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V2500-A1 SERIES PROPULSION SYSTEMS SERVICE BULLETIN

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This document transmits the Revision 1 of Service Bulletin V2500-ENG-72-0125 and the Initial Issue of the Supplement.

Document History

Service Bulletin Revision Status

Initial Issue Jun.24/94

Service Bulletin Revision 1

Remove	Incorporate	Reason for change
All pages of the Service Bulletin.	Pages 1 to 11 of the Service Bulletin.	To incorporate the new rework instruction and minor editorial changes.
	Page 1 of the Supplement.	Initial Issue.

V2500-ENG-72-0125

Transmittal - Page 1 of 1

CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED

If any have not been received please advise Customer Data Services, Rolls-Royce plc, Derby, England

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ENGINE – LP TURBINE – INCORPORATE LPT DISK AND DIFFUSER SUPPORT ASSEMBLY NUTS WITH
REVISED COATING

1. Planning Information

A. Effectivity

R (1) Airbus A320

R (a) V2500-A1 Engines prior to Serial Number V0292.

R B. Concurrent Requirements

R None.

C. Reason

(1) Condition

R The silver plating causes corrosion on the Low Pressure Turbine (LPT)
R disks and on the diffuser support ring.

(2) Background

Silver coating as antiseize is necessary and effective in the threaded area only. Liberated silver particles may act as corrosion catalyst.

(3) Objective

R Engineering assessment has concluded that the change introduced by this
R Service Bulletin is beneficial.

(4) Substantiation

R To make the best use of the silver coating. Nuts and clinch nuts with
R silver plating in the threaded area only have been introduced.

(5) Effects of Bulletin on Workshop Procedures:

R (a) Operation

Not affected.

R (b) Maintenance

R Not affected.

R (c) Overhaul

R Affected.

R (d) Repair Schemes

Not affected.

R (e) Interchangeability

Not affected.

R (f) Fits and Clearances

Not affected.

(6) Supplemental Information

None.

D. Description

(1) New nuts for the LP turbine rotor connection with silver plating in the threaded area only are now available.

R (2) The diffuser segments can be reworked by replacing the existing clinchnuts with new clinchnuts with silver plating in the threaded area only.

R E. Compliance

R Category Code 6

R Accomplish when the subassembly (i.e. Modules, Accessories, Components, Build
R groups) is disassembled sufficiently to afford access to the affected part and
R to all affected spare parts.

F. Approval

The compliance statement and the procedure described in Section 2 of 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

R Estimated Man-hours to incorporate the full intent of this Service Bulletin:

(1) In Service

Not applicable.

(2) At Overhaul

1.4 hours

Rework of diffuser segments: 1.4 hours.

H. Material – Price and Availability

(1) Modification Kit not required. Parts supplied as single line items.

R (2) Refer to Section 2."Material Information" and the supplement for prices and availability.

I. Tooling – Price and Availability

Special tools are not required to accomplish this Service Bulletin.

R J. Industry Support Information

R Not applicable.

K. Weight and Balance

(1) Weight change

None.

(2) Moment arm

No effect.

(3) Datum

Engine front mount centreline (Powerplant Station (PPS) 100).

L. Electrical Load Data

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

R M. Software Accomplishment Summary

R Not applicable.

N. References

R (1) Internal Reference No.:

R Engineering Change No. 91VM017, 91VM017-01 and 91VM017-02.

R (2) Service Bulletin V2500-ENG-72-0179 – ENGINE – LP TURBINE ASSEMBLY –
R PROVIDE IAE PARTNUMBER IDENTIFICATION FOR LPT ROTORNUTS.

O. Other Publications Affected

R (1) V2500-A1 Engine Illustrated Parts Catalogue, Chapter/Section 72-50-10 and 72-50-24 to add the new Part Numbers.



- R (2) V2500 Engine Manual, Chapter/Section 72-50-24, Cleaning, to add the new
R Part numbers.
- R (3) V2500 Engine Manual, Chapter/Section 72-50-24, Inspection/Check, to add
R the new Part numbers.
- R (4) V2500 Engine Manual, Chapter/Section 72-50-24, Repair, to add the new Part
R numbers.
- R P. Interchangeability of Parts
- R Not affected.

2. Material Information

A. Kits associated with this Bulletin:

None.

B. Parts to be reworked

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
72-50-24						
01-100	3A2201	1	.Support, assembly diffuser inner	-	3A1564	(A2)(C) (1D)(S1)
01-100	3A2202	1	.Support, assembly diffuser inner	-	3A0104	(A2)(1D)(S1)

C. New production parts

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
72-50-10						
01-120	ST2325-10	36	.Nut, double hex self locking	-	4W0010	(A1)(B)(S1)
01-170	ST2325-10	36	.Nut, double hex self locking	-	4W0010	(A1)(B)(S1)
01-220	ST2325-10	36	.Nut, double hex self locking	-	4W0010	(A1)(B)(S1)
01-320	ST2325-10	36	.Nut, double hex self locking	-	4W0010	(A1)(B)(S1)
01-370	ST2325-10	36	.Nut, double hex self locking	-	4W0010	(A1)(B)(S1)
72-50-24						
01-100	3A2201	1	.Support, assembly diffuser inner	-	3A1564	(A2)(C) (1D)(S1)

R	FIG	NEW	QTY	PART TITLE	MAT	OLD	INSTR
R	ITEM	PART				PART	DISP
R	NO.	NO.				NO.	
R	01-130	ST1578	29	.Nut, Clinch self locking	-	494677	(A2)(C)
R							

D. Instruction/Disposition Code Statements:

(A1) Old parts may be retained for use in other applications.

(A2) Old parts are no longer available.

(B) New parts have been superseded. See Service Bulletin V2500-ENG-72-0179.

(C) New parts currently available.

R (1D) Old parts may be reworked and reidentified to the new part number.

(S1) Old and new parts are physically and functionally interchangeable.

3. Accomplishment Instructions

A. Rework Instructions

R Rework the existing Support Assembly diffuser inner 3A0104 and 3A1564 as follows:

R (1) Tools

R None.

R (2) Consumable Materials

R None.

R PROCEDURE

SUPPLEMENTARY INFORMATION

R (3) Inspect the old parts
R Refer to EM 72-50-24-200-000, INSPECTION/CHECK 00, Page 801

R NOTE:
R Do not rework parts that do not satisfy serviceability requirements in the EM.

R (4) Remove the Worn Nuts of the Inner Diffuser Support Assembly
R Use electric hand drill, diameter of drill 0.27 in. (6,80 mm). Damages at the chamfer, the bore and the faces of the Inner Diffuser Support Assembly are not permitted (Refer to Fig.3).

R (5) Hit lightly the remainder of the nut shaft to remove it from the inner diffuser support
R Use pin punch with a diameter of 0.29 in. (7,50 mm).

R (6) Examine the inner diameter of the hole for damage
R Fine scratches are permitted. Remove raised material (Refer to Fig.3).
R Use needle file and stones.

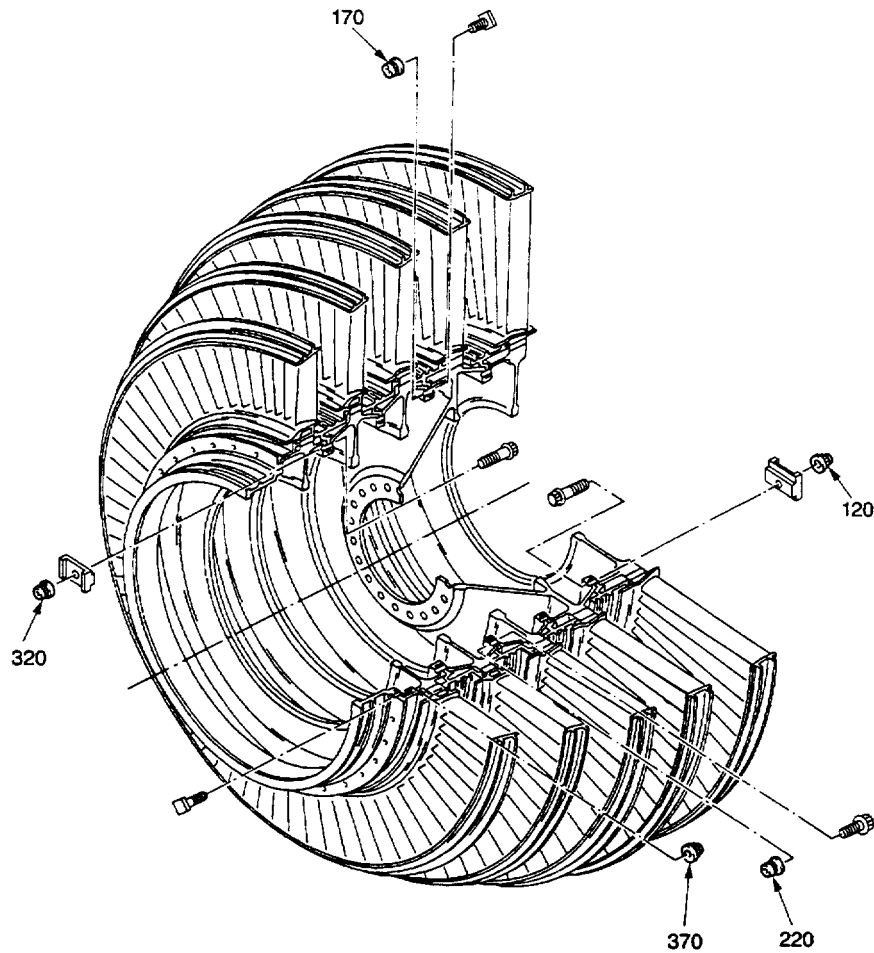
R (7) Install the hollow sections of the new nuts into the holes
R Make sure that the shoulder of the nuts are installed so that the nuts cannot rotate (Refer to Fig.3).

R (8) Flare over the locations diameter of the nuts
R Axial movement of the nuts up to a maximum of 0.010 in. (0,25 mm) is permitted.

R	PROCEDURE	SUPPLEMENTARY INFORMATION
R R R	(9) Examine the installed nuts for cracks visually	No cracks are permitted. Use illuminated comparator magnifier.
R R R R	(10) Examine the nuts for correct installation	The flare must be formed symmetrically without broken or rough edges. Use illuminated comparator magnifier.
R R R R	(11) Examine the installed nuts nuts dimensionally	Axial movement of the nuts up to a maximum of 0.010 in. (0,25 mm) is permitted.
R R R R R R R	(12) Identify the inner diffuser support assembly with the new part number adjacent to the part number that was before	PART NUMBER BEFORE - 3A0104 NEW PART NUMBER - 3A2202 PART NUMBER BEFORE - 3A1564 NEW PART NUMBER - 3A2201
R R R R R	(13) Vibro peen the new PART NUMBER adjacent to the existing PART NUMBER	Refer to SPP TASK 70-09-00-400-501.

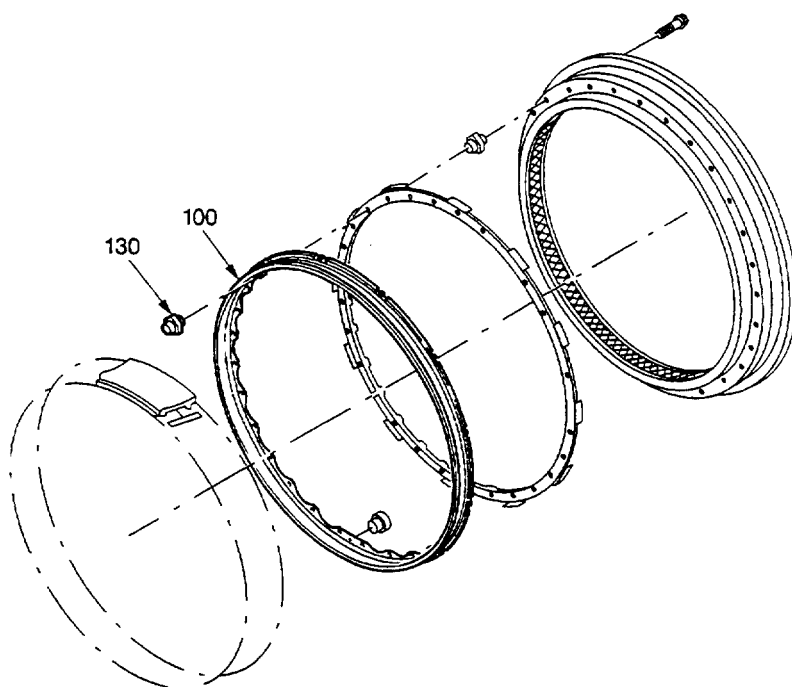
B. Recording Instructions

- (1) A record of accomplishment is necessary.



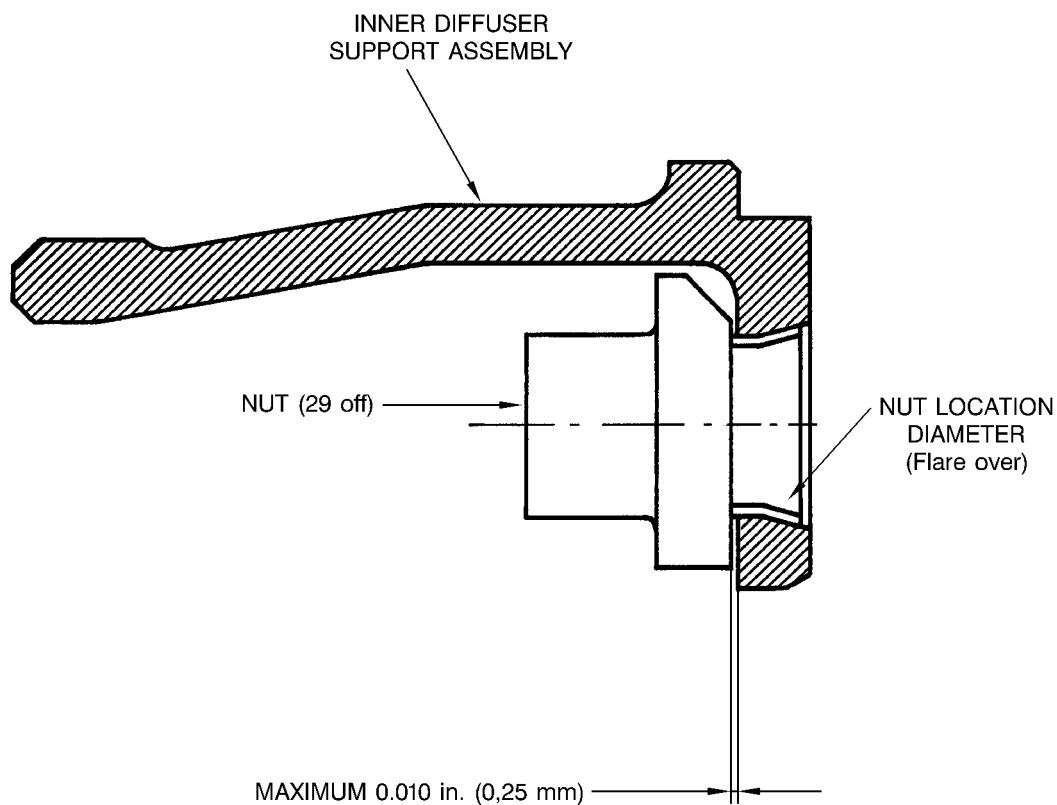
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LPT rotor assembly
Figure 1



LPT Diffuser support assembly
Figure 2

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R

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R
R

Replace the nuts of the inner diffuser support
Figure 3

ENGINE - LP TURBINE - INCORPORATE LPT DISK AND DIFFUSER SUPPORT ASSEMBLY NUTS WITH REVISED COATING

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R SUPPLEMENT - PRICES AND AVAILABILITY

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

R 1. Modification Kit:

R Not applicable.

R 2. New Production Parts:

R			Unit Price
R	Part No.	Description	US Dollars
R	ST2325-10	.Nut, double hex	23.50
R		self locking	
R	3A2201	.Support assembly	18,640.00
R		support inner	
R	ST1578	.Nut, clinch	27.00
R		self locking	

R 3. Tools

R None.