



Instructions for Packing Replacement, and Safety Relief Valve Inspection for Model A1416 Relief Valve Manifold

June 2000

Form FVC 024 - Rev. 1

KEEP THIS DOCUMENT WITH THE PRODUCT UNTIL IT REACHES THE END USER.

WARNING

Use proper safety equipment at all times. An abundant supply of clean water must be readily available and easily accessible as a means of providing IMMEDIATE First Aid treatment for exposure to ammonia.

CAUTION: Contact with or inhalation of Liquid Anhydrous Ammonia or LP-Gas or their vapors can cause serious injury or death. Dispersement must be in accordance with local regulations.
For the proper handling and storage of Anhydrous Ammonia refer to ANSI Standard K61.1
For the proper handling and storage of Liquefied Petroleum Gas refer to NFPA Pamphlet 58.

To insure long term safe operation, the manufacturer recommends that under normal service conditions this product should be inspected at least once every five (5) years and be repaired or replaced as required. To prevent the accidental opening of any valve, never carry or grasp a valve by its handwheel or handle.

The following instructions include the required steps to allow replacement or inspection of Relief Valves mounted in the 1-1/4" NPT ports on top of the A1416 Relief Valve Manifold as well as replacement of the Stem Packing:

To Replace or Inspect Relief Valves at Ports 1 & 2

TOOLS REQUIRED:

- 18" Pipe Wrench
- 10" Adjustable Wrench
- 9/16 Open End or 8" Adjustable Wrench
- Pipe Thread Sealer or TFE Tape
- Safety Equipment (i.e. gloves, goggles, and clothing)

REFER TO FIGURE 1 FOR THE FOLLOWING STEPS:

- Step 1: To remove the Relief Valve from Port No. 1, turn Handwheel (6) clockwise (cw) until Disc Holder (8) is seated firmly against body seat.
- Step 2: Taking precaution to be upwind, and away from any anhydrous ammonia discharge, open Bleed Valve (13) and bleed Port No. 1 cavity completely.
- Step 3: Remove Relief Valve in Port No. 1 using the 18" pipe wrench. (CAUTION: Port No. 2 valve is under pressure)
NOTE: Relief Valves are required by state regulation to be replaced every 5 years. If upon visual inspection, dirt and debris or internal corrosion is found due to absence of the rain cap, early replacement should be considered. Please note the warning concerning the rain cap on the Relief Valve name plate Figure 2. IF THE RAIN CAP IS NOT IN PLACE AT ALL TIMES ICE, SNOW, OR DEBRIS WILL INHIBIT OPERATION OF THE RELIEF VALVE.
- Step 4: Use pipe thread sealer or TFE tape on the 1-1/4" Relief Valve threads. Install Relief Valve, and tighten with 18" pipe wrench.
- Step 5: Close Bleed Valve (13).
- Step 6: To remove the Relief Valve from Port No. 2 turn Handwheel (6) counter-clockwise (ccw) until Disc Holder (8) is seated firmly against body seat. Taking precaution to be upwind, and away from any anhydrous ammonia discharge, open Bleed Valve (7) and bleed Port No. 2 completely.
- Step 7: Remove Relief Valve in Port No. 2 and install new Relief Valve as in Step 4.
- Step 8: Close Bleed Valve (7).
- Step 9: To return the Model A1416 Relief Valve Manifold back to service, rotate Handwheel (6) clockwise 11-1/2 turns to place Disc Holder (8) in the center position as shown in Figure 1.

To Replace the Stem Packing (4)

REFER TO FIGURE 1 FOR THE FOLLOWING STEPS:

- Step 1: Turn Handwheel (6) counter-clockwise until Disc Holder (8) is seated firmly against body seat of Port No. 2.
- Step 2: Taking precaution to be upwind and away from any anhydrous ammonia discharge, open Bleed Valve (7), and bleed Port No. 2 completely.

(OVER)

To Replace the Stem Packing (4) (cont'd)

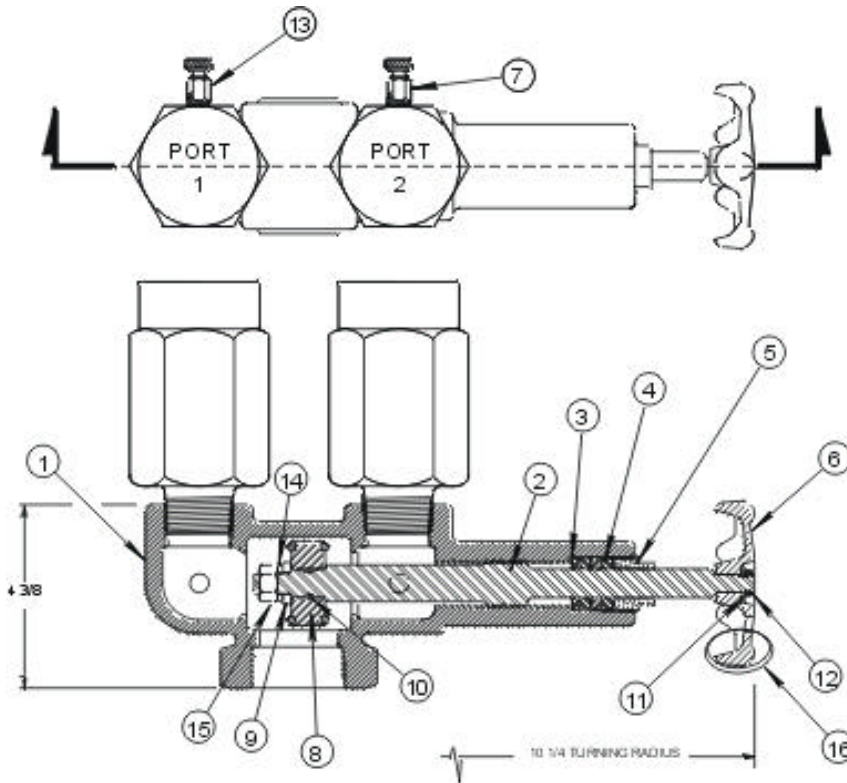
REFER TO FIGURE 1 FOR THE FOLLOWING STEPS (cont'd):

- Step 3: Remove Handwheel (6) by removing Nut (12) and Washer (11).
- Step 4: Remove Follower (5) and Stem Packing (4) [one packing set consists of three (3) rings] and replace with new Packing (4), part number 1415-7.
NOTE: Do not substitute other packing materials. This packing must be certified for use with anhydrous ammonia.

CAUTION: EXTREME care must be taken to make sure that stem remains in closed position during repair. With follower and packing removed, stem can be moved very easily, which could result in the release of ammonia.

- Step 5: Replace Follower (5) and tighten snugly against packing.
- Step 6: Replace Handwheel (6), Washer (11), and Nut (12).
- Step 7: Close Bleed Valve (7).
- Step 8: Rotate Handwheel (6) clockwise one (1) turn and check stem packing for leaks around Stem (2) and Follower (5). Retighten Follower (5) if necessary.
- Step 9: To return the Model A1416 Relief Valve Manifold back to service, rotate Handwheel (6) clockwise 11-1/2 turns to place Disc Holder (8) in the center position as shown in Figure 1.

To order Parts, Packing, or new Safety Relief Valves, contact your nearest Squibb-Taylor Distributor.



16	308-2021	WARNING LABEL
15	P6-111-10	HEX NUT
14	P6-121-10	LOCK WASHER
13	1911-1000	BLEED VALVE
12	312-2015	NUT
11	312-2014	WASHER
10	P5-057-R0	O-RING
9	1415-5011	STEM WASHER
8	1415-5010	DISC HOLDER
7	1911-1000	BLEED VALVE
6	479-3013	HANDWHEEL
5	1415-5008	FOLLOWER
4	1415-2007	PACKING
3	1415-5006	RETAINER
2	1415-5012	STEM
1	1415-5001	BODY
ITEM	PART NO.	DESCRIPTION

NOTE:
BEFORE TURNING HANDWHEEL (6), LOOSEN FOLLOWER (5) 1/2 TURN. AFTER REPOSITIONING VALVE RETIGHTEN FOLLOWER (5). ADDITIONAL TIGHTENING MAY BE REQUIRED IF STEM SEAL LEAKS THIS PROCEDURE MUST BE FOLLOWED EACH TIME VALVE IS REPOSITIONED.

FIG. 1

SQUIBB-TAYLOR AA 1310A 1.14 Underwriters Laboratories Inc. **C.R.N.**

MFG. BY PRECISION GENERAL INC. NB ASME 5367 **WARNING** NH₃ SAFETY RELIEF VALVE NO. 02602.6

CFM AIR AT 20% OP. RAIN CAP MUST BE IN PLACE AT ALL TIMES MFG. 5795 SET 250 PSI

REPLACE THIS RELIEF VALVE BY

FIG. 2