



ENGINE - DIFFUSER AND COMBUSTOR GROUP - SHOTPEEN THE NO.4 BEARING SUPPORT - CATEGORY  
CODE 5 - MOD.ENG-72-0040

1. Planning Information

NOTE: The intent of this Service Bulletin is superseded by the instructions given in Service Bulletin V2500-ENG-72-0112. For engines that do not incorporate this Service Bulletin you must do the applicable modification given in V2500-ENG-72-0112.

A. Effectivity

- (1) Aircraft: Airbus A320
- (2) Engine: V2500-A1 Engine Serial No. V0001 through V0101 and V0118 except V0090, V0092, V0097, V0098 and V0099.

B. Reason

(1) Condition

A cracked No.4 Bearing Support was found on an experimental engine and a test rig.

(2) Background

A cracked No. 4 Bearing Support was found on an experimental engine. The condition was found on an experimental engine. The same condition was also found on a test rig.

Analysis showed that a crack can occur because supports were not peened and there were stress concentrations.

(3) Objective

To prevent cracks in the No. 4 Bearing Support.

(4) Substantiation

Shot peened supports are used, and have shown satisfactory life, in other engine programs.

(5) Effect 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) The No. 4 Bearing Support is shotpeened and part life is increased, because this makes it less possible that cracks will occur.

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

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Accomplish when the engine is disassembled sufficiently to afford access to the affected subassembly (i.e. modules, accessories, components, builds groups) and to all affected spare subassemblies.

F. Manpower

Estimated manhours to incorporate the full intent of this Bulletin:

Venue	Estimated Manhours
(1) In Service	Not applicable
(2) At overhaul (Note: The parts affected by this Service Bulletin are accessible at overhaul)	

To accomplish the shotpeening of  
the No. 4 Bearing Support Assembly.. .. 43 Minutes  
TOTAL: 43 Minutes

G. Material - Price and Availability

- (1) Modification Kit not required.

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

## H. Tooling - Price and Availability

None.

## I. Weight and Balance

- |     |               |    |    |    |   |
|-----|---------------|----|----|----|---|
| (1) | Weight change | .. | .. | .. | None  |
| (2) | Moment Arm    | .. | .. | .. | No effect   |
| (3) | Datum         | .. | .. | .. | Engine front mount centerline<br>(Powerplant Station P.P.S.100) |

## J. Electrical Load Data

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

## K. References

- (1) Internal Reference No.

EC89VA103

93VC504

- (2) Other references

V2500 Engine Illustrated Parts Catalog.

V2500 Engine Manual.

V2500 Standard Practices Manual.

## L. Other Publications Affected

- (1) The V2500 Engine Illustrated Parts Catalog, Chapter/Section 72-42-31, Figure 1, to add the new parts.
- (2) The V2500 Engine Manual, Chapter/Section 72-42-31, Cleaning, to add the new parts.
- (3) The V2500 Engine Manual, Chapter/Section 72-42-31, Inspection, to add the new parts.
- (4) The V2500 Engine Manual, Chapter/Section 72-42-31, Repair, to add the new parts.

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**International Aero Engines**

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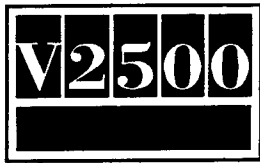
- (5) V2500 Engine Service Bulletin No. V2500-ENG-72-0112 Engine Diffuser and Combustor Group – Provide a new No. 4 Bearing Support Assembly with increased durability.

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2. Accomplishment Instructions

A. Disassembly Instructions

- (1) Disassemble the No.4 Bearing Front Compartment Parts by the approved procedure in Reference (2), Chapter/Section 72-42-30, Disassembly.

B. Rework Instructions

- (1) Do a modification on PN 2A0846 No.4 Bearing Support Assembly (See Reference (1), 72-42-31, Fig/Item No.01-010) and identify as follows:

Procedure	Supplementary Information	
(a) Round the edges of all the slots in the No.4 Bearing Assembly	Refer to Figures 1 and 2 requirements	
(b) Shotpeen the No.4 Bearing Support Assembly to an intensity of 6A using SAE 170 maximum cast steel shot (Hardness 45-55 HRC or equivalent) by TASK 70-38-13-380-501 (AMS 2430)	Refer to Figures 1 and 2 requirements. Refer to the approved procedure in Reference (3) Chapter/Section 70-38-13 Surface Treating	
(c) Mark the new part number adjacent to the old part number. Use the vibration peen method	Existing	New Number
	2A0846	2A2038

NOTE: Overspray is permitted on all other surfaces, if not differently specified.

Refer to approved procedure in Reference (3) Chapter/Section 70-09-00, Marking of Parts

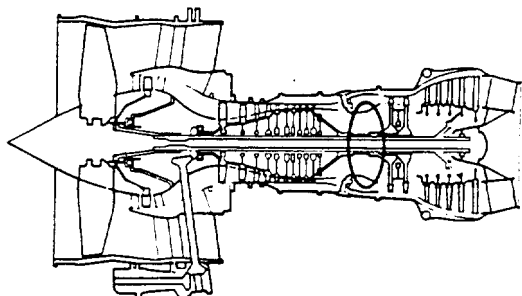
C. Assembly Instructions

- (1) Assemble the No.4 Bearing Front Compartment Parts by the approved procedure in Reference (2), Chapter/Section 72-42-30, Assembly. Use PN 2A2038 No.4 Bearing Support Assembly.

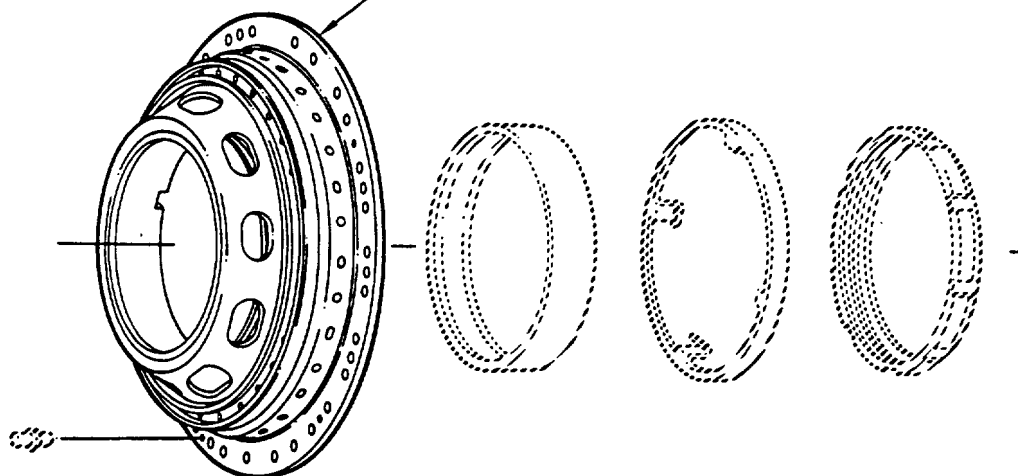
D. Recording Instructions

- (1) A record of accomplishment is necessary

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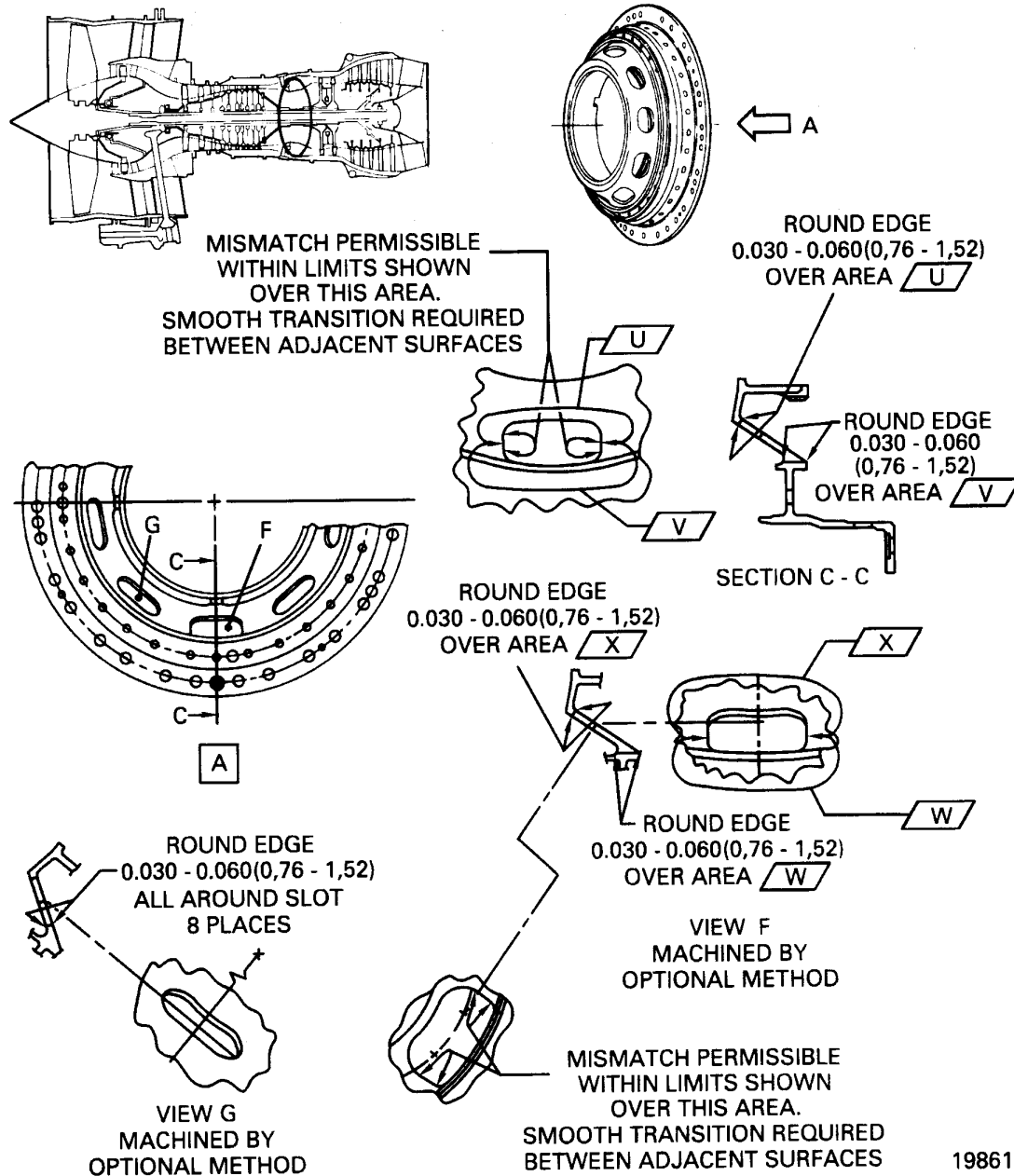
REMOVE THE PN 2A0846 No.4 BEARING  
SUPPORT ASSEMBLY (1 Off) DO A  
MODIFICATION, IDENTIFY, AND INSTALL  
AS PN 2A2038 No.4 BEARING SUPPORT  
ASSEMBLY (1 Off)



19504

Location of No.4 Bearing Support Assembly  
Fig.1

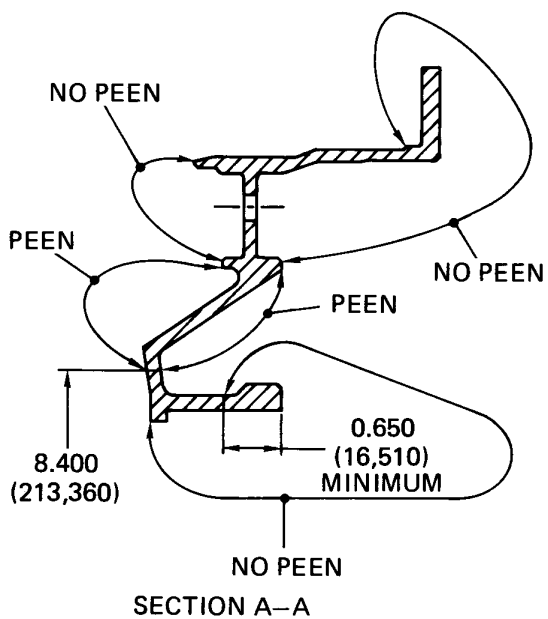
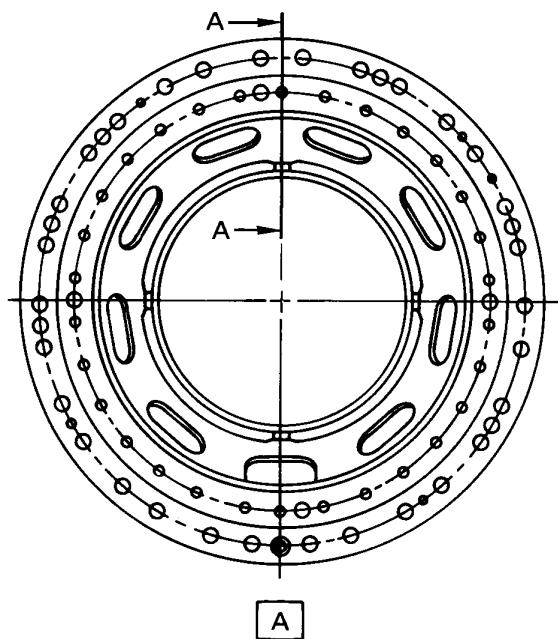
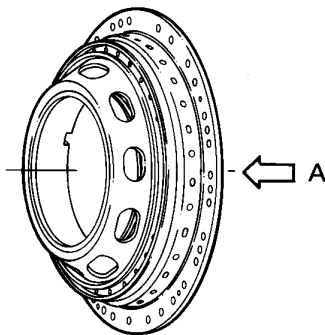
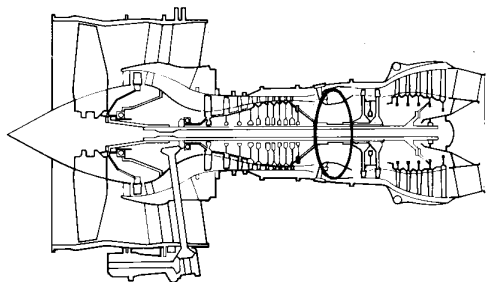
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19861

Modification of No.4 Bearing Support Assembly  
Fig.2

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19505

Modification of No.4 Bearing Support Assembly  
Fig.3

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3. Material Information

New Part No. (ATA No.)	Qty	Est'd Unit Price (\$)	Keyword	Old Part No. (IPC No.)	Instructions Disposition
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Applicability: For each V2500 Engine to incorporate this Bulletin.

A. Kits associated with this Bulletin:

None

B. Parts affected by this Bulletin:

2A2038 (72-42-31)	1	13,340.00	Support Assembly - No.4 Bearing	2A0846 (01-010)	(1D)(A)(B)
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C. Instructions/Disposition Code Statements:

- (1D) Old Part can be reworked and reidentified to the New Part Number.
- (A) New Part is currently available.
- (B) Old Part will no longer be available.

NOTE: The estimated 1989 unit prices shown are provided for planning purposes only and do not constitute a firm quotation. Contact IAE's Spare Parts Sales Department for information concerning firm prices.

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