



AIR - HP COMPRESSOR STAGE 10 BLEED VALVES - INTRODUCTION OF CHEVRON SEALS AND NEW VALVE
CENTRE STEM BUSHING - CATEGORY CODE 4 - MOD.ENG-75-0054

1. Planning Information

A. Effectivity

- (1) Aircraft: (a) Airbus A320
(b) Airbus A321
(c) McDonnell Douglas MD90
- (2) Engine: (a) V2500-A1 Engines prior to V0362
(b) V2500-A5 Engines prior to V10122
(c) V2530-A5 Engines prior to V10122
(d) V2525-D5 Engines prior to V20025
(e) V2528-D5 Engines prior to V20025
- (3) Units: Bleed Valve - HP Compressor Stage 10 AC69861

B. Concurrent Requirements

None

C. Reason

(1) Condition

Valve sticking of HP Compressor Valves has occurred in service.

(2) Background

Dry contamination of the triple seals in the valve body and piston and oxidation of the valve centre stem may cause valve sticking. When the valve sticks in the closed position, starting may be difficult. Valves stuck in the open position may result in EGT shift and loss of surge margin.

(3) Objective

Incorporation of the changes introduced by this Service Bulletin are designed to improve unit reliability.

(4) Substantiation

HP compressor stage 10 bleed valves incorporating the chevron design seal and valve center stem bushing have successfully completed contamination and vibration testing, to demonstrate the integrity of the new seal and bushing.

V2500-ENG-75-0054



SERVICE BULLETIN

(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

None

D. Description

- (1) This bulletin covers the installation of the HP compressor stage 10 bleed valves incorporating Dunlop Mod E593.
- (2) This bulletin introduces stage 10 bleed valves which incorporates new chevron seals and a center stem bushing to prevent valves sticking as a result of dry contamination of the triple seals and oxidation of the valve center stem bushing.
- (3) Units incorporating this bulletin will be identified by the type number AC69922.

E. Approval

The part number changes and/or part modification 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.

F. Compliance

Category Code 4

Accomplish at the first visit of an engine or module to a maintenance base capable of compliance with the accomplishment instructions, regardless of the planned maintenance action or the reason for engine removal.

G. Manpower

Estimated manhours to incorporate the full intent of this Bulletin:

Venue	Estimated Manhours
-------	--------------------

(1) In Service

(a) To gain access	26 minutes
--------------------	------------

V2500-ENG-75-0054



SERVICE BULLETIN

(b) To embody (Refer to Dunlop Service Bulletin 75-31)

(c) To return to flyable status 31 minutes

total: 57 minutes

(2) At Overhaul

(a) To embody (Refer to Dunlop Service Bulletin 75-31)

Note: The parts affected by this Service Bulletin are accessible at overhaul.

H. Material - Price and Availability

(1) Modification Kit not required.

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

I. Tooling - Price and Availability

Special tools are not required.

J. Weight and Balance

(1) Weight change	None
(2) Moment arm	No effect
(3) Datum	Engine front mount centerline (Power Plant Station (PPS) 100)

K. Electrical Load Data

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

L. References

(1) Internal Reference No.

EC94VR056

EC94VR056A

EC94VR056B

V2500-ENG-75-0054



(2) Other References

Airbus A320 Aircraft Maintenance Manual

Airbus A321 Aircraft Maintenance Manual

McDonnell Douglas MD90 Aircraft Maintenance Manual

Dunlop Service Bulletin 75-30

IAE Service Bulletin V2500-ENG-75-0040

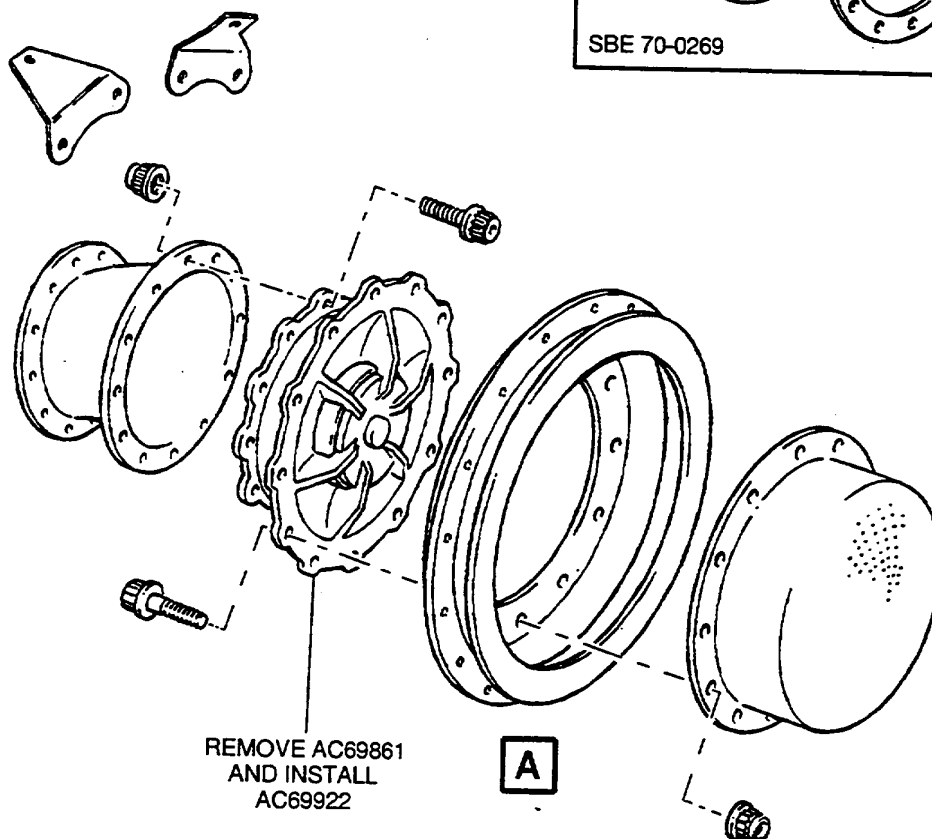
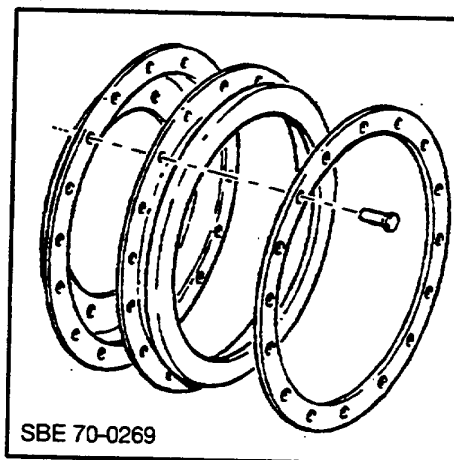
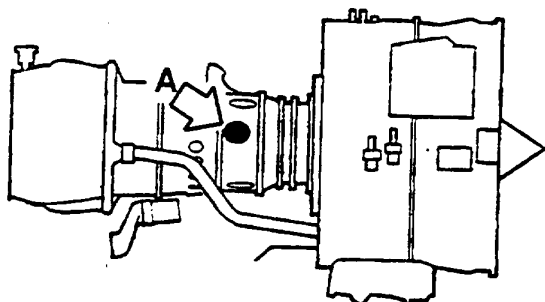
For the V2500-A1, V2527-A5 and V2530-A5 models this SB is subject to Aircraft Modification 26873 and is covered by Airbus Industrie SB A320-75-1003

Printed in Great Britain

M. Other Publications Affected

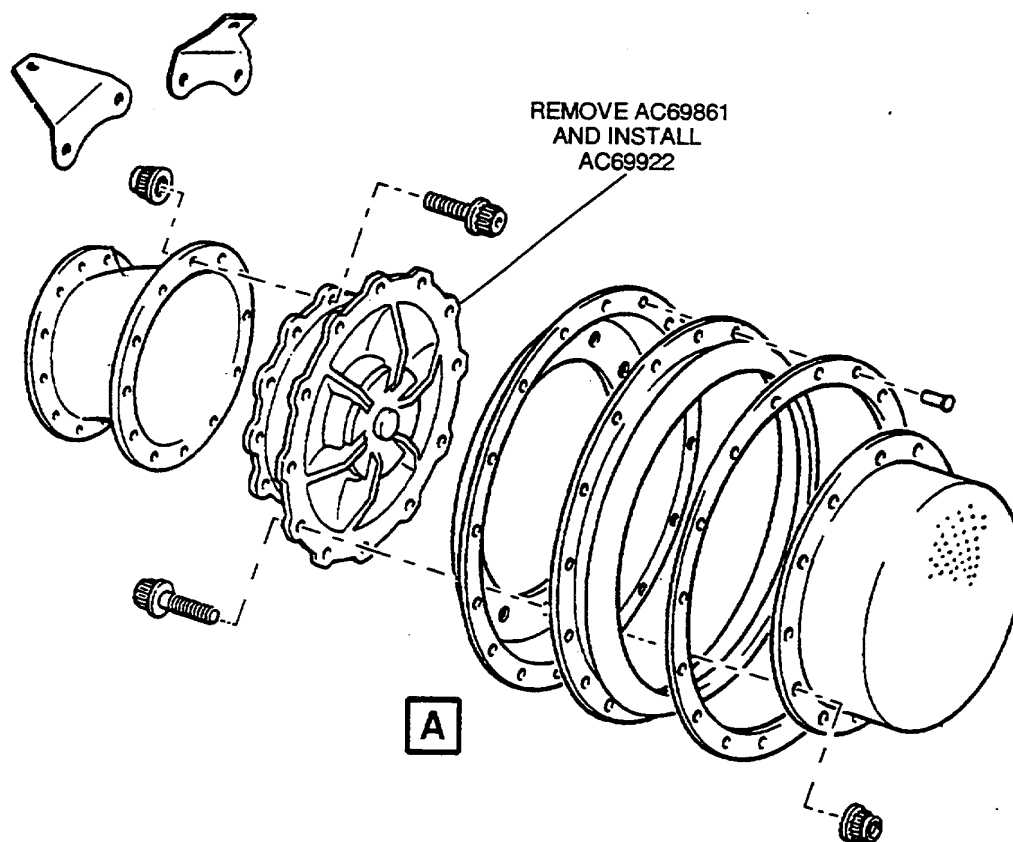
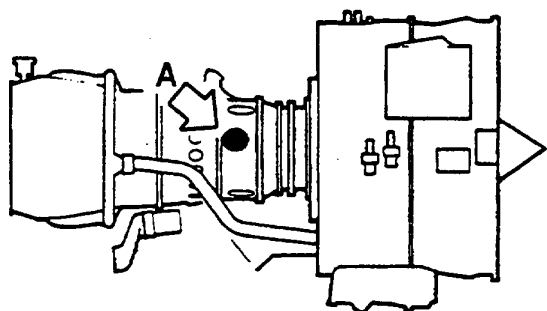
- (1) V2500 Engine Illustrated Parts Catalog (S-V2500-1IA), Chapter/Section 75-32-52
- (2) V2500 Engine Illustrated Parts Catalog (S-V2500-2IA), Chapter/Section 75-32-52
- (3) V2500 Engine Illustrated Parts Catalog (S-V2500-3IA), Chapter/Section 75-32-52

V2500-ENG-75-0054



Location of HPC Stage 10 Bleed Valve (V2500-A1 Engine)
Fig.1(Sheet 1 of 3)

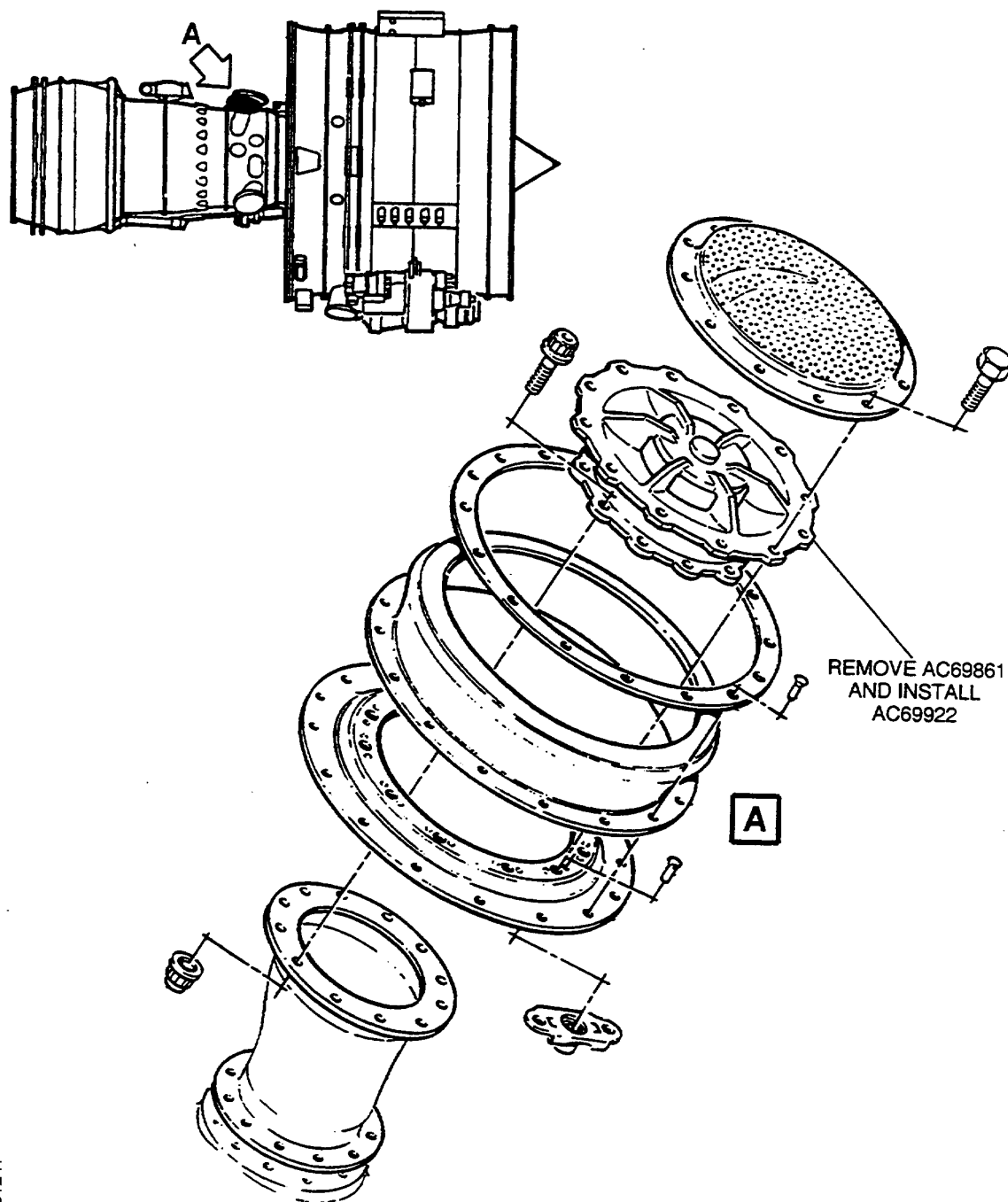
ded0001239



Location of HPC Stage 10 Bleed Valve (V2500-A5 Engine)
Fig.1(Sheet 2 of 3)

V2500-ENG-75-0054

Printed in Great Britain



Location of HPC Stage 10 Bleed Valve (V2500-D5 Engine)
Fig.1(Sheet 3 of 3)

ded0001241

V2500-ENG-75-0054

May.12/95

Page 7



2. Accomplishment Instructions

A. Prerequisite Instructions

- (1) On the aircraft panel 115VU put a warning notice to tell persons not to start the engine.
- (2) Make sure that the engine has been shutdown for at least 5 minutes.
- (3) On the aircraft panel 50VU make sure that the ON legend of the ENG FADEC GND PWR push button switch is OFF and install a warning notice.
- (4) Open the left and right fan cowl doors with the instructions given in the A320 Aircraft Maintenance Manual or the A321 Aircraft Maintenance Manual, TASK 71-13-00-010-010 or the upper and lower fan cowl doors with the instructions given in the MD90 Aircraft Maintenance Manual, Chapter/Section 71-13-00, Page 201.
- (5) Open the left and right thrust reverser halves with the instructions given in the A320 Aircraft Maintenance Manual or the A321 Aircraft Maintenance Manual, TASK 78-32-00-010-010 or the upper and lower thrust reverser halves with the instructions given in the MD90 Aircraft Maintenance Manual, Chapter/Section 78-32-00, Page 201.

B. Removal Instructions

- (1) Remove the HP compressor stage 10 bleed valve as instructed in the A320 Aircraft Maintenance Manual or the A321 Aircraft Maintenance Manual TASK 75-32-54-000-010, or the MD90 Aircraft Maintenance Manual, Chapter/Section 75-33-54, Page 401.

C. Rework Instructions

- (1) Rework the HP compressor stage 10 bleed valve as instructed in Dunlop Service Bulletin 75-31.

D. Assembly Instructions

- (1) Install the HP compressor stage 10 bleed valve as instructed in the A320 Aircraft Maintenance Manual or the A321 Aircraft Maintenance Manual TASK 75-32-54-400-010, or the MD90 Aircraft Maintenance Manual, Chapter/Section 75-33-54, Page 401.

E. Post-Requisite Instructions

- (1) Close the left and right thrust reverser halves with the instructions given in the A320 Aircraft Maintenance Manual or the A321 Aircraft Maintenance Manual, TASK 78-32-00-410-010 or the upper and lower thrust reverser halves with the instructions given in the MD90 Aircraft Maintenance Manual, Chapter/Section 78-32-00, Page 201.

V2500-ENG-75-0054



- (2) Close the left and right fan cowl doors with the instructions given in the A320 Aircraft Maintenance Manual or the A321 Aircraft Maintenance Manual, TASK 71-13-00-410-010 or the upper and lower fan cowl doors with the instructions given in the MD90 Aircraft Maintenance Manual, Chapter/Section 71-13-00, Page 201.

- (3) Remove the warning notices from the aircraft panels 115VU and 50VU.

F. Test

- (1) Do a test of the HP compressor stage 10 bleed valve. Refer to the A320 Aircraft Maintenance Manual or the A321 Aircraft Maintenance Manual, TASK 71-00-00-710-017 or the MD90 Aircraft Maintenance Manual, Chapter/Section 71-00-00, Page 501.

G. Recording Instructions

- (1) A record of accomplishment is necessary.



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
AC69922 (75-32-54)	1		Bleed Valve Stage 10 HPC	AC69861 (01-400)	(A)(B)(1D) (S1)

C. Instructions/Disposition Code Statements

(A) New part is currently available

(B) Old part is no longer available

(1D) Old part is capable of being reworked and
re-identified to the new part number.

(S1) New part may be used in place of old part but not vice versa.

NOTE: Consult vendor for price information.

Printed in Great Britain

V2500-ENG-75-0054



DUNLOP EQUIPMENT DIVISION

SERVICE BULLETIN

SB Number 75-31 (Revision 1)

Power Plant Air Compressor Control

**Introduction of HP10 Bleed Valve AC 69922 Mod 2 with Chevron Seal & Metal Bush in lieu and by conversion of AC69861 & AC69922 Mod 1
DUNLOP MODIFICATION E593 (Issue 2) (IAE SB V2500-ENG-75- 0054 Rev 1)**

1. Planning Information

A. Effectivity

- (1) Aircraft
 - (a) Airbus A320
 - (b) Airbus A321
 - (c) McDonnell Douglas MD90
- (2) Engines
 - (a) V2500-A1
 - (b) V2500-A5
 - (c) V2500-D5
- (3) Units affected
Dunlop HP 10 Bleed Valve AC69861 Mod 1 and AC69922 Mod 1.

B. Reason

- (1) Condition
Valve sticking of HP compressor bleed valves has occurred in service.
- (2) Background
Dry contamination of the triple seals in the valve body and piston, also oxidation of the valve centre stem bushing may cause valve sticking. When the valve sticks in the closed position, starting may be difficult. Valve sticking in the open position may result in EGT shift and loss of surge margin.
- (3) Objective
Incorporation of the changes introduced by this Service Bulletin (Dunlop Mod E593 Re 2) are designed to improve unit reliability.
Note:- This re-issue of SB 75-31 at Revision 1 incorporates Dunlop Mod E593 Issue 2 which modifies the Piston 'Chevron' Seal and the Metal Bush included in Mod Kit ACO47198
- (4) Substantiation
HP compressor stage 10 bleed valves incorporating the chevron design carbon /nimonic triple seals and the metal bush successfully completed contamination and vibration testing, to demonstrate the integrity of the new seals and bush.

Dec.12/94

Revision 1 May 12/95

AC69861, AC69922 SB 75-31

Page 1 of 12

Printed in England

A Division of Dunlop Limited. Registered in England No. 995293. Registered Office, Silvertown House, Vincent Square, London SW1P 2PL.
A member of the BTR Group

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



DUNLOP EQUIPMENT DIVISION

SERVICE BULLETIN

SB Number 75-31 (Revision 1)

Power Plant Air Compressor Control

**Introduction of HP10 Bleed Valve AC 69922 Mod 2 with Chevron Seals
& Metal Bush in lieu and by conversion of AC69861 & AC69922 Mod 1
DUNLOP MODIFICATION E593 (Issue 2) (IAE SB V2500-ENG-75- 0054 Rev 1)**

C. Description

(1) The procedures introduced by this Service Bulletin are as follows:-

HP10 Bleed Valve AC69861 Mod 1

Disassembly of HP10 Bleed Valve
Replacement of Piston Triple Seal Assembly DAS2485-1256 by a new 'Chevron' Seal Assembly ACO47190 Issue 2.
Replacement of Body Triple Seal Assembly DAS2505-1225 by a new 'Chevron' Seal Assembly ACO47189 Issue 1.
Replacement of Carbon Bush ACO47056 by new Metal Bush ACO47055 Issue 2.
Renewal of Nut AS20625, Retainer MR59S and Rivet A546791
Assembly & Re-identification of the modified Bleed Valve as **AC69922 Mod 2**.

HP10 Bleed Valve AC69922 Mod 1

Disassembly of HP10 Bleed Valve
Replacement of Piston 'Chevron' Seal Assembly ACO47190 Issue 1 by a new 'Chevron' Seal Assembly ACO47190 Issue 2.
Replacement of Metal Bush ACO47055 Issue 1 by a new metal Bush ACO47055 Issue 2.
Renewal of Nut AS20625, Retainer MR59S and Rivet A546791
Assembly & Re-identification of the modified Bleed Valve as **AC69922 Mod 2**.

(2) Refer to figure 1 for pre and post mod configuration of the Bleed Valve

D. Approval

This Service Bulletin No AC69861, AC69922 SB 75-31 Revision 1 (MOD E593 Issue 2) (IAE SB V2500-ENG-75-0054 Rev 1) was technically agreed by IAE on 28. April 1995. The part number changes and / or part modifications described in this bulletin have been shown to comply with the appropriate Federal Aviation Regulations and are FAA approved for those units Listed in this bulletin.

E. Compliance

Category 4

Accomplish at the first visit of an engine or module to a maintenance base capable of compliance with the accomplishment instructions regardless of the planned maintenance action or the reason for engine removal.

F. Manpower

Modification & Rework 45 man minutes

Dec.12/94

Revision 1 May 12/95

AC69861, AC69922 **SB 75-31**

Page 2 of 12

Printed in England

A Division of Dunlop Limited. Registered in England No. 995293. Registered Office, Silvertown House, Vincent Square, London SW1P 2PL.
A member of the BTR Group

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



DUNLOP EQUIPMENT DIVISION

SERVICE BULLETIN

SB Number 75-31 (Revision 1)

Power Plant Air Compressor Control

**Introduction of HP10 Bleed Valve AC 69922 Mod 2 with Chevron Seals
& Metal Bush in lieu and by conversion of AC69861 & AC69922 Mod 1
DUNLOP MODIFICATION E593 (Issue 2) (IAE SB V2500-ENG-75- 0054 Rev 1)**

G. Materials - Price and Availability

Dunlop will supply a modification kit PN ACO47198 Issue 2 to permit accomplishment of this Service Bulletin. Further information on the Price and Availability of the modification kit can be obtained on request to:-

Dunlop Equipment Division. Holbrook Lane, Foleshill, Coventry CV6 4AA. England
Tel. (01203) 668614 Fax.(01203) 668776 Telex 31677 Sita.CVTDLCR
Attention of Mr. Ray Latham

H. Tooling - Price and Availability

The following tools are required to accomplish this Service Bulletin.

Tool No	Qty	Description	Function
Acratork Model A	One	Torque Spanner $\frac{3}{8}$ in square drive range 4 to 20 Nm	To torque load Nut AS20625
Britool AB312	One	Torque Socket $\frac{3}{8}$ in square drive	To hold Nut AS20625
Britool AB437	One	Torque Socket $\frac{3}{8}$ in square drive	To hold Bolt A10419E
Britool A70	One	'T' handle $\frac{3}{8}$ in square drive	For use with Torque Sockets

Note:1 Equivalent alternatives may be used for listed items.

Note:2 Tooling is commercially available.

I. Weight and Balance

(1) Weight change	None
(2) Moment Arm.....	No Effect
(3) Datum.....	Engine Front Mount Centreline (Power Plant Station (PPS) 100)

J. Electrical Load Data

Not affected.

K. References

IAE EC 94VR056, 94VR056A, 94VR056B
IAE Service Bulletin V2500-ENG-75-0054 Rev 1
Dunlop Component Maintenance Manual (CMM) 75-32-54 (HP10 Bleed Valve)

L. Publications Affected

Dunlop Component Maintenance Manual (CMM) 75-32-54 to be revised.

M. Family Tree Charts

Not applicable.

Dec.12/94

Revision 1 May 12/95

AC69861, AC69922 **SB 75-31**

Page 3 of 12

Printed in England

A Division of Dunlop Limited. Registered in England No. 995293. Registered Office, Silvertown House, Vincent Square, London SW1P 2PL.
A member of the BTR Group



DUNLOP EQUIPMENT DIVISION

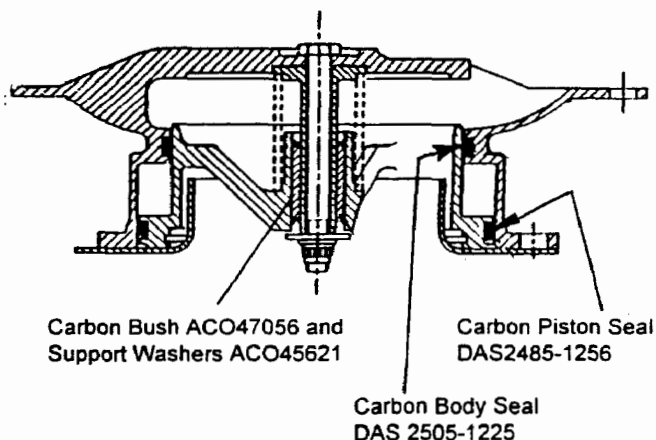
SERVICE BULLETIN

SB Number 75-31 (Revision 1)

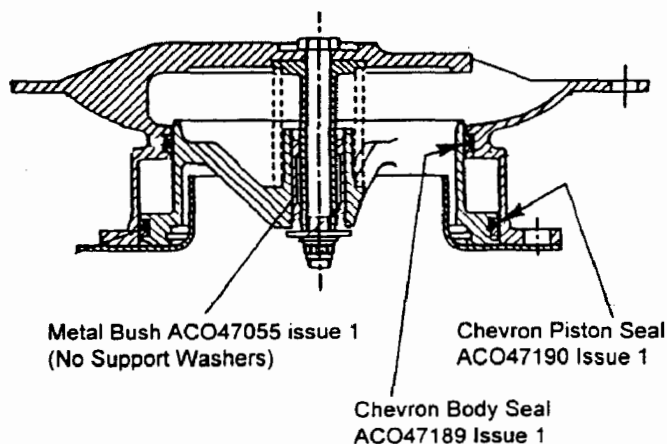
Power Plant Air Compressor Control

**Introduction of HP10 Bleed Valve AC 69922 Mod 2 with Chevron Seals
& Metal Bush in lieu and by conversion of AC69861 & AC69922 Mod 1
DUNLOP MODIFICATION E593 (Issue 2) (IAE SB V2500-ENG-75- 0054 Rev 1)**

HP10 Bleed Valve AC69861 Mod 1

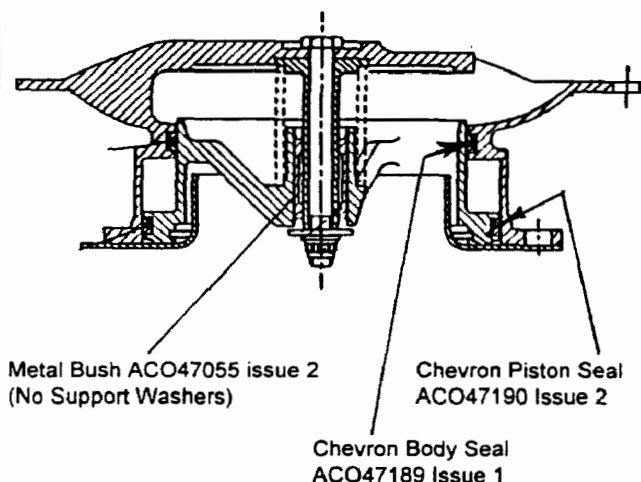


HP10 Bleed Valve AC69922 Mod 1



Pre Mod E593 Issue 2

HP10 Bleed Valve AC69922 Mod 2



Post Mod E593 Issue 2

Figure 1 Pre and Post Mod Configuration of HP10 Bleed Valve

Dec.12/94
Revision 1 May 12/95

AC69861, AC69922 **SB 75-31**
Page 4 of 12

Printed in England
A Division of Dunlop Limited. Registered in England No. 995293. Registered Office, Silvertown House, Vincent Square, London SW1P 2PL.
A member of the BTR Group

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



DUNLOP EQUIPMENT DIVISION

SERVICE BULLETIN

SB Number 75-31 (Revision 1)

Power Plant Air Compressor Control

**Introduction of HP10 Bleed Valve AC 69922 Mod 2 with Chevron Seal & Metal Bush in lieu and by conversion of AC69861 & AC69922 Mod 1
DUNLOP MODIFICATION E593 (Issue 2) (IAE SB V2500-ENG-75- 0054 Rev 1)**

2. Accomplishment Instructions

A. General. These instructions detail the partial rework of HP10 Bleed Valves P/N AC69861 Mod 1 and P/N AC69922 Mod 1 and their re-identification as **AC69922 Mod 2**.

B Disassembly Instructions. (Refer to Figure 2).

HP 10 Bleed Valve P/N AC69861 Mod 1 and P/N AC69922 Mod 1

- (1) Remove the two PN AS46791-411 Rivets from the PN AC69359 or PN AC69809 Shroud and remove the Shroud from the Bleed Valve Body.
- (2) Using the Britool A70, AB312 and AB437 Tools remove the PN AS20625 Nut, the PN ACO45619 Washer and the PN A10419E Bolt. Discard the PN AS20625 Nut.
- (3) Remove the PN AC69328 Piston complete with the PN ACO45615 Valve Stem and PN ACO45616 Spring.

HP 10 Bleed Valve P/N AC69861 Mod 1 Only

- (4a) Remove the PN DAS2485-1256 Carbon Triple Seal Assembly from the Piston. Discard the PN DAS2485-1256 Carbon Triple Seal Assembly
- (5a) Remove the (two off) PN MR59S Retainers, the (two off) PN ACO45621 Washers and the PN ACO47056 Carbon Bush from the Piston. Discard the PN ACO45621 Washers, the PN MR59S Retainers and the PN ACO470 Carbon Bush.
- (6a) Remove the PN DAS2505-1225 Carbon Triple Seal Assembly from the Bleed Valve Body. Discard the PN DAS2505-1225 Carbon Triple Seal Assembly.

HP 10 Bleed Valve P/N AC69922 Mod 1 Only

- (4a) Remove the PN ACO47190 Issue 1 Chevron Seal Assembly from the Piston. Discard the PN ACO47190 Issue 1 Chevron Seal Assembly
- (5b) Remove the (two off) PN MR59S Retainers and the PN ACO47055 Issue 1 Metal Bush from the Piston. Discard the PN MR59S Retainers and the PN ACO47055 Issue 1 Metal Bush.
- (6b) No further disassembly is required. **Do Not Remove** the PN ACO47189 Issue 1 Chevron Seal Assembly from the Body unless it is unserviceable.

Dec.12/94

Revision 1 May 12/95

AC69861, AC69922 **SB 75-3**

Page 5 of 1

Printed in England

A Division of Dunlop Limited. Registered in England No. 995293. Registered Office, Silvertown House, Vincent Square, London SW1P 2PL
A member of the BTR Group

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



DUNLOP EQUIPMENT DIVISION

SERVICE BULLETIN

SB Number 75-31 (Revision 1)

Power Plant Air Compressor Control

**Introduction of HP10 Bleed Valve AC 69922 Mod 2 with Chevron Seals
& Metal Bush in lieu and by conversion of AC69861 & AC69922 Mod 1
DUNLOP MODIFICATION E593 (Issue 2) (IAE SB V2500-ENG-75- 0054 Rev 1)**

C Inspection, Cleaning, Modification

- (1) Visually examine the removed metal components and the chamber of the Bleed Valve for signs of surface corrosion, damage, distortion and surface deposits.
Polish out light surface corrosion, damage or surface deposits with a smooth hone or grade 00 carborundum cloth.
Reject a metal component with corrosion or damage that is not removed by polishing.
- (2) Examine threads for burrs and thread strip. Reject any defective component.
- (3) If required clean the metal components with Trichloroethane 1:1:1 BS4487 (O.T.620) in accordance with the data given in IAE Standard Practices Manual SPP-V2500-11A.
Note: All non-metallic (carbon etc) components must be removed before cleaning with Trichloroethane or other chlorinated solvents.

WARNING: TRICHLOROETHANE 1:1:1 IS A HAZARDOUS MATERIAL,
BEFORE YOU USE IT MAKE SURE THAT YOU KNOW THE SAFETY
PRECAUTIONS AND FIRST AID INSTRUCTIONS ON:-
- THE LABEL ON THE CONTAINER IT WAS SUPPLIED IN.
- ITS MATERIAL SAFETY DATA SHEET.
- YOUR LOCAL SAFETY REGULATIONS.

CAUTION TRICHLOROETHANE AND OTHER CHLORINATED SOLVENTS CAN
COMBINE WITH SMALL AMOUNTS OF MOISTURE TO MAKE
HYDROCHLORIC ACID AND CAUSE CORROSION.
AFTER CLEANING THE METAL COMPONENTS DRY THEM AT A
CONTROLLED TEMPERATURE OF 80 to 85 deg C (185 to 194 deg. F)
TO REMOVE ALL SIGNS OF THE SOLVENT USED.

CAUTION TRICHLOROETHANE AND OTHER CHLORINATED SOLVENTS CAN
CAUSE SEVERE DAMAGE TO CARBON SEALING RINGS. MAKE
SURE THAT CARBON SEALING RINGS DO NOT COME INTO
CONTACT WITH CHLORINATED SOLVENTS.

CAUTION CARBON SEALING RINGS ARE EASILY DAMAGED.
BE CAREFUL WHEN HANDLING AND INSTALLING CARBON
SEALING RINGS

Dec.12/94
Revision 1 May 12/95

AC69861, AC69922 **SB 75-31**
Page 6 of 12

Printed in England
A Division of Dunlop Limited. Registered in England No. 995293. Registered Office, Silvertown House, Vincent Square, London SW1P 2PL.
A member of the BTR Group



DUNLOP EQUIPMENT DIVISION

SERVICE BULLETIN

SB Number 75-31 (Revision 1)

Power Plant Air Compressor Control

**Introduction of HP10 Bleed Valve AC 69922 Mod 2 with Chevron Seals
& Metal Bush in lieu and by conversion of AC69861 & AC69922 Mod 1
DUNLOP MODIFICATION E593 (Issue 2) (IAE SB V2500-ENG-75- 0054 Rev 1)**

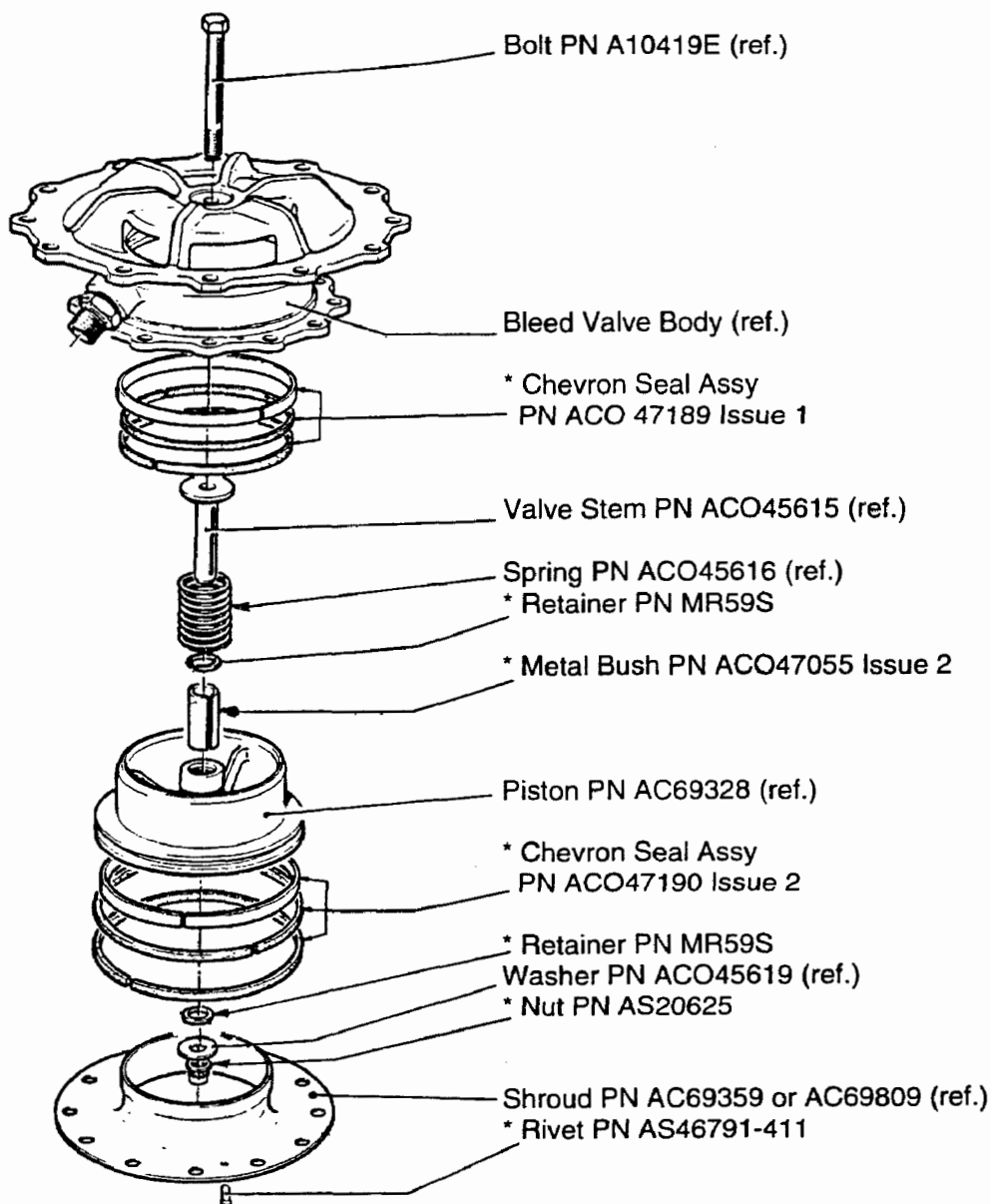


Figure 2 Exploded View of Bleed Valve P/N AC69922 Mod 2
(* Denotes Items contained in Mod Kit PN ACO47198 Issue 2)

Dec.12/94

Revision 1 May 12/95

AC69861, AC69922 SB 75-31

Page 7 of 12

Printed in England

A Division of Dunlop Limited. Registered in England No. 995293. Registered Office, Silvertown House, Vincent Square, London SW1P 2PL.
A member of the BTR Group



DUNLOP EQUIPMENT DIVISION

SERVICE BULLETIN

SB Number 75-31 (Revision 1)

Power Plant Air Compressor Control

**Introduction of HP10 Bleed Valve AC 69922 Mod 2 with Chevron Seals
& Metal Bush in lieu and by conversion of AC69861 & AC69922 Mod 1
DUNLOP MODIFICATION E593 (Issue 2) (IAE SB V2500-ENG-75- 0054 Rev 1)**

D Fitment Instructions. (Refer to Figure 2)

HP 10 Bleed Valve P/N AC69861 Mod 1 Only

- (1) Install a new PN ACO47189 Issue 1 Chevron design carbon / nimonic Triple Seal Assembly in the Bleed Valve Body.
Make sure the ring gaps are equispaced around the circumference.

HP 10 Bleed Valve P/N AC69861 Mod 1 and P/N AC69922 Mod 1.

- (2) Install one of the replacement PN MR59S Retainers and the new PN ACO47055 Issue 2 metal Bush in the Piston.
- (3) Install a second replacement PN MR59S Retainer in the Piston.
- (4) Install the PN A10419E Bolt through the Bleed Valve Body.
- (5) Install the PN ACO45615 Valve Stem over the Bolt and locate the Valve Stem flange in the recess in the Bleed Valve Body.
- (6) Install the PN ACO45616 Spring on the Valve Stem.
- (7) Install a new PN ACO47190 Issue 2 Chevron design carbon / nimonic Triple Seal Assembly on the PN AC69328 Piston.
Make sure the ring gaps are equispaced around the circumference
- (8) Install the Piston over the Valve Stem.
- (9) Make sure the Chevron design carbon / nimonic Triple Seal Assemblies in the Piston and Valve body are not damaged during assembly.
- (10) Install the PN ACO45619 Washer on the Bolt.
- (11) Lubricate the threads of the Bolt with a minimum amount of "Threadgard" and install a new PN AS20625 Nut on the Bolt.
- (12) Using the Acratork Model A, Britool AB312 and AB437 Tools torque tighten the PN AS20625 Nut to 8,5/9,0 Nm (75/80 lbf in.) plus the torque required to overcome the lock properties of the Nut.

Dec.12/94
Revision 1 May 12/95

AC69861, AC69922 **SB 75-31**
Page 8 of 12

Printed in England
A Division of Dunlop Limited. Registered in England No. 995293. Registered Office, Silvertown House, Vincent Square, London SW1P 2PL.
A member of the BTR Group

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



DUNLOP EQUIPMENT DIVISION

SERVICE BULLETIN

SB Number 75-31 (Revision 1)

Power Plant Air Compressor Control

**Introduction of HP10 Bleed Valve AC 69922 Mod 2 with Chevron Seal
& Metal Bush in lieu and by conversion of AC69861 & AC69922 Mod 1
DUNLOP MODIFICATION E593 (Issue 2) (IAE SB V2500-ENG-75- 0054 Rev 1)**

- (13) Install the PN AC69359 or PN AC69809 Shroud on the Bleed Valve Body and secure place with the two replacement PN AS46791-411 Rivets.
Make sure the piston can move freely in the Body and is not caught by the Shroud.
- (14) Use a vibro-etch tool to reidentify the HP10 Bleed Valve adjacent to the existing part number and mod number on the Bleed Valve body.

Existing Part Number
AC69861 Mod 1
AC69922 Mod 1

Renumber
AC69922 Mod 2
AC69922 Mod 2

E Complete the tests detailed in VCMM 75-32-54, TESTING AND FAULT ISOLATION.

F For units reoperated in the field, verify the valve operation using the following procedure.

- (1) Fixtures, Tools, Test and Support Equipment. (refer to Figure 3).

<u>Reference</u>	<u>Designation</u>
AC69574	Stage 10 Solenoid Valve.
No Specific	Torque Wrench; range 0 to 250 lbf.in.
No Specific	Air tube suitable for connecting between the Bleed Valve and the Solenoid Valve.
IAE2R18900	Bleed System Test Set.
- (2) On a suitable workbench, connect an air tube between the Stage 10 Bleed Valve union and the P/N AC69574 Stage 10 Solenoid Valve outlet union. Torque the connectors to 204 to 221 lbf. in. (2,30 to 2,50 mdaN).
- (3) Install the P/N IAE2R18900 Bleed Valve Test Set to the P/N AC69574 Stage 10 Solenoid Valve as follows. (refer to Figure 3 for item numbers quoted).
 - (a) Install the vacuum line fixture (10) on to the pressure line connection (8) and the servo vent (11).
 - (b) Install the pressure line union (9) to the pressure line connection (8).
 - (c) Torque the pressure line union (9) to 204 to 221 lbf. in. (2,30 to 2,50 mdaN).
Make sure the vacuum fixture (10) seals down over the servo vent (11).
 - (d) Connect the electrical connector (12) to the P/N AC69572 Stage 7 Solenoid Valve.

Dec.12/94

Revision 1 May 12/95

AC69861, AC69922 SB 75-31

Page 9 of 12

Printed in England

A Division of Dunlop Limited. Registered in England No. 995293. Registered Office, Silvertown House, Vincent Square, London SW1P 2PL.
A member of the BTR Group



DUNLOP EQUIPMENT DIVISION

SERVICE BULLETIN

SB Number 75-31 (Revision 1)

Power Plant Air Compressor Control

**Introduction of HP10 Bleed Valve AC 69922 Mod 2 with Chevron Seals
& Metal Bush in lieu and by conversion of AC69861 & AC69922 Mod 1
DUNLOP MODIFICATION E593 (Issue 2) (IAE SB V2500-ENG-75- 0054 Rev 1)**

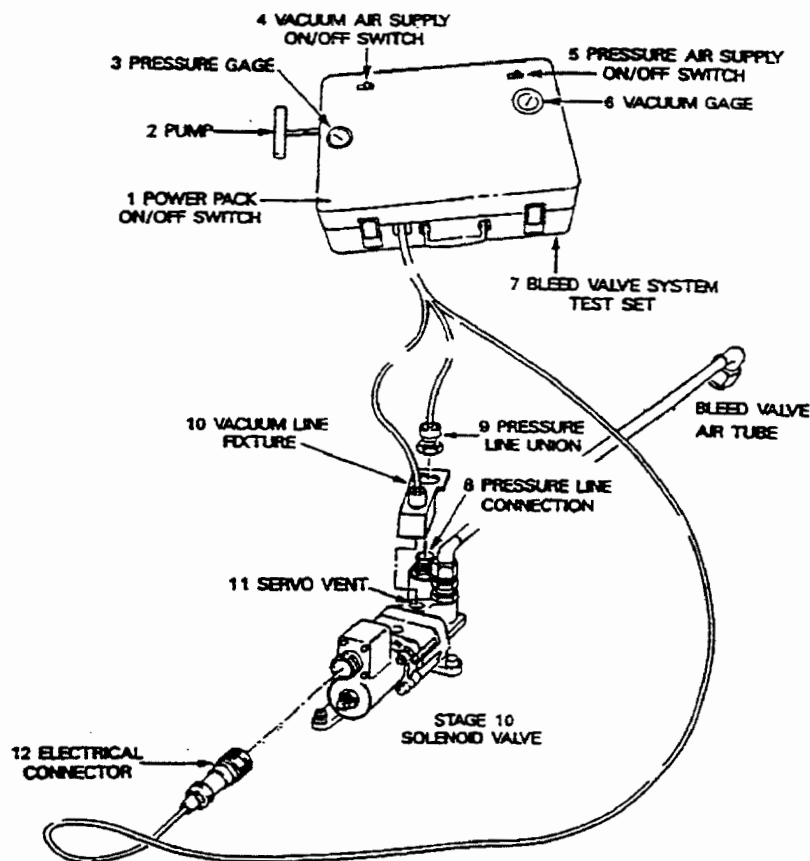


Figure 3 Bleed Valve Test Set

- (4) Test the Stage 10 Bleed Valve as follows. (refer to Figure 3 for item numbers quoted).
- (a) Make sure the vacuum gauge (6) and the pressure gauge (3) read zero and the vacuum air supply switch (4) and the pressure air supply switch (5) are both in the OFF position.
 - (b) Prime the test set with the pump (2) until the pressure gauge (3) reads 30 psig (207 KPa) and the vacuum gauge (6) reads -8 psig (-55 KPa).
 - (c) Turn the power pack switch (1) to the ON position.
 - (d) Turn the pressure air supply switch (5) to the ON position.
 - (e) Turn the vacuum air supply switch (4) to the ON position and verify the bleed valve closes.

Dec.12/94

Revision 1 May 12/95

AC69861, AC69922 **SB 75-31**

Page 10 of 12

Printed in England

A Division of Dunlop Limited. Registered in England No. 995293. Registered Office, Silvertown House, Vincent Square, London SW1P 2PL.
A member of the BTR Group



DUNLOP EQUIPMENT DIVISION

SERVICE BULLETIN

SB Number 75-31 (Revision 1)

Power Plant Air Compressor Control

**Introduction of HP10 Bleed Valve AC 69922 Mod 2 with Chevron Seals
& Metal Bush in lieu and by conversion of AC69861 & AC69922 Mod 1
DUNLOP MODIFICATION E593 (Issue 2) (IAE SB V2500-ENG-75- 0054 Rev 1)**

- (f) Turn the power pack switch (1) to the OFF position and verify the valve closes.
- (g) If the bleed valve fails the test, check for correct assembly of the bleed valve.
- (h) Repeat the tests in paragraphs (a) thru (f).
- (i) If the bleed valve fails the test again, replace the solenoid valve.
- (j) Repeat the tests in paragraphs (a) thru (f).
- (k) If the bleed valve fails the test again, reject the bleed valve.
- (l) Disconnect the bleed valve from the test set.

G Recording Instructions.

A record of Accomplishment is required

3. Material Information

A The type of equipment affected by this mod is:-

Unit.

HP compressor stage 10 bleed valve.

Type No.

AC69861 Mod 1 and AC69922 Mod 1

B Modification Items associated with this Bulletin

The following modification kit is required to accomplish this modification:-

MODIFICATION KIT Part Number ACO47198 Issue 2

Modification Kit Part Number ACO47198 Issue 2		
Kit Item Part Number	Qty per Kit	Keyword
AS20625	One	NUT
ACO47189 issue 1	One	SEAL Assembly Body (Chevron design))
ACO47190 issue 2	One	SEAL Assembly Piston (Chevron design)
ACO47055 issue 2	One	BUSH Split (metal design)
MR59S (DSR51677-1004)	Two	RING Retaining
AS46791-411	Two	RIVET

Notes:-

DSR = Dunlop Stores Reference

Unit AC69922 Mod 1 is already fitted with Chevron Body Seal P/N ACO47189 Issue 1

Dec.12/94

Revision 1 May 12/95

AC69861, AC69922 **SB 75-31**

Page 11 of 12

Printed in England

A Division of Dunlop Limited. Registered in England No. 995293. Registered Office, Silvertown House, Vincent Square, London SW1P 2PL.
A member of the BTR Group

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



DUNLOP EQUIPMENT DIVISION

SERVICE BULLETIN

SB Number 75-31 (Revision 1)

Power Plant Air Compressor Control

**Introduction of HP10 Bleed Valve AC 69922 Mod 2 with Chevron Seals
& Metal Bush in lieu and by conversion of AC69861 & AC69922 Mod 1
DUNLOP MODIFICATION E593 (Issue 2) (IAE SB V2500-ENG-75- 0054 Rev 1)**

C Parts Affected by this Bulletin

New PN	Quantity Per Unit	Keyword	Old PN	Instructions / Dispositions
AC69922 Mod State 2	RF	Valve Assy Bleed HP10	AC69861 Mod State 1	Rework Old Part Number Unit and Re-identify to the New Part Number and Mod State
ACO47189 Issue 1	1	Seal Assy Chevron (Body Seal)	DAS 2505-1225	Old Part is to be Discarded
ACO47190 Issue 2	1	Seal Assy Chevron (Piston Seal)	DAS 2485-1256	Old Part is to be Discarded
ACO47055 Issue 2	1	Bush Split (Metal)	ACO47056	Old Part is to be Discarded
not required	---	Washer	ACO45621	Old Part is to be Discarded

New PN	Quantity Per Unit	Keyword	Old PN	Instructions / Dispositions
AC69922 Mod State 2	RF	Valve Assy Bleed HP10	AC69922 Mod State 1	Rework Mod State 1 Unit and Re-identify to the New Mod State
ACO47190 Issue 2	1	Seal Assy Chevron (Piston Seal)	ACO47190 Issue 1	Old Part is to be Discarded
ACO47055 Issue 2	1	Bush Split (Metal)	ACO47055 Issue 1	Old Part is to be Discarded