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V2500-A5/D5 SERIES PROPULSION SYSTEMS SERVICE BULLETIN

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This document transmits Revision 1 to Service Bulletin EV2500-72-0481 and Revision 1 to the Supplement

Document History

Service Bulletin Revision Status
Initial Issue Aug.4/04

Supplement Revision Status
Initial Issue Aug.4/04

Bulletin Revision 1

Remove	Incorporate	Reason for change
All pages of the Summary	Page 1 and 2 of the Summary	To add rework instructions.
All pages of the Service Bulletin	Pages 1 to 7 of the Service Bulletin	To add rework instructions.

Supplement Revision 1

Remove	Incorporate	Reason for change
All pages	Page 1	To add rework instructions.

V2500-ENG-72-0481
Transmittal - Page 1 of 2

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

The effective pages to this Service Bulletin following incorporation of Revision 1 to the Bulletin and Revision 1 to the Supplement are as follows:

<u>Page</u>	<u>Revision Number</u>	<u>Revision Date</u>
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Supplement		
R 1	1	Jul.26/05

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ENGINE – HP COMPRESSOR BLADES – INTRODUCTION OF A PART NUMBER TO RE-IDENTIFY EDM
MANUFACTURED STAGE 3 BLADES

SUMMARY

1. PLANNING

A. EFFECTIVITY

Engine

V2500-A5

V2500-D5

B. CONCURRENT REQUIREMENTS

None.

C. REASON/PROBLEM

Problem

Clapper abutment face wear on HP Compressor Stage 3 blades may occur.

The problem has been attributed to blades which have been supplied from one specific manufacturer where the clapper is positioned slightly higher on the aerofoil than the original design intent.

Evidence

The problem has been experienced on engines in service.

Substantiation

The changes introduced by this Service Bulletin (Modification) have been the subject of extensive engineering analysis.

Objective

Incorporation of this Service Bulletin is designed to maintain engine reliability.

D. DESCRIPTION

In order to ensure clapper alignment and utilisation of serviceable blades, the following changes have been introduced:

This Service Bulletin introduces a new part number for the traceability of HP Compressor stage 3 blades manufactured by 'EDM'.

Existing parts, identified by the manufacturers mark 'EDM' on the base of the blade root, will be re-identified with the new part number and are only interchangeable as a complete engine set.

NOTE: Following incorporation of this Service Bulletin blades which are manufactured by other suppliers, and do not carry the 'EDM' mark, must only be fitted as a complete engine set, inter-mixing of EDM and non-EDM blades is not permissible.

E. COMPLIANCE

Category Code 5

Accomplish when the engine is disassembled sufficiently to afford access to the affected sub-assembly (ie. Modules, accessories, components, build groups) and to all affected subassemblies.

F. MANPOWER

In service – Not applicable.

At overhaul – Not affected.

G. INTERCHANGEABILITY OF PARTS

Old and new parts are freely and fully interchangeable only as a set.

2. MATERIAL INFORMATION

A. PARTS PRICES

Part Number 6A8398 – Blade, Stage 3 (EDM only) – HP Compressor – US \$ 1880.00

ENGINE – HP COMPRESSOR BLADES – INTRODUCTION OF A PART NUMBER TO RE-IDENTIFY EDM
MANUFACTURED STAGE 3 BLADES

1. Planning Information

A. Effectivity

- (1) Airbus A319
V2522-A5, V2524-A5, V2527M-A5 Engines
- (2) Airbus A320
V2527-A5, V2527E-A5 Engines
- (3) Airbus A321
V2530-A5, V2533-A5 Engines
- (4) Boeing – Longbeach Division MD-90
V2525-D5, V2528-D5 Engines

B. Concurrent Requirements

None.

C. Reason

(1) Problem

Clapper abutment face wear on HP Compressor Stage 3 blades may occur.

The problem has been attributed to blades which have been supplied from one specific manufacturer where the clapper is positioned slightly higher on the aerofoil than the original design intent.

(2) Evidence

The problem has been experienced on engines in service.

(3) Substantiation

The changes introduced by this Service Bulletin (Modification) have been the subject of extensive engineering analysis.

(4) Objective

Incorporation of this Service Bulletin is designed to maintain engine reliability.

(5) Effect of Bulletin on:

(a) Operation

Not affected.

(b) Maintenance

Affected.

(c) Overhaul

Affected.

(d) Repair Schemes

Affected.

(e) Interchangeability

Affected (see 1.P.).

(f) Fits and Clearances

Not affected.

D. Description

In order to ensure clapper alignment and utilisation of serviceable blades, the following changes have been introduced:

- (1) This Service Bulletin introduces a new part number for the traceability of HP Compressor stage 3 blades manufactured by 'EDM'.
- (2) Existing parts, identified by the manufacturers mark 'EDM' on the base of the blade root, will be re-identified with the new part number and are only interchangeable as a complete engine set.

NOTE: Following incorporation of this modification blades which are manufactured by other suppliers, and do not carry the 'EDM' mark, must only be fitted as a complete engine set, inter-mixing of EDM and non-EDM blades is not permissible.

E. Compliance

Category 5

Accomplish when the engine is disassembled sufficiently to afford access to the affected sub-assembly (ie. Modules, accessories, components, build groups) and to all affected subassemblies.

F. Approval

The part number changes and/or part modifications described in Sections 2 and 3 of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-Approved for the engine models listed.

G. Manpower**(1) In service**

Not applicable.

(2) At overhaul

Not affected.

NOTE: The parts affected by this Service Bulletin are accessible at overhaul.

H. Material Price and Availability

Modification kit not required; parts supplied as single line items.

For prices and availability of future spares see Supplement to this Bulletin.

I. Tooling Price and Availability

Special tools are not required.

J. Industry Support Information

Not applicable.

K. Weight and Balance**(1) Weight Change**

None.

(2) Moment Arm

No effect.

(3) Datum

Engine Front Mount Centreline (Power Plant Station PPS100).

L. Electrical Load Data

The aircraft electrical load is not affected by this Service Bulletin.

M. Software Accomplishment Summary

Not applicable.

N. References

(1) Engine Manual, Chapter/Section 72-41-10, Assembly.

(2) Engineering Change No. - 03VR023.

(3) ATA Locator - 72-41-15.

R (4) Standard Practices/Processes Manual.

O. Other Publications Affected

(1) Illustrated Parts Catalogue (IPC) Chapter/Section 72-41-15 will be revised.

(2) Engine Manual, Chapter/Section 72-41-10, Assembly.

(3) Engine Manual, Chapter/Section 72-41-15, Cleaning, Inspection and Repair.

P. Interchangeability of Parts

Old and new parts are freely and fully interchangeable only as a set.

2. Material Information

A. The kit required consists of the following parts:

None.

B. Parts to be reworked:

None.

C. New production parts:

All Engines

72-41-15

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	OLD PART NO.	INSTR DISP
01200	6A8398	31	.Blade, stage 3 (EDM only)- HP Compressor	6A5942	(S1)(1D)

D. Instruction Disposition Codes:

(S1) New parts are only interchangeable as a complete engine set. Mixing old and new parts is not permissible.

(1D) Old part may be re-identified to the new part number.

3. Accomplishment Instructions

A. Rework Instructions

- R (1) Rework the following parts:
- R 6A5942, HP Compressor Stage 3 blades (EDM Only)
- R Standard Equipment: Vibro-engraving tool

	PROCEDURE	RELATED DATA	
R	(a) Cancel the existing blade part number and re-identify with the new part number.	Use vibro-engraving tool.	
R		Refer to SPM, TASK 70-09-00-400-501,	
R		SUBTASK 70-09-00-400-001.	
R		EXISTING	RENUMBER
R		6A5942	6A8398
R			

B. Assembly Instructions

For the correct Assembly instructions refer to the Engine Manual, Chapter/Section 72-41-10, Assembly.

C. Recording Instructions

A record of accomplishment is necessary.

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HP Compressor Stage 3 Blade Family Tree

V2500 A5 and D5 Engines

Baseline

V2500-ENG-72-0201

Engine - HP Compressor - Introduce A New Stage 3 Rotor Blade With A Cut Back Clapper

V2500-ENG-70-0714

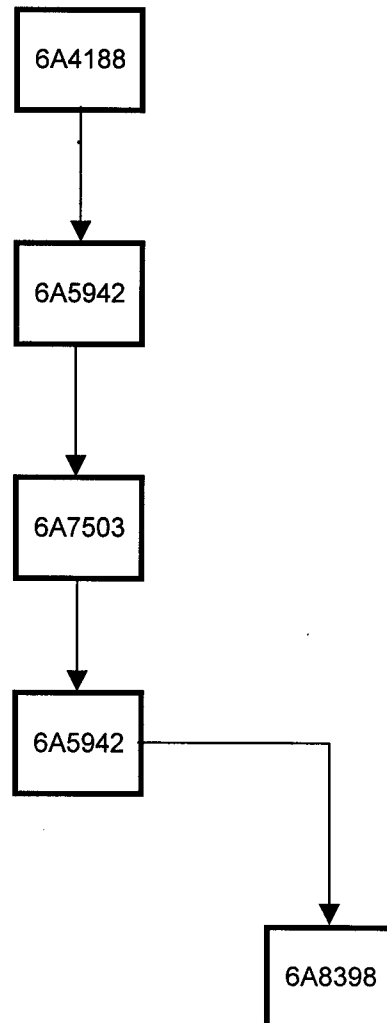
Information - Announcement Of Super Polished HP Compressor Blades And Vanes

V2500-ENG-70-0726

Information - Announcement Of HP Compressor Blades And Vanes Without Super Polished Finish

V2500-ENG-72-0481

Engine - HP Compressor Blades - Introduction Of Part Number To Re-identify EDM Manufactured Stage 3 Blades.



Family Tree - HP Compressor Stage 3 Blade
Figure 1

ENGINE – HP COMPRESSOR BLADES – INTRODUCTION OF A PART NUMBER TO RE-IDENTIFY EDM
MANUFACTURED STAGE 3 BLADES

SUPPLEMENT – PRICES AND AVAILABILITY

The prices (if shown) are for estimating purposes only and as such are given in good faith, without commercial liability for advanced planning purposes only. Refer to IAE Spares and/or current price catalogue for current prices.

1. Modification Kit:

Not applicable.

2. Parts required:

Part No.	Description	Unit Price US Dollars
6A8398	Blade, stage 3 (EDM only)– HP Compressor	1,880.00