

NOTE: The following information will help when referencing chapter 72-00-00 in the following Tables (602-605).

- Description and Operation starts on page 1.
- Troubleshooting starts on page 101.
- Servicing starts on page 301.
- Adjustment/Test starts on page 501.
- Inspection/Check starts on page 601.
- Cleaning/Painting starts on page 701.
- Storage Instructions starts on page 901.

Table 602

Inspection Checksheet

Owner _____ Date _____

A/C Make/Model _____ S/N _____ Reg. No. _____ TSN _____

Engine S/N _____ TSN _____ TSO _____

This inspection checksheet is to be used when performing scheduled inspections. This form can be locally reproduced and/or expanded to reflect the aircraft operating environment. Keep the completed sheets as a permanent part of the aircraft engine records. Detailed information regarding each inspection item is contained in the referenced Operation and Maintenance Manual paragraphs.

CAUTION: BEFORE UNDERTAKING ANY INSPECTION OR MAINTENANCE ACTION, CONSULT THE REFERENCED PARAGRAPHS OF THIS MANUAL. FAILURE TO FOLLOW THE RECOMMENDED INSTRUCTIONS IN THE MANUAL COULD RESULT IN EQUIPMENT DAMAGE OR DESTRUCTION, POSSIBLY RESULTING IN PERSONNEL DEATH OR INJURY.

Item	Inspection/Maintenance Action	Ref. Para	✓	Initial
<u>100 Hour Inspection</u>				
1	Inspect the entire engine for loose or missing bolts, broken or loose connections, security of mounting accessories, broken or missing lockwire and chafing of tubes or hoses. Check accessible area for obvious damage and evidence of fuel or oil leakage. Check B-nuts for presence and alignment of torque stripes. B-nuts with missing torque stripes must be loosened and retorqued before application of new torque stripes.	N/A		
2	Check that the mounting and support bolts are tight, lockwired and in good condition. Check security of screws and rivets. Remove all foreign material which might be drawn into the compressor inlet.	N/A		

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Table 602 (cont)

Item	Inspection/Maintenance Action	Ref. Para	✓	Initial
<u>100 Hour Inspection (cont)</u>				
3	Carefully inspect the fuel control and governor for evidence of leakage. Check fittings for torque and security and tubing for conditions which can contribute to leakage (loose, chafed, cracked, bent or dented). Check and correct obvious tube-to-fitting misalignment. Check fuel control and governor for proper rigging; check lever for freedom of travel, ensure that fuel control lever contacts both stops and that linkage bolts are free of excessive wear. If there is no evidence of leakage, further action is not required. If evidence of leaking is found, isolate and repair leak in accordance with Fuel Leakage Inspection paragraph.	2.A., 73-00-00		
4	Inspect compressor scroll for cracks. Pay particular attention to welded areas. No cracks are allowed. If cracks are discovered remove compressor and send to an authorized overhaul facility for scroll repair.	N/A		
5	Inspect P _c filter for proper clamping and security.	Section 73-20-03		
6	Until M250 CEB-A-75-2017 is complied with, inspect P _c filter assembly as follows: Without disassembly or removal of the P _c filter assembly from the mounting bracket, inspect using a 10x magnification glass and a bright light to detect any signs of cracks, paying particular attention to both of the end fittings at their junction with the end walls. If cracks are detected, remove assembly and comply with M250 CEB-A-75-2017 .	N/A		
7	Visually inspect the compressor for foreign object damage and dirt accumulation. Wash or rinse as necessary.	4., 72-30-00		
8	Inspect the compressor impeller blade edge for nicks, cracks or breakouts. No cracks or breakouts are acceptable. Repair as necessary.	4.B., 72-30-00		
9	Check the compressor discharge air tubes on the engine for evidence of air leakage, dents, cracks or wear. Also, inspect tubes for distortion caused by improper clamping.	Table 203 72-40-00		
10	Inspect the anti-icing, ejector (M250-C28B), bleed air and overspeed solenoid valves for loose, chafed, frayed or broken wires, loose connectors and security of attachment.	N/A		
11	Clean the compressor, as required, with a chemical wash solution if soot buildup is evident.	5., 72-30-00		
12	Clean the burner drain valve. Ensure that the airframe overboard gang drain is clear.	3., 72-40-00		

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Table 602 (cont)				
Item	Inspection/Maintenance Action	Ref. Para	✓	Initial
	<u>100 Hour Inspection (cont)</u>			
13	Visually inspect the outer combustion case (sheet metal and weld seams) for cracks. Pay particular attention to the weld seams in the area of the igniter plugs, dummy plug, drain valves, fuel nozzle bosses, armpit braze patch and adjacent areas. Use a bright light and mirror as necessary. The OCC does not have to be removed. Perform a Leak Tec check for installed OCC's and an FPI for removed OCC's.	Table 202, 72-40-00		
	a. Horizontal butt welds on the outer surface and between the air discharge tube attachment flanges and gas producer attachment flange on the forward side.			
	b. Both forward and aft seam welds between outer case and inner liner.			
	c. Bosses for the igniter plug, dummy plug, drain valves and fuel injector.			
	Inspect areas adjacent to the welds for cracks also. No cracks are allowed. A combustion outer case that is cracked must be removed from service and repaired.			
14	Inspect the turbine support assemblies and engine exhaust duct for condition of welded joints, for cracks and for buckling. Inspect exhaust collector support flow divider for cracks.	7.B., 72-50-00 1.D.(1), 72-00-00, Engine-Inspection/Check		
15	Inspect horizontal and vertical firewall shields that have been stop drilled to halt crack progression. (Refer to item 35 in the 300 hour inspection of this Table.) Replace firewall shield if crack continues beyond stop drill repair to exceed the 2 in. (51 mm) limit.	N/A		
	<u>NOTE:</u> Continued sheet metal or tube cracking can be an indication of excessive engine, engine accessory, or airframe vibration.			
16	On the power and accessories gearbox cover P/N 6895079, check the applied torque on the three uppermost turbine and exhaust collector support-to-gearbox retaining nuts. Torque must be 120-150 lb in. (14-17 N·m). If torque on any of the three nuts is less than 120 lb in., tighten the nut as required. If any of the three upper nuts require tightening, check and tighten as required the three lower retaining nuts.	N/A		
17	Inspect and clean the magnetic drain plugs. Check the chip detector end of the plug for cracks (due to overtorque). No cracks are acceptable. Tighten magnetic drain plug to 60-80 lb in. (6.8-9.0 N·m).	4.B., 72-60-00		
18	(Optional) Inspect and clean quick disconnect magnetic drain plugs. Check locking pins and flanged inserts for wear.	4.B., 72-60-00		

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Table 602 (cont)

Item	Inspection/Maintenance Action	Ref. Para	✓	Initial
	<u>100 Hour Inspection (cont)</u>			
19	Inspect ignition lead for burning, chafing or cracking of conduit. Also, check for loose connectors and/or broken lockwire.	2., 74-20-02		
19.A	Clean and examine the fuel injector. If no airframe fuel filter is installed, examine the fuel nozzle screen.	73-10-03		
20	Inspect the start counter for proper operation (increase in count) and for loose, chafed, frayed or broken wires and loose connectors.	74-20-03		
21	Inspect the electrical harness for loose, chafed, frayed or broken wires and loose connectors.	6.A., 73-21-00		
22	Check the condition of the bleed valve gasket (without removing bleed valve). Replace gasket if air leaks (blowouts) can be detected.	N/A		
23	Drain the oil system and refill. Remove, clean and reinstall the oil filter and magnetic drain plugs. Tighten plugs to 60-80 lb in. (6.8-9.0 N·m). Measure and record power turbine support pressure oil nozzle flow. If flow is less than 90 cc, clean pressure oil nozzle, power turbine support scavenge oil strut, external sump, and pressure oil nozzle screen.	Table 603 5.C. and 5.D., 72-50-00		
	NOTE: The incorporation of an external oil filter of a type that has a valid STC (Supplemental Type Certificate) in the engine oil system, increases the time limitation on this item from 100 to 200 hours.			
24	Clean the air/oil separator vent orifice.	6.B., 72-50-00		
25	If the engine oil system incorporates an external filter, check the oil supply level. Check the oil quantity within 15 minutes following shutdown.	N/A		
26	Review engine records for compliance with all mandatory Bulletins, Inspections and Airworthiness Directives.	N/A		
27	Review Engine Records for Time or Cycle Limited Parts, Components, Accessories or Modules.	N/A		
28	Enter component changes, inspections, compliances, etc (CEB's or CSL's) in the Engine Log Book as required.	N/A		
	<u>200 Hour Inspection</u>			
	In addition to the 100 hour inspection items, perform the following:			
29	Drain the oil system and refill. Measure and record power turbine support pressure oil nozzle flow. If flow is less than 90 cc, clean nozzle, power turbine support scavenge oil strut and external sump, and pressure oil nozzle screen.	Table 603, 5.C. and 5.D. 72-50-00		

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Table 602 (cont)				
Item	Inspection/Maintenance Action	Ref. Para	✓	Initial
<u>300 Hour Inspection</u>				
In addition to the 100 hour and appropriate 200 hour inspection items, perform the following:				
30	Inspect the compressor mount for cracks.	1.D.(2), 72-00-00 Engine-Inspection/ Check		
31	Every 300 hours, or earlier if carbon is found in the oil filter, or if the pressure oil nozzle flow check is less than 90cc, clean the power turbine pressure oil nozzle, power turbine scavenge oil strut, power turbine external sump and pressure oil nozzle screen.	5.C. and 5.D., 72-50-00		
32	Remove and disassemble fuel nozzle. Clean and inspect fuel nozzle filter assembly. Assemble and install fuel nozzle.	73-10-03		
33	Clean No. 1 bearing oil pressure reducer.	2.A.(2), 72-30-00, Compressor Section - Maintenance Practices		
34	Inspect the engine rear mount.	1.D.(3), 72-00-00, Engine Inspection/Check		
35	Inspect the horizontal and vertical firewall shields for cracks. Repair cracks of less than 2 in. (51 mm) length by stop drilling to approximately 0.125 in. (3.18 mm). Reinspect stop drilled cracks at subsequent 100 hour inspections to ensure there is no additional crack progression. If cracks are longer than 2 in. (51 mm) length, replace the firewall shield.	N/A		
<u>NOTE:</u> Continued sheet metal or tube cracking may be an indication of excessive engine, engine accessory, or airframe vibration.				
36	Remove, clean and inspect the P _c filter every 300 hr or earlier as engine performance dictates.	73-20-03		
37	Remove, inspect, and reinstall the turbine pressure oil check valve.	72-60-00, para 5.		
<u>NOTE:</u> Check Valve P/N 23074872 and subsequent part numbers are not applicable to this inspection (these valves are considered "ON CONDITION").				
38	On power and accessory gearbox cover, check the applied torque on all turbine and exhaust collector support-to-gearbox retaining nuts.	72-50-00, para 1.B. Torque must be 120-150 lb in. (14-17 N-m)		
38A	Inspect the thermocouple assembly (TOT/MGT)	77-20-01, para 2.		
<u>600 Hour Inspection</u>				
39	Do the scavenge oil filter impending bypass function check per Facet Service Bulletin No. 090589 (Ref. Rolls-Royce CSL 2112) for aircraft equipped with this type of external scavenge filter system. Follow the Facet instructions and time intervals, or follow this recommended inspection interval each 600 hours.	N/A		

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Table 602 (cont)

Item	Inspection/Maintenance Action	Ref. Para	✓	Initial
1500 Hour Inspection				
40	Inspect the combustion liner any time it is removed from the engine or at 1500 hr, whichever comes first.	1.C., 72-40-00		
41	Inspect the outer combustion case any time it is removed from the engine or at 1500 hr, whichever comes first.	2.B., 72-40-00		
42	Inspect the discharge air tubes any time they are removed from the engine or at 1500 hr, whichever comes first.	4.C., 72-40-00		
43	Inspect the N ₂ overspeed control mounting dampers for tears, missing pieces, or deteriorated rubber any time the N ₂ overspeed control is removed from the engine or at 1500 hr, whichever comes first.	N/A		
44	Inspect the spur adapter gearshaft, compressor rotor splined adapter and associated impeller bore.	72-30-00, para 4.C., 4.D. and 4.F.		
45	Inspect the turbine-to-compressor coupling, turbine splined adapter, power turbine inner shaft and turbine shaft-to-pinion gear coupling.	72-50-00, para 5.I. and 5.J.		
	NOTE: Turbine-to-compressor coupling is part of the turbine assembly.			
	NOTE: The following inspections are recommended whenever the turbine or compressor is removed in-between the required 1500 hour inspection:			
	1. Anytime the compressor is removed from the engine, visually inspect the aft end of the spur adapter gearshaft for worn or damaged splines.			
	2. Anytime the turbine is removed from the engine, visually inspect the splines on the following items, turbine-to-compressor coupling, turbine splined adapter, power turbine outer shaft and turbine shaft-to-pinion gear coupling for worn or damaged splines.			
	3. If spline wear or damage is observed, the appropriate maintenance action is required. (Refer to item 44 and 45 above).			
	4. Inspection intervals shall not exceed 1500 hours.			
46	(M250-C28B only) Remove the ejector tube assembly from the compressor and inspect for cracks using visual and FPI methods. No cracks are allowed.	75-10-02		
47	Fuel control screen inspection and cleaning.	73-20-02, para 5A.		
48	Deleted			
49	Remove and replace fuel filter element. Before discarding filter, inspect for signs of contaminants. If any are found, inspect the entire fuel system and clean if necessary.	73-00-00, para 2.D. and applicable aircraft manual		