

Rolls-Royce

M250-C20R SERIES OPERATION AND MAINTENANCE

Table 602
Scheduled Inspections

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 THE OPERATION AND MAINTENANCE 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 accessory and broken or missing lock wire. Check accessible areas for obvious damage and evidence of fuel or oil leakage. Loose connections also include the requirement to inspect the slippage mark on all B-nut connections in the engine control system.	N/A		
2	Inspect all "B" nuts for application and alignment of torque paint. If missing, loosen "B" nut, retorque, and apply torque paint.	PARA 8.B., 72-00-00, Engine-Servicing		
3	Check mounting and support bolts to be sure they 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		
4	Inspect P _c filter for proper clamping.	N/A		

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Table 602
Scheduled Inspections (cont)

Item	Inspection/Maintenance Action	REF. PARA	✓	Initial
100 Hour Inspection (cont)				
5	Remove the Scroll-to-P _c Filter Tube Assembly at both ends and inspect for cracks using 10x power glass. Pay particular attention to the flared ends of the tube for cracks, and to the areas beneath the floating ferrules for fretting damage. Tubes found to contain cracks and/or excessive fretting damage are to be replaced by new parts of the same part number as removed.	N/A		
<p>NOTE: Excessive fretting is present when the ferrule has chafed the tube sufficiently to wear a step in the tube that can be felt with a thumbnail or other inspection aid.</p>				
6	With the Scroll-to-P _c Tube assembly still removed and using a 10x power glass, inspect the elbow in the compressor scroll for distress, cracks, and proper alignment. No cracks are permissible.	N/A		
7	Check accessible fuel system components, lines, and connections for security, damage or leakage. Accomplish with the boost pump on, if available. Remove, visually inspect and clean if visual condition dictates.	PARA 2., 73-00-00		
8	(M250-C20R/2(SP) engines only)			
<p>CAUTION: WHEN THERE IS EVIDENCE THAT THE FUEL PUMP FILTER HAS BEEN BYPASSED, THE GAS PRODUCER FUEL CONTROL INLET FILTER, THE FUEL NOZZLE FILTER, THE GOVERNOR FILTER AND THE HIGH PRESSURE FUEL FILTER, IF APPLICABLE, MUST BE CLEANED. (REFER TO SPECIAL INSPECTIONS, 72-00-00, TABLE 604) 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.</p>				
	a. Check for extension of impending fuel filter bypass indicator. If indicator has extended, and replace the fuel filter, reset indicator and inspect and clean the fuel control inlet filter and inspect the fuel nozzle filter for contamination.	PARA 1.D., 73-10-05 and PARA 4.A., 73-20-02		
	b. If indicator has not extended, drain the filter bowl and inspect the drained fuel for water and other forms of contamination; then purge air from the fuel system.	PARA 2.D., 73-00-00		

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Table 602 Scheduled Inspections (cont)				
Item	Inspection/Maintenance Action	REF. PARA	✓	Initial
	<u>100 Hour Inspection (cont)</u>			
9	Check fuel control and power turbine governor linkage for freedom of operation, full travel and proper rigging. Check security of linkage for loose or worn linkage and linkage bolts.	PARA 2.E., 73-20-02 and PARA 2.C., 73-20-01		
10	Inspect compressor inlet guide vanes and visible blades and vanes for foreign object damage.	N/A		
11	Clean compressor with chemical wash solution as required if operating in a smoggy area or if operating in conditions with airborne pollutants.	PARA 6., 72-30-00		
12	Inspect the compressor scroll for cracks or breaks at the anti-ice air valve and customer bleed port. If cracks or breaks are detected, check engine for possible vibration causes.	PARA 1.D.(2), this Section		
13	Visually inspect compressor discharge tubes for cracks, damage, deterioration or corrosion using a bright light and mirror as necessary. The compressor discharge tubes do not have to be removed. Perform a Leak Tec check for the installed compressor discharge tubes and FPI removed tubes.	PARA 4.A., 72-40-00		
14	Inspect the anti-icing valve (all models) and N ₂ over-speed solenoid valve (M250-C20R, -C20R/1, -C20R/1(RS) only) for loose, chafed, frayed or broken wires, loose connectors, and security of attachment.	PARA 3., 75-10-01 and PARA 5. and 6., 73-21-00		
15	Deleted			
16	Check anti-ice valve for security, worn parts and proper operation. Valve need not be removed or disassembled unless a problem is detected.	PARA 3., 75-10-01		
17	Inspect compressor mount inserts for looseness or oil leakage. Replace if loose and check engine for possible vibration causes.	PARA 4.E., 72-60-00 and PARA 1.D.(2), this Section		
18	Inspect the turbine support assemblies and engine exhaust ducts for condition of welded joints, for cracks and buckling. Check exhaust duct clamps for proper installation, condition, and torque.	PARA 7.A., 72-50-00		
18A	Deleted			

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100 Hour Inspection (cont)				
19*	Drain the oil system and refill.	N/A		
	<p>Oil changed at:</p> <p>100 hours: _____</p> <p>200 hours: _____</p> <p>300 hours: _____</p> <p>600 hours: _____</p> <p>The maximum oil change interval is 100 hours or 6 months, whichever occurs first. This limit can be extended if the following conditions are met.</p> <p>A. If an external scavenge oil filter system is installed the oil change interval can be increased to 200 hours or 6 months, whichever occurs first.</p> <p>B. With an approved HTS (Third Generation Oil), but no external scavenge oil filter system, the oil change interval can be increased to 300 hours or 12 months, whichever occurs first.</p> <p>C. With an approved HTS (Third Generation Oil), and an external scavenge oil filter system is installed, the oil change interval can be increased to 600 hours or 12 months, whichever occurs first.</p> <p>CAUTION: SOME OPERATORS AND/OR HARSH ENVIRONMENTS CAN DICTATE OIL CHANGES AT MORE FREQUENT INTERVALS.</p> <p>NOTE: See oil change flow chart for further detail. (See Figure 601)</p> <p>NOTE: External scavenge oil filter systems must have a valid STC (Supplemental Type Certificate).</p>	PARA 10.C., 72-00-00, Engine-Servicing		
19A	Remove, inspect, and clean the oil filter. Note any accumulation of metal chips, debris, or carbon particles. Conduct further inspection of the lube system and/or engine gear train/bearings if metal chips or debris are found. See Items 19D, 35, 36, 37, and 38 below if carbon particles are found.	PARA 1.C., 72-60-00		
<p>NOTE: Follow STC manufacture's recommendations regarding replacement/cleaning of external oil filter elements. Inspect removed elements for any accumulations of metal chips or carbon particles. It can prove helpful to cut apart disposable (paper) filter elements to facilitate this inspection. If chips, debris, or carbon particles are found, proceed with additional inspection/maintenance as outlined in Item 19A. above.</p>				
19B*	Inspect and clean the turbine pressure oil check valve.	PARA 2.J., 72-60-00		

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Table 602 Scheduled Inspections (cont)				
Item	Inspection/Maintenance Action	REF. PARA	✓	Initial
100 Hour Inspection (cont)				
NOTE: Check Valve P/N 23074872 and subsequent part numbers are not applicable to this inspection (these valves are considered "ON CONDITION").				
19C*	Turbine pressure oil tube screen assembly. Detach the clamp, then disconnect the power turbine pressure oil tube at the connector (tee). Loosen the the tube coupling nut at the fireshield elbow only enough to allow sufficient movement of the tube to enable removal of the screen. At assembly, tighten the connector coupling nut to 200-250 lb in. (23-28 N.m). Tighten the fireshield elbow coupling nut to 80-120 lb in. (9-14 N.m). Tighten the clamp nut to 35-40 lb in. (3.9-4.5 N.m).	N/A		
19D*	Measure the oil flow from the scavenge passage or the external sump of the power turbine and the scavenge passage of the gas producer turbine support. It is recommended that the external sump is not removed for this check.	PARA 6.E., 72-50-00		
NOTE: This step must be performed before draining oil or after the oil system is refilled.				
NOTE: Items designated with an asterisk (*) are to be accomplished on the same intervals as item 19* (Oil Change).				
19E	Inspect magnetic chip detector plugs.	PARA 10.G., 72-00-00, Engine-Servicing		
19F	Inspect quick disconnect magnetic chip detector plugs and flanged inserts for wear, if installed.	PARA 10.G., 72-00-00, Engine-Servicing		
19G	Remove, inspect and clean the fuel nozzle. If no airframe mounted fuel filter is installed, inspect the fuel nozzle filter.	73-10-03		
20	If installed, inspect the start counter for proper operation (increase in count) and for loose, chafed, frayed, or broken wires, and loose connectors.	PARA 1., 74-20-03		
21	(M250-C20R, -C20R/1, -C20R/1(RS) only) Inspect the electrical harness for loose, chafed, frayed, or broken wires, and loose connectors.	PARA 7., 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.	PARA 2., 75-10-02		
23	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.	PARA 2.B.(1), (2) (3) and (4), 72-40-00		
24	Clean the burner drain valve.	PARA 3.A., 72-40-00		

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Table 602
Scheduled Inspections (cont)

Item	Inspection/Maintenance Action	REF. PARA	✓	Initial
<u>100 Hour Inspection (cont)</u>				
25	Inspect the ignition lead for burning, chafing, or cracking of conduit and loose connectors and broken lockwire.	PARA 2., 74-20-02		
26	Review engine records for compliance with all mandatory bulletins, inspections and airworthiness directives.	N/A		
27	Review engine records for time limited parts components, accessory or modules.	N/A		
28	Enter component changes, inspection compliance, etc., in log book as required.	N/A		
28A	If the optional CEB 72-4101 has been accomplished without removal of the bearing cage, then inspect the bearing cage retention for looseness.	PARA 2.B.(2), CEB 72-4101 Revision 5 (or later revision)		
<u>300 Hour Inspection</u>				
In addition to the 100 hour perform the following:				
<p>CAUTION: INSPECTION FREQUENCY MUST BE BASED ON THE NATURE OF THE EROSIIVE AND/OR CORROSIVE ENVIRONMENT. THE OPERATING ENVIRONMENT CAN DICTATE A MORE FREQUENT INSPECTION INTERVAL. WHEN OPERATING IN A CORROSIVE AND/OR EROSIIVE ENVIRONMENT FOR NON-COATED COMPRESSOR WHEELS, THE INSPECTION MUST NOT EXCEED 300 HOURS OR 6 MONTHS. FOR COATED COMPRESSOR WHEELS, INSPECTION MUST NOT EXCEED 300 HOURS OR 12 MONTHS. FOR COMPRESSOR BLISKS, INSPECTION MUST NOT EXCEED 300 HOURS OR 12 MONTHS. IF ANY WHEEL EXHIBITS CORROSION AND/OR EROSION, THE INSPECTION REQUIREMENT MUST REVERT BACK TO 300 HOURS OR SIX MONTHS.</p>				
29	Inspect the compressor case, blades, and vanes when operating in an erosive and/or corrosive environment. 10X power magnification is recommended for corrosion pit inspection.	PARA 1.D.(8), this Section and PARA 5.C., 72-30-00		
<p>CAUTION: AIRCRAFT INSTALLED ENGINE FUEL-PUMP FILTER DIFFERENTIAL PRESSURE WARNING SYSTEMS AND/OR OPERATING EXPERIENCE CAN DICTATE REPLACEMENT AT A LESSER TIME INTERVAL. IN NO INSTANCE WILL THE 300 HR REPLACEMENT INTERVAL BE EXCEEDED.</p>				
(M250-C20R,-C20R(ST),-C20R/1,-C20R/1(RS),-C20R/2,-C20R/4 engines only)				
30	Replace the fuel filter element. Before discarding filter, inspect for signs of contaminants. If any are found, inspect the entire fuel system and clean if necessary.	PARA 1.E., 73-10-01		
<p>NOTE: This filter is a throw-away item; it is not cleanable. Fuel filter replacement for M250-C20R/2(SP) engine (CECO suction pump, P/N 23051980 and subsequent) is not required at 300 hours. Refer to the 1500 Hour Scheduled Inspection in this Table for M250-C20R/2(SP) requirement.</p>				

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Table 602 Scheduled Inspections (cont)				
Item	Inspection/Maintenance Action	REF. PARA	✓	Initial
300 Hour Inspection (cont)				
CAUTION: WHEN THERE IS EVIDENCE THAT THE FUEL PUMP FILTER HAS BEEN BYPASSED, THE GAS PRODUCER FUEL CONTROL INLET FILTER, THE FUEL NOZZLE FILTER, THE GOVERNOR FILTER AND THE HIGH PRESSURE FUEL FILTER, IF APPLICABLE, MUST BE CLEANED. (REFER TO SPECIAL INSPECTIONS, 72-00-00, TABLE 604) 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.				
	(M250-C20R, -C20R/1, -C20R/1 (RS), -C20R/2, -C20R/4, -C20R(ST) engines only)			
31	Do a fuel pump bypass valve operation check when a fuel filter is replaced. NOTE: Applicable to Sundstrand/Pesco and Argo-Tech/TRW manufactured pumps only.	PARA 1.C., 73-10-01		
32	(M250-C20R, -C20R(ST), -C20R/1, -C20R/1 (RS), -C20R/2, -C20R/4 engines only.) Purge air from the fuel system.	PARA 2.D., 73-00-00		
33	Remove and Disassemble Fuel Nozzle. Clean and Inspect Fuel Nozzle Filter Assembly. Reassemble Fuel Nozzle.	73-10-03		
34	Remove, clean and inspect engine P _c filter every 300 hours or earlier as engine performance dictates.	PARA 3., 73-20-03		
35	Inspect and clean the No. 1 bearing oil pressure reducer.	PARA 3., 72-30-00		
36	Visually inspect external sump. Clean internal carbonous deposits from sump or replace if necessary.	N/A		
37	Inspect scavenge oil strut in the power turbine support. Clean carbonous deposits from strut.	PARA 6.F., 72-50-00		
38	Inspect No. 6 and 7 bearing pressure oil nozzle. Clean internal carbonous deposits from nozzle.	PARA 6.H., 72-50-00		
38A	Inspect the thermocouple assembly (TOT/MGT).	PARA 2.B., 77-20-01		
<u>Other Scheduled Inspections</u>				
600 Hour Inspection				
39	Do the scavenge oil filter impending bypass functional test per Facet Service Bulletin No. 090589 (Ref. Rolls-Royce M250 CSL 4034) for 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
Scheduled Inspections (cont)

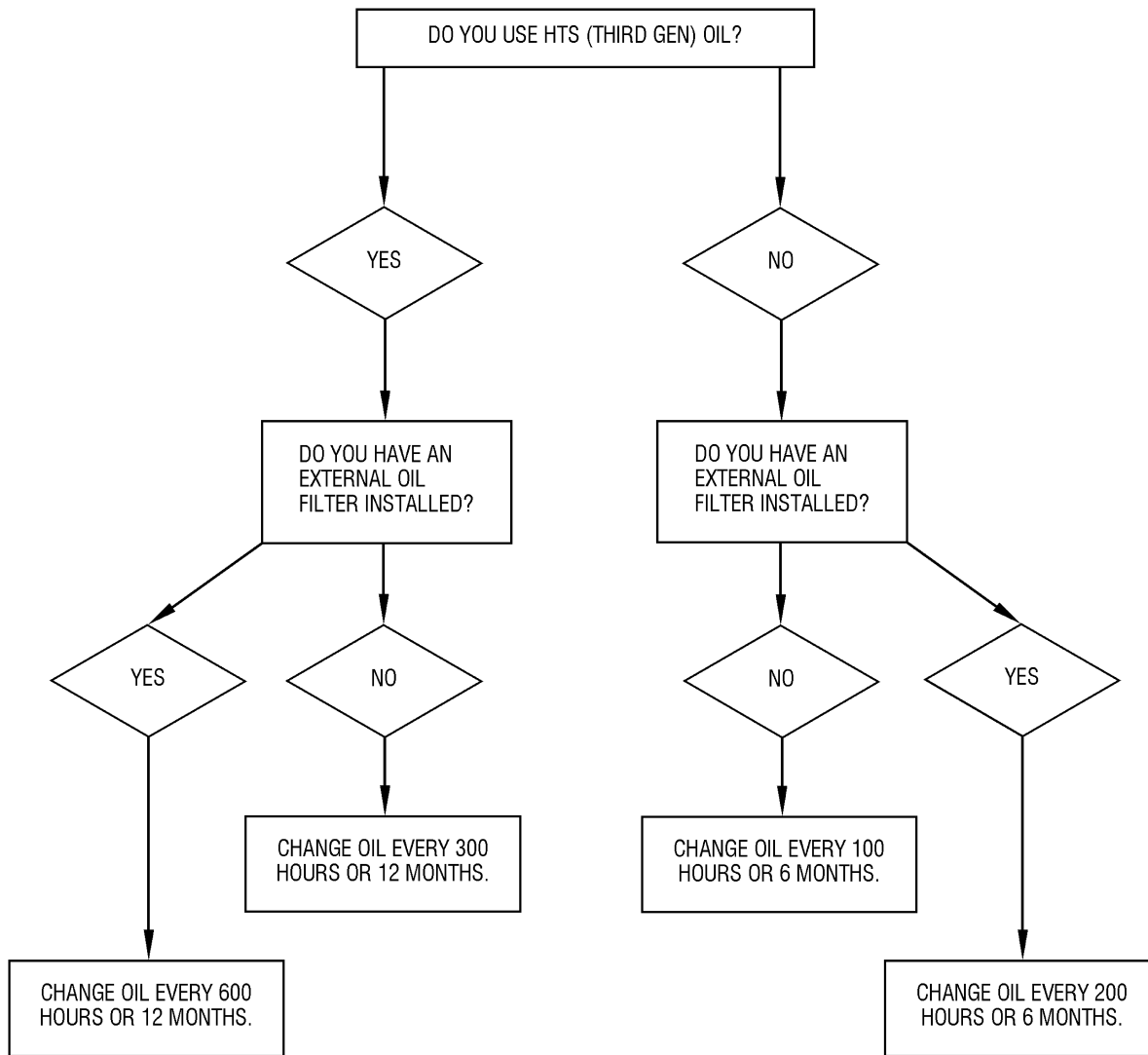
Item	Inspection/Maintenance Action	REF. PARA	✓	Initial
	<u>1000 Hour Inspection</u>			
40	Inspect Py port on Bendix power turbine governor per M250 CEB-A-73-4012 .	N/A		
NOTE: If CEB-A-73-4015 or CEB-A-73-4031 have been accomplished, this inspection is not required.				
	<u>1500 Hour Inspection</u>			
41	Replace the fuel control filter assembly.	PARA 4.A., 73-20-02		
42	Replace high-pressure fuel filter element. (M250-C20R/2(SP) engine only)	PARA 1.C., 73-10-05		
43	Inspect and clean fuel pump inlet filter. (M250-C20R/2(SP) engine only)	PARA 1.D., 73-10-05		
44	Deleted			
	<u>1750 Hour Inspection</u>			
45	Inspect the N ₂ overspeed control mounting dampers for tears, missing pieces, or deterioration of rubber any time the N ₂ overspeed control is removed from the engine or at 1750 hours, whichever comes first. (M250-C20R, -C20R/1, -C20R/1(RS)).	N/A		
46	Inspect the compressor case, blades, and vanes. Inspection frequency must be made as necessary by operating environment and condition of the compressor at the last inspection. In erosive and/or corrosive environment, inspect case at least every 300 hours. In any environment do not exceed 1750 hours without case inspection. 10X power magnification is recommended for corrosion pit inspection.	PARA 1.D.(8) , this Section and PARA 5.C., 72-30-00		
47	Heavy Maintenance Inspection (HMI). Heavy Maintenance Inspection must consist of gas producer turbine wheel replacement and inspection of assembled components per Rolls-Royce published documents. It is the responsibility of the operator to assure that the total time and cycle life limits of specific parts listed in Engine - Description and Operation, Tables 6, 7, and 8, 72-00-00 are not exceeded.	N/A		

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M250 OIL CHANGE FLOWCHART



NOTE: Engines with dry spline starter generators must change the oil at each 100 hours or 6 months regardless of oil type.

ACS062XA

Oil Change Flowchart
Figure 601

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C. Alternate Inspection Schedule

Based on current engine configuration and the use of modern oils, operators can use this alternate inspection schedule. Prerequisites for this include:

- (1) The use of High Thermal Stability (third generation) oils. Reference [PARA 4.C., 72-00-00, Engine-Description and Operation](#), for oil specifications and mixing cautions.
- (2) The engine must have an external oil filter installed that has a valid STC (Supplemental Type Certificate).

Table 603 Alternate Scheduled Inspection				
Inspection Checksheet				
Owner _____		Date _____		
A/C Make/Model _____		S/N _____	Reg No. _____	TSN _____
Engine S/N _____		TSN _____	TSO _____	
<p>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.</p> <p>CAUTION: BEFORE UNDERTAKING ANY INSPECTION OR MAINTENANCE ACTION, CONSULT THE REFERENCED PARAGRAPHS OF THE OPERATION AND MAINTENANCE MANUAL. FAILURE TO FOLLOW THE RECOMMENDED INSTRUCTIONS IN THE MANUAL COULD RESULT IN EQUIPMENT DAMAGE OR DESTRUCTION, POSSIBLY RESULTING IN PERSONNEL DEATH OR INJURY.</p> <p>NOTE: THIS INSPECTION CHECKLIST CAN ONLY BE USED IF THE OPERATOR IS USING AN APPROVED THIRD GENERATION (HTS) OIL AND AN APPROVED AIRFRAME MOUNTED SCAVENGE OIL FILTER.</p> <p>NOTE: COMPLIANCE TO THE 150 HOUR AND 300 HOUR ITEMS IN THIS TABLE MUST BE PERFORMED AT LEAST EVERY 12 CALENDAR MONTHS OR BY HOURS, WHICHEVER OCCURS FIRST.</p>				
Item	Inspection/Maintenance Action	REF. PARA	✓	Initial
150 Hour Inspection				
1	Visually inspect the compressor discharge tubes for cracks, damage, deterioration, or corrosion using a bright light and mirror as necessary. The compressor discharge tubes do not have to be removed. Perform a Leak Tec check for the installed compressor discharge tubes and FPI the removed tubes.	PARA 4.A., 72-40-00		
2	Inspect for discharge air tube inserts that are cocked or backing out of the scroll. If cocked or loose inserts are detected, check the engine for possible vibration causes. Check the air tubes for cracks.	PARA 4.A., 72-40-00		
3	Remove, inspect, and clean the fuel nozzle. If no airframe mounted fuel filter is installed, inspect the fuel nozzle filter.	73-10-03		
4	(M250-C20R/2(SP) engines only)			

72-00-00

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Table 603
Alternate Scheduled Inspection

Item	Inspection/Maintenance Action	REF. PARA	✓	Initial
	150 Hour Inspection (cont)			
<p>CAUTION: WHEN THERE IS EVIDENCE THAT THE FUEL PUMP FILTER HAS BEEN BYPASSED, THE GAS PRODUCER FUEL CONTROL INLET FILTER, THE FUEL NOZZLE FILTER, THE GOVERNOR FILTER, AND THE HIGH-PRESSURE FUEL FILTER, IF APPLICABLE, MUST BE CLEANED. (REFER TO SPECIAL INSPECTIONS, 72-00-00, TABLE 604.) 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.</p>				
	a. Check for extension of the impending fuel filter bypass indicator. If the indicator has extended and the fuel filter replaced, reset the indicator, inspect and clean the fuel control inlet filter, and inspect the fuel nozzle filter for contamination. Test the bypass system.	PARA 1.C., 73-10-05 and PARA 4.A., 73-20-02		
	b. If the indicator has not extended, drain the filter bowl and inspect the drained fuel for water and other forms of contamination, then purge air from the fuel system.	PARA 2.D., 73-00-00		
	c. If the optional CEB 72-4101 has been accomplished without removal of the bearing cage, then inspect the bearing cage retention for looseness.	PARA 2.B. (2), CEB 72-4101 Revision 5 (or later revision)		
5	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.	Para 2.B.(1), (2), (3) and (4), 72-40-00		
	300 Hour Inspection			
	In addition to the 150 hour, perform the following:			
1	Clean the compressor with the chemical wash solution as required if operating in a smoggy area or if operating in conditions with airborne pollutants.	PARA 6., 72-30-00		
2	Inspect the entire engine for loose or missing bolts, broken or loose connections, security of mounting accessory, and broken or missing lock wire. Check accessible areas for obvious damage and evidence of fuel or oil leakage. Loose connections also include the requirement to inspect the slippage mark on all B-nut connections in the engine control system.	N/A		
3	Inspect all B nuts for application and alignment of torque paint. If missing, loosen B nut, retorquer, and apply torque paint.	PARA 8.B., 72-00-00, Engine-Servicing		

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Table 603 Alternate Scheduled Inspection (cont)				
300 Hour Inspection (cont)				
Item	Inspection/Maintenance Action	REF. PARA	✓	Initial
4	Check mounting and support bolts to be sure they 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		
5	Inspect the P _c filter for proper clamping.	N/A		
6	Remove the Scroll-to-P _c Filter Tube Assembly at both ends and inspect for cracks using 10x power glass. Pay particular attention to the flared ends of the tube for cracks, and to the areas beneath the floating ferrules for fretting damage. Tubes found to contain cracks and/or excessive fretting damage are to be replaced by new parts of the same part number as removed.	N/A		
NOTE: Excessive fretting is present when the ferrule has chafed the tube sufficiently to wear a step in the tube that can be felt with a thumbnail or other inspection aid.				
7	With the Scroll-to-P _c Tube assembly still removed and using a 10x power glass, inspect the elbow in the compressor scroll for distress, cracks, and proper alignment. No cracks are permissible.	N/A		
8	Check the accessible fuel system components, lines, and connections for security, damage, or leakage. Accomplish with the boost pump on, if available. Remove and visually inspect and clean if visual condition dictates.	PARA 2., 73-00-00		
9	Check the fuel control and power turbine governor linkage for freedom of operation, full travel, and proper rigging. Check the security of linkage for loose or worn linkage and linkage bolts.	PARA 2.E., 73-20-02 and PARA 2.C., 73-20-01		
10	Inspect the compressor inlet guide vanes and visible blades and vanes for foreign object damage.	N/A		
11	Inspect the compressor scroll for cracks or breaks at the anti-ice air valve and customer bleed port. If cracks or breaks are detected, check the engine for possible vibration causes.	PARA 1.D.(2), this Section		
12	Inspect the anti-icing valve (all models) and N ₂ over-speed solenoid valve (M250-C20R, -C20R/1, -C20R/1(RS) only) for loose, chafed, frayed, or broken wires, loose connectors, and security of attachment.	PARA 3., 75-10-01 and PARA 5. and 6., 73-21-00		
13	Check the anti-ice valve for security, worn parts, and proper operation. The valve need not be removed or disassembled unless a problem is detected.	PARA 3., 75-10-01		
14	Inspect the compressor mount inserts for looseness or oil leakage. Replace if loose and check engine for possible vibration causes.	PARA 4.E., 72-60-00 and PARA 1.D.(2), this Section		

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Table 603
Alternate Scheduled Inspection (cont)

Item	Inspection/Maintenance Action	REF. PARA	✓	Initial
<u>300 Hour Inspection (cont)</u>				
15	Inspect the turbine support assemblies and the engine exhaust ducts for condition of welded joints, for cracks, and buckling. Check the exhaust duct clamps for proper installation, condition, and torque.	PARA 7.A., 72-50-00		
16	Inspect and the clean turbine pressure oil check valve.	PARA 2.J., 72-60-00		
NOTE: Check Valve P/N 23074872 and subsequent part numbers are not applicable to this inspection (these valves are considered "ON CONDITION").				
17	Turbine pressure oil tube screen assembly. Detach the clamp, then disconnect the power turbine pressure oil tube at the connector (tee). Loosen the tube coupling nut at the fireshield elbow only enough to allow sufficient movement of the tube to enable removal of the screen. At assembly, tighten the connector coupling nut to 200-250 lb in. (23-28 N·m). Tighten the fireshield elbow coupling nut to 80-120 lb in. (9-14 N·m). Tighten the clamp nut to 35-40 lb in. (3.9-4.5 N·m).	N/A		
18	Measure oil flow from the scavenge passage of the external sump and from the scavenge passage of the gas producer support. It is recommended that the external sump is not removed for this check.	PARA 6.E., 72-50-00		
19	Drain the oil system and refill.			
	Oil changed at: 300 hours/6 months: (Optional) _____ 600 hours/12 months: _____ Maximum oil change interval is 600 hours or 12 months, whichever occurs first. Some operators experience and/or harsh environments can dictate oil changes at more frequent intervals.	PARA 10.C., 72-00-00, Engine-Servicing		
19A	Remove, inspect, and clean the oil filter. Note any accumulation of metal chips, debris, or carbon particles. Conduct further inspection of the lube system and/or engine gear train/bearings if metal chips or debris are found. See Items 19, 19D, 19E, and 19F below if carbon particles are found.	PARA 1.C., 72-60-00		
NOTE: Follow the STC manufacture's recommendations regarding replacement/cleaning of external oil filter elements. Inspect removed elements for any accumulations of metal chips or carbon particles. It can prove helpful to cut apart disposable (paper) filter elements to facilitate this inspection. If chips, debris, or carbon particles are found, proceed with additional inspection/maintenance as outlined in Item 19A. above.				

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Table 603 Alternate Scheduled Inspection (cont)				
Item	Inspection/Maintenance Action	REF. PARA	✓	Initial
<u>300 Hour Inspection (cont)</u>				
19B	Inspect the magnetic chip detector plugs.	PARA 10.G., 72-00-00, Engine-Servicing		
19C	Inspect the quick disconnect magnetic chip detector plugs and flanged inserts for wear, if installed.	PARA 10.G., 72-00-00, Engine-Servicing		
19D	Visually inspect the external sump. Clean internal carbonous deposits and build up from the sump or replace if necessary.	N/A		
19E	Inspect the scavenge oil strut in the power turbine support. Clean carbonous deposits from the strut.	PARA 6.F., 72-50-00		
19F	Inspect the No. 6 and 7 bearing pressure oil nozzle. Clean internal carbonous deposits from the nozzle.	PARA 6.H., 72-50-00		
19G	Inspect the thermocouple assembly (TOT/MGT).	PARA 2.B., 77-20-01		
19H	Remove and disassemble the fuel nozzle. Clean and examine the fuel nozzle filter assembly. Assemble and install fuel nozzle.	73-10-03		
20	If installed, inspect the start counter for proper operation (increase in count) and for loose, chafed, frayed, or broken wires, and loose connectors.	PARA 1., 74-20-03		
21	(M250-C20R, -C20R/1, -C20R/1(RS) only) Inspect the electrical harness for loose, chafed, frayed, or broken wires, and loose connectors.	PARA 7., 73-21-00		
22	Check the condition of the bleed valve gasket (without removing bleed valve). Replace the gasket if air leaks (blowouts) can be detected.	PARA 2., 75-10-02		
23	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.	PARA 2.B.(1), (2), (3), and (4), 72-40-00		
24	Clean the burner drain valve.	PARA 3., 72-40-00		
25	Inspect the ignition lead for burning, chafing, or cracking of conduit and loose connectors and broken lockwire.	PARA 2., 74-20-02		
26	Review the engine records for compliance with all mandatory bulletins, inspections, and airworthiness directives.	N/A		
27	Review engine records for time limited parts components, accessories, or modules.	N/A		
28	Enter component changes, inspection compliance, etc., in the log book as required.	N/A		

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Table 603

Alternate Scheduled Inspection (cont)

Item	Inspection/Maintenance Action	REF. PARA	✓	Initial
	300 Hour Inspection (cont)			
<p>CAUTION: INSPECTION FREQUENCY MUST BE BASED ON THE NATURE OF THE EROSIIVE AND/OR CORROSIVE ENVIRONMENT. THE OPERATING ENVIRONMENT CAN DICTATE A MORE FREQUENT INSPECTION INTERVAL. FOR NON-COATED COMPRESSOR WHEELS, THE INSPECTION MUST NOT EXCEED 300 HOURS OR 6 MONTHS. FOR COATED COMPRESSOR WHEELS, INSPECTION MUST NOT EXCEED 300 HOURS OR 12 MONTHS. FOR COMPRESSOR BLISKS, INSPECTION MUST NOT EXCEED 300 HOURS OR 12 MONTHS. IF ANY WHEEL EXHIBITS CORROSION AND/OR EROSION, THE INSPECTION REQUIREMENT MUST REVERT BACK TO 300 HOURS OR SIX MONTHS.</p>				
29	Inspect the compressor case, blades, and vanes when operating in an erosive and/or corrosive environment. 10X power magnification is recommended for corrosion pit inspection.	PARA 1.D.(8), this Section and PARA 5.C., 72-30-00		
<p>CAUTION: AIRCRAFT INSTALLED ENGINE FUEL-PUMP FILTER DIFFERENTIAL PRESSURE WARNING SYSTEMS AND/OR OPERATING EXPERIENCE CAN DICTATE REPLACEMENT AT A LESSER TIME INTERVAL. IN NO INSTANCE WILL THE 300 HOUR REPLACEMENT INTERVAL BE EXCEEDED.</p>				
	(M250-C20R,-C20R(ST),-C20R/1,-C20R/1(RS),-C20R/2,-C20R/4 engines only)			
30	Replace the fuel filter element. Before discarding the filter, inspect for signs of contaminants. If any are found, inspect the entire fuel system and clean if necessary.	PARA 1.E., 73-10-01		
<p>NOTE: This filter is a throw-away item; it is not cleanable. Fuel filter replacement for the M250-C20R/2(SP) engine (CECO suction pump, P/N 23051980 and subsequent) is not required at 300 hours. Refer to the 500 Hour Scheduled Inspection in this table for the M250-C20R/2(SP) requirement.</p>				
<p>CAUTION: WHEN THERE IS EVIDENCE THAT THE FUEL PUMP FILTER HAS BEEN BYPASSED, THE GAS PRODUCER FUEL CONTROL INLET FILTER, THE FUEL NOZZLE FILTER, THE GOVERNOR FILTER, AND THE HIGH-PRESSURE FUEL FILTER, IF APPLICABLE, MUST BE CLEANED. (REFER TO SPECIAL INSPECTIONS, 72-00-00, TABLE 604.) 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.</p>				
	(M250-C20R,-C20R/1,-C20R/1(RS),-C20R/2,-C20R/4,-C20R(ST) engines only)			
31	Do a fuel pump bypass valve operation check when a fuel filter is replaced. NOTE: Applicable to Sundstrand/Pesco and Argo-Tech/TRW manufactured pumps only.	PARA 1.C., 73-10-01		

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Table 603 Alternate Scheduled Inspection (cont)				
Item	Inspection/Maintenance Action	REF. PARA	✓	Initial
	<u>300 Hour Inspection (cont)</u>			
32	(M250-C20R, -C20R(ST), -C20R/1, -C20R/1(RS), -C20R/2, -C20R/4 engines only.) Purge air from the fuel system.	PARA 2.D., 73-00-00		
33	Remove, clean, and inspect the engine P _c filter every 300 hours or earlier as engine performance dictates.	PARA 3., 73-20-03		
	<u>Other Scheduled Inspections</u>			
	<u>600 Hour Inspection</u>			
1	Do the scavenge oil filter impending bypass functional test per Facet Service Bulletin No. 090589 (Ref. Rolls-Royce M250 CSL 4034) for 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		
2	Inspect and clean the No. 1 bearing oil pressure reducer.	PARA 3., 72-30-00		
	<u>1000 Hour Inspection</u>			
1	Inspect the Py port on the Bendix power turbine governor per M250 CEB-A-73-4012.	N/A		
NOTE: If CEB-A-73-4015 or CEB-A-73-4031 have been accomplished, this inspection is not required.				
	<u>1500 Hour Inspection</u>			
1	Replace the fuel control filter assembly.	PARA 4.A., 73-20-02		
2	Replace the high-pressure fuel filter element. (M250-C20R/2(SP) engine only)	PARA 1.C., 73-10-05		
3	Inspect and clean the fuel pump inlet filter. (M250-C20R/2(SP) engine only)	PARA 1.D., 73-10-05		
	<u>1750 Hour Inspection</u>			
1	Inspect the N ₂ overspeed control mounting dampers for tears, missing pieces, or deterioration of rubber any time the N ₂ overspeed control is removed from the engine or at 1750 hours, whichever comes first. (M250-C20R, -C20R/1, -C20R/1(RS)).	N/A		

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Table 603 Alternate Scheduled Inspection (cont)				
Item	Inspection/Maintenance Action	REF. PARA	✓	Initial
1750 Hour Inspection (cont)				
2	Inspect the compressor case, blades, and vanes. Inspection frequency must be made as necessary by the operating environment and condition of the compressor at the last inspection. In an erosive and/or corrosive environment, inspect the case at least every 300 hours. In any environment, do not exceed 1750 hours without a case inspection. 10X power magnification is recommended for corrosion pit inspection.	PARA 1.D.(8), this Section and PARA 5.C., 72-30-00		
3	Heavy Maintenance Inspection (HMI). Heavy Maintenance Inspection must consist of gas producer turbine wheel replacement and inspection of assembled components per Rolls-Royce published documents. It is the responsibility of the operator to assure that the total time and cycle life limits of specific parts listed in Engine - Description and Operation, Tables 6, 7, and 8, 72-00-00 are not exceeded.	N/A		

D. SPECIAL INSPECTIONS.

Special inspections are required when the engine has been subjected to abnormal operating conditions, when engine damage is suspected, or when associated parts are removed from the engine. The special occurrence, the component or system to be inspected, and the nature of the inspection are given in [Table 604](#).

Table 604
Special Inspections

Item	Occurrence	Component or System	Required Action
1	Engine removal from aircraft	Engine, general Start Counter	a az
2	Compressor removal from engine	Anti-icing air valve Gearbox compressor mount inserts	p ad
3	Turbine removal from engine	Combustion liner Outer combustion case Compressor discharge air tubes Burner drain valve Turbine pressure oil check valve Power turbine to pinion gear coupling shaft	aa z ab ac aq bd
	NOTE:	Check Valve P/N 23074872 and subsequent part numbers are not applicable to this inspection (these valves are considered "ON CONDITION").	
4	Rigid tube and/or accumulators removal from engine	Rigid tube and/or accumulators	e, av
5	Hard landing (over 10g)	Engine, general	b
6	Sudden stoppage of rotor	Engine, general Compressor Magnetic Drain Plugs	c j ag
7	Operation in erosive environment	Compressor	l
8	Snow or ice ingestion	Compressor	h

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