PILOT'S INFORMATION MANUAL

TOME 2

TBM 700C

SECTION 9

SUPPLEMENTS

This section consists of a series of supplements, each covering a single system which may be installed in the Model TBM 700 airplane. Each supplement contains a brief description, and when applicable, operating limitations, emergency and normal procedures, and performance. The supplements are arranged numerically (See "List of Supplements and Validities") to make it easier to locate a particular supplement. Some installed items of optional equipment, whose function and operational procedures do not require detailed instructions, are discussed in Section 7.

Limitations contained in the following supplements are Airworthiness Authorities approved and adherence to these limitations is mandatory.

NOTE

The Supplements Section must include approved Supplements for all optional equipment installed on the airplane. Additional Supplements for optional equipment not installed on this airplane may be included and can be removed if desired.

LIST OF SUPPLEMENTS AND VALIDITIES

Supp. No.		Edition Date
A -	General All From S / N 1	31.01.90
1 -	"BENDIX / KING" autopilot type KFC 275 TBM 700A and TBM 700B From S / N 1	31.03.90
2 -	"BENDIX / KING" vertical speed and altitude selector type KAS 297C All From S / N 1	31.03.90
3 -	"BENDIX / KING" RDS 81 weather radar TBM 700A and TBM 700B From S / N 1	30.11.90
4 -	"BENDIX / KING" RDS 82 weather radar TBM 700A and TBM 700B From S / N 1	30.11.90
5 -	"BENDIX / KING" RDS 82 VP vertical profile weather radar TBM 700A and TBM 700B From S / N 1	30.11.90
6 -	"BFG" WX-500 or WX-950 or WX-1000 or 1000+ or 1000E stormscope All From S / N 1	30.11.90
7 -	7-place accomodation TBM 700A From S / N 1	28.02.91

LIST OF SUPPLEMENTS AND VALIDITIES (cont'd)

Supp. No.		Edition Date
8	"BENDIX / KING" GC 381A radar graphics interface TBM 700A and TBM 700B From S / N 1	28.02.91
9	"BENDIX / KING" EFS 40 All From S / N 1	31.05.91
10	"BENDIX / KING" autopilot type KFC 325 All From S / N 1	31.05.91
11	"CASEY COPTER" freon air conditioning TBM 700A From S / N 24	31.05.92
12	Window and capability of Camera / Observation TBM 700A From S / N 1	31.01.94
13	"BENDIX / KING" KLN90A GPS navigation system interfaced with HSI KI 525A TBM 700A and TBM 700B From S / N 1	30.04.94
14	"BENDIX / KING" KLN90A GPS navigation system interfaced with EHSI OF EFS 40 TBM 700A and TBM 700B From S / N 1	30.06.94
15	"KEITH" vapor cycle cooling system TBM 700A and TBM 700B From S / N 96	30.06.94

LIST OF SUPPLEMENTS AND VALIDITIES (cont'd)

Supp. No.		Edition Date
16	"BENDIX / KING" KRA 405 radar altimeter All From S / N 1	30.09.95
17	"BENDIX / KING" KLN90B GPS navigation system interfaced with EHSI OF EFS 40 TBM 700A and TBM 700B From S / N 1	30.04.96
18	"L'HOTELLIER" Engine fire detection system TBM 700A From S / N 1	31.01.96
19	"SHADIN" ETM (Engine Trend Monitor) TBM 700A and TBM 700B From S / N 1	31.01.96
20	"BENDIX / KING" GC 360A radar graphics interface TBM 700A and TBM 700B From S / N 1	29.02.96
21	"BENDIX / KING" KLN90B GPS navigation system interfaced with the HSI KI525A TBM 700A and TBM 700B From S / N 1	30.04.96
22	"BENDIX / KING" RDR 2000 vertical profile weather radar All From S / N 1	30.06.96
23	AMS 44 dual channel audio control box TBM 700A From S / N 1	31.07.96

LIST OF SUPPLEMENTS AND VALIDITIES (cont'd)

Supp. No.		Edition Date
24 -	"NAVCAL" flight inspection system capability TBM 700A From S / N 1	31.07.96
25 -	"EVENTIDE" ARGUS 7000 CE moving map display TBM 700A and TBM 700B From S / N 1	10.06.98
26 -	"BENDIX / KING" KLN90B GPS (B-RNAV) navigation system interfaced with EFS 40 EHSI All From S / N 1	30.11.98
27 -	"BENDIX / KING" KLN90B GPS (B-RNAV) navigation system interfaced with electromechanical HSI TBM 700A and TBM 700B From S / N 1	15.06.99
28 -	"BFG" SKYWATCH SKY 497 or SKY 899 traffic advisory system All From S / N 1	31.08.99
29 -	"EROS/INTERTECHNIQUE" gaseous oxygen system (30000 ft) TBM 700A and TBM 700B From S / N 40, plus S / N 24 and 36	30.09.99
30 -	Cargo transportation capability TBM 700B and TBM 700C1 airplanes equipped with option OPT70 52002A "Pilot door"	15.06.01
31 -	Intentionally left free	

LIST OF SUPPLEMENTS AND VALIDITIES (cont'd)

Supp. No.		Edition Date
32	"GARMIN GNS 430" GPS navigation system interfaced with electromechanical instruments TBM 700A and TBM 700B From S / N 1	30.04.00
33	Intentionally left free	
34	"GARMIN GNS 430" GPS (B-RNAV) navigation system interfaced with EHSI OF EFS 40 TBM 700A and TBM 700B From S / N 1	31.08.00
35	"HONEYWELL" KMD 850 Multi-function display TBM 700B and TBM 700C From S / N 192	31.01.01
36	"GARMIN GNS 530" GPS (B-RNAV) navigation system interfaced with EHSI OF EFS 40 All From S / N 1	31.10.01
37	"EROS/INTERTECHNIQUE" gaseous oxygen system (31000 ft) TBM 700A and TBM 700B From S / N 40, plus S / N 24 and 36	30.08.01
38	Operation at 31000 ft TBM 700A and TBM 700B From S / N 40, plus S / N 24 and 36	30.08.01
39	KGP 560 "HONEYWELL" EGPWS system All From S / N 1	31.10.01
40	Cargo transportation capability without pilot door TBM 700 airplanes equipped with the large door	15.11.01

LIST OF SUPPLEMENTS AND VALIDITIES (cont'd)

Supp. No.		Edition Date
41 -	TBM 700C2 TBM 700C From S / N 244, plus S / N 205 and S / N 240	15.02.03
42 -	"HONEYWELL" KMH 880 EGPWS/TAS system All From S / N 1	30.09.02
43 -	Provision for TBM 700C2 TBM 700C1 From S / N 244, plus S / N 205 and S / N 240	10.12.02

D.G.A.C.Approval :

Date : 25 FEV. 2003

BENOÎT PINON
SFACT/N.AG

SUPPLEMENT

"BENDIX / KING" VERTICAL SPEED AND ALTITUDE SELECTOR TYPE KAS 297C

TABLE OF CONTENTS

SECTION 1
GENERAL

This supplement is provided to acquaint the pilot with the limitations as well as the normal and emergency operating procedures of the BENDIX / KING KAS 297C Vertical Speed and Altitude Selector when added to a KFC 275 or KFC 325 Flight Control System.

The KAS 297C provides the pilot with the following features : ability to select vertical speed hold ; ability to select, arm and, upon approaching the selected altitude, automatically transfer into Altitude Hold ; altitude alerting as specified by the regulation.

SECTION 2
LIMITATIONS

When the airplane is equipped with the KAS 297C, in addition to the autopilot, limitations are identical to those of the standard airplane plus those of the autopilot.
Refer to Section 2 "Limitations" of the basic Pilot's Operating Handbook and of the Autopilot Supplement.

SECTION 3
EMERGENCY PROCEDURES

No change in the basic emergency procedures of the airplane described in Section 3 "Emergency Procedures" of the basic Pilot's Operating Handbook and of the Autopilot Supplement.

SECTION 4
NORMAL PROCEDURES

These procedures supplement those of standard airplane described in Section 4 "Normal procedures" of the basic Pilot's Operating Handbook and of the Autopilot Supplement.

BEFORE TAXIING

KAS 297C TEST

1 - "TEST" knob of KMC 321 ..... **PRESS**

2 - Check :

- All legends and digits are displayed on the KAS 297C.

VERTICAL SPEED MODES

MODE ENGAGEMENT

1 - Select knob ..... **PULL, then ROTATE to display the desired vertical speed**

2 - "ENG" push-button ..... **PRESS**

VERTICAL SPEED CHANGE

1 - Using "CWS"

- "CWS" push-button ..... **PRESS until the desired vertical speed is displayed**
- "CWS" push-button ..... **RELEASE when the desired vertical speed is reached**

The autopilot will maintain the desired vertical speed.

2 - Using Vertical Trim Control

- Vertical Trim Control ..... **PRESS either "UP" or "DN"**

The search of the new vertical speed will be performed at the rate of 100 ft/min per second.

- Vertical Trim Control ..... **RELEASE when desired time in seconds has passed (for example : press 5 seconds for a change of 500 ft/min)**

The autopilot will maintain the desired vertical speed.

CAUTION

VERTICAL SPEED HOLD MODE USE REQUIRES MONITORING OF THE INDICATED SPEED ESPECIALLY WHEN INDICATED SPEEDS ARE LOW (CLIMB) OR HIGH (DESCENT).

CAUTION

WHEN NEARING A PRESELECTED ALTITUDE. VERTICAL TRIM USE OR PRESELECTED ALTITUDE CHANGES WHILE THE SYSTEM IS IN CAPT MODE, WILL CANCEL THE MODE AND THE PRESELECTED ALTITUDE WILL BE DISREGARDED. THE SYSTEM MUST BE RE-ARMED BY THE PILOT. IF THE AIRPLANE HAS PASSED BEYOND THE SELECTED ALTITUDE, THE PILOT MUST ALSO RE-ESTABLISH THE NECESSARY INTERCEPT ATTITUDE

ALTITUDE PRESELECT MODES

MODE ENGAGEMENT

1 - Select knob ..... **PRESS, then ROTATE to display the desired altitude**

2 - "ARM" push-button ..... **PRESS**

3 - Display an airplane attitude or a longitudinal mode ("IAS" or "VS") necessary to intercept the selected altitude.

SECTION 5

PERFORMANCE

No change in the basic performance of the airplane described in Section 5 "Performance" of the basic Pilot's Operating Handbook.

SECTION 6

WEIGHT AND BALANCE

Weight and balance corresponding to the KAS 297C "BENDIX KING" autopilot are given in the optional equipment list attached to Section 6 "Weight and balance" of the basic Pilot's Operating Handbook.

SECTION 7
DESCRIPTION

7.1 - KAS 297C CONTROLS AND DISPLAYS

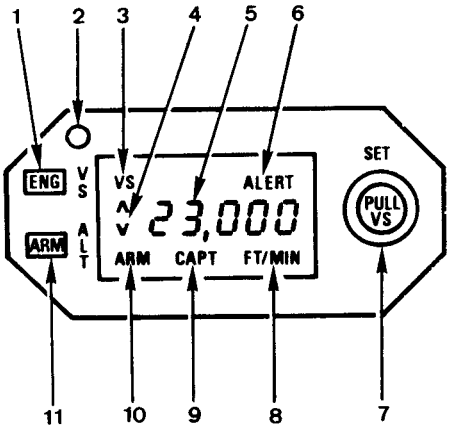

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Figure 9.2.1 - KAS 297C CONTROLS AND DISPLAYS

Item 1 - VERTICAL SPEED MODE (ENG) BUTTON
When pressed will engage the Vertical Speed Hold mode. When pressed a second time will disengage the Vertical Speed Hold mode. When pressed with altitude displayed, will engage the Vertical Speed Hold mode and re-sync the Vertical speed Hold mode to the current vertical speed of the airplane.

Item 2 - PHOTOCELL
Automatically dims display according to the cockpit ambient light.

Item 3 - VERTICAL SPEED (VS) ANNUNCIATOR
Illuminates when the Vertical Speed Hold mode is engaged.

Item 4 - VERTICAL SPEED UP / DOWN CARETS (^ or v)
Indicates whether the selected vertical speed is up or down.

Item 5 - GAS DISCHARGE DISPLAY
Displays selected altitude from 100 to 35000 feet or the selected vertical speed from 0 to 3000 ft per minute up or down.

Item 6 - ALTITUDE ALERT (ALERT) ANNUNCIATOR
The ALERT annunciator is illuminated 1000 ft prior to the selected altitude, goes out 300 ft prior to the selected altitude and illuminates momentarily when the selected altitude is reached. Once the selected altitude is reached, the light signifies that the 300 ft "safe band" has been exceeded and will remain on until 1000 ft from the selected altitude. The alert light is accompanied by a 2 second, pulsating aural tone anytime the light initially comes on.

Item 7 - VERTICAL SPEED / ALTITUDE SELECT KNOB
Concentric knobs which allow easy setting of altitude or vertical speed. The small knob (inner) has an IN and OUT position.
Altitude is displayed and selected when the small knob is in the IN position. When rotated the small knob selects altitude in 100 foot increments with roll over into the 1000 digits. The larger knob (outer) selects altitude in 1000 foot increments with roll over into the 10000 digits.
Vertical speed is displayed and selected when the small knob is in the OUT position. When rotated the small knob selects vertical speed in 100 ft / min increments.
The larger knob selects vertical speed in 1000 ft / min increments up to a maximum of 3000 ft / min.

Item 8 - MODE (FT or FT / MIN) ANNUNCIATOR
Indicates FT / MIN when in the Vertical Speed Hold mode and FT when in the Altitude Select mode.

Item 9 - ALTITUDE CAPTURE (CAPT) ANNUNCIATOR
Indicates the KAS 297C has switched the autopilot from Pitch Attitude Hold or Vertical Speed Hold mode into the pitch roundout mode (CAPT). The point, just prior to transfer into Altitude Hold, at which the CAPT mode becomes active varies with the vertical speed, i.e. the higher the rate of climb, the sooner the CAPT mode becomes active ; at low rates of climb the activation of the CAPT mode and transfer to altitude hold occur almost simultaneously. Engagement of any vertical mode or use of vertical trim, when in CAPT mode, will cancel this mode.

Item 10 - ALTITUDE SELECT MODE (ARM) ANNUNCIATOR
Indicates that the Altitude Select mode is armed to capture the selected altitude.

Item 11 - ALTITUDE SELECT MODE (ARM) BUTTON
When pressed and the selected altitude is displayed, will arm the Altitude Select mode. The Altitude Select (ARM) mode will cancel altitude hold (ALT) if ALT is already engaged. If Altitude Select (ARM) mode is present when GS couple occurs, the GS mode will cancel Altitude Select (ARM) mode. The engagement of ALT by the pilot's use of the ALT switch will cancel the altitude Select (ARM) mode.

Item 12 - CONTROL WHEEL STEERING (CWS) BUTTON (Not shown) - When pressed, in addition to the normal autopilot functions, the CWS also interfaces with the KAS 297C. When operating in the Vertical Speed Hold mode, the CWS will re-sync the vertical Speed Hold mode to the current vertical speed of the airplane. If altitude is displayed when the CWS is pressed, the display will automatically display vertical speed as long as the CWS is depressed. CWS does not affect the Altitude Select mode.

7.2 - KMC 321 CONTROL BOX

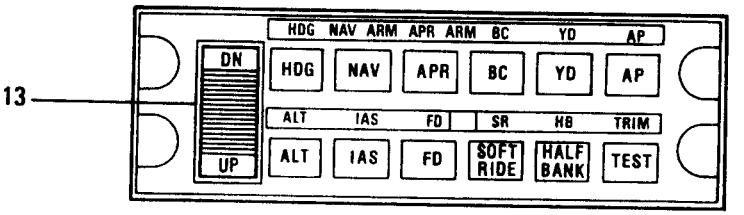

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Figure 9.2.2 - KMC 321 CONTROL BOX

Item 13 - VERTICAL TRIM CONTROL
When in the Vertical Speed Hold mode this control can be used to slew the vertical speed up or down at 100 ft / min for every second the rocker switch is held down. If altitude is being displayed at the time the rocker switch is depressed, vertical speed will be displayed until 1 - 2 seconds after the rocker switch is released.

7.3 - CIRCUIT-BREAKERS

Autopilot components are supplied through following circuit-breakers :

LABEL	FUNCTION
AP / TRIMS	Supplies power to the KCP 220, the autopilot pitch, roll and yaw servos and the "PITCH TRIM", "AIL TRIM", "RUD TRIM" and "AP DISC" circuit-breakers.
AP ALERT	Supplies power to the KAA 15 audible alarm.
AP ALT SEL	Supplies power to the KAS 297C.
HSI RMI	Supplies the compass system.
PITCH TRIM	Supplies power to the manual electric pitch trim.
AP DISC	Delivers a control signal (28 VDC switched by "AP DISC TRM INT" switch) to the KCP 220 autopilot computer and to the KAA 15 alarm unit.

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SUPPLEMENT

"BFG" WX-500 OR WX-950 OR WX-1000 OR 1000+ OR 1000E STORMSCOPE

TABLE OF CONTENTS

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 TBM700 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,

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)
	34 - NAVIGATION			
A	Stormscope WX-1000+ (OPT 70 34009A)	BFG	16.535 (7.500)	228.35 (5.800)
A	Stormscope WX-1000 (OPT 70 34009B)	BFG	15.432 (7.000)	230.71 (5.860)
A	Stormscope, EFIS coupled WX-1000+ (OPT 70 34009C)	BFG	15.432 (7.000)	230.71 (5.860)
A	Stormscope, EFIS coupled - Remote installed control WX-1000E (OPT 70 34009D)	BFG	9.502 (4.310)	269.09 (6.835)
A	Stormscope, EFIS coupled WX-1000E (OPT 70 34009E)	BFG	15.939 (7.230)	230.94 (5.866)
A	Stormscope, shared with the SKYWATCH WX-1000E (OPT 70 34009F)	BFG	15.939 (7.230)	230.94 (5.866)
A	Stormscope, shared with the SKYWATCH WX-1000+ (OPT 70 34009G)	BFG	16.535 (7.500)	228.35 (5.800)
A	Stormscope WX-950 (OPT 70 34041)	BFG	4.696 (2.130)	191.85 (4.873)
A	Stormscope, shared with the GNS 530 GPS WX-500 (OPT 70 34056)	BFG	4.938 (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 wiews : 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

Stormscope setting to ON or OFF is performed by using the "RADIO MASTER" switch.

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SUPPLEMENT

"BENDIX / KING"

EFS 40

TABLE OF CONTENTS

SECTION 1
GENERAL

This supplement provides information necessary for airplane utilization when the system EFIS "BENDIX / KING" EFS 40 type is installed on TBM 700 airplane.

SECTION 2
LIMITATIONS

These limitations supplement those of standard airplane described in Section 2 "Limitations" of the basic Pilot's Operating Handbook.

The installation of EFS 40 EFIS is subordinated to the installation of the modification Nr MOD 70-010-24 "Alternator Ventilation".

The using of COMPOSITE MODE is only authorized when one of both displays is out of order or when ventilation of one of both displays is out of order.

To undertake an IFR-flight :
- The EADI and EHSI must be available.
- The stand-by horizon must be available.
- No red or yellow "SG" or "DU" warning must be present.
- The "CHECK CONFIG" warning must not be present.
- ATTITUDE FAIL and HDG warnings must not be present.

CAUTION

EFS 40 CONFIGURATION OF THE TBM 700 AIRPLANE IS MENTIONED ON FIGURE 9.9.1. MODIFICATION OF THIS CONFIGURATION IS PROHIBITED

1	VIEW / EDIT OPERATING CHAR			
2	ITEM	SG	RK1	RK2
4	DCLTR GS ON BC	1	1	1
6	DISPLAY WIND VEC	1	1	1
7	DISPLAY DRIFT	1	1	1
9	DME DIST ONLY	1	1	1
1	VIEW / EDIT OPERATING			
2	ITEM	SG	RK1	RK2
6	DCLTR UNUS ATT	1	1	1
1	VIEW / EDIT OPERATING			
2	ITEM	SG	RK1	RK2
4	VERT PTR TYPE	2	2	2
5	DISPLAY FMS MSG	1	1	1
9	RISING RUNWAY	1	1	1
11	CMD BAR FILTER	1	1	1

NOTE :
Confirm all missing lines above mentioned as follows :

SG	*RK1*	*RK2*
0	*0*	*0*

Figure 9.9.1 - TABLE OF OPERATING CONFIGURATIONS CERTIFIED FOR TBM 700 AIRPLANE

The "BENDIX / KING Pilot's Guide EFS 40 system" P/N 006-08701-00001K at its latest revision shall be readily available for the operation of the EFIS.

SECTION 3
EMERGENCY PROCEDURES

These procedures supplement those of standard airplane described in Section 3 "Emergency procedures" of the basic Pilot's Operating Manual.

TABLE OF CONTENTS OF EMERGENCY PROCEDURES

TRANSITION TO COMPOSITE MODE

CAUTION

THE USE OF COMPOSITE MODE IS ONLY AUTHORIZED WHEN ONE OF BOTH DISPLAYS IS OUT OF ORDER OR WHEN VENTILATION OF ONE OF BOTH DISPLAYS IS OUT OF ORDER

1 - Control the attitudes referring to stand-by horizon

2 - Select COMPOSITE MODE by pressing CMPST push-button

When COMPOSITE figuration appears :

3 - Fully reduce brightness of the faulty display

4 - Control referring to the remaining display

CAUTION

THE AUTOPILOT DISENGAGES AS SOON AS COMPOSITE MODE IS SELECTED. AS SOON AS COMPOSITE FIGURATION APPEARS, THE AUTOPILOT CAN BE REENGAGED

RED WARNING ATTITUDE FAIL

This warning, displayed on EADI center, indicates a vertical gyro failure. It causes pitch and roll attitudes scales removal and involves autopilot disconnection.

- Control the attitude referring to stand-by horizon.

RED WARNING HDG

This warning, displayed on EHSI lubber line indicator location, indicates a directional gyro failure.
It involves autopilot transition to wings level basic mode.

- Control the heading referring to emergency compass.

NOTE :
. *Only bearing information remains valid for ADF.*
. *Only QDM and course deviation information remain valid for the VOR.*

EADI FAILURE

If EADI symbols partially or completely disappear, the display is out of order.

In order to reconfigure the system, apply transition to COMPOSITE MODE procedure.

EHSI FAILURE

If EHSI symbols partially or completely disappear, the display is out of order.

In order to reconfigure the system, apply transition to COMPOSITE MODE procedure.

YELLOW WARNING DU

This warning, displayed on the lower left corner of the EADI or EHSI, indicates a loss of airflow of the concerned display.

- If the failure occurs BEFORE FINAL APPROACH PHASE, apply transition to COMPOSITE MODE procedure.
- If the failure occurs DURING FINAL APPROACH, continue without changing anything.

NOTE :
In the worst ambient temperature conditions, the display correctly operates during at least 30 minutes after annunciation.

YELLOW WARNING [SG]

This warning, displayed on the lower left corner of the EADI and at the lower right corner of the EHSI, indicates a loss of airflow of the symbol generator.

1 - Reduce, if possible, displays brightness

2 - Lighten the display information if possible (radar image, navigation secondary information)

NOTE :
In the worst ambient temperature conditions, the symbol generator correctly operates during at least 30 minutes after annunciation.

RED WARNING [CP]

This warning, displayed on the L.H. of the EHSI and at the lower left corner of the EADI, indicates that a control panel switch of the EHSI has become stuck.

In this case, ALL CURRENTLY SELECTED CONDITIONS ARE FROZEN.

SELF-TEST DISPLAY

A self-test display during the flight indicates :

- that the pilot pressed the TST / REF push-button during more than 3 seconds,
- or that the TST / REF push-button remained stuck after having been briefly depressed.

In the case of a stuck button, the EADI and the EHSI return to normal display after 6 seconds.

RED CROSS DISPLAY ON HEADING BUG

A red cross, displayed on the HEADING BUG, indicates a HDG rotactor failure.

In this case, THE HEADING SELECTION IS FROZEN.

RED CROSS DISPLAY ON COURSE POINTER

A red cross, displayed on head and tail of the COURSE pointer, indicates a CRS rotactor failure.

In this case, THE COURSE SELECTION IS FROZEN.

RED WARNING RCP

This warning, displayed on the lower left corner of the EHSI, indicates a radar control panel failure.

NOTE :
In case of absence of specific radar screen, the radar goes automatically into ST-BY mode, regardless of radar control panel setting, whenever a weather radar mode is not selected for EHSI.

RED WARNINGS ATTITUDE FAIL AND HDG

These warnings indicate a failure of directional and vertical gyros power supply converter.
It involves autopilot disconnection as well as the removal of ADF information.

- Control referring to emergency instruments.
- Set "EFIS MASTER" switch to OFF.

SMALL RED WARNING SG

This warning, displayed on EHSI upper part or on EADI lower part, indicates that information present on the concerned display are no longer valid.

- Use these information, particularly the attitudes, only after validation with emergency instruments and only as additional information.

BIG RED WARNING SG

This warning, displayed on the entire EADI or EHSI screen, indicates that the symbols generator of the concerned display is unusable. It involves the autopilot disconnection.

- Control referring to corresponding emergency instruments.
- Fully reduce brightness of the concerned display.

OPTION OPT70–01–018 (if installed)

YELLOW WARNING

This warning displayed on the L.H. side of the heading bug, indicates a heading difference greater than 6° between the EHSI and HSI#2 directional gyros.

– Determine the wrong heading source by referring to a 3rd heading source.

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SECTION 4
NORMAL PROCEDURES

4.1 - GENERAL

These procedures supplement those of standard airplane described in Section 4 "Normal procedures" of the basic Pilot's Operating Handbook.

4.2 - LIST OF GROUND CHECKS

BEFORE TAXIING

1 - Check no flags
"DU", "SG", "CP"

EFS 40 SYSTEM AUTOTEST (if desired)

1 - "TST / REF" button ..... **PRESS and HOLD for 3 seconds**

2 - Check :

- the EHSI and EADI test images appear
- the "SELF TEST PASS" or "SELF TEST FAIL" message is annunciated in the center of each test pattern

If the "SELF TEST FAIL" message appears, the EFS 40 system must be serviced.

4.3- LIST OF INFLIGHT CHECKS

SELECTION OF NAVIGATION SYSTEM

1 - Push-button [1 2] ..... **PRESS**

NOTE :
If only one navigation sensor is installed, the display will not cycle and the sensor annunciation will not show a system number.

SELECTION OF THE PRIMARY NAVIGATION SENSOR

1 - Push-button [NAV] ..... **PRESS**

A press of the NAV push-button sequentially selects the primary navigation sensor. The sequence movement is :

- VOR, LOR (if installed), ADF then VOR, etc...

NOTE :
When the VOR navigation sensor is selected and an ILS frequence displayed, or if the KNS 81 is in RNAV mode, the VOR annunciation is respectively replaced by LOC or RNAV.

SELECTION OF THE 360-DEGREE HSI MODE

1 - Push-button [HSI] ..... **PRESS**

A press of the HSI push-button, sequentially selects the 360-degree display formats. The movement sequence is :

- COMPASS ROSE
- COMPASS ROSE AND NAVIGATION MAP
- COMPASS ROSE AND NAVIGATION MAP AND RADAR IMAGE (if radar installed)

SELECTION OF BEARING POINTERS

1 - Push-button [→] or [⇒] ..... **PRESS**

The button [→] is paired with the white single bar pointer.

The button [⇒] is paired with the magenta double bar pointer.

A press of the bearing pointer buttons, sequentially selects the navigation sensors which are interfaced with the pointers.

The movement sequence is :

- no pointer (declutter function)
- VOR
- LOR (if installed)
- ADF
- no pointer, etc...

SELECTION OF BEARING POINTERS (Cont'd)

NOTE :

- *The pointers are displayed only if a valid radio-electric information exists.*
- *The VOR position is withdrawn from the sequence if an ILS frequence is selected.*
- *The DME information is displayed below the sensor annunciation - in VOR function, if a VOR-DME frequence is selected - in ADF function, if a VOR-DME frequence is selected and the DME positioned to "HOLD".*
- *The distance indication is displayed only if a valid DME signal is really received.*

SELECTION OF THE "ARC" DISPLAY MODE

1 - Push-button [A R C] ..... **PRESS**

A press of the ARC push-button, sequentially selects the ARC display formats. An approximate 85-degree sector display of the compass is presented. The movement sequence is :

ARC - ARC + NAV - ARC + NAV + RADAR (if installed) - ARC + RADAR (if installed) - ARC...

RANGE SELECTION

1 - Push-button [Δ] or [∇] ..... **PRESS**

A press of the buttons [Δ] or [∇] respectively selects the next higher or lower range to be displayed while in the NAV MAP or RADAR modes of operation. The selectable ranges are :

5 NM - 10 NM - 20 NM - 40 NM - 80 NM - 160 NM - 240 NM - 320 NM - 1000 NM.

COURSE SELECTION

1 - CRS knob ..... **ROTATE**

Pushing the center of the CRS knob will cause the course pointer to slew to the direct course to the selected NAVAID or active waypoint.

HEADING SELECTION

1 - HDG knob ..... **ROTATE**

Pushing the center of the HDG knob will cause the heading bug to slew to the present aircraft heading.

SETTING OF GROUND SPEED OR TIME TO THE STATION

1 - TST / REF button ..... **PRESS**

When the EFIS system is coupled with the KLN 90A or KLN 90B GPS, a press of the TST / REF button displays one after the other in NAVIGATION MAP mode the following items on the screen background :

- FPL ID
- AIRPORT
- NAVAIDS.

CAUTION

WHEN THE TST / REF BUTTON IS PRESSED AND HELD FOR 3 SECONDS, IT INITIATES THE EFS 40 SYSTEM TEST AND DISENGAGES THE AUTOPILOT

SECTION 5
PERFORMANCES

The installation and the operation of "BENDIX/KING" EFS 40 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)
	01 – SPECIFIC OPTIONAL EQUIPMENT			
A	Heading#1/Heading#2 EHSI miscompare (OPT70 3401018)	KING	0.033 (0.015)	125.98 (3.200)
	34 – NAVIGATION			
O	EFIS (EFS 40 + AP) KFC 325 (OPT 70 34001)	KING		
	– with standby horizon M32 RC ALLEN RCA 22		71.716 (32.530)	133.19 (3.383)
	– with horizon M32 EDO AIRE /SIGMATEK 5000B		71.520 (32.440)	132.60 (3.368)

SECTION 7
DESCRIPTION

7.1 - EFS 40 CONTROLS

1) EADI
2) EHSI
3) Push-button of EFS 40 self-test or of DME ground speed or time-to-station alternate display
4) Scale setting push-button in MAP or WEATHER mode
5) ARC symbologic mode selecting push-button
6) Selected heading bug knob
7) ERMI dual pointer selecting push-button
8) EHSI brightness setting knob
9) ERMI single pointer selecting push-button
10) Navigation course selecting knob
11) EHSI figuration modes selecting push-button
12) Navigation source selecting push-button
13) Navigation system selecting push-button
14) MARKER test and level selecting toggle switch
15) EADI brightness setting knob
16) COMPOSITE MODE selecting push-button
17) CMPST push-button light test
18) DME frequence tuning selecting rotary switch
19) EFIS MASTER switch - see Figure 9.9.4

Figure 9.9.2 (1 / 2) - CONTROLS AND DISPLAY

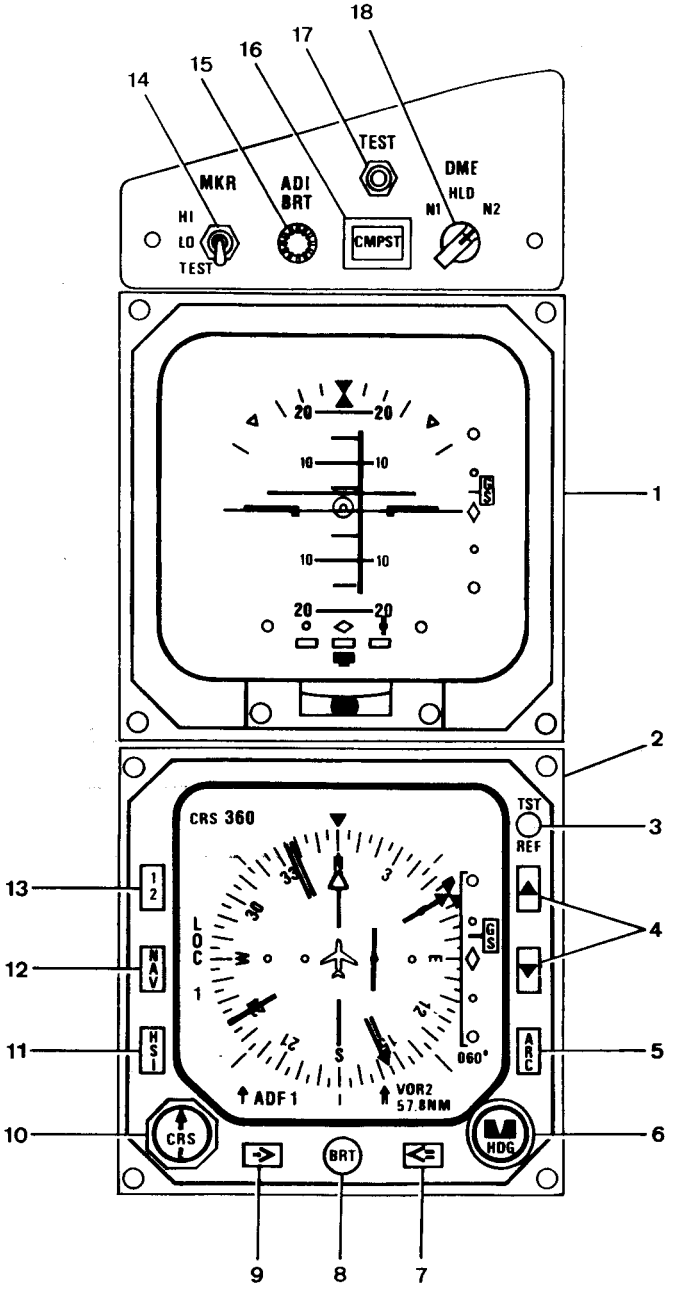

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Figure 9.9.2 (2 / 2) - CONTROLS AND DISPLAY

Item 3 - TST / REF button - It allows to self-test the EFS 40 system by pressing at least 3 seconds. A brief switching allows to alternately display DME ground speed or time-to-station.

Item 4 - PUSH-BUTTONS Δ and ∇ - They allow to modify the range scale either in NAV MAP or WEATHER mode.

Item 5 - ARC PUSH-BUTTON - It allows to select the desired ARC figuration :
by switching:
. ARC COMPASS ROSE
. ARC NAV MAP
. ARC NAV MAP WITH WEATHER
. ARC COMPASS ROSE WITH WEATHER

Item 6 - HDG KNOB - It allows to set the bug to the desired heading. Depress to synchronise with the present heading.

Item 7 - PUSH-BUTTON < = - It allows to allocate the ERMI dual pointer to the different navigation sensors.

Item 8 - BRT KNOB - It allows to set the EHSI brightness.

Item 9 - PUSH-BUTTON => - It allows to allocate the ERMI single pointer to the different navigation sensors.

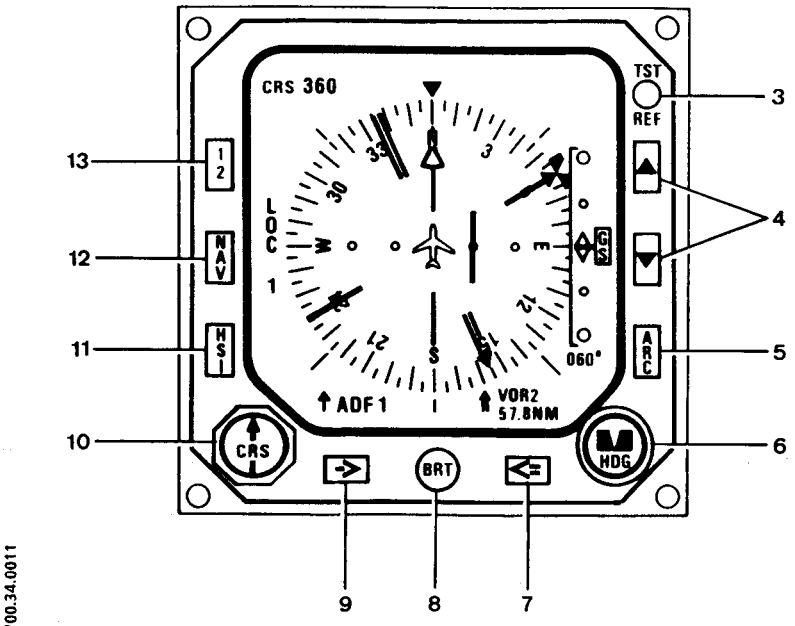
Item 10 - CRS KNOB - It allows to display the desired radial. Depress to select the present QDM.

Item 11 - HSI PUSH-BUTTON - It allows to select the EHSI desired figuration :
by switching :
. HSI COMPASS ROSE
. HSI NAV MAP
. HSI NAV MAP WITH WEATHER

Item 12 - NAV PUSH-BUTTON - It allows to select the primary navigation source.

Item 13 - NAVIGATION SYSTEM SELECTING PUSH-BUTTON - It allows to select the navigation system used (system 1 or 2).

Figure 9.9.3 (1 / 2) - EHSI CONTROLS



S.4.700.34.0011

Figure 9.9.3 (2 / 2) - EHSI CONTROLS

Item 14 - MKR TOGGLE - It allows to test the Marker system (TEST) and select the receiver sensitivity (LO, HI).

Item 15 - ADI BRT KNOB - EADI display brightness setting knob.

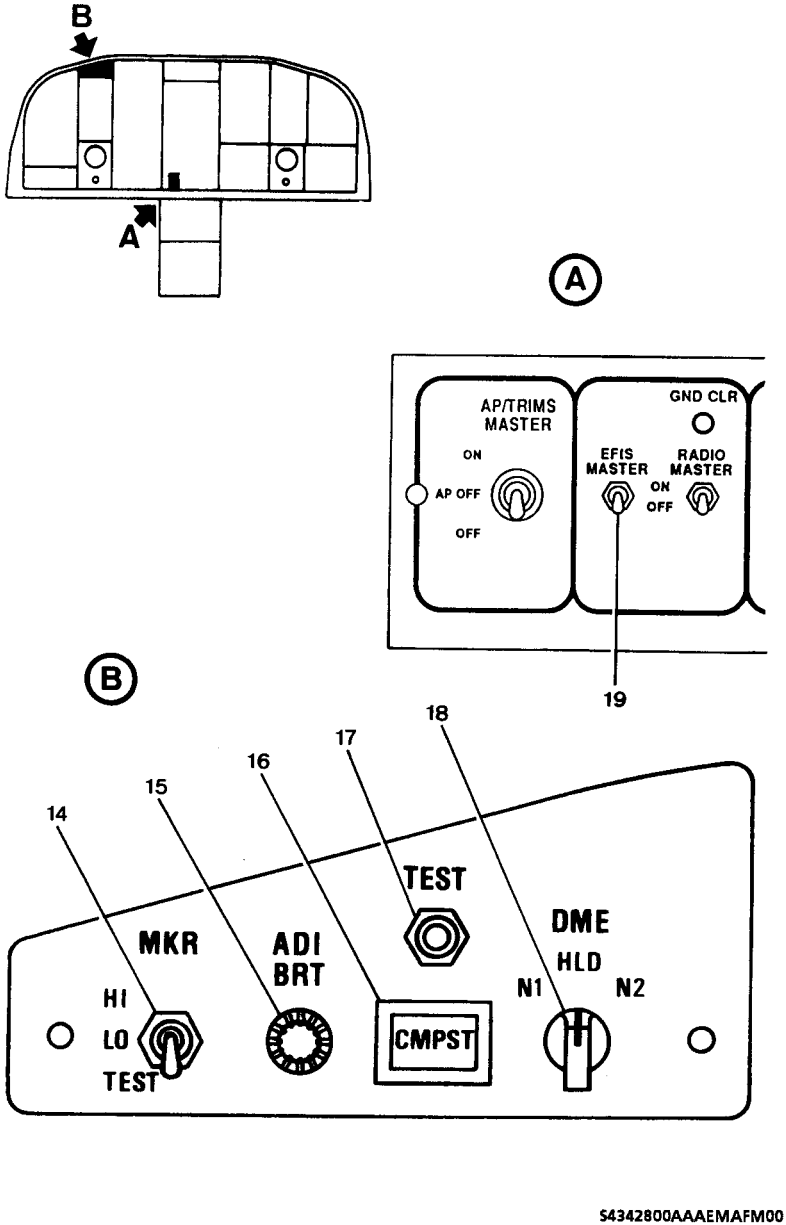
Item 16 - CMPST PUSH-BUTTON - Push-button allowing to select COMPOSITE MODE figuration, which is an image uniting EADI display information with some navigation information including a heading scale along the horizon line.

Item 17 - TEST PUSH-BUTTON - It allows to test the CMPST push-button lamp.

Item 18 - DME ROTARY SWITCH - It allows to tune DME receiver frequency to the navigation system 1 or 2 (N_1 and N_2 positions). Furthermore, when tuning is performed, the rotator allows to memorize the selected frequency in the DME receiver (HLD position).

Item 19 - EFIS MASTER SWITCH - It controls the power to all EFIS system components.

Figure 9.9.4 (1 / 2) - EADI CONTROLS



S4342800AAAEMAFM00

Figure 9.9.4 (2 / 2) - EADI CONTROLS

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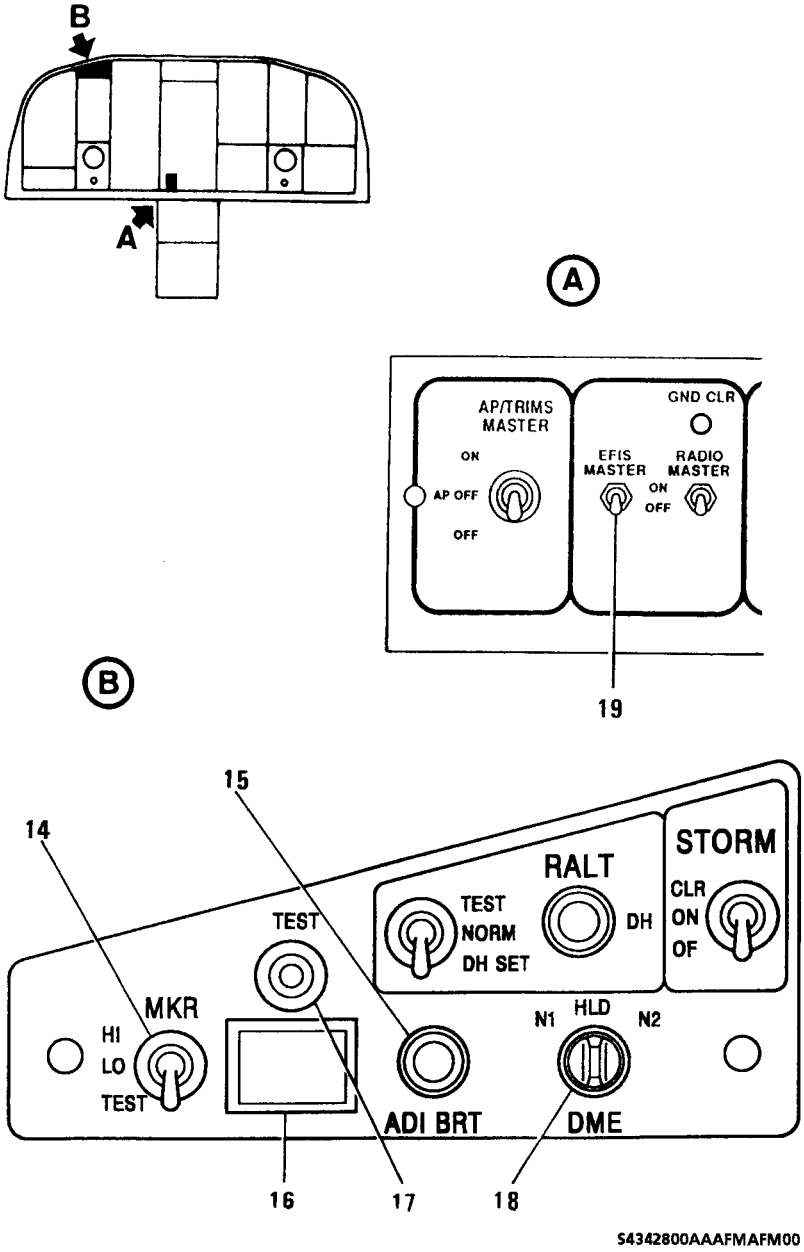


Figure 9.9.4A (2 / 2) - EADI CONTROLS

7.2 - EADI SYMBOLOGY

1) Roll scale
2) Pitch scale
3) Airplane symbol (for split-cue FD command bars)
4) Side-slip indicator
5) Radar altimeter display
6) Glide Slope scale
7) Decision height alert
8) Airplane symbol (for single-cue FD command bars)
9) Localizer scale
10) Selected decision height display
11) Rate of turn display
12) FD command bars (split-cue)
13) Autopilot modes annunciator
14) FD command bars (single-cue)

Figure 9.9.5 (1 / 2) - EADI

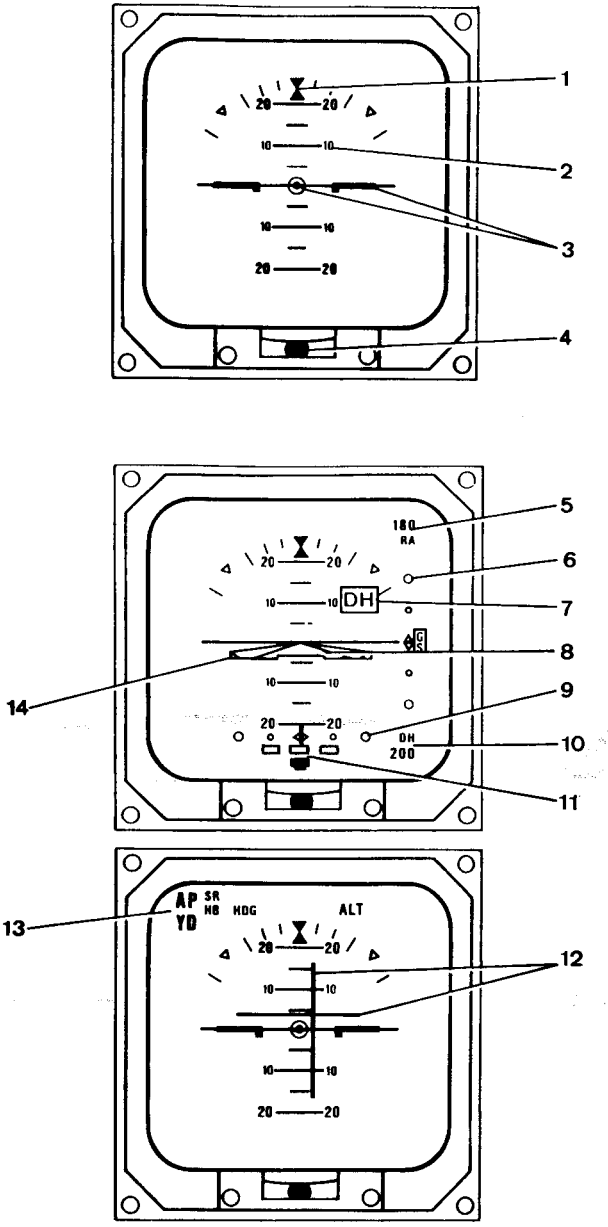
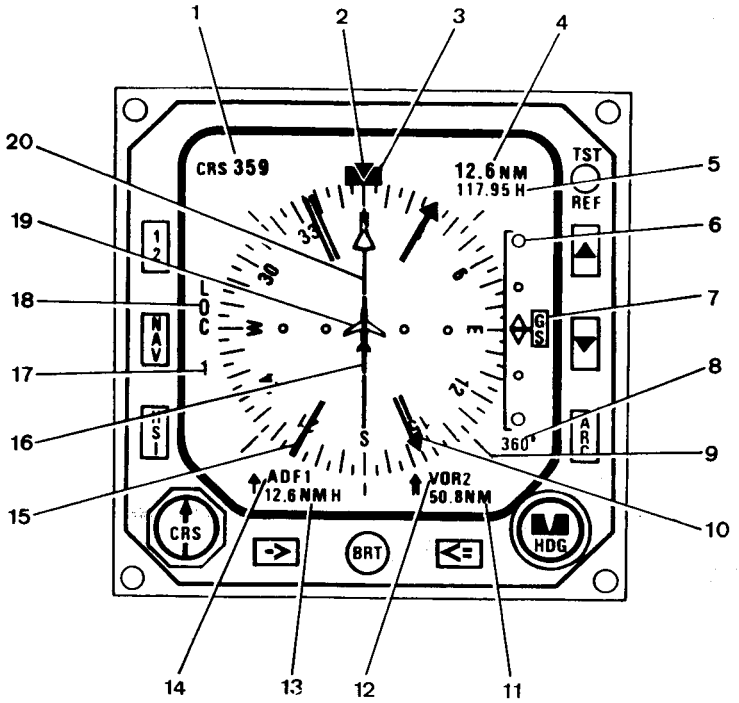


Figure 9.9.5 (2 / 2) - EADI

7.3 - EHSI SYMBOLOGY

1) Selected course
2) Lubber line
3) Selected heading bug
4) Distance bound to the primary navigation source (or other navigation system when in HLD function)
5) Ground speed or time-to-station or navigation source frequency when in HLD function
6) Glide Slope scale
7) Glide Slope pointer
8) Selected heading value
9) Heading rose
10) ERMI dual pointer
11) DME 2 distance
12) Navigation system allocated to ERMI dual pointer
13) DME 1 distance
14) Navigation system allocated to ERMI single pointer
15) ERMI single pointer
16) Deviation bar
17) Navigation system Nr 1 or Nr 2 used
18) Primary navigation source selected
19) Airplane symbol
20) Selected radial pointer

Figure 9.9.6 (1 / 2) - STANDARD EHSI SYMBOLOGY



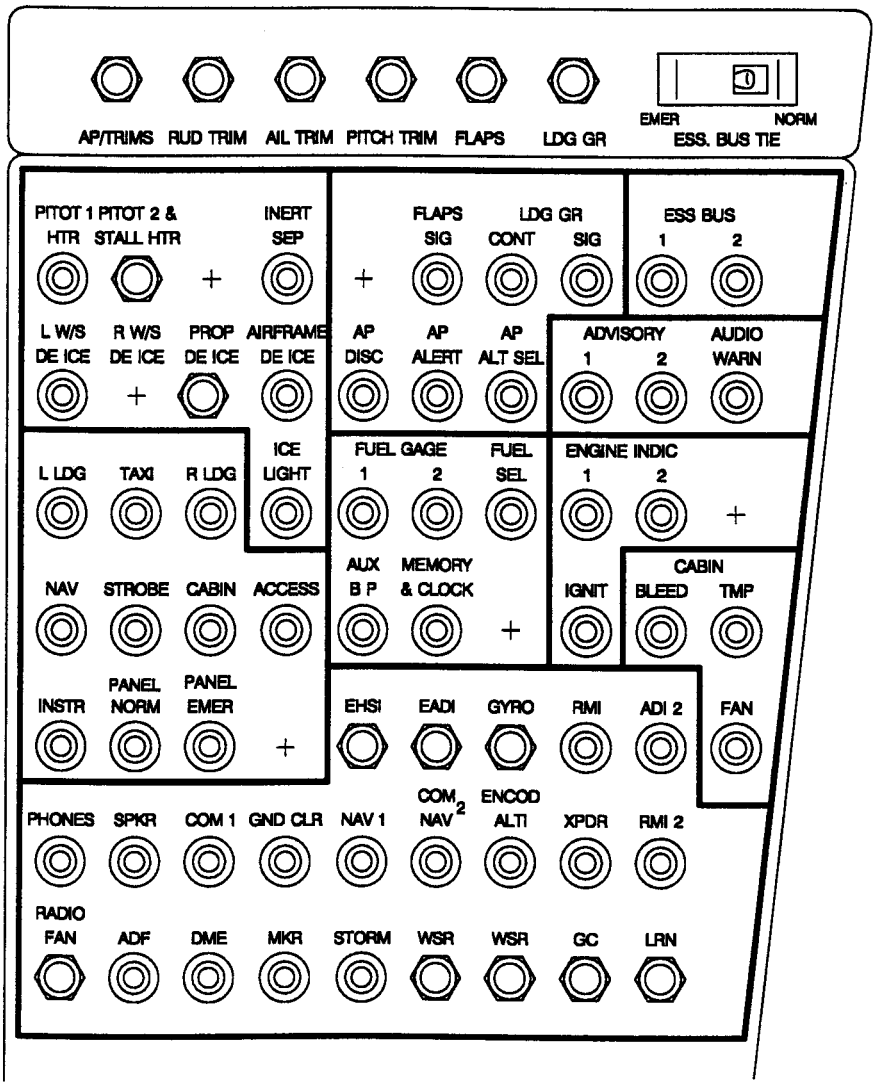
S.4.700.34.0014

Figure 9.9.6 (2 / 2) - STANDARD EHSI SYMBOLOGY

AP / TRIMS	AP & trims general protec.
RUD TRIM	Rudder trim protec.
AIL TRIM	Aileron trim protec.
PITCH TRIM	Pitch trim protec.
FLAPS	Flaps protec.
LDG GR	Landing gear general protec.
ESS BUS TIE	Essential bus NORM & EMER switch
PITOT 1 HTR	Pitot 1 deicing protec.
PITOT 2 & STALL HTR	Pitot 2 and stall warning deicing protec.
INERT SEP	Inertial separator protec.
LW/S DE ICE	L.H. windshield deicing protec.
RW/S DE ICE	R.H. windshield deicing protec.
PROP DE ICE	Propeller deicing protec.
AIRFRAME DE ICE	Empennage and wing leading edges deicing protec
ICE LIGHT	L.H. wing leading edge lighting protec.
L LDG	L.H. landing light protec.
TAXI	Taxi light protec.
R LDG	R.H. landing light protec.
NAV	Navigation lights protec.
STROBE	Strobe lights protec.
CABIN	Passenger's reading lamps protec.
ACCESS	FWD dome light, cabin, baggage compartment bottom & access door lighting protec.
INSTR	Instruments light. protec.
PANEL NORM	Instrument panel normal lighting protec.
PANEL EMER	Instrument panel emergency lighting protec.
FUEL GAGE 1	L.H. gage protec.
FUEL GAGE 2	R.H. gage protec.
FUEL SEL	Timer protec.
AUX BP	Fuel pump protec.
MEMORY & CLOCK	Stop watch and flowmeter protec.
ENGINE INDIC 1	Power plant cont. protec. : Oil temp. & pres., torque, propeller
ENGINE INDIC 2	Power plant cont. protec. : Ng, flowmeter & ITT
IGNIT	Power plant ignit. protec.

ADVISORY 1	Visual warn. protec.
ADVISORY 2	Visual warn. protec.
AUDIO WARN	Audio warnings protec.
FLAPS SIG	Flaps signalization protec.
LDG GR CONT	Landing gear control protec.
LDG GR SIG	Landing gear signalization protec.
AP DISC	Trim and AP cont. protec.
AP ALERT	Trim and AP audio signalization protec.
AP ALT SEL	Altitude selector protec.
ESS BUS 1	Essential bus 1 circuit protec.
ESS BUS 2	Essential bus 2 circuit protec.
EHSI	EHSI protec.
EADI	EADI protec.
GYRO	Gyros protec.
RMI	RMI protec.
ADI 2	ADI Nr 2 protec.
PHONES	Reception line protec.
SPKR	Loudspeaker line protec.
COM 1	VHF 1 protec.
GND CLR	Ground communication protec.
NAV 1	NAV 1 radio protec.
COM 2 NAV	VHF 2 & NAV 2 radio protec.
ENCOD ALTI	Encoding altimeter protec.
XPDR	Transponder protec.
RMI 2	RMI 2 protec.
RADIO FAN	Radio fan protec. + radio master
ADF	ADF protec.
DME	DME protec.
MKR	MKR protec.
STORM	Stormscope protec.
WSR	Weather radar protec.
GC	Radar graphic protec.
LRN	LORAN long range navigation protec.
CABIN BLEED	Cabin air bleed valve protec.
CABIN TEMP	Cabin temperature valve protec.
FAN	Ground fan protec.

Figure 9.9.7 (1 / 2) - EFIS CIRCUIT BREAKERS PANEL



I4255004AAAHMA8201

Disjoncteur déclenchable
"PULL-OFF" type circuit breaker

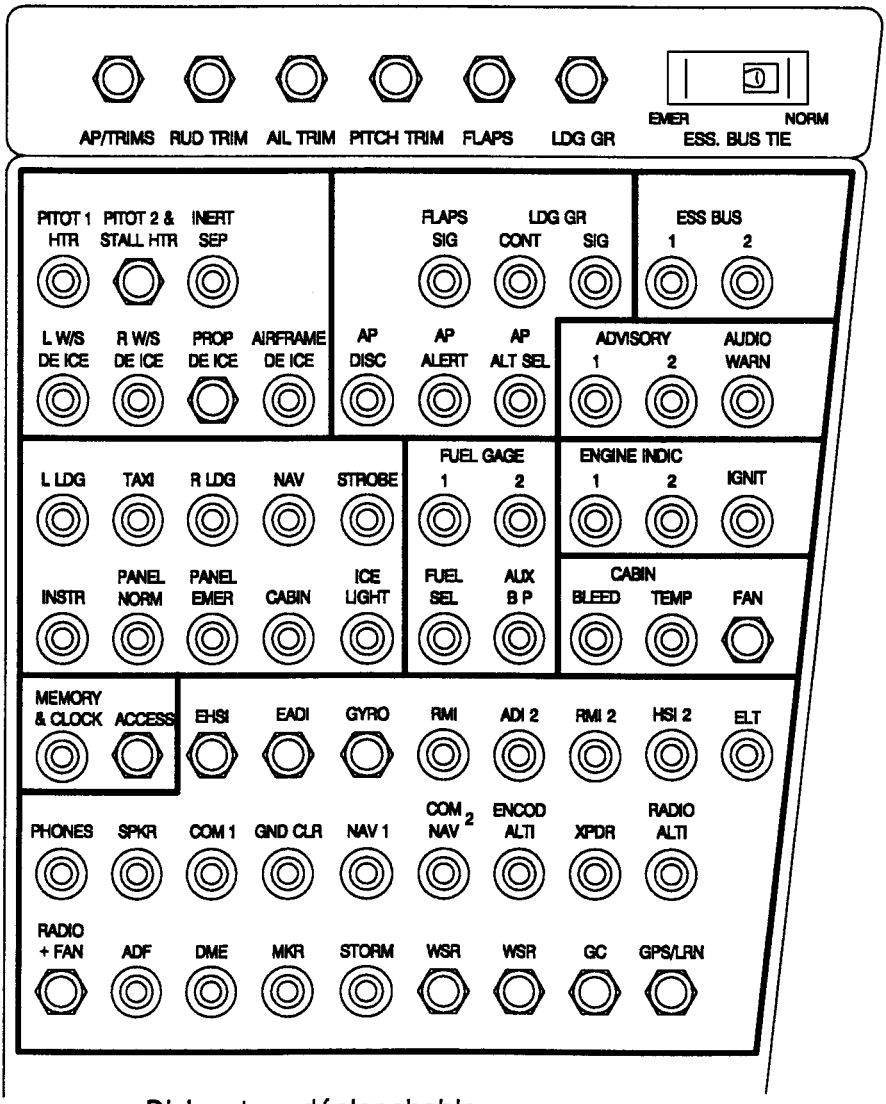
Disjoncteur non déclenchable
Circuit breaker which cannot be pulled off

Figure 9.9.7 (2 / 2) - EFIS CIRCUIT BREAKERS PANEL

AP / TRIMS	AP & trims general protec.
RUD TRIM	Rudder trim protec.
AIL TRIM	Aileron trim protec.
PITCH TRIM	Pitch trim protec.
FLAPS	Flaps protec.
LDG GR	Landing gear general protec.
ESS BUS TIE	Essential bus NORM &
PITOT 1 HTR	Pitot 1 deicing protec.
PITOT 2 & STALL HTR	Pitot 2 and stall warning deicing protec.
INERT SEP	Inertial separator protec.
LW/S DE ICE	L.H. windshield deicing protec.
RW/S DE ICE	R.H. windshield deicing protec.
PROP DE ICE	Propeller deicing protec.
AIRFRAME DE ICE	Empennage and wing leading edges deicing protec.
FLAPS SIG	Flaps signalization protec.
LDG GR CONT	Landing gear control protec.
LDG GR SIG	Landing gear signalization protec.
AP DISC	Trim and AP cont. protec.
AP ALERT	Trim and AP audio signalization protec.
AP ALT SEL	Altitude selector protec.
ESS BUS 1	Essential bus 1 circ. protec.
ESS BUS 2	Essential bus 2 circ. protec.
ADVISORY 1	Visual warn. protec.
ADVISORY 2	Visual warn. protec.
AUDIO WARN	Audio warnings protec.
L LDG	L.H. landing light protec.
TAXI	Taxi light protec.
R LDG	R.H. landing light protec.
NAV	Navigation lights protec.
STROBE	Strobe lights protec.
INSTR	Instruments light. protec.
PANEL NORM	Instrument panel normal lighting protec.
PANEL EMER	Instrument panel emergency lighting protec.
CABIN	Passenger's reading lamps protec.
ICE LIGHT	L.H. wing leading edge lighting protec.

FUEL GAGE 1	L.H gage protec.
FUEL GAGE 2	R.H gage protec.
FUEL SEL	Timer protec.
AUX BP	Fuel pump protec.
ENGINE INDIC 1	Power plant cont. protec. : Oil temp. & pres., torque, propeller
ENGINE INDIC 2	Power plant cont. protec. : Ng, flowmeter & ITT
IGNIT	Power plant ignit. protec.
CABIN BLEED	Cabin air bleed valve protec.
CABIN TEMP	Cabin temperature valve protec.
FAN	Ground fan protec.
MEMORY & CLOCK	Stop watch and flowmeter protec.
ACCESS	FWD dome light, cabin, baggage compartment bottom, access door lighting & access door closing geared motor protec.
EHSI	EHSI protec.
EADI	EADI protec.
GYRO	Gyros protec.
RMI	RMI protec.
ADI 2	ADI Nr 2 protec.
RMI 2	RMI 2 protec.
HSI 2	HSI 2 protec.
ELT	ELT 90 protec.
PHONES	Reception line protec.
SPKR	Loudspeaker line protec.
COM 1	VHF 1 protec.
GND CLR	Ground communication protec.
NAV 1	NAV 1 radio protec.
COM 2 NAV	VHF 2 & NAV 2 radio protec.
ENCOD ALTI	Encoding altimeter protec.
XPDR	Transponder protec.
RADIO ALTI	RADIO ALTI protec.
RADIO + FAN	Radio fan protec. + radio master
ADF	ADF protec.
DME	DME protec.
MKR	MKR protec.
STORM	Stormscope protec.
WSR	Weather radar protec.
GC	Radar graphic protec.
LRN	LORAN long range navigation protec.

Figure 9.9.7A (1 / 2) - EFIS CIRCUIT BREAKERS PANEL



I4255004AAAHMA8002

Disjoncteur déclenchable
"PULL-OFF" type circuit breaker

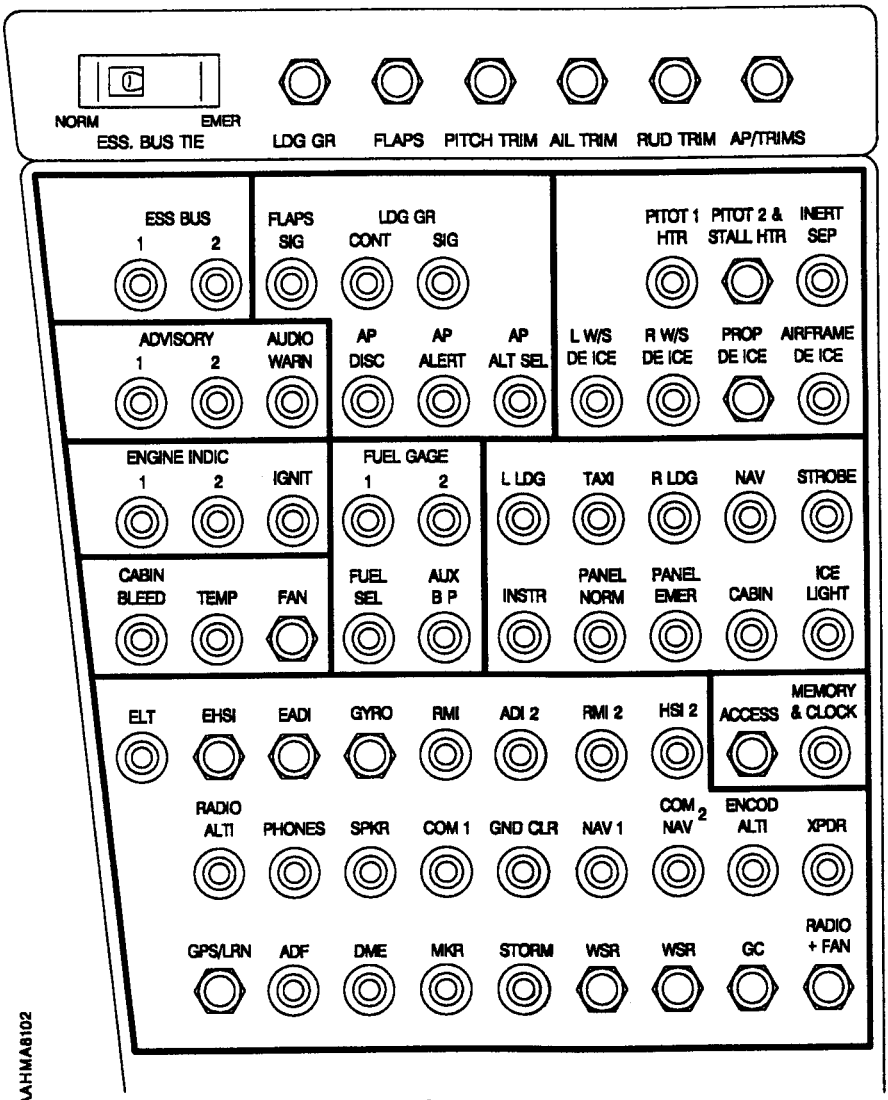
Disjoncteur non déclenchable
Circuit breaker which cannot be pulled off

Figure 9.9.7A (2 / 2) - EFIS CIRCUIT BREAKERS PANEL

AP / TRIMS	AP & trims general protec.
RUD TRIM	Rudder trim protec.
AIL TRIM	Aileron trim protec.
PITCH TRIM	Pitch trim protec.
FLAPS	Flaps protec.
LDG GR	Landing gear general protec.
ESS BUS TIE	Essential bus NORM &
PITOT 1 HTR	Pitot 1 deicing protec.
PITOT 2 & STALL HTR	Pitot 2 and stall warning deicing protec.
INERT SEP	Inertial separator protec.
LW/S DE ICE	L.H. windshield deicing protec.
RW/S DE ICE	R.H. windshield deicing protec.
PROP DE ICE	Propeller deicing protec.
AIRFRAME DE ICE	Empennage and wing leading edges deicing protec.
FLAPS SIG	Flaps signalization protec.
LDG GR CONT	Landing gear control protec.
LDG GR SIG	Landing gear signalization protec.
AP DISC	Trim and AP cont. protec.
AP ALERT	Trim and AP audio signalization protec.
AP ALT SEL	Altitude selector protec.
ESS BUS 1	Essential bus 1 circ. protec.
ESS BUS 2	Essential bus 2 circ. protec.
ADVISORY 1	Visual warn. protec.
ADVISORY 2	Visual warn. protec.
AUDIO WARN	Audio warnings protec.
L LDG	L.H. landing light protec.
TAXI	Taxi light protec.
R LDG	R.H. landing light protec.
NAV	Navigation lights protec.
STROBE	Strobe lights protec.
INSTR	Instruments light. protec.
PANEL NORM	Instrument panel normal lighting protec.
PANEL EMER	Instrument panel emergency lighting protec.
CABIN	Passenger's reading lamps protec.
ICE LIGHT	L.H. wing leading edge lighting protec.

FUEL GAGE 1	L.H gage protec.
FUEL GAGE 2	R.H gage protec.
FUEL SEL	Timer protec.
AUX BP	Fuel pump protec.
ENGINE INDIC 1	Power plant cont. protec. : Oil temp. & pres., torque, propeller
ENGINE INDIC 2	Power plant cont. protec. : Ng, flowmeter & ITT
IGNIT	Power plant ignit. protec.
CABIN BLEED	Cabin air bleed valve protec.
CABIN TEMP	Cabin temperature valve protec.
FAN	Ground fan protec.
MEMORY & CLOCK	Stop watch and flowmeter protec.
ACCESS	FWD dome light, cabin, baggage compartment bottom, access door lighting & access door closing geared motor protec.
ELT	ELT 90 protec.
EHSI	EHSI protec.
EADI	EADI protec.
GYRO	Gyros protec.
RMI	RMI protec.
ADI 2	ADI Nr 2 protec.
RMI 2	RMI 2 protec.
HSI 2	HSI 2 protec.
RADIO ALTI	RADIO ALTI protec.
PHONES	Reception line protec.
SPKR	Loudspeaker line protec.
COM 1	VHF 1 protec.
GND CLR	Ground communication protec.
NAV 1	NAV 1 radio protec.
COM 2 NAV	VHF 2 & NAV 2 radio protec.
ENCOD ALTI	Encoding altimeter protec.
XPDR	Transponder protec.
LRN	LORAN long range navigation protec.
ADF	ADF protec.
DME	DME protec.
MKR	MKR protec.
STORM	Stormscope protec.
WSR	Weather radar protec.
GC	Radar graphic protec.
RADIO + FAN	Radio fan protec. + radio master

Figure 9.9.7B (1 / 2) - EFIS CIRCUIT BREAKERS PANEL



I4255004AAAHMA8102

Disjoncteur déclenchable
"PULL-OFF" type circuit breaker

Disjoncteur non déclenchable
Circuit breaker which cannot be pulled off

Figure 9.9.7B (2 / 2) - EFIS CIRCUIT BREAKERS PANEL

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SUPPLEMENT

"BENDIX / KING" AUTOPILOT

TYPE KFC 325

TABLE OF CONTENTS

SECTION 1
GENERAL

This supplement is provided to acquaint the pilot with the limitations as well as normal and emergency operating procedures of the BENDIX / KING KFC 325 Digital Autopilot. The limitations presented are pertinent to the operation of the KFC 325 System as installed in the TBM 700 airplane. The Autopilot must be operated within the limitations herein specified.

The KFC 325 Autopilot is certified in this airplane with 3 axis control, pitch, roll and yaw damper. The various instruments and the controls for the operation of the KFC 325 System are described in the following pages.

The KFC 325 Autopilot has an electric pitch trim system which provides autotrim during autopilot operation and manual electric trim for the pilot when the autopilot is not engaged. The trim system is designed to withstand any single inflight malfunction.

A lockout device prevents autopilot engagement until the system has been successfully preflight tested.

The following conditions will cause the Autopilot to automatically disconnect :

A - Power failure.

B - Internal Flight Control System failure.

C - Roll rates in excess of 10° / sec. except when the "CWS" push-button is held depressed.

D - Pitch rates in excess of 5° / sec. except when the "CWS" push-button is held depressed.

E - Accelerations outside of a 0.3 g to 1.6 g envelope (1.0 g's being normal for straight and level flight).

F - The presence of "ATTITUDE FAIL" and big "SG" flags.

G - A movement of the roll trim except when the "CWS" push-button is held depressed.

H - A movement of the pitch trim.

SECTION 2
LIMITATIONS

These limitations supplement those of standard airplane described in Section 2 "Limitations" of the basic Pilot's Operating Handbook.

A - During autopilot operation, a pilot with seat belt fastened must be seated at the left pilot position.

B - The autopilot and yaw damper must be OFF during takeoff and landing.

C - Do not engage autopilot below 1000 ft (300 m) above ground level in cruise or climb.

D - Do not use autopilot in approach under 200 ft (60 m).

E - Autopilot engagement is prohibited with the "PITCH TRIM" circuit-breaker pulled.

F - IAS for localizer interception is limited to 160 kt.

G - In "APR" mode - "GS" coupled, flaps must be fully extended in landing position before crossing the OM.

NOTE 1 :
Use of basic pitch attitude hold mode is recommended during operation in severe turbulence.

NOTE 2 :
It is recommended not to use the autopilot with a too high rate of descent below 2000 ft (600 m) above ground level.

SECTION 3
EMERGENCY PROCEDURES

These procedures supplement those of standard airplane described in Section 3 "Emergency procedures" of the basic Pilot's Operating Handbook.

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

NOTE :
Maximum altitude losses due to autopilot malfunction :

Configuration	*Altitude loss*
Cruise, climb	*200 ft*
Maneuver, descent	*800 ft*
Approach	*90 ft*

ENGINE FAILURE (AUTOPILOT COUPLED)

1 - "AP / TRIMS DISC INT" push-button ..... **PRESSED**

2 - In case of engine failure, apply the basic airplane Pilot's Operating Handbook procedures.

SECTION 4
NORMAL PROCEDURES

4.1 - GENERAL

These procedures supplement those of standard airplane described in Section 4 "Normal procedures" of the basic Pilot's Operating Handbook.

4.2 - LIST OF GROUND CHECKS

BEFORE TAXIING

AUTOPILOT AUTOTEST

1 - Check no flags
"ATTITUDE FAIL", "HDG", "SG", "DU"

2 - "TEST" button ..... **PRESS**

3 - Check :

- All annunciator lights of control box ON ("TRIM" annunciator flashing).
- After approximately 5 seconds, all annunciator lights of control box OFF except "AP" which will flash approximately 12 times prior to extinguishing and red "AP" of EADI which will flash approximately 5 times prior to extinguishing and be accompanied by the autopilot audible disconnect tone.

NOTE :
If "TRIM" warning light on the mode controller or if the "PTRM" annunciator on the EADI stays ON, the autotrim did not pass preflight test. The "AP / TRIMS MASTER" switch must be turned to "AP OFF" position. The flight director may be used but the electric pitch trim will be inoperative and the autopilot should not be engaged.

BEFORE TAXIING (Cont'd)

MANUAL ELECTRIC TRIM TEST

1 - Actuate left side of split switch unit to the fore and aft positions. The trim wheel should not move on its own. Rotate the trim wheel manually against the engaged clutch to check the pilot's trim overpower capability.

2 - Actuate right side of split switch unit to the fore and aft positions. Trim wheel should not move on its own and normal trim wheel force is required to move it manually.

3 - Press the "AP / TRIMS DISC INT" push-button down and hold.
Manual electric trim should not operate either nose up or nose down when both halves of the split switch are actuated to the fore and aft positions.

AUTOMATIC ELECTRIC TRIM TEST

1 - "AP" button ..... **PRESS**
to engage autopilot

2 - Control wheel ..... **MOVE**
aft, fore, left and right to verify that the autopilot can be overpowered

3 - "AP / TRIMS DISC INT" push-button ..... **PRESS**
Verify that the autopilot disconnects and all flight director modes are cancelled

4 - Trim ..... **SET**
to takeoff position

BEFORE TAKEOFF

1 - "AP / TRIMS DISC INT" push-button ..... **PRESS**

4.3 - LIST OF INFLIGHT CHECKS

AUTOPILOT ENGAGEMENT

"AP" button ..... **PRESS**

Note "AP", "FD" and "YD" annunciators ON. If no other flight director modes are selected at the time of autopilot engagement the mode of operation will be flight director wings level and pitch attitude hold.

CAUTION

DO NOT EXERT ANY PRESSURE ON THE PITCH CONTROL AS THE AUTOPILOT WILL RUN THE PITCH TRIM TO OPPOSE YOUR ACTION

NOTE :
Significant balance changes can occur with speed / power changes or fuel imbalance. With AP engaged it is therefore necessary to check regularly that the plane is trimmed in the roll axis by pressing the "CWS" push-button and if needed retrimming the plane. In case of action on the roll trim, the "CWS" push-button must be kept depressed, otherwise the AP will disconnect.

BASIC MODES

USING CWS

1 - "CWS" push-button ..... **PRESS and MOVE airplane nose to the desired attitude**

2 - "CWS" push-button ..... **RELEASE**

The autopilot will maintain airplane pitch attitude up to the pitch limits of + 15° or - 10°.

USING VERTICAL TRIM

1 - Vertical trim control ..... **PRESS either "UP" or "DOWN" to modify airplane attitude at a rate of 0.7 deg / sec. up to the pitch limits of + 15° or - 10°**

2 - Vertical trim control ..... **RELEASE when desired airplane attitude is reached**

The autopilot will maintain the desired pitch attitude.

ALTITUDE MODES

ALTITUDE HOLD

1 - "ALT" mode selector button ..... **PRESS**
Note ALT mode annunciator ON

The autopilot will maintain the selected pressure attitude.

ALTITUDE CHANGE

1 - Using "CWS" (recommended for altitude changes greater than 100 ft).

- "CWS" push-button ..... **PRESS**
and fly airplane to desired pressure altitude

- "CWS" push-button ..... **RELEASE**
when desired pressure altitude is reached

The autopilot will maintain the desired pressure altitude.

2 - Using Vertical Trim (recommended for altitude changes less than 100 ft).

- Vertical trim control ..... **PRESS**
either "UP" or "DOWN"

Vertical Trim will seek an altitude rate of change of about 500 ft / min.

- Vertical trim control ..... **RELEASE**
when desired pressure altitude is reached

The autopilot will maintain the desired pressure altitude.

SPEED MODES

INDICATED AIRSPEED HOLD

1 - "IAS" mode selector button ..... **PRESS**
Note the IAS mode annunciator ON

The autopilot will maintain the current indicated airspeed.

SELECTED INDICATED AIRSPEED CHANGE

1 - Using "CWS" (recommended for airspeed changes of 10 KIAS or greater)

- "CWS" push-button ..... **PRESS**
and fly airplane to desired airspeed

- "CWS" push-button ..... **RELEASE**
when desired airspeed is reached

The autopilot will maintain the desired airspeed.

2 - Using Vertical Trim (recommended for airspeed changes less than 10 KIAS).

- Vertical trim control ..... **PRESS**
either "UP" or "DOWN"

Vertical Trim will seek a new airspeed at a rate of about 0.75 knots per second.

- Vertical trim control ..... **RELEASE**
when desired time in seconds has past
i.e. 10 KIAS change desired hold V / T
for approximately 13 seconds

The autopilot will maintain the desired airspeed.

HEADING MODES

HEADING HOLD

1 - Heading selector knob ..... **SET bug to desired heading**

2 - "HDG" mode selector button ..... **PRESS**
Note HDG mode annunciator ON

The autopilot will automatically turn the airplane to the selected heading

MANUAL HEADING CHANGE (basic mode)

1 - "CWS" push-button ..... **PRESS and TURN airplane to the desired heading**

2 - "CWS" push-button ..... **RELEASE**

The autopilot will maintain airplane in wings level attitude.

NOTE :
Airplane heading may change in the wings level mode due to an airplane out of trim condition.

HEADING CHANGE ("HDG" mode)

1 - Heading selector knob ..... **SET bug to desired heading**

The autopilot will automatically turn the airplane to the new selected heading.

NAVIGATION MODE

1 - Course bearing pointer ..... **SET to desired course**

2 - Establish intercept angle using wings level or "HDG" modes.

3 - "NAV" mode selector button ..... **PRESS**

- If the Course Deviation Bar is greater than 2 to 3 dots : the airplane will continue in "HDG" mode (or wings level if "HDG" not selected) with the "NAV-ARM" annunciators illuminated. When the computed capture point is reached, the "HDG" will disengage, the "ARM" annunciator will turn off and the selected course will be automatically captured and tracked.
- If the D-Bar is less than 2 to 3 dots : the "HDG" mode will disengage upon selecting "NAV" mode ; the "NAV" annunciator will illuminate and the capture / track sequence will automatically begin.

NOTE :
When making relatively small course changes with "NAV" mode engaged, it may be necessary to reinitiate the "NAV" coupling procedures described in the previous paragraph. This will force the autopilot back into a capture mode, allowing the system to establish tracking the new course more rapidly.

CAUTION

IT IS BETTER NOT TO PERFORM AUTOMATIC CAPTURE OF AN "ADF" HEADING.

IT IS RECOMMENDED TO ENGAGE "NAV" MODE WHEN ADF CAPTURE IS PERFORMED.

APPROACH MODE

1 - Course bearing pointer ..... **SET to desired course**

2 - Establish intercept angle using wings level or "HDG" modes.

3 - "APR" mode selector button ..... **PRESS**

- If the Course Deviation Bar is greater than 2 to 3 dots : the airplane will continue in "HDG" mode (or wings level if "HDG" not selected) with the "APR-ARM" annunciators illuminated. When the computed capture point is reached the "HDG" will disengage, the "ARM" annunciators will turn off and the selected course will be automatically captured and tracked.

- If the D-Bar is less than 2 to 3 dots : the "HDG" mode will disengage upon selecting "APR" mode ; the "APR" annunciator will illuminate steady and the capture / track sequence will automatically begin.

BC APPROACH MODE

1 - Course bearing pointer ..... **SET to the ILS front course inbound heading**

2 - Establish intercept angle using wings level or "HDG" mode.

3 - "BC" mode selector button ..... **PRESS**

- If the Course Deviation Bar is greater than 2 to 3 dots : the airplane will continue in "HDG" mode (or wings level if "HDG" not selected) with "APR-ARM", "BC" annunciated. When the computed capture point is reached the "HDG" will disengage, the ARM annunciators will turn off and the selected course will be automatically captured and tracked.
- If the D-Bar is less than 2 to 3 dots : the "HDG" mode will disengage upon selecting "BC" mode ; the "APR" and "BC" annunciators will illuminate and the capture / track sequence will automatically begin.

CAUTION

WHENEVER THE AIRPLANE IS EQUIPPED WITH "BENDIX / KING" EFS 40, AND THE EHSI FIGURATION IS ON HSI NAV MAP,THE LOCALIZER CDI LEFT-RIGHT DEVIATION IS AUTOMATICALLY CORRECTED BY THE EFS 40 TO ELIMINATE THE NEED TO FLY REVERSE SENSING ON THE BACK COURSE. BC IS ANNUNCIATED AND THE CDI IS CORRECTED FOR PROPER STEERING COMMANDS WHEN THE AIRPLANE HEADING DEVIATES MORE THAN 105° FROM THE COURSE POINTER. THE COURSE POINTER SHOULD BE SET TO THE LOCALIZER FRONT COURSE INBOUND HEADING.

GLIDE SLOPE MODE

NOTE :
"Glide Slope" coupling is inhibited when operating in "NAV" or "APR" + "BC" modes. "Glide Slope" coupling occurs automatically in the "APR" mode.

1 - "APR" mode ..... **ENGAGED**

2 - At Glide Slope centering ..... **CHECK "GS" annunciator ON**

NOTE :
The autopilot can capture "Glide Slope" from above or below the beam while operating in either pitch attitude hold, IAS hold, VS hold or ALT hold modes.

NOTE :
If after "Glide Slope" coupling the "Glide Slope" signal becomes inadequate ("GS" flag in view), the "Glide Slope" annunciator will flash at least six times before extinguishing and the system will transfer to pitch attitude hold.
If a valid "Glide Slope" signal returns within six seconds the system will automatically recouple.
If a valid "Glide Slope" signal does not return within six seconds, the airplane must once again pass through the "Glide Slope" beam to achieve "Glide Slope" coupling.

GO-AROUND MODE

1 - Power lever "GA" push-button ..... **PRESS**
to disengage the autopilot (if engaged) and engage the flight director (if not engaged) in a wings level, pitch up command. Note GA mode annunciator ON

2 - MISSED APPROACH ..... **EXECUTE**

3 - Airplane ..... **TRIM**

4 - Lateral guidance (Select one mode)

- "HDG" mode ..... **SET bug and PRESS "HDG" push-button**
- "NAV" mode ..... **PRESS "NAV" push-button**
- "APR" mode ..... **PRESS "APR" push-button**

Glide Slope coupling will be inhibited so that the LOC can be tracked outbound (the autopilot will not couple to false Glide Slope signals as long as "GA" is engaged.

"GA" is disconnected whenever a vertical mode is engaged.

HALF-BANK ANGLE MODE

"HALF-BANK" mode button ..... **PRESS**

The commanded bank angle will be reduced to $\frac{1}{2}$ the normal value. This mode is functional during "HDG" and "NAV" mode operations but will be automatically deselected and inhibited during "APR" (normal or BC) coupled operations.

SOFT RIDE MODE

"SOFT RIDE" mode button ..... **PRESS**

This mode softens the autopilot's commands to provide a smoother ride during operations in turbulence. The normal autopilot performance (maintaining heading, maintaining wings level, maintaining attitude, maintaining airspeed and / or maintaining altitude) will be degraded by use of the Soft Ride mode.

BEFORE LANDING

"AP / TRIMS DISC INT" push-button ..... **PRESS**
to disengage autopilot and yaw damper

4.4 - FLIGHT DIRECTOR OPERATION

The flight director modes of operation are the same as those used for autopilot operations except the autopilot is not engaged and the pilot must maneuver the airplane to satisfy the flight director commands.

SECTION 5
PERFORMANCE

The installation and the operation of the autopilot 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

Weight and balance corresponding to KFC 325 "BENDIX KING" autopilot are given in the optional equipment list attached to Section 6 "Weight and balance" of the basic Pilot's Operating Handbook.

SECTION 7
DESCRIPTION

7.1 - KMC 321 CONTROLLER

This mode controller consists of nine Flight Director mode select push-buttons (Push On - Push Off), mode annunciators, the vertical trim control, the yaw damper engage / disengage push-button, the autopilot engage / disengage push-button and the preflight test push-button.

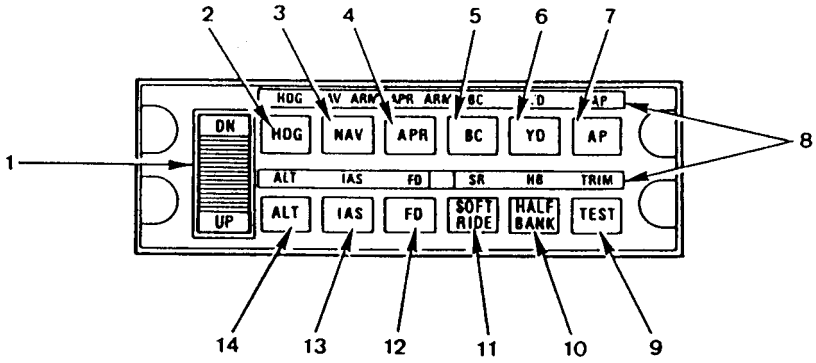

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Figure 9.10.1 - KMC 321 AUTOPILOT MODE CONTROLLER

Item 1 - VERTICAL TRIM CONTROL
A spring loaded to center rocker switch which will provide up or down pitch command changes :

- While in Pitch Attitude Hold mode will adjust the pitch attitude at a rate of 0.7° / sec.
- While in Altitude Hold mode will adjust the altitude at a rate of 500 ft / min.
- While in Indicated Airspeed Hold mode will adjust the airspeed at a rate of 0.75 kt / sec.
- While in the Vertical Speed Hold mode will adjust the vertical speed at a rate of 100 ft / min / sec.

Item 2 - HEADING (HDG) MODE SELECTOR PUSH-BUTTON
When pushed, will select the Heading mode which commands the airplane to turn to and maintain the heading selected by the heading bug on the EHSI. A new heading may be selected at any time and will result in the airplane turning to the new heading with a maximum bank angle of about 25°. Selecting "HDG" mode will cancel "NAV", "APR" or "BC" track modes.

Item 3 - NAVIGATION (NAV) MODE SELECTOR PUSH-BUTTON
When pushed, will select the Navigation mode. The mode provides all angle intercepts, automatic beam capture and tracking of "VOR", "RNAV", "ADF" or LOC signals. The "NAV-ARM" annunciators located above this push-button will illuminate until the automatic capture sequence is initiated, then "ARM" will extinguish. The EADI mode annunciator will annunciate the same sequence. A loss of radionavigation signal during more than 7.5 sec. will turn autopilot to wings level attitude basic mode. In that case, "NAV" mode flashes on the EADI mode annunciator.

Item 4 - APPROACH (APR) MODE SELECTOR PUSH-BUTTON
When pushed, will select the Approach mode. This mode provides all angle intercepts, automatic beam capture and tracking of "VOR", "RNAV" or "LOC" signals plus glideslope coupling in the case of an ILS. The tracking gain of the "APR" mode is greater than the gain in the "NAV" mode. The "APR-ARM" annunciators located above this button will illuminate until the automatic capture sequence is initiated, then "ARM" will extinguish. The EADI mode annunciator will annunciate the same sequence.

Item 5 - BACK COURSE APPROACH (BC) MODE SELECTOR PUSH-BUTTON
When pushed will select the Back Course Approach mode. This mode functions identically to the Approach mode except that response to LOC signals is reversed. Glideslope coupling is inhibited in the Back Course Approach mode. The "BC" annunciators (both the KMC 321 and the EADI) will illuminate when this mode is activated plus the Approach Mode annunciators will function as described in Item 4.

Item 6 - YAW DAMPER ENGAGE (YD) PUSH-BUTTON
When pushed, engages the yaw damper independent of the autopilot. When pushed with the yaw damper engaged, disengages the yaw damper.

Item 7 - AUTOPILOT ENGAGE (AP ENG) PUSH-BUTTON
When pushed, engages autopilot and yaw damper if all logic conditions are met. When pushed again, disengages autopilot but does not disengage the yaw damper.

Item 8 - MODE ANNUNCIATORS
The mode symbol located above each mode push-button will illuminate when the mode is engaged except for the "NAV" and "APR" modes. When either the "NAV", "APR" or "BC" mode push-button is pressed, the appropriate "ARM" annunciator above either the "NAV" or "APR" mode push-button will illuminate until the automatic beam capture sequence is initiated. At beam capture "NAV" or "APR" will be annunciated above either the "NAV" or "APR" mode push-button. Normally, the "NAV" or "APR" coupled conditions follow an "ARM" condition but the coupled condition may be entered into directly if the beam capture criteria are met when "NAV", "APR" or "BC" is selected.

Item 9 - PREFLIGHT TEST (TEST) PUSH-BUTTON
When momentarily pushed, initiates preflight test sequence which automatically turns on all annunciator lights, tests the roll and pitch rate monitors, tests the autotrim fault monitor, checks the manual trim drive voltage and tests all autopilot valid and disengage logic. If the preflight test is successfully passed, the "AP" annunciator light will flash for approximately 6 seconds (an audible tone will also sound simultaneously with the annunciator flashes).
The autopilot cannot be engaged until the autopilot preflight tests are successfully passed.

Item 10 - HALF BANK (HB) MODE SELECTOR PUSH-BUTTON
When pushed, engages the Half Bank mode which reduces the certified autopilot commanded maximum bank angle to one half the normal value. This mode is automatically disengaged when the "APR" or "BC" mode is activated.

Item 11 - SOFT RIDE (SR) MODE SELECTOR PUSH-BUTTON
When pushed, engages the Soft Ride mode which reduces the autopilot commands. This command reduces the autopilot aggressivenesss which results in a more comfortable ride in turbulent air conditions. This mode is only intended to be used during turbulent air conditions. Routine use of this mode during all flight conditions will result in less than optimum autopilot performance. This mode is automatically disengaged when the "APR" or "BC" mode is activated.

Item 12 - FLIGHT DIRECTOR (FD) MODE SELECTOR PUSH-BUTTON
When pushed, will select the Flight Director mode bringing the Command Bar in view on the EADI and will command wings level and pitch attitude hold.

Item 13 - INDICATED AIRSPEED HOLD (IAS) MODE SELECTOR PUSH-BUTTON
When pushed, engages the Indicated Airpseed Hold mode. The autopilot varies the airplane pitch attitude in order to maintain the selected airspeed during changing air conditions, power changes and / or airplane configuration changes.

Item 14 - ALTITUDE HOLD (ALT) MODE SELECTOR PUSH-BUTTON
When pushed, will select the Altitude Hold mode, which commands the airplane to maintain the pressure altitude existing at the moment of selection.
Engagement may be accomplished in climb, descent, or level flight. In the "APR" mode, altitude hold will automatically disengage when the Glideslope is captured.

7.2 - GO-AROUND PUSH-BUTTON

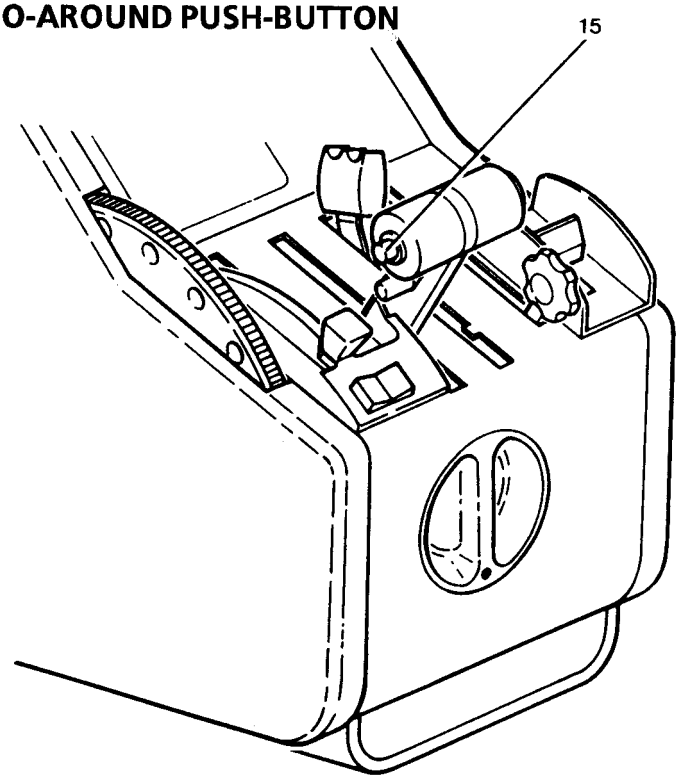

Figure 9.10.2 - GO-AROUND PUSH-BUTTON

Item 15 - GO AROUND (GA) MODE SELECTOR PUSH-BUTTON
The button located on the left side of the throttle lever, when pressed, disengages the autopilot and "NAV" or "APR" modes, if engaged. Flight director gives order which allows keeping a fixed pitch up attitude of 8 degrees. GA will annunciate on the EADI mode annunciator. The autopilot and any lateral mode may be re-engaged after the GO AROUND attitude has been manually established. Initiation of any other vertical mode cancels GO AROUND. If GO AROUND is active, Glideslope mode is inhibited.

7.3 - MODE ANNUNCIATOR ON EADI

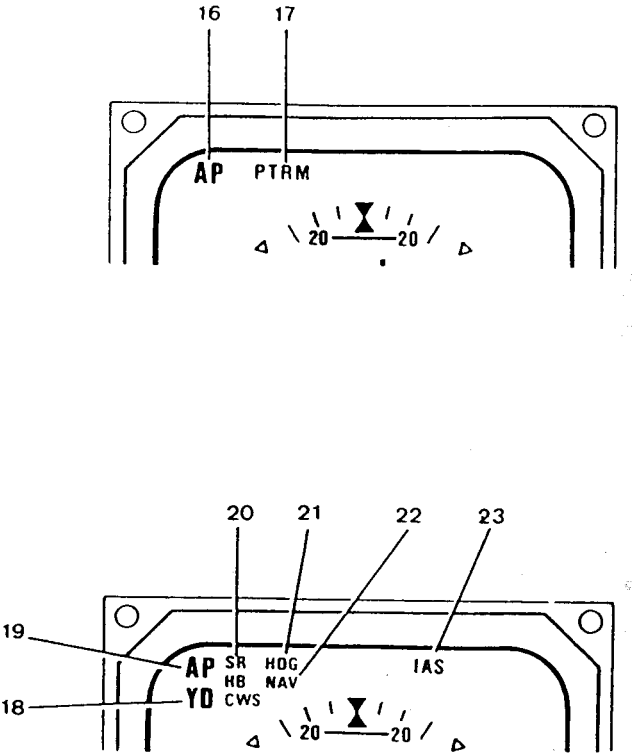

Figure 9.10.3 - MODE ANNUNCIATOR ON EADI

Item 16 - AUTOPILOT (red AP) ANNUNCIATOR
Flashes for a short time whenever the autopilot is disengaged (an audible tone operates too during 2 seconds).

Item 17 - TRIM WARNING LIGHT (red PTRM)
Illuminates continuously whenever trim power is not on or the system has not been preflight tested. The "PTRM" warning light illuminates and is accompanied by an audible warning whenever a manual trim fault is detected. The Manual Trim System is monitored for the Trim Servo running without a command. The "PTRM" warning light will illuminate and be accompanied by an audible warning tone whenever an autotrim failure occurs. The autotrim system is monitored for the following failures : trim servo running without a command ; trim servo not running when commanded to run ; trim servo running in the wrong direction.

Item 18 - YAW DAMPER (YD) ANNUNCIATOR
Illuminates continuously whenever the yaw damper is engaged. Flashes for a short time whenever the yaw damper is disengaged.

Item 19 - AUTOPILOT (green AP) ANNUNCIATOR
Illuminates whenever the autopilot is engaged.

Item 20 - MODE ANNUNCIATORS
SR (soft ride) : indicates that mode, which softens autopilot commands, is engaged.

HB (half-bank) : indicates that mode, reducing bank angle by a half, is engaged. This mode is automatically disengaged when approach mode is engaged.

CWS : indicates that pilot is pressing "CWS" push-button, which activates the flight director in attitude and wings level hold mode. If autopilot is engaged, it allows to activate control wheel steering.

Item 21 - ENGAGED LATERAL MODE (green)
Possible modes are "HDG", "NAV", "APR", "LOC" or "BC".

Item 22 - ARMED LATERAL MODE (white)
Possible modes are "NAV", "APR", "LOC" or "BC".

Item 23 - ENGAGED LONGITUDINAL MODE (green)
Possible modes are "ALT", "ALTC", "IAS", "VS" or "GS".

7.4 - DIRECTIONAL GYRO SLAVING CONTROL

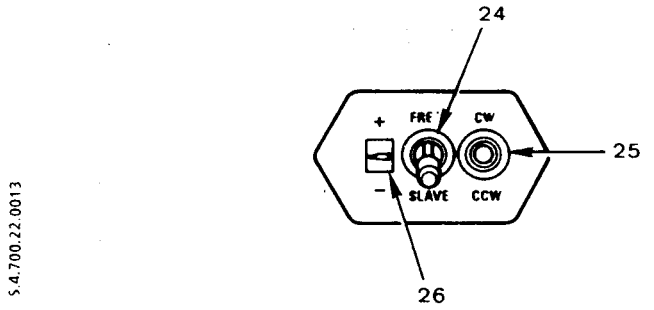

Figure 9.10.4 - KA 51B SLAVING CONTROL AND COMPENSATOR UNIT

Item 24 - FREE / SLAVE COMPASS SLAVE SWITCH
Selects either the manual (FREE) or automatic slaving (SLAVE) mode for the compass system.

Item 25 - CW / CCW COMPASS MANUAL SLAVE SWITCH
With the FREE / SLAVE compass slave switch in the FREE position, allows manual compass card to rotate either clockwise or counterclockwise. The switch is spring loaded to the center position.

Item 26 - SLAVING METER
Indicates the difference between the displayed heading and the magnetic heading. Deflection upwards indicates a clockwise error of the compass card. Deflection downwards indicates a counterclockwise error of the compass card.

7.5 - AUTOPILOT CONTROL WHEEL SWITCH CAP

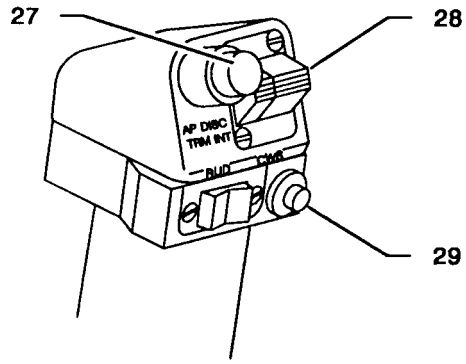

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Figure 9.10.5 - AUTOPILOT CONTROL WHEEL SWITCH CAP

Item 27 - AUTOPILOT DISCONNECT / TRIM INTERRUPT (AP / TRIMS DISC INT) PUSH-BUTTON
When shortly depressed, will disengage the autopilot and cancel all operating flight director modes. When depressed and held will interrupt all electric trims power (stop trims motion).

Item 28 - MANUAL ELECTRIC PITCH TRIM CONTROL SWITCHES
A split switch unit in which the left half provides power to engage the trim servo clutch and the right half to control the direction of motion of the trim servo motor. Both halves of the split trim switch must be actuated in order for the manual electric trim to operate in the desired direction. When the autopilot is engaged, operation of the manual electric trim will automatically disconnect the autopilot. (The flight director will remain engaged and the yaw damper will remain engaged if already engaged).

Item 29 - CONTROL WHEEL STEERING (CWS) PUSH-BUTTON
When depressed, allows pilot to manually control the airplane (disengages the pitch, roll and pitch trim servos) without cancellation of any of the selected modes. Will engage the flight director mode if not previously engaged. Automatically synchronizes the flight director / autopilot to the pitch attitude present when the CWS switch is released, to the present pressure altitude when operating in the Altitude hold mode, to the present Vertical Speed when operating in the vertical speed hold mode or to the present Indicated Airspeed when operating in the indicated airspeed hold mode.

7.6 -"AP / TRIMS MASTER" AND "EFIS MASTER" SWITCHES

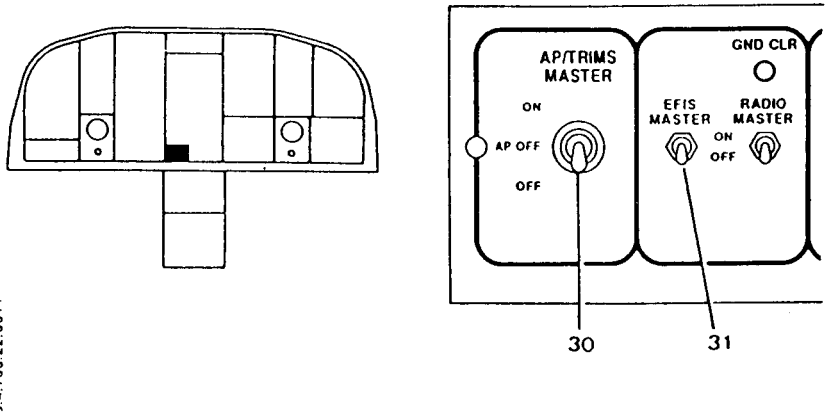

Figure 9.10.6 - "AP / TRIMS MASTER" AND "EFIS MASTER" SWITCHES

Item 30 - "AP / TRIMS MASTER" SWITCH
Controls power to all autopilot components and to all electric trims. When set to AP OFF position, autopilot and electric pitch trim are inoperative. When set to OFF position, autopilot and electric trims are inoperative.

Item 31 - "EFIS MASTER" SWITCH
Supplies all components of EFIS system including vertical and directional gyros.

7.7 - CIRCUIT-BREAKERS

Autopilot components are supplied through following circuit-breakers :

LABEL	FUNCTION
AP / TRIMS	Supplies power to KCP 220 autopilot computer, to KS 270A pitch servo, to KS 271A roll servo, to KS 271A yaw servo and to "PITCH TRIM", "AIL TRIM", "RUD TRIM", "AP DISC" and "AP ALT SEL" circuit-breakers.
AP ALERT	Supplies power to the KAA 15 alarm unit.
AP ALT SEL	Supplies power to the KAS 297C vertical speed and altitude selector.
GYRO	Supplies power to the KSG 105 directional compass, to the KVG 350 vertical unit and to the KRG 332 yaw rate gyro.
PITCH TRIM	Supplies power to the KS 272A electric pitch trim.
AP DISC	Delivers a control signal (28 VDC switched by "AP DISC TRM INT" switch) to the KCP 220 autopilot computer and to the KAA 15 alarm unit.
EADI	Supplies power to the SG 465 symbols generator, EADI section
EHSI	Supplies power to the SG 465 symbols generator, EHSI section, to the navigation computer and to the KN 40 navigation converter.

SUPPLEMENT

"BENDIX / KING" KRA 405 RADAR ALTIMETER

TABLE OF CONTENTS

SECTION 1

GENERAL

This supplement provides information necessary for airplane utilization when the "BENDIX / KING" KRA 405 radar altimeter is installed on TBM 700 airplane.

The radar altimeter provides the pilot with altitude information within –20 ft and 2500 ft.

SECTION 2

LIMITATIONS

These limitations complete those of standard airplane described in Section 2 "Limitations" of the basic Pilot's Operating Handbook.

The radio altimeter is not approved as an additional accurate approach aid.

SECTION 3

EMERGENCY PROCEDURES

The emergency procedures given hereafter complete those of the standard airplane described in Section 3 "Emergency procedures" of the basic Pilot's Operating Handbook.

- During the test, if the radio altimeter does not indicate 50 ft ± 5 ft, the information provided by the radio altimeter must not be used.
- If the DH annunciator (EFIS) or the DH lamp (KNI 415) does not illuminate when the TEST button is depressed, the approach decision height will not be annunciated.
- If the flag comes into view, the information provided by the radar altimeter must not be used.

SECTION 4

NORMAL PROCEDURES

The normal procedures given hereafter complete those of the standard airplane described in Section 4 "Normal procedures" of the basic Pilot's Operating Handbook.

After engine starting :

1. Adjust the DH (Decision Height) to 25 ft.
2. Depress the TEST button. The indicated altitude should be 50 ft ± 5 ft. The DH annunciator or the DH lamp should be out.
   When releasing the TEST button, the DH lamp must come on and, if the KNI 415 indicator is installed, the warning tone must sound when the adjusted altitude is reached.
3. With the TEST button depressed, slowly increase the adjusted DH. When the DH annunciator or the DH lamp comes on, the adjusted altitude should be 50 ft ± 5 ft. The DH annunciator or the DH lamp should also be illuminated at all altitudes above 50 feet.
4. Release the TEST button. The indicated altitude should be 0 ft ± 5 ft.

Prior to landing :

1. Select the decision height.
2. Depress the TEST button. The indicated altitude should be 50 ft ± 5 ft and, if the KNI 415 indicator is installed, the warning tone must sound. The DH annunciator or the DH lamp must come on and the warning tone must sound if the adjusted DH is greater than 50 ft.
3. Check that the radar altimeter pointer (KNI 415) or the DH annunciator (EFIS) indicates approximately 2500 ft by using the altimeter as a reference.

SECTION 5

PERFORMANCE

The installation of the "BENDIX / KING" KRA 405 radar altimeter 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

Weight and balance corresponding to the "BENDIX / KING" KRA 405 radar altimeter are given in the optional equipment list attached to Section 6 "Weight and balance" of the basic Pilot's Operating Handbook.

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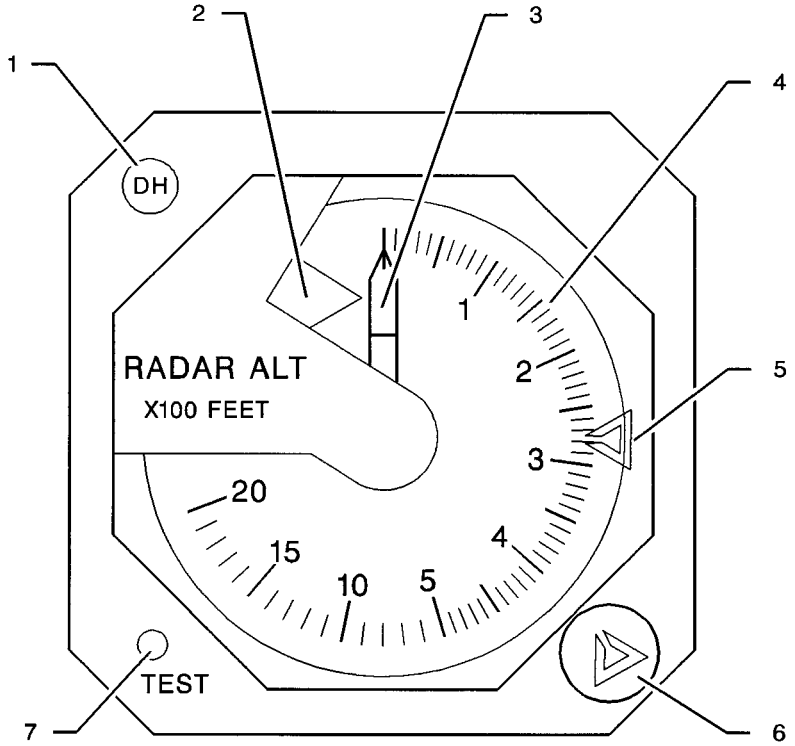
SECTION 7
DESCRIPTION

STANDARD VERSION : KNI 415 INDICATOR (Figure 9.16.1)

The DH lamp can be disabled by depressing it and rearmed by depressing it once again.

1) DH lamp
2) Flag
3) Indicator pointer
4) Altitude scale
5) DH bug
6) DH knob
7) Self–test button

Figure 9.16.1 (1 / 2) – KNI 415 INDICATOR



I4341400AAAAMA8001

Figure 9.16.1 (2 / 2) – KNI 415 INDICATOR

EFIS VERSION (Figure 9.16.2)

1) Radar altimeter altitude display
2) DH annunciator
3) Selected decision height
4) DH selection pull–knob
5) TEST button

Figure 9.16.2 (1 / 2) – RADAR ALTIMETER : EFIS VERSION
WITHOUT KNI 415 INDICATOR

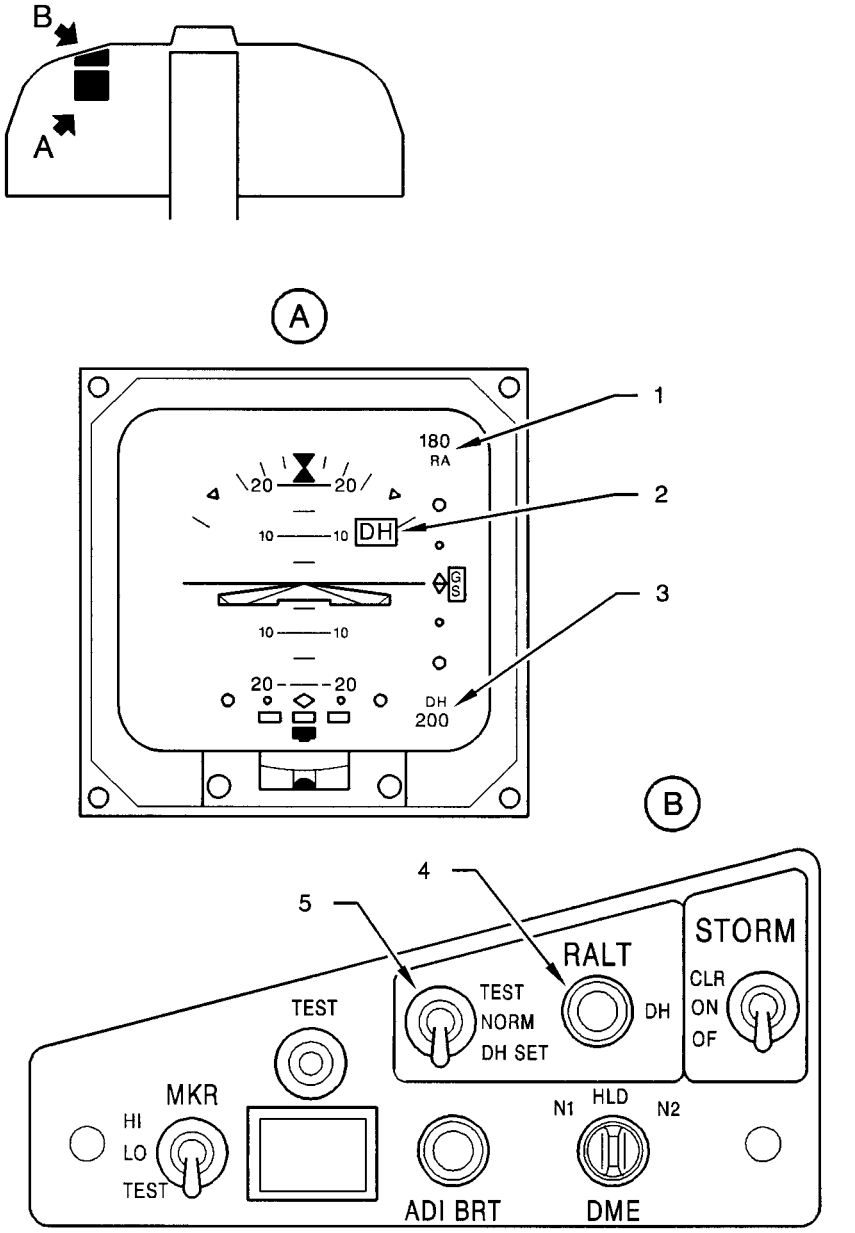


Figure 9.16.2 (2 / 2) – RADAR ALTIMETER : EFIS VERSION WITHOUT KNI 415 INDICATOR

COMBINED VERSION

The radar altimeter information given in the EADI system are a recopy of the indications and selections made on the KNI 415 indicator.

SUPPLEMENT

"BENDIX/KING" RDR 2000 VERTICAL PROFILE WEATHER RADAR

TABLE OF CONTENTS

SECTION 1
GENERAL

This supplement supplies information necessary for the operation of the airplane when the optional "BENDIX/KING" RDR 2000 vertical profile color weather radar system is installed in the TBM 700 airplane.

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 15 feet of area being scanned by antenna when system is transmitting.

2.1 - RDR 2000 weather radar not interfaced with KMD 850 multi-function display

The "BENDIX/KING" RDR 2000 Pilot's Guide P/N 006-08755-0000 at its latest revision shall be readily available to the pilot whenever the operation of the radar system is predicted.

2.2 - RDR 2000 weather radar interfaced with KMD 850 multi-function display

The "BENDIX/KING" RDR 2000 Pilot's Guide P/N 006-08755-0000, the KMD 550/850 Pilot's Guide P/N 006-18222-0000 and the KMD 850 Wx Radar Pilot's Guide Addendum P/N 006-18235-0000 at their 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 "BENDIX/KING" RDR 2000 vertical profile 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 CASE OF AP COMPUTER FAILURE, THE ANTENNA STABILIZATION WILL NOT BE OPERATIVE

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 the vertical profile weather radar system are outlined in the Pilot's Guides, the references of which are given in Section 2 "Limitations" of this Supplement.

AFTER ENGINE STARTING

- Radar function selection switch ..... **TST**
  Check the antenna scanningand that there is no failure message.
- Radar function selection switch ..... **SBY**

TAKE OFF

- Radar ..... **As required**

If the radar is switched "ON" with the landing gear shock absorbers compressed, the "TX FLT" message appears in the KMD 850 screen (if installed) LH. lower corner or in the radar screen (if KMD 850 not installed) RH. lower corner. The radar radiation is inhibited. The radar automatically radiates, as soon as the aircraft takes off.

BEFORE LANDING

- Radar function selection switch ..... **SBY**

ENGINE SHUT-DOWN

RDR 2000 weather radar interfaced with KMD 850 :

- "RADIO MASTER" switch ..... **OFF**

RDR 2000 weather radar not interfaced with KMD 850 :

- Radar function selection switch ..... **OFF**

SECTION 5
PERFORMANCE

Installation of "BENDIX/KING" RDR 2000 vertical profile 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)
	34 - NAVIGATION				
A	Weather radar (OPT70 34040A)	RDR 2000	KING	21.054 (9.550)	163.70 (4.158)
A	Weather radar GC 360A coupled (OPT70 34040B)	RDR 2000	KING	25.154 (11.410)	161.22 (4.095)
A	Weather radar EFIS coupled (OPT70 34040E)	RDR 2000	KING	21.054 (9.550)	163.70 (4.158)
A	Weather radar KMD 850 coupled (OPT70 34040F)	RDR 2000	KING	11.530 (5.230)	173.46 (4.406)
A	Weather radar EFIS and GC 360A coupled (OPT70 34040G)	RDR 2000	KING	25.154 (11.410)	161.22 (4.095)
A	Weather radar EFIS coupled (with CP 466A) (OPT70 34040H)	RDR 2000	KING	17.394 (7.890)	167.20 (4.247)

SECTION 7
DESCRITION

7.1 - RDR 2000 weather radar not interfaced with KMD 850 multi-function display

All modes and controls, as well as radar clutter display are arranged on a specific screen.

1 - Manual gain control knob
2 - NAV mode selector button
3 - Ground Mapping mode selector button
4 - Vertical Profile mode selector button
5 - Weather and Weather-Alert toggle selector button
6 - Screen brightness control knob
7 - Left or right Track mode annunciation
8 - Degrees of Track left or right of airplane nose
9 - Vertical Profile mode annunciation
10 - Relative altitude reference line
11 - Plus & minus thousands of feet from relative altitude
12 - Radar function selection switch
13 - Range selector buttons
14 - Left or right Track mode selector buttons
15 - Antenna tilt control
16 - Range rings
17 - Weather or Weather-Alert mode annunciation
18 - VP scan angle
19 - "TX FLT" annunciation

Figure 9.22.1 (1/2) - Indicator

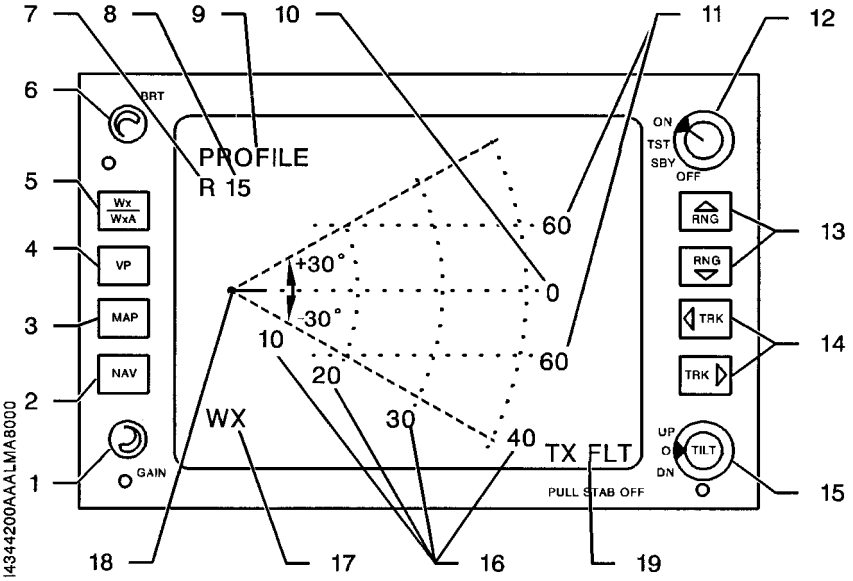
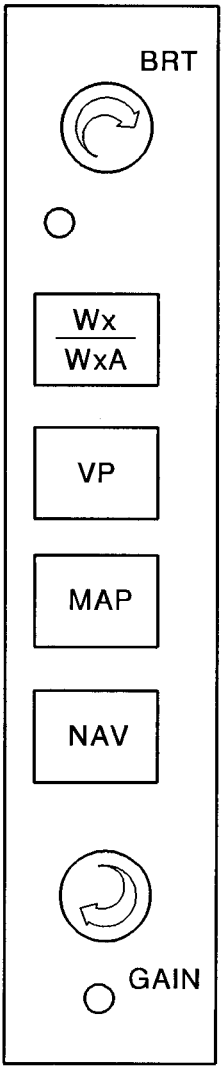


Figure 9.22.1 (2/2) - Indicator

OPERATIONAL CONTROLS



BRT Controls brightness of the indicator display.

Wx / WxA Alternately selects between weather (Wx) and "weather-alert" (WxA) modes of operation. "Wx" or "WxA" will appear on the lower left of the display. Areas of high rainfall appear in magenta color. When the WxA mode is selected, magenta areas of storms flash between magenta and black.

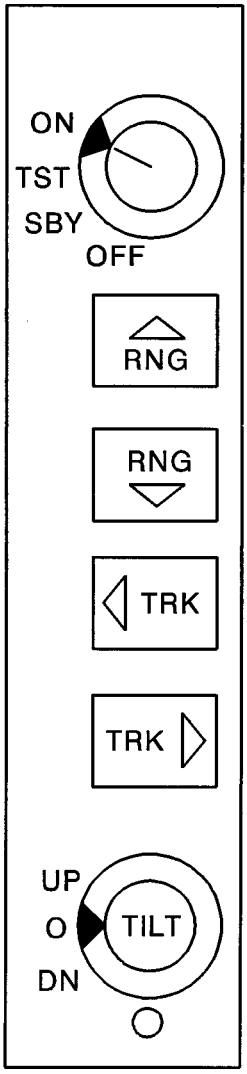
VP Selects and deselects the Vertical Profile mode of operation. Selecting the VP mode of operation will not change the selected mode of operation : TST, Wx, WxA or GND MAP. Once in VP, these modes may be changed as desired. VP will engage from the NAV MAP mode, but NAV will be disabled during VP operation.

GND MAP Places indicator in ground-mapping mode disables weather-alert feature and activates gain control. (The magenta is not activated in the GND MAP mode).

NAV MAP Places indicator in navigation mode so that preprogrammed waypoints may be displayed. If other modes are also selected, the NAV display will be superimposed on them. This button is effective only if an optional radar graphics unit and Flight Management System is installed. If actuated without these units, it will cause NO NAV to appear at lower left of screen. The radar is still capable of displaying weather.

GAIN Manual gain control becomes active when GND MAP is selected. In all other modes, gain is internally set.

LOG Used only when the "BENDIX/KING" IU 2023 series radar graphics unit is installed along with a compatible long range navigation system, a listing of the latitudes and longitudes of selected waypoints will be displayed. If a compatible RNAV is installed, selected VOR frequencies, along with bearings and distances to waypoints, will be presented. No radar transmission occurs in this mode.



ON Radar switch-on/off.

TST The test pattern is displayed on the indicator, no transmission occurs.

SBY After 30 seconds in this mode, the system is in a state of readiness. No radar transmission occurs, and the antenna is parked in the down position. "STBY" is displayed in the lower left of the display.

OFF Removes primary power from the radar indicator and the sensor. The antenna is parked down.

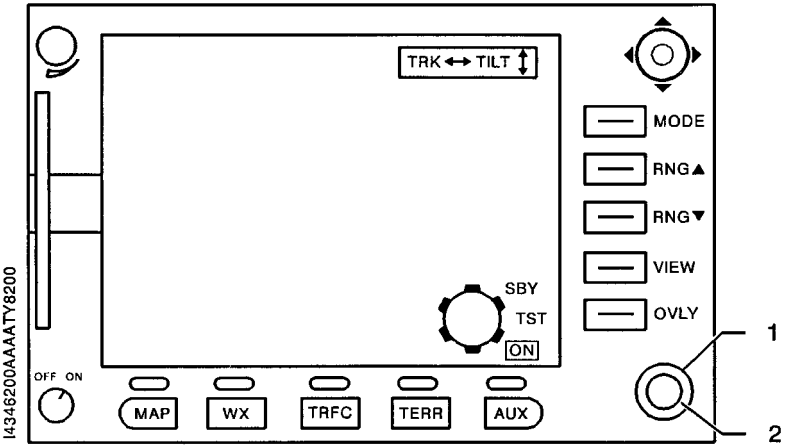
RNG When pressed clears the display and advances the indicator to the next range. Upper button increases range, lower button decreases it. Selected range is displayed in lower right corner on the last range mark and distance to other range rings is displayed along the lower edge.

TRK When pressed provides a yellow azimuth line and a digital display of the azimuth line placement left or right from the nose of the airplane. For VP operations, the TRK button performs two functions.

1) Prior to engaging VP, the appropriate button (left or right) is used to place the track line at the desired azimuth angle to be vertically scanned (sliced). When VP is engaged, the slice will be taken at the last position of the track line, whether it is visible or not. If the track line has not been selected after power has been applied to system and VP is engaged, the slice will be taken at 0° (directly in front of the airplane).
2) Continuously holding the TRK button will result in the system "slicing" in two-degree increments.

TILT Permits manual adjustment of antenna tilt 15° up or down for best indicator presentation. The tilt angle is displayed in the upper right corner of the display. Depending on mode status of the indicator the readout may be in tenths of degree. Pull the Tilt selector knob out for "STAB OFF" operations. "STAB OFF" will appear in the upper left corner of the display. Tilt functions are disabled in VP mode.

7.2 - RDR 2000 weather radar interfaced with KMD 850 multi-function display



WX : KMD 850 radar function selection

Figure 9.22.2 - KMD 850 Multi-function display

When the KMD 850 is set to radar function, equivalences between KMD 850 and radar standard operationial controls described in chapter 7.1 are as follows :

KMD 850 CONTROL	RDR 2000 STANDARD OPERATIONAL CONTROL
MODE	WX/GND MAP
RNG▼ / RNG▲	RNG
VIEW	VP
Joystick horizontal movement	TRK
Joystick vertical movement	TILT
1 - Outer knob	SBY / TST / ON
2 - Inner knob	GAIN

From S/N 196

Radar setting to ON or OFF is performed by using the "RADIO MASTER" switch.

SUPPLEMENT

"BENDIX / KING" KLN90B GPS (B-RNAV) NAVIGATION SYSTEM INTERFACED WITH EFS 40 EHSI

TABLE OF CONTENTS

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 700 airplane is equipped with the option ""BENDIX / KING" KLN90B GPS (B-RNAV) NAVIGATION SYSTEM INTERFACED WITH EFS 40 EHSI".

The generalities hereafter supplement those of the standard airplane described in Section 1 "General" of the basic Pilot's Operating Handbook, when the TBM 700 airplane is equipped with the option ""BENDIX / KING" KLN90B GPS (B-RNAV) NAVIGATION SYSTEM INTERFACED WITH EFS 40 EHSI".

Using information provided by satellites ("BENDIX / KING" KLN90B is able to track up to 8 satellites at a time), GPS is an automatic tridimensional (latitude, longitude, altitude) location and navigation means. It also uses data recorded in a data base (two different data bases are available : North American one or International one). The data base is housed in a cartridge plugged into the back of the KLN90B and is updated every 28 days by means of diskettes and a computer (a jack located on right lower panel PL25 provides a means of interfacing the KLN90B with the computer via an interface cable).

Each data base contains information about airports, communication frequencies, VORs, NDBs, Intersections, SIDs, STARs, instrument approaches, flight service stations ...

There is also room for up to 250 user defined waypoints and 26 different flight plans.

CAUTION

IT IS STRONGLY ADVISED NOT TO LOAD USER WAYPOINTS IN DATA BASE IN TERMINAL AREA NAVIGATION DUE TO THE INCREASE OF WORK LOAD FOR THE PILOT

The KLN90B can be interfaced with "SHADIN" fuel flow system. It also receives altitude code from the encoding altimeter.

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 700 airplane is equipped with the option ""BENDIX / KING" KLN90B GPS (B-RNAV) NAVIGATION SYSTEM INTERFACED WITH EFS 40 EHSI".

Data base updating must be verified before each flight.

NOTE :
The original KLN90B data base is in accordance with the WGS84 geodetic model

If the data base or the cartridge are not in accordance with WGS84 or NAD 83 geodetic model, and as there is no means of operation published, GPS navigation system must be disengaged in terminal area.

The navigation sources required for the anticipated flight shall be serviceable. In any case, GPS use is limited to the En route or terminal area of the flight.

The KLN90B fuel management pages use a fuel flow input of the "SHADIN" fuel flowmeter (if installed) and must not be used as a fuel management primary source.

"BENDIX / KING" KLN90B Pilot's Guide at its latest revision shall be readily available to the pilot, each time the GPS navigation system is used.

GPS
APPROVED FOR B-RNAV
SID/STAR AND APPROACH MODE PROHIBITED

Figure 9.26.1 - GPS limitation placard

IFR navigation is restricted as follows :

- The system must utilize ORS level 20 or higher.
- IFR en route and terminal area navigation is prohibited unless the pilot verifies the currency of the data base and each selected waypoint for accuracy.
- For every navigation into areas reserved for B-RNAV the pilot must be provided with a predicted availability of RAIM on the route.
- When the GPS is selected as EFIS navigation source, it is prohibited to engage the autopilot Approach mode.
- The use of SIDs and STARs stored in GPS data base and the use of GPS Approach mode are prohibited.

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 700 airplane is equipped with the option ""BENDIX / KING" KLN90B GPS (B-RNAV) NAVIGATION SYSTEM INTERFACED WITH EFS 40 EHSI".

NAV FLAG

If the NAV flag appears on the EHSI when it is interfaced with GPS KLN90B, this means that the GPS signal integrity has been lost.

Return to VOR or ADF navigation source and to remaining operational navigation equipment.

1 - "NAV" push-knob of EHSI ..... **PRESS ONCE or TWICE**

"MSG" ANNUNCIATOR ILLUMINATION

1 - "MSG" push-knob of KLN90B ..... **PRESS**

Check the message.

If the message mentions the loss of GPS system integrity (RAIM NOT AVAILABLE) or detects a too important position error (RAIM POSITION ERROR) :

Return to VOR or ADF navigation source and to remaining operational navigation equipment.

2 - "NAV" push-knob of EHSI ..... **PRESS ONCE or TWICE**

WHEN IN B-RNAV VERIFY THE IFR PROCEDURE APPLICABLE TO EACH ONE OF THESE NEW SITUATIONS WITH THE AIR TRAFFIC CONTROL :

- **OUT OF B-RNAV AREA : IT IS PROHIBITED TO ENTER THE B-RNAV AREA.**
- **IN B-RNAV AREA : INFORM THE AIR TRAFFIC CONTROL TO INDICATE THE LOSS OF B-RNAV CAPABILITY.**

When the system integrity is restored, the return to GPS mode must be accompanied by the validation of the followed and desired track concordance by using primary sources of navigation.

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 700 airplane is equipped with the option ""BENDIX / KING" KLN90B GPS (B-RNAV) NAVIGATION SYSTEM INTERFACED WITH EFS 40 EHSI".

Normal operating procedures of the KLN90B GPS recommended by "BENDIX / KING" manufacturer are outlined in the "BENDIX / KING" KLN90B Pilot's Guide at the latest revision and KLN90B Memory Jogger at the latest revision.

However, it is important to precise the following points for the use of KLN90B on TBM700 :

SET UP CONDITIONS

- 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). This will be obtained from a prediction program (e.g. : "BENDIX KING" PREFLIGHT PLUS).

  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.

  With 23 or more satellites available, the predicted availability of RAIM is valid for 7 days.

  When less than 23 satellites are available, the predicted availability of RAIM shall be confirmed short before each flight.

- The system must utilize ORS level 20 or higher in compliance with the Pilot's Guide.

- Verify if the data base is current. Verify data on the self test page.
- Verify that altitude data is valid to the KLN90B prior to flight.
- Set turn anticipation mode (SET / 6) to :
  - . ENABLE (turn anticipation ENABLED) : recommended mode,
  - . DISABLE (turn anticipation DISABLED) : not recommended mode.
- Check that the proper criteria are used for nearest airport selection (SET / 3).

The course deviation indicator sensitivity is adjustable with a maximum value which is the default value selected by the KLN90B. It is recommended not to change the default value which is ± 5 NM full scale.

In order to reduce navigation errors in terminal area, the course deviation indicator scale shall be set to ± 1 NM or navigation shall be conducted with autopilot.

SYSTEM ANNUNCIATORS / SWITCHES / CONTROLS

EHSI presentation "NAV" push-knob

It may be used to select data for presentation on the pilot's EHSI ; either NAV data from NAV 1 or NAV 2 navigation receiver or GPS data from the KLN90B GPS or ADF data
"NAV" symbol is green, **"GPS"** symbol is blue, **"ADF"** symbol is green.

"MSG" message annunciator

CAUTION

"MSG" ANNUNCIATOR MAY BE PERMANENTLY ILLUMINATED IF THERE EXISTS A PERMANENT MESSAGE. WHEN A NEW MESSAGE APPEARS, "MSG" ANNUNCIATOR ONLY FLASHES.

It will flash to alert the pilot of a situation that requires his attention. Press the "MSG" button on the KLN 90B GPS to view the message. (Appendix B of the KLN90B Pilot's Guide contains a list of all the messages likely to appear on the "Message" page and their meanings).
"MSG" annunciator is amber.

"WPT" Waypoint annunciator

Prior to reaching a waypoint in the active flight plan, the KLN90B GPS will provide navigation along a curved path segment to ensure a smooth transition between two adjacent legs in the flight plan. This feature is called turn anticipation. Approximately 20 seconds prior to the beginning of the turn anticipation, the "WPT" annunciator will flash, going solid upon initiation of the turn, and extinguishing upon turn completion.
"WPT" annunciator is amber. **"WPT"** symbol is also displayed white on L.H. side of the EHSI.

GPS approach "GPS APR, ARM, ACTV" switch / annunciator

This switch / annunciator is used to select or deselect approach mode of the KLN90B. This operation mode is prohibited.

GPS course "GPS CRS, OBS, LEG" switch / annunciator

This switch / annunciator is used to select the basic operation modes of the KLN90B, either a single waypoint with omnibearing selector (OBS) selection through the waypoint (like a VOR) or automatic leg sequencing (LEG) between waypoints.
"GPS CRS" annunciator is white. **"OBS"** annunciator is amber. **"LEG"** annunciator is green.

NOTE :
Either LEG or OBS will illuminate during system self-test depending on switch position.

EN ROUTE-LEG mode

When using the en route-leg mode, GPS navigation data are differently presented on the EHSI according to the selected mode :

- display equivalent to an electromechanical HSI (track, course deviation, TO / FROM) in ARC or HSI modes,
- trace of the navigation in "MAP" mode. The active leg is blue, the following legs are white.

When crossing a waypoint, the track resetting on following navigation leg automatically occurs.

When turn anticipation is ENABLED, the "WPT" annunciator will flash about 20 seconds before the initialization of the turn, going solid upon the turn, and extinguishing upon turn completion.

When turn anticipation is DISABLED, the "WPT" annunciator will flash, until waypoint vertical line is crossed, then extinguishes.

The navigation course selecting knob "CRS" is inactive.

With the autopilot engaged on NAV mode, the EHSI automatic resetting, when crossing a waypoint, allows to the aircraft an automatic transition from leg to leg without pilot action.

EN ROUTE-OBS mode

When using the "ENROUTE-OBS" mode, the desired radial selection on the waypoint is made equally from the course selecting knob "CRS" of the EHSI or from the KLN90B control box. The recopy is quasi instantaneous.

FLIGHT DIRECTOR / AUTOPILOT COUPLED OPERATION

The EHSI may be coupled with KFC 325 autopilot.

Engaging the "NAV" mode on the autopilot mode controller will make the FD appear on the EADI, which uses selected course and left / right steering information presented on the EHSI.

This information is related to the navigation source (VOR, GPS or ADF) selected by the push-button "NAV" on the EHSI.

When AP is engaged on the mode controller, the autopilot is then coupled to the EHSI and uses displayed information (track and course deviation).

In order to reduce navigation errors in terminal area, the course deviation indicator scale shall be set to ± 1 NM or navigation shall be conducted with autopilot.

NOTE :
When the EHSI is selected on GPS navigation source, the RMI remains selected on NAV 1 source (VOR or RNAV).

SECTION 5
PERFORMANCE

Installation and operation of the "BENDIX / KING" KLN90B GPS (B-RNAV) NAVIGATION SYSTEM INTERFACED WITH EFS 40 EHSI" do 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.

R S A or O	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
	34 - NAVIGATION			
	Attitude and direction			
A	GPS, EFIS coupled KLN90B (B-RNAV) (OPT70 34033D)	KING	8.774 (3.980)	155.20 (3.942)

SECTION 7
DESCRIPTION

Normal operating procedures of the "BENDIX / KING" KLN90B GPS (B-RNAV) navigation system interfaced with EFS 40 EHSI are described in the "BENDIX / KING" KLN90B Pilot's Guide at the latest revision.

CONTROLS - see Figure 9.26.2

Controlled by two sets of concentric knobs and two cursor buttons, the KLN90B can present a variety of information in a number of different page formats.

The various display types can be considered as chapters in a book, each chapter having 26 pages. With a few exceptions, each of these pages can be changed independently.

Generally the 2 concentric knobs and the cursor button to the left of the screen are used to select data on L.H. page, the knobs and cursor on the right control the R.H. page.

The large outer knobs control the chapters and the small inner knobs turn the pages.

To change data in a page use the cursor function. This function is an area of inverse video on the screen brought up by depressing the cursor button.

Then rotate the outer knob to position the cursor and the inner knob to select the desired characters. Repeat this operation as many times as necessary and valid (ENT button).

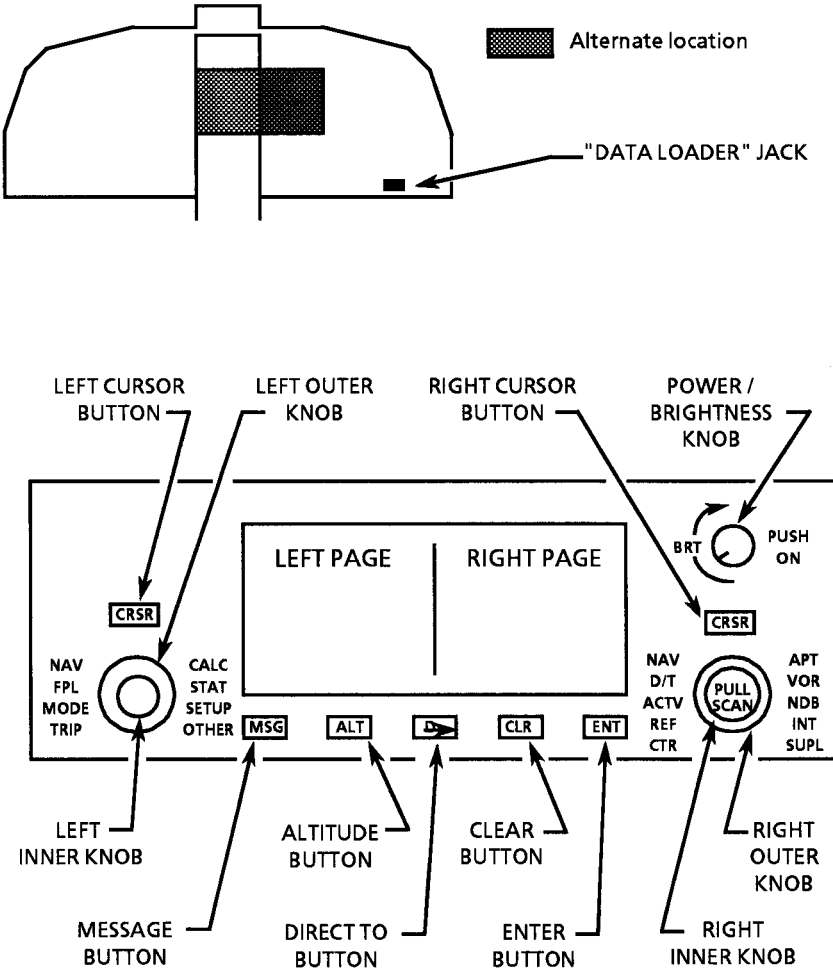


Figure 9.26.2 - Controls

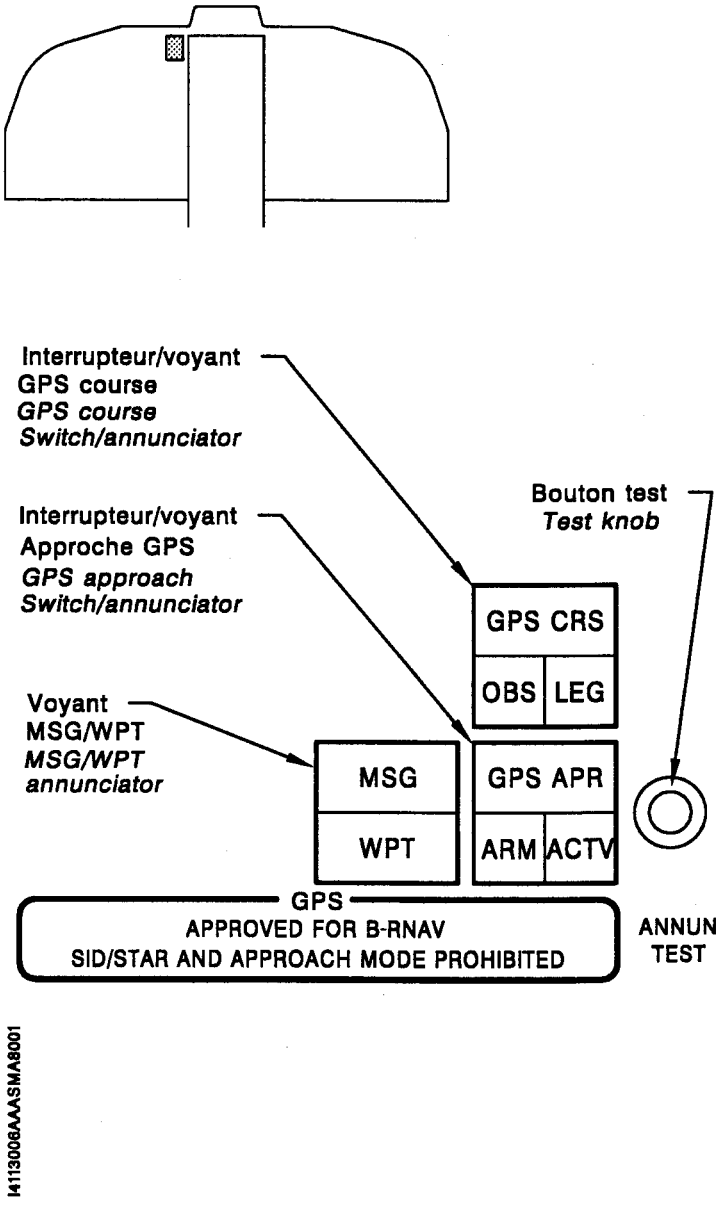


Figure 9.26.3 - GPS placard and annunciators

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SUPPLEMENT

"BFG" SKYWATCH SKY 497 OR SKY 899 TRAFFIC ADVISORY SYSTEM

TABLE OF CONTENTS

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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 700 airplane is equipped with the option "BFG" SKYWATCH SKY 497 OR SKY 899 TRAFFIC ADVISORY SYSTEM.

The SKYWATCH traffic advisory system relies on information obtained from nearby aircraft transponders. It does neither detect, nor track aircraft which are not equipped with an operating ATCRBS transponder.

SECTION 2

LIMITATIONS

The installation of the "BFG" SKYWATCH traffic advisory system does not change the basic limitations of the airplane described in Section 2 "Limitations" of the basic Pilot's Operating Handbook.

REMARK :
The SKYWATCH is a TAS (advisory means), not a TCAS.

SECTION 3

EMERGENCY PROCEDURES

The installation of the "BFG" SKYWATCH traffic advisory system 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

Normal operating procedures of the "BFG" SKYWATCH traffic advisory system are outlined in :

- the Pilot's Guide for the "BFG" SKYWATCH™ traffic advisory system, Model SKY 497 P/N 009-10801-001 Rev. B dated 06/00 or any applicable following edition
  or
- the Pilot's Guide for the "BFG" SKYWATCH® HP traffic alert/advisory system, Model SKY 899 P/N 009-11901-001 Rev. A dated 08/01 or any applicable following edition and :
  - . the Multi-function Display Traffic Avoidance Function (TCAS/TAS) Pilot's Guide Addendum P/N 006-18238-0000 Rev. 0 dated 04/01 or any applicable following edition, if data are displayed on a KMD 850 MFD,
  - . the "GARMIN" GNS 530 Pilot's Guide, P/N 190-00181-00 Revision A dated 04/00 or any applicable following edition, if data are displayed on a GNS 530 GPS.

WARNING

DO NOT ATTEMPT EVASIVE MANEUVERS BASED SOLELY ON TRAFFIC INFORMATION SHOWN ON THE SKYWATCH DISPLAY. 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 SKYWATCH traffic advisory system issues a Traffic Alert (aural or visual), look outside for the intruder aircraft. When you spot an intruder aircraft, use normal right-of-way procedures to maintain separation.

SECTION 5

PERFORMANCE

The installation of the "BFG" SKYWATCH traffic advisory system 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

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)
	34 - NAVIGATION			
A	Traffic advisory system SKYWATCH™ SKY 497 (OPT70 34047A)	BFG	15.780 (7.16)	145.91 (3.706)
A	Traffic advisory system (EFIS version) SKYWATCH™ SKY 497 (OPT70 34047B)	BFG	13.140 (5.96)	150.12 (3.813)
A	Traffic advisory system SKYWATCH® HP SKY 899 (OPT70 34059)	BFG	12.720 (5.77)	151.18 (3.840)

SECTION 7
DESCRIPTION

The SKYWATCH is an airborne Traffic Advisory System (TAS). It monitors the airspace around your aircraft and advises the flight crew where to look for transponder equipped aircraft that may pose a collision threat.

SKYWATCH SKY 497

The traffic can be displayed on the stormscope display, whether a stormscope system is installed or not.

The display range is 2 NM or 6 NM.

SKYWATCH SKY 899

The traffic can be shown on a dedicated screen (KMD 850 MFD or GNS 530 GPS) and/or on the EFS 40.

The controls ("TEST" or "TEST/MODE", "ON", "OFF" and "ST-BY/OPR") are remote from the screen (see Figures 9.28.1 and 9.28.2).

The display range is between 2 NM and 20 NM.

All

The traffic detected is displayed, when the vertical separation between your own aircraft altitude and the intruder altitude ranges :

MODE	From	Up to
ABV (Look up)	- 2700 ft	+ 9000 ft
NRM (Normal)	- 2700 ft	+ 2700 ft
BLW (Below)	- 9000 ft	+ 2700 ft

The Traffic Advisory (TA) criteria, which initiates a visual and/or an aural alert, are (sensitivity level B) :

- detection of an intruder aircraft within a 0.55 NM horizontal radius and a ± 800 ft relative altitude,
- approach of an intruder aircraft on a course that will intercept your course within 20 to 30 seconds.

Post-MOD70-125-23

SKYWATCH setting to ON or OFF is performed by using the "RADIO MASTER" switch.

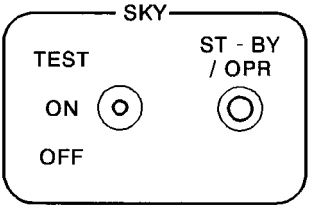
AIRCRAFT EQUIPPED WITH THE KRA 405B RADIO ALTIMETER

When the aircraft is at a ground height lower than 2000 ft, the Traffic Advisory (TA) criteria, which initiate a visual and/or an aural alert, are (sensitivity level A) :

- detection of an intruder aircraft within a 0.2 NM horizontal radius and a ± 600 ft relative altitude,
- approach of an intruder aircraft on a course that will intercept your course within 15 to 20 seconds.

When the aircraft is at a ground height lower than 1700 ft, the traffics which ground height is lower than 380 ft will no longer be displayed.

The aural traffic alert is inhibited when the height detected by the radio altimeter is below 400 ft.

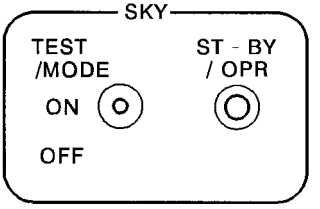


I4344400AAAAMA8000

TEST : Held position for test

ST-BY/OPR : 1st press : Skywatch stand-by
2nd press : OPR selection

Figure 9.28.1 - SKYWATCH SKY 899 remote control : EFS 40 display impossible



I4344400AAAAMA8200

ST-BY/OPR : Skywatch stand-by

TEST/MODE : 1st case : When the SKY 899 is in stand-by, tests the Skywatch
2nd case : When the SKY 899 is in OPR, changes display type (NORM, BLW, ABV) in the EFS 40
NOTE :
EFS 40 TEST/REF knob enables selection of SKY 899 Skywatch data display in the EFS 40.

Figure 9.28.2 - SKYWATCH SKY 899 remote control with display on EFS 40

SUPPLEMENT

CARGO TRANSPORTATION CAPABILITY

TABLE OF CONTENTS

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SECTION 1
GENERAL

This supplement is intended to inform the pilot about the limitations, description and operations necessary to load the airplane in order to perform cargo transportation.

For this utilization, the freight is installed in the cabin aft of the front seats.

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 "CARGO TRANSPORTATION CAPABILITY".

OCCUPANTS

- Front L.H. seat .. 1 (pilot)
- Front R.H. seat .. 0 [with partition net, P/N T700B259001100000 (emergency exit not accessible)]
  ..... 1 [with partition net, P/N T700B259001800000 (emergency exit accessible)]

Front R.H. seat occupied

The specific partition net, P/N T700B259001800000 must be installed. This net allows bulk freight only.
A clear path must be available to the emergency exit. In particular, no cargo or equipment may be stowed on top of the net forward of frame 10.

FREIGHT WEIGHT LIMITATIONS

Bulk freight [max. density 6.24 lb/cu.ft (100 kg/m^3)] :

- between the two partition nets ..... 441 lbs (200 kg)
- aft of the rear partition net ..... 220 lbs (100 kg)

Container, pallet or heavy box freight :

- front container, pallet or heavy box ..... 396.8 lbs (180 kg)
- rear container, pallet or heavy box..... 330.7 lbs (150 kg)

Max. floor load ..... 38.5 lb/sq.ft (188 kg/m^2)

Max. dimensions of containers, pallets or heavy boxes :

- Length ..... 47.24 in (1.20 m)
- Width ..... 31.50 in (0.80 m)
- Height (front container, pallet or heavy box) .... 39.37 in (1.00 m)
- Height (rear container, pallet or heavy box) .... 31.50 in (0.80 m)

PLACARDS

(1) On the raiser at frame 13bis, inside the cabin

I4255004AAAJMA18002

LOADING LIMITS

CONTAINERS, PALLETS AND HEAVY BOXES

330 Kg (727 lbs) MAXIMUM

188 Kg / m^2 (38,5 lb/sq.ft) MAXIMUM

BULK

200 Kg (441 lbs) BETWEEN PARTITION NETS

100 Kg (220 lbs) AFT OF REAR PARTITION NET

100 Kg / m^3 (6,24 lb/cu.ft)

FOR LOADING INSTRUCTIONS REFER TO RELEVANT SUPPLEMENT IN PILOT'S OPERATING HANDBOOK

IT IS THE PILOT'S RESPONSIBILITY TO CHECK THAT ALL THE CARGO IS PROPERLY SECURED

(2) Under L.H. front side window

I4113200AAABMA8000

CARGO OPERATION LIMIT

DO NOT USE FRONT RIGHT SEAT
IF EMERGENCY EXIT IS NOT ACCESSIBLE

SECTION 3

EMERGENCY PROCEDURES

The installation of the option "CARGO TRANSPORTATION CAPABILITY" 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

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 "CARGO TRANSPORTATION CAPABILITY".

PREFLIGHT INSPECTION

Bulk freight

Partition nets in place ..... **CHECK**

Container, pallet or heavy box freight

Stowing nets in place ..... **CHECK**

SECTION 5

PERFORMANCE

The installation of the option "CARGO TRANSPORTATION CAPABILITY" 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

Information hereafter supplement the information 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 option "CARGO TRANSPORTATION CAPABILITY".

S A or O	STANDARD OR OPTIONAL EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
	25 - EQUIPMENT - FURNISHINGS			
A	Cargo transportation capability :			
	- Partition net at frame 7	SOCATA	2.205 (1.00)	200.31 (5.088)
	- Partition net at frame 14	SOCATA	2.205 (1.00)	289.53 (7.354)
	- Stowing net	SOCATA	6.614 (3.00)	224.41 (5.700) or 275.59 (7.000)
	- Front stop	SOCATA	1.014 (0.46)	202.76 (5.150)
	- Rear shim	SOCATA	6.173 (2.80)	255.12 (6.480)
	(OPT70 25027A)			
A	Cargo transportation capability :			
	- Partition net at frames 7/10	SOCATA	5.071 (2.30)	219.09 (5.57)
	- Partition net at frame 14	SOCATA	2.205 (1.00)	289.53 (7.354)
	(OPT70 25027B)			
S	Seats (oxygen equipment excluded) – 6-seat configuration			
	. R.H. front seat	SOCATA	29.696 (13.470)	182.68 (4.640)
	. Intermediate (back to flight direction)	SOCATA	25.507 (11.570)	218.31 (5.545)
	. Rear double chair	SOCATA	57.319 (26.000)	271.30 (6.891)

S A or O	STANDARD OR OPTIONAL EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
S	Stairway	SOCATA	9.921 (4.500)	252.36 (6.410)
S	Cabin and baggage compartment carpets	SOCATA	23.369 (10.600)	234.02 (5.944)
A	JEPPESEN cabinet - Composite (OPT70 25005C)	SOCATA	14.991 (6.800)	202.76 (5.150)
A	Storage cabinet - Composite (OPT70 25006E)	SOCATA	16.314 (7.400)	202.76 (5.150)
A	Refreshment cabinet - Composite (OPT70 25006F)	SOCATA	18.960 (8.600)	202.76 (5.150)
A	Audio cabinet - Composite (OPT70 25009C)	SOCATA	24.052 (10.910)	206.14 (5.236)

WEIGHT AND BALANCE DETERMINATION

Enter the basic empty weight of the airplane in normal configuration and the moment in the appropriate block on the Loading Form, Figure 9.30.2 (1/3).

Use Figure 9.30.1 to determine the weight and moment difference for the conversion to the cargo version. Enter the weight and moment difference for the conversion in the appropriate block on the Loading Form, Figure 9.30.2 (1/3).

Enter the weight of all the crew and the loaded cargo in the appropriate block on the Loading Form, Figure 9.30.2 (1/3).

Determine the moment for each occupant.

Determine the moment for the cargo according to the position of the C.G. arm from Figure 9.30.1.

Enter the moment of each item in the appropriate blocks on the Loading Form, Figure 9.30.2 (1/3).

Add the weight and moment of all the items to the basic empty weight and moment of the airplane to determine the zero fuel weight and moment. Divide the moment by the weight to determine the C.G. arm "do".

Determine the moment of the fuel load.

Enter the fuel weight and moment in the appropriate block on the Loading Form, Figure 9.30.2 (1/3) and proceed as for the zero fuel configuration.

Add the fuel weight and moment to the here above calculated zero fuel weight and moment to determine the weight with fuel and moment. Divide the moment by the weight to determine the C.G. arm.

Express the C.G. arms "do" in percentage of the aerodynamic chord according to the formula and complete the table, Figure 9.30.2 (2/3) or (3/3).

Enter the characteristics of the loaded airplane in blocks (1) for the zero fuel and weight with fuel configurations, Figure 9.30.3.

Calculate the basic index using the formula described in (2) and enter the results in (3), Figure 9.30.3.

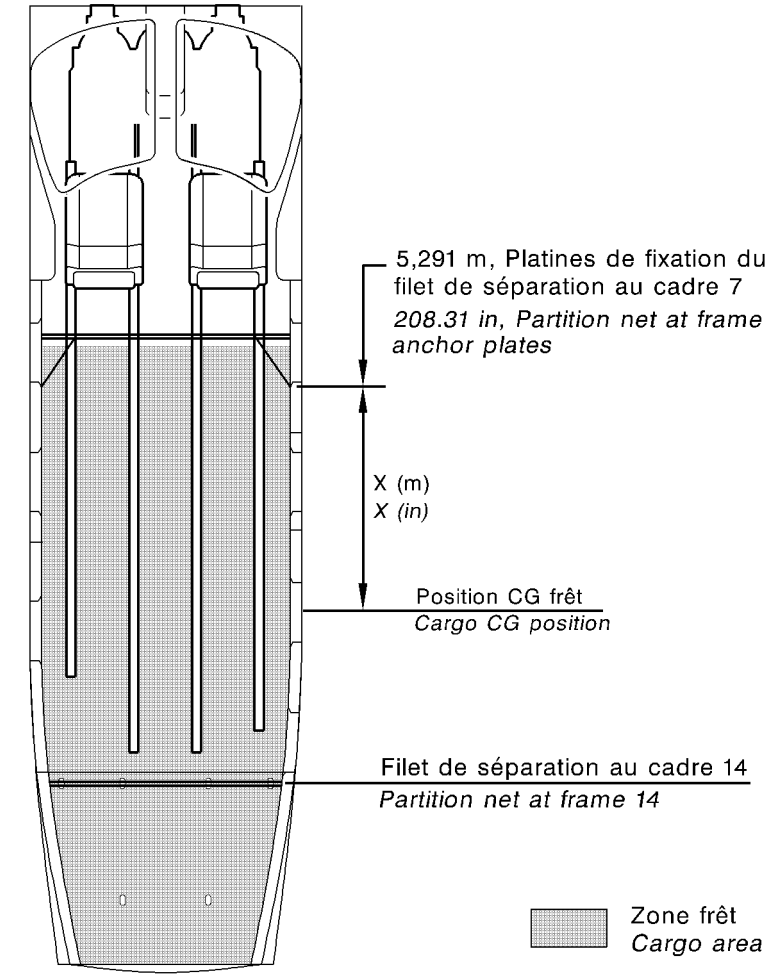
Enter the calculated index (3) in the upper index scale and proceed according to the method described in Figure 9.30.3.

Draw a vertical line corresponding to the final index (loaded airplane) until you reach the airplane weight horizontal line.

Read the corresponding balance while checking that the obtained point falls within the weight and balance envelope. Also check that the total zero fuel weight does not exceed the max. zero fuel weight [6001 lbs (2722 kg)].

Otherwise, reconsider the airplane loading.

Record these data on your navigation log.



Measure the cargo CG position (x dimension) from the anchor plates at frame 7.

Express the cargo CG arm according to the following formula :

do = 208.31 + x (in)

or

do = 5.291 + x (m)

Figure 9.30.1 - CG arm calculation

LOADING FORM			
ITEM	WEIGHT lb (kg)	C.G. ARM in (m)	MOMENT lb.in (m.kg)
1. Basic empty weight			
2. Cargo conversion			
3. Pilot		180.5 (4.585)	
4. R.H. seat passenger		180.5 (4.585)	
5. Front baggage		128.0 (3.250)	
6. Cargo			
7. Cargo			
8. Cargo			
9. Cargo			
10. Rear baggage		303.0 (7.695)	
11. Zero fuel weight			
12. Fuel		188.19 (4.780)	
13. Weight with fuel			

Figure 9.30.2 (1/3) - Loading Form

$$\text{CG m.a.c. \%} = \frac{(d_o - 172.93)}{59.45} \times 100$$

ITEM	WEIGHT lb	do in	CG m.a.c. %
14. Zero fuel weight			
15. Weight with fuel			

Figure 9.30.2 (2/3) - Loading Form (lbs and in)

$$\text{CG \% cam} = \frac{(d_o - 4.3925)}{1.51} \times 100$$

ITEM	WEIGHT kg	do m	CG m.a.c. %
14. Zero fuel weight			
15. Weight with fuel			

Figure 9.30.2 (3/3) - Loading Form (kg and m)

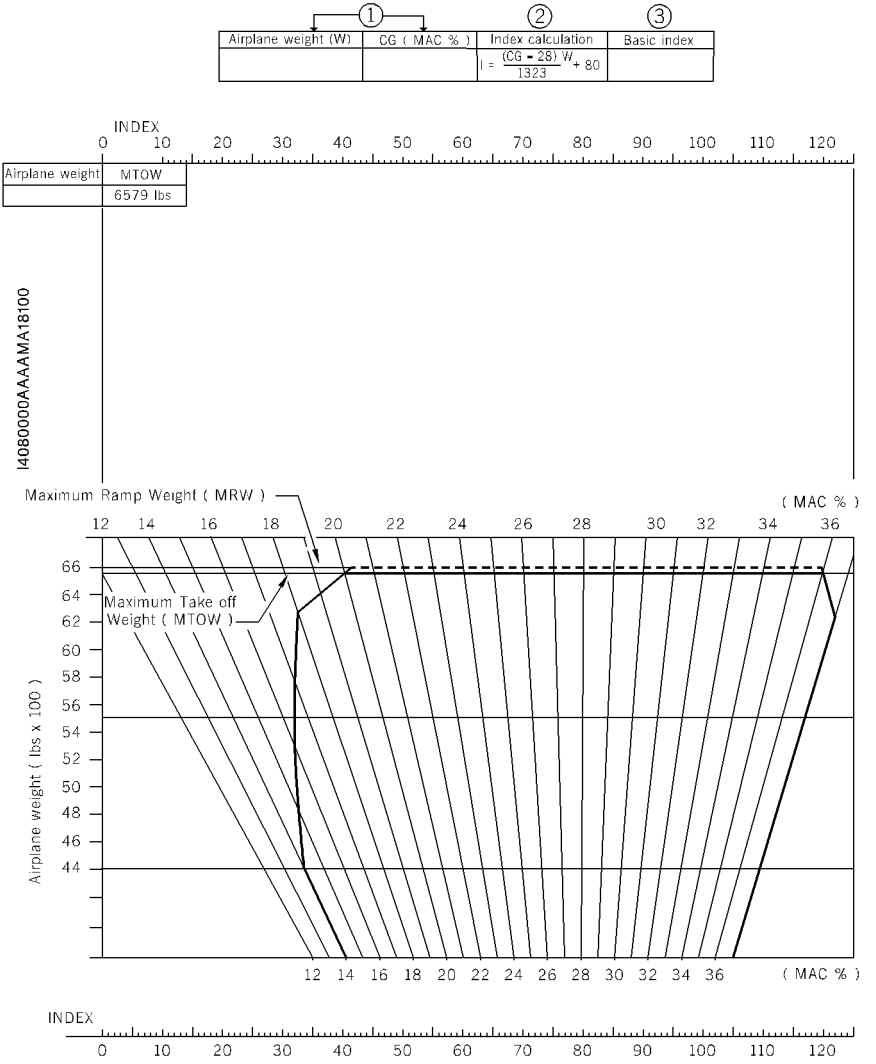


Figure 9.30.3 - Weight and balance graph (in lbs)

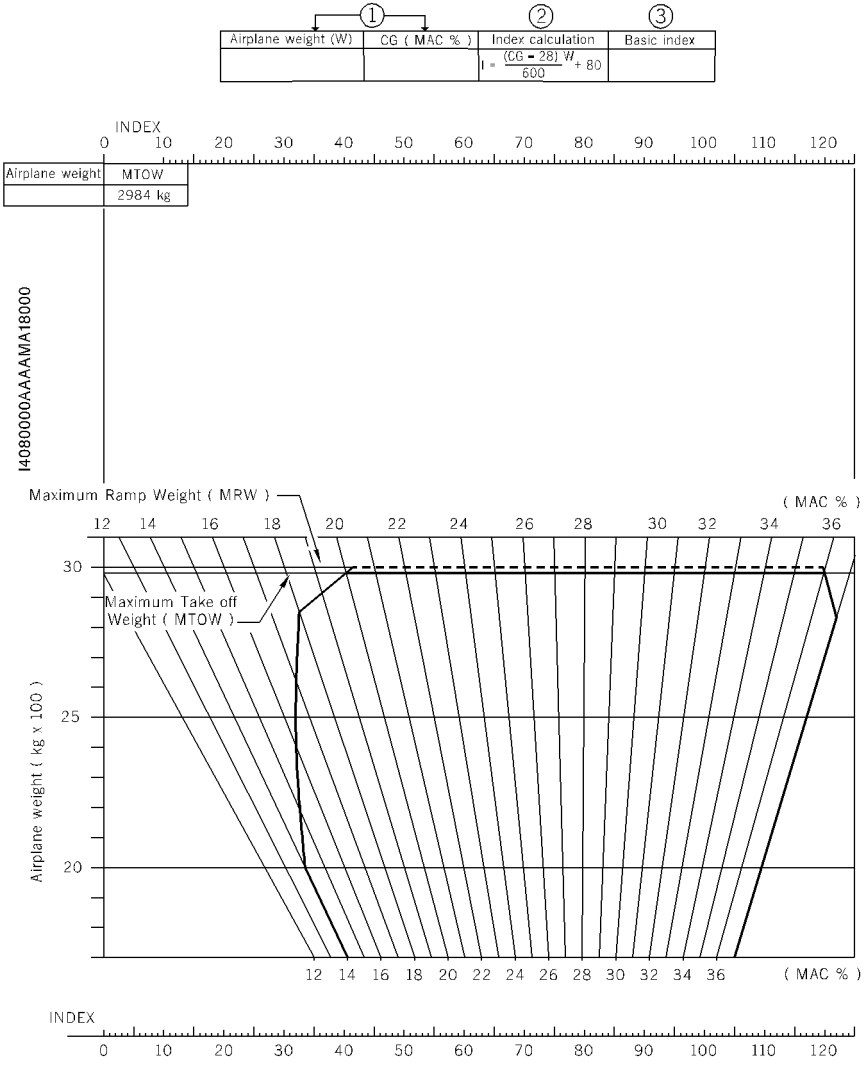


Figure 9.30.3A - Weight and balance graph (in kg)

SECTION 7
DESCRIPTION

DESCRIPTION

For transport of goods in bulk (cargo of low density), two partition nets are available :

- one net at frame 7 for cargo installed in the cabin with only a pilot on board or one net at frames 7/10 with a pilot and a R.H. passenger on board,
- one net at frame 14 for cargo installed in the baggage compartment aft of the cabin.

For transport of goods in container, on pallet or in heavy case, two identical stowing nets, with adjustable straps, are available. The strap ends are equipped with anchor fittings allowing their attachment to the seat rails or into anchor points provided in the baggage compartment.

LOADING INSTRUCTIONS

CAUTION

CARGO MUST BE STRAPPED ON THE PALLET FROM THE FRONT TO THE REAR PART OF THE CARGO

When positioned at the front, the container, pallet or heavy case must be installed against retaining angles attached to the seat rails and it must be stowed with one of the stowing nets attached to the anchor fittings in the seat rails.

When positioned at the rear, the container, pallet or heavy case must be stowed with the second stowing net attached to the anchor fittings in the seat rails, to the attachment fittings of standard straps in the baggage compartment and to the lower attachment fittings of the partition net at frame 14.

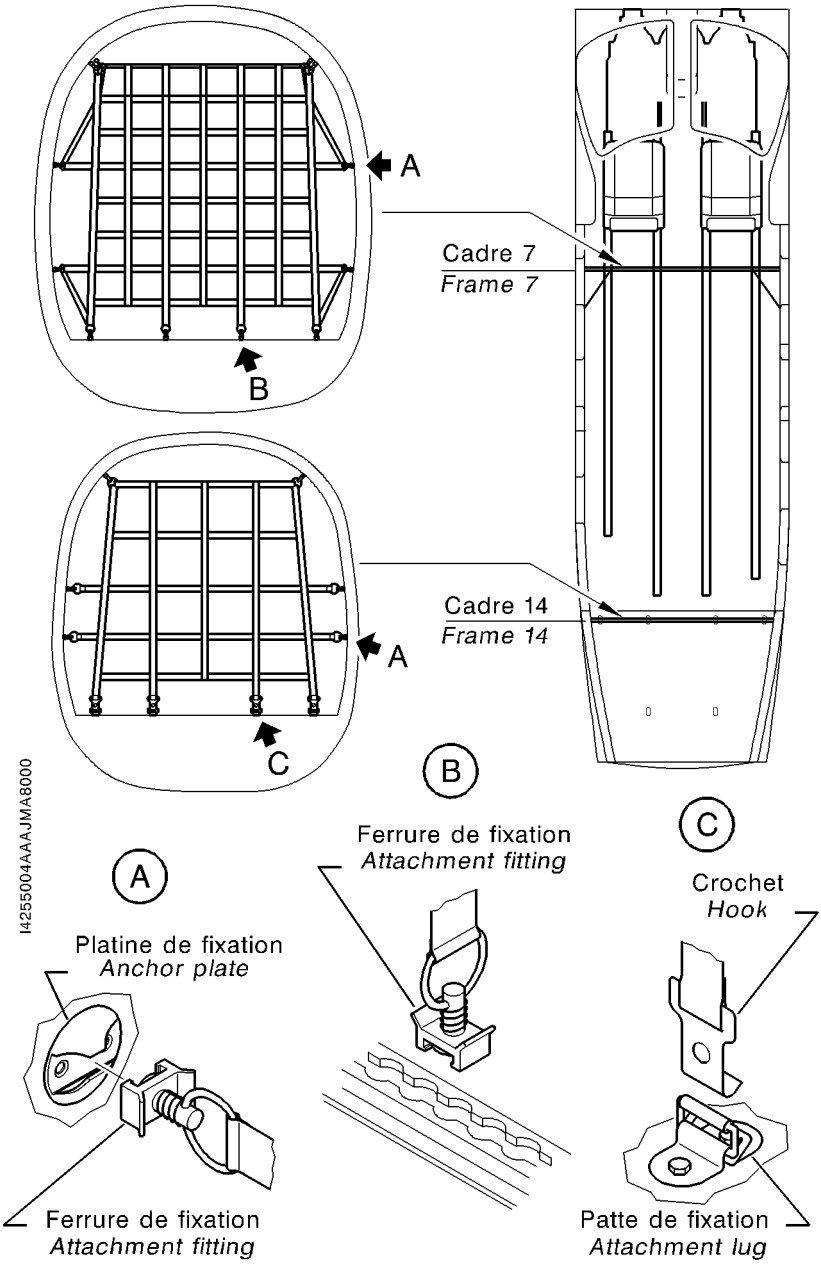


Figure 9.30.4 - Partition nets (version with a pilot)

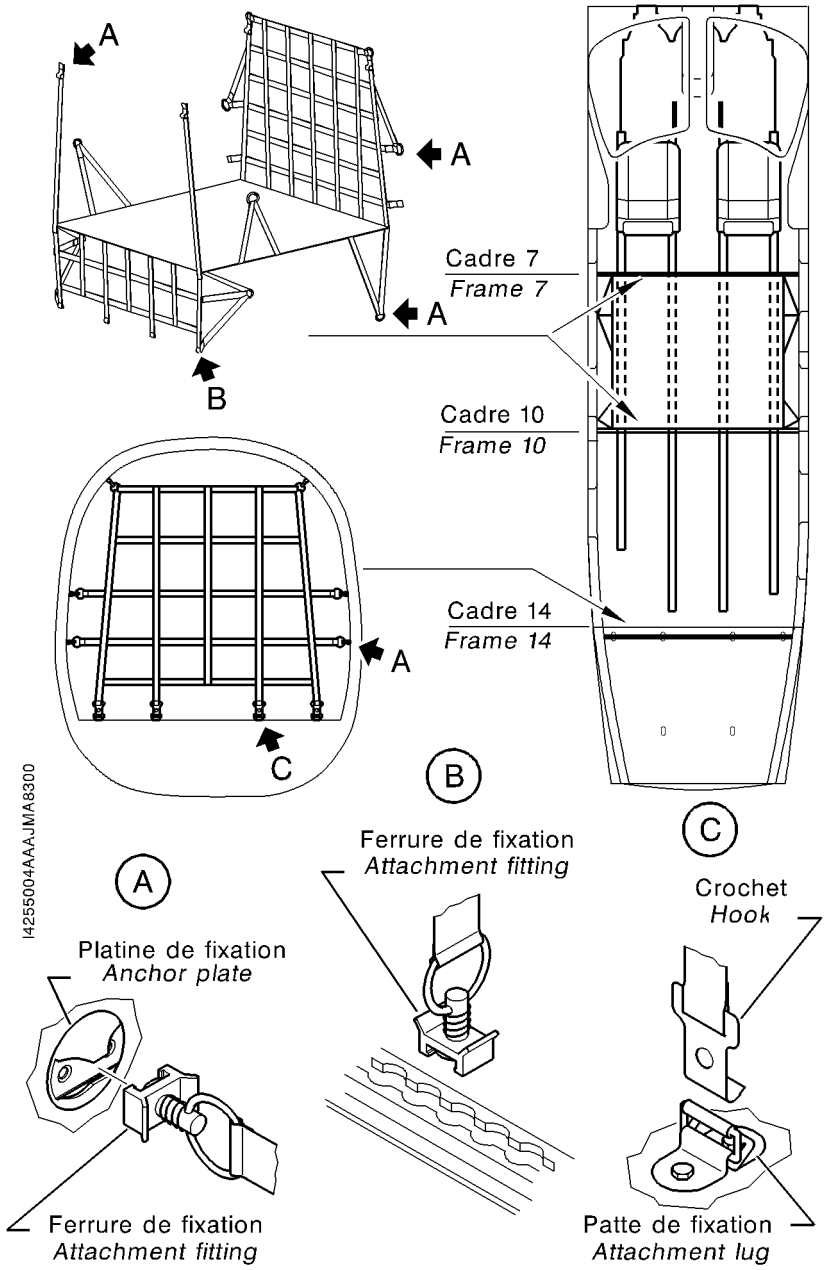


Figure 9.30.4A - Partition nets
(version with a pilot and a R.H. passenger)

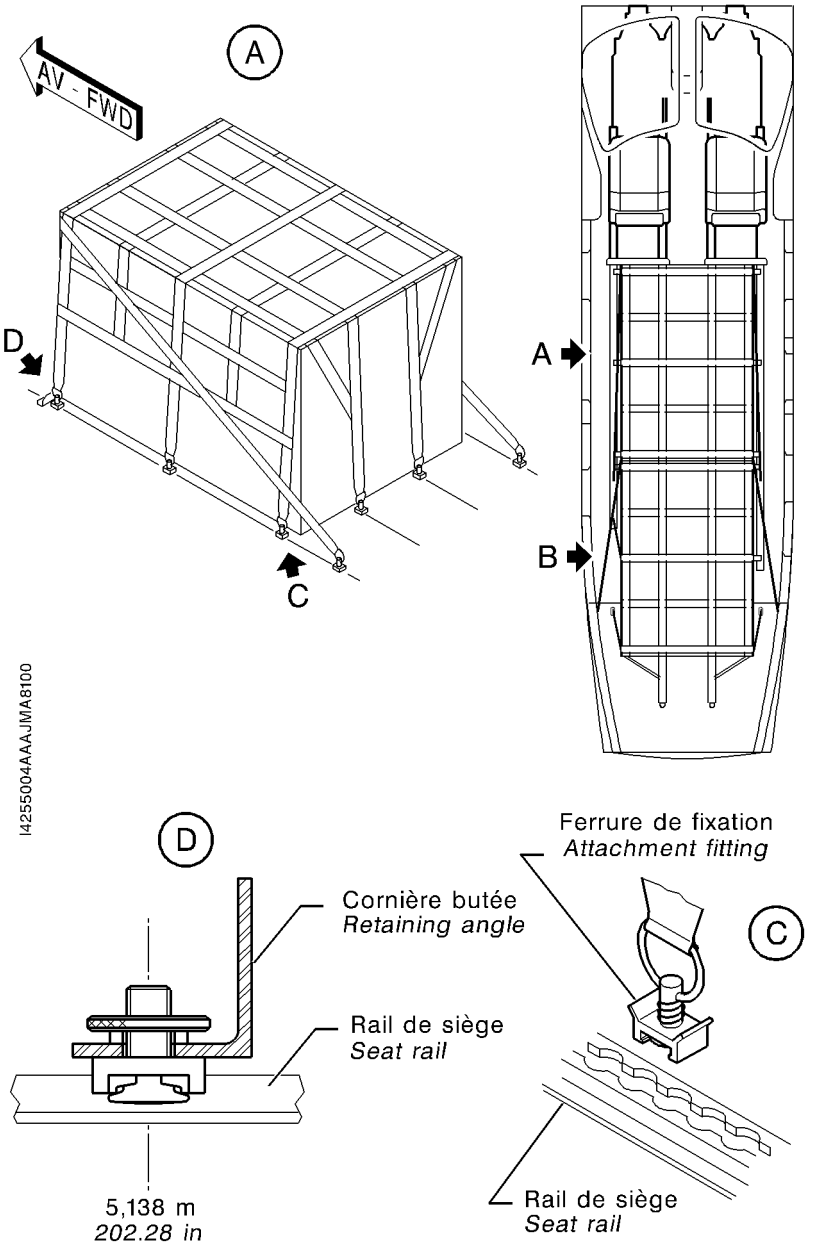


Figure 9.30.5 (1/2) - Stowing of front container, pallet or heavy box (pilot alone on board)

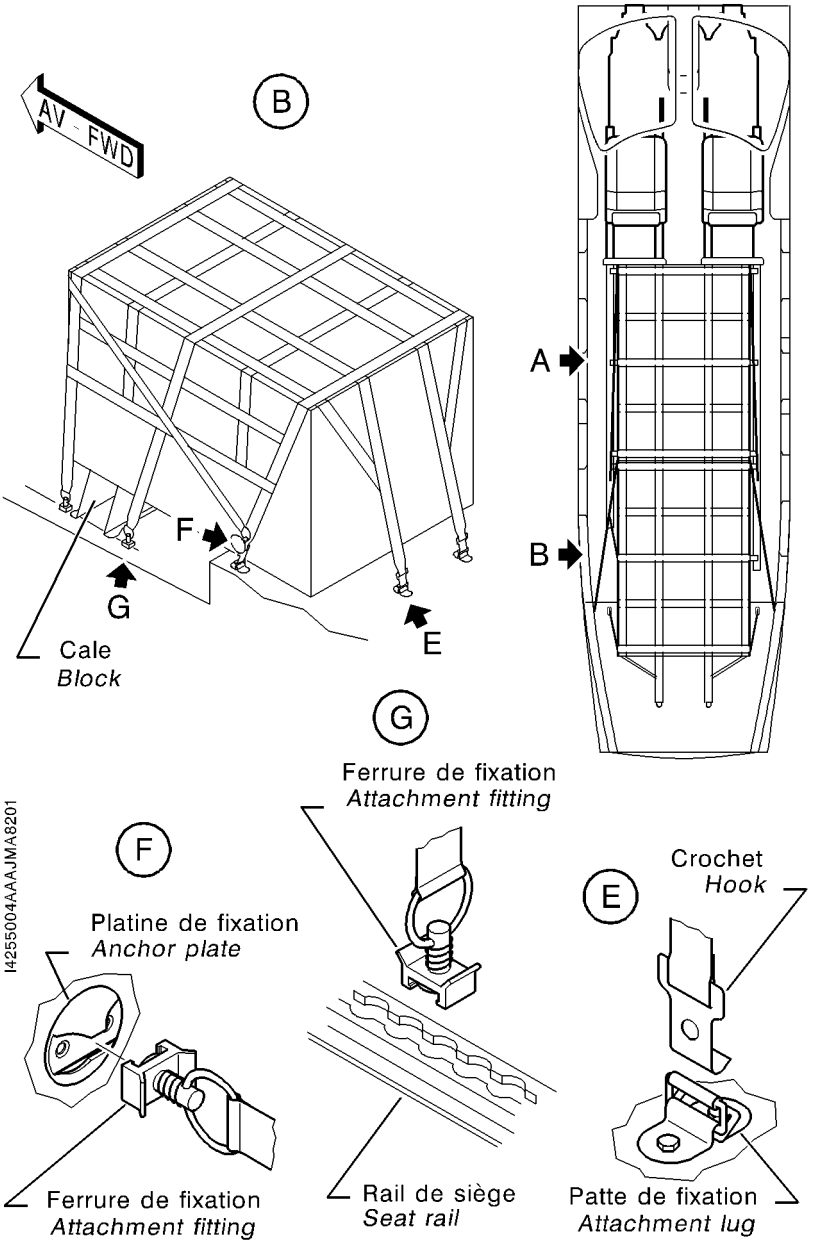


Figure 9.30.5 (2/2) - Stowing of rear container, pallet or heavy box (pilot alone on board)

SECTION 8

HANDLING, SERVICING AND MAINTENANCE

A - CONVERSION OF PASSENGERS ACCOMMODATION INTO CARGO TRANSPORTATION VERSION

1) Remove the rear double chair and the intermediate passengers' seats.
2) If the airplane is equipped with the gaseous oxygen option, optionally remove the R.H. front seat.
3) If installed, remove the cabinets.
4) Remove the cabin and baggage compartment carpets.
5) If necessary, remove the stairs.

Bulk freight with a pilot

6) Attach the front partition net, P/N T700B259001100000.
7) Attach the rear partition net, P/N T700B259000100000.

Bulk freight with a pilot and a passenger

6) Attach the front partition net, P/N T700B259001800000.
7) Attach the rear partition net, P/N T700B259000100000.

Container, pallet or heavy box freight

6) Position and secure the retaining angles, P/N T700B259003100000.

CAUTION

CARGO MUST BE STRAPPED ON THE PALLET FROM THE FRONT TO THE REAR PART OF THE CARGO

7) If a container, a pallet or a heavy box must be installed in aft location :
   a) Remove both attachment lugs and the rings in airplane centerline at the level of frame 14.
   b) Position and secure the block, P/N T700B259001500000.
8) After having loaded the airplane, position and secure the stowing nets, P/N T700B259001300000.

B - CONVERSION OF CARGO TRANSPORTATION VERSION INTO PASSENGERS ACCOMMODATION

1) If removed, install the stairs.
2) Remove and put away :
   - the stowing nets, P/N T700B259001300000,
   - the retaining angles, P/N T700B259003100000,
   - the front partition net, P/N T700B259001100000 or T700B259001800000,
   - if necessary, the rear partition net, P/N T700B259000100000,
   - the block, P/N T700B259001500000.
3) If removed, install both attachment lugs and the rings at the level of frame 14.
4) Install the cabin and baggage compartment carpets.
5) If removed, install the cabinets.
6) Install the intermediate passengers' seats and the rear double chair.
7) If removed, install the R.H. front seat.

SUPPLEMENT

"HONEYWELL" KMD 850 MULTI-FUNCTION DISPLAY

TABLE OF CONTENTS

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 700 airplane is equipped with the option ""HONEYWELL" KMD 850 MULTI-FUNCTION DISPLAY".

The generalities hereafter supplement those of the standard airplane described in Section 1 "General" of the basic Pilot's Operating Handbook, when the TBM 700 airplane is equipped with the option ""HONEYWELL" KMD 850 MULTI-FUNCTION DISPLAY".

The KMD 850 is a multifunction display screen which allows to display topographical type information (rivers, roads, ...), aeronautical type information (VOR, Airport, NDB, ...), as well as information issued from a weather radar, a stormscope, an EGPWS and the active flight plan issued from a GPS.

Aeronautical items of information are stored in a data card. This data base is updated every 28 days by replacing the data card.

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 700 airplane is equipped with the option ""HONEYWELL" KMD 850 MULTI-FUNCTION DISPLAY".

KMD 550/850 Multi-function Display Pilot's Guide, P/N 006-18222-0000, Revision 0 dated Oct/2000 or any applicable following edition, shall be readily available to the pilot.

The KMD 850 may be used only as an aid to navigation, if :

- navigation is based on other approved instruments,
- the KMD 850 data base is current and compatible with the flight,
- KMD 850 and associated GPS data bases cover the same geographical areas.

CAUTION

KMD 850 TOPOGRAPHICAL DATA MUST NOT BE USED FOR TERRAIN AND/OR OBSTACLES AVOIDANCE

SECTION 3

EMERGENCY PROCEDURES

Installation and operation of the "HONEYWELL" KMD 850 Multi-function Display do not change the emergency procedures 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 aircraft described in Section 4 "Normal procedures" of the basic Pilot's Operating Handbook, when the TB aircraft is equipped with the option ""HONEYWELL" KMD 850 MULTI-FUNCTION DISPLAY".

KMD normal operating procedures recommended by the manufacturer are outlined in the KMD 550/850 Multi-function Display Pilot's Guide, P/N 006-18222-0000, Revision 0 dated Oct/2000 or any applicable following edition.

SECTION 5
PERFORMANCE

The installation and the operation of the "HONEYWELL" KMD 850 Multi-function Display 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)
	34 - NAVIGATION			
A	Multi-function display KMD 850 (OPT70 34054)	HONEYWELL	6.415 (2.910)	153.54 (3.900)

SECTION 7
DESCRIPTION

1 - Brightness control
2 - Data card
3 - LCD display
4 - Available function
5 - ON/OFF control
6 - Selected function indicators
7 - Function select keys
8 - Control knobs (inner and outer)
9 - Power key labels
10 - Soft labels
11 - Joystick
12 - Power keys
13 - Fault indicator

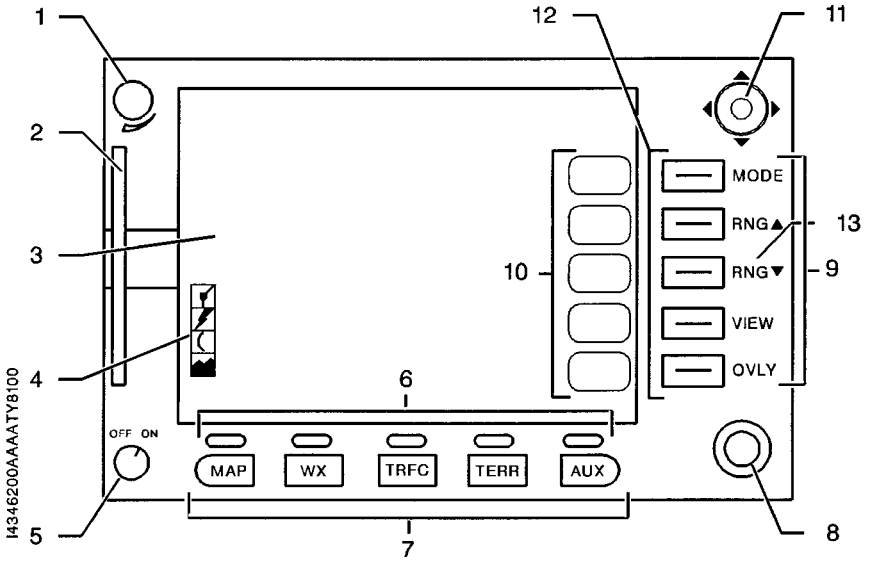


Figure 9.35.1 - KMD 850 Multi-function display (front view)

SUPPLEMENT

"GARMIN GNS 530" GPS NAVIGATION SYSTEM (B-RNAV) INTERFACED WITH EHSI OF EFS 40

TABLE OF CONTENTS

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 700 airplane is equipped with the option ""GARMIN GNS 530" GPS NAVIGATION SYSTEM (B-RNAV) INTERFACED WITH EHSI OF EFS 40".

Approved utilization types :

- IFR in continental and Terminal Enroute areas as additional source,
- B-RNAV,
- Non precision approaches (GPS, VOR, VOR-DME, TACAN, NDB, NDB-DME, RNAV).

Conformity means :

- ACJ 20X4 and ACJ 20X5
- AC 20-138.

The generalities hereafter supplement those of the standard airplane described in Section 1 "General" of the basic Pilot's Operating Handbook, when the TBM 700 airplane is equipped with the option ""GARMIN GNS 530" GPS NAVIGATION SYSTEM (B-RNAV) INTERFACED WITH EHSI OF EFS 40".

This supplement does not constitute an operational utilization authorization.

The GPS is an automatic tridimensional (latitude, longitude, altitude) location and navigation means using information provided by satellites (the GNS 530 system is able to track up to 12 satellites at a time). It also uses data recorded in a data base. The data base is housed in a Navdata card to be inserted in the front face and is updated every 28 days by replacing the card.

Each data base contains information about airports, communication frequencies, VORs, NDBs, Intersections, SIDs, STARs, instrument approaches, flight service stations ...

There is also room for up to 1000 user defined waypoints and 20 different flight plans.

SECTION 2
LIMITATIONS

2.1 - General

The limitations hereafter supplement those of the standard airplane described in Section 2 "Limitations" of the basic Pilot's Operating Handbook, when the TBM 700 airplane is equipped with the option ""GARMIN GNS 530" GPS NAVIGATION SYSTEM (B-RNAV) INTERFACED WITH EHSI OF EFS 40".

"GARMIN" GNS 530 Pilot's Guide, P/N 190-00181-00 Revision A dated 04/00 or any applicable following edition, shall be readily available to the pilot, each time the GPS navigation system is used.

The system must utilize the following software versions or more recent ones :

Subsystem	Software
MAIN	2.06
GPS	2.10

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.

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 GNS 530 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 "GARMIN GNS 530 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 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, 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.

2.2 - 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).

2.3 - 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 achieved 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) 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.

c) If a landing is required on a diversion field, an other means than GPS must be available to perform approach to this field. Required on board equipment must be serviceable and ground aids must be operational.

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

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 700 airplane is equipped with the option ""GARMIN GNS 530" GPS NAVIGATION SYSTEM (B-RNAV) INTERFACED WITH EHSI OF EFS 40".

EHSI NAV FLAG

In navigation GPS#1 (OPT70-23024) :

Return to VOR, ADF or (if installed) GPS#2 navigation sources and to remaining operational navigation equipment.

Selection of GPS#2 (if installed and BRNAV authorized) ..... **PRESS ONCE on "1-2" push-button of the EHSI**

or

Selection of VOR or ADF ..... **PRESS ONCE or TWICE on "NAV" push-button of the EHSI**

In navigation GPS#2 (OPT70-23025) :

Return to VOR, ADF or GPS#1 navigation sources and to remaining operational navigation equipment.

Selection of GPS#1 (if BRNAV authorized) ..... **PRESS ONCE on "1-2" push-button of the EHSI**

or

Selection of VOR or ADF ..... **PRESS ONCE or TWICE on "NAV" push-button of the EHSI**

"MSG" ANNUNCIATOR ILLUMINATION

In navigation with GPS associated to the warning :

"MSG" push-button of associated GPS ..... **PRESS**

Check the message.

NOTE :
A single "stand-alone" GPS certified as B-RNAV navigation means is required to fly in B-RNAV areas.

In case of loss of RAIM function, the navigation information remains available but its integrity is no longer controlled.

- If RAIM loss occurs out of B-RNAV area, the aircraft must not enter B-RNAV area.
- If RAIM loss occurs in B-RNAV area, GPS navigation can be continued as long as cross-checkings done with conventional means (VOR, DME, NDB and dead reckoning elements) enable making sure that B-RNAV accuracy criteria are observed. When this condition is not met, the Air Traffic Control must be contacted to return to conventional navigation.

If GPS navigation information is lost or declared not valid, use the other available navigation means. If this occurs during instrument approach final phase, a go-around must be made, except if the other approved radio means to perform approach are displayed and available.

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 700 airplane is equipped with the option ""GARMIN GNS 530" GPS NAVIGATION SYSTEM (B-RNAV) INTERFACED WITH EHSI OF EFS 40".

Normal operating procedures of the GPS recommended by the manufacturer are outlined in the "GARMIN" GNS 530 Pilot's Guide at the latest revision and Memory Jogger at the latest revision.

However, it is important to precise the following points for the GPS use on TBM 700 :

SET UP CONDITIONS

- Verify if the data base is current. Verify data on the self test page.
- 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).

  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.

  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.

SYSTEM ANNUNCIATORS / SWITCHES / CONTROLS

"CDI" push-button of the GPS

This push-button may be used to select data to be displayed on electromechanical instruments (CDI or HSI).

This push-button is ineffective on the EHSI.

EHSI presentation "NAV" push-button

This push-button may be used to select data for presentation on the pilot's EHSI ; either NAV data from NAV 1 or NAV 2 navigation receiver or GPS#1 or (if installed) GPS#2 data or ADF data.

"NAV" symbol is green, **"GPS1"** symbol is blue, **"GPS2"** symbol is yellow and **"ADF"** symbol is green.

Colors relative to EHSI symbols are as follows :

CONFIGURATION	TEXTS	LEG OR NEEDLE
GPS1	Blue	Active leg : Blue Not active leg : White
GPS2	Yellow	Active leg : Yellow Not active leg : White
ADF	Green	Magenta
VOR1	Green	White
VOR2	Yellow	Magenta
LOC1	Green	Green
LOC2	Yellow	Yellow

"MSG" message annunciator

CAUTION

"MSG" ANNUNCIATOR MAY BE PERMANENTLY ILLUMINATED IF THERE EXISTS A PERMANENT MESSAGE. WHEN A NEW MESSAGE APPEARS, "MSG" ANNUNCIATOR JUST FLASHES.

"MSG" message annunciator will flash to alert the pilot of a situation that requires his attention. Press the **"MSG" push-button** located on the GPS to view the message (Chapter 12 of "GARMIN" GNS 530 Pilot's Guide contains a list of all the messages likely to appear on the "Message" page and their meanings).

"MSG" message annunciator (white color) of the GPS system interfaced with EHSI is displayed on the L.H. side of the EHSI. **"MSG1" message annunciator** of GPS#1 system (OPT70-23024) and/or **"MSG2" message annunciator** of GPS#2 system (OPT70-23025) are displayed on L.H. instrument panel (amber indication - see Figure 9.36.1, Detail A).

"WPT" Waypoint annunciator

This annunciator illuminates 10 seconds before warning "TURN TO XXX".

"WPT" Waypoint annunciator is also displayed on the L.H. side of the EHSI.

"APR" annunciator is also displayed on the L.H. side of the EHSI.

Flight director/autopilot coupled operation

The EHSI may be coupled with KFC 325 autopilot.

Engaging the "NAV" mode on the autopilot mode controller will make the FD appear on the EADI. The FD uses selected course and left/right steering information presented on the EHSI.

This information is related to the navigation source (VOR, GPS or ADF) selected by the push-button "NAV" on the EHSI.

When "AP" is engaged on the mode controller, the autopilot is then coupled to the EHSI and uses displayed information (track and course deviation).

When the GPS suspends the linked navigation (GPS "SUSP" annunciator), the autopilot continues keeping same heading.

NOTE :
When the EHSI is selected on GPS navigation source, the RMI remains selected on NAV 1 source (VOR or RNAV).

REMARK :
The change of steering source for the autopilot, when the latter is set to "NAV" side mode, implies a sequence of checks, some of which may be omitted or require a particular attention. Therefore it is strongly recommended to temporarily disengage the autopilot "NAV" mode before changing source.

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

The EHSI must be set in "HSI Compass Rose" mode.

Coupling with autopilot must 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

The installation and the operation of the "GARMIN GNS 530" GPS NAVIGATION SYSTEM (B-RNAV) INTERFACED WITH EHSI OF EFS 40 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)
	23 - COMMUNICATIONS			
A	COM-NAV-GPS # 1 GNS 530 (B-RNAV) interfaced with EHSI (OPT70 23024)	GARMIN	- 1.852 (- 0.840)	169.13 (4.296)
A	COM-NAV-GPS # 2 GNS 530 interfaced with GI 106A CDI and EHSI (OPT70 23025)	GARMIN	1.852 (0.840)	143.15 (3.636)

SECTION 7
DESCRIPTION

Normal operating procedures of the "GARMIN GNS 530" GPS NAVIGATION SYSTEM (B-RNAV) INTERFACED WITH EHSI OF EFS 40 are described in the "GARMIN" GNS 530 Pilot's Guide at the latest revision.

7.1 "GNS 530 System # 1" OPTION (OPT70-23024)

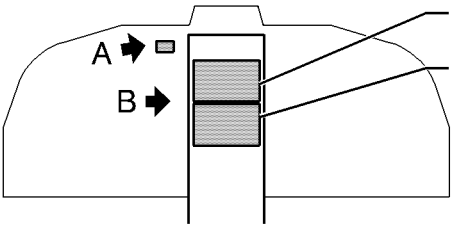
The option includes the GPS#1 system consisting of :

- one "GNS 530" GPS - see Figure 9.36.1 :
  This GPS may be a navigation source for the autopilot. Course deviation information is then displayed on the EHSI.
- one "MSG1" repeater on pilot's instrument panel.

7.2 "GNS 530 System # 2" OPTION (OPT70-23025)

The option includes the GPS#2 system consisting of :

- one "GNS 530" GPS - see Figure 9.36.1 :
  This GPS may be a navigation source for the autopilot. Course deviation information is then displayed on the EHSI.
- one GI 106A CDI,
- one "MSG2" repeater on pilot's instrument panel.



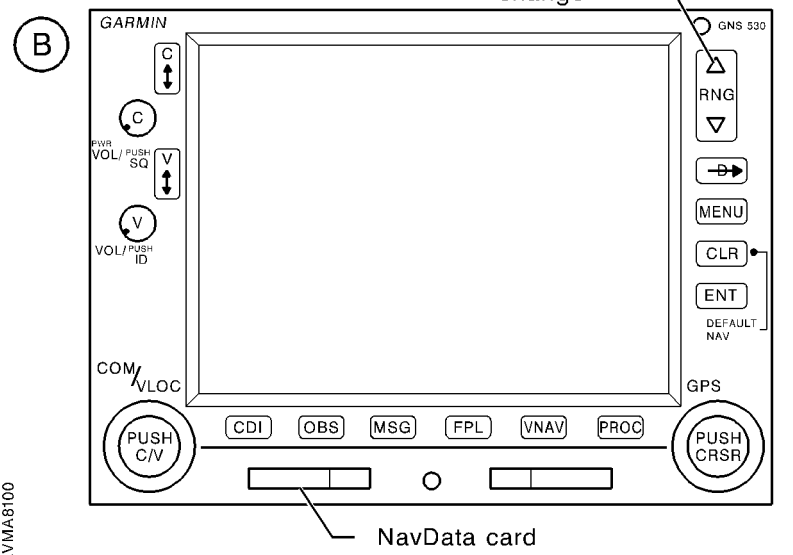
GPS#1 system

GPS#2 system

(A)

MSG - 1 or 2 MSG amber annunciator(s)

Map scale change



NavData card

I4345100AAVMA8100

(C) - COM volume

(V) - VOR volume

PUSH C/V - Selection of VOR/VHF frequencies

PUSH CRSR - Selection of group pages

Group selection:
- NAV
- WPT
- AUX
- NRST

CDI - Navigation source (VLOC/GPS)selection

OBS - OBS/Leg mode selection

MSG - Message viewing

FPL
- Create
- Edit
- Activate

VNAV - Vertical navigation

PROC Procedures :
- Arrival
- Departure
- Approach

D "Direct TO"

Figure 9.36.1 - "GARMIN GNS 530" GPS SYSTEMS

SUPPLEMENT

KGP 560 "HONEYWELL" EGPWS SYSTEM

TABLE OF CONTENTS

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 700 airplane is equipped with the option "KGP 560 "HONEYWELL" EGPWS SYSTEM".

The EGPWS system is an aid for the pilot enabling him 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 TBM 700 airplane is equipped with the option "KGP 560 "HONEYWELL" EGPWS SYSTEM".

Following documents or any further edition applicable to the latter, shall be readily available to the pilot, each time the EGPWS system is used.

- KMD 550/850 Multi-function Display Pilot's Guide, P/N 006-18222-0000 Revision 1 dated April/2001,
- KMD 550/850 Multi-function Display/Terrain Function (EGPWS) Pilot's Guide Addendum, P/N 006-18236-0000 Revision 1 dated April/2001,
- KGP 560 General aviation Enhanced Ground Proximity Warning System - TSO C151a Class B - Pilot's Guide, P/N 006-18254-0000 Revision 1.

The EGPWS system 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, the EGPWS must be inhibited for any landing on a terrain which is not mentioned in the data base.

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 700 airplane is equipped with the option "KGP 560 "HONEYWELL" EGPWS SYSTEM".

WARNING LIGHT "TERR N/A" ON

1 - MD41 "TEST" switch ..... **PUSH**

If the following voice message is heard :
"EGPWS Computer OK - External faults : Display configuration"
or
"EGPWS Computer OK - External faults : Display bus inactive" :

2 - Check the KMD 850 is set to ON.

For all other messages :

The EGPWS system 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 TBM 700 airplane is equipped with the option "KGP 560 "HONEYWELL" EGPWS SYSTEM".

BEFORE TAKEOFF

1 - MD41 "TEST" switch ..... **PUSH**

2 - "EGPWS System OK" voice message ..... **HEARD**

4.1 - WARNINGS

"PULL UP" AURAL WARNING

The red "TERR" warning light illuminates.

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", "Obstacle Obstacle Pull up", AURAL WARNINGS

The red "TERR" warning light illuminates.

Adjust airplane path in order to make the warning disappear.

4.2 - CAUTIONS

"Caution terrain", "Caution obstacle", "Too low terrain" AURAL WARNINGS
The amber "TERR" warning light illuminates. Adjust airplane path in order to make the warning disappear.

"DON'T SINK" AURAL WARNING
The amber "TERR" warning light illuminates. Re-establish a positive rate of climb.

"SINK RATE" AURAL WARNING
The amber "TERR" warning light illuminates. Reduce rate of descent.

SECTION 5
PERFORMANCE

The installation and the operation of the KGP 560 "HONEYWELL" EGPWS 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)
	34 - NAVIGATION			
A	EGPWS KGP 560 (OPT70 34060)	HONEYWELL	2.535 (1.150)	185.39 (4.709)

SECTION 7
DESCRIPTION

7.1 COMPONENTS OF THE OPTION

The EGPWS option is constituted of the following components :

- a KA 92 GPS antenna,
- a KGP 560 computer with integrated GPS,
- an MD41-1208 control box.

The KGP 560 information are displayed on a KMD 850 screen, when the "TERR" function is activated by the pilot. The GPS # 1 flight plan may be overlaid on the EGPWS display.

7.2 FUNCTIONS OF THE EGPWS SYSTEM

The EGPWS system has 5 functions :

- "Look ahead" function
  This function provides a protection ahead of the airplane with a 1 minute prediction ("Caution terrain" or "Caution obstacle" aural warning associated with the illumination of the amber "TERR" warning light) and a 30 seconds prediction ("Terrain Terrain Pull up" or "Obstacle Obstacle Pull up" aural warning associated with the illumination of the red "TERR" warning light).

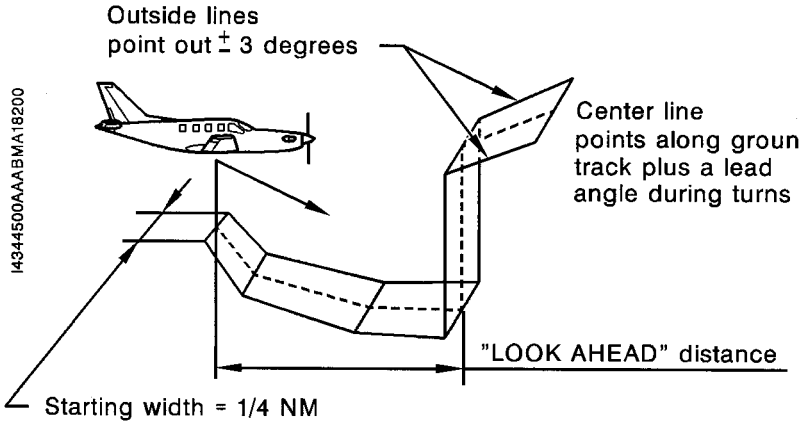


Figure 9.39.1

- "Runway Field Clearance Floor" (RFCF) function
This function is active, when the airplane flies at less than 5 NM from a runway known in the KGP 560 data base ; it generates the "Too low terrain" aural warning and the illumination of the amber "TERR" warning light.

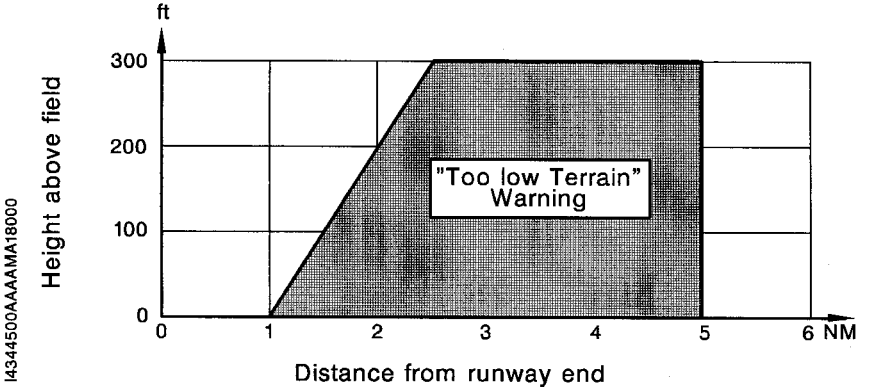


Figure 9.39.2 - "Too low terrain" warning area

- "Excessive rate of descent" function
This function has a lower priority than the "Look ahead" function ; it generates the "Sink rate" aural warning (illumination of the amber "TERR" warning light) and the "Pull up" aural warning (illumination of the red "TERR" warning light).

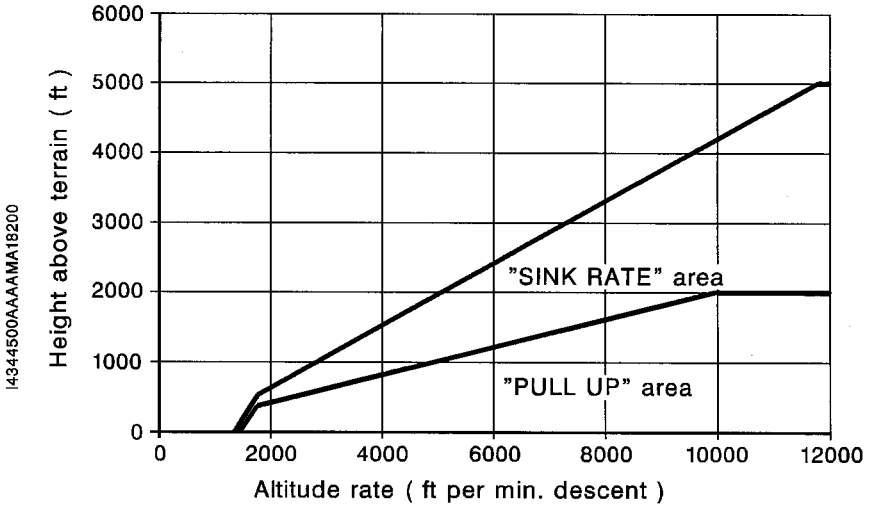


Figure 9.39.3 - "Sink rate" and "Pull up" warnings areas

- "Loss of altitude/negative rate of descent after takeoff" function
  This function is active until the airplane reaches an altitude of approximately 700 ft above the runway ; it generates the "Don't sink" aural warning and the illumination of the amber "TERR" warning light.

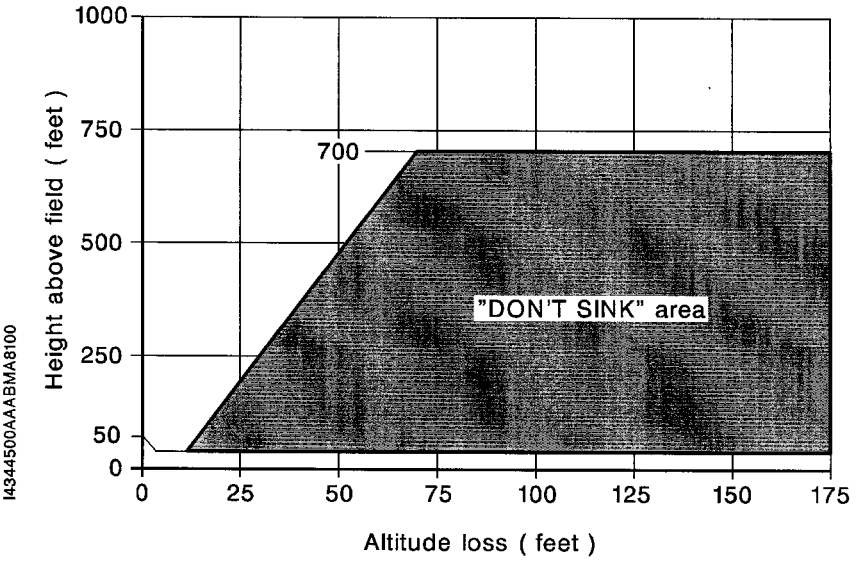
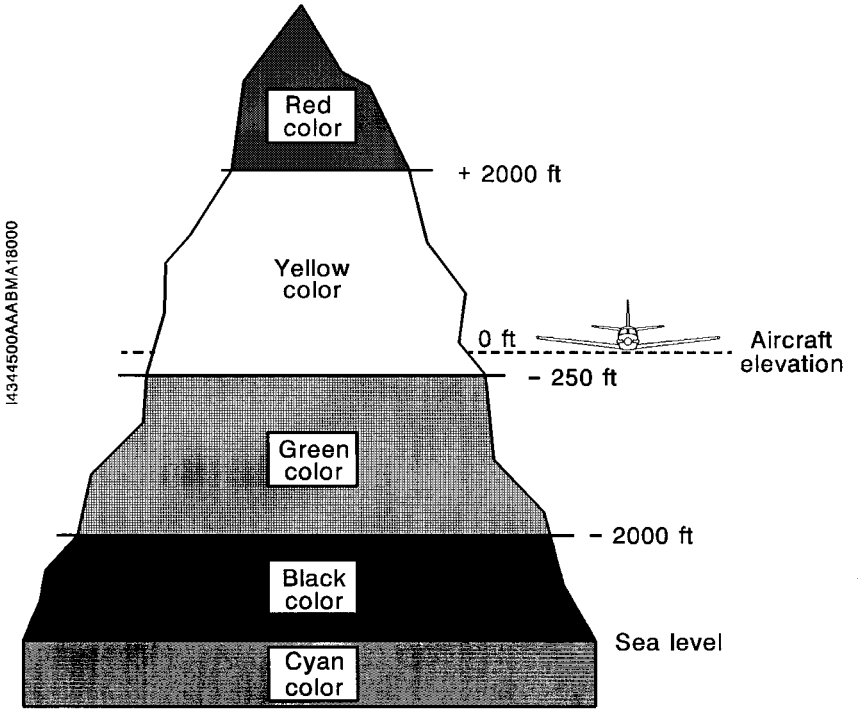


Figure 9.39.4 - "Don't sink" warning area

- "500 ft" function
  This function is active, when the airplane flies at less than 5 NM from a runway known in the KGP 560 data base ; it generates a "500 ft" aural warning. This warning is re-initialized when the airplane reaches a height of 700 ft above the terrain altitude.

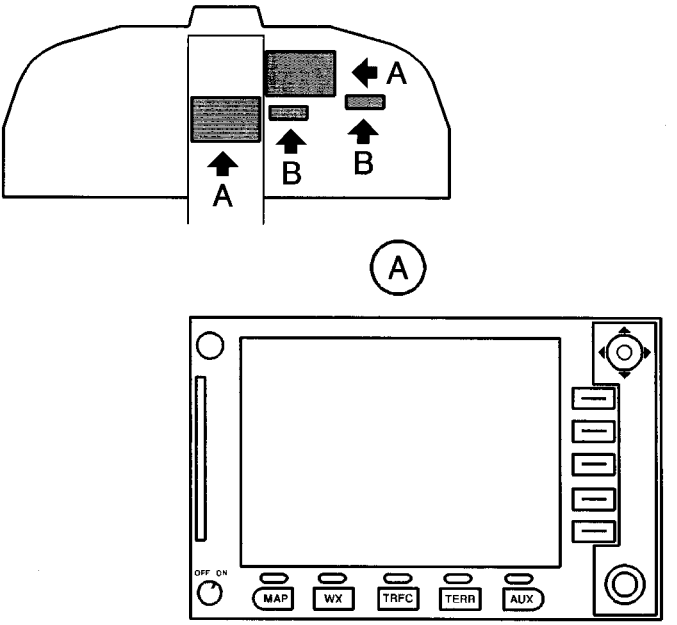
7.3 TERRAIN AWARENESS DISPLAY



7.4 OBSTACLE DATA BASE

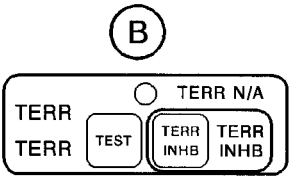
Data for known obstacles such as towers, buildings, antennas, etc. is contained on the same data card as the terrain and airport data. Presently, there are some 70000-plus obstacles in the database, but they are all in the area of North America. As more reliable information becomes available, Honeywell will expand the capability to provide alerting and warning for obstacles in other areas of the world.

Obstacles in the database are those known obstacles more than 100 feet AGL, so obstacles of lower height will not produce GA-EGPWS "Obstacle" alerts or warnings. However, terrain elevations are "rounded" up to the next 100 feet, so alerting and warning protection is generally available for known obstacles that are less than 100 feet AGL.



KMD 850

TERR : EGPWS mapping selection



MD41 - 1208

TEST : EGPWS system test switch

TERR INHB : EGPWS warning inhibition switch

TERR (red) : Warnings
TERR (amber) : Cautions
TERR INHB (white) : Inhibited EGPWS warnings
TERR N/A (amber) : EGPWS system not operational

I4344500AAAAMA8100

Figure 9.39.5 - EGPWS system

SUPPLEMENT

TBM 700C2

TABLE OF CONTENTS

SECTION 1
GENERAL

This supplement is intended to inform the pilot about the limitations and procedures necessary to use the TBM 700C2 airplane :
- between 6579 lbs (2984 kg) and 7394 lbs (3354 kg) for takeoff weight, and/or
- between 6250 lbs (2835 kg) and 7024 lbs (3186 kg) for landing weight.

The TBM 700C2 modification consists of :
- new seats with integral belt and shoulder harnesses,
- reinforced main wheels and tires.

SECTION 2
LIMITATIONS

The limitations hereafter supplement or replace those of the TBM 700C1 airplane described in Section 2 "Limitations" of the TBM 700C1 Pilot's Operating Handbook when using the TBM 700C2 airplane :
- between 6579 lbs (2984 kg) and 7394 lbs (3354 kg) for takeoff weight, and/or
- between 6250 lbs (2835 kg) and 7024 lbs (3186 kg) for landing weight.

2.1 - WEIGHT AND C.G. LIMITS

WEIGHT LIMITS

Maximum ramp weight : 7430 lbs (3370 kg)
Maximum takeoff weight : 7394 lbs (3354 kg)
Maximum landing weight : 7024 lbs (3186 kg)
Maximum zero fuel weight (MZFW) : 6032 lbs (2736 kg)
Maximum baggage weight in pressurized compartment :
- with partition net version A : 100 lbs (45 kg)
  or
- with partition net version B : 220 lbs (100kg)

C.G. LIMITS (Figures 9.41.34 and 9.41.34A - Section 6 of this Supplement)

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

Forward limits :

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.)

2.2 - OPERATION LIMITS

FLIGHT LOAD FACTOR LIMITS

Flaps up

Weight below 6579 lbs (2984 kg) :

$-1.5 \leq n \leq +3.8$ g

Weight above 6579 lbs (2984 kg) :

$-1.5 \leq n \leq +3.5$ g

Flaps down

$-0 \leq n \leq +2.0$ g

2.3 - MARKINGS

AIRSPEED INDICATOR

Airspeed indicator markings and their color code significance are shown in Figure 9.41.1.

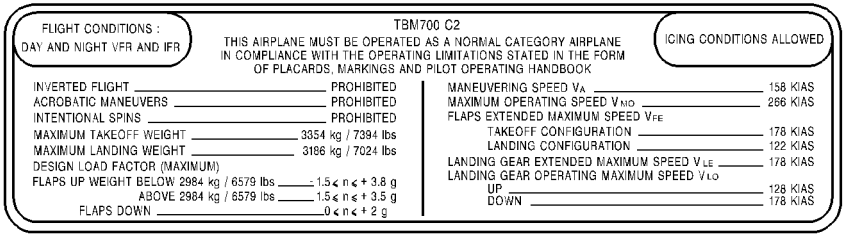
MARKING	KIAS (Value or range)	SIGNIFICANCE
White arc	65 - 122	Full Flap Operating Range Lower limit is maximum weight V_{SO} in landing configuration.
Wide	65 - 81	Transition point between wide and narrow arcs is stall speed with flaps UP
Narrow	81 - 122	Upper limit is maximum speed permissible with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

Figure 9.41.1 - AIRSPEED INDICATOR MARKINGS

2.4 - PLACARDS

Under L.H. front side window

I4113004AAAKMA18000



On main gear leg

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

On pressurized baggage compartment partition wall

With partition net version A (refer to Section 6 of TBM 700C1 Pilot's Operating Handbook)

I4113500AAAAMA8000

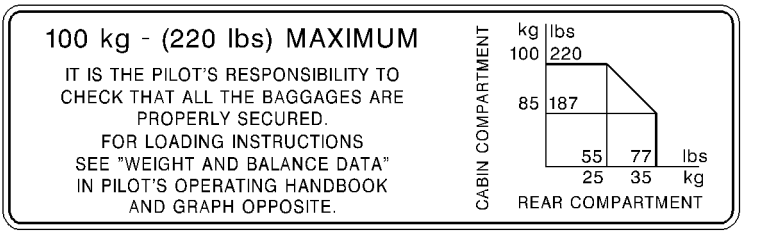
45 Kg - (100 lbs) MAXIMUM

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

With partition net version B (refer to Section 6 of TBM 700C1 Pilot's Operating Handbook)

I4112003AAABMA8200



SECTION 3
EMERGENCY PROCEDURES

The emergency procedures hereafter supplement or replace those of the TBM 700C1 airplane described in Section 3 "Emergency procedures" of the TBM 700C1 Pilot's Operating Handbook, when using the TBM 700C2 airplane :

- between 6579 lbs (2984 kg) and 7394 lbs (3354 kg) for takeoff weight, and/or
- between 6250 lbs (2835 kg) and 7024 lbs (3186 kg) for landing weight.

3.1 - ENGINE FAILURES

ENGINE FAILURE AFTER ROTATION

- *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 ..... **IAS > 85 KIAS**
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 ..... **DOWN**
2 - Flaps ..... **AS REQUIRED**
3 - Maintain ..... **IAS > 105 KIAS, Flaps UP**
IAS > 95 KIAS, Flaps TO
4 - Power lever ..... **IDLE**
5 - Propeller governor lever ..... **FEATHER**

Before touch-down :

6 - Condition lever ..... **CUT OFF**
7 - Tank selector ..... **OFF**
8 - CRASH lever ..... **PULL DOWN**

3.2 - 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 ..... **110 KIAS maintained until favourable ground approach**

If ground allows it :

10 - Landing gear ..... **DN**

If ground does not allow it :

11 - Keep landing gear ..... **UP**
12 - When chosen ground is assured ..... **FLAPS LDG**
13 - CRASH lever ..... **PULL DOWN**
14 - Final approach ..... **IAS = 85 KIAS**
15 - Land flaring out
16 - EVACUATE after stop

3.2 - 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**
IAS = 95 KIAS

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

3.2 - EMERGENCY LANDINGS

LANDING WITH GEAR UP

1 - Final approach ..... **Standard (Flaps LDG, IAS = 85 KIAS)**
2 - "BLEED" switch ..... **OFF**
3 - "DUMP" switch ..... **ACTUATED**

When runway is assured :

4 - Power lever ..... **IDLE**
5 - Propeller governor lever ..... **FEATHER**
6 - Condition lever ..... **CUT OFF**
7 - Tank selector ..... **OFF**
8 - Flare out
9 - After touch-down, CRASH lever ..... **PULL DOWN**
10 - EVACUATE after airplane comes to a stop

LANDING WITHOUT FLAPS

Proceed as for a normal landing, maintaining approach airspeed IAS = 105 KIAS

Provide for a landing distance increased by about 60 %

3.2 - EMERGENCY LANDINGS

DITCHING

1 - Landing gear ..... **UP**

In heavy swell with light wind, land parallel to the swell (rollers).

In heavy wind, land facing wind.

2 - Flaps ..... **LDG**

3 - Maintain a descent rate as low as possible when approaching the water

4 - Airspeed ..... **IAS = 85 KIAS**

5 - "BLEED" switch ..... **OFF**

6 - "DUMP" switch ..... **ACTUATED**

7 - CRASH lever ..... **PULL DOWN**

8 - Maintain attitude without rounding off until touch-down

9 - EVACUATE through EMERGENCY EXIT

3.3 - DEICING SYSTEM

WINDSHIELD MISTING OR INTERNAL ICING

Symptoms : - Mist or ice on windshield internal face

1 - "CABIN TEMP/°C" selector ..... **Max HOT**

2 - "AIR FLOW" distributor ..... **HOT**

3 - "L. WINDSHIELD" switch ..... **ON**

4 - "R. WINDSHIELD" switch ..... **ON**

If not successful, to gain sufficient visibility :

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 - Maintain IAS ≥ 95 KIAS

CAUTION

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

SECTION 4
NORMAL PROCEDURES

The normal procedures hereafter supplement or replace those of the TBM 700C1 airplane described in Section 4 "Normal procedures" of the TBM 700C1 Pilot's Operating Handbook, when using the TBM 700C2 airplane :

- between 6579 lbs (2984 kg) and 7394 lbs (3354 kg) for takeoff weight, and/or
- between 6250 lbs (2835 kg) and 7024 lbs (3186 kg) for landing weight.

4.1 - AIRSPEEDS FOR NORMAL OPERATION

CONDITIONS : - Takeoff weight : 7394 lbs (3354 kg)
- Landing weight : 7024 lbs (3186 kg)

1 Rotation airspeed (V_R)
- Flaps TO ..... Depending on weight (See "Takeoff distances" Chapter 5.4 of this Supplement)

2 Best rate of climb speed (V_Y)
- Landing gear UP, flaps UP ..... 124 KIAS

3 Best angle of climb speed (V_x) ..... 100 KIAS

4 Maximum speed : Flaps TO ..... 178 KIAS
Flaps LDG ..... 122 KIAS

5 Maximum speed with landing gear down ..... 178 KIAS

6 Maximum landing gear operating speed
- Extension ..... 178 KIAS
- Retraction ..... 128 KIAS

7 Approach speed
- Flaps LDG ..... 85 KIAS

8 Maximum operating speed (V_{MO}) ..... 266 KIAS

9 Glide speed (maximum L / D ratio)
- Landing gear UP, flaps UP ..... 110 KIAS

10 Maximum inertial separator operating speed ..... 200 KIAS

4.2 - CHECK-LIST PROCEDURES

TAKEOFF

WHEN LINED UP

CAUTION

- **IF HEAVY PRECIPITATION, TURN IGNITION AND INERT SEP ON.**
- **IF ICING CONDITIONS ARE FORESEEN, REFER TO CHAPTER 4.5 OF THE TBM 700C1 PILOT'S OPERATING HANDBOOK, PARAGRAPH "FLIGHT INTO KNOWN ICING CONDITIONS"**

1 - Heading - HSI - Stand-by compass ..... **CHECK**
- Altimeter setting ..... **CHECK**

2 - Horizon ..... **Attitude + 2° - CHECK**

3 - Lights
- "L.LDG / TAXI / R.LDG" ..... **ON**

4 - Engine instruments ..... **CHECK**
(ITT = green sector)

5 - Advisory panel ..... **CHECK**
All warning lights OFF,

except [INERT SEP] **if used**

except [IGNITION] **if used**

6 - Radar switch ..... **As required**

7 - PROP O' SPEED GOVERNOR TEST
- Increase power until propeller RPM reaches 1900 RPM
- PROP O' SPEED ..... **TEST : Maintain engaged**
- Observe that propeller RPM decreases of 50 to 150 RPM
- PROP O' SPEED ..... **TEST : Release**
- Check that propeller RPM increases again up to 1900 RPM

CHECK-LIST PROCEDURES

TAKEOFF (Cont'd)

8 - Brakes ..... **RELEASED**

9 - Power lever ..... **TRQ = 100 %**

10 - Takeoff ..... **ROTATION : See "Takeoff distances" Chapter 5.4 of this Supplement**
- Attitude for normal takeoff ..... **7°5**
- Attitude for performance takeoff ..... **12°5**

11 - Vertical speed indicator ..... **POSITIVE**

12 - Brakes ..... **APPLY (Briefly)**

13 - Landing gear control ..... (IAS < 128 KIAS) ..... **UP**
At sequence end, check : All warning lights OFF

14 - Lights
- "TAXI" ..... **OFF**
- "L.LDG / R.LDG" ..... **AS REQUIRED**

15 - Initial climb speed ..... **115 KIAS**

16 - Flaps ..... **UP**

17 - Climb speed (recommended) ..... **130 KIAS**

18 - "YAW DAMPER" push-button ..... **ON**

CHECK-LIST PROCEDURES

BEFORE LANDING

Long final

1 - Altimeters ..... **CHECK**

2 - Fuel gages ..... **CHECK / CORRECT (Quantity / Symmetry)**

3 - "INERT SEP" switch ..... (IAS ≤ 200 KIAS) ..... **ON**

4 - Propeller lever ..... **MAX RPM**

5 - Landing gear control (IAS ≤ 178 KIAS) ..... **DN**
- Green warning lights ..... **ON**

6 - Flaps ..... (IAS ≤ 178 KIAS) ..... **TO**

7 - Lights
- "L.LDG / TAXI / R.LDG" ..... **ON**

8 - Autopilot ..... **OFF**

9 - Radar switch ..... **SBY**

Short final

10 - Flaps ..... (IAS ≤ 122 KIAS) ..... **LDG**

11 - Approach speed (Flaps LDG) ..... **85 KIAS**

12 - "YAW DAMPER" push-button ..... **OFF**

CHECK-LIST PROCEDURES

GO-AROUND

1 - Simultaneously
- Power lever ..... **TRQ = 100 %**
- Attitude ..... **7°5**

2 - Flaps ..... **TO**

If the vertical speed is positive and if IAS is at or above 90 kt :

3 - Landing gear control ..... **UP**
All warning lights OFF

If IAS is at or above 115 kt :

4 - Flaps ..... **UP**

5 - Climb speed ..... **AS REQUIRED**

TOUCH AND GO

After wheel touch

1 - Flaps ..... **TO**

2 - Elevator trim ..... **Green sector**

3 - Power lever ..... **Display TRQ = 100 %**

4 - Takeoff ..... **ROTATION : See "Takeoff distances" Chapter 5.4 of this Supplement**
ATTITUDE : 7°5

4.3 - AMPLIFIED PROCEDURES

TAKEOFF

WHEN LINED UP

CAUTION

- **IF HEAVY PRECIPITATION, TURN IGNITION AND INERT SEP ON.**
- **IF ICING CONDITIONS ARE FORESEEN, REFER TO CHAPTER 4.5 OF THE TBM 700C1 PILOT'S OPERATING HANDBOOK, PARAGRAPH "FLIGHT INTO KNOWN ICING CONDITIONS"**

1 - Heading - HSI - Stand-by compass ..... **CHECK**
The indication of the stand-by compass is disturbed when windshield(s) deice system(s) is (are) activated.
- Altimeter setting ..... **CHECK**

2 - Horizon ..... **Attitude + 2° - CHECK**
Horizon has been set so as to indicate a 2° nose up attitude, when airplane center of gravity is at a middle average.

3 - Lights
- "L.LDG / TAXI / R.LDG" ..... **ON**

4 - Engine instruments ..... **CHECK**
(ITT = green sector)

5 - Advisory panel ..... **CHECK**
All warning lights OFF,
except [INERT SEP] **if used**
except [IGNITION] **if used**

AMPLIFIED PROCEDURES

TAKEOFF (Cont'd)

6 - Radar switch ..... **As required**

7 - PROP O' SPEED GOVERNOR TEST
- Increase power until propeller RPM reaches 1900 RPM
- PROP O' SPEED ..... **TEST : Maintain engaged**
- Observe that propeller RPM decreases of 50 to 150 RPM
- PROP O' SPEED ..... **TEST : Release**
- Check that propeller RPM increases again up to 1900 RPM

8 - 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.

9 - Power lever ..... **TRQ = 100 %**

10 - Takeoff ..... **ROTATION : See "Takeoff distances" Chapter 5.4 of this Supplement**
- Attitude for normal takeoff ..... **7°5**
- Attitude for performance takeoff ..... **12°5**

Rotation speed at takeoff, according to airplane weight, is also given in Chapter 5.4 of this Supplement.

11 - Vertical speed indicator ..... **POSITIVE**

12 - Brakes ..... **APPLY (Briefly)**

AMPLIFIED PROCEDURES

TAKEOFF (Cont'd)

13 - Landing gear control ..... (IAS < 128 KIAS) ..... **UP**

During the sequence :
- The red warning light flashes ; it indicates that the landing gear engine is electrically supplied. It goes off when the 3 landing gears are locked. If the red warning light is fixed ON, there is a discrepancy (refer to EMERGENCY PROCEDURES).
- It is possible that the 3 landing gear position green indicator lights flash uncertainly then go off at the end of the sequence.

At sequence end, check : All warning lights OFF

In practice, if preconized attitude is kept, there is no difficulty to maintain a speed < 128 KIAS until landing gear retraction is completed.

14 - Lights
- "TAXI" ..... **OFF**
- "L.LDG / R.LDG" ..... **AS REQUIRED**

15 - Initial climb speed ..... **115 KIAS**

16 - Flaps ..... **UP**

17 - Climb speed (recommended) ..... **130 KIAS**

18 - "YAW DAMPER" push-button ..... **ON**

AMPLIFIED PROCEDURES

CLIMB

1 - Power lever ..... **ADJUST according to engine operation table - Chapter 5.7 of the TBM 700C1 Pilot's Operating Handbook**

CAUTION

OBSERVE TRQ / Ng / Np / ITT / T° AND OIL PRESSURE LIMITATIONS (Refer to tables in Chapter 5.7 of the TBM 700C1 Pilot's Operating Handbook)

Torque setting during climb must be adjusted according to engine operation tables in Chapter 5.7 of the TBM 700C1 Pilot's Operating Handbook. These tables give the max. climb power torque setting (MXCL). For each engine, when torque is reduced below 100 % at high altitude according to the tables, the ITT will be approximately constant during final climb, giving a particular value of ITT. For a simplified engine operation during climb, power may be set first of all by torque, using 100 %, then, when the ITT typical value for climb is reached, by indicated ITT, using this particular value. The margin between this indicated ITT and 785°C (recommended ITT limit during continuous operation) will gradually reduce as flight time is performed.

2 - Climb speed ..... **AS REQUIRED**

Best climb speed is 124 KIAS. Performance tables concerning climb at 130 and 160 KIAS are given in Chapter 5.5 of this Supplement.

AMPLIFIED PROCEDURES

CLIMB (Cont'd)

3 - ECS panel
- Cabin altitude selector ..... **Cruise altitude + 1000 feet**
- Cabin rate selector ..... **ADJUST so as to obtain a cabin climb rate of about 500 ft/min**

  It concerns the control on triple indicator of cabin rate, as well as increasing of differential pressure and cabin altitude.
- Pressurization ..... **CHECK**
- "CABIN TEMP/°C" selector ..... **ADJUST**

  Anticipate setting to hot position during climb. Do not wait a fresh sensation to perform this setting. Desired temperature will be as longer to obtain as setting is made later.

4 - Fuel tank gages ..... **CHECK / CORRECT (Quantity / Symmetry)**

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. Tolerated maximum dissymmetry is 25 us gal (95 Litres).

5 - DE ICE SYSTEM ..... **As required**
Refer to Chapter 4.5 "PARTICULAR PROCEDURES" of the TBM 700C1 Pilot's Operating Handbook

CAUTION

IF HEAVY PRECIPITATION, TURN IGNITION AND INERT SEP ON

AMPLIFIED PROCEDURES

BEFORE LANDING

Long final

1 - Altimeters ..... **CHECK**

2 - Fuel gages ..... **CHECK / CORRECT (Quantity / Symmetry)**

Maximum tolerated dissymmetry is 25 us gal (95 Litres).

3 - "INERT SEP" switch ..... (IAS ≤ 200 KIAS) ..... **ON**

4 - Propeller lever ..... **MAX RPM**

5 - Landing gear control (IAS ≤ 178 KIAS) ..... **DN**

During the sequence :

- The red warning light flashes ; it indicates that the landing gear motor is electrically supplied. It goes off when the 3 landing gears are locked. If the red warning light is fixed ON, there is a discrepancy (refer to EMERGENCY PROCEDURES of the TBM 700C1 Pilot's Operating Handbook).
- It is possible that the 3 landing gear position green indicator lights flash uncertainly then come on at the end of the sequence, indicating that the landing gears are locked in down position.
- Green indicator lights ..... **ON**

6 - Flaps ..... (IAS ≤ 178 KIAS) ..... **TO**

7 - Lights
- "L.LDG / TAXI / R.LDG" ..... **ON**

AMPLIFIED PROCEDURES

BEFORE LANDING (Cont'd)

8 - Autopilot ..... **OFF**
Autopilot must be disconnected at the latest at 200 ft above the ground or at decision height or before go-around, whichever is the highest.

9 - Radar switch ..... **SBY**

Short final

10 - 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.

11 - Approach speed (Flaps LDG) ..... **85 KIAS**
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.

12 - "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

GO-AROUND

1 - 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.

2 - Flaps ..... **TO**

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 :

3 - Landing gear control ..... **UP**

All warning lights OFF

If IAS is at or above 115 KIAS :

4 - Flaps ..... **UP**

5 - Climb speed ..... **AS REQUIRED**

AMPLIFIED PROCEDURES

TOUCH AND GO

After wheel 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 5.4 of this Supplement**
ATTITUDE : 7°5
However, the pilot's operating handbook does not supply distances concerning touch and go. These distances are let to pilot's initiative.

4.4 - PARTICULAR PROCEDURES

REMARK :
The procedures and procedure elements given in this Chapter "PARTICULAR PROCEDURES" supplement the normal procedures.

FLIGHT INTO KNOWN ICING CONDITIONS

General

1 - Icing conditions exist when the IOAT 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, sleed or ice crystals).

2 - Icing conditions also exist when the IOAT 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 5.4.1 of the TBM 700C1 Pilot's Operating Handbook to convert IOAT to SAT in flight.
SAT = IOAT - 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 of the TBM 700C1 Pilot's Operating Handbook.

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 (Cont'd)

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 of the TBM 700C1 Pilot's Operating Hankbook.

Ice protection procedures

1 - Prior to entering IMC, as a preventive :

If 0° C < IOAT <+ 13° C :

- "PROP DE ICE" switch ..... **ON**
- "INERT SEP" switch ..... **ON**

If - 15° C < IOAT < 0° C :

- All "DE ICE SYSTEM" switches ..... **ON**
- "IGNITION" switch ..... **ON**
- "INERT SEP" switch ..... **ON**

If - 25° C < IOAT < - 15° C :

- All "DE ICE SYSTEM" switches ..... **ON**
- "INERT SEP" switch ..... **ON**

If IOAT < - 25° C :

- "PROP DE ICE" switch ..... **ON**
- "INERT SEP" switch ..... **ON**

When IOAT is below - 25°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 (Cont'd)

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

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

PARTICULAR PROCEDURES

FLIGHT INTO KNOWN ICING CONDITIONS (Cont'd)

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 :
  - . Flaps UP 135 KIAS
  - . Flaps TO 115 KIAS
  - . Flaps LDG 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.

PARTICULAR PROCEDURES

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).

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 5.7 "LANDING DISTANCES" of this Supplement.

SECTION 5
PERFORMANCE
TABLE OF CONTENTS

TABLE OF CONTENTS (Cont'd)

Information hereafter supplement or replace those of the TBM 700C1 airplane described in Section 5 "Performance" of the TBM 700C1 Pilot's Operating Handbook when using the TBM 700C2 airplane :

- between 6579 lbs (2984 kg) and 7394 lbs (3354 kg) for takeoff weight, and/or
- between 6250 lbs (2835 kg) and 7024 lbs (3186 kg) for landing weight.

5.1 - ACOUSTIC LIMITATION

	Maximum noise level permissible	Demonstrated noise level
FAR PART 36, Appendix G - Amendment 22 / OACI, Annex 16, Chapter 10, Appendix 6	**88 dB(A)**	**79.6 dB(A)**

TBM 700 airplane has received the noise limitation type certificate Nr N181 dated 31st January 1990.

5.2 - 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
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 9.41.2 - STALL SPEEDS

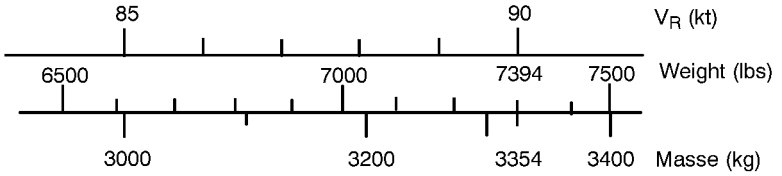
5.3 - DEMONSTRATED CROSSWIND

20 kts

5.4 - 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 ON
- Hard, dry and level runway
- GR = Ground roll (in ft)
- D50 = Takeoff distance (clear to 50 ft) (in ft)
- Rotation speed choice (V_R)



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 9.41.3 - 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 : 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 ON.

5.5 - CLIMB PERFORMANCE [7394 Lbs (3354 Kg)]

CLIMB SPEEDS (IAS = 130/160 KIAS)

Conditions : Maximum climb power
Landing gear and flaps UP
BLEED ON

IAS (KIAS)	Pressure altitude (feet)	RATE OF CLIMB (ft/min)					
		ISA - 20°C	ISA - 10°C	ISA	ISA + 10°C	ISA + 20°C	ISA + 30°C
130	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
160	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 9.41.4 - CLIMB SPEEDS (IAS = 130/160 KIAS)

CLIMB PERFORMANCE

TIME, CONSUMPTION AND CLIMB DISTANCE [7394 Lbs (3354 Kg)]

Conditions : ***ISA - 20°C***
Maximum climb power
Landing gear and flaps UP
2000 RPM - BLEED ON

NOTE :
Time, consumption and distance from the 50 ft

Pressure altitude (feet)	130 KIAS					160 KIAS up to 20000 ft then - 2 KIAS/1000 ft				
	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)
		l	kg	us gal			l	kg	us gal	
SL	00.00	0	0	0	0	00.00	0	0	0	0
2000	01.10	6	5	2	2	01.20	7	5	2	3
4000	02.25	11	9	3	5	02.40	13	10	3	7
6000	03.35	17	13	4	8	04.00	19	15	5	11
8000	04.50	22	18	6	11	05.25	25	20	7	15
10000	06.00	28	22	7	13	06.55	32	25	8	19
12000	07.20	33	26	9	17	08.25	38	30	10	23
14000	08.35	38	30	10	20	09.55	44	34	12	28
16000	09.55	43	34	11	23	11.30	50	39	13	33
18000	11.20	48	38	13	27	13.05	56	44	15	38
20000	12.40	54	42	14	31	14.55	63	49	17	45
22000	14.05	59	46	16	35	16.35	69	54	18	51
24000	15.35	64	50	17	39	18.20	75	59	20	56
26000	17.05	70	55	18	44	20.00	81	64	21	62
28000	18.40	75	59	20	49	21.40	87	68	23	68
30000	20.30	81	64	21	55	23.30	93	73	25	75
31000	21.27	85	66	22	58	24.38	97	76	26	79

Figure 9.41.5 - TIME, CONSUMPTION AND CLIMB DISTANCE
(IAS = 130/160 KIAS)/ISA - 20°C

CLIMB PERFORMANCE

TIME, CONSUMPTION AND CLIMB DISTANCE [7394 Lbs (3354 Kg)]

Conditions : ***ISA***
Maximum climb power
Landing gear and flaps UP
2000 RPM - BLEED ON

NOTE :
Time, consumption and distance from the 50 ft

Pressure altitude (feet)	130 KIAS					160 KIAS up to 20000 ft then - 2 KIAS/1000 ft				
	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)
		l	kg	us gal			l	kg	us gal	
SL	00.00	0	0	0	0	00.00	0	0	0	0
2000	01.20	7	5	2	3	01.30	7	6	2	4
4000	02.35	13	10	3	6	03.00	15	12	4	8
6000	03.50	19	15	5	9	04.30	22	17	6	12
8000	05.20	25	20	7	12	06.05	29	23	8	17
10000	06.40	31	25	8	15	07.40	36	28	10	22
12000	08.05	37	29	10	19	09.25	43	34	11	27
14000	09.30	43	34	11	23	11.05	50	40	13	33
16000	11.00	49	39	13	27	13.00	58	45	15	39
18000	12.30	55	43	15	31	14.55	65	51	17	46
20000	14.05	61	48	16	36	16.55	73	57	19	53
22000	15.50	67	53	18	41	18.55	80	63	21	60
24000	17.30	74	58	19	46	20.55	87	69	23	67
26000	19.35	81	63	21	53	23.10	95	75	25	76
28000	22.10	89	70	23	62	26.10	105	82	28	87
30000	25.35	99	78	26	73	30.00	116	91	31	101
31000	27.51	105	82	28	81	32.44	124	97	33	111

Figure 9.41.6 - TIME, CONSUMPTION AND CLIMB DISTANCE
(IAS = 130/160 KIAS)/ISA

CLIMB PERFORMANCE

TIME, CONSUMPTION AND CLIMB DISTANCE [7394 Lbs (3354 Kg)]

Conditions : ***ISA + 20°C***
Maximum climb power
Landing gear and flaps UP
2000 RPM - BLEED ON

NOTE :
Time, consumption and distance from the 50 ft

Pressure altitude (feet)	130 KIAS					160 KIAS up to 20000 ft then - 2 KIAS/1000 ft				
	Time (min. s)	Consump.			Dist. (NM)	Time (min. s)	Consump.			Dist. (NM)
		l	kg	us gal			l	kg	us gal	
SL	00.00	0	0	0	0	00.00	0	0	0	0
2000	01.25	7	6	2	3	01.35	8	7	2	5
4000	02.50	15	11	4	7	03.20	17	13	4	9
6000	04.20	22	17	6	10	05.00	25	20	7	14
8000	05.50	28	22	8	14	06.40	33	26	9	20
10000	07.20	35	28	9	18	08.35	41	32	11	25
12000	08.55	42	33	11	22	10.30	49	39	13	32
14000	10.30	49	38	13	26	12.30	58	45	15	38
16000	12.10	56	44	15	31	14.35	66	52	17	46
18000	14.00	63	49	17	36	17.00	75	59	20	54
20000	16.10	70	55	19	43	19.55	86	68	23	65
22000	18.40	79	62	21	51	23.30	98	77	26	79
24000	21.55	89	70	24	61	27.55	113	88	30	95
26000	26.00	101	80	27	75	33.55	130	102	34	118
28000	32.20	118	93	31	96	43.50	157	124	42	156
30000	44.55	151	118	40	142	68.10	220	172	58	250
31000	68.51	208	163	55	230	/	/	/	/	/

Figure 9.41.7 - TIME, CONSUMPTION AND CLIMB DISTANCE
(IAS = 130/160 KIAS)/ISA + 20°C

CLIMB PERFORMANCE

CLIMB PERFORMANCE AFTER GO-AROUND

Conditions : Maximum 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 9.41.8 - CLIMB PERFORMANCE AFTER GO-AROUND

CLIMB PERFORMANCE - FLAPS TO

Conditions : Climb maximum 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 9.41.9 - CLIMB PERFORMANCE - FLAPS TO

5.6 - CRUISE PERFORMANCE

Maximum cruise

Conditions : ***ISA - 20°C***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

NOTE :
Use preferably recommended cruise power

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 2	100	304	239	80.3	228	223	227	222
5000	- 8	100	275	216	72.6	223	234	221	232
10000	- 17	100	250	196	66.0	218	245	216	244
15000	- 26	100	232	182	61.2	212	258	210	256
18000	- 32	100	223	175	58.9	208	266	206	263
20000	- 36	100	218	171	57.6	206	271	204	269
21000	- 37	100	216	170	57.1	205	274	203	271
22000	- 39	100	214	168	56.5	204	277	202	274
23000	- 41	100	212	166	56.0	203	280	200	278
24000	- 43	100	210	165	55.6	202	283	200	280
25000	- 45	100	209	164	55.3	201	286	198	283
26000	- 46	100	208	163	54.9	200	289	197	286
27000	- 48	100	207	162	54.7	198	292	196	289
28000	- 50	100	206	162	54.4	197	295	195	292
29000	- 52	100	206	161	54.3	196	299	194	295
30000	- 54	100	205	161	54.2	195	302	193	298
31000	- 56	100	206	161	54.3	194	306	191	301

Figure 9.41.10 - 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Maximum cruise

Conditions : ***ISA - 10°C***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

NOTE :
Use preferably recommended cruise power

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 12	100	308	242	81.4	227	226	225	224
5000	+ 2	100	279	219	73.6	221	236	220	235
10000	- 7	100	254	199	67.0	216	248	214	247
15000	- 16	100	234	184	61.9	210	261	208	258
18000	- 22	100	225	177	59.4	207	269	204	266
20000	- 25	100	220	173	58.2	204	274	202	272
21000	- 27	100	218	171	57.6	203	277	201	275
22000	- 29	100	216	170	57.1	202	280	200	277
23000	- 31	100	215	168	56.7	201	283	198	281
24000	- 33	100	213	167	56.3	199	286	197	283
25000	- 34	100	212	166	55.9	198	289	196	286
26000	- 36	100	210	165	55.6	197	292	195	289
27000	- 38	100	209	164	55.3	196	296	194	292
28000	- 40	100	209	164	55.2	195	299	192	295
29000	- 42	97	201	158	53.2	191	297	188	292
30000	- 44	93	194	152	51.2	186	295	183	290
31000	- 46	91	187	146	49.3	182	293	178	287

Figure 9.41.11 - 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Maximum cruise

Conditions : ***ISA - 5°C***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

NOTE :
Use preferably recommended cruise power

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 17	100	310	243	81.8	226	227	224	225
5000	+ 8	100	280	220	74.1	220	238	219	236
10000	- 2	100	255	200	67.4	215	250	213	248
15000	- 11	100	235	185	62.2	209	262	207	260
18000	- 17	100	226	178	59.8	206	270	203	268
20000	- 20	100	222	174	58.6	203	276	201	273
21000	- 22	100	220	173	58.1	202	279	200	276
22000	- 24	100	218	171	57.5	201	282	199	279
23000	- 26	100	216	170	57.1	200	285	197	283
24000	- 28	100	215	168	56.7	199	288	196	285
25000	- 29	100	213	167	56.3	198	291	195	288
26000	- 31	100	212	166	56.0	196	294	194	291
27000	- 33	99	210	165	55.5	194	296	192	292
28000	- 35	96	202	159	53.5	190	294	187	290
29000	- 37	92	195	153	51.5	185	292	182	287
30000	- 39	88	188	147	49.6	181	290	177	285
31000	- 41	86	181	142	47.7	177	288	172	281

Figure 9.41.12 - 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Maximum cruise

Conditions : ***ISA***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

NOTE :
Use preferably recommended cruise power

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 22	100	312	245	82.3	225	228	223	227
5000	+ 13	100	282	221	74.5	220	239	218	238
10000	+ 3	100	257	201	67.8	214	251	212	249
15000	- 6	100	237	186	62.5	208	264	206	261
18000	- 12	100	228	179	60.2	205	272	203	269
20000	- 15	100	223	175	58.9	202	278	200	275
21000	- 17	100	221	174	58.5	201	281	199	278
22000	- 19	100	220	172	58.0	200	283	198	280
23000	- 21	100	218	171	57.5	199	286	196	284
24000	- 22	100	216	170	57.1	198	290	195	286
25000	- 24	100	215	169	56.8	197	293	194	289
26000	- 26	99	209	164	55.2	194	294	191	290
27000	- 28	95	202	159	53.5	190	292	187	287
28000	- 30	91	195	153	51.6	185	290	182	285
29000	- 32	88	188	148	49.8	181	288	177	282
30000	- 34	84	181	142	47.9	176	285	172	278
31000	- 36	81	174	136	45.9	171	282	166	275

Figure 9.41.13 - 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Maximum cruise

Conditions : ***ISA + 5°C***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

NOTE :
Use preferably recommended cruise power

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 27	100	313	246	82.8	224	229	223	228
5000	+ 18	100	283	223	74.9	219	240	217	239
10000	+ 8	100	258	202	68.1	213	253	212	251
15000	- 1	100	238	187	62.9	207	265	205	263
18000	- 6	100	229	180	60.6	204	273	202	271
20000	- 10	100	224	176	59.3	201	279	199	276
21000	- 12	100	223	175	58.9	200	282	198	279
22000	- 14	100	221	174	58.5	199	285	197	282
23000	- 16	100	220	172	58.0	198	288	195	286
24000	- 17	100	218	172	57.7	197	291	194	288
25000	- 19	97	211	166	55.9	194	292	192	288
26000	- 21	94	204	161	54.0	190	291	187	286
27000	- 23	90	197	155	52.0	185	289	182	283
28000	- 25	87	190	149	50.1	181	287	177	281
29000	- 27	83	182	143	48.2	176	284	172	277
30000	- 29	80	176	138	46.4	171	280	166	273
31000	- 31	76	168	132	44.5	166	277	160	268

Figure 9.41.14 - 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Maximum cruise

Conditions : ***ISA + 10°C***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

NOTE :
Use preferably recommended cruise power

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 32	100	315	247	83.2	223	230	222	229
5000	+ 23	100	285	224	75.4	218	242	217	240
10000	+ 13	100	259	203	68.4	213	254	211	252
15000	+ 4	100	240	188	63.3	206	267	204	264
18000	- 1	100	231	181	60.9	203	275	201	272
20000	- 5	100	226	177	59.7	200	281	198	278
21000	- 7	100	224	176	59.2	199	284	197	280
22000	- 9	100	223	175	58.9	198	286	196	283
23000	- 11	98	218	171	57.6	197	289	193	285
24000	- 13	96	211	166	55.7	193	288	190	284
25000	- 15	92	204	160	53.9	189	287	186	282
26000	- 17	89	197	155	52.0	184	285	181	280
27000	- 19	86	190	150	50.3	180	283	176	278
28000	- 20	82	184	144	48.5	175	281	171	274
29000	- 22	79	176	139	46.6	171	278	166	271
30000	- 24	75	170	133	44.9	165	275	160	266
31000	- 26	72	163	128	43.0	160	271	154	261

Figure 9.41.15 - 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Maximum cruise

Conditions : ***ISA + 20°C***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

NOTE :
Use preferably recommended cruise power

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 42	100	319	250	84.3	222	233	221	231
5000	+ 33	100	289	227	76.3	217	244	215	243
10000	+ 23	100	262	206	69.3	211	257	209	254
15000	+ 14	100	243	190	64.1	205	269	203	267
18000	+ 9	100	234	183	61.7	201	278	199	275
20000	+ 4	97	225	177	59.4	197	282	195	278
21000	+ 2	94	218	171	57.5	193	280	190	276
22000	0	92	211	166	55.7	190	280	187	276
23000	- 2	88	204	160	53.9	186	278	181	273
24000	- 3	86	197	155	52.0	182	277	178	272
25000	- 5	82	190	149	50.2	178	275	174	270
26000	- 7	79	183	144	48.3	173	273	169	266
27000	- 9	76	176	139	46.6	168	270	163	263
28000	- 11	72	170	133	44.8	163	266	157	258
29000	- 13	69	163	128	43.1	157	263	151	253
30000	- 15	66	156	122	41.2	152	258	144	246
31000	- 17	62	150	117	39.5	145	252	136	236

Figure 9.41.16 - 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Normal (recommended) cruise

Conditions : ***ISA - 20°C***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

NOTE :
Power recommended by PRATT & WHITNEY CANADA

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 2	100	304	239	80.3	228	223	227	222
5000	- 8	100	275	216	72.6	223	234	221	232
10000	- 17	100	250	196	66.0	218	245	216	244
10000	- 17	100	250	196	66.0	218	245	216	244
15000	- 26	100	232	182	61.2	212	258	210	256
18000	- 32	100	223	175	58.9	208	266	206	263
20000	- 36	100	218	171	57.6	206	271	204	269
21000	- 37	100	216	170	57.1	205	274	203	271
22000	- 39	100	214	168	56.5	204	277	202	274
23000	- 41	100	212	166	56.0	203	280	201	277
24000	- 43	100	210	165	55.6	202	283	200	280
25000	- 45	100	209	164	55.3	201	286	198	283
26000	- 46	100	208	163	54.9	200	289	197	286
27000	- 48	100	207	162	54.7	198	292	196	289
28000	- 50	100	206	162	54.4	197	295	195	292
29000	- 52	100	206	161	54.3	196	299	194	295
30000	- 54	100	205	161	54.2	195	302	192	297
31000	- 56	95	198	155	52.2	191	300	187	295

Figure 9.41.17 - 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Normal (recommended) cruise

Conditions : ***ISA - 10°C***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

NOTE :
Power recommended by PRATT & WHITNEY CANADA

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 12	100	308	242	81.4	227	226	225	224
5000	+ 2	100	279	219	73.6	221	236	220	235
10000	- 7	100	254	199	67.0	216	248	214	247
15000	- 16	100	234	184	61.9	210	261	208	258
18000	- 22	100	225	177	59.4	207	269	204	266
20000	- 25	100	220	173	58.2	204	274	202	272
21000	- 27	100	218	171	57.6	203	277	201	275
22000	- 29	100	216	170	57.1	202	280	200	277
23000	- 31	100	215	168	56.7	201	283	199	280
24000	- 33	100	213	167	56.3	200	286	197	283
25000	- 34	100	212	166	55.9	198	289	196	286
26000	- 36	100	210	165	55.6	197	292	195	289
27000	- 38	99	207	162	54.7	195	293	192	289
28000	- 40	96	199	157	52.7	190	292	187	287
29000	- 42	92	193	151	50.9	186	290	183	285
30000	- 44	88	185	145	48.9	182	288	178	282
31000	- 46	85	179	140	47.2	177	286	173	279

Figure 9.41.18 - 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Normal (recommended) cruise

Conditions : ***ISA - 5°C***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

NOTE :
Power recommended by PRATT & WHITNEY CANADA

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 17	100	310	243	81.8	226	227	224	225
5000	+ 8	100	280	220	74.1	220	238	219	236
10000	- 2	100	255	200	67.4	215	250	213	248
15000	- 11	100	235	185	62.2	209	262	207	260
18000	- 17	100	226	178	59.8	206	270	203	268
20000	- 20	100	222	174	58.6	203	276	201	273
21000	- 22	100	220	173	58.1	202	279	200	276
22000	- 24	100	218	171	57.5	201	282	199	279
23000	- 26	100	216	170	57.1	200	285	198	282
24000	- 28	100	215	168	56.7	199	288	196	285
25000	- 29	100	213	167	56.3	198	291	195	287
26000	- 31	98	208	163	54.9	194	291	192	287
27000	- 33	95	201	158	53.1	190	289	187	285
28000	- 35	91	195	153	51.4	185	287	182	282
29000	- 37	87	188	147	49.6	181	285	177	279
30000	- 39	83	181	142	47.7	176	283	172	276
31000	- 41	80	172	135	45.4	171	280	167	273

Figure 9.41.19 - 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Normal (recommended) cruise

Conditions : ***ISA***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

NOTE :
Power recommended by PRATT & WHITNEY CANADA

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 22	100	312	245	82.3	225	228	223	227
5000	+ 13	100	282	221	74.5	220	239	218	238
10000	+ 3	100	257	201	67.8	214	251	212	249
15000	- 6	100	237	186	62.5	208	264	206	261
18000	- 12	100	228	179	60.2	205	272	203	269
20000	- 15	100	223	175	58.9	202	278	200	275
21000	- 17	100	221	174	58.5	201	281	199	278
22000	- 19	100	220	172	58.0	200	283	198	280
23000	- 21	100	218	171	57.5	199	286	196	283
24000	- 22	100	216	170	57.1	198	290	195	286
25000	- 24	97	209	164	55.3	194	289	191	285
26000	- 26	94	203	159	53.6	190	288	187	283
27000	- 28	90	196	154	51.9	185	286	182	281
28000	- 31	86	190	149	50.1	181	284	177	278
29000	- 33	83	183	144	48.3	176	281	172	274
30000	- 35	78	176	138	46.5	171	278	167	271
31000	- 37	76	166	130	43.9	166	275	160	266

Figure 9.41.20 - 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Normal (recommended) cruise

Conditions : ***ISA + 5°C***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

NOTE :
Power recommended by PRATT & WHITNEY CANADA

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 27	100	313	246	82.8	224	229	223	228
5000	+ 18	100	283	223	74.9	219	240	217	239
10000	+ 8	100	258	202	68.1	213	253	212	251
15000	- 1	100	238	187	62.9	207	265	205	263
18000	- 6	100	229	180	60.6	204	273	202	271
20000	- 10	100	224	176	59.3	201	279	199	276
21000	- 12	100	223	175	58.9	200	282	198	279
22000	- 14	100	221	174	58.5	199	285	197	282
23000	- 16	97	216	170	57.1	196	286	194	282
24000	- 18	95	209	164	55.1	192	285	190	281
25000	- 20	92	202	159	53.4	188	284	186	279
26000	- 22	89	195	153	51.5	184	282	181	277
27000	- 24	84	188	148	49.8	180	280	176	275
28000	- 26	81	182	143	48.0	175	278	171	272
29000	- 28	78	175	137	46.2	171	275	166	268
30000	- 30	74	171	134	45.2	166	272	160	264
31000	- 32	71	161	126	42.5	161	269	154	259

Figure 9.41.21 - 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Normal (recommended) cruise

Conditions : ***ISA + 10°C***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

NOTE :
Power recommended by PRATT & WHITNEY CANADA

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 32	100	315	247	83.2	223	230	222	229
5000	+ 23	100	285	224	75.4	218	242	217	240
10000	+ 13	100	259	203	68.4	213	254	211	252
15000	+ 4	100	240	188	63.3	206	267	204	264
18000	- 1	100	231	181	60.9	203	275	201	272
20000	- 6	100	226	177	59.7	200	281	198	278
21000	- 8	98	220	173	58.1	198	282	196	279
22000	- 10	96	214	168	56.5	195	282	192	278
23000	- 12	92	207	162	54.7	191	281	188	277
24000	- 13	90	200	157	52.8	187	279	184	275
25000	- 15	87	193	152	51.1	183	278	180	273
26000	- 17	83	187	147	49.4	178	276	175	271
27000	- 19	79	181	142	47.7	174	274	170	267
28000	- 21	76	174	137	46.0	169	271	164	264
29000	- 23	73	167	131	44.1	164	268	159	259
30000	- 25	69	166	130	43.9	159	264	153	254
31000	- 27	67	154	121	40.7	153	260	/	/

Figure 9.41.22 - CRUISE PERFORMANCE -
Normal cruise / ISA + 10°C

NOTE :
No airspeed data means that the cruise speed obtained for these conditions is lower than Long Range cruise speed.

(*) 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Normal (recommended) cruise

Conditions : ***ISA + 20°C***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

NOTE :
Power recommended by PRATT & WHITNEY CANADA

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 42	100	319	250	84.3	222	233	221	231
5000	+ 33	100	289	227	76.3	217	244	215	243
10000	+ 23	100	262	206	69.3	211	257	209	254
15000	+ 14	100	243	190	64.1	205	269	203	267
18000	+ 9	96	226	177	59.7	198	273	195	270
20000	+ 4	90	213	167	56.3	191	272	188	268
21000	+ 2	87	206	162	54.4	187	272	184	267
22000	0	84	200	157	52.8	183	270	180	266
23000	- 2	81	193	152	51.0	179	269	176	264
24000	- 4	78	187	146	49.3	175	267	171	262
25000	- 6	76	180	141	47.6	171	265	167	259
26000	- 8	72	173	136	45.8	166	262	161	255
27000	- 10	69	167	131	44.1	161	259	155	250
28000	- 12	66	160	126	42.3	155	255	/	/
29000	- 14	63	157	120	40.6	150	251	/	/

Figure 9.41.23 - CRUISE PERFORMANCE -
Normal cruise / ISA + 20°C

NOTE :
No airspeed data means that the cruise speed obtained for these conditions is lower than Long Range cruise speed.

(*) 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Intermediate cruise

Conditions : ***ISA - 20°C***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 1	88	286	225	75.6	217	212	216	211
5000	- 8	88	257	202	68.0	212	223	210	221
10000	- 18	88	233	183	61.6	207	233	205	231
15000	- 27	88	214	168	56.5	201	245	199	243
18000	- 32	88	205	161	54.2	198	253	196	250
20000	- 36	88	200	157	52.8	196	258	193	255
21000	- 38	88	198	155	52.2	195	260	192	257
22000	- 40	88	195	153	51.6	193	263	191	260
23000	- 42	88	193	152	51.1	192	266	190	262
24000	- 44	88	192	151	50.7	191	268	189	265
25000	- 45	88	190	149	50.2	190	271	188	267
26000	- 47	88	188	148	49.7	189	274	186	270
27000	- 49	88	187	147	49.4	188	277	185	273
28000	- 51	88	186	146	49.1	187	280	184	275
29000	- 53	88	185	145	48.9	186	283	183	279
30000	- 54	87	183	144	48.3	184	285	181	280
31000	- 56	84.5	178	139	46.9	180	284	177	279

Figure 9.41.24 - CRUISE PERFORMANCE -
Intermediate 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Intermediate cruise

Conditions : ***ISA - 10°C***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 11	88	289	227	76.3	216	215	214	213
5000	+ 2	88	261	205	68.9	210	225	209	223
10000	- 7	88	236	185	62.3	205	236	203	234
15000	- 17	88	217	170	57.2	200	248	197	246
18000	- 22	88	207	162	54.7	196	256	194	253
20000	- 26	88	202	159	53.4	194	261	191	257
21000	- 28	88	199	157	52.7	193	263	190	260
22000	- 30	88	198	155	52.2	192	266	189	263
23000	- 31	88	195	153	51.6	190	269	188	265
24000	- 33	88	194	152	51.2	189	272	187	268
25000	- 35	88	192	151	50.7	188	274	185	270
26000	- 37	88	190	150	50.3	187	277	184	273
27000	- 39	85	185	146	49.0	183	276	180	272
28000	- 41	82	179	141	47.3	179	275	176	269
29000	- 43	79	173	135	45.6	175	273	171	267
30000	- 45	76	166	130	43.9	170	271	166	264
31000	- 47	74	162	127	42.7	167	270	162	262

Figure 9.41.25 - CRUISE PERFORMANCE -
Intermediate 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Intermediate cruise

Conditions : ***ISA - 5°C***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 17	88	290	228	76.7	215	216	213	215
5000	+ 7	88	262	206	69.3	209	226	208	225
10000	- 2	88	237	186	62.7	204	238	202	235
15000	- 12	88	218	171	57.5	199	250	196	247
18000	- 17	88	209	164	55.1	195	257	193	254
20000	- 21	88	203	160	53.7	193	262	190	259
21000	- 23	88	201	158	53.1	192	265	189	261
22000	- 25	88	199	156	52.5	191	267	188	264
23000	- 26	88	197	155	52.0	189	270	187	267
24000	- 28	88	195	153	51.5	188	273	186	269
25000	- 30	87.5	193	151	50.9	187	276	184	271
26000	- 32	84.7	187	146	49.3	183	274	180	270
27000	- 34	82	181	142	47.7	179	273	176	268
28000	- 36	79	174	137	46.0	175	272	171	266
29000	- 38	76	167	131	44.2	171	269	167	263
30000	- 40	73.3	161	126	42.5	166	267	162	260
31000	- 42	69.5	156	122	41.1	161	263	155	254

Figure 9.41.26 - CRUISE PERFORMANCE -
Intermediate 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Intermediate cruise

Conditions : ***ISA***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 22	88	292	229	77.1	214	217	213	216
5000	+ 12	88	264	207	69.8	209	227	207	226
10000	+ 3	88	239	188	63.1	203	239	201	237
15000	- 7	88	219	172	57.9	198	251	196	248
18000	- 12	88	210	165	55.5	194	258	192	255
20000	- 16	88	204	161	54.0	192	264	190	260
21000	- 18	88	202	159	53.5	191	266	188	263
22000	- 20	88	200	157	52.8	190	269	187	265
23000	- 21	88	198	156	52.4	189	272	186	268
24000	- 23	87.3	195	153	51.5	187	274	184	270
25000	- 25	84.3	188	148	49.8	183	273	180	268
26000	- 27	81.2	182	143	48.1	179	271	175	266
27000	- 29	78	176	138	46.4	174	269	170	263
28000	- 31	75	169	133	44.6	170	266	166	260
29000	- 33	72	162	128	42.9	165	264	160	256
30000	- 35	69	156	122	41.2	160	260	155	252
31000	- 37	66	151	118	39.8	155	256	/	/

Figure 9.41.27 - CRUISE PERFORMANCE -
Intermediate cruise / ISA

NOTE :
No airspeed data means that the cruise speed obtained for these conditions is lower than Long Range cruise speed.

(*) 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Intermediate cruise

Conditions : ***ISA + 5°C***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 27	88	293	230	77.5	213	218	212	217
5000	+ 17	88	266	209	70.2	208	229	206	227
10000	+ 8	88	240	188	63.4	203	240	201	238
15000	- 2	88	220	173	58.2	197	252	195	250
18000	- 7	88	211	166	55.8	193	260	191	257
20000	- 11	88	206	162	54.4	191	265	189	262
21000	- 13	88	204	160	53.9	190	268	187	264
22000	- 14	88	201	158	53.1	189	270	186	267
23000	- 16	85.6	195	153	51.5	185	270	183	266
24000	- 18	82.7	189	148	49.9	182	269	179	264
25000	- 20	79.8	182	143	48.2	178	267	174	262
26000	- 22	76.9	176	139	46.6	173	265	169	260
27000	- 24	74	170	134	45.0	169	263	165	257
28000	- 27	71	164	129	43.3	164	261	159	253
29000	- 29	68.1	157	124	41.6	159	258	/	/
30000	- 31	65.2	151	119	39.9	154	253	/	/
31000	- 33	62.5	146	114	38.5	149	250	/	/

Figure 9.41.28 - CRUISE PERFORMANCE -
Intermediate cruise / ISA + 5°C

NOTE :
No airspeed data means that the cruise speed obtained for these conditions is lower than Long Range cruise speed.

(*) 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Intermediate cruise

Conditions : ***ISA + 10°C***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 32	88	295	232	77.9	213	220	211	218
5000	+ 22	88	267	210	70.6	207	230	205	228
10000	+ 13	88	241	189	63.7	202	242	200	239
15000	+ 4	88	221	174	58.5	196	254	194	251
18000	- 2	88	212	167	56.1	193	261	190	258
20000	- 6	88	207	162	54.6	190	266	188	263
21000	- 8	86.5	201	158	53.1	188	267	185	263
22000	- 10	84	195	153	51.5	184	267	181	262
23000	- 12	81	190	149	50.1	180	265	177	261
24000	- 14	78	183	144	48.3	176	263	173	258
25000	- 16	75.5	177	139	46.8	172	262	168	256
26000	- 18	73	171	134	45.2	168	260	164	254
27000	- 20	70	165	130	43.6	163	258	158	250
28000	- 22	67	159	124	41.9	158	254	/	/
29000	- 24	64	153	120	40.3	152	250	/	/

Figure 9.41.29 - CRUISE PERFORMANCE -
Intermediate cruise / ISA + 10°C

NOTE :
No airspeed data means that the cruise speed obtained for these conditions is lower than Long Range cruise speed.

(*) 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Intermediate cruise

Conditions : ***ISA + 20°C***
Landing gear and flaps UP
2000 RPM (*) - BLEED ON

Pressure altitude (feet)	IOAT (°C)	TRQ (%)	Fuel flow			AIRSPEEDS (kt)			
						6614 lbs (3000 kg)		7275 lbs (3300 kg)	
			l / h	kg / h	us gal / h	IAS	TAS	IAS	TAS
0	+ 42	88	299	235	79.0	211	222	210	220
5000	+ 32	88	271	212	71.5	206	232	204	230
10000	+ 23	88	245	192	64.6	200	244	198	242
15000	+ 14	88	224	176	59.3	195	256	192	253
18000	+ 8	84	209	164	55.2	187	259	185	255
20000	+ 4	79	196	154	51.9	180	257	177	253
21000	+ 2	76.4	190	150	50.3	176	256	173	251
22000	0	74	184	144	48.6	173	255	169	249
23000	- 2	71.2	178	140	47.0	168	252	164	246
24000	- 4	69	172	135	45.4	164	251	160	244
25000	- 6	66	165	130	43.7	159	248	/	/
26000	- 8	63.4	159	125	42.1	154	244	/	/
27000	- 10	60.7	154	120	40.6	149	240	/	/

Figure 9.41.30 - CRUISE PERFORMANCE -
Intermediate cruise / ISA + 20°C

NOTE :
No airspeed data means that the cruise speed obtained for these conditions is lower than Long Range cruise speed.

(*) 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Long Range Cruise (6614 lbs - 3000 kg)

Conditions : Landing gear and flaps UP
2000 RPM (*) - BLEED ON

LEGEND : **IOAT**: °C **IAS** : KIAS
FF : us gal/h
FF : lbs/h **TAS**: KTAS

Presssure altitude (feet)	TRQ (%)	ISA - 20°C	ISA - 10°C	ISA	ISA + 10°C	ISA + 20°C
15000	55.5	**- 28** **164** 44.4 291 **200**	**- 18** **163** 45.0 295 **202**	**- 8** **161** 45.6 299 **205**	**2** **160** 46.1 302 **207**	**12** **158** 46.7 306 **208**
18000	56.0	**- 34** **162** 42.1 276 **206**	**- 24** **160** 42.7 280 **209**	**- 14** **158** 43.3 284 **210**	**- 4** **156** 43.8 287 **212**	**6** **155** 44.4 291 **214**
19000	56.5	**- 36** **161** 41.6 273 **209**	**- 26** **159** 42.1 276 **211**	**- 16** **157** 42.7 280 **213**	**- 6** **156** 43.3 284 **215**	**4** **154** 43.8 287 **217**
20000	57.0	**- 38** **160** 40.9 268 **212**	**- 28** **158** 41.5 272 **214**	**- 18** **157** 42.1 276 **216**	**- 8** **155** 42.6 279 **218**	**2** **154** 43.2 283 **220**
21000	57.5	**- 40** **160** 40.4 265 **214**	**- 30** **158** 40.9 268 **217**	**- 20** **156** 41.5 272 **219**	**- 10** **155** 42.1 276 **221**	**0** **153** 42.6 279 **223**
22000	58.0	**- 42** **159** 39.9 261 **217**	**- 32** **158** 40.4 265 **220**	**- 22** **156** 40.9 268 **222**	**- 12** **154** 41.5 272 **224**	**- 2** **152** 42.0 275 **225**
23000	58.5	**- 44** **159** 39.6 259 **220**	**- 34** **157** 40.1 263 **223**	**- 24** **155** 40.6 266 **225**	**- 14** **154** 41.1 269 **227**	**- 4** **152** 41.5 272 **228**
24000	59.0	**- 46** **159** 39.1 256 **223**	**- 36** **157** 39.6 259 **226**	**- 26** **155** 40.1 263 **228**	**- 16** **153** 40.6 266 **230**	**- 6** **151** 41.1 269 **231**

Figure 9.41.31 (1/2) - CRUISE PERFORMANCE -
Long Range Cruise (6614 lbs - 3000 kg) (Altitude $\leq$ 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Long Range Cruise (6614 lbs - 3000 kg) (Cont'd)

Conditions : Landing gear and flaps UP
2000 RPM (*) - BLEED ON

LEGEND : **IOAT**: °C **IAS** : KIAS
FF : us gal/h
FF : lbs/h **TAS**: KTAS

Presssure altitude (feet)	TRQ (%)	ISA - 20°C	ISA - 10°C	ISA	ISA + 10°C	ISA + 20°C
24000	59.0	**- 46** **159** 39.1 256 **223**	**- 36** **157** 39.6 259 **226**	**- 26** **155** 40.1 263 **228**	**- 16** **153** 40.6 266 **230**	**- 6** **151** 41.1 269 **231**
25000	59.5	**- 48** **158** 38.8 254 **227**	**- 38** **156** 39.3 257 **229**	**- 28** **154** 39.8 261 **231**	**- 18** **152** 40.3 264 **233**	**- 8** **150** 40.8 267 **234**
26000	60.0	**- 50** **158** 38.4 252 **229**	**- 40** **156** 38.9 255 **232**	**- 30** **153** 39.4 258 **234**	**- 20** **151** 39.9 261 **235**	**- 10** **149** 40.4 265 **237**
27000	60.5	**- 52** **157** 38.2 250 **233**	**- 42** **155** 38.7 254 **235**	**- 32** **153** 39.1 256 **236**	**- 22** **150** 39.6 259 **238**	**- 12** **149** 40.2 263 **240**
28000	61.0	**- 53** **156** 38.0 249 **235**	**- 43** **154** 38.4 252 **237**	**- 33** **152** 38.9 255 **239**	**- 23** **150** 39.4 258 **241**	**- 13** **148** 39.9 261 **243**
29000	61.5	**- 55** **156** 37.8 248 **239**	**- 45** **153** 38.3 251 **240**	**- 35** **151** 38.8 254 **243**	**- 25** **149** 39.2 257 **244**	**- 15** **147** 39.7 260 **246**
30000	62.0	**- 57** **155** 37.7 247 **241**	**- 47** **153** 38.1 250 **243**	**- 37** **151** 38.6 253 **246**	**- 27** **148** 39.0 255 **247**	**- 17** **146** 39.5 259 **249**
31000	62.5	**- 59** **154** 37.5 246 **245**	**- 49** **152** 38.0 249 **247**	**- 39** **150** 38.5 252 **249**	**- 29** **148** 38.9 255 **251**	**- 19** **145** 39.4 258 **252**

Figure 9.41.31 (2/2) - CRUISE PERFORMANCE -
Long Range Cruise (6614 lbs - 3000 kg) (Altitude $\geq$ 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Long Range Cruise (7275 lbs - 3300 kg)

Conditions : Landing gear and flaps UP
2000 RPM (*) - BLEED ON

LEGEND : **IOAT**: °C **IAS** : KIAS
FF : us gal/h
FF : lbs/h **TAS**: KTAS

Presssure altitude (feet)	TRQ (%)	ISA - 20°C	ISA - 10°C	ISA	ISA + 10°C	ISA + 20°C
15000	62.5	**- 28** **171** 47.1 309 **208**	**- 18** **169** 47.7 312 **210**	**- 8** **167** 48.3 316 **212**	**2** **165** 48.9 320 **214**	**12** **164** 49.5 324 **215**
18000	63.0	**- 34** **167** 44.7 293 **214**	**- 24** **166** 45.3 297 **216**	**- 14** **164** 45.9 301 **218**	**- 4** **162** 46.5 305 **220**	**6** **160** 47.1 309 **221**
19000	63.5	**- 36** **167** 44.1 289 **217**	**- 26** **165** 44.6 292 **219**	**- 16** **163** 45.2 296 **221**	**- 6** **161** 45.8 300 **222**	**4** **160** 46.5 305 **225**
20000	64.0	**- 38** **166** 43.6 286 **219**	**- 28** **164** 44.1 289 **221**	**- 18** **162** 44.6 292 **223**	**- 8** **161** 45.2 296 **225**	**2** **159** 45.8 300 **227**
21000	64.5	**- 40** **166** 43.1 282 **222**	**- 30** **164** 43.7 286 **224**	**- 20** **162** 44.2 290 **226**	**- 10** **160** 44.7 293 **228**	**0** **158** 45.3 297 **230**
22000	65.0	**- 42** **165** 42.7 280 **225**	**- 32** **163** 43.2 283 **227**	**- 22** **161** 43.7 286 **229**	**- 12** **159** 44.2 290 **231**	**- 2** **157** 44.8 293 **233**
23000	65.5	**- 44** **165** 42.3 277 **228**	**- 34** **163** 42.8 280 **230**	**- 24** **161** 43.3 284 **232**	**- 14** **159** 43.8 287 **234**	**- 4** **156** 44.4 291 **235**
24000	66.0	**- 46** **164** 41.8 274 **231**	**- 36** **162** 42.3 277 **233**	**- 26** **160** 42.9 281 **235**	**- 16** **158** 43.4 284 **236**	**- 6** **155** 43.9 288 **238**

Figure 9.41.32 (1/2) - CRUISE PERFORMANCE -
Long Range Cruise (7275 lbs - 3300 kg) (Altitude $\leq$ 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 resetting power lever (within limits permitted by torque limiter).

CRUISE PERFORMANCE

Long Range Cruise (7275 lbs - 3300 kg) (Cont'd)

Conditions : Landing gear and flaps UP
2000 RPM (*) - BLEED ON

LEGEND : **IOAT**: °C **IAS** : KIAS
FF : us gal/h
FF : lbs/h **TAS**: KTAS

Presssure altitude (feet)	TRQ (%)	ISA - 20°C	ISA - 10°C	ISA	ISA + 10°C	ISA + 20°C
24000	66.0	**- 46** **164** 41.8 274 **231**	**- 36** **162** 42.3 277 **233**	**- 26** **160** 42.9 281 **235**	**- 16** **158** 43.4 284 **236**	**- 6** **155** 43.9 288 **238**
25000	66.5	**- 48** **163** 41.5 272 **233**	**- 38** **161** 42.0 275 **236**	**- 28** **159** 42.5 278 **238**	**- 18** **157** 43.0 282 **239**	**- 8** **154** 43.6 286 **241**
26000	67.0	**- 50** **163** 41.2 270 **237**	**- 40** **160** 41.7 273 **238**	**- 30** **158** 42.2 276 **240**	**- 20** **156** 42.7 280 **242**	**- 10** **154** 43.2 283 **244**
27000	67.5	**- 52** **162** 41.1 269 **239**	**- 42** **159** 41.5 272 **241**	**- 32** **157** 42.0 275 **243**	**- 22** **155** 42.5 278 **245**	**- 12** **153** 43.0 282 **246**
28000	68.0	**- 53** **161** 40.9 268 **242**	**- 43** **159** 41.3 271 **244**	**- 33** **156** 41.8 274 **246**	**- 23** **154** 42.3 277 **248**	**- 13** **152** 42.8 280 **249**
29000	68.5	**- 55** **160** 40.7 267 **245**	**- 45** **158** 41.2 270 **247**	**- 35** **156** 41.7 273 **249**	**- 25** **153** 42.2 276 **251**	**- 15** **151** 42.7 280 **252**
30000	69.0 (1)	**- 57** **160** 40.6 266 **248**	**- 47** **157** 41.0 269 **250**	**- 37** **155** 41.5 272 **252**	**- 27** **152** 42.0 275 **253**	**- 17** **144** 41.0 269 **246**
31000	69.5 (2)	**- 59** **159** 40.6 266 **251**	**- 49** **156** 41.0 269 **254**	**- 39** **154** 41.5 272 **255**	**- 29** **151** 42.0 275 **257**	**- 19** **136** 39.4 258 **236**

Figure 9.41.32 (2/2) - CRUISE PERFORMANCE -
Long Range Cruise (7275 lbs - 3300 kg) (Altitude $\geq$ 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 resetting power lever (within limits permitted by torque limiter).

(1) For conditions ISA + 20°C, performance are obtained according to usable maximum torque : 65 %

(2) For conditions ISA + 20°C, performance are obtained according to usable maximum torque : 62 %

5.7 - 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_{50} = 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 9.41.33 - 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 :
- 7 % on hard grass
- 10 % on short grass
- 15 % on wet runway
- 25 % on high grass
- 30 % on slippery runway

SECTION 6

WEIGHT AND BALANCE

Information hereafter supplement or replace the one given for the TBM 700C1 airplane in Section 6 "Weight and balance" of the TBM 700C1 Pilot's Operating Handbook.

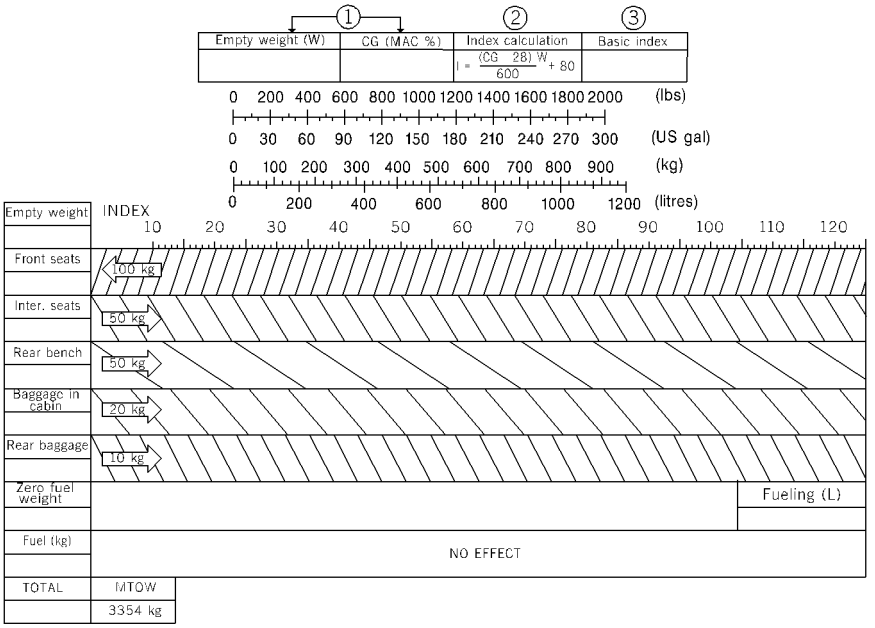
GENERAL

IT IS THE PILOT'S RESPONSIBILITY TO ENSURE THAT THE AIRPLANE IS LOADED PROPERLY AND THE WEIGHT AND BALANCE LIMITS ARE ADHERED TO.

If airplane empty weight has varied since last weighing form, refer to paragraph "DETERMINING EMPTY AIRPLANE CHARACTERISTICS" to determine new empty weight and the corresponding balance (for instance : optional equipment installation).

DETERMINING WEIGHT AND BALANCE

Refer to weight and balance graphs - Figure 9.41.34 or 9.41.34A.



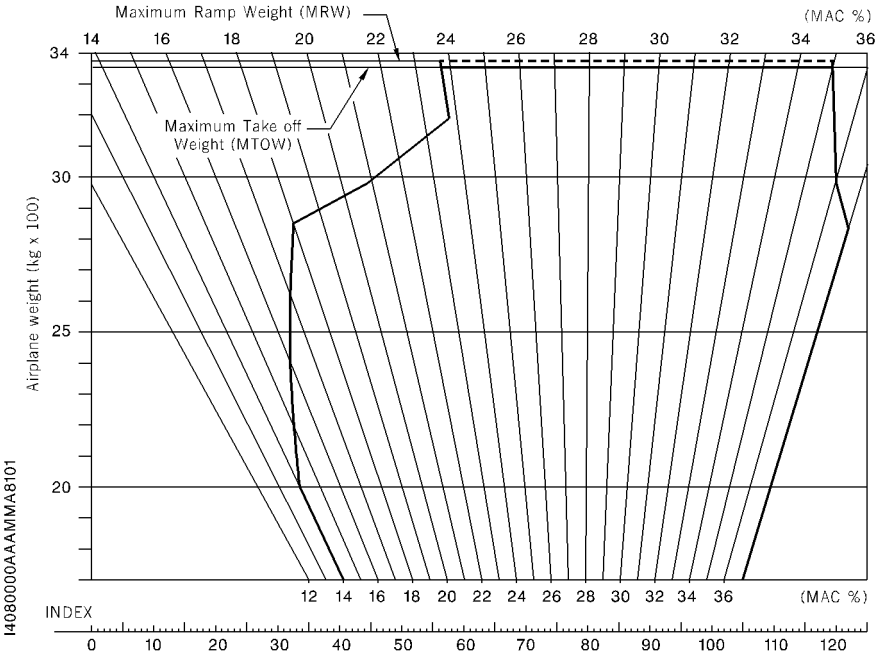
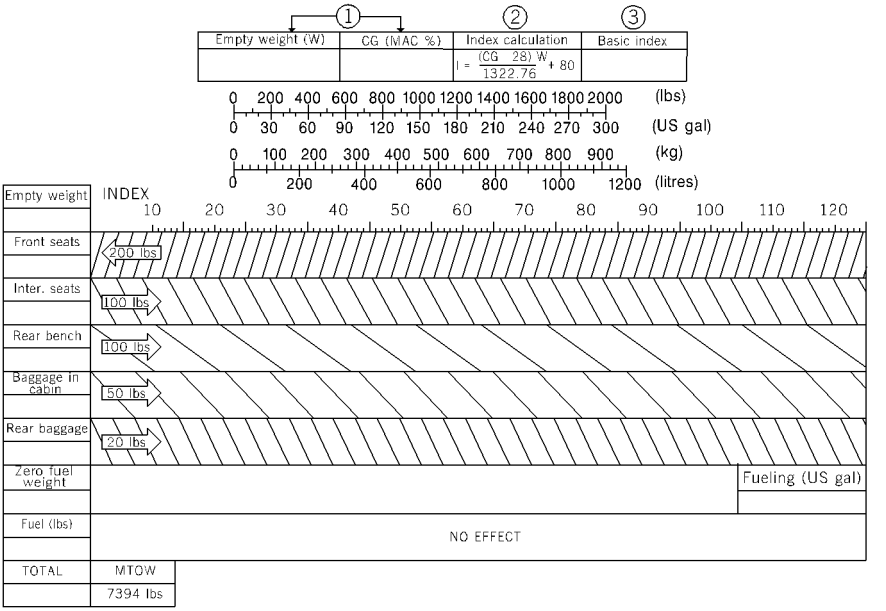


Figure 9.41.34 - WEIGHT AND BALANCE GRAPH (in Kg and Litres)



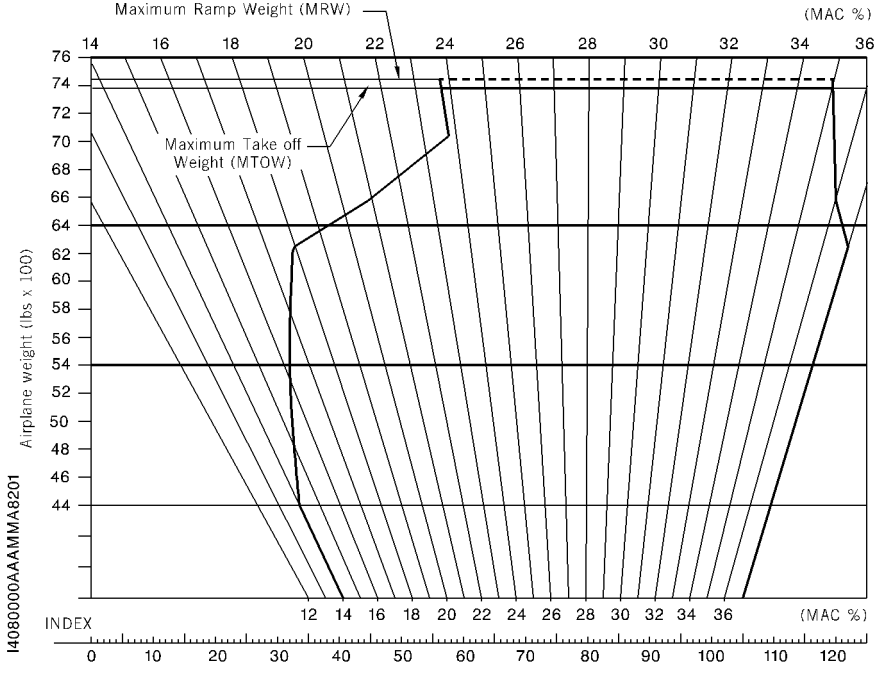


Figure 9.41.34A - WEIGHT AND BALANCE GRAPH (in lbs and us gal)

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.

List of equipment 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_o"	Moment
	According to delivery							

Figure 9.41.35 - SAMPLE WEIGHT AND BALANCE RECORD

$$CG\ m.a.c.\% = \frac{(do - 172.93)}{59.45} \times 100$$

Use the above formula to express arm "d_o" in % of mean aerodynamic chord.

NOTE :
Arm expressed in inches with regard to reference.

		Post-MOD70-148-25
Front seats	: 178.5 in. (4.534 m)	178.5 in. (4.534 m)
Intermediate seats	: 221.6 in. (5.630 m)	222.7 in. (5.656 m)
Rear bench (2 seats)	: 267.1 in. (6.785 m)	267.1 in. (6.785 m
Baggage compartment in pressurized cabin	: 303.0 in. (7.695 m)	303.0 in. (7.695 m)
Aft baggage compartment	: 329.4 in. (8.366 m)	329.4 in. (8.366 m)
Fuel	: 189.8 in. (4.820 m)	189.8 in. (4.820 m)

LIST OF EQUIPMENT

S A or O	STANDARD OR OPTIONAL EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
	25 - EQUIPMENT - FURNISHINGS			
A	Storage box (OPT70 25006G)	SOCATA	17.64 (8.000)	203.74 (5.175)
	or Post-MOD70-148-25			205.79 (5.227)
A	Refreshment cabinet (OPT70 25006H)	SOCATA	20.28 (9.200)	203.74 (5.175)
	or Post-MOD70-148-25			205.79 (5.227)
	Seats - Belts (Standard equipment)			
S	Seats			
	- Pilot's seat T700C2500002000	SOCATA	55.12 (25.00)	183.90 (4.671)
	- Front R.H. seat T700C2500002001	SOCATA	55.12 (25.00)	183.90 (4.671)
	- L.H. intermediate seat (back to flight direction) T700C2500003002 or Post-MOD70-148-25	SOCATA	35.27 (16.00)	219.96 (5.587) 220.94 (5.612)
	- R.H. intermediate seat (back to flight direction) T700C2500003003 or Post-MOD70-148-25	SOCATA	35.27 (16.00)	219.96 (5.587) 220.94 (5.612)
	- Double chair	SOCATA		
	. 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 A or O	STANDARD OR OPTIONAL EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
	26 - FIRE PROTECTION			
S	Portable fire extinguisher unit 863520-00 or Post-MOD70-148-25	L'HOTELLIER	3.64 (1.650)	192.16 (4.881) 194.17 (4.932)
	32 - LANDING GEARS			
	32-40 - Wheels and brakes			
R	Main tire 18x5.5-10PR	MICHELIN	13.50 (6.123)	204.33 (5.190)
R	Main wheel (Model 40-434)	PARKER	11.28 (5.120)	204.33 (5.190)
	34 - NAVIGATION			
	34-11 - Air data systems			
R	Airspeed indicator # 1 8140 Code B.851	UNITED INSTRUMENTS	0.75 (0.340)	157.48 (4.000)
S	Airspeed indicator # 2 8140 Code B.851	UNITED INSTRUMENTS	0.75 (0.340)	157.48 (4.000)
O	Airspeed indicator # 1 8040 Code B.850	UNITED INSTRUMENTS	0.75 (0.340)	157.48 (4.000)
O	Airspeed indicator # 2 8040 Code B.850	UNITED INSTRUMENTS	0.75 (0.340)	157.48 (4.000)

SECTION 7
DESCRIPTION

SEATS, BELTS AND HARNESSES

Cockpit seats

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

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 a rear handle and each seat 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.

Belts and harnesses

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.

SECTION 8

HANDLING, SERVICING AND MAINTENANCE

8.1 - SERVICING

LANDING GEAR

Main gear tires :

18 5.5 10 PR - Inflating pressure : 135 psi (9.32 bars)

NOTE :
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.

8.2 - 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.

	OAT (°C)	- 40°	- 30°	- 20°	- 10°	+ 15°
PRESSURES psi (bars)	Main landing gear tire	144 (9.96)	144 (9.96)	130 (8.96)	130 (8.96)	130 (8.96)

Table 1

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SUPPLEMENT

"HONEYWELL" KMH 880 EGPWS/TAS SYSTEM

TABLE OF CONTENTS

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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 700 airplane is equipped with the option "HONEYWELL" KMH 880 EGPWS/TAS SYSTEM.

The KMH 880 system provides two functions which are aids for the pilot :

- the EGPWS function enables to detect if the airplane path is in compliance with the overflown terrain relief.
- the TAS function enables to monitor the traffic by relying on information obtained from nearby airplane transponders. This function does neither detect, nor track airplane 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 700 airplane is equipped with the option "HONEYWELL" KMH 880 EGPWS/TAS SYSTEM.

The KMH 880 EGPWS 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, EGPWS function must be inhibited for any landing on a terrain which is not mentioned in the data base.

REMARK :
The KMH 880 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 KMH 880 system is used.

- KMD 550/850 Multi-function Display Pilot's Guide, P/N 006-18222-0000 Revision 1 dated April/2001,
- KMD 550/850 Multi-function Display/Terrain Function (EGPWS) Pilot's Guide Addendum, P/N 006-18236-0000 Revision 1 dated April/2001,
- Multi-function Display Traffic Avoidance Function (TCAS/TAS) Pilot's Guide Addendum P/N 006-18238-0000 Revision 0 dated 04/01 or any applicable following edition, if data are displayed on a KMD 850 MFD,
- KTA 870/KMH 880 Traffic Advisory System/Multi-Hazard Awareness System Pilot's Guide, P/N 006-18265-0000 Revision 0 dated 03/01 or any applicable following edition,
- EFS 40/50 Pilot's Guide, P/N 006-08701-0000 dated 08/15/93 or any applicable following edition,
- "GARMIN" GNS 530 Pilot's Guide, P/N 190-00181-00 Revision A dated 04/00 or any applicable following edition, if data are displayed on a GNS 530 GPS.

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 700 airplane is equipped with the option "HONEYWELL" KMH 880 EGPWS/TAS SYSTEM.

WARNING LIGHT "TERR N/A" ON

1 - MD41 "TEST" switch ..... **PUSH**

If the following voice message is heard :
"EGPWS Computer OK - External faults : Display configuration"
or
"EGPWS Computer OK - External faults : Display bus inactive" :

2 - Check the KMD 850 is set to ON.

For all other messages :

The EGPWS 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 TBM 700 airplane is equipped with the option "HONEYWELL" KMH 880 EGPWS/TAS SYSTEM.

BEFORE TAKEOFF

1 - MD41 "TEST" switch ..... **PUSH**
2 - "EGPWS System OK" voice message ..... **HEARD**
3 - KMD 850 "TRFC" knob ..... **PRESS**
4 - TAS function test (KMD 850) ..... **OK**
5 - "TAS" knob (on KMD 850 "TRFC" page) ..... **ON**

4.1 - WARNINGS OF THE EGPWS FUNCTION

"PULL UP" AURAL WARNING

The red "TERR" warning light illuminates.

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", "Obstacle Obstacle Pull up", AURAL WARNINGS
The red "TERR" warning light illuminates. Adjust airplane path in order to make the warning disappear.

4.2 - CAUTIONS OF THE EGPWS FUNCTION

"Caution terrain", "Caution obstacle", "Too low terrain" AURAL WARNINGS
The amber "TERR" warning light illuminates. Adjust airplane path in order to make the warning disappear.

"DON'T SINK" AURAL WARNING
The amber "TERR" warning light illuminates. Re-establish a positive rate of climb.

"SINK RATE" AURAL WARNING
The amber "TERR" warning light illuminates. Reduce rate of descent.

4.3 - KMH 880 TAS FUNCTION

WARNING

DO NOT ATTEMPT EVASIVE MANEUVERS BASED SOLELY ON TRAFFIC INFORMATION SHOWN ON DISPLAY ASSOCIATED TO THE KMH 880 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 KMH 880 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" KMH 880 EGPWS/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)
	34 - NAVIGATION				
A	EGPWS/TAS system (OPT70 34061A)	KMH 880	HONEYWELL	15.63 (7.09)	158.42 (4.024)
A	EGPWS/TAS system (with antenna KA92) (OPT70 34061B)	KMH 880	HONEYWELL	15.89 (7.21)	166.02 (4.217)

SECTION 7
DESCRIPTION

7.1 COMPONENTS OF THE OPTION

The KMH 880 option is constituted of the following components :

- a KA 92 GPS antenna (airplanes equipped with a "HONEYWELL" GPS),
- an MD41-1208 control box for EGPWS function of the option,
- a KMH 880 computer,
- two KA 815 antennas.

KMH 880 terrain type information is displayed on a KMD 850 screen, when the "TERR" function is activated by the pilot.

Traffic information can be displayed on a dedicated screen (KMD 850 and/or GNS 530) and/or on the EFS 40.

KMH 880 traffic type information is displayed on a KMD 850 screen, when the "TRFC" function is activated by the pilot.

Use EFS 40 "TEST/REF" knob to display TAS information on the EFS 40.

7.2 MODES OF THE KMH 880 EGPWS FUNCTION

The KMH 880 EGPWS function has 5 modes :

- "Look ahead" mode
  This mode provides a protection ahead of the airplane with a 1 minute prediction ("Caution terrain" or "Caution obstacle" aural warning associated with the illumination of the amber "TERR" warning light) and a 30 seconds prediction ("Terrain Terrain Pull up" or "Obstacle Obstacle Pull up" aural warning associated with the illumination of the red "TERR" warning light).

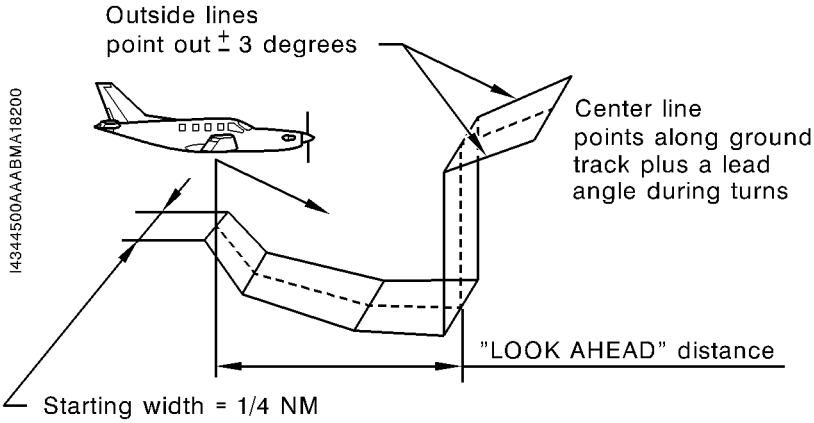


Figure 9.42.1

- "Runway Field Clearance Floor" (RFCF) mode
  This mode is active, when the airplane flies at less than 5 NM from a runway known in the KMH 880 data base ; it generates the "Too low terrain" aural warning and the illumination of the amber "TERR" warning light.

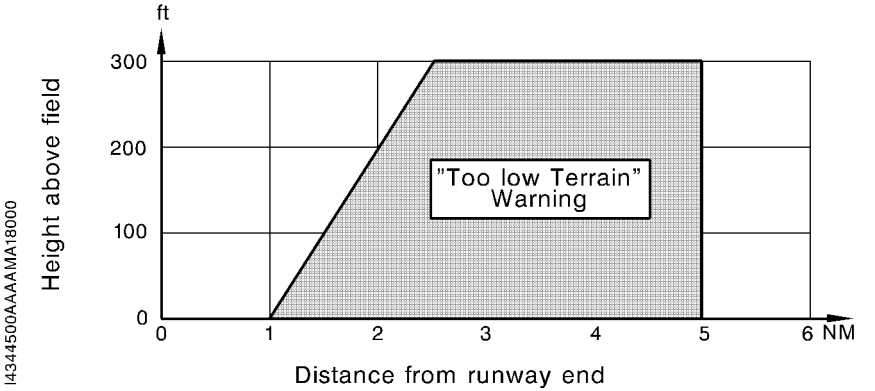


Figure 9.42.2 - "Too low terrain" warning area

- "Excessive rate of descent" mode
  This mode has a lower priority than the "Look ahead" mode ; it generates the "Sink rate" aural warning (illumination of the amber "TERR" warning light) and the "Pull up" aural warning (illumination of the red "TERR" warning light).

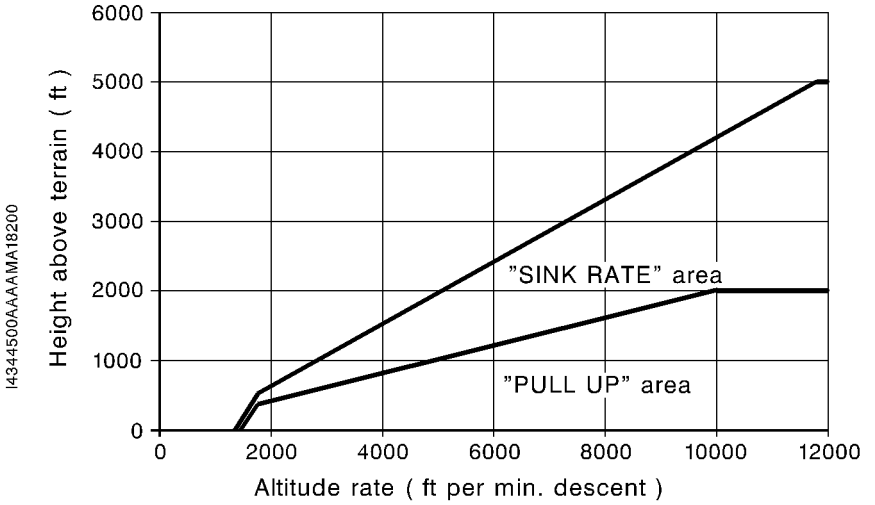


Figure 9.42.3 - "Sink rate" and "Pull up" warnings areas

- "Loss of altitude/negative rate of descent after takeoff" mode
  This mode is active until the airplane reaches an altitude of approximately 700 ft above the runway ; it generates the "Don't sink" aural warning and the illumination of the amber "TERR" warning light.

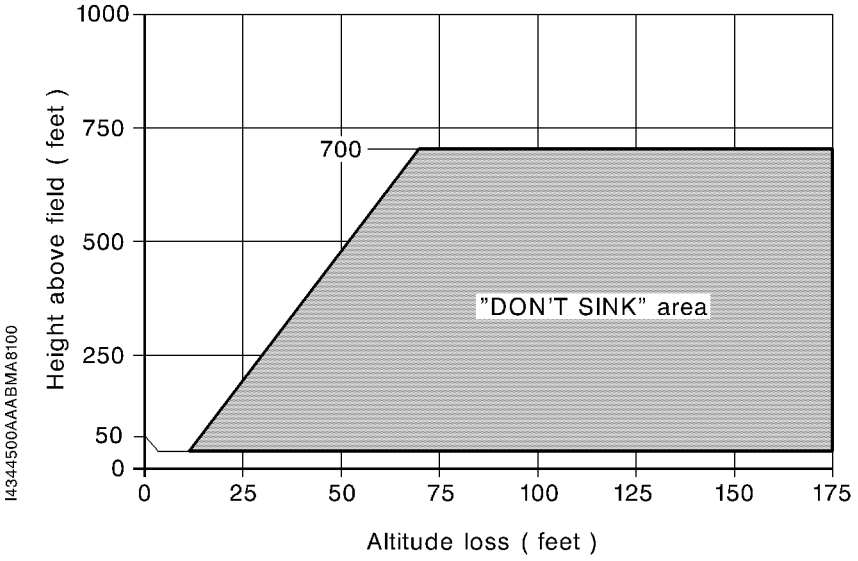


Figure 9.42.4 - "Don't sink" warning area

- "500 ft" mode
  This mode is active, when the airplane flies at less than 5 NM from a runway known in the KMH 880 data base ; it generates a "500 ft" aural warning. This warning is re-initialized when the airplane reaches a height of 700 ft above the terrain altitude.

7.3 TERRAIN AWARENESS DISPLAY

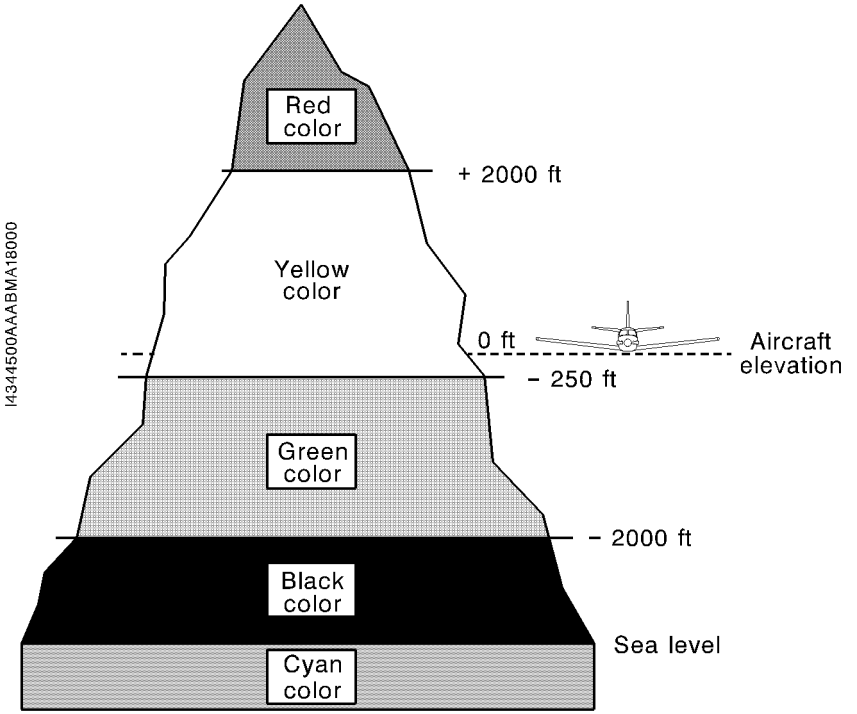


Figure 9.42.5

7.4 OBSTACLE DATA BASE

Data for known obstacles such as towers, buildings, antennas, etc. is contained on the same data card as the terrain and airport data. Presently, there are some 70000-plus obstacles in the database, but they are all in the area of North America. As more reliable information becomes available, Honeywell will expand the capability to provide alerting and warning for obstacles in other areas of the world.
Obstacles in the database are those known obstacles more than 100 feet AGL, so obstacles of lower height will not produce GA-EGPWS "Obstacle" alerts or warnings. However, terrain elevations are "rounded" up to the next 100 feet, so alerting and warning protection is generally available for known obstacles that are less than 100 feet AGL.

7.5 KMH 880 TAS FUNCTION

Traffic detected is displayed, when the vertical separation between your own airplane altitude and the intruder altitude ranges :

MODE	From	Up to
ABV (Look up)	- 2700 ft	+ 9000 ft
NRM (Normal)	- 2700 ft	+ 2700 ft
BLW (Below)	- 9000 ft	+ 2700 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 ± 800 ft relative altitude,
- approach of an intruder airplane on a course that will intercept your course within 20 to 30 seconds.

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 ± 600 ft relative altitude,
- approach of an intruder airplane on a course that will intercept your course within 15 to 20 seconds.

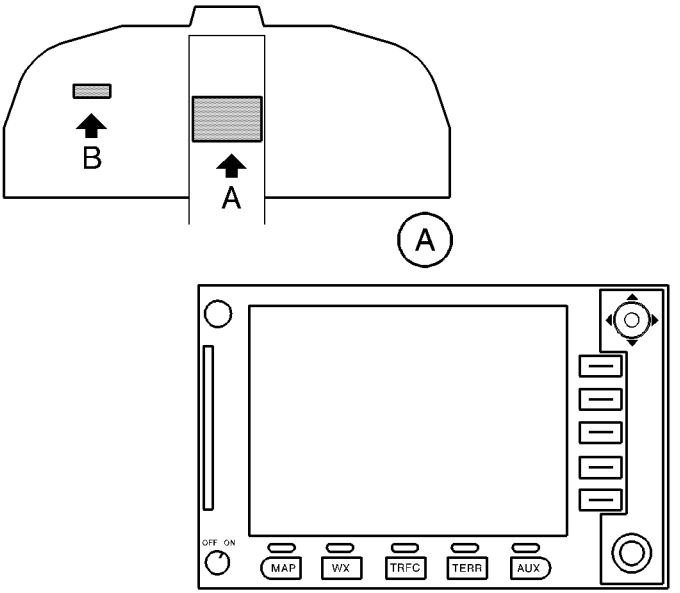
The aural traffic alert is inhibited when the height detected by the radio altimeter is below 600 ft.

TAS function will be automatically activated, if following conditions are combined :

- radio altimeter height is greater than 50 ft,
- KMD 850 TAS selector (outer knob icon) is set to ON.

7.6 SWITCH-ON

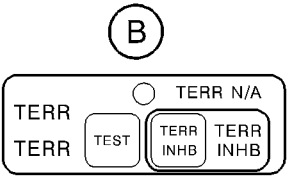
To switch ON or OFF the KMH 880, use "RADIO MASTER" switch.



KMD 850

TERR : EGPWS mapping selection

TRFC : TAS function selection



MD41 - 1208

TEST : EGPWS function test switch

TERR INHB : EGPWS warning inhibition switch

TERR (red) : Warnings
TERR (amber) : Cautions
TERR INHB (white) : Inhibited EGPWS warnings
TERR N/A (amber) : EGPWS system not operational

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Figure 9.42.6 - KMH 880 system

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SUPPLEMENT

PROVISION FOR TBM 700C2

TABLE OF CONTENTS

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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 700C1 airplane is equipped with the option "PROVISION FOR TBM 700C2".

The option consists of :
- new seats with integral belt and shoulder harnesses,
- reinforced main wheels and tires.

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 700C1 airplane is equipped with the option "PROVISION FOR TBM 700C2".

2.1 - PLACARDS

On main gear leg

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

On pressurized baggage compartment partition wall

45 Kg - (100 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

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SECTION 3

EMERGENCY PROCEDURES

The installation of the option "PROVISION FOR TBM 700C2" does not change the basic emergency procedures of the airplane described in Section 3 "Emergency procedures" of the TBM 700C1 Pilot's Operating Handbook.

SECTION 4

NORMAL PROCEDURES

The installation of the option "PROVISION FOR TBM 700C2" does not change the basic normal procedures of the airplane described in Section 4 "Normal procedures" of the TBM 700C1 Pilot's Operating Handbook.

SECTION 5

PERFORMANCE

The installation of the option "PROVISION FOR TBM 700C2" does not change the basic performance of the airplane described in Section 5 "Performance" of the TBM 700C1 Pilot's Operating Handbook.

SECTION 6

WEIGHT AND BALANCE

Information hereafter supplement the one given for the TBM 700C1 airplane in Section 6 "Weight and balance" of the TBM 700C1 Pilot's Operating Handbook.

S A or O	STANDARD OR OPTIONAL EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
O	PROVISION FOR TBM 700C2 : (OPT70 01029)			
	25 - EQUIPMENT - FURNISHINGS			
	Seats - Belts			
	Seats			
	- Pilot's seat	IAI	55.12 (25.00)	183.90 (4.671)
	- Front R.H. seat	IAI	55.12 (25.00)	183.90 (4.671)
	- Intermediate seat (back to flight direction)	IAI	35.27 (16.00)	219.96 (5.587)
	- Double chair	IAI		
	. R.H. seat		52.91 (24.00)	278.19 (7.066)
	. L.H. seat		52.91 (24.00)	278.19 (7.066)
	32 - LANDING GEARS			
	32-40 - Wheels and brakes			
	Main tire 18x5.5-10PR	MICHELIN	13.50 (6.123)	204.33 (5.190)
	Main wheel (Model 40-434)	PARKER	11.28 (5.120)	204.33 (5.190)

SECTION 7
DESCRIPTION

SEATS, BELTS AND HARNESSES

Cockpit seats

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

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 a rear handle and each seat 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.

Belts and harnesses

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.

SECTION 8
HANDLING, SERVICING AND MAINTENANCE

8.1 - SERVICING

LANDING GEAR

Main gear tires :

18 5.5 10 PR - Inflating pressure : 135 psi (9.32 bars)

NOTE :
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.

8.2 - 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.

	OAT (°C)	- 40°	- 30°	- 20°	- 10°	+ 15°
PRESSURES psi (bars)	Main landing gear tire	144 (9.96)	144 (9.96)	130 (8.96)	130 (8.96)	130 (8.96)

Table 1

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