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V2500-A1/A5/D5 SERIES PROPULSION SYSTEMS SERVICE BULLETIN

This document transmits the Revision 2 of Service Bulletin V2500-ENG-72-0509.

Document History

Service Bulletin Revision Status

Initial Issue. Mar.24/06

Revision 1. Mar. 5/09

Service Bulletin Revision 2

Remove Incorporate Reason for change

All pages of the Pages 1 to 6 of the To revise the Effectivity for

Service Bulletin. Service Bulletin. the A5 Model.

All pages of the Page 1 of the No change.

Supplement. Supplement.



CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED If any have not been received please advise IAE International Aero Engines AG





<u>ENGINE - HP COMPRESSOR BLADES - INTRODUCTION OF HP COMPRESSOR LOCKPLATES WITH REVISED PROFILE</u>

1. Planning Information

A. Effectivity

- (1) Airbus A319
- R (a) V2522-A5, V2524-A5, V2527M-A5 Engines prior to Serial No.V12698 and Engines with Serial No.V12699 to V12722, Serial No.V12724 to V12756 R and Serial No.V12758 to V12799 (A5 Standard and A5 SelectOne™ Retrofit Standard).
 - (2) Airbus A320
- R (a) V2500-A1 Engines prior to Serial No.V0362.
- R (b) V2527-A5, V2527E-A5 Engines prior to Serial No.V12698 and Engines with Serial No.V12699 to V12722, Serial No.V12724 to V12756 and Serial R No.V12758 to V12799 (A5 Standard and A5 SelectOne™ Retrofit R Standard).
 - (3) Airbus A321
- R (a) V2530-A5, V2533-A5 Engines prior to Serial No.V12698 and Engines with Serial No.V12699 to V12722, Serial No.V12724 to V12756 and Serial R No.V12758 to V12799 (A5 Standard and A5 SelectOne™ Retrofit R Standard).
- R (4) Boeing MD-90
- R (a) V2525-D5, V2528-D5 Engines prior to Serial No.V20286.

B. Concurrent Requirements

None.

C. Reason

- R (1) Condition
- R Premature deterioration of the High Pressure Compressor (HPC) stage 3, 4 and 5 locking plates may occur.
- R This can cause wear on the bottom lip caused by engine vibration, leading to lockplate release, HPC downstream damage and unscheduled engine removal.

Mar.24/06 Nov.16/10 Revision 2



R (2) Background

This 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

R

Incorporation of this Service Bulletin is designed to maintain engine reliability and part durability "In Service".

- (5) Effect of Bulletin on:
 - (a) Operation

Not affected.

(b) Maintenance

Not affected.

(c) Overhaul

Not affected.

(d) Repair Schemes

None.

(e) Interchangeability

None.

(f) Fits and Clearances

None.

D. <u>Description</u>

- (1) This Service Bulletin introduces revised HP Compressor stage 3, 4 and 5 lockplates similar to the existing items except for:
 - (a) The bottom lip (in contact with the drum) has been changed from a curled geometry to a bossed profile.
 - (b) The upper lip (in contact with the blade) has been revised to a chamfered design.

Mar.24/06 Nov.16/10 Revision 2



(c) The pre-bent shape of the lockplate has been revised from two bends to one.

E. Compliance

Category Code 6

Accomplish when the sub-assembly (i.e. Modules, accessories, components, build groups) is disassembled sufficiently to afford access to the affected part and to all affected spare parts.

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 model(s) listed.

G. Manpower

In Service

Not applicable.

At Overhaul

Not affected.

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

H. Material Price and Availability

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

For prices and availability of spares, refer to supplement to this Service Bulletin.

I. Tooling Price and Availability

Special tools are not required.

J. <u>Industry Support Information</u>

Not applicable.



K. Weight and Balance

(1) Weight Change

None.

(2) Moment Arm

No effect.

(3) Datum

R

R

Engine Front Mount Centerline (Power Plant Station (PPS) 100).

L. Electrical Load Data

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

M. <u>Software Accomplishment Summary</u>

Not applicable.

N. References

- (1) Engine Manual, 72-41-10, Disassembly/Assembly.
- (2) Engineering Changes No. 05VR003 and 05VR003-08.
- (3) ATA Locator 72-41-15.

0. Other Publications Affected

(1) For effect on Illustrated Parts Catalogue (IPC), refer to 2. Material Information.

P. Interchangeability of Parts

Not affected.

Mar.24/06 Nov.16/10 Revision 2



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	MAT	OLD PART NO.	INSTR DISP
R	01125	6A8524	9	.Plate,Locking - HPC Blad Stg.3	e -	6A1029	(A)(B)(S1)
R	01425	6A8525	3	.Plate,Locking - HPC Blad Stg.4	e -	6A1034	(A)(B)(S1)
R	01725	6A8526	3	.Plate,Locking - HPC Blad Stg.5	e -	6A1039	(A)(B)(S1)

D. <u>Instruction disposition codes:</u>

- R (A) New part is currently available.
 - (B) Old part will be discontinued.
 - (S1) Old and new parts are freely and fully interchangeable.



3. Accomplishment Instructions

- A. Rework Instructions
 - (1) None.
- B. Assembly Instructions

CAUTION: ONLY IAE TOOLING GIVEN IN THE DISASSEMBLY/ASSEMBLY INSTRUCTIONS (ENGINE MANUAL, CHAPTER/SECTION 72-41-10) MUST BE USED WHEN INSTALLING OF THE LOCKPLATES TO AVOID DAMAGE TO THE LOCKPLATE OR HPC DRUM.

- (1) For the correct assembly instructions refer to the Engine Manual, Chapter/Section 72-41-10, Disassembly/Assembly.
- C. Recording Instructions
 - (1) A record of accomplishment is necessary.

Mar.24/06 Nov.16/10 Revision 2



<u>ENGINE - HP COMPRESSOR BLADES - INTRODUCTION OF HP COMPRESSOR LOCKPLATES WITH REVISED PROFILE</u>

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.	Description	US Dollars
R 6A8524	Plate, locking Stg.3	35.00
R 6A8525	Plate, locking Stg.4	35.00
R 6A8526	Plate, locking Stg.5	35.00

3. Tools

None.

