



AIR - HPC STAGE 10 BLEED VALVES - INTRODUCTIN OF A STAGE-10 BLEED VALVE SUPPLIED BY
PARKER HANNIFIN FOR THE HP COMPRESSOR - CATEGORY CODE 7 - MOD.ENG-75-0070

1. Planning Information

A. Effectivity

- (1) Aircraft: (a) Boeing - Douglas Product Division MD-90
- (2) Engines: (a) V2525-D5 Engines prior to Serial No.V20190
(b) V2528-D5 Engines prior to Serial No.V20190

B. Concurrent Requirements

This modification can only be installed to engines which have IAE V2500 Service Bulletin ENG 75-0069 (Refer to 1.L.).

C. Reason

(1) Condition

The HPC Stage-10 bleed-valve supplied by Dunlop can become locked in the closed position.

The problem is caused by contaminated air flows and occurs more often during compressor rub-in on a new engine. The problem can continue to occur during the engines life.

(2) Background

The problem has been reported on in-service engines.

(3) Substantiation

A satisfactory engineering analysis, engine tests and vendor rig tests have been done on the changes introduced by this Service Bulletin.

(4) Objective

The purpose of this Service Bulletin is to make the reliability of the unit better.

(5) Effect of Bulletin on Workshop Procedures:

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

D. Description

(1) The Parker Hannifin bleed valve shields the piston sealing rings and guide stem from direct exposure to valve inlet air flow. This gives protection against contamination.

The changes introduced are:

- (a) The Stage-10 bleed-valve installed to the HP Compressor is supplied by Dunlop Limited. This Service Bulletin replaces it with a unit supplied by Parker Hannifin Corporation.

E. Compliance

Category Code 7.

Do this Service Bulletin when there are no initial parts remaining.

F. Approval

The part number changes and/or part modification are given in Section 2 and 3 of this Service Bulletin. They obey the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine model listed.

G. Manpower

Estimate of man-hours necessary to do this Service Bulletin in full:

| Venue | Estimated Man-hours |
|-------------------------|---|
| (1) In Service | Not applicable |
| (2) At Overhaul | No additional time is necessary to do this Service Bulletin |

NOTE: It is possible to get access to the parts affected by this Services Bulletin at overhaul.

H. Material - Price and Availability

- (1) A modification kit is not necessary.

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- (2) See "Material Information" section for prices and availability of new spares.

I. Tooling - Price and Availability

Special tools are not necessary.

J. Weight and Balance

- | | | | | | |
|-----|---------------|----|----|----|-------------------------------|
| (1) | Weight Change | .. | .. | .. | Plus 0,18 kg (0.4 lb) |
| (2) | Moment Arm | .. | .. | .. | 673 mm (26.5 in) to the rear |
| (3) | Datum | .. | .. | .. | Power Plant Station (PPS) 100 |

K. Electrical Load Data

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

L. References

- (1) Internal Reference No.

EC97VI004C

EC97VI012

- (2) Other References

The following IAE V2500 Service Bulletin that follows must be installed before or at the same time as this Service Bulletin.

ENG-75-0069 AIR - HPC STAGE 10 BLEED VALVES - INTRODUCTION OF BLEED VALVE SILENCERS WITH INTEGRAL SEAL LAND

Parker Hannifin Service Bulletin 5950041-75-105

M. Other Publications Affected

- (1) Illustrated parts catalog (IPC), Chapter/Section, 75-32-54.
- (2) Engine Manual (EM), Chapter/Section, 72-00-40 Removal-04 and Installation-07.
- (3) MD-90 Aircraft Maintenance Manual (AMM), Chapter/Section, 75-33-54 Removal/Installation.
- (4) Repair schemes affected.

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2. Accomplishment Instructions

A. Rework Instructions

None.

B. Assembly Instructions

For the correct removal/installation procedures refer to the MD-90 Aircraft Maintenance Manual (AMM), Chapter/Section 75-33-54, Removal/Installation.

or

The D5 Engine Manual (EM), Chapter/Section, 72-00-40 Removal-04 and Installation-07.

C. Recording Instructions

- (1) A record of accomplishment is necessary. Refer to Parker Hannifin Service Bulletin 5950041-75-105.

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3. Material Information

Applicability: For each V2500 Engine to incorporate this Bulletin.

A. Kits associated with this Bulletin:

None

B. Parts affected by this Bulletin:

| New Part No. (ATA No.) | Qty | Est'd Unit Price (\$) | Keyword | Old Part No. (IPC No.) | Instructions Disposition |
|------------------------------|-----|-----------------------------|-------------------------------|------------------------------|-----------------------------|
| 5950041-105 (75-32-54) | 1 | NOTE | Valve, Bleed, Stage 10 HPC | AC69922 (01-400) | (A)(B)(S1) |

NOTE: The unit prices, if shown, are an estimate and they are given for the purpose of planning only. For information about actual prices, refer to the IAE Price Catalog or contact IAE's spare parts sales department.

C. Instruction/Disposition Code Statements:

- (A) New part will be available from October 1997.
- (B) Old part will be discontinued.
- (S1) Old and new parts are freely and fully interchangeable upon embodiment of IAE V2500 modification 96VR016C (see 1.L.). Installation of new parts to pre-mod 96VR016C units is not possible.

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SERVICE BULLETIN

| | | |
|-----|-----------------|--|
| AIR | V2500-D5 ENGINE | INTRODUCTION OF 10TH STAGE HIGH PRESSURE COMPRESSOR BLEED VALVE, PART NUMBER (P/N) 5950041-105 |
|-----|-----------------|--|

1. Planning Information

A. Effectivity

This service bulletin is applicable to the 10th Stage High Pressure Compressor Bleed Valve (hereinafter referred to as the valve), P/N 5950041-105, installed on the IAE V2500-D5 engines, used on Boeing MD90 aircraft.

B. Reason

(1) Background

This service bulletin is issued to introduce a new 10th Stage High Pressure Compressor Bleed Valve, P/N 5950041-105.

(2) Objective

The valve improves the product reliability against contamination induced failure.

(3) Substantiation

The valve is inherently contamination resistant. The design uses a single piston seal assembly that is completely shielded from the main stage airflow. The seal is on the downstream side of the piston and has no leakage when the valve is closed.

C. Description

This service bulletin provides instructions for ordering the new valve, P/N 5950041-105.

D. Compliance – Code 7

This service bulletin is classified as a Life Extension element. The compliance recommendation, therefore, falls into the Operator's Decision category, as defined by the ATA Implementation Guideline Manual (IGM), July 1994. Parker Hannifin Corporation recommends that this service bulletin be accomplished when supply of superseded parts have been depleted.

E. Approval

This service bulletin has been reviewed by the Federal Aviation Administration (FAA), and the modifications herein comply with the applicable Federal Aviation Regulations (FAR) and are approved for installation in the IAE V2500 engines.

F. Manpower

Not applicable.

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G. Weight and Balance

Not applicable.

H. Electrical Load Data

Not applicable.

I. Software Accomplishment Summary

Not applicable.

J. References

Parker Hannifin Corporation Component Maintenance Manual (CMM), ATA 75-31-41.

IAE Service Bulletin V2500-ENG-75-0070.

K. Other Publications Affected

None.

2. Material Information

A. Material - Cost and Availability

Operators who want to implement this service bulletin should contact the Parker Hannifin Corporation at the following address:

| | | |
|-----------------------------|---------------------|----------------|
| PARKER HANNIFIN CORPORATION | PHONE: | (714) 833-3000 |
| Customer Support Commercial | After 1 April 1998 | (949) 833-3000 |
| 16666 Von Karman Avenue | FAX: | (714) 660-8390 |
| Irvine, California 92606 | After 1 April 1998 | (949) 660-8390 |
| USA | TELEX: | 678304 |
| | SITA: | JNPPHCR |
| | REPAIR STATION NO.: | AU4R063M |

NOTE: This valve must be installed with a new silencer, P/N 6A6538. Please refer to IAE Service Bulletin V2500-ENG-75-0069 for further information.

B. Material Necessary for Each Component

Not applicable.

C. Tooling

Not applicable.

3. Accomplishment Instructions

Operators who want to accomplish this service bulletin should contact the Parker Hannifin Corporation at the address in paragraph 2.A.

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