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#### V2500-A1/A5 SERIES PROPULSION SYSTEM SERVICE BULLETIN

This document transmits Revision 2 to Service Bulletin EV2500-72-0503 and Revision 2 to the Supplement

# **Document History**

Service Bulletin Revision Status
Initial Issue Jul.19/05
Revision 1 Aug.11/05
Revision 1 Aug.11/05

# **Bulletin Revision 2**

Remove Incorporate Reason for change
All pages of the Page 1 and 2 of the To revise Effectivity. To
Summary incorporate assembly instruction and part number of Pre-SBE 75-0010 when this SB is introduced.

this SB is introduced.
Fig.3 revised.
Pages 1 to 21 of the Pages 1 to 22 of the To revise Effectivity. To

Service Bulletin Service Bulletin incorporate assembly instruction and part number of Pre-SBE 75-0010 when this SB is introduced.

Fig.3 revised.

V2500-ENG-72-0503

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CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED If any have not been received please advise Publication Services, Rolls-Royce plc, Derby, England © Rolls-Royce plc (date as above) Printed in Great Britain

# Supplement Revision 2

Remove All pages Incorporate Page 1 Reason for change To revise Effectivity. To incorporate assembly instruction and part number of Pre-SBE 75-0010 when this SB is introduced. Fig.3 revised.

# 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>P</u> | <u>age</u> | <u>Revision Number</u> | Revision Date |
|----------|------------|------------------------|---------------|
|          |            |                        |               |
|          | Summary    |                        |               |
| R        | 1          | 2                      | Dec.1/05      |
| R        | 2          | 2<br>2                 | Dec.1/05      |
|          | Bulletin   |                        |               |
| R        | 1          | 2                      | Dec.1/05      |
| R        | 2          | 2                      | Dec.1/05      |
| R        | 3          | 2                      | Dec.1/05      |
| R        | 4          | 2                      | Dec.1/05      |
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| R        | 7          | 2<br>2<br>2<br>2<br>2  | Dec.1/05      |
| R        | 8          | 2                      | Dec.1/05      |
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| R        | 10         | 2                      | Dec.1/05      |
| R        | 11         | 2                      | Dec.1/05      |
| R        | 12         | 2                      | Dec.1/05      |
| R        | 13         | 2                      | Dec.1/05      |
| R        | 14         | 2                      | Dec.1/05      |
| R        | 15         | 2<br>2<br>2<br>2<br>2  | Dec.1/05      |
| R        | 16         | 2                      | Dec.1/05      |
| R        | 17         | 2                      | Dec.1/05      |
| R        | 18         | 2                      | Dec.1/05      |
| R        | 19         | 2                      | Dec.1/05      |
| R        | 20         | 2                      | Dec.1/05      |
| R        | 21         | 2                      | Dec.1/05      |
| R        | 22         | 2                      | Dec.1/05      |
|          | Supplement |                        |               |
| R        | 1          | 2                      | Dec.1/05      |





# <u>ENGINE - LP COMPRESSOR - INTRODUCTION OF NEW BRACKET FOR MODIFIED FB FLANGE OF FAN</u> <u>CASE ASSEMBLY</u>

# **SUMMARY**

#### 1. PLANNING

A. EFFECTIVITY

Engine

R V2500-A1 All Engines

V2500-A5 All Engines

**B. CONCURRENT REQUIREMENTS** 

None

C. REASON

Problem:

Premature deterioration of the Fan case assembly may occur, which in extreme cases can result in cracking of the FB flange.

Evidence:

The problem has been found on in-service engines.

Objective:

The changes in configuration recommended in this Service Bulletin are intended to maintain engine durability. This modification should be embodied on engines with a cracked or damaged FB flange at the FCOC mount.

Substantiation

A satisfactory engineering analysis has been carried out on the changes introduced by this Service Bulletin.

D. DESCRIPTION

The length of the raft assembly abutment side is decreased to ensure assembly.

The holes of the raft assembly are elongated in the forward direction by a minimum amount to allow assembly.

To provide longer bolts and new washers for attachment of the raft assembly to the fan case.

The new repair-only part introduced for FB flange of the fan case assembly.

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Modification of the existing fan case assembly is introduced, similar to the existing fan case assembly except for the length of the FB flange (FCOC top mount location) which is decreased to allow assembly of the extension bracket (P/N 5RO294).

#### E. COMPLIANCE

Category Code 8

Accomplish based upon experience with the prior configuration.

F. MANPOWER

In Service

R Not Applicable

At Overhaul - Scheduled removal

To scribe profile

30 minutes

To machine profile

45 minutes

Inspect, visual and dimensional

30 minutes

Crack test using fluorescent penetrant

1 hour

Re-ident part

15 minutes

Total: 3 hours

#### G. INTERCHANGEABILITY OF PARTS

Old part and new part are not interchangeable.

# 2. MATERIAL INFORMATION

Parts Prices

The estimated price of new material is \$2,035.00 to do this Service Bulletin when the part modification procedure is used.

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# <u>ENGINE - LP COMPRESSOR - INTRODUCTION OF NEW BRACKET FOR MODIFIED FB FLANGE OF FAN</u> <u>CASE ASSEMBLY</u>

# 1. Planning Information

- A. Effectivity
  - (1) Airbus A319
    - (a) V2522-A5, V2524-A5 All Engines
  - (2) Airbus A319CJ
    - (a) V2527M-A5 All Engines
  - (3) Airbus A320
- R (a) V2500-A1 All Engines
  - (b) V2527-A5, V2527E-A5 All Engines
  - (4) Airbus A321
    - (a) V2530-A5, V2533-A5 All Engines
  - B. Concurrent Requirements

None.

# C. Reason

(1) Problem

Premature deterioration of the Fan case assembly may occur, which in extreme cases can result in cracking of the FB flange.

(2) Evidence

The problem has been found on in-service engines.

(3) Objective

The changes in configuration recommended in this Service Bulletin are intended to maintain engine durability. This modification should be embodied on engines with a cracked or damaged FB flange at the FCOC mount.

(4) Substantiation

A satisfactory engineering analysis has been carried out on the changes introduced by this Service Bulletin.

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- (5) Effect of Bulletin on Workshop Procedures:
  - (a) Operation

Not affected.

(b) Maintenance

Affected (See Supplemental Information).

(c) Overhaul

Not affected.

(d) Repair Schemes

Not affected.

(e) Interchangeability

Not affected.

(f) Fits and Clearances

Not affected.

(6) Supplemental Information

The assembly of the Post Service Bulletin configuration requires instructions for installing longer bolts, additional washers and modified raft assembly, and the revised procedures for installing the extension bracket in place of the damaged FB flange on the Fan Case assembly.

#### D. <u>Description</u>

- (1) The changes introduced are:
  - (a) Modification of existing raft assembly is introduced, similar to the existing raft assembly except for the following:
    - (i) The length of the raft assembly abutment side is decreased to ensure assembly, see Figure 2.
    - (ii) The holes of the raft assembly are elongated in the forward direction by a minimum amount to allow assembly, see Figure 2.
  - (b) To provide longer bolts and new washers for attachment of the raft assembly to the fan case.
  - (c) The new repair-only part introduced for FB flange of the fan case assembly.



(d) Modification of the existing fan case assembly is introduced, similar to the existing fan case assembly except for the length of the FB flange (FCOC top mount location) which is decreased to allow assembly of the extension bracket (P/N 5RO294), see Figure 3.

# E. Compliance

Category Code 8

Accomplish based upon experience with the prior configuration.

#### 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

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

(1) In Service

Not applicable.

(2) At Overhaul - Scheduled removal

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

(a) To scribe profile

30 minutes

(b) To machine profile

45 minutes

(c) Inspect, visual and dimensional

30 minutes

(d) Crack test using fluorescent penetrant

1 hour

(e) Re-ident part

15 minutes

Total: 3 hours

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## H. Material - Price and Availability

Modification kit not required.

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

# I. Tooling - Price and Availability

Special tools are not required.

# J. <u>Industry Support Information</u>

Not applicable.

# K. Weight and Balance

(1) Weight Change

None.

(2) Moment Arm

No effect.

(3) Datum

Engine Front Mount Centreline (Power Plant Station (PPS) 100).

## L. Electrical Load Data

This Service Bulletin has no effect on the aircraft electrical load.

# M. Software Accomplishment Summary

Not applicable.

# N. References

- (1) V2500 Engine Manual, E-V2500-1IA.
- (2) Internal Reference No. O5VJO13, O5VN3O3 and O5VN3O3A.
- (3) ATA Locator 72-32-85.
- (4) IAE V2500 Service Bulletins:

ENG-75-0010: AIR - ENGINE - DEDICATED ALTERNATOR - COOLING AIR SUPPLY.

ENG-70-0458: TO REVERT TO OLD STANDARD BRACKET

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# 0. Other Publications Affected

- (1) Engine Illustrated Parts Catalogue, 71-51-43, 72-32-85 and 79-22-49.
- (2) V2500 Engine Manual, E-V2500-1IA, 72-00-32, Installation/Removal.

# P. Interchangeability of Parts

Affected - Refer to Section 2 Material Information.

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# 2. Material Information

# A. <u>Kit required consists of the following parts:</u>

None.

# B. Parts to be reworked

R V2500-A1

R

71-51-43

| FIG<br>ITEM<br>NO. | NEW<br>PART<br>NO. | QTY | PART TITLE    | MAT | OLD<br>PART<br>NO. | INSTR<br>DISP      |
|--------------------|--------------------|-----|---------------|-----|--------------------|--------------------|
| 05-990             | 740-5773-9503      | 1   | Raft assembly | -   | 740-5773-503       | (B)(C)<br>(S1)(S2) |
| 05-990             | 740-5773-9507      | 1   | Raft assembly | -   | 740-5773-507       |                    |

V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5, V2533-A5 Engines

71-51-43

| FIG<br>ITEM<br>NO. | NEW<br>PART<br>NO. | QTY | PART TITLE    | MAT | OLD<br>PART<br>NO. | DISP               |
|--------------------|--------------------|-----|---------------|-----|--------------------|--------------------|
| 05-990             | 740-5773-9507      | 1   | Raft assembly | -   | 740-5773-507       | (B)(C)<br>(S1)(S2) |

V2500-A1 Engines

72-32-85

| FIG<br>ITEM<br>NO. | NEW<br>PART<br>NO. | QTY | PART TITLE    | MAT | OLD<br>PART<br>NO. | INSTR<br>DISP |
|--------------------|--------------------|-----|---------------|-----|--------------------|---------------|
| 01-100             | 5w0201             | 1   | Case, A/O Fan | _   | 5W0069             | (D)(1D)       |
| 01-100             | 5W0199             | 1   | Case, A/O Fan | _   | 5w0072             | (D)(1D)       |
| 01-100             | 5W0202             | 1   | Case, A/O Fan | -   | 5w0081             | (D)(1D)       |
| 01-100             | 5W0203             | 1   | Case, A/O Fan | -   | 5W0093             | (D)(1D)       |
| 01-100             | 5W0204             | 1   | Case, A/O Fan | -   | 5W0094             | (D)(1D)       |
| 01-100             | 5W0205             | 1   | Case, A/O Fan | -   | 5w0100             | (D)(1D)       |
| 01-100             | 5W0206             | 1   | Case, A/O Fan | -   | 5W0124             | (D)(1D)       |
| 01-100             | 5W0207             | 1   | Case, A/O Fan | -   | 5W0168             | (D)(1D)       |
| 01-100             | 5W0208             | 1   | Case, A/O Fan | -   | 5W0171             | (D)(1D)       |
| 01-100             | 5W0209             | 1   | Case, A/O Fan | -   | 5W0184             | (D)(1D)       |
| 01-100             | 5W0210             | 1   | Case, A/O Fan | -   | 5W0186             | (D)(1D)       |

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| FIG<br>ITEM<br>NO.  | NEW<br>PART<br>NO.  | QTY                                  | PART TITLE  | MAT                             | OLD<br>PART<br>NO.  | INSTR<br>DISP  |
|---|---|--------------------------------------|---|---------------------------------|---|--|
| 01-100<br>01-100<br>01-100<br>01-100<br>01-100<br>01-100<br>V2522-A           | 5W0211<br>5W0212<br>5W0213<br>5W0200<br>5W0214<br>5W0215<br>5W0216                        | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | Case, A/O Fan               | -<br>-<br>-<br>-<br>-<br>-<br>- | 5W0187<br>5W0188<br>5W0189<br>5W0190<br>5W0191<br>5W0192<br>5W0193<br>Engines | (D)(1D) (D)(1D) (D)(1D) (D)(1D) (D)(1D) (D)(1D) (D)(1D)                              |
| 72-32-8   | 5   |                                      |   |                                 |   |  |
| FIG<br>ITEM<br>NO.  | NEW<br>PART<br>NO.  | QTY                                  | PART TITLE  | MAT                             | OLD<br>PART<br>NO.  | INSTR<br>DISP  |
| 01-100<br>01-100<br>01-100<br>01-100<br>01-100<br>01-100<br>01-100<br>V2533-A | 5W0217<br>5W0219<br>5W0220<br>5W0221<br>5W0222<br>5W0224<br>5W0225<br>5W0226<br>5 Engines | 1<br>1<br>1<br>1<br>1<br>1<br>1      | Case, A/O Fan |                                 | 5W0144<br>5W0154<br>5W0169<br>5W0172<br>5W0194<br>5W0196<br>5W0197<br>5W0198  | (D)(1D)<br>(D)(1D)<br>(D)(1D)<br>(D)(1D)<br>(D)(1D)<br>(D)(1D)<br>(D)(1D)<br>(D)(1D) |
| FIG<br>ITEM<br>NO.  | NEW<br>PART<br>NO.  | QTY                                  | PART TITLE  | MAT                             | OLD<br>PART<br>NO.  | INSTR<br>DISP  |
| 01-100<br>01-100<br>01-100  | 5W0218<br>5W0220<br>5W0221  | 1<br>1<br>1                          | Case, A/O Fan<br>Case, A/O Fan<br>Case, A/O Fan   | -<br>-<br>-                     | 5W0149<br>5W0169<br>5W0172  | (D)(1D)<br>(D)(1D)<br>(D)(1D)  |

# C. New production parts:

R V2500-A1, Pre-SBE 75-0010 Engines

5W0223

5W0225

5W0226

R 71-51-43

01-100

01-100

01-100

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5W0195

5W0197

5W0198

(D)(1D)

(D)(1D)

(D)(1D)

Case, A/O Fan

Case, A/O Fan

Case, A/O Fan

1

1



| R<br>R<br>R   | FIG<br>ITEM<br>NO. | NEW<br>PART<br>NO. | QTY     | PART TITLE              | MAT     | OLD<br>PART<br>NO. | INSTR<br>DISP  |
|---------------|--------------------|--------------------|---------|-------------------------|---------|--------------------|----------------|
| <b>R</b><br>R | 05-874             | AS22515            | 1       | Bolt                    | -       | AS21512            | (A)(B)<br>(S1) |
| R             | All Eng            | ines               |         |                         |         |                    |                |
|               | 71-51-4            | 3                  |         |                         |         |                    |                |
|               | FIG<br>ITEM<br>NO. | NEW<br>PART<br>NO. | QTY     | PART TITLE              | MAT     | OLD<br>PART<br>NO. | INSTR<br>DISP  |
|               | 05-992             | NAS1149C0463R      | 2       | Washer                  | -       | -                  | (A)            |
|               | All Eng            | ines               |         |                         |         |                    |                |
|               | 72-32-8            | 5                  |         |                         |         |                    |                |
|               | FIG<br>ITEM<br>NO. | NEW<br>PART<br>NO. | QTY     | PART TITLE              | MAT     | OLD<br>PART<br>NO. | INSTR<br>DISP  |
|               | 01-970             | 5R0294             | 1       | Extension bracket       | -       | -                  | (A)            |
| R             | V2500-A            | 1, Pre SBE 70-0458 | Engine  | es                      |         |                    |                |
|               | 79-22-4            | 9                  |         |                         |         |                    |                |
|               | FIG<br>ITEM<br>NO. | NEW<br>PART<br>NO. | QTY     | PART TITLE              | MAT     | OLD<br>PART<br>NO. | INSTR<br>DISP  |
|               | 13-904             | AS22515            | 2       | Bolt                    | -       | 4W0168             | (A)(B)<br>(S1) |
|               | 13-906             | NAS1149C0463R      | A/R     | Washer                  | -       | -                  | (A)            |
|               | V2522-A<br>Engines |                    | -A5, V2 | 2527E-A5, V2527M-A5, V2 | 530-A5, | Pre SBE 70-        | -0458          |
|               | 79-22-4            | 9                  |         |                         |         |                    |                |
|               | FIG<br>ITEM<br>NO. | NEW<br>PART<br>NO. | QTY     | PART TITLE              | MAT     | OLD<br>PART<br>NO. | INSTR<br>DISP  |
|               | 13-904             | AS22515            | 2       | Bolt                    | -       | 4W0168             | (A)(B)<br>(S1) |
|               | 13-906             | NAS1149C0463R      | A/R     | Washer                  | -       | -                  | (A)            |

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All model, Post SBE 70-0458 Engines

79-22-49

| FIG<br>ITEM<br>NO. | NEW<br>PART<br>NO. | QTY | PART TITLE | MAT | OLD<br>PART<br>NO. | INSTR<br>DISP  |
|--------------------|--------------------|-----|------------|-----|--------------------|----------------|
| 13-904             | AS22515            | 3   | Bolt       | -   | 4W0168             | (A)(B)<br>(S1) |
| 13-906             | NAS1149C0463R      | A/R | Washer     | _   | _                  | (A)            |

# D. <u>Instruction Disposition Codes:</u>

- (A) New part will be available from July 2005.
- (B) Old part can be used up on other applications.
- (C) It is possible to get the new part only by modification.
- (D) Old parts are no longer available.
- (S1) Old part and new part are not interchangeable.
- (S2) Not available as a spare for replenishment purpose.
- (1D) New part can be obtained by rework and re-identification of old part.

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# 3. Accomplishment Instructions

- A. Prepare the raft assembly and damaged area of the FB flange on the fan case, refer to Figure 1 and 2.
  - (1) Remove the clipping point 1103 and 0909 and tubes 117, 172, 202, 203, 206, 207 and 246 from the engine. Refer to the applicable Engine Manual (EM) Chapter/Section 72-00-32, Removal-03.
  - (2) Remove the FCOC (Fuel Cooled Oil Cooler) from the engine. Refer to the applicable Engine Manual (EM) Chapter/Section 72-00-32, Removal-29.
  - (3) Remove the raft assembly (71-51-43, 05-990), attachment angle (71-51-43, 05-870), and bracket (79-22-49, 13-900) from the FB flange. Refer to the applicable Engine Manual (EM) Chapter/Section 72-00-32, Removal-05.

#### B. Rework Instructions

(1) Consumable Materials:

CoMat 06-063 Fluorescent Penetrant CoMat 06-064 Fluorescent Penetrant CoMat 05-020 Waterproof silicon carbide abrasive paper CoMat 05-021 Waterproof silicon carbide abrasive paper

- (2) Do a modification of PN 740-5773-503 or PN 740-5773-507 raft assembly.
  - (a) Enlarge hole 'A' 2 places in raft assembly. See Figure 2.
  - (b) Remove the edge of the raft assembly in the FB flange side. See Figure 2.
  - (c) Cancel existing part number and re-identify with new part number which is followed by the letters assy adjacent to existing part number.
    - (i) Use the vibro-peen method, refer to Figure 2 and SPM TASK 70-09-00-400-501.

| EXISTING     | ke-number     |
|--------------|---------------|
| 740-5773-503 | 740-5773-9503 |
| 740-5773-507 | 740-5773-9507 |

(3) Do a modification of FB flange on the fan case assembly.

------

- (a) Clean the fan case assembly, refer to SPM TASK 70-11-26-300-503.
- (b) Crack test on the damaged area, refer to Figure 3 and SPM TASK 70-23-05-230-501. Use CoMat 06-063 fluorescent penetrant or CoMat 06-064 fluorescent penetrant. Record all cracks.



(c) Remove the damaged flange material, refer to Figure 3.

(i) Use portable grinding equipment and CoMat 05-021 waterproof silicon carbide abrasive paper.

Machining data:

Maximum continual work time: 30 seconds

Feed or work rate: 50 to 150 in/run

CAUTION: ON TITANIUM COMPONENTS, ONLY SILICON CARBIDE TYPE

WHEELS, STONES AND ABRASIVE PAPERS ARE TO BE USED FOR THIS REWORK. ALUMINUM OXIDE TYPES MUST NOT BE USED.

CAUTION: THE MATERIAL WILL OXIDIZE AND CRACK IF MECHANICAL

CUTTERS ARE USED HEAVILY. THIS WILL HAVE OCCURRED IF THE

COMPONENT SHOWS DARK STRAW TO BLUE DISCOLORATION. BE CAREFUL THAT THE GUIDE IS NOT DAMAGED BY CUTTING

PROCESS.

(ii) Blend any burred, galled, cracked of chafed material in the region of the original fracture area. Use portable grinding equipment and CoMat 05-021 waterproof silicon carbide abrasive paper to remove damage.

- (iii) Polish the blended area. Use CoMat 05-020 waterproof silicon carbide abrasive paper to make the blended surface as smooth as the initial surface.
- (d) Crack test again, do step (3)(a) and (b). The blend area must satisfy dimension given in Figure 3. If necessary, do step (3)(c) again.
- (e) Cancel existing part number and re-identify with new part number which is followed by the letters assy adjacent to existing part number.
  - (i) Use the vibro-peen method, refer to Figure 3 and SPM TASK 70-09-00-400-501.

| Existing | Re-number |
|----------|-----------|
| 5w0069   | 5w0201    |
| 5W0072   | 5W0199    |
| 5w0081   | 5W0202    |
| 5W0093   | 5w0203    |
| 5W0094   | 5W0204    |
| 5W0100   | 5w0205    |
| 5W0124   | 5w0206    |
| 5W0144   | 5W0217    |
| 5W0149   | 5w0218    |
| 5W0154   | 5W0219    |
|          |           |

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| Existing | Re-number |
|----------|-----------|
| 5W0168   | 5w0207    |
| 5W0169   | 5w0220    |
| 5W0171   | 5W0208    |
| 5W0172   | 5W0221    |
| 5W0184   | 5W0209    |
| 5W0186   | 5W0210    |
| 5W0187   | 5W0211    |
| 5W0188   | 5W0212    |
| 5W0189   | 5W0213    |
| 5W0190   | 5W0200    |
| 5W0191   | 5W0214    |
| 5W0192   | 5W0215    |
| 5W0193   | 5W0216    |
| 5W0194   | 5W0222    |
| 5W0195   | 5W0223    |
| 5W0196   | 5W0224    |
| 5W0197   | 5W0225    |
| 5W0198   | 5W0226    |
|          |           |

## C. Assembly Instructions

R

R

R

R R

R R (1) Assembly instruction for A1 model Pre SBE 75-0010 engines

Attach the attachment angle (71-51-43, 05-870) to the raft assembly with the two current bolts and new NAS1149C0463R washer (2 off), and then install the new 5R0294 extension bracket, raft assembly and bracket (79-22-49, 13-900) with new AS22515 bolt (3 off), NAS1149C0463R washer (as required) to the engine, refer to Figure 2 and 4. Refer to the applicable Engine Manual (EM) Chapter/Section 72-00-32, Installation-01.

(2) Assembly instruction for A1 model Post SBE 75-0010 and A1/A5 model Pre-SBE 70-0458 engines

Attach the attachment angle (71-51-43, 05-870) to the raft assembly with the two current bolts and new NAS1149C0463R washer (2 off), and then install the new 5R0294 extension bracket, raft assembly and bracket (79-22-49, 13-900) with new AS22515 bolt (2 off), NAS1149C0463R washer (as required) to the engine, refer to Figure 4. Refer to the applicable Engine Manual (EM) Chapter/Section 72-00-32, Installation-01.

(3) Assembly instruction for all model Post SBE 70-0458 engines

Attach the attachment angle (71-51-43, 05-870) to the raft assembly with the two current bolts and new NAS1149C0463R washer (2 off), and then install the new 5R0294 extension bracket, raft assembly and bracket (79-22-49, 13-900) with new AS22515 bolt (3 off), NAS1149C0463R washer (as required) to the engine, refer to Figure 4. Refer to the applicable Engine Manual (EM) Chapter/Section 72-00-32, Installation-01.

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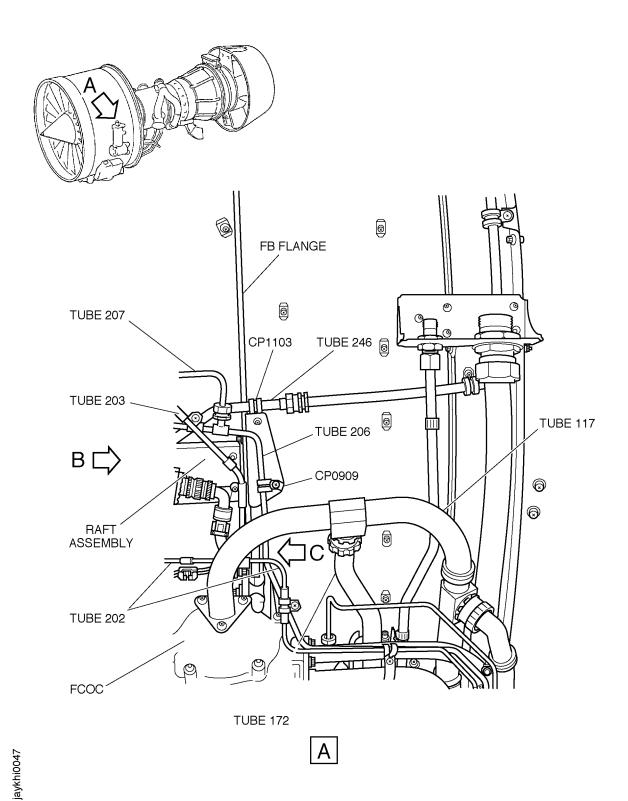


- (4) Install the FCOC to the engine. Refer to the applicable Engine Manual (EM) Chapter/Section 72-00-32, Installation-29.
- (5) Install the clipping point 1103 and 0909 and tubes 117, 172, 202, 203, 206, 207 and 246 to the engine. Refer to the applicable Engine Manual (EM) Chapter/Section 72-00-32, Installation-03.
- D. Recording Instructions

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A record of accomplishment is necessary.

V2500–ENG–72–0§



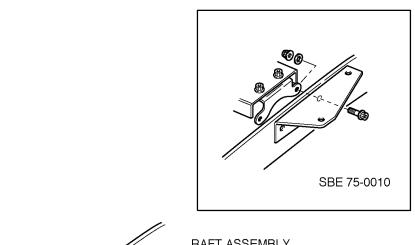
Rework details and related parts

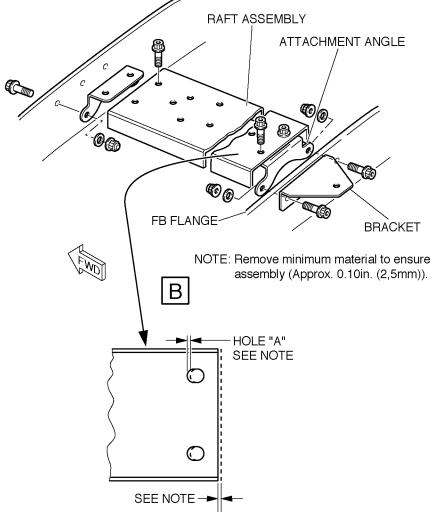
Figure 1

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# International Aero Engines...

# **SERVICE BULLETIN**

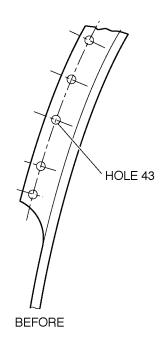




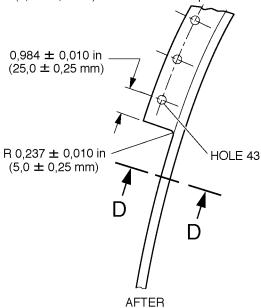
Rework details for the raft assembly Figure 2

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jaykhi0048a



Break sharp edges 0,004 to 0,0020 in. (0,1 to 0,5 mm) unless otherwise specified.



+0,020 in. -0,000 in. (+0,5 mm) (-0,0 mm) SECTION D-D

Rework details for the FB flange Figure 3

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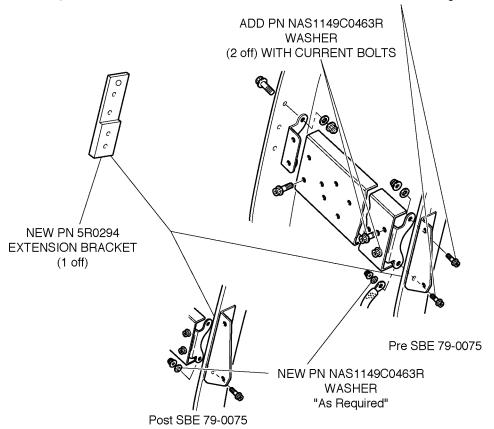
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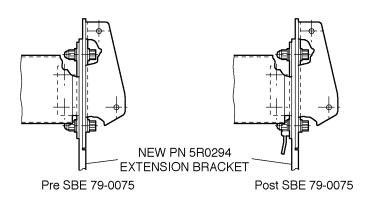
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# NEW PN AS22515 BOLT

(V2500-A1, Pre SBE 75-0010 and V2500-A1/A5, Post SBE 70-0458 configuration 3 off ) (V2500-A1, Post SBE 75-0010 and V2500-A1/A5, Pre SBE 70-0458 configuration 2 off)



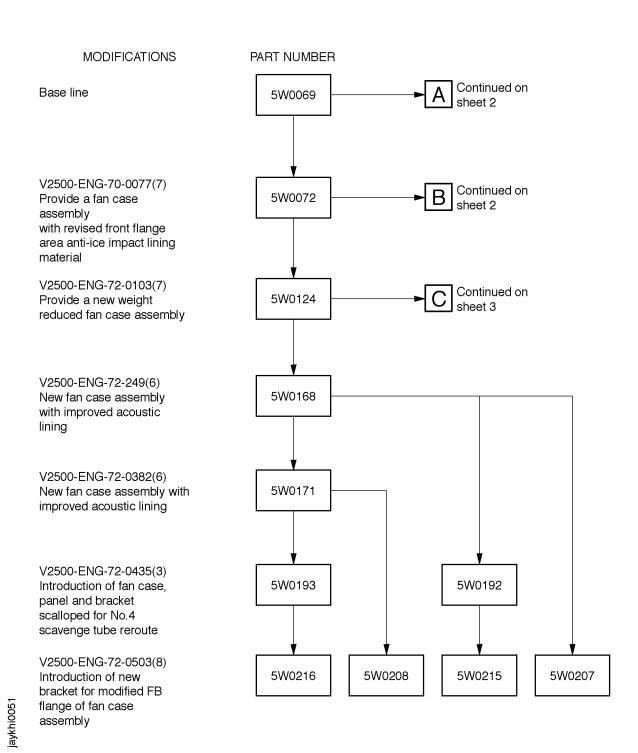


avkhi0050

Assembly instructions Figure 4

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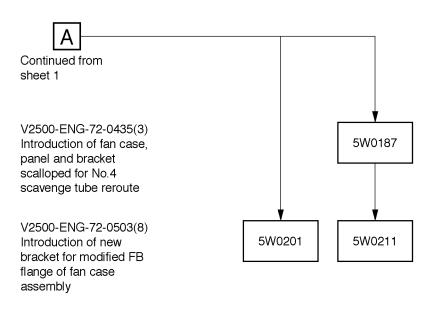
© Rolls-Royce plc

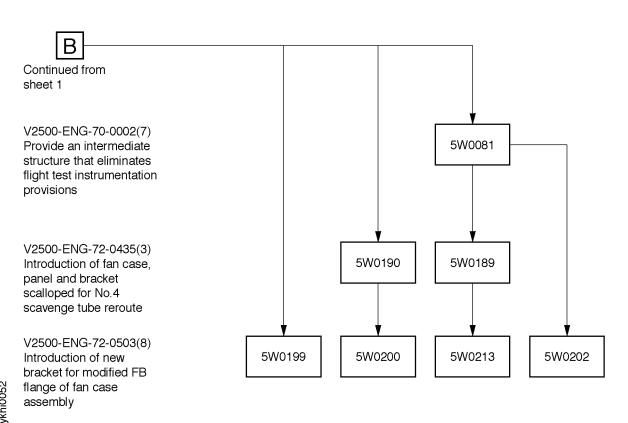


Family Tree - Fan case for V2500-A1 (72-32-85, Fig. 01 Item 100) Figure 5 (sheet 1 of 3)

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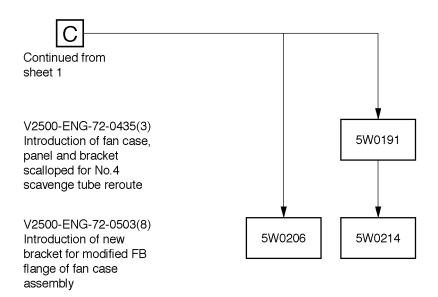






Family Tree - Fan case for V2500-A1 (72-32-85, Fig. 01 Item 100) Figure 5 (sheet 2 of 3)

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Family Tree - Fan case for V2500-A1 (72-32-85, Fig. 01 Item 100) Figure 5 (sheet 3 of 3)

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**MODIFICATIONS** 

Base lile

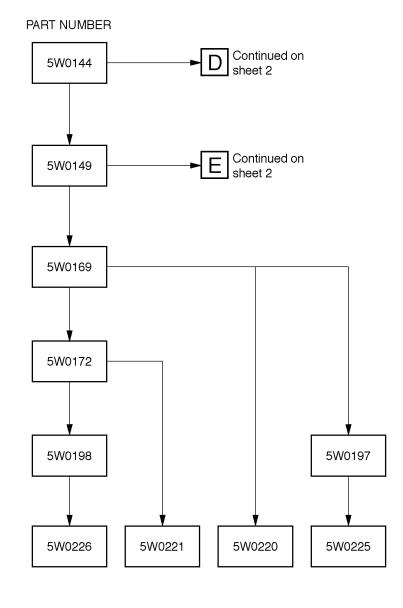
V2500-ENG-72-0160(7) Provide a new fan case assembly that eliminates the provisions for a transition ring

V2500-ENG-72-249(6) New fan case assembly with improved acoustic lining

V2500-ENG-72-0382(6) New fan case assembly with improved acoustic lining

V2500-ENG-72-0435(3) Introduction of fan case, panel and bracket scalloped for No.4 scavenge tube reroute

V2500-ENG-72-0503(8) Introduction of new bracket for modified FB flange of fan case assembly

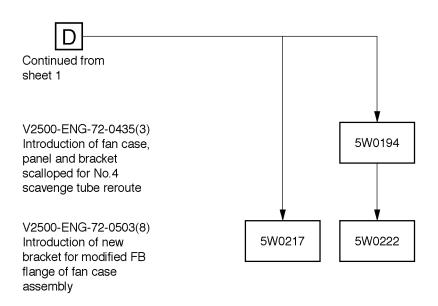


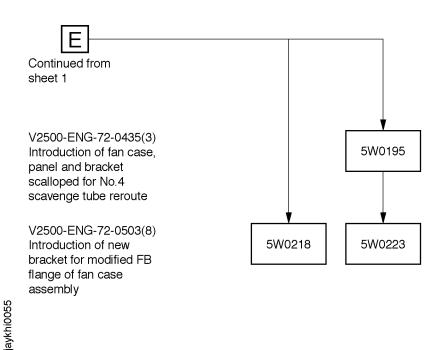
laykhi0054

Family Tree - Fan case for V2500-A5 (72-32-85, Fig. 01 Item 100) Figure 6 (sheet 1 of 2)

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Family Tree - Fan case for V2500-A5 (72-32-85, Fig. 01 Item 100) Figure 6 (sheet 2 of 2)

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# <u>ENGINE - LP COMPRESSOR - INTRODUCTION OF NEW BRACKET FOR MODIFIED FB FLANGE OF FAN</u> <u>CASE ASSEMBLY</u>

# 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       | US Dollars |
|----------|-------------------|------------|
| 5R0294   | Extension Bracket | 2,000.00   |

AS22515 Bolt 10.00
NAS1149C0463R Washer 1.10

# 3. Tools

None.

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