



ENGINE - STAGE 1 TURBINE NOZZLE ASSEMBLY - PROVIDE NEW FIRST STAGE HPT DUCT SEGMENTS
AND DUCT STOPS WITH BOLT HOLE CHAMFERS - CATEGORY CODE 6 - MOD.ENG-72-0113

Printed in Great Britain

1. Planning Information

A. Effectivity

- (1) Aircraft: Airbus A320
- (2) Engine: V2500-A1 Engines before Serial No.V0239*

*The Serial Number data shown 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.

B. Reason

(1) Condition

At disassembly the mounting bolts for the First Stage HPT Duct Segments and the First Stage HPT Duct Stops showed wear in the fillet radius. This wear could cause bolt heads to break off and go into the turbine flowpath.

(2) Background

There is not sufficient clearance between the mounting bolt fillet radii and the sharp edges of their respective holes (in the First Stage HPT Duct Segments and the First Stage HPT Duct Stops). At the disassembly of some engines there were First Stage HPT Duct Segments, First Stage HPT Duct Stops, and mounting bolts which showed wear. This occurred because of contact between the bolt fillet radii and the sharp corners of their respective bolt holes. This wear showed that there was not sufficient bolt hole break edge allowance, which caused the bolts to seat on the fillet radius instead of the head.

(3) Objective

To eliminate a possible interference between the First Stage HPT Duct Segments, the First Stage HPT Duct Stops and their mounting bolts.

(4) Substantiation

Successful analytical review.

(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) Provide new First Stage HPT Ducts Stops and new First Stage HPT Duct Segments which have chamfers added to the mounting bolt holes.

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 Code 6.

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

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)	
	Total: 1 Hour, 20 Minutes
(a) To machine the Stage 1 HPT Duct Segments (20 off)	30 Minutes
(b) To machine the Stage 1 HPT Duct Stops (20 off)	30 Minutes
(c) To vibropeen the new part numbers	20 Minutes

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Total: 1 Hour, 20 Minutes

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

Special tools are not required to accomplish Sub-division 2 of this Service Bulletin.

I. Weight and Balance

- | | | | | | |
|-----|---------------|----|----|----|--|
| (1) | Weight change | .. | .. | .. | None |
| (2) | Moment arm | .. | .. | .. | No effect |
| (3) | Datum | .. | .. | .. | Engine front mount Centerline
(Poweplant station P.P.S.100) |

J. Electrical Load Data

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

K. Reference

- (1) Internal Reference No.

90VA111

- (2) Other References

V2500-ENG-72-0013 (Engine - Stage 1 Turbine Nozzle Assembly And HP Turbine Rotor and Stator Assembly - Replacement Of The Stage 1 HPT Duct Segment And The Stage 1 HPT Airseal).

V2500 Illustrated Parts Catalog

V2500 Engine Manual

V2500 Standard Practices Manual

L. Other Publications Affected

- (1) The V2500 Engine Illustrated Parts Catalog Chapter/Section 72-44-60, Figure 1, to add the new parts.

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- (2) The V2500 Engine Manual Chapter/Section 72-44-60, Cleaning, to add the new parts.
- (3) The V2500 Engine Manual Chapter/Section 72-44-60, Inspection, to add the new parts.

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2. Accomplishment Instructions

A. Rework Instructions

- (1) Do a modification to the 2A0087 and 2A1198 Stage 1 HPT Duct Segments (See Reference (2), Chapter/Section 72-44-60, Fig/Item No.01-010) and the 2A0936 Stage 1 HPT Duct Stop (See Reference (2), Chapter/Section 72-44-60, Fig/Item No.01-020) and reidentify as follows:

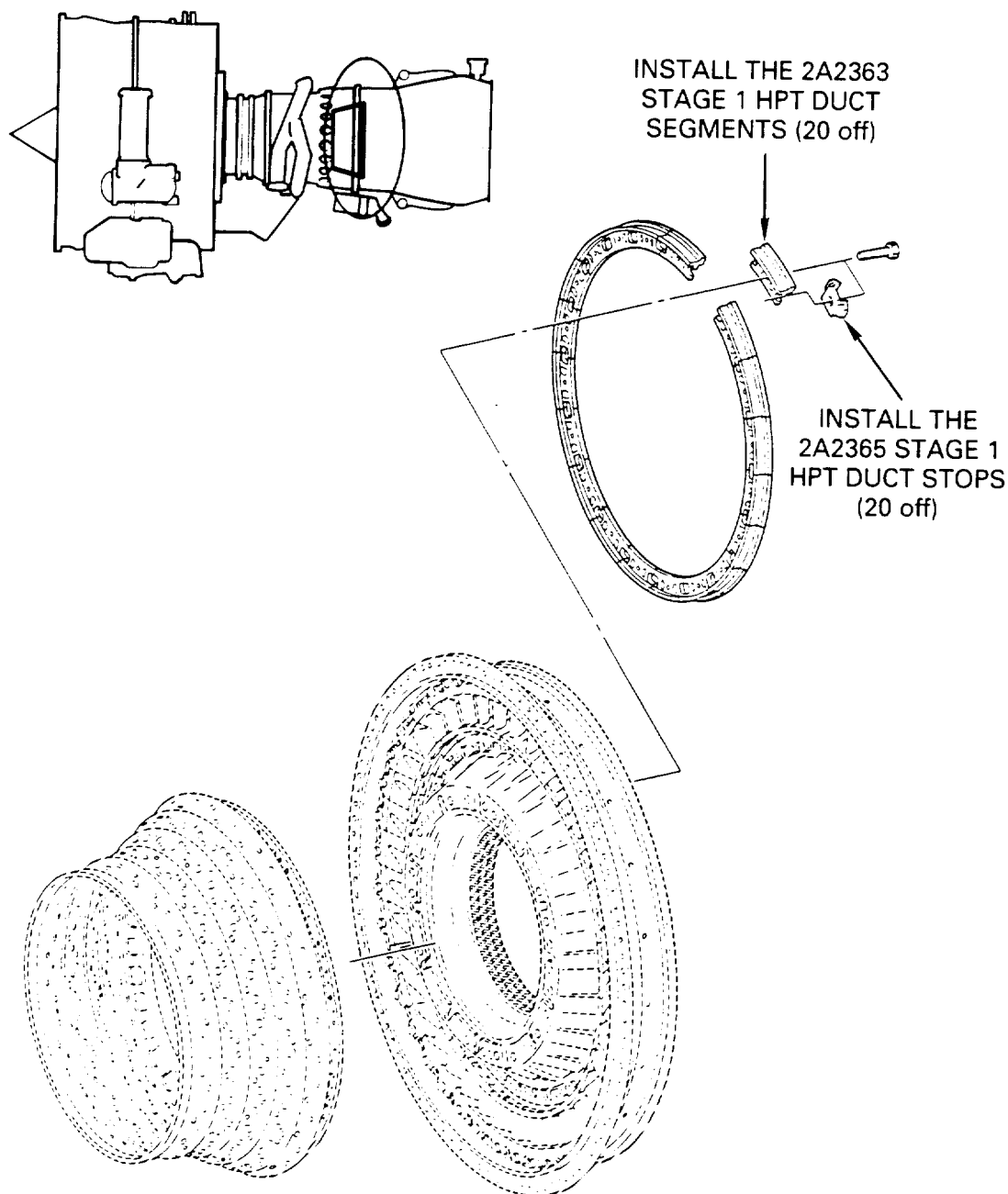
Procedure	Supplementary Information	
(a) Set-up and machine a chamfer at the bolt hole in the stage 1 HPT duct segment (20 off) at the bolt head side.	Refer to Figures 1, 2, and 3, requirements.	
(b) Set-up and machine a chamfer at the bolt hole in the stage 1 HPT duct stop (20 off) at the bolt head side.	Refer to Figures 1, 2, and 3, requirements.	
(c) Make a mark adjacent to the old part number to show the new part number. Use the vibration peen method.	Old Part No.	New Part No.
	2A0087	2A2363
	2A1198	2A2364
	2A0936	2A2365
	Refer to Reference (4), Control No./TASK No. 70-09-00-400-501.	

B. Assembly Instructions

- (1) For engines which do not incorporate Reference (1) install the 2A2363 Stage 1 HPT Duct Segments (20 off) and the 2A2365 Stage 1 HPT Duct Stops (20 off). Use the approved procedure in Reference (3), Chapter/Section 72-44-00, Assembly and Figure 1.
- (2) For engines which incorporate Reference (1) install the 2A2364 Stage 1 HPT Duct Segments (20 off) and the 2A2365 Stage 1 HPT Duct Stops (20 off). Use the approved procedure in Reference (3), Chapter/Section 72-44-00, Assembly and Figure 2.

C. Recording Instructions

- (1) A record of accomplishment is necessary.

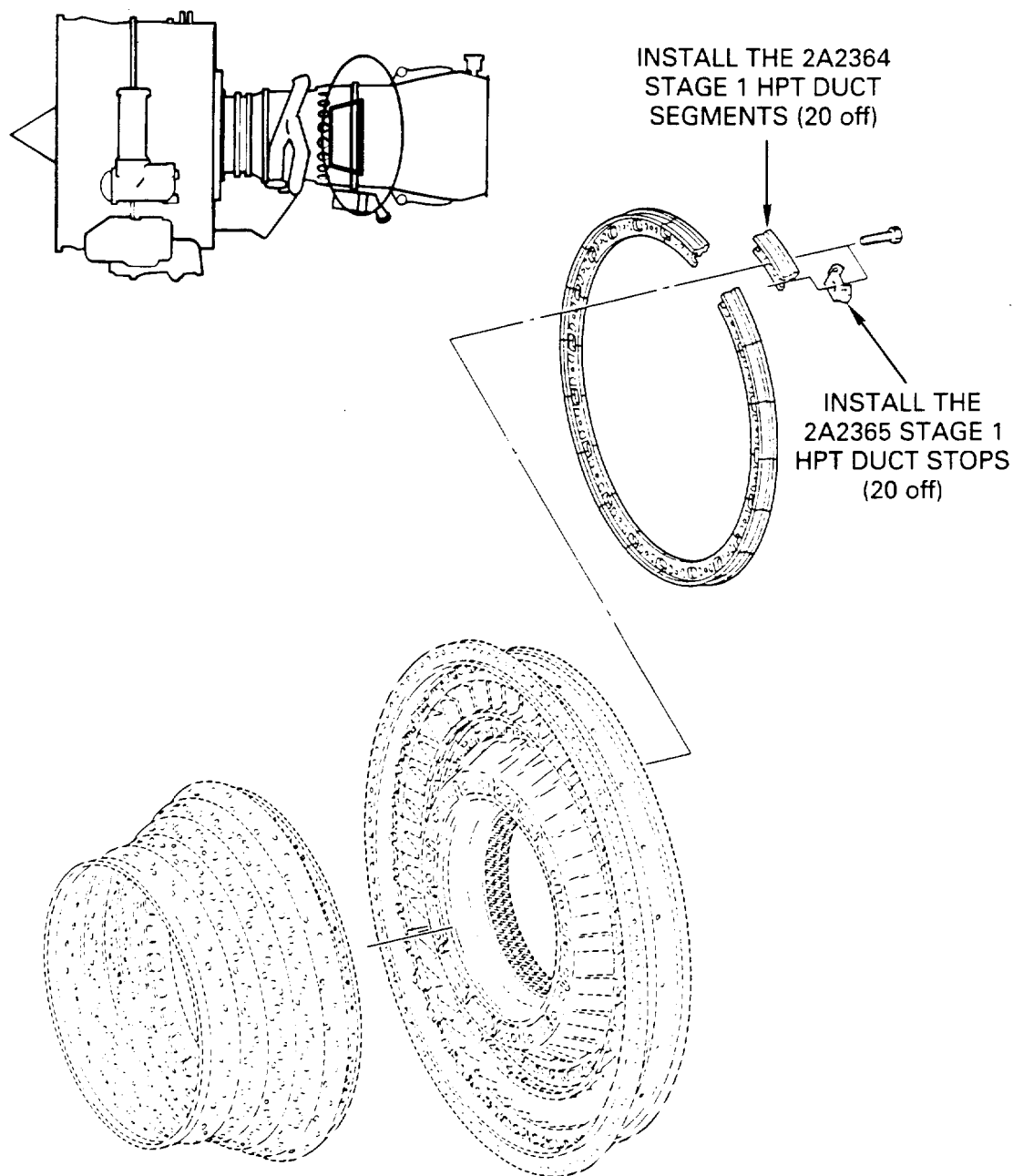


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Location of the Stage 1 HPT Duct Segments and Stage 1 HPT Stops For Engines Which Do Not Incorporate V2500-ENG-72-0013

Fig.1

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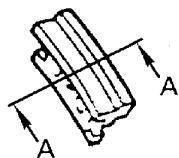


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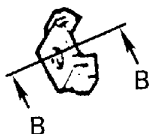
Location of the Stage 1 HPT Duct Segments and the Stage 1 HPT Stops For Engines Which Incorporate V2500-ENG-72-0013

Fig.2

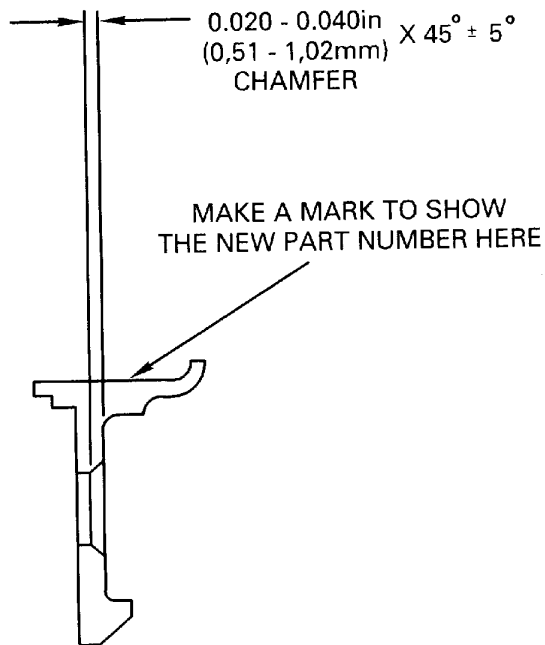
V2500-ENG-72-0113



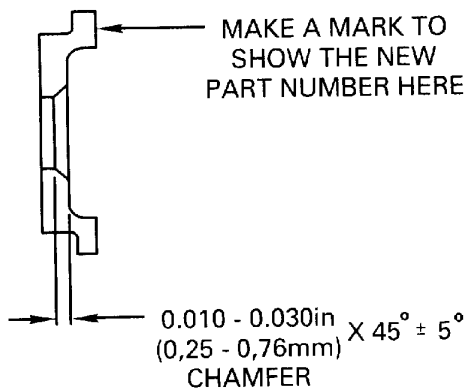
STAGE 1 HPT DUCT SEGMENT



STAGE 1 HPT DUCT STOP



SECTION A - A



SECTION B - B

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Modification of the Stage 1 HPT Duct Segments and Stage 1 HPT Duct Stops
Fig.3

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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
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Applicability: For each V2500 engine to incorporate this Service Bulletin which does not incorporate V2500-ENG-72-0013.

2A2363 (72-44-60)	20	-	Duct Segment, HPT, Stage 1	2A0087 (01-010)	(S1)(1D) (A) (B)
2A2365 (72-44-60)	20	-	Stop, HPT Duct, Stage 1	2A0936 (01-020)	(S1)(1D) (A) (B)

Applicability: For each V2500 engine to incorporate this Service Bulletin which incorporates V2500-ENG-72-0013.

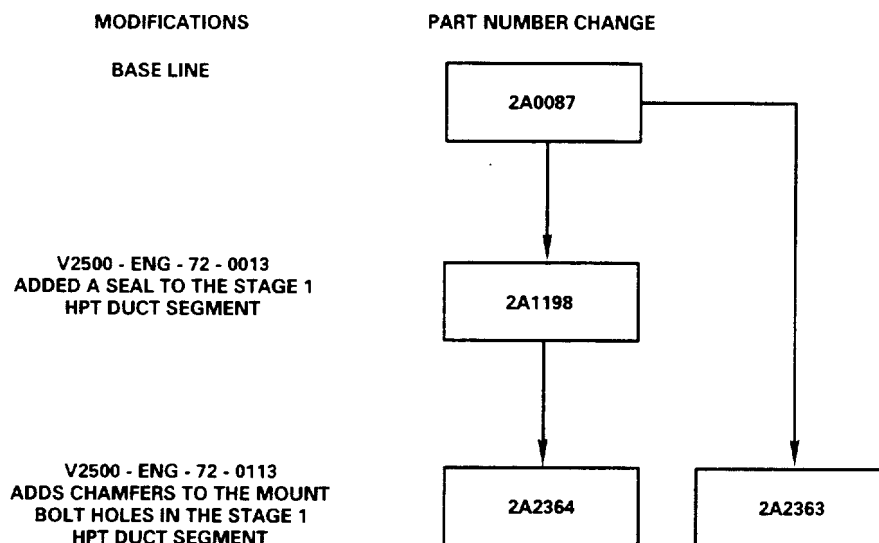
2A2364 (72-44-60)	20	-	Duct Segment, HPT, Stage 1	2A1198 (01-010)	(S2)(1D) (A) (B)
2A2365 (72-44-60)	20	-	Stop, HPT Duct, Stage 1	2A0936 (01-020)	(S2)(1D) (A) (B)

C. Instruction/Disposition Code Statements:

- (S1) New Parts coded (S1) can replace Old Parts coded (S1) as a complete set.
- (S2) New Parts coded (S2) can replace Old Parts coded (S2) as a complete set.
- (1D) Old part can be reworked and identified to the new part number.
- (A) New part is currently available.
- (B) Old part will no longer be available.

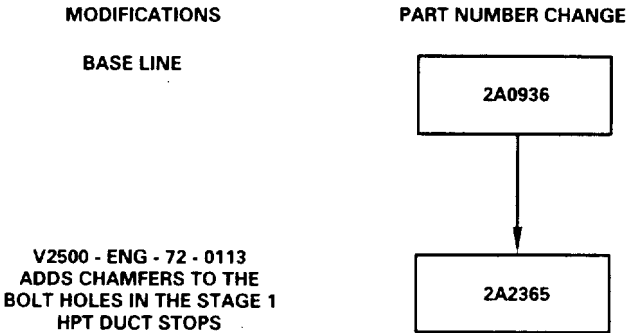
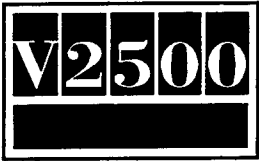
NOTE: The estimated 1992 unit prices shown are provided for planning purposes only and do not constitute a firm quotation. Consult the IAE Price Catalog or contact IAE's Spare Parts Sales Department for information concerning firm prices.

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Family tree - Stage 1 HPT Duct Segments
Fig.4

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Family tree - Stage 1 HPT Duct Stops
Fig.5



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