

TRAINING REFERENCE ONLY — NOT A SUBSTITUTE FOR THE AFM

This summary is provided for training use. The approved Airplane Flight Manual for your airframe's serial number is the sole authority for operation of the airplane.

Source: DAHER TBM 850 G1000 Pilot's Information Manual, SN 434-999, Edition 1 Revision 14, Section 2 — Limitations (pages 2.1.1A to 2.9.12). Pages labelled with a trailing "A" apply POST-GARMIN SOFTWARE VERSION 12.01 or ANY LATER.

Contents

This table is interactive — click any entry to jump to that section. Use the [△ Contents](#) link in the page footer to return here.

1. General	2
2. Airspeed	3
3. Power Plant	4
4. Fuel	5
5. Oil	7
6. Instrument Markings	7
7. Weight and Balance	9
8. Flight and Operating Limits	10
9. Ice and Rain Protection	16
10. Kinds of Operation	16
11. Placards	21
12. V-Speed Definitions (General Reference)	23

1. GENERAL

General

PIM 2.1.1A

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

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

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

Post-MOD70-0335-34 (ESI-2000): the Pilot's Guide for the Electronic Standby Indicator MODEL ESI-2000 P/N 0040-32500-01 Rev. E or any later version as applicable, must be permanently kept in the airplane with the Pilot's Operating Handbook. Departure into IMC is not authorized if the battery symbol is present with an amber battery symbol (less than 1 hour remaining), or an amber or red “X” over the battery symbol or a “CAL DUE” message by the battery symbol.

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

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

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

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

NOTE

This manual prints two variants of several subsections, distinguished by Garmin software standard. The pages labelled with a trailing “A” apply POST-GARMIN SOFTWARE VERSION 12.01 or ANY LATER and are the basis of this document. Aircraft on the PRE-12.01 standard carry the equivalent pages without the “A” suffix; those pages differ in the GPS/GNSS navigation paragraphs and omit the Post-MOD70-0335-34 (ESI-2000) requirements shown above.

2. AIRSPEED

Airspeed limitations

PIM 2.2.1

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

Figure 2.2.1 - Airspeed limitations

Speed	KCAS	KIAS	Remarks
V_{mo} Maximum operating speed	271	266	Do not intentionally exceed this speed in normal flight category
V_a Maneuvering speed	160	158	Do not make abrupt or full control movements above this speed
V_{fe} Maximum flaps extended speed — landing configuration	120	122	Do not exceed these speeds depending on flaps position
V_{fe} Maximum flaps extended speed — takeoff configuration	180	178	Do not exceed these speeds depending on flaps position
V_{lo} Maximum landing gear operating speed — extension	180	178	Do not extend or retract landing gear above this speed
V_{lo} Maximum landing gear operating speed — retraction	130	128	Do not extend or retract landing gear above this speed
V_{le} Maximum landing gear extended speed	180	178	Do not exceed this speed with landing gear extended
Maximum inertial separator operating speed	205	200	No limitation when inertial separator is in fixed position

3. POWER PLANT

Engine

PIM 2.3.1

Number of engines	1
Engine manufacturer	PRATT & WHITNEY CANADA
Engine model number	PT6A - 66D

Maximum power

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

Ng limitation	104.1 %
Np limitation	2000 RPM
ITT limitation — Take off	850°C
ITT limitation — Maximum climb/cruise	840°C
ITT limitation — During start	< 840°C (no duration limitation) < 870°C for 20 seconds max. < 1000°C for 5 seconds max.

CAUTION

When normally operating, refer to chapter 5.8 “ENGINE OPERATION” tables.

Propeller

PIM 2.3.4

Number of propellers	1
Propeller manufacturer	HARTZELL
Propeller model number	HC-E4N-3 / E9083S (K)
Propeller diameter — Minimum	90 inches (2.286 m)
Propeller diameter — Maximum	91 inches (2.311 m)
Blade setting at 30 inches station — Low pitch	21°
Blade setting at 30 inches station — Feathering	86°
Blade setting at 30 inches station — Maximum reverse	- 11°

Starter operation limits

PIM 2.4.1

Starter operation sequence is limited as follows :

if Ng ≤ 30 %	30 seconds
if Ng > 30 %	60 seconds

Should several sequences be necessary, respect following spacing :

Sequence	Wait before the next
1st sequence	1 minute
2nd sequence	5 minutes
3rd sequence	30 minutes
4th sequence	—

4. FUEL

Fuel

PIM 2.3.2

Fuel pressure — Minimum	10 psi
Fuel pressure — Maximum	50 psi
2 tanks	150.5 us gal (570 Litres) each
Total fuel	301 us gal (1140 Litres)
Usable fuel	292 us gal (1106 Litres)
Unusable fuel	9 us gal (34 Litres)
Maximum fuel unbalance	15 us gal (57 Litres)

NOTE

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

CAUTION

The fuel used must contain an anti-ice additive, in accordance with specification MIL-I-27686 or MIL-I-85470. Additive concentrations (EGME or DIEGME) shall be comprised between a minimum of 0.06 % and a maximum of 0.15 % by volume. Refer to Section 8 “Handling, servicing and maintenance” for additional information.

CAUTION

The use of aviation gasoline (AVGAS) must be restricted to emergency purposes only. AVGAS shall not be used for more than 150 cumulative hours during any period between engine overhaul periods.

NOTE

Use of AVGAS to be recorded in engine module logbook.

CAUTION

Maximum time for sideslip condition is 30 seconds.

Figure 2.3.1 - Recommended fuel types (Reference: Service Bulletin P & W C. No. 14004)

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

5. OIL

Oil

PIM 2.3.2

CAUTION

Do not mix different viscosities or specifications of oil as their different chemical structure can make them incompatible.

Maximum oil temperature	104 °C
Oil pressure — Minimum	60 psi
Oil pressure — Maximum	135 psi
Oil capacity — System total	12.7 Quarts (12 Litres), oil cooler included
Oil capacity — Usable	6 Quarts (5.7 Litres)

6. INSTRUMENT MARKINGS

Airspeed indicator on PFD(s)

PIM 2.8.1

Figure 2.8.1 - Airspeed indicator markings

Marking	KIAS (value or range)	Significance
Red strip	Below 65	/
White strip	65 - 122	Full flap operating range. Lower limit is maximum weight V_{so} in landing configuration.
Green strip	122 - 266	Normal operating airspeed range
Red/white barber pole strip	Above 266	266 = V_{mo}

Figure 2.8.1B - Standby airspeed indicator markings

Marking	KIAS (value or range)	Significance
Red strip	Below 65	/
White strip	65 - 122	Full flap operating range. Lower limit is maximum weight V_{so} in landing configuration.
Green strip	122 - 266	Normal operating airspeed range
Red strip	266	Maximum speed for all operations.

NOTE

Pre-MOD70-0335-34 aeroplanes carry a dial standby indicator with a white arc 65 - 122 KIAS (wide 65 - 81, narrow 81 - 122) and a red line at 266 KIAS — see PIM 2.8.1, Figure 2.8.1A.

Pressurization

Figure 2.8.2 - Pressurization marking

Marking	Value	Significance
Red line	6.2 psi	Cabin ΔP limit

Engine instruments

Figure 2.8.3 - Engine instrument markings

Indication	Red — minimum limit	Yellow — caution range	Green — normal operating	Red line — maximum limit
Oil temperature	- 40 °C	- 40 to 0 °C 104 to 110 °C	0 to 104 °C	110 °C
Oil pressure	60 psi	60 to 100 psi	100 to 135 psi	135 psi
Fuel pressure	0 to 5 psi	—	10 to 50 psi	50 psi
Generator RPM (Ng)	—	—	51 to 104 %	104 %
Propeller RPM (Np)	—	450 to 1000 RPM	1600 to 2000 RPM	2000 RPM
ITT — engine start or off	—	840 to 1090 °C	400 to 840 °C	840 °C normal limit 870 °C (< 20 seconds limit) 1090 °C (red line) absolute limit
ITT — engine running	—	—	400 to 840 °C	840 °C normal limit
Torque (TRQ)	—	121.4 %	0 to 121.4 %	121.4 %

Suction gage — Pre-MOD70-0335-34 (ESI-2000)

Figure 2.8.4 - Suction gage markings

Marking	Corresponding value
Green	Normal operating from 4.4 to 5.2 in.Hg
Red lines	at 4.4 and 5.2 in.Hg

7. WEIGHT AND BALANCE

Weight limits

PIM 2.5.1

Maximum ramp weight (MRW)	7430 lbs (3370 kg)
Maximum takeoff weight (MTOW)	7394 lbs (3354 kg)
Maximum landing weight (MLW)	7024 lbs (3186 kg)
Maximum zero fuel weight (MZFW)	6032 lbs (2736 kg)
Maximum baggage — FWD compartment (non pressurized)	110 lbs (50 kg)
Maximum baggage — rear of pressurized cabin, Pre-MOD70-0315-25 and Post-MOD70-0315-25 with 6-seat accommodation	220 lbs (100 kg)
Maximum baggage — rear of pressurized cabin, Post-MOD70-0315-25 with 4-seat accommodation	396 lbs (180 kg), with small or large net

NOTE

The placard on the pressurized baggage compartment partition wall states an unqualified 100 kg — 220 lbs MAXIMUM. The 396 lbs figure applies only in the 4-seat accommodation with a cargo net fitted.

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

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

Aft limit — station aft of datum	At weight	% m.a.c.
194.9 inches (4.951 m)	all weights below 6250 lbs (2835 kg)	37 %
194.3 inches (4.936 m)	6579 lbs (2984 kg)	36 %
193.65 inches (4.921 m)	7394 lbs (3354 kg)	35 %

Reference datum	118.1 inches (3 m) in front of the firewall front face
Leveling point	Cabin floor rails
Between points	Straight line variation

NOTE

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

8. FLIGHT AND OPERATING LIMITS

Maneuver limits

PIM 2.6.1A

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

Aerobatic maneuvers, including spins, are not approved.

Temperature limits

PIM 2.6.1A

Minimum temperature at start and takeoff	- 40°C (- 40°F)
Maximum temperature at start and takeoff	ISA + 37°C (+ 67°F) from 0 to 8000 ft pressure altitude
Maximum temperature in flight	ISA + 37°C (+ 67°F) from 0 to 8000 ft pressure altitude ISA + 30°C (+ 54°F) at 31000 ft pressure altitude Linear decrease between 8000 and 31000 ft

Flight load factor limits

PIM 2.6.1A

Flaps up — weight below 6579 lbs (2984 kg)	- 1.5 ≤ n ≤ + 3.8 g
Flaps up — weight above 6579 lbs (2984 kg)	- 1.5 ≤ n ≤ + 3.5 g
Flaps down	- 0 ≤ n ≤ + 2.0 g

CAUTION

Intentional negative load factors prohibited.

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

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

Minimum engagement altitude, cruise or climb	1000 ft (300 m) AGL
Minimum use altitude, approach	200 ft (60 m) AGL
Minimum operating airspeed	85 KIAS

NOTE

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

The pilot must confirm at system initialization that the Navigation database is current. If the AIRAC cycle will change during flight, the pilot must ensure the accuracy of navigation data. If an amended chart affecting navigation data is published for the procedure, the database must not be used to conduct the procedure. GPS/SBAS based IFR enroute, oceanic and terminal navigation is prohibited unless the pilot verifies and uses a valid, compatible and current Navigation database, or verifies each waypoint for accuracy by reference to current approved data.

RNP APCH approaches (“GPS”, “or GPS”, “RNAV (GPS)”, “RNAV (GNSS)”) are prohibited unless the pilot verifies and uses the current Navigation database, and the procedure is loaded from that database into the flight plan by its name. Not all published Instrument Approach Procedures are in the Navigation database.

A procedure with a reported discrepancy is prohibited from being flown until a new Navigation database is installed and the discrepancy verified as corrected. Wherever possible, RNP and RNAV routes including SIDs, ODPs and STARs should be loaded into the flight plan from the database in their entirety.

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

For flight planning in areas without SBAS coverage the pilot must check RAIM availability. In the event of a predicted continuous loss of RAIM of more than five minutes for any part of the intended route, the flight should be delayed, cancelled or re-routed.

Where LNAV+V is indicated during an approach, LNAV minima shall be used. Use of the GPS/SBAS receivers for guidance during the final approach segment of an ILS, LOC, LOC-BC, LDA, SDF, MLS, or any other approach not approved for “or GPS” navigation, is prohibited.

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

At a minimum, the flight director must be displayed and utilized when conducting procedures containing RF (Radius to Fix) legs.

Maximum predicted FDE unavailability — RNAV 10 / RNP 10	34 minutes; two GNSS systems required to be operational
Maximum predicted FDE unavailability — RNP 4	25 minutes; two GNSS systems required to be operational
Maximum predicted FDE unavailability — RNP 2	5 minutes; two GNSS systems required (one only for domestic and offshore areas)
RNAV 5 / RNAV 2 / RNAV 1	One GNSS system required to be operational

NOTE

The full GNSS equipment approvals, the PBN capability table (Table 2.6.1) and the complete system limitations run from PIM 2.6.2A to 2.6.8A. This page summarises the operating restrictions; consult the PIM for the approvals matrix.

Flap operating envelope

PIM 2.6.9A

Maximum altitude for flap use	The use of flaps is not authorized above 15 000 ft
“850” flap position	The use of flap control in “850” position is prohibited for takeoff and landing

Reverse utilization

PIM 2.6.9A

Use of control reverse BETA (β) range is prohibited	during flight; on ground, if the engine is not running
---	---

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

Operation in RVSM area

This airplane is approved for operations in Reduced Vertical Separation Minimum (RVSM) airspace when required equipment is maintained in accordance with the airplane Maintenance Manual. This does not constitute operational approval; individual airplane and operational approval must be obtained in accordance with applicable operating rules.

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

The following equipment must be installed and operating normally upon entering RVSM airspace: pilot and R.H. station primary altimeters; autopilot; altitude alerter; ATC transponder.

NOTE

Any changes to the pitot / static, air data computer, autopilot, altitude alerting and / or transponder systems, or other changes that affect operation of these systems must be evaluated for impact on the RVSM approval.

The standby altimeter is not approved for RVSM operations.

In-flight circuit breaker use limits

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

Enhanced Mode S

The installed Mode S system satisfies the data requirements of ICAO Doc 7030/4, Regional Supplementary Procedures for SSR Mode S Enhanced Surveillance in designated European airspace. The following parameters are available: magnetic heading, indicated airspeed, Mach number, vertical rate, roll angle, true airspeed, true track angle, groundspeed, selected altitude and barometric pressure setting.

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

NOTE

The airplane symbol provides supplemental situational awareness only. It is not a means for navigation or flight guidance, is not to be used for conducting instrument approaches or departures, and should not be relied upon during low visibility taxi operations.

Operators must have back-up charts available to the flight crew. Database currency must be verified prior to use via the database effectivity page. The flight crew is responsible for verifying availability of charts for the planned flight.

Miscellaneous limits

PIM 2.7.1

2 front seats	178.5 in. (4.534 m)
2 intermediate seats — Pre-MOD70-0315-25	222.7 in. (5.656 m)
2 intermediate seats — Post-MOD70-0315-25 (4- or 6-seat accommodation)	224.8 in. (5.710 m)
Rear bench, 2 seats — Pre-MOD70-0315-25 and Post-MOD70-0315-25 with 6-seat accommodation	267.1 in. (6.785 m)
Baggage in pressurized cabin	303 inches (7.695 m)
Baggage in non pressurized forward section	128 inches (3.250 m)
Minimum crew	One pilot
Maximum occupancy	Six, including the pilot; and not more than the number of seats installed
Use of doors	Flight with door open or ajar is prohibited
Chemical toilet cabinet (if installed)	Must be stowed during take-off and landing. No baggage on the top of the cabinet for the whole flight.

Cargo net installation limits

PIM 2.7.2

Small cargo net — maximum loading height	28 in (710 mm)
Large cargo net — maximum loading height	22 in (565 mm) in cabin, out of baggage compartment

CAUTION

No item may extend forward of the cargo net system, to protect the door from obstruction.

9. ICE AND RAIN PROTECTION

Severe icing conditions

PIM 2.6.8A

WARNING

Severe icing may result from environmental conditions outside of those for which the aircraft is certificated. Flight in freezing rain, freezing drizzle, or mixed icing conditions (supercooled liquid water and ice crystals) may result in ice build-up on protected surfaces exceeding the capability of the ice protection system, or may result in ice forming aft of the protected surfaces. This ice may not be shed using the ice protection systems, and may seriously degrade the performance and controllability of the aircraft.

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

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

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

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

10. KINDS OF OPERATION

Equipment required depending on type of operation

PIM 2.6.9A

The airplane is approved for day and night VFR and day and night IFR operations when appropriate equipment is installed and operating correctly. The type certification for each use requires the following equipment, which must be installed and operate perfectly according to the indicated type of use.

CAUTION

It is the pilot's responsibility to check that the following equipment lists are in accordance with the specific national operation rules of the airplane registration country depending on the type of operation.

NOTE

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

Group	Equipment
Pilot instruments	Airspeed indicator
Pilot instruments	Sensitive and adjustable altimeter
Pilot instruments	Magnetic compass with built-in compensator
CAS warning and caution messages	Oil pressure
CAS warning and caution messages	Low fuel pressure
CAS warning and caution messages	Fuel selector OFF
CAS warning and caution messages	Fuel auxiliary pump ON
CAS warning and caution messages	L.H. and R.H. fuel tank low level
CAS warning and caution messages	Non functioning of fuel timer
CAS warning and caution messages	Battery overheat
CAS warning and caution messages	Battery stop
CAS warning and caution messages	Main generator OFF
CAS warning and caution messages	Low voltage
CAS warning and caution messages	Ground power unit connected
CAS warning and caution messages	Inertial separator
CAS warning and caution messages	Starter
CAS warning and caution messages	Ignition
CAS warning and caution messages	Flaps
CAS warning and caution messages	Landing gears and doors
Aural warning	Vmo warning
Aural warning	Landing gear warning
Aural warning	Stall warning
Engine instruments	Torquemeter
Engine instruments	Propeller tachometer
Engine instruments	Interturbine temperature indicator (ITT)
Engine instruments	Gas generator tachometer (Ng)
Engine instruments	Oil pressure indicator
Engine instruments	Oil temperature indicator
Various indicators	Fuel gauge indicators (2)
Various indicators	Fuel pressure indicator
Various indicators	Voltmeter
Various indicators	Ammeter
Various indicators	Outside air temperature
Installations	Fuel mechanical pump (main)
Installations	Fuel electrical pump (auxiliary)
Installations	Fuel shut-off valve
Installations	Fuel timer
Installations	Starter generator
Installations	Inertial separator

Group	Equipment
Installations	Stall warning
Installations	Electrical aileron trim
Installations	Electrical rudder trim
Installations	Manual elevator pitch trim
Installations	Engine ignition
Installations	Landing gear electro-hydraulic unit
Installations	Landing gear emergency hydraulic pump (manual)
Installations	Flaps
Installations	Overspeed regulator
Installations	Manual feathering
Installations	Battery
Miscellaneous	Seats (each occupant)
Miscellaneous	Belts (each occupant)
Miscellaneous	Straps (each occupant)
Miscellaneous	Pilot's operating handbook

Night VFR

PIM 2.6.12A

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

IFR

PIM 2.6.12A

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

Pressurized flight

PIM 2.6.12A

#	Equipment
1	Cabin altimeter
2	Cabin vertical speed indication
3	Cabin differential pressure indication
4	Pressurization control valve
5	Safety valve
6	Pressurization control
7	Maximum cabin altitude and pressure warning light

#	Equipment
1	All equipment required for IFR flight
2	Propeller deicing
3	L.H. windshield deicing
4	Airframe, stabilizer and elevator horn deicing
5	Wing leading edge inspection light (if night flight)
6	Stall warning deicing
7	Inertial separator

11. PLACARDS

Placards

PIM 2.9.1

Ref.	Location	Placard text
(1)	Under L.H. front side window	[Graphic placard — see PIM 2.9.1]
(2)	Calibration chart on compass and on windshield post	For N 30 60 E 120 150 / Steer For S 210 240 W 300 330 / Steer DATE : RADIO ON
(3)	On pressurized baggage compartment partition wall	100 kg — 220 lbs MAXIMUM IT IS THE PILOT'S RESPONSIBILITY TO CHECK THAT ALL THE BAGGAGES ARE PROPERLY SECURED FOR LOADING INSTRUCTIONS SEE "WEIGHT AND BALANCE DATA" IN PILOT'S OPERATING HANDBOOK
(3)a	Post-MOD70-0315-25 — for the small cargo net, on frame C13bis	[Graphic placard — see PIM 2.9.2]
(3)b	Post-MOD70-0315-25 — for the large cargo net, R.H. side upholstery panel, rear baggage compartment	[Graphic placard — see PIM 2.9.2]
(3)c	On FWD baggage compartment door frame (non pressurized)	50 kg — 110 lbs MAXIMUM FOR LOADING INSTRUCTIONS SEE "WEIGHT AND BALANCE DATA" IN PILOT'S OPERATING HANDBOOK
(4)	Under GCU 475 control unit on pedestal console	[Graphic placard — see PIM 2.9.2A]
(5)	On fuel selector	[Graphic placard — see PIM 2.9.3]
(6)	Near fuel tank caps	[Graphic placard — see PIM 2.9.3]
(7)	On internal face of L.H. engine cowling	Oil system capacity 12 l 12.7 qt
(8)	On landing gear emergency control access door	LDG GEAR EMERGENCY ACCESS PULL
(9)	On rear passenger's table casing	TABLE MUST BE STOWED DURING TAKEOFF AND LANDING
(10)	Under R.H. control wheel	[Graphic placard — see PIM 2.9.4]
(11)	On nose gear door	[Graphic placard — see PIM 2.9.5]
(12)	On nose gear leg	NOSE LANDING GEAR TIRE PRESSURE : 6,5 bar 94 psi
(13)	On main gear leg	MAIN LANDING GEAR TIRE PRESSURE : 8,96 bar 130 psi
(14)	On engine cowling, in front of compartment door	EXTERNAL POWER 28 VOLTS D.C. NOMINAL 800 AMPS STARTING CAPACITY MIN DO NOT EXCEED 1400 AMPS

Ref.	Location	Placard text
(15)	On “pilot” door — external side (if installed)	[Graphic placard — see PIM 2.9.6]
(16)	On access door — external side	[Graphic placard — see PIM 2.9.6]
(17)	On outer fuselage skin aft of access door and in the cabin forward of access door	[Graphic placard — see PIM 2.9.7]
(18)	On access door — internal side	[Graphic placard — see PIM 2.9.7]
(19)	On “pilot” door — internal side (if installed)	[Graphic placard — see PIM 2.9.8]
(20)	On emergency exit handle	[Graphic placard, marking on cover and marking on handle — see PIM 2.9.8]
(21)	On last step of stairs	STAIRS MAX LOAD : ONE PERSON
(22)	On R.H. access door jamb	DO NOT USE HAND RAIL TO RETRACT OR STOW STAIRS
(23)	On R.H. side at front seat level and on the first rear passengers masks container	[Graphic placard — see PIM 2.9.9]
(24)	On rear passengers masks containers	[Graphic placard — see PIM 2.9.9]
(25)	On internal face of the oxygen cylinder service door	[Graphic placard — see PIM 2.9.10]
(26)	On the oxygen service door	[Graphic placard — see PIM 2.9.10]
(27)	On emergency locator transmitter inspection door	[Graphic placard — see PIM 2.9.11]
(28)	On the potty seat curtain (if installed), pilot's side	CURTAIN MUST BE STOWED FOR TAKE-OFF AND LANDING
(29)	Post-MOD70-0557-25C — on the L.H. rear cargo compartment panel upper edge	[Graphic placard — see PIM 2.9.11]
(30)	Pre-MOD70-0336-26 and Post-MOD70-0391-26D — on R.H. side at front seat level	[Graphic placard — see PIM 2.9.11]
(31)	On the lower drawer of the R.H. cabinet	[Graphic placard — see PIM 2.9.12]

NOTE

Placards reproduced as text. Graphic-only placards are identified by their reference number and location; refer to the cited PIM page for the artwork.

12. V-SPEED DEFINITIONS (GENERAL REFERENCE)

Takeoff and Initial Climb

V-Speed	Name	Meaning
V1	Takeoff decision speed	Maximum speed at which a reject may be initiated; at or above it the takeoff must be continued.
Vr	Rotation speed	Speed at which the pilot rotates to raise the nose.
Vlof	Lift-off speed	Speed at which the aircraft first becomes airborne.
V2	Takeoff safety speed	Target climb speed with the critical engine inoperative.
V2min	Minimum takeoff safety speed	Lowest allowable V2 .
Vef	Engine-failure speed	Speed at which the critical engine is assumed to fail (certification).
Vmu	Minimum unstick speed	Slowest speed at which the aircraft can safely lift off.
Vfto	Final takeoff speed	Speed in the final takeoff / climb segment.

Climb Performance

V-Speed	Name	Meaning
Vx	Best angle of climb	Most altitude gained per distance over the ground.
Vy	Best rate of climb	Most altitude gained per unit of time.
Vxse	Best angle, single-engine	Vx with one engine inoperative (multiengine).
Vyse	Best rate, single-engine	Vy with one engine inoperative — the blue line .

Stall Speeds

V-Speed	Name	Meaning
Vs	Stall speed	Minimum steady flight speed at which the aircraft is controllable.
Vs0	Stall speed, landing configuration	Stall with full flaps and gear down — bottom of the white arc.
Vs1	Stall speed, clean configuration	Stall in a specified (usually clean) configuration — bottom of the green arc.
Vsr	Reference stall speed	Certification reference stall speed.
Vsse	Safe single-engine speed	Minimum speed for intentionally cutting one engine.
Vsw	Stall warning speed	Speed at which the stall warning activates.

Airspeed Indicator Limit Speeds

V-Speed	Name	Meaning
Va	Design maneuvering speed	Maximum speed for full or abrupt control inputs without overstress.
Vno	Maximum structural cruising speed	Normal operating limit — top of the green arc, start of the yellow arc.
Vne	Never-exceed speed	The red line — never exceed.
Vfe	Maximum flap-extended speed	Top of the white arc.
Vle	Maximum landing-gear-extended speed	Maximum speed flying with the gear down.
Vlo	Maximum landing-gear-operating speed	Maximum speed to extend or retract the gear.
Vmo / Mmo	Maximum operating limit speed / Mach	Maximum operating airspeed and Mach number.

Approach and Landing

V-Speed	Name	Meaning
Vref	Landing reference speed	Threshold-crossing speed, typically $1.3 \times V_{s0}$.
Vapp	Approach speed	Target speed on final approach.
Vbg	Best glide speed	Speed for maximum glide distance (best lift-to-drag ratio).

Multiengine Control

V-Speed	Name	Meaning
Vmc / Vmca	Minimum control speed (airborne)	Minimum speed to maintain control with the critical engine inoperative — red radial line.
Vmcg	Minimum control speed (ground)	Minimum control speed on the takeoff roll.
Vmcl	Minimum control speed (landing)	Minimum control speed in the landing configuration.
Vmbe	Maximum brake energy speed	Maximum speed from which the brakes can absorb a rejected takeoff.

Design and Certification Speeds

V-Speed	Name	Meaning
Vb	Design gust-intensity speed	Turbulence-penetration design speed.
Vc	Design cruising speed	Certification design cruising speed.
Vd / Vdf	Design / demonstrated diving speed	Certification dive speed.
Vf	Design flap speed	Certification design flap speed.
Vh	Maximum level-flight speed	Maximum speed in level flight at maximum continuous power.

NOTE

These are certification design speeds. They are rarely referenced in day-to-day operations.

Airspeed Indicator Colour Markings

CAUTION

GENERIC REFERENCE ONLY — these are the standard FAA airspeed-indicator markings and they do NOT describe this airplane. The TBM airspeed indicator has no yellow caution arc, no **Vne** red line, no **blue line** and no red radial: it reads red below 65 KIAS, white 65 to 122 KIAS, green 122 to 266 KIAS and a red/white barber pole above 266 KIAS (**Vmo**). For this airplane's actual markings see the Instrument Markings section of this document.

V-Speed	Name	Meaning
White arc	Flap operating range	Vs0 to Vfe .
Green arc	Normal operating range	Vs1 to Vno .
Yellow arc	Caution range	Vno to Vne — smooth air only.
Red line	Never exceed	Vne .
Blue line	Best rate, single-engine	Vyse (multiengine).
Red radial	Minimum control speed	Vmc (multiengine).

NOTE

The colour markings are defined by the V-speeds above, so a change to a limitation speed changes the arc.