P U B L I C A T I O N T R A N S M I T T A L

RR-DERBY

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DATE: Nov.20/02

V2500-A5 SERIES PROPULSION SYSTEM NON-MODIFICATION SERVICE BULLETIN

This document transmits the Initial Issue of Service Bulletin EV2500-72-0446

Bulletin Initial Issue

Remove	Incorporate	Reason for change
	Pages 1 to 7 of the Service Bulletin	Initial issue

V2500-ENG-72-0446

CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED
If any have not been received please advise Publication Services, Rolls-Royce plc, Derby, England

LIST OF EFFECTIVE PAGES

The effective pages to this Service Bulletin are as follows:

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NON-MODIFICATION - ENGINE - INSPECTION OF TURBINE EXHAUST CASE LEADING EDGE PRESSURE AND TEMPERATURE VANES

1. Planning Information

A. Effectivity

Airbus A320

Engine Models Applicable

V2527-A5 Engine Serial Nos. V11324 and V11328

B. Concurrent Requirements

There are no concurrent requirements.

C. Reason

(1) Problem: During manufacture of the Turbine Exhaust Case, the forgings used to fabricate the leading edges of the three Pressure strut vanes and the four temperature strut vanes may have been inadvertently produced from an incorrect material.

(2) Background: The correct leading edge material is AMS 5616 (Greek Ascoloy). It has been confirmed that REX 734 forgings may have been used in two engines already in service, - V11324 and V11328. Engineering analysis has shown higher stress on the weld joint between the REX 734 and AMS 5616 due to the incompatibility of the materials. Cracking of this weld joint may affect the P4.9 reading resulting in the EEC switching to the N1 mode and generating a cockpit warning. Analysis has shown a B50 life of 2700 cycles to generate a 1/32 inch crack. This is not a Flight Safety issue.

(3) Objective: Inspect the two engines already in service - V11324 and V11328

(4) Effects of Bulletin on:

Removal/Installation: None.

Disassembly/Assembly: None.

Cleaning: None.

Inspection/Check: None.

Repair: None.

Testing: None.

(5) Supplemental Information

None.

D. Description

Inspect in-service engines V11324 and V11328 for magnetic properties.

E. Compliance

Category 3

Accomplish within 2700 cycles.

F. Approval Data

The part number changes and/or part modifications specified in the Accomplishment Instructions and Material Information sections of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine model(s) given.

The compliance statement and the procedures described in this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the Engine Model listed.

G. Manpower

Estimated man-hours to incorporate the full intent of this Bulletin:

Venue	Estimated Manhours
In Service	1 hour
At Overhaul	Not Applicable

H. Weight and Balance

Weight Change	None
Moment	No Effect
Datum	Engine Front Mount Centerline (Power Plant Station (PPS) 100)

I. Electrical Load Data

This Service Bulletin has no effect on the aircraft electrical load.

J. Software Accomplishment Summary

Not Applicable.

K. References

1. V2500 Engine Illustrated Parts Catalogs (S-V2500-7IA, and S-V2500-71B), Chapter/Section 72-50-00.

2. Internal Reference No. - 02VC309.

3. ATA Locator - 72-50-00.

L. Other Publications Affected

Not applicable.

M. Interchangeability of Parts

Not applicable.

N. Information in the Appendix

Alternate Accomplishment Instructions (No)

Progression Charts (No)

Added Data (No)

Revision to Table of Limits (No)

Inspection Procedures (No)

2. Material Information

A. Material - Price and Availability

1. There is no new material cost to do this Service Bulletin.

2. There is no kit provided to do this Service Bulletin.

B. Industry Support Program

Not Applicable.

C. Tooling - Price and Availability

The following special tools may be required to accomplish this Service Bulletin:

Walker Scientific ATS-6044T Unit with assigned probe.
Setting Gage: TAM 99603 - AMS6304
Magnet

D. Other Material Information Data

Not Applicable.

3. Accomplishment Instructions

(1) Verify with a magnet that the leading edge of the three Pressure Strut Vanes, and four Temperature Strut Vanes exhibit magnetic properties. Suspect struts have a forged leading edge with either 'V' cuts or integral tubes protruding. Acceptable material will attract the magnet. Any questionable material can be further tested as follows:

(a) Obtain Walker Scientific ATS-6044T unit with assigned probe.

NOTE: Probes must be kept with assigned unit and are not interchangeable

(i) Connect probe cable to 'PROBE' connector at front of instrument.

(ii) Push power switch to position 'HI'. When red indicator light goes off, unit is at operating temperature.

Request the services of Q and SL Non-destructive Test on technical problems related to the equipment and calibration procedure.

CAUTION: PROBE TIP IS 250 DEG. - 270 DEG. F HOT

(iii) Contact probe tips to setting gage TAM 99603. Apply the cold tip to the specimen before the hot tip. The meter readings for the gage shall be minus 80 to minus 95.

(iv) If instrument reading is not within tolerance specified, send to Gage Standards for repair.

(v) Perform the inspection by placing both of the probe tips on the Leading Edge of the seven struts to be inspected, applying the cold tip to the leading edge before the hot tip. Material is acceptable if the instrument readings are within the specified limits for Greek Ascoloy per Table 1.

Sheet Material			Meter Reading
AMS 5616	Greek Ascoloy	Negative	minus 90 to minus 130
ASTM F1586	REX 734	Positive	45 to 60

Table 1

(vi) If no meter reading is obtained, this indicates an oxide or other non-conductive material on the strut. Clean the local area and repeat the check to obtain a reading.

(vii) Repeat check on struts as necessary to ensure accurate and consistent readings

(viii) 5. When finished, turn the power switch to the center position marked 'OFF'. The unit should be plugged in as necessary to recharge the battery when using the DC operation.

(b) If VANE tests prove material is not acceptable, remove engine prior to 2700 cycles.

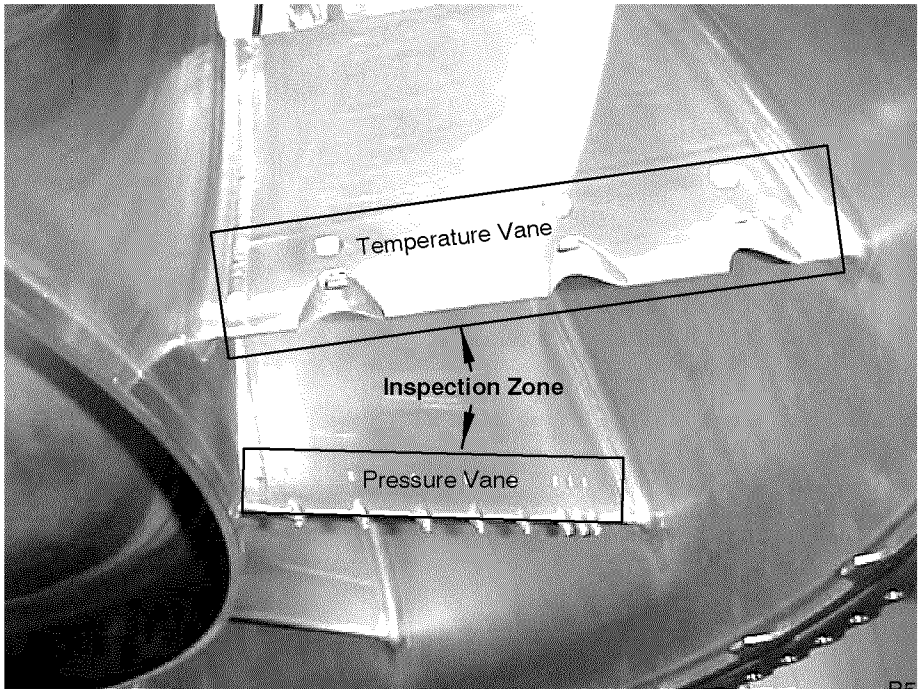
(i) If any cracks are detected contact IAE for a detailed management plan.

(2) Disposition.

(a) Report all results (Acceptable or Non-acceptable) to IAE.

(3) Recording Instructions

(a) A record of accomplishment is required.



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Turbine Exhaust Case - Inspection Zones
Figure 1