

SERVICE BULLETIN REVISION NOTICE

ENGINE — LP COMPRESSOR — REPLACEMENT OF SEVERAL RINGS TO REDUCE OIL LEAKS

Turbojet Engine Service Bulletin No. V2500-ENG-72-0701 Revision No. 1 dated March 8, 2021.

Revision History

Original Issue March 26, 2019

Revision 1 dated March 8, 2021

Reason for the Revision

To update the ATA Chapters/Sections throughout this Service Bulletin.

To update Figure 2 and Figure 4 with updated ATA Chapters/Sections.

To update the Accomplishment Instructions with updated Ring Part Numbers.

Effect of Revision on Prior Compliance

None.

This is a Complete Revision (Not Applicable to the SGML version)

The contents are in accordance with the list of effective pages. All pages have the current revision number. Technical changes are marked with black bars.

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 72-0701

<u>Page</u>	<u>Revision No.</u>	<u>Date</u>
1 thru 20	1	March 8/21

A copy of this Revision Notice and any future revision notices must be filed as a permanent record with your copy of the subject bulletin.

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SERVICE BULLETIN

ENGINE — LP COMPRESSOR — REPLACEMENT OF SEVERAL RINGS TO REDUCE OIL LEAKS

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 72-0701

ATA NUMBER

72-32-00

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Compliance Category

6

IAE Distribution Code

V2500

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Summary

The purpose of this Service Bulletin is to replace several rings to reduce oil leaks.

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. V15001 thru V18940*

V2525-D5, V2528-D5

Engine Serial Nos. V20001 thru V20285

* This estimate of engine serial numbers will be revised, if necessary, when parts are installed in engines in production.

Concurrent Requirements

There are no concurrent requirements.

Reason

1. Condition: Review of engine teardown identified swelling of some of the rings. Some engines with swollen rings showed evidence of oil wetness in the aero flow path. This condition can result in additional troubleshooting or unplanned engine removal.
2. Background: Front Bearing Compartment (FBC) rings have been identified as a possible contributor to oil wetness outside the compartment. A review of engine teardown determined that the stretch on the rings in the FBC was not sufficient to tolerate swell.
3. Objective: To introduce new part numbers for nine rings with improved material and/or sizing characteristics.
4. Substantiation: The rings sizing and material changes have been substantiated from positive field experience by other engines with similar design architecture.
5. Effects of Bulletin on:
 - Removal/Installation: Not Affected.
 - Disassembly/Assembly: Not Affected.
 - Cleaning: Not Affected.
 - Inspection/Check: Not Affected.
 - Repair: Not Affected.
 - Testing: Not Affected.
6. Supplemental Information
 - None.

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Description

Replace the rings and/or re-identify the No.1 bearing support assembly.

Compliance

Category 6

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

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 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 — 72-32-00.

2. Internal Reference No. — 18VJ003.

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3. V2500 Standard Practices and Processes, P&W Ref. PN 2A4414, Chapter/Section 70-09-00, 70-11-03 and 70-38-02.
4. V2500-A1 Series Illustrated Parts Catalog, P&W Ref. PN 2A4427, Chapter/Section 72-32-00, 72-32-36, 72-32-41 and 72-32-51.
5. V2500-A5 Series Illustrated Parts Catalog, P&W Ref. PN 2A4428, Chapter/Section 72-32-00, 72-32-36, 72-32-41 and 72-32-51.
6. V2500-D5, Series Illustrated Parts Catalog, P&W Ref. PN 2A4426, Chapter/Section 72-32-00, 72-32-36 and 72-32-51.
7. V2500 A1/A5 Series Engine Manual, P&W Ref. PN 2A4407, Chapter/Section 72-32-00, 72-32-41 and 72-32-50.
8. V2500-D5 Series Engine Manual, P&W Ref. PN 2A4416, Chapter/Section 72-32-00 and 72-32-50.

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 72-32-00, 72-32-36, 72-32-41 and 72-32-51.
2. V2500-A5 Series Illustrated Parts Catalog, P&W Ref. PN 2A4428, Chapter/Section 72-32-00, 72-32-36, 72-32-41 and 72-32-51.
3. V2500-D5, Series Illustrated Parts Catalog, P&W Ref. PN 2A4426, Chapter/Section 72-32-00, 72-32-36 and 72-32-51.

Interchangeability of Parts

Old and new parts are directly interchangeable, but it is recommended to incorporate new parts in complete sets.

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. Part prices were not available at the time of Service Bulletin publication. Contact IAE Spares Management & Logistics for firm quotations.
2. There is no kit provided to do this Service Bulletin.
3. 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 V2500-A1 Engines:

New PN	Qty	Estimate of Unit Price (\$)	Keyword	Old PN	Instructions — Disposition
M83485-1-212	2	*	RING	AS43013-212 (72-32-00-01-135) (72-32-00-01-870)	(2)(A)(N)
M83485-1-119	3	*	RING	AS43013-119 (72-32-00-01-865) (72-32-36-01-130) (72-32-36-01-245)	(2)(A)(C1)
5A2223	1	*	RING	5A5396 (72-32-00-02-130)	(2)(A)(N)
5A2224	1	*	RING	5A5397 (72-32-00-02-188)	(2)(A)(N)
5W2339	1	*	SUPPORT — A/O NO. 1 BEARING	5W2328 (72-32-41-01-240 B)	(1)(A)(N)
M83485-1-281	1	*	.O-RING	5W2329 (72-32-41-01-270)	(2)(A)(N)
M83485-1-261	1	*	RING	AS43013-262 (72-32-51-01-110)	(2)(A)(N)

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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
M83485-1-212	2	*	RING	AS43013-212 (72-32-00-01-135) (72-32-00-01-870)	(2)(A)(N)
M83485-1-119	3	*	RING	AS43013-119 (72-32-00-01-865) (72-32-36-01-130) (72-32-36-01-245)	(2)(A)(C1)
5A2223	1	*	RING	5A5396 (72-32-00-02-130)	(2)(A)(N)
5A2224	1	*	RING	5A5397 (72-32-00-02-188)	(2)(A)(N)
5W2339	1	*	SUPPORT — A/O NO. 1 BEARING	5W2328 (72-32-41-01-240 A)	(1)(A)(N)
M83485-1-281	1	*	.O-RING	5W2329 (72-32-41-01-270)	(2)(A)(N)
M83485-1-261	1	*	RING	AS43013-262 (72-32-51-01-110)	(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
M83485-1-212	2	*	RING	AS43013-212 (72-32-00-01-135) (72-32-00-01-870)	(2)(A)(N)
M83485-1-119	3	*	RING	AS43013-119 (72-32-00-01-865) (72-32-36-01-130) (72-32-36-01-245)	(2)(A)(C1)
5A2223	1	*	RING	5A5396 (72-32-00-02-130)	(2)(A)(N)
5A2224	1	*	RING	5A5397 (72-32-00-02-188)	(2)(A)(N)
M83485-1-261	1	*	RING	AS43013-262 (72-32-51-01-110)	(2)(A)(N)

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Modification and Spares Information

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.

- (1) The new part can be obtained by modification of the old part as specified in the Accomplishment Instructions.
- (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.
- (C1) The old part will continue to be supplied for use at other locations.
- (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

Reidentified Parts Data

New PN	Keyword	Old PN
5W2339	SUPPORT — A/O NO. 1 BEARING	5W2328

Other Material Information Data

Not Applicable.

Accomplishment Instructions

For V2500-A1 and V2500-A5 Engines

1. Replace the rings as follows:
 - A. Replace ring, PN AS43013-212 with PN M83485-1-212. Reference 7, Engine Manual, TASK 72-32-00-030-005, Disassembly-005 and 72-32-00-430-011, Assembly-011. Refer to Figure 1.
 - B. Replace ring, PN AS43013-119 with PN M83485-1-119. Reference 7, Engine Manual, TASK 72-32-00-030-009, Disassembly-009 and 72-32-00-430-007, Assembly-007. Refer to Figure 2.
 - C. Replace ring, PN AS43013-212 with PN M83485-1-212. Reference 7, Engine Manual, TASK 72-32-00-030-009, Disassembly-009 and 72-32-00-430-007, Assembly-007. Refer to Figure 2.
 - D. Replace ring, PN 5A5396 with PN 5A2223. Reference 7, Engine Manual, TASK 72-32-00-030-009, Disassembly-009 and 72-32-00-430-007, Assembly-007. Refer to Figure 3.
 - E. Replace ring, PN 5A5397 with PN 5A2224. Reference 7, Engine Manual, TASK 72-32-00-030-013, Disassembly-013 and 72-32-00-430-003, Assembly-003. Refer to Figure 3.
 - F. Replace ring, PN AS43013-119 with PN M83485-1-119. Reference 7, Engine Manual, TASK 72-32-00-030-012, Disassembly-012 and 72-32-00-430-004, Assembly-004. Refer to Figure 4.
 - G. Replace ring, PN AS43013-119 with PN M83485-1-119. Reference 7, Engine Manual, TASK 72-32-00-030-014, Disassembly-014 and 72-32-00-430-002, Assembly-002. Refer to Figure 4.
 - H. Replace ring, PN AS43013-262 with PN M83485-1-261. Reference 7, Engine Manual, TASK 72-32-50-040-001, Disassembly-001 and 72-32-50-440-001, Assembly-001. Refer to Figure 5.
2. Rework instructions for No.1 bearing support assembly. Refer to Figure 6.
 - A. Disassemble the No.1 Bearing Support Assembly for Post SBE 72-0391 configuration parts. Reference 7, Engine Manual, TASK 72-32-41-040-001, Disassembly-001.
 - B. Replace the ring, PN 5W2329 with PN M83485-1-281.
 - C. Install the new ring, PN M83485-1-281 to the No.1 Bearing Support Assembly. Reference 7, Engine Manual, TASK 72-32-41-440-001, Assembly-001.
 - D. Re-identify the part adjacent to existing part number per Table 1. Cross off the existing part number with a double line. Mark the new part number per Reference 3, Standard Practices Manual, Chapter/Section 70-09-00, marking of parts. Use vibropeen method (manual or mechanical).

Table 1

New PN	Old PN
5W2339	5W2328

- E. Surface treat the re-identified area.

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- (1) Clean the re-identified area. Reference 3, Standard Practices Manual, TASK 70-11-03-300-503.
- (2) Do a chemical touch up to the re-identified area by a brush. Reference 3, Standard Practices Manual, TASK 70-38-02-300-503.

3. Recording Instructions

- A. A record of accomplishment is required.

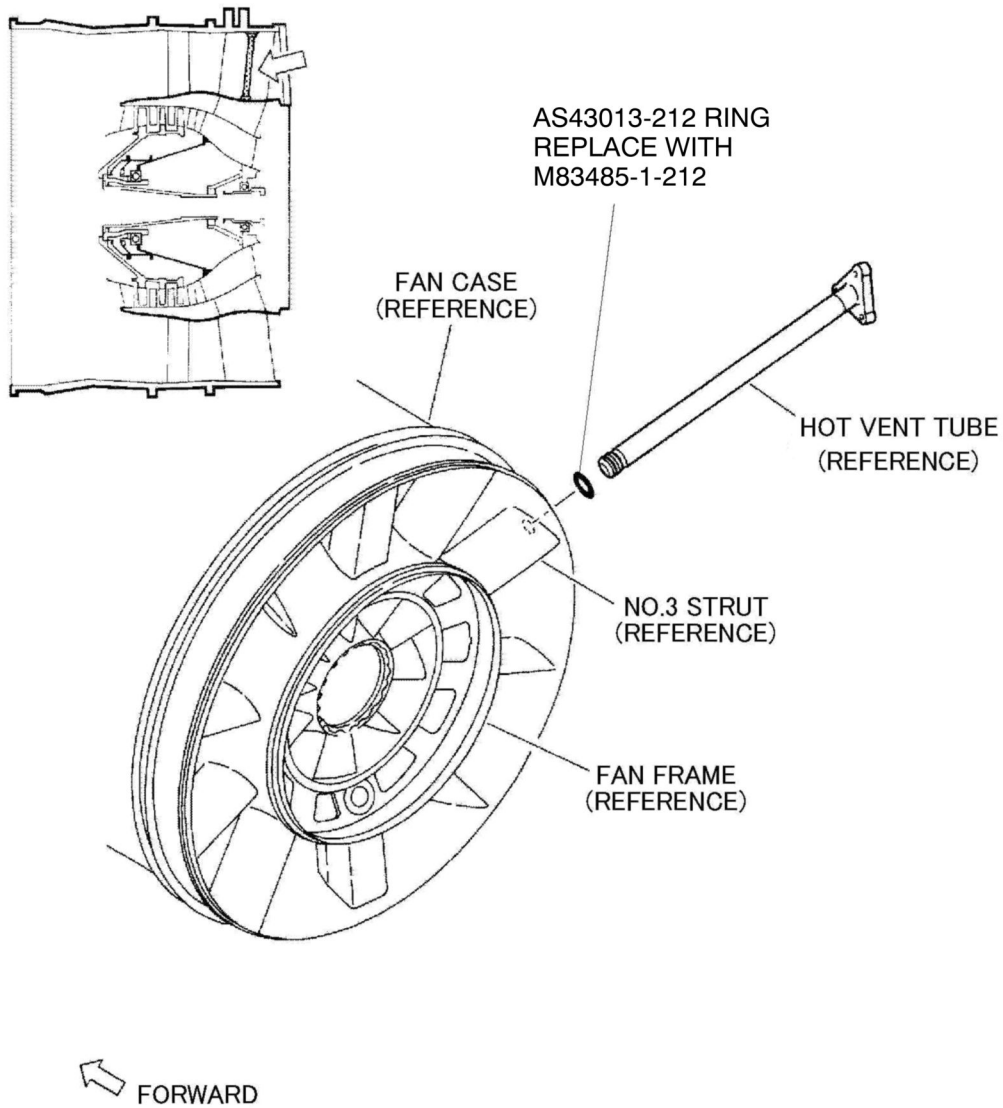
For V2500-D5 Engines

1. Replace the rings as follows:

- A. Replace ring, PN AS43013-212 with PN M83485-1-212. Reference 8, Engine Manual, TASK 72-32-00-030-005, Disassembly-005 and 72-32-00-430-011, Assembly-011. Refer to Figure 1.
- B. Replace ring, PN AS43013-119 with PN M83485-1-119. Reference 8, Engine Manual, TASK 72-32-00-030-009, Disassembly-009 and 72-32-00-430-007, Assembly-007. Refer to Figure 2.
- C. Replace ring, PN AS43013-212 with PN M83485-1-212. Reference 8, Engine Manual, TASK 72-32-00-030-009, Disassembly-009 and 72-32-00-430-007, Assembly-007. Refer to Figure 2.
- D. Replace ring, PN 5A5396 with PN 5A2223. Reference 8, Engine Manual, TASK 72-32-00-030-009, Disassembly-009 and 72-32-00-430-007, Assembly-007. Refer to Figure 3.
- E. Replace ring, PN 5A5397 with PN 5A2224. Reference 8, Engine Manual, TASK 72-32-00-030-009, Disassembly-009 and 72-32-00-430-007, Assembly-007. Refer to Figure 3.
- F. Replace ring, PN AS43013-119 with PN M83485-1-119. Reference 8, Engine Manual, TASK 72-32-00-030-012, Disassembly-012 and 72-32-00-430-004, Assembly-004. Refer to Figure 4.
- G. Replace ring, PN AS43013-119 with PN M83485-1-119. Reference 8, Engine Manual, TASK 72-32-00-030-014, Disassembly-014 and 72-32-00-430-002, Assembly-002. Refer to Figure 4.
- H. Replace ring, PN AS43013-262 with PN M83485-1-261. Reference 8, Engine Manual, TASK 72-32-50-040-001, Disassembly-001 and 72-32-50-440-001, Assembly-001. Refer to Figure 5.

2. Recording Instructions

- A. A record of accomplishment is required.



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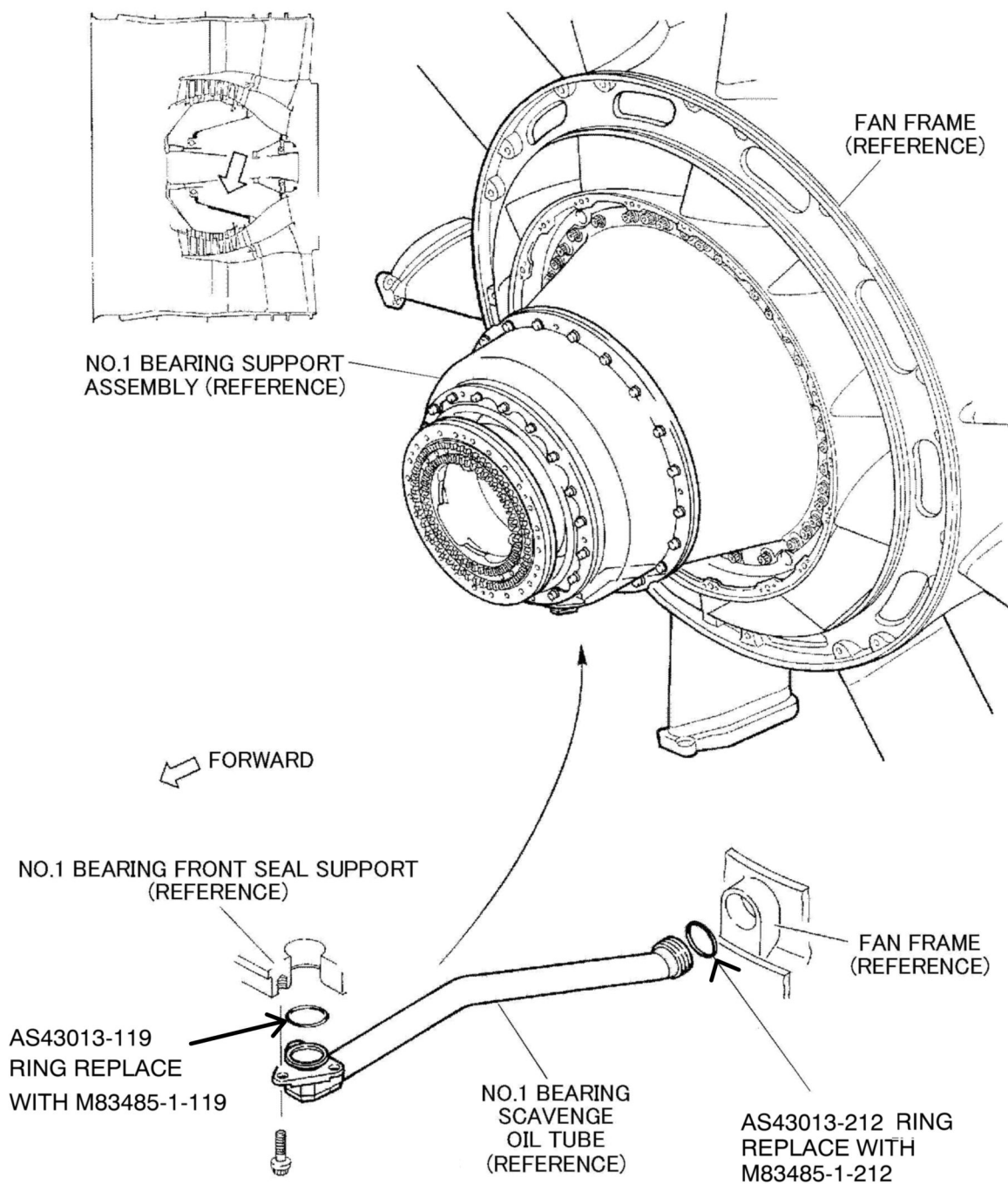
LOCATION OF THE RING
72-32-00
FIGURE 1

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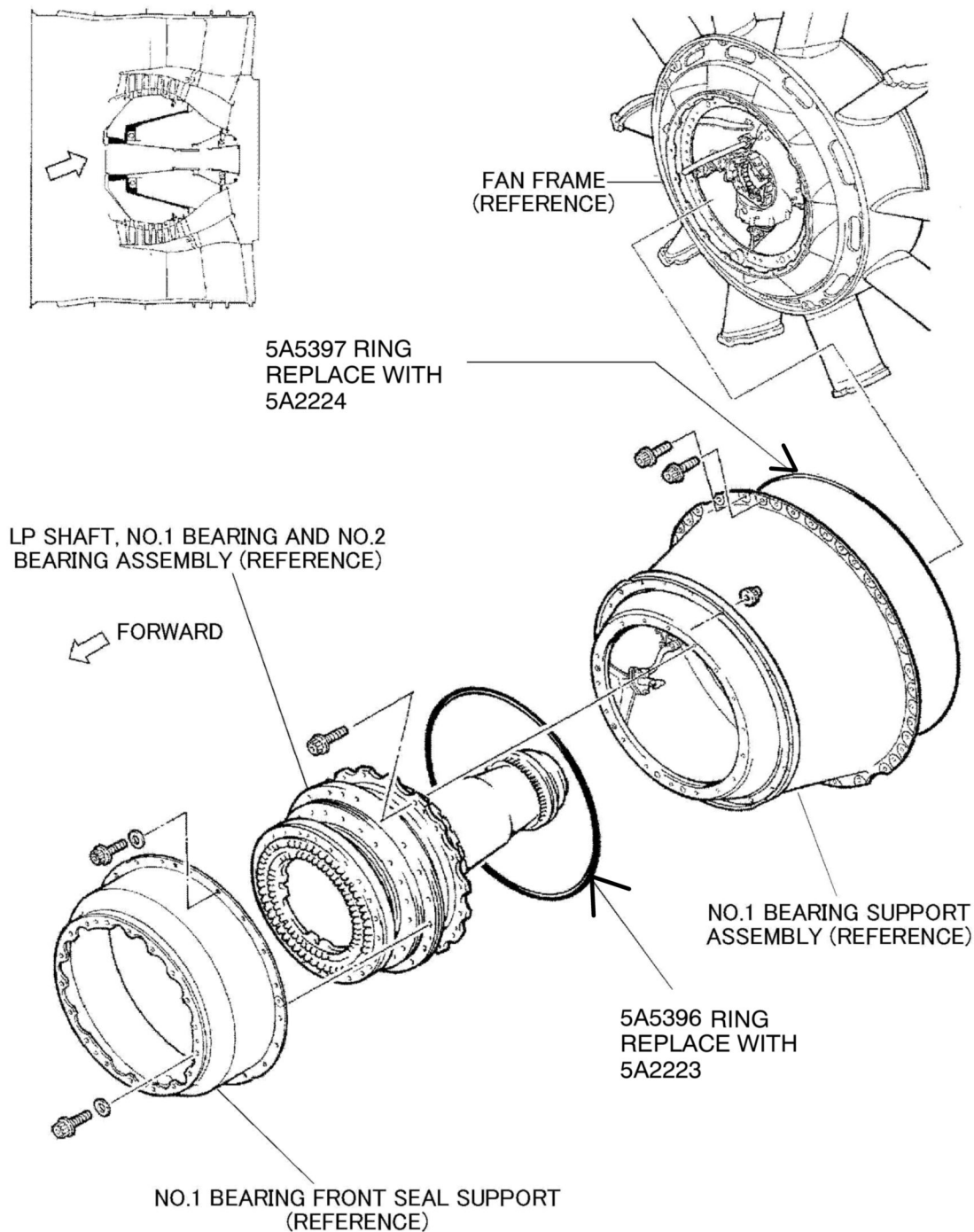
LOCATION OF THE RINGS
72-32-00
FIGURE 2

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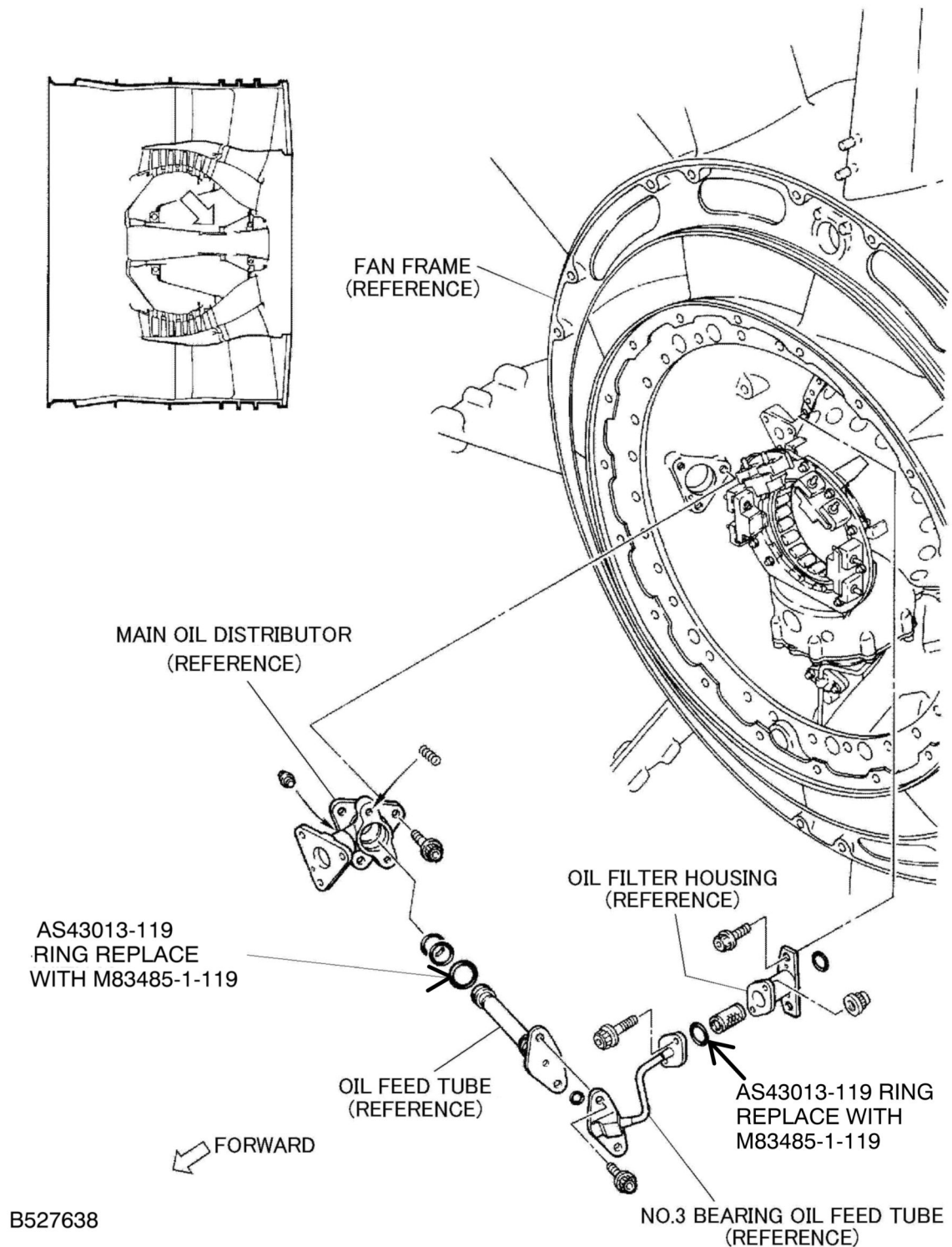
LOCATION OF THE RINGS
72-32-00
FIGURE 3

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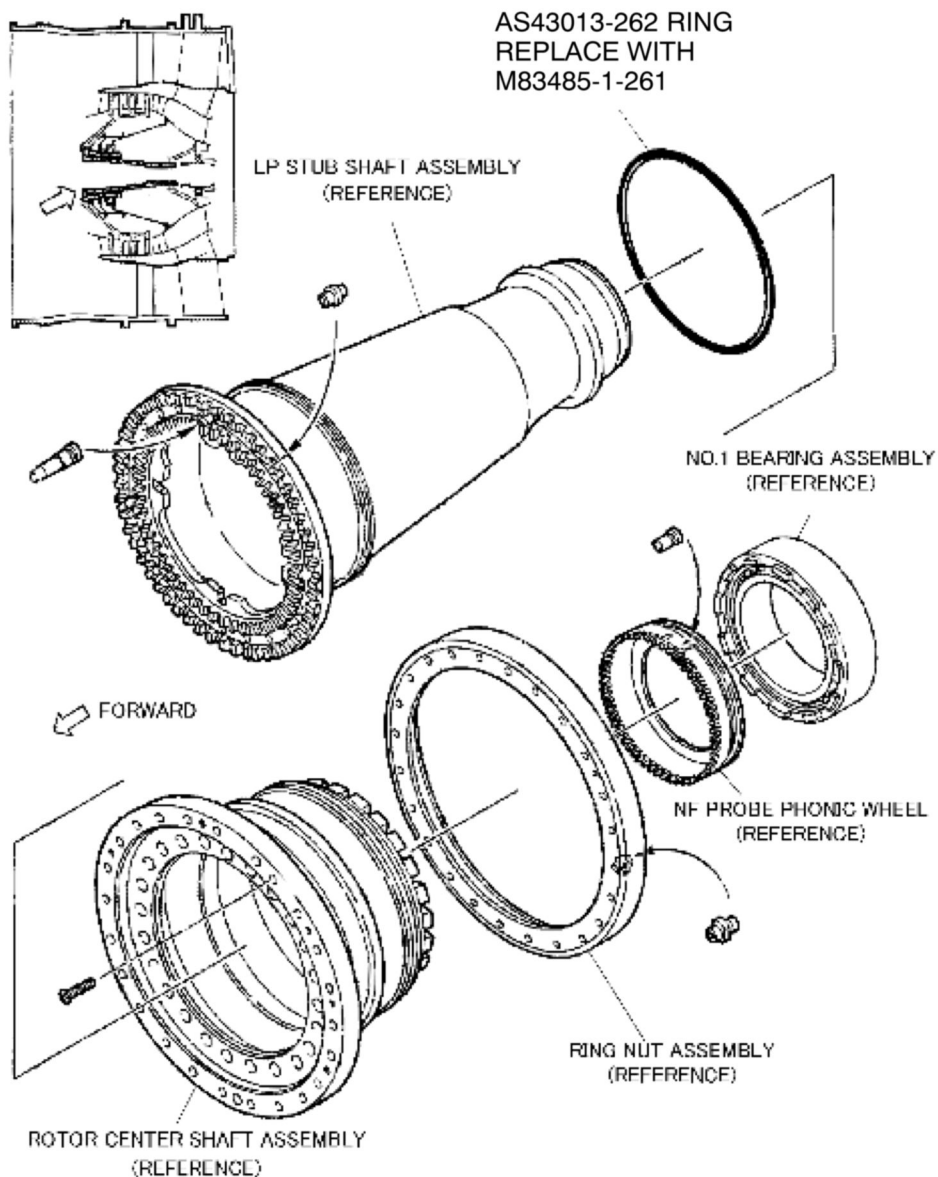
LOCATION OF THE RINGS
72-32-36
FIGURE 4

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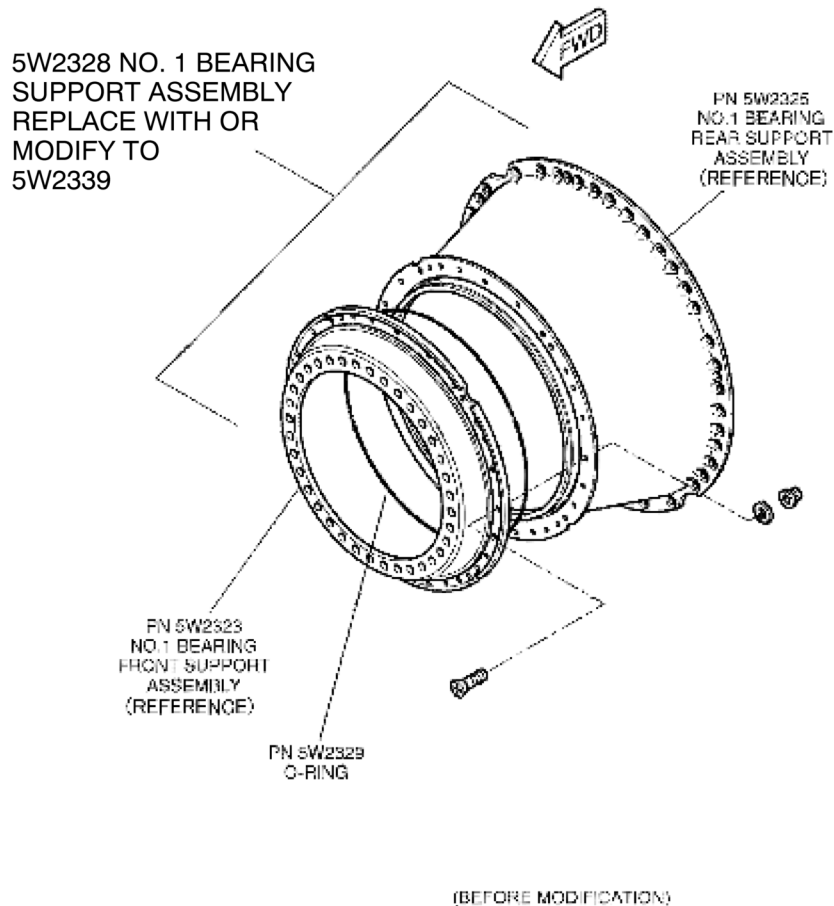
LOCATION OF THE RING
72-32-51
FIGURE 5

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LOCATION OF THE NO. 1 BEARING SUPPORT ASSEMBLY AND RING
(V2500-A1 AND V2500-A5 ONLY)

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FIGURE 6 (SHEET 1 OF 2)

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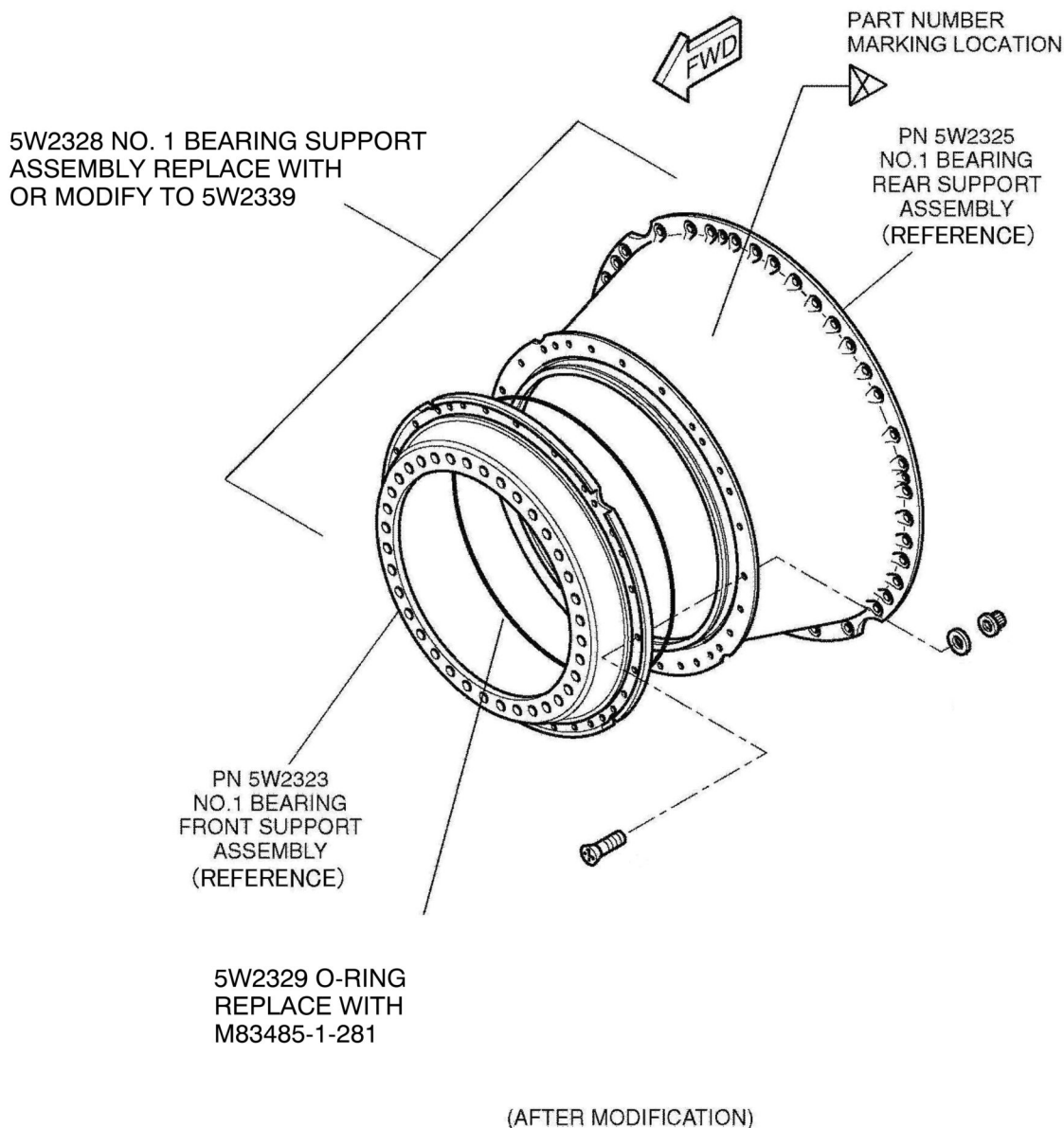
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LOCATION OF THE NO. 1 BEARING SUPPORT ASSEMBLY AND RING
(V2500-A1 AND V2500-A5 ONLY)

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FIGURE 6 (SHEET 2 OF 2)

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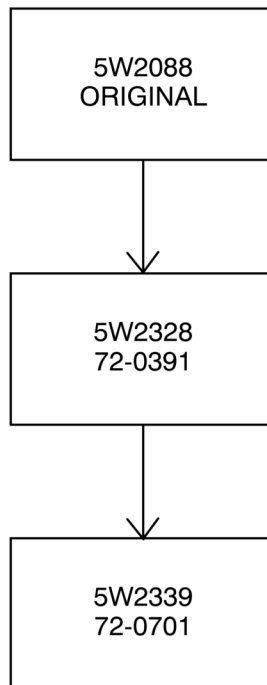
Appendix

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

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NO. 1 BEARING SUPPORT ASSEMBLY
CHART A

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Added Data

Internal Reference Information

Revision No.	Reference Document	Origination
Original	EC18VJ003	JAEC
1	EC18VJ003	JAEC

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

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, the following Technical Publications cross reference table is provided.

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-V2500-3IA	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

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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	

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