adjusted to permit over-travel of power control lever to ensure full operation of engine and that the linkage can be operated without interference. Also, investigate and eliminate any slack in the control system. Lubricate and adjust all controls (Ref. Aircraft Maintenance Manual).

## 8. Periodic Inspection

NOTE: The following tolerance is established for maintenance scheduling convenience.

Unless otherwise stated, the tolerance for periodic inspections is ten percent (10%), or up to a maximum of 100 hours operating time, whichever is less. The tolerance for scheduled inspections is ten percent (10%), or up to a maximum of 30 days calendar time, whichever is less.

Subsequent intervals will be adjusted to re-establish the original schedule. When an inspection is done more than 10% early, subsequent inspections will be advanced as required to not exceed the maximum tolerance.

For inspection items and intervals, refer to Table 601. Refer to Inspection/Check in the referenced CHAP/SEC/SUB for limits and disposition of items.

Table 601 Periodic Inspection **NOTE; ROUTINE & MINOR inspection now in A 0125**

| Component | | | | Inspection | Interval |
|---|---|---|---|---|---|
| 1. | Engine Externals | | | | |
| | A. | Tubing, Wiring, Control Linkages, Hose Assemblies | (1) | All accessible connections, clamps and brackets for attachment. | MINOR<br>71- POWERPLANT |
| | | | **NOTE**: Inspect accessible lockwire and safety cable for security and installation. | | |
| | | | (2) | Wear, chafing, cracks and corrosion. | MINOR 72 - ENGINE |
| | | | **NOTE**: Visually inspect insulated air tubes for sign of swelling, cracking, bulging of rubber sheath material. Refer to repair section and SB1687. Replace as necessary. | | |
| | | | (3) | Fuel and oil lines for leaks. | ROUTINE 72 - ENGINE |
| | | | (4) | Depending on operating conditions and environment, examine linkages at regular intervals. Pay particular attention to rear linkage cam box, fuel control unit arm, telescopic rod and rod end fittings. Disconnect rod ends and clean using solvent (PWC11-027) or (PWC11-031). Lubricate with light grease (PWC04-001) | MINOR<br>(See NOTE)<br>73- ENG FUEL & CONTROL<br>76 - ENG CONTROLS |


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| Component | | | | Inspection | Interval |
|---|---|---|---|---|---|
| | | | | after engine external wash. Examine rod end for corrosion, roughness in rotation, side play and radial play. After lubrication reinstall rod ends and torque to specified value (Ref 76-10-00). Check free movement of linkage. | |
| | | | | **NOTE**: Inspect initially at 100 hours with extension to relevant airframe zone inspection based on inspection results but not to exceed 200 hours. | |
| | | | | **NOTE**: With the exception of rod end fittings, linkages generally will operate satisfactorily without lubrication. While lubrication will be effective in some instances, it must be realized that grease and oil attracts dirt and foreign matter. Depending on local conditions, operators should take these facts into consideration before deciding to lubricate components. | |
| | B. | Air Inlet Screen | | Cleanliness (Ref. 72-20-00). | MINOR 72 - ENGINE |
| | C. | Gas Generator Case | | External surfaces, and fireseal mount ring brackets for cracks, distortion, and corrosion (Ref. 72-30-04). | MINOR 71 - POWERPLANT |
| | D. | Fireseal Mount Rings | | Cracks and attachment of brackets and seals. (Ref. 72-30-01/-02) | MINOR *71 - POWERPLANT* |
| | E. | Exhaust Duct | (1) | Cracks and distortion (Ref. 72-50-05, MAINTENANCE PRACTICES). | MINOR |
| | | | (2) | Engines that exhibit inferior welds (Ref. 72-50-05, MAINTENANCE PRACTICES) (Ref. SB1610) | MINOR not to exceed 150 hours. |
| | | | (3) | Engines that exhibit cracks (Ref. 72-50-05, MAINTENANCE PRACTICES) (Ref. SB1610) | 25 hours |
| | F. | Propeller Shaft Seal | | Check for oil leaks (Ref. 72-10-00 ) | ROUTINE |
| | G. | Accessories | (1) | Attachment and linkages, air, oil and fuel lines (Ref. 73-10-07/-08) . | MINOR |


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| Component | | | Inspection | | Interval |
|---|---|---|---|---|---|
| | | | **NOTE**: Visually inspect insulated air tubes for sign of swelling, cracking, bulging of rubber sheath material. Refer to repair section and SB1687. Replace as necessary. | | |
| | | | (2) | Oil and fuel leaks as applicable. | ROUTINE |
| | | | (3) | The starter-generator gearshaft splines for wear (Ref. 72-60-00). If wear found is above the limits, replace the gearshaft within the next 50 flight hours. | At the starter-generator removal/replacement only. |
| 2. | Engine Internals | | | | |
| | A. | First-stage Compressor Rotor | | Do a visual inspection with a mirror or a borescope (Ref. Para. 9.D.). | MINOR |
| | | | **NOTE**: If any FOD has caused the engine to become prone to engine surges or causes unusual compressor whining, the large bent airfoil will make the whining sound (Ref. Fig. 602). Remove the engine immediately. | | |
| | B. | Compressor Turbine Disk Assembly | | Remove assembly and ship to an approved overhaul facility. | (Ref. NOTES 1 and 2) |
| | | | **NOTE**: 1. For **PT6A-34** in SKYDIVE OPERATION | | **Initial interval**: Every 4000 hours for compressor turbine disk with full set of new blades installed at last shop visit. **Subsequent interval**: Every 2000 hours since last inspection for compressor turbine disk with full or partial set of previously operated compressor turbine blades. |
| | | | **NOTE**: 2. For **PT6A-34B/34AG** (Not SKYDIVE) | | **Initial interval**: Every 5000 hours for the compressor turbine disk with full |


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| Component | | | Inspection | | Interval |
|---|---|---|---|---|---|
| | | | | | set of new blades installed at last shop visit.<br>**Subsequent interval**: Every 3000 hours since last inspection for the compressor turbine disk with full or partial set of previously operated compressor turbine blades. |
| | | | **NOTE**: 3. For **PT6A-34/36** (Not SKYDIVE) | | Ref. **SB1403** |
| | C. | Compressor Turbine Blade | | For **Pre-SB1767** CT blade configuration: | |
| | | | (1) | Send a sample of two CT blades for metallurgical analysis. (Ref. 72-50-02) | Ref NOTES 1 to 3 |
| | | | **NOTE**: 1. For **PT6A-34** in SKYDIVE OPERATION | | Every 2000 hours |
| | | | **NOTE**: 2. For **PT6A-34/34B/34AG/36** SINGLE ENGINE applications (Not SKYDIVE). | | **Initial interval**: Every 5000 hours for compressor turbine disk with full set of new blades installed at last shop visit<br>**Subsequent interval**: Every 3000 hours since last inspection for compressor turbine disk with full or partial set of previously operated compressor turbine blades. |
| | | | **NOTE**: 3. For **Post-SB1767** or TWIN ENGINE non SKYDIVE application | | Not required |
| | D. | Hot Section | (1) | Examine with borescope (Ref. Para. 9.). | In conjunction with periodic fuel nozzle |


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| Component | | | | Inspection | Interval |
|---|---|---|---|---|---|
| | | | | | leak and function tests (Ref. Para. 3.B. (12)) |
| | | | (2) | For Post-SB1590 engines NOT incorporating SB1627 or SB1628: | |
| | | | | (1) Analyse engine condition trend monitoring system data on a weekly basis. (Ref. 72-00-00, FAULT ISOLATION, Engine Condition Trend Monitoring System). No baseline HSI is required. | |
| | | | | (2) If the analysis indicates that the engine is deteriorating, then do a hot section inspection. (Ref. 72-00-00, INSPECTION, Hot Section Inspection). | |
| 3. | Systems | | | | |
| | A. | Oil System | (1) | Check oil level (Ref. SERVICING). | ROUTINE |
| | | | **NOTE**: For oil change recommendations, refer to **SB1001**. | | |
| | | | (2) | Check condition and locking of oil filler cap (Ref. 72-60-00). | ROUTINE |
| | | | (3) | Oil filter elements and secondary screen (coarse hat-type screen attached to the inner end of the filter).<br>Elements must be inspected and cleaned (Ref. 79-20-02). Light traces of sediment only may be removed from the main filter screen. All other contamination requires replacement of filter element. Any foreign material found in main oil filter or on chip detector, should be identified before further inspection/operation (Ref. 79-20-02, MAINTENANCE PRACTICES). | MINOR<br>(See NOTE) |
| | | | **NOTE**: Inspect initially at 100 hours with extension to relevant airframe zone inspection based on inspection results but not to exceed 200 hours. | | |
| | | | **NOTE**: If the engine has a recent history (within 200 flight hours) of generating carbon debris; do the inspection at 100 hours interval and replace the filter element at 300 hours interval. | | |


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| Component | | | Inspection | | Interval |
|---|---|---|---|---|---|
| | | | | Refer to 72-00-00, ENGINE, TURBOPROP - FAULT ISOLATION for the instructions to start oil filter inspection again and for the oil filter replacement intervals. | |
| | | | | **NOTE**: If carbon like deposits are found, drain accessory gearbox oil into a clean container and examine debris. Varnish flakes are non metallic and are usually dark on one side and shiny, similar to bronze, on the other side. They are hard and will not form into paste when rubbed between fingers (Ref. step (7)). | |
| | | | | Replace disposable filter elements (Post-SB1215/Post-SB1282). | Every 1000 hours |
| | | | | Examine and clean permanent (Pre-SB1215/Pre-SB1282) filter elements at an overhaul facility. The filter may be utilized for further 1500 hour periods, maintaining the same inspection/cleaning schedule. | Every 1500 hours |
| | | | (4) | Check magnetic chip detector(s) for continuity, open circuit must exist indicating no contamination at pole tips. If continuity is there, remove and examine for contamination. Any foreign material found on the chip detector or in the main oil filter must be identified before further inspection/operation (Ref. 79-20-02, OIL FILTER, HOUSING AND CHECK VALVE - MAINTENANCE PRACTICES) (See NOTE 3). | Every 100 hours (See NOTES 1 and 2) |
| | | | | **NOTE**: 1. FOR SINGLE ENGINE AIRCRAFT, If the chip detector is connected to a cockpit indicating system, examine the chip detector initially at 100 hours with extension to relevant airframe zone inspection based on the inspection results, but not more then 200 hours. | |
| | | | | **NOTE**: 2. FOR TWIN ENGINE AIRCRAFT, If the chip detector is connected to a cockpit indicating system, examine the | |


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| Component | Inspection | Interval |
|---|---|---|
| | chip detector initially at 100 hours with extension to relevant airframe zone inspection based on the inspection results, but not more than 400 hours. | |
| | **NOTE**: 3. While the chip detector is removed, examine with both poles bridged (Ref. Check (5)). With poles unbridged, inspect if continuity exists, and if no continuity exists, replace the chip detector. | |
| (5) | Bridge chip detector(s) magnetic bar with correct jumper and use an applicable ohmmeter to make sure the continuity between connector pins. Change the chip detector if continuity does not be. One unwanted material found on one of the two (chip detector or in main oil filter) have to identify before more inspection or operation (Ref. 79-20-02, OIL FILTER, HOUSING AND CHECK VALVE - MAINTENANCE PRACTICES). | 600 hours<br>or one year, that comes first. |
| **NOTE**: For aircraft equipped with an airframe supplied indicating device, the integrity of the complete indicating system can be checked by re-attaching the electrical connector to the removed chip detector and check for chip indication when magnetic poles are bridged. Closed circuit condition must exist. | | |
| (6) | Check scavenge oil pump housing for leaks. | ROUTINE |
| (7) | Check the AGB internal scavenge oil pump inlet screen (Ref. Chapter 72-60-00 CLEANING/INSPECTION). Collect drained oil. Using a mirror and a flashlight inspect the scavenge oil pump inlet screen. Any foreign material found blocking the screen or contained in the oil should be identified before further operation (Ref. Unscheduled Inspection). | 200 hours or 6 months (at operator's option) for engines operating in high relative humidity/tropical environment (above 70% for most of the year). |


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| Component | | | | Inspection | Interval |
|---|---|---|---|---|---|
| | | | | | Extension in steps of 50 hours to 500 hours maximum, based on operator experience. |
| | | | | | 1000 hours for engines NOT operating in high relative humidity/tropical environment. |
| | B. | Fuel System | (1) | Do a visual inspection of the fuel pump (in-situ inspection only) for installation and leakage (Ref. 73-10-02, FUEL PUMP - MAINTENANCE PRACTICES). | MINOR |
| | | | **NOTE**: If airframe fuel boost pump fails or is inadvertently left off for an accumulative time in excess of 10 hours, the engine driven fuel pump must be removed and replaced. The removed pump should be sent to an approved overhaul facility. | | |
| | | | (2) | Check inlet screen for foreign matter or distortion, clean and reinstall, or install new screen. (Ref. 73-10-02). | 600 hours (Non-agricultural) 300 hours (Agricultural) |
| | **CAUTION: ON NEW AIRCRAFT, CHECK FILTER AFTER EACH FLIGHT UNTIL NO CONTAMINATION IS EVIDENT. CHECK AFTER FIRST FLIGHT OR GROUND RUN WHENEVER ANY COMPONENT UPSTREAM OF FILTER IS REPLACED.** | | | | |
| | | | (3) | Check outlet filter for foreign matter or distortion (Ref. 73-10-02). Install new filter as service conditions dictate, not to exceed 600 hours and when fuel system contamination is suspected. | MINOR |
| | | | (4) | If Sundstrand fuel pump installed: | |
| | | | | If fuel pump gear-set and coupling operating time since new (TSN) is **LESS THAN** Engine Basic TBO (Ref. **SB1003** for **PT6A-34B**, **SB1303** for **PT6A-34AG** and **SB1403** for **PT6A-34/-36**): | |
| | | | | (a) Check fuel pump coupling in-situ for | Every 600 hours |


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| Component | Inspection | Interval |
|---|---|---|
| | fretting and corrosion (Ref 73-10-02, FUEL PUMP - MAINTENANCE PRACTICES). | |
| | (b) Remove fuel pump and inspect the drive coupling and cover accessory gearbox side for signs of reddish-brown (iron oxide) stains. If stains are observed, return the fuel pump to an approved overhaul facility (Ref. 73-10-02, FUEL PUMP - MAINTENANCE PRACTICES). | Every 1800 hours |
| | If fuel pump gear-set or coupling operating time since new (TSN) is **MORE THAN** Engine Basic TBO (Ref. **SB1003** for **PT6A-34B**, **SB1303** for **PT6A-34AG** and **SB1403** for **PT6A-34/-36**) **OR** is **UNKNOWN OR** fuel pump was overhauled before 2007: | |
| | (a) Remove fuel pump and inspect the drive coupling and cover accessory gearbox side for signs of reddish-brown (iron oxide) stains. If stains are observed, return the fuel pump to an approved overhaul facility (Ref. 73-10-02, FUEL PUMP - MAINTENANCE PRACTICES). | 300 hours |
| | **NOTE**: As of January 2010, the fuel pump gear-set and drive coupling replacement is required at every pump overhaul. | |
| (5) | Check drain valve for installation and leaks (Ref. 73-10-06). | MINOR |
| (6) | Check FCU for installation, linkages and pneumatic tubes (Ref. 73-20-00). | MINOR |
| (7) | For **Post-SB1568**: Do a deceleration check (Ref. 71-00-00, POWER PLANT - ADJUSTMENT/TEST). | 150 hours or MINOR, whichever occurs first for single engine installation or 400 hours for twin engine installation. |
| | **NOTE**: Not required for FCU identified with “RE52”, “SB 73-3” or with a | |


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| Component | | | | Inspection | Interval |
|---|---|---|---|---|---|
| | | | | serial number that contains the letter F as prefix. | |
| | | | (8) | For engines fitted with a manual override on the fuel control, check FCU Manual Override System for static operation (Ref. 71-00-00, ADJUSTMENT/TEST). | MINOR not exceeding 200 hours |
| | | | (9) | Examine the FCU for bearing wash-out, shown by blue dye (grease and fuel mixed) at FCU vent (Ref. Fault Isolation - Operating Problems). | MINOR |
| | | | (10) | (a) Remove the FCU (Ref. 73-20-00, FUEL CONTROL UNIT - MAINTENANCE PRACTICES) for the drive body inspection/driveshaft bearing replacement in accordance with the component maintenance manual (Ref. IPC P/N 3021244). | **Pre-SB1561**: Basic engine TBO (Ref. NOTE)<br>**Post-SB1561**: Use of extended engine TBO permitted (Ref. NOTE) |
| | | | **NOTE**: This limit is calculated from the time the unit entered service or the last overhaul of the FCU. | | |
| | | | | (b) Remove the FCU and send for overhaul. | See NOTE |
| | | | **NOTE**: 1. For PT6A - 34B engines Ref. SB1003.<br>NOTE 2: For PT6A - 34AG engines Ref. SB1303.<br>NOTE 3: For PT6A - 34/36 engines Ref. SB1403. | | |
| | | | (11) | Check starting flow control/flow divider for installation and leaks (Ref. 73-10-04). | MINOR |
| | | | (12) | Leak test and function test fuel manifold adapter and nozzle assemblies (Ref. 73-10-05). | See NOTES |
| | | | **NOTE**: 1. Do the periodic borescope inspection of the hot section components in conjunction with the following tests (Ref. 2.B.).<br>NOTE 2: Regular fuel nozzle maintenance is important for hot section durability. Inspection recommended at routine intervals according to:<br>Engines **ON** fuel nozzle in-situ cleaning program (Ref.71-00-00, POWER PLANT - CLEANING), test fuel nozzles and repair as necessary (Ref. 73-10-05, FUEL MANIFOLD AND NOZZLES | | |


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| Component | | | Inspection | | Interval |
|---|---|---|---|---|---|
| | | | | - MAINTENANCE PRACTICES). Where fuel quality is not sure, and for operators new to PT6A operation, inspection is recommended at 400 hours initially, with extension based on the operators experience and rejection rate, not more than 200 hours. For other operators, inspection is recommended at 600 hours initially, with extension based on the operators experience and rejection rate, not more than 200 hours. Engine **NOT ON** fuel nozzle in-situ cleaning program, test fuel manifold adapter (Ref. 73-10-05, FUEL MANIFOLD AND NOZZLES - MAINTENANCE PRACTICES). Where fuel quality is not sure, and for operators new to PT6A operation, cleaning/inspection is recommended at 200 hours initially, with extension, based on the operators experience and rejection rate, not more than 200 hours. For other operators, inspection is recommended at 400 hours initially, with extension based on the operators experience and rejection rate, not more than 200 hours. | |
| | | | (13) | Check oil-to-fuel heater installation (Ref. 73-10-01, MAINTENANCE PRACTICES). | MINOR |
| | C. | Ignition System | (1) | Examine the ignition exciter/current regulator for installation and condition (Ref. 74-10-00, IGNITION EXCITER - MAINTENANCE PRACTICES). | 400 Hours |
| | | | (2) | Examine the ignition cables for chafing, wear and installation (Ref. 74-20-00, CABLES & SPARK IGNITERS - MAINTENANCE PRACTICES). | 400 Hours |
| | | | (3) | Examine the spark igniters for cleanliness and erosion. Do a functional check (Ref. 74-20-00, CABLES & SPARK IGNITERS - MAINTENANCE PRACTICES). | 400 Hours |
| | D. | Pneumatic System | (1) | Check P3 filter for installation (Ref. 73-10-07). | MINOR |
| | | | (2) | Inspect pneumatic tubes and lines for cracks and damages especially at the end fittings and joints. | MINOR |
| | | | (3) | Clean or replace filter, dependent on condition, service experience or environment (Ref. 73-10-07). | Every 100 hours |
| | | | | **NOTE**: Visually inspect the P3 filter for corrosion. If the filter shows | |


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| Component | | | Inspection | | Interval |
|---|---|---|---|---|---|
| | | | **NOTE**: Visually inspect the P3 filter for corrosion. If the filter shows presence of corrosion, discard the filter and replace with a new filter. | | |
| | | | (4) | Clean and inspect Post-SB1495 P3 filter drain valve housing assembly (Ref. 73-10-07). | Every 100 hours |
| | | | **NOTE**: Filter contamination is greatly influenced by particular operating conditions and environment, inspection intervals may be modified accordingly. | | |
| | | | (5) | Replace disposable filter based on condition, service experience or environment. | Every 1000 hours |
| | | | (6) | Clean or replace permanent filter based on condition, service experience or environment. Ship to an approved overhaul facility for ultrasonic cleaning. | Every 1000 hours. |
| | | | (7) | Check the bleed valve (Ref. 75-30-00, Inspection/Check). | |
| | | | | (a) For engines operating in salt laden or harsh environments or high cyclic conditions. | Every 600 hours. Extension can be based on the operators experience. |
| | | | | (b) For other engines NOT operating in conditions in Step (7)(a). | Inspect in conjunction with a Hot Section Inspection. |


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