

International Aero Engines

## SERVICE BULLETIN

May 29/98

Subject: Transmittal of Revision 3 to Service Bulletin V2500-ENG-72-0035

Service Bulletin Revision History:

Event	Date
Basic Issue	Jan. 12/90
Revision 1	May 17/91
Revision 2	Dec. 19/91
Revision 3	May 29/98

Reason for Revision:

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

Effect on Past Compliance:

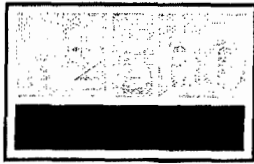
None.

List of Effective Pages:

Page No.	Revision No.	Effective Date
1 to 15	Revision 3	May 29/98

**V2500-ENG-72-0035**

Transmittal  
Page 1 of 1



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## SERVICE BULLETIN

ENGINE - HP COMPRESSOR DISCS AND BLADES - STAGE-3 TO 5 - ANTI-FRET TREATMENT

### MODEL APPLICATION

V2500-A1

### BULLETIN INDEX LOCATOR

72-41-00

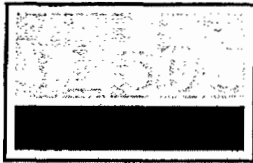
#### Compliance Category Code

6

R

#### Internal Reference No.

EC88VR140  
EC88VR140-01  
EC88VR140-05  
EC88VR140-06



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**ENGINE - HP COMPRESSOR DISCS AND BLADES - STAGE-3 TO 5 - ANTI-FRET TREATMENT**

1. Planning Information

A. Effectivity

(1) Aircraft

(a) Airbus A320

(2) Engines

(a) V2500-A1 Engines prior to Serial No. V0146

B. Concurrent Requirements

None.

C. Reason

(1) Problem

Fretage of the dovetail slots of the HP Compressor Stage-3 to 5 discs can occur.

(2) Evidence

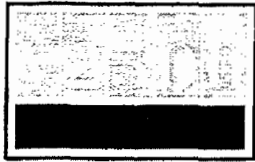
Fretage has been found on the dovetail slots of development engines.

(3) Substantiation

The same anti-fret treatment has been successful on similar applications on other engine models. More than one million hours total running time has been achieved without any fretage being found.

(4) Objective

The purpose of this Service Bulletin is to maintain engine reliability.



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(5) Effect of Bulletin on:

- R (a) Operation  
Not affected.
- R (b) Maintenance  
Not affected.
- R (c) Overhaul  
Affected.
- R (d) Repair Schemes  
Not affected.
- R (e) Interchangeability  
Not affected.
- R (f) Fits and Clearances  
Not affected.

R D. Description

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

- R (a) The Stage-3, 4 and 5 dovetail slots of the HP Compressor Stage-3 to 8 disc  
R assembly, have been treated with an anti-fret coating.
- R (b) The roots of the Stage-3, 4 and 5 HP Compressor rotor blades have been treated with an  
R anti-fret coating.
- (c) The existing discs and blades can be reworked, refer to Figures 2 to 6.
- (d) For the effect on the declared life of the Stage-3 to 8 HP Compressor discs, refer to the A1  
Engine Manual (EM), Chapter/Section 05-10-01, Group A part lives.

R E. Compliance

Category Code 7.

This Service Bulletin can be accomplished when the subassembly (That is, modules accessories, components, build groups) is disassembled sufficiently to get access to all the affected parts.



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R 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.

R G. Manpower

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

Venue

Estimated Man-Hours

(1) In Service

Not applicable

(2) At Overhaul

R (a) To embody and re-identify the applicable disc and  
R blade assemblies

35 Hours

NOTE: It is possible to get access to the parts affected by this Service Bulletin at overhaul.

R 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.

R I. Tooling - Price and Availability

Special tools are not necessary.

R J. Weight and Balance

(1) Weight Change

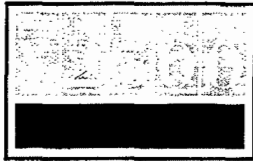
None.

(2) Moment Arm

Not affected.

(3) Datum

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



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

Not affected.

R L. References

(1) A1 Engine Manual (EM), Chapter/Section 72-41-10, Sub Assembly.

(2) Standard Practices Manual (SPM):

R (a) TASK 70-11-01-300-503.

R (b) TASK 70-38-03-380-501, SUBTASK 70-38-03-220-001.

R (c) TASK 70-38-03-380-501, SUBTASK 70-38-03-380-002.

R (d) TASK 70-38-03-380-501, SUBTASK 70-38-03-380-004.

R (e) TASK 70-38-03-380-501, SUBTASK 70-38-03-380-005.

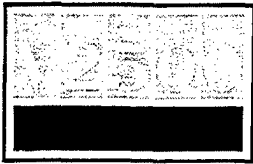
R M. Other Publications Affected

(1) Illustrated Parts Catalogue (IPC), Chapter/Section 72-41-11 and 72-41-15.

(2) A1 Engine Manual (EM):

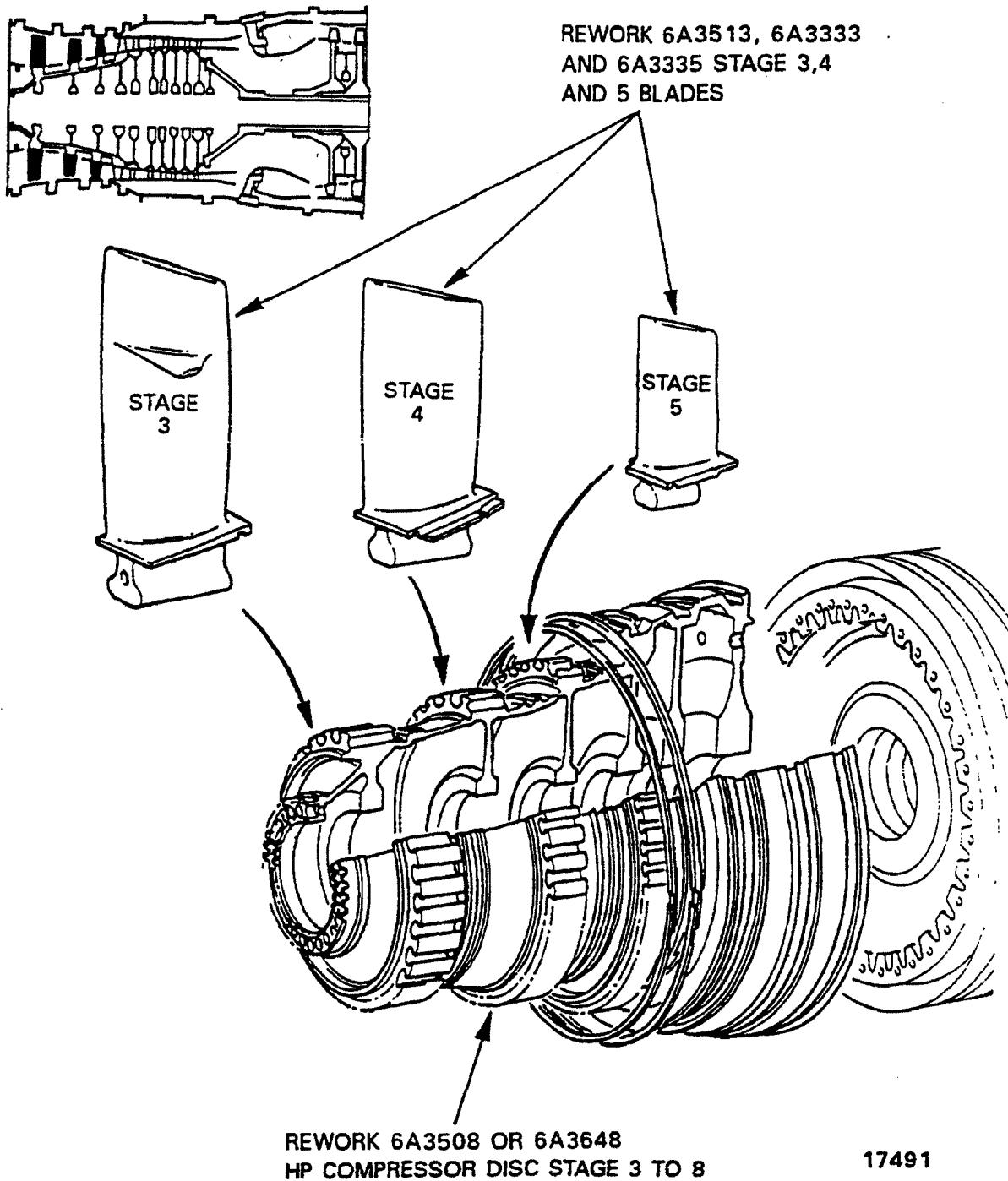
(a) Chapter/Section, 72-41-11 and 72-41-15, Inspection/Check and Cleaning.

(b) Chapter/Section, 05-10-01, Group A part lives.



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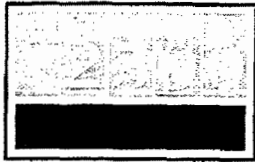
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Location of the Stage-3 to 5 HP Compressor disc and blades.

Figure 1

R



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### 2. Accomplishment Instructions

#### A. Rework Instructions

##### R (1) Tools and Equipment

###### (a) Consumable Materials

CoMat 02-002 Masking tape.  
CoMat 02-019 Masking tape (Alternative).  
CoMat 02-010 Camel hair brush.  
CoMat 10-002 Dry film lubricant - graphite.  
CoMat 07-009 Thinners.

NOTE: To identify the consumable materials, refer to the Consumable Overhaul Materials Manual (CoMat).

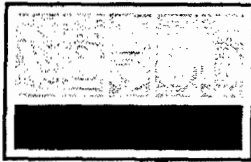
###### (b) Standard Equipment

Spray gun

- (2) Rework 6A3508 and 6A3648 HP Compressor Stage-3 to 8 disc assembly. (Refer to 72-41-11, Fig/Item No. 01-200).

CAUTION: DO NOT ABRASIVE BLAST, THIS IS A SHOT PEENED AREA.

- R (a) Clean the surfaces which are to be coated with the dry film lubricant. Refer to the Standard  
R Practices Manual (SPM), TASK 70-11-01-300-503.
- R (b) With CoMat 02-002 or CoMat 02-019, mask the areas which are not to be coated with the dry  
R film lubricant.
- R (c) Apply three layers of a correct mix of CoMat 10-002 and 07-009. Refer to the Standard  
R Practices Manual (SPM), TASK 70-38-03-380-501, SUBTASK 70-38-03-380-002 and  
R Figures 2 and 6.
- R (d) Stove the component. Refer to the Standard Practices Manual (SPM),  
R TASK 70-38-03-380-501, SUBTASK 70-38-03-380-005.
- R (e) Examine the layer of dry film lubricant. Refer to the Standard Practices Manual (SPM),  
R TASK 70-38-03-380-501, SUBTASK 70-38-03-220-001



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- R (f) With a vibro-engraving tool, cancel the existing part number and re-identify with the new part  
R number.

<u>Existing Part No.</u>	<u>New Part No.</u>
6A3508	6A3934
6A3648	6A3936

- (3) Rework 6A3513 HP Compressor Stage-3 blade. (Refer to 72-41-15, Fig/Item No. 01-200).

**CAUTION:** DO NOT ABRASIVE BLAST, THIS IS A SHOT PEENED AREA.

- R (a) Clean the surfaces which are to be coated with the dry film lubricant. Refer to the Standard  
R Practices Manual (SPM), TASK 70-11-01-300-503.
- R (b) With CoMat 02-002 or CoMat 02-019, mask the areas which are not to be coated with the dry  
R film lubricant.
- R (c) Apply four layers of a correct mix of CoMat 10-002 and 07-009. Refer to the Standard  
R Practices Manual (SPM), TASK 70-38-03-380-501, SUBTASK 70-38-03-380-004 and  
R Figures 2 and 3.
- R (d) Stove the component. Refer to the Standard Practices Manual (SPM),  
R TASK 70-38-03-380-501, SUBTASK 70-38-03-380-005.
- R (e) Examine the layer of dry film lubricant. Refer to the Standard Practices Manual (SPM),  
R TASK 70-38-03-380-501, SUBTASK 70-38-03-220-001
- R (f) With a vibro-engraving tool, cancel the existing part number and re-identify with the new part  
R number.

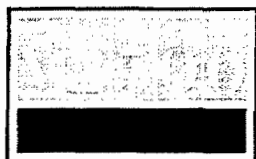
<u>Existing Part No.</u>	<u>New Part No.</u>
6A3513	6A3938

- (4) Rework 6A3333 and 6A3335 HP Compressor Stage-4 and 5 blade. (Refer to 72-41-15, Fig/Item No. 01-500 and 01-800).

**CAUTION:** DO NOT ABRASIVE BLAST, THIS IS A SHOT PEENED AREA.

- R (a) Clean the surfaces which are to be coated with the dry film lubricant. Refer to the Standard  
R Practices Manual (SPM), TASK 70-11-01-300-503.

**NOTE:** The standard cleaning processes will remove the sealing strips.



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- R (b) With CoMat 02-002 or CoMat 02-019, mask the areas which are not to be coated with the dry  
R film lubricant.
- R (c) Apply four layers of a correct mix of CoMat 10-002 and 07-009. Refer to the Standard  
R Practices Manual (SPM), TASK 70-38-03-380-501, SUBTASK 70-38-03-380-004 and  
R Figures 2, 4 and 5.
- R (d) Stove the component. Refer to the Standard Practices Manual (SPM),  
R TASK 70-38-03-380-501, SUBTASK 70-38-03-380-005.
- R (e) Examine the layer of dry film lubricant. Refer to the Standard Practices Manual (SPM),  
R TASK 70-38-03-380-501, SUBTASK 70-38-03-220-001
- R (f) Bond on the sealing strips. Refer to VRS6214 Stage-4 or VRS6215 Stage-5.
- (f) With a vibro-engraving tool, cancel the existing part number and re-identify with the new part number.

#### Existing Part No.

#### New Part No.

6A3333

6A3939

6A3335

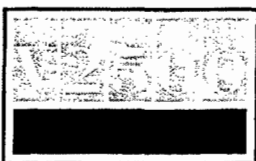
6A3941

#### B. Assembly Instructions

- (1) Replace the applicable HP Compressor disc assemblies and blades.
- (a) Remove the 6A3508 or 6A3648 Stage-3 to 8HP Compressor disc assembly.
- (b) Remove the 6A3513 Stage-3, 6A3333 Stage-4 and the 6A3335 Stage-5 blades.
- (c) Install the 6A3938 Stage-3, 6A3939 Stage-4 and the 6A3941 Stage-5 blades
- (d) Install the 6A3934 or 6A3936 Stage-3 to 8 HP Compressor disc assembly.
- (i) For the correct removal/installation procedures refer to the A1 Engine Manual (EM), Chapter/Section 72-41-10 Assembly/Disassembly.

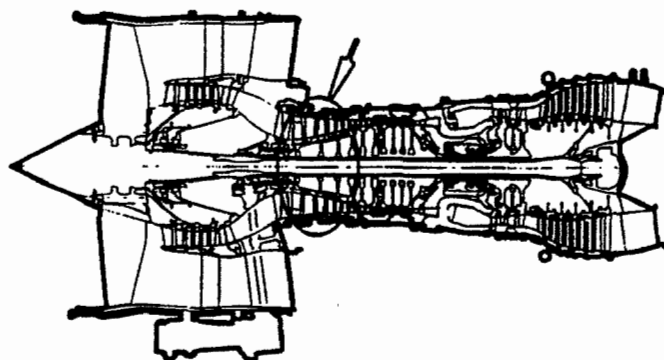
#### C. Recording Instructions

A record of accomplishment is necessary.



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ALL DIMENSIONS IN INCHES (MILLIMETRES)

### REWORK OF STAGE 3 BLADE AND STAGES 4 AND 5 BLADE ASSEMBLIES-HP COMPRESSOR

#### NOTE AE

APPLY 4 LAYERS OF THE DRY FILM LUBRICANT WHERE SPECIFIED - REFER TO TEXT.  
THE TOTAL THICKNESS TO BE 0.00031(0,008) TO 0.00118(0,030).  
THE DRY FILM LUBRICANT IS PERMITTED ON THE ADJACENT SURFACES WHERE  
SPECIFIED AF AND THE BLADE ROOT END FACES ONLY.

THE DRY FILM LUBRICANT MUST NOT TOUCH THE SEALING STRIPS (WHERE APPLICABLE).

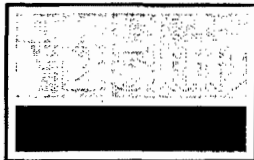
### REWORK OF STAGE 3 TO 8 DISC ASSEMBLY -HP COMPRESSOR

#### NOTE AK

APPLY 3 LAYERS OF THE DRY FILM LUBRICANT WHERE SPECIFIED TO A THICKNESS  
OF 0.00012(0,003) TO 0.00059(0,015) FOR EACH LAYER - REFER TO TEXT.  
THE DRY FILM LUBRICANT IS PERMITTED ON THE ADJACENT SURFACES WHERE  
SPECIFIED AH TO A MAXIMUM THICKNESS OF 0.00100(0,025).  
THE DRY FILM LUBRICANT IS PERMITTED ON THE ADJACENT SURFACES WHERE  
SPECIFIED AJ TO A MAXIMUM THICKNESS OF 0.00180(0,045).

HP Compressor Stage-3 to 8 disc assembly - Application of dry film lubricant.

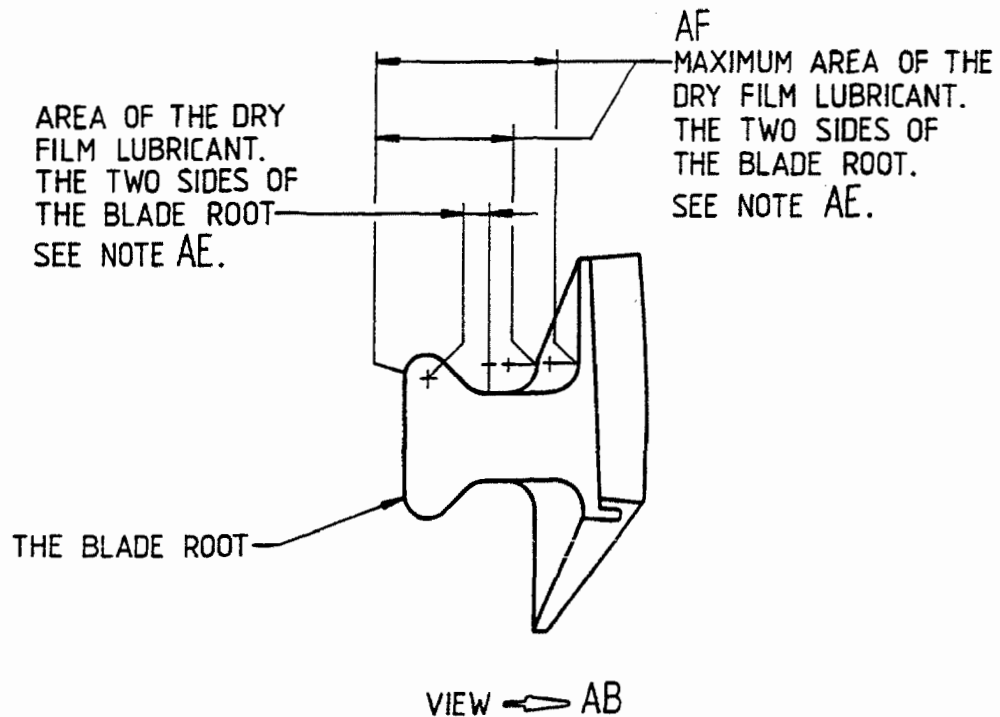
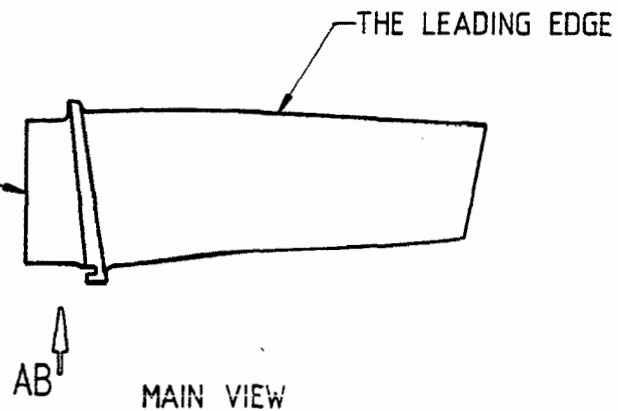
Figure 2



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ERASE IDENTIFICATION MARKS  
- REFER TO TEXT.  
POSITION THE NEW  
IDENTIFICATION MARKS  
HERE - REFER TO TEXT



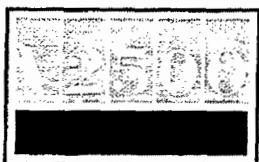
R

Rework of the Stage-3 HP Compressor Blade  
Figure 3

Jan. 12/90  
Revision 3 May 29/98

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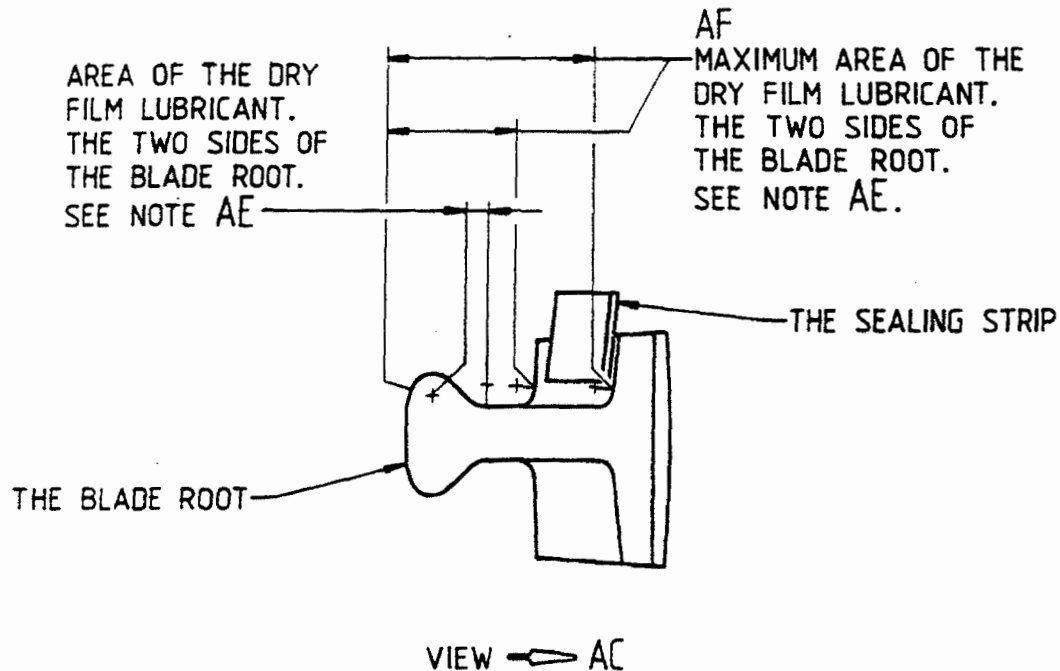
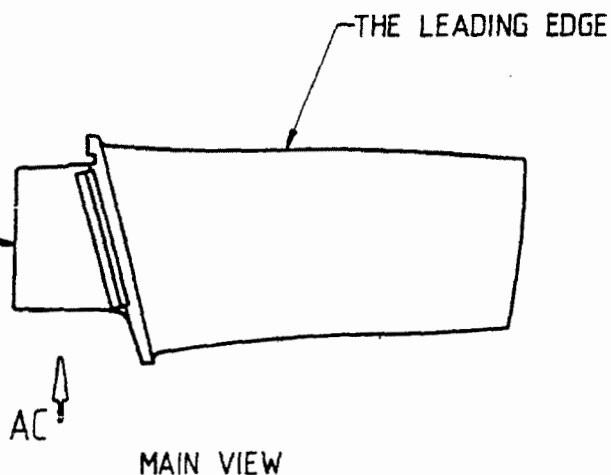
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ERASE IDENTIFICATION MARKS  
-REFER TO TEXT.  
POSITION THE NEW  
IDENTIFICATION MARKS  
HERE-REFER TO TEXT



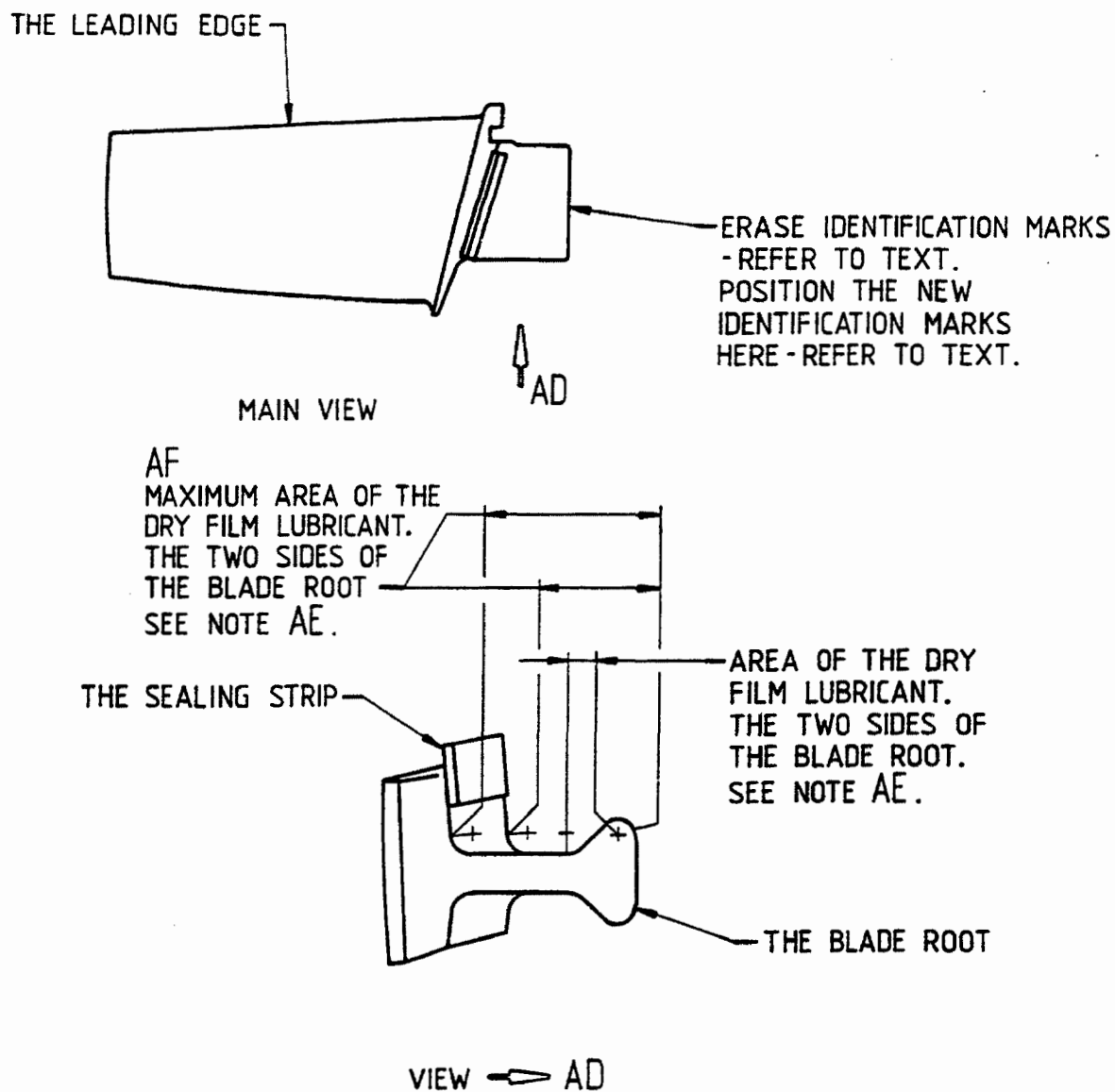
R

Rework of the Stage-4 HP Compressor Blade  
Figure 4



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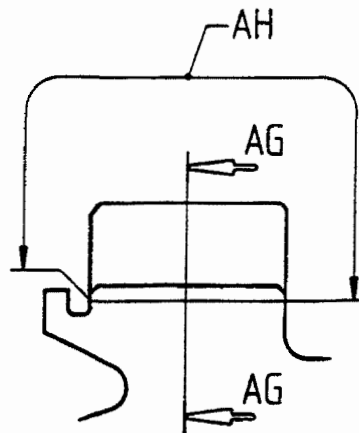


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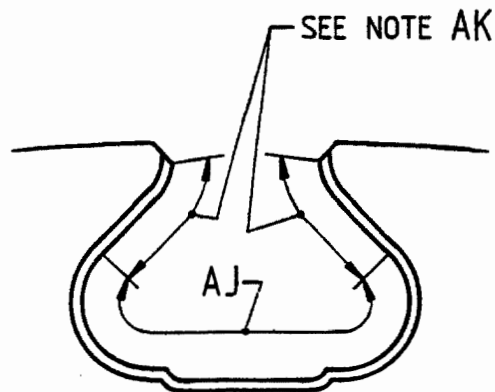
Rework of the Stage-5 HP Compressor Blade  
Figure 5.



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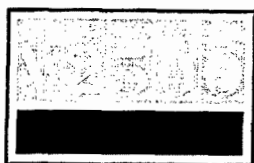
PART SECTION OF TYPICAL DISC RIM  
STAGES 3,4 & 5 ONLY.



TYPICAL SECTION AG

R

Rework of the HP Compressor Stage-3 to disc assembly  
Figure 6.



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### 3. Material Information

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
6A3934 (72-41-11)	1		Disc, assembly of, Stage-3 to 8	6A3508 (01-200)	(S1) (1D) (A) (B)
6A3936 (72-41-11)	1		Disc, assembly of, Stage-3 to 8	6A3648 (01-200)	(S1) (1D) (A) (B)
6A3938 (72-41-15)	31	694.00	Blade, Stage-3	6A3513 (01-200)	(S2) (1D) (A) (B)
6A3939 (72-41-15)	38	187.00	Blade, assembly of, Stage-4	6A3333 (01-500)	(S2) (1D) (A) (B)
6A3941 (72-41-15)	64	147.00	Blade, assembly of, Stage-5	6A3335 (01-800)	(S2) (1D) (A) (B)

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

C. Instruction Disposition Codes:

(A) New part will be available from March 1990.

(B) Old part will be supplied until new part is available.

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

(S1) All old and new parts coded (S1) are freely and fully interchangeable.

(S2) Old and new parts are freely and fully interchangeable.