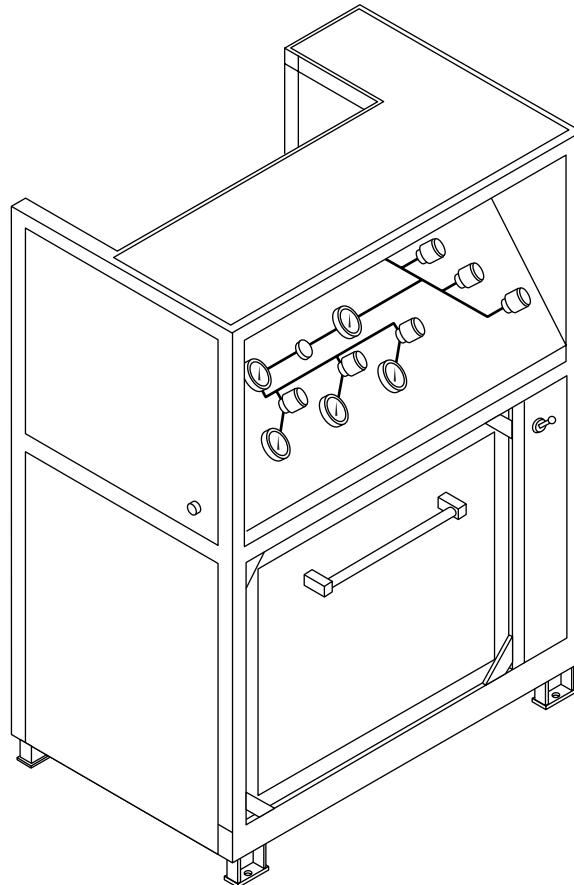


Containment Fill Station CFS-3



October 2001

MNL-0159

This manual contains operating instructions and maintenance schedules for the **CFS**, Containment Fill Station, manufactured by **BAUER** Compressors, Inc. of Norfolk, Virginia, USA.

All instructions in this manual should be observed and carried out as written to prevent damage and premature wear to the equipment and the units served by it.

If these operating instructions are not followed and/or changes are made to the unit without prior written authorization, including the use of maintenance parts not supplied by Bauer, any claims under warranty shall be void. Please contact our customer service department at the numbers listed on the front of this manual should you need any further assistance.

While every effort is made to ensure the accuracy of the information contained in this manual, **BAUER** will not, under any circumstances, be held accountable for any inaccuracies or the consequences thereof

Change #	Date	Notes	Approval
Basic Edition	October 1993		
1	April 1994		
2	October 2001	AR 2043 and new format	JH

Change #	Effected Pages	Change #	Effected Pages
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2 - Format	All		

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A SAFETY PRECAUTIONS**A1 General Safety**

- Read the operating manual before installing or operating the machine, and always follow appropriate handling, operation and maintenance procedures. The maintenance plan contains measures required to keep the machine in good condition. Maintenance is simple, but must be executed regularly to achieve safe operation, maximum efficiency and long service life.
- Consult and follow all OSHA, NEMA, ASME and local regulations, laws and codes covering the installation and operation of this fill station and accessories before operating the unit.
- The unit must be installed, operated, maintained and repaired only by authorized, trained and qualified personnel.
- Do not operate this unit in excess of its rated capacity, pressure, temperature, or other condition outside the limits contained in this manual. Operation of this unit in excess of the conditions set forth in this manual may subject the unit to limits which it is not designed to withstand.
- If any of the provisions contained in this list (especially concerning safety) do not comply with local provisions of law, the safer provision must be applied.
- Limits (pressure values, temperature values, time settings, etc.) must be permanently marked.
- Do not play with compressed air. Pressurized air can cause serious injuries.
- The operator is responsible for keeping the machine in safe operating condition. If parts and accessories are not considered to be reliable for safe operation, they must be replaced immediately.
- Periodically check all safety devices, temperature and pressure gauges to make sure the system is operating within the proper limits.
- Keep the operating manual available for the operators, and take care that operation and maintenance are performed according to the instructions. Enter all operating data, executed maintenance measures, etc. in a log. Observe all relevant safety provisions.
- Failure to follow any of these warnings may result in an accident causing personal injury or property damage.

A2 Safety Warnings

- The use of repair parts other than those included within the Bauer approved parts list may create hazardous conditions over which Bauer has no control. Such hazardous conditions can lead to accidents that may be life-threatening, cause substantial bodily injury, and/or result in damage to the equipment. Therefore, Bauer Compressor, Inc. can bear no responsibility for equipment in which non-approved repair parts are installed.
- The use of plastic pipe or rubber hose in place of steel tube or iron pipe; soldered joints; or failure to insure system compatibility of flex joints and flexible hose can result in mechanical failure, property damage, and serious injury or death.

B TECHNICAL DATA

All technical data is subject to change without notice.

B1 CFS-3 Containment Fill Station

Medium	air
No. of fill positions	3
Operating pressure, std.	3250 psig (224 bar)
Operating pressure, max.	6000 psig (350 bar)
Ambient temperature range	32° to 105° F (0° to 40° C)

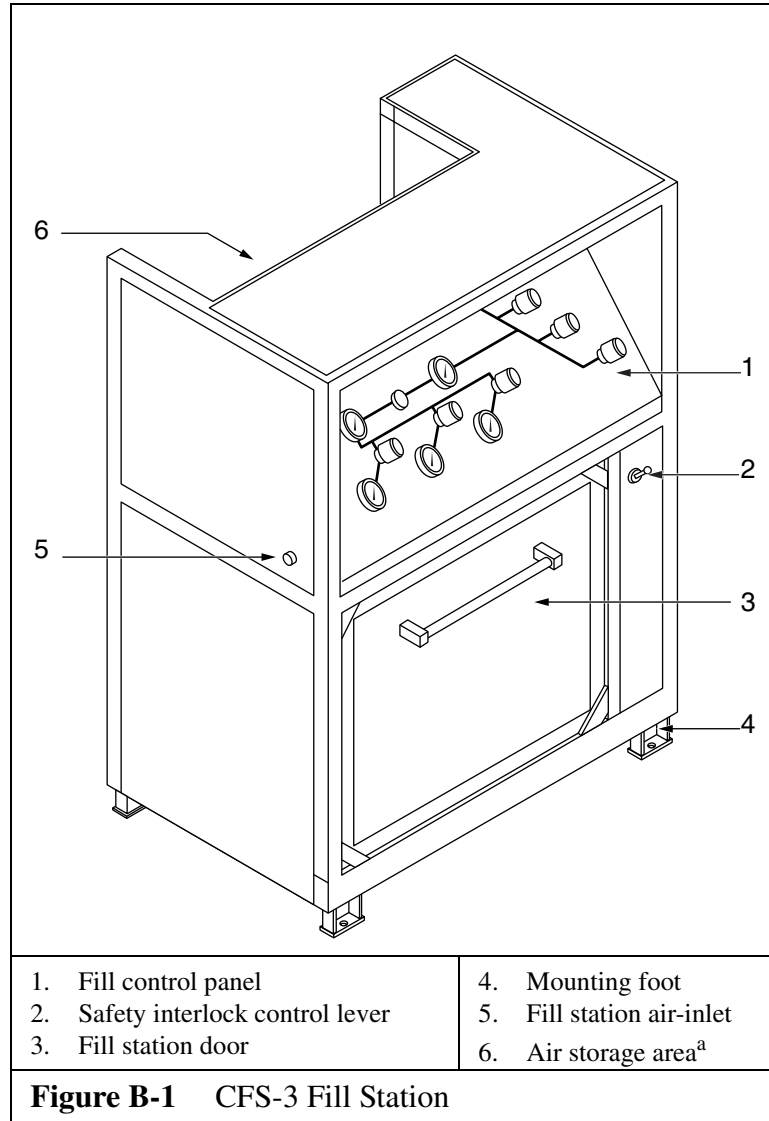


Figure B-1 CFS-3 Fill Station

a.Storage vessels are optional accessories.

B2 Description

The Containment Fill Station (CFS) is used in conjunction with an air-storage system and an air-compressor to recharge air-bottles. Approximate weight of the CFS-3 is 2950 lbs.

B3 Fill Station Air-flow

Refer to the flow diagram in Section E.

When recharging bottles with compressed air directly from the fill station air-inlet with the 3-way ball valve (V2) in the “FROM COMPRESSOR” position and the bank shut-off valves (V9) and the fill control valves (V4) open, compressed air flows to the fill pressure regulator (R1) where the desired fill pressure is achieved. The fill pressure regulator inlet pressure gauge (P1) indicates the pressure applied to the fill pressure regulator while the fill pressure regulator outlet pressure gauge (P2) indicates the regulated fill pressure. The safety valve (RV1) protects against excess pressure. From the fill pressure regulator, the compressed air flows through the fill control valves (V4) and the fill hose (H1) to the fill adapter (ADP1). The fill pressure gauges (P4) indicate the pressure applied to the air-bottles.

When refilling the storage banks¹ with the 3-way ball valve (V2) in the “FROM COMPRESSOR” position, the bank isolation valves (V3) open, the bank shut-off valves (V9) and the fill control valves (V4) closed, compressed air flows into the fill station through the fill station air-inlet. The compressed air flows through the check valves (CV1) and into the storage banks (CYL1). The bank pressure gauges (P3) will indicate the pressures of the storage banks.

When recharging bottles from the storage banks with the 3-way ball valve (V2) in the “FROM BANKS” position, the respective bank shut-off valves (V9), fill control valves (V4) and bank isolation valves (V3) all open, compressed air flows from the banks through the bank isolation valves and the bank shut-off valves to the fill pressure regulator (R1) where the desired fill pressure is achieved. The fill pressure regulator inlet pressure gauge (P1) indicates the pressure applied to the fill pressure regulator while the fill pressure regulator outlet pressure gauge (P2) indicates the regulated fill pressure. The safety valve (RV1) protects against excess pressure. From the fill pressure regulator, the compressed air flows through the fill control valves (V4) and the fill hose (H1) to the fill adapter (ADP1). The fill pressure gauges (P4) indicate the pressure applied to the air-bottles.

1. optional accessory

C INSTALLATION

C1 Unpacking and Handling

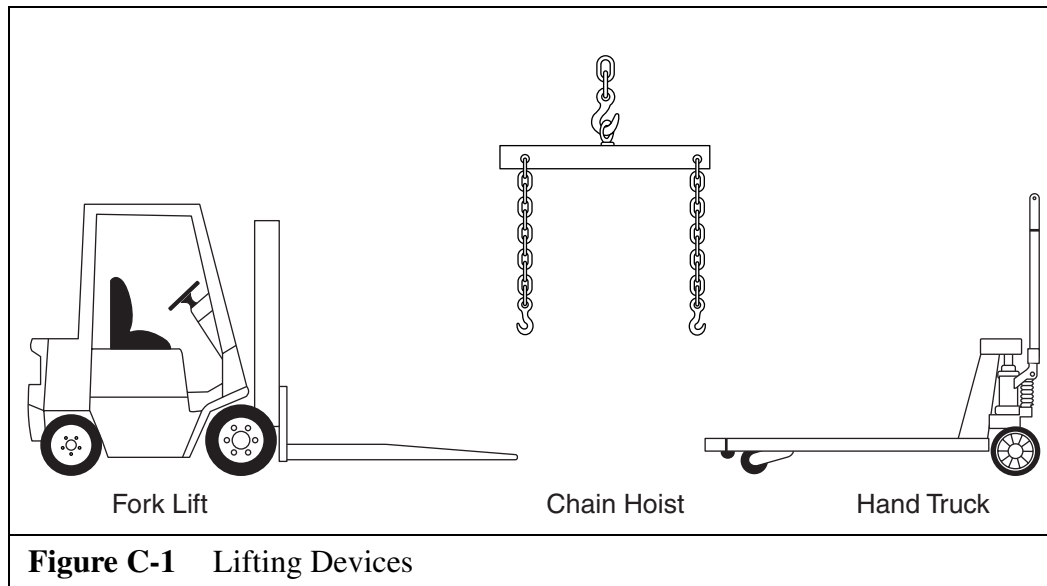
This fill station is packaged according to the requirements for shipping via the requested type of carrier service. It is possible that the fill station could have been damaged during shipping. For this reason, we urge you to thoroughly examine the unit for possible damage and report any such damage to the shipping company immediately.

Care must be taken in unpacking the fill station. Serious damage could result by not checking for clearance between the item to be unpacked and the packaging to be removed.

Handling of the unpacked fill station should be performed only by the following methods.

CAUTION

Be sure that the lifting devices are capable of handling the weight of the unit.
 Before lifting the unit, secure all loose or swinging parts to keep them from moving.
 Stay clear of the lifted load



C2 Installation of the Fill Station

For installation observe the following:

- The floor must be capable of supporting the weight of the unit.
- Position the unit so that it is level.
- For added safety, you must bolt the unit to the floor and the wall. In the event of a bottle failure, a substantial amount of energy will be released. This extra measure may help secure the fill station.
- Observe and maintain the ambient temperature within the permissible range. This unit is designed for indoor operation in ambient temperatures ranging from 32° to 105°F.

D OPERATION AND MAINTENANCE**D1 General**

Filling bottles is a tremendous responsibility. Delegate your most reliable personnel to this task. This system is capable of generating pressures in excess of the normal bottle fill pressure. It is important not to overfill bottles.

Every bottle is stamped with a maximum pressure and the last inspection date. Be sure the regulator and safety valves are properly set. Do not fill a bottle with an outdated inspection stamp.

Visually inspect each bottle and valve for signs of damage before filling. Do not fill any bottles which appear to be damaged. See ASME and DOT regulations and manufacturer's recommendations.

D2 Description

The fill station is designed to offer some operator protection against resultant explosive forces should a cylinder fail during the filling operation and, at the same time, to contain resulting shrapnel. The fill station features scuff guard strips, three fill hoses complete with bleed valves and SCBA fill adapters of choice, pneumatic fill door safety interlock, and an illuminated polished stainless steel fill control panel with individual pressure gauges. A panel mounted remote fill hose connection or hose reel is optional.

D3 Operation

1. Unlatch the fill station door by flipping the fill station door interlock control lever to the down position and then pull the door open by means of the provided handle.
2. Insert the proper size spacer ring, supplied with your system, into the bottom of the bottle holder to adjust the height of your SCBA bottle (See Figure D-1). Different SCBA bottles have different lengths. For some smaller cylinders, it may be best to turn the large spacer on its side. A proper height adjustment will leave the bottle valve slightly below the rim of the bottle holder.

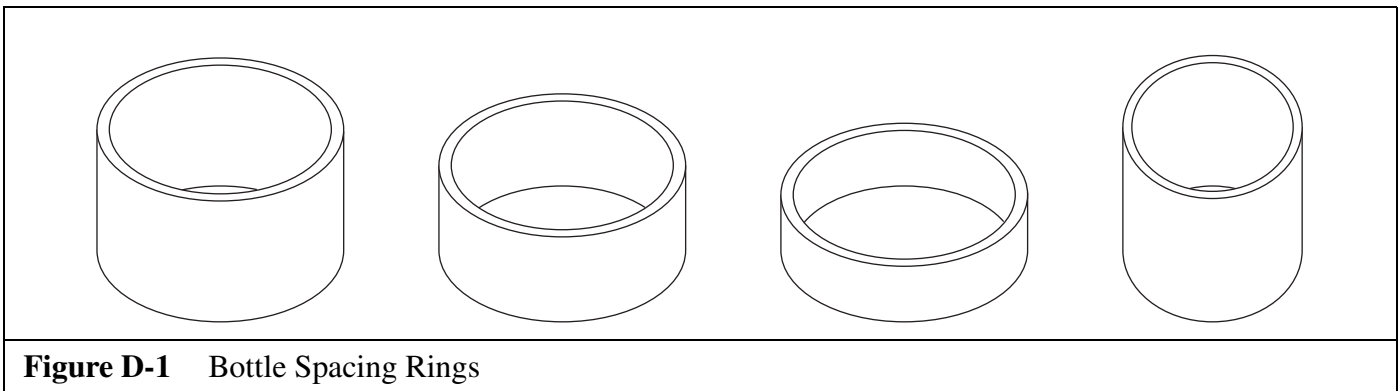


Figure D-1 Bottle Spacing Rings

3. Place the bottle(s) to be filled into the holder and connect the fill adapter(s) to the bottle(s) to be filled.

CAUTION

Minimum bend radius for the fill hose is 1½ inches. Less than this will cause damage to or failure of the fill hose. Place the bottle so that the bend radius of the hose is greater than 1½ inches.

4. Close the hose bleed valve(s) and open the bottle valve(s).
5. Close and latch the fill station door by flipping the fill station interlock control lever to the up position.

NOTE:

The Containment Fill Station will not fill the bottles unless the door is closed and latched.

6. By closing the door, the bottle holders are returned to their upright position.
7. With the 3-way ball valve, select whether to fill directly from the compressor or from air storage.
8. Filling from the compressor is best suited for “topping-off” bottles.
9. Filling from air storage is best suited for multiple and cascade bottle fillings.
10. For cascade filling from air storage, open the desired bank valve. Adjust the fill pressure with the fill pressure regulator to the desired pressure.
11. Open the fill valve(s) to fill the bottle(s). The pressure indication on the fill pressure gauge will drop while bottles are filling.
12. Filling is completed when the fill pressure gauge returns to the desired pressure. If the pressures between the bank and the fill gauge equalize before the desired fill pressure is reached, close the bank valve in use and open another bank valve. Repeat this procedure as necessary.
13. Close the bank valve and the fill valve(s).
14. Unlatch the fill station door by flipping the fill station interlock control lever back to the down position.
15. Open the safety door. The bottles are now in a diagonal position.
16. Close the bottle valve(s) and open the fill hose bleed valve(s).
17. Remove the fill adapter(s) from the filled bottle(s) and connect them to the hose holder(s).

D3.1 Remote Fill Hose and Hose Reel

The remote fill hose¹ and the hose reel¹ are rated for 5000 psi service. The hose reel is supplied with 50 ft. of ¼” high pressure hose. The remote fill and the hose reel are located in the compartment behind the panel adjacent to the fill station door.

1. Optional Items

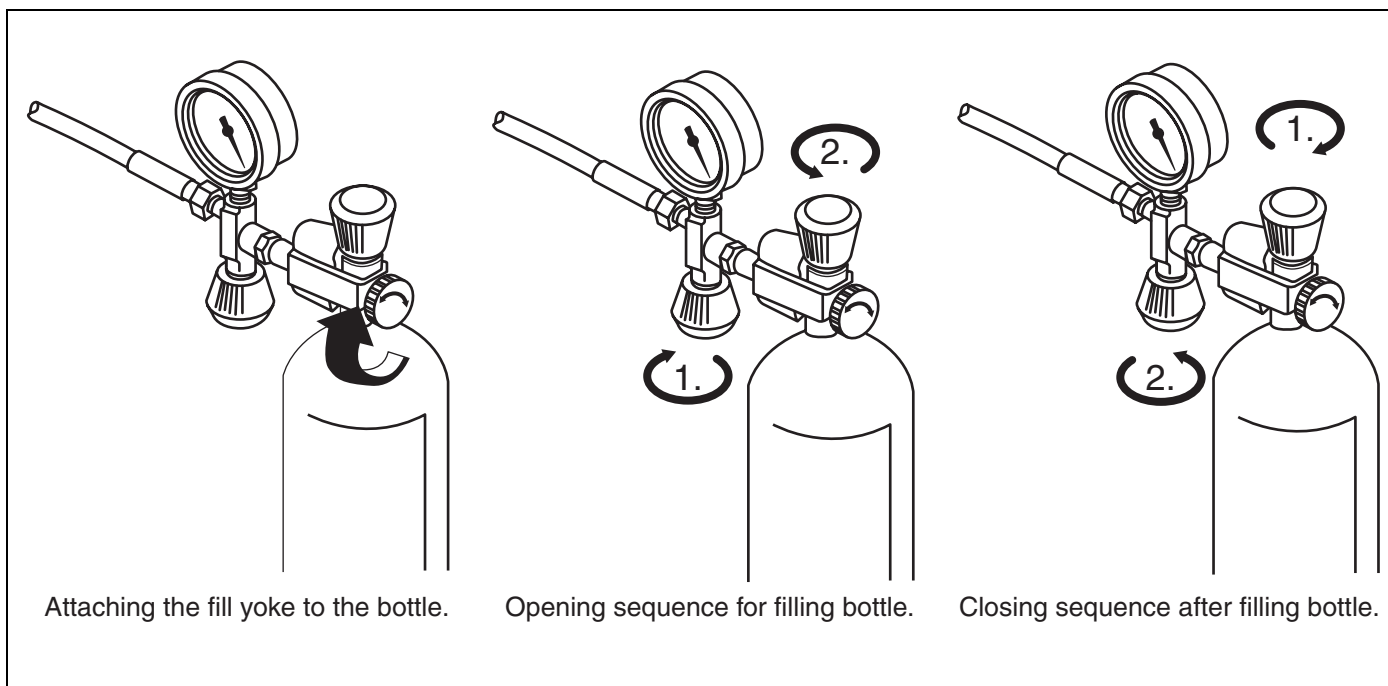


Figure D-2 Bottle Valve Sequences

D3.2 Filling Procedure for a Remote Fill Hose or a Hose Reel

Refer to figure Figure D-2

D3.2.1 Connecting an Air Bottle

- Connect to the air bottle valve using a fill hose with the CGA-346 fill adapter for 2215 psi bottles, or the CGA-347 adapter for 4500 psi bottles. The CGA-347 fill adapter seals on 4500 psi rated bottle valves, but vents on lower rated pressure bottles.

D3.2.2 Filling the Air Bottle

- Close the bleed valve (1) on the fill hose.
- Open the filling valve on the fill panel to the filling position.
- Adjust the regulator on the fill panel to the desired pressure.
- Open the bottle valve (2). The bottle will fill.
- Drain the condensation from the compressor regularly during filling. On units with an automatic condensate drain system, check that the condensation is drained regularly.

D3.2.3 Removing the Air Bottle

- After reaching the desired bottle pressure, close the bottle valve.
- After the bottle valve is closed, close the filling valve located on the fill panel.
- Open the bleed valve (2) to vent the residual pressure in the fill hose.
- Disconnect the fill adapter from the air bottle valve.
- Turn off the compressor unit.

During the filling procedure, the bottles will warm up due to recompression. After removal, allow the bottles to cool down and the bottle pressure to drop. The bottles may then be reconnected and topped off to their maximum filling pressures.

Both adapters use a unique o-ring sealed tip. Light finger tightening assures a complete bubble tight seal to the bottle valve, even when the valve seating area has been somewhat scratched or dented.

Compressed air tank filling valves for a pressure in excess of 2215 psi are standardized (CGA). Connectors for 2215 and 4500 psi are different and cannot be accidentally attached and used with the wrong type bottle.

D3.3 Auto-fill System

To actuate the auto-fill¹ system move the auto/manual lever to the “AUTO” position. The auto-fill system, installed after the air storage and cascade system, controls the dispensation of air from the storage banks. For example, when a bottle is connected to a fill hose and air begins to flow from air storage, air is initially being drawn from Bank 4. When the pressure in the bottle equalizes with Bank 4, a sequential valve senses this and opens the bank sequential valve, allowing air to be drawn from Bank 3. When the pressure of Bank 3 equals the pressure in the bottle, the auto-fill process continues by switching from Bank 3 to Bank 2. When the bottle pressure approaches the pressure of Bank 3, the sequential valve closes the Bank 3 exit valve and opens the Bank 4 sequential valve. The dome load valve senses when the bottle is filled and stops the flow of air from the storage system. While this is happening, the compressor is topping off the banks as directed by the priority valve system.

D3.4 Air Storage System

D3.4.1 Description

The air storage system¹ consists of two (or more) D.O.T. or A.S.M.E. storage vessels with line valves, safety valves, interconnecting tubing, pressure gauges, check valves and mounting clamps.

D.O.T. vessels are approved by the Department of Transportation for portable usage. D.O.T. systems are available at 4500 psi and 6000 psi.

A.S.M.E. vessels conform to the American Society of Mechanical Engineers codes for permanent installation. These vessels have working pressures of 5250 psig, with a safety factor of 4 to 1; and 6600 psig, with a safety factor of 3 to 1.

A safety valve (See Figure D-3) is provided on each vessel to protect against excess pressure. It is preset at the factory and sealed. It should not be adjusted.

1. Optional Item

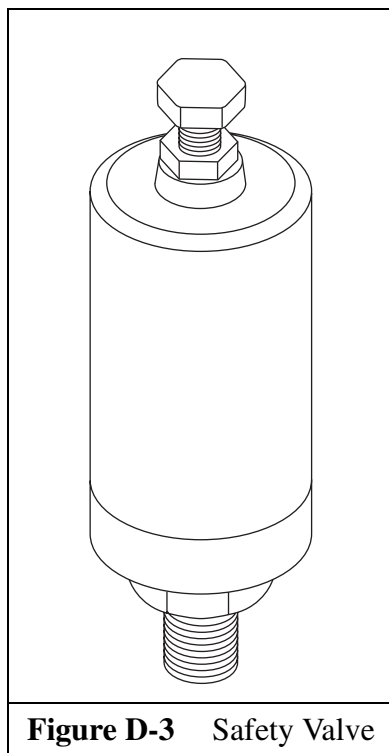


Figure D-3 Safety Valve

D3.4.2 Operation

For bottle filling instructions, refer to Paragraph D3.2.

To refill the storage cylinders, turn the 3-way ball valve to the “from bank” position. The respective isolation valve(s) should be open and the fill valve(s) closed.

D3.4.3 Auto Refill

The auto refill system is an optional item.

The actuation points of the priority valves are set at descending pressure values as follows:

The priority valve of the Bank 1 is set at least 200 psi below the set pressure of the compressor final pressure switch. The priority valve of Bank 2 is set at least 200 psi below the value of the Bank 1 priority valve, and (on four bank systems) the Bank 3 priority valve is set at least 200 psi below the actuation point of the Bank 2 priority valve.

The Bank 1 fills up and the system pressure approaches the actuation point of the Bank 2 priority valve, causing it to open and allow air flow to the bank 2. When the bank 2 pressure approaches the actuation point of the Bank 3 priority valve, the valve opens, allowing the Bank 3 to fill. When the Bank 3 pressure approaches the actuation point of the Bank 4 priority valve, the valve opens and allows the Bank 4 to fill. After the last bank fills to the actuation point of its priority valve, the compressor continues to fill the banks until the system pressure reaches the actuation point of the final pressure switch and shuts the compressor down. The system is then fully charged, awaiting the next bottle to fill.

As air is being used, the pressure in the storage bank drops. The final pressure switch installed in the air discharge line after the compressor senses decreased pressure and signals the compressor to start filling or refilling the air storage system. Unless otherwise specified, the final pressure switch senses the Bank 1 pressure. When the compressor is started and begins to fill the storage system, air flows directly from the compressor to Bank 1.

D3.5 Maintenance

D3.5.1 Pressure Gauges

Observe the pressure gauges daily. If the readings of any of the gauges seem to be incorrect, bleed off all system pressure. Then, remove the gauge and check for wear and tear, accuracy and proper functioning by comparing it to a precision test gauge or a dead weight tester. Replace all broken or damaged gauges immediately.

D3.5.2 Safety Valve (Fill Station)

Develop a regular program of visual inspection, looking for clogged drains and discharge pipe, dirt build-up in and around the valve seat, and broken or missing parts.

Avoid excessive operation of the safety valve, as even one opening can provide a means for leakage. Safety valves should be operated only often enough to assure that they are in good working order.

Test the valve every two to six months (depending on the surrounding conditions) by raising the system pressure to the valve's set pressure, allowing it to open and reset as it would in normal service. Do not hand operate the valve with less than 75% of the stamped set pressure exerted on the underside of the disc. When hand operating, be sure to hold the valve in an open position long enough to purge accumulated foreign material from the seat area and then allow the valve to snap shut.

Do not paint, oil or otherwise cover any interior or working parts of any safety valve. They do not require any lubrication or protective coating to work properly.

When safety valves require repair, service adjustments or set pressure changes, work shall be accomplished by the manufacturer or holders of "V", "UV" and/or "VR" stamps.

D3.5.3 Tube Connections

Pipe connections (swivel nuts): Tighten *just firmly enough* so that leakage is stopped (finger tight plus up to an additional 1/2 turn as necessary). Please note that the compression type coupling fittings are capable of exerting extreme force on the tubing and should not be tightened more than is required to seal the joint. To improve the sealing of the pipe connections and to facilitate installation, the following should be observed:

Apply a thin layer of Never-Seez NSWT or equivalent on the outside of the ferrule during assembly.

Lubricate the threads of the connector with Never-Seez NSWT or a similar PTFE base lubricant to facilitate future disassembly.

D3.5.4 Flange Mounted Ball Bearings for Bottle Door Pivot

When operating at a slow speed and in a clean environment, there is no need for relubrication.

If the setscrews should become loose, tighten as follows:

Setscrew diameter	Hex size	Recommended torque (inch lbs)
#10	3/32"	28
1/4"	1/8"	65

D3.5.5 Pressure Hoses

The hoses should be inspected periodically for wear and damage. If a hose is worn or damaged, remove and replace it.

D3.5.6 Storage Bottles

All storage bottles should be visually inspected internally every year.

Every five (5) years, D.O.T. bottles must be hydrotested.

Check local and state regulations regarding testing of ASME and/or D.O.T. bottles. Some states require an annual visual inspection, and hydrotesting requirements also differ from state to state.

D3.5.7 Safety Valves (Air-storage)

Develop a regular program of visual inspection, looking for clogged drains and discharge pipe, dirt build-up in and around the valve seat, and broken or missing parts.

Avoid excessive operation of the safety valve, as even one opening can provide a means for leakage. Safety valves should be operated only often enough to assure that they are in good working order.

Test the valve every two to six months (depending on the surrounding conditions) by raising the system pressure to the valve's set pressure, allowing it to open and reset as it would in normal service.

Do not paint, oil or otherwise cover any interior or working parts of any safety valve. They do not require any lubrication or protective coating to work properly.

When ASME safety valves require repair, service adjustments or set pressure changes, work shall be accomplished by the manufacturer or holders of "V", "UV" and/or "VR" stamps.

D3.5.8 Fill Station Door Interlock Mechanism

Should the fill station interlock mechanism become jammed, turn the regulator on the fill station control panel to zero and the door should unlock when all pressure is relieved.

E REPLACEMENT PARTS

E1 How to Use this Section


- The use of repair parts other than those included in the Bauer Replacement Parts List may create unsafe conditions over which Bauer has no control. Such unsafe conditions can lead to accidents that may be life-threatening, cause substantial bodily injury, and/or result in damage to the equipment. Therefore, Bauer Compressors, Inc. can bear no responsibility for equipment in which non-approved repair parts are installed
- No number in the Item column indicates the this is a part number for a complete assembly
- A † in the Qty column means the parts are illustrated for assembly purposes only and are not available for sale as individual components. These parts can be obtained by ordering the complete assembly.
- A dash (—) in the Item Number column and an ellipsis (...) in the QTY column indicates that there is more than one part number applicable to the Item.
- AR in the Quantity column means that the item is cut or manufactured to the size which the customer specifies.
- NS in the Item column indicates the item is Not Shown in the illustration.

When placing an order for spare parts, please provide the following information to ensure delivery of the correct parts.

Model Number Date of Manufacture
 Serial Number Quantity required
 Part Number Part Description

Example: Junior-E3; manufactured 1998; Serial number 32165; requiring 2 reed valves, p/n N04860.

The model number, date of manufacture and serial number can be found of the compressor unit identification plate on the compressor unit's frame.

BAUER COMPRESSORS, INC. NORFOLK, VIRGINIA U.S.A			
MODEL NO.	<input type="text"/>	BLOCK NO.	<input type="text"/>
SERIAL NO.	<input type="text"/>	PRESSURE	<input type="text"/> PSIG
CAPACITY	<input type="text"/> CFM	CHG. RATE	<input type="text"/> CFM
MOTOR	<input type="text"/> HP	SPEED	<input type="text"/> RPM
<input type="text"/>	VOLTS <input type="text"/> PH	<input type="text"/>	HZ <input type="text"/> AMPS
DATE OF MANUFACTURE <input type="text"/>			LBL-4

Compressor Unit Identification Plate

E2 CFS-3 Replacement Parts List

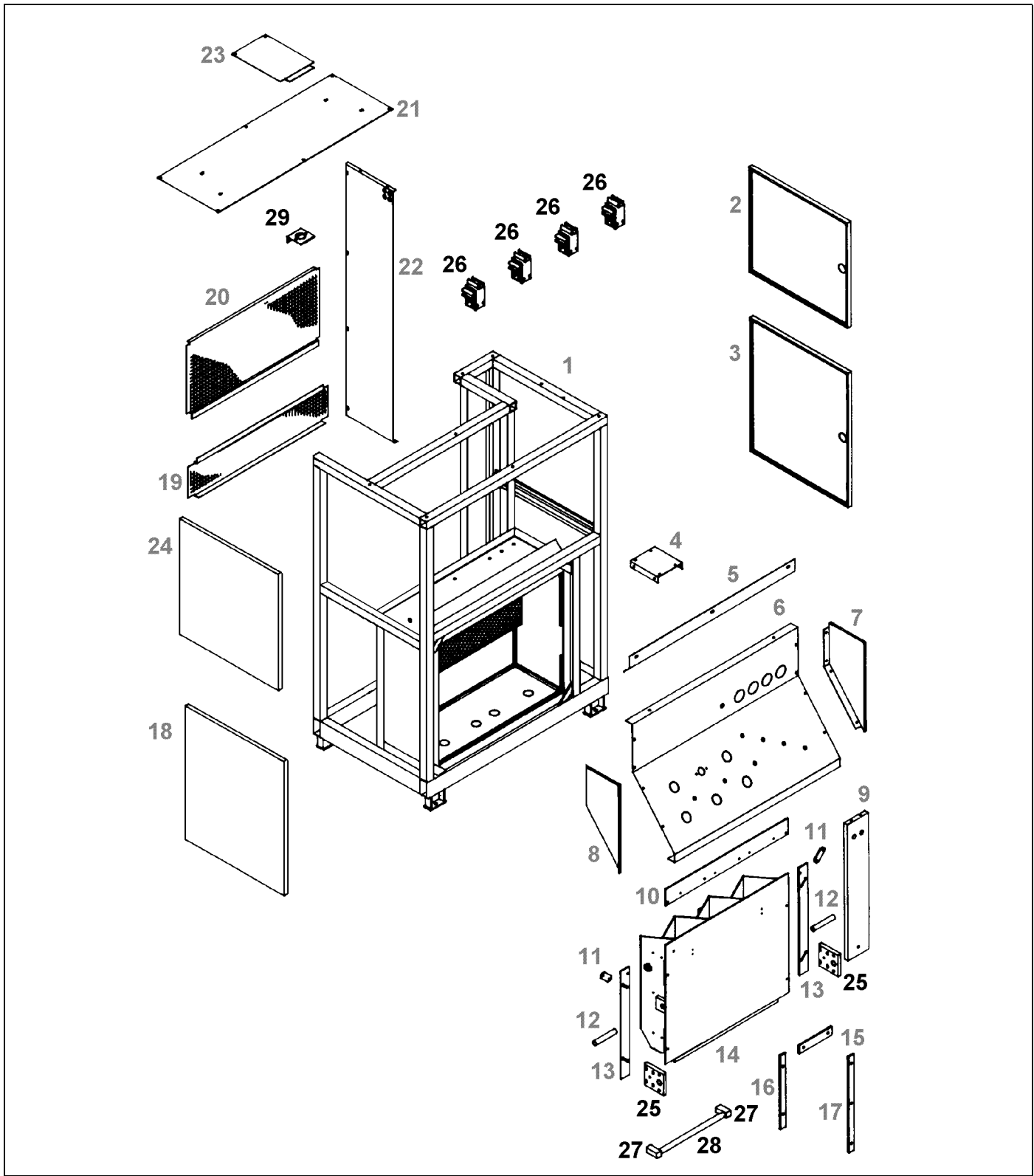


Figure E-1 CFS-3 Frame Assembly

Item	Qty	Part No.	Description	Notes
1	1	FRM-0196	Fill station frame	CFS-3
2	1	PNL-0691	Upper right hand side panel	UNII/CFS-3
3	1	PNL-0692	Lower right hand side panel	UNII/CFS-3
4	1	SUP-0116	Hose reel support ¹	UNII/CFS-3
5	1	PNL-0743	Light canopy panel	CFS-3
6	1	PNL-0708	Fill station control panel	UNII/CFS-3
7	1	SUP-0108	Right control panel support	UNII/CFS-3
8	1	SUP-0109	Left control panel support	UNII/CFS-3
9	1	PNL-0698	Fill box front panel	UNII/CFS-3
—	...	PNL-0725	Fill box front panel ¹	UNII/CFS-3, RF
—	...	PNL-0729	Fill box front panel ¹	UNII/CFS-3, HR
10	1	LCH-0023	Latch bar	UNII/CFS-3
11	2	BAR-0025	Lock bar support bar	UNII/CFS-3
12	2	PIN-0017	Fill box pivot pin	UNII/CFS-3
13	2	BAR-0024	Lock bar	UNII/CFS-3
14	1	HOL-0041	Bottle holder	UNII/CFS-3
15	3	STR-0025	Scuff guard strip	UHMW 3/8" x 2" x 9 3/8" lg.
16	6	STR-0026	Scuff guard strip	UHMW 3/8" x 1 1/2" x 18" lg.
17	18	STR-0024	Scuff guard strip	UHMW 3/8" x 1 1/2" x 23" lg.
18	1	PNL-0742	Lower left hand side panel	CFS-3
19	1	PNL-0125	Lower back center panel	UNII/CFS-3
20	1	PNL-0193	Upper back center panel	UNII/CFS-3
21	1	PNL-0749	Roof panel part A	CFS-3
22	1	PNL-0744	Right back inside panel	UNII/CFS-3
23	1	PNL-0690	Roof panel part B	UNII/CFS-3
24	1	PNL-0750	Upper left hand side panel	CFS-3
25	2	PLT-0166	Adjustment block	UNII/CFS-3
26	4	BRK-0328	Safety valve bracket	UNII/CFS-3/ASME racks
27	2	MTS-0142	Handle mount	1 1/4" OD tube rail
28	AR	TUB-R-0098	Round tube rail	1 1/4" OD
29	1	BRK-0312	Regulator mounting bracket ¹	UNII/RF/HR/Hi-lo

1. optional accessory

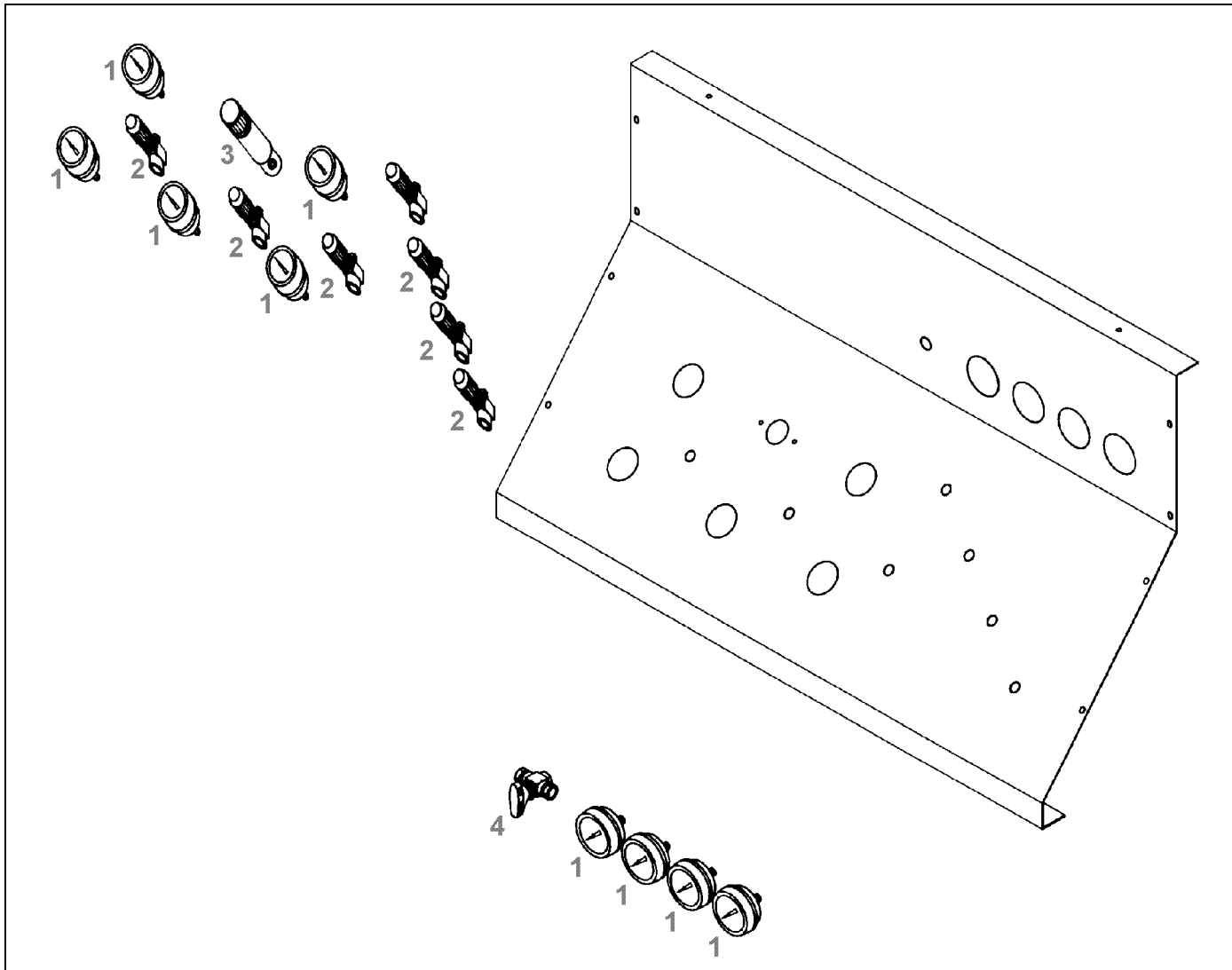


Figure E-2 CFS-3 Fill Control Panel

Item	Qty	Part No.	Description	NotesCFS-3
1	9	GAG-0009S	Pressure gauge	0-7500 psi, 2½", ¼" NPT, UC
2	7	VAL-0076	Line valve	¼" NPT
3	1	REG-0003	Regulator	¼" NPT, 6000 psi in, 0-5000 psi out
4	1	VAL-0067	Ball valve	3-way, ¼" NPT

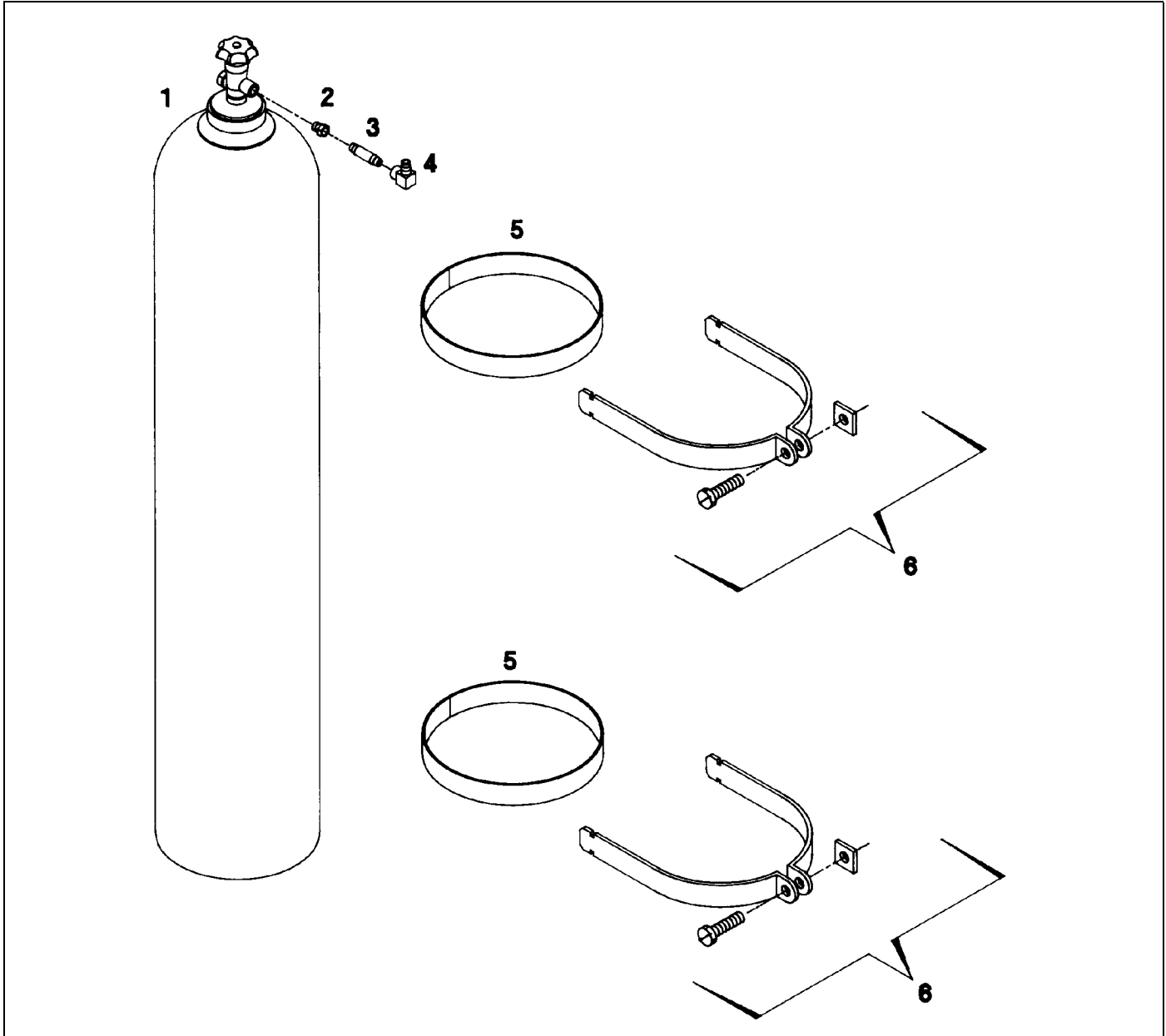


Figure E-3 Air Storage Vessel Assembly, D.O.T

Item	Qty	Part No.	Description	Notes
1	1	CYL-0011	DOT bottle with valve	6000 psi
—	...	CYL-0013	DOT bottle with valve	4500 psi
2	1	NUT-0043	Nut (4500 to 5000 psi)	CGA 347
—	...	NUT-0063	Nut (6000 psi)	CGA 702
3	1	NIP-0117	Nipple (4500 to 5000 psi)	1/4" NPT x 3" lg, CGA 347
—	...	NIP-0146	Nipple (3000 to 7500 psi)	CGA 680, 695 & 702
4	1	ELL-0018	Street elbow	1/4" NPT
5	2	WRP-0004	Rubber wrap	For unistrut clamps
6	2	CMP-0027	Unistrut clamp	9 5/8" OD tube

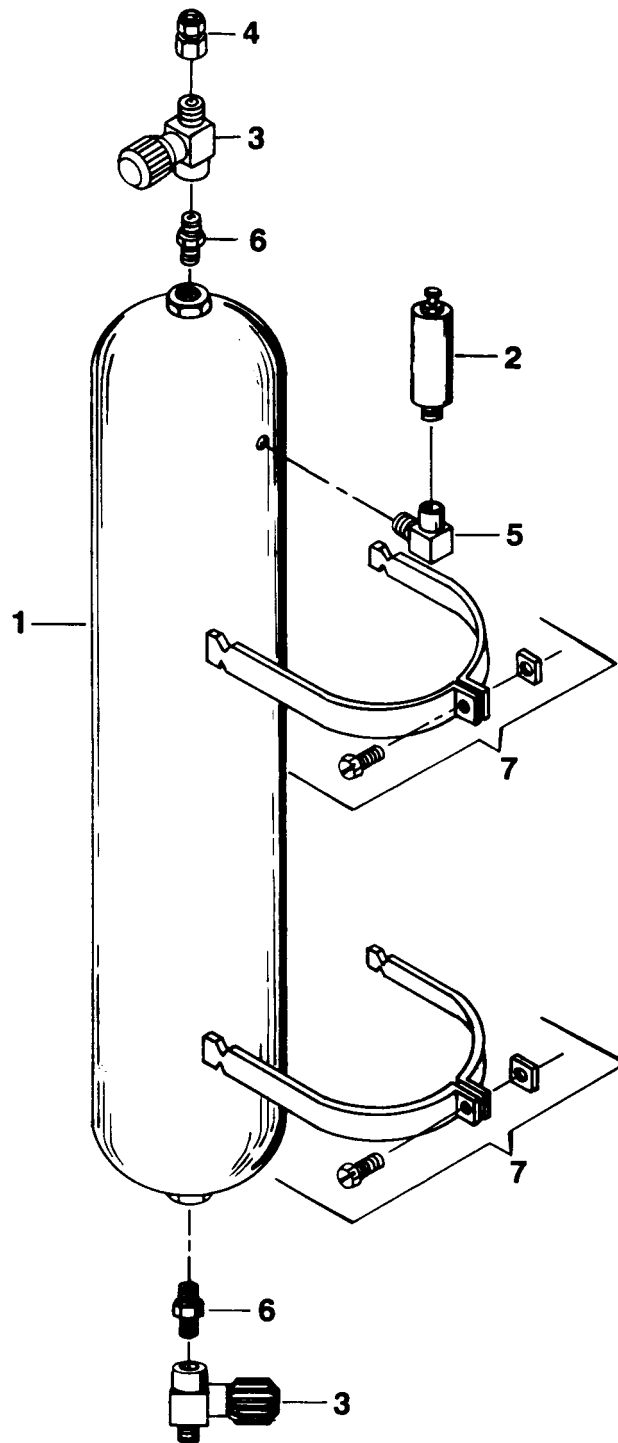


Figure E-4 Air Storage Vessel Assembly, A.M.S.E Standard

Item	Qty	Part No.	Description	Notes
1	1	CYL-0009	Storage vessel	ASME, 4:1 @ 5000 psi, or 3:1 @ 6000 psi ¹
2	1	VAL-0022	Safety valve	5250 pis, ¼" NPTm
—	...	VAL-0154	Safety valve	6500 psi, ¼" NPTm
3	2	VAL-0006	Line valve	6000 psi, ¼" NPT
4	1	CON-0032	Female connector	¼" tube x ¼" NPT
5	1	ELL-0018	Street elbow	¼" NPT
6	2	CON-0017	Hex nipple connector	¼" NPTm
7	2	CMP-0027	Unistrut clamp	9 5/8" OD tube

1. 3:1 @ 6000 is not available in California.

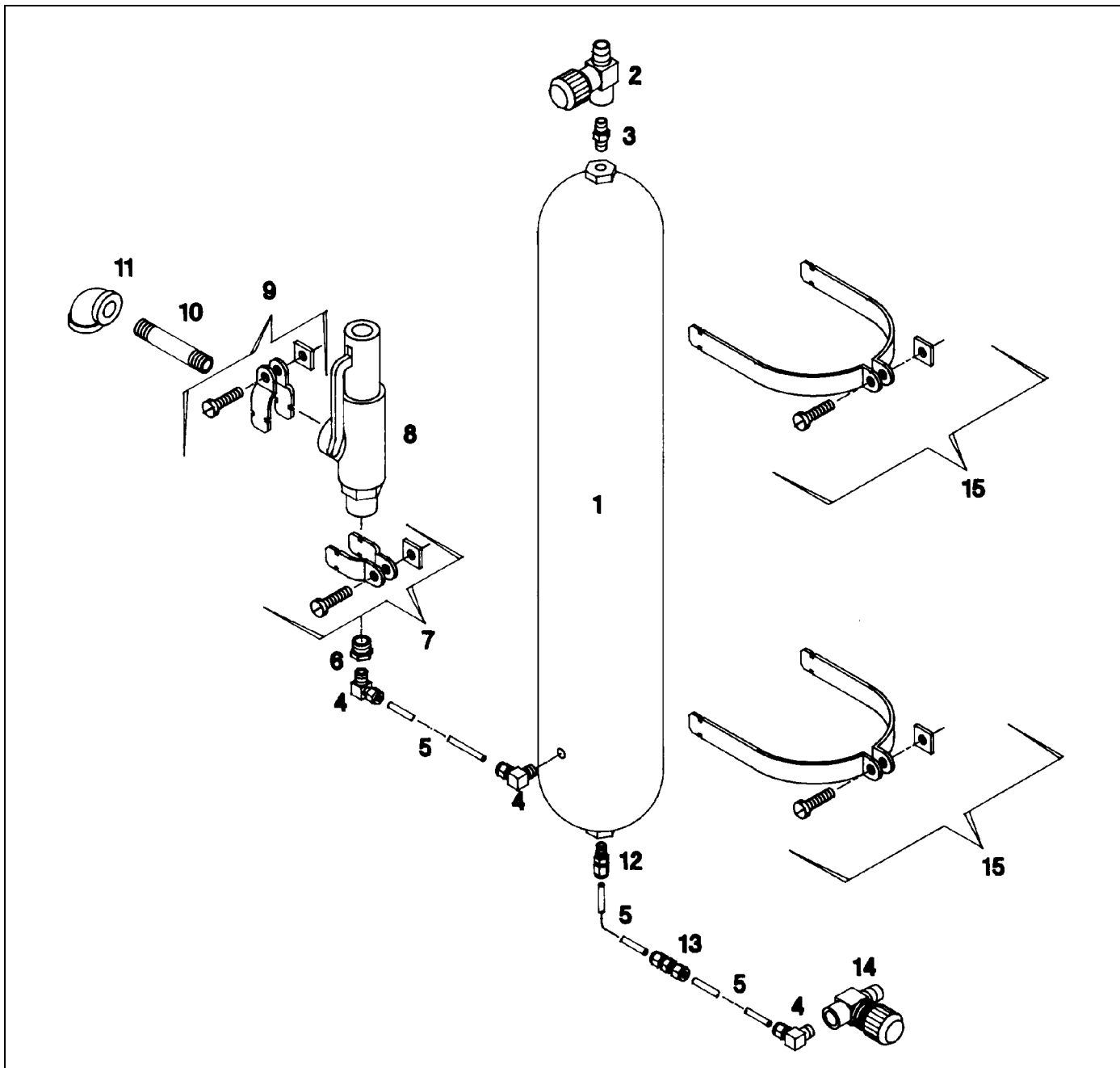


Figure E-5 Air Storage Vessel Assembly, A.S.M.E. with Lift Lever

Item	Qty	Part No.	Description	Notes
1	1	CYL-0009	Storage vessel	ASME, 4:1 @ 5000 psi, or 3:1 @ 6000 psi ¹
—	...	CYL-0034	Storage vessel	ASME, 4:1 @ 6000 psi
2	1	VAL-0006	Line valve	6000 psi, 1/4" NPT
3	1	CON-0017	Hex nipple	1/4" NPTm
4	3	ELL-0028	Male elbow	1/4" tube x 1/4" NPTm
5	AR	TUB-R-0011	Round tube	1/4" OD x 0.035" wall

1. 3:1 @ 6000 is not available in California.

6	1	RED-0014	Bushing reducer	½" NPTm x ¼" NPTf
7	1	CMP-0070	Unistrut clamp	1¼" OD tube
8	1	VAL-0266	Safety valve	½" NPTf, 5250 psi, lever @ 90°
9	1	CMP-0062	Unistrut clamp	¾" pipe
10	1	NIP-0102	Pipe nipple	¾" NPTm x 4" lg., galvanized
11	1	ELL-0071	Pipe elbow	¾" NPTf, galvanized
12	1	CON-0030	Male connector	¼" tube x ¼" NPTm
13	1	CON-0068	Bulkhead union	¼" tube
14	1	VAL-0076	Line valve	6000 psi, ¼" NPT, panel mount
15	2	CMP-0027	Unistrut clamp	9 5/8" OD tube

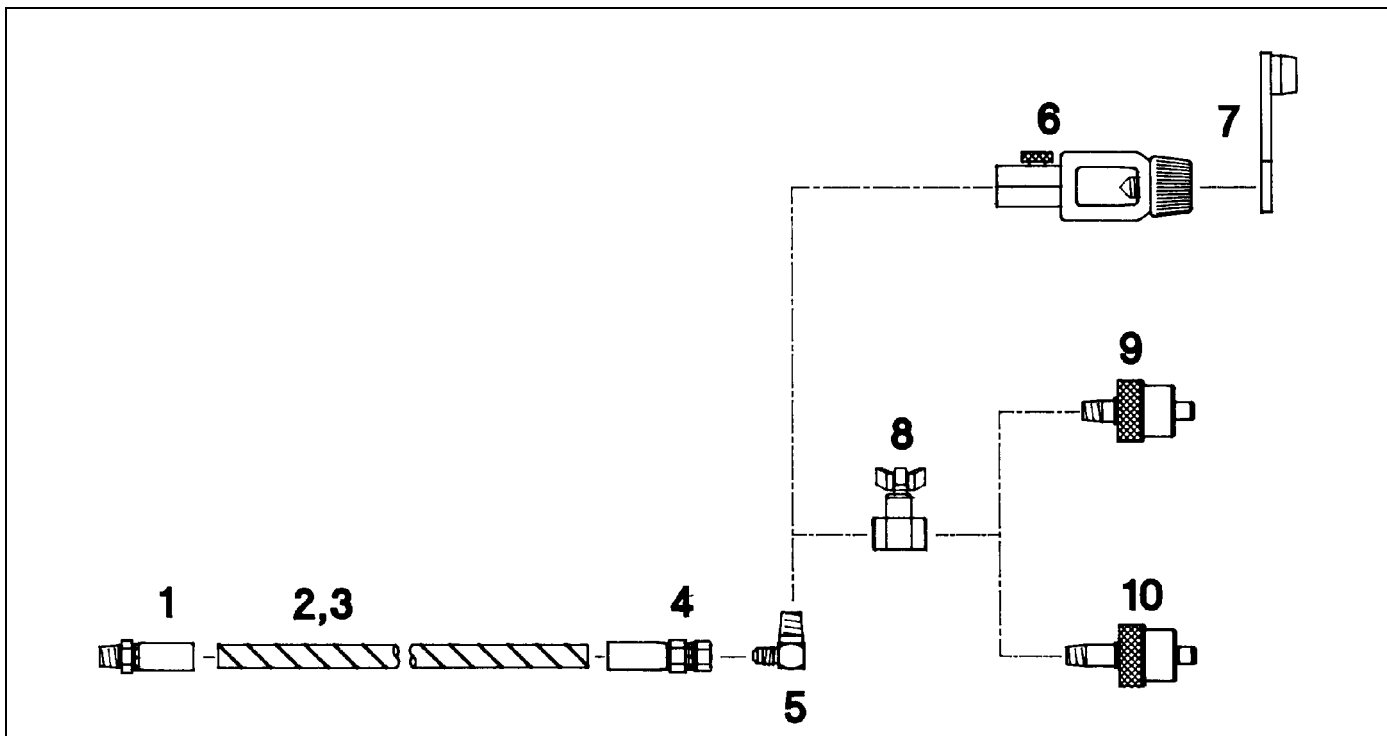
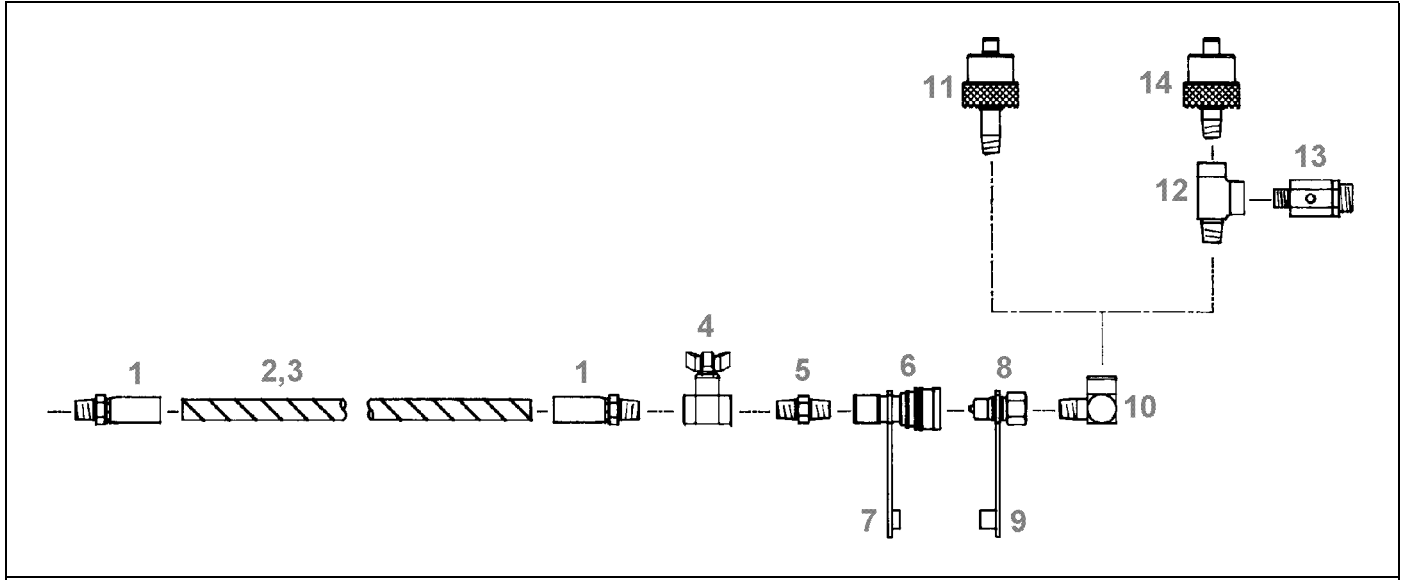


Figure E-6 Fill hose assembly, standard fill station

Item	Qty	Part No.	Description	Notes
1	1	CPL-0070	Male hose coupling	3/16" ID hose x 1/4" NPTm
2	AR	HOS-R-0038	High pressure hose	3/16" ID
3	AR	GRD-0225	Spiral hose wrap	1/2" OD, blue
4	1	CPL-0067	Swivel hose coupling	3/16" ID x 7/16"-20 swivel
5	1	ELL-0031	Male elbow	1/4" NPTm x 1/4" 30°
6	1	YOK-0001	SCUBA fill yoke w/bleeder	Plated
7	1	CAP-0023	SCUBA yoke dust cap	Rubber
8	1	065126	Bleed valve	1/4" NPTf
9	1	ADP-0112	Fill adapter	For 4500/2215 psi cyl.
10	1	ADP-0113	Fill adapter	For 4500 psi SCBA cyl.


Figure E-7 Fill hose assembly dual fill

Item	Qty	Part No.	Description	Notes
1	2	CPL-0070	Male hose coupling	3/16" ID hose x 1/4" NPTm
2	AR	HOS-R-0038	High pressure hose	3/16" ID
3	AR	GRD-0225	Spiral hose wrap	3/16" OD, blue
4	1	065126	Bleed valve	1/4" NPTf
5	1	CON-0017	Hex nipple connector	1/4" NPTm
6	1	CON-0162	Quick disconnect socket	5000 psi
7	1	CAP-0026	Quick disconnect socket dust cap	Rubber
8	1	CON-0163	Quick disconnect plug	5000 psi
9	1	CAP-0027	Quick disconnect plug dust cap	Rubber
10	1	ELL-0018	Street elbow	1/4" NPT
11	1	ADP-0113	Fill adapter	for 4500 psi SCBA cyl.
12	1	TEE-0012	Male run tee	1/4" NPT
13	1	VAL-0169	Safety valve	300 to 6000 psi
14	1	ADP-0112	Fill adapter	For 4500/2215 psi cyl.

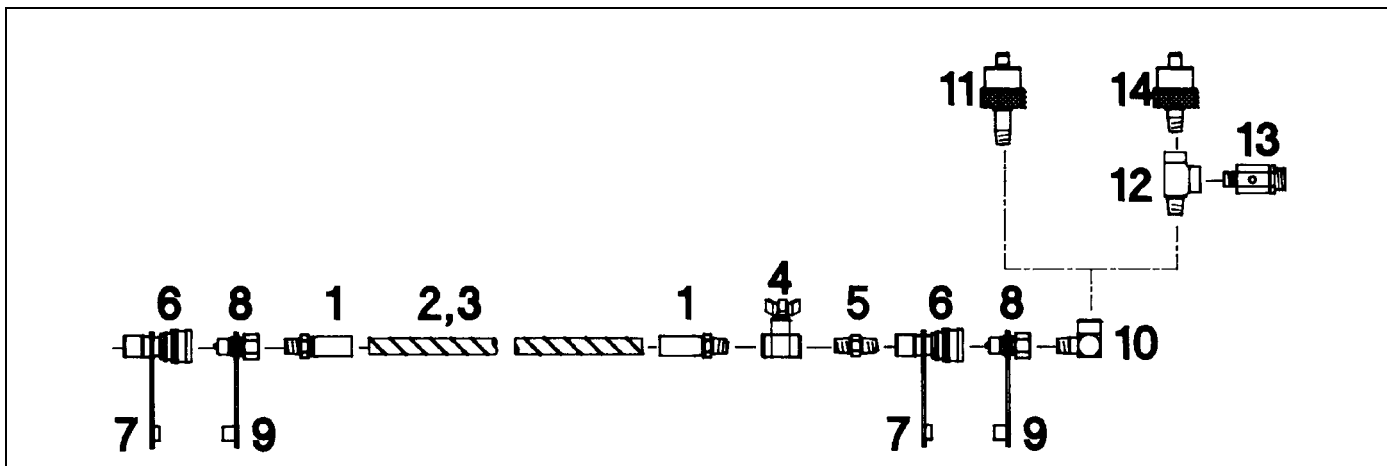


Figure E-8 Fill hose assembly, remote fill

Item	Qty	Part No.	Description	Notes
1	2	CPL-0070	Male hose coupling	3/16" ID hose x 1/4" NPTm
2	AR	HOS-R-0038	High pressure hose	3/16" ID
3	AR	GRD-0225	Spiral hose wrap	1/2" OD, blue
4	1	065126	Bleed valve	1/4" NPTf
5	1	CON-0017	Hex nipple connector	1/4" NPTm
6	2	CON-0162	Quick disconnect socket	5000 psi
7	2	CAP-0026	Quick disconnect socket dust cap	Rubber
8	2	CON-0163	Quick disconnect plug	5000 psi
9	2	CAP-0027	Quick disconnect plug dust cap	Rubber
10	1	ELL-0018	Street elbow	1/4" NPT
11	1	ADP-0113	Fill adapter	for 4500 psi SCBA cyl.
12	1	TEE-0012	Male run tee	1/4" NPT
13	1	VAL-0169	Safety valve	300 to 6000 psi
14	1	ADP-0112	Fill adapter	For 4500/2215 psi cyl.
NS	1	REL-0001	Hose reel assembly	5000 psi, 50 ft. hose 1/4"

F ADDITIONAL DATA**F1** Included Drawings

Any included drawings, wiring diagrams, pneumatic flow diagrams, etc., will be bound in this manual next to the back cover.

F2 Other Manuals

OEM Manuals and other Bauer manuals may be included in the documentation shipping package.