

TIME LIMITS

1. General

Chapter 05 presents the airworthiness limitations, overhaul limitations (TBO), scheduled and unscheduled maintenance checks.

The airworthiness limitations are presented in 05-10-10 - LIFED AND OVERHAULED COMPONENTS and printed on red paper. This section is FAA approved for US registered aircraft in accordance with the provisions of 14 CFR Section 21.29. In addition, this section is required by FAA Type Certification Data Sheet No. A50EU and it specifies maintenance required under 14 CFR Sections 43.16 and 91.163 unless an alternative program has been FAA approved.

Approved by:

FEDERAL OFFICE OF CIVIL AVIATION (FOCA), SWITZERLAND

Approval Signature: Signed original held on file by Pilatus Aircraft Ltd. Stans

Approval Date:

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2. Recommended Scheduled Inspection Intervals

As required by FAR Part 91.409 the aircraft must have an Annual (intermediate) Inspection each 12 calendar months of operation.

The inspection periods given in this manual assume that the aircraft operates in a temperate area.

Aircraft operated in tropical or arctic type conditions may require additional or more frequent inspection to prevent wear, corrosion or deterioration of the structure and components. If the aircraft is operated in these climatic conditions it must be inspected more frequently until the operator gains experience and can adapt the inspection requirements to suit the local conditions.

A. Intermediate Inspection (05-30-01 to 05-30-04)

An intermediate inspection must be done each 100 flying hours or each year, if this occurs first, (except when a Detailed / High Time Inspection is applicable) plus Time Limited Inspection items which are due at the specified time.

B. Detailed / High Time Inspection (05-30-05 to 05-30-09)

A detailed inspection must be done each 200 flying hours, or each 2 years if this occurs first, (except when a High Time Inspection is applicable) plus Time Limited Inspection items which are due at the specified time.

A high time inspection must be done each 1000 flying hours, or each 5 years if this occurs first, plus Time Limited Inspection items which are due at the specified time.

When a high time inspection is done the aircraft maintenance cycle starts again.

C. Time Limited Inspection Requirements (05-10-20)

This topic gives a list of items that require inspecting or testing at intervals that are based on flying hours, calendar time or the number of cycles. The first inspection or test must be done not later than the stated time limit. The condition of the item can be used as a criterion for determining subsequent time limits applicable to the individual aircraft or fleet operation, provided the operator has an approved condition monitoring system.

D. Corrosion Control (20-40-00)

To control corrosion it is recommended that a wash and corrosion control program is established. Local conditions will not be the same for all operators and must be considered when establishing such a program. Refer to chapter 20-40-00 for further recommendations.

3. Airframe Fatigue Life

The PC-7 airframe is designed using the safe life concept and has a fatigue life of 12000 flying hours or 24000 landings.

Extension to this life can only be given after investigation by Pilatus of the condition and usage of the aircraft.

4. Component Maintenance Policy

A. Lified and Overhauled Components (05-10-10)

This topic gives a recommended list of all components which are subject to an overhaul life or a maximum life limit. The time limits for the components are based on flying hours, component or system cycles, or calendar time. The first overhaul or replacement of a component must be done not later than the stated time limit (the permissible tolerances are applicable). The condition of the component can be used as a criterion for determining subsequent time limits applicable to the individual aircraft or fleet operation, provided the operator has an approved condition monitoring system.

The requirements of this topic may be accomplished by either:

- disassembly, inspection, assembly and test in accordance with the appropriate Component Maintenance Manual.
- exchange parts from Pilatus Aircraft Limited may be purchased and installed. Compliance with one of these two options is at the discretion of the maintenance center carrying out the time limit requirement.

For landing gear components only, the following definitions must be used to calculate lives:

Landing Gear Cycle:

A landing gear cycle is the action of fully retracting and extending the gear during flight, whether or not a landing occurs.

Landing:

A landing is the action of an airborne aircraft touching-down on the landing gear, and includes touch-and-go/roller landings as well as full-stop landings. It is assumed that the retraction/extension mechanism will operate once for each landing.

B. Components Replaced on Condition

All components not listed as lifed or overhauled are in this group and do not have a defined life. They need only be replaced when their condition shows that replacement is necessary.

C. Tolerances for Scheduled Maintenance Inspections and Component Lives

(1) Scheduled Inspections

It is permitted to anticipate or extend all flying hour, calendar, landing and cycle based inspections, subject to local regulations, as follows:

- Flying hours based inspections:
± 10% up to a maximum of 100 flying hours.
- Calendar based inspections with a frequency of up to one year:
± 10% up to a maximum of 1 month.
- Calendar based inspections with a frequency of more than one year:
± 10% up to a maximum of 6 months.
- Cycle based inspections:
± 10% up to a maximum of 250 cycles.

Never extend an inspection by more than the permitted tolerance.

If an inspection is done in the permitted 10% tolerance, then the forecast inspection times do not change.

e.g. 100 hour inspection are due at 100, 200, 300, 400 hours etc. If the inspection is done at 90 hours then the next inspection is due at 200 hours (± the permitted tolerance). If this inspection is done at 210 hours, then the next inspection is due at 300 hours (± the permitted tolerance).

If the inspection is anticipated by more than the 10% tolerance, then the forecast inspection time changes.

e.g. If the 100 hour inspection is done at 260 hours, then the next inspections are due at 360, 460, 560 hours etc. (± the permitted tolerance).

(2) Component Lives and Overhaul Intervals

It is permitted to extend all flying hour, calendar, and cycle based component lives, if no spares are available and subject to local regulations, as follows:

- Flying hours based inspections:
10% up to a maximum of 100 flying hours.
- Calendar based inspections with a frequency of up to one year:
10% up to a maximum of 1 month.
- Calendar based inspections with a frequency of more than one year:
10% up to a maximum of 6 months.
- Cycle based inspections:
10% up to a maximum of 250 cycles.

Never extend a component life by more than the permitted tolerance.

NOTE: A replacement component may not have the full overhaul life on installation due to life limits of component parts of the assembly. Details of this reduced life will be given by the overhaul or repair shop.
For extensions on the engine and propeller refer to the applicable Pratt & Whitney Canada and Hartzell documentation.

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LIFED AND OVERHAULED COMPONENTS

Component	Maximum Life	Overhaul Interval
Chapter 24 - Electrical Power Starter/Generator		1000 flying hours
Chapter 25 - Equipment and Furnishings First aid kit Fire extinguisher ELT battery (if installed) Seat harness Parachute	1 year 2 years After one hour of total use or as shown on the battery label 10 years total 15 years	180 days
Chapter 27 - Flight Controls Aileron Outboard Control-Rod (LH and RH) P/N 116.35.07.272 Examine with a borescope (Ref. 27-10-04, Page Block 601) Elevator Forward Control-Rod Assy P/N 116.35.07.270 Examine with a borescope (Ref. 27-30-06, Page Block 601) Elevator Center Control-Rod Assy P/N 116.35.07.345 Examine with a borescope (Ref. 27-30-05, Page Block 601) Elevator Rear Control-Rod Assy P/N 116.35.07.269 Examine with a borescope (Ref. 27-30-07, Page Block 601) Flap pivot arm assembly Examine (Ref. 27-50-00, Page Block 601)		2 years 2 years 2 years 2 years Threshold inspection at 30 April 2021 if installed before 30 April 2016, then every 5 years. 5 years if installed after 29 April 2016.
Chapter 28 - Fuel Engine driven pump Center tank Flexible hoses (Pt Nos. 115.55 07.137, 140, 143 and 146)	6000 flying hours or 14 years whichever comes first 5 years	3500 flying hours

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Component	Maximum Life	Overhaul Interval
Chapter 31 - Indicating / Recording		
Aircraft clock battery (If installed)	75 days with no aircraft battery power connected	
Chapter 32 - Landing Gear		
Main landing gear legs		5000 landings
Nose landing gear leg		5000 landings
Main landing gear screw actuators		6000 landing gear cycles
Nose landing gear screw actuator		6000 landing gear cycles
Landing gear rotary actuator, AR00502 (Part No. 978.71.11.105, 532.30.07.036 & 111.48.07.260)		12000 landing gear cycles (send all rotary actuators to Pilatus Aircraft Ltd for overhaul)
Landing gear rotary actuator, AR00501 (Part No. 978.71.11.103, 978.71.11.104 & 111.48.07.232)		3500 flying hours or 7000 landing gear cycles (send all rotary actuators to Pilatus Aircraft Ltd for overhaul)
Universal ball joints (Qty 6) (Pre SB 32-009 only)	1500 landing gear cycles	
Brake master cylinder		3000 flying hours
Brake fluid reservoir bellows	1000 flying hours or 3 years	
Brake units		Overhaul when brake linings are worn beyond limits. (Ref. BF Goodrich CMM, Chap 32)
Chapter 35 - Oxygen		
Oxygen cylinder and pressure reducer	15 years (Only if Part No. EROS GCD 1411 is installed)	5 years (hydrostatic test)
Regulator panels		5 years
Flexible hoses	4 years	
Chapter 53 - Fuselage		
Vertical stabilizer Examine the internal structure with a borescope (Ref. 53-20-01, Page Block 601)		2 years
Center Fuel Tank Support-Bracket P/Ns 112.35.07.766 and 112.35.07.796 Examine (Ref. 53-10-02, Page Block 601)		2 years
Frame 3 Pick-Up Brackets P/Ns 112.35.07.009 and 112.35.07.010 Examine with a borescope (Ref. 53-10-04, Page Block 601)		2 years

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Component	Maximum Life	Overhaul Interval
Rudder-Pedal Outboard-Bearings P/N 112.35.07.251 Examine with a borescope (Ref. 53-10-05, Page Block 601)		2 years
Chapter 55 - Stabilizers Bolts, horizontal stabilizer spar/fuselage attachment Nuts, horizontal stabilizer spar/fuselage attachment Rudder Lower-Hinge Bracket P/N 555.30.09.039 Eddy Current inspection (Ref. 55-40-01, Page Block 601)	1000 flying hours 1000 flying hours	2 years
Chapter 57 - Wings Bolts, wing attachment (U bracket, main and auxiliary spars) Bolts, wing attachment (U bracket, main and auxiliary spars) Nuts, wing attachment (U bracket, main and auxiliary spars) Nuts, wing attachment (U bracket, main and auxiliary spars) Flap Bearing Support-Brackets P/Ns 111.34.07.329 and 111.34.07.330 Examine with a borescope (Ref. 57-10-05, Page Block 601) Angle brackets with silver-plated nut-plates (Ref. SB 57-017) at middle rib 23 Pre SB 57-018 only Examine (Ref. 57-10-06, Page Block 601)	1000 flying hours (Pre SB PC7-57-002) 5000 flying hours (Post SB PC7-57-002) 1000 flying hours (Pre SB PC7-57-002) 5000 flying hours (Post SB PC7-57-002)	2 years 200 flying hours or 2 years whichever comes first
Chapter 61 - Propeller Propeller (with attachment bolts) Propeller blades Propeller overspeed governor	 9795 flying hours	3000 flying hours or 5 years whichever comes first (Ref. Hartzell SL 61, Latest Revision) Propeller blades Engine TBO + 500 hours
Chapter 71 - Powerplant Engine Engine accessories Engine hot section		3000 flying hours (Ref. P&WC SB 1003) (Ref. P&WC SB 1003) 1500 flying hours (Ref. P&WC SB 1003)

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Component	Maximum Life	Overhaul Interval
Engine rotor components Engine shockmounts Bolts, nuts and washers, engine mounting frame attachment Bolts and nuts, V-strut attachment	Refer to P&WC SB 1402 5000 flying hours (Ref. 71-20-01, Page Block 401) or 5 years (Ref. 71-20-01, Page Block 601) whichever comes first 5000 flying hours (Ref. 71-20-02, Page Block 401)	3000 flying hours
Chapter 73 - Engine Fuel and Control P3 air filter (Part No. 3029268) P3 air filter (Part No. 3031781) HP fuel pump outlet filter (Part No. 3033355) FCU drivebody inspection/bearing replacement	 1000 flying hours 600 flying hours (Ref. P&WC EMM 73-10-02) 3000 flying hours (Ref. P&WC EMM 72-00-00, Table 601)	1000 flying hours
Chapter 79 - Oil Oil filter Flexible hoses (Pt Nos. 115.60.07.014, 015, 016 and 017)	 1500 flying hours 5 years	

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