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V2500-A1/A5/D5 SERIES PROPULSION SYSTEMS SERVICE BULLETIN

This document transmits the Initial Issue of Service Bulletin V2500-ENG-72-0612.

Service Bulletin Initial Issue

Remove Incorporate Reason for change

Pages 1 to 10 of the Service Bulletin.

Initial Issue.

Pages 1 to 2 of the

Supplement.

Initial Issue.

V2500-ENG-72-0612

CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED If any have not been received please advise IAE International Aero Engines AG





ENGINE - HIGH PRESSURE (HP) COMPRESSOR RING CASES - THERMAL BLANKET STAGE 7 TO 11 RE-DESIGN

1. Planning Information

A. Effectivity

- (1) Airbus A319
 - (a) V2522-A5, V2524-A5, V2527M-A5 Engines prior to Serial No. V13191 (A5 Standard and A5 SelectOne™ Retrofit Standard).

V2522-A5, V2524-A5, V2527M-A5 Engines prior to Serial No. V15613 and Engines with Serial number V15614 and V15623 (A5 SelectOneTM Production Standard).

- (2) Airbus A320
 - (a) V2500-A1 Engines prior to Serial No. V0362.
 - (b) V2524-A5, V2527-A5, V2527E-A5 Engines prior to Serial No. V13191 (A5 Standard and A5 SelectOne™ Retrofit Standard).

V2524-A5, V2527-A5, V2527E-A5 Engines prior to Serial No. V15613 and Engines with Serial number V15614 and V15623 (A5 SelectOneTM Production Standard).

- (3) Airbus A321
 - (a) V2530-A5, V2533-A5 Engines prior to Serial No. V13191 (A5 Standard and A5 SelectOne™ Retrofit Standard)

V2530-A5, V2533-A5 Engines prior to Serial No. V15613 and Engines with Serial number V15614 and V15623 (A5 SelectOne™ Production Standard).

- (4) Boeing MD-90
 - (a) V2525-D5, V2528-D5 Engines prior to Serial No. V20286.
- B. Concurrent Requirements

None.

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C. Reason

(1) Condition

Thermal blankets are located in the cavities between the High Pressure (HP) compressor stages 7 to 11 inner cases and the HP compressor stages 7 to 11 stator vanes. The thermal blankets can deteriorate during engine operation and release their insulation material into the gas path.

(2) Evidence

Thermal blankets can deteriorate during engine operation and release their insulation material into the gas path.

(3) Objective

Incorporation of this Service Bulletin is designed to provide thermal blankets with improved design to mitigate release of the insulation material.

(4) Substantiation

The changes introduced by this Service Bulletin were the subject of satisfactory engineering analysis. This Service Bulletin complies with the applicable engine certification basis.

- (5) Effect of Bulletin on:
 - (a) Operation

Not affected.

(b) Maintenance

Not affected.

(c) Overhaul

Not affected.

(d) Repair Schemes

Not affected.

(e) Interchangeability

Not affected.

(f) Fits and Clearances

Not affected.

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D. <u>Description</u>

This Service Bulletin introduces re-designed thermal blankets with improved insulation material for the High Pressure (HP) compressor stages 7 to 11 for the V2500-A5 and V2500-D5 engines and HP compressor stages 8, 9 and 11 for the V2500-A1 engines.

The sleeve ends of the thermal blankets have been modified to reduce the risk of damage to the ends during initial engine running.

A new fitting instruction allows the use of double sided adhesive tape as an assembly aid only.

E. Compliance

Category Code 7

Accomplish when the supply of superseded parts has been depleted.

F. Approval

The part number changes and/or 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 models listed.

G. Manpower

(1) In Service

Not applicable.

(2) At Overhaul

Applicable (hours not affected).

H. Material Price and Availability

A modification kit is not required; parts are supplied as single line items.

For prices and availability of spares, refer to the supplement to this Service Bulletin.

I. Tooling Price and Availability

Special tools are not required.

J. <u>Industry Support Information</u>

Not applicable.

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K. Weight and Balance

(1) Weight Change

None.

(2) Moment Arm

No effect.

(3) Datum

Engine Front Mount Centerline (Power Plant Station (PPS) 100).

L. Electrical Load Data

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

M. Software Accomplishment Summary

Not applicable.

N. References

- (1) IAE V2500 Engine Manual (E-V2500-1IA/3IA), Chapters 72-00-40, 72-00-41 and 72-41-00.
- (2) Internal Reference No.

Engineering Change No. 09VR127 and 09VR127-02.

(3) ATA Locator - 72-41-21.

0. Other Publications Affected

(1) IAE V2500 Engine Illustrated Parts Catalogues (S-V2500-1IA, S-V2500-2IA, S-V2500-2IB, S-V2500-2SA, S-V2500-2SB, S-V2500-3IA, S-V2500-3IB, S-V2500-3IC, S-V2500-5IA, S-V2500-5IB, S-V2500-5SA, S-V2500-5SB, S-V2500-6IA, S-V2500-6IB, S-V2500-6SA, S-V2500-6SB, S-V2500-7IA, S-V2500-7IB, S-V2500-7SA and S-V2500-7SB), Chapter 72-41-21 will be amended to incorporate the new part numbers (Refer to paragraph 2. Material Information).

P. Interchangeability of Parts

Affected (Refer to paragraph 2.E. Instruction disposition codes).

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2. Material Information

A. The kit required consists of the following parts:

None.

B. Parts to be reworked:

None.

C. New production parts:

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
72-41-2	1					
V2500-A	1 Engines o	nly				
03-094	6B1369	3	.High Pressure (HP) compressor stage 9 insulation strip	-	6A3422	(\$1)
03-096	6B1367	1	.High Pressure (HP) compressor stage 9 insulation strip	-	6A3420	(\$1)
03-098	6B1368	1	.High Pressure (HP) compressor stage 9 insulation strip	-	6A3421	(\$1)
03-154	6B1366	3	.High Pressure (HP) compressor stage 8 insulation strip	-	6A3419	(\$2)
03-156	6B1364	1	.High Pressure (HP) compressor stage 8 insulation strip	-	6A3417	(\$2)
03-158	6B1365	1	.High Pressure (HP) compressor stage 8 insulation strip	-	6A3418	(\$2)
04-094	6B1373	3	.High Pressure (HP) compressor stage 11 insulation strip	-	6A3425	(\$3)

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FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
04-096	6B1371	1	.High Pressure (HP) compressor stage 11 insulation strip	-	6A3423	(\$3)
04-098	6B1372	1	.High Pressure (HP) compressor stage 11 insulation strip	-	6A3424	(\$3)
For V25	00-A5 and V	/2500-D	5 Engines			
03-094	6B1369	3	.High Pressure (HP) compressor stage 9 insulation strip	-	6A4279	(\$1)
03-096	6B1367	1	.High Pressure (HP) compressor stage 9 insulation strip	-	6A4277	(\$1)
03-098	6B1368	1	.High Pressure (HP) compressor stage 9 insulation strip	-	6A4278	(\$1)
03-154	6B1366	3	.High Pressure (HP) compressor stage 8 insulation strip	-	6A4282	(\$2)
03-156	6B1364	1	.High Pressure (HP) compressor stage 8 insulation strip	-	6A4280	(\$2)
03-158	6B1365	1	.High Pressure (HP) compressor stage 8 insulation strip	-	6A4281	(\$2)
03-210	6B1363	4	.High Pressure (HP) compressor stage 7 insulation strip	-	6A4283	(\$4)
04-094	6B1373	3	.High Pressure (HP) compressor stage 11 insulation strip	-	6A4286	(\$3)
04-096	6B1371	1	.High Pressure (HP) compressor stage 11 insulation strip	-	6A4284	(\$3)

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FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
04-098	6B1372	1	.High Pressure (HP) compressor stage 11 insulation strip	-	6A4285	(\$3)
04-150	6B1370	4	.High Pressure (HP) compressor stage 10 insulation strip	-	6A4287	(\$5)

D. <u>Redundant parts:</u>

None.

E. Instruction disposition codes:

- (S1) The old and new parts are freely interchangeable, but must be changed as a complete set for each HP compressor stage.
- (S2) The old and new parts are freely interchangeable, but must be changed as a complete set for each HP compressor stage.
- (S3) The old and new parts are freely interchangeable, but must be changed as a complete set for each HP compressor stage.
- (S4) The old and new parts are freely interchangeable, but must be changed as a complete set for each HP compressor stage.
- (S5) The old and new parts are freely interchangeable, but must be changed as a complete set for each HP compressor stage.

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3. Accomplishment Instructions

- A. Rework Instructions
 - (1) None.
- B. Assembly Instructions
 - (1) General
 - (a) Obey all the WARNINGS and CAUTIONS in the procedures that are referred to.
 - (b) Consumable Materials
 - (i) Refer to the related Manual tasks given in this instruction.
 - (c) Tools and Equipment
 - Refer to the related Manual tasks given in this instruction.
 - (2) Get access to the High Pressure (HP) compressor assembly.
 - (3) Remove the HP system module (Refer to the Engine Manual, Chapter 72-00-40).
 - (4) Remove the HP compressor assembly (Refer to the Engine Manual, Chapter 72-00-41).
 - (5) Disassemble the HP compressor assembly (Refer to the Engine Manual, Chapter 72-41-00).
 - (a) For V2500-A1 Engines:

Remove the old HP compressor stage 11 insulation strips, (72-41-21, 04-094), P/N 6A3425, (72-41-21, 04-096), P/N 6A3423 and (72-41-21, 04-098), P/N 6A3424.

(b) For V2500-A5 and V2500-D5 Engines:

Remove the old HP compressor stage 11 insulation strips, (72-41-21, 04-094), P/N 6A4286, (72-41-21, 04-096), P/N 6A4284 and (72-41-21, 04-098), P/N 6A4285.

(c) For V2500-A5 and V2500-D5 Engines:

Remove the old HP compressor stage 10 insulation strips, (72-41-21, 04-150), P/N 6A4287.

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(d) For V2500-A1 Engines:

Remove the old HP compressor stage 9 insulation strips, (72-41-21, 03-094), P/N 6A3422, (72-41-21, 03-096), P/N 6A3420 and (72-41-21, 03-098), P/N 6A3421.

(e) For V2500-A5 and V2500-D5 Engines:

Remove the old HP compressor stage 9 insulation strips, (72-41-21, 03-094), P/N 6A4279, (72-41-21, 03-096), P/N 6A4277 and (72-41-21, 03-098), P/N 6A4278.

(f) For V2500-A1 Engines:

Remove the old HP compressor stage 8 insulation strips, (72-41-21, 03-154), P/N 6A3419, (72-41-21, 03-156), P/N 6A3417 and (72-41-21, 03-158), P/N 6A3418.

(g) For V2500-A5 and V2500-D5 Engines:

Remove the old HP compressor stage 8 insulation strips, (72-41-21, 03-154), P/N 6A4282, (72-41-21, 03-156), P/N 6A4280 and (72-41-21, 03-158), P/N 6A4281.

(h) For V2500-A5 and V2500-D5 Engines:

Remove the old HP compressor stage 7 insulation strips, (72-41-21, 03-210), P/N 6A4283.

- (6) Assemble the HP compressor assembly (Refer to the Engine Manual, Chapter 72-41-00)
 - (a) For V2500-A5 and V2500-D5 Engines:

Install the new HP compressor stage 7 insulation strips, (72-41-21, 03-210), P/N 6B1363.

NOTE: Only CoMat: 02-271 Adhesive tape (double sided) can be used as an assembly aid to attach the insulation strips to the HP compressor vanes.

(b) For V2500-A1, V2500-A5 and V2500-D5 Engines:

Install the new HP compressor stage 8 insulation strips, (72-41-21, 03-154), P/N 6B1366, (72-41-21, 03-156), P/N 6B1364 and (72-41-21, 03-158), P/N 6B1365.

<u>NOTE</u>: Only CoMat: O2-271 Adhesive tape (double sided) can be used as an assembly aid to attach the insulation strips to the HP compressor vanes.

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(c) For V2500-A1, V2500-A5 and V2500-D5 Engines:

Install the new HP compressor stage 9 insulation strips, (72-41-21, 03-094), P/N 6B1369, (72-41-21, 03-096), P/N 6B1367 and (72-41-21, 03-098), P/N 6B1368.

NOTE: Only CoMat: 02-271 Adhesive tape (double sided) can be used as an assembly aid to attach the insulation strips to the HP compressor vanes.

(d) For V2500-A5 and V2500-D5 Engines:

Install the new HP compressor stage 10 insulation strips, (72-41-21, 04-150), P/N 6B1370.

NOTE: Only CoMat: 02-271 Adhesive tape (double sided) can be used as an assembly aid to attach the insulation strips to the HP compressor vanes.

(e) For V2500-A1, V2500-A5 and V2500-D5 Engines:

Install the new HP compressor stage 11 insulation strips, (72-41-21, 04-094), P/N 6B1373, (72-41-21, 04-096), P/N 6B1371 and (72-41-21, 04-098), P/N 6B1372.

NOTE: Only CoMat: 02-271 Adhesive tape (double sided) can be used as an assembly aid to attach the insulation strips to the HP compressor vanes.

- (7) Install the HP compressor assembly (Refer to the Engine Manual, Chapter 72-00-41).
- (8) Install the HP system module (Refer to the Engine Manual, Chapter 72-00-40).
- (9) Make sure that the work area is clean and clear of tools, equipment and other unwanted materials.
- C. Recording Instructions
 - (1) A record of accomplishment is necessary.



ENGINE - HIGH PRESSURE (HP) COMPRESSOR RING CASES - THERMAL BLANKET STAGE 7 TO 11 **RE-DESIGN**

SUPPLEMENT - PRICES AND AVAILABILITY

The prices (if shown) are for estimating purposes only and as such are given in good faith, without commercial liability for advanced planning purposes only. Refer to IAE Spares and/or current price catalogue for current prices.

1. Modification Kit:

Not applicable.

2. New Production Parts:

Part No.	Description	Unit Price US Dollars
6B1363	High Pressure (HP) compressor stage 7 insulation strip	131.00
6B1364	.High Pressure (HP) compressor stage 8 insulation strip	234.00
6B1365	.High Pressure (HP) compressor stage 8 insulation strip	133.00
6B1366	.High Pressure (HP) compressor stage 8 insulation strip	219.00
6B1367	.High Pressure (HP) compressor stage 9 insulation strip	231.00
6B1368	.High Pressure (HP) compressor stage 9 insulation strip	136.00
6B1369	.High Pressure (HP) compressor stage 9 insulation strip	231.00
6B1370	.High Pressure (HP) compressor stage 10 insulation strip	131.00

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Part No.	Description	Unit Price US Dollars
6B1371	.High Pressure (HP) compressor stage 11 insulation strip	232.00
6B1372	.High Pressure (HP) compressor stage 11 insulation strip	149.00
6B1373	.High Pressure (HP) compressor stage 11 insulation strip	256.00

NOTE: Parts will be available for sale from October 2010.

3. <u>Tools</u>

None.

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