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V2500 A1/A5/D5 SERIES PROPULSION SYSTEM SERVICE BULLETIN

Printed in Great Britain

This document transmits the Initial Issue of Service Bulletin EV2500-72-0490 and the Initial Issue of the Supplement

Bulletin Initial Issue

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	Summary	
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Supplement Initial Issue

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CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED

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LIST OF EFFECTIVE PAGES

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Printed in Great Britain

ENGINE - HP COMPRESSOR BLADES - INTRODUCTION OF A STAGE 5 BLADE WITH REVISED ROOT
GEOMETRY - MOD 72-0490

SUMMARY

1. PLANNING

A. EFFECTIVITY

Engine	Serial No.
V2500-A1	Prior to Serial No. V0362
V2500-A5	Prior to Serial No. V12000
V2500-D5	Prior to Serial No. V20286

B. CONCURRENT REQUIREMENTS

None.

C. REASON

Problem

Uneven bedding of the HP Compressor Stage 5 blade root in the HPC Stage 3-8 Disc Assembly may occur. Difficulty may also be experienced during assembly.

The problem has been attributed to insufficient clearance between the Blade and the Disc Assembly due to adverse tolerances when the components are at Maximum Metal Condition.

Evidence

The problem has been experienced on engines in service.

Substantiation

The changes introduced by this modification have been the subject of extensive engineering analysis.

Objective

Incorporation of this modification is designed to maintain reliability.

D. DESCRIPTION

The changes introduced are:

A revised HP Compressor Stage 5 Blade has been introduced, similar to the existing item except for the following

The geometry of the blade root has been revised to ensure a clearance at the neck root, across the lobes and between the bottom of the blade and disc when maximum metal condition and full adverse positional tolerance occurs.

E. COMPLIANCE

Category Code 7

Accomplish when supply of superseded parts has been depleted.

F. MANPOWER

In service – Not applicable.

At overhaul – Not affected.

G. INTERCHANGEABILITY OF PARTS

Not affected.

2. MATERIAL INFORMATION**A. PARTS PRICES**

Part No.	Desc.	Unit Price US Dollars
6A8449	Blade, Stage 5 – HP Compressor	350.00
6A8451	Blade, Stage 5 – HP Compressor	523.00

ENGINE – HP COMPRESSOR BLADES – INTRODUCTION OF A STAGE 5 BLADE WITH REVISED ROOT
GEOMETRY – MOD 72-0490

1. Planning Information

A. Effectivity

- (1) Airbus A319
 - (a) V2522-A5, V2524-A5, V2527M-A5 Engines prior to Serial No. V12000
- (2) Airbus A320
 - (a) V2500-A1 Engines prior to Serial No. V0362
 - (b) V2527-A5, V2527E-A5 Engines prior to Serial No. V12000
- (3) Airbus A321
 - (a) V2530-A5, V2533-A5 Engines prior to Serial No. V12000
- (4) Boeing – Longbeach Division MD-90
 - (a) V2525-D5, V2528-D5 Engines prior to Serial No. V20286

B. Concurrent Requirements

None.

C. Reason

(1) Problem

Uneven bedding of the HP Compressor Stage 5 blade root in the HPC Stage 3-8 Disc Assembly may occur. Difficulty may also be experienced during assembly.

The problem has been attributed to insufficient clearance between the Blade and the Disc Assembly due to adverse tolerances when the components are at Maximum Metal Condition.

(2) Evidence

The problem has been experienced on engines in service.

(3) Substantiation

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

(4) Objective

Incorporation of this Service Bulletin is designed to maintain reliability.

(5) Effect of Bulletin on:

(a) Operation

Not affected.

(b) Maintenance

Not affected.

(c) Overhaul

Affected.

(d) Repair Schemes

Affected.

(e) Interchangeability

Not affected.

(f) Fits and Clearances

Not affected.

D. Description

(1) The changes introduced are:

A revised HP Compressor Stage 5 Blade has been introduced, similar to the existing item except for the following

- (a) The geometry of the blade root has been revised to ensure a clearance at the neck root, across the lobes and between the bottom of the blade and disc when maximum metal condition and full adverse positional tolerance occurs.

E. Compliance

Category Code 7

Accomplish when supply of superseded parts has been depleted.

F. Approval

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 models given.

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

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

M. Software Accomplishment Summary

Not applicable.

N. References

- (1) Internal Reference No. – 04VR011
- (2) ATA Locator – 72-41-15
- (3) Engine Manual, Chapter/Section 72-41-10, Assembly/Disassembly.

O. Other Publications Affected

- (1) Illustrated Parts Catalogue will be revised.
- (2) Engine Manual Chapter/Section 72-41-10, Cleaning, Inspection/Check.

P. Interchangeability of Parts

Not affected.

2. Material Information

A. The kit required consists of the following parts:

None.

B. Parts to be reworked:

None.

C. New production parts:

72-41-15

A1 Model

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
01800	6A8449	64	.Blade, Stage 5 - HP Compressor	-	6A3941	(A)(B) (S1)

A5 and D5 Models

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
01800	6A8451	64	.Blade, Stage 5 - HP Compressor	-	6A4198	(A)(B) (S1)

D. Instruction Disposition Codes:

(A) New part will be available from April 2005.

(B) Part will be discontinued.

(S1) Old and new parts are freely and fully interchangeable.

3. Accomplishment Instructions

A. Rework Instructions

None.

B. Assembly/Disassembly Instructions

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

C. Recording Instructions

A record of accomplishment is necessary.

HP Compressor Stage 5 Rotor Blade Family Tree

V2500 A1 Engines

Baseline

V2500-ENG-70-0024

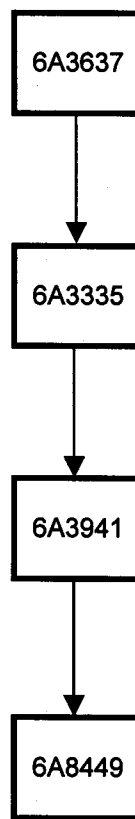
Information - To Announce New Stage 4 & Stage 5 HP Compressor Blade With Revised Sealing Provision

V2500-ENG-72-0035

Engine - HP Compressor Disc And Blades - Stage 3 To Stage 5 - Anti-Fret Treatment

V2500-ENG-72-0490

Engine - HP Compressor Blades - Introduction of a Stage 5 Blade With Revised Root Geometry



V2500 A1 Engines - HP Compressor Stage 5 Rotor Blade Family Tree
Chart 1

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HP Compressor Stage 5 Rotor Blade Family Tree

V2500 A5 & D5 Engines

Baseline

V2500-ENG-70-0714

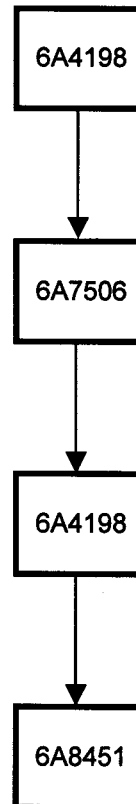
Information - Announcement Of Super Polished
HP Compressor Blades and Vanes

V2500-ENG-70-0726

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

V2500-ENG-72-0490

Engine - HP Compressor Blades - Introduction of a
Stage 5 Blade With Revised Root Geometry



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V2500 A5 and D5 Engines – HP Compressor Stage 5 Rotor Blade Family Tree
Chart 2

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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. New Production Parts:

Part No.	Desc.	Unit Price US Dollars
6A8449	Blade, Stage 5 - HP Compressor	350.00
6A8451	Blade, Stage 5 - HP Compressor	523.00

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