

International Aero Engines

SERVICE BULLETIN

May 29/98

Subject: Transmittal of Revision 1 to Service Bulletin V2500-ENG-72-0178

Service Bulletin Revision History:

Event	Date
Basic Issue	Sept. 30/93
Revision 1	May 29/98

Reason for Revision:

- (1) Change effectivity at 1. A. (2) (c).
- (2) Editorial changes to bring SB up to latest standards.

Effect on Past Compliance:

None.

List of Effective Pages:

Page No.	Revision No.	Effective Date
1 to 9	Revision 1	May 29/98

V2500-ENG-72-0178

Transmittal
Page 1 of 1



International Aero Engines

SERVICE BULLETIN

ENGINE - HP COMPRESSOR DISCS - STAGE-3 TO 8 ROTOR DRUM WITH THICKER STAGE-6 DISC
HUB AND DAMPING WIRE LOCATION LIPS

MODEL APPLICATION

V2500-A1
V2500-A5
V2500-D5

BULLETIN INDEX LOCATOR

72-41-00

Compliance Category Code

7

R
R

Internal Reference No.

EC92VR362
ECM92VR362-01
ECM92VR362-03



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SERVICE BULLETIN

ENGINE - HP COMPRESSOR DISCS - STAGE-3 TO 8 ROTOR DRUM WITH THICKER STAGE-6 DISC HUB AND DAMPING WIRE LOCATION LIPS

1. Planning Information

A. Effectivity

(1) Aircraft

(a) Airbus A320

(b) Airbus A321

(c) Boeing-Douglas MD-90

(2) Engines

(a) V2500-A1 Engines prior to Serial No. V0339

(b) V2500-A5 Engines prior to Serial No. V10044

(c) V2500-D5 Engines prior to Serial No. V20007

B. Concurrent Requirements

None.

C. Reason

(1) Problem

Refer to (2) Evidence.

(2) Evidence

The Stage-3 to 8 rotor drum of the A5 HP Compressor is life limited at the 30K thrust rating by the Stage-6 rotor disc. An increase in the thickness of the Stage-6 disc hub, will provide a life that can be compared to the remainder of the drum.



International Aero Engines

SERVICE BULLETIN

R (3) Substantiation

R (a) The thicker Stage-6 disc drum has successfully completed a substantial amount of in-Rservice operation on A1 engines without any problems.

R (b) To maintain the original values of the under-platform clearances, the diameter of the disk
R under the blade platform, has been decreased.

R (c) Extensive development tests on A5 engines have been done on the changes associated with
R the introduction of a common drum for the A1 engines.

R (4) Objective

R The purpose of this Service Bulletin is to increase the cyclic life of the Stage-3 to 8 rotor drum.
R It also introduces a drum assembly that is common to the A1, A5 and D5 engines.

(5) Effect of Bulletin on:

R (a) Operation

Not affected.

R (b) Maintenance

Not affected.

R (c) Overhaul

Affected.

R (d) Repair Schemes

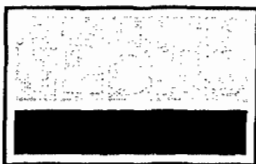
Affected.

R (e) Interchangeability

Not affected.

R (f) Fits and Clearances

Not affected.



International Aero Engines

SERVICE BULLETIN

D. Description

- R (1) For the A5 and D5 engines, this Service Bulletin introduces a new Stage-3 to 8 drum assembly
R with the changes that follow:
- (a) The nominal width of the Stage-6 disc hub has increased.
 - (b) The diameter of the blade support lips for the Stage-6, 7 and 8 discs has been reduced. This is to maintain the original values of the under-platform clearances.
 - (c) The width of the damping wire location lips of the Stage-7 and 8 discs has increased.
 - (d) For the effect on declared lives, refer to the applicable Engine Manual (EM), Chapter/Section 05-10-01, Group-A part lives.
- R (2) For A1 engines, this Service Bulletin introduces a new Stage-3 to 8 drum assembly with the
R changes that follow:
- R (a) The diameter of the blade support lips for the Stage-6, 7 and 8 discs has been reduced. This is
R to maintain the original values of the under-platform clearances.
 - R (b) The width of the damping wire location lips of the Stage-7 and 8 discs has increased.
 - (c) The scroll on the abrasive coating between the Stage-6 and 7 discs and the Stage-7 and 8 discs are deleted.
 - (d) The configuration of the blade locking slots on the Stage-6 and 8 discs has changed.
 - (e) The thickness of the Stage-7 disc diaphragm has decreased and the thickness of the Stage-8 disc has increased.
 - (f) For the effect on declared lives, refer to the applicable Engine Manual (EM), Chapter/Section 05-10-01, Group-A part lives.

E. Compliance

Category Code 7.

- R This Service Bulletin can be accomplished when there are no original parts remaining.

F. Approval

The part number changes and/or part modification are given in Section 2 and 3 of this Service Bulletin. They comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine models listed.



International Aero Engines

SERVICE BULLETIN

G. Manpower

Estimate of man-hours necessary to embody this Service Bulletin in full:

<u>Venue</u>	<u>Estimated Man-Hours</u>
(1) In Service	Not applicable
(2) At Overhaul	Not affected

H. Material - Price and Availability

- (1) A modification kit is not necessary.
- (2) Refer to the Material Information section for prices and availability of future spares.

I. Tooling - Price and Availability

Special tools are not necessary.

J. Weight and Balance

(1) Weight Change

R (a) A1 Engines

R (i) Minus 2.0 lb (0,907 Kg)

R (b) A5 and D5 Engines

R (i) Plus 0.8 lb (0,363 Kg)

(2) Moment Arm

R (a) A1 Engines

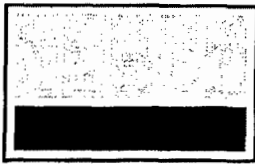
R (i) 17.7 in. (450 mm) to the rear of the datum.

R (b) A5 and D5 Engines

R (i) 14.8 in. (376 mm) to the rear of the datum.

(3) Datum

Engine front mount centerline (Power Plant Station (PPS) - 100)



International Aero Engines
SERVICE BULLETIN

K. Electrical Load Data

- (1) The aircraft electrical load is not affected by this Service Bulletin.

L. References

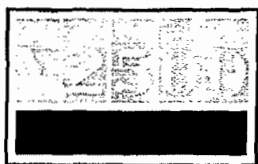
- (1) IAE V2500-A1 Service Bulletin:

ENG 72-0161 ENGINE - HP DISCS AND BLADES - STAGE-7 AND 8 ROTOR BLADES
WITH DAMPING WIRES AND STAGES-6, 7 AND 8 BLADES WITH
ANTI-FRET COATING

- R (2) A1/A5/D5 Engine Manual (EM), Chapter/Section 72-41-10, Disassembly/Assembly.

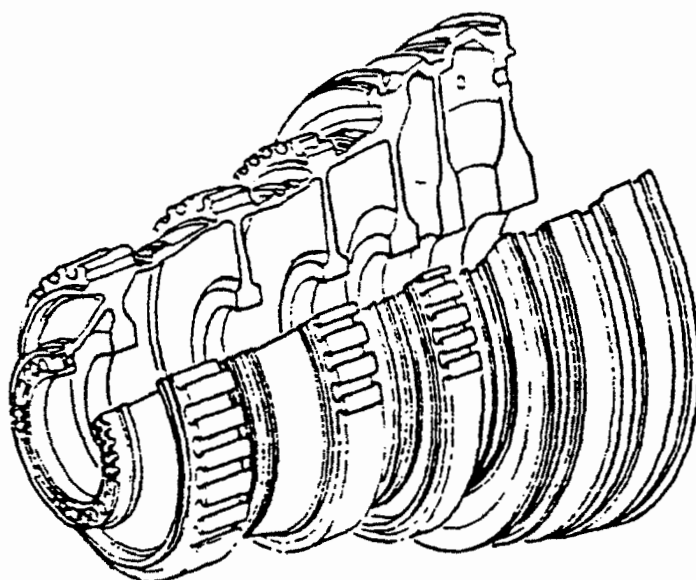
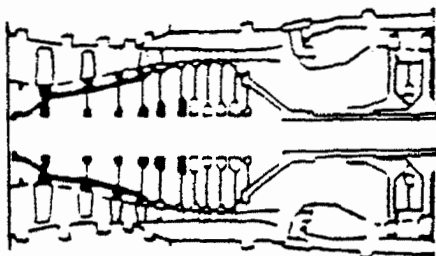
M. Other Publications Affected

- (1) Illustrated Parts Catalogue (IPC), Chapter/Section 72-41-11.
- (2) A1/A5 Engine Manual (EM), Chapter/Section 05-10-01, CONFIG-1 and CONFIG-2, Group-A part lives.
- (3) D5 Engine Manual (EM), Chapter/Section 05-10-01, Group-A part lives.
- (4) A1/A5 Engine Manual (EM), Chapter/Section 72-41-11, Cleaning-00, Cleaning-01 CONFIG-2.
- (5) A1/A5 Engine Manual (EM), Chapter/Section 72-41-11, Inspection/Check-00, Inspection/Check-01 CONFIG-3.
- (6) D5 Engine Manual (EM), Chapter/Section 72-41-11, Cleaning-00, Cleaning-01 CONFIG-1.
- (7) D5 Engine Manual (EM), Chapter/Section 72-41-11, Inspection/Check-00, Inspection/Check-01 CONFIG-1.
- (8) Repair Schemes:
 - (a) VRS6007, VRS6047, VRS6048, VRS6122, VRS6132, VRS6149, VRS6220, VRS6300.



International Aero Engines

SERVICE BULLETIN



A1 MODEL

REMOVE 6A5594
6A5592
6A5659
INSTALL 6A5467

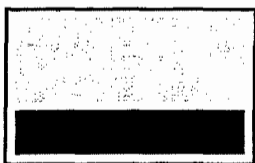
A5 AND D5 MODEL

REMOVE 6A4900
INSTALL 6A5467

E1414

R

Location of the Stage-3 to 8 HP Compressor disc assembly.
Figure 1



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SERVICE BULLETIN

2. Accomplishment Instructions

A. Rework Instructions

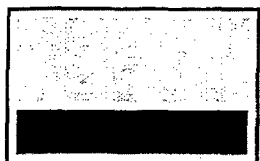
None

B. Assembly Instructions

- R (1) For the correct assembly instructions refer to Engine Manuals (EM) that follow:
- R (a) A1 Engine Manual (EM), Chapter/Section 72-41-10, Assembly-02 CONFIG-1.
- R (b) A5 Engine Manual (EM), Chapter/Section 72-41-10, Assembly-02 CONFIG-2.
- R (c) D5 Engine Manual (EM), Chapter/Section 72-41-10, Assembly-02

C. Recording Instructions

A record of accomplishment is necessary.



International Aero Engines

SERVICE BULLETIN

3. Material Information

R Applicability: For each V2500 engine for which this Service Bulletin is necessary.

A. Kits necessary for this Service Bulletin:

None.

B. Parts affected by this Service Bulletin:

NEW PART No. (ATA No.)	QTY	EST UNIT PRICE (\$)	PART TITLE	OLD PART No. (IPC No.)	INSTR DISP
A1 Engines					
6A5467 (72-41-11)	1		Disc assembly, Stage-3 to 8 HPC	6A5594 (01-200)	(A) (B) (S1)
- (72-41-11)	1		Disc assembly, Stage-3 to 8 HPC	6A5592 (01-200)	(B)
- (72-41-11)	1		Disc assembly, Stage-3 to 8 HPC	6A5659 (01-200)	(B)
A5/D5 Engines					
6A5467 (72-41-11)	1		Disc assembly, Stage-3 to 8 HPC	6A4900 (01-200)	(A) (B) (S1)

R **NOTE:** The unit prices, if shown, are an estimate and they are given for the purpose of planning only.
R For information about actual prices, refer to the IAE Price Catalog or contact IAE's spare part
R sales department.

C. Instruction Disposition Codes:

(A) New parts are available.

(B) Old parts are not available.

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