DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A50EU
Revision 4
Pilatus
PC-7
July 07, 2021

TYPE CERTIFICATE DATA SHEET No. A50EU

This data sheet, which is a part of Type Certificate No. A50EU, prescribes conditions and limitations under which the products for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Administration.

Type Certificate Holder. Pilatus Aircraft Ltd
CH-6370 STANS (Switzerland)

Model PC-7 (Acrobatic Category) Approved August 12, 1983.

Engine. Pratt & Whitney Aircraft of Canada Ltd. PT6A-25 or PT6A-25A Turboprop.

Fuel. See Airplane Flight Manual for approved fuels and additives.

Oil. (Engine & Gearbox) See Airplane Flight Manual for approved oils.

Engine Limits.

	Shaft Power SHP	Torque Pressure Psi	N_1 Gas Generator Speed %	Prop. Shaft Speed RPM	Maximum Permissible Turbine Interstage Temperature ºC
Takeoff and Max. Continuous	550	42.5	101.5	2200	695
Starting Transient			101.5	2200	1090*
Max. Acceleration		48.5	102.6	2420	825

* These values are time limited to two seconds

NOTE: 100% Gas Generator Speed = 37,468 rpm
Engine torque is limited by a torque controller to 1315 lb-ft (42,5 psi) at sea level.

Oil temperatures: Starting - 40º minimum
idle - 40º to +99ºC
max. continuous + 10º to +99ºC

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

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Propeller and Propeller Limits. Hartzell HC-B3TN-2 hubs with Hartzell T 10173C-8 or 10173CH-8 blades, three blade constant speed type.

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

Pitch settings at: (measure at 30 inch station)

Minimum pitch	+14º
Feathered	+83.5º ± 1.5º

Propeller blade life limit: 9700 hours

Spinner: Hartzell C 3065 P

Airspeed Limits (CAS).

Max. operating speed up to 15,000 ft altitude	(V_{MO})	270 knots
above 15,000 ft limited to max. operating Mach. No.	(V_{MO})	0.55
Maneuvering speed at MTOW = 4189 lbs.	(V_A)	175 knots
Max. speed with flaps	(V_{FE})	135 knots
Max. speed with landing gear extended	(V_{LO})	135 knots

Maneuvering Load Factors.

	Acrobatic
Max. positive up to V_{MO}	+ 6.00
Max. negative up to V_{MO}	- 3.00

C.G. Range. (Landing Gear Extended). 13.707 ft to 14.232 at 4189 lbs or less (18% - 28% MGC)

Maximum Weight.

Ramp	4213	lbs
Takeoff	4189	lbs
Landing	4189	lbs
Zero fuel	3668.5	lbs

Number of Seats. Two, front seat at 13.494 ft.
rear seat at 17.611 ft.

For solo flight the pilot must occupy the front seat.

Maximum Baggage. 55 lb at 21.981 ft in baggage compartment.

Fuel Capacity.

Total	Usable	Arm
129.4 gals	125.2 gals	13.83 ft.

Oil Capacity.

Total	Arm
4.22 gals	7.66 ft

Control Surface Movements.

Wing flap	Takeoff	23º ± 2º	Landing	50º ± 2º
Ailerons	Up	20º ± 1º	Down	11º ± 1º
Aileron tab	Up	12.5º ± 1.5º	Down	18º ± 1.5º
Elevator	Up	18.5º ± 1º	Down	16º ± 1º
Elevator tab	Up	15º ± 2º	Down	20º ± 2º
Rudder	Right	24º ± 1º	Left	24º ± 1º
Rudder tab	Right	11º ± 1.5º	Left	17.75º ± 1.5º

Rudder tab
At 24º rudder deflection to the right, Anti-Flettner deflection: Right 7±1º
At 24º rudder deflection to the left, Anti-Flettner deflection: Left 7±1º

Maximum Operating Altitude.

25,000 ft

Datum.

9.84 ft. in front of firewall.

Leveling Means.

Marks (rivet heads) on each side of fuselage. Canopy rails horizontal.
See Section 8 of Airplane Maintenance Manual.

Certification Basis.

Type certification under 14 CFR Section 21-29 including the following requirements:

- 14 CFR Part 23 effective February 1, 1965, including amendments 23-1 through 23-16 plus FAR 23.977 Amendment 23-17, FAR 25.393 Amendment 25-37 and
- 14 CFR Part 36 effective December 1, 1969, including Amendments 36-1 through 36-12 and
- SFAR 27 effective December 12, 1973, including Amendments SFAR 27-1 through SFAR 27-4 (see Note 5) and
- Exemption No. 3748 from Section 23.49(b)(1).

Date of application: December 21, 1981.

Type Certificate issued on August 12, 1983.

Import Requirements.

An FAA Standard Airworthiness Certificate may be issued on the basis of a Certificate of Airworthiness for Export signed by a representative of the Swiss Federal Air Office, containing the following statement:

"The airplane covered by this certificate has been examined, tested and found to conform to the type design approved under Type Certificate No. A50EU, and to be in condition for safe operation."

Airplane S/N 395 is eligible for a U.S. standard Airworthiness Certificate when the requirements of 14 CFR Sections 45.11 and 45.13, and all other import requirements of this type certificate data sheet are satisfied.

Refer to the applicable bilateral agreement to verify eligibility for import into the United States of both new and used aircraft based on the scope of the agreement, to identify any required statements by the exporting authority on the export certificate of airworthiness (or equivalent document), and for procedures for coordinating exceptions to conformity statements on these documents. Refer to FAA Order 8130.2, *Airworthiness Certification of Aircraft*, for requirements for issuance of an *airworthiness certificate* for imported aircraft.

Serial Nos. Eligible. A Certificate of Airworthiness for Export endorsed as noted under "Import Requirements" must be submitted for each individual aircraft for which application for U.S. Certification is made.

Service Information. Service bulletins, structural repair manuals, vendor manuals, aircraft flight manuals, and overhaul and maintenance manuals, should contain a statement that the document is approved by the Swiss Federal Office of Civil Aviation (FOCA). (NOTE 2, NOTE 3 and NOTE 4)

The FAA accepts such documents and considers them FAA-approved for type design data only unless one of the following conditions exists:

• The documents change the limitations, performance, or procedures of the FAA approved manuals; or

• The documents make an acoustical or emissions changes to this product's U.S. type certificate as defined in 14 CFR § 21.93.

The FAA uses the post type validation procedures to approve these documents. The FAA may delegate on case-by-case to FOCA to approve on behalf of the FAA for the U.S. type certificate. If this is the case it will be noted on the document.

NOTES.

NOTE 1. Current weight and balance report including list of equipment in certificated empty weight, and loading instructions, must be provided for each aircraft at the time of original certification.
The certificated empty weight and corresponding center of gravity location must include full oil (31.65 lbs at + 7.66 ft), and unusable fuel (28.66 lbs. at + 15.39 ft).

NOTE 2. All placards required in the approved Airplane Flight Manual must be installed on the airplane in the appropriate location. Revisions to this report may be approved by FOCA on behalf of the FAA, unless they are changes to the limitation section. These changes require FAA approval for the US version.

NOTE 3. The Chapter 5 of the Swiss Federal Office of Civil Aviation (FOCA) approved PC-7 Aircraft Maintenance Manual, Document No. 01715, presents the airworthiness limitations, overhaul limitations (TBO), scheduled and unscheduled maintenance checks. The "Airframe Fatigue Life" is presented in paragraph 3 of section 05-10-00, and the "Time Limited Inspection Requirements" are presented in section 05-10-20.

The Airworthiness Limitations are presented in section 05-10-10 "Lifed and Overhauled Components" and was approved by FOCA and the FAA. Revisions to this section must be approved by FOCA and the FAA.

NOTE 4. Information essential for the proper operation and maintenance of the airplane are contained in the following Pilatus Aircraft Ltd. documents:

(a) Airplane Flight Manual: Swiss Federal Office of Civil Aviation (FOCA) approved Document No. 01678 including actual weight and balance data and equipment list for the individual airplane (Report No. 01603-A).

NOTE 4. (cont.)

(b) Airplane Flight Manual: Swiss Federal Office of Civil Aviation (FOCA) approved Document No. 01678 including actual weight and balance data and equipment list for the individual airplane (Report No. 01603-A).

(c) Maintenance Manual: PC-7 Maintenance Manual Document No. 01715. Pages of the document 01715 applicable to the US N-registered aircraft are identified with either
- "ALL" followed by no letter in the footer, or
- "ALL" followed by a "U" in the footer (maybe be in combination with other letters e.g. "U, HU, HMU. etc…)

(d) PC-7 Structural Repair Manual: Document No. 01720

(e) PC-7 Wiring Manual: Document No. 01718

(f) PC-7 Illustrated Parts Catalog: Document No. 01719

(g) PC-7 Tool and Equipment Manual: Document No. 01724

NOTE 5. Compliance with the fuel venting provisioned of SFAR-27 is achieved by incorporation of the components listed on Pilatus Drawing No. 119.35.07.008.

NOTE 6. Each seat is to be equipped with Pilatus PC-7 Harness Assembly, Part No. G.Q.D. 14081, manufactured by G.Q. Defence Equipment, Ltd., Woking, England. (Ref. Exemption No. 3748)

NOTE 7. This airplane is not FAA approved for use with underwing stores or underwing fuel tanks.

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