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V2500-A5 SERIES PROPULSION SYSTEMS SERVICE BULLETIN

Printed in Great Britain

This document transmits the Revision 1 of Service Bulletin V2500-ENG-72-0561 and the Revision 1 of the Supplement
Document History

Service Bulletin Revision Status		Supplement Revision Status	
Initial Issue	Sep.22/08	Initial Issue	Sep.22/08

Service Bulletin Revision 1

Remove	Incorporate	Reason for change
All pages of the Service Bulletin	Pages 1 to 11 of the Service Bulletin	To add the new module part number to the Description.
All pages of the Supplement	Pages 1 to 3 of the Supplement	To add the new module part number to the Description.

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Transmittal - Page 1 of 1

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ENGINE – HIGH PRESSURE (HP) COMPRESSOR – V2500 SELECTONE PRODUCTION – HP COMPRESSOR
UPGRADE**1. Planning Information****A. Effectivity****(1) Airbus A319**

(a) V2522-A5, V2524-A5, V2527M-A5 Engines from Serial No. V15002 onwards (SelectOne Production Standard).

(2) Airbus A320

(a) V2524-A5, V2527-A5, V2527E-A5 Engines from Serial No. V15002 onwards (SelectOne Production Standard).

(3) Airbus A321

(a) V2530-A5, V2533-A5 Engines from Serial No. V15002 onwards (SelectOne Production Standard).

B. Concurrent Requirements

The Service Bulletin that follows must be done before or at the same time as this one:

V2500-ENG-72-0560	ENGINE – HIGH PRESSURE (HP) COMPRESSOR – V2500 SELECTONE RETROFIT AND PRODUCTION – HP COMPRESSOR UPGRADE
V2500-ENG-72-0562	ENGINE – HIGH PRESSURE TURBINE (HPT) – V2500 SELECTONE PRODUCTION AND RETROFIT – HPT UPGRADE
V2500-ENG-72-0563	ENGINE – LOW PRESSURE (LP) TURBINE – INTRODUCTION OF TURBINE VANES STAGE 3
V2500-ENG-72-0564	ENGINE – HIGH PRESSURE (HP) COMPRESSOR – V2500 SELECTONE – INTRODUCTION OF REDESIGNED VARIABLE STATOR VANE (VSV) SYSTEM
V2500-ENG-73-0203	ENGINE – FUEL AND CONTROL – PROVIDE A NEW ELECTRONIC ENGINE CONTROL (EEC) WITH A5 SCN20/Y SOFTWARE

C. Reason**(1) Condition**

None.

(2) Background

The V2500 SelectOne is a committed programme to enhance the V2500 engine for improved time on wing, efficiency and durability. The package features an optimised aerodynamic and mechanical design of the HP compressor blades and vanes.

(3) Objective

The purpose of this Service Bulletin is to inform the operator that a new production standard of HP compressor is introduced.

(4) Substantiation

The changes introduced by this Service Bulletin were the subject of satisfactory engineering analysis, extensive engine testing and flight test. This Service Bulletin complies with the applicable engine certification basis.

(5) Effect of Bulletin on:

(a) Operation

Not affected.

(b) Maintenance

Not Affected.

(c) Overhaul

Affected (Refer to paragraph 1.0. Other Publication Affected).

(d) Repair Schemes

Affected (Refer to VRS6009, VRS6010, VRS6011, VRS6012, VRS6013, VRS6014, VRS6015, VRS6016, VRS6017, VRS6018, VRS6025, VRS6026, VRS6027, VRS6028, VRS6029, VRS6049, VRS6050, VRS6051, VRS6052, VRS6053, VRS6054, VRS6055, VRS6056, VRS6057, VRS6058, VRS6060, VRS6061, VRS6062, VRS6063, VRS6064, VRS6065, VRS6066, VRS6067, VRS6068, VRS6069, VRS6070, VRS6071, VRS6072, VRS6073, VRS6074, VRS6080, VRS6081, VRS6082, VRS6083, VRS6084, VRS6150, VRS6151, VRS6152, VRS6210, VRS6214, VRS6215, VRS6236, VRS6586, VRS6490, VRS6495, VRS6496, VRS6497, VRS6499, VRS6503, VRS6616, VRS6635 and VRS6653).

(e) Interchangeability

Affected (Refer to paragraph 1.B. Concurrent Requirements).

(f) Fits and Clearances

Not affected.

D. Description

The SelectOne Production Service Bulletin packages feature an improved aerodynamic and mechanical design for the HP compressor rotor blades and vanes.

- (1) The HP compressor stage 3 and stages 9 to 12 rotor blades have a leading edge shape that is changed from circular to elliptical and the blade aerofoil and fillet surfaces are superpolished.
- (2) The HP compressor stages 6 to 11 stator vanes have a leading edge shape that is changed from circular to elliptical and the blade aerofoil and adjacent annulus surfaces superpolished.

R **NOTE:** All engines which got this Service Bulletin incorporated during new
R production, the new HP compressor module has the new HP compressor
R module number 4W6518.

E. Compliance

Category Code 8

For Information Only.

F. Approval

The part number changes and/or part modifications described in sections 2 and 3 of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine models listed.

The authorising IAE documents are ECs 07SEL02R, 07SEL02RA and 07SEL02R-01.

G. Manpower

- (1) In Service

Not applicable.

- (2) At Overhaul

Not applicable.

H. Material Price and Availability

Modification kit is not required; parts supplied as single line items.

For prices and availability of future spares, refer to the supplement to this Service Bulletin.

I. Tooling Price and Availability

Special tools are not required.

J. Industry Support Information

Not applicable.

K. Weight and Balance**(1) Weight Change**

None.

(2) Moment Arm

No effect.

(3) Datum

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

L. Electrical Load Data

This Service Bulletin has no effect on the aircraft electrical load.

M. Software Accomplishment Summary

Not applicable.

N. References**(1) Internal Reference No.:**

Engineering Change No. 07SEL02R, 07SEL02RA and 07SEL02R-01.

(2) V2500 Service Bulletins:

V2500-ENG-72-0560	ENGINE - HIGH PRESSURE (HP) COMPRESSOR - V2500 SELECTONE RETROFIT AND PRODUCTION - HP COMPRESSOR UPGRADE
V2500-ENG-72-0562	ENGINE - HIGH PRESSURE TURBINE (HPT) - V2500 SELECTONE PRODUCTION AND RETROFIT - HPT UPGRADE
V2500-ENG-72-0563	ENGINE - LOW PRESSURE (LP) TURBINE - INTRODUCTION OF TURBINE VANES STAGE 3
V2500-ENG-72-0564	ENGINE - HIGH PRESSURE (HP) COMPRESSOR - V2500 SELECTONE - INTRODUCTION OF REDESIGNED VARIABLE STATOR VANE (VSV) SYSTEM
V2500-ENG-73-0203	ENGINE - FUEL AND CONTROL - PROVIDE A NEW ELECTRONIC ENGINE CONTROL (EEC) WITH A5 SCN20/Y SOFTWARE

(3) ATA Locator - 72-00-00, 72-41-10, 72-41-15, 72-41-20 and 72-41-22.

0. Other Publications Affected

- (1) Airbus A319/A320/A321 Aircraft Maintenance Manual, Chapter 72-00-00.
- (2) IAE V2500 Engine Manual (E-V2500-1IA), Chapter/Section 72-00-00, 72-41-10, 72-41-15, 72-41-20 and 72-41-22.
- (3) IAE V2500 Engine Illustrated Parts Catalogue (S-V2500-2SA, S-V2500-2SB, S-V2500-5SA, S-V2500-5SB, S-V2500-6SA, S-V2500-6SB, S-V2500-7SA, S-V2500-7SB), Chapter/Section 72-41-15 and 71-41-22 will be amended to incorporate the new part numbers (Refer to 2. Material Information).

P. Interchangeability of Parts

Affected (Refer to paragraph 2.E. Instruction disposition codes).

2. Material Information

A. The kit required consists of the following parts:

None.

B. Parts to be reworked:

None.

C. New production parts:

NOTE: The new parts are introduced as a baseline standard for V2500-A5 engines which have installation arrangement number SQ02 or SQ03 (SelectOne) engraved on the engine data plate on the same Fig/Item No. as the old parts of the V2500-A5 engines which have installation arrangement number AQ02 or AQ03 engraved on the engine data plate. The old parts are mentioned for information only.

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
72-41-15						
01-200	6A8688	31	.Blade Assembly, Stage 3, HP Compressor	-	6A8353	(S1)
02-470	6A8751	2	.Blade, Stage 9 Locking LH, HP Compressor	-	6A6566	(S1)
02-485	6A8752	2	.Blade, Stage 9 Locking RH, HP Compressor	-	6A5645	(S1)
02-500	6A8749	60	.Blade, Stage 9 Nominal, HP Compressor	-	6A4211C01	(S1)
02-515	6A8749	25 A/R	.Blade, Stage 9 Nominal, HP Compressor	-	6A4211C01	(1)(S1)
02-517	6A8750	25 A/R	.Blade, Stage 9 Undersize, HP Compressor	-	6A4211C02	(1)(S1)
02-570	6A8755	2	.Blade, Stage 10 Locking LH, HP Compressor	-	6A6567	(S1)
02-585	6A8756	2	.Blade, Stage 10 Locking RH, HP Compressor	-	6A5646	(S1)



FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
02-600	6A8753	57	.Blade, Stage 10 Nominal, HP Compressor	-	6A4222C01	(S1)
02-615	6A8753	24 A/R	.Blade, Stage 10 Nominal, HP Compressor	-	6A4222C01	(1)(S1)
02-617	6A8754	24 A/R	.Blade, Stage 10 Undersize, HP Compressor	-	6A4222C02	(1)(S1)
02-670	6A8759	2	.Blade, Stage 11 Locking LH, HP Compressor	-	6A6568	(S1)
02-685	6A8760	2	.Blade, Stage 11 Locking RH, HP Compressor	-	6A5647	(S1)
02-700	6A8757	50	.Blade, Stage 11 Nominal, HP Compressor	-	6A4251C01	(S1)
02-715	6A8757	24 A/R	.Blade, Stage 11 Nominal, HP Compressor	-	6A4251C01	(1)(S1)
02-717	6A8758	24 A/R	.Blade, Stage 11 Undersize, HP Compressor	-	6A4251C02	(1)(S1)
02-770	6A8763	2	.Blade, Stage 12 Locking LH, HP Compressor	-	6A5947	(S1)
02-785	6A8764	2	.Blade, Stage 12 Locking RH, HP Compressor	-	6A5648	(S1)
02-800	6A8761	44	.Blade, Stage 12 Nominal, HP Compressor	-	6A4207C01	(S1)
02-815	6A8761	23 A/R	.Blade, Stage 12 Nominal, HP Compressor	-	6A4207C01	(1)(S1)
02-817	6A8762	23 A/R	.Blade, Stage 12 Undersize, HP Compressor	-	6A4207C02	(1)(S1)
72-41-22						
01-350	6A8767	4	.Vane, Stage 6 Stop, HP Compressor	-	6A7424	(S1)
01-400	6A8765	60	.Vane, Stage 6 Nominal, HP Compressor	-	6A7423C01	(S1)



FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
01-448	6A8765	20 A/R	.Vane, Stage 6 Nominal, HP Compressor	-	6A7423C01	(1)(S1)
01-450	6A8766	20 A/R	.Vane, Stage 6 Undersize, HP Compressor	-	6A7423C02	(1)(S1)
02-350	6A8770	4	.Vane, Stage 7 Stop RH, HP Compressor	-	6A7427	(S1)
02-400	6A8768	60	.Vane, Stage 7 Nominal, HP Compressor	-	6A7425C01	(S1)
02-448	6A8768	24 A/R	.Vane, Stage 7 Nominal, HP Compressor	-	6A7425C01	(1)(S1)
02-450	6A8769	24 A/R	.Vane, Stage 7 Undersize, HP Compressor	-	6A7425C02	(1)(S1)
03-200	6A8774	1	.Vane, Stage 8 Intrascope LH, HP Compressor	-	6A4246	(S1)
03-250	6A8775	1	.Vane, Stage 8 Intrascope RH, HP Compressor	-	6A4248	(S1)
03-350	6A8776	4	.Vane, Stage 8 Stop, HP Compressor	-	6A4249	(S1)
03-400	6A8772	58	.Vane, Stage 8 Nominal, HP Compressor	-	6A4245C01	(S1)
03-448	6A8772	28 A/R	.Vane, Stage 8 Nominal, HP Compressor	-	6A4245C01	(1)(S1)
03-450	6A8773	28 A/R	.Vane, Stage 8 Undersize, HP Compressor	-	6A4245C02	(1)(S1)
04-200	6A8780	1	.Vane, Stage 9 Intrascope LH, HP Compressor	-	6A4226	(S1)
04-250	6A8781	1	.Vane, Stage 9 Intrascope RH, HP Compressor	-	6A4227	(S1)
04-350	6A8782	8	.Vane, Stage 9 Stop, HP Compressor	-	6A4228	(S1)
04-400	6A8778	62	.Vane, Stage 9 Nominal, HP Compressor	-	6A4229C01	(S1)

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
04-448	6A8778	32 A/R	.Vane, Stage 9 Nominal, HP Compressor	-	6A4229C01	(1)(S1)
04-450	6A8779	32 A/R	.Vane, Stage 9 Undersize, HP Compressor	-	6A4229C02	(1)(S1)
05-350	6A8786	4	.Vane, Stage 10 Stop RH, HP Compressor	-	6A7429	(S1)
05-355	6A8785	4	.Vane, Stage 10 Stop LH, HP Compressor	-	6A7430	(S1)
05-400	6A8783	60	.Vane, Stage 10 Nominal, HP Compressor	-	6A7428C01	(S1)
05-448	6A8783	32 A/R	.Vane, Stage 10 Nominal, HP Compressor	-	6A7428C01	(1)(S1)
05-450	6A8784	32 A/R	.Vane, Stage 10 Undersize, HP Compressor	-	6A7428C02	(1)(S1)
06-200	6A8789	1	.Vane, Stage 11 Intrascope LH, HP Compressor	-	6A4238	(S1)
06-250	6A8790	1	.Vane, Stage 11 Intrascope RH, HP Compressor	-	6A4239	(S1)
06-350	6A8791	4	.Vane, Stage 11 Stop, HP Compressor	-	6A4240	(S1)
06-400	6A8787	62	.Vane, Stage 11 Nominal, HP Compressor	-	6A4237C01	(S1)
06-448	6A8787	40 A/R	.Vane, Stage 11 Nominal, HP Compressor	-	6A4237C01	(1)(S1)
06-450	6A8788	40 A/R	.Vane, Stage 11 Undersize, HP Compressor	-	6A4237C02	(1)(S1)

D. Redundant parts:

None.

E. Instruction disposition codes:

- (1) The quantity of the parts to be installed must be calculated during assembly of the HP compressor rotor assembly.
- (S1) Old and new parts are not interchangeable.

3. Accomplishment Instructions

A. Rework Instructions

(1) None.

B. Assembly Instructions

(1) None.

C. Recording Instructions

(1) None.

ENGINE - HIGH PRESSURE (HP) COMPRESSOR - V2500 SELECTONE PRODUCTION - HP COMPRESSOR
UPGRADE

SUPPLEMENT - PRICES AND AVAILABILITY

The prices (if shown) are for estimating purposes only and as such are given in good faith, without commercial liability for advanced planning purposes only. Refer to IAE Spares and/or current price catalogue for current prices.

1. Modification Kit:

Not applicable.

2. New Production Parts:

Part No.	Description	Unit Price US Dollars
6A8688	Blade Assembly, Stage 3, HP Compressor	P.O.A.
6A8749	Blade, Stage 9 Nominal, HP Compressor	P.O.A.
6A8750	Blade, Stage 9 Undersize, HP Compressor	P.O.A.
6A8751	Blade, Stage 9 Locking LH, HP Compressor	P.O.A.
6A8752	Blade, Stage 9 Locking RH, HP Compressor	P.O.A.
6A8753	Blade, Stage 10 Nominal, HP Compressor	P.O.A.
6A8754	Blade, Stage 10 Undersize, HP Compressor	P.O.A.
6A8755	Blade, Stage 10 Locking LH, HP Compressor	P.O.A.
6A8756	Blade, Stage 10 Locking RH, HP Compressor	P.O.A.
6A8757	Blade, Stage 11 Nominal, HP Compressor	P.O.A.
6A8758	Blade, Stage 11 Undersize, HP Compressor	P.O.A.

Part No.	Description	Unit Price US Dollars
6A8759	Blade, Stage 11 Locking LH, HP Compressor	P.O.A.
6A8760	Blade, Stage 11 Locking RH, HP Compressor	P.O.A.
6A8761	Blade, Stage 12 Nominal, HP Compressor	P.O.A.
6A8762	Blade, Stage 12 Undersize, HP Compressor	P.O.A.
6A8763	Blade, Stage 12 Locking LH, HP Compressor	P.O.A.
6A8764	Blade, Stage 12 Locking RH, HP Compressor	P.O.A.
6A8765	Vane, Stage 6 Nominal, HP Compressor	P.O.A.
6A8766	Vane, Stage 6 Undersize, HP Compressor	P.O.A.
6A8767	Vane, Stage 6 Stop, HP Compressor	P.O.A.
6A8768	Vane, Stage 7 Nominal, HP Compressor	P.O.A.
6A8769	Vane, Stage 7 Undersize, HP Compressor	P.O.A.
6A8770	Vane, Stage 7 Stop RH, HP Compressor	P.O.A.
6A8772	Vane, Stage 8 Nominal, HP Compressor	P.O.A.
6A8773	Vane, Stage 8 Undersize, HP Compressor	P.O.A.
6A8774	Vane, Stage 8 Intrascop LH, HP Compressor	P.O.A.
6A8775	Vane, Stage 8 Intrascop RH, HP Compressor	P.O.A.
6A8776	Vane, Stage 8 Stop, HP Compressor	P.O.A.

Part No.	Description	Unit Price US Dollars
6A8778	Vane, Stage 9 Nominal, HP Compressor	P.O.A.
6A8779	Vane, Stage 9 Undersize, HP Compressor	P.O.A.
6A8780	Vane, Stage 9 Intrascopes LH, HP Compressor	P.O.A.
6A8781	Vane, Stage 9 Intrascopes RH, HP Compressor	P.O.A.
6A8782	Vane, Stage 9 Stop, HP Compressor	P.O.A.
6A8783	Vane, Stage 10 Nominal, HP Compressor	P.O.A.
6A8784	Vane, Stage 10 Undersize, HP Compressor	P.O.A.
6A8785	Vane, Stage 10 Stop LH, HP Compressor	P.O.A.
6A8786	Vane, Stage 10 Stop RH, HP Compressor	P.O.A.
6A8787	Vane, Stage 11 Nominal, HP Compressor	P.O.A.
6A8788	Vane, Stage 11 Undersize, HP Compressor	P.O.A.
6A8789	Vane, Stage 11 Intrascopes LH, HP Compressor	P.O.A.
6A8790	Vane, Stage 11 Intrascopes RH, HP Compressor	P.O.A.
6A8791	Vane, Stage 11 Stop, HP Compressor	P.O.A.

P.O.A. - Price On Application

3. Tools

None.