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V2500-A5/D5 SERIES PROPULSION SYSTEMS SERVICE BULLETIN

This document transmits the Revision 1 of Service Bulletin V2500-ENG-72-0614.

Document History

Service Bulletin Revision Status

Initial Issue. Dec. 6/10.

Service Bulletin Revision 1

Remove	Incorporate	Reason for change
All pages of the Service Bulletin.	Pages 1 to 10 of the Service Bulletin.	To include the Rework Instruction. Minor editorial changes.
All pages of the Supplement.	Page 1 of the Supplement.	No change.

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

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ENGINE – HIGH PRESSURE (HP) COMPRESSOR – INTRODUCTION OF A NEW HP COMPRESSOR REAR
SHAFT ASSEMBLY WITH A RING NUT THAT IS SILVER PLATED ON THREAD AND ABUTMENT FACE TO
THE CUP WASHER ONLY

1. Planning Information

A. Effectivity

(1) Airbus A319

(a) V2522-A5, V2524-A5, V2527M-A5 Engines prior to Serial No. V13191 (A5 Standard and A5 SelectOne™ Retrofit Standard).

V2522-A5, V2524-A5, V2527M-A5 Engines prior to Serial No. V15738 (A5 SelectOne™ Production Standard).

(2) Airbus A320

R (a) V2527-A5, V2527E-A5 Engines prior to Serial No. V13191 (A5 Standard and A5 SelectOne™ Retrofit Standard).

R V2527-A5, V2527E-A5 Engines prior to Serial No. V15738 (A5 SelectOne™ Production Standard).

(3) Airbus A321

(a) V2530-A5, V2533-A5 Engines prior to Serial No. V13191 (A5 Standard and A5 SelectOne™ Retrofit Standard).

V2530-A5, V2533-A5 Engines prior to Serial No. V15738 (A5 SelectOne™ Production Standard).

(4) Boeing MD-90

(a) V2525-D5, V2528-D5 Engines prior to Serial No. V20286.

B. Concurrent Requirements

None.

C. Reason/Condition

(1) Condition

Silver plating is applied to engine nuts to act as a lubricant. The nuts are used at several locations in the High Pressure Compressor (HPC). The current ring nut is fully silver plated and is being replaced with partially silver plated ring nut on thread and the abutment face to the cup washer only.

(2) Background

R To use partially silver plated nuts only, when used close to titanium parts at elevated temperatures.

(3) Objective

Incorporation of this Service Bulletin is designed to let installation of a ring nut which is silver plated on the thread and the abutment face to the cup washer only.

(4) Substantiation

The changes introduced by this Service Bulletin were the subject of satisfactory engineering analysis. This Service Bulletin complies with the applicable engine certification basis.

(5) Effect of Bulletin on:

(a) Operation

Not affected.

(b) Maintenance

Not affected.

(c) Overhaul

Not affected.

(d) Repair Schemes

Not affected.

(e) Interchangeability

Not affected.

(f) Fits and Clearances

Not affected.

D. Description

This Service Bulletin introduces a new High Pressure (HP) compressor rear shaft assembly with a ring nut that is silver plated on the threads and the abutment face to the cup washer only. The existing ring nut is completely silver coated. The base material and the geometry of the ring nut remains unchanged.

E. Compliance

Category Code 7

Accomplish when the supply of superseded parts has been depleted.

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

(a) Applicable (hours not affected).

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

H. Material Price and Availability

A modification kit is not required; parts are supplied as single line items.

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

I. Tooling Availability

None.

J. Industry Support Information

Not applicable.

K. Weight and Balance

(1) Weight Change

None.

(2) Moment Arm

No effect.

(3) Datum

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. Software Accomplishment Summary

Not applicable.

N. References

(1) IAE V2500 Engine Manual (E-V2500-3IA), Chapters 72-00-40, 72-00-41, 72-41-00, 72-41-10 and 72-41-13.

(2) Internal Reference No.

Engineering Change No. 10VR006.

(3) ATA Locator - 72-41-13.

O. Other Publications Affected

(1) IAE V2500 Engine Illustrated Parts Catalogues (S-V2500-2IA, S-V2500-2IB, S-V2500-2SA, S-V2500-2SB, S-V2500-3IA, S-V2500-3IB, S-V2500-3IC, S-V2500-5IA, S-V2500-5IB, S-V2500-5SA, S-V2500-5SB, S-V2500-6IA, S-V2500-6IB, S-V2500-6SA, S-V2500-6SB, S-V2500-7IA, S-V2500-7IB, S-V2500-7SA and S-V2500-7SB), Chapter 72-41-13 will be amended to incorporate the new part numbers (Refer to paragraph 2. Material Information).

R (2) IAE V2500 Time Limits Manuals (T-V2500-1IA and T-V2500-3IA) will be
R amended to incorporate the new part numbers (Refer to paragraph 2.
R Material Information).

P. Interchangeability of Parts

Affected (Refer to paragraph 2.E. Instruction disposition codes).

2. Material Information

A. The kit required consists of the following parts:

None.

B. Parts to be reworked:

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
72-41-13						
01-850	6B1426	1	.High Pressure (HP) compressor rear shaft assembly	-	6A7713	(1D)(S1)
01-850	6B1419	1	.High Pressure (HP) compressor rear shaft assembly	-	6A7711	(1D)(S1)

C. New production parts:

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
72-41-13						
01-850	6B1419	1	.High Pressure (HP) compressor rear shaft assembly	-	6A7711	(A)(S1)
01-872	6B1413	1	..Ring nut	-	UP10896	(A)(S1)

D. Redundant parts:

None.

E. Instruction disposition codes:

(A) Part is currently available for sale.

(S1) Not interchangeable - but the new part may be fitted in lieu of the superseded part but not vice-versa.

(1D) Rework old part number and re-identify to the new part number.

3. Accomplishment Instructions

A. Rework Instructions

R (1) Effectivity

ENGINE MARK	FIG/ITEM	PART NO.
A5/D5	01-850	6A7713
A5/D5	01-850	6A7711

R (2) Standard Equipment

R None.

R (3) Consumable Material

R None.

R (4) Special Tools

R None.

R (5) Expendable Parts

R None.

R (6) Rework Parts

FIG/ITEM	PART TITLE	PART NO.	QTY
01-872	Ring Nut	6B1413	1

R (7) General Data

R (a) This Rework Instruction gives the procedure to replace the ring nut
R located in the inner bore of the rear shaft. Part number UP10896 is to
R be replaced with new part number 6B1413.

R (b) Material of components

PART IDENT	MATERIAL
HP Compressor – Rear shaft assembly	Inconel 718
Ring Nut	Inconel 718

R (c) TASKS identified by SPP TASK are in the Standard Practices Manual.

R (d) TASKS identified by EM TASK are in the Engine Manual.

R (8) Remove the Ring Nut

R (a) Refer to Fig.72-41-13-990-001 (Fig 901).

PROCEDURE

RELATED DATA

R (b) Remove the ring nut from the
R shaft assembly.
R

Refer to EM TASK 72-41-13 HP
Compressor Shaft - Disassembly,
accomplish all SUBTASKs therein.
Remove the Ring Nut (72-41-13,
01-872) part number UP10896, and
discard.

R (9) Replace the Ring Nut

R (a) Refer to Fig.72-41-13-990-001 (Fig 901).

PROCEDURE

RELATED DATA

R (b) Fit new ring nut 6B1413 into
R the shaft assembly.
R

Refer to EM TASK 72-41-13 - Assemble
the HP Compressor Rear Shaft
Assembly, accomplish all SUBTASKs
therein.
Install the new Ring Nut (72-41-13,
01-872) part number 6B1413. Ensure
the old Ring Nut is not used.

R (10) Identify the Rework

PROCEDURE

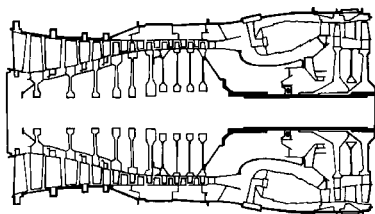
RELATED DATA

R (a) Cancel the existing part
R number and re-identify the HP
R Compressor Rear Shaft Assy.
R

Refer to SPP TASK 70-09-00-400-001.
Use Vibro-engraving equipment.

Existing	Re-number
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6A7713	6B1426
6A7711	6B1419



MODULE 40

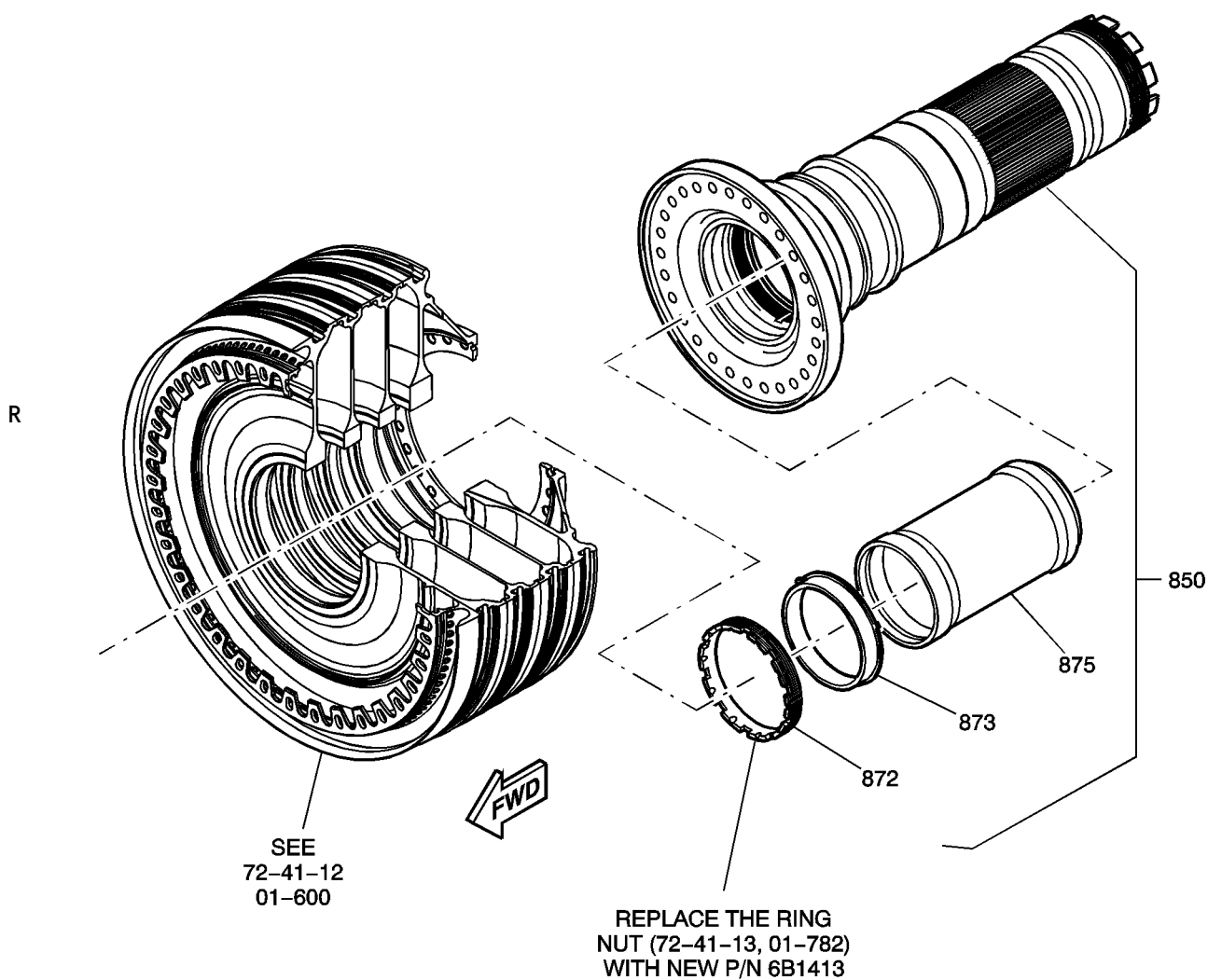


Figure 1

B. Assembly Instructions**(1) General**

(a) Obey all the WARNINGS and CAUTIONS in the procedures that are referred to.

(b) Consumable Materials

(i) Refer to the related Manual tasks given in this instruction.

(c) Tools and Equipment

(i) Refer to the related Manual tasks given in this instruction.

(2) Get access to the High Pressure (HP) compressor assembly.**(3) Remove the HP system module (Refer to the Engine Manual, Chapter 72-00-40).****(4) Remove the HP compressor assembly (Refer to the Engine Manual, Chapter 72-00-41).****(5) Disassemble the HP compressor assembly (Refer to the Engine Manual, Chapter 72-41-00).****(6) Disassemble the HP compressor rotor assembly (Refer to the Engine Manual, Chapter 72-41-10).****(7) Disassemble the HP compressor rear shaft assembly (Refer to the Engine Manual, Chapter 72-41-13)**

R (a) Remove the old HP compressor rear shaft assembly, (72-41-13, 01-850), P/N 6A7711 or P/N 6A7713.

(8) Assemble the HP compressor rear shaft assembly (Refer to the Engine Manual, Chapter 72-41-13)

R (a) Install the new HP compressor rear shaft assembly, (72-41-13, 01-850), P/N 6B1419 or P/N 6B1426.

(9) Assemble the HP compressor rotor assembly (Refer to the Engine Manual, Chapter 72-41-10).**(10) Assemble the HP compressor assembly (Refer to the Engine Manual, Chapter 72-41-00).****(11) Install the HP compressor assembly (Refer to the Engine Manual, Chapter 72-00-41).**



- (12) Install the HP system module (Refer to the Engine Manual, Chapter 72-00-40).
- (13) Make sure that the work area is clean and clear of tools, equipment and other unwanted materials.

C. Recording Instructions

- (1) A record of accomplishment is required.

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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.	Description	Unit Price US Dollars
6B1413	..Ring nut	3,287.00
6B1419	.High Pressure (HP) compressor rear shaft assembly	102,550.00

3. Tools

None.