

Pilatus PC-12 NGX | Limitations

TRAINING REFERENCE ONLY — NOT A SUBSTITUTE FOR THE AFM

This document is a training summary compiled from the aircraft's POH/AFM. In any conflict, the EASA/FAA Approved Airplane Flight Manual for the specific airplane, including all applicable Supplements and Temporary Revisions, is the governing authority. Verify limitations against the AFM for the serial number being flown.

Source: Pilatus PC-12 NGX (PC-12/47E) Pilot's Operating Handbook and EASA Approved Airplane Flight Manual, Report No. 02406 (MSN 1720, 2001 and up; issue date March 06, 2020, with revised pages through April 24, 2023) — Section 2, LIMITATIONS (EASA Approved), pages 2-1-1 through 2-23-22. Some limits differ by MSN block, interior configuration or optional equipment; both values are shown where the POH publishes them — confirm the applicable value for the specific serial number.

Contents

1. General	2
2. Airspeed	3
3. Power Plant	4
4. Fuel	7
5. Instrument Markings	9
6. Weight and Balance	9
7. Flight and Operating Limits	10
8. Ice and Rain Protection	12
9. Kinds of Operation and Equipment List	14
10. Systems and Equipment Limits	17
11. Other Limitations	22
12. Placards	24
13. V-Speed Definitions (General Reference)	28

1. GENERAL

SCOPE AND CIRCUIT BREAKER RESET LIMITATION

POH 2-1

Section 2 of the POH contains the EASA Approved operating limitations, instrument markings, color coding, and basic placards necessary for the operation of the airplane, its engine, systems, and equipment. Compliance with approved limitations is mandatory. Limitations associated with systems or equipment requiring POH Supplements are in Section 9, Supplements.

With the exception of circuit breakers on the Essential Bus, and if not detailed otherwise in procedures, all tripped open circuit breakers are not allowed to be reset in flight. Circuit breakers on the Essential Bus, if tripped, may be reset once only in flight providing:

1. At least one minute has elapsed from the time of the circuit breaker trip.
2. There is no remaining smoke or burning smell.

2. AIRSPEED

AIRSPEED LIMITATIONS (KIAS)

POH 2-2

SPEED	KIAS	SIGNIFICANCE
Maximum Operating Speed Vmo	240	Do not exceed this speed in any operations. Maximum speed at or below 16,300 ft.
Maximum Operating Mach Mmo	0.49 M	Do not exceed this speed in any operations. Governs above 16,300 ft — see the Vmo/Mmo Schedule below (POH Figure 2-2-1).
Maximum Flap Extended Speed Vfe — flaps 15° or less	165	Do not exceed this speed with flaps extended.
Maximum Flap Extended Speed Vfe — flaps more than 15°	130	Do not exceed this speed with flaps extended.
Maximum Landing Gear Operating Speed Vlo	180	Do not retract or extend the landing gear above this speed.
Maximum Landing Gear Extended Speed Vle	240	Do not exceed this speed with the landing gear extended.

NOTE

Vmo/Mmo Schedule (POH Figure 2-2-1, page 2-2-2): Vmo is 240 KIAS from sea level to 16,300 ft. Above 16,300 ft, Mmo 0.49 governs and the indicated limit decreases approximately linearly to about 181 KIAS at 30,000 ft.

MAXIMUM OPERATING MANEUVERING SPEED VO

POH 2-2

Do not make full or abrupt control movements above this speed. Vo varies with weight:

WEIGHT	Vo (KIAS)	WEIGHT	Vo (KIAS)
10450 lb (4740 kg)	166	7060 lb (3200 kg)	136
9921 lb (4500 kg)	161	6610 lb (3000 kg)	132
9480 lb (4300 kg)	158	6170 lb (2800 kg)	127
9039 lb (4100 kg)	154	5730 lb (2600 kg)	123
8380 lb (3800 kg)	148		
7940 lb (3600 kg)	144		
7500 lb (3400 kg)	140		

AIRSPEED INDICATION MARKINGS (SPEED TAPE)

POH 2-3

INDICATION	KIAS VALUE / RANGE	REMARKS
Red/White Barber Pole — across and upwards on right side of tape	240 or 0.49 M, whichever is lower	Maximum operating limit (Vmo/Mmo).
Red (high speed) strip on right side of tape	180 Vlo 165 Vfe 15° 130 Vfe 30/40°	Extends downwards from Vmo/Mmo to the valid Vlo or Vfe as applicable. Not shown in clean configuration or with gear extended only.
Labeled placards on right side of tape	180 Vlo 165 Vfe 15° 130 Vfe 30/40°	Maximum flap operating and extended speed (Vfe 15/30/40°) and maximum landing gear operating speed (Vlo).
Red low speed awareness tape — overlaid on right side of tape	Shaker speed	Extends upwards from bottom of tape to the shaker speed in the current configuration. Not shown on ground.

3. POWER PLANT

ENGINE

POH 2-4-1

ITEM	LIMITATION
Number of Engines	1
Engine Manufacturer	Pratt & Whitney Canada
Engine Model Number	PT6E-67XP

OIL

POH 2-4-1

Approved oils are: AeroShell Turbine Oil 500 · AeroShell Turbine Oil 560 (ASTO 560) · Royco Turbine Oil 500 · Royco Turbine Oil 560 · Mobil Jet Oil II · Eastman Turbo Oil 2380 · Turbonycoil 600. The oils listed are approved to MIL-PRF-23699 Type II.

CAUTION

Mixing oil of different viscosities is not permitted.

OIL QUANTITY

POH 2-4-1

ITEM	LIMITATION
Total Oil Capacity	3.6 US gal (13.6 liters)
Drain and Refill Quantity	2.0 US gal (7.6 liters)
Oil Quantity Operating Range	1.0 US gal (3.8 liters)

NOTE

An oil quantity check is required for takeoff. Takeoff is not approved with the ENGINE OIL LEVEL warning annunciator illuminated.

ENGINE OPERATING LIMITS

POH 2-4-2 / 2-4-3

The limits presented in each column shall be observed. The limits presented do not necessarily occur simultaneously. Refer to the Pratt & Whitney Engine Maintenance Manual for specific action if limits are exceeded.

OPERATING CONDITION (1)	SHP	TORQUE PSI (2)(3)	MAX ITT °C	Ng %	Np RPM (11)(12)	OIL PRESS PSI (4)(5)	OIL TEMP °C (9)
Takeoff (7)(10)	1200	44.84	850	104	1700	90 to 135	15 to 110
Max. Climb (7)	1200	44.84	825	104	1700	90 to 135	15 to 105
Cruise (7)	1100	40.63	820	104	1700	90 to 135	15 to 105
Min. Idle (8)	—	—	750	64.5	—	60 min.	-40 to 110
Starting (6)	—	—	1000	—	—	175 max.	-40 min.
Transient (10)	—	61.00	900	104.3	1870	40 to 175	0 to 110
Max. Reverse (7)(11)	900	34.26	820	104	1650	90 to 135	15 to 105

- (1) Engine inlet condition limit for the operation of the engine is: Temperature 57.2°C (135°F) at the engine inlet connection.
- (2) The torque limit is in the propeller operation range of 1000 to 1700 RPM. At less than 1000 RPM the torque limit is 23.92 psi.
- (3) Maximum recommended torque at 1700 rpm is 44.34 psi. The torque limit of 44.84 psi is provided to allow operation at reduced Np speed at the quoted power setting.
- (4) Usual oil pressure is between 90 and 135 psi at Ng speeds of more than 72%. If engine torque is less than 35.87 psi the minimum oil pressure is 85 psi with an oil temperature of between 60 and 70°C.
- (5) Oil pressures of less than 90 psi are not recommended. A low oil pressure of 60 psi is permitted at torques of less than 23.92 psi. Oil pressures less than 60 psi are not safe and it will be necessary to stop the engine.
- (6) The time limit for maximum start engine Inter Turbine Temperature (ITT) is 5 seconds.
- (7) Engine oil temperature must be 15°C or above prior to setting takeoff power on ground. Engine oil temperature must be 10°C or above when operating with anti-icing additives.
- (8) For the Np range of 900 RPM or more.
- (9) Takeoff power rating is limited to 5 minutes duration. The limit for oil temperatures between 105 and 110°C is 10 minutes for all operations.
- (10) The time limit for transient torque, ITT, Np and oil pressure is 20 seconds.
- (11) The usual maximum ground reverse limit is an Np of 1615 RPM ± 20 RPM.
- (12) During steady state operation a variation of ± 30 rpm is permitted to account for power governing accuracy.

PROPELLER

POH 2-4-5

ITEM	LIMITATION
Propeller Manufacturer	Hartzell
Propeller Model Number	HC-E5A-31A/NC10245B
Number of Propellers / Blades	1 / 5
Propeller Diameter	Min 104 in (2.642 m) Max 105 in (2.667 m)
Max Normal Operation (Np)	1,700 rpm $\pm$ 30 rpm
Max Transient (20 sec)	1,870 rpm
Max Reverse	1,650 rpm
Blade Angle at Sta. 42 — Fine Pitch	14.7° $\pm$ 0.2°
Blade Angle — Max Reverse Pitch	-17.5° $\pm$ 0.5°
Blade Angle — Feather	80.0° $\pm$ 0.5°
Minimum Pitch in Flight	1°

CAUTION

Stabilized operation on the ground between 350 and 900 rpm is not permitted (POH 2-4-5). Note: the center-console placard (POH 2-23-12) reads "between 350 and 950 rpm" — the POH publishes both figures; observe the more conservative placard range.

STARTER

POH 2-4-6

The engine starting cycle shall be limited to the following intervals:

1. Sequence, 60 seconds OFF
2. Sequence, 60 seconds OFF
3. Sequence, 30 minutes OFF

NOTE

A dry motoring cycle is to be counted as a sequence. In case of start abort and automatic dry motoring commanded by EPECS, wait for an additional 10 minutes before a new start is attempted.

GENERATOR

POH 2-4-6

GENERATOR	MAX CONTINUOUS LOAD	MAX LOAD FOR 2 MINUTES *
Generator 1	300 AMP	450 AMP
Starter/Generator 2	300 AMP	450 AMP

* Maximum load permitted for a 2 minute period per each one hour of operation.

POWER CONTROL LEVER OPERATION

POH 2-4-6

Power Control Lever operation aft of the idle detent is prohibited during flight. Such operation may lead to loss of airplane control and total power loss.

CHIP DETECTOR

POH 2-4-6

Takeoff is not approved with the ENGINE CHIP caution annunciator illuminated.

FEATHER INHIBIT (OPTIONAL)

POH 2-4-6

After nine consecutive engine shutdowns using the propeller feather inhibit function, the next engine shutdown must be a normal shutdown.

4. FUEL

APPROVED FUELS

POH 2-4-3 / 2-4-4

APPROVED FUEL	SPECIFICATION
Unrestricted use (1)	
Jet A	ASTM-D1655; CAN/CGSB-3.23
Jet A-1	ASTM-D1655; IATA; JFSCL; GOST R 52050; QAV-01; CAN/CGSB-3.23; DEF STAN 91-91
JP-5	MIL-DTL-5624; DEF STAN 91-86
JP-8 (F-34)	DEF STAN 91-87; MIL-DTL-83133
F-35 / JP-8+100 (F-37)	MIL-DTL-83133
Jet A-50 (2)	—
MSN 1720, 2001-2040 Post SB 28-013, and MSN 2041 and up only:	
RT	GOST 10227-86; GSTU 320.00149943.007-97
TS-1	GOST 10227-86 + Russian Decree #118
Restricted use (3)	
Diesel grades (4)(5) — No. 2-D S500, No. 2-D S5000, No. 1-D S500, No. 1-D S5000	ASTM-D975
Automotive Diesel Fuel (4)(6) — Type B, Type A	CAN/CGSB-3.517

(1) Fuel meeting the requirements of ASTM D7566 revision 19 (Annex 1 to 5), Standard Specification for Aviation Turbine Fuel Containing Synthesized Hydrocarbons, redesignated as ASTM D1655, is acceptable for use.

(2) A brand blend sold in Alaska — Jet A with a lower freezing point.

(3) Unless otherwise specified, continued use of these fuels for more than 1000 hours is allowed provided periodic fuel nozzle inspections are found acceptable by P&WC.

(4) Not allowed for use when cloud point is lower than +5°C.

(5) Shall not contain a biodiesel component.

(6) Unless otherwise specified, intermittent or continued use of these fuels for up to 1000 hours is allowed provided satisfactory fuel nozzle inspection results are achieved at the approved intervals.

ANTI-ICING ADDITIVE

POH 2-4-4 / 2-4-5

The PC-12/47E fuel system design (MSN 1720, 2001 and up) is such that anti-icing additive is not required. If anti-icing additive is to be used, it must conform to the following specifications. Additive concentration must be below the maximum and within additive supplier recommendations. Refer to POH Section 8, Handling, Servicing and Maintenance, for blending instructions.

ADDITIVE	SPECIFICATION	MAX CONCENTRATION
Diethylene Glycol Monomethyl Ether (DiEGME)	ASTM D4171 Type II; MIL-DTL-85470	0.15% by volume
Liquid I	GOST 8313	0.30% by volume
Liquid I-M (50/50 blend of Liquid I with Methyl Alcohol)	TU-6-10-1458	0.30% by volume

CAUTION

The correct mix of anti-icing additive with the fuel is important. Concentrations of more than the maximum will cause damage to the protective primer and sealants of the fuel tanks. Damage will occur in the fuel system and engine components.

FUEL LIMITATIONS

POH 2-16

ITEM	LIMITATION
Total Fuel Capacity	406.8 US gal, 2,736.5 lb (1,540 liters, 1,241.3 kg)
Total Usable Fuel	402 US gal, 2,703.6 lb (1,521.5 liters, 1,226.4 kg)
Total Unusable Fuel	4.8 US gal, 32.9 lb (18.5 liters, 14.9 kg)
Maximum Fuel Imbalance	26.4 US gal, 178 lb (100 liters, 80.6 kg) — maximum 3 segments on indicator

NOTE

Usable fuel can be safely used during all Normal Category airplane maneuvers.

5. INSTRUMENT MARKINGS

POWER PLANT WINDOW MARKINGS

POH 2-5

	RED MARK MIN. LIMIT	AMBER LOW LIMIT	GREEN ARC NORM OPS.	AMBER HIGH LIMIT	RED MARK MAX. LIMIT
Torque (psi)	N/A	N/A	0 to 40.63	40.63	44.84
ITT (°C)	N/A	N/A	400 to 820	820	850 / 1000 (1)
Engine Speed Ng (%)	N/A	64.5	64.5 to 103.5	103.5	104.3
Oil Temperature (°C)	N/A	15	15 to 105	105	110
Oil Pressure (psi)	60	90	90 to 135	N/A	135

(1) During starting, the ITT limit is at 1000°C. Once Ng is at Ground Idle or above, the ITT limit is at 850°C.

MISCELLANEOUS INSTRUMENT MARKINGS

POH 2-6

INSTRUMENT	RED RADIAL MIN. LIMIT	YELLOW ARC CAUTION	GREEN ARC NORM OPS.	YELLOW ARC CAUTION	RED RAD/DIA MAX. LIMIT
Oxygen Pressure (psi)	N/A	N/A	N/A	N/A	1850 to 2000

6. WEIGHT AND BALANCE

WEIGHT LIMITS

POH 2-7

LIMIT	VALUE
Maximum Ramp Weight	10,495 lb (4,760 kg)
Maximum Takeoff Weight	10,450 lb (4,740 kg)
Maximum Landing Weight	9,921 lb (4,500 kg)
Maximum Zero Fuel Weight	9,039 lb (4,100 kg)
Maximum Baggage Weight	400 lb (180 kg)
Maximum Floor Loading — On Seat Rails	205 lb/ft ² (1,000 kg/m ²)
Maximum Floor Loading — On Cabin Floor	125 lb/ft ² (600 kg/m ²)

CENTER OF GRAVITY LIMITS

POH 2-8

WEIGHT — LB (KG)	FORWARD LIMIT A.O.D.: IN. / M	AFT LIMIT A.O.D.: IN. / M
10450 (4740)	232.20 / 5.898	240.43 / 6.107
9921 (4500)	232.20 / 5.898	240.94 / 6.120
8158 (3700)	224.13 / 5.693	—
7938 (3600)	—	242.99 / 6.172
6615 (3000)	—	242.99 / 6.172
5733 (2600)	220.75 / 5.607	225.47 / 5.727

NOTE

Straight line variation between points given. The datum is 118 in (3.0 m) forward of the firewall. It is the responsibility of the pilot to ensure that the airplane is loaded properly. See POH Section 6, Weight and Balance, for proper loading instructions.

7. FLIGHT AND OPERATING LIMITS

MANEUVER LIMITS

POH 2-9

This airplane is certificated in the Normal Category — non-aerobatic operations only. These include any maneuvers incidental to normal flying, stalls (except whip stalls), lazy eights, chandelles, and turns in which the bank angle does not exceed 60°. Aerobatic maneuvers, including spins, are not approved.

FLIGHT LOAD FACTOR LIMITS

POH 2-10

CONFIGURATION	LOAD FACTOR
Flaps Up	+3.3 g / -1.32 g
Flaps Down	+2.0 g / -0.0 g

FLIGHT CREW LIMITS

POH 2-11

Minimum required flight crew is one pilot in the left hand seat.

OPERATING ENVELOPE

POH 2-17 / 2-18 / 2-19

LIMIT	VALUE
Maximum Operating Altitude	30,000 ft (9,144 m)
Minimum Outside Air Temperature	-55°C (-67°F)
Maximum Outside Air Temperature	+50°C (122°F)
Maximum Cabin Pressure Differential	5.75 psi (400 mbar)
Pressurized Landing	Approved, up to 0.7 psid
Maximum Occupants	9 passengers plus pilot(s)

MAXIMUM PASSENGER SEATING LIMITS

POH 2-20

Maximum number of occupants is 9 passengers plus pilot(s). During single pilot operation, the pilot occupies the left hand cockpit seat and an additional passenger may occupy the right hand cockpit seat. The PC-12 is certified with two basic cabin interior configurations (Corporate Commuter and Executive) and the following approved variations:

- Corporate Commuter Interior Code STD-9S — nine standard seats.
- Executive Interior Code EX-6S-2 — six executive seats.
- Executive Interior Code EX-8S — eight executive seats.
- Executive Interior Code EX-6S-STD-2S — six executive seats and two standard seats.
- Executive Interior Code EX-4S-STD-4S — four executive seats and four standard seats.
- For layouts EX-8S, EX-6S-STD-2S and EX-4S-STD-4S: leave seats 5, 6, 7 and 8 vacant during takeoff and landing unless the seat in front is occupied.

For aircraft with the optional No Cabin Interior configuration installed: no persons are allowed in the cabin during operation. Pilatus must be contacted to determine the modification work required to the aircraft before any change to an interior configuration is made.

8. ICE AND RAIN PROTECTION

PNEUMATIC DEICING BOOT SYSTEM

POH 2-13

- The pneumatic de-ice boot system is required to be installed for all flights.
- Preflight function test required before takeoff and flight into known icing conditions.
- The system is required to function properly for flight into known icing conditions.
- Operation of the boots in ambient temperatures below -40°C and above +40°C may cause permanent damage to the boots.
- The wing and tail leading edge boots must be activated at the first sign of ice formation anywhere on the aircraft.
- The boots may be deactivated only after leaving icing conditions and after the aircraft is determined to be clear of ice.

ICING LIMITATIONS

POH 2-14-1

Icing conditions can exist when: OAT on the ground and for takeoff, or SAT in flight, is 10°C or colder and visible moisture in any form is present (clouds, fog or mist with visibility of one mile or less, rain, snow, sleet, ice crystals); when operating at 10°C or colder on ramps, taxiways or runways where surface snow, ice, standing water or slush may be ingested by the engine or freeze on the engine or nacelle; or when there are visible signs of ice accretion on the aircraft.

- Flight in icing conditions is only approved with all ice protection systems, generator 1 and generator 2 serviceable.
- Flight in icing conditions is prohibited when the Propeller De-ice caution is active.
- If any ice protection system fails during flight in icing conditions, exit icing conditions. Immediately request priority handling from ATC to facilitate a route or altitude change.
- Flight in freezing rain, freezing fog, freezing drizzle and mixed conditions causing ice accretion beyond the protected areas of the pneumatic boots is not approved.
- The aircraft must be clear of all deposits of snow, ice and frost adhering to the lifting and control surfaces immediately prior to takeoff.
- In the event of a balked landing (go-around) with residual ice on the airframe, the flaps should not be retracted from the 15° position, and the landing gear and flaps may not fully retract after selection.
- The left wing inspection light must be operative prior to flight into forecast icing conditions at night.

WARNING

During flight in icing conditions or flight with any visible ice accretion on the airframe, the following flap maximum extension limits apply — with operational airframe pneumatic de-ice boots: 15° flap; after failure of the airframe pneumatic de-ice boots: 0° flap.

SEVERE ICING CONDITIONS

POH 2-14-2

Severe icing may result from environmental conditions outside of those for which the airplane 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 ice forming aft of the protected surfaces, seriously degrading performance and controllability.

Severe icing conditions that exceed certification shall be determined by the following visual cues. If one or more exists, immediately request priority handling from ATC 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 beyond the active portions of the wing pneumatic boots.

CAUTION

When using the autopilot, tactile cues such as increased aileron forces may be masked by the autopilot function. Periodically disengage the autopilot to check for abnormal forces.

9. KINDS OF OPERATION AND EQUIPMENT LIST

APPROVED KINDS OF OPERATION

POH 2-12

The Pilatus PC-12 is approved for the following types of operation when the required equipment is installed and operational:

#	KIND OF OPERATION
1	VFR Day
2	VFR Night
3	IFR Day, including CAT 1 approaches, single pilot
4	IFR Night, including CAT 1 approaches, single pilot
5	Flight into Known Icing Conditions

KINDS OF OPERATION EQUIPMENT LIST (KOEL)

POH 2-15-1 to 2-15-3

A zero (0) means the system/equipment was not required for type certification for that kind of operation; AR = As Required. The list does not include flight and radio/navigation equipment required by a particular country's operating regulations. Deviations may be approved for a specific aircraft under an authorized MEL. The pilot in command is responsible for determining airworthiness and regulatory compliance for each intended flight.

SYSTEM / EQUIPMENT	VFR DAY	VFR NIGHT	IFR DAY	IFR NIGHT	ICING	RVSM
Primus Apex						
Pilot PFD	1	1	1	1	1	1
MFD	1	1	1	1	1	1
MAU (Channel A & B)	1	1	1	1	1	1
PFD Controller	2	2	2	2	2	2
Touch Screen Controller / MF Controller	0	0	1	1	1	1
Audio Marker Panel	1	1	1	1	1	1
ADAHRS (Channel A & B)	1	1	1	1	1	1
Magnetometer	0	0	1	1	1	1
MMDR (COM/NAV)	0	1	1	1	1	1
Mode S Transponder	0	0	1	1	1	1
GPS	0	0	1	1	1	1
DME	0	0	1	1	1	1
Miscellaneous						
Electronic Standby Instrument (ESIS)	1	1	1	1	1	1
Engine						
No. 1 Generator	1	1	1	1	1	1
No. 2 Generator	1	1	1	1	1	1
Inertial Separator	1	1	1	1	1	1
Electric Wing Tank Fuel Boost Pump	2	2	2	2	2	2
Firewall Fuel Shutoff Valve	1	1	1	1	1	1
Fuel Ejector Pumps	1	1	1	1	1	1
Fuel Venting System	1	1	1	1	1	1
Ignition System	1	1	1	1	1	1
Fire Detect System	1	1	1	1	1	1
Engine and Propeller Electronic Control System	1	1	1	1	1	1
Electrical						

SYSTEM / EQUIPMENT	VFR DAY	VFR NIGHT	IFR DAY	IFR NIGHT	ICING	RVSM
No. 1 Battery	1	1	1	1	1	1
No. 2 Battery	1	1	1	1	1	1
Stall Warning/Stick Pusher System	1	1	1	1	1	1
AOA Probes	2	2	2	2	2	2
CAS	1	1	1	1	1	1
Primary Pitch Trim System	1	1	1	1	1	1
Alternate Stab Trim System	1	1	1	1	1	1
Aileron Trim System	1	1	1	1	1	1
Rudder Trim System	1	1	1	1	1	1
Trim Interrupt System	1	1	1	1	1	1
Windshield Heat	2*	2*	2*	2*	2*	2*
Navigation Lights	0	4	4	4	4	4
Strobe Lights	0	2	2	2	2	2
Landing Lights	0	2	2	2	2	2
Taxi Light	0	1	1	1	1	1
Instrument and Panel Lighting	0	AR	AR	AR	AR	AR
Audio System	1	1	1	1	1	1
Cockpit Speaker	1	1	1	1	1	1
Cabin Speaker	1	1	1	1	1	1
De-ice Boot Timer	0	0	0	0	1	0
AOA Heater LH	1	1	1	1	1	1
AOA Heater RH	1	1	1	1	1	1
Probe Current Monitor	1	1	1	1	1	1
Propeller De-ice Timer	0	0	0	0	1	0
Propeller De-ice Brush	0	0	0	0	1	0
Propeller De-ice MOV	0	0	0	0	1	0
Propeller De-ice Boots	0	0	0	0	**	0
Propeller De-ice OAT	0	0	0	0	2	0
Left Wing Inspection	0	0	0	0	1	0
Emergency Power Supply	0	1	1	1	1	0
Mechanical Systems						
Landing Gear Actuating System	1	1	1	1	1	1
Emergency Gear Extension System	1	1	1	1	1	1
Flap Control	1	1	1	1	1	1
Seat Restraints (each occupant)	AR	AR	AR	AR	AR	AR
Firewall ACS Shutoff Valve	1	1	1	1	1	1
Emergency Ram Air Scoop	1	1	1	1	1	1
Negative Pressure Relief Valve	2	2	2	2	2	2
Oxygen System	1	1	1	1	1	1
De-ice Boot PRV	1	1	1	1	1	1
De-ice Boot EFCVs	1	1	1	1	5	1
De-ice Boot Pressure Switches	0	0	0	0	5	0
De-ice Boot, Inner Wing LH	1	1	1	1	1	1
De-ice Boot, Outer Wing LH	1	1	1	1	1	1
De-ice Boot, Inner Wing RH	1	1	1	1	1	1
De-ice Boot, Outer Wing RH	1	1	1	1	1	1
De-ice Boot, Tail LH	1	1	1	1	1	1
De-ice Boot, Tail RH	1	1	1	1	1	1

SYSTEM / EQUIPMENT	VFR DAY	VFR NIGHT	IFR DAY	IFR NIGHT	ICING	RVSM
Fuel Control & Monitoring System	1	1	1	1	1	1
For Pressurized Flight						
ACS	1	1	1	1	1	1
Cabin Pressure Control Unit	1	1	1	1	1	1
Outflow Valve	1	1	1	1	1	1
Safety Valve	1	1	1	1	1	1

* Refer to Systems and Equipment Limits — Heated Windshield for the actual limitation.

** Flight into known icing conditions is prohibited if the Propeller De-ice caution is active.

10. SYSTEMS AND EQUIPMENT LIMITS

STALL WARNING / STICK PUSHER SYSTEM

POH 2-21-1

Preflight function test required before takeoff. The system is required to function properly in normal mode for all flights and in ice mode for flight into known icing conditions.

BRAKES

POH 2-21-1

To allow adequate cooling of the wheels and brakes, the aircraft must remain on the ground for at least 45 minutes following either of the two events:

- Rejected takeoff with brake-on speed greater than VR -20 kt and heavy brake usage.
- 0° flap full stop landing and heavy brake usage.

TRIM SYSTEMS

POH 2-21-1

Stabilizer normal and alternate, and rudder trim systems must function properly for all flights.

HEATED WINDSHIELD

POH 2-21-1

Left hand and right hand heated windshields must function properly for all flights. Exception: for IFR flights conducted into no known or forecast icing conditions, at least one heating zone of the windshield on the side of the pilot in command must function properly.

FIRE DETECTION SYSTEM

POH 2-21-1

Preflight function test is required for takeoff. The system must function properly for all flights.

ENGINE ICE PROTECTION

POH 2-21-1

Preflight function test is required for takeoff.

OXYGEN SYSTEM

POH 2-21-1 / 2-21-2

- A minimum oxygen supply of 10 minutes duration for each occupant is required for dispatch for pressurized flight above FL250 (national operating requirements may require more).
- The oxygen system shutoff valve handle in the cockpit must be selected ON prior to engine start and throughout the duration of flight.
- The oxygen masks for the crew must be connected for all flights.
- With Corporate Commuter side wall paneling, passenger oxygen masks must be connected and properly stowed prior to takeoff when operating above 10,000 ft (in executive interiors the masks are permanently connected).

PROBE HEAT

POH 2-21-2

Preflight function test required before takeoff. The system is required to function properly for IFR flight and flight into known icing conditions.

FLAP SYSTEM CYCLE LIMITS

POH 2-21-2

A flap cycle is defined as movement from 0° to 15° to 0°, and from 0° to 15° to 40° to 0°. Maximum number of cycles per hour: 10 up to 25°C OAT; 8 from 25°C to 50°C OAT.

PRIMUS APEX — GENERAL

POH 2-21-2

The Pilots Guide for the Advanced Cockpit Environment (ACE™) (powered by Honeywell) for the Pilatus PC-12/47E must always be carried on board the aircraft.

PRIMUS APEX — AUTOMATIC FLIGHT CONTROL SYSTEM

POH 2-21-2 / 2-21-3

- During autopilot operation, a pilot must be seated in a pilot position with seat belt fastened.
- The autopilot (AP) and yaw damper (YD) must be OFF during takeoff and landing.
- The autothrottle (AT) must be OFF during landing.
- Minimum engagement height after takeoff is 400 ft AGL.
- Do not engage the autopilot while the Tactile Feedback (TF) system is active.
- The autopilot must be disengaged below 1,000 ft AGL, except: non-precision and visual approaches (airspeed below 150 KIAS and VS below 1,500 ft/min) — below 400 ft AGL; instrument approach procedures with vertical guidance (APV) and ILS — below 200 ft AGL.
- The system is approved for Category 1 operation (Approach mode selected) and autopilot coupled go-arounds initiated at decision altitude or minimum descent altitude.
- Maximum approved glideslope angle for all coupled approaches is 4°.
- During normal operation do not override the autopilot and yaw damper in any axis. To override an engaged AT, hold the throttle at the required position for at least 3 seconds and confirm the AT disconnect by pressing the AT Quick-Disconnect button on the PCL.
- ASEL is not overspeed protected — avoid AFCS altitude capture close to V_{mo}/M_{mo}.
- The autopilot servos may be temporarily disengaged without disengaging the autopilot (push and hold the TCS switch on the control wheel) to allow manual flight path control.

CAUTION

In accordance with FAA recommendation (AC 00-24C), the use of PITCH ATTITUDE HOLD mode is recommended during operation in severe turbulence.

The PC-12/47E with Apex FMS holds airworthiness certification for GNSS (AMC 20-5, AC 90-100A), B-RNAV / RNAV 5 (AMC 20-4, AC 90-96A), P-RNAV (JAA TGL 10 Rev 1), BARO-VNAV (AMC 20-27, AC 90-105, AC 20-129), RNP 1, RNP APCH, MNPS (AC 20-138A) and RNP 4 & RNP 10 (AC 20-138D). For MNPS/RNP 4/RNP 10, full GPS redundancy requires a second FMS, second GPS and CCD installed. Airworthiness certification does not constitute operational approval — the operator must apply to the local authorities.

- The FMS database must incorporate the current update cycle for IFR operation.
- FMS instrument approaches must be retrieved from the FMS database and conducted in FMS approach mode, with GPS integrity monitoring available at the FAF and APP mode displayed on the PFD at the FAF.
- Accomplishment of ILS, LOC, LOC-BC, LDA, SDF and MLS approaches using the FMS is prohibited.
- RNAV approaches are prohibited in non-WGS-84 airspace. Radio-based (VOR, NDB, etc.) approaches using GPS updating require the underlying NAVAID tuned and monitored; if GPS position does not match the radio-based data, use the radio-based data (refer to AC 90-108).
- European RNAV: with 23 satellites or less projected operational (22 or less with automatic pressure altitude aiding), RAIM availability must be confirmed for the intended flight; do not dispatch with predicted continuous RAIM loss of more than 5 minutes (Honeywell Preflight or equivalent approved software).
- Traditional approved navigation equipment (VOR, DME, ADF) adequate for the route must be installed and serviceable per the operational approval.
- Dead reckoning based on AHRS is not available north/south of approximately 82° latitude.
- When using VNAV, the altimeter is the primary altitude reference for all operations. On approach the LNAV/VNAV minimums apply; below minimums fly by visual references — do not rely on the VNAV deviation indicator.
- Flying an LNAV approach with FMS vertical guidance, never descend below the published LNAV MDA unless required visibility of the runway is provided.
- Baro-VNAV approach guidance (transition, final and missed approach) can be temperature compensated by entering the destination airport OAT into the FMW temperature-compensation tab and crosschecking the corrected altitudes on the waypoint lists before activating the changes.

RVSM

POH 2-21-6

The aircraft is qualified for RVSM operations as a group aircraft (JAA TGL No. 6 Rev 1; FAA document No. 91-RVSM, change 2). The following equipment must be operational to enter RVSM airspace:

- Both ADC channels of ADAHRS KSG 7200 (channel 1 & 2).
- One flight controller KMC 9200 with altitude preselector.
- One Automatic Flight Control System (AFCS) with altitude hold.
- One altitude reporting transponder KXP 2290.

The ESIS does not meet RVSM performance requirements and shall only be used for emergency procedures. The RVSM option in the Primus Apex option file has to be activated (contact Pilatus customer support). Airworthiness approval alone does not authorize flight into RVSM airspace — operational approval must be obtained under the applicable operating rules.

PRIMUS APEX — TCAS I

POH 2-21-6

The flight crew must not use a TA on the PFD traffic display to initiate evasive maneuvering. ATC procedures and visual acquisition of the intruder must continue to be the primary means of ensuring aircraft separation.

TCAS II (OPTIONAL)

POH 2-21-6

When an RA occurs, the pilot flying shall respond immediately to RA displays and aural alerts, maneuvering as indicated, unless doing so would jeopardize the safe operation of the aircraft. Visually acquired traffic may not be the same traffic causing an RA; the visual perception of an encounter may be misleading, particularly at night.

PRIMUS APEX — TRANSPONDER / ADS-B OUT

POH 2-21-7

The KXP 2290A ATC Transponder System with 1090 MHz Extended Squitter ADS-B Out complies with ICAO Doc 7030/4 for enhanced surveillance and meets 14 CFR 91.227 (FAA TSO-C166b, AC 20-165A, EASA ETSO-C166b, CS-ACNS.ADS, AMC 20-24, CASA AC 21-45(1)). The FL ID should never be cleared without entering a legal FL ID or recycling power to the XPDR; on power-up an invalid FL ID defaults to the tail number. Flight in ADS-B equipped airspace is only allowed with ADS-B Out functionality operational.

PRIMUS APEX — ADAHRS

POH 2-21-7

If CAS message HSI IS MAG TRK or HSI IS TRU TRK is displayed, system accuracy does not allow VOR, VOR/DME and NDB non-precision approaches — use (GPS) overlay, LNAV or LNAV/VNAV, RNAV (GPS), RNAV (RNP), LPV or ILS approaches instead. The message appears when operating north/south of approximately 82° latitude, in Northern Canadian Domestic Airspace (north of ~73°N between 80°W and 130°W), and south of ~60°S between 120°E and 160°E.

PRIMUS APEX — USE OF SMARTVIEW

POH 2-21-7

SmartView (SV) does not provide the accuracy or reliability upon which the flight crew can solely base decisions or plan maneuvers to avoid terrain or obstacles. The use of SV alone for navigation is prohibited; for obstacle and/or terrain avoidance is prohibited; and for aircraft control without reference to the Apex primary flight indications or ESIS is prohibited.

YAW DAMPER

POH 2-21-8

Above FL155 (15,500 ft), when the yaw damper is not operating, the aircraft must be flown only in balanced flight (slip-skid indicator ± 1 trapezoid).

PRIMUS APEX — ELECTRONIC CHECKLIST

POH 2-21-8

The AFM remains the primary reference for checklists. Implementation of an Electronic Checklist database is the responsibility of the aircraft owner/operator; use and operational approval depend on the rules of operation and implementation does not constitute operational approval.

PRIMUS APEX — ELECTRONIC CHARTS

POH 2-21-8

The Apex Electronic Charts provide supplemental situational awareness only — no blind-taxi procedures or flight navigation by these charts. The pilot remains responsible for taxiing by external visual references and flying by primary navigation instruments. Position accuracy of the aircraft symbol can decrease with insufficient GPS reception, and the symbol is not to scale. Approved published paper or approved electronic charts must remain available as backup.

PRIMUS APEX — VIDEO INPUT / XM WEATHER / INAV / VSD

POH 2-21-8 / 2-21-9

- Video Input: the operator must ensure no interference with installed avionics from a connected camera device.
- XM Sat Weather: does not work in PDC mode (STBY bus); re-select the required XM layers once the aircraft is powered by batteries, external power, or the engine.
- INAV Map: the topographical map shall not be used for navigation; the airspace display shall not be the sole means of reference.
- Vertical Situation Display: situational awareness only — shall not be used for navigation purposes.

PRIMUS APEX — WEATHER RADAR

POH 2-21-9

- Ground operation: direct the nose so the antenna scan sector is free of large metallic objects (hangars, other aircraft) for a minimum of 15 ft (5 m), and tilt the antenna fully upwards.
- Do not operate during aircraft refueling or refueling operations within 15 ft (5 m).
- Do not operate when personnel are standing within 15 ft (5 m) of the 270° forward sector of the aircraft.

PRIMUS APEX — LPV APPROACH

POH 2-21-9

- A valid and compatible database must be installed and contain current data.
- For autopilot coupled LPV/LP approaches the autopilot must be disengaged below 200 ft (61 m) AGL.
- If NAV preview is selected, LPV/LP approach will not be available (amber LPV UNVL or LP UNVL message).
- Within EGNOS coverage: when an alternate airport is required by the applicable operational rules, it must be served by an approach based on other than GPS navigation.

PRIMUS APEX — TERRAIN DATABASE

POH 2-21-9

Databases must come from a provider holding a Type 2 Letter of Acceptance (or equivalent), and the operator/end-user must comply with FAA AC 20-153B paragraph 13 for: EGPWF Threat Database P/N DO69002412-xxxx and EPIC/APEX Terrain Server Database P/N 996-0146-xxx. Databases satisfying the same data quality requirements may be used as an alternative when these compliance requirements are satisfied.

11. OTHER LIMITATIONS

PASSENGER SEATS

POH 2-22-1

For takeoff and landing the seat lap and shoulder belts must be fastened, the lap belt tightened, and the seat headrest positioned to support the head.

LUGGAGE LIMITATIONS

POH 2-22-1

INTERIOR CONFIGURATION	MAX LUGGAGE LOAD (NET P/N 525.25.12.043)
STD-9S	265 lb (120 kg)
EX-6S-STD-2S	265 lb (120 kg)
EX-4S-STD-4S	265 lb (120 kg)
EX-6S-2	400 lb (180 kg)
EX-8S	400 lb (180 kg)

- A luggage net must be installed at Frame 34 when luggage is stowed.
- The luggage area maximum load is 500 lb (225 kg) with an extendable luggage net (P/N 525.25.12.026) installed. The net and/or any luggage may not extend in front of frame 32. Keep a clear area of at least 280 mm forward of frame 32 (net attached at frame 32) or at least 340 mm forward of frame 34 (net attached at frame 34).

CARGO LIMITATIONS

POH 2-22-1

- Maximum freight load 3,300 lb (1,500 kg).
- Cargo must be arranged to permit free access to the passenger door and the right hand emergency overwing exit. No cargo on the seats.
- All cargo must be secured by approved cargo restraints as described in POH Section 6. Tie down straps with a breaking strength of at least 1,800 lb per strap must be used.
- All cargo/containers must be located against a retaining bar secured laterally to the seat rails.
- Items up to a total weight of 66 lb (30 kg) can be stowed in the cabin area without being strapped down providing a cargo net is installed in front of the items. Cargo nets may only be installed on the attachments at Frames 24 and 27.
- No passengers may be seated rearward of a cargo net.
- If an extendable baggage net is used, the tie down fittings and cargo strap fittings must have a minimum space of 5 inches between the fittings.

STRUCTURAL LIMITATIONS

POH 2-22-2

Refer to Chapter 4 of the PC-12/47E Aircraft Maintenance Manual, Pilatus Report Number 02436.

SMOKING

POH 2-22-2

Smoking is not permitted in the cabin of aircraft equipped with a standard interior unless ashtrays are installed.

PORTABLE ELECTRONIC DEVICES

POH 2-22-2

The aircraft is Wi-Fi and Bluetooth frequency tolerant, tested to RTCA/DO-307 (front door coupling per Section 4 and back door coupling per Section 3, including Change 1). No restrictions result from DO-307 testing; the operator defines during which phases of flight PED usage is allowed. No test has been performed for GSM frequency tolerance. If electromagnetic interference is suspected, PED use should be discontinued or terminated.

REDUCED LANDING DISTANCES

POH 2-22-2

The PC-12/47E is eligible for application of the reduced required landing distance operations per CAT.POL.A.255. The operator must apply for and obtain prior operational approval of the competent authority.

12. PLACARDS

Key limitation-bearing placards installed in the airplane, transcribed from POH Section 2-23. Some placards vary by interior code or optional equipment — the applicable variant is noted.

COCKPIT — OPERATIONAL LIMITATIONS (LH AND RH SIDE PANELS)

POH 2-23-9

This airplane must be operated as a normal category airplane in compliance with the operating limitations stated in the form of placards, markings and manuals. No acrobatic maneuvers including spins are approved. This airplane approved for VFR, IFR, day & night operation & icing conditions.

COCKPIT — EMERGENCY GEAR EXTENSION (RED PLACARD)

POH 2-23-9

- Airspeed 120 KIAS. Ensure landing gear selector DOWN.
- If 3 greens not illuminated after 30 seconds: emergency gear extension system (aft end of centre pedestal) — open cover, pull emergency gear extension lever firmly to hard stop, check 3 greens are obtained.
- If 3 greens still not illuminated: to lock LH & RH gear conduct level turns left and right at angles of bank up to 30°, maintain constant speed; to lock nose gear reduce airspeed (power idle). Keep emergency gear extension lever in pulled position.

COCKPIT — ICING FLAP LIMITS (RED WARNING STRIP)

POH 2-23-9

WARNING: During flight in icing conditions or flight with any visible ice accretion on the airframe the following flap maximum extension limits apply — with operational airframe pneumatic de-ice boots 15° flap; after failure of the airframe pneumatic de-ice boots 0° flap.

COCKPIT — AIRSPEED PLACARD (LH AND RH INSTRUMENT PANEL)

POH 2-23-10

AIRSPEED LIMITATION	VALUE
Vo (4740 kg)	166 KIAS
Vo (2600 kg)	123 KIAS
Vmo	240 KIAS
Mmo	0.49 M
Vfe up to 15°	165 KIAS
Vfe above 15°	130 KIAS
Vlo (near landing gear selector handle)	180 KIAS
Vle (near landing gear selector handle)	240 KIAS

COCKPIT — OTHER PLACARDS

POH 2-23-8 to 2-23-13

- Near TS/MF controller: TOTAL USABLE CAPACITY 1521 LTR / 402 US GAL / (2704 LBS JET-A1).
- Below the RH PFD: ENSURE CABIN ΔP MAX. 0.7 PSI BEFORE LANDING; MAXIMUM CABIN DIFF. PRESS. = 5.75 PSID.
- Center console quadrant: POWER (T/O / MCP / IDLE / REVERSE-GROUND), FLAP (0°/15°/30°/40°); below it: STABILIZED PROPELLER OPERATION ON GROUND (NOT FEATHERED) BETWEEN 350 AND 950 RPM IS PROHIBITED.
- Aft end of center console: CAUTION — PCL OPERATION AFT OF THE IDLE DETENT IS PROHIBITED WHEN IN FLIGHT.
- Rear of center console (red strip): FUEL EMER SOV HANDLE · EMERGENCY GEAR EXTENSION · ACS EMER SOV HANDLE; red pull handles read FUEL EMERGENCY SHUT OFF — PULL and ACS EMERGENCY SHUT OFF — PULL.
- FIRE EXTINGUISHER LOCATED BEHIND THE CO-PILOT SEAT (arrow placard FIRE EXTINGUISHER on the front side of the right cockpit bulkhead); SMOKE GOGGLE — PULL behind crew seats.
- Near DV window: DV WINDOW — PRESS BUTTON AND PULL INWARDS.

- Near optional standby magnetic compass: STANDBY COMPASS — for correct reading switch: generators & batteries ON, avionics ON, NAV & instrument lights as required, windshield de-ice LH & RH OFF, probes de-ice OFF, electrical heat/cool switch INHIBIT, foot warmer OFF (if installed).
- LH side panel near oxygen controls: PASSENGER OXYGEN — OFF / AUTO / ON.
- LH and RH side panels: WARNING — DO NOT SMOKE WHILE OXYGEN IS IN USE; OXYGEN; MASK MIC.
- Near AFCS control panel (if AT not installed): AT NOT INSTALLED. On LH instrument panel: ELT — ON.

EXTERIOR PLACARDS

POH 2-23-1 to 2-23-7

- Passenger door: PRESS HERE TO OPEN, PULL HANDLE AND PULL DOOR OUT — DO NOT OPEN DOOR WHEN ENGINE IS RUNNING UNLESS IN EMERGENCY.
- Cargo door: PRESS HERE TO OPEN, PULL HANDLE AND PULL DOOR OUT — DO NOT OPEN DOOR WHEN ENGINE IS RUNNING UNLESS IN EMERGENCY — PULL TO OPEN.
- Emergency exit: EMERGENCY EXIT — PUSH — PUSH IN AFTER RELEASE.
- Near static ports: STATIC PRESSURE KEEP CLEAR. Rudder (each side), aileron and flap top surfaces: DO NOT PUSH.
- Inside left engine cowling: TURBINE OIL — ACCEPTABLE OILS SEE PILOT'S OPERATING HANDBOOK — TOTAL SYSTEM CAPACITY 14.5 QRT / 13.6 LTR; ENGINE OIL TYPE USED (added to the placard prior to delivery).
- Near fuel filler: JET-A-FUEL — TOTAL CAPACITY 770 LTR / 203 US GAL — SEE PILOT'S OPERATING HANDBOOK FOR APPROVED FUELS AND QUANTITY; REFUELING BONDING POINT; FUEL VENT.
- Main and nose landing gear doors: TYRE PRESSURE 60 psi (4.1 bar).
- Nose landing gear: DO NOT TURN BEYOND RED MARKS; A/C GND grounding point.
- Nose gear doors: NOSE LANDING GEAR SHOCK STRUT N2 CHARGE PRESSURE — 1st stage 50 psi (3.5 bar), 2nd stage 834 psi (57.5 bar).
- Main gear doors: MAIN LANDING GEAR SHOCK STRUT N2 CHARGE PRESSURE — 1st stage 141 psi (9.7 bar), 2nd stage 1668 psi (115 bar).
- Engine lower front cowling (each side): VERY HOT AREA — DO NOT TOUCH.
- Forward fuselage RH access door: OXYGEN SERVICE POINT — USE NO LUBRICANTS (with the optional larger oxygen bottle, inside the battery compartment and on the rear fuselage bottom access door).
- Rear fuselage: BATTERY COMPARTMENT; ELT INSTALLED INSIDE; 28 VOLT DC EXTERNAL POWER POINT.

CABIN PLACARDS

POH 2-23-14 to 2-23-16

- Interior passenger door: EXIT — DO NOT OPERATE IN FLIGHT; DO NOT OPEN DOOR WHEN ENGINE IS RUNNING UNLESS IN EMERGENCY; ONLY ONE PERSON ON STAIRS AT ANY TIME; TO OPEN LIFT LATCH ROTATE HANDLE.
- Interior emergency exit / handle: EXIT; PULL.
- Interior cargo door: DO NOT REMOVE COVER IN FLIGHT; LIFT LOCKING LEVER AND PULL HANDLE PUSH DOOR OUT; DO NOT OPEN DOOR WHEN ENGINE IS RUNNING UNLESS IN EMERGENCY.
- Cabin to baggage area step: KEEP GRILL CLEAR.
- Forward and rear cargo door frame: MAX FREIGHT LOAD = 1500 kg / 3300 lb; max load on seat rails 1000 kg/m² (205 lb/ft²); max load on floor panels 600 kg/m² (125 lb/ft²); CARGO MUST NOT OBSTRUCT ACCESS TO CABIN DOOR AND EMERGENCY EXIT.
- Lower cargo door frame: INSTALL TAIL SUPPORT STAND BEFORE LOADING CARGO.
- Above baggage area: MAX BAGGAGE LOAD = 120 kg / 265 lb, or 180 kg / 400 lb. Cargo net attachment points: FR 24 / FR 27 / FR 34.

INTERIOR-SPECIFIC PLACARDS

POH 2-23-17 to 2-23-22

Per-interior placard sets. Values as placarded; confirm the interior code installed on the specific airplane.

INTERIOR / SET	PLACARDS AS INSTALLED
STD-9S	Seat-back takeoff/landing placards: seat back fully upright, adjust headrest, fasten lap and shoulder belt. Oxygen-mask location: under your seat (seat 5: under seat in front). INTERIOR CODE placard.
EX-6S-2	Executive-seat placards: seat fully upright, fully aft and fully outboard, headrest adjusted, belts fastened, table stowed. Lavatory: NO SMOKING IN LAVATORY; TOILET COMPARTMENT NOT TO BE OCCUPIED DURING TAKEOFF/LANDING AND TURBULENCE. Cabinet limits — RIGHT: 2.2 kg (5 lb) upper / 3.2 kg (7 lb) lower; LEFT: 4.5 kg (10 lb) upper / 11.5 kg (25 lb) lower. MAX COAT RAIL 5 kg (11 lb).
EX-8S / EX-6S-STD-2S / EX-4S-STD-4S	LEAVE THIS SEAT VACANT DURING TAKEOFF AND LANDING UNLESS SEAT IN FRONT IS OCCUPIED (seats 5-8). Matching INTERIOR CODE placards.
No Cabin Interior (optional)	INOP covers installed. LIMITATIONS — NO PERSON(S) ALLOWED IN CABIN. Baggage or luggage in the cabin must be tied down as defined in the AFM/POH. CAUTION — extreme caution must be applied not to contact the sidewalls; no protective interior shells are installed. MAX BAGGAGE LOAD 180 kg (400 lb); MAX COAT RAIL LOAD 5 kg (11 lb).

13. 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.
Vmu	Minimum unstick speed	Slowest speed at which the aircraft can safely lift off.

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.
Vsse	Safe single-engine speed	Minimum speed for intentionally cutting one engine.

Airspeed Indicator Limit Speeds

V-SPEED	NAME	MEANING
Va	Design maneuvering speed	Maximum speed for full or abrupt control inputs without overstress.
Vo	Operating maneuvering speed	Maximum speed for full or abrupt control movement at the given weight.
Vno	Maximum structural cruising speed	Normal operating limit — top of the green 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.

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.

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).

NOTE

The airspeed limit speeds above define the PC-12 NGX speed-tape markings: the barber pole sits at Vmo/Mmo, the red high-speed strip extends down to the valid Vlo/Vfe, and the low-speed awareness tape rises to the shaker speed for the current configuration.