

This data sheet which is part of **Type Certificate No. F 56-20** prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

**Type Certificate Holder**

Pilatus Aircraft Ltd.  
P.O. Box 992  
CH-6371 Stans  
SWITZERLAND

**Model Designation**

Pilatus PC-7 (Acrobatic and Utility Categories).  
Low-wing monoplane with a tandem-seat cockpit, powered by a single engine turboprop engine with full acrobatic capability.

**Type:**  
**Variant:**

**Pilatus PC-7**  
**Pilatus PC-7**

**Airworthiness Category:**

US 14 CFR Part 23 ("FAR 23") Acrobatic Category  
US 14 CFR Part 23 ("FAR 23") Utility Category

**Date of Type Certificate:**

Acrobatic Category    December 5, 1978  
Utility Category        April 6, 1979

**Technical Data**

**Engine**

Pratt & Whitney Aircraft of Canada Ltd. PT6A-25 and PT6A-25A (Turboprop), Transport Canada Type Certificate No. E-13

**Fuel**

Refer to P&WC Service Bulletin No 1244 for approved fuels.

**Oil (Engine and Gearbox)**

Refer to P&WC Service Bulletin No 1001 for approved oils. (synthetic turbine oil conforming to Specifications CPW 202 (7.5Cs) and PWA 521 Type II (5Cs)).

**Engine limits**

	Shaft Power		Torque Pressure	N <sub>1</sub> Gas Generator Speed	Propeller Shaft Speed	Maximum Permissible Turbine Interstage Temperature
	kW	SHP	psi	%	RPM	°C
Takeoff and Max. Continuous	410	550	42.5	101.5	2200	695
Starting Transient				101.5	2200	1090 *
Max. acceleration			48.5	102.6	2420	825 *

Note: 100 % Gas Generator Speed = 37'468 rpm  
Engine torque is limited by a torque controller to 1315 lbft (42.5 psi) at sea level.

\* These values are time limited to two seconds.

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Oil temperature:	Minimum	Maximum
Starting	-40°C	
idle	-40°C	+99°C
max. continuous	+10°C	+99°C
maximum (5 min)		+104°C

Inverted flight (less than zero g) is limited to 30 seconds

### Propeller and Propeller limits

Three blade constant speed type  
Hartzell HC-B3TN-2 hub with Hartzell T 10173C-8, T 10173CH-8, T10173CK-8\* or T10173CHK-8\* blades  
(\* deiced version)  
US FAA Type Certificate No. P15EA

Diameter: 92 3/8 to 93 3/8 inches  
(cropping of blade tip not permitted)

Pitch settings (measured at 30 inch station):	
Minimum pitch	+14°
Feathered	+83.5° ± 1.5°

Propeller blade life limit: 9795 hours

Spinner: Hartzell C 3065

### Airspeed limits (CAS)

		Acrobatic (1900 kg)	Utility (2700 kg)
Max. operating speed up to 15'000 ft altitude	V <sub>MO</sub>	270 knots	
Max. operating Mach. No. above 15'000 ft altitude	M <sub>MO</sub>	0.55	
Maneuvering speed	V <sub>A</sub>	175 knots	181 knots
Max. speed with flaps and/or landing gear extended and/or canopy open	V <sub>FE</sub> , V <sub>LO</sub>	135 knots	

### Maneuvering Load Factors

	Acrobatic	Utility
Max. positive up to V <sub>MO</sub>	+6.00	+4.5
Max. negative up to V <sub>MO</sub>	-3.00	-2.25

### Maximum Operating Weights

	Acrobatic	Utility
Maximum Ramp Weight	1911 kg	2711 kg *)
Maximum Take-Off Weight (MTOW)	1900 kg	2700 kg *)
Maximum Landing Weight (MLW)	1900 kg	2565 kg *)
Maximum Zero Fuel Weight (MZFW)	1664 kg	1664 kg without underwing store

\*) Difference between masses in A- und U-Cat. is given only by underwing stores specified in AFM-Supplement Doc. No. 01604

**Center of Gravity Limits  
(Landing Gear Extended)**

	Acrobatic (1900 kg)	Utility (2700 kg)
Minimum CG	+4178 mm (18 % MGC)	+4242 mm (22 % MGC)
Maximum CG	+4338 mm (28 % MGC)	+4338 mm (28 % MGC)

with straight line variation from Acrobatic to Utility limits.  
MGC = 1596 mm

**Minimum crew**

One pilot, for solo flight the pilot must occupy the front cockpit.

**Number of Seats**

Two, front seat at +4180 mm  
rear seat at +5130 mm

**Maximum Baggage**

25 kg at 6700 mm in baggage compartment

**Fuel Capacity**

	Capacity	Arm
Total	490 liters	4215 mm
Usable	474 liters	4215 mm

**Oil Capacity**

	Capacity	Arm
Total, Pre SB 79-001	16 liters	2335 mm
Total, Post SB 79-001	16.4 liters	2335 mm

**Maximum Operating Altitude**

25'000 ft (according to FAR 23.141)

**Control Surface Movements**

	Takeoff	23°	Landing	50°
Wing flap ( $\pm 2^\circ$ )				
Ailerons ( $\pm 1^\circ$ )	Up	20°	Down	11°
Aileron tab ( $\pm 1.5^\circ$ )	Up	12.5°	Down	18°
Elevator ( $\pm 1^\circ$ )	Up	18.5°	Down	16°
Elevator tab ( $\pm 2^\circ$ )	Up	15°	Down	20°
Rudder ( $\pm 1^\circ$ )	Right	24°	Left	24°
Rudder tab ( $\pm 1.5^\circ$ )	Right	11°	Left	17.75°
Anti-Flettner ( $\pm 1^\circ$ ) (at 24° rudder deflection in same direction)	Right	7°	Left	7°

**Serial Nos. Eligible**

101 and up

**Datum**

3000 mm in front of firewall

**Leveling Means**

Marks (rivet heads) on each side of fuselage.  
Canopy rails horizontal.

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## Certification Basis

US Federal Aviation Regulation Part 23  
Acrobatic and Utility Category including Amendments 23-1 through 23-16 effective Febr. 14, 1975 and Swiss Federal Air Office Special Requirements dated December 5, 1978, and February 9, 1979  
ICAO Annex 16, SFAR 27  
Exemption for: FAR 23.49 (b) (1)

Initial application for type certificate to Swiss FOCA dated December 2, 1975

Type Certificate No. F 56-20 for Acrobatic Category issued December 5, 1978; revision for added Utility Category issued April 6, 1979

### PC-7 Avionics Upgrade ("Glass Cockpit"):

The certification basis for the Major Significant change introducing the glass cockpit for the PC-7 is defined in **CRI A-1** as follows:

- US Code of Federal Regulations Book 14 (US 14 CFR) Part 23, Acrobatic and Utility Category, paragraphs at Amendments 23-1 through 23-62 effective January 31<sup>st</sup>, for the affected areas where it materially contributes to the level of safety.
- US 14 CFR Part 23, Acrobatic and Utility category, paragraphs at Amendments 23-1 through 23-16 for the affected areas where the latest requirement does not materially contribute to the level of safety or is impractical.
- Exemption for: FAR 23.49 (b) (1)
- FOCA CRIs of the type Regulation:
  - CRI A-1, Regulation, Certification Basis
- FOCA CRIs of the type Special Condition:
  - CRI A-2, Special Condition, Swiss IFR Requirements
  - CRI F-2, Special Condition, Integration and Installation of a Primary Flight Display (PFD) & Secondary Flight Display (SFD)
- FOCA CRIs of the type Equivalent Level Of Safety:
  - CRI G-1, Equivalent Level of Safety, Powerplant Markings

Any existing PC-7 Certification Review Item (CRI) remains valid unless superseded by a new CRI.

## Kinds of Operation

Eligible for the following kinds of operations when the appropriate equipment and instruments required by the operating requirements are installed, approved and in operable condition:

- VFR Day
- VFR Night
- IFR

Flight into known icing conditions is not approved.

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## Placards

All placards required in the Approved Airplane Flight Manual and/or applicable AFM Supplements must be installed at the respective locations.

## Service Life Limits

Airplane components which are life limited are listed in paragraph 3 of Chapter 5 of the applicable PC-7 Aircraft Maintenance Manual (AMM) Document listed below, and must be replaced as indicated therein.

## Documents

### FOCA approved Airplane Flight Manual (AFM)

- 01678 AFM for instrumentation in British/American units
- 01678M AFM for instrumentation in metric units
- 02402 AFM for PC-7 with Integrated Glass Cockpit
- 01603-X Actual weight and balance data and equipment list for the individual airplane (Part of the AFM)

### FOCA approved Airplane Flight Manual Supplement (AFMS)

- 01604 Operation with the Aircraft in the Utility Category
- 01717 Operation with Underwing Auxiliary fuel tanks (2x152 liters)
- 01717-1 Restricted Ferry Operation with Underwing Fuel Tanks (2x240 liters)
- 01786 Restricted Operation in the Acrobatic Category at an airplane Mass of 1900 kg to 2100 kg.
- 01865 Operation with Omega Navigation System Canadian Marconi Company, CMA-734
- 01889 Operation with Underwing Smoke Generator Pools installed.
- 01896 Operation with Martin-Baker Mk CH 15A Ejection Seats installed.
- 02203 Operation with GPS 155 XL Navigation System
- 02226 Operation with Tool Containers
- 02227 Operation with LITEF LCR 92 AHRS in UAE Aircraft (MSN 286 to 299, 488 to 497 and 600 to 606)
- 02312 Operation with Kannad 406 AF Emergency Locator Transmitter
- 02338 MSN 319 Modifications
- 02359 Operation with Rockwell Collins VHF 4000E in CEV Aircraft (MSN 576 to 580)
- 02360 Operation with Honeywell MST ATC Transponder in CEV aircraft (MSN 576 to 580)

### Aircraft Maintenance Manual

- 01715 PC-7 Maintenance Manual
- 02416 PC-7 Maintenance Manual (Integrated Glass Cockpit)

### Illustrated Parts Catalogue

- 01719 PC-7 IPC for MSN 110-121, 130-135, 146-193, 224-229, 230-239, 240-243, 245-256
- 01918 PC-7 IPC for MSN 412-417, 445-448, 482-487

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- 01932 PC-7 IPC for MSN 102-109, 138-145, 244, 538-547, 551-557, 562-564, 558-560, 576-580, 594-599, 610-612 (PC-7 Standard IPC for MSN up to 599)
- 01934 PC-7 IPC for MSN 350-393
- 01939 PC-7 IPC for MSN 257-260, 396-399, 418-444
- 01943 PC-7 IPC for MSN 300-311, 522-527, 568-573
- 01949 PC-7 IPC for MSN 312-349
- 01954 PC-7 IPC for MSN 286-299, 488-497, 600-606 (Standard IPC for MSN 600-999)
- 01965 PC-7 IPC for MSN 122-129, 194-223, 269-285, 499-518, 581-593

Structural Repair Manual

- 01720 Structural Repair Manual

Wiring Diagram Manual

- 01718 PC-7 Wiring Diagram Manual
- 02420 PC-7 Wiring Diagram Manual (Integrated Glass Cockpit)

- End of document -

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