P U B L I C A T I O N T R A N S M I T T A L

RR-DERBY

V2500 International Aero Engines

400 MAIN STREET, MAIL STOP 121-10
EAST HARTFORD, CT 06108, USA.
TELEPHONE: 860 565 5515
FAX: 860 565 0600

P.O. BOX 31, DERBY
TELEGRAMS - 'ROYCAR' DERBY
TELEX - 37645
TELEPHONE - DERBY 242424

DATE: Apr.25/02

V2500-A1 PROPULSION SYSTEMS SERVICE BULLETIN

Printed in Great Britain

This document transmits the Initial Issue of Service Bulletin EV2500-72-0422 and the Initial Issue of the Supplement

Bulletin Initial Issue

Remove	Incorporate	Reason for change
	Pages 1 to 24 of the Service Bulletin	Initial issue

Supplement Initial Issue

Remove	Incorporate	Reason for change
	Page 1	Initial issue

V2500-ENG-72-0422

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

LIST OF EFFECTIVE PAGES

The effective pages to this Service Bulletin are as follows:

Page	Revision Number	Revision Date
Bulletin		
1		Apr.25/02
2		Apr.25/02
3		Apr.25/02
4		Apr.25/02
5		Apr.25/02
6		Apr.25/02
7		Apr.25/02
8		Apr.25/02
9		Apr.25/02
10		Apr.25/02
11		Apr.25/02
12		Apr.25/02
13		Apr.25/02
14		Apr.25/02
15		Apr.25/02
16		Apr.25/02
17		Apr.25/02
18		Apr.25/02
19		Apr.25/02
20		Apr.25/02
21		Apr.25/02
22		Apr.25/02
23		Apr.25/02
24		Apr.25/02
Supplement		
1		Apr.25/02

ENGINE - HP COMPRESSOR VARIABLE VANE INNER SHROUDS - INTRODUCTION OF REVISED ONE PIECE BUSHES

1. Planning Information

A. Effectivity

(1) Airbus A320

(a) V2500-A1 Engines.

B. Concurrent Requirements

None.

C. Reason

(1) Condition

deterioration of the HP Compressor VSV inner shroud bushes may occur, allowing the shroud to move relative to the vane inner spindle. This can result in damage between the HP Compressor VSV aerofoils and the inner shrouds.

The problem is attributed to gradual oxidisation causing the inner bush material to become brittle.

(2) Background

The problem has been observed on HP Compressor stages 4 and 5 during engine overhaul.

(3) Objective

Incorporation of this modification is designed to improve maintainability.

(4) Substantiation

The changes introduced by this modification have been the subject of satisfactory engineering Analysis, thermal analysis and successful testing on development engines.

(5) Effect of Bulletin on:

(a) Operation

Not affected.

(b) Maintenance

Not affected.

(c) Overhaul

Not affected.

(d) Repair Schemes

Affected.

(e) Interchangeability

Not affected.

D. Description

(1) This modification introduces one piece VSV stage 4 and 5 inner spindle bushes with a higher temperature capability, along with inner shrouds and vanes to suit the new bushes. To maintain commonality, this modification also covers VIGV and stage 3 bushes, vanes and shrouds,

The changes introduced are:

(a) A revised one piece HP Compressor VSV inner spindle bush is introduced replacing the existing two piece bush across VIGV, stage 3, stage 4 and stage 5, similar to the existing item except for the following:

(i) The graphite/polymide material is changed from Vespel SP211 to Vespel ST2030.

(ii) The inner and outer diameters have been changed to suit the thermal properties of the revised material.

(b) Revised HP Compressor VIGV, stage 3, stage 4 and stage 5 vanes are introduced, similar to the existing items except for the following:

(i) The penny at the base of the vane spindle is deleted to suit the one piece bush.

(ii) A manufacture option to machine a fillet radius is introduced as an alternative to the undercut.

(c) A revised HP Compressor VIGV shroud assembly is introduced, similar to the existing item except for the following:

(i) A lip is introduced to the inner spindle hole as a retention feature for the bush.

(ii) The inner spindle hole diameter is increased to suit the revised one piece bush.

(d) A revised HP Compressor stage 3 shroud half assembly is introduced, similar to the existing item except for the following:-

(i) A lip is introduced to the inner spindle hole as a retention feature for the bush.

(ii) The inner spindle hole diameter is increased to suit the revised one piece bush.

(iii) Revised location pins and retaining rings are introduced.

(iv) The stage 3 inner static seal is now an integral part of the shroud half assembly.

(e) As described above, the stage 3 inner static seal is deleted as a separate item, the features are now incorporated within the stage 3 shroud half assembly.

(f) Revised stage 3 inner shroud attaching bolts are introduced similar to the existing item except for a reduction in length.

(g) A revised HP Compressor stage 4 shroud half assembly is introduced, similar to the existing item except for the following:

(i) A lip is introduced to the inner spindle hole as a retention feature for the bush.

(ii) The inner spindle hole diameter is increased to suit the revised one piece bush.

(iii) Revised location pins are introduced.

(iv) The stage 4 inner static seal is now an integral part of the shroud half assembly.

(h) As described above, the stage 4 inner static seal is deleted as a separate item, the features are now incorporated within the stage 4 shroud half assembly.

(i) Revised stage 4 inner shroud attaching bolts are introduced, similar to the existing item except for a reduction in length.

(j) A revised HP Compressor stage 5 shroud half assembly is introduced, similar to the existing item except for the following:

(i) A lip is introduced to the inner spindle hole as a retention feature for the bush.

(ii) The inner spindle hole diameter is increased to suit the revised one piece bush.

(2) Existing HP Compressor Vanes may be reworked.

(3) This modification is in parts as follows:

Part 1 - Covers full embodiment of HP Compressor stage VIGV, stage 3, stage 4 and stage 5.

Part 2 - Covers embodiment of HP Compressor stage VIGV.

Part 3 - Covers embodiment of HP Compressor stage 3.

Part 4 - Covers embodiment of HP Compressor stage 4.

Part 5 - Covers embodiment of HP Compressor stage 5.

NOTE: New production engines fully embodying this modification will not be annotated with a mod part and can be considered equivalent to Part 1.

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 model(s) 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 tool IAE 1R19633 Assembly Tool is required (supercedes assembly tool IAE 1R18250).

J. Industry Support Information

None.

K. Weight and Balance

(1) Weight Change

Minus 0.6 lb. (0,27 kg.).

(2) Moment Arm

3.5in. (89 mm.) rearwards of datum.

(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 V2500 Service Bulletin ENG-72-0092

Information - To announce new HP compressor variable stator vanes, stages 4 and 5 made of improved corrosion resistant material.

(2) Internal Reference Number 01VR023.

(3) ATA Locator 72-41-33.

O. Other Publications Affected

(1) Illustrated Parts Catalogue V2500-A1-1IA will be revised.

(2) Engine Manual, 72-41-00 (1IA)

(a) Disassembly, Config-01

(b) Assembly-02, Config-01

(3) Engine Manual, 72-41-30 (1IA)

(a) Disassembly, Config-01

(b) Assembly-02 to -10, Config-01

(4) Engine Manual, 72-41-32 (1IA)

(a) Cleaning

(b) Inspection/Check

(c) Rework

(d) Repair

(5) Engine Manual, 72-41-33 (1IA)

(a) Cleaning

(b) Inspection/Check

(c) Repair

P. Interchangeability of Parts

(1) The parts introduced by this modification must be fitted as a modification set.

A modification set may consist of modification parts 1, 2, 3, 4 or 5.

2. Material Information

A. The kit required consists of the following parts:

All Engines

72-41-33

Part 1 and Part 2

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
01190	6A7728	40	.Bush VIGV inner shroud	-	6A3497	(A)(C)(S1)(1D)
01200	6A7727	1	.Shroud, assy VIGV	-	6A3464	(A)(C)(S1)

Part 1 and Part 3

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
02138	4W0114	16	.Bolt (see appendix 5) (.190 dia x 1.188)	-	4W0116	(B)(S1)(5D)
02190	6A7728	32	.Bush stage 3 inner shroud	-	6A3497	(A)(C)(S1)(2D)
02200	6A7719	2	.Shroud, assy stage 3 half	-	6A3467	(A)(C)(S1)
02220	AS20763	3	..Ring, retaining	-	AS20762	(B)(S1)
02222	AS20745	3	..Pin, grooved headless	-	LK41751	(B)(S1)

Part 1 and Part 4

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
03138	4W0114	24	.Bolt (see appendix 5) (.190 dia x 1.188)	-	4W0116	(B)(S1)(5D)
03190	6A7728	50	.Bush stage 4 inner shroud	-	6A3497	(A)(C)(S1)(3D)
03200	6A7561	2	.Shroud, assy stage 4 half	-	6A3469	(A)(C)(S1)

Part 1 and Part 5

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
04138	AS26114	32	.Bolt, close tol dee head (.190 dia x .875)	-	AS26113	(B)(S1)(5D)
04190	6A7728	64	.Bush stage 5 inner shroud	-	6A3497	(A)(C)(S1)(4D)
04200	6A7563	2	.Shroud, assy stage 5 half	-	6A3471	(A)(C)(S1)

B. Parts to be reworked:

All Engines

72-41-32

Part 1 and Part 2

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
01500	6A8058	38	.Vane, assy VIGV long spindle	-	6A3690	(A)(S1)(S2)
01600	6A8060	2	.Vane, assy VIGV short spindle	-	6A3692	(A)(S1)(S2)

Part 1 and Part 3

For engines not incorporating ENG-70-0092

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
02500	6A8068	30	.Vane stage 3 long spindle	-	6A3813	(S1)(S2)
02600	6A8067	2	.Vane stage 3 short spindle	-	6A3815	(S1)(S2)

For engines incorporating ENG-70-0092

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
02500	6A8063	30	.Vane stage 3 long spindle	-	6A3883	(A)(S1)
02600	6A8062	2	.Vane stage 3 short spindle	-	6A3884	(A)(S1)(S2)

Part 1 and Part 4

For Engines not incorporating ENG-70-0092

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
03500	6A8069	50	.Vane, stage 4	-	6A3816	(S1)(S2)

For engines incorporating ENG-70-0092

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
03500	6A8064	50	.Vane, stage 4	-	6A3880	(A)(S1)(S2)

Part 1 and Part 5

For Engines not incorporating ENG-70-0092

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
04500	6A8070	60	.Vane, stage 5 short spindle	-	6A3697	(S1)(S2)
04600	6A8071	4	.Vane, stage 5 long spindle	-	6A3698	(S1)(S2)

For Engines incorporating ENG-70-0092

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
04500	6A8065	60	.Vane, stage 5 short spindle	-	6A3881	(A)(S1)(S2)
04600	6A8066	4	.Vane, stage 5 long spindle	-	6A3882	(A)(S1)(S2)

C. New production parts:

None.

D. Redundant parts:

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
02150	-	2	.Seal, half, half ring, stage 3, shroud	-	6A1093	(C)
03150	-	2	.Seal, half ring, stage 4	-	6A1427	(C)

E. Instruction disposition codes:

(A) New part will be made available from December 2001.

(B) New part is currently available.

(C) Old part becomes redundant upon embodiment of this modification.

(S1) Old and new parts are not interchangeable.

(S2) Old part may be reworked and re-identified to the new part number.

(1D) Quantity reduced from 80 to 40.

(2D) Quantity reduced from 64 to 32.

(3D) Quantity reduced from 100 to 50.

(4D) Quantity reduced from 128 to 64.

(5D) Old part may be used up on other applications.

3. Accomplishment Instructions

A. Prepare the HP Compressor

(1) Remove the HP Compressor assembly from the engine. Refer to the applicable Engine Manual (EM) Chapter/Section 72-00-41, Removal/Installation.

(2) Disassemble the HP Compressor assembly. Refer to the applicable Engine Manual (EM) Chapter/Section 72-41-00, up to Subtask 72-41-00-040-058 (A1), Removal/Installation.

(3) Disassemble the HP Compressor front case and vanes. Refer to the applicable Engine Manual (EM) Chapter/Section 72-41-30-040-001, Removal/Installation.

B. Rework Instructions

(1) Rework the parts that follow:

6A3690, HP Compressor VIGV Assembly. Refer to Illustrated Parts Catalogue (IPC) Chapter/Section 72-41-32, Fig/Item 01-500.

6A3692, HP Compressor VIGV Assembly. Refer to Illustrated Parts Catalogue (IPC) Chapter/Section 72-41-32, Fig/Item 01-600.

(2) Standard equipment

Vibro-engraving equipment

Dial test indicator

Standard workshop equipment

Standard workshop inspection equipment

Chemical cleaning equipment

Penetrant crack test equipment

(3) Consumable materials

CoMat 06-022 - Fluorescent penetrant

(a) Re-identify the VIGV

PROCEDURE	RELATED DATA
(i) Make a note of the Part No.	

(ii) Re-identify repair markings	Re-identify any repair markings identified on the vane. Refer to Fig.4. Refer to SPM 70-09-00-400-501. Use vibro-engraving equipment. Remove all burrs and raised material made by vibro-engraving.

(b) Machine the HPC VIGV

CAUTION 1: TITANIUM COMPONENT - YOU MUST USE SILICON CARBIDE TYPE WHEELS, STONES AND PAPERS TO DRESS, BLEND AND POLISH THIS COMPONENT.

CAUTION 2: TITANIUM COMPONENT - AVOID BUILD-UP OF HEAT BY APPLYING ONLY GENTLE PRESSURE AND KEEPING THE TOOL SPEED AS LOW AS POSSIBLE.

CAUTION 3: TITANIUM COMPONENT - YOU MUST MAKE SURE THAT WHEN YOU DRESS MATERIAL, BLEND AND POLISH, TO MAKE SMOOTH, THAT NO SPARKS ARE PRODUCED.

CAUTION 4: TITANIUM COMPONENT - IF THE MATERIAL SHOWS A CHANGE IN COLOUR, TO A DARKER THAN LIGHT STRAW COLOUR, THE COMPONENT IS TO BE REJECTED.

(i) Set the VIGV true to be machined	Use a dial test indicator and standard workshop equipment.
(ii) Machine the VIGV to length	Refer to Fig.4. Use standard workshop equipment.
(iii) Machine the chamfer on the VIGV	Refer to Fig.4. Use standard workshop equipment.
(iv) Remove burrs	Use standard workshop equipment.
(c) Inspect the HPC VIGV	Refer to Fig.4. Use standard workshop inspection equipment.

(d) Swab etch the HPC VIGV

(i) Chemically clean	Refer to SPM TASK 70-11-08-300-503, SUBTASK 70-11-08-300-001. Use chemical cleaning equipment.
(ii) Swab etch the reworked area(s)	Refer to SPM TASK 70-11-08-300-503, SUBTASK 70-11-08-300-002. Use chemical cleaning equipment.

(e)	Do a local penetrant crack test	Refer to SPM TASK 70-23-05-230-501. Use CoMat 06-022 fluorescent penetrant with penetrant crack test equipment. Cracks are not permitted.
(f)	Cancel the existing Part No. and re-identify the HP Compressor VIGV Assembly with the new Part No. adjacent to the existing Part No.	Refer to SPM TASK 70-09-00-400-001. Use vibro-engraving equipment. Remove all burrs and raised material made by vibro-engraving.

Existing	Re-number
6A3690	6A8058
6A3692	6A8060

(4) Rework the parts that follow:

6A3883 and 6A3813, HP Compressor Stage 3 Vane. Refer to Illustrated Parts Catalogue (IPC) Chapter/Section 72-41-32, Fig/Item 02-500.

6A3884 and 6A3815, HP Compressor Stage 3 Vane. Refer to Illustrated Parts Catalogue (IPC) Chapter/Section 72-41-32, Fig/Item 02-600.

6A3880 and 6A3816, HP Compressor Stage 4 Vane. Refer to Illustrated Parts Catalogue (IPC) Chapter/Section 72-41-32, Fig/Item 03-500.

6A3831 and 6A3697, HP Compressor Stage 5 Vane. Refer to Illustrated Parts Catalogue (IPC) Chapter/Section 72-41-32, Fig/Item 04-500.

6A3882 and 6A3698, HP Compressor Stage 5 Vane. Refer to Illustrated Parts Catalogue (IPC) Chapter/Section 72-41-32, Fig/Item 04-600.

(5) Standard equipment

Vibro-engraving equipment

Dial test indicator

Standard workshop equipment

Standard workshop inspection equipment

Chemical cleaning equipment

Penetrant crack test equipment

(6) Consumable Materials

CoMat 06-022 - Fluorescent penetrant

(a) Re-identify the HPC Stage 3, 4 and/or 5 Vanes

PROCEDURE	RELATED DATA
(i) Make a note of the Part No.	
(ii) Re-identify repair markings	Re-identify any repair markings identified on the vane. Refer to Fig.4. Refer to SPM 70-09-00-400-501. Use vibro-engraving equipment. Remove all burrs and raised material made by vibro-engraving.

(b) Machine the HPC Stage 3, 4 and/or 5 Vanes

(i) Set the vanes true to be machined	Use a dial test indicator and standard workshop equipment.
(ii) Machine the vanes to length	Refer to Fig.4. Use standard workshop equipment.
(iii) Machine the chamfer on the vanes	Refer to Fig.4. Use standard workshop equipment.
(iv) Remove burrs	Use standard workshop equipment.
(c) Inspect the HPC vanes	Refer to Fig.4. Use standard workshop inspection equipment.
(d) Chemically clean the HPC vanes	Refer to SPM TASK 70-11-01-300-503. Use chemical cleaning equipment.
(e) Cold Ferric Chloride etch the HPC vanes	Refer to SPM TASK 70-11-39-300-503, SUBTASK 70-11-39-300-001. Use chemical cleaning equipment.
(f) Do a local penetrant crack test	Refer to SPM TASK 70-23-05-230-501. Use CoMat 06-022 fluorescent penetrant with penetrant crack test equipment. Cracks are not permitted.

(g) Re-identify the HP Compressor Stage 3, 4 and/or 5 Vanes with the new Part No.

Refer to Fig.4.
Refer to SPM TASK 70-09-00-400-001.
Use vibro-engraving equipment.
Remove all burrs and raised material made by vibro-engraving.

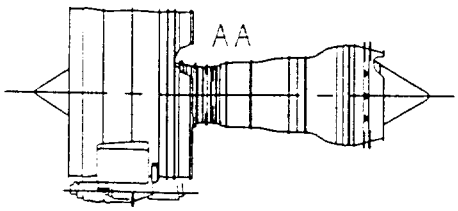
Existing	Re-number
6A3883	6A8063
6A3884	6A8062
6A3813	6A8068
6A3815	6A8067
6A3880	6A8064
6A3816	6A8069
6A3881	6A8065
6A3882	6A8066
6A3697	6A8070
6A3698	6A8071

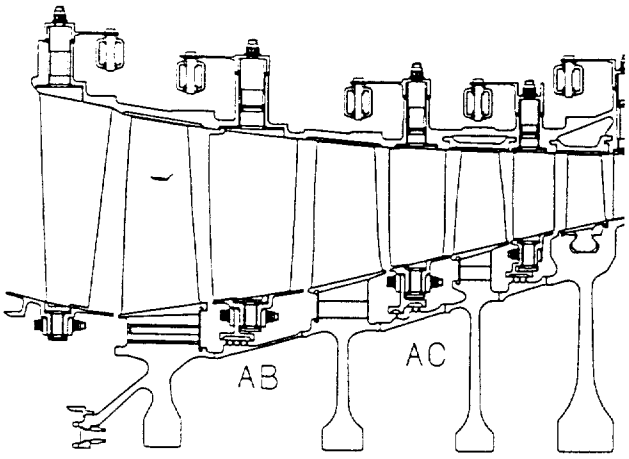
C. Assembly Instructions

(1) For the correct assembly procedures refer to Engine Manual, 72-41-00, Assembly, 72-41-30-440, Front case assembly and 72-41-00-440-02 Assemble the HPC front cases onto the Rotor.

D. Recording Instructions

A record of accomplishment is necessary.

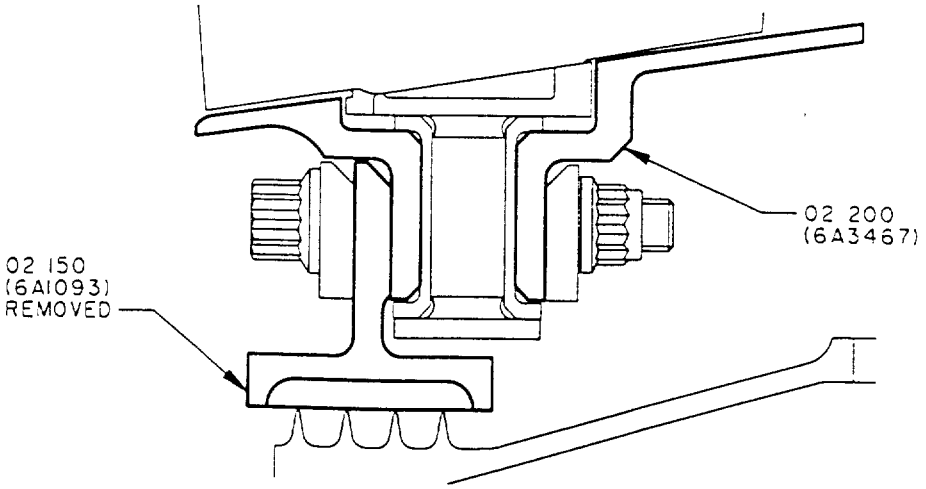




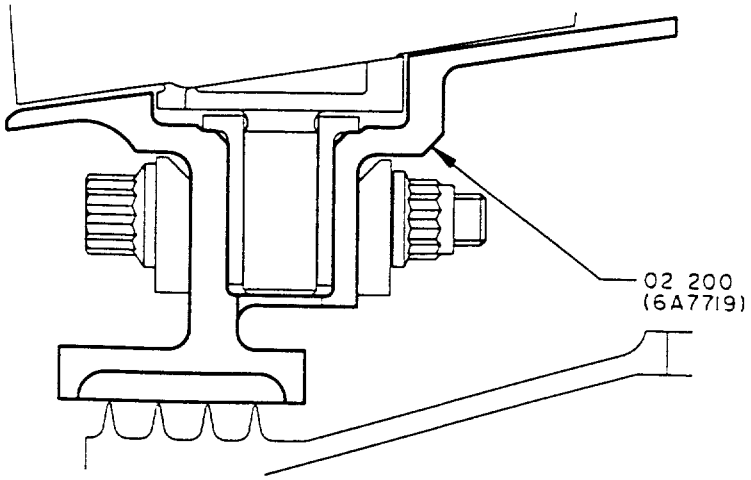
DETAIL AT AA

dem0000806

Repair details and dimensions
Fig.1



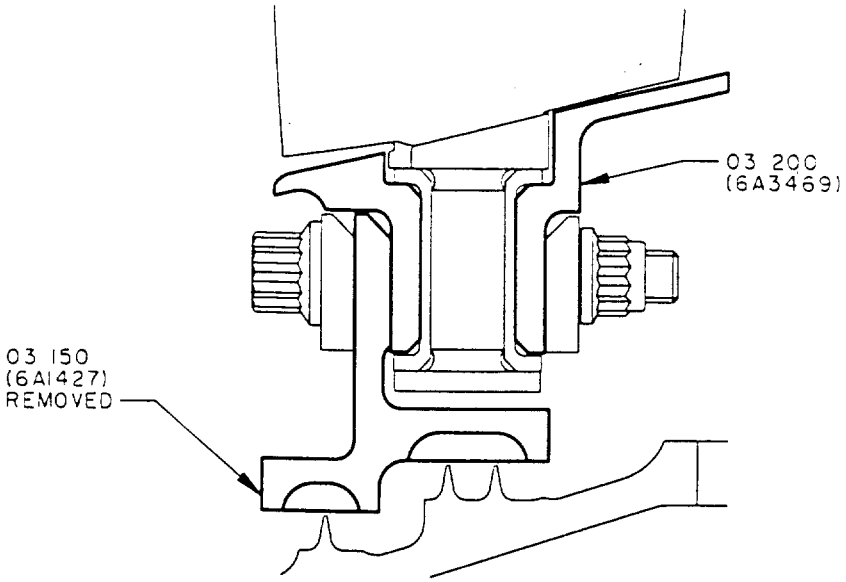
DETAIL AT AB BEFORE MODIFICATION
SHOWING STAGE 3 INNER SHROUD
AND VANE ASSEMBLY



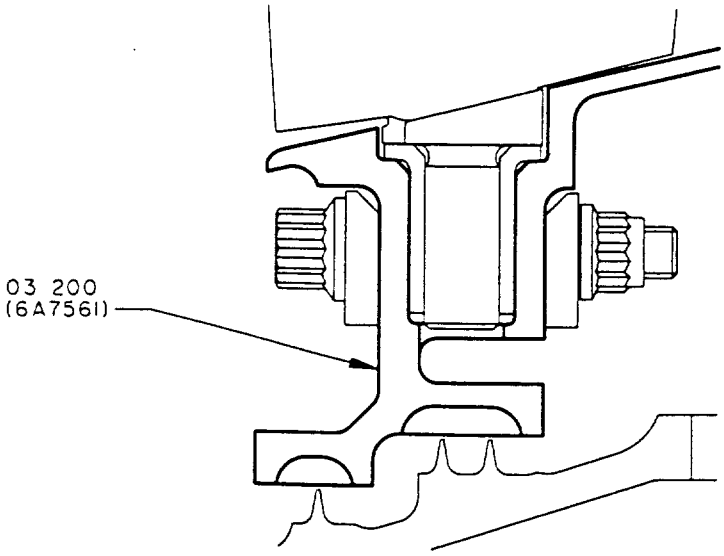
DETAIL AT AB AFTER MODIFICATION
SHOWING STAGE 3 INNER SHROUD
AND VANE ASSEMBLY

dem0000807

Repair details and dimensions
Fig.2



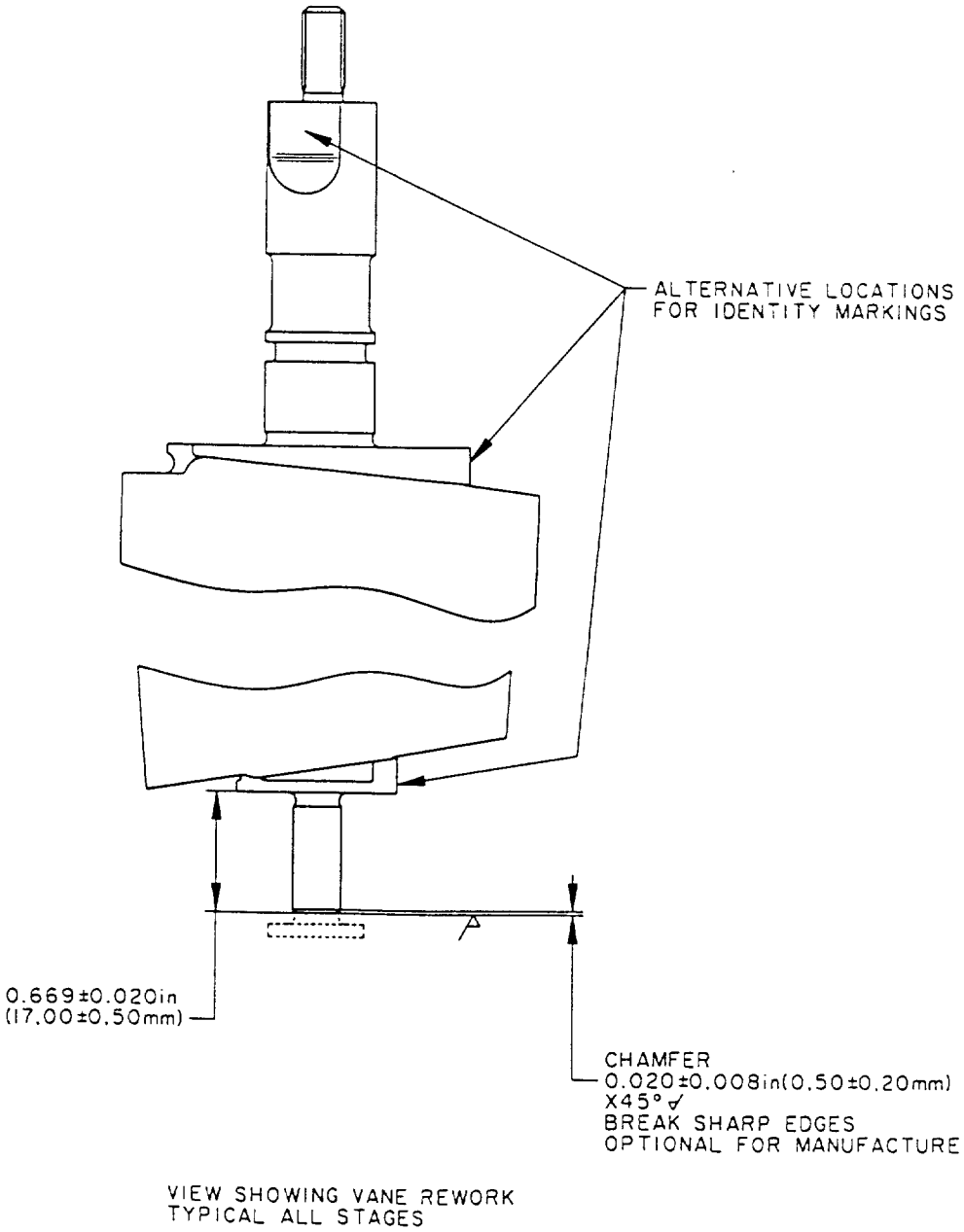
DETAIL AT AC BEFORE MODIFICATION
SHOWING STAGE 4 INNER SHROUD
AND VANE ASSEMBLY



DETAIL AT AC AFTER MODIFICATION
SHOWING STAGE 4 INNER SHROUD
AND VANE ASSEMBLY

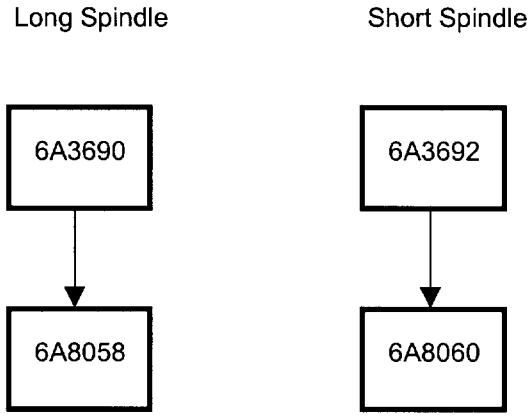
dem0000808

Repair details and dimensions
Fig.3



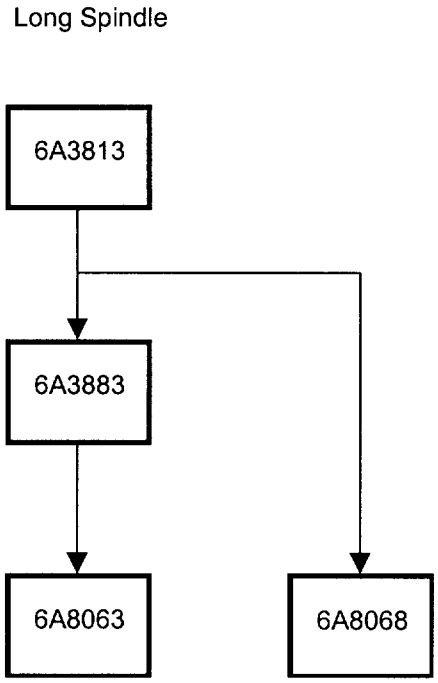
Repair details and dimensions
Fig.4

HP Compressor VIGV Vane Assembly Family Tree



V2500-ENG-72-0422
Engine - HP Compressor Variable Vane Inner Shrouds - Introduction of Revised One Piece Bushes.

HP Compressor Stage 3 Vane Family Tree



V2500-ENG-70-0092
Information - To announce new HP Compressor Variable Vanes, Stages 3, 4 and 5 Made of Improved Corrosion Resistant Material

V2500-ENG-72-0410
Engine - HP Compressor Variable Vane Inner Shrouds - Introduction of Revised One Piece Bushes.

ded0004344

Family Tree
Fig.1, Sheet 1

HP Compressor Stage 3 Vane Family Tree

Short Spindle

Baseline

6A3815

V2500-ENG-70-0092
Information - To announce new HP Compressor Variable Vanes, Stages 3, 4 and 5 Made of Improved Corrosion Resistant Material

6A3884

V2500-ENG-72-0410
Engine - HP Compressor Variable Vane Inner Shrouds - Introduction of Revised One Piece Bushes.

6A8062 6A8067

HP Compressor Stage 4 Vane Family Tree

Baseline

6A3816

V2500-ENG-70-0092
Information - To announce new HP Compressor Variable Vanes, Stages 3, 4 and 5 Made of Improved Corrosion Resistant Material

6A3880

V2500-ENG-72-0410
Engine - HP Compressor Variable Vane Inner Shrouds - Introduction of Revised One Piece Bushes.

6A8064 6A8069

ded0004345

Family Tree
Fig.1, Sheet 2

HP Compressor Stage 5 Vane Family Tree

Short Spindle

Baseline

6A3697

V2500-ENG-70-0092
Information - To announce new HP Compressor Variable Vanes, Stages 3, 4 and 5 Made of Improved Corrosion Resistant Material

6A3881

V2500-ENG-72-0410
Engine - HP Compressor Variable Vane Inner Shrouds - Introduction of Revised One Piece Bushes.

6A8065 6A8070

HP Compressor Stage 5 Vane Family Tree

Long Spindle

Baseline

6A3698

V2500-ENG-70-0092
Information - To announce new HP Compressor Variable Vanes, Stages 3, 4 and 5 Made of Improved Corrosion Resistant Material

6A3882

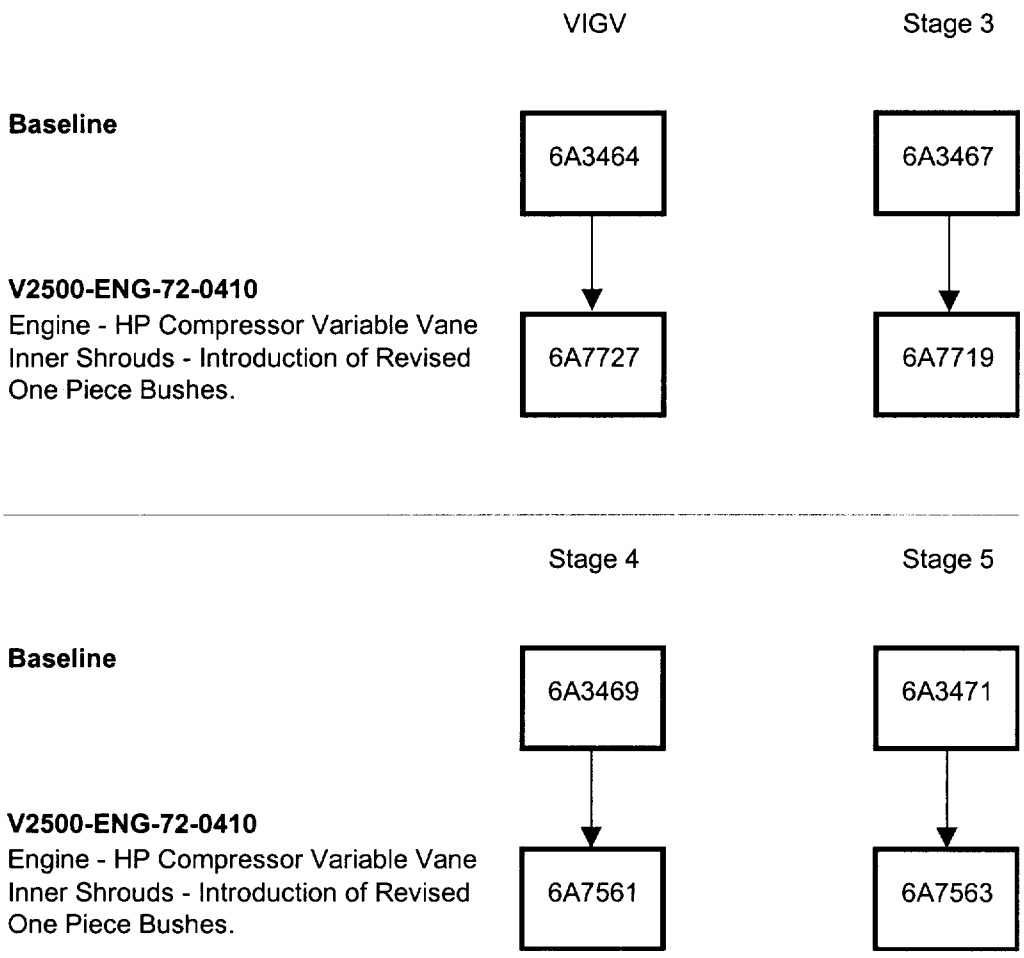
V2500-ENG-72-0410
Engine - HP Compressor Variable Vane Inner Shrouds - Introduction of Revised One Piece Bushes.

6A8066 6A8071

ded0004346

Family Tree
Fig.1, Sheet 3

HP Compressor Inner Shroud Family Trees



ded0004347

Family Tree
Fig.1, Sheet 4

HP Compressor Inner Shroud Bush Family Trees

VIGV,Stage 3,
Stage 4 & Stage 5

Baseline

6A3497

V2500-ENG-72-0410
Engine - HP Compressor Variable Vane Inner Shrouds - Introduction of Revised One Piece Bushes.

6A7728

ded0004348

Family Tree
Fig.1, Sheet 5

ENGINE - HP COMPRESSOR VARIABLE VANE INNER SHROUDS - INTRODUCTION OF REVISED ONE PIECE BUSHES

SUPPLEMENT - PRICES AND AVAILABILITY

The prices shown are provided for planning purposes only and do not constitute a firm quotation. Consult the IAE Price Catalogue or contact IAE Spares Parts Sales Department for information concerning firm prices.

1. Modification Kit

Not applicable. Parts supplied as single line items.

2. Parts Prices

Part No.	Unit Price US Dollars
AS20745	Price will be supplied on request
AS20763	Price will be supplied on request
AS26114	Price will be supplied on request
4W0114	Price will be supplied on request
6A7561	Price will be supplied on request
6A7563	Price will be supplied on request
6A7719	Price will be supplied on request
6A7727	Price will be supplied on request
6A7728	Price will be supplied on request

3. Tools

None.