT A SUBSITUTE FOR STANDARD COURSE AND ALTITUDE DEVIATION INFORMATION PROVIDED BY THE CDI, VSI, VDI AND THE PRIMARY FLIGHT INSTRUMENTS, AS WELL AS FOR THE TRAFFIC ADVISORY SYSTEM (TAS) OR THE TERRAIN AWARENESS WARNING SYSTEM (TAWS).**

Airplane equipped with GARMIN G1000 flight deck (MOD70-0176-00) or airplane retrofitted with GARMIN G1000 flight deck (MOD70-0276-00)

**SVS ACTIVATION (1/2)**

4 - If SVS is desired :

- "PFD" key ..... **Press**
- "SYN VIS" key ..... **Press**
- "SYN TERR" key ..... **Press**

The synthetic vision system will cycle on or off with each press of the "SYN TERR" key. The Flight Path Marker is displayed anytime "SYN TERR" is selected for display.

(a) If Pathway is desired :

- "PATHWAY" key ..... **Press**

The Pathway display will cycle on or off with each press of the "PATHWAY" key. The Pathway can be displayed separately or in conjunction with the flight director.

**NOTE :**

*The utilization of the PATHWAYS is bound by limitations mentioned in Section 2 of this Supplement.*



**SVS ACTIVATION (2/2)**

(b) If Horizon Heading is desired :

- "HRZN HDG" key ..... **Press**

The horizon heading display will cycle on or off with each press of the "HRZN HDG" key.

(c) If Airport Signs are desired :

- "APTSIGNS" key ..... **Press**

The airport signs display will cycle on or off with each press of the "APTSIGNS" key.

**NOTE :**

- For *PATHWAY, HRZN HDG and APTSIGNS* : "SYN TERR" must be activated first.
- When display backup mode is selected, the display of the SVS is active within 1 minute after SVS selection.

Airplane retrofitted with GARMIN G1000 NXi flight deck (MOD70-0539-00)

**SVS ACTIVATION**

Refer to GARMIN Integrated Flight Deck Pilot's Guide, as applicable, listed in Section 2 "Limitations" of this supplement for further information.

**"GARMIN" SYNTHETIC VISION SYSTEM**

**SECTION 5  
PERFORMANCE**

The installation and the operation of the "GARMIN" SYNTHETIC VISION SYSTEM do not change the basic performance of the airplane described in Section 5 "Performance" of the basic Pilot's Operating Handbook.

**SECTION 6  
WEIGHT AND BALANCE**

Information hereafter supplement the one given for the standard airplane in Section 6 "Weight and balance" of the basic Pilot's Operating Handbook.

A or O	OPTIONAL EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
A	<b>34 - NAVIGATION</b> GARMIN Synthetic Vision System	GARMIN	/	/

## SECTION 7

### DESCRIPTION

SVS provides additional features on the primary flight display (PFD) which display the following information :

- **Synthetic Terrain** : an artificial, database derived, three dimensional view of the terrain ahead of the aircraft within a field of view of approximately 30 degrees left and 35 degrees right of the aircraft heading. The terrain data has a resolution of 9 arc seconds.
- **Obstacles** : obstacles such as towers, including buildings over 200 AGL that are within the depicted synthetic terrain field of view.
- **Flight Path Marker (FPM)** : an indication of the current lateral and vertical path of the aircraft. The FPM is always displayed when synthetic terrain is selected for display.
- **Pathway** : a pilot selectable three dimensional representation of the programmed flight plan path that can be selected for display alone or with the flight director anytime synthetic terrain is selected for display.
- **Traffic** : a display on the PFD indicating the position of other aircraft detected by the Traffic Information System (TIS) component of the GARMIN flight deck system.
- **Horizon Line** : a white line indicating the true horizon is always displayed on the SVS display.
- **Horizon Heading** : a pilot selectable display of heading marks displayed just above the horizon line on the PFD.
- **Airport Signs** : pilot selectable "signposts" displayed on the synthetic terrain display indicating the position of nearby airports that are in the G1000 database.
- **Runway Highlight** : a highlighted presentation of the location and orientation of the runway(s) at the departure and destination airports.

**"GARMIN" SYNTHETIC VISION SYSTEM****USE OF PATHWAY**

Refer to GARMIN Integrated Flight Deck Pilot's Guide, as applicable, listed in Section 2 Limitations of this supplement for further information.

If Synthetic Terrain is displayed on the PFD, the Pathway may be used to assist the pilot's awareness of the programmed lateral and vertical navigation path. The following sections describe the basic use of the Pathway in various flight segments. For more detailed information, consult the G1000 Pilot's Guide.

**- Departure**

Prior to departure, load and activate the desired flight plan into the FMS, set the initial altitude on the altitude selector and select GPS on the HSI display just as you would without the SVS system.

The programmed flight path will be displayed as a series of magenta boxes along the path at the flight plan altitude subject to the following conditions :

- If the first segment of the flight plan is a heading to altitude leg, the Pathway will not be displayed for that segment. The first Pathway segment displayed will be the first GPS course leg.
- The Pathway must be within the SVS field of view of 30 degrees left and 35 degrees right. If the programmed path is outside that field of view, the Pathway will not be visible on the display until the aircraft has turned toward the course.
- The Pathway will be displayed at either the altitude selected on the selector OR the altitude published for the procedure (e.g. SID) WHICHEVER IS HIGHER.

After departure, the primary aircraft control must be by reference to the primary aircraft instruments. The SVS and Pathway displays should be used to aid in awareness of the terrain and programmed flight path.

Prior to intercepting the programmed course, the Pathway will be displayed as a series of magenta "boxes" with pointers at each corner that point in the direction of the programmed course. The Pathway boxes will not be displayed on portions of the course line that would lead the pilot to intercept the course in the wrong direction.

As the aircraft approaches the center of the programmed course and altitude, the number of Pathway boxes will decrease to a minimum of four.

### - Enroute

When enroute, the Pathway will be displayed along the lateral path defined by the flight plan, at the altitude selected on the altitude selector.

Flight plan changes in altitude that require a climb will be indicated by the Pathway being displayed as a level path at the altitude entered for the current flight plan leg. Because the GARMIN flight deck system does not have information available to it about aircraft performance, climb profiles are not displayed by the Pathway.

If the programmed flight plan includes one or more defined VNAV descent segments, the descent path(s) will be displayed by the Pathway as prompted by the FMS.

If the flight plan includes a significant change in course at a waypoint, the Pathway boxes toward the currently active waypoint will be magenta in color. The boxes defining the next flight plan segment may be visible, but will be displayed in a white color.

### - Approach

During approach, the SVS and Pathway displays should only be used to maintain awareness with regard to the surrounding terrain and the programmed flight path. Primary aircraft control must be accomplished by reference to the primary flight instruments and, if desired, the flight director.

### - GPS approach

During a GPS approach, the lateral path and altitude will be displayed by the Pathway in magenta along each segment including the path required to track course reversals that are part of the approach procedure (such as a holding pattern). Approach descent segments will be displayed by the Pathway as published in the approach procedure.

If Vectors-To-Final is selected as the approach transition, the Pathway will display the final approach course inbound to the Missed Approach Point (MAP). The Pathway will be shown level at the altitude set in the altitude selector, or the Final Approach Fix (FAF) crossing altitude (whichever is higher), up to the point along the final approach course where that altitude intercepts the extended VPTH or GP. If the altitude selector indicates an altitude below the airplane's current altitude, the Pathway will appear below the airplane altitude and the pilot must use normal descent techniques to intercept the VPTH or GP.



**"GARMIN" SYNTHETIC VISION SYSTEM**

If the altitude selector is left at an altitude above the current airplane altitude, the airplane will intercept the final approach course below the extended VPTH or GP, such that the Pathway will be displayed above the airplane until the aircraft intercepts the VPTH or GP. From the VPTH or GP intercept point, the pathway will be shown inbound to the MAP along the published lateral and vertical descent path.

**- ILS approach**

When an ILS approach is programmed into the FMS, the initial approach segments will be displayed by the Pathway in magenta at the procedure segment altitudes if they are being flown by reference to a GPS path.

When the GARMIN flight deck system switches to the localizer inbound to the final approach fix, the Pathway will be displayed along the localizer inbound path and glideslope in green.

If Vectors-To-Final is selected as the approach transition, the Pathway will display the final approach course inbound to the Missed Approach Point (MAP). The Pathway will be shown level at the altitude set in the altitude selector, or the Final Approach Fix (FAF) crossing altitude (whichever is higher), up to the point along the final approach course where that altitude intercepts the extended GS. If the altitude selector indicates an altitude below the airplane's current altitude, the Pathway will appear below the airplane altitude and the pilot must use normal descent techniques to intercept the GS. If the altitude selector is left at an altitude above the current airplane altitude, the airplane will intercept the final approach course below the extended GS, such that the Pathway will be displayed above the airplane until the aircraft intercepts the GS. From the GS intercept point, the pathway will be shown inbound to the MAP along the published localizer and glideslope.

**- VOR, LOC BC or other approach**

Approach segments for a VOR, LOC BC, ADF or other approach that are approved to be flown by reference to GPS will be displayed by the Pathway in a magenta color. Approach segments that are defined by other than a GPS or ILS, such as heading legs or VOR defined final approach course, will not be displayed by the Pathway.

**- Missed approach**

When the missed approach is selected on the FMS, the Pathway to the Missed Approach Holding Point will be displayed just as described for the departure segment.

The pilot must assure that the aircraft path will, at all times, comply with the requirements of the published missed approach procedure.

If the initial missed approach leg is heading-to-altitude or a leg defined by other than a GPS course, the Pathway will not be displayed for that segment.

If the course to the Missed Approach Holding Point is out of the SVS field of view during the initial missed approach climb, the Pathway will not be visible on the PFD until the aircraft is turned toward the course.

The Pathway will be displayed at the published missed approach altitude OR the altitude set on the altitude selector WHICHEVER IS HIGHER. If the altitude selector is set to MDA on the final approach segment and not reset during the initial missed approach, the Pathway will still be displayed at the published missed approach altitude.

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## Supplement

### Argentina specifics

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## Section 1 General

This supplement is intended to inform the pilot about the airplane specifics, among others those required by the relevant Certification Authorities (limitations, description and operations necessary to the operation of the TBM airplane).

Refer to Supplement A at the beginning of section 9 of the POH for the list of available supplements with their respective applicability.

## Section 2 Limitations

The information in this section supplements and/or replaces the information in section 2: Limitations of the standard POH.

### Placards

#### Internal placards

- 1) Rear pressurized baggage compartment (in cabin)
  - a) On bottom bulkhead

#### **TBM 700A, TBM 700B**

1411ZU03AAALMFA8000

**MÁXIMO 100 kg - (220 lbs)**  
**ES RESPONSABILIDAD DEL PILOTO**  
**COMPROBAR QUE TODO EL EQUIPAJE ESTÁ**  
**ASEGURADO CORRECTAMENTE.**  
**PARA INSTRUCCIONES DE CARGA REFERIRSE**  
**A LOS "DATOS DE PESO Y CENTRAJE"**  
**DEL MANUAL DE OPERACIÓN DEL PILOTO.**

b) On partition wall

**TBM 700C1**

14112003AAAALWA8000

**MÁXIMO 100 kg - (220 lbs)**  
 ES RESPONSABILIDAD DEL PILOTO  
 COMPROBAR QUE TODO EL EQUIPAJE ESTÁ  
 ASEGURADO CORRECTAMENTE.  
 PARA INSTRUCCIONES DE CARGA REFERIRSE  
 A LOS "DATOS DE PESO Y CENTRAJE"  
 DEL MANUAL DE OPERACIÓN DEL PILOTO.

or

14112003AAANMA8200

**MÁXIMO 100 kg - (220 lbs)**  
 ES RESPONSABILIDAD DEL PILOTO  
 COMPROBAR QUE TODO EL EQUIPAJE ESTÁ  
 ASEGURADO CORRECTAMENTE.  
 PARA INSTRUCCIONES DE CARGA REFERIRSE  
 A LOS "DATOS DE PESO Y CENTRAJE" DEL MANUAL  
 DE OPERACIÓN DEL PILOTO Y LA GRÁFICA DE AL LADO.

Weight (kg)	Weight (lbs)
0	220
25	187
35	187

**TBM 700C2** - refer to POH Supplement 41

With partition net version A - refer to section 6 of TBM 700C1 POH

14112003AAANMA8300

**MÁXIMO 45 kg - (100 lbs)**  
 ES RESPONSABILIDAD DEL PILOTO  
 COMPROBAR QUE TODO EL EQUIPAJE  
 ESTÁ ASEGURADO CORRECTAMENTE.  
 PARA INSTRUCCIONES DE CARGA  
 REFERIRSE A LOS "DATOS DE PESO Y CENTRAJE"  
 DEL MANUAL DE OPERACIÓN DEL PILOTO.

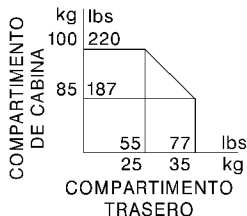
With partition net version B - refer to Section 6 of TBM 700C1 POH

I4112003AAANMAB200

**MÁXIMO 100 kg - (220 lbs)**

ES RESPONSABILIDAD DEL PILOTO  
COMPROBAR QUE TODO EL EQUIPAJE ESTÁ  
ASEGURADO CORRECTAMENTE.

PARA INSTRUCCIONES DE CARGA REFERIRSE  
A LOS "DATOS DE PESO Y CENTRAJE" DEL MANUAL  
DE OPERACIÓN DEL PILOTO Y LA GRÁFICA DE AL LADO.



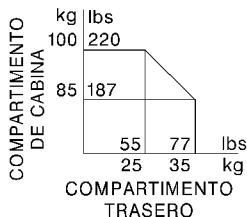
**TBM 850 (up to S/N 433)**

I4112003AAANMAB200

**MÁXIMO 100 kg - (220 lbs)**

ES RESPONSABILIDAD DEL PILOTO  
COMPROBAR QUE TODO EL EQUIPAJE ESTÁ  
ASEGURADO CORRECTAMENTE.

PARA INSTRUCCIONES DE CARGA REFERIRSE  
A LOS "DATOS DE PESO Y CENTRAJE" DEL MANUAL  
DE OPERACIÓN DEL PILOTO Y LA GRÁFICA DE AL LADO.



**TBM 850 (from S/N 434). TBM 900. TBM 910 (up to S/N 1269). TBM 930**

I4112003AAALMAB000

**MÁXIMO 100 kg - (220 lbs)**

ES RESPONSABILIDAD DEL PILOTO  
COMPROBAR QUE TODO EL EQUIPAJE ESTÁ  
ASEGURADO CORRECTAMENTE.

PARA INSTRUCCIONES DE CARGA REFERIRSE  
A LOS "DATOS DE PESO Y CENTRAJE"  
DEL MANUAL DE OPERACIÓN DEL PILOTO.

**TBM 910 (from S/N 1270)**

C4113500AAAEMA8300

**MÁXIMO 100 kg - 220 lbs**

ES RESPONSABILIDAD DEL PILOTO  
COMPROBAR QUE TODO EL EQUIPAJE ESTÁ  
ASEGURADO CORRECTAMENTE.

PARA INSTRUCCIONES DE CARGA REFERIRSE  
A LOS "DATOS DE PESO Y CENTRAJE"  
DEL MANUAL DE OPERACIÓN DEL PILOTO.

- c) On the left-side rear cargo compartment panel upper edge  
Airplane equipped with coat hanger

**TBM 910 (up to S/N 1269), TBM 930** - MOD70-0557-25B

C4113500AAAEMA8000

**SOLO ROPA****TBM 850, TBM 900, TBM 910 (from S/N 1270), TBM 930** -  
MOD70-0557-25C or MOD70-0641-25A

C4113500AAAEMA8100

**CAPACIDAD DE PESO MÁXIMA 4.5 KG - 10 LBS**

Airplane equipped with coat and headset hanger

**TBM 910 (from S/N 1336), TBM 930** - MOD70-0683-25F

C4113500AAAEMA8200

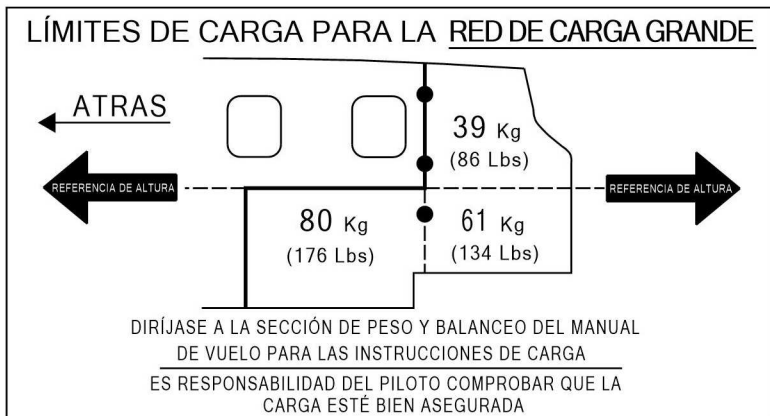
**CAPACIDAD DE PESO MÁXIMA 7 KG - 15.43 LBS**



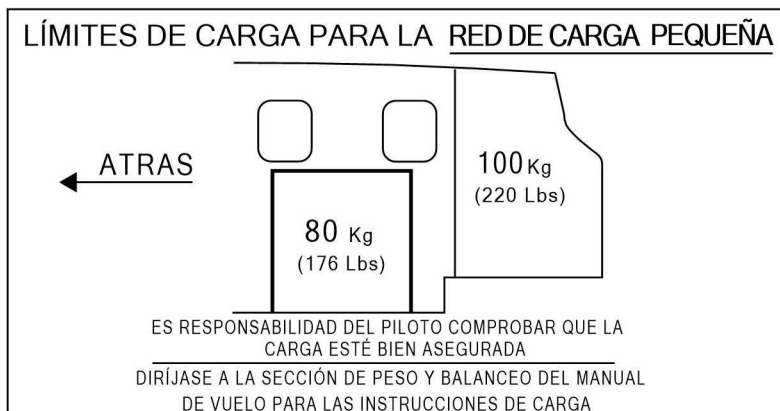
- 2) Post-MOD70-0315-25, as a retrofit or as standard equipment (from S/N 609)

**TBM 850 (from S/N 609), TBM 900, TBM 910, TBM 930**

- a) For the large cargo net, on the right-side upholstery panel, in the rear baggage compartment



- b) For the small cargo net, on frame C13bis or on the right lower upholstery panel



## Pilot's Operating Handbook

- 3) Non pressurized FWD baggage compartment  
a) On baggage compartment door frame

**TBM 700A, TBM 700B, TBM 850 (from S/N 434), TBM 900, TBM 910, TBM 930**

I4112003AAALMA8100

**MÁXIMO 50 kg - (110 lbs)**

PARA INSTRUCCIONES DE CARGA REFERIRSE  
A LOS "DATOS DE PESO Y CENTRAJE"  
DEL MANUAL DE OPERACIÓN DEL PILOTO.

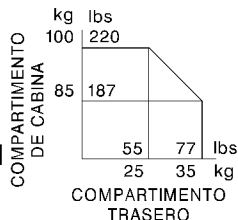
- 4) Non pressurized rear baggage compartment  
a) On internal face of the baggage compartment door

**TBM 700C, TBM 850 (up to S/N 433)**

I4112003AAANMAB100

**MÁXIMO 35 kg - (77 lbs)**

PARA INSTRUCCIONES DE CARGA  
REFERIRSE A LOS "DATOS DE PESO Y  
CENTRAJE" DEL MANUAL DE OPERACIÓN  
DEL PILOTO Y LA GRÁFICA DE AL LADO.



or

I4112003AAANMA8000

**MÁXIMO 35 kg - (77 lbs)**

PARA INSTRUCCIONES DE CARGA REFERIRSE  
A LOS "DATOS DE PESO Y CENTRAJE"  
DEL MANUAL DE OPERACIÓN DEL PILOTO.

- 5) On the right side of the cockpit, at front seat level

**TBM 700A, TBM 700B (chemical oxygen)**

I4112003AAALMA18000

**OXÍGENO DE EMERGENCIA**  
EN EL CAJÓN BAJO EL ASIENTO; TIRE  
COMPLETAMENTE LA MÁSCARA FUERA DEL CAJÓN;  
CUANDO ESTÁ TOTALMENTE EXTENDIDA DÉ UN  
TIRÓN A LA CUERDA. MÁXIMA DURACIÓN: 12 MIN.  
REFERIRSE AL MANUAL DE OPERACIÓN DEL PILOTO.  
NO FUMAR CUANDO ESTÉ EN USO.

- 6) Under seating of intermediate and rear passenger seats (on FWD side), which are fitted with oxygen

**TBM 700A, TBM 700B (chemical oxygen)**

I4112003AAALMA8500

**PUSH TO OPEN  
EMPUJE PARA ABRIR**

**OXÍGENO DE EMERGENCIA**  
EN EL CAJÓN BAJO EL ASIENTO; TIRE  
COMPLETAMENTE LA MÁSCARA FUERA DEL CAJÓN;  
CUANDO ESTÁ TOTALMENTE EXTENDIDA DÉ UN  
TIRÓN A LA CUERDA. MÁXIMA DURACIÓN: 12 MIN.  
REFERIRSE AL MANUAL DE OPERACIÓN DEL PILOTO.  
NO FUMAR CUANDO ESTÉ EN USO.

- 7) On the right side of the cockpit, at front seat level, and on the first rear passenger masks container (right side on the ceiling)

**TBM 700C, TBM 850, TBM 900, TBM 910 (up to S/N 1269), TBM 930**

I4112003AAAMMA18100

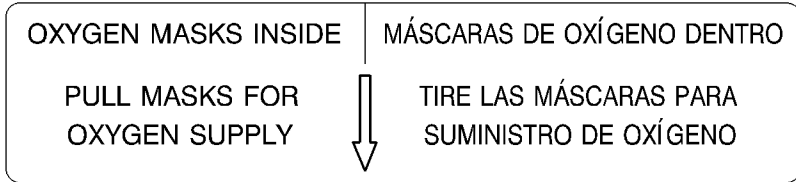
<b>WARNING</b>	<b>ADVERTENCIA</b>
GREASY SUBSTANCES ARE CAPABLE OF SPONTANEOUS COMBUSTION ON CONTACT WITH OXYGEN	SUSTANCIAS GRASOSAS PUEDEN PROVOCAR COMBUSTIÓN ESPONTÁNEA AL ESTAR EN CONTACTO CON OXÍGENO
DO NOT SMOKE WHILE OXYGEN IS IN USE	NO FUMAR CUANDO EL OXÍGENO ESTÁ EN USO

## Pilot's Operating Handbook

- 8) On rear passenger masks containers (right side on the ceiling)

**TBM 700C, TBM 850, TBM 900, TBM 910 (up to S/N 1269), TBM 930**

I4112003AAAAMMA18200



- 9) On rear passenger masks containers

**TBM 910 (from S/N 1270)**

I4112003AAAASMA8000

OXYGEN MASKS  
MÁSCARAS DE OXÍGENO

- 10) On internal face of rear passenger masks containers doors

**TBM 910 (from S/N 1270)**

C4112003AAAABMA08000

PULL MASKS FOR  
OXYGEN SUPPLY  
TIRE LAS MÁSCARAS  
PARA SUMINISTRO DE  
OXÍGENO

- 11) On rear passenger's table casing

**TBM 700A, TBM 700B, TBM 700C, TBM 850, TBM 900, TBM 910 (up to S/N 1269), TBM 930**

I4112003AALLMA8400

LA MESA DEBE ESTAR GUARDADA DURANTE EL DESPEGUE Y ATERRIZAJE

- 12) Above passenger's table

**TBM 910 (from S/N 1270)**

TABLE MUST BE STOWED DURING TAKE-OFF AND LANDING  
LA MESA DEBE ESTAR GUARDADA DURANTE EL DESPEGUE Y ATERRIZAJE

- 13) On cabinet drawer (optional)

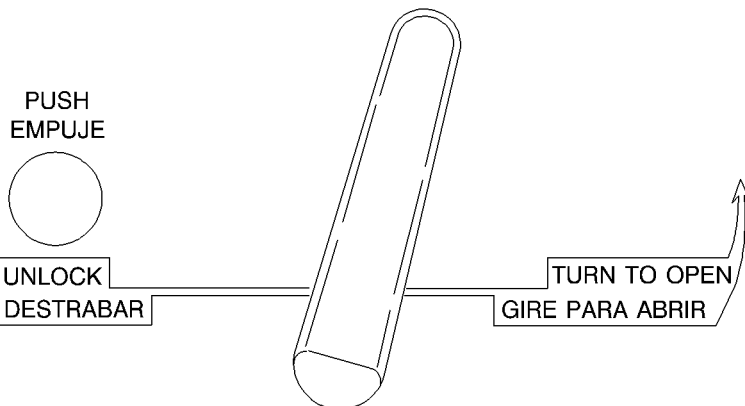
**All**

GAFAS PARA HUMO

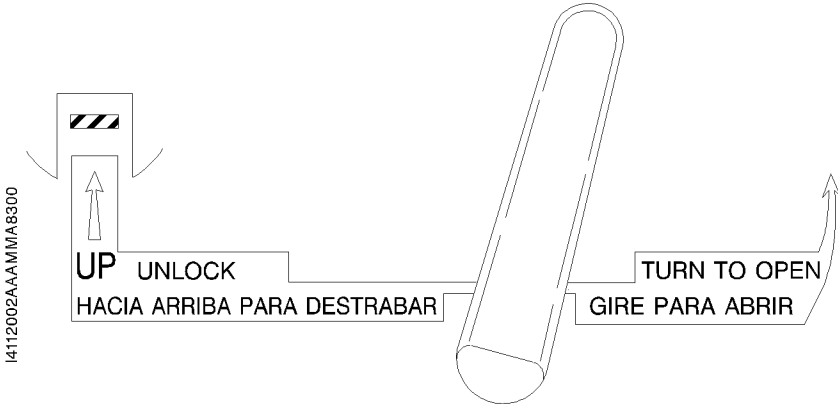
- 14) Door internal side

- a) On access door

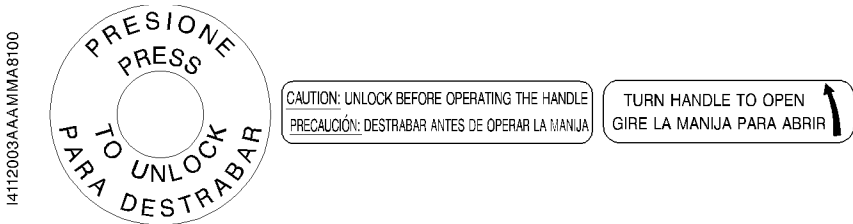
**TBM 700A from S/N 1 to S/N 49, except airplanes equipped as a retrofit with modification No. MOD70-019-25**



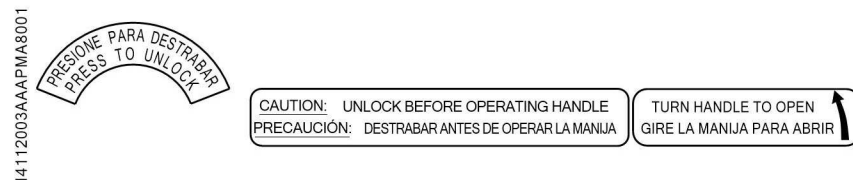
**TBM 700A from S/N 50 to S/N 125, plus airplanes equipped as a retrofit with modification No. MOD70-019-25**



**TBM 700B, TBM 700C, TBM 850 (Up to S/N 433)**

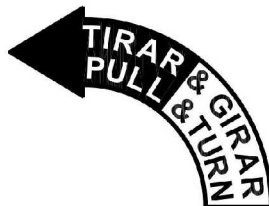


**TBM 850 (From S/N 434), TBM 900, TBM 910 (up to S/N 1269), TBM 930**



TBM 910 (from S/N 1270)

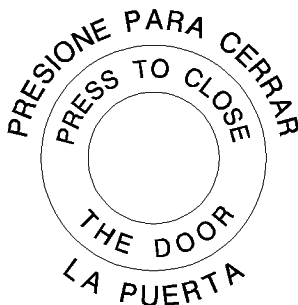
C4112003AAACMA8000



b) In the cabin, forward of access door

TBM 700B, TBM 700C, TBM 850, TBM 900, TBM 910 (up to S/N 1269),  
TBM 930

I4112003AAAM/MA8000



TBM 910 (from S/N 1270)

C4113300AAAHMA08000

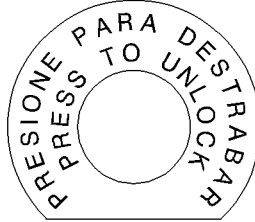
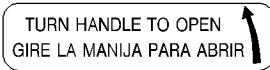


Pilot's Operating Handbook

c) On pilot's door, if installed

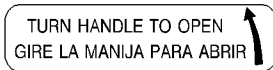
**TBM 700B, TBM 700C, TBM 850 (Up to s/n 433)**

I4112003AAAAMMA8200



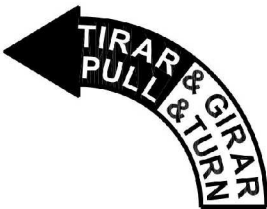
**TBM 850 (From S/N 434), TBM 900, TBM 910 (up to S/N 1269), TBM 930**

I4112003AAAAPMA8100



**TBM 910 (from S/N 1270)**

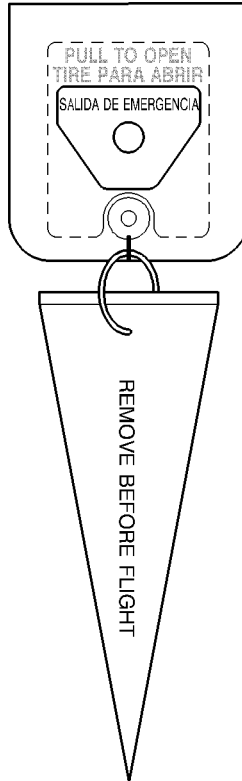
C4112003AAACMA8100





- 15) On emergency exit handle

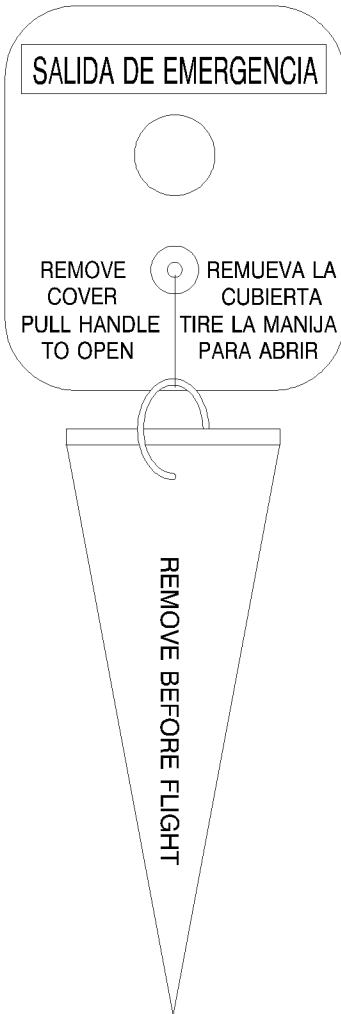
**TBM 700A S/N 1 to 23, 25, 28, 33 and 35, except airplanes equipped as a retrofit with modification No. MOD 70-019-25**



I4112003AAAMMA18500

**S/N 24, 26, 27, 29 to 32, 34, 36 to 1269, plus airplanes equipped as a retrofit with modification No. MOD 70-019-25**

Marking on cover



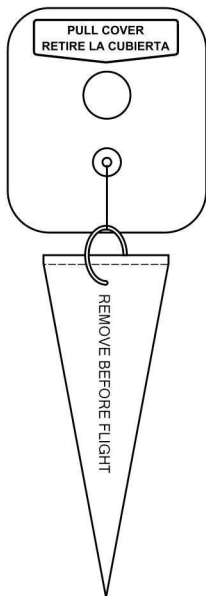
I4112003AAA MMA8400

Marking on handle



**From S/N 1270**

Marking on cover



C4112003AAADMA8001

Marking on handle



or



16) Above emergency exit

**All**



C4113300AAACMA8100

## Pilot's Operating Handbook

17) On landing gear emergency control access door

**TBM 700A, TBM 700B, TBM 700C, TBM 850 not equipped with MOD70-0189-53**

I4112003AAAOMAB400

LDG GEAR EMERGENCY  
UNDER HATCH  
TREN DE ATERRIZAJE  
DE EMERGENCIA  
DEBAJO DE LA ESCOTILLA

**TBM 850 equipped with MOD70-0189-53, TBM 900, TBM 910 (up to S/N 1269), TBM 930**

I4112003AAAOM/18400

LDG GEAR EMERGENCY  
ACCESS PULL  
TREN DE ATERRIZAJE  
DE EMERGENCIA  
TIRE AQUI

**TBM 910 (from S/N 1270)**

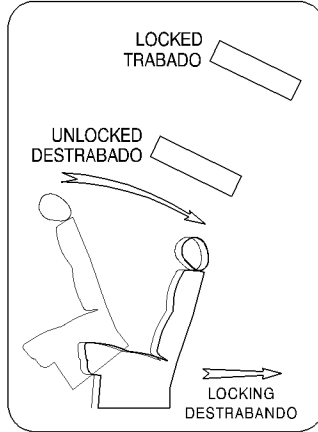
C4112003AAACIM8200

LDG GEAR EMERGENCY  
ACCESS PULL  
TREN DE ATERRIZAJE  
DE EMERGENCIA  
TIRE AQUI

- 18) On aisle side of rear seats

**TBM 700A - Pre-MOD70-019-25**

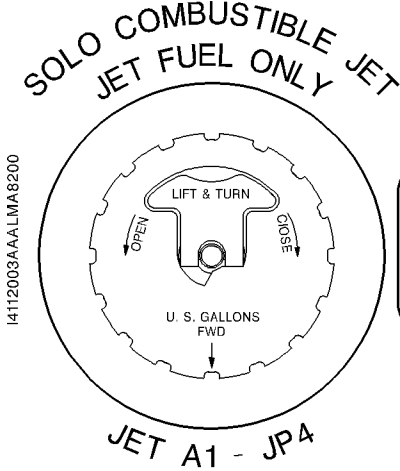
I4112003AAAOMA18300



**External placards**

19) Near fuel tank caps

**TBM 700A, TBM 700B, TBM 700C, TBM 850 (Up to S/N 433)**



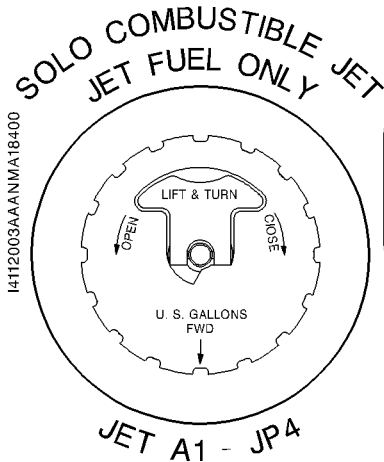
**COMBUSTIBLE JET A**

**CAPACIDAD TOTAL 550 L (145.3 us gal.)**

SE NECESITA ADITIVO ANTICONGELANTE. REFERIRSE AL MANUAL DE OPERACIÓN DEL PILOTO PARA OTRAS CANTIDADES DE COMBUSTIBLE Y TIPOS DE ADITIVOS APROBADOS.

- OPEN → ABRA
- CLOSE → CIERRE
- LIFT & TURN → LEVANTE Y GIRE
- LOCK → TRABAR
- FWD → ADELANTE

**TBM 850 (From S/N 434), TBM 900, TBM 910, TBM 930**



**COMBUSTIBLE JET A**

**CAPACIDAD TOTAL 570 L (150.5 us gal.)**

SE NECESITA ADITIVO ANTICONGELANTE. REFERIRSE AL MANUAL DE OPERACIÓN DEL PILOTO PARA OTRAS CANTIDADES DE COMBUSTIBLE Y TIPOS DE ADITIVOS APROBADOS.

- OPEN → ABRA
- CLOSE → CIERRE
- LIFT & TURN → LEVANTE Y GIRE
- LOCK → TRABAR
- FWD → ADELANTE

**All**

- 20) On internal face of the left-side engine cowling

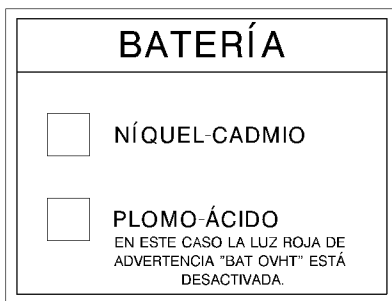
I4112003AAALMA8300



- 21) On internal face of the left-side engine cowling

**TBM 700A, TBM 700B, TBM 700C**

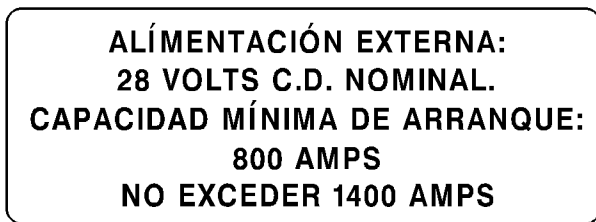
I4112003AAAPMA8300



- 22) On engine cowling, in front of compartment door

**TBM 700A, TBM 700B, TBM 700C, TBM 850**

I4112003AAALMA18200



**TBM 900, TBM 910, TBM 930**

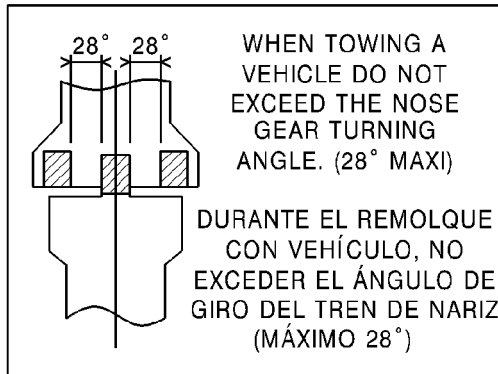
I4112003AAA GMA18500

**ALIMENTACIÓN EXTERNA:  
28 VOLTS C.D. NOMINAL.  
CAPACIDAD MÍNIMA DE ARRANQUE:  
800 AMPS  
NO EXCEDER 1000 AMPS**

**All**

23) On nose gear door

I4112003AAA LMA18100



24) On nose gear leg

I4112003AAA OMA8200

**TREN DE ATERRIZAJE  
DE NARIZ**

**PRESIÓN DE CUBIERTA: 6,5 bar  
94 psi**



- 25) On main gear leg

**TBM 700A, TBM 700B, TBM 700C1**

I4112003AAAOMA8100

**TREN DE ATERRIZAJE  
PRINCIPAL**

PRESIÓN DE CUBIERTA: 8,25 bar  
120 psi

**TBM 700C2, TBM 850, TBM 900, TBM 910, TBM 930**

I4112003AAAOMA8300

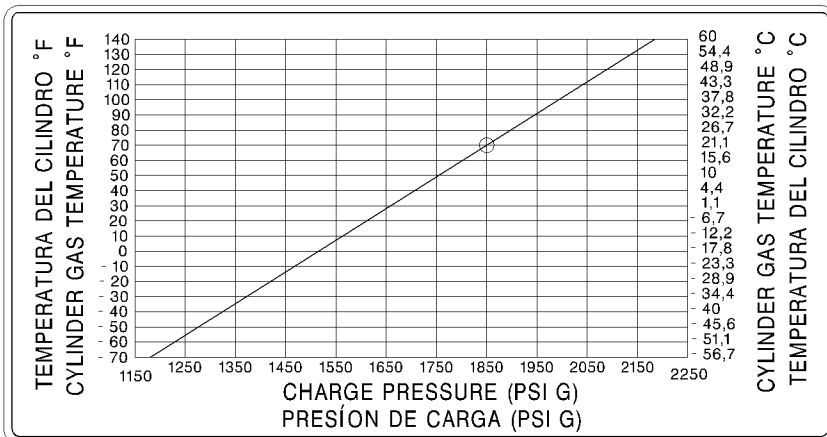
**TREN DE ATERRIZAJE  
PRINCIPAL**

PRESIÓN DE CUBIERTA: 8,96 bar  
130 psi

- 26) On internal face of the oxygen cylinder service door

**TBM 700C, TBM 850, TBM 900, TBM 910, TBM 930**

I4112003AAAOMA18300



27) On the oxygen service door

**TBM 700C, TBM 850, TBM 900, TBM 910, TBM 930**

I4112003AAAQOIA18100

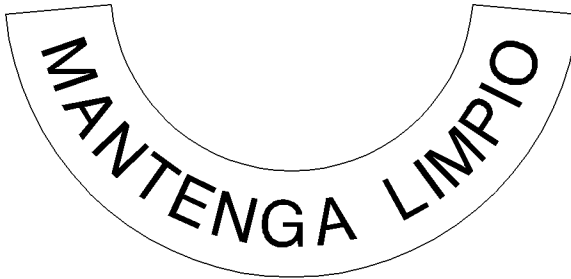


PUNTO DE SERVICIO PARA  
OXÍGENO  
NO USAR LUBRICANTES

**All**

28) Near air data system port

I4112003AAAQOIA8000



MANTENGA LIMPIO

29) On external side of emergency locator transmitter inspection door

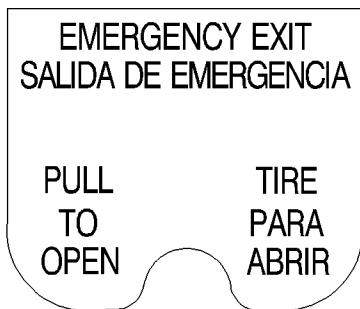
I4112003AAAQOIA8100



ELT  
LOCALIZADO  
AQUI

- 30) On emergency exit external side

I4112003AAAAMMA8500

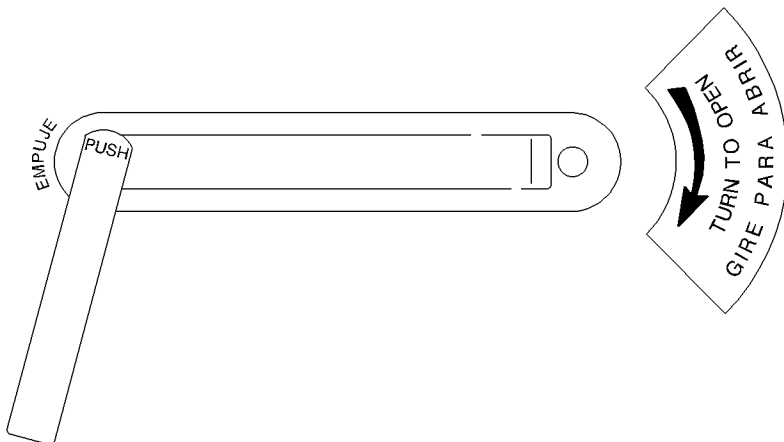


- 31) Door external side

- a) **TBM 700A** - On access door

**TBM 700B, TBM 700C, TBM 850, TBM 900, TBM 910, TBM 930** - On pilot's door, if installed

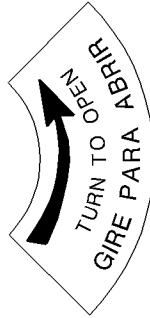
I4112003AAAALMA18300



## Pilot's Operating Handbook

- b) **TBM 700B, TBM 700C, TBM 850, TBM 900, TBM 910, TBM 930** - On access door

I4112003AAA LMA18400



- c) **TBM 700B, TBM 700C, TBM 850, TBM 900, TBM 910, TBM 930** - On outer fuselage skin aft of access door and in the cabin forward of access door

I4112003AAA MMA8000



- 32) **TBM 700A** - On external side of lower half-door

**TBM 700B, TBM 700C, TBM 850, TBM 900, TBM 910 (Up to S/N 1269), TBM 930** - On last step of stairs

I4112003AAA MMA8300

**CARGA MÁXIMA SOBRE LA ESCALERA : UNA PERSONA**

33) On the right-side access door jamb

TBM 700B, TBM 700C, TBM 850, TBM 900, TBM 910 (up to S/N 1269),  
TBM 930

I4112003AAAMMA18000

NO USAR EL  
PASAMANO  
PARA RETRAER  
O GUARDAR LA  
ESCALERA

**Placards relative to optional equipment**

34) Airplanes equipped with option OPT70 25002 :  
"7-place accommodation" - refer to POH Supplement 7

a) **Specific for S/N 7**

- On the right side of the cockpit, at front seat level

I4112003AAAALMA18000

**OXÍGENO DE EMERGENCIA**  
EN EL CAJÓN BAJO EL ASIENTO; TIRE  
COMPLETAMENTE LA MÁSCARA FUERA DEL CAJÓN;  
CUANDO ESTÁ TOTALMENTE EXTENDIDA DÉ UN  
TIRÓN A LA CUERDA. MÁXIMA DURACIÓN: 12 MIN.  
REFERIRSE AL MANUAL DE OPERACIÓN DEL PILOTO.  
NO FUMAR CUANDO ESTÉ EN USO.

- Under seating of intermediate and right-side rear seats (on FWD side)  
equipped with oxygen

I4112003AAAALMA8500

**PUSH TO OPEN**  
**EMPUJE PARA ABRIR**

**OXÍGENO DE EMERGENCIA**  
EN EL CAJÓN BAJO EL ASIENTO; TIRE  
COMPLETAMENTE LA MÁSCARA FUERA DEL CAJÓN;  
CUANDO ESTÁ TOTALMENTE EXTENDIDA DÉ UN  
TIRÓN A LA CUERDA. MÁXIMA DURACIÓN: 12 MIN.  
REFERIRSE AL MANUAL DE OPERACIÓN DEL PILOTO.  
NO FUMAR CUANDO ESTÉ EN USO.

- On FWD side of the rear divan seating

I4112003AAAANMA18300

**OXÍGENO DE EMERGENCIA**  
MÁXIMA DURACIÓN: 12 MIN  
REFERIRSE AL MANUAL DE OPERACIÓN DEL PILOTO.  
NO FUMAR CUANDO ESTÉ EN USO.

- On the rear divan middle seating

I4112003AAAAPMA8200

**OXÍGENO DE EMERGENCIA**  
EN EL CAJÓN ENTRE LOS ASIENTOS, TIRE  
COMPLETAMENTE LA MÁSCARA; CUANDO ESTÁ  
TOTALMENTE EXTENDIDA DÉ UN TIRÓN A LA CUERDA.  
MÁXIMA DURACIÓN - 12 MIN  
REFERIRSE AL MANUAL DE OPERACIÓN DEL PILOTO.  
NO FUMAR CUANDO ESTÉ EN USO

b) **From S/N 68 to S/N 243, except S/N 72 to 75 and S/N 205 and 240**

- On the right side of the cockpit, at front seat level, and under seating of left-side intermediate seat, right-side rear seat and rear seats (on FWD side)

I4112003AAALMA18000

**OXÍGENO DE EMERGENCIA**  
EN EL CAJÓN BAJO EL ASIENTO; TIRE  
COMPLETAMENTE LA MÁSCARA FUERA DEL CAJÓN;  
CUANDO ESTÁ TOTALMENTE EXTENDIDA DÉ UN  
TIRÓN A LA CUERDA. MÁXIMA DURACIÓN: 12 MIN.  
REFERIRSE AL MANUAL DE OPERACIÓN DEL PILOTO.  
NO FUMAR CUANDO ESTÉ EN USO.

c) **S/N 7 and from S/N 68 to S/N 243, except S/N 72 to 75 and S/N 205 and 240**

- On bottom bulkhead of rear pressurized baggage compartment (in cabin)

I4112003AAANMA8400

VERSIÓN 6-ASIENTOS : MÁXIMO 100 kg - (220 lbs)  
VERSIÓN 7-ASIENTOS : MÁXIMO 35 kg - (77 lbs)  
ES RESPONSABILIDAD DEL PILOTO  
COMPROBAR QUE TODO EL EQUIPAJE  
ESTÁ ASEGURADO CORRECTAMENTE.  
PARA INSTRUCCIONES DE CARGA REFERIRSE  
A LOS "DATOS DE PESO Y CENTRAJE"  
DEL MANUAL DE OPERACIÓN DEL PILOTO

- On left side, under the right-side and left-side intermediate seat seatings or on the left-side intermediate seat back-rest

I4112003AAAOMA18200

TIRE LA MANIJA HACIA ARRIBA Y EMPUJE EL  
RESPALDO DEL ASIENTO HACIA ADELANTE

- 35) **TBM 700B & TBM 700C1 with pilot door** Airplanes equipped with option OPT70 25027 : "Cargo transportation capability" - refer to POH Supplement 30

- On the raiser at frame 13bis, inside the cabin

## LÍMITES DE CARGA

### CONTENEDORES, PLATAFORMAS Y CAJAS PESADAS

MÁXIMO 330 Kg (727 Lbs)  
MÁXIMO 188 Kg/m<sup>2</sup> (38.5 Lb/Sq.ft)

### CARGAMENTO A GRANEL

200 Kg (441 Lbs)  
ENTRE REDES DE SEPARACIÓN  
100 Kg (220 Lbs)  
DETRÁS DE LA RED DE  
SEPARACIÓN TRASERA  
100 Kg/m<sup>3</sup> (6.24 Lb/Cu.ft)

PARA INSTRUCCIONES DE CARGA REFERIRSE AL SUPLEMENTO  
APLICABLE EN EL MANUAL DE OPERACIÓN DEL PILOTO.

ES RESPONSABILIDAD DEL PILOTO COMPROBAR QUE  
TODA LA CARGA ESTÁ ASEGURADA CORRECTAMENTE.

I4112003AAANMA18100



- Under the left front side window

I4112003AAANMA18000

## LÍMITES DE OPERACIÓN VERSIÓN CARGA

SI LA SALIDA DE EMERGENCIA NO ESTÁ ACCESIBLE,  
NO USE EL ASIENTO DELANTERO DERECHO

### 36) **TBM 700B without pilot door**

Airplanes equipped with option OPT70 25031 : "Cargo transportation capability without pilot door" - refer to POH Supplement 40

- On the raiser at frame 13bis, inside the cabin

I4112003AAANMA18200

## LÍMITES DE CARGA

### CONTENEDORES, PLATAFORMAS Y CAJAS PESADAS

MÁXIMO 180 Kg (396 Lbs)

MÁXIMO 188 Kg/m<sup>2</sup> (38.5 Lb/Sq.ft)

### CARGAMENTO A GRANEL

100 Kg (220 Lbs)

DETRÁS DE LA RED DE  
SEPARACIÓN TRASERA

MÁXIMO 100 Kg/m<sup>3</sup> (6.24 Lb/Cu.ft)

PARA INSTRUCCIONES DE CARGA, REFERIRSE AL SUPLEMENTO  
APLICABLE EN EL MANUAL DE OPERACIÓN DEL PILOTO.

ES RESPONSABILIDAD DEL PILOTO COMPROBAR QUE  
TODA LA CARGA ESTÁ ASEGURADA CORRECTAMENTE.

37) **TBM 700A with MOD70-019-25 and TBM 700B**

Airplanes equipped with option OPT70 35001 : "EROS/INTERTECHNIQUE" gaseous oxygen system" - refer to POH Supplement 29 or 37

- On the right side of the cockpit, at front seat level, and on the first rear passenger masks container (right side on the ceiling)

I4112003AAAAMMA18100

WARNING	ADVERTENCIA
GREASY SUBSTANCES ARE CAPABLE OF SPONTANEOUS COMBUSTION ON CONTACT WITH OXYGEN	SUSTANCIAS GRASOSAS PUEDEN PROVOCAR COMBUSTIÓN ESPONTÁNEA AL ESTAR EN CONTACTO CON OXÍGENO
DO NOT SMOKE WHILE OXYGEN IS IN USE	NO FUMAR CUANDO EL OXÍGENO ESTÁ EN USO

- On rear passenger masks containers (right side on the ceiling)

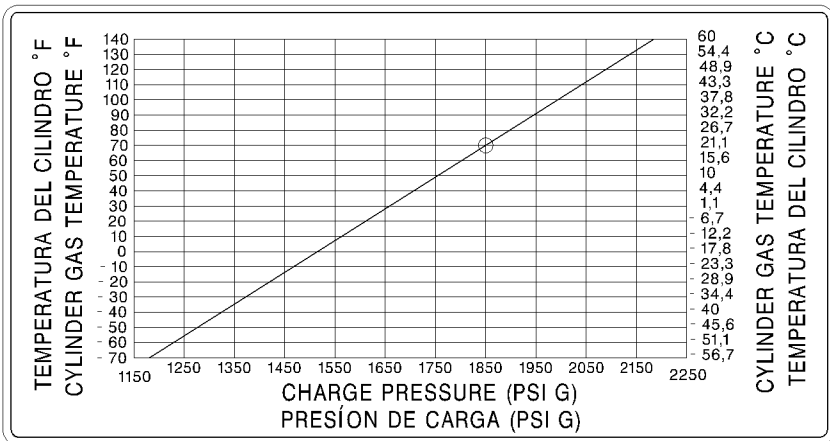
I4112003AAAAMMA18200

OXYGEN MASKS INSIDE	MÁSCARAS DE OXÍGENO DENTRO
PULL MASKS FOR OXYGEN SUPPLY	TIRE LAS MÁSCARAS PARA SUMINISTRO DE OXÍGENO

↓

- On internal face of the oxygen cylinder service door

I4112003AAAAMMA18300



38) Airplanes equipped with optional MOD70-0505-25C "Cabinet installation : Lavatory compartment"

- On fixed panel, cabin side

14113200AAACMA8000

**EL DIVISOR DEBE ESTAR ALMACENADO DURANTE EL DESPEGUE Y EL ATERRIAJE**

- On fixed panel, toilet side

**EL INODORO NO DEBE  
ESTAR OCUPADO DURANTE EL  
DEPEGUE Y EL ATERRIAJE**

**CIERRE Y ASEGURE LA TAPA  
DEL INODORO CUANDO NO ESTÉ EN USO**

**NO CUELQUE O GUARDE OBJETOS  
EN EL BAÑO O DIVISOR**

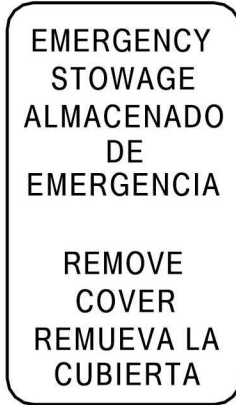
**EL DIVISOR DEBE ESTAR ALMACENADO  
DURANTE EL DESPEGUE Y EL ATERRIAJE**

**USE LOS AURICULARES CUANDO EL  
DIVISOR ESTÉ DESPLEGADO**

14113200AAACMA8100

- On access door, cabin side and toilet side

C4113200AABMA08000



- Behind access door, cabin side and toilet side

C4113200AAAAA8200



- Front face of lavatory compartment, near opening / closing switches

ALMACENAR

DESPLEGAR

- On the magazine rack

1,5 KG (3.3 LBS)

39) Airplanes equipped with optional MOD70-0684-25 "Extended large storage cabinet"

- On the upper surface of the cabinet

**WARNING**

**DO NOT SIT DOWN ON THE CABINET  
NO BAGGAGE ON THE CABINET**

**ADVERTENCIA**

**NO SENTARSE SOBRE EL GABINETE  
NO COLOCAR EQUIPAJE SOBRE EL GABINETE**

**FOR TAKE-OFF AND LANDING :**

**- NO OBJECTS ALLOWED ON THE CABINET  
- CABINET DRAWERS MUST BE STOWED**

**PARA DESPEGUE Y ATERRIZAJE:**

**NO SE PERMITEN OBJETOS SOBRE EL GABINETE  
LOS CAJONES DEL GABINETE DEBEN ESTAR CERRADOS**

- Inside large drawers, on side wall

C4113300AAAHMA8200

12,5 kg - 27.5 lbs MÁXIMO

- Inside small internal drawer, on side wall

C4113300AAAHMA8300

5 kg - 11 lbs MÁXIMO

### Section 3

## Emergency procedures

No specifics

### Section 4

## Normal procedures

No specifics

### Section 5

## Performance

No specifics

## Section 6

### Weight and balance

The information in this section supplements and/or replaces the information in section 6: Weight and Balance of the standard POH.

S/ R/ A/ O	Item OPT70 or MOD70	Required (R) or Standard (S) or Optional (A or O) equipment	Weight per unit lb (kg)	Arm in. (m)
<b>01 - Specific optional equipment</b>				
A	0289-11	Argentina markings	/	/
A	0619-11F	Argentina markings	/	/
<b>34 - Navigation</b>				
A	0176-00H	ADF RA 3500 system	7.61 (3.45)	214.65 (5.452)

## Section 7

### Description

No specifics

## Section 8

### Handling, servicing and maintenance

No specifics

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**SECTION 1****GENERAL**

This supplement is intended to inform the pilot about the airplane specifics, among others those required by the relevant Certification Authorities (limitations, description and operations necessary to the operation of the TBM airplane).

**SECTION 2****LIMITATIONS**

The limitations hereafter supplement or replace those of the standard airplane described in Section 2 "Limitations" of the basic Pilot's Operating Handbook.

**RUNWAY OPERATING LIMITS**

The airplane is only allowed to operate on paved runways.

**VFR NIGHT OPERATION LIMITS**

The aircraft VFR night operation without ATC communications is prohibited.

**MISCELLANEOUS LIMITS**

- In case of single pilot operations, the right crew seat must not be occupied by a passenger.
- The aircraft may be operated in CIS airspace on routes covered by ATC ground facilities using RBS mode and VHF radio fields.
- Aircraft flights in Polar Regions outside areas covered by VHF communications are allowed only in case of favourable forecast for HF radio waves propagation.
- Extended overwater flights must be conducted in accordance with operational rules of country of operator.

**PLACARDS**

- 1) Rear pressurized baggage compartment (in cabin)
  - a) On bottom bulkhead

**TBM 700A, TBM 700B and TBM 850**

**100 kg - 220 lbs MAXIMUM**

**IT IS THE PILOT'S RESPONSIBILITY TO  
CHECK THAT ALL THE BAGGAGES ARE  
PROPERLY SECURED**

**FOR LOADING INSTRUCTIONS  
SEE "WEIGHT AND BALANCE DATA"  
IN PILOT'S OPERATING HANDBOOK**

**100 кг МАКСИМУМ**

**В ОБЯЗАННОСТЬ ПИЛОТА ВХОДИТ  
ПРОВЕРКА ПРАВИЛЬНОСТИ  
ЗАКРЕПЛЕНИЯ БАГАЖА.**

**ИНСТРУКЦИЮ ПО ЗАГРУЗКЕ  
СМ. "WEIGHT AND BALANCE DATA"  
В "PILOT'S OPERATING HANDBOOK"**

2) Non pressurized FWD baggage compartment

a) On baggage compartment door frame

**TBM 700A, TBM 700B and TBM 850**

**50 kg - 110 lbs MAXIMUM**

**FOR LOADING INSTRUCTIONS  
SEE "WEIGHT AND BALANCE DATA"  
IN PILOT'S OPERATING HANDBOOK**

**50кг МАКСИМУМ**

**ИНСТРУКЦИЮ ПО ЗАГРУЗКЕ  
СМ. "WEIGHT AND BALANCE DATA"  
В "PILOT'S OPERATING HANDBOOK"**

3) On cockpit R.H. side, at front seat level

**TBM 700A, TBM 700B (chemical oxygen)**

**EMERGENCY OXYGEN**

**IN DRAWER UNDER SEAT ; PULL FULLY  
THE MASK OUT OF DRAWER ; AT FULL  
EXTENSION GIVE CORD A TUG.  
MAXIMUM DURATION - 12 min  
SEE POH  
NO SMOKING WHILE IN USE**

**АВАРИЙНЫЙ КИСЛОРОД**

**В ВЫДВИЖНОМ ЯЩИКЕ ПОД КРЕСЛОМ. ВЫТЯНУТЬ  
МАСКУ ИЗ ЯЩИКА С ПОЛНЫМ НАТЯЖЕНИЕМ ШНУРА.  
МАКСИМАЛЬНЫЙ ЗАПАС КИСЛОРОДА НА 12 МИНУТ.  
СМ. "PILOT'S OPERATING HANDBOOK".  
НЕ КУРИТЬ ПРИ ИСПОЛЬЗОВАНИИ!**

- 4) Under seating of intermediate and rear passenger seats (on FWD side), which are fitted with oxygen

**TBM 700A, TBM 700B (chemical oxygen)**

**PUSH TO OPEN**  
**НАЖАТЬ ДЛЯ ОТКРЫТИЯ**

EMERGENCY OXYGEN  
IN DRAWER UNDER SEAT; PULL FULLY THE MASK OUT OF DRAWER; AT FULL EXTENSION GIVE CORD A TUG.  
MAXIMUM DURATION - 12 min  
SEE POH  
NO SMOKING WHILE IN USE

**АВАРИЙНЫЙ КИСЛОРОД**  
В ВЫДВИЖНОМ ЯЩИКЕ ПОД КРЕСЛОМ. ВЫТЯНУТЬ МАСКУ ИЗ ЯЩИКА С ПОЛНЫМ НАТЯЖЕНИЕМ ШНУРА. МАКСИМАЛЬНЫЙ ЗАПАС КИСЛОРОДА НА 12 МИНУТ. СМ. "PILOT'S OPERATING HANDBOOK". НЕ КУРИТЬ ПРИ ИСПОЛЬЗОВАНИИ!

14113200AAAABMA8100

- 5) On R.H. side at front seat level and on the first rear passengers masks container (R.H. side on the ceiling)

**TBM 850 (gaseous oxygen)**

**TBM 700B (gaseous oxygen) (if installed)**

<p><b>WARNING</b></p> <p>GREASY SUBSTANCES ARE CAPABLE OF SPONTANEOUS COMBUSTION ON CONTACT WITH OXYGEN</p> <p>DO NOT SMOKE WHILE OXYGEN IS IN USE</p>	<p><b>ВНИМАНИЕ!</b></p> <p>МАСЛЯНЫЕ СУБСТАНЦИИ МОГУТ САМОПРОИЗВОЛЬНО ЗАГОРЕТЬСЯ ПРИ КОНТАКТЕ С КИСЛОРОДОМ.</p> <p>НЕ КУРИТЬ ПРИ ИСПОЛЬЗОВАНИИ КИСЛОРОДА!</p>
--	--

- 6) On rear passengers masks containers (on R.H. side on the ceiling)

**TBM 850 (gaseous oxygen)**

**TBM 700B (gaseous oxygen)** (if installed)



- 7) On rear passenger's table casing

**TBM 700A, TBM 700B and TBM 850**

**TABLE MUST BE STOWED DURING TAKEOFF AND LANDING**

**ПРИ ВЗЛЁТЕ И ПОСАДКЕ СТОЛИК ДОЛЖЕН БЫТЬ СЛОЖЕН**

- 8) On rear passenger's table casing

**TBM 850**

**PUSH TO OPEN**

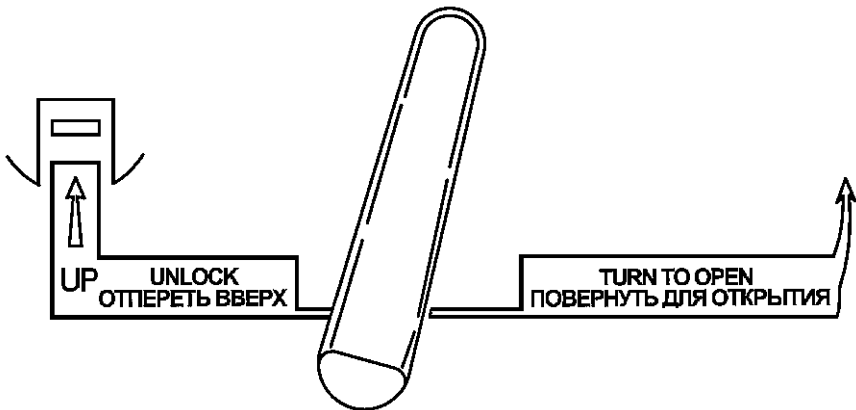
**НАЖАТЬ ДЛЯ ОТКРЫТИЯ**

9) On access door - Internal side

- a) **TBM700A** from S / N 1 to S / N 49, except airplanes equipped as a retrofit with modification No. MOD70-019-25

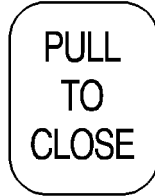


- b) **TBM700A** from S / N 50 to S/N 125, plus airplanes equipped as a retrofit with modification No. MOD70-019-25



c) **TBM700A** S / N 30, 35 and from S/N 50 to 125


I4112003AAA PMA18000



d) **TBM700B**




**CAUTION:** UNLOCK BEFORE OPERATING THE HANDLE  
**ВНИМАНИЕ!** ОТПЕРЕТЬ ПЕРЕД ИСПОЛЬЗОВАНИЕМ РУЧКИ

**TURN HANDLE TO OPEN**  
**ПОВЕРНУТЬ РУЧКУ ДЛЯ ОТКРЫТИЯ** 

e) **TBM850**



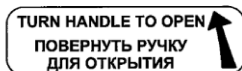
**CAUTION:** UNLOCK BEFORE OPERATING THE HANDLE  
**ВНИМАНИЕ!** ОТПЕРЕТЬ ПЕРЕД ИСПОЛЬЗОВАНИЕМ РУЧКИ

**TURN HANDLE TO OPEN**  
**ПОВЕРНУТЬ РУЧКУ ДЛЯ ОТКРЫТИЯ** 



10) On "pilot" door (if installed)

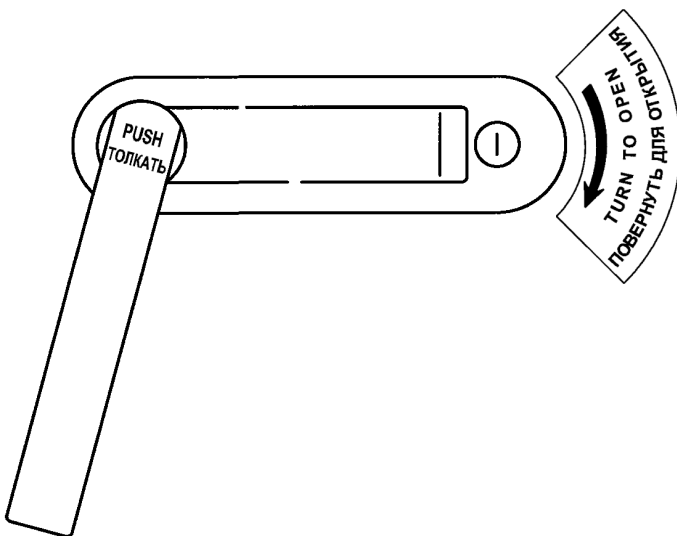
a) **TBM700B**



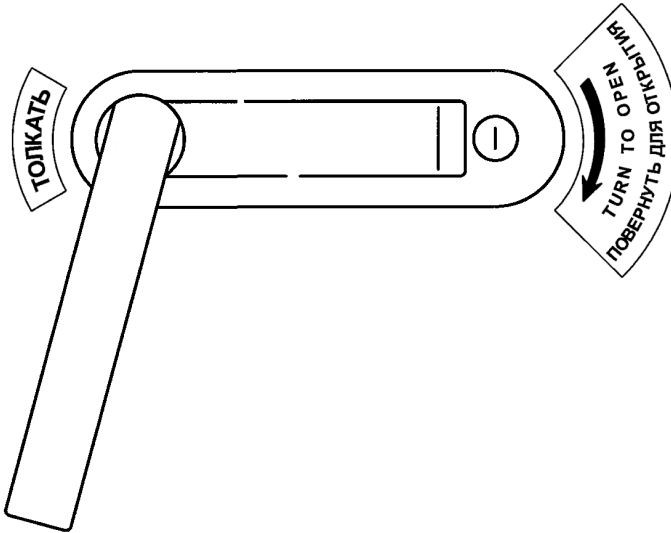
b) **TBM850**



11) **TBM700A** On access door - External side



- 12) **TBM700B, TBM850** On "pilot" door (if installed) - External side



- 13) On access door - External side

**TBM700B, TBM850**



- 14) Under the window, on L.H. side, at the level of intermediate seats

TBM700A, TBM700B, TBM850

**NO SMOKING  
НЕ КУРИТЬ**

- 15) On cabinet drawer

TBM700A, TBM700B, TBM850

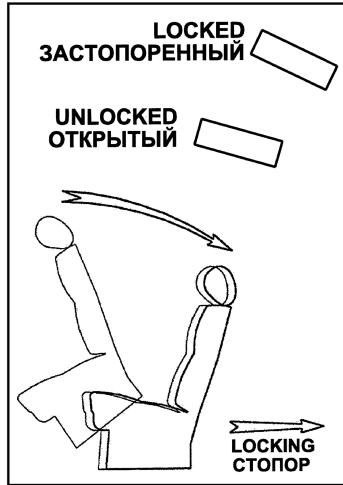
14112003AA/AMA/18500

**SMOKE GOGGLES**

**ДЫМОЗАЩИТНЫЕ  
ОЧКИ**

- 16) On aisle side of rear seats

**TBM700A - PRE-MOD70-019-25**



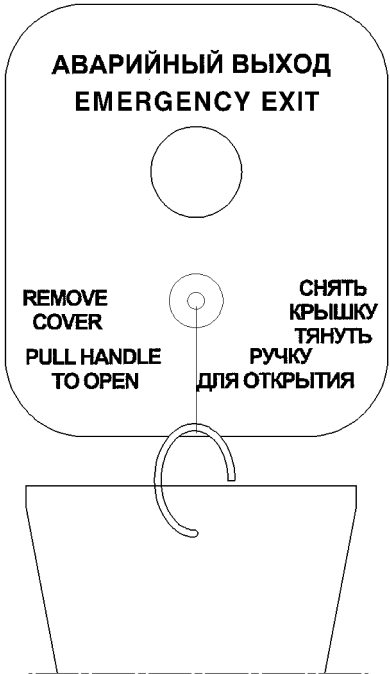
- 17) Under seating of L.H. intermediate seat, on FWD side

**TBM700A, TBM700B, TBM850**



18) On emergency exit handle

**TBM700A, TBM700B, TBM850**



I411300AAA MA8300



19) On emergency exit handle, external side

TBM700A, TBM700B, TBM850



20) TBM700B, TBM850 On outer fuselage skin aft of access door



- 21) TBM700B, TBM850 In the cabin forward of access door



- 22) TBM700A, TBM700B, TBM850 On last step of stairs

**STAIRS MAX LOAD : ONE PERSON**

**МАКСИМАЛЬНАЯ НАГРУЗКА НА ЛЕСТНИЦУ: 1 ЧЕЛОВЕК**

23) TBM700B, TBM850 On R.H. access door jamb

**DO NOT USE  
HAND RAIL  
TO RETRACT  
OR STOW  
STAIRS**

**НЕ  
ИСПОЛЬЗОВАТЬ  
ПОРУЧЕНЬ ДЛ  
ВЫТЯГИВАНИЯ /  
СКЛАДЫВАНИЯ  
ЛЕСТНИЦЫ**



## SECTION 3

### EMERGENCY PROCEDURES

The emergency procedures hereafter supplement those of standard airplane described in Section 3 "Emergency Procedures" of the basic Pilot's Operating Handbook.

### 3.1 - GENERAL

#### *Alarm system recall*

Main failure or state modification of the different systems are provided by warning or caution messages appearing on CAS display.

The CAS includes **red** messages indicating failures which require an immediate action from the pilot, and **amber** messages indicating failures or discrepancies which require an action as soon as practical.

Red or amber failure warnings are coupled with the lighting of

- a flashing red indicator



or - a fixed amber indicator



Both indicators are located on the upper part of the instrument panel. When either one lights up, press it once to reactivate. It will go out and is ready to signal in the event of another failure. On the CAS display, the corresponding failure message remains ON as long as the failed condition exists.

### 3.2 - EMERGENCY LANDINGS

After each Emergency landing, remove portable ELT/VHF emergency radio from pocket and operate it as prescribed by the instruction.

#### LANDING WITHOUT ELEVATOR CONTROL

- 1 - Configuration ..... **LANDING GEAR DN - FLAPS TO**  
 2 - Airspeed ..... **Maintain IAS as below**

Weight < 6250 lbs (2835 kg)	Weight ≥ 6250 lbs (2835 kg)
<b>IAS = 100 KIAS</b>	<b>IAS = 105 KIAS</b>

- 3 - Power as necessary to maintain airspeed according to an easy approach slope  $\simeq$  300 ft / min  
 4 - Adjust aircraft pitch using manual pitch trim wheel and engine thrust  
 5 - When ground approaches, decrease slope progressively  
 6 - Reduce power just before touchdown

**CAUTION**

**ENGINE POWER INCREASE EFFECT IS NOSING-UP,  
DECREASE EFFECT IS NOSING-DOWN.**

**CAUTION**

**IN CASE OF CONTROL DISCONNECTION, AIRPLANE  
REACTION ON ELEVATOR TRIM MOVEMENT IS  
STRAIGHT.**

**CAUTION**

**IN CASE OF ELEVATOR JAMMING, AIRPLANE  
REACTION ON ELEVATOR TRIM MOVEMENT IS  
REVERSE.**

**LANDING WITHOUT RUDDER CONTROL**

- 1 - Configuration ..... **LANDING GEAR DN - FLAPS LDG**
- 2 - Normal landing

**CAUTION**  
**CONTROL AIRCRAFT DIRECTION BY MEANS OF**  
**AILERONS.**

**LANDING WITHOUT AILERONS**

- 1 - Configuration ..... **LANDING GEAR DN - FLAPS TO**
- 2 - Airspeed ..... **Maintain IAS as below**

Weight < 6250 lbs (2835 kg)	Weight ≥ 6250 lbs (2835 kg)
<b>IAS = 100 KIAS</b>	<b>IAS = 105 KIAS</b>

**CAUTION**  
**CONTROL AIRCRAFT DIRECTION BY MEANS OF**  
**RUDDER.**

### 3.3 - DEICING SYSTEM

#### LEADING EDGES DEICING FAILURE

Symptoms :

- Propeller de-icing green light is not lit
- Propeller vibrations
- Intensive ice accumulation on the windshield
- Abnormal airplane behaviour

1 - REDUCE power

2 - ACTUATE propeller governor lever to vary RPM within operating range

3 - LEAVE icing conditions as soon as possible

**SECTION 4**  
**NORMAL PROCEDURES**

The normal procedures hereafter supplement those of standard airplane described in Section 4 "Normal Procedures" of the basic Pilot's Operating Handbook.

**4.3 - CHECK-LIST PROCEDURES**

<b>TOUCH AND GO</b>	
<i>After wheels touch</i>	
1 - Flaps .....	<b>TO</b>
2 - Power lever .....	<b>Display TRQ = 100 %</b>
3 - Takeoff .....	<b>ROTATION : See "Takeoff distances" Chapter 5.9</b>
- Normal takeoff .....	<b>ATTITUDE : 7° 5</b>
- Short takeoff	
. Weight < 6579 lbs (2984 kg) .....	<b>ATTITUDE : 15°</b>
. Weight ≥ 6579 lbs (2984 kg) .....	<b>ATTITUDE : 12° 5</b>

**4.4 - AMPLIFIED PROCEDURES****TOUCH AND GO*****After wheels touch***

- 1 - Flaps ..... **TO**  
Check that flaps have well reached the TO position before increasing power. Do not increase power with full flaps, as airplane may lift off prematurely at low speed.
- 2 - Power lever ..... **Display TRQ = 100 %**
- 3 - Takeoff ..... **ROTATION : See "Takeoff distances" Chapter 5.9**
  - Normal takeoff ..... **ATTITUDE : 7° 5**
  - Short takeoff
    - . Weight < 6579 lbs (2984 kg) ..... **ATTITUDE : 15°**
    - . Weight ≥ 6579 lbs (2984 kg) ..... **ATTITUDE : 12° 5**

Rotation speed at takeoff, according to airplane weight, is also given in Chapter 5.9.

However, the pilot's operating handbook does not supply distances concerning touch and go. These distances are let to pilot's initiative.

In case of air leak between the solenoï d valve and the torque limiter, the available torque might be below 100 %. Consequently, it is strongly recommended not to select "850" position of the flap control lever :

- for a new approach or visual circuit
- for staying below 1500 ft AGL

## 4.5 - PARTICULAR PROCEDURES

### REMARK :

*The procedures and procedure elements given in this Chapter "PARTICULAR PROCEDURES" supplement the normal procedures or complete certain elements of the normal procedures described in Chapter(s) 4.3 and/or 4.4.*

### FLIGHT INTO KNOWN ICING CONDITIONS (1/5)

#### CAUTION

**DURING FLIGHT INTO KNOWN ICING CONDITIONS, FLIGHT CREW SHALL PAY HEIGHTENED ATTENTION TO THE CORRECT OPERATION OF AIRFRAME DEICE SYSTEM LIGHT ILLUMINATION LOCATED ON APPROPRIATE CONTROL PANEL.**

#### General

- 1 - Icing conditions exist when the OAT on the ground or in flight is + 13°C or below, and visible moisture in any form is present (clouds, fog with visibility of one mile (1.6 km) or less, rain, snow, sleet or ice crystals).
- 2 - Icing conditions also exist when the OAT on the ground is + 13°C or below and when operating on ramps, taxiways or runways where surface snow, ice, standing water or slush may be ingested by the engine or freeze on engine or cowlings.

#### NOTE :

*Refer to Figure 5.5.1 to convert OAT to SAT in flight.*

*SAT = OAT - 2°C on the ground.*

- 3 - Flight into known icing conditions is authorized when all airplane equipment provided for ice protection is operating correctly. This includes :
  - Pneumatic deice system for inboard and outboard wing, for stabilizers and for elevator horns.
  - Propeller electrical deice system.
  - Electrical heating system for both pitots and for the stall warning incidence sensor.
  - Windshield electrical deice system.
  - Inertial separator.

Description of deice systems is presented in Chapter 7.13.

## PARTICULAR PROCEDURES

**FLIGHT INTO KNOWN ICING CONDITIONS (2/5)**

Ice accumulation thickness is monitored by the pilot on the L.H. wing leading edge.

At night, a leading edge icing inspection light located on the fuselage L.H. side, activated by the "ICE LIGHT" switch, is provided.

Boots are automatically cycling at the optimum time to assure proper ice removal. Correct operation of the system can be checked observing the corresponding green advisory light illumination at each boot inflation impulse. If correct operation cannot be confirmed, do not enter or leave as soon as possible icing conditions.

Apply "LEADING EDGES DEICING FAILURE" emergency procedure.

**Ice protection procedures**

- 1 - Prior to entering IMC, as a preventive :

*If  $0^{\circ} C < OAT < + 13^{\circ} C$  :*

- "PROP DE ICE" switch ..... **ON**
- "INERT SEP" switch ..... **ON**

*If  $- 15^{\circ} C < OAT < 0^{\circ} C$  :*

- All "DE ICE SYSTEM" switches ..... **ON**
- "IGNITION" switch ..... **ON**
- "INERT SEP" switch ..... **ON**

*If  $- 25^{\circ} C < OAT < - 15^{\circ} C$  :*

- All "DE ICE SYSTEM" switches ..... **ON**
- "INERT SEP" switch ..... **ON**

*If  $OAT < - 25^{\circ} C$  :*

- "PROP DE ICE" switch ..... **ON**
- "INERT SEP" switch ..... **ON**

If icing conditions are foreseen, particularly check good functioning of all electrical and pneumatic ice protection systems.

When OAT is below  $- 25^{\circ} C$ , avoid operations of the "AIRFRAME DEICE SYSTEM" for a too long period because the boots could be damaged. The "INERT SEP" switch must be left ON while the airplane remains in icing conditions.



PARTICULAR PROCEDURES

**FLIGHT INTO KNOWN ICING CONDITIONS (3/5)**

- 2 - When operating under IMC :
  - All "DE ICE SYSTEM" switches ..... **ON**
  - "IGNITION" switch ..... **ON**
  - "INERT SEP" switch ..... **ON**

**CAUTION**

**SHOULD CONDITIONS REQUIRE IT, APPLY THESE DIRECTIVES FROM BEGINNING OF TAXI ONWARDS**

**CAUTION**

**DO NOT OPERATE INERTIAL SEPARATOR IF THE AIRSPEED EXCEEDS 200 KIAS. THERE IS NO SPEED LIMITATION WHEN THE INERTIAL SEPARATOR IS IN FIXED POSITION**

If a high speed descent (> 200 KIAS) is anticipated into known icing conditions, position "INERT SEP" switch to ON before accelerating. This will avoid reducing speed below 200 KIAS during descent to set the inertial separator.

**IF AIRPLANE LEAVES ICING CONDITIONS, MAINTAIN "INERT SEP" ON AS LONG AS ICE THICKNESS ON NON-DEICED VISIBLE PARTS EXCEEDS 15 mm (OR ½ INCH)**

This will avoid ice fragments coming from propeller spinner and being ingested by engine.

**INERTIAL SEPARATOR POSITION AFFECTS ENGINE PARAMETERS (PARTICULARLY TRQ AND ITT). CARE MUST BE EXERCISED WHEN OPERATING THE INERTIAL SEPARATOR OR WHEN INCREASING POWER WITH THE INERTIAL SEPARATOR ON, TO AVOID EXCEEDING ENGINE LIMITATIONS**

## PARTICULAR PROCEDURES

### FLIGHT INTO KNOWN ICING CONDITIONS (4/5)

**NOTE :**

*"IGNITION" switch may be left ON for a long period.*

*Standby compass indications are altered when windshield deicing system(s) operate(s).*

- 3 - Procedures for holding, approach and landing in icing conditions :
  - Minimum recommended speeds are :

	Weight	
	< 6579 lbs (2984 kg)	> 6579 lbs (2984 kg)
Flaps UP	130 KIAS	135 KIAS
Flaps TO	110 KIAS	110 KIAS
Flaps LDG	90 KIAS	95 KIAS

- If there is ice on the unprotected surfaces of the airplane, during flight end phase, conduct holding with the flaps up. Use flaps as required for final approach and landing at minimum speeds noted above.

#### Ice accumulation effects

When ice has accumulated on the unprotected surfaces of the airplane, aerodynamic characteristics may be changed.

Particularly stall speeds may increase by up to :

- Flaps UP            20 KIAS
- Flaps TO            15 KIAS
- Flaps LDG        10 KIAS

Correct operation of the aural stall warning may be altered by severe or prolonged icing.

Indeed, in case of severe or prolonged icing, an ice concretion due to refreezing around the heated stall warning may appear. Above-recommended speeds take into account, on one side, the stall speed increase due to profile shape deterioration and, on the other side, the weight increase of the iced-up airplane (taking as a basis the airplane maximum weight when not iced-up).

## PARTICULAR PROCEDURES

**FLIGHT INTO KNOWN ICING CONDITIONS (5/5)**

Rate of climb values with ice accumulation on the unprotected surfaces are to be decreased by 10 %.

Cruise speeds may be decreased by 10 %, if cruise power is not changed, or more, if cruise power setting should be decreased due to the additional inertial separator limitations (ITT limitation).

Because of the higher landing speed, landing distances will be increased. In the landing configuration, using 90 KIAS approach speed increases landing distance by 20 % - refer to Chapter 5.14 "LANDING DISTANCES".

**STALL**

The characteristics are conventional. An aural warning is provided by stall warning horn which sounds between 6 and 10 knots above the stall in all configurations.

**NOTE :**

*If audio warning signal becomes alternated (high-pitched sound / low-pitched sound) the first step is recovery from stall.*

**SECTION 5**  
**PERFORMANCE**

The performance hereafter supplement those of standard airplane described in Section 5 "Performance" of the basic Pilot's Operating Handbook.

**5.1 - WIND COMPONENTS**

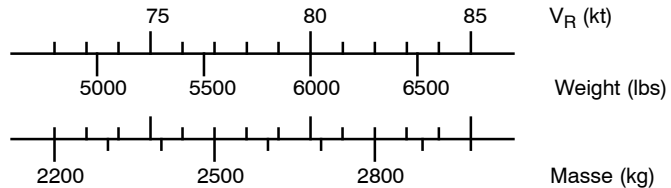
The runway condition changes the full crosswind limits as follows :

- Dry runway ( $\mu = 0.6$ ) : 20 kts
- Wet runway ( $\mu = 0.45$ ) : 15 kts
- Iced runway ( $\mu = 0.3$ ) : 10 kts

## 5.2 - TAKEOFF DISTANCES

### WEIGHT : 5512 lbs (2500 kg)

- Associated conditions :
- Landing gear DN and flaps TO
  - 15° of attitude - TRQ = 100 %
  - Np = 2000 RPM - BLEED AUTO
  - Paved, hard, dry and level runway
  - GR = Ground roll (in ft)
  - D50 = Takeoff distance (clear to 50 ft) (in ft)
  - Rotation speed choice (VR)



WEIGHT : 5512 lbs (2500 kg) At 50 ft = 91 KIAS - 105 MPH IAS								
PRESSURE ALTITUDE ft	ISA - 35°C		ISA - 20°C		ISA - 10°C		ISA	
	GR	D50	GR	D50	GR	D50	GR	D50
0	787	1280	886	1411	951	1493	1017	1591
2000	886	1411	984	1558	1066	1657	1132	1772
4000	984	1558	1099	1722	1181	1837	1280	1968
6000	1099	1722	1230	1903	1329	2051	1444	2215
8000	1230	1903	1394	2149	1526	2329	1657	2510
PRESSURE ALTITUDE ft	ISA + 10°C		ISA + 20°C		ISA + 30°C		ISA + 37°C	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1083	1690	1148	1788	1214	1903	1247	1969
2000	1214	1870	1296	1985	1378	2133	1444	2231
4000	1363	2100	1476	2247	1575	2411	1640	2526
6000	1575	2379	1690	2559	1837	2756	1919	2887
8000	1804	2707	1968	2920	2100	3133	2198	3281

Figure 5.3.1 - TAKEOFF DISTANCES - 5512 lbs (2500 kg)

- Corrections :
- . Reduce total distances of 10 % every 10 kts of headwind
  - . Increase total distances of 30 % every 10 kts of rear wind
  - . Increase by : 30 % on slippery runway 15 % on wet runway

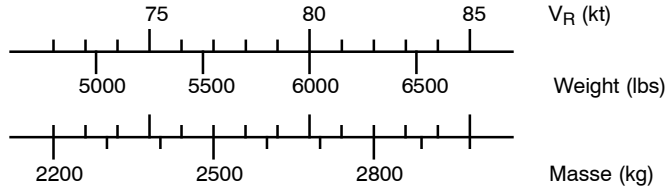
**NOTE :**

Between ISA + 30°C and ISA + 37°C, it may be necessary to cut-off the Bleed in order to set TRQ = 100 % during takeoff while respecting the engine limitations. In this case, reduce power after takeoff to set the Bleed to AUTO.

## TAKEOFF DISTANCES

### WEIGHT : 6579 lbs (2984 kg)

- Associated conditions :
- Landing gear DN and flaps TO
  - 15° of attitude - TRQ = 100 %
  - Np = 2000 RPM - BLEED AUTO
  - Paved, hard, dry and level runway
  - GR = Ground roll (in ft)
  - D<sub>50</sub> = Takeoff distance (clear to 50 ft) (in ft)
  - Rotation speed choice (V<sub>R</sub>)



WEIGHT : 6579 lbs (2984 kg) At 50 ft = 94 KIAS - 108 MPH IAS								
PRESSURE ALTITUDE ft	ISA - 35°C		ISA - 20°C		ISA - 10°C		ISA	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1083	1673	1214	1870	1280	2001	1378	2133
2000	1214	1870	1345	2067	1444	2198	1542	2362
4000	1345	2067	1509	2297	1640	2461	1739	2625
6000	1509	2297	1706	2559	1837	2723	1968	2920
8000	1706	2559	1903	2854	2067	3051	2231	3281
PRESSURE ALTITUDE ft	ISA + 10°C		ISA + 20°C		ISA + 30°C		ISA + 37°C	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1476	2264	1575	2395	1690	2559	1755	2657
2000	1673	2493	1772	2657	1903	2854	1969	2953
4000	1870	2789	2001	2953	2149	3182	2231	3314
6000	2100	3117	2297	3346	2461	3609	2543	3740
8000	2428	3543	2657	3839	2854	4134	2969	4298

Figure 5.3.2 - TAKEOFF DISTANCES - 6579 lbs (2984 kg)

- Corrections :
- . Reduce total distances of 10 % every 10 kts of headwind
  - . Increase total distances of 30 % every 10 kts of rear wind
  - . Increase by : 30 % on slippery runway 15 % on wet runway

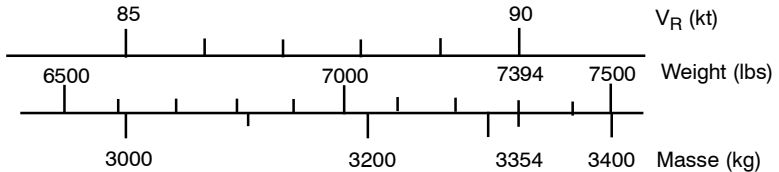
**NOTE :**

Between ISA + 30°C and ISA + 37°C, it may be necessary to cut-off the Bleed in order to set TRQ = 100 % during takeoff while respecting the engine limitations. In this case, reduce power after takeoff to set the Bleed to AUTO.

**TAKEOFF DISTANCES**

**WEIGHT : 7394 lbs (3354 kg)**

- Associated conditions :
- Landing gear DN and flaps TO
  - 12°5 of attitude - TRQ = 100 %
  - Np = 2000 RPM - BLEED AUTO
  - Paved, hard, dry and level runway
  - GR = Ground roll (in ft)
  - D<sub>50</sub> = Takeoff distance (clear to 50 ft) (in ft)
  - Rotation speed choice (V<sub>R</sub>)



<b>WEIGHT : 7394 lbs (3354 kg) At 50 ft = 99 KIAS - 114 MPH IAS</b>								
PRESSURE ALTITUDE ft	ISA - 35°C		ISA - 20°C		ISA - 10°C		ISA	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1575	2250	1755	2495	1905	2675	2035	2840
2000	1755	2495	1970	2755	2120	2955	2280	3150
4000	1970	2755	2200	3055	2380	3285	2545	3510
6000	2185	3035	2480	3415	2675	3675	2890	3955
8000	2460	3380	2790	3825	3055	4135	3315	4445
PRESSURE ALTITUDE ft	ISA + 10°C		ISA + 20°C		ISA + 30°C		ISA + 37°C	
	GR	D50	GR	D50	GR	D50	GR	D50
0	2165	3020	2315	3200	2480	3415	2560	3530
2000	2445	3365	2595	3580	2780	3805	2920	3990
4000	2740	3760	2955	4035	3185	4300	3330	4480
6000	3135	4235	3380	4530	3625	4825	3805	5055
8000	3560	4760	3855	5105	4170	5450	4380	5710

Figure 5.3.3 - TAKEOFF DISTANCES - 7394 lbs (3354 kg)

- Corrections :
- . Reduce total distances of 10 % every 10 kts of headwind
  - . Increase total distances of 30 % every 10 kts of rear wind
  - . Increase by : 30 % on slippery runway 15 % on wet runway

**NOTE :**

Between ISA + 30°C and ISA + 37°C, it may be necessary to cut-off the Bleed in order to set TRQ = 100 % during takeoff while respecting the engine limitations. In this case, reduce power after takeoff to set the Bleed to AUTO.

## 5.3 - LANDING DISTANCES

### WEIGHT : 7024 lbs (3186 kg)

- Associated conditions:
- Landing gear DN and flaps LDG
  - Approach speed IAS = 85 KIAS
  - Touch-down speed IAS = 78 KIAS
  - Maximum braking without reverse
  - Paved, hard, dry and level runway
  - GR = Ground roll (in ft)
  - D<sub>50</sub> = Landing distance (clear to 50 ft) (in ft)

PRESSURE ALTITUDE ft	ISA - 35°C		ISA - 20°C		ISA - 10°C		ISA	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1575	2135	1675	2265	1740	2330	1840	2430
2000	1675	2265	1805	2395	1870	2495	1970	2590
4000	1805	2395	1940	2560	2035	2660	2135	2790
6000	1940	2560	2100	2725	2200	2855	2300	2955
8000	2100	2725	2265	2920	2360	3020	2495	3180
PRESSURE ALTITUDE ft	ISA + 10°C		ISA + 20°C		ISA + 30°C		ISA + 37°C	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1905	2530	2000	2625	2070	2690	2135	2790
2000	2070	2690	2135	2790	2230	2890	2300	2955
4000	2230	2890	2330	2985	2430	3085	2495	3185
6000	2395	3050	2530	3215	2625	3315	2690	3380
8000	2590	3280	2725	3410	2855	3570	2920	3640

Figure 5.4.1 - LANDING DISTANCES - 7024 lbs (3186 kg)

- Corrections :
- . Reduce total distances of 10 % every 10 kt of headwind
  - . Increase total distances of 30 % every 10 kt of rear wind

Other runway surfaces require the following correction factors :

- . Increase by : 30 % on slippery runway 15 % on wet runway



LANDING DISTANCES

**WEIGHT : 6250 lbs (2835 kg)**

- Associated conditions: - Landing gear DN and flaps LDG  
 - Approach speed IAS = 80 KIAS  
 - Touch-down speed IAS = 65 KIAS  
 - Maximum braking without reverse  
 - Paved, hard, dry and level runway  
 - GR = Ground roll (in ft)  
 - D<sub>50</sub> = Landing distance (clear to 50 ft) (in ft)

PRESSURE ALTITUDE ft	ISA - 35°C		ISA - 20°C		ISA - 10°C		ISA	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1050	1900	1115	2000	1180	2070	1215	2135
2000	1115	2000	1215	2100	1245	2200	1310	2265
4000	1180	2100	1280	2230	1345	2330	1410	2395
6000	1280	2230	1380	2360	1445	2460	1510	2525
8000	1380	2360	1475	2490	1540	2590	1610	2690
PRESSURE ALTITUDE ft	ISA + 10°C		ISA + 20°C		ISA + 30°C		ISA + 37°C	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1280	2200	1310	2300	1380	2360	1445	2430
2000	1345	2330	1410	2430	1475	2495	1540	2560
4000	1445	2460	1510	2560	1575	2655	1640	2755
6000	1575	2645	1640	2720	1705	2820	1770	2920
8000	1705	2790	1770	2885	1835	2985	1900	3085

Figure 5.4.2 - LANDING DISTANCES - 6250 lbs (2835 kg)

- Corrections : . Reduce total distances of 10 % every 10 kt of headwind  
 . Increase total distances of 30 % every 10 kt of rear wind

Other runway surfaces require the following correction factors :

- . Increase by : 30 % on slippery runway 15 % on wet runway

## LANDING DISTANCES

### WEIGHT : 5071 lbs (2300 kg)

- Associated conditions :
- Landing gear DN and flaps LDG
  - Approach speed IAS = 80 KIAS
  - Touch-down speed IAS = 60 KIAS
  - Maximum braking without reverse
  - Paved, hard, dry and level runway
  - GR = Ground roll (in ft)
  - D<sub>50</sub> = Landing distance (clear to 50 ft) (in ft)

PRESSURE ALTITUDE ft	ISA - 35°C		ISA - 20°C		ISA - 10°C		ISA	
	GR	D50	GR	D50	GR	D50	GR	D50
0	885	1900	950	2000	1000	2070	1030	2135
2000	950	2000	1030	2100	1065	2200	1115	2265
4000	1000	2100	1080	2230	1150	2330	1200	2395
6000	1080	2230	1180	2360	1230	2460	1280	2525
8000	1180	2360	1245	2490	1310	2590	1360	2690
PRESSURE ALTITUDE ft	ISA + 10°C		ISA + 20°C		ISA + 30°C		ISA + 37°C	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1080	2200	1115	2300	1180	2360	1230	2430
2000	1150	2330	1200	2430	1245	2495	1310	2560
4000	1230	2460	1280	2560	1345	2655	1395	2755
6000	1345	2645	1395	2720	1445	2820	1510	2920
8000	1445	2790	1510	2885	1560	2985	1610	3085

Figure 5.4.3 – LANDING DISTANCES – 5071 lbs (2300 kg)

- Corrections :
- . Reduce total distances of 10 % every 10 kt of headwind
  - . Increase total distances of 30 % every 10 kt of rear wind

Other runway surfaces require the following correction factors :

- . Increase by : 30 % on slippery runway 15 % on wet runway

**SECTION 6**  
**WEIGHT AND BALANCE**

Information hereafter supplement those given for the standard airplane in Section 6 "Weight and Balance" of the basic Pilot's Operating Handbook.

**TBM700 LIST OF REQUIRED AND STANDARD EQUIPMENT FOR IAC AR CERTIFIED AIRPLANES**

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
S	01026A	<b>01 - SPECIFIC OPTIONAL EQUIPMENT</b>  Flight ceiling at 31000 ft Flight ceiling at 31000 ft Russian certification	SOCATA SOCATA SOCATA	/ / /	/ / /	Post-MOD70-0176 Post-MOD70-0276			X
S	01026B						X	X	
R	0332-00						X	X	
S		<b>21 - ENVIRONMENTAL SYSTEM</b>  General Air System Controller (GASC) 82024A020 General Air System Controller (GASC) 82024A030	LIEBHERR LIEBHERR	0.900 0.900	7.900 7.900	Post-MOD70-0207 Post-MOD70-0207			X
S									
S		<b>21-20 - Distribution</b>  Cabin fan AVVC 00244 Mixing unit 9723A010001 Hot Air Distributor 6044A010001 Bleed temperature switch 9224A010002	VETUS LIEBHERR LIEBHERR LIEBHERR	1.500 0.240 0.840 0.060	6.400 3.850 3.900 3.900	Post-MOD70-0207 Post-MOD70-0207 Post-MOD70-0207		X	X
S									
S									
S									
S	0276-00A	<b>21-30 - Pressurization control</b>  Cabin pressure sensor CP0304	FALGAYRAS	/	/	From S/N 14 to 243, except S/N 205 and 240	X		X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
S		Cabin altitude warn switch 214 C40.3.261	CONDEC	0.035	3.910		X		X
S		Cabin pressurization dump solenoid valve 5112-1	AEROSPACE	0.200	4.600		X	X	
S		Cabin pressure control panel 22297A010001	LIEBHERR	0.300	4.250	Post-MOD70-0207	X	X	X
S		Cabin ΔP warn switch 17-600-1	UMA	0.065	3.550		X		
S		Cabin ΔP warn switch 17-600-01	UMA	0.065	3.550		X	X	X
S		Check valve 985C-63-3	LE BOZEC	0.090	3.000		X	X	
S		Outflow valve controller 130618-1	GARRETT	0.750	4.000		X	X	
S		Outflow valve 103760-1	GARRETT	0.700	8.060		X	X	
S		Outflow valve 81146A010101	LIEBHERR	1.800	8.060	Post-MOD70-0207	X		X
S		Safety valve 103760-2	GARRETT	0.700	8.060		X		X
S		Safety valve 81147A010101	LIEBHERR	1.500	8.060	Post-MOD70-0207	X		X
S	0176-001	Selected cabin altitude repeater potentiometer interface	FALGAYRAS	/	/	Post-MOD70-0207	X		X
<b>21-50 - Temperature conditioning system</b>									
S		Cooling turbine 2204600-1	GARRETT	2.965	2.500		X		X
S		Ground conditioning heat M5922H-9A1	DYNAMIC AIR	6.310	2.300		X	X	
S		Heat exchanger 195980-1	GARRETT	5.715	2.900		X	X	
S		Heat exchanger 195980-3	GARRETT	5.715	2.900		X	X	
S		Overheat switch 1173T200	NEO DYN	0.050	2.900		X	X	
S		Pilot regulator 3214102-1	GARRETT	0.260	2.950		X	X	
S		Pressure regulating and shut-off valve 3213876-9	GARRETT	2.070	2.900		X	X	

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
S		Temperature control sensor 622446-1	GARRETT	0.285	3.400		X		
S		Temperature control valve 979432-2	GARRETT	1.120	2.700		X	X	
S		Temperature control valve 979432-5	GARRETT	1.120	2.700		X	X	
S		Water separator 85020-8	GARRETT	1.020	2.400		X	X	
S		Flow control shut-off valve 6784A010001	LIEBHERR	2.500	2.900	Post-MOD70-0207			X
S		Non-return valve 7085A010002	LIEBHERR	0.050	2.600	Post-MOD70-0207			X
S		Shut-off valve 4589A010001	LIEBHERR	1.075	2.900	Post-MOD70-0207			X
S		Intermediate pressure sensor 93557A010001	LIEBHERR	0.150	2.800	Post-MOD70-0207			X
S		Overheat thermal switch A042010300-5	LIEBHERR	0.080	2.800	Post-MOD70-0207			X
S		Main heat exchanger 81249A010001	LIEBHERR	3.500	2.750	Post-MOD70-0207			X
S		Ground Fan 8031A010	LIEBHERR	1.790	2.300	Post-MOD70-0207			X
S		Ground Fan 8031A020	LIEBHERR	1.790	2.300	Post-MOD70-0207			X
		<b>21-55 - Vapor cycle cooling system</b>							
A		Vapor cycle cooling system - Refer to optional equipment list A/T/N 079/11					X		
S		Compressor 1377A010001	LIEBHERR	6.700	2.500	Post-MOD70-0207			X
S		Cockpit Evaporator Assembly 14720A010001	LIEBHERR	4.111	5.100	Post-MOD70-0207			X
S		Cabin Evaporator Assembly 14719A010001	LIEBHERR	5.850	7.900	Post-MOD70-0207			X
S		Condenser Assembly 81250A010001	LIEBHERR	11.250	8.400	Post-MOD70-0207			X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
S		<b>21-60 - Temperature regulation</b>							
S		By-pass valve 6043A010001	LIEBHERR	1.500	2.700	Post-MOD70-0207			X
S		Bleed differential pressure sensor 93558A010001	LIEBHERR	0.200	2.900	Post-MOD70-0207			X
S		Inlet temperature sensor 93276A010001	LIEBHERR	0.050	3.900	Post-MOD70-0207			X
S		Cockpit ventilated sensor 92279A010002	LIEBHERR	0.080	4.625	Post-MOD70-0207			X
S		Cabin ventilated sensor 92279A010002	LIEBHERR	0.080	6.350	Post-MOD70-0207			X
S		<b>22 - AUTO FLIGHT</b>							
S	0176-00A	AFCS GFC 700 composed of :	GARMIN			From S/N 434, plus S/N 269			X
		. Pitch servo GSA 81+Servo mount GMS 85	GARMIN	1.750	6.284				X
		. Roll servo GSA 81+Servo mount GMS 85	GARMIN	1.750	5.870				X
		. Yaw servo GSA 81+Servo mount GMS 85	GARMIN	1.750	6.444				X
		. Pitch trim servo GSA 81+Servo mount GMS 85	GARMIN	1.830	4.010				X
		. Trim adapter GTA 82	GARMIN	0.590	6.118				X
		. AFCS Control Unit GMC 710	GARMIN	0.410	3.978				X
S	0276-00A	AFCS GFC 700 composed of :	GARMIN			From S/N 14 to 243, except S/N 205 and 240	X		
		. Pitch servo GSA 81+Servo mount GMS 85	GARMIN	1.750	6.284				X
		. Roll servo GSA 81+Servo mount GMS 85	GARMIN	1.750	5.870				X
		. Yaw servo GSA 81+Servo mount GMS 85	GARMIN	1.750	6.444				X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
		. Pitch trim servo GSA 81+Servo mount GMS 85 . Trim adapter GTA 82 . AFCS Control Unit GMC 710	GARMIN GARMIN GARMIN	1.830 0.590 0.410	4.010 6.118 3.978		X X X		
		<b>23 - COMMUNICATIONS</b>							
S		Cockpit loud-speaker (Qty 2) AB 100 SC	ALPINE ELEC-TRONICS	0.350	4.600		X		X
S	0176-00A	Dual audio system with integrated Marker Beacon Receiver # 1 GMA 1347C	GARMIN	1.170	3.895	From S/N 434, plus S/N 269	X		X
S	0176-00A	Dual audio system with integrated Marker Beacon Receiver # 2 GMA 1347C	GARMIN	1.170	3.895	From S/N 434, plus S/N 269	X		X
S	0176-00A	G1000 COM # 1 system	GARMIN			From S/N 434, plus S/N 269	X		X
		. Transceiver (integrated in GIA 63W Integrated Avionics Unit # 1 - refer to ATA 34-28)	GARMIN						X
		. VHF antenna (under fuselage) 16-21B-P3	CHELTON	0.390	6.900	From S/N 434, plus S/N 269	X		X
S	0176-00A	G1000 COM # 2 system	GARMIN						X
		. Transceiver (integrated in GIA 63W Integrated Avionics Unit # 2 - refer to ATA 34-28)	GARMIN						X
		. VHF antenna (upper fuselage) 16-21B-P3	CHELTON	0.390	6.900				X



S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
S	0276-00A	Dual audio system with integrated Marker Beacon Receiver # 1 GMA 1347C	GARMIN	1.170	3.895	From S/N 14 to 243, except S/N 205 and 240	X		
S	0276-00A	Dual audio system with integrated Marker Beacon Receiver # 2 GMA 1347C	GARMIN	1.170	3.895	From S/N 14 to 243, except S/N 205 and 240	X		
S	0276-00A	G1000 COM # 1 system . Transceiver (integrated in GIA 63W Integrated Avionics Unit # 1 - refer to ATA 34-28)	GARMIN GARMIN			From S/N 14 to 243, except S/N 205 and 240	X	X	
S	0276-00A	. VHF antenna (under fuselage) 16-21B-P3 G1000 COM # 2 system . Transceiver (integrated in GIA 63W Integrated Avionics Unit # 2 - refer to ATA 34-28)	CHELTON GARMIN GARMIN	0.390	6.900	From S/N 14 to 243, except S/N 205 and 240	X	X	X
S	230111	. VHF antenna (upper fuselage) 16-21B-P3 Radio headset H10-30	CHELTON DAVID CLARK	0.390 / /	6.900 / /	From S/N 14 to 243, except S/N 205 and 240	X X	X	X
S		Radio stereo-headset HMEC 25-6A Static dischargers Type 2-16SC-1	SENNHEISER CHELTON	Neglig.	/	From S/N 434, plus S/N 269	X		X
R		<b>24 - ELECTRICAL POWER</b> <b>24-30 - DC generation</b> Electric power center 160GC02Y02	ECE	5.000	3.250		X	X	X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
R		Electric power center 160GC02AY02 (Ignition priority + contact splitting)	ECE	5.000	3.250		X		
R		Electric power center 160GC02Y03 (Freon)	ECE	5.000	3.250		X		
R		Electric power center 160GC02Y04 (Freon + ignition priority)	ECE	5.000	3.250		X		
R		Electric power center 160GC02Y05 (Freon + ignition priority + contact splitting)	ECE	5.000	3.250	S/N 92-9999 and S/N 1-92 after SB70-031-24	X		X
R		Stand-by generator T700A2430045900	SOCATA	5.500	2.600		X		
R		Stand-by generator T700A2430080900	SOCATA	5.500	2.600		X		
R		Stand-by generator T700A243008000601	SOCATA	5.500	2.600		X		X
R		Starter generator 8012F	AUXILEC	11.100	2.800		X		X
S	24001C	Battery 4076-1	SAFT	37.800	2.845	From S/N 1 to 243, except S/N 205 and 240	X		
S	24002	Lead-acid battery RG-380E/44	CONCORDE	39.000	2.850	From S/N 434, plus S/N 269			X
S		<b>24-40 - External power supply</b> Ground power receptacle MS 3506-1	QPL (AIR-CRAFT APPLIANCES AND EQUI. LTD)	0.360	2.900		X		X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
S	0207-00	25 - EQUIPMENT AND FURNISHINGS Map holder - Carpet - Carpet furnishings	SOCATA SOCATA SOCATA	0.210 16.000 137.19	4.260 5.370 5.370	From S/N 434, plus S/N 269			X X X
S	25026B	Partition net between the cabin and the baggage compartment	SOCATA	1.650	7.354				X
S	25018A	Smoke goggles  Seats - Belts (Standard equipment)	PURITAN	0.260	5.080				X
S		Seats (6 places without oxygen equipment) :				Valid S/N 1 to 23, 25, 28, 33 and 35, except airplanes equipped as a retrofit with MOD70-019-25			
		.Pilot's seat T700A2512000	SOCATA	11.000	4.580		X		
		.Front R.H. seat T700A2512000	SOCATA	11.000	4.580		X		
		.Intermediate seat (back to flight direction) T700A2522000	SOCATA	10.500	5.330		X		
		.Rear L.H. seat T700A2522001	SOCATA	11.000	6.530		X		
		.Rear R.H. seat T700A2522000	SOCATA	10.500	6.530		X		

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
S		Seats (6 places without oxygen equipment) :				Valid S/N 24, 26, 27, 29 to 32, 34, 36 to 9999, plus airplanes equipped as a retrofit with MOD70-019-25	X		X
		.Pilot's seat	PPI	13.470	4.640		X		
		.Front R.H. seat	PPI	13.470	4.640		X	X	
		.Intermediate seat (back to flight direction)	PPI	11.570	5.545		X	X	
		.Rear divan Model 3028 P/N 303437-3 - Valid up to S/N 67, plus S/N 72 to 75, except airplanes equipped as a retrofit with MOD70-023-25	ERDA	34.000	6.891		X	X	
		.Rear divan T700A252123000 - Valid from S/N 68, except S/N 72 to 75, plus airplanes equipped as a retrofit with MOD70-023-25	SOCATA	26.000	6.891		X		
S		Belt and harness T700A2510007	ANJOU AERONAUTIQU UE	0.810	4.900 or 7.300		X		
S		Leather seats - Belts							X
S		Reels	ANJOU AERONAUTIQU UE	0.810	4.900 or 7.300				X
S		.Pilot's seat T700C2500002000	SOCATA	25.000	4.671				X
S		.Front R.H. seat T700C2500002001	SOCATA	25.000	4.671				X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
S		L.H. intermediate seat (back to flight direction) T700C2500003002	SOCATA	16.000	5.612			X	
S		R.H. intermediate seat (back to flight direction) T700C2500003003	SOCATA	16.000	5.612			X	
S		.Double chair						X	
		L.H. seat T700C2500005002	SOCATA	24.000	7.066			X	
		R.H. seat T700C2500005003	SOCATA	24.000	7.066			X	
		<b>25-61 - Emergency locator transmitter</b>							
S	0273-25B	Emergency beacon KANNAD 406 AF Compact - automatic fixed (installed in cabin under seat), of which : . ELT 406 AF compact . Antenna ANIT300	SERPE- IESM	1.040	6.933		X		
S	0208-25B	Emergency Locator Transmitter ME-406 (installed in tail area)	ARTEX	0.850 0.150 1.860	6.890 7.960 8.546		X	X	X
S	26001B	<b>26 - FIRE PROTECTION</b> Portable fire extinguisher unit 863520-00	L'HOTELLIER	1.650	4.932				X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
		<b>27 - FLIGHT CONTROLS</b>							
		<b>27-10 - Roll control</b>							
R		Roll trim actuator 145700.01	LPMI	0.700	5.400	X	X		X
R		Roll trim actuator 145700.02	LPMI	0.700	5.400	X	X		X
		<b>27-20 - Yaw control</b>							
R		Rudder trim actuator 145700.01	LPMI	0.700	10.040	X	X		X
R		Rudder trim actuator 145700.02	LPMI	0.700	10.040	X	X		X
S		AFC and electric trim control on R.H. control wheel	SOCATA	0.400	4.000				X
		<b>27-30 - Pitch control</b>							
S		Pitch trim actuator 145400-01	LPMI	0.550	10.800	X	X		X
S		Pitch trim actuator 145400-02	LPMI	0.550	10.800	X	X		X
		<b>27-50 - Wing flaps (control)</b>							
R		Flap control including : .Flap motor 6157 -1 .Flap actuator 1-5295 / 2-5295 Flap actuator 1-5297 / 2-5297	AVIAC AVIAC AVIAC AVIAC	7.040 1.300 0.870 0.830	5.550 5.500 5.500 5.600	X X X X	X X X X	X X X X	X X X X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
		<b>28 - FUEL SYSTEM</b>							
		<b>28-20 - Fuel supply</b>							
R		Electric boost pump 2003-B	WELDON	1.580	3.300		X		X
R		Electric boost pump 2022-B	WELDON	1.580	3.300		X	X	X
R		Electric boost pump 1B9-5	AIRBORNE	2.000	3.300		X	X	X
R		Engine driven fuel pump 1127-01	IN-LHC	0.700	2.800		X	X	X
R		Engine driven fuel pump 1127-01A	IN-LHC	0.700	2.800		X	X	X
R		Engine driven fuel pump 1127-02A	IN-LHC	0.700	2.800	Post-MOD70-0237-08	X	X	X
R		Fuel sequencer unit E3-003-00	STPI	0.800	3.200		X	X	
R		Fuel unit 35001C14-1	LE BOZEC	2.500	3.380		X	X	
R		Fuel unit L88A15-651	INTER-TECHNIQUE	2.080	3.380		X	X	
R		Fuel sequencer unit	TFE	0.500	3.200				X
		<b>28-40 - Fuel indication</b>							
R	0158-28A	Fuel gage amplifier (in us gal) 738574-1-0	INTER-TECHNIQUE	0.490	7.080	Post-MOD70-0176-00			X
R	0158-28B	Fuel gage amplifier (in us gal) 738574-1-0	INTER-TECHNIQUE	0.490	7.080	Post-MOD70-0276-00 From S/N 14 to 243, except S/N 205 and 240	X		X
R		Inboard L.H. probe 768-403 or 762 438.1.0	INTER-TECHNIQUE	0.150	4.650		X		X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
R		Inboard L.H. probe 762 438.1.0	INTER-TECHNIQUE	0.150	4.650			X	
R		Inboard R.H. probe 768-404 or 762 439.1.0	INTER-TECHNIQUE	0.150	4.650		X		
R		Inboard R.H. probe 762 439.1.0	INTER-TECHNIQUE	0.150	4.650			X	
R		Intermediate probe 766-976-1 or 762 440.1.0	INTER-TECHNIQUE	0.100	4.850		X		
R		Intermediate probe 762 440.1.0	INTER-TECHNIQUE	0.100	4.850			X	
R		Low level probe 722-447	INTER-TECHNIQUE	0.050	4.650		X		
R		Outboard probe 766-977-1 or 762 441.1.0	INTER-TECHNIQUE	0.100	4.850		X		
R		Outboard probe 762 441.1.0	INTER-TECHNIQUE	0.100	4.850		X		X
		<b>30 - ICE AND RAIN PROTECTION</b>							
S		Deicer T700A5520015006(920), L.H. elevator horn	SOCATA	1.500	10.240		X		
S		Deicer T700A5520015007(921), R.H. elevator horn	SOCATA	1.500	10.240		X		X
S		Deicer T700A3013003000, L.H. horizontal stabilizer	SOCATA	1.900	10.120		X		X



S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
S		Deicer T700A3013003001, R.H. horizontal stabilizer	SOCATA	1.900	10.120		X		X
S		Deicer T700A3014003000, vertical stabilizer	SOCATA	1.800	9.500		X	X	X
S		Deicer T700A3010001002, inboard L.H. wing	SOCATA	2.600	4.400		X	X	X
S		Deicer T700A3010001003, inboard R.H. wing	SOCATA	2.600	4.400		X	X	X
S		Deicer T700A3010001004, middle L.H. wing	SOCATA	1.700	4.400		X	X	X
S		Deicer T700A3010001005, middle R.H. wing	SOCATA	1.700	4.400		X	X	X
S		Deicer (Std) T700A3010001006, outboard L.H. wing	SOCATA	1.500	4.400		X	X	
S		Deicer T700A3010012000, outboard L.H. wing	SOCATA	1.200	4.400				X
S		Deicer T700A3010001007, outboard R.H. wing	SOCATA	1.500	4.400		X	X	X
S		Dual port distribution valve 1532-10C	LUCAS	1.100	3.200		X	X	X
S		Timer 42E25-2	LUCAS	0.350	4.500		X	X	X
S		Timer 42E25-2A	LUCAS	0.350	4.500		X	X	X
S		Water separator and filter 44E21-2A	LUCAS	0.500	3.200		X	X	X
<b>30-40 - Windshield deicing</b>									
S		Windshield heater controller WH 89-10	AIR SYSTEMS	0.450	3.800		X	X	X
S		Windshield heater controller WH 89-10A	AIR SYSTEMS	0.450	3.800		X	X	X
S		Windshield heater controller TWH 93-01	AIR SYSTEMS	0.450	3.800		X	X	X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
S		Windshield heater controller (Qty 2 : L.H. + R.H.) TWH 93-01	AIR SYSTEMS	0.450	3.800	From S/N 434, plus S/N 269		X	
S		<b>30-60 - Propeller deicing</b>							
S		Deicing kit 67-600-2	GOODRICH	0.800	1.230		X		
S		Modular brush assy 3E2044-2	BF GOODRICH	0.200	1.195			X	
S		Timer 3E2311-4	BF GOODRICH	0.200	5.100			X	
		<b>31 - INDICATING/RECORDING SYSTEMS</b>							
		<b>31-20 - Independent instruments</b>							
S		Hourmeter 56457-3 (flying time)	DATCON	0.250	3.970			X	
		<b>31-50 - Aural warning</b>							
R		Aural warning system T700A3155011000	SOCATA	0.300	4.650		X	X	
		<b>31-60 - Visual warning</b>							
R		Master and Caution warnings on R.H. instrument panel	SOCATA	/	/	Post-MOD70-0392	X	X	X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
		<b>32 - LANDING GEARS</b>							
		<b>32-10 - Main landing gear</b>							
R		L.H. main landing gear 21135-001-00	ERAM	22.700	5.090	X	X		
R		L.H. main landing gear 21135-002-00	ERAM	22.700	5.090	X	X		
R		R.H. main landing gear 21136-001-00	ERAM	22.700	5.090	X	X		
R		R.H. main landing gear 21136-002-00	ERAM	22.700	5.090	X	X		
R		L.H. main landing gear D23767000	MESSIER DOWTY	23.400	5.090	X		X	
O		L.H. main landing gear D23767000	MESSIER DOWTY	23.400	5.090	X			X
R		R.H. main landing gear D23768000	MESSIER DOWTY	23.400	5.090	X			
O		R.H. main landing gear D23768000	MESSIER DOWTY	23.400	5.090	X			
		<b>32-20 - Nose landing gear</b>							
R		Nose gear 21130-001-00	ERAM	24.000	2.380	X			X
R		Nose gear D23766000	MESSIER DOWTY	24.300	2.380	X			
O		Nose gear D23766000	MESSIER DOWTY	24.300	2.380	X			

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
R		<b>32-30 - Extension and retraction</b>					X		
R		Door actuator EC 6230	HRL	0.610	4.900		X		
R		Main locking actuator 08-1480	HRL	6.000	5.285		X	X	
R		Nose locking actuator 08-1480	HRL	6.000	2.800		X	X	
R		Hand pump 914-8D27	TELEDYNE	1.055	4.600		X	X	
R		<b>32-35 - Hydraulic generation</b>							
		Hydraulic power pack :	LHC				X		
		- up to S/N 10 : 1118-02 or 03		2.970	2.150		X	X	
		- from S/N 11 : 1118-03		2.970	2.150		X	X	
		- from S/N 1 : 1118-04		4.700	2.150		X	X	X
		<b>32-40 - Wheels and brakes</b>							
R		Brake assembly 030-19100	PARKER	6.800	5.190		X		X
R		Main tire 18x5.5-8PR TL	DUNLOP	6.000	5.190		X	X	
R		Main tire 18x5.5-8/190T	MICHELIN	5.534	5.190		X	X	
R		Main tire 18x5.5-10PR P/N 033-631	MICHELIN	6.123	5.190		X		X
R		Main tire 18x5.5-8PR FLE	GOOD YEAR	6.101	5.190		X	X	
R		Master cylinder 010-07801	PARKER	0.400	3.700		X	X	
R		Master cylinder 010-07802	PARKER	0.400	3.700		X	X	
R		Nose tire 5.00x5-6PR	DUNLOP	2.903	2.275		X	X	
R		Nose tire 5.00-5-10PR TL	MICHELIN	2.722	2.275		X	X	

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
R		Nose tire 5.00-5-10PR TL P/N 071-311 P/N 505T01	MICHELIN	2.540	2.275		X		X
R		Nose tire 5.00x5-10-120TL	GOOD YEAR	2.858	2.275		X	X	
R		Nose wheel 40-262A	AVIATOR	2.540	2.275		X	X	
R		Main wheel (Model 40-270) 040-27000	PARKER	1.350	2.275		X	X	X
R		Main wheel (Model 40-434)	PARKER	5.000	5.190		X	X	
R		Parking brake valve 060-01600	PARKER	5.120	5.190		X		X
R		Parking brake valve T700A3240010 or T700B3240001	PARKER	0.150	4.000		X		
R		Parking brake valve T700A3240010 or T700B3240001	SOCATA	0.150	4.000		X		X
		<b>33 - LIGHTS</b>							
		<b>33-10 - Instrument panel lighting</b>							
S		Panel lights regulator T700A3310025	SOCATA	/	/		X	X	X
S		Instrument Lighting regulator T700A3310025	SOCATA	/	/		X	X	X
S		Postlights (Qty: 6)	WHELEN	/	/		X	X	X
S		Postlights (Qty: 4)	WHELEN	/	/		X	X	X
S		Instruments emergency lighting 2240-3	WEMAC	0.050	4.600		X		X
		<b>33-40 - External lighting</b>							
S		L.H. wing inspection light (icing detection) 01-0790093-00	WHELEN	0.090	3.850		X		X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
S		L.H. wing inspection light (icing detection) T700A3340012	SOCATA	0.090	3.850		X		X
S		Landing lights 4596	GE	0.360	4.550		X	X	
S		Taxi light assembly A715-1 (4587)	WHELEN	0.500	2.380		X	X	
S		Taxi light assembly T700A3340006	SOCATA	0.500	2.380		X		X
S		NAV/Anticollision system :	WHELEN				X	X	
S		- Anticollision power supply A413A HDA- DF-28	WHELEN	1.360	5.200		X	X	
S		Anticollision power supply A413A HDA- DF-14/28	WHELEN	1.360	5.200		X	X	
S		Anticollision power supply A413A HDA- CF-14/28	WHELEN	1.360	5.200		X	X	
S		- R.H. navigation light assy A600 PG 28	WHELEN	0.230	4.700		X	X	
S		R.H. navigation light assy A600 PG D28	WHELEN	0.230	4.700		X	X	
S		- L.H. navigation light assy A600 PR 28	WHELEN	0.230	4.700		X	X	
S		L.H. navigation light assy A600 PR D28	WHELEN	0.230	4.700		X	X	
S		NAV/Anticollision system :	WHELEN				X	X	X
S		- Anticollision power supply A413A HDA- CF-14/28	WHELEN	1.360	5.200		X	X	
S		- R.H. or L.H. navigation light assy T700A3341019	SOCATA	0.230	4.700				X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
		<b>34 - NAVIGATION</b>							
		<b>34-10 - Flight environment data</b>							
		<b>34-11 - Air data systems</b>							
R		Lift transducer 799-5	SAFE FLIGHT INSTRUMENTS	0.400	4.400	X	X		
R		Lift transducer 799-8	SAFE FLIGHT INSTRUMENTS	0.400	4.400	X	X		X
S		Pitot heated probe AN 5812-1	QPL (AIR-CRAFT APPLIANCES AND EQUI. LTD)	0.340	5.100	X	X		
S		Pitot L heated probe AN 5812-1	QPL (AIR-CRAFT APPLIANCES AND EQUI. LTD)	0.340	5.100			X	
S		Pitot R heated probe AN 5812-1	QPL (AIR-CRAFT APPLIANCES AND EQUI. LTD)	0.340	5.100			X	
R		Stand-by airspeed indicator 5A58.22.30K.28.1	THOMMEN LTD)	0.363	4.390	X	X		X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
R		Stand-by altimeter 3A43.22.35F.28.1	THOMMEN	0.410	4.000		X		X
R		Static reference plug T700A3415017	SOCATA	Neglig.	/		X	X	X
S		Static reference selector TB30 77010000	SOCATA	0.100	4.000		X	X	X
S	0176-00A	Air Data Computer # 1 GDC 74B	GARMIN	1.050	3.816	From S/N 434, plus S/N 269			X
S	0176-00A	Air Data Computer # 2 GDC 74B	GARMIN	1.050	3.816	From S/N 434, plus S/N 269			X
S	0276-00A	Air Data Computer # 1 GDC 74B	GARMIN	1.050	3.816	From S/N 14 to 243, except S/N 205 and 240	X	X	
S	0276-00A	Air Data Computer # 2 GDC 74B	GARMIN	1.050	3.816	From S/N 14 to 243, except S/N 205 and 240	X	X	
		<b>34-20 - Attitude and direction</b>							
		<b>34-21 - Heading reference system</b>							
S	0176-00A	Attitude and Heading Reference System # 1 GRS 77	GARMIN	1.570	4.363	From S/N 434, plus S/N 269			X
S	0176-00A	Attitude and Heading Reference System # 2 GRS 77	GARMIN	1.570	4.363	From S/N 434, plus S/N 269			X
S	0176-00A	Magnetometer # 1 GMU 44	GARMIN	0.220	4.597	From S/N 434, plus S/N 269			X
S	0176-00A	Magnetometer # 2 GMU 44	GARMIN	0.220	4.597	From S/N 434, plus S/N 269			X
S	0276-00A	Attitude and Heading Reference System # 1 GRS 77	GARMIN	1.570	4.363	From S/N 14 to 243, except S/N 205 and 240	X	X	



S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
S	0276-00A	Attitude and Heading Reference System # 2 GRS 77	GARMIN	1.570	4.363	From S/N 14 to 243, except S/N 205 and 240	X		
S	0276-00A	Magnetometer # 1 GMU 44	GARMIN	0.220	4.597	From S/N 14 to 243, except S/N 205 and 240	X		
S	0276-00A	Magnetometer # 2 GMU 44	GARMIN	0.220	4.597	From S/N 14 to 243, except S/N 205 and 240	X		
		<b>34-23 - Magnetic compass</b>							
R		Stand-by compass C2350 DL4CM	AIRPATH	0.250	4.150		X	X	X
R		Stand-by compass C2350 L4CM23	AIRPATH	0.250	4.150		X	X	
		<b>34-24 - ADI and standby horizon</b>							
S		Stand-by ADI 1U149-019-19	SIGMATEK	1.900	3.875		X		X
		<b>34-28 - Electronic flight instrumentation system</b>							
S	0176-00A	Integrated Flight Deck System G1000 composed of : . PFD1 GDU 1040A . PFD2 GDU 1040A . MFD GDU 1500A . Engine/Airframe Interface Unit # 1 GEA 71	GARMIN GARMIN GARMIN GARMIN	2.960 2.960 3.930 1.150	3.955 3.955 3.942 3.826	From S/N 434, plus S/N 269	X	X	X X X X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
S	0276-00A	. Engine/Airframe Interface Unit # 2 GEA 71 . Integrated Avionics Unit # 1 GIA 63W . Integrated Avionics Unit # 2 GIA 63W . MFD remote controller GCU 475 Integrated Flight Deck System G1000 com- posed of : . PFD1 GDU 1040A . PFD2 GDU 1040A . MFD GDU 1500A . Engine/Airframe Interface Unit # 1 GEA 71 . Engine/Airframe Interface Unit # 2 GEA 71 . Integrated Avionics Unit # 1 GIA 63W . Integrated Avionics Unit # 2 GIA 63W . MFD remote controller GCU 475	GARMIN GARMIN GARMIN GARMIN  GARMIN GARMIN GARMIN GARMIN GARMIN GARMIN GARMIN	1.150 3.270 3.270 0.370  2.960 2.960 3.930 1.150 1.150 3.270 3.270 0.370	3.826 3.794 3.794 4.009  3.955 3.955 3.942 3.826 3.826 3.794 3.794 4.009	From S/N 14 to 243, except S/N 205 and 240	X		
							X		
							X		
							X		
								X	
								X	
								X	
								X	
								X	
								X	
S		<b>34-30 - Landing and taxiing aids</b>							
S		<b>34-31 - Marker</b>							
S		MARKER antenna DM N27-3	DORNE & MARGOLIN	0.340	3.300		X		X
S		Receiver (integrated in the GMA 1347C dual audio systems : refer to ATA 23)				Post-MOD70-0176-00	X		X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
S		Receiver (integrated in the GMA 1347D dual audio systems : refer to ATA 23)				Post-MOD70-0276-00 From S/N 14 to 243, except S/N 205 and 240	X		
		<b>34-50 - Dependent position determining</b>							
		<b>34-51 - NAV 1 installation</b>							
S		VHF GS-NAV antenna DM N4-17N	DORNE & MARGOLIN	1.500	10.200		X	X	X
S		Receiver (integrated in the GIA 63W Integrated Avionics Unit # 1 : refer to ATA 34-28)					X	X	
		<b>34-52 - NAV 2 installation</b>							
S		Receiver (integrated in the GIA 63W Integrated Avionics Unit # 2 : refer to ATA 34-28)					X		X
		<b>34-53 - Transponder</b>							
S	0176-00A	Transponder # 1 GTX 33 - Mode S non diversity + Antenna KA 61	GARMIN	1.750 0.180	3.801 4.908	From S/N 434, plus S/N 269			X X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
S	0276-00A	Transponder # 1 GTX 33 - Mode S non diversity + Antenna KA 61	GARMIN	1.750 0.180	3.801 4.908	From S/N 14 to 243, except S/N 205 and 240	X X	X X	
S	0176-00A	<b>34-57 - Global Positioning System (GPS)</b> GPS/WAAS Antenna GA 36	GARMIN	0.210	5.203	From S/N 434, plus S/N 269		X	
S	0176-00A	GPS/WAAS + XM Antenna GA 37	GARMIN	0.230	5.203	From S/N 434, plus S/N 269		X	
S	0276-00A	GPS/WAAS Antenna GA 36	GARMIN	0.21	5.203	From S/N 14 to 243, except S/N 205 and 240	X		
S	0276-00A	GPS/WAAS + XM Antenna GA 37	GARMIN	0.23	5.203	From S/N 14 to 243, except S/N 205 and 240	X		
S		<b>35 - OXYGEN</b> Generator 117024-02	PURITAN	0.430	4.580 5.330 6.530		X X X	X X X	
S		Mask 174554 / 174555	PURITAN	0.200	4.580 5.330 6.530		X X X	X X X	

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
S	0244-35	Mask 174095-87 (as spares for Mask 174554)	PURITAN	0.200	4.580	Aircraft not equipped with OPT70 35001	X	X	
S	0207-00	Gaseous oxygen system	EROS/INTER TECHNIQUE	10.310	5.330 6.530 5.760	Post-MOD70-0220-00	X	X	X
S		<b>37 - VACUUM</b>							
S		Air ejector valve 19E17-5A	LUCAS	0.300	2.950		X	X	X
S		Gyro suction gage 3-310-5	UMA	0.065	4.000		X	X	X
S		Gyro vacuum air filter 1J7-2	AIRBORNE	0.170	3.550		X	X	X
S		Regulator and relief valve 38E-96-2D	LUCAS	0.600	2.950		X	X	X
S		Vacuum relief valve 691-21A	LUCAS	0.150	3.550		X	X	X
S		Valve 557-18 E	LUCAS	0.160	3.000		X	X	X
		<b>56 - WINDOWS</b>							
R	56001A	De-iced R.H. windshield	SPS	0.800	4.020	From S/N 434, plus S/N 269			X
R	56001B	De-iced R.H. windshield	SPS	0.800	4.020	From S/N 14 to 243, except S/N 205 and 240	X		

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
S	57001A	<b>57 - WINGS</b> Utilization on runways covered with melting snow	SOCATA	△-3.500	5.080		X		X
S		<b>61 - PROPELLER</b>							
S		<b>61-10 - Propeller assembly</b> Propeller HC-E4N.3 / E 9083 S (K)	HARTZELL	69.500	1.095		X		X
R		<b>61-20 - Controls</b>					X	X	X
S		Overspeed governor A210632 Propeller governor 8210.007	WOODWARD WOODWARD	1.240 1.200	1.500 1.500		X	X	X
R		<b>71 - POWER PLANT</b>					X		X
R		Turboprop engine PT6 A-64	P & W CANADA	225.000	2.025	Pre-MOD70-0188			X
R		Turboprop engine PT6 A-66D	P & W CANADA	226.000	2.025	Post-MOD70-0188			X
S		Silentblocks 95007-16	BARRY	1.325	2.025		X		X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
R		<b>71 -60 - Air inlet</b>							
R		Inertia ice separator actuator 148600-09	LPMI	0.780	1.600		X		X
R		Inertia ice separator actuator 148600-09A	LPMI	0.780	1.600		X	X	
R		<b>77 - ENGINE INDICATING</b>							
R		Compressor turbine tacho-generator (Ng) MIL-G-26611C GEU-7/A	QPL (AIR- CRAFT APPLIANCES AND EQUI. LTD)	0.445	2.750		X		X
R		Power turbine tacho-generator MIL- G-26611 GEU-7/A - P/N 32005-007	QPL (AIR- CRAFT APPLIANCES AND EQUI. LTD)	0.445	1.400	Pre-MOD70-0188	X		
R		Power turbine tacho-generator MIL- G-26611 GEU-7/A - P/N 32005-025	WESTON	0.445	1.400	Post-MOD70-0188			X
R		Torque transducer CZ 52E8-G	AUXITROL	0.205	1.400		X	X	X
R		Torque transducer 8107.200.00.10	THALES (SEXTANT)	0.210	1.360		X	X	X

S / R / O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR SPARES (O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
S		<b>77-12 - Fuel management</b> Fuel flow transducer 660 526A	SHADIN	0.454	2.799		X	X	X
R		<b>79 - LUBRICATION</b> <b>79-20 - Distribution</b> Oil cooler L8538233	LORI	4.750	2.300		X	X	X
R	79001A	<b>79-30 - Indicating</b> Oil pressure transmitter 8107-400-00-10	MORS / SEX-TANT	0.200	2.700		X	X	X



**TBM700 LIST OF OPTIONAL EQUIPMENT FOR IAC AR CERTIFIED AIRPLANES**

A / O	ITEM OPT70 or MOD70	OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
		<b>21 - ENVIRONMENTAL SYSTEM</b>							
		<b>21-55 - Vapor cycle cooling system</b>							
A	0292-21B	Air conditioning with OPT70-21002 Vapor cycle cooling system	SOCATA (KEITH)	40.800	6.588	Post-MOD70-0276-00 From S/N 14 to 243, except 205 and 240	X	X	X
		<b>23 - COMMUNICATIONS</b>							
A	23009A	Additional equipment for electrostatic dischargers	CHELTON	Neglig.	/		X	X	X
A	0176-00B	Data link GDL 69A (interfaced with G1000 system)	GARMIN	1.160	3.827	From S/N 434, plus S/N 269	X		X
A	0276-00B	Data link GDL 69A (interfaced with G1000 system)	GARMIN	1.160	3.827	From S/N 14 to 243, except S/N 205 and 240	X	X	X
O	23011A	Radio headset H10-13.4	DAVID CLARK	/	/		X	X	
O	23011B	Radio headset 7001	PELTOR	/	/		X	X	
O	23011C	Radio headset HMEC 25-KA	SENNHEISER	/	/		X	X	
O	23011D	Radio stereo-headset HMEC 25-KA-S	SENNHEISER	/	/		X	X	
O	23011E	Radio stereo-headset HMEC 25-KAX	SENNHEISER	/	/		X	X	
O	23011F	Radio stereo-headset Serie X	BOSE	/	/		X	X	
O	23011G	Radio stereo-headset HMEC 25-6A	SENNHEISER	/	/		X	X	
O	23011H	Radio stereo-headset Serie X	BOSE	/	/	Post-MOD70-0207-00	X	X	X
O	0287-23	Radio stereo-headset A20 with bluetooth	BOSE	Neglig.	/	Post-MOD70-0207-00	X	X	X

A / O	ITEM OPT70 or MOD70	OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700	
							A	G
O	24002B	<b>24 - ELECTRICAL POWER</b> <b>24-30 - DC generation</b> Lead-acid battery RG-380E/44	CONCORDE	39.000	2.850		X	S
A	25003A	<b>25 - EQUIPMENT AND FURNISHINGS</b>  Pilot piddle pak Pilot piddle pak Leather upholstering - version A Leather upholstering - version B Leather upholstering - version C Leather upholstering - version D JEPPESEN filing cabinet JEPPESEN filing cabinet - PPI  JEPPESEN filing cabinet - Composite  Storage box Refreshment cabinet Storage box - PPI  Refreshment cabinet - PPI	SOCATA	0.100	4.420	S/N 1 to 102 except 96	X	
A	25003B		SOCATA	0.100	4.420	S/N 103 to 9999 plus 96	X	
A	25004A		SOCATA	3.000	5.400		X	
A	25004B		SOCATA	3.000	5.400		X	
A	25004C		SOCATA	3.000	5.400		X	
A	25004D		SOCATA	3.000	5.400		X	
A	25005A		SOCATA	5.580	5.107	S/N 1 to 39	X	X
A	25005B		SOCATA	8.500	5.150	S/N 40 to 9999, plus 24 and 36	X	X
A	25005C		SOCATA	6.800	5.150	S/N 40 to 9999, plus 24 and 36	X	X
A	25006A		SOCATA	5.060	5.107	S/N 1 to 39	X	
A	25006B	SOCATA	7.200	5.107	S/N 1 to 39	X		
A	25006C	SOCATA	9.200	5.150	S/N 40 to 9999, plus 24 and 36	X	X	
A	25006D	SOCATA	10.700	5.150	S/N 40 to 9999, plus 24 and 36	X	X	

A / O	ITEM OPT70 or MOD70	OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
A	25006E	Storage box – Composite	SOCATA	7.400	5.150	S/N 40 to 9999, plus 24 and 36	X		X
A	25006F	Refreshment cabinet – Composite	SOCATA	8.600	5.150	S/N 40 to 9999, plus 24 and 36	X		X
A	25007A	Retractable table	SOCATA	1.870	6.204	S/N 1 to 39	X		X
A	25009A	Audio cabinet	SOCATA	9.720	5.208	S/N 40 to 244, except 205	X		X
A	25009B	Audio cabinet – PPI	SOCATA	13.020	5.218	S/N 40 to 244, except 205	X		X
A	25009C	Audio cabinet – Composite	SOCATA	10.910	5.236	S/N 40 to 244, except 205	X		X
A	0171 –25	"Generation 2005" cabinets : . Version A : L.H. low cabinet . Version B : R.H. low cabinet . Version C : Removable (low) insulated picnic bag . Version D : L.H. tall storage cabinet . Version E : R.H. tall storage cabinet . Version F : R.H. tall storage cabinet + audio . Version G : L.H. tall baggage cabinet . Version H : R.H. tall baggage cabinet Map holder Window panel blinds and upper door locking safety device Smoke goggles Coat hanger	SOCATA SOCATA SOCATA SOCATA SOCATA SOCATA SOCATA SOCATA SOCATA SOCATA SOCATA SOCATA SOCATA SOCATA SOCATA	4.300 4.300 4.300 3.500 3.500 3.600 1.400 1.400 0.210 ΔNeglig.	5.175 5.175 5.175 5.175 5.175 5.175 4.260 / / / / / / 5.080 / / 5.500	From S/N 328 From S/N 122 to 243, except 205 and 240 Post-MOD70–019–25	X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X	X X X X X X S S S S S S S S S S S S S S
O	25013A		SOCATA	0.260			X		X
O	25017A		SOCATA	Neglig.			X		X
A	25018A		PURITAN				X		X
A	25021A		SOCATA				X		X
O	25022A		SOCATA	Δ 3.500			X		X

ITEM OPT70 or MOD70	OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
						A	B	G
O 25022B	Upholstery panels modifications - Version B	SOCATA	△ 2.500	5.500	Post-MOD70-019-25	X	X	
O 25022C	Upholstery panels modifications - Version C	SOCATA	△ 2.500	5.500	Post-MOD70-019-25	X	X	
A 25024A	Carpet protecting mat - version A	SOCATA	2.600	6.250	S/N 40 to 125, plus 24 and 36	X		X
A 25024B	Carpet protecting mat - version B	SOCATA	2.600	6.250	From S/N 126 to 286			
A 0207-00	2nd Carpet	SOCATA	16.000	5.370	From S/N 434, plus S/N 269			
O 25025A	Cabin furnishings "LUXE"	SOCATA	3.500	7.325	S/N 137 to 243, except 205 and 240	X		
O 25025B	Cabin furnishings "VIP"	SOCATA	3.500	7.325	S/N 137 to 243, except 205 and 240	X		
A 25026A	Partition net between the cabin and the baggage compartment	SOCATA	1.250	7.354	Post-MOD70-019-25	X		
A 25028A	28V plugs - lighter	SOCATA	/	/	OPT70 25026B	X		S
A 25032	Front seats ease covers	SOCATA	1.250	4.668		X	X	X
A 25035	JetFly type cabin arrangement	SOCATA	/	/	Post-MOD70-0207-00			X
A 25036	Cabin furnishings - "Loupe d'Orme" wood	SOCATA	/	/	Post-MOD70-0207-00			X
A 0151-25	CD reader PCD 7100	PS ENGINEERING	1.000	5.208	With audio cabinet	X	X	X
A 0174-25	Optional 12V plugs - Without version - Version B	SOCATA	1.500	4.960	Up to S/N 433, S/N 269	X	X	X
		SOCATA	1.500	4.960	From S/N 434, plus S/N 269	X	X	X
A 0229-25A	28 V plugs	SOCATA	/	/	Post-MOD70-0220-00 - From S/N 434, plus S/N 269			X

A / O	ITEM OPT70 or MOD70	OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700	
							A	B
A	0229-25B	28 V plugs	SOCATA	/	/	Post-MOD70-0276-00 From S/N 14 to 243, except 205 and 240	X	
A	25019A	<b>25-60 - Emergency equipment</b> Axe	SOCATA	1.100	4.960		X	
A	25020A	First aid kit	SOCATA	1.800	7.250		X	X
O	25030C	<b>25-61 - Emergency locator transmitter</b> Three-frequency emergency locator transmitter C406-1 (with base), NAV interfaced, with G1000 system GPS source (airplanes equipped with reinforcement), of which: .ELT C406-1 .ELT/NAV interface box 453-6500 .Antenna 21-41	ARTEX	3.459	8.900	Post-MOD70-0176-00		X
O	25030D	Three-frequency emergency locator transmitter C406-1 (with base), <u>not</u> interfaced with NAV, with G1000 system GPS source (airplanes equipped with reinforcement), of which: .ELT C406-1 .Antenna 21-41	ARTEX ARTEX CHELTON ARTEX	1.525 1.220 0.140 2.239	9.010 8.970 8.095 8.870	Post-MOD70-0176-00	X	X X X X

A / O	ITEM OPT70 or MOD70	OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700	
							A	B G
O	25030E	Three-frequency emergency locator transmitter C406-1 (with base), not interfaced with NAV, with G1000 system GPS source (airplanes equipped with reinforcement), of which: .ELT C406-1 .Antenna 110-338	ARTEX	2.303	8.845	Post-MOD70-0176-00		X
O	25030F	Three-frequency emergency locator transmitter C406-1 (with base), NAV interfaced, with G1000 system GPS source (airplanes equipped with reinforcement), of which: .ELT C406-1 .ELT/NAV interface box 453-6500 .Antenna 110-338	ARTEX ARTEX ARTEX	1.525 0.204 3.523	9.010 8.095 8.888	Post-MOD70-0176-00		X X X
A	26001A	<b>26 - FIRE PROTECTION</b> Portable fire extinguisher unit FH 15 N or	AREOFEU	2.130	4.480	S/N 1 to 22, plus 37 to 39	X	X
A	26001B	Portable fire extinguisher unit H1 - 10 AIR Portable fire extinguisher unit H1 - 10 AIR or	MAIP MAIP	1.935 1.935	4.480 4.881	From S/N 40, plus 23 to 36	X X	X
		Portable fire extinguisher unit 863520-00	L'HOTELLIER	1.650	4.881		X	S

A / O	ITEM OPT70 or MOD70	OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700	
							A	B G
A	26002C	Engine fire detection system	L'HOTELLIER	0.660	2.440	From S/N 494, plus S/N 269		X
A	26002D	Engine fire detection system	L'HOTELLIER	0.660	2.440	Post-MOD70-0276-00 From S/N 14 to 243, except S/N 205 and 240	X	X
<b>27 - FLIGHT CONTROLS</b>								
<b>27-20 - Yaw control</b>								
A	27001A	AFC and electric trim control on R.H. control wheel	SOCATA	0.400	4.000		X	S
<b>27-50 - Wing flaps (control)</b>								
O	27002A	Flap control	LPMI	7.910	5.550		X	X
<b>28 - FUEL SYSTEM</b>								
<b>28-20 - Fuel supply</b>								
O	28001A	Fuel sequencer unit	TFE	0.500	3.200		X	S

A / O	ITEM OPT70 or MOD70	OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700	
							A	B G
O		<b>30 - ICE AND RAIN PROTECTION</b> Deicer T700A3010012000, outboard L.H. wing	SOCATA	1.200	4.400	TBM700A & B equipped with optional MOD70-0276-00C Weather radar	X	
		<b>31 - INDICATING/RECORDING SYSTEMS</b>						
		<b>31-20 - Independent instruments</b>						
O	31002A	Hourmeter 56457-3 (engine running time)	DATCON	0.250	3.970		X	X
O	31002B	Hourmeter 56457-3 (flying time)	DATCON	0.250	3.970		X	X
		<b>33 - LIGHTS</b>						
		<b>33-10 - Instrument panel lighting</b>						
A	33001B	PULSELITE control Ref. 1NC P/N 1220/2410-2	PRECISE FLIGHT	0.574	5.146	From S/N 434, plus S/N 269		X
A	33001C	PULSELITE control Ref. 1NC P/N 1220/2410-2	PRECISE FLIGHT	0.574	5.146	Post-MOD70-0276-00 From S/N 14 to 243, except S/N 205 and 240	X	



A / O	ITEM OPT70 or MOD70	OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700	
							A	B
O	33002	<b>33-40 - External lighting</b> Halogen landing lights Q5596 Halogen taxi light Q5587	WHELEN WHELEN	0.360 0.500	4.550 2.380		X X	X X
		<b>34 - NAVIGATION</b>						
A	0226-00	<b>34-28 - Electronic flight instrumentation system</b> G1000 Synthetic Vision System	GARMIN	/	/	Post-MOD70-0176-00 and MOD70-0225-00	X	X
A	0222-00	Electronic checklists technical content - TBM850 Checklist V1.0	GARMIN	/	/	Post-MOD70-0176-00	X	X
A	34056B	<b>34-41 - Stormscope</b> Stormscope WX 500, G1000 coupled, of which: .Antenna NY163 .Processor WX500	BFG BFG BFG	2.240 0.380 1.030	5.900 7.900 6.500	From S/N 434, plus S/N 269	X X X	X X X
A	34056C	Stormscope WX 500, G1000 coupled, of which: .Antenna NY163 .Processor WX500	BFG BFG	2.240 0.380 1.030	5.900 7.900 6.500	Post-MOD70-0276-00 From S/N 14 to 243, except S/N 205 and 240	X X X	X X X

A / O	ITEM OPT70 or MOD70	OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700	
							A	B
A	0176-00C	<b>34-42 - Weather radar</b> Weather radar GWX 68	GARMIN	4.250	4.406	From S/N 434, plus S/N 269		X
A	0276-00C	Weather radar GWX 68	GARMIN	4.250	4.406	From S/N 14 to 243, except S/N 205 and 240	X	
A	34037L	<b>34-43 - Radioaltimeter</b> Radioaltimeter KRA 405B, G1000 coupled, without KNI 415 or aural warning, of which : . Transceiver KRA 405B . Antennas DM 19-2-1	HONEYWELL DORNE & MARGOLIN	2.600 1.270 0.090 and 0.090	5.318 5.872 4.625 5.228	Post-MOD70-0176-00		X X X X
A	34037M	Radioaltimeter KRA 405B, G1000 coupled, without KNI 415 or aural warning, of which : . Transceiver KRA 405B . Antennas DM 19-2-1	HONEYWELL DORNE & MARGOLIN	2.600 1.270 0.090 and 0.090	5.318 5.872 4.625 5.228	Post-MOD70-0276-00 From S/N 14 to 243, except S/N 205 and 240	X X X X	X X X X

A / O	ITEM OPT70 or MOD70	OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
A	0270-34A	Radioaltimeter RA4500, G1000 coupled, of which: . Transceiver RA4500 . Antennas S67-2002	FREEFLIGHT SENSOR SYSTEMS	1.134 0.862 0.136 and 0.136	5.600 5.812 4.625 5.228	Post-MOD70-0176-00	X	X	X
A	0270-34B	Radioaltimeter RA4500, G1000 coupled, of which: . Transceiver RA4500 . Antennas S67-2002	FREEFLIGHT SENSOR SYSTEMS	1.134 0.862 0.136 and 0.136	5.600 5.812 4.625 5.228	Post-MOD70-0276-00 From S/N 14 to 243, except S/N 205 and 240	X	X	X
A	34061D	<b>34-44 - Traffic advisory system</b> TAS system KTA 870, G1000 coupled, of which: . Processor KTA 810 . Antenna KA 815 (upper fuselage) . Antenna KA 815 (under fuselage) G1000 TAWS system	HONEYWELL	5.17	3.357	Post-MOD70-0176-00	X	X	X
A	0176-00F	G1000 TAWS system	HONEYWELL GARMIN	4.11 0.43 0.43 /	3.380 5.859 6.520 /	From S/N 434, plus S/N 269	X	X	X
A	0276-00F	G1000 TAWS system	GARMIN	/	/	From S/N 14 to 243, except S/N 205 and 240	X	X	X

A / O	ITEM OPT70 or MOD70	OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
A	0258-00B	TAS system GTS 820, G1000 coupled, of which: .Processor GTS 820 .Power amplifier/low noise amplifier GPA 65 .Antenna GA 58 (upper fuselage) .Antenna GA 58 (under fuselage)	GARMIN GARMIN GARMIN GARMIN GARMIN	10.220 4.500 0.860 0.360 0.360	4.513 3.635 5.624 5.860 6.620	Post-MOD70-0176-00	X X X X X		
A	0258-00C	TAS system GTS 820, G1000 coupled, of which: .Processor GTS 820 .Power amplifier/low noise amplifier GPA 65 .Antenna GA 58 (upper fuselage) .Antenna GA 58 (under fuselage)	GARMIN GARMIN GARMIN GARMIN	10.220 4.500 0.860 0.360 0.360	4.513 3.635 5.624 5.860 6.620	Post-MOD70-0276-00 From S/N 14 to 243, except S/N 205 and 240	X X X X X	X X X X X	
A	0176-00D	<b>34-50 - Dependent position determining</b> <b>34-53 - Transponder</b> Transponder # 1 GTX 33D - Mode S diversity + Antenna KA 61 (under fuselage) + Antenna KA 61 (upper fuselage)	GARMIN	1.870 0.180 0.180	3.801 3.812 4.908	From S/N 434, plus S/N 269	X X X	X X X	
A	0176-00E	Transponder # 2 GTX 33 - Mode S non diversity + Antenna KA 61	GARMIN	1.750 0.180	3.801 4.908	From S/N 434, plus S/N 269	X X	X X	X X

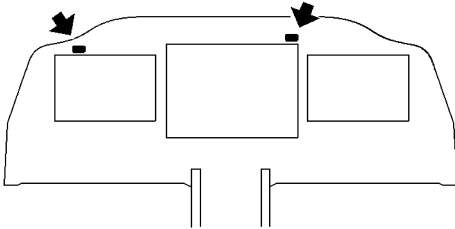
A / O	ITEM OPT70 or MOD70	OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
A	0276-00D	Transponder # 1 GTX 33D - Mode S diversity + Antenna KA 61 (under fuselage)	GARMIN	1.870	3.801	From S/N 14 to 243, except S/N 205 and 240	X		X
A	0276-00E	Transponder # 2 GTX 33 - Mode S non diversity + Antenna KA 61 (upper fuselage)	GARMIN	0.180 0.180 1.750	3.812 4.908 3.801	From S/N 14 to 243, except S/N 205 and 240	X X X		X X X
A	0264-34	Transponder # 1 GTX 33D - Mode S diversity with extended squitter + Antenna KA 61 (under fuselage) + Antenna KA 61 (upper fuselage)	GARMIN	0.180 1.870	4.908 3.801	From S/N 434, plus S/N 269	X		X X X
A	0176-00H	<b>34-54 - Automatic Direction Finder (ADF)</b> ADF RA 3500 system	BECKER	3.450	5.452	From S/N 434, plus S/N 269 European countries only			X
A	0276-00H	ADF RA 3500 system	BECKER	3.450	5.452	Post-MOD70-0276-00 From S/N 14 to 243, except S/N 205 and 240 European countries only	X		X
A	34014E	<b>34-55 - DME installation</b> DME KN63, G1000 coupled + Antenna KA 61	HONEYWELL	1.270 0.180	5.900 6.066	From S/N 434, plus S/N 269			X X

A / O	ITEM OPT70 or MOD70	OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700	
							A	G
A	34014F	DME KN63, G1000 coupled + Antenna KA 61	HONEYWELL	1.270	5.900	Post-MOD70-0276-00 From S/N 14 to 243, except S/N 205 and 240	X	X
A	0176-00G	<b>34-62 - Multifunction display</b> G1000 Chartview function	GARMIN	0.180	/	From S/N 434, plus S/N 269	X	X
A	0276-00G	G1000 Chartview function	GARMIN	/	/	From S/N 14 to 243, except S/N 205 and 240	X	X
O	35001C	<b>35 - OXYGEN</b> Gaseous oxygen system (30000 ft)	EROS/INTER TECHNIQUE	10.400	4.526	Post-MOD70-0276-00 From S/N 14 to 243, except S/N 205 and 240	X	X
O	35001D	Gaseous oxygen system (31000 ft)	EROS/INTER TECHNIQUE	11.200	4.526	Post-MOD70-0276-00 From S/N 14 to 243, except S/N 205 and 240	X	X
A	52002A	<b>52 - DOORS</b> "Pilot" door	SOCATA	20.000	4.350	Post-MOD70-091-52	X	X

A / O	ITEM OPT70 or MOD70	OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit kg	ARM m	APPLICABILITY OR EFFECTIVITY	TBM700		
							A	B	G
O	57001A	<b>57 - WINGS</b> Utilization on runways covered with melting snow	SOCATA	Δ- 3.500	5.080	From S/N 1 to 110 Standard from S/N 111	X		
A	0169-79C	<b>79 - LUBRICATION</b> <b>79-30 - Indicating</b> Chip detection system (2 detectors) interfaced with G1000 system	PWC	Neglig.	/	Post-MOD70-0176-00			X
A	0169-79D	Chip detection system (1 or 2 detectors) interfaced with G1000 system	PWC	Neglig.	/	Post-MOD70-0276-00	X		X

## SECTION 7 DESCRIPTION

Information hereafter supplement those given for the standard airplane in Section 7 "Description" of the basic Pilot's Operating Handbook.



I4315001AAA BMA18000

Légende voyants  
*Lights key*



Rouge  
*Red*



Ambre  
*Amber*

Figure 9.55.1 - GENERAL ALARMS WARNING LIGHTS



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- 1) GDU 1040 PFD2
- 2) R.H. GMA 1347 audio panel
- 3) Right station control wheel tube
- 4) Crew music
- 5) Adjustable air outlet
- 6) Right station reception-micro jacks
- 7) Hour meter
- 8) R. H. station rudder pedals adjusting handle
- 9) Circuit breakers panel postlight
- 10) Servicing plug
- 11) Cabin emergency air control ("RAM AIR" control knob)
- 12) Static source selector
- 13) "ECS" air conditioning control panel
- 14) Electric pitch trim control
- 15) Electric rudder trim control
- 16) Maps reading tablet
- 17) "AP / DISC TRM INT" red push-button
- 18) General alarm red and amber indicators

Figure 9.55.2 (1/2) - RIGHT INSTRUMENT PANEL

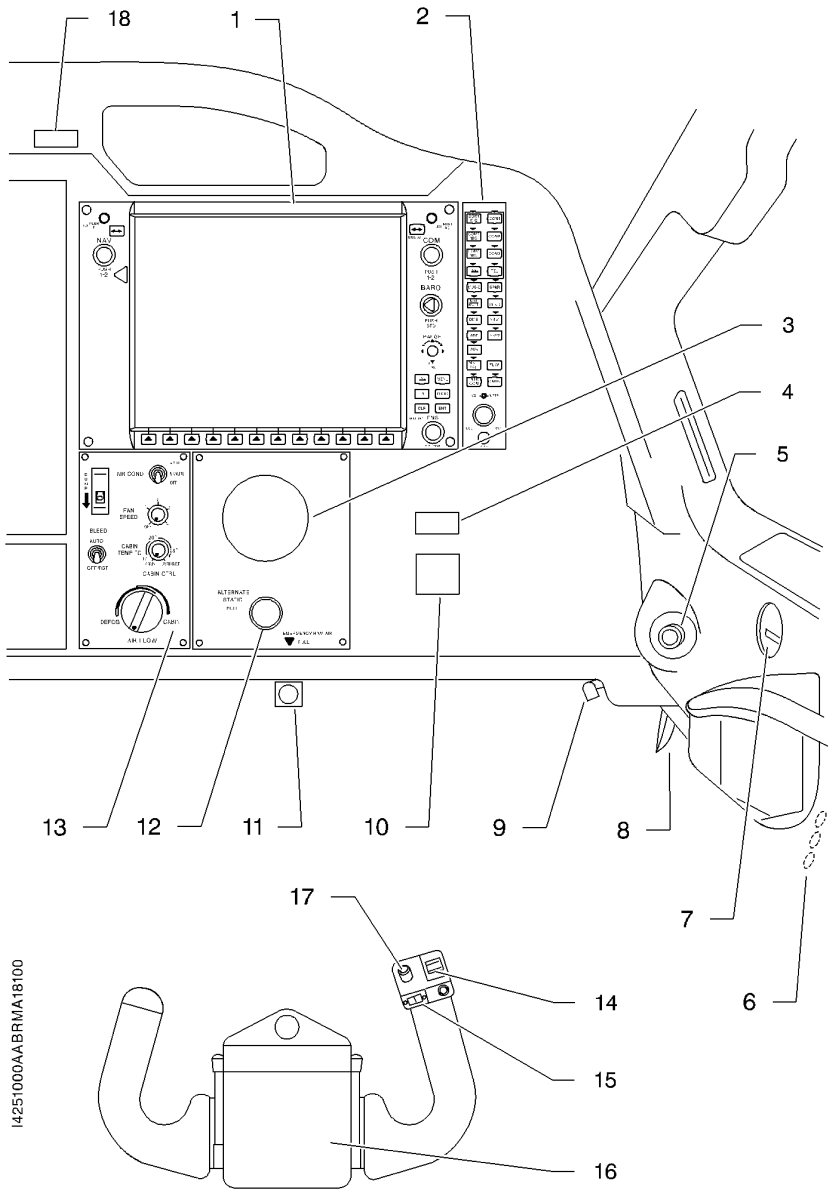


Figure 9.55.2 (2/2) - RIGHT INSTRUMENT PANEL  
(Typical arrangement)

## **SUPPLEMENT**

# **"GARMIN" GSR 56 WEATHER DATALINK AND SATELLITE PHONE**

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**"GARMIN" GSR 56 WEATHER DATALINK  
AND SATELLITE PHONE****SECTION 1****GENERAL**

This supplement supplies information necessary for the operation of the airplane when the optional "GARMIN" GSR 56 weather datalink and satellite phone system is installed in the TBM airplane.

**SECTION 2****LIMITATIONS**

These limitations supplement those of standard airplane described in Section 2 "Limitations" of the basic Pilot's Operating Handbook.

**SATELLITE PHONE functions**

- It is forbidden to activate Pilot In Command On-side GMA TEL button as long as the airplane is in the air or moving on the ground.
- Only the Pilot In Command cross side GMA TEL input can be activated at all time of flight for the front passenger and passengers to have the GSR 56 telephone audio functions.

**USE OF PHONE BY PIC PROHIBITED DURING ALL AIRCRAFT OPERATIONS**

**WEATHER DATALINK functions**

- The GSR 56 weather datalink is only an advisory weather source, it does not relieve the pilot to comply with the applicable operational regulation in terms of flight preparation especially with regard to the use of an approved weather and NOTAM sources during flight planning.

**Airplane equipped with GARMIN G1000 flight deck (MOD70-0176-00)**

The "GARMIN" G1000 Integrated Flight Deck Pilot's Guide for the TBM 850 P/N 190-00709-04 at its latest revision shall be readily available to the pilot whenever the operation of the GSR 56 weather datalink and satellite phone system is predicted.

Airplane retrofitted with GARMIN G1000 NXi flight deck (MOD70-0539-00)

The "GARMIN" G1000 NXi Integrated Flight Deck Pilot's Guide for the TBM 850/900 P/N 190-02348-00 at its latest revision shall be readily available to the pilot whenever the operation of the GSR 56 weather datalink and satellite phone system is predicted.

### INTERNATIONAL TELECOMMUNICATION REGULATION

The GSR 56 is a telecommunication device approved under FCC ID Q639522B and registered by the ITU (International Telecommunication Union) for international use according to the GMPCS-MoU.

The receiver transmitter RF module embedded in the GSR 56 is a 9522 B manufactured by Iridium Satellite LLC.

Terms of use are subject to changes and are available from the ITU website.

## **2.1 - PLACARDS**

Under L.H. front side window, under instruction plate

USE OF PHONE BY PIC PROHIBITED DURING ALL AIRCRAFT OPERATIONS

14113207A AAA MA4200

## **SECTION 3 EMERGENCY PROCEDURES**

Installation and operation of "GARMIN" GSR 56 weather datalink and satellite phone system do not change the basic emergency procedures of the airplane described in Section 3 "Emergency procedures" of the basic Pilot's Operating Handbook.

**SECTION 4  
NORMAL PROCEDURES**

Normal operating procedures of the "GARMIN" GSR 56 weather datalink and satellite phone system are outlined in the Pilot's Guide, the references of which are given in Section 2 "Limitations" of this Supplement.

<b>BEFORE STARTING ENGINE</b>	
On L.H. GMA audio panel	
1 - "TEL" button .....	<b>OFF</b>

<b>BEFORE STARTING A PHONE CALL IN FLIGHT</b>	
On L.H. GMA audio panel	
1 - "TEL" button .....	<b>OFF</b>
<i>If passengers intend to take part into a phone call :</i>	
2 - "CABIN" button .....	<b>OFF</b>
<i>If front passenger intends to take part into a phone call :</i>	
3 - "INTRCOM" button .....	<b>OFF</b>
On R.H. GMA audio panel	
4 - "TEL" button .....	<b>ON</b>
<i>If passengers intend to take part into a phone call :</i>	
5 - "CABIN" button .....	<b>ON</b>

## SECTION 5 PERFORMANCE

Installation and operation of "GARMIN" GSR 56 weather datalink and satellite phone system do not change the basic performance of the airplane described in Section 5 "Performance" of the basic Pilot's Operating Handbook.

## SECTION 6 WEIGHT AND BALANCE

Information hereafter supplement the one given for the standard airplane in Section 6 "Weight and balance" of the basic Pilot's Operating Handbook.

A or O	OPTIONAL EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
<b>23 - COMMUNICATIONS</b>				
A	Weather datalink and satellite phone system coupled with "GARMIN" system MOD70-0331-23 GSR 56	GARMIN	3.82 (1.736)	58.03 (1.474)

## SECTION 7 DESCRIPTION

"GARMIN" GSR 56 weather datalink and satellite phone system provides airborne low speed datalink and voice communication capability to "GARMIN" system excluding any voice mail function. GSR 56 weather datalink and satellite phone system contains a transceiver that operates on the Iridium Satellite network.

The weather information are displayed on the MFD maps and on the PFD inset map.



*"GARMIN" GSR 56 WEATHER DATALINK  
AND SATELLITE PHONE*

The satellite phone interface is embedded in the MFD : Phone communication and SMS can be received and sent through the dedicated pages on the MFD.

Although it is possible to leave a message when calling the aircraft, as voice mail communication is not supported by the GSR 56 :

- it is not possible to access the GSR 56 voice mail from the aircraft
- - there is no indication on the GARMIN integrated flight deck system when a new message has been left on the GSR 56 voice mail.

The controls for the MFD are located on both the MFD bezel and the MFD control unit (keyboard).

The telephone audio including the incoming call ringing is controlled by the TEL button on the GMA audio panels and can be played in the pilot, front passenger and passengers headphones.

**SUPPLEMENT****PUBLIC TRANSPORTATION FOR  
FRENCH-REGISTERED AIRPLANES****TABLE OF CONTENTS**

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**PUBLIC TRANSPORTATION FOR  
FRENCH-REGISTERED AIRPLANES****SECTION 1****GENERAL**

This supplement supplies information necessary for the operation of the TBM airplane when used for "PUBLIC TRANSPORTATION FOR FRENCH-REGISTERED AIRPLANES".

**SECTION 2****LIMITATIONS**

These limitations supplement those of standard airplane described in Section 2 "Limitations" of the basic Pilot's Operating Handbook when the TBM airplane is used for "PUBLIC TRANSPORTATION FOR FRENCH-REGISTERED AIRPLANES".

**2.1 - PLACARDS**

(1) On access door - Internal side

**CAUTION: UNLOCK BEFORE OPERATING THE HANDLE**

**ATTENTION: DEVERROUILLER AVANT D'AGIR SUR LA POIGNEE**

**TURN HANDLE TO OPEN  
TOURNER LA POIGNEE  
POUR OUVRIR**



**APPUYER POUR DEVERROUILLER  
PRESS TO UNLOCK**

- (2) On access door - External side



- (3) On "pilot" door - External side (if installed)



- (4) On outer fuselage skin aft of access door and in the cabin, forward of access door



**PUBLIC TRANSPORTATION FOR  
FRENCH-REGISTERED AIRPLANES**

(5) On emergency exit handle – Internal side

Marking on cover

**ISSUE DE SECOURS**

Marking on handle

**PULL TO OPEN  
TIRER POUR  
OUVRIR**

**REMOVE  
COVER  
PULL HANDLE  
TO OPEN**

**RETIRER  
LE CACHE  
TIRER LA POIGNEE  
POUR OUVRIR**

(6) On emergency exit handle – External side

**EMERGENCY EXIT  
SORTIE DE SECOURS**

**PULL  
TO  
OPEN**

**TIRER  
POUR  
OUVRIR**

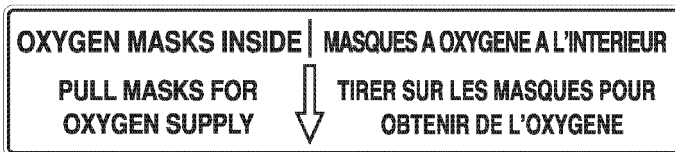
- (7) On R.H. access door jamb



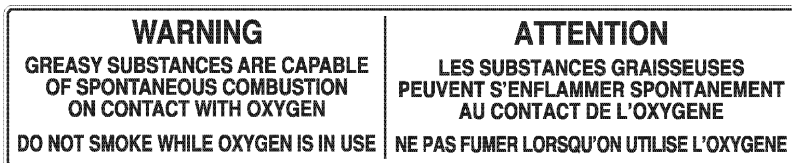
- (8) On last step of stairs

**CHARGE MAXI SUR ESCALIER : UNE PERSONNE**

- (9) On rear passengers masks containers



- (10) On R.H. side at front seat level and on the first rear passengers masks container (R.H. side on the ceiling)



**PUBLIC TRANSPORTATION FOR  
FRENCH-REGISTERED AIRPLANES**

(11) Under window, at L.H. intermediate seat



(12) On rear passenger's table edge

**LA TABLETTE DOIT ETRE RABATTUE LORS DU DECOLLAGE ET DE L'ATTERRISSAGE**

(13) On the chemical toilet cabinet curtain (if installed)

**LE RIDEAU DOIT ETRE RANGE LORS DU DECOLLAGE ET DE L'ATTERRISSAGE**

**SECTION 3****EMERGENCY PROCEDURES**

Use of TBM airplane for “PUBLIC TRANSPORTATION FOR FRENCH-REGISTERED AIRPLANES” does not change the basic emergency procedures of the airplane described in Section 3 “Emergency procedures” of the basic Pilot’s Operating Handbook.

**SECTION 4****NORMAL PROCEDURES**

Use of TBM airplane for “PUBLIC TRANSPORTATION FOR FRENCH-REGISTERED AIRPLANES” does not change the basic normal procedures of the airplane described in Section 4 “Normal procedures” of the basic Pilot’s Operating Handbook.

**SECTION 5****PERFORMANCE**

Use of TBM airplane for “PUBLIC TRANSPORTATION FOR FRENCH-REGISTERED AIRPLANES” does not change the basic performance of the airplane described in Section 5 “Performance” of the basic Pilot’s Operating Handbook.

**SECTION 6****WEIGHT AND BALANCE**

Use of TBM airplane for “PUBLIC TRANSPORTATION FOR FRENCH-REGISTERED AIRPLANES” does not change Section 6 “Weight and balance” of the basic Pilot’s Operating Handbook.



**PUBLIC TRANSPORTATION FOR  
FRENCH-REGISTERED AIRPLANES****SECTION 7  
DESCRIPTION**

Use of TBM airplane for “PUBLIC TRANSPORTATION FOR FRENCH-REGISTERED AIRPLANES” does not change Section 7 “Description” of the basic Pilot’s Operating Handbook.

**SECTION 8  
HANDLING, SERVICING AND MAINTENANCE**

Use of TBM airplane for “PUBLIC TRANSPORTATION FOR FRENCH-REGISTERED AIRPLANES” does not change Section 8 “Handling, Servicing and Maintenance” of the basic Pilot’s Operating Handbook.



# BRAZIL PILOT'S OPERATING HANDBOOK

**SOCATA S.A.S**  
Direction des Services  
65921 TARBES CEDEX 9  
FRANCE

## **SUPPLEMENT 59 "BRAZIL SPECIFICS" OPT70-01004**

This Supplement is approved in accordance with the Paragraph 21.29 of RBHA 21 for Brazilian registered airplanes and is approved by the EASA on behalf of the Agência Nacional de Aviação Civil (ANAC).

This Supplement includes information to be furnished to the pilot as required by the certification conditions on behalf of ANAC.

This Supplement and the basic POH it is attached to, together with its further applicable Supplements, are EASA approved on behalf of the Brazilian Aviation Authority ANAC.

The original version of this Supplement is meeting the ANAC requirements and is approved by EASA on behalf of the Brazilian Aviation Authority ANAC.

Approval number : EASA letter DRO/ana/CT.2/2017(D)5550

Date : November 16, 2017

This airplane must be operated in accordance with the limitations contained in Section 2 of the basic Pilot's Operating Handbook and limitations and instructions herein established.

**THIS DOCUMENT MUST BE EMBODIED IN SECTION 9 OF THE  
PILOT'S OPERATING HANDBOOK AND BE PERMANENTLY KEPT IN  
THE AIRPLANE**

## LIST OF EFFECTIVE PAGES AND VALIDITIES

EDITION 2 OF JULY 20, 2017

From S/N 434 to 999

*P/N Z00.DMNF59EE2R0BZ*

Page No.	Edit./Rev. No.	Rev. Date	Page No.	Edit./Rev. No.	Rev. Date
9.59A	2-0	JUL 17			
9.59B	2-0	JUL 17			
9.59C	2-0	JUL 17			
9.59D	2-0	JUL 17			
9.59.1	2-0	JUL 17			
9.59.2	2-0	JUL 17			
9.59.3	2-0	JUL 17			
9.59.4	2-0	JUL 17			
9.59.5	2-0	JUL 17			
9.59.6	2-0	JUL 17			
9.59.7	2-0	JUL 17			
9.59.8	2-0	JUL 17			
9.59.9	2-0	JUL 17			
9.59.10	2-0	JUL 17			
9.59.11	2-0	JUL 17			
9.59.12	2-0	JUL 17			
9.59.13	2-0	JUL 17			
9.59.14	2-0	JUL 17			
9.59.15	2-0	JUL 17			
9.59.16	2-0	JUL 17			

**LIST OF AMENDMENTS**

Revision 0 dated July 20, 2017

Pages	Description
All pages	Supplement creation

Approval : The original version of this Supplement is an English version meeting the ANAC requirements. It is EASA approved on behalf of the Brazilian Aviation Authority ANAC

Approval number : EASA letter DRO/ana/CT.2/2017(D)5550

Date : November 16, 2017

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# SUPPLEMENT

## BRAZIL SPECIFICS

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## **SECTION 1**

### **GENERAL**

This supplement is intended to inform the pilot about the airplane specifics, among others those required by the relevant Certification Authorities (limitations, description and operations necessary to the operation of the TBM airplane).

**SECTION 2**  
**LIMITATIONS**

The limitations hereafter supplement or replace those of the standard airplane described in Section 2 Limitations of the basic Pilot's Operating Handbook.

**2.1 - GENERAL**

TBM 700 airplane is certified under EASA.A.010 and ANAC No. 9307 Type Certificates.

**2.5 - WEIGHT AND C.G. LIMITS**

**WEIGHT LIMITS**

With 4-seat accommodation

- in rear part of pressurized cabin : 396 lbs (180 kg), with small or large net (see sketch below)

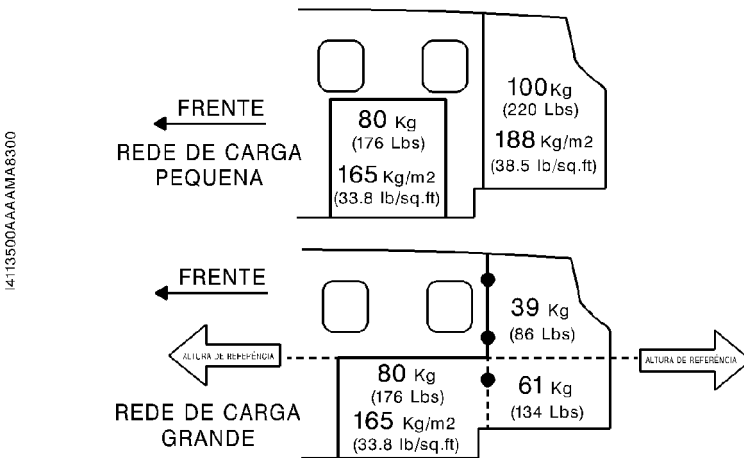


Figure 2.5.1 - Baggage limits



## 2.6 - OPERATION LIMITS

When operating the VHF-COMM system in Brazilian air space, the selection of 8.33 kHz in the channels spacing can cause the loss of communication with the Air Traffic Control (ATC).

## GNSS (GPS/SBAS) NAVIGATION SYSTEM LIMITATIONS

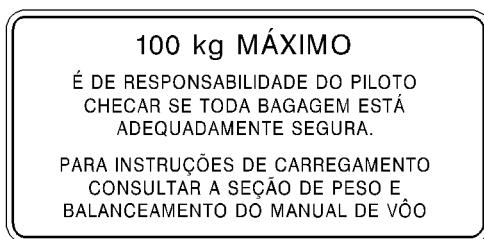
In accordance with Brazilian IS 21-013A, use of GNSS/GPS is prohibited under IFR unless other means of navigation, suitable and approved for the intended route, are installed and operational. It must be possible - at any point along the route - to navigate to the destination or alternate, using such means.

The SBAS functionality is not available in Brazil, therefore operations that require such functionality, such as GNSS vertical navigation modes, are prohibited in Brazilian airspace.

## 2.9 - PLACARDS

On pressurized baggage compartment partition wall

I4112003AAA BMA8300

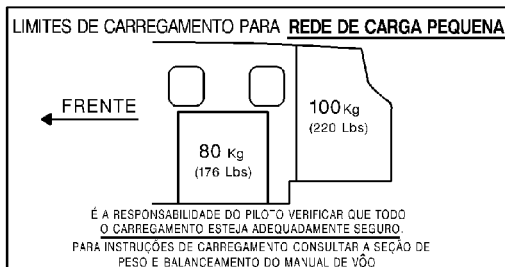


PILOT'S OPERATING HANDBOOK

Post-MOD 70-0315-25

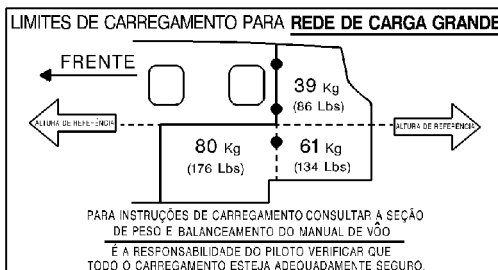
For the small cargo net, on frame C13bis

14113500AAAAMA8400



For the large cargo net, on R.H. side upholstery panel, in the rear baggage compartment

14113500AAAAMA8400



All

On FWD baggage compartment door frame (non pressurized)

**50 KG MÁXIMO**

**PARA INSTRUÇÕES DE CARREGAMENTO  
CONSULTAR A SEÇÃO DE PESO E  
BALANCEAMENTO DO MANUAL DE VÔO**

Near fuel tank caps

**QAV-1 JET A JET A-1**  
CAPACIDADE TOTAL 570 L - 150,5 us gal  
ADITIVO ANTI CONGELANTE REQUERIDO,  
VEJA MANUAL DE VÔO PARA  
QUANTIDADE E TIPO DE ADITIVO

14112004AAAA/AB300



On internal face of L.H. engine cowling



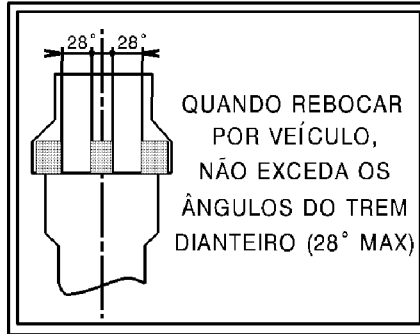
On rear passenger's table casing

**A MESA DEVERÁ ESTAR RECOLHIDA PARA DECOLAGEM E POUSO**

PILOT'S OPERATING HANDBOOK

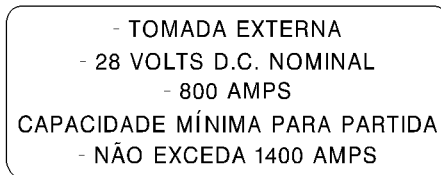
On nose gear door

I4112001AAACMA8100

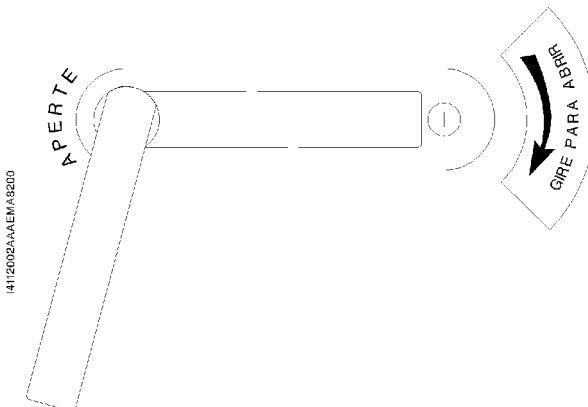


On engine cowling, in front of compartment door

I4112001AAACMA8200



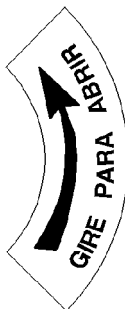
On pilot door - External side (if installed)



I4112002AAEMA8200

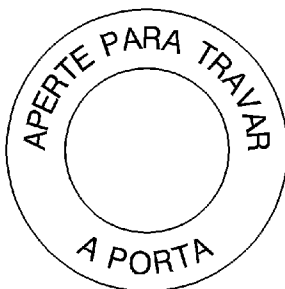
On access door - External side

I4112002AAA4EIMAB300



On outer fuselage skin aft of access door and in the cabin forward of access door

I4112002AAAADMA8400




On access door - Internal side

I4112002AAA DWA18000



**ATENÇÃO:** DESTRAVAR ANTES  
DE OPERAR A MANOPLA

GIRE A MANOPLA  
PARA ABRIR 

PILOT'S OPERATING HANDBOOK

On pilot door – Internal side (if installed)

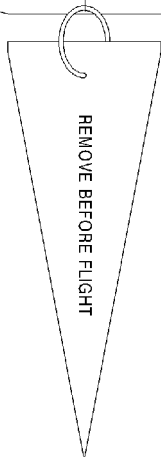
14112002AAADMA18100



On emergency exit handle

Marking on cover

Marking on handle



14113004AAAMA8000

On last step of stairs

I4113400AAAAMA8000

MAX. UMA PESSOA NA ESCADA

On R.H. access door jamb

I4113400AAABMA8200

NÃO USE O  
CORRIMÃO  
PARA RECOLHER  
E PARA ALOJAR  
A ESCADA

On R.H. side at front seat level and on the first rear passengers masks container (R.H. side on the ceiling)


I4113400AAABMA8300

**CUIDADO**  
PROIBIDO FUMAR DURANTE O USO DE OXIGÊNIO.  
GRAXAS E SUBSTÂNCIAS OLEOSAS ESTÃO  
SUJEITAS Á COMBUSTÃO ESPONTÂNEA QUANDO  
EM CONTATO COM OXIGÊNIO

On rear passengers masks containers

I4113400AAABMA8400

MÁSCARAS DE OXIGÊNIO  
PUXE A MÁSCARA PARA  
ATIVAR O OXIGÊNIO



## PILOT'S OPERATING HANDBOOK

On the oxygen service door

I4112400AAAAA/MA8200

ABASTECIMENTO DE OXIGÊNIO.  
NÃO USE LUBRIFICANTES

Pre-MOD70-0336-26 and Post-MOD70-0391-26D

On R.H. side at front seat level

I4113207AAAAA/MA18000

EXTINTOR DE INCÊNDIO  
NA GAVETA INFERIOR DO  
ARMÁRIO ATRÁS DO ASSENTO  
DIANTEIRO DIREITO

On the lower drawer of the R.H. cabinet

I4113207AAAAA/MA8200

EXTINTOR DE INCÊNDIO

All

Airplanes equipped with MOD70-0505-25 "Lavatory compartment"

On fixed panel, cabin side

I4113200AAAAA/MA8300

A DIVISÓRIA DEVE ESTAR RECOLHIDA DURANTE A DECOLAGEM E O POUSO



On fixed panel, toilet side

O ASSENTO DO SANITÁRIO NÃO DEVE ESTAR  
OCUPADO DURANTE A DECOLAGEM E O POUSO

FECHE E TRAVE A TAMPA DO SANITÁRIO  
QUANDO NÃO ESTIVER EM USO

NÃO PENDURE OU MANTENHA OBJETOS  
SOBRE O SANITÁRIO OU NA DIVISÓRIA

A DIVISÓRIA DEVE ESTAR RECOLHIDA  
DURANTE A DECOLAGEM E O POUSO

OS FONES DE OUVIDO DEVEM SER  
UTILIZADOS QUANDO A  
DIVISÓRIA ESTIVER ESTENDIDA

I4113200AAAMMA8000

On access door, cabin side and toilet side

COMPARTIMENTO  
DE  
EMERGÊNCIA  
  
REMOVA A  
TAMPA

I4113200AAAMMA8200

PILOT'S OPERATING HANDBOOK

Behind access door, cabin side and toilet side

I4113200AAA MMA18200



Front face of lavatory compartment, near opening / closing switches

I4113200AAA MMA18000



I4113200AAA MMA8400



On the magazine rack and on side wall of storage volume

I4113200AAA1MMA18100

1,5 KG (3.3 LB)

**SECTION 3  
EMERGENCY PROCEDURES**

No specifics

**SECTION 4  
PROCEDURES NORMALES**

No specifics

**SECTION 5  
PERFORMANCE**

No specifics



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# SUPPLEMENT

## ADS-B OUT FUNCTION

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■ 3 - EMERGENCY PROCEDURES .....	9.60.3
4 - NORMAL PROCEDURES .....	9.60.3
5 - PERFORMANCE .....	9.60.3
6 - WEIGHT AND BALANCE .....	9.60.3
■ 7 - DESCRIPTION .....	9.60.4
8 - HANDLING, SERVICING AND MAINTENANCE .....	9.60.5

## SECTION 1 GENERAL

This supplement is intended to inform the pilot about the equipment limitations, description and operations necessary for operation when the airplane is equipped with “ADS-B OUT function”.

The ADS-B OUT function is integrated in the following optional modifications :

- MOD70-0264-34 : Garmin GTX 33 Non-Diversity or diversity Mode S transponders with the extended squitter functionality,
- MOD70-0542-34 : Garmin GTX 3X5 transponders.

The installed ADS-B OUT system has been shown to meet the equipment requirements of 14 CFR 91.227.

The installed transponder system is able to respond to interrogations in Modes A, C and S and is fully compliant with the requirements of CS ACNS.D.ELS/EHS (Mode S Elementary/Enhanced Surveillance).

The installed ADS-B OUT system is fully compliant with the requirements of CS ACNS.D.ADSB (1090 MHz Extended Squitter ADS-B OUT).

### 1.4 - ABBREVIATIONS AND TERMINOLOGY

#### RADIO-NAVIGATION ABBREVIATIONS

**ADS-B** : Automatic Dependent Surveillance-Broadcast

## SECTION 2 LIMITATIONS

Operation of “ADS-B OUT function” does not change the limitations of the airplane described in Section 2 “Limitations” of the basic Pilot’s Operating Handbook.

**SECTION 3**  
**EMERGENCY PROCEDURES**

Operation of “ADS-B OUT function” does not change the emergency procedures of the airplane described in Section 3 “Emergency Procedures” of the basic Pilot’s Operating Handbook.

**SECTION 4**  
**NORMAL PROCEDURES**

Operation of “ADS-B OUT function” does not change the normal procedures of the airplane described in Section 4 “Normal Procedures” of the basic Pilot’s Operating Handbook.

**SECTION 5**  
**PERFORMANCE**

Operation of “ADS-B OUT function” does not change the performance of the airplane described in Section 5 “Performance” of the basic Pilot’s Operating Handbook.

**SECTION 6**  
**WEIGHT AND BALANCE**

Operation of “ADS-B OUT function” does not change the weight and balance of the airplane described in Section 6 “Weight and Balance” of the basic Pilot’s Operating Handbook.



## SECTION 7 DESCRIPTION

Information hereafter supplement or replace those of the standard airplane described in Section 7 "Description" of the basic Pilot's Operating Handbook when the airplane is equipped with the "ADS-B OUT function".

The "ADS-B OUT function" enables the airplane to broadcast data, such as position information, to ground stations and to other airplanes equipped with ADS-B IN system.

The loss of an interfaced input to the selected extended squitter transponder may cause the transponder to stop transmitting ADS-B OUT data. Depending on the nature of the fault or failure, the transponder may no longer be transmitting all of the required data in the ADS-B OUT messages.

### Airplane equipped with one extended squitter transponder

ADS-B OUT data is only transmitted via transponder # 1. Use of transponder # 2 results in a loss of the ADS-B OUT data transmission.

If the transponder # 1 detects any internal fault or failure with the ADS-B OUT functionality, the "XPDR1 ADS-B FAIL" message will be displayed.

After being informed of ADS-B OUT failure either by the "XPDR1 ADS-B FAIL" message or by Air Traffic Control, it is possible to disable ADS-B OUT function by selecting transponder # 2.

### Airplane equipped with two extended squitter transponders

ADS-B OUT data can be transmitted from any transponder upon pilot selection.

If the transponder # 1 [# 2] detects any internal fault or failure with the ADS-B OUT functionality, the following "XPDR1 ADS-B FAIL" ["XPDR2 ADS-B FAIL"] message will be displayed.

After being informed of ADS-B OUT failure either by the "XPDR1 ADS-B FAIL" ["XPDR2 ADS-B FAIL"] message or by Air Traffic Control, it is possible to restore ADS-B OUT function by selecting transponder # 2 [# 1].

**SECTION 8**  
**HANDLING, SERVICING AND MAINTENANCE**

Operation of “ADS-B OUT function” does not change the handling, servicing and maintenance of the airplane described in Section 8 “Handling, Servicing and Maintenance” of the basic Pilot’s Operating Handbook.

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# SUPPLEMENT

## FLIGHT ENVELOPE PROTECTION

### TABLE OF CONTENTS

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4 - NORMAL PROCEDURES .....	9.62.7
5 - PERFORMANCE .....	9.62.14
6 - WEIGHT AND BALANCE .....	9.62.14
7 - DESCRIPTION .....	9.62.15
8 - HANDLING, SERVICING AND MAINTENANCE .....	9.62.18

## SECTION 1

### GENERAL

This supplement is intended to inform the pilot about the equipment limitations, description and operations necessary for operation when the airplane is equipped with "FLIGHT ENVELOPE PROTECTION".

The flight envelope protection may be :

- Option No. 1 : the Lift Transducer, USP and coupled Go Around.
- Option No. 2 : the Electronic Stability Protection (only if the option No. 1 is installed).

Whenever this Supplement refers to the GARMIN Integrated Flight Deck Cockpit Reference Guide, it states the ones described in Section 2.

### 1.4 - ABBREVIATIONS AND TERMINOLOGY

#### GENERAL ABBREVIATIONS

AoA	:	Angle of Attack
ESP	:	Electronic Stability Protection
USP	:	UnderSpeed Protection

## SECTION 2

### LIMITATIONS

Information hereafter supplement those of the standard airplane described in Section 2 "Limitations" of the Pilot's Operating Handbook.

Airplane equipped with GARMIN G1000 flight deck (MOD70-0176-00)

The "GARMIN G1000 Integrated Flight Deck Cockpit Reference Guide for SOCATA TBM 850", P/N 190-00708-07, or any later version, shall be readily to the pilot and permanently kept in the airplane.

Airplane retrofitted with GARMIN G1000 NXi flight deck (MOD70-0539-00)

The "GARMIN G1000 NXi Integrated Flight Deck Cockpit Reference Guide for SOCATA TBM 850/900", P/N 190-02349-00, or any later version, shall be readily to the pilot and permanently kept in the airplane.

### SECTION 3

### EMERGENCY PROCEDURES

Information hereafter supplement or replace those of the standard airplane described in Section 3 “Emergency Procedures” of the basic Pilot’s Operating Handbook when the airplane is equipped with “FLIGHT ENVELOPE PROTECTION”.

### 3.9 - ELECTRICAL SYSTEM

I4246000AA ANMMA8200

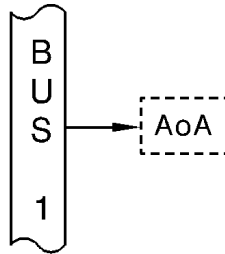


Figure 3.9.1 - PARTIAL ELECTRICAL DISTRIBUTION OF BUS BARS

**3.13 - MISCELLANEOUS**

<b>INADVERTENT SPINS</b>	
<i>(Voluntary spins are prohibited)</i>	
<i>In case of inadvertent spins</i>	
1 - "AP/TRIM DISC" pushbutton .....	<b>PRESS and HOLD until recovery</b>
2 - Control wheel .....	<b>NEUTRAL : PITCH ROLL</b>
3 - Rudder .....	<b>FULLY OPPOSED TO THE SPIN</b>
4 - Power lever .....	<b>IDLE</b>
5 - Flaps .....	<b>UP</b>
<i>When rotation is stopped</i>	
6 - Level the wings and ease out of the dive	

<b>AP OFF AND STALL WARNING SOUND</b>
1 - Fly the airplane, wings level and nose down until stall warning stops
2 - Power as required
3 - Return to the desired flight path

**RED WARNING CAS MESSAGE  
“USP ACTIVE” ON**

- 1 - Do not disconnect AP
- 2 - Increase power up to 50% minimum
- 3 - Manage the flight

**NOTE :**

*Stall warning may be triggered but AP will remain ON.*

Airplane retrofitted with GARMIN G1000 NXi flight deck (MOD70-0539-00)

**AMBER WARNING CAS MESSAGE  
“ESP FAIL”**

Indicates pitch, roll, high speed and AoA protections are inoperative.

- 1 - Maintain the airplane inside the flight envelope

FLAPS UP	105 < IAS < 266 KIAS
FLAPS TO	100 < IAS < 178 KIAS
FLAPS LDG	85 < IAS < 122 KIAS

- 2 - Continue flight
- 3 - Inform maintenance department



**AMBER WARNING CAS MESSAGE  
“ESP DEGRADED - IAS”**

Indicates high speed protection is inoperative.

- 1 - Maintain IAS below 266 KIAS
- 2 - Continue flight
- 3 - Inform maintenance department

**AMBER WARNING CAS MESSAGE  
“ESP DEGRADED - AOA”**

Indicates AoA protection at low speed is inoperative.

- 1 - Maintain airspeed above 1.3 Vs

FLAPS UP	105 < IAS < 266 KIAS
FLAPS TO	100 < IAS < 178 KIAS
FLAPS LDG	85 < IAS < 122 KIAS

- 2 - Continue flight
- 3 - Inform maintenance department

**SECTION 4**  
**NORMAL PROCEDURES**

Information hereafter supplement or replace those of the standard airplane described in Section 4 "Normal Procedures" of the basic Pilot's Operating Handbook.

### 4.3 - CHECK-LIST PROCEDURES

<b>GO-AROUND WITH AP OFF</b>	
1 - GO AROUND push-button .....	<b>PUSHED</b>
2 - Simultaneously	
- Power lever .....	<b>TRQ = 100 %</b>
- Attitude .....	<b>7° 5</b>
3 - Flaps .....	<b>TO</b>
<u>Weight below 6579 lbs (2984 kg)</u>	
<i>If the vertical speed is positive and if IAS is at or above 85 KIAS :</i>	
4 - Landing gear control .....	<b>UP</b> <b>All warning lights OFF</b>
<i>If IAS is at or above 110 KIAS :</i>	
5 - Flaps .....	<b>UP</b>
6 - Climb speed .....	<b>AS REQUIRED</b>
<u>Weight above 6579 lbs (2984 kg)</u>	
<i>If the vertical speed is positive and if IAS is at or above 90 KIAS :</i>	
7 - Landing gear control .....	<b>UP</b> <b>All warning lights OFF</b>
<i>If IAS is at or above 115 KIAS :</i>	
8 - Flaps .....	<b>UP</b>
9 - Climb speed .....	<b>AS REQUIRED</b>
10 - Power .....	<b>AS REQUIRED</b>

**GO-AROUND WITH AP ON**1 - GO AROUND push-button ..... **PUSHED**

2 - Simultaneously

- Power lever ..... **TRQ = 100 %**3 - Flaps ..... **TO**Weight below 6579 lbs (2984 kg)*If the vertical speed is positive and if IAS is at or above 85 KIAS :*4 - Landing gear control ..... **UP****All warning lights OFF***If IAS is at or above 110 KIAS :*5 - Flaps ..... **UP**6 - Climb speed ..... **AS REQUIRED**Weight above 6579 lbs (2984 kg)*If the vertical speed is positive and if IAS is at or above 90 KIAS :*7 - Landing gear control ..... **UP****All warning lights OFF***If IAS is at or above 115 KIAS :*8 - Flaps ..... **UP**9 - Climb speed ..... **AS REQUIRED**10 - Power ..... **AS REQUIRED**

**4.4 - AMPLIFIED PROCEDURES**

**GO-AROUND WITH AP OFF (1/2)**

1 - GO AROUND push-button ..... **PUSHED**  
It provides the moving up of the flight director to + 7° 5.

2 - Simultaneously  
- Power lever ..... **TRQ = 100 %**  
- Attitude ..... **7° 5**  
The airplane will tend to yaw to the left when power is applied. Right rudder pressure will be required to maintain coordinated straight flight until the rudder trim can be adjusted.

3 - Flaps ..... **TO**  
Weight below 6579 lbs (2984 kg)  
If speed has been maintained at 80 KIAS or more and TRQ 100 %, select TO flaps as soon as the 8° attitude has been attained.

*If the vertical speed is positive and if IAS is at or above 85 KIAS :*

4 - Landing gear control ..... **UP**  
**All warning lights OFF**

*If IAS is at or above 110 KIAS :*

5 - Flaps ..... **UP**

6 - Climb speed ..... **AS REQUIRED**

Weight above 6579 lbs (2984 kg)  
If speed has been maintained at 85 KIAS or more and TRQ 100 %, select TO flaps as soon as the 7° 5 attitude has been attained.

*If the vertical speed is positive and if IAS is at or above 90 KIAS :*

7 - Landing gear control ..... **UP**  
**All warning lights OFF**



**GO-AROUND WITH AP OFF (2/2)***If IAS is at or above 115 KIAS :*8 - Flaps ..... **UP**

In case of air leak between the solenoïd valve and the torque limiter, the available torque might be below 100 %. Consequently, it is strongly recommended not to select "850" :

- for a new approach or visual circuit
- for staying below 1500 ft AGL

9 - Climb speed ..... **AS REQUIRED**10 - Power ..... **AS REQUIRED**

**GO-AROUND WITH AP ON (1/2)**

1 - GO AROUND push-button ..... **PUSHED**  
 AP remains ON with the flight director to + 7° 5.

2 - Simultaneously  
 - Power lever ..... **TRQ = 100 %**

3 - Flaps ..... **TO**

Weight below 6579 lbs (2984 kg)

If speed has been maintained at 80 KIAS or more and TRQ 100 %, select TO flaps as soon as the 8° attitude has been attained.

*If the vertical speed is positive and if IAS is at or above 85 KIAS :*

4 - Landing gear control ..... **UP**  
**All warning lights OFF**

*If IAS is at or above 110 KIAS :*

5 - Flaps ..... **UP**

6 - Climb speed ..... **AS REQUIRED**

Weight above 6579 lbs (2984 kg)

If speed has been maintained at 85 KIAS or more and TRQ 100 %, select TO flaps as soon as the 7° 5 attitude has been attained.

*If the vertical speed is positive and if IAS is at or above 90 KIAS :*

7 - Landing gear control ..... **UP**  
**All warning lights OFF**

*If IAS is at or above 115 KIAS :*

8 - Flaps ..... **UP**

In case of air leak between the solenoïd valve and the torque limiter, the available torque might be below 100 %. Consequently, it is strongly recommended not to select "850" :

- for a new approach or visual circuit
- for staying below 1500 ft AGL



**GO-AROUND WITH AP ON (2/2)**

9 - Climb speed .....	<b>AS REQUIRED</b>
10 - Power .....	<b>AS REQUIRED</b>

**4.5 - PARTICULAR PROCEDURES****FLIGHT INTO KNOWN ICING CONDITIONS****CAUTION**

**THE STALL WARNING SYSTEM DOES NOT FUNCTION PROPERLY IN ICING CONDITIONS AND SHOULD NOT BE RELIED UPON TO PROVIDE ADEQUATE STALL WARNING IN ICING CONDITIONS AND AFTER LEAVING ICING CONDITIONS, IF ICE ACCRETION REMAINS ON THE AIRPLANE.  
THEREFORE THE USP AND ESP (IF INSTALLED) FUNCTIONS RECEIVING INFORMATION FROM THE STALL WARNING SYSTEM MAY NOT BE CORRECTLY ENGAGED.**



**SECTION 5**  
**PERFORMANCE**

Operation of "FLIGHT ENVELOPE PROTECTION" does not change the performance of the airplane described in Section 5 "Performance" of the basic Pilot's Operating Handbook.

**SECTION 6**  
**WEIGHT AND BALANCE**

Information hereafter supplement or replace those of the standard airplane described in Section 6 "Weight and Balance" of the basic Pilot's Operating Handbook when the airplane is equipped with the "FLIGHT ENVELOPE PROTECTION".

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>34 - NAVIGATION</b>		
A	0423-34	Lift transducer and AoA computer installation, of which SAFE FLIGHT INSTRUMENTS	1.66 (0.752)	242.01 (6.147)
		- Lift transducer	0.50 (0.226)	173.23 (4.400)
		- AoA computer P/N C-101706-1	0.74 (0.336)	273.62 (6.950)
		- K59 and K590 relays	0.25 (0.115)	265.55 (6.745)

**SECTION 7**  
**DESCRIPTION**

Information hereafter supplement or replace those of the standard airplane described in Section 7 "Description" of the basic Pilot's Operating Handbook when the airplane is equipped with the "FLIGHT ENVELOPE PROTECTION".

**7.8 - ELECTRICAL SYSTEM**

I4246000AAANMIA8200

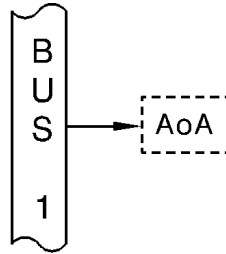


Figure 7.8.1 - PARTIAL ELECTRICAL DISTRIBUTION OF BUS BARS

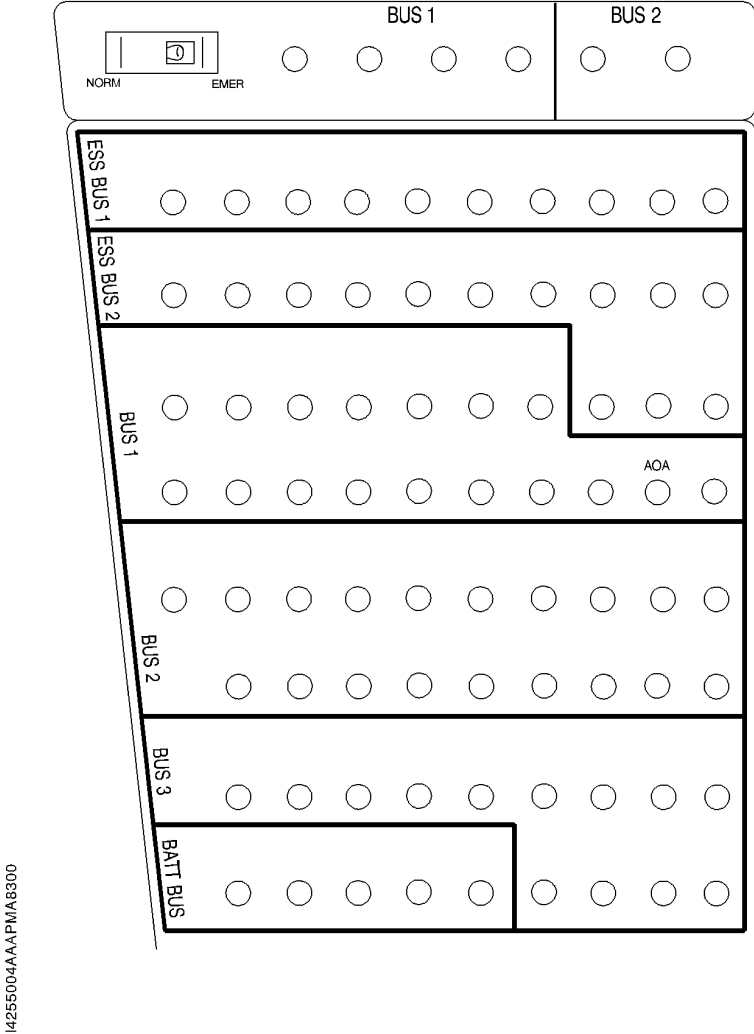


Figure 7.8.2 - PARTIAL ELECTRICAL DISTRIBUTION OF BUS BARS

**7.15 - MISCELLANEOUS EQUIPMENT****STALL WARNING SYSTEM**

The stall warning system consists of :

- an electrically deiced lift transducer, installed in the leading edge of the right wing,
- an AoA computer,
- the "AOA TEST" pushbutton located at the bottom of the L.H. side instrument panel.

The system is also interfaced with the GARMIN Integrated Flight Deck system.

The lift transducer is fitted with a vane that senses the change in airflow over the wing.

The AoA computer computes the normalized angle of attack of the airplane thanks to the lift transducer information and the flaps position. The normalized angle of attack value is sent to the GARMIN Integrated Flight Deck system for display. The AoA computer also triggers the "stall" aural warning alert that begins no later than 5 knots above the stall in all configurations.

The stall warning system should be checked during the preflight inspection by momentarily turning on the "SOURCE" selector and by manipulating the vane of the lift transducer at the wing leading edge then, while in the cockpit by depressing the "AOA TEST" pushbutton.

The system is operational if a "stall" aural warning alert is heard on the alarms speaker.

For further information concerning the use of the system and its controls, refer to GARMIN "Pilot's Guide" at the latest issue.

**UNDERSPEED PROTECTION (USP), COUPLED GO AROUND**

For further information concerning the use of the system and its controls, refer to GARMIN "Pilot's Guide" at the latest issue.

**ELECTRONIC STABILITY PROTECTION (ESP)**

For further information concerning the use of system and its controls, refer to GARMIN "Pilot's Guide" at the latest issue.

**SECTION 8****HANDLING, SERVICING AND MAINTENANCE**

Operation of "FLIGHT ENVELOPE PROTECTION" does not change the handling, servicing and maintenance of the airplane described in Section 8 "Handling, Servicing and Maintenance" of the basic Pilot's Operating Handbook.

# **SUPPLEMENT**

## **LAVATORY COMPARTMENT**

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8 - HANDLING, SERVICING AND MAINTENANCE .....	9.63.18

## **SECTION 1 GENERAL**

This supplement is intended to inform the pilot about the equipment limitations, description and operations necessary for operation when the TBM airplane is equipped with the option "LAVATORY COMPARTMENT".

## **SECTION 2 LIMITATIONS**

The limitations hereafter supplement or replace those of the standard airplane described in Section 2 "Limitations" of the basic Pilot's Operating Handbook when the TBM airplane is equipped with the option "LAVATORY COMPARTMENT".

- **TOILET SEAT MUST NOT BE OCCUPIED DURING TAKE-OFF AND LANDING**
- **DIVIDER MUST BE STOWED DURING TAKE-OFF AND LANDING**
- **HEADSET SHALL BE WORN AT ALL TIME WHEN SEAT IS OCCUPIED**

### **2.1 - PLACARDS**

On fixed panel, cabin side

DIVIDER MUST BE STOWED DURING TAKE-OFF AND LANDING

I4113200AAA-HMA8300

On fixed panel, toilet side

I4113200AAAHHMA18000

TOILET SEAT MUST NOT  
BE OCCUPIED DURING  
TAKE OFF AND LANDING  
CLOSE AND LOCK TOILET COVER  
WHEN NOT IN USE  
DO NOT HANG OR STORE ITEMS  
ON TOILET OR DIVIDER  
DIVIDER MUST BE STOWED DURING  
TAKE-OFF AND LANDING  
HEADSET MUST BE USED WHEN  
DIVIDER IS DEPLOYED

On access door, cabin side and toilet side

I4113200AAAHHMA8000

EMERGENCY  
STOWAGE  
REMOVE  
COVER

Behind access door, cabin side and toilet side

I4113200AAAHHMA18100

PUSH TO STOW



Inner face of toilet cover

I4113200AAA1MA18200



Front face of lavatory compartment, near opening/closing switches

I4113200AAA1MA8100



I4113200AAA1MA8200



On the magazine rack

I4113200AAA1MA8000



## SECTION 3

### EMERGENCY PROCEDURES

The emergency procedures hereafter supplement those of the standard airplane described in Section 3 "Emergency procedures" of the basic Pilot's Operating Handbook.

#### Pre-MOD70-0407-00D

#### **RED WARNING CAS MESSAGE "CABIN ALTITUDE" ON**

Inform passengers to use emergency stowing of the divider and oxygen mask.

#### Post-MOD70-0407-00D

#### **RED WARNING CAS MESSAGE "CABIN ALTITUDE" ON AND AMBER WARNING CAS MESSAGE "USE OXYGEN MASK" ON**

#### NOTE

***"CABIN ALTITUDE" warning CAS message is followed by "USE OXYGEN MASK" amber CAS message and 3 voice messages "USE OXYGEN MASK / USE OXYGEN MASK".***

Inform passengers to use emergency stowing of the divider and oxygen mask.

## SECTION 4

### NORMAL PROCEDURES

The normal procedures hereafter supplement or replace those of the standard airplane described in Section 4 "Normal Procedures" of the basic Pilot's Operating Handbook when the TBM airplane is equipped with the option "LAVATORY COMPARTMENT".

#### **BRIEFING to passengers to be performed before entering the airplane**

Normal and Emergency stowing operations of the divider.

In case of depressurization : emergency stowing of the divider, use oxygen mask, and remain seated unless otherwise instructed by the crew.

The headset must be used when the divider is deployed to allow communication with the crew in case of emergency.

## **SECTION 5**

### **PERFORMANCE**

Installation and operation of "LAVATORY COMPARTMENT" do not change the basic performance of the airplane described in Section 5 "Performance" of the basic Pilot's Operating Handbook.

## SECTION 6

### WEIGHT AND BALANCE

The weight and balance hereafter supplement or replace those of the standard airplane described in Section 6 "Weight and balance" of the basic Pilot's Operating Handbook when the airplane is equipped with the option "LAVATORY COMPARTMENT"

#### 6.1 - GENERAL

This paragraph is intended to provide the pilot with a simple and rapid means of determining weight and balance of the airplane when equipped with the lavatory compartment option.

IT IS THE PILOT'S RESPONSIBILITY TO ENSURE THAT THE AIRPLANE IS PROPERLY LOADED AND THE WEIGHT AND BALANCE LIMITS ARE ADHERED TO.

#### 6.2 - DETERMINING THE NEW AIRPLANE EMPTY WEIGHT AND BALANCE AFTER THE APPLICATION OF THE LAVATORY COMPARTMENT OPTION

##### NOTE

*The new empty weight determination after lavatory compartment installation shall be performed from the 6-seat configuration airplane characteristics*

- 1) Record the basic empty weight (1a) and moment (1b) and CG (MAC %) (1c) from the last Weight and Balance Report in 6-seat configuration (see samples Figures 6.4.1 and 6.4.2 of the basic Pilot's Operating Handbook).
- 2) Compute the new empty weight (2a) and moment (2b) as sum of the basic empty weight (1a) plus total Weight Variation, and basic empty moment (1b) plus total Moment Variation.
- 3) Compute the new empty weight arm (3) and CG (MAC %) (3c) using given formulas.
- 4) Report the new empty weight arm (3) and CG (MAC %) (3c) into the WEIGHT AND BALANCE FORM AND DIAGRAM of the airplane loading form in order to perform the weight and balance determination with the lavatory compartment installed.

Moment = Weight x Arm  $CG (MAC \%) = \frac{(Arm (m) - 4.392)}{1.51} \times 100$

Item	Weight (kg)	Arm (m)	Moment (m.kg)	CG (MAC %)
Empty Weight (kg)	(1a)		(1b)	(1c)
Weight and Moment Variation after LAVATORY COMPARTMENT option installation	+12		+87	
New empty weight (ready for cargo preparation)	(2a)	(3)	(2b)	(3c)

Moment = Weight x Arm  $CG (MAC \%) = \frac{(Arm (in) - 172.93)}{59.45} \times 100$

Item	Weight (lbs)	Arm (in)	Moment (in.lbs)	CG (MAC %)
Empty Weight (lbs)	(1a)		(1b)	(1c)
Weight and Moment Variation after LAVATORY COMPARTMENT option installation	+27		+7529	
New empty weight (ready for cargo preparation)	(2a)	(3)	(2b)	(3c)

## 6.3 - USING THE WEIGHT AND BALANCE FORM

### CAUTION

**EMPTY WEIGHT, ARM AND CG % POSITION TO BE CONSIDERED ARE THE ONES FROM THE LAST WEIGHT AND BALANCE REPORT ISSUED AFTER THE LAVATORY COMPARTMENT OPTION INSTALLATION.**

Refer to POH Section 6.4 using the weight and balance form procedure to determine the weight and balance of the airplane equipped with the lavatory compartment option together with the use of the loading form hereafter.

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>25 - EQUIPMENT AND FURNISHINGS</b>		
O	0505-25C	Lavatory compartment	138.9 (63)	267.7 (6.799)
		Lavatory compartment carpet	28.7 (13)	211.4 (5.370)

**WEIGHT AND BALANCE FORM AND DIAGRAM (m, kg) - ONLY APPLICABLE IF LAVATORY COMPARTMENT IS INSTALLED**

Moment = Weight x Arm

$$CG (MAC\%) = \frac{(Arm (m) - 4.392)}{1.51} \times 100$$

Item		Weight (kg)	Arm (m)	Moment (m.kg)	CG (MAC %)
Empty Weight	(kg)				
Baggage FWD	(< 50 kg)		3.250		
Front Seats	(kg)		4.534		
Inter. Seats	-17 kg per seat removed		5.710		
	Pax				
Baggage AFT	(< 100 kg)		7.695		
Zero Fuel Weight	(< 2 736 kg)				
Fuel	(kg)		4.820		
Ramp Weight	(< 3 370 kg)				
Taxi Fuel	(kg)		4.820		
Takeoff Weight	(< 3 354 kg)				
Trip Fuel	(kg)		4.820		
Landing Weight	(< 3 186 kg)				

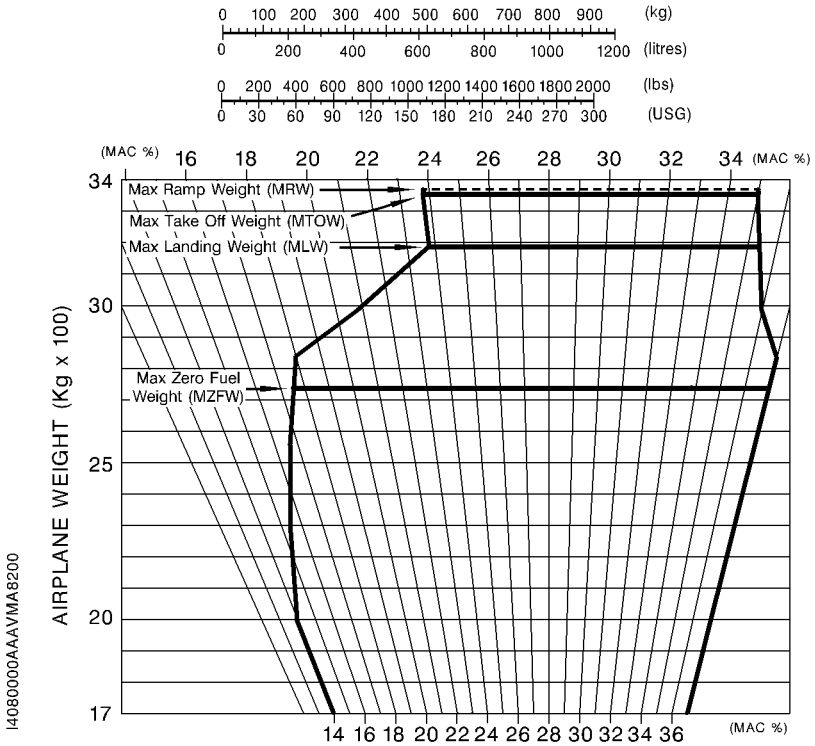


Figure 9.63.1 – Weight and Balance diagram



**WEIGHT AND BALANCE FORM AND DIAGRAM (in, lbs) - ONLY APPLICABLE IF LAVATORY COMPARTMENT IS INSTALLED**

Moment = Weight x Arm                       $CG (MAC \%) = \frac{(Arm (in) - 172.93)}{59.45} \times 100$

Item		Weight (lbs)	Arm (in)	Moment (in.lbs)	CG (MAC %)
Empty Weight (lbs)					
Baggage FWD (< 110 lbs)			128.0		
Front Seats (lbs)			178.5		
Inter. Seats	-37.5 lbs per seat removed		224.8		
	Pax				
Baggage AFT (< 220 lbs)			303.0		
Zero Fuel Weight (< 6 032 lbs)					
Fuel (lbs)			189.8		
Ramp Weight (< 7 430 lbs)					
Taxi Fuel (lbs)			189.8		
Takeoff Weight (< 7 394 lbs)					
Trip Fuel (kg)			189.8		
Landing Weight (< 7 024 lbs)					

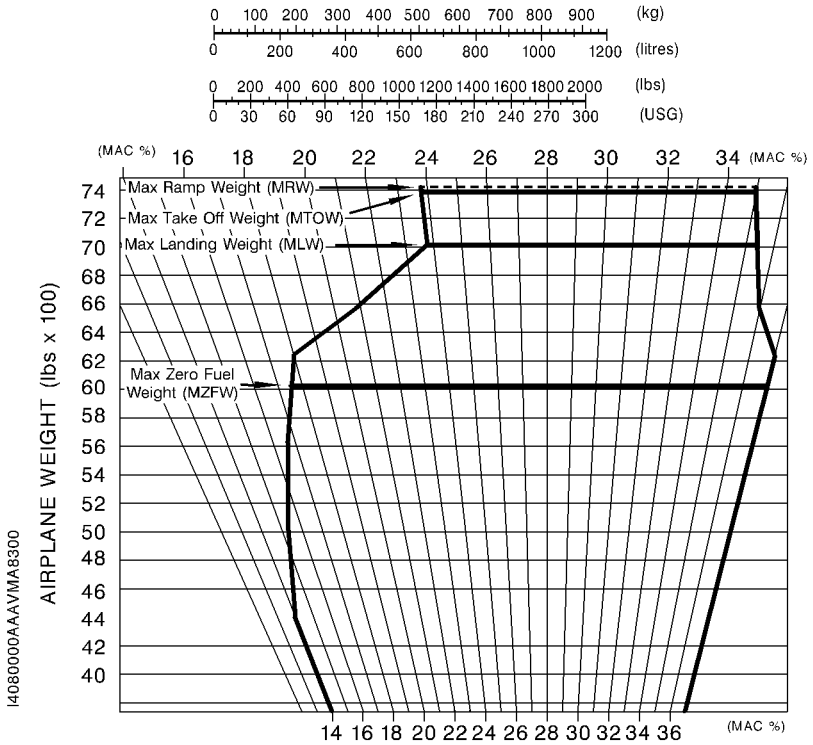


Figure 9.63.2 – Weight and Balance diagram

## SECTION 7

### DESCRIPTION

Information hereafter supplement or replace those of the standard airplane described in Section 7 "Description" of the basic Pilot's Operating Handbook when the airplane is equipped with the option "LAVATORY COMPARTMENT".

For operation, refer to equipment User's Guide.

The lavatory compartment is installed against right interior upholstery panel, facing large door. The lavatory compartment is installed at the place of the rear seats, removed to allow this installation. It is attached to the fuselage structure on the cabin floor, using the seats tracks with four pads and screws.

The lavatory compartment structure is made of composite panels.

The lavatory compartment assembly is composed of :

- A chemical toilet,
- Electrically deployable separating panels (divider),
- Two (2) actuating switches (DEPLOY, STOW),
- Two (2) emergency stowing buttons (PUSH TO STOW), accessible from inside or outside the lavatory compartment,
- One (1) mirror,
- One (1) electric power plug,
- One (1) headset allowing communication between the passenger and the crew.

When the lavatory compartment is not occupied, the divider is stored unfolded in the lavatory compartment structure.

A circuit breaker integrated into the lavatory compartment structure protects its electrical system. The circuit breaker is only accessible when the lavatory compartment is removed.

Two (2) switches, located on the seat front face, left side, hidden when latching strap snap fastener is locked, control the deployment/stowing of the moveable parts of the divider.

Two (2) access doors (Velcro tape attached), located on each side of the fixed part of the divider, give access to the emergency stowing push button, allowing the emergency (manual) retraction of the divider, using the application of a vertical force (by hand) on the upper edge of the divider.

Electric connection of the system is performed via a power plug :

Pre-MOD70-0174-25

- 28 volts

Post-MOD70-0174-25

- 12 volts

All

The power plug is located on the right hand side upholstery panel. Connection is only accessible when the lavatory compartment structure is unscrewed from the floor and moved slightly aside to access the plug.

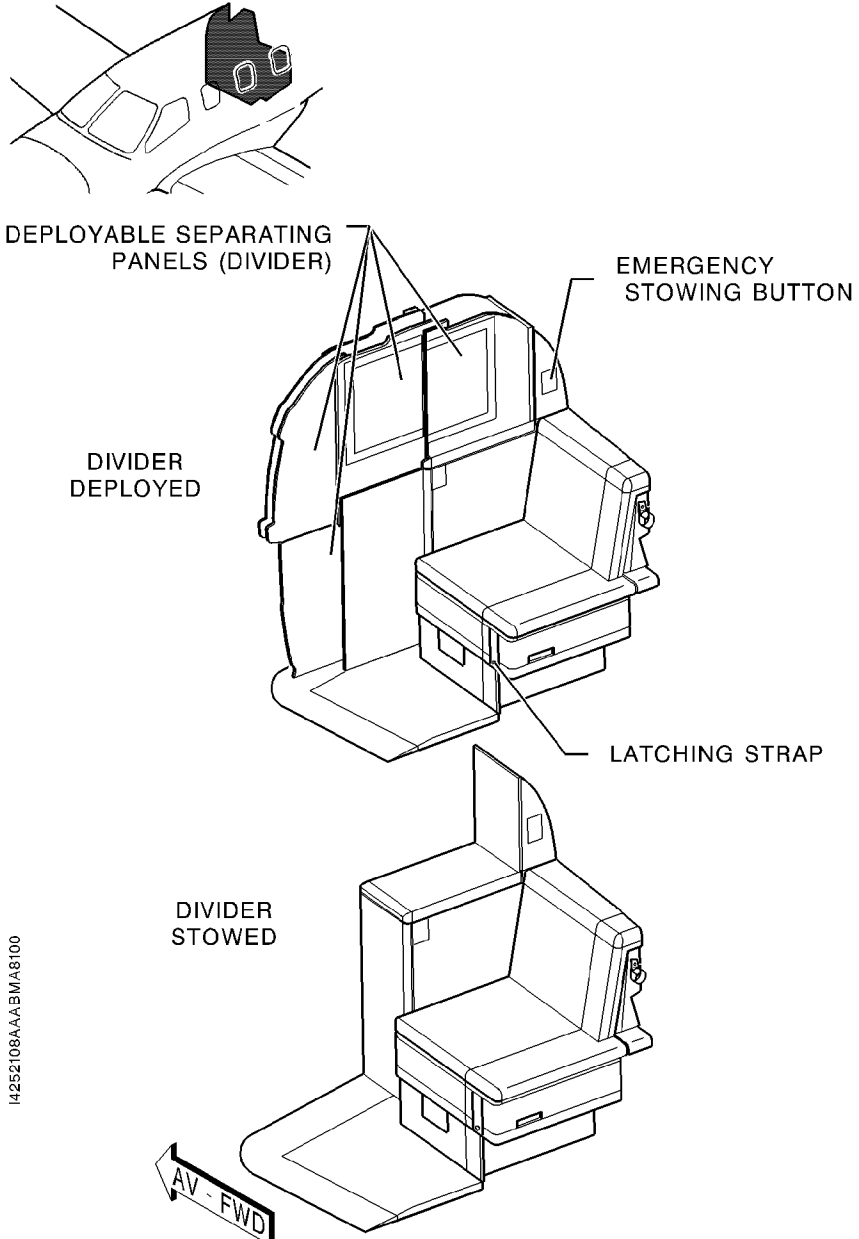
Mirror is automatically illuminated during the deployment of the divider.

A safety anti pinching sensor stops the deployment of the divider in case an interference is detected.

To remove the chemical toilet system from the lavatory compartment structure, it is necessary to unlatch the toilet cover, remove the top frame (if installed), then lift upward the forward face of the structure and pull out the toilet from the structure.

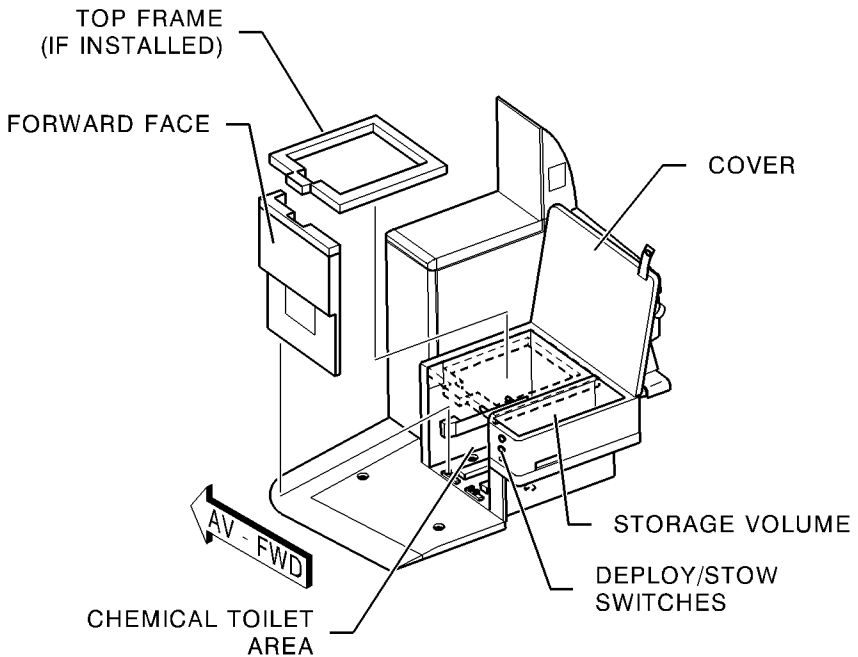
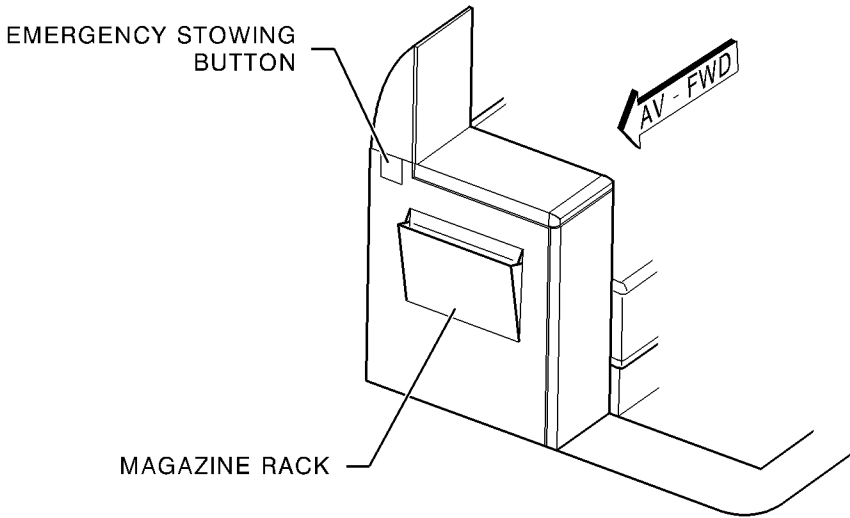
A storage volume on the left side of the toilet is accessible when toilet cover is up.

A magazine rack is located on the forward side of the fixed part of the divider.



14252108AAA.BMA8100

Figure 9.63.3 (1/2) - Lavatory compartment



14252108AA.ABM/A8200

Figure 9.63.3 (2/2) - Lavatory compartment

## **SECTION 8**

### **HANDLING, SERVICING AND MAINTENANCE**

Installation and operation of "LAVATORY COMPARTMENT" do not change the basic handling, servicing and maintenance procedures of the airplane described in Section 8 "Handling, Servicing and Maintenance" of the basic Pilot's Operating Handbook.

# SUPPLEMENT

## STICK SHAKER

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**SECTION 1**  
**GENERAL**

This supplement is intended to inform the pilot about the equipment limitations, description and operations necessary for operation when the airplane is equipped with the STICK SHAKER.

**SECTION 2**  
**LIMITATIONS**

Operation of the STICK SHAKER does not change the limitations of the airplane described in Section 2 Limitations of the basic Pilot's Operating Handbook.

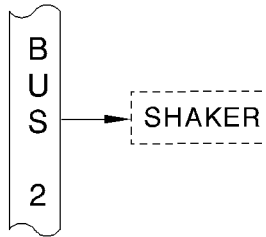
### SECTION 3

## EMERGENCY PROCEDURES

Information hereafter supplement or replace those of the standard airplane described in Section 3 Emergency Procedures of the basic Pilot's Operating Handbook when the airplane is equipped with the STICK SHAKER.

### 3.9 - ELECTRICAL SYSTEM

I4246000AAANMA18000



NOTE: PARTIAL ELECTRICAL DISTRIBUTION OF BUS BARS

Figure 3.9.1 - PARTIAL ELECTRICAL DISTRIBUTION OF BUS BARS

**3.13 - MISCELLANEOUS**

Aircraft not equipped with AoA system (MOD70-0423-34)

**STALL WARNING SOUND**

***NOTE :*** *Shaker will vibrate simultaneously with stall warning sound.*

- 1 - AP DISC TRM INT push-button . . . . . Press twice
- 2 - Fly the airplane, wings level and nose down until stall warning stops
- 3 - Power as required
- 4 - Return to the desired flight path

Aircraft equipped with AoA system (MOD70-0423-34)

**AP OFF AND STALL WARNING SOUND**

***NOTE :*** *Shaker will vibrate simultaneously with stall warning sound.*

- 1 - Fly the airplane, wings level and nose down until stall warning stops
- 2 - Power as required
- 3 - Return to the desired flight path

**RED WARNING CAS MESSAGE “USP ACTIVE” ON**

- 1 - Do not disconnect AP
- 2 - Increase power up to 50% minimum
- 3 - Manage the flight

***NOTE :*** *Stall warning may be triggered and shaker will vibrate but AP will remain ON.*

**SECTION 4**  
**NORMAL PROCEDURES**

Operation of the STICK SHAKER does not change the normal procedures of the airplane described in Section 4 Normal Procedures of the basic Pilot's Operating Handbook.

**SECTION 5**  
**PERFORMANCE**

Operation of the STICK SHAKER does not change the performance of the airplane described in Section 5 Performance of the basic Pilot's Operating Handbook.

**SECTION 6**  
**WEIGHT AND BALANCE**

Information hereafter supplement the one given for the standard airplane in Section 6 Weight and Balance of the basic Pilot's Operating Handbook when the airplane is equipped with the STICK SHAKER.

S/ R/ A/ O	ITEM OPT70 or MOD70	OPTIONAL EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>27 - FLIGHT CONTROLS</b>		
O	0510-27C	Stick shaker, of which :	1.053 (0.477)	144.0 (3.658)
		- Support T700J2730008100	0.053 (0.024)	143.0 (3.631)
		- Stick shaker C-101702-1	1.000 (0.453)	144.1 (3.661)

## **SECTION 7**

### **DESCRIPTION**

Information hereafter supplement the one given for the standard airplane in Section 7 Description of the basic Pilot's Operating Handbook when the airplane is equipped with the STICK SHAKER.

#### **7.3 - ACCOMODATIONS**

Pre-MOD70-0407-00D

##### **Aural warning operation**

The GMA # 1 and # 2 audio control panels receive signals from the aural warning box. According to the airplane configuration, these signals are low-pitched and / or high-pitched.

The "HORN TEST" knob allows to test the correct operation of aural warnings :

- Set the "SOURCE" selector to BAT or to GPU.
- Set the "AVIONICS" MASTER switch to ON.
- Push and hold the "HORN TEST" knob :
  - . the VMO buzzer emits "bips",
  - . the loud-speakers emit alternate low-pitched and high-pitched sounds.
  - . the shaker vibrates.
- Release the knob to stop the alarms.

Post-MOD70-0407-00D

##### **Cockpit overhead panel**

This panel includes following elements :

- the loud-speaker of GMA # 1,
- the loud-speaker of GMA # 2,
- the "HORN TEST" knob,
- the emergency lighting rheostat.

It is attached to the cabin upper part between frames C6 and C7.

The emergency lighting rheostat is electrically supplied by "BATT BUS" bar and protected by "PANEL EMER" circuit breaker.

The "HORN TEST" push-button allows to test the correct operation of aural warnings :

- set the "SOURCE" selector to BATT or GPU,
- push and hold the "HORN TEST" push-button :
  - . the loud-speakers emit "stall / stall" aural warning alert
  - . the shaker vibrates.
- release the knob to stop the alarms.

## 7.4 - FLIGHT CONTROLS

### **ELEVATOR** (Figure 7.4.3)

Both elevators are activated simultaneously by the same control. Each control surface is hinged at three points to the rear part of horizontal stabilizer.

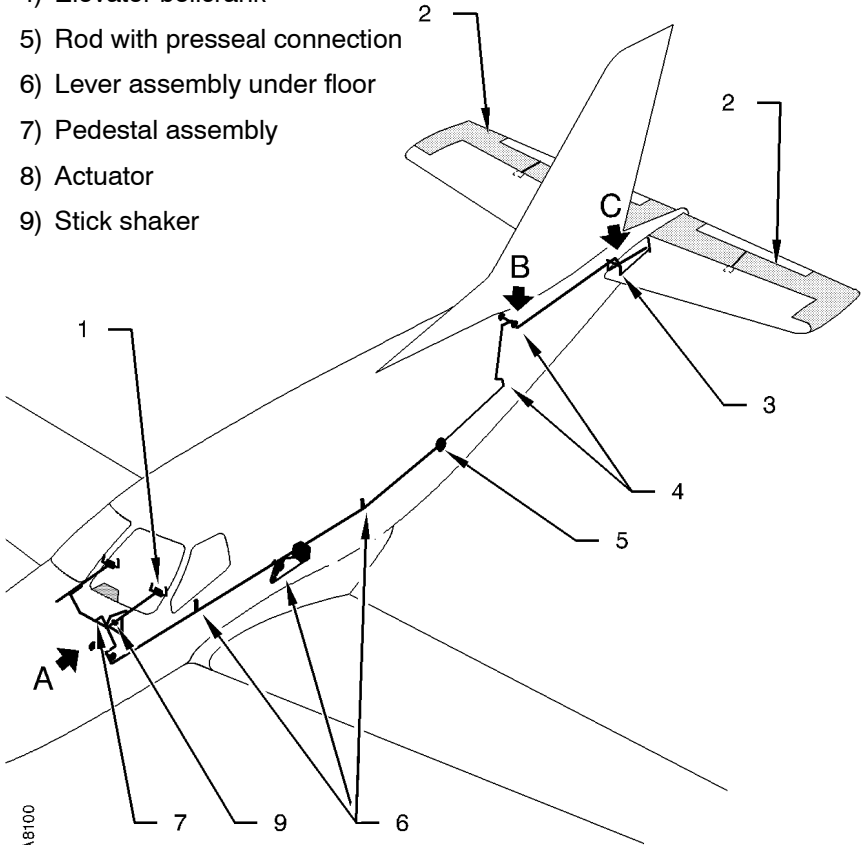
The control wheel controls the two elevators through rods, bearings and bellcranks.

The stick shaker is fixed on the pitch lever linked to the pilot control column lever. This is a mechanical device to vibrate the control wheel to warn the pilot in case of an imminent stall.

A spring actuator creates a "nose-down" artificial force which allows a better static stability.

Each control surface is provided with an automatic anti-tab (automaticity about 0.3), which is also used as trim tab.

- 1) Control wheel assembly
- 2) Elevators
- 3) Lever assembly, fuselage rear part
- 4) Elevator bellcrank
- 5) Rod with presseal connection
- 6) Lever assembly under floor
- 7) Pedestal assembly
- 8) Actuator
- 9) Stick shaker



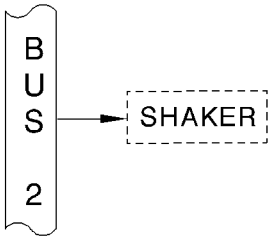
14273000AAA1MA8100

Figure 7.4.3 - ELEVATOR



**7.8 - ELECTRICAL SYSTEM**

I4246000AAANMIA18000



NOTE: PARTIAL ELECTRICAL DISTRIBUTION OF BUS BARS

Figure 7.8.1 - PARTIAL ELECTRICAL DISTRIBUTION OF BUS BARS

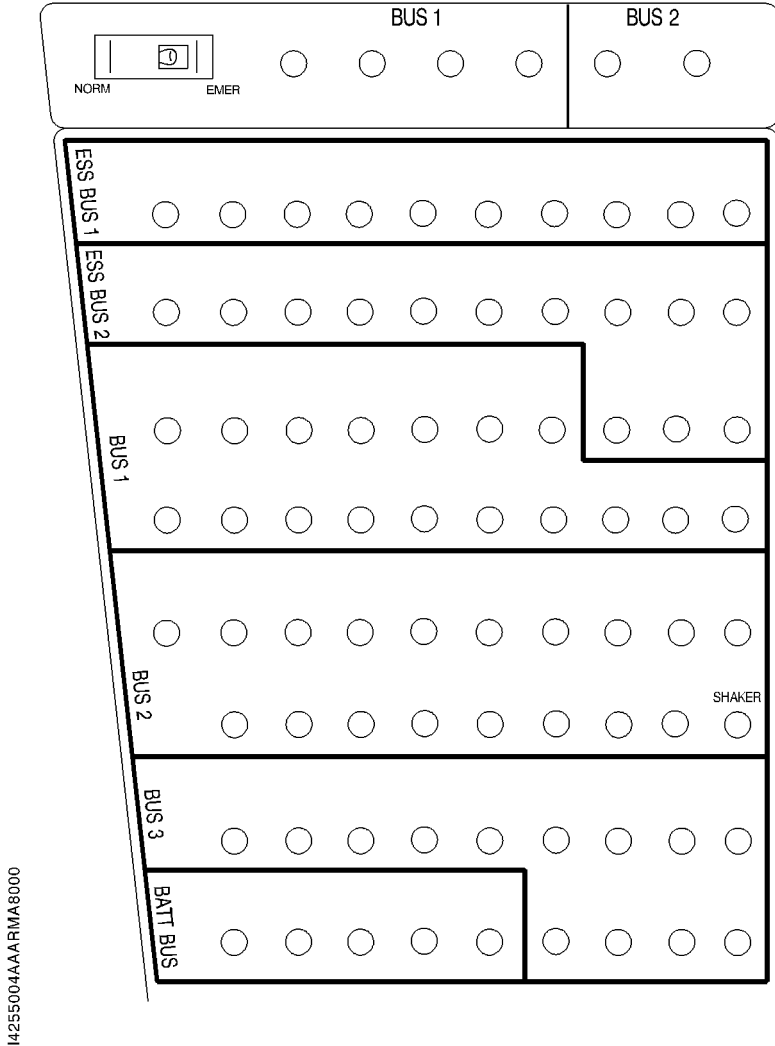


Figure 7.8.2 - PARTIAL ELECTRICAL DISTRIBUTION OF BUS BARS

**7.15 - MISCELLANEOUS EQUIPMENT****STALL WARNING SYSTEM**

The airplane is equipped with an electrically deiced stall sensor in the leading edge of the right wing. This sensor fitted with a vane is electrically connected to an audible warning. The vane senses the change in airflow over the wing and operates the warning unit, which produces an alert over the alarm speaker. This warning tone begins between 5 and 10 knots above the stall in all configurations.

The stall warning system should be checked during the preflight inspection by momentarily turning on the "SOURCE" selector and by manipulating the vane in the wing.

**Pre-MOD70-0407-00D**

The system is operational if a continuous tone (low-pitched sound) is heard on the alarms speaker and the stick shaker simultaneously vibrates.

**Post-MOD70-0407-00D**

The system is operational if a "stall" aural warning alert is heard on the alarms speaker and the stick shaker simultaneously vibrates.

**All****NOTE :**

*The audible stall warning may be altered by severe or prolonged icing.*

**SECTION 8****HANDLING, SERVICING AND MAINTENANCE**

Operation of the STICK SHAKER does not change the handling, servicing and maintenance of the airplane described in Section 8 Handling, Servicing and Maintenance of the basic Pilot's Operating Handbook.

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## **SUPPLEMENT**

# **MD302 STANDBY ATTITUDE MODULE**

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**SECTION 1****GENERAL**

This supplement is intended to inform the pilot about the equipment limitations, description and operations necessary for operation when the airplane is equipped with MD302 STANDBY ATTITUDE MODULE.

Whenever this Supplement refers to the MD302 Pilot's Guide, it states the one described in Section 2.1.

**RADIO-NAVIGATION ABBREVIATIONS**

SAM : Standby Attitude Module

**SECTION 2****LIMITATIONS**

Information hereafter supplement or replace those of the standard airplane described in Section 2 "Limitations" of the basic Pilot's Operating Handbook when the airplane is equipped with MD302 STANDBY ATTITUDE MODULE.

**2.1 - GENERAL**

The Pilot's Guide for the MD302 Standby Attitude Module P/N 9017846 Rev. E or any later version as applicable, must be permanently kept in the airplane with the Pilot's Operating Handbook.

Departure into IMC is not authorized if the MD302 battery following message is displayed :

**WARNING**  
**INTERNAL BATTERY MAY PROVIDE LESS THAN 60 MINUTES**  
**OF OPERATIONS**

## 2.8 - MARKINGS

### INDICATED AIRSPEED

Indicated airspeed markings and their color code significance are shown in Figure 2.8.1.

MARKING	KIAS (Value or range)	SIGNIFICANCE
Red line	Below 65	/
White line	65 - 122	Full Flap Operating Range Lower limit is maximum weight $V_{SO}$ in landing configuration.
Green line	Above 122	Normal operating airspeed range
Hatched (Red & White) Sector	Above 266	266 = VMO

Figure 2.8.1 - IAS AWARENESS BAR CUES



**SECTION 3**  
**EMERGENCY PROCEDURES**

Information hereafter supplement or replace those of the standard airplane described in Section 3 “Emergency Procedures” of the basic Pilot’s Operating Handbook when the airplane is equipped with MD302 STANDBY ATTITUDE MODULE.

**3.9 - ELECTRICAL SYSTEM**

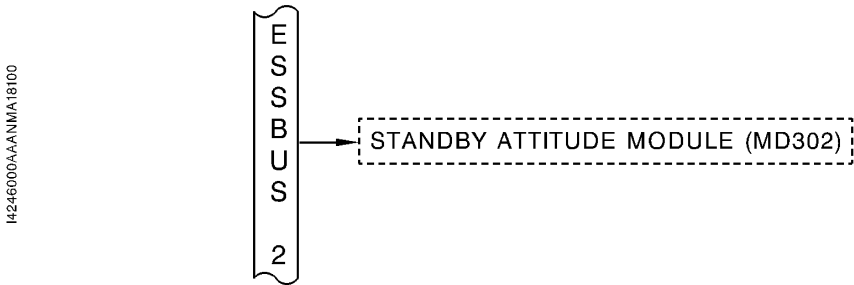


Figure 3.9.1 - PARTIAL ELECTRICAL DISTRIBUTION OF BUS BARS

<b>TOTAL LOSS OF ELECTRICAL POWER</b>
<ul style="list-style-type: none"> <li>1 - Maintain airplane control</li> <li>2 - Use the MD302 for attitude, airspeed and altitude</li> <li>3 - Land as soon as possible</li> </ul>
<p><b>NOTE :</b></p> <p><i>Airplane power is provided to the MD 302 display for normal operation.</i></p> <p><i>Operation of the basic MD 302 system is automatic - the system is powered ON while airplane power is ON.</i></p> <p><i>The internal battery will provide power to the MD 302 if airplane power is lost.</i></p>

**3.10 - PRESSURIZATION AND AIR CONDITIONING**

<b>AMBER WARNING CAS MESSAGE</b> <b>“VACUUM LOW” ON</b>	
Low vacuum may lead to malfunctioning of leading edge deicing, pressurization .....	<b>MONITOR</b>
If necessary, fly to an altitude $\leq$ 12000 ft and return to VMC conditions as soon as possible.	
“BLEED” switch .....	<b>OFF</b>

**SECTION 4**  
**NORMAL PROCEDURES**

Information hereafter supplement or replace those of the standard airplane described in Section 4 “Normal Procedures” of the basic Pilot’s Operating Handbook when the airplane is equipped with MD302 STANDBY ATTITUDE MODULE.

**4.3 - CHECK-LIST PROCEDURES**

**PREFLIGHT INSPECTION**

MD302 battery indicator symbol ..... **Not displayed**

**SHUT-DOWN**

Standby attitude module ..... **OFF**

**4.4 - AMPLIFIED PROCEDURES**

**PREFLIGHT INSPECTION**

MD302 battery indicator symbol ..... **Not displayed**

If a battery symbol appears on the MD302 display, airplane take-off is not allowed until the situation is resolved. Refer to the battery details in the MD302 Pilot’s guide for further information.

**SHUT-DOWN**

Standby attitude module ..... **OFF**

**MD302 - NORMAL PROCEDURE**

- No pilot action required for normal shutdown. The MD302 will shut down automatically within 60 seconds following electrical power shut-down.

**MD302 - MANUAL PROCEDURE**

- The MD302 can be manually shut down when in the discharge mode to conserve battery power :
  - . Press and hold the control knob for approximately 2 seconds.
  - . Turn the control knob to select POWER OFF on the menu and press the control knob to shut down the standby attitude module.

## SECTION 5 PERFORMANCE

Operation of MD302 STANDBY ATTITUDE MODULE does not change the performance of the airplane described in Section 5 “Performance” of the basic Pilot’s Operating Handbook.

## SECTION 6 WEIGHT AND BALANCE

Information hereafter supplement or replace those of the standard airplane described in Section 6 “Weight and Balance” of the basic Pilot’s Operating Handbook when the airplane is equipped with the MD302 STANDBY ATTITUDE MODULE.

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>34 - NAVIGATION</b>		
		<b>34-11 - Air data systems</b>		
O	0462-34C	Standby Attitude module MD302 MID CONTINENT	1.61 (0.730)	154.53 (3.925)

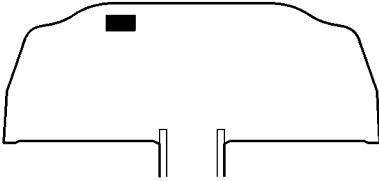
**SECTION 7**  
**DESCRIPTION**

Information hereafter supplement or replace those of the standard airplane described in Section 7 "Description" of the basic Pilot's Operating Handbook when the airplane is equipped with the MD302 STANDBY ATTITUDE MODULE.

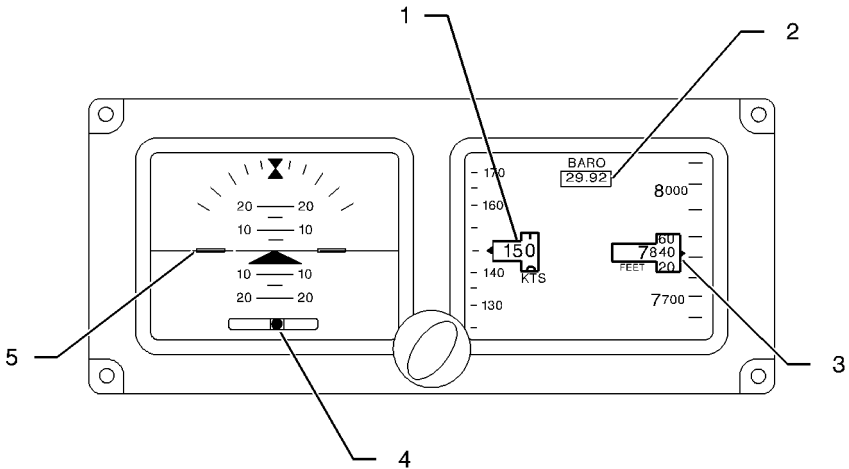
### 7.3 - ACCOMMODATIONS

Instrument panel (Figure 7.3.1) includes :

- Standby Attitude Module (MD302)



- 1) Airspeed readout
- 2) Barometric pressure window
- 3) Altimeter digital readout
- 4) Slip/skid indicator
- 5) Horizon



I4341110AAAEBMA8000

Figure 7.3.1 - LEFT INSTRUMENT PANEL

**7.8 - ELECTRICAL SYSTEM**

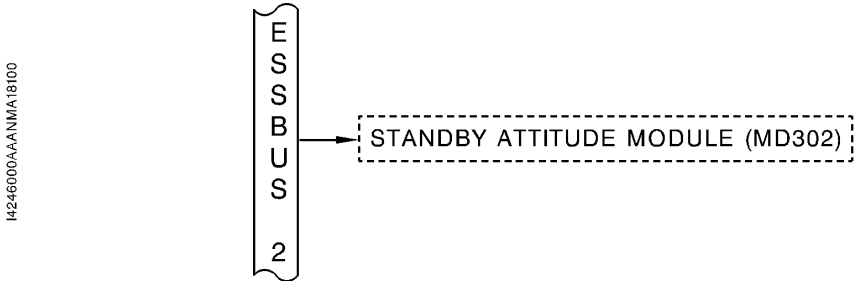


Figure 7.8.1 - PARTIAL ELECTRICAL DISTRIBUTION OF BUS BARS

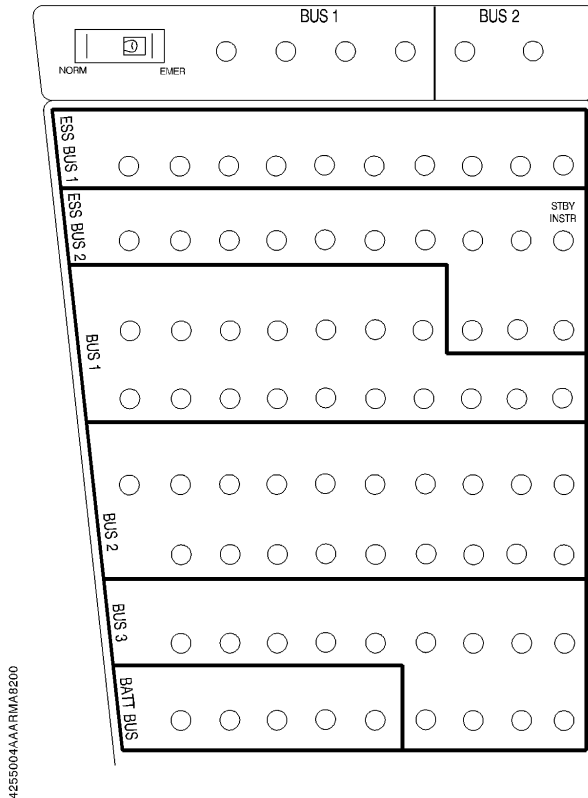


Figure 7.8.2 - PARTIAL ELECTRICAL DISTRIBUTION OF BUS BARS

## **7.11 - AIR DATA SYSTEMS AND INSTRUMENTS**

Airplane air data system consists of :

- two separate static pressure systems supplying a standby attitude module and air data computers (ADC).

A part of system 1 is backed up by an alternate system which operation is controlled by a switching valve (normal / alternate) attached to instrument panel under R.H. control wheel. In case of obstruction or icing of ports, this selector isolates airplane normal static system. When selector is on alternate position (pulled rearwards), static pressure is picked from a port located in airplane rear fuselage.

- two separate dynamic pressure systems supplying the standby attitude module and air data computers.

### **STATIC PRESSURE SYSTEMS**

#### **Primary systems**

Two dual static ports (one on either side of the fuselage tail part) supply a dual system routed towards the cockpit.

System 1 part, which is connected to the switching valve (normal / alternate), supplies the  $\Delta P$  cabin and the standby attitude module. The system remainder directly supplies one of the air data computers.

System 2 is directly connected to the second ADC.

Systems feature a drain valve located under the instrument panel on R.H. side.

#### **Alternate static source**

The alternate static port located in the rear fuselage supplies a system routed to the switching valve (normal / alternate) in order to replace static system 1.

The alternate line incorporates a drain plug located under the instrument panel on R.H. side.

### **DYNAMIC PRESSURE SYSTEM**

One heated pitot probe is installed under the L.H. wing. The second one is installed under the R.H. wing. The first one supplies the standby attitude module and one ADC.

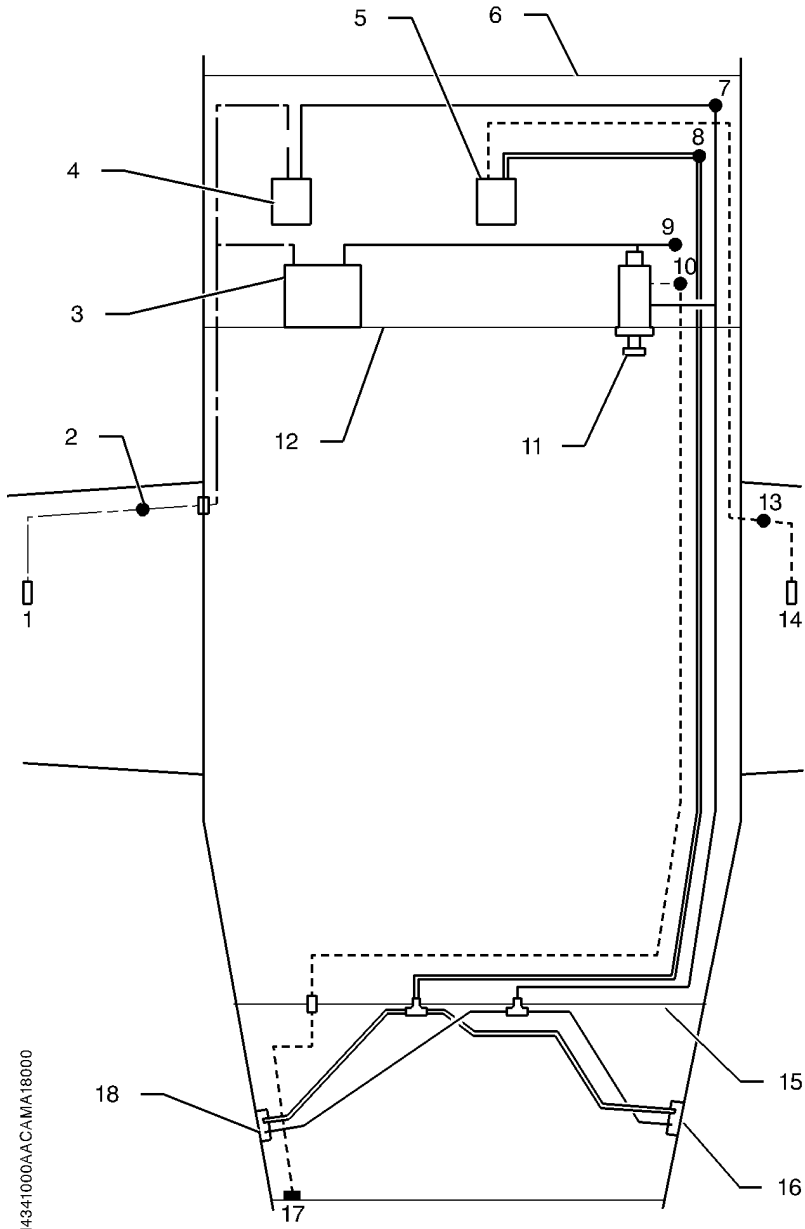
The second one supplies the other ADC.

Both lines incorporate a drain plug located in the root of L.H. and R.H. wings.



- 1) Pitot L
- 2) Dynamic system drain
- 3) Standby Attitude Module (MD302)
- 4) GDC ADC
- 5) GDC ADC
- 6) FWD pressure bulkhead
- 7) Static system drain
- 8) Static system drain
- 9) Static system drain
- 10) Emergency static system drain
- 11) Emergency static valve (Normal / Alternate)
- 12) Instrument panel
- 13) Dynamic system drain
- 14) Pitot R
- 15) Rear pressure bulkhead
- 16) Static port
- 17) Emergency static port
- 18) Static port

Figure 7.11.1 (1/2) - AIR DATA SYSTEM



I4341000AACAMA18000

Figure 7.11.1 (2/2) - AIR DATA SYSTEM

## 7.12 - VACUUM SYSTEM AND INSTRUMENTS

The airplane is fitted with a vacuum system providing the suction necessary to operate the cabin pressurization and the leading edge deicing.

Vacuum system includes :

- A pressure regulator
- An ejector
- A regulating and relief valve
- A pressure switch

Compressed air necessary for the ejector to create decompressed air is taken from the powerplant. The air flow is regulated before going into the ejector which creates necessary vacuum by venturi effect.

A relief valve fixed in cabin to frame C2, maintains the vacuum for pressurization system. In case of pressure drop, a pressure switch, installed in the system, indicates the failure by causing the "VACUUM LOW" CAS message to light on.

### STANDBY ATTITUDE MODULE (MD302)

The Mid-Continent Instrument and Avionics MD302 Standby Attitude Module consists of two LCD screens. The first screen displays the airplane attitude (pitch and roll) and the second screen displays the airplane altitude and airspeed. The MD302 is powered from the ESSENTIAL BUS 2 or internal replaceable battery ensuring that the airplane can continue safe flight and landing in the event of a loss of primary attitude and air data displays. Pitot and static pressures are provided to the MD302 solid state electronic sensors using the airplane pitot probe and static sources.

Compared to traditional standby instruments, the MD302 Standby attitude module does not require suction from vacuum system to operate.

The standby attitude module is located in the top left hand corner of the instrument panel.

- 1) Pressure regulator
- 2) Ejector
- 3) Valve
- 4) Regulating and relief valve
- 5) Pressure switch
- 6) Failure CAS message

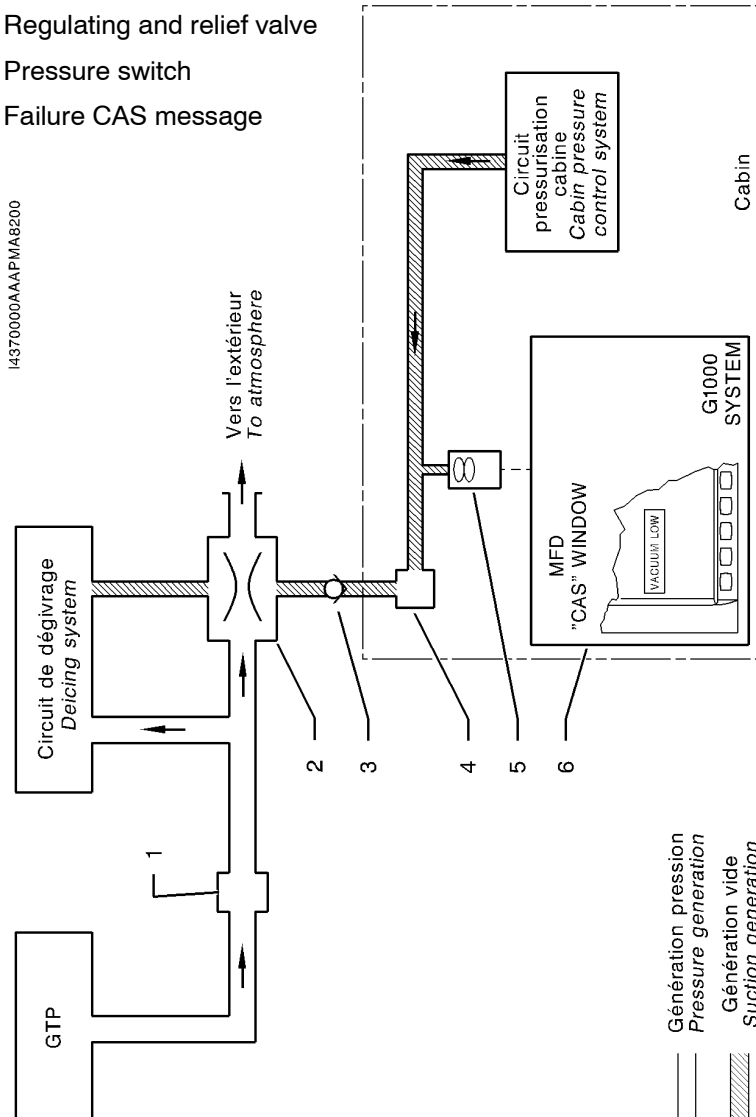


Figure 7.12.1 - VACUUM SYSTEM

**SECTION 8**  
**HANDLING, SERVICING AND MAINTENANCE**

Operation of MD302 STANDBY ATTITUDE MODULE does not change the handling, servicing and maintenance of the airplane described in Section 8 “Handling, Servicing and Maintenance” of the basic Pilot’s Operating Handbook.

## SUPPLEMENT

# “GARMIN” G1000 NXi RETROFIT

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4 - NORMAL PROCEDURES .....	9.66.11
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**SECTION 1****GENERAL**

This supplement is intended to inform the pilot about the equipment limitations, description and operations necessary for operation when the airplane is equipped with “GARMIN” G1000 NXI RETROFIT.

Whenever this Supplement refers to the GARMIN Integrated Flight Deck Pilot’s Guide, it states the one described in Section 2.1.

**SECTION 2****LIMITATIONS**

Information hereafter supplement or replace those of the standard airplane described in Section 2 “Limitations” of the basic Pilot’s Operating Handbook when the airplane is equipped with “GARMIN” G1000 NXi RETROFIT.

**2.1 - GENERAL**

The “GARMIN” G1000 NXi Integrated Flight Deck Pilot’s Guide, No. 190-02348-00, or any later version as applicable must be readily available to the pilot and permanently kept in the airplane with the Pilot’s Operating Handbook.

**2.6 - OPERATION LIMITS****GNSS (GPS/SBAS) NAVIGATION SYSTEM LIMITATIONS****Advisory visual approaches (if installed)****WARNING**

**USE OF ADVISORY VISUAL APPROACHES IN IMC IS PROHIBITED. ADVISORY VISUAL APPROACHES ARE INTENDED TO BE USED AS AN AID TO SITUATIONAL AWARENESS AND DO NOT GUARANTEE TERRAIN OR OBSTRUCTION CLEARANCE ALONG THE APPROACH PATH.**

**SECTION 3**  
**EMERGENCY PROCEDURES**

Information hereafter supplement or replace those of the standard airplane described in Section 3 "Emergency Procedures" of the basic Pilot's Operating Handbook when the airplane is equipped with "GARMIN" G1000 NXi RETROFIT.

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*NOTE :*

*CAS MESSAGES are in alphabetical order by either Chapter, Section, Paragraph, Advisory or Supplement.*

	Page
"ABORT APR" .....	9.66.8
"APR DWNGRADE" .....	9.66.8
"CARGO DOOR" .....	9.66.4
"ESP DEGRADED AOA" .....	Sup 62 "Flight Envelope Protection"
"ESP DEGRADED IAS" .....	Sup 62 "Flight Envelope Protection"
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**3.13 - MISCELLANEOUS**

<p><b>AMBER CAS MESSAGE</b>  <b>“CARGO DOOR”</b></p>
<p>Indicates that the forward baggage door is open.</p> <p>1 - On the ground ..... <b>Correct</b></p> <p>2 - In the air</p> <ul style="list-style-type: none"> <li>- Reduce to minimum speed available</li> <li>- Land as soon as practical</li> </ul>

<p><b>GPS APPROACH ALARM LIMITS EXCEEDED</b></p>
<p>During a GPS LPV, LNAV/VNAV, or LNAV+V approach, if the Horizontal or Vertical alarm limits are exceeded, the G1000 System will downgrade the approach. This will be annunciated by the amber CAS message “APR DWNGRADE” and by an annunciation change on the HSI from LPV, L/VNAV, or LNAV+V to LNAV. GPS glide path vertical guidance will be removed from the PFD. The approach may be continued using the LNAV only minimums.</p> <p>During any GPS approach in which both precision and non-precision alarm limits are exceeded, the G1000 System will flag the lateral guidance and display a red CAS message “ABORT APR” (loss of navigation). Immediately upon viewing the message, the unit will revert to Terminal navigation mode alarm limits. If the position integrity is within these limits lateral guidance will be restored and the GPS may be used to execute the missed approach, otherwise alternate means of navigation must be utilized.</p>

## AHRS FAILURE (1/2)

### Symptoms : Autopilot is disconnected

- On PFD(S) : COMPARATOR WINDOW (**WHITE ANNUNCIATION**) : "HDG" and/or "PIT" and/or "ROL"
- On PFD(S) : REVERSIONARY SENSOR WINDOW (**YELLOW ANNUNCIATION**) : "BOTH ON AHRS1" or "BOTH ON AHRS2"

### Lost systems :

- AHRS1 or AHRS2
- AUTOPILOT (AP)

### Systems still operative :

- FLIGHT DIRECTOR (FD), when engaged again

### Actions : AUTOPILOT IS NOT OPERATIVE

- 1 - AHRS1 and/or AHRS2 circuit breaker **CHECKED "IN"**

A - If **yellow** annunciation "BOTH ON AHRS1" or "BOTH ON AHRS2" is associated to **white** annunciation "HDG" and/or "PIT" and/or "ROL" :

- 1 - Fly the aircraft manually
- 2 - AHRS1 and/or AHRS2 circuit breaker **CHECKED "IN"**

### *If pilot wishes :*

- 3 - "FD" (default mode : "PITCH" and ROLL") **ENGAGED**
- 4 - "FD" (specifics modes : "HDG", "NAV", "ALT", ...) **ENGAGED as DESIRED**
- 5 - Fly the aircraft manually to follow Command Bars

*If ALL white annunciations, ("HDG" and/or "PIT" and/or "ROL"), GO "OFF", refer to following "B" procedure.*



**AHRS FAILURE (2/2)**

B - If **yellow** annunciation “BOTH ON AHRS1” or “BOTH ON AHRS2” **ONLY** (not associated to **white** annunciation “HDG ” and/or “PIT” and/or “ROL”) :

1 - PFD1 and PFD2 “SENSOR” softkey’s	<b>PRESSED</b>
2 - AHRS1 on PFD1 and/or AHRS2 on PFD2	<b>RESET</b>
3 - “BOTH ON AHRS1” or “BOTH ON AHRS2” annunciation’s – <b>OFF</b>	<b>CHECKED</b>
4 - <b>Autopilot</b>	<b>NORMAL USE (as desired)</b>

**ADC FAILURE**

**Symptoms :**

- On PFD(S) : COMPARATOR WINDOW (**WHITE ANNUNCIATION**) : “IAS” and/or “ALT”
- On PFD(S) : REVERSIONARY SENSOR WINDOW (**YELLOW ANNUNCIATION**) : “BOTH ON ADC1” or “BOTH ON ADC2”

**Lost systems :**

- ADC1 or ADC2

**Actions : AUTOPILOT IS STILL OPERATIVE**

- 1 - ADC1 and/or ADC2 circuit breaker **CHECKED “IN”**

A - If **yellow** annunciation “BOTH ON ADC1” or “BOTH ON ADC2” is associated to **white** annunciation “IAS” and/or “ALT” :

- 1 - NO action required

*If ALL white annunciations, (“IAS” and/or “ALT”), GO “OFF”, refer to following “B” procedure.*

B - If **yellow** annunciation “BOTH ON ADC1” or “BOTH ON ADC2” **ONLY** (not associated to **white** annunciation “IAS” and/or “ALT”), pilot may do following actions :

- 1 - PFD1 and PFD2 “SENSOR” softkey’s **PRESSED**
- 2 - ADC1 on PFD1 and/or ADC2 on PFD2 **RESET**
- 3 - “BOTH ON ADC1” or BOTH ON ADC2” annunciation’s – **OFF CHECKED**

<b>RED CAS MESSAGE</b> <b>“ABORT APR”</b>
Indicates a loss of GPS navigation. Perform a GO AROUND.

<b>AMBER CAS MESSAGE</b> <b>“APR DWNGRADE”</b>
Indicates Vertical guidance generated by SBAS is unavailable If LNAV minimums available : 1 - Approach ..... Downgrade to LNAV If LNAV minimums not available : Perform a GO AROUND. 2 - Inform maintenance department

**AMBER CAS MESSAGE**  
**"XPDR1 FAIL" OR "XPDR2 FAIL"**

Indicates transponder # 1 [or transponder # 2] is inoperative.

If transponder # 2 [or transponder # 1] is available :

- 1 - Set transponder # 2 [or transponder # 1] as active
- 2 - Continue flight
- 3 - Inform maintenance department

If transponder # 2 [or transponder # 1] is unavailable :

- 1 - Inform Air Traffic Control of the loss of the second XPDR
- 2 - Leave controlled airspace
- 3 - Continue flight
- 4 - Inform maintenance department

Aircraft equipped with GTS820 Traffic Advisory System (MOD70-0258-00)

**AMBER CAS MESSAGE**  
**"TCAS FAIL"**

Indicates that Traffic Advisory System is inoperative

**NOTE :**

*No active traffic available, but ADSB-IN traffic may still be displayed.*

- 1 - Inform maintenance department

Aircraft equipped with GTS820 or KTA870 Traffic Advisory System (MOD70-0258-00 or OPT70-034-61)

**AMBER CAS MESSAGE  
“TRAFFIC FAIL”**

Indicates that Traffic Advisory System is inoperative.

*NOTE :*

*No active traffic available, but ADSB-IN traffic may still be displayed.*

- 1 - Inform maintenance department

Aircraft equipped with ADS-B OUT function (MOD70-0264-34)

**AMBER CAS MESSAGE  
“XPDR1 ADS-B FAIL” or “XPDR2 ADS-B FAIL”**

Indicates ADS-B OUT function of transponder # 1 [or transponder # 2] is inoperative. Other functions may remain available.

If transponder # 2 [or transponder # 1] is available :

- 1 - Restore ADS-B OUT function by setting transponder # 2 [or transponder # 1] as active
- 2 - Continue flight
- 3 - Inform maintenance department

If transponder # 2 [or transponder # 1] is unavailable :

- 1 - Inform Air Traffic Control
- 2 - Leave ADS-B OUT airspace
- 3 - Continue flight
- 4 - Inform maintenance department

Aircraft equipped with GWX68 Weather radar (MOD70-0176-00C)

**AMBER CAS MESSAGE  
“GWX FAIL”**

Indicates that GWX weather radar is inoperative.

*NOTE :*

*No real time weather data available.*

- 1 - GWX breaker ..... **Check pushed**
- 2 - Continue flight by using other weather data source, and adjust flight route.
- 3 - Inform maintenance department

**SECTION 4**

**NORMAL PROCEDURES**

Operation of the “GARMIN” G1000 NXi RETROFIT does not change the normal procedures of the airplane described in Section 4 “Normal Procedures” of the basic Pilot’s Operating Handbook.

**SECTION 5**

**PERFORMANCE**

Operation of “GARMIN” G1000 NXi RETROFIT does not change the performance of the airplane described in Section 5 “Performance” of the basic Pilot’s Operating Handbook.



**SECTION 6**  
**WEIGHT AND BALANCE**

Information hereafter supplement or replace those of the standard airplane described in Section 6 “Weight and Balance” of the basic Pilot’s Operating Handbook when the airplane is equipped with the “GARMIN” G1000 NXI RETROFIT.

S/ R/ A/ O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	WEIGHT per unit lb (kg)	ARM in. (m)
		<b>34 - NAVIGATION</b>		
		<b>34-28 - Electronic Flight Instrumentation system</b>		
O	0539-00 Version D	Integrated Flight Deck System G1000 NXi of which :		
		- PFD1                              GDU 1050A	6.31 (2.04)	155.63 (3.953)
		- PFD2                              GDU 1050A	6.31 (2.04)	155.63 (3.953)
		- MFD                                GDU 1550	5.49 (2.49)	155.43 (3.948)
A	0734-34	Visual approach patch card	/	/

## **SECTION 7**

### **DESCRIPTION**

Information hereafter supplement or replace those of the standard airplane described in Section 7 "Description" of the basic Pilot's Operating Handbook when the airplane is equipped with the "GARMIN" G1000 NXi RETROFIT.

#### **7.3 - ACCOMMODATIONS**

##### **DOORS, WINDOWS AND EMERGENCY EXIT**

###### **FWD compartment door**

The FWD compartment door is located on the airplane left side between the firewall and the front pressure bulkhead. It is hinged at the top. It is maintained in the up position by a compensation rod. Two interlocking-type latches ensure its closing and it is equipped with a lock [same key as for the access door and the "pilot" door (if installed)]. When the door is closed, latches are flush with the fuselage profile.

The "CARGO DOOR" CAS message lights on as long as FWD compartment door is not locked.

#### **7.15 - MISCELLANEOUS EQUIPMENT**

##### **FLIGHT DECK INFORMATION SYSTEM (FS 510) (if installed)**

The airplane is equipped with a flight deck information system allowing portable electronics devices to stream data to and from the GARMIN integrated flight deck system.

For the system description and its utilization, refer to GARMIN Cockpit Reference Guide.

##### **GARMIN INTEGRATED FLIGHT DECK (GIFD) APPROACHES**

###### **Advisory visual approaches (if installed)**

The GIFD will provide advisory visual approaches to many runways in the aviation database. Lateral guidance for the visual approach is aligned with the runway bearing. The system also generates vertical guidance from the runway threshold at a GIFD defined glide path (usually 3°, refer to the GARMIN Pilot's Guide for further information) allowing coupling of the autopilot to the appropriate minimums.

## “GARMIN” G1000 NXI RETROFIT

The pilot interface for visual approaches is an extension of the normal approach selection method. At the end of the list of instrument approaches, there will be a set of visual approaches added. Nominally, there will be a visual approach listed for each runway end. The approaches will be labeled with the name VISUAL and the runway number.

Each visual approach has two transitions, the straight in transition and the Vectors-to-Final transition. The transitions will be labeled STRAIGHT and VECTORS, respectively. The FMS creates the VISUAL approach waypoints (fixes) based on the runway position and course specified in the navigation database. These are defined in the following table:

Fix Identifier	Description	Distance to runway
RWxxx	Runway fix defined in the navigation database. “xxx” is the runway number and suffix (e.g. RW19L).	N/A
FINAL	The roll-out from the turn to the final approach course is accomplished as this fix is sequenced.	3.5 Nm
STRGHT	Initial fix for the straight-in transition.	6 Nm

The waypoints created by the FMS to define a VISUAL approach are fixes stored in the flight plan. When the approach is no longer a part of a flight plan, these waypoints are deleted. A VISUAL approach can be inserted onto the Active Flight Plan or the Standby Flight Plan. A VISUAL approach can also be inserted into a stored flight plan or copied to a stored flight plan in the course of saving the active or standby flight plan.

CDI and VDI indications are equivalent to those of other GPS-based approaches (e.g.- LPV or L/VNAV magenta annunciation). The GIFD annunciates VISUAL in magenta in the HSI to indicate a visual approach is active.

When conducting a visual approach, it is the pilot's responsibility to ensure terrain and obstacle avoidance. The visual approach does not consider terrain or obstacles. It is important for the pilot to understand that the Garmin visual approach does not guarantee terrain or obstacle clearance. Therefore, when a visual approach is selected, the message OBSTACLE CLEARANCE IS NOT PROVIDED FOR VISUAL APPROACHES is displayed on the approach selection page and must be acknowledged before the visual approach is loaded into the flight plan.

The TAWS function normally provides some suppression of terrain alerts when flying an approach with vertical guidance. The TAWS logic is adjusted to ensure that there is no suppression of terrain alerts while flying a VISUAL approach.

Visual approaches are intended to be used as an aid to situational awareness. Visual approaches are advisory in nature and do not guarantee terrain and obstacle clearance for the approach runway.

## **SECTION 8**

### **HANDLING, SERVICING AND MAINTENANCE**

Operation of "GARMIN" G1000 NXi RETROFIT does not change the handling, servicing and maintenance of the airplane described in Section 8 "Handling, Servicing and Maintenance" of the basic Pilot's Operating Handbook.

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# SUPPLEMENT

## BARO-VNAV APPROACHES

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## **SECTION 1**

### **GENERAL**

This supplement is intended to inform the pilot about the equipment limitations, description and operations necessary for operation when the airplane is equipped with Baro-VNAV approaches capability.

## **SECTION 2**

### **LIMITATIONS**

Information hereafter supplement or replace those of the standard airplane described in Section 2 "Limitations" of the basic Pilot's Operating Handbook when the airplane is equipped with Baro-VNAV approaches capability.

#### **2.1 - GENERAL**

The GARMIN Integrated Flight Deck Pilot's Guides as applicable must be readily available to the pilot and permanently kept in the airplane with the POH :

- G1000 (850) P/N 190-00709-00 Rev. C or any later revision,
- G1000 NXi retrofitted (850) P/N 190-02348 Rev. B or any later revision,

#### **2.6 - OPERATION LIMITS**

##### **GNSS (GPS/SBAS) NAVIGATION EQUIPMENT APPROVALS**

The GARMIN GNSS navigation system installed in this airplane :

- is a GPS system with a Satellite Based Augmentation System (SBAS) comprised of :
  - two TSO-C145a (or later) Class 3 approved GARMIN GIAs,
  - TSO-C146a (or later) Class 3 approved GARMIN GDUs Display Units,
  - GARMIN GA36 and GA37 antennas,
  - GPS software version 3.2 or later approved version.
- is installed in this airplane in accordance with AC 20-138A.

- is, as installed in this airplane, approved for navigation using GPS and GPS/SBAS (within the coverage of a SBAS complying with ICAO Annex 10) for IFR enroute, terminal area, and RNP APCH operations (to LNAV, LNAV/VNAV and LPV minima).
- is, as installed in this airplane, complying with the equipment, performance, and functional requirements to conduct RNAV and RNP operations in accordance with the applicable requirements of the reference documents listed in the following table.

**NOTE :**

*Depending on the area of navigation, an operational approval may be required to use the navigation performance that are detailed in the table hereafter. The pilot is responsible to ensure compliance with current operational requirements.*

This table is accurate at the time it was published.

Phase of flight	Approved PBN Capability	Operational limitations	Reference Documents	ICAO Flight Plan Code		Notes
				Item 10a Code	Item 18 PBN/	
En-route, Oceanic and Remote continental (Class II Navigation)	RNAV 10  RNP 10	GNSS FDE availability must be verified prior to flight. Maximum predicted FDE unavailability is 34 minutes. <sup>1</sup>  Two GNSS systems required to be operational. <sup>2</sup>	FAA AC 90-105A	R	A1	Additional communication and surveillance equipment may be required to obtain operational approval to utilize RNP 10 / RNAV 10 performance.
En-route continental, Arrival	RNAV 5 <i>(formerly designated as B-RNAV)</i>	One GNSS system required to be operational.	JAA AMJ 20X2	R	B2	
En-route, Oceanic and Remote continental (Class II Navigation)	RNP 4	GNSS FDE availability must be verified prior to flight. Maximum predicted FDE unavailability is 25 minutes. <sup>1</sup>  Two GNSS systems required to be operational. <sup>2</sup>	FAA AC 90-105A	R	L1	Additional communication and surveillance equipment may be required to obtain operational approval to utilize RNP 4 performance.



Phase of flight	Approved PBN Capability	Operational limitations	Reference Documents	ICAO Flight Plan Code		Notes
				Item 10a Code	Item 18 PBN/	
Departure En-route continental, Arrival	RNAV 2 / RNAV 1	One GNSS system required to be operational.	JAA TGL-10  FAA AC 90-105A	R	C2 / D2	
Domestic, Offshore, Oceanic and Remote continental	RNP 2	GNSS FDE availability must be verified prior to oceanic or remote continental flight. Maximum predicted FDE unavailability is 5 minutes.  Two GNSS systems required to be operational. <sup>2</sup>  Only one operational GNSS system required for domestic and offshore operations areas.	FAA AC 90-105A	R	-	Additional communication and surveillance equipment may be required to obtain operational approval to utilize RNP 2 performance.
Departure, Arrival,	RNP 1 <i>(with and without RF legs)</i>	At a minimum, the flight director must be displayed and utilized when conducting procedures containing RF legs.	FAA AC 90-105A	R	O2	Includes RNP terminal departure and arrival procedures. This includes procedures with Radius-to-Fix legs (RF legs).

Phase of flight	Approved PBN Capability	Operational limitations	Reference Documents	ICAO Flight Plan Code		Notes
				Item 10a Code	Item 18 PBN/	
Approach	RNP APCH LNAV minima <i>(with and without RF legs)</i>	At a minimum, the flight director must be displayed and utilized when conducting procedures containing RF legs.	EASA AMC 20-27 FAA AC 90-105A	R	S1	Includes non-precision approaches based on conventional navigation aids with "or GPS" in the title and area navigation approaches titled "GPS", "RNAV (GPS)", and "RNAV (GNSS)". This includes procedures with RF legs.  RF legs may be used in the initial and intermediate legs of the approach procedure or the final leg of the missed approach procedure only.
Approach	RNP APCH LNAV/VNAV minima <i>(with and without RF legs)</i>	At a minimum, the flight director must be displayed and utilized when conducting procedures containing RF legs.  QNH shall be available at the destination airport when conducting a Baro-VNAV approach. Use of remote altimeter setting source is not allowed to conduct a Baro-VNAV approach.  The two primary altimeters must be operational when flying a RNP APCH LNAV/VNAV with Baro-VNAV guidance	EASA AMC 20-27 FAA AC 90-105A	R	S2	Includes area navigation approaches titled "RNAV (GPS)" and "RNAV (GNSS)". This includes procedures with RF legs.  Vertical guidance is based on GPS/SBAS and/or Baro-VNAV.  RF legs may be used in the initial and intermediate legs of the approach procedure or the final leg of the missed approach procedure only.

Phase of flight	Approved PBN Capability	Operational limitations	Reference Documents	ICAO Flight Plan Code		Notes
				Item 10a Code	Item 18 PBN/	
Approach	RNP APCH LPV minima <i>(with and without RF legs)</i>	At a minimum, the flight director must be displayed and utilized when conducting procedures containing RF legs.	EASA AMC 20-28	B		RF legs may be used in the initial and intermediate legs of the approach procedure or the final leg of the missed approach procedure only.

<sup>1</sup> and <sup>2</sup>, see Note 1 and Note 2 hereafter

Table 2.6.1 – GNSS operational requirements

Note 1 FDE/RAIM availability worldwide can be determined using the WFDE Prediction program, part number 006-A0154-01 or later approved version with GARMIN GA36 and GA37 antennas selected, or :

- Within the United States, using the FAA's en-route and terminal RAIM prediction website : [www.raimprediction.net](http://www.raimprediction.net), or by contacting a Flight Service Station.
- Within Europe, using Europe's AUGUR GPS RAIM Prediction Tool at <http://augur.ecacnav.com/augur/app/home>.

Note 2 A "BOTH ON GPS1" or "BOTH ON GPS2" yellow system annunciation does not necessarily mean that one GPS has failed. Refer to the MFD – GPS STATUS page to determine the state of the unused GPS.

**General considerations**

The route planning and WFDE prediction program may be downloaded from the GARMIN website on the internet. For information on using the WFDE Prediction Program, refer to GARMIN WAAS FDE Prediction Program, part number 190-00643-01, 'WFDE Prediction Program Instructions'.

Garmin International holds an FAA Type 2 Letter of Acceptance (LOA) in accordance with RTCA/DO-200A and AC 20-153B for database integrity, quality, and database management processes for many of its aviation databases. LOA status and RTCA/DO-200A List of Applicable Avionics (190-01999-00) can be viewed at FlyGarmin.com.

Navigation information is referenced to WGS-84 reference system, and should only be used where the Aeronautical Information Publication (including electronic data and aeronautical charts) conform to WGS-84 or equivalent.

**GNSS (GPS/SBAS) NAVIGATION SYSTEM LIMITATIONS****Navigation database limitations**

The pilot must confirm at system initialization that the Navigation database is current.

If the AIRAC cycle will change during flight, the pilot must ensure the accuracy of navigation data, including suitability of navigation facilities used to define the routes and procedures for flight. If an amended chart affecting navigation data is published for the procedure, the database must not be used to conduct the procedure.

GPS/SBAS based IFR enroute, oceanic, and terminal navigation is prohibited unless the pilot verifies and uses a valid, compatible, and current Navigation database or verifies each waypoint for accuracy by reference to current approved data.

Discrepancies that invalidate a procedure must be reported to Garmin International. The affected procedure is prohibited from being flown using data from the Navigation database until a new Navigation database is installed in the airplane and verified that the discrepancy has been corrected.

Contact information to report Navigation database discrepancies can be found at [www.Garmin.com](http://www.Garmin.com)>Support>Contact Garmin Support>Aviation. Pilots and operators can view navigation data base alerts at [www.Garmin.com](http://www.Garmin.com)>In the Air>NavData Alerts.

RNP APCH including "GPS", "or GPS", "RNAV (GPS)" and "RNAV (GNSS)" instrument approaches using the Garmin integrated flight deck are prohibited unless the pilot verifies and uses the current Navigation database. GPS based instrument approaches must be flown in accordance with an approved instrument approach procedure that is loaded from the Navigation database into the flight plan by its name.

Not all published Instrument Approach Procedures (IAP) are in the Navigation database.

Manual entry of waypoints using latitude/longitude or place/bearing is prohibited for published RNP and RNAV routes.

Whenever possible, RNP and RNAV routes including Standard Instrument Departures (SIDs) and Obstacle Departure Procedures (ODPs), Standard Terminal Arrival (STAR), and enroute RNAV Q and RNAV T routes should be loaded into the flight plan from the database in their entirety, rather than loading route waypoints from the database into the flight plan individually. Selecting and inserting individual named fixes from the database is permitted, provided all fixes along the published route to be flown are inserted.

### **GNSS integrity limitations**

For flight planning purposes, in areas where SBAS coverage is not available, the pilot must check RAIM availability. The availability of GPS integrity RAIM shall be confirmed for the intended route of flight.

In the event of a predicted continuous loss of RAIM of more than five minutes for any part of the intended route of flight, the flight should be delayed, cancelled, or re-routed on a track where RAIM requirements can be met.

For flight planning purposes, in Remote Continental and Oceanic areas, the pilot must check FDE availability. Refer to the Table 2.6.1 – GNSS operational requirements, to check maximum authorized FDE unavailability and WFDE Prediction program references.

### **Approach operations limitations**

LNAV+V feature is a standard LNAV approach with advisory vertical guidance provided for assistance in maintaining a constant vertical glidepath similar to an ILS glideslope on approach. This guidance is displayed on the PFD in the same location as the ILS glideslope using a magenta diamond. In all cases where LNAV+V is indicated by the system during an approach, LNAV minima shall be used.

Use of the GARMIN GPS/SBAS receivers to provide navigation guidance during the final approach segment of an ILS, LOC, LOC-BC, LDA, SDF, MLS or any other type of approach not approved for "or GPS" navigation is prohibited.

When using the VOR/LOC/GS receivers to fly the final approach segment, VOR/LOC/GS navigation data must be selected and presented on the CDI of the pilot flying.

Use of Baro-VNAV to a DA is not authorized with a remote altimeter setting. A current altimeter setting for the landing airport is required. When using remote altimeter minima, the baro VNAV function may be used to the published LNAV MDA.

### **Procedures with RF legs (Radius to Fix legs)**

At a minimum, the flight director must be displayed and utilized when conducting procedures containing RF legs.

## **SECTION 3**

### **EMERGENCY PROCEDURES**

The emergency procedures hereafter supplement or replace those of the standard airplane described in section 3 Emergency procedures of the basic Pilot's Operating Handbook when the airplane is equipped with the Baro-VNAV approaches capability.

#### **3.13 - MISCELLANEOUS**

<p style="text-align: center;"><b>RED WARNING CAS MESSAGE</b> <b>"ABORT APR" ON</b></p>
<p>Indicates a loss of GPS navigation.</p> <p style="text-align: center;">Perform a GO AROUND.</p>

## **AMBER WARNING CAS MESSAGE "APR DWNGRADE" ON**

Indicates that the GARMIN system downgrades the approach upon navigation system integrity failure during a GPS LPV, LNAV/VNAV. This may be also indicated by an annunciation change on the HSI.

- 1 - System will automatically downgrade to LNAV/VNAV or LNAV.
- 2 - Update minimums as appropriate.

**NOTE :**

*In some cases, the approach may be downgraded without AMBER WARNING CAS MESSAGE "APR DWNGRADE" being displayed to the crew. Please consider the HSI approach annunciation as the primary mean to identify the current mode of operation.*

**NOTE :**

*Refer to the section 7 to get details on the approach downgrading process.*

## **GPS APPROACH ALARM LIMITS EXCEEDED**

Procedure cancelled with the Baro-VNAV approaches capability.

**"PIT" IN AP VERTICAL MODE DURING FD APPROACH WITH VERTICAL GUIDANCE**

Indicates the loss of vertical integrity signal during LPV or LNAV/VNAV. This may be indicated by an annunciation change on the HSI.

Symptoms :

- AP mode from GP flashing 5 seconds to "PIT"
- VDI is flagged and indicates NO GP

If automatic downgrade to LNAV :

- 1 - Update minimums as appropriate.

If not :

Perform a GO AROUND.

**"VDI" WHITE or "VDI" AMBER ON APPROACH**

Symptoms : VDI white or VDI amber at bottom of VDI window.

If possible :

- 1 - Use LNAV minimums.

If not :

Perform a GO AROUND.



## SECTION 4 NORMAL PROCEDURES

Information hereafter supplement or replace those of the standard airplane described in section 4 Normal procedures of the basic Pilot's Operating Handbook when the airplane is equipped with the Baro-VNAV approaches capability.

### 4.5 - PARTICULAR PROCEDURES

#### GPS NAVIGATION

##### Set up conditions

- Verify if the data base is current.
- Verify that altitude data is valid for the GPS prior to flight.

Check the systems availability requirements in the table 2.6.1 in section 2 / GNSS (GPS/SBAS) navigation equipment approvals, depending on the planned navigation performance.

##### GPS flight plan

In the active flight plan, addition of a STAR or an approach is always made at the end of the flight plan. In the scope of these additions, the pilot must pay attention not to duplicate points.

##### Non precision approach with coupled autopilot

Coupling with autopilot may be made in NAV mode, except in the following cases :

- holding pattern,
- landing pattern turn,
- interrupted approach,

which have to be made in HDG mode.

For memory, the approach particular point name in the GARMIN system is as follows :

- IA = IAF
- FA = FAF ou FAP
- MA = MAP
- MH = MAHP

## **SECTION 5 PERFORMANCE**

Operation of the airplane equipped with the Baro-VNAV approaches capability does not change the performance of the airplane described in Section 5 Performance of the basic Pilot's Operating Handbook.

## **SECTION 6 WEIGHT AND BALANCE**

Operation of the airplane equipped with the Baro-VNAV approaches capability does not change the weight and balance of the airplane described in Section 6 Weight and balance of the basic Pilot's Operating Handbook.

## **SECTION 7 DESCRIPTION**

Description hereafter supplement or replace those of the standard airplane described in Section 7 Description of the basic Pilot's Operating Handbook when the airplane is equipped with the Baro-VNAV approaches capability.

### **7.15 - MISCELLANEOUS EQUIPMENT**

#### **GARMIN INTEGRATED FLIGHT DECK (GIFD) APPROACHES**

The purpose of this section is to provide an overview of the GIFD capabilities and operation related to GIFD Approaches.

Detailed descriptions as well as operating instructions of these approaches are provided in the applicable Pilot's Guide and Cockpit Reference Guide.

#### **RNP APPROACHES OPERATION**

The GIFD is capable of performing approaches with GNSS guidance also designated as RNP approaches.

**RNAV (GPS) or RNAV (GNSS) – "LNAV, LNAV+V"**

LNAV approaches provide lateral GPS-based guidance to legs defined by the navigation database.

Vertical deviations may be available if the necessary information to construct a vertical path is contained in the database.

Any vertical path information for LNAV approaches is strictly advisory.

There is no guarantee that stepdown fix altitudes will be honored and the crew must level off at the MDA if the runway is not visible.

LNAV approaches may be executed with or without SBAS, and advisory vertical guidance is dependent on sufficient GPS vertical error estimates rather than SBAS vertical integrity.

LNAV+V approaches do not downgrade in general because they do not require SBAS, although high GPS vertical error estimate anomalies could result in loss of advisory vertical guidance.

If GPS is lost the LNAV approach will be aborted.

**RNAV (GPS) or RNAV (GNSS) – "L/VNAV"**

LNAV/VNAV approaches add published vertical guidance in addition to LNAV guidance. They are different from LNAV+V in that the vertical deviations are not advisory, but rather published guidance.

The minimums of an LNAV/VNAV approach represent a DA rather than an MDA.

Execution of an LNAV/VNAV approach does not require SBAS integrity, as long as a system is configured to support barometric VNAV for approach.

If SBAS integrity is available, it will be used to provide vertical guidance.

During execution of a GPS approach with LNAV/VNAV service levels, while the aircraft is between the FAF and MAP, excessive deviation indicators appear as white vertical lines to indicate an area where the vertical deviation exceeds  $\pm 75$  feet.

If the glide-path indicator is within an area of excessive deviation, the glide-path indicator becomes yellow and the vertical lines also become yellow.

**RNAV (GPS) or RNAV (GNSS) – "LPV"**

LPV approaches provide both localizer precision lateral guidance and a vertical path definition.

SBAS integrity is required to execute the approach.

**BARO-VNAV APPROACHES**

The GIFD provides the ability to conduct barometric based VNAV operations while conducting certain GPS approaches using an automatically generated temperature compensated glidepath.

Baro-VNAV Approach functionality is separate and distinct from enroute and terminal descent VNAV functions.

**Temperature Compensation**

If SBAS is unavailable or disabled, the GIFD will provide automatic temperature compensated glidepath vertical guidance on approaches that have LNAV/VNAV minima published, or on some approaches that are not authorized for SBAS.

No pilot action is required to receive the temperature compensated glide-path when SBAS is not available or allowed.

**Final Approach Segment (FAS)**

Altimeter systems assume an ISA temperature model.

When actual atmosphere deviates from the ISA model it results in altitude errors.

For example, performing a Baro-VNAV during a hot day would result in guidance relative to a glide path angle steeper than the published glide path angle. On the contrary, during a cold day, a Baro-VNAV would be based on guidance relative to a glide path smoother than the published glide path angle.

The approach plates indicate a temperature range for which the approach has been designed.

Within this temperature range the LNAV/VNAV can be used with uncompensated Baro-VNAV systems.

Outside of this temperature range, LNAV/VNAV minimums shall not be used with uncompensated Baro-VNAV systems.

The GARMIN Approach Baro-VNAV system is automatically temperature compensated to produce a glide-path position in space such that Baro-VNAV approaches are always flown at the published glide path angle when the actual temperature deviates from the ISA model. This produces results similar to ILS glideslopes and LPV glide-paths that remain in the same position in space without respect to temperature.

To produce the correct geometric glide path angle on the final approach segment, temperature compensation is applied to the barometric altitude and used to determine the displayed vertical deviation.

However, the altimeter continues to display uncompensated barometric altitude.

The temperature compensation required depends on the temperature profile over the altitude range between the point at which the barometric setting is measured (presumed to be the approach airport) and the present altitude of the aircraft.

This temperature profile is estimated by using the air data system static air temperature (SAT) and applying the standard temperature lapse rate to determine the temperature over the rest of the range.

When using barometric altitude for vertical guidance along the final approach segment, temperature compensation is applied whether the temperature is above or below standard temperature. The actual compensated altitude is not displayed to the pilot during an approach.

### **Compensating Waypoint Altitudes**

Depending on the terrain, temperature compensation may be required for waypoints in the approach prior to the final approach segment due to terrain and/or obstacle clearance requirements.

**Temperature Compensation of Approach Minimums**

To enable temperature compensation of the minimum altitude, select the TEMP COMP, option for the minimum altitude reference type (in addition to OFF, BARO, and RAD ALT). The temperature at the destination airport is used for this purpose.

The temperature at the destination airport is invalidated when a different approach is loaded into the active flight plan or when the system powers up.

This disables temperature compensation of both the published approach waypoint altitudes on the active flight plan page and the minimum altitude.

The minimum altitude selection type changes to BARO if it was previously set to TEMP COMP.

Temperature compensation of the minimum altitude is not dependent on use of barometric altitude for vertical guidance on the FAS, and is therefore available for any type of approach; in fact, only the destination airport and temperature are required.

Compensating the approach minimums bug simply determines where the minimums reference is displayed on the altimeter.

No adjustment to the barometric altitude is made as a result of temperature compensating the minimums reference.

## APPROACH LEVEL DOWNGRADE

Some automatic approach service downgrade may be performed automatically upon loss of SBAS or GPS approach alarm limits being exceeded, depending on the approach service level that has been loaded in the flight plan and activated.

This automatic downgrade is annunciated to the pilot through an "APR DWNGRADE" amber CAS message and a change in the annunciated service level in the HSI.

As the "APR DWNGRADE" amber CAS message may not be triggered under certain circumstances, the HSI annunciation shall be considered as the primary mean to annunciate any approach downgrade.

Under certain circumstances, when the GNSS integrity requirements are not met nor approach level is available the approach may be aborted.

This is annunciated through an "ABORT APR" red CAS message and the service level annunciation being removed from the HSI.

If SBAS becomes unavailable on an RNAV LNAV/VNAV approach, "L/VNAV" is shown in yellow, the system switches to LNAV/VNAV (Baro-VNAV) service level and the "APR DWNGRADE" amber CAS message will be generated (the VDI will be flagged NO GP until the "APR DWNGRADE" amber CAS message has been acknowledged).

If the "APR DWNGRADE" amber CAS message is acknowledged, "L/VNAV" is shown in magenta.

If the "APR DWNGRADE" amber CAS message is not acknowledged, the system will downgrade to LNAV service level, ("LNAV" shown in magenta), the VDI will remain flagged NO GP, and no additional downgrade system message will be generated.

If SBAS becomes unavailable on an RNAV LPV approach, "LPV" will be shown in yellow, but the CDI and VDI will continue to be shown. At one minute to the FAF, an "APR DWNGRADE" amber CAS message will be generated.

The VDI will be flagged NO GP. Depending on the available lines of minima for the approach, the system will switch to either LNAV/VNAV or LNAV service level.

**SECTION 8****HANDLING, SERVICING AND MAINTENANCE**

Operation of the airplane equipped with the Baro-VNAV approaches capability does not change the basic handling, servicing and maintenance of the airplane described in section 8 Handling, servicing and maintenance of the basic Pilot's Operating Handbook.



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