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

Printed in Great Britain

This document transmits Revision 2 to Service Bulletin EV2500-72-0470 and Revision 2 to the Supplement

### Document History

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Initial Issue Jul.28/04  
Revision 1 Jul.6/05

Supplement Revision Status  
Initial Issue Jul.28/04  
Revision 1 Jul.6/05

### Bulletin Revision 2

| Remove                            | Incorporate                           | Reason for change            |
|-----------------------------------|---------------------------------------|------------------------------|
| All pages of the Summary          | Page 1 and 2 of the Summary           | To revise Family Tree titles |
| All pages of the Service Bulletin | Pages 1 to 11 of the Service Bulletin | To revise Family Tree titles |

### Supplement Revision 2

| Remove    | Incorporate | Reason for change            |
|-----------|-------------|------------------------------|
| All pages | Page 1      | To revise Family Tree titles |

# V2500-ENG-72-0470

Transmittal - Page 1 of 2

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

The effective pages to this Service Bulletin following incorporation of Revision 2 to the Bulletin and Revision 2 to the Supplement are as follows:

| <u>Page</u> | <u>Revision Number</u> | <u>Revision Date</u> |
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| Summary     |                        |                      |
| R 1         | 2                      | Oct.13/05            |
| R 2         | 2                      | Oct.13/05            |
| Bulletin    |                        |                      |
| R 1         | 2                      | Oct.13/05            |
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| R 11        | 2                      | Oct.13/05            |
| Supplement  |                        |                      |
| R 1         | 2                      | Oct.13/05            |

Printed in Great Britain

ENGINE - HP COMPRESSOR DISCS (STAGES 3-8) - INTRODUCTION OF REVISED DISC ASSEMBLY  
WITH REDUCED STAGE 7 REAR DAMPER WIRE RETAINING WALL DIAMETER

## SUMMARY

### 1. PLANNING

#### A. EFFECTIVITY

| Engine   | Serial No.  |
|----------|---|
| V2500-A1 | V0001 to V0361  |
| V2500-A5 | V10001 to V11783 and Engine Serial Nos. V11785,<br>V11787, V11789, V11791, V11793, V11795, V11797 and<br>V11799 |
| V2500-D5 | V20001 to V20285  |

#### B. CONCURRENT REQUIREMENTS

None.

#### C. REASON/PROBLEM

##### Problem

Difficulty may be experienced when fitting HP Compressor Stage 7 blades to the HPC 3-8 disc assembly.

The problem has been attributed to insufficient clearance between the stage 7 rear damper wire retaining tower and the underside of the blade platform.

##### Evidence

The problem has been experienced on engine build.

##### Substantiation

The changes introduced by this Service Bulletin (Modification) have been the subject of extensive engineering analysis.

##### Objective

Incorporation of this Service Bulletin is designed to ease engine assembly.

#### D. DESCRIPTION

A revised HP Compressor Stage 3-8 disc assembly is introduced similar to the existing item except for a reduction in the stage 7 rear damper wire retaining wall diameter. This introduces a minimum clearance of 0,03 mm. between the retaining wall and the underside of the blade platform.

**E. COMPLIANCE**

Category Code 7

Accomplish when the supply of superseded parts has been depleted.

**F. MANPOWER**

In service – Not applicable.

At overhaul – Not affected.

**G. INTERCHANGEABILITY OF PARTS**

Not affected.

**2. MATERIAL INFORMATION****A. PARTS PRICES**

| Part No. | Description | Unit Price |
|----------|-------------|------------|
|          |             | US Dollars |
| 6A8318   | Disc        | 143,040.00 |
| 6A8316   | Disc        | 143,040.00 |

ENGINE – HP COMPRESSOR DISCS (STAGES 3–8) – INTRODUCTION OF REVISED DISC ASSEMBLY  
WITH REDUCED STAGE 7 REAR DAMPER WIRE RETAINING WALL DIAMETER

1. Planning Information

A. Effectivity

(1) Airbus A319

V2522-A5, V2524-A5, V2527M-A5 Engines prior to Serial No.V11784 and Engine Serial Nos. V11785, V11787, V11789, V11791, V11793, V11795, V11797 and V11799

(2) Airbus A320

V2500-A1 Engines prior to Serial No. V0362

V2527-A5, V2527E-A5 Engines prior to Serial No.V11784 and Engine Serial Nos. V11785, V11787, V11789, V11791, V11793, V11795, V11797 and V11799

(3) Airbus A321

V2530-A5, V2533-A5 Engines prior to Serial No.V11784 and Engine Serial Nos. V11785, V11787, V11789, V11791, V11793, V11795, V11797 and V11799

(4) Boeing – Longbeach Division MD-90

V2525-D5, V2528-D5 Engines prior to Serial No. V20286

B. Concurrent Requirements

None.

C. Reason

(1) Problem

Difficulty may be experienced when fitting HP Compressor Stage 7 blades to the HPC 3–8 disc assembly.

The problem has been attributed to insufficient clearance between the stage 7 rear damper wire retaining tower and the underside of the blade platform.

(2) Evidence

The problem has been experienced on engine build.

(3) Substantiation

The changes introduced by this Service Bulletin (Modification) have been the subject of extensive engineering analysis.

(4) Objective

Incorporation of this Service Bulletin is designed to ease engine assembly.

(5) Effect of Bulletin on:

(a) Operation

Not affected.

(b) Maintenance

Affected.

(c) Overhaul

Affected.

(d) Repair Schemes

Affected.

(e) Interchangeability

Not affected.

(f) Fits and Clearances

Not affected.

D. Description

(1) The changes introduced are:

- (a) A revised HP Compressor Stage 3–8 disc assembly is introduced similar to the existing item except for a reduction in the stage 7 rear damper wire retaining wall diameter. This introduces a minimum clearance of 0,03 mm. between the retaining wall and the underside of the blade platform.

(2) For effect on declared life see Time Limits manual 5–10–01.

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

In service

Not applicable.

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.

For prices and availability of future spares see Supplement to this Bulletin.

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

No Effect.

(3) Datum

Engine Front Mount Centreline (Power Plant Station PPS100).

L. Electrical Load Data

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

**M. Software Accomplishment Summary**

Not applicable.

**N. References**

- (1) Engine Manual, Chapter/Section 72-41-10, Assembly.
- (2) Engineering Change No. - 03VR012.
- (3) ATA Locator - 72-41-11.

**O. Other Publications Affected**

- (1) Illustrated Parts Catalogue (IPC), Chapter/Section 72-41-11 will be revised.
- (2) Engine Manual, Chapter/Section 72-41-10, Assembly.
- (3) Engine Manual, Chapter/Section 72-41-11, Cleaning and Inspection/Check.

**P. Interchangeability of Parts**

Not Affected.



## 2. Material Information

### A. The kit required consists of the following parts:

None.

### B. Parts to be reworked:

None.

### C. New production parts:

A1 Engines

72-41-11

| FIG<br>ITEM<br>NO. | NEW<br>PART<br>NO. | QTY | PART TITLE                                 | MAT | OLD<br>PART<br>NO. | INSTR<br>DISP |
|--------------------|--------------------|-----|--|-----|--------------------|---------------|
| 01200              | 6A8318             | 1   | .Disc, assy of Stage 3-8<br>HP Compressor  | -   | 6A8236             | (A)(S1)       |
| 01245              | 6A8317             | Ref | ..Disc, assy of Stage 3-8<br>HP Compressor | -   | 6A7706             | (B)           |

A5 and D5 Engines

| FIG<br>ITEM<br>NO. | NEW<br>PART<br>NO. | QTY | PART TITLE                                 | MAT | OLD<br>PART<br>NO. | INSTR<br>DISP |
|--------------------|--------------------|-----|--|-----|--------------------|---------------|
| 01200              | 6A8316             | 1   | .Disc, assy of Stage 3-8<br>HP Compressor  | -   | 6A7705             | (A)(S1)       |
| 01245              | 6A8317             | Ref | ..Disc, assy of Stage 3-8<br>HP Compressor | -   | 6A7706             | (C)           |

### D. Instruction Disposition Codes:

(A) New part will be available from July 2004.

(B) Part of Disc Assy, 6A8318. Will not be made available as a spare for replenishment purposes.

(C) Part of Disc Assy, 6A8316. Will not be made available as a spare for replenishment purposes.

(S1) Old and new parts are freely and fully interchangeable.

### 3. Accomplishment Instructions

#### A. Rework Instructions

None.

#### B. Assembly Instructions

For the correct Assembly Instructions refer to Engine Manual, Chapter/Section 72-41-10, Assembly.

#### C. Recording Instructions

A record of accomplishment is necessary.

**Baseline**

**V2500-ENG-72-0035**

HP Compressor Discs and  
Blades-Stages 3 to 5 -  
Anti-Fretage Treatment

**V2500-ENG-72-0130**

HP Compressor Discs  
Stage 3 to 8 Rotor Drum  
Assembly with Spacers in  
Triple Melt Titanium

**V2500-ENG-72-0161**

HP Compressor Discs and  
Blades-Stage 7 & 8 Damper Wires  
and Stage 6, 7 & 8 Blades with  
Anti-Fretage Coating

**V2500-ENG-72-0178**

HP Compressor Discs  
Stage 3 to 8 Rotor Drum  
Thicker Stage 6 Disk Hub  
and Damping Wire Locating Lip

**V2500-ENG-72-0254**

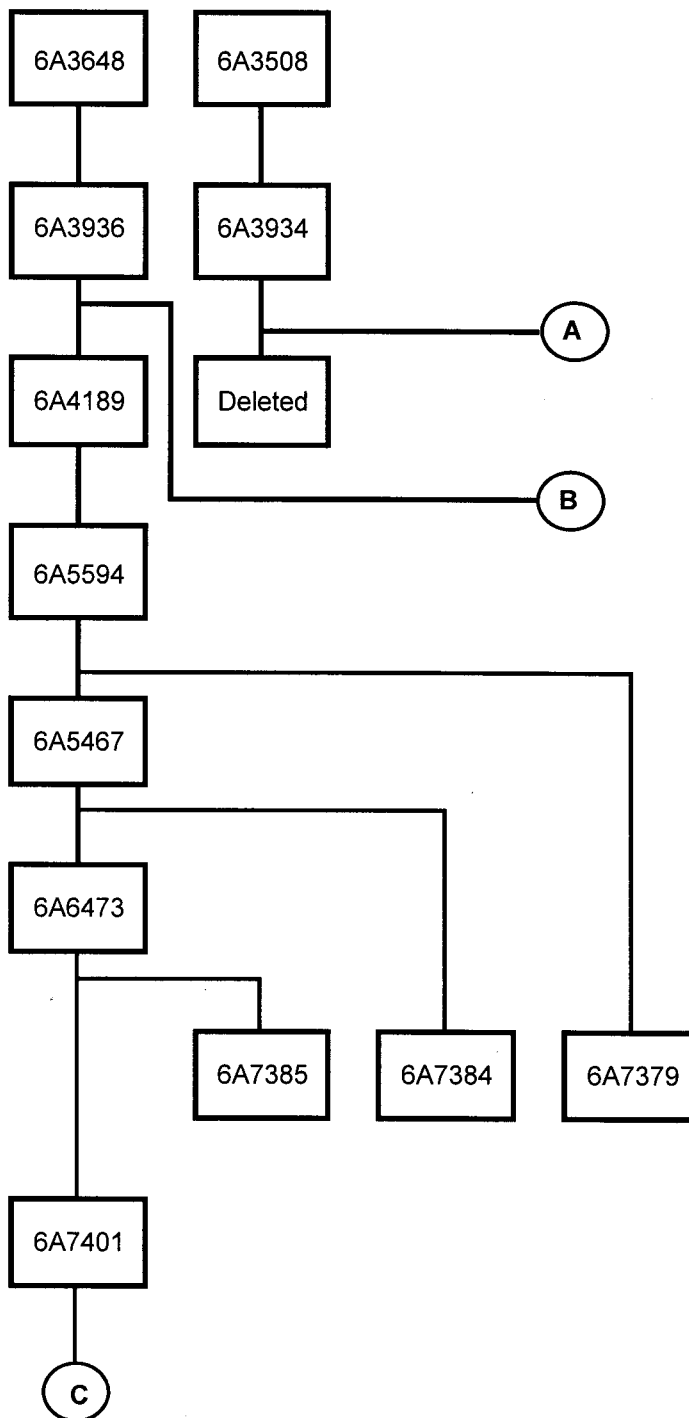
HP Compressor Discs  
Stage 3 to 8-Introduction of  
HPC Drum with Revised  
Disc Profiles

**V2500-ENG-72-0304**

HP Compressor Discs  
Stage 3 to 8-Intro of Reworked  
Stage 3 to 8 Disc Assy with  
Revised 'L' Shaped Sealing Wires

**V2500-ENG-72-0300**

HP Compressor Discs  
Stages 3 to 8-Intro of HP Comp  
Disc Assy with Revised Location  
Of Damper Wire Grooves



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A1 Engines Only - HP Compressor Stage 3-8 Disc Assembly Family Tree  
Sheet 1 of 3

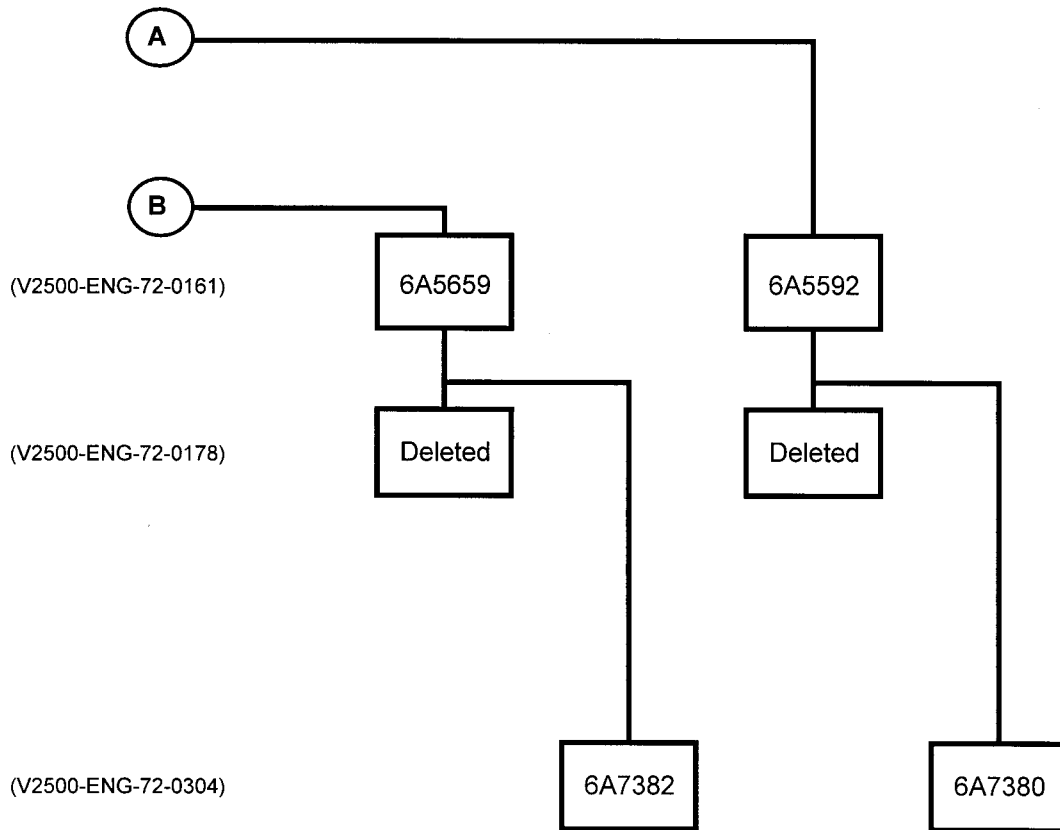
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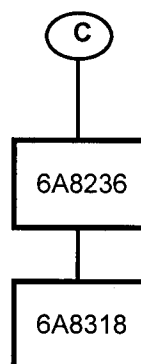


A1 Engines Only - HP Compressor Stage 3-8 Disc Assembly Family Tree  
Sheet 2 of 3

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V2500-ENG-72-0450  
HP Compressor Discs  
Stages 3-8 - Intro of a  
Revised Stage 3-8 Disc Assy

V2500-ENG-72-0470  
HP Compressor Discs  
Stages 3-8 - Intro of a Revised  
Disc Assy with Reduced  
Stage 7 Rear Damper Wire  
Retaining Wall Diameter



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A1 Engines Only - HP Compressor Stage 3-8 Disc Assembly Family Tree  
Sheet 3 of 3

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**Baseline**
**V2500-ENG-72-0178**

Engine - HP Compressor Discs - Stage 3 to 8 Drum with Thicker Stage 6 Disk Hub and Damping Wire Location Lips

**V2500-ENG-72-0254**

Engine - HP Compressor Discs (Stage 3 to 8) Introduction of HP Compressor Drum with Revised Disc Profiles

**V2500-ENG-72-0304**

Engine - HP Compressor Discs - Introduction of a reworked Stage 3 to 8 disc with revised L shaped sealing wires

**V2500-ENG-72-0300**

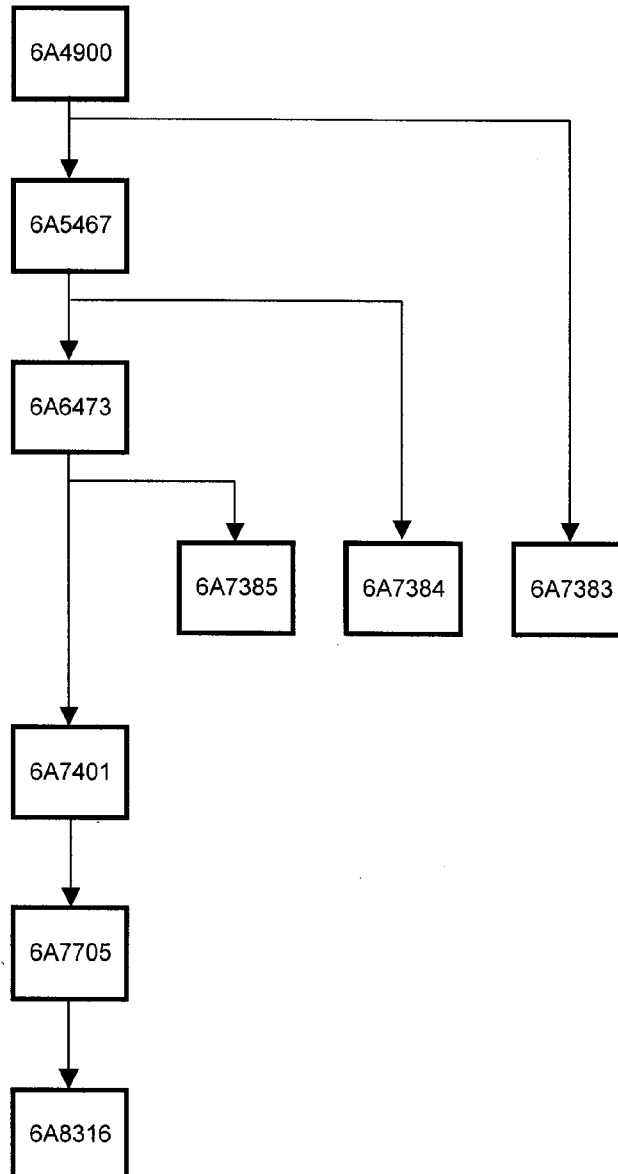
Engine - Stage 3 to 8 - HP Compressor Discs - Introduction of revised stage 3 to 8 disc assembly and revised stage 7 and 8 sealing wires

**V2500-ENG-72-0376**

Engine - HP Compressor Discs (Stages 3-8) - Introduction of a Revised Stage 3-8 Disc Assembly With Increased Life.

**V2500-ENG-72-0470**

Engine - HP Compressor Discs (Stages 3-8) - Introduction of a Revised Disc Assembly With Reduced Stage 7 Rear Damper Wire Retaining Wall Diameter



A5 and D5 Engines (not including A533) – HP Compressor Stage 3–8 Disc Assembly  
Family Tree  
Sheet 1 of 1

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**Baseline**
**V2500-ENG-72-0304**

Engine - HP Compressor Discs Introduction of a reworked Stage 3 to 8 disc assembly with revised L shaped sealing wires

**V2500-ENG-72-0300**

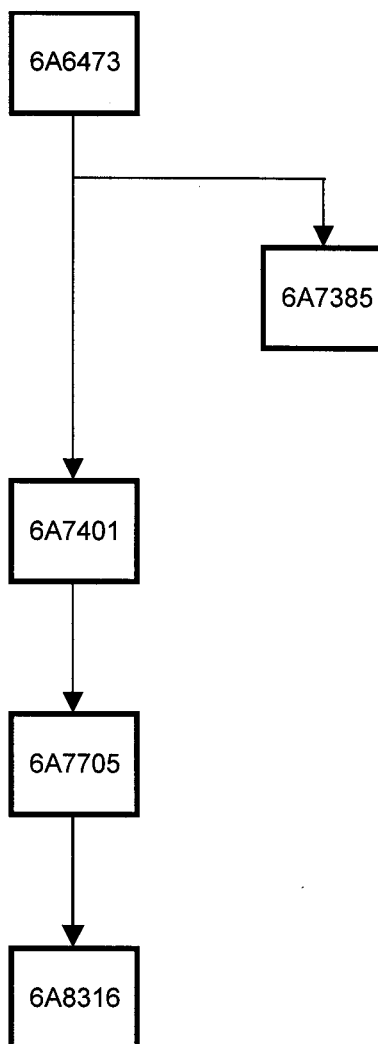
Engine - Stage 3 to 8 - HP Compressor Discs - Introduction of revised stage 3 to 8 disc assembly and revised stage 7 and 8 sealing wires

**V2500-ENG-72-0376**

Engine - HP Compressor Discs (Stages 3-8) - Introduction of a Revised Stage 3-8 Disc Assembly With Increased Life.

**V2500-ENG-72-0470**

Engine - HP Compressor Discs (Stages 3-8) - Introduction of a Revised Disc Assembly With Reduced Stage 7 Rear Damper Wire Retaining Wall Diameter



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A533 Only - HP Compressor Stage 3-8 Disc Assembly Family Tree  
Sheet 1 of 1

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ENGINE - HP COMPRESSOR DISCS (STAGES 3-8) - INTRODUCTION OF REVISED DISC ASSEMBLY  
WITH REDUCED STAGE 7 REAR DAMPER WIRE RETAINING WALL DIAMETER

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. Parts required:

| Part No. | Description | Unit Price<br>US Dollars |
|----------|-------------|--------------------------|
| 6A8318   | Disc        | 143,040.00               |
| 6A8316   | Disc        | 143,040.00               |