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DATE ~~R~~ Nov.16/01**V2500-A1 SERIES PROPULSION SYSTEM SERVICE BULLETIN**

Printed in Great Britain

This document transmits Revision 1 to Service Bulletin EV2500-72-0042

Document History

Service Bulletin Revision Status
 Initial Issue May 25/92

Supplement Revision Status

Bulletin Revision 1

Remove
 Pages 1 to 10 of the
 Service Bulletin

Incorporate
 Pages 1 to 12 of the
 Service Bulletin

Reason for change
 Initial Issue

V2500-ENG-72-0042
 Transmittal - Page 1 of 2

CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED
 If any have not been received please advise Publication Services, Rolls-Royce plc, Derby, England
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LIST OF EFFECTIVE PAGES

The effective pages to this Service Bulletin following incorporation of Revision 1 are as follows:

<u>Page</u>		<u>Revision Number</u>	<u>Revision Date</u>
	Bulletin		
R	1	1	Nov.16/01
R	2	1	Nov.16/01
R	3	1	Nov.16/01
R	4	1	Nov.16/01
R	5	1	Nov.16/01
R	6	1	Nov.16/01
R	7	1	Nov.16/01
R	8	1	Nov.16/01
R	9	1	Nov.16/01
R	10	1	Nov.16/01
R	11	1	Nov.16/01
R	12	1	Nov.16/01

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ENGINE - LP COMPRESSOR - REWORK THE LPC FRONT CASING ASSEMBLY TO INCORPORATE AN
ENLARGED PIN HOLE DIAMETER

1. Planning Information

A. Effectivity

- R (1) Part 1 of SB
- R Airbus A320
- R V2500-A1 Engines Serial Number V0018 to V0021, V0024, V0025, V0027 to
V0133 and V0149
- R (2) Part 2 of SB
- R Airbus A320
- R V2500-A1 Engines prior to Serial Number V0018 and V0022, V0023 and V0026
- R (3) Part 3 of SB
- R Airbus A320
- R V2500-A1 Engine Serial Number V0134 to V0141, V0143 to V0148 and V0184
- R NOTE: Those engines with Serial Numbers listed above had the LP
R Compressor Front Case Assembly with the enlarged pin hole diameter
R at manufacture and must incorporate the re-identification
requirement only.
- R (4) ATA Locator 72-32-00

B. Reason

(1) Condition

Interference may occur between the locating pin hole on the LPC front case assembly and the locating pin on the LPC rear case assembly depending on the combination of diametral and positional tolerances.

(2) Background

This condition has been noted during the assembly of the production engines. A design review of the existing LPC front case assembly has shown the need for enlargement of the locating pin hole.



(3) Objective

To prevent the interference between the locating pin hole on LPC front case assembly and the locating pin on LPC rear case assembly.

(4) Substantiation

A substantiation test is not necessary.

(5) Effects of Bulletin on workshop procedure:

(a) Removal/Installation

Not affected

(b) Disassembly/Assembly

Not affected

(c) Cleaning

Not affected

(d) Inspection/Check

Not affected

(e) Repair

Not affected

(f) Testing

Not affected

(6) Supplemental Information

None

C. Description

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

(a) The diameter of the locating pin hole on LPC front case assembly has been enlarged from 0.239 - 0.240 in. (6,07 - 6,10 mm) to 0.252 - 0.259 in. (6,40 - 6,60 mm) (See Figures 1 and 2).

(2) The existing LPC front case assembly can be reworked to the new configuration.



- R (3) For relationship with other Service Bulletins, see 1.K. 'References' and Fig 3 'Family Tree'
- R (4) This Service Bulletin comprises the three parts that follow:
- R Part 1 – Rework of engines incorporating Service Bulletin V2500-ENG-72-0018.
- R NOTE: Refer to paragraph (1) in A. Effectivity to effectivity models.
- R Part 2 – Rework of engines not incorporating Service Bulletin V2500-ENG-72-0018.
- R Part 3 – Re-identification of engines incorporating Service Bulletin V2500-ENG 72-0018
- R NOTE: Refer to paragraph (3) in A. Effectivity to effectivity models

D. Approval

The Part Number changes and part modifications described in Sections 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:

- R (1) Part 1 and Part 2 of SB
- R (a) In service
- R Not applicable
- R (b) At overhaul
- R (i) To enlarge pin hole of the LPC Front case Assembly
- R 40 minutes
- R (ii) To re-identify the LPC Front Case Assembly
- R 10 minutes



R (iii) Total

R 50 minutes

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

R (2) Part 3 of SB

R (a) In service

R Not applicable

R (b) At overhaul

R (i) To re-identify the LPC Front Case Assembly

R 10 minutes

R (ii) Total

R 10 minutes

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

G. Material – Price and Availability

Modification Kit is not required. Part is supplied as single line item.

H. Tooling – Price and availability

Special Tools are not required.

I. Weight and Balance

(1) Weight change

None

(2) Moment arm

No effect

(3) Datum

Engine front mount centerline (Power Plant Station (P.P.S.) 100)

J. Electrical Load Data

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



K. References

- R (1) Internal Reference No.
EC90VJ037, 90VJ037A
- (2) Other References
- (a) V2500 Engine Illustrated Parts Catalog, Chapter/Section 72-32-83.
- (b) V2500 Engine Manual, 72-32-80, Assembly.
- (c) V2500 Standard Practices/Processes Manual, 70-09-00 Marking of Parts, and 70-38-02 Surface Treating.
- (d) V2500 Facilities Equipment Manual.
- R (e) IAE Service Bulletin, V2500-ENG-72-0018, Engine - Provide a new LP compressor front case assembly and a new LPC inlet guide vane assembly

L. Other Publications Affected

- (1) V2500 Engine Illustrated Parts Catalog. Chapter/Section 72-32-83.
- (2) V2500 Engine Manual, 72-32-83, Cleaning-01, Inspection/Check-00, Inspection/Check-01, and Repair 004.



2. Material Information

A. Kits associated with this Bulletin:

None.

R B. New production parts

R	Part No.	Qty	Unit Price
R	5A0961	1	7214.00

C. Parts affected by this Bulletin:

R V2500-A1 Engines

72-32-83

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	OLD PART NO.	INSTR DISP
--------------------	--------------------	-----	------------	--------------------	---------------

R Part 1 and Part 3 of SB

R	01350	5A0961	1	Case, A/O Front LP Compressor	5A0062	(A)(B)(S1) (1D)
R	01420	5A0962	1	Case, Front LP Compressor	5A0063	(C) (S1) (1D)

R Part 2 of SB

R	01350	5A1814	1	Case, A/O Front LP Compressor	5A7399	(B) (S1) (2D)
R	01420	5A1815	1	Case, Front LP Compressor	5A7400	(C) (S1) (2D)

D. Instruction/Disposition Code Statements:

(A) New part is currently available for sale.

(B) Old part will no longer be available for sale.

(S1) New part can be fitted in place of old part but not visa versa.

R (1D) Old part may be reworked and re-identified to the new part number.

R (C) Old and new parts are not available as spares

R (2D) New part can be obtained only by rework and re-identification



3. Accomplishment Instructions

R A. Part 1 and Part 2 of SB

R (1) Rework Instructions

R Do a modification of the 5A0062 (Part 1 of SB) or 5A7399 (Part 2 of SB) LP
R Compressor Front Case Assembly and re-identify to the new part number as follows:

PROCEDURE

RELATED DATA

(a) Do an inspection of the LP compressor front case assembly for a diameter of the locating pin hole

Refer to Figure 2

(b) Set Set LP compressor front case assembly onto single spindle drill machine

Refer to 1.K.(2)(d)

(c) Put the center of locating pin hole on LP compressor front case assembly in the drill center

(d) Drill the locating pin hole with 0.256in. (6,50 mm) diameter of drill

Refer to Figure 2

(e) Remove the burrs from around the hole

Refer to Figure 2

(f) Inspect the hole for cracks

Refer to Figure 2

(g) Renumber both of the piece part number and the assembly part number identified on the LP compressor front case assembly by use of the vibration peening method

Refer to Figure 2 and 1.K.(2)(c) - TASK 70-09-00-400-501. See numbers below

Existing

Re-number

Part 1 of SB

5A0063

5A0962

ASSY 5A0062

ASSY

5A0961

Part 2 of SB

May 25/92

R Nov.16/01

V2500-ENG-72-0042

Page 7

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	Existing	Re-number
R	5A7400	5A1815
R	ASSY 5A7399	ASSY
R		5A1814
R	(h) Do a surface treating around the inside of enlarged hole and on the marks made to identify the new part numbers	Refer to Figure 2 and 1.K.(2)(c) - TASK 70-38-02-300-503.
R	(2) Assembly Instructions	
R	Assemble the 5A0961 (Part 1 of SB or 5A1814 (Part 2 of SB) LP compressor front case assembly to the LP compressor stage 1.5, 2 and 2.5 assembly. For the correct procedures, refer to the Engine Manual, Chapter/Section, 72-32-80, Assembly, Config 1.	
R	(3) Recording Instructions	
R	A record of accomplishment is required	
R	B. Part 3 of SB	
R	(1) Rework Instructions	
R	Do a modification of the 5A0062 (Part 3 of SB) LP compressor front case assembly and re-identify to the new part number as follows:	
	PROCEDURE	RELATED DATA
R	(a) Re-number both of the piece part number and the assembly part number identified on the LP compressor front case assembly by use of the vibration peening method	Refer to Fig 2 and 1.K.(2)(c), TASK 70-09-00-400-501
R		Existing Re-number
R		5A0063 5A0962
R		ASSY 5A0062 ASSY
R		5A0961
R	(b) Do a surface treating on the marks made to identify the new part numbers	Refer to Fig 2 and 1.K.(2)(c) TASK 70-38-02-300-503

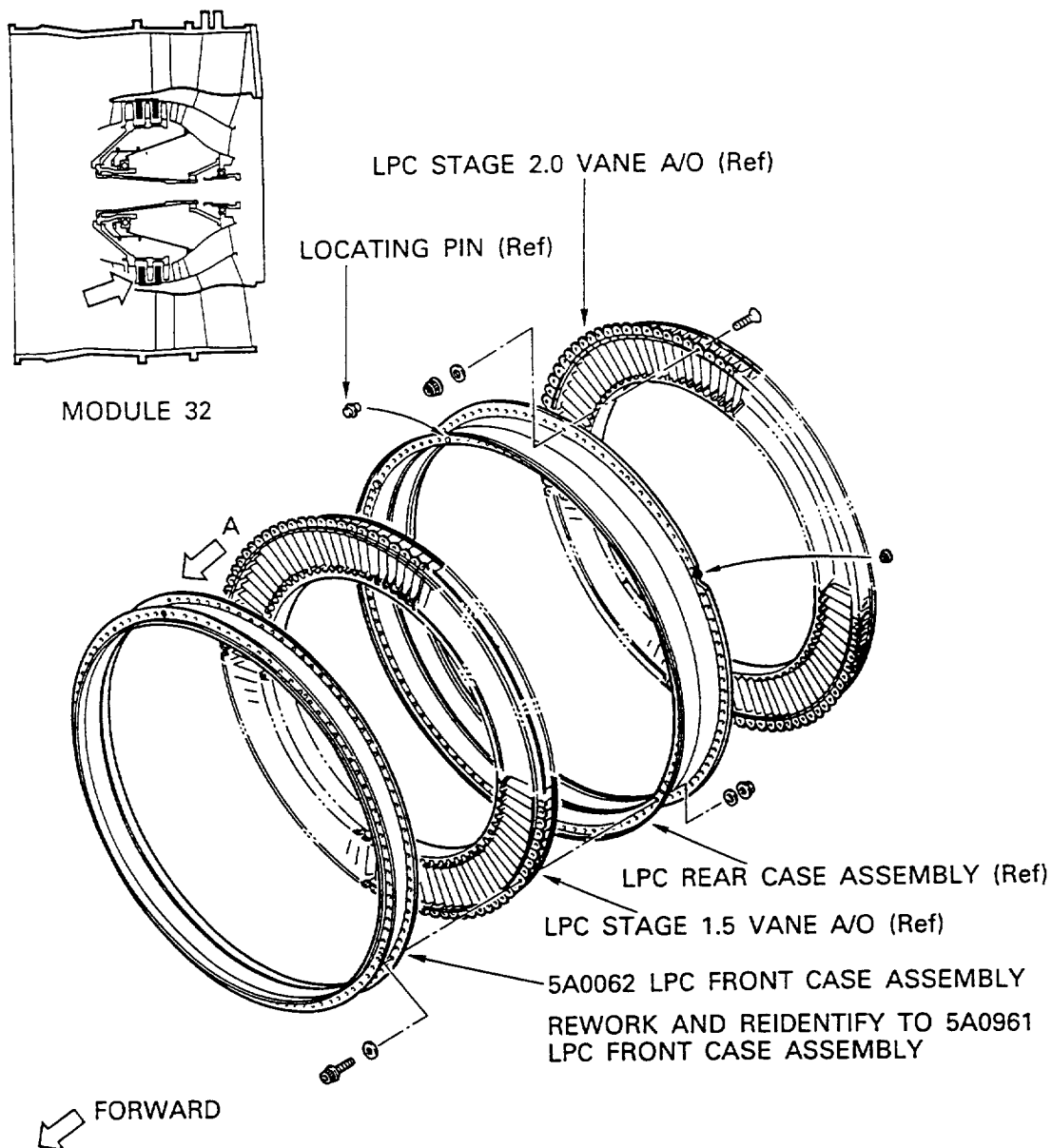


R (2) Assembly Instructions

R Assemble the 5A0961 LP compressor front case assembly to the LP compressor
R stage 1.5, 2 and 2.5 assembly. For the correct procedures, refer to the
R Engine Manual, Chapter/Section, 72-32-80, Assembly, Config-01

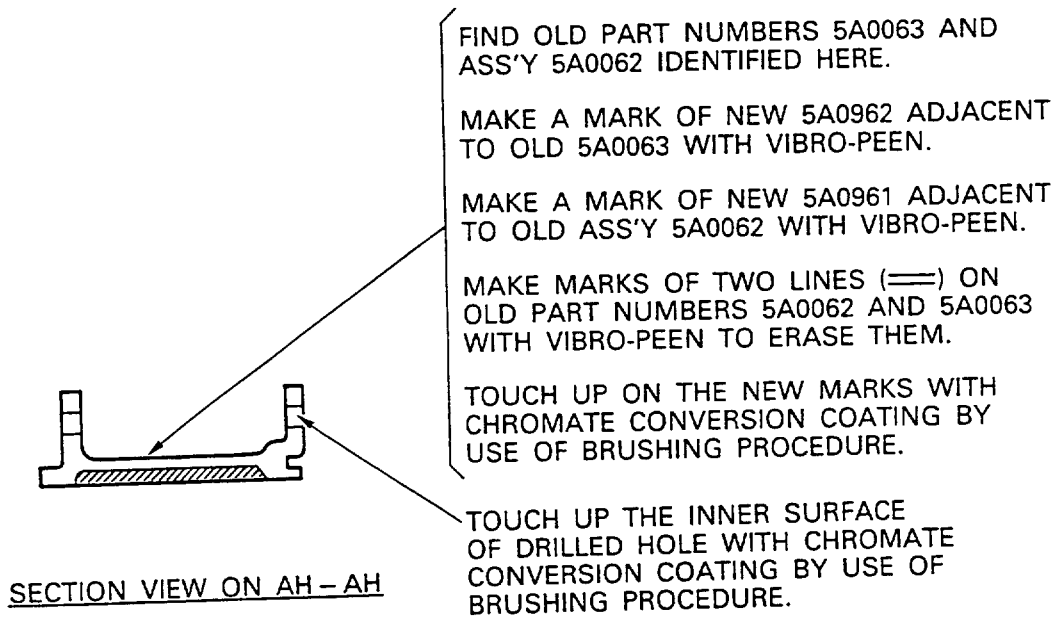
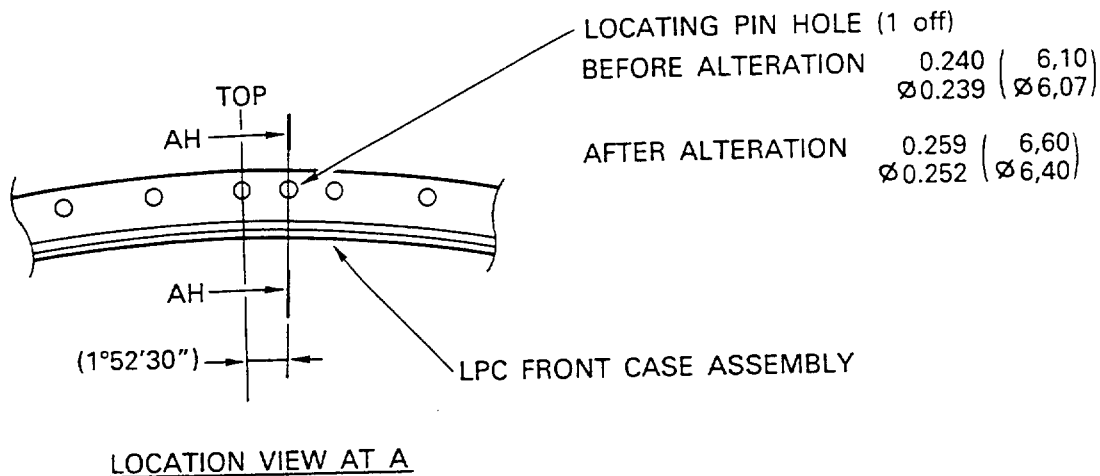
R (3) Recording Instructions

R A record of accomplishment is required.



Location of the LP compressor front case assembly
Figure 1

ded0000521



ded0000522

Rework of the LP compressor front case assembly
Figure 2

MODIFICATION

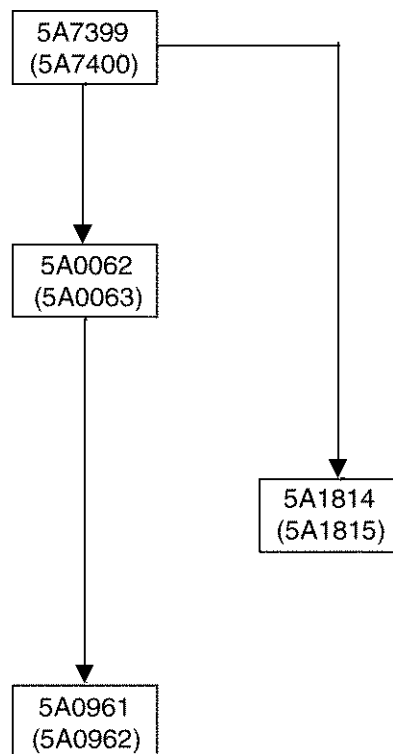
PART NUMBER CHANGE

BASELINE

V2500-ENG-72-0018
PROVIDE A NEW LP
COMPRESSOR FRONT CASE

V2500-ENG-72-0042 PART 2
REWORK THE LP COMPRESSOR
FRONT CASING ASSEMBLY

V2500-ENG-72-0042 PART 1 AND 3
REWORK THE LP COMPRESSOR
FRONT CASING ASSEMBLY



NOTE: Part Numbers in parenthesis show piece part numbers.

Family tree - LPC front case assembly Ref catalog sequence No. 72-32-83, Fig 01,
Item 350
Fig 3

V2500-ENG-72-0042

Page 12

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May 25/92
R Nov.16/01

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