



AIR - STG 10 TO HPT AIR VALVE - INTRODUCE THE IMPROVED SWITCH MECHANISM - CATEGORY
CODE 8 - MOD.ENG-75-0022

1. Planning Information

A. Effectivity

- (1) Aircraft: (a) Airbus A320
(b) Airbus A321
(c) McDonnell Douglas MD-90
- (2) Engine: (a) V2500-A1 Engines prior to serial number V0354*
(b) V2500-A5 Engines prior to serial number V10012
(c) V2500-D5 Engines prior to serial number V20013*

* The serial number data shown are of a preliminary nature and are provided for advanced planning only.
A future revision to this Service Bulletin will confirm final serial number effectivity.

B. Reason

(1) Condition

Some Stage 10 to HPT Air Valves have been removed in fields because of the fault message.

(2) Background

A design review shows that there are some improvements to the condition.

(3) Objective

To improve reliability of the Stage 10 to HPT Air Valve.

(4) Substantiation

The changes introduced by this Service Bulletin were analytically substantiated.

(5) Effects of Bulletin on Workshop Procedures

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Removal/Installation	Not affected
Disassembly/Assembly	Not affected
Cleaning	Not affected
Inspection/Check	Not affected
Repair	Not affected
Testing	Not affected

(6) Supplemental Information

The Stage 10 to HPT Air Valve (PN 5U0008 and PN 5U0027) could be reworked to the new valves (PN 5U0057).

C. Description

Stage 10 to HPT Air Valve with the improved switch mechanism is introduced.

D. Approval

The Part Number changes and part modifications described in Section 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 Model listed.

E. Compliance

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Accomplish based upon experience with the prior configuration.

F. Manpower

Estimated Manhours to incorporate the full intent of this Bulletin:

Venue	Estimated Manhours
(1) In Service	Not applicable
(2) In Shop	Not applicable
(3) At overhaul	Refer to the reference 1.K.(4).

G. Material – Price and Availability

- (1) Refer to the reference 1.K.(4).
- (2) See "Material Information" section for prices and availability of future spares.

H. Tooling – Price and Availability

Special tools are not required to accomplish this Service Bulletin.

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**SERVICE BULLETIN****I. Weight and Balance**

- | | |
|-------------------|--|
| (1) Weight change | None |
| (2) Moment arm | No effect. |
| (3) Datum | Engine front mount centerline
(Power Plant Station (P.P.S) 100) |

J. Electrical Load Data

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

K. References

- (1) Internal Reference No.

93VJ015

- (2) Other References

V2500 Engine Illustrated Parts Catalog, Chapter/Section 75-23-51.

V2500 Power Plant Illustrated Parts Catalog, Chapter/Section 75-23-51.

IAE Service Bulletin No. V2500-ENG-70-0016.

Parker Hannifin Corporation Service Bulletin No. 5860010-75-77.

L. Other Publications Affected

- (1) V2500 Engines Illustrated Parts Catalog, Chapter/Section 75-23-51 will be revised to incorporate the new part.
- (2) V2500 Power Plant Illustrated Parts Catalog, Chapter/Section 75-23-51 will be revised to incorporate the new part.

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2. Accomplishment Instructions

A. Removal Instructions

Not applicable

B. Rework Instructions

For details, refer to the reference 1.K.(4).

C. Installation Instructions

Not applicable

D. Recording Instructions

A record of accomplishment is necessary.



3. Material Information

Applicability: For each V2500 Engines to incorporate this Bulletin.

A. Kits associated with this Bulletin:

Refer to the reference 1.K.(4).

B. Parts affected by this Bulletin:

New Part No. (ATA No.)	Qty	Est'd Unit Price (\$)	Keyword	Old Part No. (IPC No.)	Instructions Disposition
5U0057 (5860010-108) (75-23-51)	1		. Valve, Air Stg 10 to HPT	5U0008 (5860010-103) (01-100)	(A)(B)(C) (1)
5U0057 (5860010-108) (75-23-51)	1		. Valve, Air Stg 10 to HPT	5U0027 (5860010-106) (01-100)	(A)(B)(C) (1)

C. Instruction/Disposition Code Statements:

(A) New part is currently available for sale.

(B) New part can be reworked from old part.

(C) Old parts are no longer available for sale. Existing supplies of old parts will be continued to be fully supported although they must be used up.

(1) Old and New parts are freely and fully interchangeable, both physically and functionally.

NOTE: The estimated 1993 unit price shown in provided for planning purposes only and does not constitute a firm quotation.
Consult the IAE Price Catalog or contact IAE's Spare Parts Sales Department for information concerning firm prices.



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SERVICE BULLETIN

AIR - V2500 SERIES ENGINES-STAGE 10 TO HPT VALVE ASSEMBLY, PART NUMBERS 5860010-103 AND 5860010-106. UPGRADE TO 5860010-108.

1. PLANNING INFORMATION

A. Effectivity

This service bulletin is applicable to all Parker Hannifin Corporation Air Stage 10 to HPT Valve Assemblies (hereafter referred to as the Valve), Part Numbers, 5860010-103 and 5860010-106, used on the IAE V2500 engines.

B. Reason

This service bulletin is issued to advise all Model V2500 operators of an upgrade to the valve that incorporates an improved switch assembly mechanism.

C. Description

This service bulletin provides accomplishment instructions and reidentification information for upgrading the Valve to the -108 configuration.

D. Compliance

The intent of this service bulletin is classified as a life extension element. The compliance recommendation, therefore, falls into the non-quantified, time category, as defined by the ATA Implementation Guideline Manual (IGM) of April 1976.

E. Approval

- (1) This service bulletin was technically agreed to by International Aero Engines (IAE).
- (2) This service bulletin has been reviewed by the Federal Aviation Administration (FAA). The repairs and modifications, herein, comply with the applicable Federal Aviation Regulations (FARs) and are FAA approved for installation on the IAE V2500 engine.

F. Manpower

Time required is based on one individual performing all the tasks listed after the Valve has been removed from the V2500 engine.

<u>TASK</u>	<u>MANHOURS</u>
Disassembly of Valve Assembly	1.5
Reassembly of Valve Assembly	2.0
Full functional testing	4.0

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TASK

Reidentification

TOTAL

MANHOURS

0.5

8.0

G. Material - Cost and Availability

(1) Option 1:

For those operators who wish to have the Valve upgraded to the -108 configuration by Parker Hannifin Corporation:

(a) Please forward the Valve to:

PARKER HANNIFIN CORPORATION
Customer Support Commercial
16666 Von Karman Avenue
Irvine, CA 92714
USA

(b) Accomplishment of this service bulletin by Parker Hannifin Corporation will be completed at a cost to the operator of \$2510 with a turnaround time of 14 days after receipt of the Valve.

(c) The pricing provisions for the accomplishment of this service bulletin by Parker Hannifin Corporation shall be valid for 18 months from the date of issuance. Subsequent to that date, please refer to the Airline Spare Parts Catalog or request a quotation from Parker Hannifin Corporation, Customer Support Commercial.

(2) Option 2:

For operators who wish to accomplish the incorporation of the -108 configuration upgrade in the field:

(a) A kit, Part Number 1KIT5860010-101, is required for accomplishment of Option 2 in this service bulletin.

(b) Operators who wish to incorporate Option 2 of this service bulletin should order kit, Part Number, 1KIT5860010-101. The kit is available at a cost of \$1950, to operators with a delivery time of 90 days ARO beginning 60 days from the date of issuance of this service bulletin. The kit should be ordered from:

PARKER HANNIFIN CORPORATION
Customer Support Commercial
16666 Von Karman Avenue
Irvine, CA 92714
USA

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H. Tooling - Price and Availability

Not applicable.

I. Weight and Balance

Not affected.

J. Electrical Load Data

Not affected.

K. References

(1) Parker Hannifin Corporation Component Maintenance Manual (CMM), 75-23-51, Revision 1, dated April 1/89.

(2) IAE Service Bulletin V2500-ENG-75-0022.

L. Other Publications Affected

This service bulletin will be incorporated into Parker Hannifin Corporation CMM, 75-23-51, during the next scheduled revision of the manual.

M. Family Tree Chart

PARKER P/N	IAE P/N	Description
5860010-103	5U0008	Gold-contact micro switches.
5860010-106	5U0027	Platinum-contact micro switches.
5860010-108	5U0057	Chrome plated lever arm and switch plunger, new thermal isolator, main spring, and switch screws.

2. ACCOMPLISHMENT INSTRUCTIONS

A. Option 1:

See paragraph 1.G.(1) in this service bulletin.

B. Option 2:

Unless otherwise noted, refer to Parker Hannifin CMM, 75-23-51, and the following procedures for item numbers referenced throughout these instructions.

(1) Refer to the DISASSEMBLY section of CMM, 75-23-51. Disassemble the Valve to the extent necessary to accomplish this service bulletin.

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



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- C. Using the kitted parts, reassemble the Valve in accordance with ASSEMBLY section of CMM, 75-23-51.
- (1) Switch Adjustment:
- (a) Put a 0.005 inch (0,13 mm) shim stock between the switch plunger (70) and the switch actuating arm.
 - (b) Bottom the switches (25, 25A) against the shim. Torque screws (40) 19 to 20 inch pound (2,15 to 2,26 Nm) over run-down torque. Remove shim.
 - (c) Install nameplate cover (5) with four screws (10). Torque screws 10.5 to 11.5 inch pound (1,19 to 1,3 Nm) total torque.
- (2) Perform full functional testing in accordance with the TESTING AND FAULT ISOLATION section, CMM 75-23-51. Tooling and fixtures required are listed in CMM.
- D. Reidentification
- (1) Reidentify the Valve by using a 1/16 inch (1,59 mm) metal stamp in appropriate areas of the new nameplate as shown in Figure 1. The new IAE Part Number is 5U0057. The new Parker Part Number is 5860010-108. The serial number of the Valve remains the same for the -103 and -106 configurations.
 - (2) Remove nameplate cover (5) in accordance with the DISASSEMBLY section of CMM, 75-23-51.
 - (3) Install new nameplate cover (5) in accordance with the ASSEMBLY section of CMM, 75-23-51.

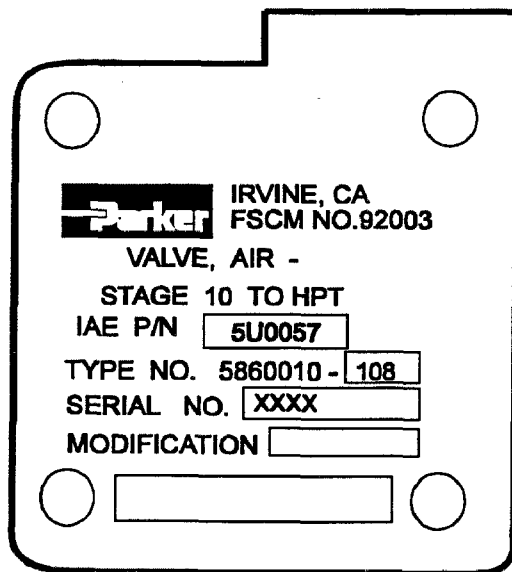


Figure 1

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3. Material Information

- A. The kit Part Number, 1KIT5860010-101, contains the items for the accomplishment of one Valve. The contents of the kit are listed in Table 1.

1KIT5860010-101 Material Information
Table 1

CONFIGURATION	NEW P/N	QTY	KEYWORD	OLD P/N	DISPOSITION
5860010-103 and -106	5873788-102	1	Thermal Isolator	5873788-101	Scrap
	5863266-103	1	Lever Arm	5863266-102	Scrap
	5863295-103	1	Switch Plunger	5863295-102	Scrap
	5933041-101	1	Spring	5873772-101	Scrap
	NAS1352N08-18	2	Screw	NAS1352C08-18	Scrap
	5873786-101	1	C Seal	5873786-101	Discard
	5853199-101	1	Gasket Seal	5853199-101	Discard
	5874225-101	1	Cover, nameplate	5874225-101	Scrap

- B. Provisions contained within this service bulletin shall be valid for 18 months from the date of issuance. Subsequent to that date, please refer to the Parker Hannifin Corporation Airline Spare Parts Catalog or request a quotation form Parker Hannifin Customer Support Commercial.

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