

SERVICE BULLETIN REVISION NOTICE

ENGINE - PROVIDE THE REQUIREMENTS FOR MODIFICATION TO THE V2500 SELECTONE RETROFIT STANDARD

Turbojet Engine Service Bulletin No. V2500-ENG-72-0565 Revision No. 2 dated March 27, 2017.

Revision History

Original Issue September 22, 2008 Revision 1 dated February 27, 2017 Revision 2 dated March 27, 2017

Reason for the Revision

Update Engine Effectivity serial number range.

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

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

BULLETIN ISSUE SEQUENCE

V2500 Series 72-0565

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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.



SERVICE BULLETIN

ENGINE - PROVIDE THE REQUIREMENTS FOR MODIFICATION TO THE V2500 SELECTONE RETROFIT STANDARD

MODEL APPLICATION

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

BULLETIN ISSUE SEQUENCE

V2500 Series 72-0565

ATA NUMBER

72-00-00

IAE PROPRIETARY INFORMATION

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P&W Distribution Code

V2500

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Summary

The purpose of this Service Bulletin is to inform the operator about the requirements to modify an already in service V2500-A5 engine to a V2500-A5 SelectOne Retrofit standard engine.

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

V2522-A5, V2524-A5, V2527M-A5, V2527-A5, V2527E-A5, V2530-A5, V2533-A5 Engine Serial No. V15001

Concurrent Requirements

The Service Bulletins that follow must be done at the same time as this one:

- Reference 5, V2500-ENG-72-0560, Engine High Pressure (HP) Compressor V2500 SelectOne Retrofit and Production HP Compressor Upgrade.
- 2. Reference 6, V2500-ENG-72-0562, Engine High Pressure Turbine (HPT) V2500 SelectOne Production and Retrofit HPT Upgrade.
- 3. Reference 7, V2500-ENG-72-0203, Engine Fuel and Control Provide a New Electronic Engine Control (EEC) with A5 SCN20/Y Software.

NOTE: The EEC software SCN20A/Z is the required standard for SelectOne Retrofit and production engines and is planned for fleetwide incorporation in Q4 2008 and will contain all the SCN20/Y changes and enhancements.

For customers receiving SelectOne engines prior incorporation of the subsequent EEC software SCN0A/Z, the interim EEC software SCN20/Y, introduced by Reference 7, Service Bulletin ENG-73-0203, is the provided EEC software standard for these engines.

Reason

- 1. Condition: None.
- Background: The V2500 SelectOne is a committed programme to enhance the V2500 engine for improved time on wing, efficiency and durability. The package for V2500 SelectOne Retrofit standard features an optimized aerodynamic and mechanical design of the HP compressor and turbine and an improved EEC software.
- Objective: The purpose of this Service Bulletin is to inform the operator about the requirements to modify an in-service V2500-A5 engine to a V2500-A5 SelectOne Retrofit standard engine.
- 4. Substantiation: The changes introduced by this Service Bulletin were the subject of satisfactory engineering analysis. This Service Bulletin complies with the applicable engine certification basis.
- 5. Effects of Bulletin on:

Removal/Installation: Not Affected.

Disassembly/Assembly: Not Affected.

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Cleaning: Not Affected.

Inspection/Check: Not Affected.

Repair: Not Affected.
Testing: Not Affected.

Supplemental Information

None.

Description

This SelectOne Retrofit Service Bulletin refers to the necessary Service Bulletins and the required minimum Service Bulletin standard to modify a V2500-A5 to a V2500-A5 SelectOne Retrofit standard engine.

A retrofitted SelectOne engine requires re-wiring of the Data Entry Plug (DEP). Reference 3, V2500 A1/A5 Engine Manual contains the instructions for this and directions for its use are specified within the Accomplishment Instructions of this Service Bulletin.

This Service Bulletin also describes the necessary change on the engine data plate after incorporation of the SelectOne Retrofit Service Bulletins.

Compliance

Category TD (Technical Directive)

After accomplishment of the referred Service Bulletins, it is necessary to change the Installation Arrangement Number (IAN) on the engine data plate from AQ02 or AQ03 to SQ02 or SQ03.

Approval Data

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

١.	In Service	
	Not Appl	icable
2.	At Overhaul	
	Not Appl	icable
nt s	nd Ralance	

Weight and Balance

Weight Change

None.

Moment Arm

No Effect.

Datum

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

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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.

- ATA Locator 72-32-85.
- 2. V2500 Standard Practices and Processes, P&W Ref. PN 2A4414, Chapter/Section 70-09-00.
- 3. V2500 A1/A5 Series Engine Manual, P&W Ref. PN 2A4407, Chapter/Section 71-00-00.
- 4. Service Bulletin No. V2500-ENG-72-0378, Engine LP Compressor—To Announce The Availability Of New Engine Identification Plate With Designation Of All A5 Model Ratings.
- Service Bulletin No. V2500-ENG-72-0560, Engine High Pressure (HP) Compressor V2500 SelectOne Retrofit and Production — HP Compressor Upgrade.
- 6. Service Bulletin No. V2500-ENG-72-0562, Engine High Pressure Turbine (HPT) V2500 SelectOne Production and Retrofit HPT Upgrade.
- 7. Service Bulletin No. V2500-ENG-73-0203, Engine Fuel and Control Provide a New Electronic Engine Control (EEC) with A5 SCN20/Y Software.
- 8. Service Bulletin No. V2500-ENG-70-0488, Information To Introduce A New LP Turbine Shaft.
- 9. Service Bulletin No. V2500-ENG-72-0145, Engine HP Turbine Rotor And Stator Assembly Provide New Stage 2 Turbine Rotor Hub With Increased Front Snap Diameter.
- Service Bulletin No. V2500-ENG-72-0202 Engine HP Compressor Introduce A Strengthened HPC Rear Shaft And A New Mating Rear Rotating Seal.
- 11. Service Bulletin No. V2500-ENG-72-0238, Engine HP Turbine Rotor And Stator Assembly Provide New Stage 1 Turbine Hub.
- 12. Service Bulletin No. V2500-ENG-72-0239, Engine Diffuser And Combustor Group Provide New Diffuser Group Adapters And Tube Assemblies.
- Service Bulletin No. V2500-ENG-72-0273, Engine HP Compressor Discs (Stages 9-12)
 Introduction Of A Revised HP Compressor Stage 9-12 Disc Assembly.
- 14. Service Bulletin No. V2500-ENG-72-0285, Engine Conversion Provide Instructions To Provide The A2500-A5 Engine Rating By Modifying The Data Entry Plug.
- Service Bulletin No. V2500-ENG-72-0300, Engine Stage 3 To 8 HP Compressor Discs
 — Introduction Of A Revised Stage 3 To 8 Disc Assembly And Revised Stage 7 And 8
 Sealing Wires.
- Service Bulletin No. V2500-ENG-72-0327, Engine High Pressure Turbine Rotor And Stator Assembly — Introduce New Rotating Parts With Potential For Increased Cycle Life (2nd Stage Retaining Plate Only)

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- 17. Service Bulletin No. V2500-ENG-72-0334, Engine Actuating Mechanism HP Compressor Variable Vanes Introduction Of Revised Stage 3 And Stage 4 VSV Actuator Ring Levers With Increased Blend Radius.
- Service Bulletin No. V2500-ENG-72-0335, Engine Actuating Mechanism HP Compressor Variable Vanes — Introduction Of Revised HP Compressor Stage 5 VSV Actuator Ring Levers With Increased Blend Radius.
- Service Bulletin No. V2500-ENG-72-0347, Engine HP Compressor Discs (Stages 9-12)
 Introduction Of Revised HP Compressor Stage 9-12 Disc Assembly With Increased Abrasive Lining Bond Coat Thickness.
- 20. Service Bulletin No. V2500-ENG-72-0364, Engine High Pressure Turbine Provide New Stage 2 High Pressure Turbine Duct Segments.
- Service Bulletin No. V2500-ENG-72-0369, Engine HP Compressors Ring Cases Introduction Of HP Compressor Stage 6,7 and 8 Rotor Paths With Revised Abradable Lining.
- 22. Service Bulletin No. V2500-ENG-72-0399, Engine Provide New 2nd Stage Turbine Rotor Blade Retention Configuration.
- 23. Service Bulletin No. V2500-ENG-72-0406, Engine Actuating Mechanism HP Compressor Variable Vanes Introduction Of A fully Machined From Bar Crankshaft Assembly.
- 24. Service Bulletin No. V2500-ENG-72-0410, Engine HP Compressor Variable Vane Inner Shrouds Introduction Of Revised One Piece Bushes.
- 25. Service Bulletin No. V2500-ENG-72-0418, Engine Actuating Mechanism HP Compressor Variable Vanes Introduction Of Unison Ring Assemblies And Bridge Piece Assemblies With Revised One Piece Lever Pins Bushes.
- 26. Service Bulletin No. V2500-ENG-72-0477, Engine HP Compression Ring Cases Deletion Of Stage 8-11 Heatshields.
- 27. Service Bulletin No. V2500-ENG-72-0487, Engine HP Compressor Blades Introduction Of A Stage 3 Blade With A Revised Clapper.
- 28. Service Bulletin No. V2500-ENG-72-0509, Engine HP Compressor Blades Introduction Of HP Compressor Lockplates With Revised Profile.
- Service Bulletin No. V2500-ENG-72-0511, Engine New 1st Stage Rotor Assembly With Metering Plugs Removed And New 1st Stage HPT Seal.
- 30. Service Bulletin No. V2500-ENG-72-0522, Engine Provide A New Second Stage Turbine Air Seal.
- 31. Service Bulletin No. V2500-ENG-72-0534, Engine Provide New Second Stage Turbine Air Seal.
- 32. Service Bulletin No. V2500-ENG-72-0555, Engine High pressure (HP) Compressor Pinch Point Reduction On Stage 3, 4, 5 And Introduction Of Stage 4 Shrouds With Close Tolerance Bolts.

Other Publications Affected

Not Applicable.

Interchangeability of Parts

Not Applicable.

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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. Not Applicable.

Industry Support Program

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

Rework Instructions

- A. For the SelectOne Retrofit modification, re-wiring of the DEP must be carried out.
 - The following V2500-A5 Engine Manual tasks must be performed:
 - (1) Test No. 10, Performance Test, refer to Reference 3, V2500 A1/A5 Series Engine Manual, Task 71-00-00-700-010.
 - (2) Test No. 11, Set Jumpers in the Data Entry Plug (DEP), refer to Reference 3, V2500 A1/A5 Series Engine Manual, Task 71-00-00-700-011.

2. Assembly Instructions

- A. The Service Bulletins that follow are the minimum standard for incorporation of SelectOne Retrofit Modification and must be done before or at the same time as this one:
 - Refer to Reference 8, Service Bulletin No. V2500-ENG-70-0488, Information To Introduce A New LP Turbine Shaft.
 - (2) Refer to Reference 9, Service Bulletin No. V2500-ENG-72-0145, Engine HP Turbine Rotor And Stator Assembly Provide New Stage 2 Turbine Rotor Hub With Increased Front Snap Diameter.
 - (3) Refer to Reference 10, Service Bulletin No. V2500-ENG-72-0202 Engine HP Compressor Introduce A Strengthened HPC Rear Shaft And A New Mating Rear Rotating Seal.
 - (4) Refer to Reference 11, Service Bulletin No. V2500-ENG-72-0238, Engine HP Turbine Rotor And Stator Assembly Provide New Stage 1 Turbine Hub.
 - (5) Refer to Reference 12, Service Bulletin No. V2500-ENG-72-0239, Engine Diffuser And Combustor Group Provide New Diffuser Group Adapters And Tube Assemblies.
 - (6) Refer to Reference 13, Service Bulletin No. V2500-ENG-72-0273, Engine HP Compressor Discs (Stages 9-12) — Introduction Of A Revised HP Compressor Stage 9-12 Disc Assembly.
 - (7) Refer to Reference 14, Service Bulletin No. V2500-ENG-72-0285, Engine Conversion — Provide Instructions To Provide The A2500-A5 Engine Rating By Modifying The Data Entry Plug.
 - (8) Refer to Reference 15, Service Bulletin No. V2500-ENG-72-0300, Engine Stage 3 To 8 HP Compressor Discs — Introduction Of A Revised Stage 3 To 8 Disc Assembly And Revised Stage 7 And 8 Sealing Wires.
 - (9) Refer to Reference 16, Service Bulletin No. V2500-ENG-72-0327, Engine High Pressure Turbine Rotor And Stator Assembly Introduce New Rotating Parts With Potential For Increased Cycle Life (2nd Stage Retaining Plate Only)
 - (10) Refer to Reference 17, Service Bulletin No. V2500-ENG-72-0334, Engine Actuating Mechanism HP Compressor Variable Vanes Introduction Of Revised Stage 3 And Stage 4 VSV Actuator Ring Levers With Increased Blend Radius.
 - (11) Refer to Reference 18, Service Bulletin No. V2500-ENG-72-0335, Engine Actuating Mechanism HP Compressor Variable Vanes Introduction Of Revised HP Compressor Stage 5 VSV Actuator Ring Levers With Increased Blend Radius.

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- (12) Refer to Reference 19, Service Bulletin No. V2500-ENG-72-0347, Engine HP Compressor Discs (Stages 9-12) — Introduction Of Revised HP Compressor Stage 9-12 Disc Assembly With Increased Abrasive Lining Bond Coat Thickness.
- (13) Refer to Reference 20, Service Bulletin No. V2500-ENG-72-0364, Engine High Pressure Turbine Provide New Stage 2 High Pressure Turbine Duct Segments.
- (14) Refer to Reference 21, Service Bulletin No. V2500-ENG-72-0369, Engine HP Compressors Ring Cases — Introduction Of HP Compressor Stage 6, 7 and 8 Rotor Paths With Revised Abradable Lining.
- (15) Refer to Reference 22, Service Bulletin No. V2500-ENG-72-0399, Engine Provide New 2nd Stage Turbine Rotor Blade Retention Configuration.
- (16) Refer to Reference 23, Service Bulletin No. V2500-ENG-72-0406, Engine Actuating Mechanism HP Compressor Variable Vanes — Introduction Of A fully Machined From Bar Crankshaft Assembly.
- (17) Refer to Reference 24, Service Bulletin No. V2500-ENG-72-0410, Engine HP Compressor Variable Vane Inner Shrouds Introduction Of Revised One Piece Bushes.
- (18) Refer to Reference 25, Service Bulletin No. V2500-ENG-72-0418, Engine Actuating Mechanism HP Compressor Variable Vanes Introduction Of Unison Ring Assemblies And Bridge Piece Assemblies With Revised One Piece Lever Pins Bushes.
- (19) Refer to Reference 26, Service Bulletin No. V2500-ENG-72-0477, Engine HP Compression Ring Cases Deletion Of Stage 8-11 Heatshields.
- (20) Refer to Reference 27, Service Bulletin No. V2500-ENG-72-0487, Engine HP Compressor Blades Introduction Of A Stage 3 Blade With A Revised Clapper.
- (21) Refer to Reference 28, Service Bulletin No. V2500-ENG-72-0509, Engine HP Compressor Blades — Introduction Of HP Compressor Lockplates With Revised Profile.
- (22) Refer to Reference 29, Service Bulletin No. V2500-ENG-72-0511, Engine New 1st Stage Rotor Assembly With Metering Plugs Removed And New 1st Stage HPT Seal.
- (23) Refer to Reference 30, Service Bulletin No. V2500-ENG-72-0522, Engine Provide A New Second Stage Turbine Air Seal.
- (24) Refer to Reference 31, Service Bulletin No. V2500-ENG-72-0534, Engine Provide New Second Stage Turbine Air Seal.
- (25) Refer to Reference 32, Service Bulletin No. V2500-ENG-72-0555, Engine High pressure (HP) Compressor Pinch Point Reduction On Stage 3, 4, 5 And Introduction Of Stage 4 Shrouds With Close Tolerance Bolts.
- B. The Service Bulletins that follow are parts of the SelectOne Retrofit package and must be done at the same time as this one:
 - (1) Refer to Reference 5, Service Bulletin No. V2500-ENG-72-0560, Engine High Pressure (HP) Compressor V2500 SelectOne Retrofit And Production HP Compressor Upgrade.



- (2) Refer to Reference 6, Service Bulletin No. V2500-ENG-72-0562, Engine High Pressure Turbine (HPT) V2500 SelectOne Production And Retrofit HPT Upgrade.
- (3) Refer to Reference 7, Service Bulletin No. V2500-ENG-73-0203, Engine Fuel And Control Provide A New Electronic Engine Control (EEC) With A5 SCN20/Y Software.

NOTE: The EEC software SCN20A/Z is the required standard for SelectOne Retrofit and production engines and is planned for fleetwide incorporation in Q4 2008 and will contain all the SCN20/Y changes and enhancements.

For customers receiving SelectOne engines prior incorporation of the subsequent EEC software SCN0A/Z, the interim EEC software SCN20/Y, introduced by Reference 7, Service Bulletin ENG-73-0203, is the provided EEC software standard for these engines.

 Re-indentification of the Installation Arrangement Number (IAN) on the engine identification plate.

For Engines which have not incorporated Reference 4, Service Bulletin V2500-ENG-72-0378, do the steps that follow:

NOTE: For Engines which have incorporated Reference 4, Service Bulletin V2500-ENG-72-0378, a new engine identification plate has to be installed. Contact your local IAE representative.

A. General

- (1) Obey all the WARNINGS and CAUTIONS in the procedures that are referred to.
- (2) Consumable Materials
 - (a) Refer to the Table 1 that follows:

Table 1

COMAT NO.	DESIGNATION
05-126	Scotch Brite

For the details of the consumable material given in the table above refer to the Overhaul Processes and Consumable Index.

- (3) Tools and Equipment
 - (a) Refer to Reference 3, V2500 A1/A5 Series Engine Manual tasks given in this instruction.
- B. Re-identify the IAN on the engine identification plate (Refer to Reference 2, Standard Practices/Processes Manual, Chapter 70-09-00).
 - (1) Use Vibro peen equipment to cross out the old IAN on the engine identification plate (72-32-85, 03-120).
 - (2) Vibro peen the applicable new IAN on the engine identification plate adjacent to the old IAN.

For the applicable IAN refer to the Table 2 that follows:

NOTE: Use characters of the same height and width as used for the old IAN.

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(a) For V2500-A5 SelectOne Retrofit engines:

Table 2

Old IAN	New IAN
AQ02	SQ02
AQ03	SQ03

- (3) Use Scotch Brite (CoMat 05-126) to remove any raised metal or burrs which have been produced during the re-identification procedure of the engine.
- (4) Make sure that the engine identification plate is not damaged and is clean and contains no unwanted material.
- C. When this change has been done, a new engine identification plate (72-32-85, 03-120) must be ordered. This will make sure that any other changes to the IAN can be done.
- 4. Install the new HP module identification plate.
 - A. Prepare the new HP Module Identification Plate, PN 6A4128 (72-41-00, 03-010).
 - Remove the two bolts and existing identification plate from the HP compressor front case.
 - C. Make a mark of the new part number 4W6517 and the existing serial number on the new module identification plate. Refer to Reference 2, Standard Practices/Processes Manual, Chapter 70-09-00, Marking of parts.
 - Install the marked new module identification plate with the two 4W0102 bolts finger tight.
 - E. Torque the two bolts 36 to 45 lbf-in. (4.00 to 5.00 Nm).
- 5. Recording Instructions
 - A. A record of accomplishment is necessary.



Appendix Added Data

Internal Reference Information

Revision No.	Reference Document	Origination
Original	EC08SEL01I	IAE
1	EA 16VC245	MJM/RCM
2	EA 16VC245	MJM/JAC

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

NOTE:

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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
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
	V2522/V2524/V2527M-AQ02	S-V2500-6IA	
	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	2A4428
	V2527/V2527E-SQ03	S-V2500-7SB	
EIPC — A5	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	