

### <u>AIR - H.P. COMPRESSOR - INTRODUCTION OF SOLENOID VALVES WITH IMPROVED ELECTRICAL</u> <u>BONDING - CATEGORY CODE 6 - MOD.ENG-75-0014</u>

### 1. Planning Information

### A. Effectivity

(1) Aircraft: Airbus A320

(2) Engine: V2500-A1 Engines prior to Serial No.V0162 except V0156, V0158,

V0160 and V0161.

### B. Reason

### (1) Condition

It is a requirement that the electrical resistance between the pipe unions and the mounting surface of the solenoid valves is at maximum 25m ohms.

### (2) Background

Measurements conducted at the engine manufacturer indicated that some solenoid valves may not comply with this requirement.

### (3) Objective

Incorporation of the changes introduced by this Service Bulletin are designed to improve the electrical bonding of the solenoid valves.

### (4) Substantiation

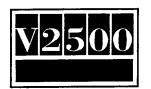
The changes introduced by this Service Bulletin have been shown by unit rig testing to alleviate the condition.

### (5) Effect of Bulletin on workshop procedures:

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

### (6) Supplemental Information

See Dunlop Service Bulletin 75-26, Dunlop Modifications E552, E553, E554.



### International Aero Engines

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### C. <u>Description</u>

The modification contained in the Dunlop Service Bulletin allows the anodizing at the pipe union and the mounting surface to be replaced by Alocrom to maintain the electrical resistance between the pipe union and the mounting surface of the solenoid valve within a maximum of 25m ohms.

### D. Approval

The part number changes and/or part modifications contained in section 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

Category Code 6

Accompish when the sub-assembly (ie modules, accessories, components, build groups) is disassembled sufficiently to afford access to the affected part and to all affected spare parts.

### F. Manpower

Estimated manhours to incorporate the full intent of this Bulletin.

Venue Estimated Manhours

(1) In service .. .. Not applicable

(2) At overhaul .. .. Not applicable

### G. Material - Price and Availability

- (1) Modification kit not required.
- (2) See 'Material Information' section for prices and availability of future spares.

### H. Tooling - Price and Availability

Special tools are not required.

### I. Weight and Balance

(1) Weight change None

(2) Moment arm None

(3) Datum Engine front mount centreline (Power Plant Station (PPS) 100)



### International Aero Engines

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### J. Electrical Load Data

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

### K. References

(1) Internal Reference No.

EC88VR139

ECM88VR139-02

(2) Other References

A320 Aircraft Maintenance Manual.

Dunlop Service Bulletin 75-26.

Dunlop Component Maintenance Manuals.

### L. Other Publications Affected

(1) V2500 Illustrated Parts Catalog, 36-11-57, 75-32-51, 75-32-53

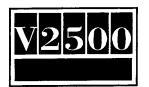


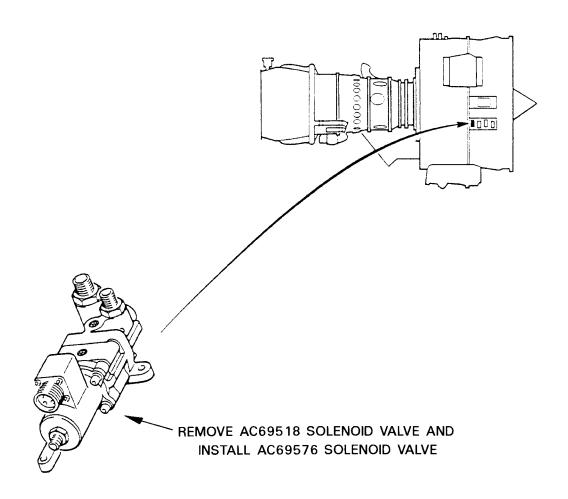
### 2. Accomplishment Instructions

A. Accomplishment of this Service Bulletin is by unit replacement.

Return removed valves to: Vendor Code No.K1037

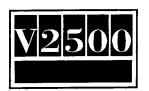
- B. Assembly Instructions
  - (1) New AC69576, AC69572 and AC69574 stage 7 and 10 solenoid valves are interchangeable with in use stage 7 and 10 solenoid valves.
  - (2) Assemble new or re-identified AC69576, C69572 and AC69574 stage 7 and 10 solenoid valves by use of approved procedures, Engine Manual, 72-00-32, Installation.
- C. Record Instructions
  - (1) A record of accomplishment is necessary.

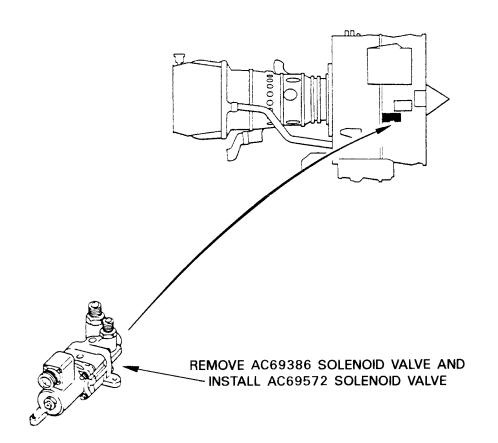




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Location of Solenoid Valve Stage 10 Bleed Fig.1 (Sheet 1 of 3)

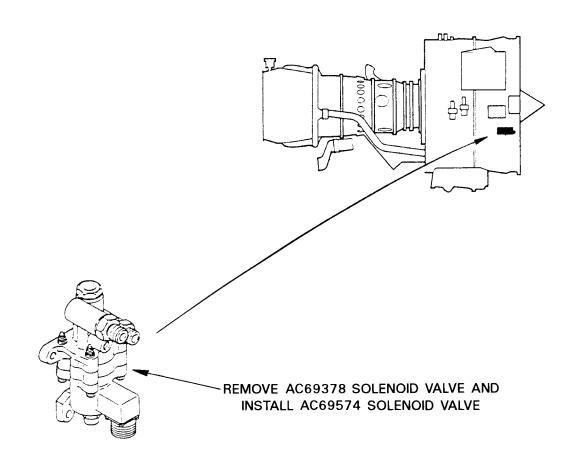




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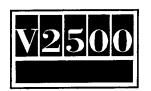
Location of Solenoid Valve Stage 7 H.P.C. Fig.2 (Sheet 2 of 3)





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Location of Solenoid Valve Stage 10 H.P.C Fig.1 (Sheet 3 of 3)



### 3. Material Information

Applicability: For each V2500 Engine to incorporate this Bulletin.

### A. <u>Kits associated with this Bulletin:</u>

None

### B. Parts affected by this Bulletin:

New		Est'd		0ld	
Part No.		Unit		Part No.	Instructions
(ATA No.)	Qty	Price (\$)	Keyword	(IPC No.)	Disposition

### A. Vendor units affected by this modification:

AC69576	1	Valve,	solenoid -	stage	10 bleed	AC69518	(A)(B)(S1)
(36-11-57)						(01-100)	
AC69572	1	Valve,	solenoid -	stage	7 HPC	AC69386	(A)(B)(S1)
(75-32-51)						(01-100)	
AC69574	1	Valve,	solenoid -	stage	10 HPC	AC69378	(A)(B)(S1)
(75-32-53)						(01-400)	

### B. <u>Instruction/Disposition code statements:</u>

- (S1) Old and new parts coded (S1) are freely and fully interchangeable.
- (A) New parts currently available.
- (B) Old parts no longer available.

# SFRVICE BUILTED AVIATION DIVISION

### AIR - HP COMPRESSOR - INTRODUCTION OF SOLENOID VALVES WITH ELECTRICAL BONDING

### Dunlop Modifications E552, E553 and E554

### 1. Planning Information

- A. Effectivity
  - (1) Engines Affected Airbus 320, V2500 A1100000 Serial Numbers prior to V0162
  - (2) Units Affected Dunlop HP7 Solenoid Valve AC69386
    Dunlop HP10 Solenoid Valve AC69378
    Dunlop Cabin Air Solenoid Valve AC69518

### B. Reason

(1) Condition and Background

It is a requirement that the electrical resistance between the pipe unions and the mounting surface of the solenoid valves is at a maximum of 25 mohms.

Measurements conducted on a production engine (V0005) indicated that the solenoid valves did not comply with this requirement.

(2) Objective

Incorporation of the changes introduced by this Service Bulletin (Modification) are designed to improve the electrical bonding of the solenoid valve.

(3) Substantiation

The changes introduced by this Service Bulletin (Modification) have been shown by unit rig testing to alleviate the condition.

NOTE: It is essential that parts are installed as a set.

### C. Description

This Service Bulletin (Modification) introduces sealing washers with revised surface finish and introduces valve bodies with the anodised finish removed from the valve body mounting feet and the sealing washer counterbores.

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### <u> AIR - HP C</u>OMPRESSOR - INTRODUCTION OF SOLENOID VALVES WITH ELECTRICAL BONDING

### Dunlop Modifications E552, E553 and E554

#### D. Approval

Service Bulletin No. 75-26 (Mod. E552, E553 and E554) (IAE SB V2500-ENG-75-0014) was technically approved by IAE on April 11/91. The part number changes and/or modifications described in this Service Bulletin have been shown to comply with the appropriate Federal Aviation Regulations (FAR's) and are FAA approved for those units listed in this Bulletin.

#### Ε. Compliance

Category Code 6.

Accomplish when the sub-assembly (ie modules, accessories, components, build groups) is disassembled sufficiently to afford access to the affected part and to all affected spare parts.

F. Manpower

This Modification will take approximately 1.5 man hours.

G. Material - Cost and Availability

Mod Kit	)	Mod E552, E553, E554 as appropriate
Mod at Works	)	
Repair and Overhaul	)	Cost and availability on application.

### Η. Tooling

Tools and equipment required are as listed in Dunlop Component Maintenance Manuals (DCMM) 75-32-51, 75-32-53 and 36-11-57.

- L Weight and Balance
  - (1) Weight change -None
  - Not affected (2) Moment arm
  - (3) **Engine front Mount Centre Line** Datum (Power Plant Station (PPS) 100).

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## AIR - HP COMPRESSOR - INTRODUCTION OF SOLENOID VALVES WITH ELECTRICAL BONDING

### Dunlop Modifications E552, E553 and E554

- J. Electrical Load Data
  - Not affected.
- K. References

DCMM 75-32-51, 75-32-53, 36-11-57. IAE Service Bulletin V2500-ENG-75-0014.

L. Publications Affected

DCMM 75-32-51, 75-32-53 and 36-11-57 to be revised.

### DUNLOP LIMITED AVIATION DIVISION

## SERVICE BULLETIN

AIR - HP COMPRESSOR - INTRODUCTION OF SOLENOID VALVES WITH ELECTRICAL BONDING

### <u>Dunlop Modifications E552, E553, and E554</u>

### 2. Accomplishment Instructions

Accomplishment of this Service Bulletin is by unit replacement.

### A. Valve AC69386

The part number identification AC69572 will show that this Service Bulletin has been included in the unit. (Dunlop Modification E553).

### B. Valve AC69378

The part number identification AC69574 will show that this Service Bulletin has been included in the unit. (Dunlop Modification E552).

### C. Valve AC69518

The part number identification AC69576 will show that this Service Bulletin has been included in the unit. (Dunlop Modification E554).

AIR - HP COMPRESSOR - INTRODUCTION OF SOLENOID VALVES WITH ELECTRICAL BONDING

### Dunlop Modifications E552, E553 and E554

- 3. Material Information
  - A. Mod Kit comprises
    - (1) Mod E552 HP10 Solenoid Valve AC69574.
    - (2) Mod E553 HP7 Solenoid Valve AC69572.
    - (3) Mod E554 Cabin Air Solenoid Valve AC69576.
  - B. Parts Affected
    - (1) Units AC69386

New Part No.	Qty Per unit	Keyword	Old Part No.	Disposition
ACA1790	1	Body	ACA1554	Return to Dunlop for Modification
ACO46216	1	Washer Sealing	ACO45635	Redundant
ACO46217	1	Washer Sealing	ACO45636	Redundant.

### (2) Units AC69378

New Part No.	Qty Per unit	Keyword	Old Part No.	Instructions Disposition
ACA1800	1	Body	ACA1573	Return to Dunlop for Modification
ACO46216	1	Washer Sealing	ACO45635	Redundant
ACO46217	1	Washer Sealing	ACO45636	Redundant

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# SERVICE BULLETIN

## AIR - HP COMPRESSOR - INTRODUCTION OF SOLENOID VALVES WITH ELECTRICAL BONDING

### **Dunlop Modifications E552, E553 and E554**

### (3) Units AC69518

New Part No.	Qty Per unit	Keyword	Old Part No.	Instructions Disposition
ACA1790	1	Body	ACA1554	Return to Dunlop for Modification
ACO46216	1	Washer Sealing	ACO45635	Redundant
ACO46217	1	Washer Sealing	ACO45636	Redundant.