

SERVICE BULLETIN

ENGINE — NO. 4 BEARING SCAVENGE TUBE ASSEMBLY — REPLACEMENT
OF, WITH A HIGHER STRENGTH TUBE

MODEL APPLICATION

V2500-A1, V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5,
V2533-A5, V2525-D5, V2528-D5

BULLETIN ISSUE SEQUENCE

V2500 Series 72-0650

ATA NUMBER

72-42-00

IAE PROPRIETARY INFORMATION

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Not subject to the EAR per 15 C.F.R. Chapter 1, Part 734.3(b)(3).

Compliance Category

3, 5

Industry Support Program

IAE Commercial Authorization Number 1996, 1951

P&W Distribution Code

V2500

June 8/15

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Summary

The purpose of this Service Bulletin is to provide a new No. 4 bearing scavenge tube assembly that has increased strength in areas of high stress and shaped to better interface with the diffuser case.

Planning Information

Effectivity Data

Engine Models Applicable

V2500-A1

Engine Serial Nos. V0001 thru V0361

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

Engine Serial Nos. V10001 thru V13190

Engine Serial Nos. V15002 thru V17804, V17806, and V17808

V2525-D5, V2528-D5

Engine Serial Nos. V20001 thru V20285

Concurrent Requirements

There are no concurrent requirements.

Reason

1. Condition: There have been some instances of in-service cracking of the No. 4 bearing scavenge tube, one of which resulted in an engine fire and others which resulted in removals for oil leaks.
2. Background: Engineering investigation has found the tube fracture was due to combined operating and assembly stresses.
3. Objective: Replace the current No. 4 bearing scavenge tube with a redesigned tube formed to increase strength in the areas of high stress and shaped to better interface with the diffuser case to reduce assembly related stress.
4. Substantiation: Durability verified by analysis that shows the part meets Low Cycle Fatigue (LCF), High Cycle Fatigue (HCF), proof and burst requirements.

There is no change to physical interfaces. Physical fit checks have been conducted on the A5 model to verify close conditions to surrounding hardware.

5. Effects of Bulletin on:

Removal/Installation: Not Affected.

Disassembly/Assembly: Not Affected.

Cleaning: Affected.

Inspection/Check: Not Affected.

Repair: Affected.

Testing: Not Affected.

6. Supplemental Information

None.

Description

Replace the No. 4 bearing scavenge tube assembly as specified in Accomplishment Instructions.

Compliance

For V2500-A1, V2522-A5, V2524-A5, V2527M-A5, V2527-A5, V2527E-A5, V2530-A5, V2533-A5 Engines.

Category 3

Accomplish within 20,000 cycles.

For V2525-D5, V2528-D5 Engines.

Category 5

Accomplish when the engine is disassembled sufficiently to afford access to the affected subassembly (i.e., modules, accessories, components, build groups) and to all affected spare subassemblies.

Approval Data

The part number changes and/or part modifications specified in the Accomplishment Instructions and Material Information sections of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine model(s) given.

The compliance statement and the procedures described in this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine model listed.

The aircraft Type Certificate (TC) holder has been informed of this change.

Manpower

1. In Service

..... Not Applicable.

2. At Overhaul

..... Not Applicable.

Weight and Balance

1. Weight Change

None.

2. Moment Arm

No Effect.

3. Datum

Engine Front Mount Centerline (Power Plant Station (PPS) 100)

Electrical Load Data

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

Software Accomplishment Summary

Not Applicable.

References

NOTE: In 2014 IAE converted the V2500 Technical Publications to a new system. As a result of the conversion, some manuals were consolidated. All manuals received new P&W part numbers. To facilitate the use of this Service Bulletin, a Technical Publications conversion table is provided in the Appendix.

1. ATA Locator — 72-42-20.
2. V2500-A1 Series Illustrated Parts Catalog, P&W Ref. PN 2A4427, Chapter/Section 74-42-20.
3. V2500-A5 Series Illustrated Parts Catalog, P&W Ref. PN 2A4428, Chapter/Section 74-42-20.
4. V2500-D5, Series Illustrated Parts Catalog, P&W Ref. PN 2A4426, Chapter/Section 74-42-20.
5. V2500 A1/A5 Series Engine Manual, P&W Ref. PN 2A4407, Chapter/Section 72-42-00.
6. V2500-D5 Series Engine Manual, P&W Ref. PN 2A4416, Chapter/Section 72-42-00.
7. V2500 Service Bulletin V2500-ENG-72-0004 (Engine — Diffuser Case Assembly — Replace The No. 4 Bearing Scavenge Tube Assembly).
8. V2500 Service Bulletin V2500-ENG-72-0087 (Engine — No. 4 Bearing Compartment — Introduce A New Heatshielded No. 4 Bearing Scavenge Tube Assembly).
9. V2500 Service Bulletin V2500-ENG-72-0120 (Engine — No. 4 Bearing Compartment — New No. 4 Bearing Scavenge Tube Assembly And Gasket).

Other Publications Affected

NOTE: In 2014 IAE converted the V2500 Technical Publications to a new system. As a result of the conversion, some manuals were consolidated. All manuals received new P&W part numbers. To facilitate the use of this Service Bulletin, a Technical Publications conversion table is provided in the Appendix.

1. V2500-A1 Series Illustrated Parts Catalog, P&W Ref. PN 2A4427, Chapter/Section 72-42-20.
2. V2500-A5 Series Illustrated Parts Catalog, P&W Ref. PN 2A4428, Chapter/Section 72-42-20.
3. V2500-D5, Series Illustrated Parts Catalog, P&W Ref. PN 2A4426, Chapter/Section 72-42-20.
4. V2500 A1/A5 Series Engine Manual, P&W Ref. PN 2A4407, Chapter/Section 72-42-00.
5. V2500-D5 Series Engine Manual, P&W Ref. PN 2A4416, Chapter/Section 72-42-00.

Interchangeability of Parts

Old and new parts are directly interchangeable.

Information in the Appendix

Alternate Accomplishment Instructions (No)

Progression Charts (Yes)

Added Data (Yes)

Revision to Table of Limits (No)

Inspection Procedures (No)

Material Information

Material — Price and Availability

1. There is no kit provided to do this Service Bulletin.
2. Part availability information is provided in material data Instructions — Disposition.

Industry Support Program

Under this Support Program the operator is offered a 50% IAE spare parts credit to perform this NMSB, one time per each engine.

For V2500-A1, V2522-A5, V2524-A5, V2527M-A5, V2527-A5, V2527E-A5, V2530-A5, V2533-A5 Engines.

IAE Commercial Authorization Number 1996 — This Support Program is valid through December 31, 2020.

For V2525-D5, V2528-D5 Engines.

IAE Commercial Authorization Number 1951 — This Support Program is valid through December 31, 2021.

Customers are requested to place a purchase order for the parts through their normal IAE spare parts channel.

To assist in the administration of the above Support Program, all Customers are required to purchase only new No. 4 Scavenge Tubes, PN 2A4379-01 from IAE, and submit a claim through IAE's eClaim system on the IAE portal which includes the IAE Commercial Authorization Number 1996 (for A1/A5) or 1951 (for D5).

In order to receive the IAE spare parts credit, the eClaim and all the required documentation must be submitted to IAE within 180 days of the applicable Shop Visit completion date. eClaims received after the period even if they are prior to the expiration date of this Support Program will be ineligible for the IAE spare parts credit and disqualified.

No. 4 Scavenge Tubes, PN 2A2074-01 that are replaced with PN 2A4379-01 must be mutilated in order to receive the IAE spare parts credit. Therefore, proof of mutilation must be submitted along with the claim (counter signed by the local IAE Representative), such as a copy of scrap tag(s), and photo or written statement of part(s) mutilated or disposed of in a manner as to preclude showing the date of the incorporation of the new parts listed within this Support Program is also required to be submitted with the claim.

Upon approval of the eClaim, IAE Warranty Administration will issue an IAE spare parts credit to the Customer's account with IAE. This IAE spare parts credit may be used by the Customer for the purchase of new goods and material from IAE.

If you have any questions concerning this offer please contact your local IAE Customer Support Representative or IAE Customer Support Regional Director.

The material data that follows is for each engine.

For V2500-A1 Engines:

| New PN | Qty | Estimate of Unit Price (\$) | Keyword | Old PN | Instructions — Disposition |
|-----------|-----|-----------------------------|---|-----------------------------|----------------------------|
| 2A4379-01 | 1 | 21,180.00 | TUBE ASSEMBLY — SCAVENGE, NO. 4 BEARING | 2A2074-01 (72-42-20-02-020) | (2)(A)(N) |

The material data that follows is for each engine.

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

| New PN | Qty | Estimate of Unit Price (\$) | Keyword | Old PN | Instructions — Disposition |
|-----------|-----|-----------------------------|---|-----------------------------|----------------------------|
| 2A4379-01 | 1 | 21,180.00 | TUBE ASSEMBLY — SCAVENGE, NO. 4 BEARING | 2A2074-01 (72-42-20-02-020) | (2)(A)(N) |

The material data that follows is for each engine.

For V2525-D5, V2528-D5 Engines:

| New PN | Qty | Estimate of Unit Price (\$) | Keyword | Old PN | Instructions — Disposition |
|-----------|-----|-----------------------------|---|-----------------------------|----------------------------|
| 2A4379-01 | 1 | 21,180.00 | TUBE ASSEMBLY — SCAVENGE, NO. 4 BEARING | 2A2074-01 (72-42-20-02-020) | (2)(A)(N) |

Instructions/Disposition Code Statements:

Parts Modification Conditions

Estimated part prices are provided when they are available at time of publication. The Estimate of Unit Price is only for planning purposes and does not constitute a firm quotation. An asterisk (*) is shown where part pricing information was unavailable. In either case, contact IAE Spares for firm quotations.

(2) The new part is a replacement part only, and cannot be obtained by modification of the old part.

Spare Parts Availability

(A) The new part is available.

(N) The old part is not available.

Vendor Services or Special Components/Materials

Not Applicable.

Tooling — Price and Availability

Special tools are not required to accomplish this Service Bulletin.

Reidentified Parts

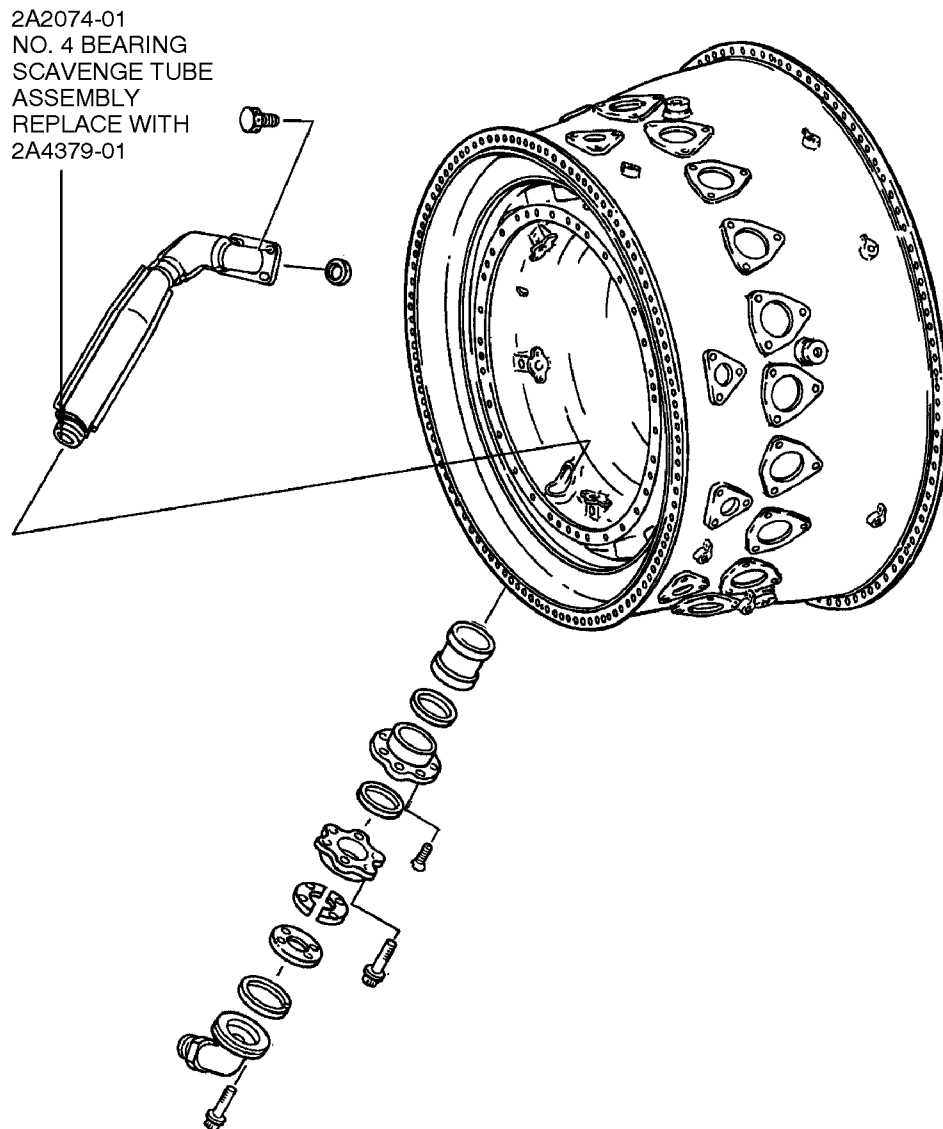
Not Applicable.

Other Material Information Data

Not Applicable.

Accomplishment Instructions

1. Remove No. 4 Bearing Scavenge Tube Assembly, PN 2A2074-01 in accordance with Reference 5 or 6, V2500 A1/A5 Series Engine Manual, P&W Ref. PN 2A4407 or V2500-D5 Series Engine Manual, P&W Ref. PN 2A4416, Chapter/Section 72-42-00-040-001. See Figure 1.
2. Install No. 4 Bearing Scavenge Tube Assembly, PN 2A4379-01 in accordance with Reference 5 or 6, V2500 A1/A5 Series Engine Manual, P&W Ref. PN 2A4407 or V2500-D5 Series Engine Manual, P&W Ref. PN 2A4416, Chapter/Section 72-42-00-430-001. See Figure 1.
3. Recording Instructions
 - A. A record of accomplishment is required.



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LOCATION OF THE NO. 4 BEARING SCAVENGE TUBE ASSEMBLY
72-42-20
FIGURE 1

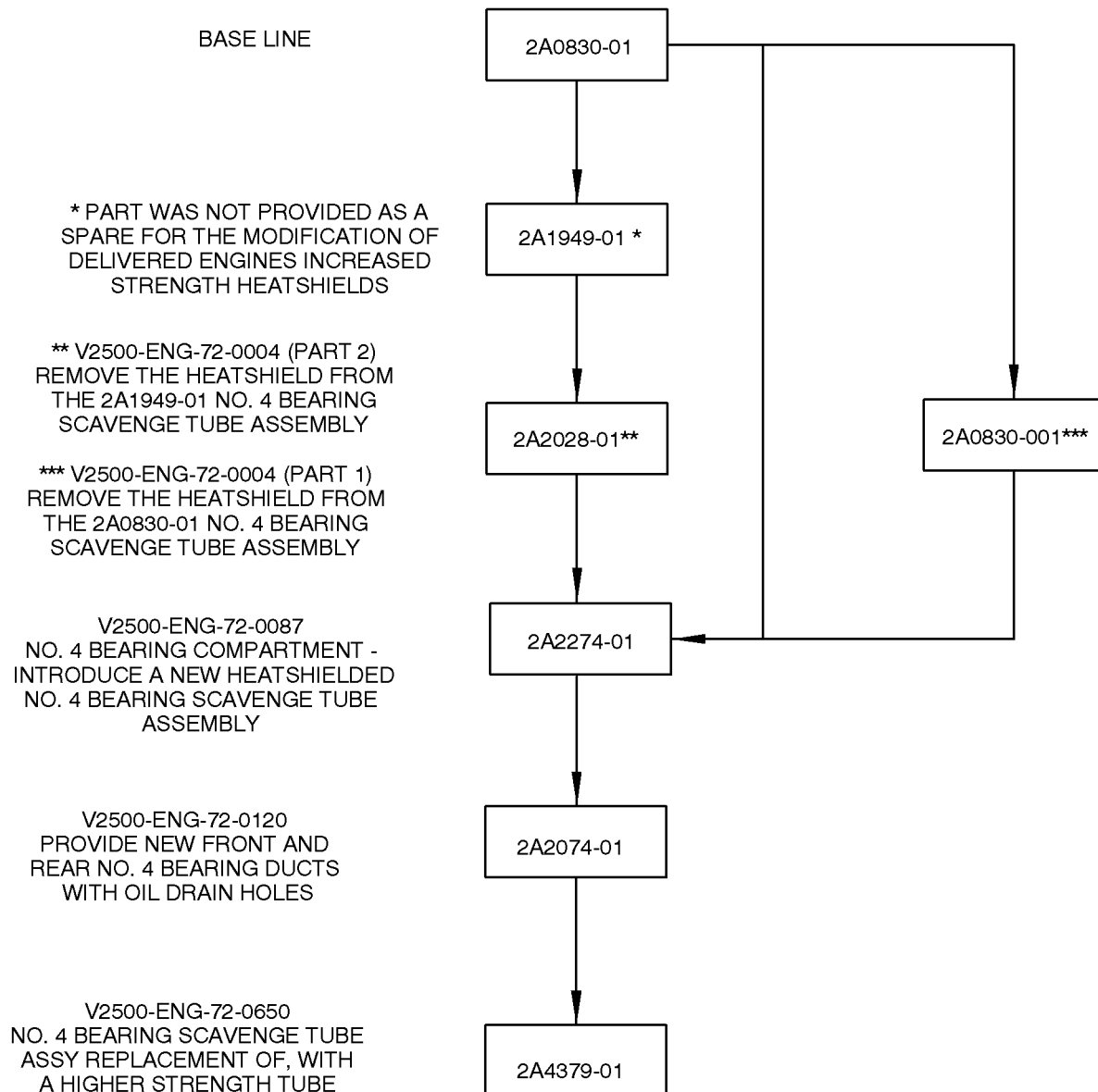
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Appendix

Parts Progression To Show the Changed Part in Relation to Other Parts



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NO. 4 BEARING SCAVENGE TUBE ASSEMBLY CHART A

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Added Data

Internal Reference Information

| Revision No. | Reference Document | Origination |
|--------------|--------------------|-------------|
| Original | EC11VW001B | IEL/FS |

Number values shown in parentheses adjacent to U.S. values are International System of units (SI) equivalents.

To calculate part life, include the hours and/or cycles since the part was made. Use the total hours or cycles to calculate life limits that are the result of part modification, a part used in an engine with different thrust, or for some other reason.

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Technical Publications Cross Reference Table

| Publication | Engine Model(s) | IAE IETM Pub Ref | P&W Part Number |
|-------------------------|-----------------|------------------|-----------------|
| ENGINE MANUAL — A1, A5 | All | E-V2500-11A | 2A4407 |
| CMM-EHC — A1, A5 | All | EHC-V2500-11A | 2A4409 |
| CMM-FN — A1, A5 | All | FN-V2500-11A | 2A4410 |
| CMM-MMC — A1, A5 | All | MECH-V2500-11A | 2A4411 |
| CMM-THD — A1, A5 | All | THD-V2500-11A | 2A4412 |
| TLM — A1, A5 | All | T-V2500-11A | 2A4408 |
| ENGINE MANUAL — D5 | All | E-V2500-31A | 2A4416 |
| CMM-EHC — D5 | All | EHC-V2500-31A | 2A4418 |
| CMM-FN — D5 | All | FN-V2500-31A | 2A4419 |
| CMM-MMC — D5 | All | MECH-V2500-31A | 2A4420 |
| CMM-THD — D5 | All | THD-V2500-31A | 2A4423 |
| TLM — D5 | All | T-V2500-31A | 2A4417 |
| SPPM (SPM) — A1, A5, D5 | All | SPP-V2500-11A | 2A4414 |
| EIPC — A1 | V2500-A1102Q00 | S-V2500-11A | 2A4427 |

| Publication | Engine Model(s) | IAE IETM Pub Ref | P&W Part Number |
|-------------|-------------------------|------------------|-----------------|
| EIPC — A5 | V2522/V2524/V2527M-AQ02 | S-V2500-6IA | 2A4428 |
| | V2522/V2524/V2527M-AQ03 | S-V2500-6IB | |
| | V2522/V2524/V2527M-SQ02 | S-V2500-6SA | |
| | V2522/V2524/V2527M-SQ03 | S-V2500-6SB | |
| | V2522/V2524/V2527M-SQ04 | S-V2500-6NA | |
| | V2522/V2524/V2527M-SQ05 | S-V2500-6NB | |
| | V2527/V2527E-AQ02 | S-V2500-7IA | |
| | V2527/V2527E-AQ03 | S-V2500-7IB | |
| | V2527/V2527E-SQ02 | S-V2500-7SA | |
| | V2527/V2527E-SQ03 | S-V2500-7SB | |
| | V2527/V2527E-SQ04 | S-V2500-7NA | |
| | V2527/V2527E-SQ05 | S-V2500-7NB | |
| | V2530-AQ02 | S-V2500-2IA | |
| | V2530-AQ03 | S-V2500-2IB | |
| | V2530-SQ02 | S-V2500-2SA | |
| | V2530-SQ03 | S-V2500-2SB | |
| | V2530-SQ04 | S-V2500-2NA | |
| | V2530-SQ05 | S-V2500-2NB | |
| | V2533-AQ02 | S-V2500-5IA | |
| | V2533-AQ03 | S-V2500-5IB | |
| | V2533-SQ02 | S-V2500-5SA | |
| | V2533-SQ03 | S-V2500-5SB | |
| | V2533-SQ04 | S-V2500-5NA | |
| | V2533-SQ05 | S-V2500-5NB | |
| EIPC — D5 | V2525/V2528-AQ02 | S-V2500-3IA | 2A4426 |
| | V2525/V2528-AQ03 | S-V2500-3IB | |
| | V2525/V2528-AQ04 | S-V2500-3IC | |