

### PARA 1. (cont)

#### B. Scheduled Inspections

Scheduled inspections are made at periodic intervals in an effort to prevent engine malfunction and serve in the role of preventative maintenance for the engine. The component to be inspected, the nature of the inspection, and the elapsed time after which the inspection is to be performed are given in the Inspection Checksheet, Table 602. The inspection times are hours of engine operation.

| Table 602<br>Scheduled Inspections                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                  |                                          |   |         |
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| 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 may 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><b>CAUTION:</b> 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> |                                                                                                                                                                                                                                  |                                          |   |         |
| 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 lockwire. Check accessible areas for obvious damage and evidence of fuel or oil leakage. | N/A                                      |   |         |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Inspect all "B" nuts for application and alignment of torque paint. If missing, loosen "B" nut, retighten, and apply torque paint.                                                                                               | PARA 9.B.,<br>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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 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                        |   |         |

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# Rolls-Royce

## 250-C20 SERIES OPERATION AND MAINTENANCE

Table 602 (cont)  
Scheduled Inspections

| Item | Inspection/Maintenance Action                                                                                                                                                                                                                                                                                                                                                                                                                     | REF PARA                                                                                   | ✓ | Initial |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---|---------|
|      | <u>100 Hour Inspection (cont)</u>                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                            |   |         |
| 5    | Inspect P <sub>c</sub> filter for proper clamping.                                                                                                                                                                                                                                                                                                                                                                                                | 73-20-06                                                                                   |   |         |
| 6    | Until CEB-A-1233 is complied with, inspect P <sub>c</sub> filter assembly as follows: Without disassembly or removal of the P <sub>c</sub> 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 CEB-A-1233. | N/A                                                                                        |   |         |
| 7    | Remove the Scroll-to-P <sub>c</sub> 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                                                                                        |   |         |
|      | <b>NOTE:</b> 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.                                                                                                                                                                                                                                                                |                                                                                            |   |         |
| 8    | With the Scroll-to-P <sub>c</sub> Tube Assembly still removed and using a 10x power glass, inspect the elbow in the compressor scroll for distress/cracks/proper alignment. No cracks are permissible.                                                                                                                                                                                                                                            | N/A                                                                                        |   |         |
| 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 3.C.,<br>73-20-02,<br>3.B., 73-20-03,<br>3.C., 73-20-04<br>and<br>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, conditions with airborne pollutants or with water alcohol.                                                                                                                                                                                                                                                                                                | PARA 6., 72-30-00                                                                          |   |         |
| 12   | Visually inspect the water-alcohol nozzles for build-up of contaminants which could restrict flow or alter the spray pattern. Ultrasonic clean nozzles if equipment is available.                                                                                                                                                                                                                                                                 | N/A                                                                                        |   |         |
| 13   | Clean the 200 mesh screen (if equipped with water-alcohol injection kit).                                                                                                                                                                                                                                                                                                                                                                         | N/A                                                                                        |   |         |

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## M250-C20 SERIES OPERATION AND MAINTENANCE

| Table 602 (cont)<br>Scheduled Inspections |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                          |   |         |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|---|---------|
| Item                                      | Inspection/Maintenance Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | REF PARA                                                 | ✓ | Initial |
|                                           | <u>100 Hour Inspection (cont)</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                          |   |         |
| 14                                        | 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                               |   |         |
| 15                                        | 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.                                                                                                                                                                                                                                                                                                                                        | PARA 1 D. (2), this Section.                             |   |         |
| 16                                        | Visually check the compressor discharge air tubes for damage or deterioration.                                                                                                                                                                                                                                                                                                                                                                                                                                   | PARA 4.A., 72-40-00                                      |   |         |
| 17                                        | Check anti-ice valve for security, worn parts and proper operation. Valve need not be removed or disassembled unless a problem is detected.                                                                                                                                                                                                                                                                                                                                                                      | PARA 4., 75-10-01                                        |   |         |
| 18                                        | Inspect compressor mount inserts, bolts and nuts for looseness, fretting or oil leakage. Replace or retighten as required. Check engine for possible vibration causes.                                                                                                                                                                                                                                                                                                                                           | PARA 4.D., 72-60-00<br>and<br>PARA 1.D.(2), this section |   |         |
| 19                                        | 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 8.A., 72-50-00                                      |   |         |
| 20                                        | Wet spline starter-generator gearshafts, new production or those replaced in accordance with the Rolls-Royce Commercial Engine Bulletin M250-C20 CEB-1082, do not need periodic inspection and lubrication. Clean and inspect any other starter-generator gearshaft. Clean the female splines of the starter-generator gearshafts and the male splines of the starter-generator with mineral spirits and a soft brush. Inspect splines. Refer to Starter-generator Gearshaft Female Spline Inspection paragraph. | PARA 4.B., 72-60-00                                      |   |         |
|                                           | Inspect the starter-generator brushes for wear in accordance with the Aircraft Manual at the same time the spline inspection is made.                                                                                                                                                                                                                                                                                                                                                                            | N/A                                                      |   |         |
|                                           | 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.                                                                                                                                                                                                                                                                           | N/A                                                      |   |         |



## M250-C20 SERIES OPERATION AND MAINTENANCE

Table 602 (cont)  
Scheduled Inspections

| Item | Inspection/Maintenance Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | REF PARA                                  | ✓ | Initial |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---|---------|
|      | <u>100 Hour Inspection (cont)</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                           |   |         |
| 21*  | Drain the oil system and refill.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                           |   |         |
|      | Oil changed at:<br>100 hours: _____<br>300 hours: _____<br><br>The maximum interval between oil changes is 100 hours or 6 months, whichever occurs first. This limit can be extended to 300 hours or 12 calendar months, whichever occurs first, if an approved high thermal stability oil (Third Generation) is used.                                                                                                                                                                                    | PARA 11.C.,<br>72-00-00, Engine-Servicing |   |         |
| 21A  | 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 21, 21D, 38, 39, and 40 below if carbon particles are found.                                                                                                                                                                                                  | PARA 1.C., 72-60-00                       |   |         |
|      | <b>NOTE:</b> Follow the Supplemental Type Certificate (STC) manufacturer's recommendations regarding the replacement/cleaning of the external oil filter elements. Inspect the removed elements for any accumulations of metal chips, debris, or carbon particles. It may prove helpful to cut apart disposable (paper) filter elements to facilitate this inspection. If chips, debris, or carbon particles are found, proceed with an additional inspection/maintenance as outlined in item 21A. above. |                                           |   |         |
| 21B* | Inspect and clean the turbine pressure oil check valve.                                                                                                                                                                                                                                                                                                                                                                                                                                                   | PARA 7.K., 72-50-00                       |   |         |
|      | <b>NOTE:</b> Check Valve P/N 23074872 and subsequent part numbers are not applicable to this inspection (these valves are considered "ON CONDITION").                                                                                                                                                                                                                                                                                                                                                     |                                           |   |         |
| 21C* | 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 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                                       |   |         |
| 21D* | Measure the oil flow from the scavenge passage or external sump of the power turbine support and the scavenge passage of the gas producer turbine support. It is recommended the external sump is not removed for this check.                                                                                                                                                                                                                                                                             | PARA 7.D., 72-50-00                       |   |         |
|      | <b>NOTE:</b> This step must be performed before draining the oil or after the oil system has been refilled.                                                                                                                                                                                                                                                                                                                                                                                               |                                           |   |         |
|      | <b>NOTE:</b> The maximum interval between oil changes is 100 hours or 6 months, whichever occurs first. This hour limit can be extended to 200 hours for those items indicated by an asterisk (*) if the external oil filter is of a type which has a valid STC (Supplemental Type Certificate) is installed on the engine. The calendar limit can be extended to 12 months for those items indicated by an asterisk (*) and if an approved high stability oil (Third Generation) is used.                |                                           |   |         |

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## M250-C20 SERIES OPERATION AND MAINTENANCE

Table 602 (cont)  
Scheduled Inspections

| Item | Inspection/Maintenance Action                                                                                                                                                                                                                                                                          | REF PARA                                                          | ✓ | Initial |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|---|---------|
|      | <u>100 Hour Inspection (cont)</u>                                                                                                                                                                                                                                                                      |                                                                   |   |         |
| 21E  | Inspect magnetic chip detector plugs.                                                                                                                                                                                                                                                                  | PARA 11.G.,<br>72-00-00, Engine-Servicing                         |   |         |
| 21F  | Inspect quick disconnect magnetic chip detector plugs and flanged inserts for wear, if installed.                                                                                                                                                                                                      | PARA 11.G.,<br>72-00-00, Engine-Servicing                         |   |         |
| 21G  | Remove, inspect and clean the fuel nozzle. If no air-frame mounted fuel filter is installed, inspect the fuel nozzle filter.                                                                                                                                                                           | 73-10-03                                                          |   |         |
|      | <b>NOTE:</b> Operators may find it necessary to inspect and clean the fuel nozzle more often depending on past experience or operating conditions.                                                                                                                                                     |                                                                   |   |         |
| 22   | 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                                                 |   |         |
| 23   | 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                                                 |   |         |
| 24   | Inspect the outer combustion case for condition. Inspect the weld joints of and in the brazed screen reinforcement in the armpit area.                                                                                                                                                                 | PARA 2.B., 72-40-00                                               |   |         |
| 25   | Clean the burner drain valve.                                                                                                                                                                                                                                                                          | PARA 3., 72-40-00                                                 |   |         |
| 26   | Inspect the ignition lead for burning, chafing, or cracking of conduit and loose connectors and broken lockwire.                                                                                                                                                                                       | PARA 2., 74-20-02                                                 |   |         |
| 27   | On engines with CECO fuel system, clean or replace the high pressure fuel filter.                                                                                                                                                                                                                      | PARA 2., 73-10-05                                                 |   |         |
| 28   | On engines with CECO fuel systems, visually inspect the bleed hole at the low point in the scroll-to-governor P <sub>c</sub> tube for any obstruction. If the hole is not completely open, remove any contamination which could obstruct drainage of moisture from the tube using a piece of lockwire. | N/A                                                               |   |         |
| 29   | Review engine records for compliance with all mandatory bulletins, inspections and airworthiness directives.                                                                                                                                                                                           | N/A                                                               |   |         |
| 30   | Review engine records for time limited parts components, accessory or modules.                                                                                                                                                                                                                         | N/A                                                               |   |         |
| 31   | Enter component changes, inspection compliance, etc., in log book as required.                                                                                                                                                                                                                         | N/A                                                               |   |         |
| 31A  | If optional CEB 1165, (removal of spare gearbox accessory drive gear), has been accomplished without removal of bearing cage, then inspect bearing cage retention for looseness.                                                                                                                       | CEB 1165 Revision 5<br>(or later revision)<br>Paragraph 2. B. (2) |   |         |

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## M250-C20 SERIES OPERATION AND MAINTENANCE

Table 602 (cont)  
Scheduled Inspections

| Item | Inspection/Maintenance Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | REF PARA                      | ✓ | Initial |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---|---------|
|      | <u>200 Hour Inspection</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |   |         |
|      | In addition to the 100 hour inspection items, perform the following:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               |   |         |
|      | <b>WARNING:</b> MANDATORY COMPLIANCE DATE FOR ROLLS-ROYCE COMMERCIAL ENGINE BULLETIN M250-C20 CEB-1051 WAS AUGUST 30, 1980.                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               |   |         |
| 32   | Perform fuel pump backlash inspection on Sundstrand dual element pump P/N 6854292, 6857548, 6877719, 6856250, 6876803.                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | M250-CSL-1007                 |   |         |
|      | <u>300 Hour Inspection</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |   |         |
|      | In addition to the 100 hour and applicable 200 hour inspection items, do the following:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |   |         |
|      | <b>CAUTION:</b> INSPECTION FREQUENCY SHALL BE BASED ON THE NATURE OF THE EROSION AND/OR CORROSIVE ENVIRONMENT. THE OPERATING ENVIRONMENT MAY DICTATE A MORE FREQUENT INSPECTION INTERVAL. WHEN OPERATING IN A CORROSIVE AND/OR EROSION ENVIRONMENT FOR NON-COATED COMPRESSOR WHEELS, THE INSPECTION SHALL NOT EXCEED 300 HOURS OR 6 MONTHS. FOR COATED COMPRESSOR WHEELS, INSPECTION SHALL NOT EXCEED 300 HOURS OR 12 MONTHS. IF ANY PARENT METAL IS EXPOSED DUE TO CORROSION AND/OR EROSION, THE INSPECTION REQUIREMENT SHALL REVERT BACK TO 300 HOURS OR 6 MONTHS.                         |                               |   |         |
| 33   | Inspect the compressor case when operating in an erosive and/or corrosive environment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | PARA 1.D.(9),<br>this Section |   |         |
|      | <b>CAUTION:</b> AIRCRAFT INSTALLED-ENGINE FUEL-PUMP FILTER DIFFERENTIAL PRESSURE WARNING SYSTEMS AND/OR OPERATING EXPERIENCE MAY DICTATE REPLACEMENT AT A LESSER TIME INTERVAL. IN NO INSTANCE SHOULD THE 300 HR REPLACEMENT INTERVAL BE EXCEEDED.                                                                                                                                                                                                                                                                                                                                           |                               |   |         |
| 34   | Replace the fuel filter element. This filter is a throw-away item. It is not cleanable. Before discarding filter, inspect for signs of contaminants. If any are found, inspect the entire fuel system and clean if necessary.                                                                                                                                                                                                                                                                                                                                                                | PARA 2.C.,<br>73-10-01        |   |         |
|      | <b>CAUTION:</b> 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. |                               |   |         |
|      | <b>CAUTION:</b> PURGE AIR FROM THE FUEL SYSTEM.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                               |   |         |
| 35   | Do a fuel pump bypass valve operation check when a fuel filter is replaced.<br><b>NOTE:</b> Applicable to Sundstrand/Pesco and Argo-Tech/TRW manufactured pumps only.                                                                                                                                                                                                                                                                                                                                                                                                                        | PARA 3.A., 73-10-01           |   |         |

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