

SERVICE BULLETIN REVISION NOTICE

AIR — VARIABLE STATOR VANE ACTUATOR — INTRODUCTION OF IMPROVED SERVO VALVE
TO PN G4000VSVA01 VARIABLE STATOR VANE ACTUATOR

Turbojet Engine Service Bulletin No. V2500-ENG-75-0127 Revision No. 1 dated June 27, 2019.

Revision History

Original Issue dated February 12, 2018

Revision 1 dated June 27, 2019

Reason for the Revision

To update the supplier contact information and addition of reference note to refer to SB 75-0122 for industry support information.

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 75-0127

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1 thru 12	1	June 27/19

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

AIR — VARIABLE STATOR VANE ACTUATOR — INTRODUCTION OF IMPROVED SERVO VALVE TO PN G4000VSVA01 VARIABLE STATOR VANE ACTUATOR

MODEL APPLICATION

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

BULLETIN ISSUE SEQUENCE

V2500 Series 75-0127

ATA NUMBER

75-32-41

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Export Classification: Not subject to the EAR per 15 C.F.R. Chapter 1, Part 734.3(b)(3).

Supplier Service Bulletin

Rolls Royce Control Systems (RRCS) Service Bulletin G4000VSVA-75-8479.

Compliance Category

7

P&W Distribution Code

V2500

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Summary

The purpose of this Service Bulletin is to introduce an improved servo valve to PN G4000 series Variable Stator Vane Actuator (VSVA) to address torque motor wraparound and track check faults.

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. V15002 thru V18843*.

* 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: There have been removals of the VSVA, PN G4000VSVA01, (Service Bulletin V2500-ENG-75-0122) for single channel torque motor wraparound (SVAWAF) or single and/or dual channel track check (SVATK) fault messages.
2. Background: There have been a limited number of returns where investigation has isolated two issues within the servo valve sub assembly of the VSVA. Fatigue breaks of torque motor coil lead wires that have resulted in SVAWAF fault setting CLM message CHA VSV ACT/HC/EEC@ or CHB VSV ACT/HC/EEC@. An interference of servo flapper extension and retainer have caused SVATK faults setting the same CLM messages listed and when dual channel results in the COMPRESSOR VANE Message on ECAM. These events have not resulted in any engine operational issues.
3. Objective: The incorporation of this Service Bulletin replaces the VSVA, PN G4000VSVA01 with PN G4000VSVA02, with an improved servo valve subassembly. This Service Bulletin is intended as an attrition modification when the VSVA, PN G4000VSVA01, is returned for cause requiring servo valve replacement. Modification of the VSVA will be through Vendor Service Bulletin G4000VSVA-75-8479.
4. Substantiation: The changes introduced were the subject of satisfactory validation tests, engineering analysis, and similarity with FAA approved checklist and test plan.
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 or modify the VSVA on attrition.

Compliance

Category 7

Accomplish when supply of superseded parts has been depleted.

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.

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 — 75-32-41.
2. V2500 Standard Practices and Processes, P&W Ref. PN 2A4414, Chapter/Section 70-00-00.
3. V2500-A5 Series Illustrated Parts Catalog, P&W Ref. PN 2A4428, Chapter/Section 75-32-41.
4. V2500 A1/A5 Series Engine Manual, P&W Ref. PN 2A4407, Chapter/Section 72-00-40.

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5. V2500 Service Bulletin V2500-ENG-75-0122, Air — Variable Stator Vane (VSV) Actuator — Introduction of VSV Actuator With Improved Force Capability.
6. V2500 Service Bulletin V2500-ENG-75-0112, Air — Variable Stator Vane (VSV) Actuator — Introduction of New VSV Actuator Mark Number Due to Modified Servo Valve Port Filters and Redesigned Housing Seal for the Constant Pressure Valve.
7. Rolls Royce Control Systems Service Bulletin G4000VSVA-75-8479.
8. Rolls Royce Control Systems Component Maintenance Manual, 75-32-42.

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, Chapter/Section 75-32-41.
2. V2500 A1/A5 Series Engine Manual, P&W Ref. PN 2A4407, Chapter/Section 72-00-40.
3. Rolls Royce Control Systems Component Maintenance Manual, 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. There is no kit provided to do this Service Bulletin.
2. Part availability information is provided in material data Instructions — Disposition.

2

Industry Support Program

Not Applicable.

NOTE: Refer to Reference 5, Service Bulletin No. V2500-75-0122 for support program for procurement of PN G4000VSVA series VSVA upgrade from Type PN 1685 or 2607 series VSVA.

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
G4000VSVA02	1	*	ACTUATOR, VARIABLE STATOR VANE	G4000VSVA01 (75-32-41-01-100 H)	(1)(B)(L)(P)(S2)

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 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 by returning the part to vendor to accomplish vendor SB G4000VSVA-75-8479.

Spare Parts Availability

- (B) The new part will be available approximately March 1, 2018.
- (L) The old part will be supplied until the supply is fully used.
- (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.

Vendor Services or Special Components/Materials

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Vendor Services or Special Components/Materials

Vendor Designation	Name	Vendor Name & Address
G4000VSVA02	ACTUATOR, VARIABLE STATOR VANE	Collins Aerospace The Radleys Marston Green Birmingham, B33 0HZ United Kingdom UK Telephone: +44 (0) 121 788 5099 FAX: +44 (0) 121779 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

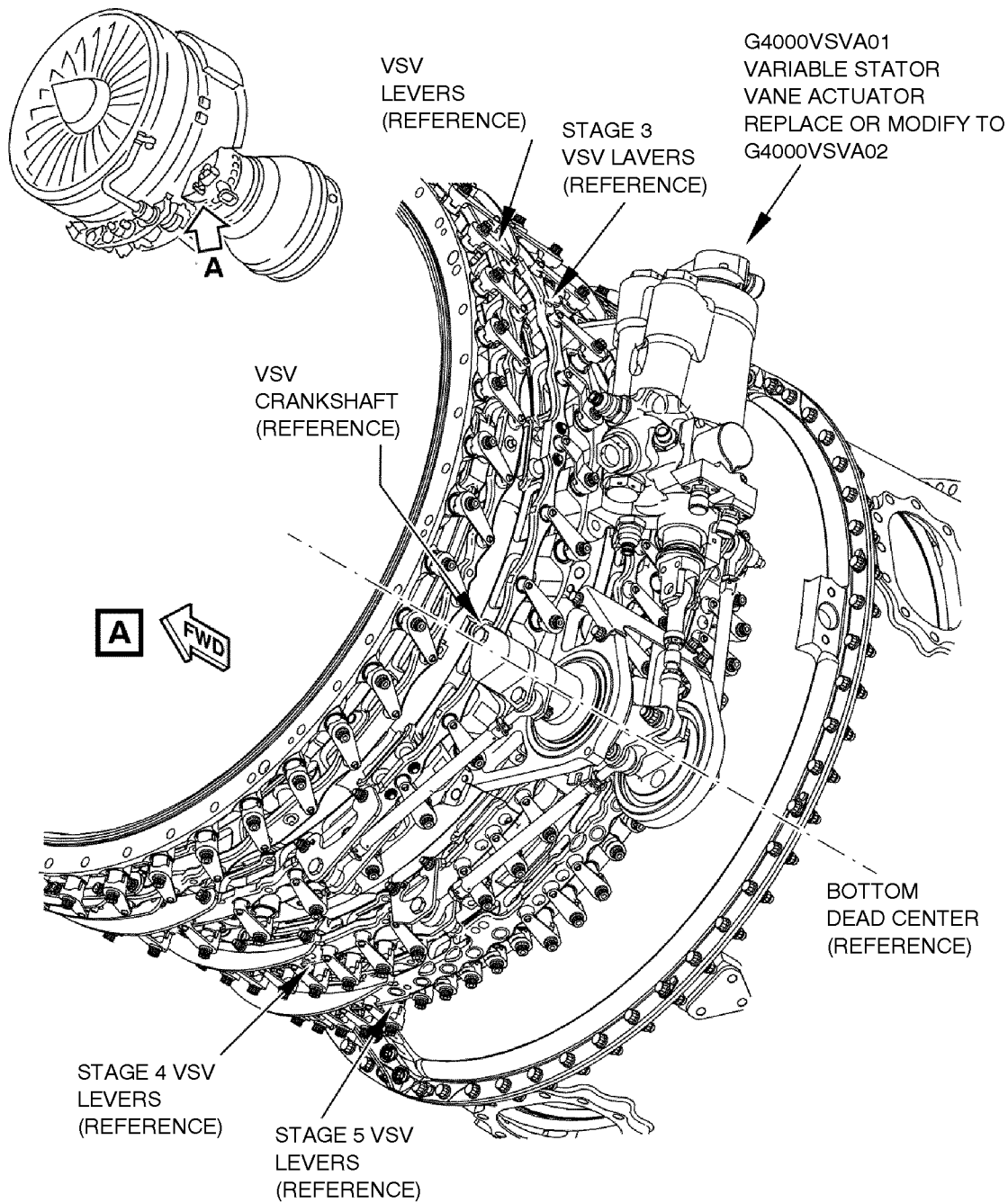
Not Applicable.

Other Material Information Data

Not Applicable.

Accomplishment Instructions

1. Replace the VSVA, PN G4000VSVA01 with PN G4000VSVA02. See Figure 1 for the location of the parts.
2. After installation of the VSVA and the Lane A 4022KS-C and Lane B 4022KS-B connectors onto the VSVA servo valve, check to make sure the 4022KS-C connector backshell strain relief clamp screw is not making contact with the 4022KS-B connector backshell.
3. If contact is present, loosen the Lane B 4022KS-B backshell coupling nut and adjust inward toward engine case one index point and tighten coupling nut to torque of 10 lbf in. (1.13 Nm).
4. Modify the old VSVA as specified in Reference 7, Rolls Royce Control Systems Service Bulletin G4000VSVA-75-8479, or send the actuator to the vendor listed in the Vendor Services or Special Components/Materials.
5. Recording Instructions
 - A. A record of accomplishment is required.



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LOCATION OF VARIABLE STATOR VANE ACTUATOR
75-32-41
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Appendix

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

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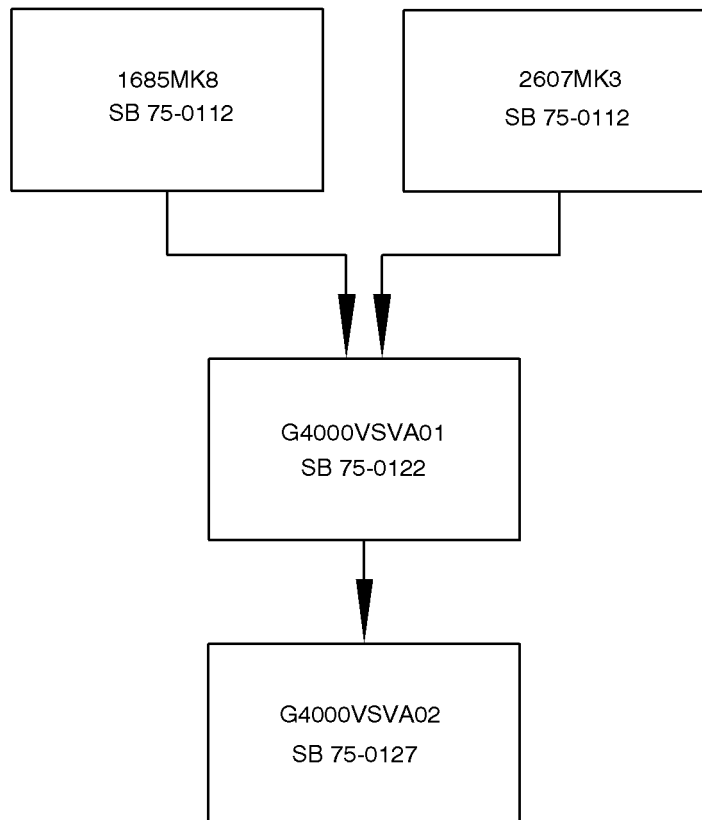
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VARIABLE STATOR VANE ACTUATOR
CHART A

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Added Data

Internal Reference Information

Revision No.	Reference Document	Origination
Original	EC 17VR001	RG/RCM
1	PSAF19VC266	RG/RCM

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

To calculate part life, include the hours and/or cycles since the part was made. Use the total hours or cycles to calculate life limits that are the result of part modification, a part used in an engine with different thrust, or for some other reason.

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	