

**Rolls-Royce**  
M250-B15G OPERATION AND MAINTENANCE

Table 9

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 OPERATION AND MAINTENANCE MANUAL COULD RESULT IN EQUIPMENT DAMAGE OR DESTRUCTION, POSSIBLY RESULTING IN PERSONNEL DEATH OR INJURY.

<u>Item</u>	<u>Inspection/Maintenance Action</u>	<u>Reference</u>	<input type="checkbox"/>	<u>Initial</u>
<u>100 Hour Inspection</u>				
1	Inspect the engine engine for loose or missing bolts, broken or loose connections, security of mounting accessories and broken or missing lock wire. Check accessible areas for obvious damage and evidence or fuel or 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.	N/A		
2	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		
3	Check accessible fuel system components, lines, and connections for security, damage or leakage. Accomplish with the boost pump on, if available.	N/A		
4	Inspect P <sub>c</sub> filter assembly as follows: Without removal of the P <sub>c</sub> filter assembly from the scroll, 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 and replace P <sub>c</sub> filter assembly.	N/A		

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Table 9 (cont)				
Item	Inspection/Maintenance Action	Reference	✓	Initial
<u>100 Hour Inspection</u> (cont)				
5	Check fuel and propeller system control linkage for freedom of operation, full travel and proper rigging. Check for excessively high throttle forces and security of linkage. Also check for loose or worn linkage and linkage bolts.	3-150		
6	Inspect compressor inlet guide vanes and visible blades and vanes for foreign object damage.	N/A		
7	Clean compressor with chemical wash solution if operating in a smoggy area (as required).	3-39		
8	Inspect the compressor scroll for cracks or breaks at the anti-ice valve and customer bleed ports. If cracks or breaks are detected, check engine for possible vibration causes.	3-96		
9	Inspect for discharge air tube inserts that are cocked or backing out of the scroll. If cocked or loose inserts are detected, check engine for possible vibration causes.	3-96		
10	Check anti-icing valve for security, worn parts and proper operation. Valve need not be removed or disassembled unless a problem is detected.	3-215		
11	Inspect compressor mount inserts for looseness or oil leakage. Replace if loose and check engine for possible vibration causes.	3-96 3-265 3-266		
12	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.	3-246		
13	Wet spline starter-generator gearshafts (new production or those replaced in accordance with the Rolls-Royce Commercial Engine Bulletin (M250-B15G TP CEB-32) do not need periodic inspection and lubrication. Clean and inspect any other starter-generator gearshaft. Clean the female splines of the starter-generator and the male splines of the starter generator with mineral spirits and a soft brush. Inspect splines in accordance with <a href="#">para 3-263, Starter-generator Gearshaft Female Spline Inspection</a> .	3-263		
	Lubricate acceptable splines with grease (Aeroshell No. 22, or equivalent). Before reinstallation of the starter-generator, make sure torsional damper members of the starter-generator driveshaft are in hard contact with each other.			
	<b>NOTE:</b> Inspect the starter-generator brushes for wear in accordance with the Aircraft Manual at the same time the spline inspection is made.			

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Table 9 (cont)

Item	Inspection/Maintenance Action	Reference	✓	Initial
<u>100 Hour Inspection (cont)</u>				
14	Deleted			
15	Measure oil flow from the scavenge passage or external sump of the power turbine support and the scavenge passage of the gas producer turbine support.	3-200		
16	Inspect the oil passage inside the bottom strut of the power turbine support if carbon particles are found in the oil filter or N <sub>2</sub> bind is encountered.	3-186		
17	Inspect, clean and check magnetic drain plugs.	3-177		
17.A	Inspect and clean the fuel nozzle. If no airframe mounted fuel filter is installed, inspect the fuel nozzle screen.	3-120 3-124		
18	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.	3-258		
19	Clean the burner drain valve.	3-260		
20	Inspect the ignition lead for burning, chafing, or cracking of conduit and loose connectors and broken lock wire.	3-207		
21	Review engine records for compliance with all mandatory bulletins, inspections and airworthiness directives.	N/A		
22	Review engine records for time or cycle limited parts, components, accessories or modules.	N/A		
23	Enter component changes, inspection compliance, etc., in logbook as required.	N/A		

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Table 9 (cont)				
Item	Inspection/Maintenance Action	Reference	✓	Initial
23A	Deleted			
	In addition to the 100 hour inspection items, perform the following:			
<u>200 Hour Inspection</u>				
24	Lubrication system maintenance			
	<b>NOTE:</b> Items designated with an asterisk (*) are to be accomplished on the same intervals as item 24*a (oil change).			
*a	<p>Drain oil system</p> <p style="padding-left: 40px;">Oil changed at:</p> <p style="padding-left: 40px;">100 hours: _____</p> <p style="padding-left: 40px;">200 hours: _____</p> <p style="padding-left: 40px;">300 hours: _____</p> <p style="padding-left: 40px;">600 hours: _____</p> <p>The maximum oil change interval with a dry spline starter generator is 100 hours or 6 months, whichever occurs first. This limit can be extended if a wet spline starter generator is installed in accordance with the Rolls-Royce Commercial Engine Bulletin M250-B15G <a href="#">TP CEB-32</a>, and 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><b>CAUTION:</b> SOME OPERATORS EXPERIENCE AND/OR HARSH ENVIRONMENTS CAN DICTATE OIL CHANGES AT MORE FREQUENT INTERVALS.</p> <p><b>NOTE:</b> See oil change flow chart for further detail. (See <a href="#">Figure 2A</a>)</p> <p><b>NOTE:</b> External scavenge oil filter systems must have a valid STC (Supplemental Type Certificate).</p>	<p><a href="#">3-183; Item 1, Table III-10</a></p>		

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Table 9 (cont)				
Item	Inspection/Maintenance Action	Reference	✓	Initial
<u>200 Hour Inspection (cont)</u>				
b.	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 31 and 32 (300 Hour Inspection) if carbon particles are found.	3-189; Item 2 Table III-10		
c.	Inspect magnetic chip detector plugs.	PARA 3-193; Item 7, Table III-10		
	<b>NOTE:</b> Follow STC manufacturer's recommendations regarding replacement/cleaning of external oil filter elements. Inspect removed elements for any accumulations of metal chips, debris 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 24b.			
*d.	Refill oil system.	PARA 3-183		
<u>300 Hour Inspection</u>				
In addition to the 100 hour and appropriate 200 hour inspection items, perform the following:				
<b>CAUTION:</b> INSPECTION FREQUENCY MUST BE BASED ON THE NATURE OF THE EROSIIVE AND/OR CORROSIVE ENVIRONMENT. THIS ENVIRONMENT CAN DICTATE A MORE FREQUENT INSPECTION INTERVAL. IN NO CASE MUST THE INSPECTION INTERVAL EXCEED 300 HOURS OR 6 MONTHS.				
25	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 3-90		
<b>CAUTION:</b> WHEN THERE IS EVIDENCE THAT THE FUEL PUMP FILTER HAS BEEN BYPASSED, THE GAS PRODUCER FUEL CONTROL INLET STRAINER, THE FUEL NOZZLE STRAINER, THE GOVERNOR FILTER AND THE HIGH PRESSURE FUEL FILTER, IF APPLICABLE, MUST BE CLEANED. (REFER TO <a href="#">TABLE III-11 SPECIAL INSPECTIONS</a> FOR DETAILS.) IF ANY CONTAMINATION IS FOUND IN THE FUEL NOZZLE SCREEN, THIS WILL REQUIRE THAT THE FUEL CONTROL BE SENT TO AN AUTHORIZED OVERHAUL OR REPAIR FACILITY FOR INTERNAL CLEANING. REFERENCE MUST ALSO BE MADE TO THE AIRFRAME MAINTENANCE MANUAL FOR FUEL SYSTEM MAINTENANCE FOLLOWING FUEL CONTAMINATION.				

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Table 9 (cont)				
Item	Inspection/Maintenance Action	Reference	✓	Initial
<u>300 Hour Inspection</u> (cont)				
26	If the aircraft is equipped with an engine fuel filter differential pressure warning system, replace the throw-away filter only when an indication of contamination is obtained or every 300 hours, whichever comes first. If the aircraft is not equipped with a differential pressure warning system, replace the fuel filter every 300 hours unless operating experience demonstrates that smaller time increments are advisable. Before discarding filter, inspect for signs of contaminants. If any are found, inspect the entire fuel system and clean if necessary.	PARA 3-130		
27	Do a fuel pump bypass valve operation check when a fuel filter is replaced. <u>NOTE:</u> Applicable to Sundstrand/Pesco and Eaton Argo-Tech/TRW manufactured pumps only.	3-135		
28	Purge air from the filter bowl area of the single element pump.	3-115		
<p><b>CAUTION:</b> IF THE FUEL NOZZLE STRAINER HAS BEEN CONTAMINATED OR HAS COLLAPSED OR BUCKLED, RETURN THE FUEL NOZZLE TO AN AUTHORIZED MAINTENANCE FACILITY FOR CLEANING AND TESTING. THIS WILL ALSO REQUIRE THAT THE FUEL CONTROL BE SENT TO AN OVERHAUL FACILITY FOR INTERNAL CLEANING. REFERENCE MUST ALSO BE MADE TO THE AIRFRAME MAINTENANCE MANUAL FOR FUEL SYSTEM MAINTENANCE FOLLOWING FUEL CONTAMINATION.</p>				
29	Remove and disassemble fuel nozzle. Clean and examine fuel nozzle filter assembly. Assemble and install fuel nozzle.	3-120		
30	Inspect and clean the No. 1 bearing oil pressure reducer.	Item 8, Table III-10		
31	Visually inspect external sump. Clean internal carbonaceous deposits from sump.	Item 11, Table III-10		
32	Inspect the power turbine support scavenge strut. Clean internal carbonaceous deposits from strut.	3-186 Item 10, Table III-10		
33	Inspect the thermocouple assembly (TOT/MGT).	3-171, Para 211		

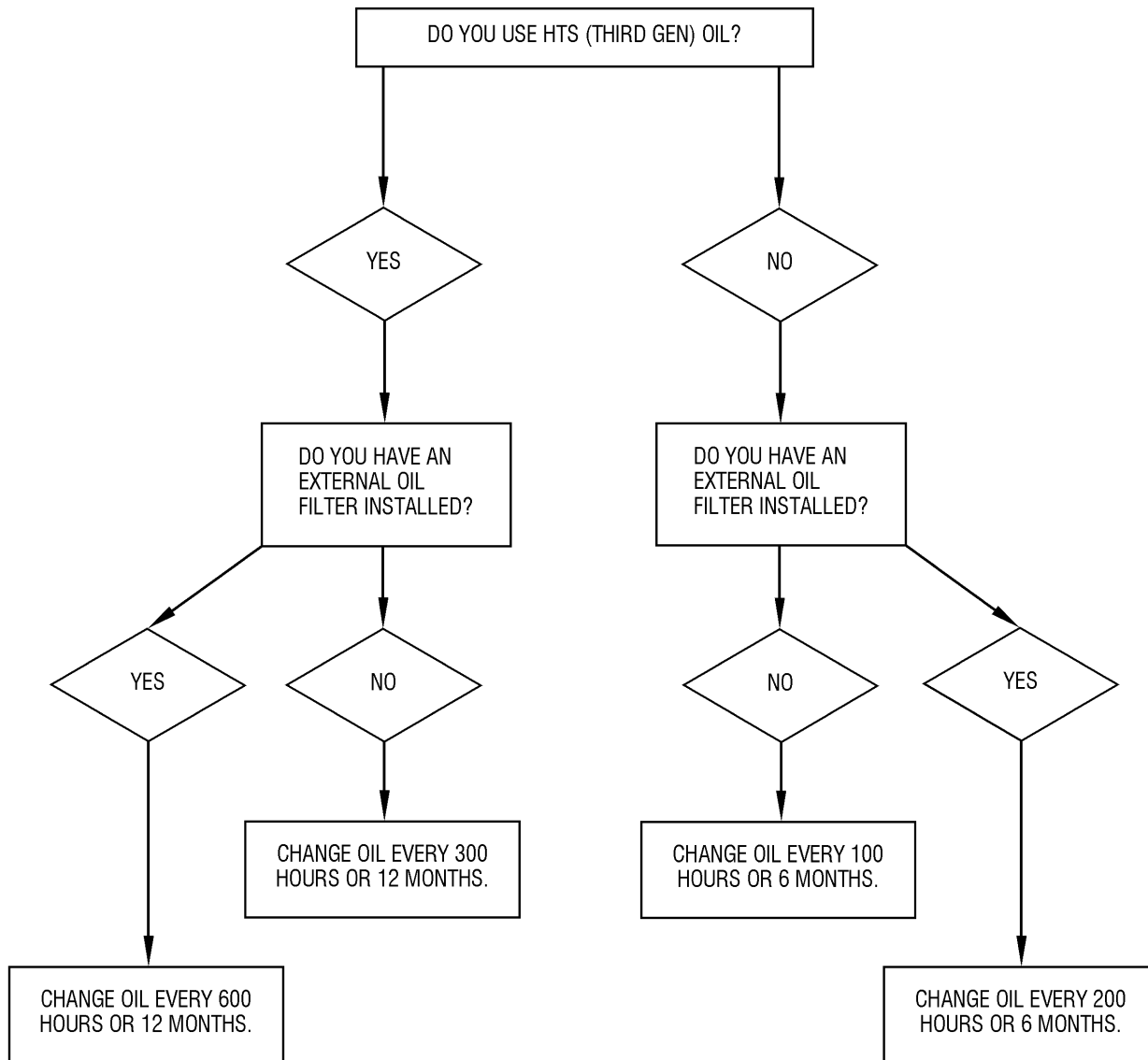
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Table 9 (cont)				
Item	Inspection/Maintenance Action	Reference	✓	Initial
<u>500 Hour/1 Year Inspection</u>				
34	Inspect all uncoated and coated P/N 6846278 power turbine outer coupling nuts for corrosion.	M250-B15G TP CSL-25		
<u>600 Hour Inspection</u>				
35	Check the fuel pump drive shaft on Sunstrand single element pumps for spline wear.	3-133		
	<u>NOTE:</u> This inspection not required on Eaton Argo-Tech (TRW) fuel pumps or Sundstrand fuel pumps P/N 23003114 and subsequent.			
36	Make an installation rotating balance of the engine and propeller assembly at intervals not to exceed 600 hours. See <a href="#">Para 3-96</a> for more information concerning rotating balance requirements.	3-96		
37	Do the scavenge oil filter impending bypass function check per Facet Service Bulletin No. 090589 (Ref. Rolls-Royce <a href="#">TP CSL-176</a> ) 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		
<u>1000 Hour Inspection</u>				
38	Clean and examine the fuel control strainer assembly. If necessary, replace the fuel control strainer assembly.	3-144		
<u>1500 Hour Inspection</u>				
39	Inspect the compressor case, blades, and vanes. Inspection frequency must be as made necessary by operating environment. In erosive environment, inspect case at least every 300 hours. In any environment, do not exceed 1500 hours without case inspection. 10X power magnification is recommended for corrosion pit inspection.	3-90		

**SECTION III**

**M250 OIL CHANGE FLOWCHART**



Oil Change Flowchart  
Figure 2A

ACS062XA

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