

Test Project

Aircraft Maintenance

Module D - Engine Inspection and Rectification

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MarkingScheme

Module D – Aircraft and System Inspection	Marks
D1 – PPE	1.0
D2 – Use and handling of the boroscope unit	2.0
D3 – Properly completed defect report of the First Stage Turbine Nozzle, and First Stage Turbine Wheel using the boroscope	1.5
D4 – Removal of all Relevant Hot Section components	1.5
D5 – Properly completed defect report of visual inspection of the Combustion Case and Combustion Liner and removed components	2.0
D6 – Correct installation of all Hot Section components	6.0
D7 – Usage of the Manufacturer’s Operators & Maintenance Manual for Hot Section Inspection	1.0
Total	15

Competitor's Working Document

NAME	(First)	(Last)
COUNTRY		
START TIME		

Objective

To test the competitor's ability to remove and install a Gas Turbine engine hot section in accordance with the Manufacturer's Maintenance manual including the use of either a rigid or flexible boroscope (as per the extra instructions provided at the competition). This work will be carried out in accordance with the appropriate Manufacturers Maintenance manual. During the Boroscope the engine shall be treated as a live engine in a live aircraft and the maintenance manual followed accordingly. During Boroscope the engine shall not be rotated from the horizontal position. After Boroscope the engine can be treated as removed from the airframe and rotated according to the operators requirements.

Time Allotted

Four hours

Process

1. Remove the fuel nozzle for internal access to the First Stage Turbine Nozzle and First Stage Turbine Wheel that is to be inspected using a boroscope. Refer to "Operation and Maintenance Manual Chapters 72-00-00, 72-40-00, 72-50-00, 72-60-00, 73-10-03", and "RR Commercial Service Letter Hot Corrosion - Sulfidation Parag. 4 Step A (1)".
2. Complete a defect report for the boroscope inspection of the First Stage Turbine Nozzle and First Stage Turbine Wheel. Three defects are required to be identified per the First Stage Turbine Wheel and Two defects are required to be identified per the First Stage Turbine Nozzle and documented, submitted to progress to Step 3.
3. Note: Pictures and Report "Defect Report – Boroscope Inspection" of defects should be delivered to expert
4. Remove Combustion Can, Combustion Liner and supporting components for further visual inspection.
5. Complete a defect report "Defect Report – Hot Section Visual Inspection" for all defects identified by the visual inspection of Combustion Case and Combustion Liner.
6. Re-install Combustion Can, Combustion Liner and supporting components that return the hot section to the original starting condition.

NOTE

- The boroscope will either be flexible or rigid type with the appropriate instructions for the boroscope being supplied by the Host Country/Region for this project.

REFERENCE DOCUMENTS

- Rolls Royce 250C20 series Operation and Maintenance Manual Chapters 72-00-00, 72-40-00, 72-50-00, 72-60-00, 73-10-03, and RR Commercial Service Letter Hot Corrosion - Sulfidation will be used for this project

Defect Report – Boroscope Inspection

Engine type: _____ Serial #: _____ Date Opened: _____

[illegible]

Engine type: _____ Serial #: _____ Date Opened: _____

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