

ENGINE - LP TURBINE - INTRODUCE A REVISED STAGE 7 LPT AIR SEAL - CATEGORY CODE 7 -
MOD.ENG-72-0003

1. Planning Information

A. Effectivity

- (1) Aircraft: Airbus A320
- (2) Engine: V2500-A1 Engines before Serial No.V0180

B. Reason

(1) Condition

In the present configuration, an interference fit between the stage 7 LP Turbine rotating airseal and the stage 7 Turbine disk may not always be available under all engine operating conditions.

(2) Background

Analytical evaluation have shown that a clearance between the airseal and the turbine disk may occur during engine operation.

(3) Objective

To ensure a residual interference fit between the stage 7 airseal and the stage 7 Turbine disk and to reduce the total weight of the engine.

(4) Substantiation

The weight reduced part have been successfully endurance tested in a development engine.

(5) Effects of Bulletin on Workshop Procedures:

Removal/Installation	Not affected
Disassembly/Assembly	Affected (See Supplemental Information)
Cleaning	Not affected
Inspection/Check	Not affected
Repair	Affected (See Supplemental Information)
Testing	Not affected

(6) Supplemental Information

- (a) A new tool and a revised procedure are necessary to remove the Post Service Bulletin Configuration part from the stage 7 turbine disk.

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(b) Material removal for balancing of the part must be carried out at the aft shoulder.

(c) New dimensions for knife edge seal weld repair will be introduced.

C. Description

(1) The changes introduced by this Service Bulletin are as follows:

(a) The weight of the part is reduced by removal of the front lip and reduction of the aft shoulder diameter.

(b) The snap diameter of the airseal is reduced.

D. Approval

The Part Number Change described in Section 3 of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and is FAA-APPROVED for the Engine Model listed.

E. Compliance

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Accomplish when supply of superseded parts have been deleted.

F. Manpower

Not applicable

G. Material - Price and Availability

(1) Modification Kit not required.

(2) See "Material Information" section for prices and availability of future spares.

H. Tooling - Price and Availability

Tool No.	Qty	Description	Function	Avail.
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New tools required:

1M14364	6	Jaw, Clamping	Removal of airseal	(1)
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Additional tool required that can be fabricated from existing tool:

1M14136	1	Fixture, Balancing	Balancing of airseal	(2)
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(Converted from 1M14231)

(1) Indicates that the Tool Design Aperture Cards are currently available from IAE.

(2) Indicates that the Tool Design Aperture Cards are currently available from IAE by end of 1991.

I. Weight and Balance

- | | |
|-------------------|---|
| (1) Weight change | minus 1.0 lb (0,45 kg) |
| (2) Moment arm | 66.583 in. (1691,2 mm) rearward |
| (3) Datum | Engine front mount centreline
(Powerplant Station(PPS)100) |

J. Electrical Load Data

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

K. References

- (1) Internal Reference No.
88VM029
- (2) Other References
 - (1) V2500 Engine Manual
 - (2) V2500 Engine Illustrated Parts Catalogue.

L. Other Publications Affected

- (1) V2500 Illustrated Parts Catalogue, Chapter/Section 72-50-33, Figure 01 to add the new part.
- (2) V2500 Engine Manual, Chapter/Section 5-10-01, Group A parts lives to add new part.
- (3) The V2500 Engine Manual Chapter/Section 72-50-30, Disassembly 01 to show the revised procedure and the new tool.
- (4) The V2500 Engine Manual Chapter/Section 72-50-30, Assembly 05 to show the new snap diameter dimension and the interference fit.
- (5) V2500 Engine Manual Chapter/Section 72-50-33, cleaning to add the new part.
- (6) V2500 Engine Manual Chapter/Section 72-50-33, Inspection/Check to show the new snap diameter limits and the applicable repair instructions.

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- (7) V2500 Engine Manual Chapter/Section 72-50-33, Repairs to provide repair data applicable for the new part.

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2. Accomplishment Instructions

A. Rework Instructions

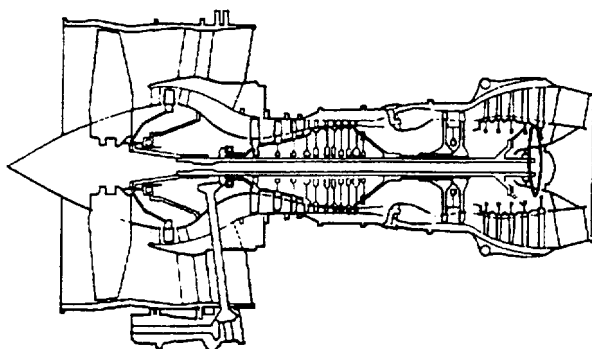
- (1) There are no rework instructions necessary to accomplish this Service Bulletin.

B. Assembly Instructions

- (1) Install new 3A1741 stage 7 air seal on to the stage 7 Turbine disk by the approved procedure in Reference (2), Chapter/Section 72-50-30, Assembly-05 and figure 1 except:
 - (a) New air seal snap diameter: 19.1181 – 19.1221 inch (485,6 – 485,7 mm).
 - (b) Required new interference fit at location 3364: 0.0157 – 0.0236 inch (0,4 – 0,6 mm).

C. Recording Instructions

- (1) A record of accomplishment is necessary.



REMOVE P/N 3A0797
STAGE 7 AIRSEAL

INSTALL P/N 3A1741
STAGE 7 AIRSEAL

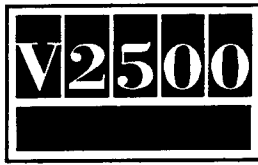
3364

3364

STAGE 7 TURBINE DISK

View showing stage 7 airseal - Before and after alteration
Fig.1

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3. Material Information

Applicability: For each V2500 Engine to incorporate this Bulletin.

A. Kits associated with this Bulletin:

None

B. Parts Affected by this Bulletin:

New Part No. (ATA No.)	Qty	Est'd Unit Price (\$)	Keyword	Old Part No. (IPC No)	Instructions Disposition
3A1741	1		Seal, air turbine stage 7	3A0797 (01-010)	(1)(2)(S1)

C. Instruction/Disposition Code Statements:

- (1) Old part will continue to be available for sale, until the parts are deleted.
- (2) New part currently is available for sale.
- (S1) Old and new part are freely and fully interchangeable functionally.

NOTE: Contact the IAE's Spare Parts Sales Department for information concerning firm prices.

