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V2500-D5 PROPULSION SYSTEMS SERVICE BULLETIN

Printed in Great Britain

This document transmits the Initial Issue of Service Bulletin EV2500-72-0433

Bulletin Initial Issue

Remove

Incorporate
Pages 1 to 8 of the
Service Bulletin

Reason for change
Initial issue

V2500-ENG-72-0433
Transmittal - Page 1 of 2

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LIST OF EFFECTIVE PAGES

The effective pages to this Service Bulletin are as follows:

Page Revision Number Revision Date

Bulletin

1	Nov.4/02
2	Nov.4/02
3	Nov.4/02
4	Nov.4/02
5	Nov.4/02
6	Nov.4/02
7	Nov.4/02
8	Nov.4/02

Printed in Great Britain

V2500-ENG-72-0433
Transmittal - Page 2



ENGINE - HP COMPRESSOR BLADES AND VANES - INTRODUCTION OF STAGE 6, 7 AND 8 BLADES AND
STAGE 8 STATOR VANES WITH EROSION RESISTANT COATINGS

1. Planning Information

A. Effectivity

(1) Boeing - Longbeach Division MD-90

V2525-D5 Engines

V2528-D5 Engines

B. Concurrent Requirements

None.

C. Reason

(1) Problem

Heavy erosion of the HP Compressor Stage 6, 7 and 8 blades and Stage 8 stator vanes may occur. In extreme cases this can result in loss of material at the blade tip and near the vane platform.

The problem has been attributed to the wing vortices throwing sand particles into the fuselage mounted engines.

(2) Background

The problem has been experienced on engines in service which are frequently used in desert environments.

(3) Objective

Incorporation of this modification is designed to maintain reliability of those engines operating in desert environments.

(4) Substantiation

The changes introduced by this modification have been the subject of satisfactory engineering analysis and successful development engine testing.

(5) Effect of Bulletin on:

(a) Operation

Not affected.



(b) Maintenance

Affected (see 1.0. Other Publications Affected).

(c) Overhaul

Affected (see 1.0. Other Publications Affected).

(d) Repair Schemes

Not affected.

(e) Interchangeability

Not affected.

(f) Fits and Clearances

Not affected.

D. Description

This Service Bulletin introduces an erosion resistant coating onto the airfoils of the HP Compressor Stage 6, 7 and 8 blades and Stage 8 stator vanes designed for desert operations as follows:

(1) The changes introduced are:

- (a) Revised HP Compressor Stage 6, 7 and 8 blades are introduced similar to the existing parts except for the addition of a titanium nitride coating on the airfoils.
- (b) Revised HP Compressor Stage 8 stator vanes are introduced similar to the existing parts except for the addition of a chromium nitride coating on the airfoils.

E. Compliance

INFORMATION (S00)

This modification is introduced to satisfy an Operators special requirement and modified parts will be supplied to Special Order Only (S00).

F. Approval

The part number transactions shown in section 2. Material Information 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

Not affected.

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

H. Material Price and Availability

Modification kit not required; parts supplied as single line items.

I. Tooling Price and Availability

Special tools are not required.

J. Industry Support Information

None.

K. Weight and Balance

(1) Weight Change

None.

(2) Moment Arm

Not affected.

(3) Datum

Engine front mount centreline (Power Plant Station (PPS) 100).

L. Electrical Load Data

The aircraft electrical load is not affected by this Service Bulletin.

M. Software Accomplishment Summary

Not applicable.

N. References

(1) IAE Engineering Change Number 02VR002.



(2) Engine Manual, 72-41-10 and 72-41-20, Disassembly/Assembly.

(3) ATA Locator - 72-41-15.

0. Other Publications Affected

(1) Illustrated Parts Catalogue (IPC) 3IA and 3IB Chapter/Section 72-41-15 and 72-41-32 will be revised.

(2) Engine Manual, 72-41-15, Cleaning-00.

(3) Engine Manual, 72-41-15, Cleaning-03, Config-02.

(4) Engine Manual, 72-41-15, Inspection/Check-00.

(5) Engine Manual, 72-41-15, Inspection/Check-04, -05, -06, Config-03.

(6) Engine Manual, 72-41-15, Repairs.

(7) Engine Manual, 72-41-22, Cleaning-00.

(8) Engine Manual, 72-41-22, Cleaning-01, Config-02.

(9) Engine Manual, 72-41-22, Inspection/Check-00.

(10) Engine Manual, 72-41-22, Inspection/Check-02, Config-03.

(11) Engine Manual, 72-41-22, Repairs.

(12) Aircraft Maintenance Manual, 72-00-02, Inspection/Check.

P. Interchangeability of Parts

It is recommended that the parts introduced by this modification should be fitted as a complete engine set



2. Material Information

A. Parts prices

The estimated 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.

Part No.	Estimated unit price US Dollars
6A8021	525.00
6A8022	525.00
6A8023	457.00
6A8024	457.00
6A8026	525.00
6A8027	525.00
6A8028	457.00
6A8029	457.00
6A8031	525.00
6A8032	525.00
6A8033	457.00
6A8034	457.00
6A7996	602.00
6A7997	602.00
6A7998	602.00
6A7999	602.00
6A8000	602.00
6A8001	602.00

B. Parts required to accomplish this Service Bulletin:

All Engines

72-41-15

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
02170	6A8021	2	.Blade - HPC Stage 6 LH - Lock		6A7406	(A)(S1)
02185	6A8022	2	.Blade - HPC Stage 6 RH - Lock		6A7407	(A)(S1)
02200	6A8023	52	.Blade - HPC Stage 6 Nominal	-	6A7405C01	(A)(S1)
02215	6A8023	23	.Blade - HPC Stage 6 Nominal	-	6A7405C01	(A)(S1)
02217	6A8024	23	.Blade - HPC Stage 6 Undersize	-	6A7405C02	(A)(S1)



FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
02270	6A8026	2	.Blade - HPC Stage 7 LH - Lock		6A6462	(A)(S2)
02285	6A8027	2	.Blade - HPC Stage 7 RH - Lock		6A6463	(A)(S2)
02300	6A8028	63	.Blade - HPC Stage 7 - Nominal		6A6469C01	(A)(S2)
02315	6A8028	26	.Blade - HPC Stage 7 - Nominal		6A6469C01	(A)(S2)
02317	6A8029	26	.Blade - HPC Stage 7 - Undersize		6A6469C02	(A)(S2)
02370	6A8031	2	.Blade - HPC Stage 8 LH - Lock		6A6464	(A)(S3)
02385	6A8032	2	.Blade - HPC Stage 8 RH - Lock		6A6465	(A)(S3)
02400	6A8033	56	.Blade - HPC Stage 8 - Nominal		6A6470C01	(A)(S3)
02415	6A8033	24	.Blade HPC Stage 8 - Nominal		6A6470C01	(A)(S3)
02417	6A8034	24	.Blade HPC - Stage 8 - Undersize		6A6470C02	(A)(S3)
72-41-22						
03150	6A7996	4	.Vane - HPC Stage 8 - Retaining		6A4250	(A)(S4)
03200	6A7997	1	.Vane - HPC Stage 8 LH - I/Scope		6A4246	(A)(S4)
03250	6A7998	1	.Vane - HPC Stage 8 RH - I/Scope		6A4248	(A)(S4)
03350	6A7999	4	.Vane - HPC Stage 8 Stop-		6A4249	(A)(S4)
03400	6A8000	54	.Vane - HPC Stage 8 - Nominal		6A4245C01	(A)(S4)
03448	6A8000	28	.Vane - HPC Stage 8 - Nominal		6A4245C01	(A)(S4)
03450	6A8001	28	.Vane - HPC Stage 8 - Undersize		6A4245C02	(A)(S4)

C. Parts to be reworked:

None.

D. New production parts:

None.

E. Instructions disposition codes:

(A) New standard of part will be made available from October 2002.



(S1) New parts coded (S1) must replace old parts coded (S1) as a complete engine set.

(S2) New parts coded (S2) must replace old parts coded (S2) as a complete engine set.

(S3) New parts coded (S3) must replace old parts coded (S3) as a complete engine set.

(S4) New parts coded (S4) must replace old parts coded (S4) as a complete engine set.



3. Accomplishment Instructions

A. Rework Instructions

None.

B. Assembly Instructions

IAE recommends that the revised HP Compressor Stage 6, 7 and 8 blades and Stage 8 stator vanes introduced by this Service Bulletin be replaced as a complete engine set. Remove and install in accordance with current overhaul procedures (Engine Manual, 72-41-10 and 72-41-20, Disassembly/Assembly).

C. Recording Instructions

A record of accomplishment is necessary.