

# SERVICE BULLETIN REVISION NOTICE

ENGINE — ROTOR AND STATOR ASSEMBLY — PROVIDE NEW SELECTONE 2ND STAGE  
HIGH PRESSURE TURBINE (HPT) RESTAGGERED BLADES

Turbojet Engine Service Bulletin No. V2500-ENG-72-0575 Revision No. 1 dated December 10, 2020.

## Revision History

Original Issue September 22, 2008

Revision 1 dated December 10, 2020

## Reason for the Revision

To correct PN 2A4520 to PN 2A4250.

## Effect of Revision on Prior Compliance

None.

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

The format of this Service Bulletin has been changed from previous versions. This revision shows flow bars and the revision date on the bottom of every page. Technical changes incorporated in this revision are marked with revision bars. The contents are in accordance with the list of effective pages.

## MODEL APPLICATION

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

## BULLETIN ISSUE SEQUENCE

V2500 Series 72-0575

### Page

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### Revision No.

1

### Date

December 10/20

**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 — ROTOR AND STATOR ASSEMBLY — PROVIDE NEW SELECTONE 2ND  
STAGE HIGH PRESSURE TURBINE (HPT) RESTAGGERED BLADES

## MODEL APPLICATION

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

## BULLETIN ISSUE SEQUENCE

V2500 Series 72-0575

## ATA NUMBER

72-45-00

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## Compliance Category

6

## IAE Distribution Code

V2500

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## Summary

The purpose of this Service Bulletin is to provide a new SelectOne 2nd blade with a 1 degree restagger and a mistake proof feature to prevent mixing non SelectOne 2nd blades. Provide a new 2nd blade, 2nd rotor and HPT module part number. Retrofit V15001 and V15002 in the field at first HPT exposure in complete sets and reidentify the 2nd rotor and HPT module.

## Planning Information

### Effectivity Data

#### Engine Models Applicable

V2522-A5, V2524-A5, V2527M-A5 (SelectOne™ Retrofit Standard)  
Engine Serial No. V15001

V2522-A5, V2524-A5, V2527M-A5 (SelectOne™ Production Standard)  
Engine Serial No. V15002

V2524-A5, V2527-A5, V2527E-A5 (SelectOne™ Retrofit Standard)  
Engine Serial No. V15001

V2524-A5, V2527-A5, V2527E-A5 (SelectOne™ Production Standard)  
Engine Serial No. V15002

V2530-A5, V2533-A5 (SelectOne™ Retrofit Standard)  
Engine Serial No. V15001

V2530-A5, V2533-A5 (SelectOne™ Production Standard)  
Engine Serial No. V15002

### Concurrent Requirements

There are no concurrent requirements.

### Reason

1. Condition: The SelectOne 2nd blade requires a restagger of 1 Degree to meet bearing load life requirements.
2. Background: The SelectOne 2nd blade requires a restagger of 1 degree. The blades are incorporated in complete sets. A mistake proof feature is added to prevent mixing the current field non SelectOne blades to avoid a structural issue of the LPT 3rd vane.
3. Objective: The purpose of this Service Bulletin is to provide a new SelectOne 2nd blade with a 1 degree restagger and a mistake proof feature to prevent mixing non SelectOne 2nd blades. Provide a new 2nd blade, 2nd rotor and HPT module part number. Retrofit V15001 and V15002 in the field at first HPT exposure in complete sets and reidentify the 2nd rotor and HPT module.
4. Substantiation: Performance, Secondary Flow, Aero, Durability, Mechanical Components, Structures, Design and MTU have performed analysis which predict blade, rotor, and bearing life will meet design intent.

Flow and thrust balance objectives were substantiated analytically. Bearing load measurements on X806-19 (A5) and SelectOne X804-28, 29A were used in concert with analysis.

MTU has assessed the LPT impact and accepts the 1 degree restagger with the mistake proof feature to prevent the intermixing on non SelectOne 2nd blades. This Service Bulletin ensures negligible performance impact.

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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.

#### Description

The HPT 2nd blades have been redesigned to incorporate a full degree restagger and a mistake proof feature. This was done to address the SelectOne bearing load. The blades are to be incorporated in complete sets. A mistake proof feature has been added to prevent intermix with the existing HPT 2nd blades. The entry into service SelectOne will incorporate this new blade in production in V15003. V15001 and V15002 will have the 2nd blades replaced at first HPT exposure.

#### 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.

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### 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. IAE V2500 Service Bulletin V2500-ENG-0302; (Engine - HP Turbine Rotor And Stator Assembly - Introduce First and Second Stage Turbine Blades Which Have Protective Coating In The Damper Pocket Area Under The Platform).
2. IAE V2500 Service Bulletin V2500-ENG-0399; (Engine - Provide a New 2nd Stage Turbine Rotor Blade Retention Configuration).
3. IAE V2500 Service Bulletin V2500-ENG-0534; (Engine - Provide a New 2nd Stage Turbine Air Seal).
4. IAE V2500 Service Bulletin V2500-ENG-0562; (Engine - High Pressure Turbine (HPT) - V2500 SelectOne Production And Retrofit - HPT Upgrade).
5. V2500-A5 Series Illustrated Parts Catalog, P&W Ref. PN 2A4428.
6. V2500 A1/A5 Series Engine Manual, P&W Ref. PN 2A4407.
7. V2500 Standard Practices and Processes, P&W Ref. PN 2A4414.

#### 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/A5 Series Engine Manual, P&W Ref. PN 2A4407, Cleaning, Inspection and Repair, to add the new part.  
72-45-30, Figure 2
2. V2500-A5 Series Illustrated Parts Catalog, P&W Ref. PN 2A4428.  
72-45-00, Figure 1

#### Interchangeability of Parts

Old and new parts are interchangeable only in full sets.

Information in the Appendix

Alternate Accomplishment Instructions (No)

Progression Charts (Yes)

Added Data (Yes)

Revision to Table of Limits (No)

Inspection Procedures (No)

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## 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 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
2A4250	1	*	ROTOR AND STATOR ASSY	2A4220 (72-45-00-01-001)	(1)(F)(N)(I)
2A4522	1	*	.2ND STAGE TURBINE ROTOR	2A4222 (72-45-30-01-010)	(1)(F)(N)(I)
2A4422	72	*	..2ND STAGE BLADE ASSY	2A4122 (72-45-32-01-010)	(B)(N)(I)
2A2278	1	*	...2ND STAGE PLATE	2A0159 (72-45-32-01-013)	(A)(D)(I)

## 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.

### Spare Parts Availability

- (A) The new part is available.  
 (B) The new part will be available approximately September 2008.  
 (D) The old part will continue to be supplied for other applications.  
 (F) The new part will be supplied on a Full Manufacturing lead time quote basis only.  
 (N) The old part is not available.  
 (I) The cleaning, inspection and repair requirements are the same for the old and new part. The applicable engine manuals will be revised.

### Vendor Services or Special Components/Materials

Not Applicable.

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#### Tooling — Price and Availability

Special tools are not required to accomplish this Service Bulletin.

#### Reidentified Parts

##### Reidentified Parts Data

New PN	Keyword	Old PN
2A4250	ROTOR AND STATOR ASSY	2A4220
2A4522	.2ND STG HPT ROTOR	2A4222

#### Other Material Information Data

Not Applicable.

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## Accomplishment Instructions

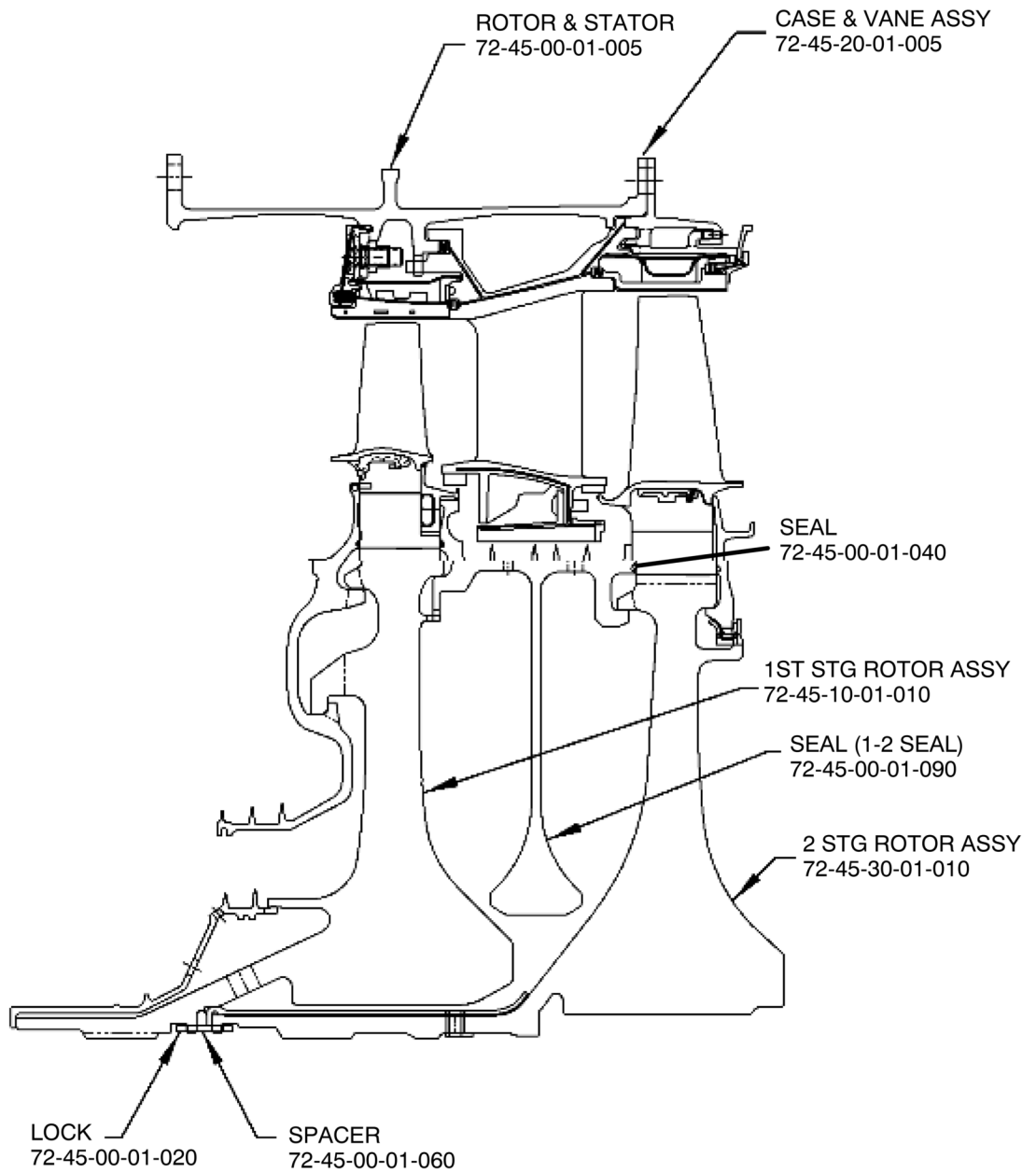
### Provide New 2nd Stage High Pressure Turbine (HPT) Restaggered Blades

#### 1. Assembly Instructions

- A. Install PN 2A4422 Stage 2 HPT Blades Assemblies (72 off) by the approved procedure given in Reference 6, Chapter/Section 72-45-30, Assembly. See Figure 1.
- B. Identify the Stage 2 Turbine Rotor Assembly by the procedure given in Reference 7, Chapter/Section 70-09-00, Marking of Parts.
  - (1) Mark the new part number, 2A4522, adjacent to the old part number, 2A4222.
  - (2) Use the vibration peen method.
- C. When you install the Stage 2 Turbine Rotor Assembly by the procedure given in Reference 6, Chapter/Section 72-45-00, Assembly, identify the HPT Rotor and Stator Assembly Module as follows:
  - (1) Use the procedure given in Reference 7, Chapter/Section 70-09-00, Marking of Parts.
  - (2) Mark the new part number, 2A4250, adjacent to the old part number, 2A4220.
  - (3) Use the vibration peen method.

#### 2. Recording Instructions

- A. A record of accomplishment is necessary.



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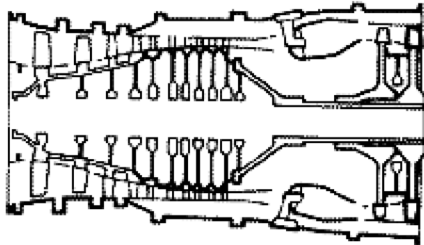
LOCATION OF ROTOR AND STATOR ASSEMBLY  
FIGURE 1

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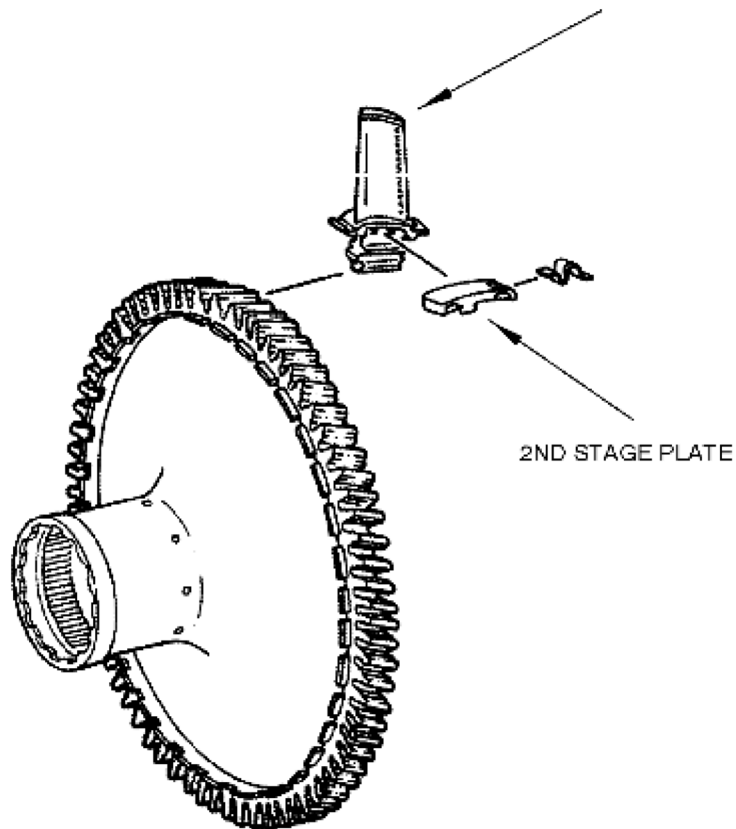
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MODULE 40

REPLACE THE STAGE 2 HPT BLADE  
WITH THE APPLICABLE NEW  
STAGE 2 HPT BLADE ASSEMBLY



2ND STAGE PLATE

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LOCATION OF 2ND STAGE HPT BLADE  
FIGURE 2

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Appendix

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

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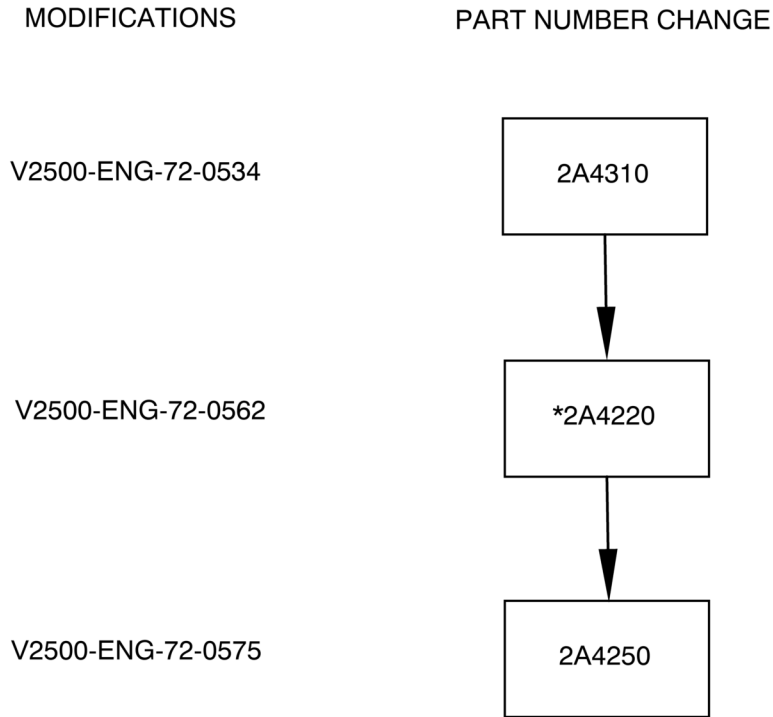
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\*FOR ENGINES V15001 AND V15002 ONLY.

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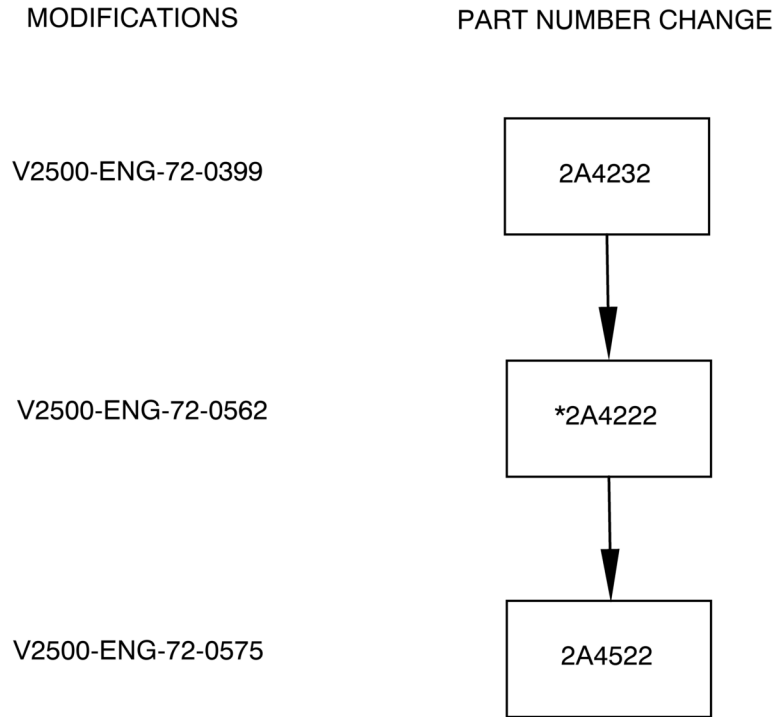
FAMILY TREE - 2ND STAGE HPT ROTOR AND STATOR ASSEMBLY REFERENCE  
 CATALOG SEQUENCE NO. 72-45-00, FIGURE 01, ITEM 010  
 CHART A

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\*FOR ENGINES V15001 AND V15002 ONLY.

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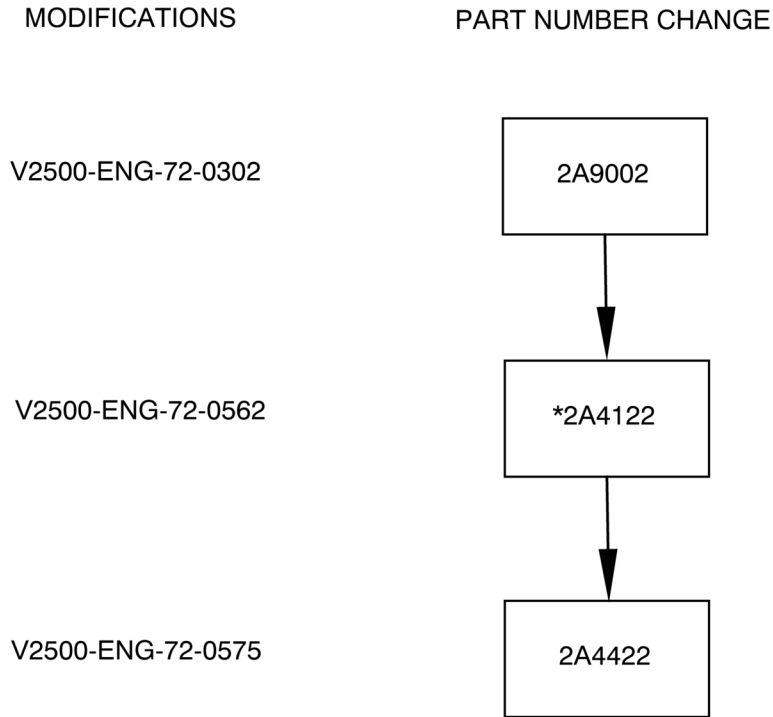
FAMILY TREE - 2ND STAGE HPT ROTOR REFERENCE CATALOG SEQUENCE  
NO. 72-45-30, FIGURE 01, ITEM 010  
CHART B

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\*FOR ENGINES V15001 AND V15002 ONLY.

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FAMILY TREE - 2ND STAGE HPT BLADE ASSEMBLY REFERENCE CATALOG  
SEQUENCE NO. 72-45-32, FIGURE 01, ITEM 010  
CHART C

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## Added Data

### Internal Reference Information

Revision No.	Reference Document	Origination
Original	EA07VA047	BB/TR
1	EC07VA047	DN/RCM

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
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	

## APPENDIX 1 SUPPLEMENT

V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5, V2533-A5 SelectOne  
Production Standard Engines

1. Modification Kit
  - A. There is no kit provided to do this Service Bulletin.
2. Material Cost
  - A. There is no kit provided to do this Service Bulletin.
3. New Production Parts

NEW PRODUCTION PARTS	DESCRIPTION	UNIT PRICE US DOLLARS
2A4250	Rotor and Stator Assy	
2A4522	2nd Stage HPT Rotor	
2A4422	2nd Stage HPT Blade Assy	
2A2278	2nd Stage HPT Plate	