

# SERVICE BULLETIN

AIR — ENGINE AIR-ACTUATOR, VARIABLE STATOR VANE — INTRODUCTION OF  
PRODUCT IMPROVEMENTS TO TYPE G4000 SERIES ACTUATOR

## MODEL APPLICATION

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

## BULLETIN ISSUE SEQUENCE

V2500 Series 75-0128

## ATA NUMBER

75-32-41

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## Supplier Service Bulletin

Rolls Royce Control Systems (RRCS) Service Bulletins G4000VSA-75-8489 or  
G4000VSA-75-8491.

## Compliance Category

6

## IAE Distribution Code

V2500

April 1/21

# V2500-ENG-75-0128

## Summary

The purpose of this Service Bulletin is to introduce modification to type G4000 series Variable Stator Vane Actuator (VSVA) for improvements to installation on engine case and component reliability.

## 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 Nos. V15001 thru V18995

### Concurrent Requirements

There are no concurrent requirements.

### Reason

1. Condition: VSVA tight fit with High Pressure Compressor (HPC) case dowel pins may cause 1) Dowel pin fracture on installation. 2) Damage to the torque motor cover. Other conditions identified: 3) Clogged torque motor servo valve screens. 4) Single channel intermittent open circuit of Linear Variable Differential Transformer (LVDT).
2. Background: 1) Tight fit of the VSVA onto the HPC Case is a small positional tolerance stack up between VSVA mounting feet dowel pin holes and the HPC case dowel pins. 2) Torque motor cover may be damaged as installers hit to aid VSVA installation onto engine. 3) Clogged torque motor servo valve screens may occur from fuel deposits or combination of fuel deposits and fuel pump debris and other fuel carried contaminants which may lead to Stator Vane Actuator Track Check (SVATK) faults. 4) Chlorine corrosion of solder joints may lead to intermittent open circuits of the LVDT which results in single channel feedback (SVAF) and/or cross check (SVAXCF) faults.
3. Objective: 1) Increase VSVA body inner mounting foot dowel pin locating hole diameter; 2) Add "DO NOT HIT" etch to the torque motor cover to remind not to use as a striking point; 3) Increase the torque motor servo valve screens mesh size to maximum allowable and still protect nozzle and torque motor flapper clearance; 4) Provide new LVDT utilizing assembly processes /material that do not contain chlorides and improve the surface finish of the electrical connector housing seal areas.
4. Substantiation: The changes introduced by this Service Bulletin were the subject of satisfactory engineering analysis and testing. This Service Bulletin complies with the applicable engine certification basis.
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

Return removed VSVA for modification to applicable vendor service bulletin.

#### 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 modification.

#### 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. V2500 Standard Practices and Processes, P&W Ref. PN 2A4414.

2. V2500-A5 Series Illustrated Parts Catalog, P&W Ref. PN 2A4428.

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3. V2500 A1/A5 Series Engine Manual, P&W Ref. PN 2A4407.
4. V2500 Service Bulletin V2500-ENG-75-0112.
5. V2500 Service Bulletin V2500-ENG-75-0122.
6. V2500 Service Bulletin V2500-ENG-75-0127.
7. RRCS Service Bulletin G4000VSVA-75-8479.
8. RRCS Service Bulletin G4000VSVA-75-8489.
9. RRCS Service Bulletin G4000VSVA-75-8491.

#### 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-A5 Series Illustrated Parts Catalog, P&W Ref. PN 2A4428.  
75-32-41, Figure 1
2. Airbus Illustrated Parts Catalog, Ref. A318, A319, A320, A321.  
75-32-41, Figure 1
3. RRCS Component Maintenance Manual (CMM), Chapter/Section 75-32-42.

#### Interchangeability of Parts

Old and new parts are directly interchangeable.

#### 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

Vendor support program is being provided by Collins Aerospace. See Commercial Vendor Support Contacts for applicable contact or Vendor Services Section for additional information.

1. Collins Aerospace will offer a discount from World list Price (WLP) through June 1, 2025 for the product improvements to the Variable Stator Vane Actuator (VSVA). Operators are requested to work directly with Collins Aerospace (via contact information provided below) to obtain details on discount pricing information.

Europe, Middle East, Africa and the Americas	Asia Pacific
Gurmail Singh Samra Collins Aerospace Marston Green United Kingdom Tel: +44 (0) 121 788 5140 Cell: +44 (0) 778 602 1969 Email: Gurmail.Samra@collins.com	BaiYi (Mr.) Collins Aerospace Guangdong, China Cell: +86 139 2627 3221 Email: Yi.bai@collins.com

2. Should you require additional information please contact your local IAE Customer Support representative or Collins Aerospace Customer Support representative.

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
G4000VSVA03	1	*	ACTUATOR, VARIABLE STATOR VANE	G4000VSVA01 (75-31-41-01-100 H)	(1)(B)(P)(S2)(V)
G4000VSVA04	1	*	ACTUATOR, VARIABLE STATOR VANE	G4000VSVA02 (75-31-41-01-100 J)	(1)(B)(P)(S2)(V)

### 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 Collins Aerospace The Radleys, Marston Green, Birmingham, B33 0HZ, UK referenced in the Vendor Services or Special Components/Materials section.

(1) The new part can be obtained by modification of the old part as specified in the Accomplishment Instructions.

#### Spare Parts Availability

(B) The new part will be available approximately June 1, 2021.

(P) Procure the part directly from the Supplier referenced in Vendor Services or Special Components.

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

(V) This is the RRCS part number.

#### Vendor Services or Special Components/Materials

P&W Designation	Vendor Designation	Name	Vendor Name & Address
G4000VSVA03	G4000VSVA03	ACTUATOR, VARIABLE STATOR VANE	Collins Aerospace The Radleys Marston Green Birmingham, B33 0HZ United Kingdom
G4000VSVA04	G4000VSVA04	ACTUATOR, VARIABLE STATOR VANE	
	G4000VSVA-75-8489	Service Bulletin	
	G4000VSVA-75-8491	Service Bulletin	
UK Telephone: +44 (0) 121 788 5099 FAX: +44 (0) 121 779 5712 www.utcaerospacesystems.com			
Vendor Manufacturer's Code: U4271 See Illustrated Parts Catalog Vendor Manufacturer's Code List			

NOTE: EXCEPT FOR WORK OR SUPPLIES TO BE PERFORMED OR FURNISHED BY IAE, IT IS UNDERSTOOD THAT IAE DOES NOT ENDORSE THE WORK PERFORMED BY THE COMPANY OR COMPANIES NAMED HEREIN OR ANY OTHER COMPANY AND DOES NOT ACCEPT RESPONSIBILITY TO ANY DEGREE FOR THE SELECTION OF SUCH COMPANY OR COMPANIES FOR THE PERFORMANCE OF ANY WORK OR PROCUREMENT OF SUPPLIES.

#### Tooling — Price and Availability

Special tools are not required to accomplish this Service Bulletin.

Reidentified Parts

Reidentified Parts Data

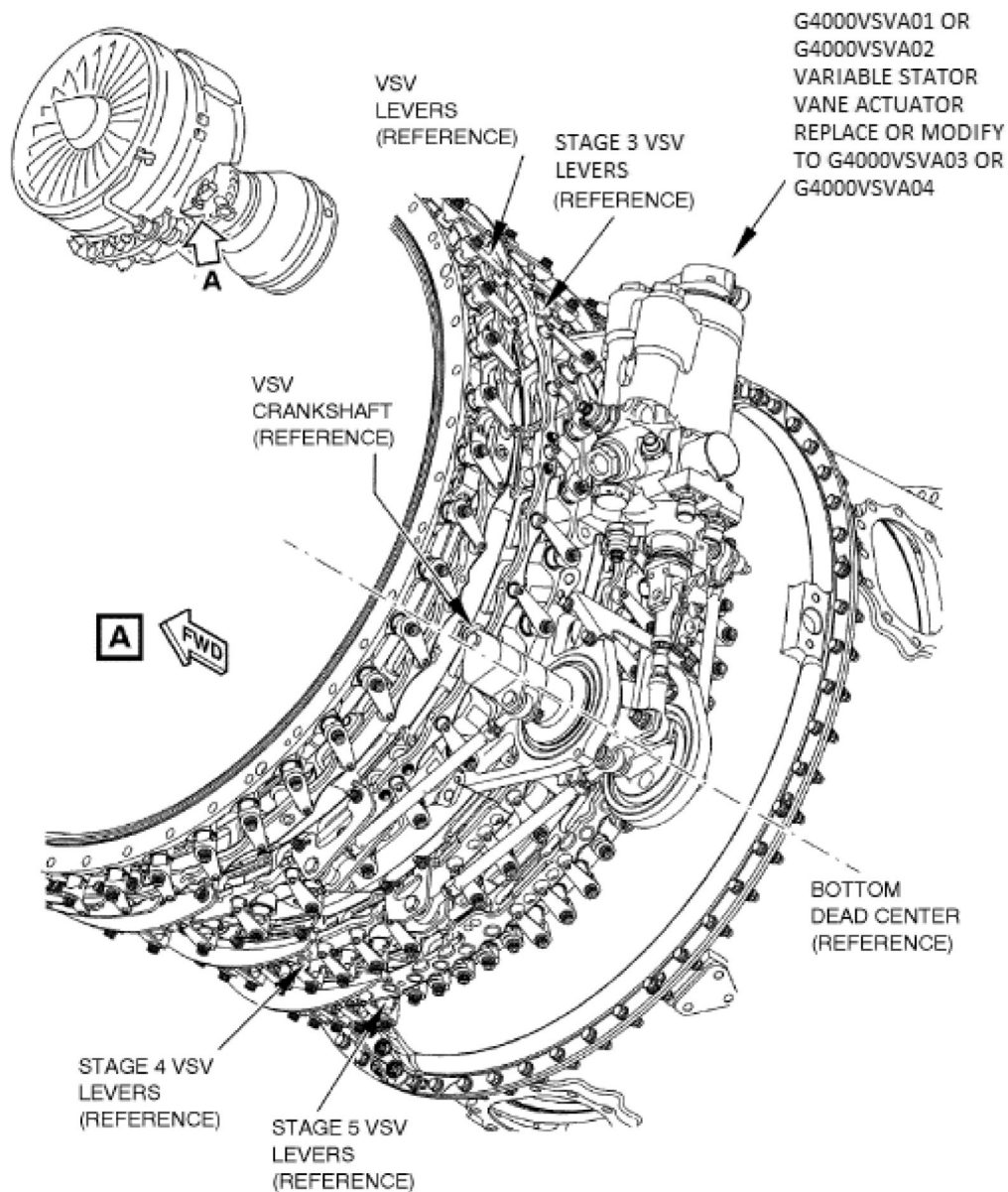
New PN	Keyword	Old PN
G4000VSVA03	ACTUATOR, VARIABLE STATOR VANE	G4000VSVA01
G4000VSVA04	ACTUATOR, VARIABLE STATOR VANE	G4000VSVA02

Other Material Information Data

Not Applicable.

### Accomplishment Instructions

1. Replace the VSVA, PN G4000VSVA01 or G4000VSVA02 with PN G4000VSVA03 or G4000VSVA04. See Figure 1.
2. Return the removed VSVA to the vendor identified in the Vendor Services section for modification.
  - A. Modify PN G4000VSVA01 to PN G4000VSVA03 as specified to Reference 8.
  - B. Modify PN G4000VSVA02 to PN G4000VSVA04 as specified to Reference 9.
3. Recording Instructions
  - A. A record of accomplishment is necessary.



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LOCATION OF VARIABLE STATOR VANE ACTUATOR  
75-32-41  
FIGURE 1

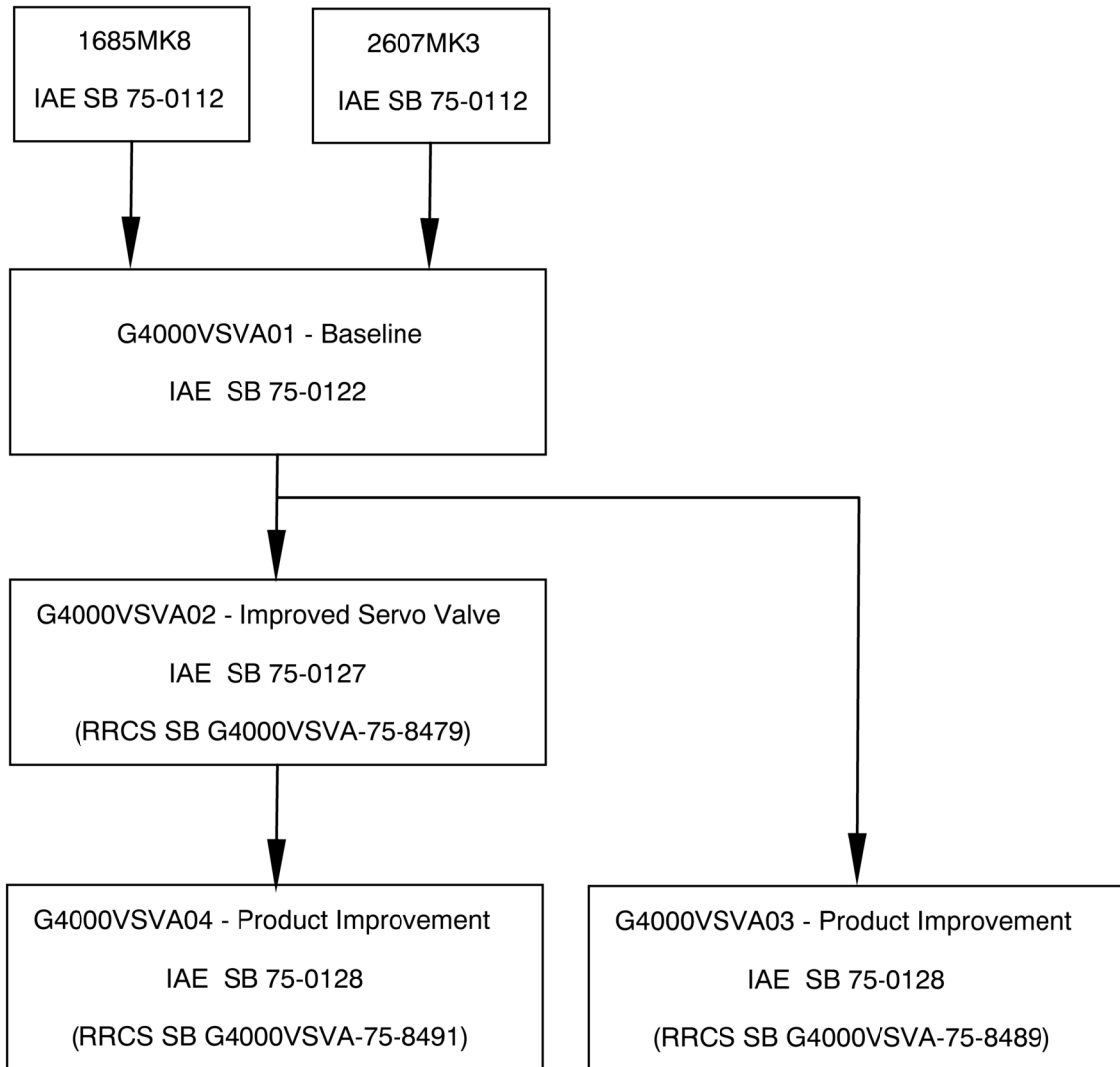
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Appendix

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



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## VARIABLE STATOR VANE ACTUATOR CHART A

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## Added Data

### Internal Reference Information

Revision No.	Reference Document	Origination
Original	EC20VR001	RG/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

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	