



SERVICE BULLETIN

ENGINE - HP TURBINE ROTOR AND STATOR ASSEMBLY - PROVIDE A NEW STAGE 2 HPT AIR SEAL ASSEMBLY FEATURING RECONTOURED FORWARD AND REARWARD MATING SURFACES AND A TAPERED WEB - CATEGORY CODE 8 - MOD.ENG-72-0207

1. Planning Information

A. Effectivity

- (1) Aircraft: Airbus A320, A321
McDonnell Douglas MD-90
- (2) Engine: V2500-A1 Engines before Serial No. V0362
V2527-A5 Engines before Serial No. V10113*
V2530-A5 Engines before Serial No. V10113*
V2525-D5 Engines before Serial No. V20117*
V2528-D5 Engines before Serial No. V20117*

NOTE: *The serial number is of a preliminary nature and is provided for advanced planning only. A future revision to this Service Bulletin will confirm final serial number effectivity.

NOTE: This Service Bulletin must be incorporated at the same time as V2500-ENG-72-0121 and at the same time as or after V2500-ENG-72-0122 and V2500-ENG-72-0124.

B. Reason

(1) Condition:

The design margin needed to be improved to desensitize web deflection.

(2) Background:

It was determined that there was not a sufficient design margin.

(3) Objective:

Improve engine durability by increasing design margin and desensitize web deflection.

(4) Substantiation

Analysis of structural durability, performance and part life verify configuration design integrity.

(5) Effects of Bulletin on Workshop Procedures:

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Removal/Installation	Not affected
Disassembly/Assembly	Not affected
Cleaning	Not affected
Inspection/Check	Not affected
Repair	Not affected
Testing	Not affected

(6) Supplemental Information

None.

C. Description

- (1) Install a new Stage 2 HPT Air Seal Assembly that has recontoured forward and rearward mating surfaces and a tapered web.
- (2) For the effect on declared life, See Appendix 1 of this Service Bulletin. The limits given in this Appendix will be included as soon as possible in revisions of the V2500 Engine Manual (E-V2500-1I-A) and the V2500 Engine Manual (E-V2500-3I-A).

D. Approval

The Part Number Changes and/or part modifications described in Section 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 listed.

E. Compliance

Category 8

Accomplish based upon experience with prior configuration.

F. Manpower

- (1) In service Not Applicable
- (2) At overhaul.. .. . Not Applicable

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

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G. Material - Price and Availability

- (1) Modification kit is not required.
- (2) See "Material Information" section for prices and availability of future spares.

H. Tooling - Price and Availability

Special tools are not required to accomplish this Service Bulletin.

I. Weight and Balance

- | | |
|-------------------|--|
| (1) Weight change | Plus 0.48 lb (0,22 kg) |
| (2) Moment arm | No effect |
| (3) Datum | Engine Front mount Centerline
(power Plant station (PPS) 100) |

J. Electrical Load Data

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

K. References

- (1) Internal Reference No.

93VA189

- (2) Other References

IAE Service Bulletin:

V2500-ENG-72-0121 - Engine - HP Turbine Rotor and Stator Assembly -
Provide New Stage 2 HPT Air Seal Assembly

V2500-ENG-72-0122 - Engine - HP Turbine Rotor and Stator Assembly -
Provide New Stage 2 Vane Assemblies, Stage 2 Air Sealing Ring
Segment Assemblies and Stage 2 HPT Seals

V2500-ENG-72-0124 - Engine - HP Turbine Rotor and Stator Assembly -
Provide New HPT Band Segment Assemblies and New HPT Duct Support
Assemblies

V2500-A1 Engine Illustrated Parts Catalog (S-V2500-1IA),
Chapter/Section 72-45-00

V2500-A5 Engine Illustrated Parts Catalog (S-V2500-2IA),
Chapter/Section 72-45-00

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V2500-D5 Engine Illustrated Parts Catalog (S-V2500-3IA),
Chapter/Section 72-45-00

V2500 Engine Manual (E-V2500-1I-A), 72-45-00, Assembly.

V2500 Engine Manual (E-V2500-3I-A), 72-45-00, Assembly.

L. Other Publications Affected

- (1) The V2500-A1 Engine Illustrated Parts Catalog (S-V2500-1IA), Chapter/Section 72-45-00, Figure-01 to add the new part.
- (2) The V2500-A5 Engine Illustrated Parts Catalog (S-V2500-2IA), Chapter/Section 72-45-00, Figure-01 to add the new part.
- (3) The V2500-D5 Engine Illustrated Parts Catalog (S-V2500-3IA), Chapter/Section 72-45-00, Figure-01 to add the new part.
- (4) The V2500 Engine Manual (E-V2500-1I-A), Chapter/Section 72-45-00, Cleaning to add the new part number.
- (5) The V2500 Engine Manual (E-V2500-3I-A), Chapter/Section 72-45-00, Cleaning to add the new part number.
- (6) The V2500 Engine Manual (E-V2500-1I-A), Chapter/Section 72-45-00, Inspection to add the new part number.
- (7) The V2500 Engine Manual (E-V2500-3I-A), Chapter/Section 72-45-00, Inspection to add the new part number.
- (8) The V2500 Engine Manual (E-V2500-1I-A), Chapter/Section 72-45-00, Repair to add the new part number.
- (9) The V2500 Engine Manual (E-V2500-3I-A), Chapter/Section 72-45-00, Repair to add the new part number.
- (10) The V2500 Engine Manual (E-V2500-1I-A), Chapter/Section 5-10-01, Group A Parts Lives to add the new part number.
- (11) The V2500 Engine Manual (E-V2500-3I-A), Chapter/Section 5-10-01, Group A Parts Lives to add the new part number.



2. Accomplishment Instructions

A. Installation Instructions (V2500-A1 and V2500-A5)

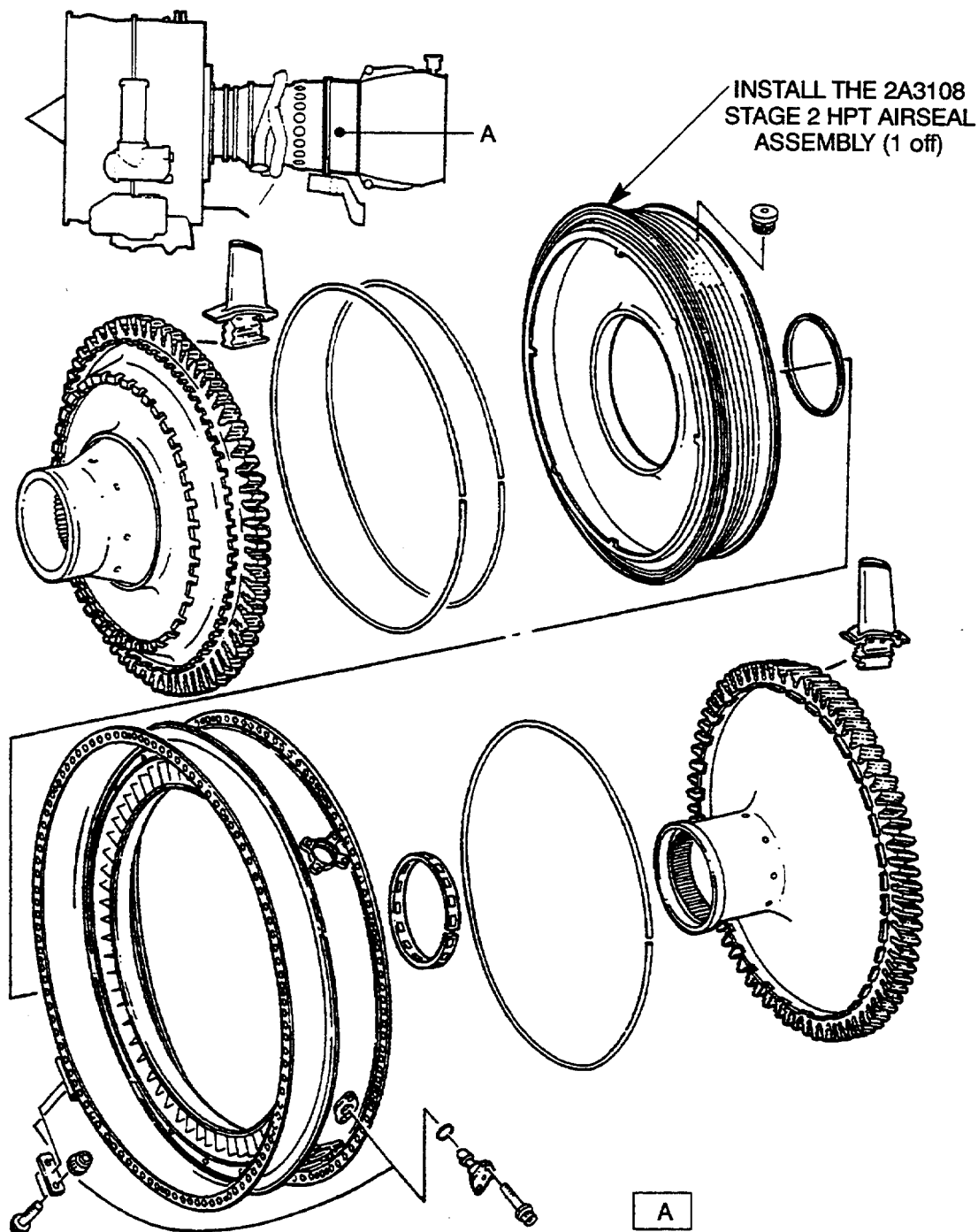
- (1) Install the 2A3108 Stage 2 HPT Air Seal Assembly (1 off) by the approved procedure given in Reference (5), Chapter/Section 72-45-00, Assembly (Config-01 or Config-02 for the V2500-A1 and Config-03 for the V2500-A5) and Figure 1.

B. Installation Instructions (V2500-D5)

- (1) Install the 2A3108 Stage 2 HPT Air Seal Assembly (1 off) by the approved procedure given in Reference (6), Chapter/Section 72-45-00, Assembly-01 and Figure 1.

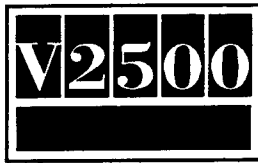
C. Recording Instructions

- (1) A record of accomplishment is necessary.



Location of the Stage 2 HPT Air Seal Assembly
Fig.2

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3. Material Information

A. Kit associated with this bulletin.

None

B. Parts affected by this bulletin.

NOTE: It is possible to use the Chapter/Section and Figure/Item reference number shown below the old part number to find the part in the Illustrated Parts Catalog.

New Part No. (ATA No.)	Qty	Est'd Unit Price (\$)	Keyword	Old Part No. (IPC No.)	Instructions Disposition
2A3108 (72-45-00)	1	\$65,000.00	Seal Assy-Air, HPT, Stage 2	2A1160 - (01-080)	(S1)(A)(B)

C. Instructions/Disposition Code Statements:

(S1)Parts coded (S1) are directly interchangeable, both physically and functionally.

(A) The new part is currently available.

(B) The old part will no longer be supplied.

NOTE: The estimated 1995 unit prices shown are provided for planning purposes only and do not constitute a firm quotation. Consult the IAE Price Catalog or contact IAE's Spare Parts Sales Department for information concerning firm prices.



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APPENDIX 1

1. The cyclic limit for the 2A3107 Stage 2 Air Seal is as follows:

NOTE: The 2A3107 Stage 2 HPT Airseal is a detail of the 2A3108 Air Seal Assembly.

REFERENCE	NAME	PART NUMBER	MODELS	CYCLES MAX.
1602	Seal-Air HPT, 1-2 STG	2A3107	V2500-A1	15000
1602	Seal-Air HPT, 1-2 STG	2A3107	V2500-A5	15000
1602	Seal-Air HPT, 1-2 STG	2A3107	V2500-D5	15000