P U B L I C A T I O N T R A N S M I T T A L

RR-DERBY

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DATE: Jun.23/00

V2500-D5 SERIES PROPULSION SYSTEM SERVICE BULLETIN

This document transmits the Initial Issue of Service Bulletin EV2500-75-0086

Bulletin Initial Issue

Remove	Incorporate	Reason for change
	Pages 1 to 6 of the Service Bulletin	Initial issue

V2500-ENG-75-0086

CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED
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LIST OF EFFECTIVE PAGES

The effective pages to this Service Bulletin are as follows:

Page	Revision Number	Revision Date
Bulletin		
1		Jun.23/00
2		Jun.23/00
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6		Jun.23/00

AIR - HP COMPRESSOR STAGE 10 BLEED VALVE - INTRODUCTION OF A REVISED PARKER HANNIFIN BLEED VALVE WITH ADDITIONAL CARBON BEARING, REDESIGNED SPRING AND ADDITIONAL SPRING GUIDE

1. Planning Information

A. Effectivity

(1) Boeing Long Beach Division MD-90

V2525-D5, V2528-D5 Engines

(2) ATA Locator

75-32-54

B. Concurrent Requirements

None

C. Reason

(1) Condition

Sticking of the Parker Hannifin supplied stage 10 HP compressor bleed valve may occur and in extreme circumstances can result in an engine failing to start.

The problem is attributed to debris generated by frettage wear due to metal to metal contact between piston and guide stem, which over time increases until the valve becomes stuck.

(2) Background

The problem has been experienced on vendor rig endurance testing and during engine Pass-Off testing.

(3) Substantiation

The changes introduced by this Service Bulletin have been the subject of satisfactory IAE engineering assessment, vendor analysis and successful rig and development engine testing.

(4) Objective

Incorporation of the changes introduced by this Service Bulletin (Modification) is designed to maintain unit reliability.

(5) Effect of Bulletin on:

(a) Operation

Not affected

(b) Maintenance

Not affected

(c) Overhaul

Not affected

(d) Repair Schemes

Not affected

(e) Interchangeability

Not affected

(f) Fits and Clearances

Not affected

D. Description

(1) A revised Parker Hannifin supplied stage 10 HP compressor bleed valve is introduced similar to the previous standard except for the changes that follow:

(a) A carbon bearing to prevent metal to metal contact between the bleed valve body guide stem and piston bore. This will prevent debris by frettage wear of the bearing surface, therefore reducing the potential for valve sticking.

(b) A revised spring with an increased spring rate to increase the natural frequency out of the normal engine running range.

(c) A spring guide to prevent lateral movement of the spring.

(2) Existing units can be reworked. Refer to Parker Hannifin Corporation Service Bulletin 5950041-75-108.

(3) Units incorporating this Service Bulletin will be identified by a new type number (see 2.C. Material Information).

E. 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. Approval

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

G. Manpower

(1) In service

Not Applicable.

(2) At overhaul

Not affected

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

H. Material Price and Availability

(1) If the stage 10 bleed valve is exchanged for the revised unit (refer to 1.D.(1)), Modification kit not required; parts supplied as single line items.

(2) If the stage 10 bleed valve is reworked, (refer to 1.D.(2)), kit5950041-75-108 is required. Refer to Parker Hannifin Corporation Service Bulletin 5950041-75-108 for prices and availability.

I. Tooling Price and Availability

(1) To replace an existing stage 10 valve with a new revised unit (refer to 1.D.(1)), special tools are not required.

(2) To rework an existing stage 10 bleed valve (refer to 1.D.(2)), special tools are referenced in Parker Hannifin Corporation Service Bulletin 5950041-75-108.

J. Weight and Balance

(1) Weight Change

None

(2) Moment Arm

None

(3) Datum

Engine Front Mount Centreline (Power Plant Station PPS 100)

K. Electrical Load Data

The aircraft electrical load is not affected by this Service Bulletin

L. References

(1) Parker Hannifin Corporation Service Bulletin 5950041-75-108

(2) Engine Manual, 72-00-40, Removal 04 and Installation 07

(3) Engine Maintenance Manual, 75-33-54, Removal/Installation

(4) Internal reference EC99VI004A

M. Other Publications Affected

(1) Illustrated Parts Catalogue (IPC), S-V2500-3IA, 75-32-54

N. Interchangeability of Parts

Not affected.

2. Material Information

A. Material Price and Availability

The prices 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

B. New production parts

PART NO.	QTY	UNIT PRICE
5950041-108	1	Price on request
kit5950041 -108	1	Price on request

C. Units affected by this Service Bulletin:

All Engines

75-32-54

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
01400	5950041 -108	1	Valve, Bleed, Stage 10 Comp (V92003)	HP -	5950041-107	(A)(B) (S1)

D. Instructions disposition codes:

(A) New part will be available from May 2000

(B) Old part will be discontinued

(S1) Old and new parts are freely and fully interchangeable

3. Accomplishment Instructions

A. Rework Instructions

None

B. Assembly Instructions

The revised HP compressor stage 10 bleed valve introduced by this Service Bulletin, is interchangeable with existing. Remove and install in accordance with current overhaul procedures and maintenance practices (Engine Manual, 72-00-40, Removal 04 and Installation 07 and Engine Maintenance Manual, 75-33-54 Removal/Installation).

C. Recording Instructions

A record of accomplishment is required. Refer to Parker Hannifin Corporation Service Bulletin 5950041-75-108.

Customer Support Inc.

SERVICE BULLETIN

AIR	10TH STAGE HIGH PRESSURE COMPRESSOR BLEED VALVE	INTRODUCTION OF 5950041-108 AND UPGRADE OF PART NUMBER (P/N) 5950041-105 AND 5950041-107 TO 5950041-108 BY INCORPORATING A NEW SPRING AND PISTON ASSEMBLY.

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 and -107.

B. Reason

(1) Background:

This service bulletin introduces a new 5950041-108 configuration and gives upgrade replacement instructions for the 5950041-105 and -107 valve configurations.

(2) Objective:

The new 5950041-108 configuration has been developed to improve the life of the valve.

(3) Substantiation:

The new 5950041-108 configuration incorporates an improved piston assembly (which includes a carbon bushing), a new spring, spring damper, retaining ring and bushing retainer. The carbon bushing eliminates wear between the body stem chamfer and the piston bore, and the new spring has a higher resonant frequency.

C. Description

Three options are provided to accomplish this service bulletin.

(1) Option 1

Order the new 5950041-108 valve at the address in 2.A.(1).

(2) Option 2

Forward the 5950041-105 or -107 valve to Parker Hannifin Corporation at the address in 2.A.(2) for upgrade to the 5950041-108 configuration.

(3) Option 3

Operators who want to accomplish this service bulletin at their own facility should follow the ordering instructions in paragraph 2.A.(3) and the accomplishment instructions in paragraph 3.

D. Compliance – Code 6

This service bulletin is classified as a Life Extension element. Do this service bulletin when access is available to the necessary part.

E. Approval

The part number modifications described in paragraphs 2. and 3. of this service bulletin have been shown to comply with applicable Federal Aviation Regulation (FARs) and are FAA approved for the valve.

F. Manpower

(1) The manpower estimates listed in Table 1 are based on work performed after the valve is removed from the engine and do not include the time to reinstall the valve onto the engine.

(2) The time required is based on one individual performing all tasks listed in Table 1.

(3) Estimates shown are for each valve.

Man-Hours
Table 1

TASK	MAN-HOURS
1. Disassemble the valve.	1.0
2. Assemble the valve.	1.0
3. Test the valve.	1.0
TOTAL	3.0

G. Weight and Balance

Not applicable.

H. Electrical Load Data

Not applicable.

I. Software Accomplishment Summary

Not applicable.

J. References

IAE Service Bulletins V2500ENG75-0085 and V2500ENG75-0086.

K. Other Publications Affected

None.

2. MATERIAL INFORMATION

A. Material - Price and Availability

(1) Operators who want to order the new 5950041-108 valve, should contact Parker Hannifin Corporation (see address below) for a price quotation.

(2) Operators who want this service bulletin implemented may send the valve to Parker Hannifin Corporation at the address below. The cost for accomplishment of this service bulletin is $1747.00. Turnaround time is 30 days after receipt of the valve, beginning 60 days from the issue date of this service bulletin.

PARKER HANNIFIN CORPORATION	PHONE:	(949) 833-3000
Customer Support Inc.	FAX:	(949) 809-8390
16666 Von Karman Avenue	TELEX:	678304
Irvine, California 92606	SITA:	JNPPHCR
USA	REPAIR STATION NO.:	AU4R063M

(3) Operators who want to implement this service bulletin at their facility should order KIT5950041-108, listed in Table 2, at a price of $1347.00 and the test fixtures in Table 4 from the address in 2.A.(2), above. The delivery time is 30 days after receipt of order, beginning 60 days from the issue date of this service bulletin.

(4) The prices and provisions referenced in this service bulletin are valid for 24 months from the issue date of this service bulletin. After that date, please refer to the Parker Airline Spare Parts Catalog or request a quotation from Parker Hannifin Corporation, Customer Support Inc.

B. Material Necessary for Each Component

(1) The parts required to upgrade the valve to 5950041-108 are listed in Table 2.

KIT5950041-108
Table 2

NEW PART NO.	KEYWORD	OLD PART NO.	QTY	DISPOSITION	PRICE
5982001-101	PISTON ASSEMBLY	5963025-101 or -102	1	SCRAP	
5993136-101	SPRING	5963024-101	1	SCRAP	
5983137-101	SPRING DAMPER	NONE	1	NONE	
5983123-101	RETAINING RING	NONE	1	NONE	
5983031-101	BUSHING RETAINER	NONE	1	NONE	
5953066-101	SEAL ASSEMBLY	SAME	1	SCRAP	
801A51-0005-A	SEAL	SAME	1	SCRAP	
MS20605AD4W4	RIVET	SAME	2	SCRAP	

(2) The consumables required to upgrade the valve to the 5950041-108 are listed in Table 3.

Consumable Materials
Table 3

NOTE: Equivalent substitutes may be used for the items listed below.

NOMENCLATURE	PART NUMBER/TYPE	SOURCE
LOCKWIRE	MS20995N25	COMMERCIALLY AVAILABLE
CROCUS COATED ABRASIVE CLOTH	PER ANSI-B74.18	COMMERCIALLY AVAILABLE
ISOPROPYL ALCOHOL	FEDERAL SPECIFICATION TT-I-735	COMMERCIALLY AVAILABLE
SILICONE CARBIDE COATED ABRASIVE CLOTH	400 GRIT PER ANSI-B74.18	COMMERCIALLY AVAILABLE

C. Reidentified Parts

5950041-105 and 5950041-107 are reidentified to 5950041-108.

D. Tooling

The tools required to upgrade the valve to the 5950041-108 are listed in Table 4.

Tools and Equipment
Table 4 (Sheet 1 of 2)

NOTE: Equivalent substitutes may be used for the items listed below.

NOMENCLATURE	PART NUMBER/TYPE	SOURCE
TEST FIXTURE	F65-0-50828	PARKER HANNIFIN CORPORATION CUSTOMER SUPPORT INC. 16666 VON KARMAN AVE IRVINE, CA 92606
TEST FIXTURE	F65-0-50832	PARKER HANNIFIN CORPORATION CUSTOMER SUPPORT INC. 16666 VON KARMAN AVE IRVINE, CA 92606

Tools and Equipment
Table 4 (Sheet 2 of 2)

NOTE: Equivalent substitutes may be used for the items listed below.

NOMENCLATURE	PART NUMBER/TYPE	SOURCE
PROOF CHAMBER	STANDARD	COMMERCIALLY AVAILABLE
FLOWMETER	0.20 SCFM (0,0056 SCMM)	COMMERCIALLY AVAILABLE
ORIFICE SECTION	0.20 IN (5,08 MM), 3.0 SCFM (0,0849 SCMM)	COMMERCIALLY AVAILABLE
DELTA-P PRESSURE GAGE	0 TO 30 IN (0 TO 762 MM) WATER	COMMERCIALLY AVAILABLE
PRESSURE GAGE	0 TO 15 PSIG (0 TO 103 KPAG)	COMMERCIALLY AVAILABLE
PRESSURE GAGE	0 TO 30 PSIG (0 TO 207 KPAG)	COMMERCIALLY AVAILABLE
PRESSURE GAGE (QTY 2)	0 TO 600 PSIG (0 TO 4137 KPAG)	COMMERCIALLY AVAILABLE
PRESSURE GAGE (QTY2)	0 TO 1000 PSIG (0 TO 6895 KPAG)	COMMERCIALLY AVAILABLE
RIVET GUN	STANDARD HAND-HELD BLIND	COMMERCIALLY AVAILABLE
BUFFING WHEEL	FED. SPEC. A-A-51175	COMMERCIALLY AVAILABLE

3. ACCOMPLISHMENT INSTRUCTIONS

Operators who want to accomplish this service bulletin at their facility should follow these instructions:

A. Disassembly Instructions (See Figure 1.)

(1) Remove the union, 5953105-101, from the body assembly, P/N 5952018-103.

(2) Remove the seal, P/N 801A51-0005-A, from the union, P/N 5953105-101. Discard the seal.

CAUTION: WEAR EYE PROTECTION WHILE DRILLING.

(3) Mask off the inlet port area of the body assembly, P/N 5952018-103. Use a standard electric drill with a 1/8-inch (3 mm) drill bit, and drill out the two rivets, P/N MS20605AD4W4, from the body assembly. Discard the rivets.

(4) While holding down on the piston, P/N 5963025-101 or -102, and spring, P/N 5963024-101, remove the stop, P/N 5963029-101 or optional P/N 5973018-101, from the body assembly, P/N 5952018-103. Carefully remove the piston and the spring from the body assembly. Discard the piston and the spring.

(5) Remove the seal assembly, P/N 5953066-101, from the groove in the body assembly, P/N 5952018-103. Discard the seal assembly.

B. Body Inspection and Repair

(1) Inspect the body, 5952018-103, for nicks, scratches, or damage. Pay special attention to the chrome finish on the stem. Wear marks are acceptable if they do not penetrate the chrome finish. If scratches penetrate the chrome finish or will not polish out, as detailed below, replace the body.

(2) For repair of minor scratches, scores, nicks, or burrs, follow these steps:

(a) Use a buffing wheel per Federal Specification A-A-51175 and polish out minor nicks and scratches from the threaded areas.

(b) Use 400 grit, silicone carbide coated abrasive cloth, per ANSI-B74.18, for coarse cleanup or smoothing.

(c) Use crocus coated abrasive cloth per ANSI-B74.18 for fine polishing.

C. Assembly Procedures (See Figure 1.)

CAUTION: THE SEAL ASSEMBLY, P/N 5953066-101, IS A MATCHED SET. DO NOT INTERMIX PARTS WITH PARTS FROM OTHER SETS.

(1) Assembly of seal assembly, P/N 5953066-101, (See Figure 2)

(a) Install the expander, P/N 5953066-2, into the groove of the inside diameter of the body assembly, P/N 5952018-103.

CAUTION: MAKE SURE THAT THE EXPANDER MOVES FREELY AND DOES NOT BIND.

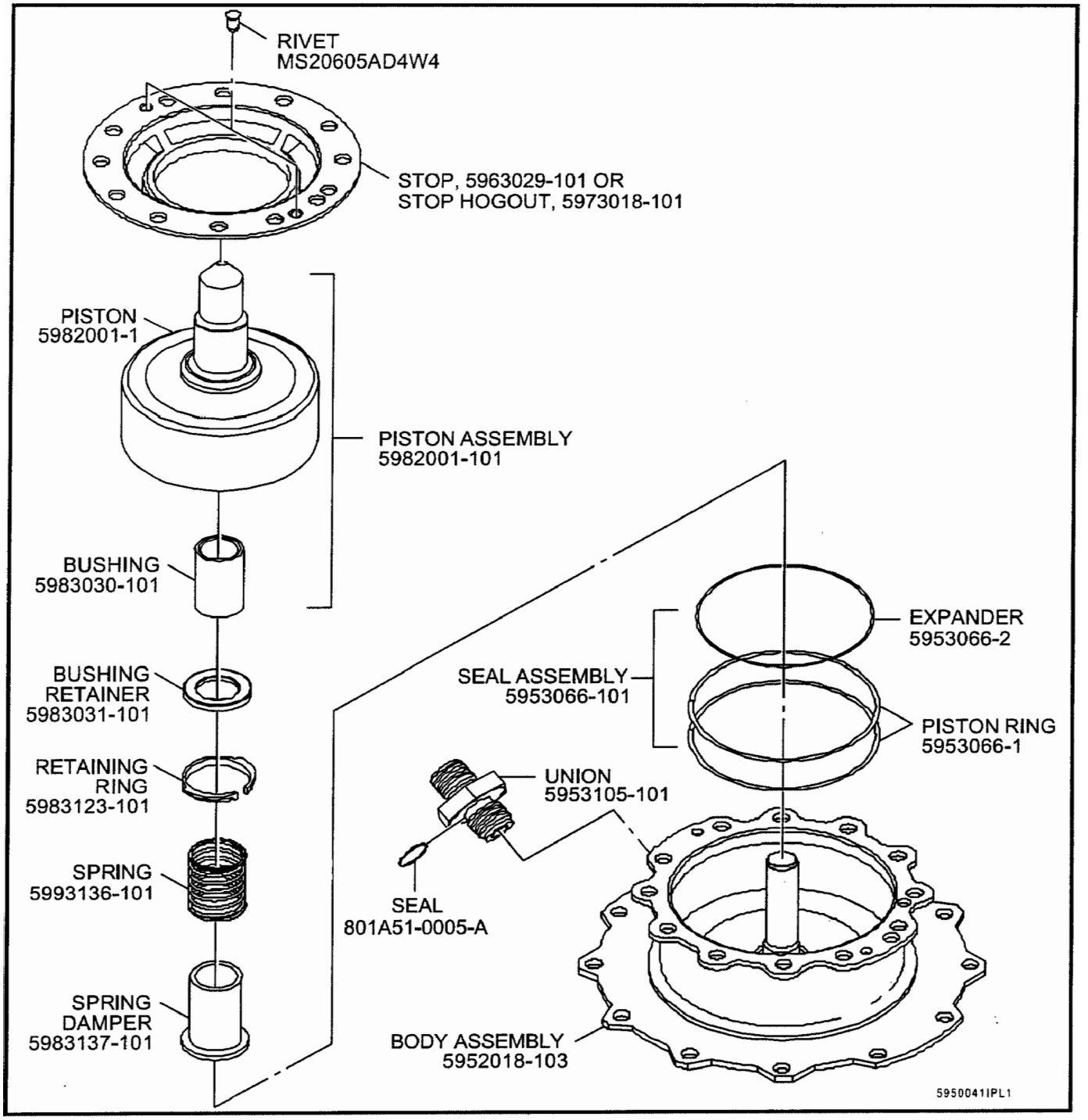
(b) Shake the body assembly, P/N 5952018-103, laterally to make sure that the expander moves freely.

WARNING: DO NOT USE MORE THAN 30 PSIG (207 KPAG) NOZZLE PRESSURE OF COMPRESSED AIR. WEAR EYE PROTECTION. DO NOT POINT THE NOZZLE IN THE DIRECTION OF OTHER PERSONS.

WARNING: ISOPROPYL ALCOHOL IS TOXIC AND FLAMMABLE. USE IN AN AREA WITH A GOOD FLOW OF AIR. DO NOT BREATHE FUMES. KEEP AWAY FROM OPEN FLAME AND OTHER IGNITION SOURCES. DO NOT LET ALCOHOL TOUCH THE SKIN.

(c) Check the piston rings, P/N 5953066-1, for any evidence of sticky residue. If necessary, clean the piston rings by wiping with a cloth dampened with isopropyl alcohol, TT-I-735, and dry with compressed air at a maximum nozzle pressure of 30 psig (207 kPag).

SERVICE BULLETIN

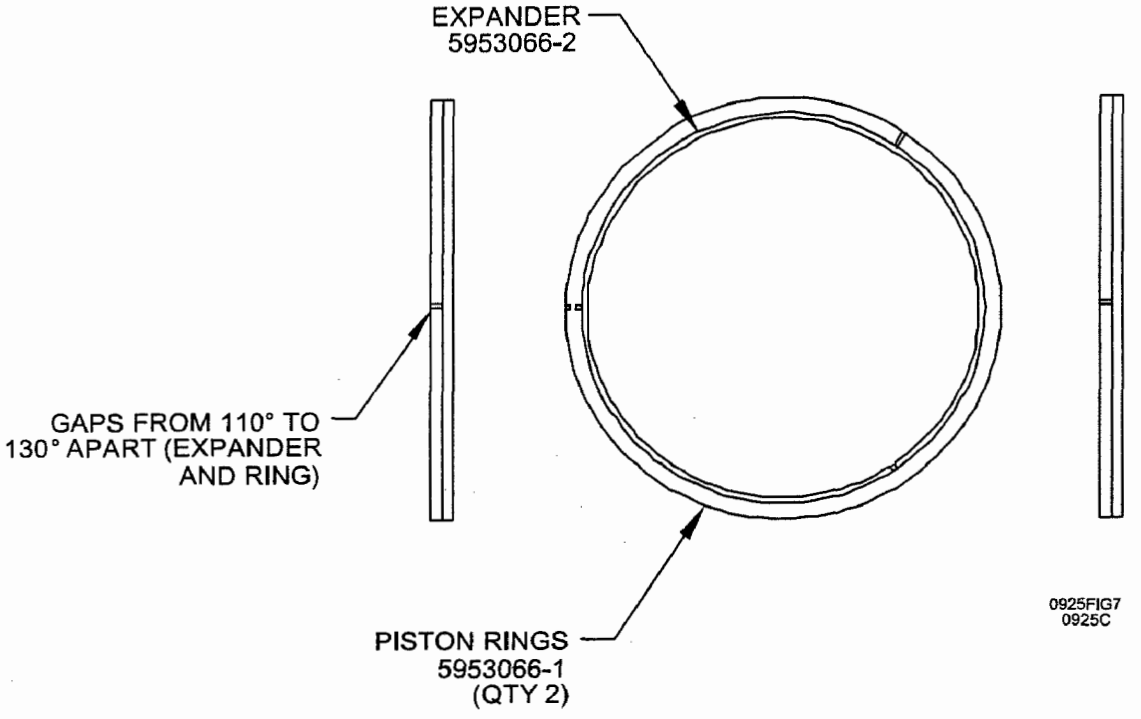


10th Stage High Pressure Compressor Bleed Valve
Figure 1

May 31, 2000

5950041-75-108

SERVICE BULLETIN



Seal Assembly
Figure 2

(d) Install one piston ring, P/N 5953066-1, from the seal assembly, P/N 5953066-101, into the groove of the inside diameter of the body assembly, P/N 5952018-103. Set the gap at 110 to 130 degrees from the expander gap.

(e) Install the second piston ring, P/N 5953066-1, and set the gap at 110 to 130 degrees in the opposite direction from the expander gap.

(f) Install the spring damper, P/N 5983137-101, into the body assembly, P/N 5952018-103.

(g) Install the spring, P/N 5993136-101, into the groove in the body assembly, P/N 5952018-103.

(h) Install the bushing retainer, P/N 5983031-101, followed by the retaining ring, P/N 5983123-101, into the piston assembly, P/N 5982001-101.

CAUTION: DO NOT DAMAGE THE PISTON RING DURING THE INSTALLATION OF THE PISTON ASSEMBLY.

(i) Compress the seal assembly, P/N 5953066-101, by hand from the outlet port of the body assembly, P/N 5952018-103, and carefully install the piston assembly, P/N 5982001-101, over the spring, P/N 5993136-101, and into the inlet port of the body assembly.

NOTE: If any resistance is felt during installation, remove the piston assembly, P/N 5982001-101, and check the piston rings, P/N 5953066-1, for any damage.

CAUTION: MAKE SURE THAT ALL BOLT HOLES AND RIVET HOLES LINE UP CORRECTLY.

(j) Put the body assembly, P/N 5952018-103, on a bench. Install the stop, P/N 5963029-101 or optional 5973018-101, onto the body assembly and line up the bolt holes and the rivet holes.

(k) Compress the spring until the stop's flange bottoms onto the body assembly, P/N 5952018-103, and clamp them together.

(l) Rivet Installation

1 Use a hand-held blind rivet gun and install the rivet, P/N MS20605AD4W4, in two places. Seat the head of the rivet in the countersink of the stop and buck the rivets.

2 Make sure that the head of the rivet, P/N MS20605AD4W4, is in full contact with the countersink after bucking, but it is acceptable if the rivet is loose and can rotate in the hole by hand.

3 The expanded portion of the rivet shank must not show signs of cracking, and the rivet stem must not break off inside the rivet.

(m) Install the seal, P/N 801A51-0005-A, onto the non-countersink end of the union P/N 5953105-101.

(n) Install the union, P/N 5953105-101, into the servo port of the body assembly, P/N 5952018-103. Make sure that the seal, P/N 801A51-0005-A, seats into the countersink of the servo port.

(o) Apply a torque of 20 to 24 ft-lb (27 to 33 N·m) to the union, P/N 5953105-101.

(p) Use lockwire, MS20995N25, per MS33540, using a double-twist method, and lockwire the union, P/N 5953105-101, to the body assembly, P/N 5952018-103.

D. Reidentification

Reidentify the valve by striking out the old configuration number -105 or -107, and vibro peen or mark the new configuration number -108 per AS478-2.

E. Testing and Fault Isolation

NOTE: Test with Air or Gaseous Nitrogen.

(1) Proof Pressure Test - Servo Pressurized, Valve Open

CAUTION: MAKE SURE TO USE A PROOF CHAMBER FOR SAFETY.

(a) Set up the valve, as shown in Figure 3, in test fixture, F65-0-50828, and the outlet and inlet ports of the valve vented to ambient.

(b) Slowly apply a pressure of 625 to 635 psig (4309 to 4378 kPag) to the servo port and hold the pressure for a minimum of 1 minute.

(c) Slowly reduce the pressure to zero.

(d) There must be no deformation or other permanent damage.

(2) Proof Pressure Test- Inlet Pressurized, Valve Closed

CAUTION: MAKE SURE TO USE A PROOF CHAMBER FOR SAFETY.

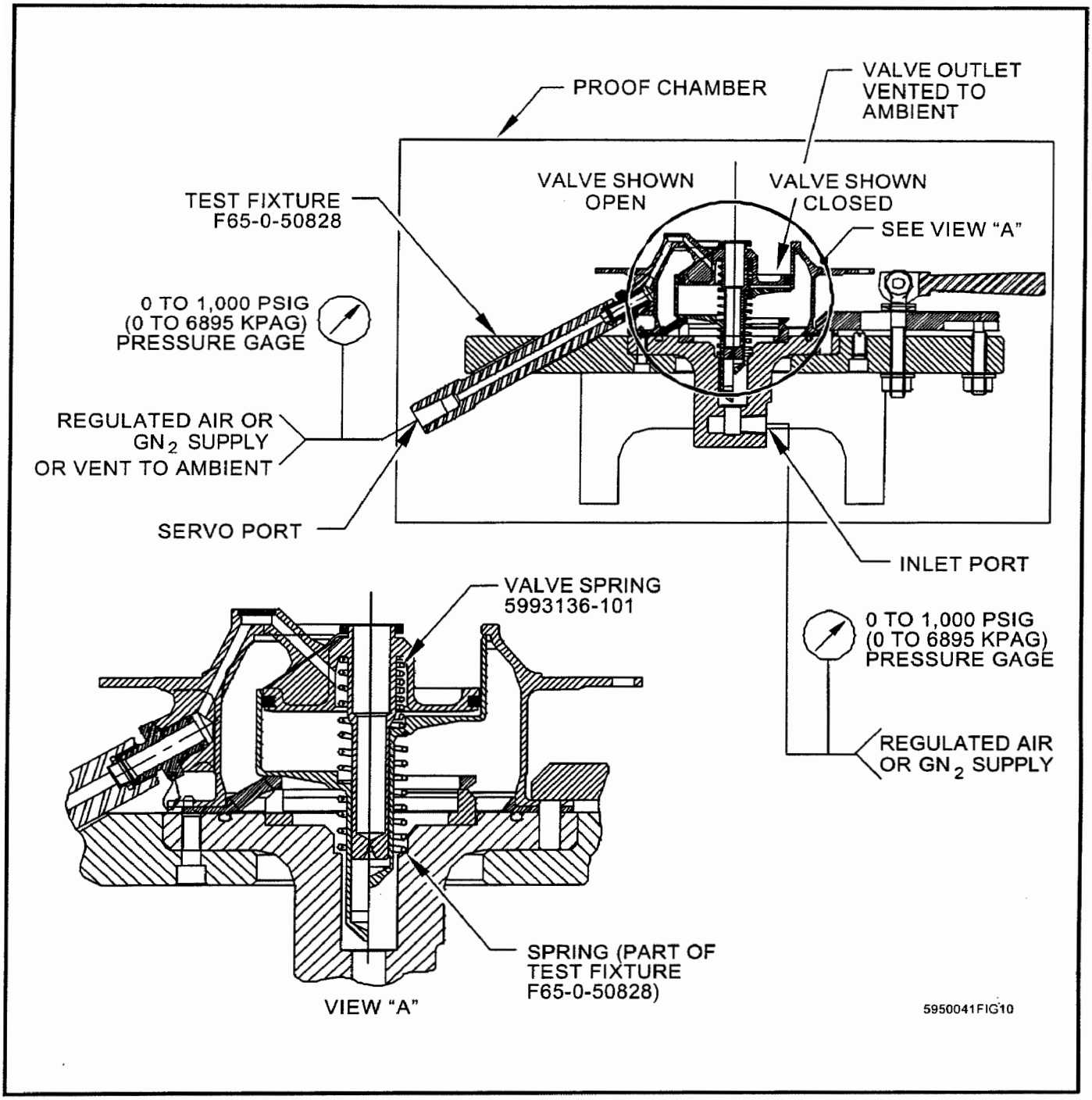
(a) Set up the valve, as shown in Figure 3, in test fixture, F65-0-50828, and the outlet and the servo ports vented to ambient.

(b) Slowly apply a pressure of 585 to 595 psig (4033 to 4102 kPag) to the inlet port and hold the pressure for a minimum of 1 minute.

(c) Slowly reduce the pressure to zero.

(d) There must be no deformation or other permanent damage.

SERVICE BULLETIN



Proof Pressure Test Setup
Figure 3

May 31, 2000

5950041-75-108

CAUTION: MAKE SURE THAT THE SPRING IS REMOVED FROM THE TEST FIXTURE BEFORE THE FOLLOWING TESTS. THE SPRING AIDS IN CLOSING THE VALVE AND WILL INVALIDATE THE TEST DATA.

(3) Leakage Test - Servo Pressurized, Valve Open

(a) Set up the valve, as shown in Figure 4, with the spring removed from the test fixture, F65-0-50828. Close valves A and F and open valves D and E.

(b) Slowly apply a pressure of 25 to 35 psig (172 to 241 kPag) to the servo port, then slowly reduce the pressure to 2.9 to 3.1 psig (20 to 21 kPag) to the servo port and hold the pressure for a minimum of 1 minute.

(c) The servo leakage must not exceed 0.170 scfm (0,0048 scmm) (equivalent to 0.013 lbs/minute [0,006 kg/minute]), as measured at the flowmeter.

(d) Slowly reduce the pressure to zero.

(e) Close valve D.

(f) Slowly apply a pressure of 345 to 355 psig (2379 to 2448 kPag) to the servo port and hold the pressure for a minimum of 1 minute.

(g) The servo leakage must not exceed 2.6 scfm (0,0736 scmm) (equivalent to 0.20 lbs/minute (0,009 kg/minute)), as measured at the flowmeter.

(h) Slowly reduce the pressure to zero.

(4) Leakage Test - Inlet Pressurized, Valve Closed

(a) With the spring still removed, set up the valve in test fixture, F65-0-50828, as shown in Figure 4. Close valves D and F. Open valves A and E.

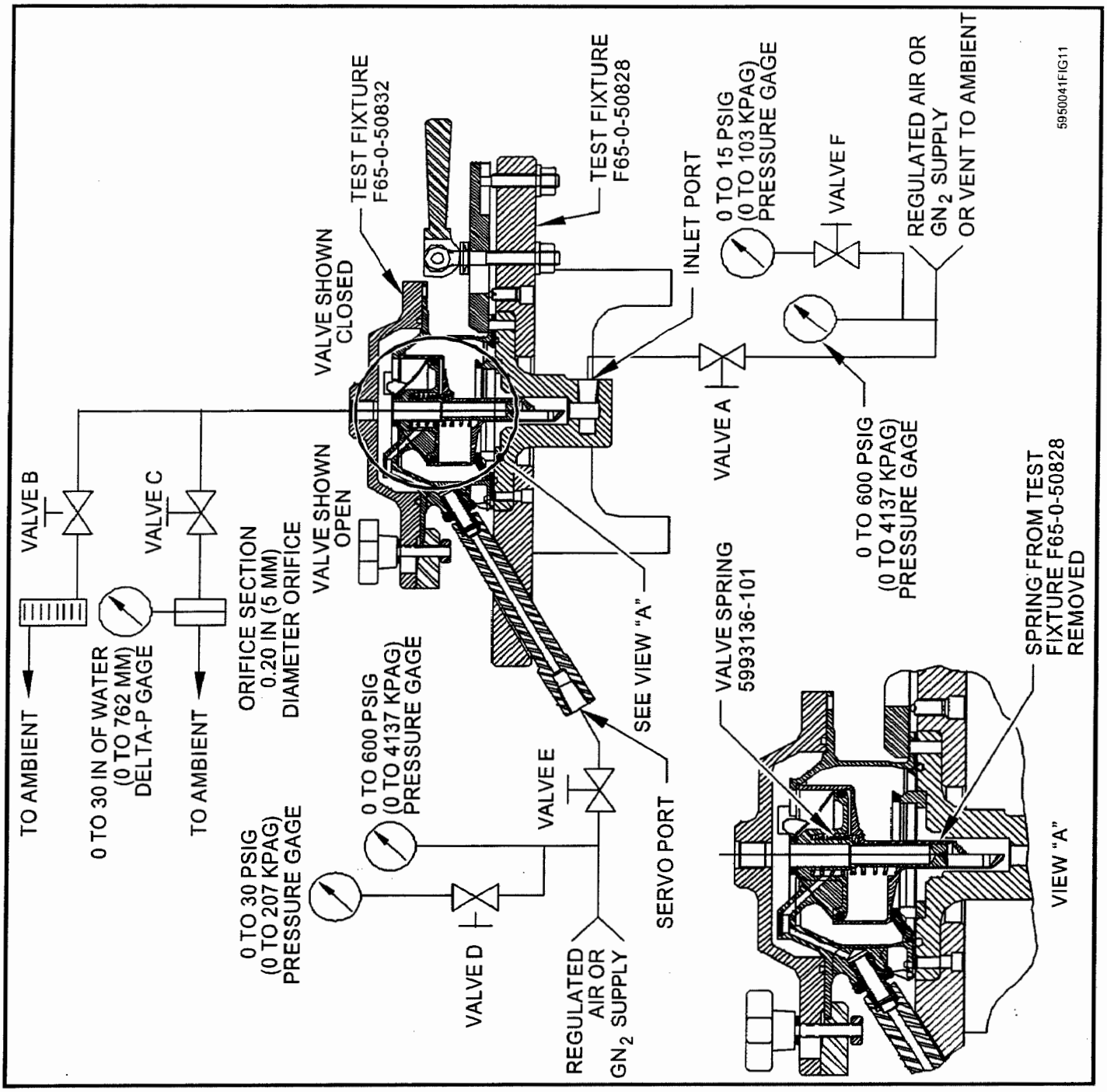
(b) Slowly apply pressure to the inlet port until the valve closes. Close valve E.

(c) Slowly increase the pressure to 330 to 340 psig (2275 to 2344 kPag) to the inlet port.

(d) The leakage must not exceed 2.8 scfm (0,079 scmm) (equivalent to 0.21 lbs/minute (0.10 kg/minute)), as measured at the flowmeter.

(e) Slowly reduce the pressure to zero.

SERVICE BULLETIN



Leakage Test Setup
Figure 4

(5) Operating Pressure Tests

(a) With the spring still removed, set up the valve in test fixture, F65-0-50828, as shown in Figure 5. Open valves A, D, E, and F.

(b) Minimum Initial Closing Pressure Test

1 Vent the servo pressure to zero.

2 With the inlet pressure at zero, partially close valve B while slowly increasing the inlet pressure to close the valve.

NOTE: A sudden increase in pressure as noted on the inlet pressure gage indicates that the valve closes (approximately 1.5 to 3 psig (10 to 21 kPag)).

3 The valve must close at a maximum pressure of 3 psig (21 kPag).

4 Reduce the inlet pressure to zero to open the valve.

NOTE: The rapid increase in airflow sound as the inlet pressure decreases, indicates that the valve opens.

5 The valve must open when the inlet pressure reduces to zero.

(c) Low Pressure Test

1 Vent the servo pressure to zero.

2 With the inlet pressure at zero, partially close valve B while slowly increasing the inlet pressure to 2.9 to 3.1 psig (20 to 21 kPag) to close the valve.

NOTE: A sudden increase in pressure as noted on the inlet pressure gage indicates that the valve closes (approximately 1.5 to 3 psig (10 to 21 kPag)).

3 Slowly increase the servo pressure until the valve opens (approximately 1.0 to 1.5 psig (7 to 10 kPag).

NOTE: The rapid increase in airflow sound as the servo pressure increases, indicates that the valve opens.

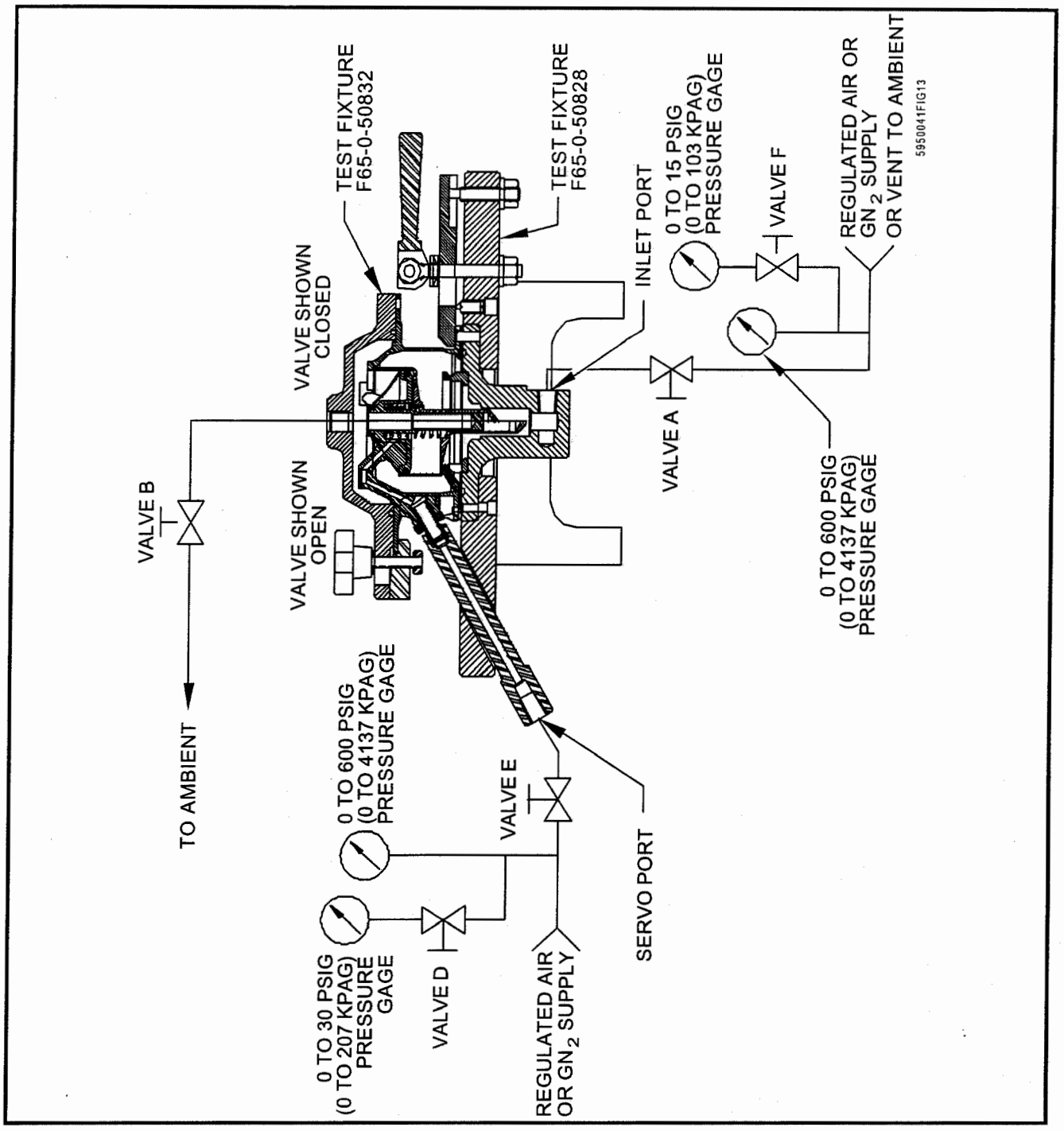
4 The valve must open at a maximum servo pressure of 5 psig (34 kPag).

5 Reduce the servo pressure to zero to close the valve.

NOTE: The rapid decrease in airflow sound as the servo pressure decreases, indicates that the valve closes.

6 The valve must close when the servo pressure is reduced to zero.

SERVICE BULLETIN



Operating Pressures Test Setup
Figure 5

(d) High Pressure Test

1 Reinstall the spring into the test fixture, F65-0-50828. Set up the valve in the test fixture, as shown in Figure 6. Close valves D and F. Open valves A and E.

2 With the servo pressure at zero, slowly apply an inlet pressure of 105 to 115 psig (724 to 793 kPag) to close the valve.

3 Slowly increase the servo pressure until the valve opens (approximately 110 to 120 psig (758 to 827 kPag)).

NOTE: The rapid increase in airflow sound as the servo pressure increases, indicates that the valve opens.

4 The valve must open at a maximum pressure of 405 psig (2792kPag).

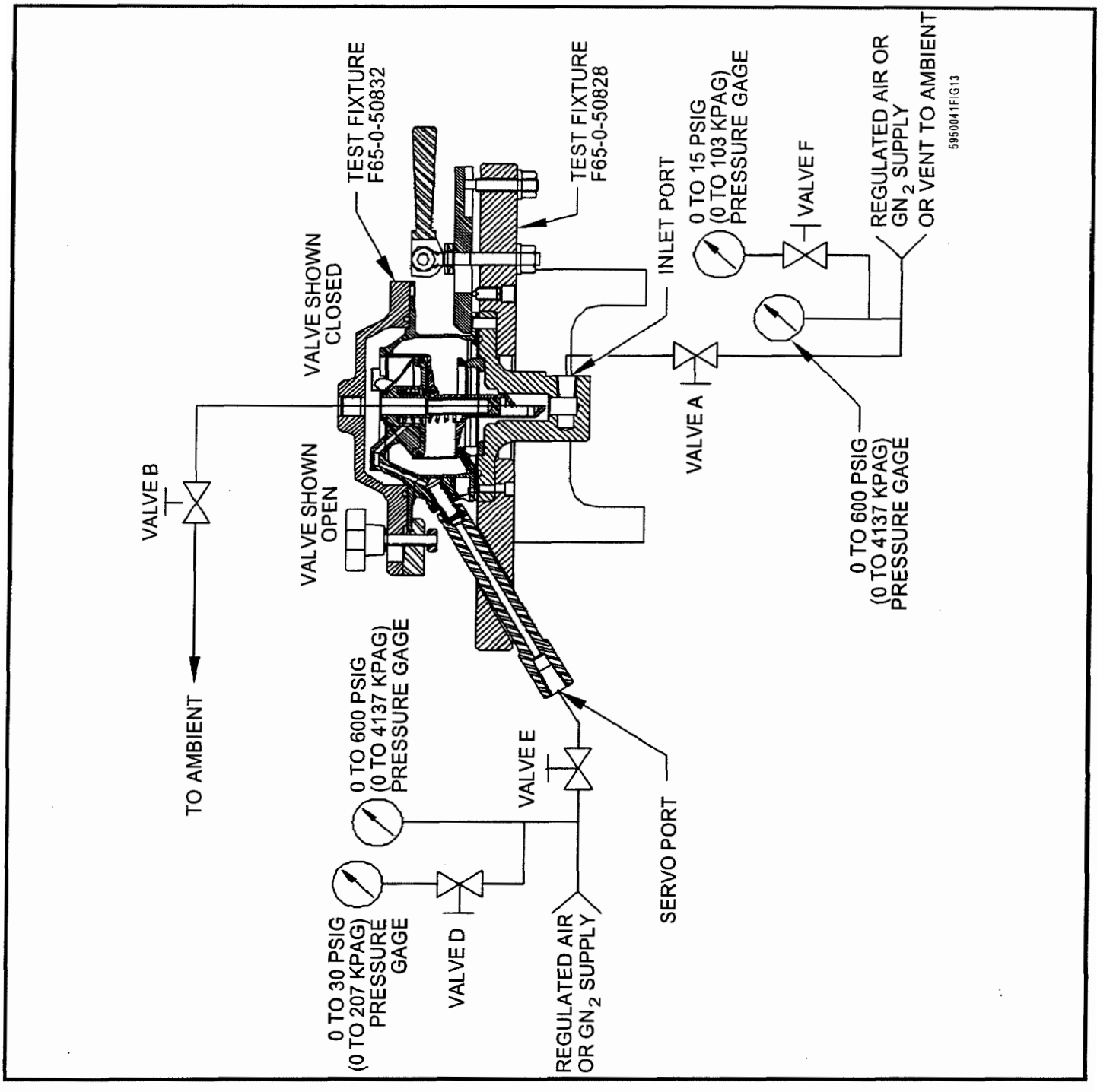
5 Reduce the servo pressure to zero to close the valve.

NOTE: The rapid decrease in airflow sound as the servo pressure decreases, indicates that the valve closes.

6 The valve must close when the servo pressure is reduced to zero.

7 Reduce the inlet pressure to zero.

SERVICE BULLETIN



Operating Pressures Test Setup
Figure 5

Customer Support Inc.
SERVICE BULLETIN

(6) Fault Isolation

NOTE: Table 5 lists the problems, probable causes, and the corrective actions.

Fault Isolation
Table 5

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
Proof test fails.	Body assembly.	Replace the body assembly.
Leakage too high.	Seal assembly, spring, piston, union.	Replace as necessary.
Valve fails to open or close at required pressures.	Seal assembly, spring, piston.	Replace as necessary.