

SERVICE BULLETIN REVISION NOTICE

AIR — VARIABLE STATOR VANE ACTUATOR — INTRODUCTION OF VARIABLE STATOR VANE
ACTUATOR WITH IMPROVED FORCE CAPABILITY

Turbojet Engine Service Bulletin No. V2500-ENG-75-0122 Revision No. 4 dated July 2, 2019.

Revision History

Original Issue May 2, 2014

Revision 1 dated September 15, 2014

Revision 2 dated May 26, 2016

Revision 3 dated January 23, 2018

Revision 4 dated July 2, 2019

Reason for the Revision

To update the Commercial Vendor Support Program to provide an end date.

To change the Vendor name from “UTC Aerospace Systems” to “Collins Aerospace”.

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 75-0122

<u>Page</u>	<u>Revision No.</u>	<u>Date</u>
1 thru 14	4	July 2/19

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 VARIABLE STATOR
VANE ACTUATOR WITH IMPROVED FORCE CAPABILITY

MODEL APPLICATION

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

BULLETIN ISSUE SEQUENCE

V2500 Series 75-0122

ATA NUMBER

75-32-41

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Compliance Category

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Summary

The purpose of this Service Bulletin is to provide a Variable Stator Vane (VSV) Actuator which has a larger piston area to mitigate a lack of hydraulic force margin at certain operating conditions.

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 V17601*

* This estimate of engine serial numbers will be revised, if necessary, when parts are installed in engines in production.

Concurrent Requirements

For engines which have SB V2500-ENG-73-0219, Reference 5, incorporated:

SB V2500-ENG-73-0235, Reference 6, must be incorporated prior to this Service Bulletin.

Reason

1. Condition: The Variable Stator Vane (VSV) Actuator can experience a lack of hydraulic force margin at certain operating conditions.
2. Background: Lack of hydraulic force margin can cause VSV interaction messages to occur during taxi maneuvering and transitions from taxi to takeoff power, climb power to cruise or thrust reverser power to idle power.
3. Objective: The incorporation of this Service Bulletin replaces the existing VSV Actuator with a new larger piston VSV Actuator which has increased force margin. This will generate VSV Actuator force margin in excess of the VSV system force demand, over the entire engine operating range to help mitigate interaction messages.
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: No.
Disassembly/Assembly: Yes.
Cleaning: No.
Inspection/Check: No.
Repair: Yes.
Testing: No.
6. Supplemental Information
None.

Description

Replace the Variable Stator Vane (VSV) Actuator.

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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.

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 technical content under the JAR 25 regulation of this document is approved under the authority of DOA No. EASA.21J.031.

Manpower

1. In Service

..... 3 hours.

2. At Overhaul

.....Not Affected.

Weight and Balance

1. Weight Change

+ 0.24 kg (0.53 LB).

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

1. ATA Locator — 75-32-41.
2. V2500 Engine Illustrated Parts Catalogs (S-V2500-2IA, S-V2500-2IB, S-V2500-5IA, S-V2500-5IB, S-V2500-6IA, S-V2500-6IB, S-V2500-7IA, S-V2500-7IB), Chapter/Section 75-32-41.
3. V2500 Engine Illustrated Parts Catalogs (S-V2500-2SA, S-V2500-2SB, S-V2500-2NA, S-V2500-2NB, S-V2500-5SA, S-V2500-5SB, S-V2500-5NA, S-V2500-5NB, S-V2500-6SA, S-V2500-6SB, S-V2500-6NA, S-V2500-6NB, S-V2500-7SA, S-V2500-7SB, S-V2500-7NA, S-V2500-7NB), Chapter/Section 75-32-41.

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4. V2500 Engine Manual (E-V2500-1IA), Chapter/Section 72-00-40.
5. Service Bulletin V2500-ENG-73-0219, Engine — Variable Stator Vane (VSV) Actuator — Low Pressure (LP) Return Line Re-Route Pipework.
6. Service Bulletin V2500-ENG-73-0235, Engine — Variable Stator Vane (VSV) Actuator — Removal of Low Pressure (LP) Return Line Re-Route Pipework.
7. A319/320/321 Aircraft Maintenance Manual, Chapter/Section given in aircraft SB N° A320-72-1036.
8. Service Bulletin V2500-ENG-72-0564, Engine — High Pressure (HP) Compressor — V2500 Selectone Production - Introduction of Redesigned Variable Stator Vane (VSV) System.
9. Service Bulletin V2500-ENG-75-0052, Engine — Variable Stator Vane (VSV) Actuator — Introduction of LVDT with Extended Travel and a Shorter Internal Piston Stop.
10. Service Bulletin V2500-ENG-75-0061, Engine — Variable Stator Vane (VSV) Actuator — Improved LVDT With Revised Soldering and Sleeve material.
11. Service Bulletin V2500-ENG-75-0110, Engine — Variable Stator Vane (VSV) Actuator — Introduction of a Modified Seal Housing with a stop to limit CPV Stop.
12. Service Bulletin V2500-ENG-75-0111, Engine — Variable Stator Vane (VSV) Actuator — Reintroduction of 50 Micron Screen Filters in Servo Valve.
13. Service Bulletin V2500-ENG-75-0112, Engine — 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.
14. This Service Bulletin is subject to aircraft modification No. 154883 P13594 (classified major) and is covered by aircraft Service Bulletin No. A320-72-1036. Under no circumstances shall the modified equipment, resulting from the application of this SB, be installed on the aircraft type unless its aircraft SB is approved.

Other Publications Affected

1. V2500 Engine Illustrated Parts Catalogs (S-V2500-2IA, S-V2500-2IB, S-V2500-5IA, S-V2500-5IB, S-V2500-6IA, S-V2500-6IB, S-V2500-7IA, and S-V2500-7IB), Chapter/Section 75-32-41.
2. V2500 Engine Manual (E-V2500-1IA), Chapter/Section 72-00-40 Cleaning, Inspection and Repair, to add the new part.

Interchangeability of Parts

Old and new parts are directly interchangeable.

Refer to Reference 14, aircraft Service Bulletin No. A320-72-1036 for further requirements at the aircraft level.

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. There is no kit provided to do this Service Bulletin.
2. Part availability information is provided in material data Instructions — Disposition.

Commercial Vendor Support Program

Vendor support program is being provided by Collins Aerospace. See the Vendor Services section for more information.

1. Collins Aerospace will offer a discount from World List Price (WLP) through March 31, 2020 to incentivize the incorporation of the new 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 and to place orders for the new VSVA.

Vendor Services

Europe, Middle East and Africa, Americas	Asia Pacific
Gurmail Singh Samra Collins Aerospace Marston Green, United Kingdom Tel: +44 (0) 121 788 5140 Cell: +44 (0) 7786021969 E-mail: Gurmail.Samra@collins.com	BaiYi (Mr.) Collins Aerospace Guangdong, China Cell: +86 139 2627 3221 E-mail: 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
G4000VSVA01	1	*	ACTUATOR VARIABLE STATOR	2607MK3 (75-32-41-01-100)	(1)(B)(L)(P)(S1)
			OR		
G4000VSVA01	1	*	ACTUATOR VARIABLE STATOR	1685MK8 (75-32-41-01-100)	(1)(B)(L)(P)(S1)

Instructions/Disposition Code Statements:

Parts Modification Conditions

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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 is a replacement part only, and cannot be obtained by modification of the old part.

Spare Parts Availability

(B) The new part will be available approximately November 1, 2014.

(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.

(S1) Old and new parts are fully and freely interchangeable

Vendor Services or Special Components/Materials

Vendor Special Components/Materials

Vendor Designation	Name	Vendor Name & Address
G4000VSVA01	Variable Stator Vane Actuator	Collins Aerospace The Radleys Marston Green Birmingham, B33 0HZ United Kingdom UK Telephone: +44 (0) 121 788 5099 FAX: +44 (0) 121779 5712 Internet: 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

New Support Equipment that is necessary

Tool No.	Description
IAE1P16614	PIN, RIGGING
For price and availability of the tools listed above, submit an email to: gpiasprtlg@iaev2500.com Return details will be provided by email.	

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Reidentified Parts

Not Applicable.

Other Material Information Data

Not Applicable.

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Accomplishment Instructions

NOTE: Service bulletin incorporation on engines installed on aircraft may be desirable and should be individually evaluated.

For engines installed on Aircraft:

1. Replace the VSV Actuator, PN 2607MK3 or PN 1685MK8 with PN G4000VSVA01. See Reference 7, Aircraft Maintenance Manual and Figure 1.

NOTE: With the new VSV Actuator the rigging position has changed from forwards to rearwards.

- A. For A5 basic (non SelectOne) engines and A5 SelectOne retrofit engines:

- (1) Remove old VSV Actuator with TASK 75-32-41-000-010-A.

CAUTION: REFER TO FIGURE 1, SHEET 2. VERIFY VSV ACTUATOR RIG PIN PART NUMBER IAE1P16614 IS FULLY SEATED OVER ACTUATOR RIG PIN HOUSING AS SHOWN.

- (2) Install New VSV Actuator with TASK 75-32-41-400-010-A and Figure 1.

- (3) Visually inspect to insure proper rig pin engagement into Fork End slot as shown in Figure 1, Sheet 2 of 2.

- B. For A5 (SelectOne) engines only, which have incorporated, see Reference 8, SBE 72-0564:

- (1) Remove old VSV Actuator with TASK 75-32-41-000-010-A01.

CAUTION: REFER TO FIGURE 1, SHEET 2. VERIFY VSV ACTUATOR RIG PIN PART NUMBER IAE1P16614 IS FULLY SEATED OVER ACTUATOR RIG PIN HOUSING AS SHOWN.

- (2) Install New VSV Actuator with TASK 75-32-41-400-010-A01 and Figure 1.

- (3) Visually inspect to insure proper rig pin engagement into Fork End slot as shown in Figure 1, Sheet 2 of 2.

2. Recording Instructions.

- A. A record of accomplishment is required.

For engines in Shop:

1. Replace the VSV Actuator, PN 2607MK3 or PN 1685MK8 with PN G4000VSVA01. See Reference 4, Engine Manual, Chapter/Section 72-00-40 and Figure 1.

NOTE: With the new VSV Actuator the rigging position has changed from forwards to rearwards.

- A. For A5 basic (non SelectOne) engines and A5 SelectOne retrofit engines:

- (1) Remove old VSV Actuator with TASK 72-00-40-050-001-B00.

CAUTION: REFER TO FIGURE 1, SHEET 2. VERIFY VSV ACTUATOR RIG PIN PART NUMBER IAE1P16614 IS FULLY SEATED OVER ACTUATOR RIG PIN HOUSING AS SHOWN.

- (2) Install New VSV Actuator with TASK 72-00-40-450-001-B00 and Figure 1.

- (3) Visually inspect to insure proper rig pin engagement into Fork End slot as shown in Figure 1, Sheet 2 of 2.

- B. For A5 (SelectOne) engines only, which have incorporated, see Reference 8, SBE 72-0564:

- (1) Remove old VSV Actuator with TASK 72-00-40-050-001-C00.

CAUTION: REFER TO FIGURE 1, SHEET 2. VERIFY VSV ACTUATOR RIG PIN PART NUMBER IAE1P16614 IS FULLY SEATED OVER ACTUATOR RIG PIN HOUSING AS SHOWN.

- (2) Install New VSV Actuator with TASK 72-00-40-450-001-C00 and Figure 1.

- (3) Visually inspect to insure proper rig pin engagement into Fork End slot as shown in Figure 1, Sheet 2 of 2.

2. Recording Instructions.

- A. A record of accomplishment is required.

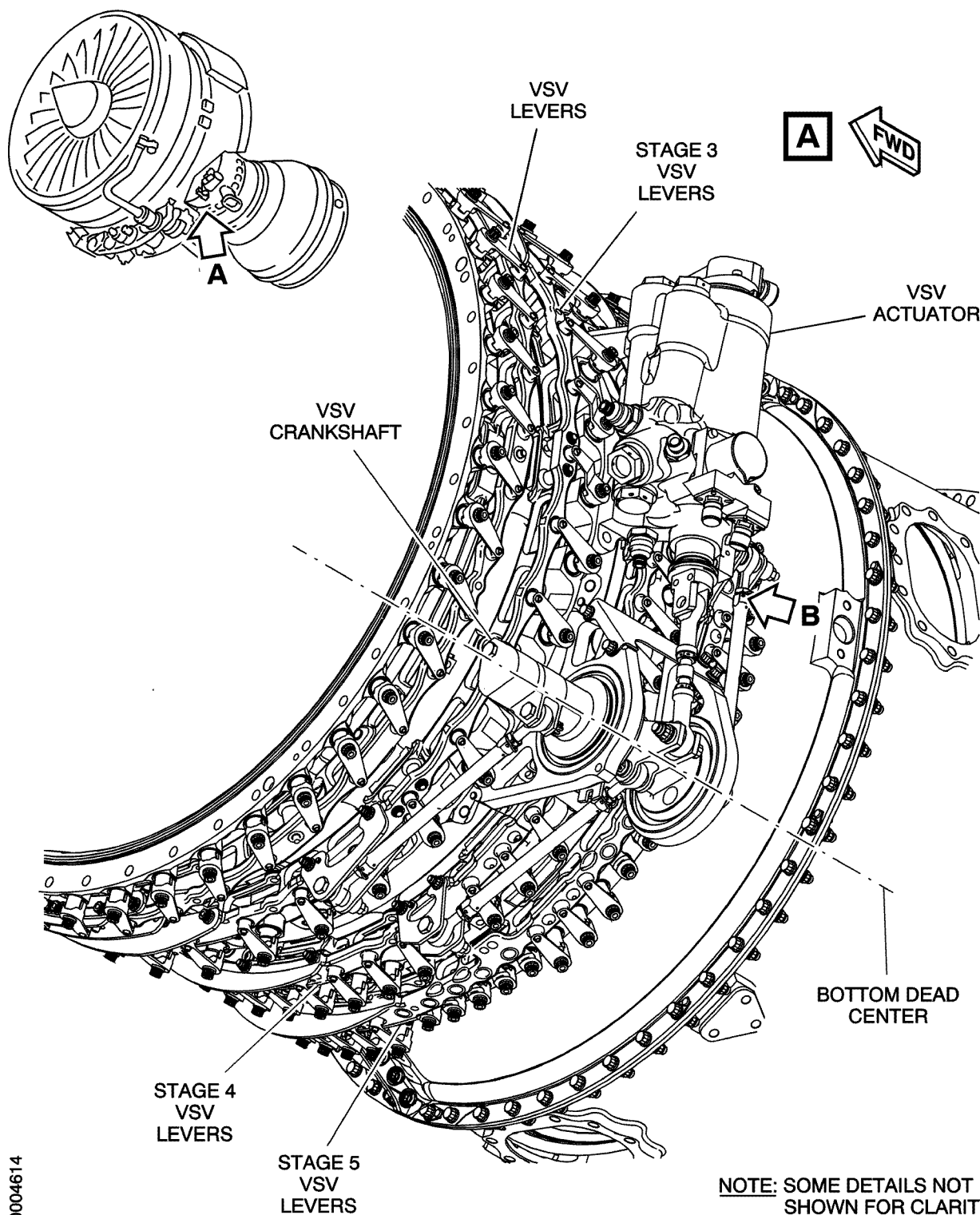


FIGURE 1
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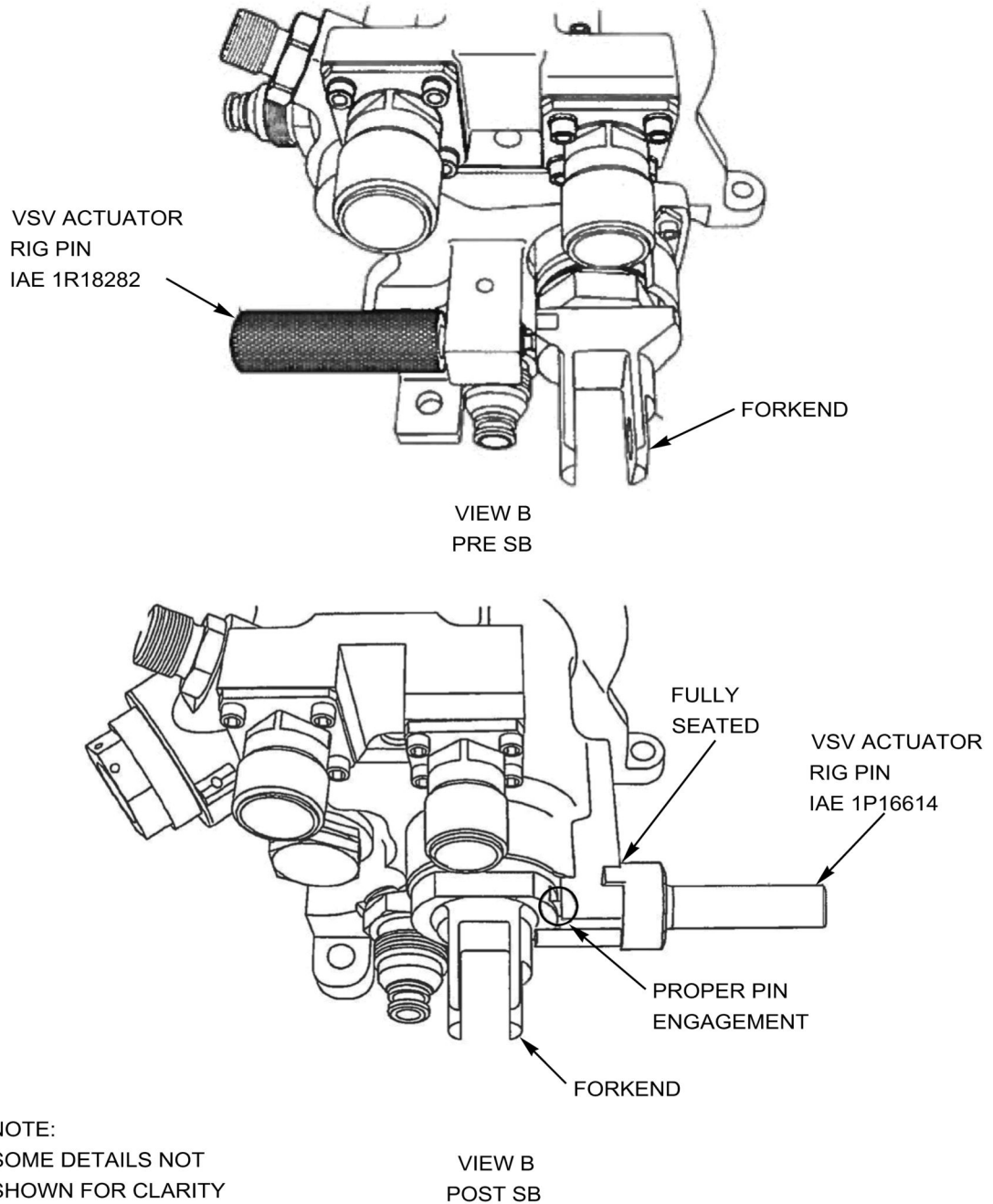
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FIGURE 1
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Appendix

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

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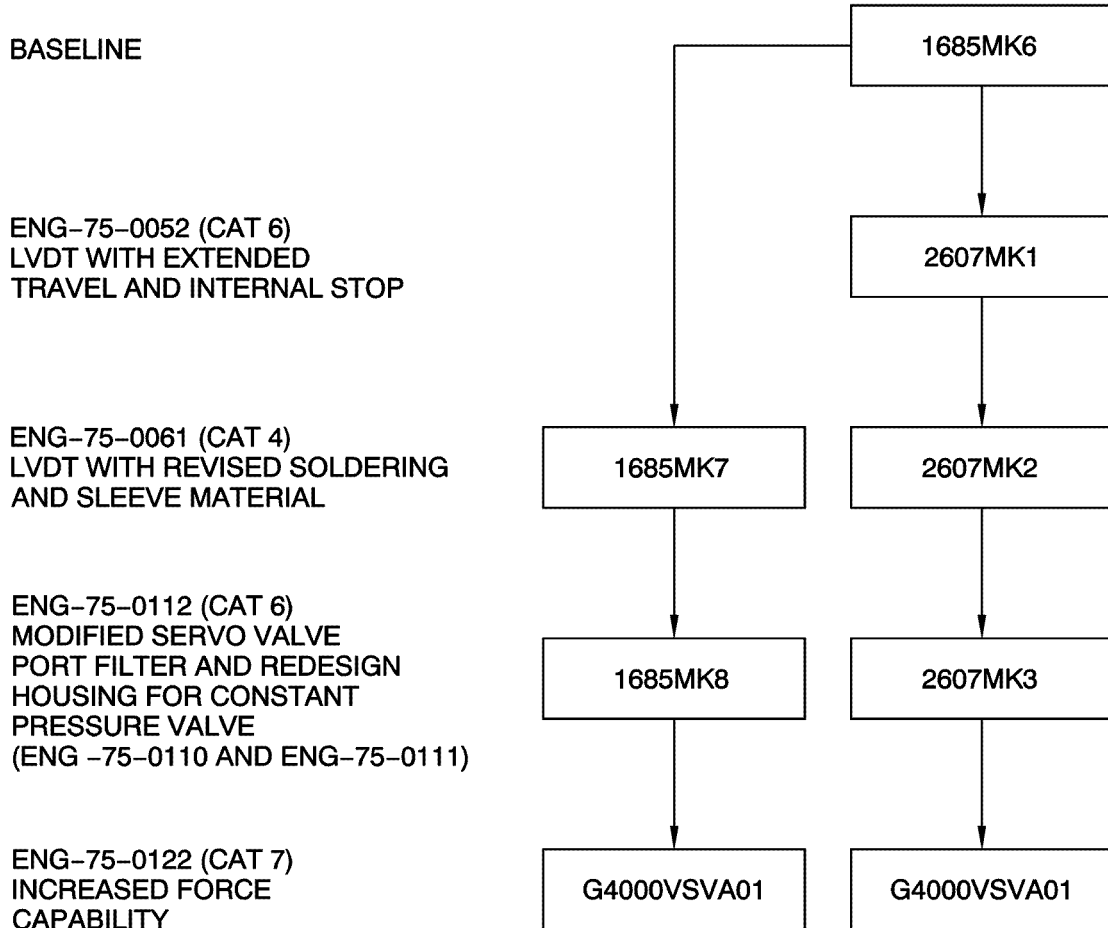
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V2500-A5
PART NUMBER CHANGE



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CHART A

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Added Data

Internal Reference Information

Revision No.	Reference Document	Origination
Original	EC12VI003	SD
1	EA14VC245	RMG/MJS
2	EA16VC013	RMG/RCM
3	EA17VC595	RMG/RCM
4	EA19VC265	RMG/RCM

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

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