

# SERVICE BULLETIN REVISION NOTICE

ENGINE – LOW PRESSURE (LP) TURBINE – INTRODUCTION OF A STAGE 6 INNER AIRSEAL  
WITH A DAMPER RING

Turbojet Engine Service Bulletin No. V2500-ENG-72-0626 Revision No. 5 dated March 3, 2017.

## Revision History

Original Issue March 1, 2012

Revision 1 dated April 16, 2012

Revision 2 dated June 18, 2012

Revision 3 dated May 23, 2013

Revision 4 dated February 3, 2017

Revision 5 dated March 3, 2017

## Reason for the Revision

To update engine serial number within Effectivity Data from V13186 to V13190.

To correct thrust rating within Accomplishment Instructions.

Editorial changes.

## 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 72-0626

### Page

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### Revision No.

5

### Date

March 3/17

**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 – LOW PRESSURE (LP) TURBINE – INTRODUCTION OF A STAGE  
6 INNER AIRSEAL WITH A DAMPER RING

## 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 72-0626

## ATA NUMBER

72-50-00

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## Compliance Category

6

## P&W Distribution Code

V2500

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## Summary

The purpose of this Service Bulletin is to provide a new design of the Inner Airseal Stg. 6.

## Planning Information

### Effectivity Data

#### Engine Models Applicable

V2500-A1

Engine Serial Nos. V0001 thru V0361

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

Engine Serial Nos. V10001 thru V13190

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

Engine Serial Nos. V15001 thru V16549

V2525-D5, V2528-D5

Engine Serial Nos. V20001 thru V20285

### Concurrent Requirements

This Service Bulletin must be done at the same time or after Reference 10, Service Bulletin No. V2500-ENG-79-0093.

### Reason

1. Condition: The current Inner Airseal Stg. 6 shows frequently High Cycle Fatigue (HCF) cracks in the rear fin.
2. Background: Maintenance centers have found cracks in the rear fin of the Inner Airseal Stg. 6 during inspection.
3. Objective: In order to eliminate in-service fin cracking from the existing 2-fin seal ring and thus reduce maintenance cost a new design of the Inner Airseal Stg. 6 was introduced.
4. Substantiation: The new design of the Inner Airseal Stg. 6 was successfully tested in a development engine. Vibrational evaluation showed that the design prevents HCF seal fin cracking and does not affect seal performance or compromise vibratory characteristics. A life analysis was carried out and showed that calculated minimum Low Cycle Fatigue (LCF) life is the same as the current build standard.
5. Effects of Bulletin on:
  - Removal/Installation: Affected.
  - Disassembly/Assembly: Not Affected.
  - Cleaning: Affected.
  - Inspection/Check: Affected.
  - Repair: Affected.
  - Testing: Not Affected.
6. Supplemental Information
  - None.

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### Description

Replace Inner Airseal Stg.6.

### 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

..... Applicable (Hours not affected).

### Weight and Balance

1. Weight Change

+ 0.4 Pound(s) (+ 0.19 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 — 72-50-00.

2. V2500 Standard Practices and Processes, P&W Ref. PN 2A4414, Chapter/Section 70-09-00.

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3. V2500-A1 Series Illustrated Parts Catalog, P&W Ref. PN 2A4427, Chapter/Section 72-50-00.
4. V2500-A5 Series Illustrated Parts Catalog, P&W Ref. PN 2A4428, Chapter/Section 72-50-00.
5. V2500-D5, Series Illustrated Parts Catalog, P&W Ref. PN 2A4426, Chapter/Section 72-50-00.
6. V2500 A1/A5 Series Engine Manual, P&W Ref. PN 2A4407, Chapter/Section 72-50-00.
7. V2500-D5 Series Engine Manual, P&W Ref. PN 2A4416, Chapter/Section 72-50-00.
8. V2500 A1/A5 Series Time Limits Manual, P&W Ref. PN 2A4408, Chapter/Section 72-50-00.
9. V2500-D5 Series Time Limits Manual, P&W Ref. PN 2A4417, Chapter/Section 72-50-00.
10. Service Bulletin No. V2500-ENG-79-0093, Engine - Oil - To Announce A New Scavenge Oil Pump With Improved Compartment No. 5 Scavenging Performance.

#### Other Publications Affected

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1. V2500-A1 Series Illustrated Parts Catalog, P&W Ref. PN 2A4427, Chapter/Section 72-50-00.
2. V2500-A5 Series Illustrated Parts Catalog, P&W Ref. PN 2A4428, Chapter/Section 72-50-00.
3. V2500-D5, Series Illustrated Parts Catalog, P&W Ref. PN 2A4426, Chapter/Section 72-50-00.
4. V2500 A1/A5 Series Engine Manual, P&W Ref. PN 2A4407, Chapter/Section 72-50-00.
5. V2500-D5 Series Engine Manual, P&W Ref. PN 2A4416, Chapter/Section 72-50-00.
6. V2500 A1/A5 Series Time Limits Manual, P&W Ref. PN 2A4408, Chapter/Section 72-50-00.
7. V2500-D5 Series Time Limits Manual, P&W Ref. PN 2A4417, Chapter/Section 72-50-00.

#### Interchangeability of Parts

This Service Bulletin must be done at the same time or after Reference 10, Service Bulletin No. V2500-ENG-79-0093.

#### Information in the Appendix

Alternate Accomplishment Instructions (No)

Progression Charts (No)

Added Data (Yes)

Revision to Table of Limits (No)

Inspection Procedures (No)

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## 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 V2500-A1 Engines:

New PN	Qty	Estimate of Unit Price (\$)	Keyword	Old PN	Instructions — Disposition
3A3047	1	33,600.00	.Seal Air, Turbine, Inner, Stg 6	3A0078 (72-50-00-01-240)	(A)(N)(S3)
			OR		
3A3047	1	33,600.00	.Seal Air, Turbine, Inner, Stg 6	3A3063 (72-50-00-01-240A)	(A)(N)(S3)
3A2981 (72-50-00-01-245)	1	3,989.00	.Ring-Damper, Inner		(A)

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
3A3047	1	33,600.00	.Seal Air, Turbine, Inner, Stg 6	3A0078 (72-50-00-01-240)	(A)(N)(S3)
			OR		
3A3047	1	33,600.00	.Seal Air, Turbine, Inner, Stg 6	3A3063 (72-50-00-01-240A)	(A)(N)(S3)
3A2981 (72-50-00-01-245)	1	3,989.00	.Ring-Damper, Inner		(A)

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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
3A3047	1	33,600.00	.Seal Air, Turbine, Inner, Stg 6	3A0078 (72-50-00-01-240)	(A)(N)(S3)
			OR		
3A3047	1	33,600.00	.Seal Air, Turbine, Inner, Stg 6	3A3063 (72-50-00-01-240A)	(A)(N)(S3)
3A2981 (72-50-00-01-245)	1	3,989.00	.Ring-Damper, Inner		(A)

#### 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.

##### Spare Parts Availability

- (A) The new part is available.
- (N) The old part is not available.
- (S3) Old and new parts are not interchangeable.

**NOTE:** The configuration “new Inner Airseal Stg. 6” with “old Scavenge Pump” (Pre Reference 10, Service Bulletin No. V2500-ENG-79-0093) is not permitted due to impact to the required correct buffer air.

##### 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. Examine LP-Turbine Module number after accomplishment of this Service Bulletin as subsequent given.
  - A. Make sure that the module part number reflect the correct module numbering as given below.
  - A. If required cross out old number and reidentify the module with the new number as given below (Refer to SPP TASK 70-09-00-400-501). Use vibropeening method.

A1 Engines	
NEW PART NUMBER 4W5222	OLD PART NUMBER 4W5192
A5 Engines 22 to 30k	
NEW PART NUMBER 4W5227	OLD PART NUMBER 4W6423
A5 Engines 33k	
NEW PART NUMBER 4W5224	OLD PART NUMBER 4W6243
A5 SelectOne™ Engines	
NEW PART NUMBER 4W5225	OLD PART NUMBER 4W6253
D5 Engines	
NEW PART NUMBER 4W5223	OLD PART NUMBER 4W6427

1. Assembly Instruction.
  - A. For assembly instructions refer to Reference 6 or 7, Engine Manual, Chapter/Section 72-50-00.
1. Recording Instructions.
  - A. A record of accomplishment is required.

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## Appendix

### Added Data

#### Internal Reference Information

Revision No.	Reference Document	Origination
Original	EC 03VM013	M M, MTU
1	EC 03VM013-01	K T, IAE
2	EC 03VM013-02	G D, MTU
3	EC 03VM013A EC 07VM008A	H K, MTU
4	EC 03VM013A-01 EC 03VM013A-02 EC 03VM013-03 EA 17VC006	G D/H K, MTU
5	EA 17VC079	JP/JAC

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-V2500-3IA	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

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Publication	Engine Model(s)	IAE IETM Pub Ref	P&W Part Number
SPPM (SPM) — A1, A5, D5	All	SPP-V2500-1IA	2A4414
EIPC — A1	V2500-A1102Q00	S-V2500-1IA	2A4427
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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