SERVICE BULLETIN

OIL — TUBE ASSY, FRONT BEARING COMPARTMENT OIL VENT — INTRODUCTION OF A NEW TUBE ASSY WITH A VENT LINE RESTRICTOR FOR REDUCED GROUND IDLE

MODEL APPLICATION

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

BULLETIN ISSUE SEQUENCE

V2500 Series 79-0106

ATA NUMBER

79-22-49

Compliance Category

7

Summary

The purpose of this Service Bulletin is to introduce a new Front Bearing Compartment (FBC) oil vent tube assembly that has a vent line restrictor. This new tube will be required for the Reduced Ground Idle (RGI) package that is being introduced at a later date.

Planning Information

Effectivity Data

Engine Models Applicable

V2522-A5, V2524-A5, V2527M-A5, V2527-A5, V2527E-A5, V2530-A5, V2533-A5
Engine Serial Nos. V10001 thru V13190
Engine Serial No. V15001 thru V17470

Concurrent Requirements

There are no concurrent requirements.

Reason

1. Condition: The current Front Bearing Compartment (FBC) oil vent tube does not support engine operation at Reduced Ground Idle (RGI).
2. Background: An upcoming Service Bulletin will introduce RGI for Thrust Specific Fuel Consumption (TSFC) improvements and requires modification to the current FBC vent tube design.
3. Objective: To provide a new FBC vent tube design that will maintain adequate front bearing compartment pressures at lower ground idle speeds while RGI is active. The new FBC vent tube design will be one way interchangeable for engines with RGI active and fully interchangeable for RGI inactive. The new FBC vent tube design follows an identical routing on the fan case.
4. Substantiation: The assessment showed that a specific fuel consumption and engine performance at low power conditions can be improved by using the new vent line restrictor.
5. Effects of Bulletin on:

   Removal/Installation: Affected.

   Disassembly/Assembly: Not Affected.

   Cleaning: Not Affected.

   Inspection/Check: Affected.

   Repair: Not Affected.

   Testing: Not Affected.
6. Supplemental Information

   None.

Description

Replace the front bearing vent tube.

Compliance

Category 7

Accomplish when supply of superseded parts has been depleted.

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 technical content under the JAR25 regulation of this document is approved under the authority of DOA Ref. EASA.21J.031.

Manpower

1. In Service

   To gain access 0.5

   To embody 1

   To close up 0.5

2. At Overhaul

   To embody 1

Weight and Balance

1. Weight Change

   + 0.1 Pound(s) (+ 0.045 kg).

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 — 79-22-49.

2. V2500 Standard Practices and Processes, P&W Ref. PN 2A4414, Chapter/Section 79-22-49.
3. V2500-A5 Series Illustrated Parts Catalog, P&W Ref. PN 2A4428, Chapter/Section 79-22-49.
4. V2500 A1/A5 Series Engine Manual, P&W Ref. PN 2A4407, Chapter/Sections 71-00-00, 72-00-32.
5. V2500 Aircraft Maintenance Manual, Chapter/Sections 71-00-00, 71-13-00.
6. This Service Bulletin is subject to aircraft Modification N°. 156714 P13654 (classified minor).

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. Aircraft Illustrated Parts Catalog, Chapter/Section 79-22-49-87.
2. V2500-A5 Series Illustrated Parts Catalog, P&W Ref. PN 2A4428, Chapter/Section 79-22-49.
3. V2500 A1/A5 Series Engine Manual, P&W Ref. PN 2A4407, Chapter/Section 71-00-00, 72-00-30.

Interchangeability of Parts

New and old parts may be freely interchanged.

Information in the Appendix

Alternate Accomplishment Instructions (No)

Progression Charts (No)

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

Not Applicable.

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
6B1584	1	*	.TUBE, RESTRICTOR, FLOW DIODE	5A8748 (79-22-49-10-100)	(2)(A)(C2)(S2)

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.

(C2) The old part will continue to be supplied for use in other engine models.

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

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

For Engines Installed on The Aircraft

NOTE: Service bulletin incorporation on engines installed on aircraft may be desirable and should be individually evaluated.

WARNING: DO NOT TOUCH THE ENGINE COMPONENTS FOR A SHORT TIME AFTER THE ENGINE IS SHUT DOWN. THE COMPONENTS CAN STAY HOT FOR UP TO 1 HOUR AND CAN CAUSE INJURY.

1. Open the fan cowl doors (Refer to Reference 5, Aircraft Maintenance Manual (AMM), Chapter/Section 71-13-00).
2. Remove Vent Tube (79-22-49, 10-100), refer to Figure 1.
   A. Remove the bolt, washer, clip nut, spacer and the clips attached to Brazed Lug (79-22-49, 10-222) clip position 1017.
   B. Remove the bolt, washer, clip nut and clip at clip position 1016.
   C. Disconnect the Tube (79-22-49, 10-100)
      (1) Remove the lockwire which safeties the tube nut of the Oil Tube (79-22-49, 10-500).
      (2) Disconnect the Vent Tube (79-22-49, 10-100) with IAE 1R18003 (wrench).
      (3) Remove the three Bolts (72-32-00, 01-130) which attach Vent Tube (79-22-49, 10-100) to the Hot Vent Tube (72-32-96, 01-125).
      (4) Remove and discard the Sealing Ring (79-22-49, 10-096) from the Vent Tube (79-22-49, 10-100).
      (5) Remove the Vent Tube (79-22-49, 10-100).
      (6) Retain bolts if serviceable, unserviceable bolts will need to be replaced prior to reinstallation.
3. Install Vent Tube, PN 6B1584 (79-22-49, 10-100). Refer to Figure 2.
   A. Lubricate the bolts removed in step 2 with CoMat 10-077 approved engine oil.
   B. Lubricate a new Sealing Ring (79-22-49, 10-096) with CoMat 10-077 approved engine oil.
   C. Install the Sealing Ring (79-22-49, 10-096) on the Vent Tube (79-22-49, 10-100).
   D. Install the Vent Tube (79-22-49, 10-100) to the Hot Vent Tube (72-32-96, 01-125) with the three Bolts (72-32-00, 01-130). Tighten the bolts lightly.
   E. Install the clip around Vent Tube (79-22-49, 10-100) at clip position 1016 and install them to the bracket with the bolts, washer and clip nut. Tighten the bolts lightly.
   F. Torque the three Bolts (72-32-00, 01-130) to 85 to 105 lbf in (10 to 12 Nm).
   G. Torque the Bolt (79-22-49, 10-133) at the clip position 1016 to 36 to 45 lbf in (4 to 5 Nm).
   H. Connect the Vent Tube (79-22-49, 10-100) to the Oil Tube (79-22-49, 10-500).
   I. Torque the nut to 566 to 611 lbf in (64 to 69 Nm) with the IAE 1R18003 (wrench). Safety the tube nut with CoMat 02-126 lockwire.

J. At clip position 1017 attach the Clip (71-51-41,02-090) around the harness and second Clip (73-22-49, 07-272) around the Vent Tube (73-22-49, 07-100) to the Brazed Lug (79-22-49, 10-222) with the bolt, washer, spacer, and nut.

K. Torque Bolt (71-51-41, 02-087) to 36 to 45 lbf in (4 to 5 Nm).

4. Make sure that working area is clean and free from foreign objects.

5. Close the fan cowl doors (Refer to Reference 5, Aircraft Maintenance Manual (AMM), Chapter 71-13-00).

6. Perform Idle Leak Check Test #3 (Refer to Reference 5, Aircraft Maintenance Manual (AMM), Chapter 71-00-00-710-012).

7. Recording Instructions

A. A record of accomplishment is required.

For Engines “At Overhaul/Shop Visit” do following steps:

1. Remove Vent Tube (79-22-49, 10-100), refer to Figure 1.

A. Remove the bolt, washer, clip nut, spacer and the clips attached to Brazed Lug (79-22-49, 10-222) clip position 1017.

B. Remove the bolt, washer, clip nut and clip at clip position 1016.

C. Disconnect the Tube (79-22-49, 10-100)

(1) Remove the lockwire which safeties the tube nut of the Oil Tube (79-22-49, 10-500).

(2) Disconnect the Vent Tube (79-22-49, 10-100) with IAE 1R18003 (wrench).

(3) Remove the three Bolts (72-32-00, 01-130) which attach Vent Tube (79-22-49, 10-100) to the Hot Vent Tube (72-32-96, 01-125).

(4) Remove and discard the Sealing Ring (79-22-49, 10-096) from the Vent Tube (79-22-49, 10-100).

(5) Remove the Vent Tube (79-22-49, 10-100).

(6) Retain bolts if serviceable, unserviceable bolts will need to be replaced prior to reinstallation.

2. Install Vent Tube, PN 6B1584 (79-22-49, 10-100). Refer to Figure 2.

A. Lubricate the bolts removed in step 2 with CoMat 10-077 approved engine oil.

B. Lubricate a new Sealing Ring (79-22-49, 10-096) with CoMat 10-077 approved engine oil.

C. Install the Sealing Ring (79-22-49, 10-096) on the Vent Tube (79-22-49, 10-100).

D. Install the Vent Tube (79-22-49, 10-100) to the Hot Vent Tube (72-32-96, 01-125) with the three Bolts (72-32-00, 01-130). Tighten the bolts lightly.

E. Install the clip around Vent Tube (79-22-49, 10-100) at clip position 1016 and install them to the bracket with the bolts, washer and clip nut. Tighten the bolts lightly.

F. Torque the three Bolts (72-32-00, 01-130) to 85 to 105 lbf in (10 to 12 Nm).

G. Torque the Bolt (79-22-49, 10-133) at the clip position 1016 to 36 to 45 lbf in (4 to 5 Nm).

H. Connect the Vent Tube (79-22-49, 10-100) to the Oil Tube (79-22-49, 10-500).

I. Torque the nut to 566 to 611 lbf in (64 to 69 Nm) with the IAE 1R18003 (wrench). Safety the tube nut with CoMat 02-126 lockwire.

J. At clip position 1017 attach the Clip (71-51-41,02-090) around the harness and second Clip (73-22-49, 07-272) around the Vent Tube (73-22-49, 07-100) to the Brazed Lug (79-22-49, 10-222) with the bolt, washer, spacer, and nut.

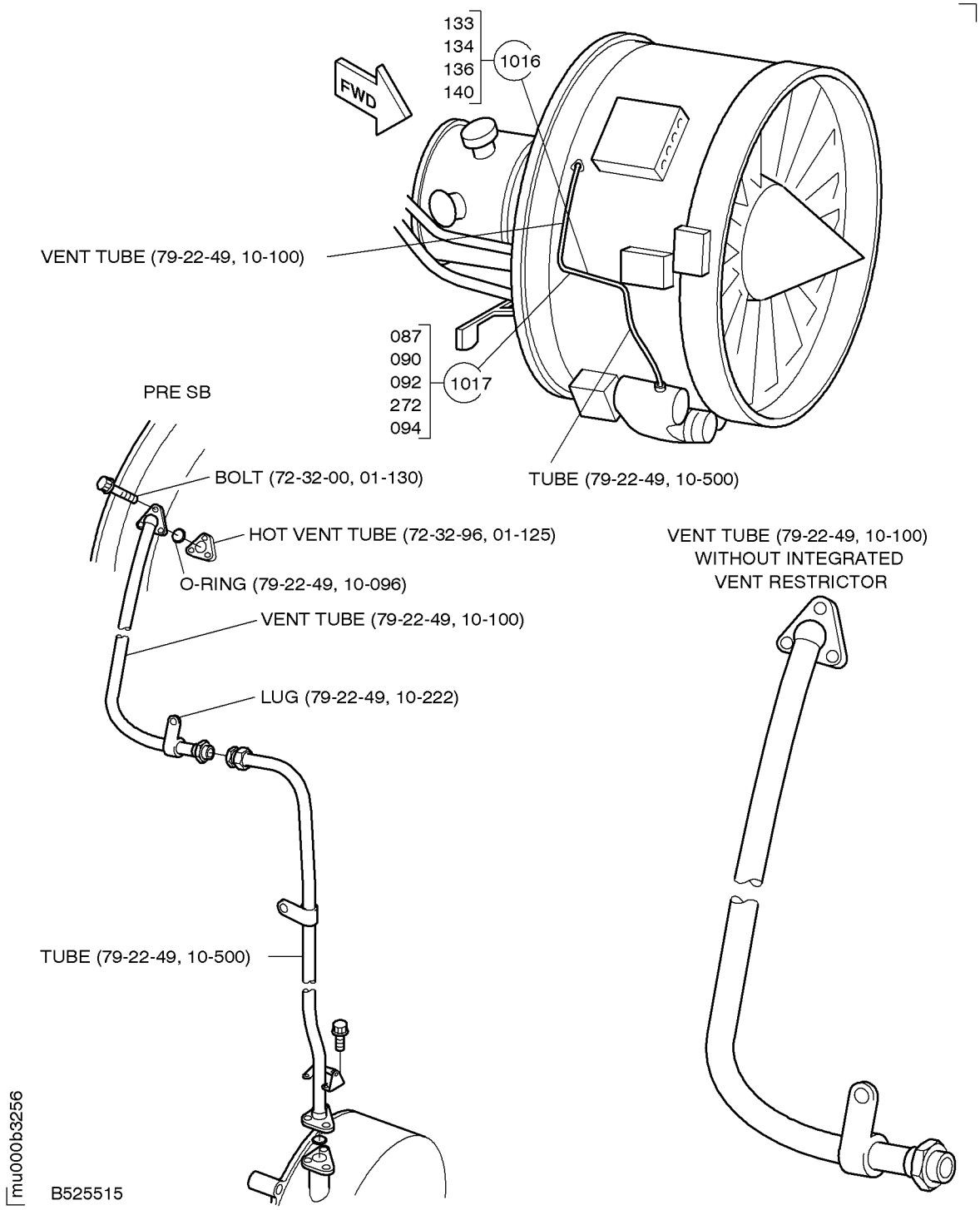
K. Torque Bolt (71-51-41, 02-087) to 36 to 45 lbf in (4 to 5 Nm).

3. Make sure that working area is clean and free from foreign objects.

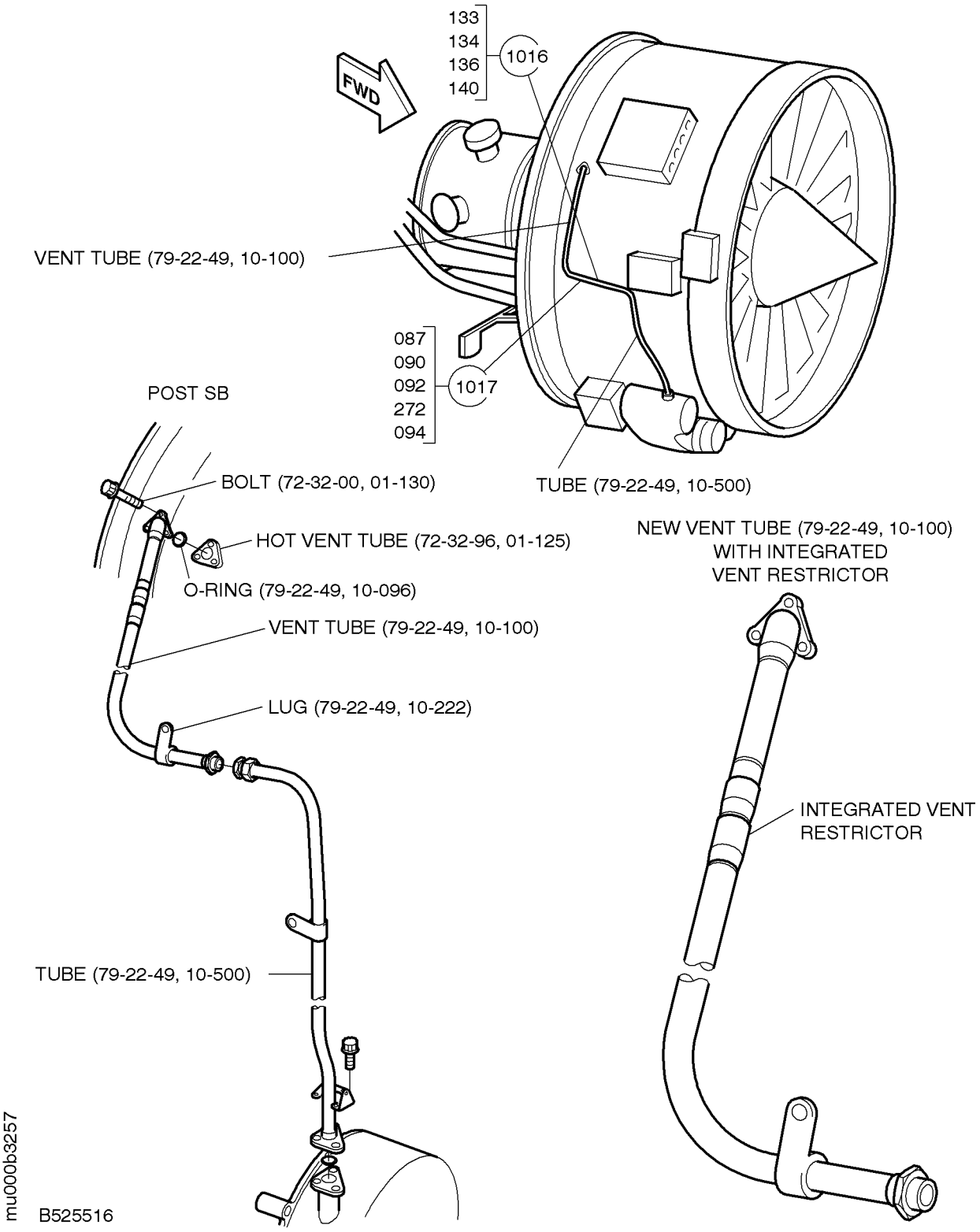
4. Perform Idle Leak Check Test #3 (Refer to Reference 4, V2500 A1/A5 Series Engine Manual (EM), Chapter 71-00-00-700-003-B00.

5. Recording Instructions

A. A record of accomplishment is required.



REPLACEMENT OF TUBE ASSY
FIGURE 1



REPLACEMENT OF TUBE ASSY
FIGURE 2

Appendix

Added Data

Internal Reference Information

Revision No.	Reference Document	Origination
Original	EC13VU041	DJ/MTU-U
Original	EC13VU041-01	DJ/MTU-U

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

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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-V2500-1IA	2A4407
CMM-EHC — A1, A5	All	EHC-V2500-1IA	2A4409
CMM-FN — A1, A5	All	FN-V2500-1IA	2A4410
CMM-MMC — A1, A5	All	MECH-V2500-1IA	2A4411
CMM-THD — A1, A5	All	THD-V2500-1IA	2A4412
TLM — A1, A5	All	T-V2500-1IA	2A4408
ENGINE MANUAL — D5	All	E-V2500-3IA	2A4416
CMM-EHC — D5	All	EHC-V2500-31A	2A4418
CMM-FN — D5	All	FN-V2500-3IA	2A4419
CMM-MMC — D5	All	MECH-V2500-3IA	2A4420
CMM-THD — D5	All	THD-V2500-3IA	2A4423
TLM — D5	All	T-V2500-3IA	2A4417
SPPM (SPM) — A1, A5, D5	All	SPP-V2500-1IA	2A4414
EIPC — A1	V2500-A1102Q00	S-V2500-1IA	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	