Table 603

100 Hour Inspection

INITIAL	100 HOUR INSPECTION	REFERENCE SECTION	REMARKS
1.	Inspect the engine for obvious loose bolts, broken or loose connections, security of mounting accessories, and broken or missing safeties. Check accessible areas for obvious damage and evidence of fuel and oil leakage. Check B-nuts for presence and alignment of torque stripes. B-nuts with missing torque stripes must be loosened and retightened before application of new torque stripes.		
2.	Inspect the compressor impeller leading edges for damage.	72-30-00, PARA 4.B.	
3.	Clean the compressor, as required, with a chemical wash solution if dirt buildup is evident.	72-30-00, PARA 5.B.	
4.	Without disassembly, inspect the turbine and exhaust collector supports for condition of welded joints, cracks and buckling.	72-50-00, PARA 5.K. and PARA 7.B.	
5.	Carefully inspect fuel system for evidence of leakage. Check fittings for torque and security and tubing for conditions that could contribute to leakage (loose, chafed, cracked, bent, or dented). Check and correct obvious tube-to-fitting misalignment. Check fuel control for proper rigging; check lever for freedom of travel; ensure that lever contacts both stops, and that linkage bolts are free of excessive wear.	73-00-00 PARA 2.A., Fuel Leakage Inspection	If there is no evidence of leakage, further action is not required. If evidence of leakage is found, isolate and repair leak.
6.	Inspect the engine mounts for condition and security.		

Table 603(cont)

INITIAL	100 HOUR INSPECTION	REFERENCE SECTION	REMARKS
7.	Visually inspect the outer combustion case (sheet metal and weld seams) in the area of the igniter plugs, dummy plug, drain valves, fuel nozzle bosses, armpit brae 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 OCCs and an FPI for removed OCCs.	72-40-00, PARA 2.B.(1)	
8.	Inspect electrical harness for loose, chafed, frayed, or broken wires and loose connectors.		
	CAUTION: NORMAL ENGINES USE A MINIMAL AMOUNT OF OIL. HOWEVER, ANY SUDDEN INCREASE IN OIL CONSUMPTION IS INDICATIVE OF OIL SYSTEM PROBLEMS AND MUST BE CORRECTED.		
9.	Check oil supply level.	72-00-00, Table 101, Trouble-shooting.	If the engine has been idle for more than 15 minutes, motor the engine for 30 seconds to scavenge any oil that can have drained into the gearbox from the oil tank. Failure to completely scavenge the oil from the gearbox will cause a false indication of high oil consumption.
	NOTE: Check oil supply level within 15 minutes of engine shutdown.		
10.	Inspect for extension of impending oil filter bypass indicator. If indicator is extended, clean oil filter.	72-60-00, PARA 1.C.	It is possible for the impending oil filter bypass indicator to extend during a start of a cold soaked engine, giving an erroneous indication of a dirty oil filter. If the impending filter bypass indicator is extended, run the engine until the oil is at operating temperature and push the indicator button in. If the button remains in throughout the normal speed range of the engine, the filter does not require cleaning.

Table 603(cont)

INITIAL	100 HOUR INSPECTION	REFERENCE SECTION	REMARKS
	CAUTION: WHEN THERE IS EVIDENCE THAT THE FUEL FILTER HAS BEEN BY PASSED, THE GAS PRODUCER FUEL CONTROL INLET FILTER AND THE FUEL NOZZLE FILTER, MUST BE CLEANED. (REFER TO SPECIAL INSPECTIONS, 72-20-00, TABLE 608) IF ANY CONTAMINATION IS FOUND IN THE FUEL NOZZLE FILTER, THIS WILL REQUIRE THAT THE FUEL CONTROL BE SENT TO AN AUTHORIZED REPAIR FACILITY FOR INTERNAL CLEANING. REFERENCE MUST ALSO BE MADE TO THE AIRFRAME MAINTENANCE MANUAL FOR FUEL SYSTEM MAINTENANCE FOLLOWING FUEL CONTAMINATION.		
11.	Inspect for extension of impending fuel filter bypass indicator.	73-10-05, PARA 2.	If indicator is extended, replace fuel filter.
		73-20-02, PARA 5.A.	Inspect the fuel filter in the fuel control and in the fuel nozzle. Ground run engine to assure proper operation of control system.
11A	Clean and inspect the fuel nozzle.	73-10-03	Install fuel nozzle with proper number of spacers.
12.	Record component changes, inspections, and compliance with technical instructions as required. Report engine difficulties to Rolls-Royce and/or Authorized Maintenance Center (AMC) on a Field Service Report (FSR) submitted on FAST @ <https://fast.aeromanager-online.com> as required.		
13.	Without disassembly, check the compressor discharge air tubes. Inspect for air leaks, dents, cracks, chafing, and proper clamping.	72-40-00, Table 203.	
14.	Inspect compressor scroll for cracks. Pay particular attention to welded areas.		
15.	Clean the burner drain valve.	72-40-00, PARA 3.	Ensure that the airframe overboard is clear. Refer to aircraft manual for maintenance procedures.
16.	Inspect the anti-icing and overspeed solenoid valves for loose, chafed, frayed or broken wires, loose connections and security of attachment.		

Table 603(cont)

INITIAL	100 HOUR INSPECTION	REFERENCE SECTION	REMARKS
17.	Inspect the horizontal and vertical firewall shields for cracks.	72-50-00, PARA 5.J.	NOTE: Continued sheet metal or tube cracking can be an indication of excessive engine, engine accessory or airframe vibration.
18.	Check fuel control for proper rigging.	73-20-02, PARA 2.C.	
19.	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). Compliance with M250 CEB-72-3017 cancels this periodic inspection requirement.
20.	Remove, clean, operationally test, and reinstall the magnetic drain plugs: a. Inspect the locking pins and flanged inserts for wear.	72-00-00, PARA 8.E.	Torque 60-80 lb in. (6.8-9.0 N·m). No cracks are acceptable. Check each chip detector separately.
21.	Inspect ignition lead for burning, chafing or cracking of conduit. Also, check for loose connectors and/or broken lockwire.	74-20-02, PARA 2.	
	Perform operational check of ignitor.	74-20-01, PARA 2.B.	
22.	Remove, inspect, clean and reinstall the oil filter.	72-60-00, PARA 1.C.	
23.	Measure and record power turbine support pressure oil nozzle flow from scavenge oil strut. Record and retain flow record. Flow_____ Compare with previous flow. Any large deviation could indicate carbon buildup.	72-50-00, PARA 5.E.	While motoring N1 to 16-18%, the minimum flow is 90 cc in 15 seconds.

Table 603(cont)

INITIAL	100 HOUR INSPECTION	REFERENCE SECTION	REMARKS
24.	Drain the oil system and refill. Oil changed at: 150 hours_____ 300 hours_____ 600 hours_____	72-00-00, PARA 8.D., Engine Servicing.	150 hours or 6 months max. time limit. NOTE: With an STC approved external scavenge filter, the oil change interval is 300 hours or six months. NOTE: The hour and calendar limit can be extended to 600 hours or 12 months if an external oil filter of a type that has a valid STC (Supplemental Type Certificate) is installed on the engine and if there is use of an approved high thermal stability oil (Third Generation). NOTE: Refer to M250 CSL-3126, Recommended Sequence, Engine Oil Change for additional instructions.
25.	Service oil filter	72-60-00, PARA 1.C.,	If excessive carbon is found in the filter, inspect the scavenge and pressure oil system. Refer to 72-50-00, PARA 5.E., 5.F., 5.G., 5.H., 6.A.
26.	Remove, inspect and reinstall the turbine pressure oil system check valve.	72-60-00 PARA 2.H.	NOTE: Check Valve P/N 23074872 and subsequent part numbers are not applicable to this inspection (these valves are considered “ON CONDITION”).

Table 603(cont)

INITIAL	100 HOUR INSPECTION	REFERENCE SECTION	REMARKS
27.	Inspect P_c filter for proper clamping and security	73-20-03	
28.	Visually inspect the outer combustion case (sheet metal and weld seems) 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.	72-40-00 PARA 2.B.(1), (2), (3) and (4)	

Table 604

300 Hour Inspection

INITIAL	300 HOUR INSPECTION	REFERENCE SECTION	REMARKS
	In addition to the 100 hour inspection items, perform the following:		
	1. Inspect compressor mount for cracks.	72-00-00, PARA 1.A. (3), Engine Inspection/ Check.	
	2. Clean power turbine support scavenge oil strut.	72-50-00, PARA 5.G.	
	3. Clean external sump.	72-50-00, PARA 5.G.	
	4. Clean No. 1 bearing oil pressure reducer.	72-30-00, PARA 2.A.	Follow procedures in compressor front bearing and/or oil seal replacement.
	5. Clean pressure oil fitting screen assembly.	72-50-00, PARA 5.G.	
	CAUTION: EXTREME CARE MUST BE EXERCISED TO PREVENT TWISTING OF OIL NOZZLE DURING REMOVAL. DO NOT ATTEMPT TO STRAIGHTEN OR REUSE IF TWISTED.		
	6. Clean power turbine pressure oil nozzle.	72-50-00, PARA 5.G.	
	7. Remove and disassemble fuel nozzle. Clean and inspect fuel nozzle filter assembly. Assemble and install fuel nozzle.	73-10-03	
	8. Remove, inspect and reinstall the turbine pressure oil check valve.	72-60-00, PARA 2.H.	NOTE: Check Valve P/N 23074872 and subsequent part numbers are not applicable to this inspection (these valves are considered “ON CONDITION”).
	9. Inspect the engine rear mount for security and excessive bearing wear.	72-00-00, PARA 1.A. (4), Engine-Inspection/ Check.	
	10. Remove, clean, inspect and reinstall the P_c filter.	73-20-03 PARA 2. and 3.	If engine performance deteriorates, P_c filter cleaning intervals have to be reduced.

Table 604 (cont)

INITIAL	300 HOUR INSPECTION	REFERENCE SECTION	REMARKS
	WARNING: PROPER TIGHTENING OF ENGINE TUBING CONNECTION IS CRITICAL TO FLIGHT SAFETY. CORRECT TORQUE VALUES MUST BE USED AT ALL TIMES. EXCESSIVE TORQUE ON PNEUMATIC SENSING SYSTEM CONNECTIONS RESULTS IN CRACKING OF THE FLARE CAUSING AN AIR LEAK WHICH CAN CAUSE FLAME OUT, POWER LOSS OR OVERSPEED.		
11.	On power and accessory gearbox cover, check the applied torque on all turbine and exhaust support-to-gearbox retaining nuts.	72-50-00, para 1.B.	Torque must be 120-150 lb in. (14-17 N·m).
12.	Inspect the thermocouple assembly (TOT/MGT).	77-20-01, Para 2.B.	
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.	72-40-00, PARA 2.B.(1), (2), (3) and (4)	

Table 605

600 Hour Inspection

INITIAL	600 HOUR INSPECTION	REFERENCE SECTION	REMARKS
1.	Do the scavenge oil filter impending bypass function check per Facet Service Bulletin No. 111089.1 (Ref. Rolls-Royce CSL 3116) for all aircraft equipped with an external scavenge filter system. Follow the Facet instructions and time intervals, or follow this recommended inspection interval each 600 hrs.		

Table 606

1500 Hour Inspection

INITIAL	600 HOUR INSPECTION	REFERENCE SECTION	REMARKS
1.	Fuel control filter inspection.	73-20-02 PARA 5.A.	
2.	Deleted		

Table 607

750/2000 Hour Inspection

INITIAL	750/2000 HOUR INSPECTION 750 HOUR INSPECTION (M250-C30U Engine) 2000 HOUR INSPECTION (M250-C30R, -C30R/1 ENGINES)	REFERENCE SECTION	REMARKS
	The following inspections are required every 750 hours time since last inspection on M250-C30U engine and every 2000 hours since last inspection on M250-C30R and -C30R/1 engines.		
1.	Remove and replace the low pressure fuel filter element. Before discarding filter, inspect for signs of contaminants. If contaminants are found, inspect the entire fuel system and clean if necessary.	73-10-05	
	Inspect the combustion liner.	72-40-00, PARA 1.C.	
2.	Examine the outer combustion case for cracks using Leak-Tek and/or Fluorescent Penetrant Inspection (FPI).	72-40-00, PARA 2.B.(2), (3), and (4).	
3.	Inspect the compressor discharge air tubes.	72-40-00, PARA 4.C.	
4.	Remove and replace the low pressure fuel filter element.	73-10-05, PARA 2.	
5.	Inspect the spur adapter gearshaft, compressor rotor splined adapter and associated impeller bore.	72-30-00, PARA 4.B.(2) 4.C. and 4.E.	
6.	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.A. and 5.B.	Turbine to compressor coupling is part of the turbine assembly.

Table 607 (cont)

750/2000 Hour Inspection

7.	Visually examine the power drive train gears.	CSL 3225	Disassembly of the gearbox is not necessary for this inspection.
	NOTE: Not applicable for: Torquemeter gear part number 23084248 and subsequent Power take-off gear part number 23084249 and subsequent Pinion gear part number 23084247 and subsequent.		
	NOTE: Anytime the compressor is removed from the engine, inspect the N_1 shafting joints by doing Items 5 and 6 above.		
	NOTE: Anytime the turbine is removed from the engine, inspect the N_1 shafting joints by doing Item 6 above.		
	NOTE: Inspection intervals must not exceed 750 hours (M250-C30U), 2000 hours (M250-C30R, -C30R/1).		

A. The following items are details of checks in Table 602, Postflight Checks, and Tables 603, 604, 605, 606, and 607, Scheduled Inspections. These items are referenced in the Section column of the applicable inspection.

(1) Erosion Inspection

If the aircraft is subjected to sand or dust ingestion, inspect compressor for erosion and monitor performance.

NOTE: If the aircraft is subjected to sand or dust ingestion, periodic compressor erosion inspection is recommended. The frequency of the inspection should be based on the degree of ingestion and condition of the compressor at the last inspection. The need for more frequent compressor wash may also be indicated.

(2) Snow Ingestion Inspection

Inspect the engine for snow, ice, or water damage as follows:

(a) Obtain access to the compressor inlet but do not disassemble any engine parts.

NOTE: Replace the compressor assembly if any mechanical damage, distortion, or bending is detected on the compressor front support struts or on the impeller.

(3) Compressor Mount Inspection (300 hour Intervals)

Using a flashlight and mirror, inspect the sheet metal adjacent to the upper 3 gearbox attachment points. (See Figure 601.) Cracks will tend to follow the circumference of the washer or the spacer fillet radius in the mount for 180, then progress to the edge of the mount.

(a) If only one crack is observed and it is within acceptable limits, the frequency of inspection must be increased to every 25 hours until the mount is replaced.

(b) Replace mount if any crack has progressed to within 3/8 in. (9.5 mm) of the mount edge.

(c) Replace mount if more than one crack is found.