

MANUFACTURED BY PARKER - PGI DIVISION

February 2014 Form

FVC 023- Rev 04

Installation, Operation & Maintenance Instructions for Models AL407P & AL409P Vapor or Liquid Service Valves

IMPORTANT:

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

WARNING!

1. Contact with or inhalation of Liquid Anhydrous Ammonia (NH₃) or of LP Gas can cause **SERIOUS INJURY OR DEATH**.
2. Before installation or removal of any tank valve, the system must be purged of all product.
3. Personal Protective Equipment (PPE), safety gloves, goggles and clothing should be worn.
4. For proper handling and storage of NH₃, and Liquefied Petroleum Gas refer to ANSI Standard K61.1 and NFPA Pamphlet 58.
5. An abundant supply of fresh water should be available to provide immediate first aid treatment for exposure to NH₃ and LP-Gas.
6. To prevent the accidental opening of any valve, never grasp or carry a valve by its Hand wheel ⑦ or handle.
7. To ensure long term safe operation, the manufacturer recommends that under normal service conditions this product should be inspected at least once every year and be repaired or replaced as required.

Tools Required

Bench Mounted Vise, 18" Pipe Wrench, 12" Adjustable Wrench, Medium sized Flat Blade Screwdriver, Torque Wrench (to 55ft-lbs) and Safety Equipment (i.e. gloves, goggles, and clothing).

Disassembly Procedure For Repair

1. With the valve secured in a bench mounted vise, remove the Bonnet ① from the Body ② which will expose the complete Bonnet ① and Stem Assembly.
2. Remove the old Gasket ④ from the Bonnet ①.
3. Remove the Screw ⑤, the Washer ⑥, and the Hand wheel ⑦.
4. Remove the Packing Nut ⑧ and the Hat Gasket ⑨ over the end of the Stem ⑩.
5. Rotate the Stem ⑩ clockwise (using the Hand wheel ⑦ if necessary), until the Stem ⑩ is disengaged from the Bonnet ①.
6. Before reassembly, clean and inspect the valve seat at (A). Clean all metal components with solvent and wipe or blow dry with air.

While this information is presented in good faith and believed to be accurate, Individuals using this literature must exercise their independent judgment in evaluating product selection and determining product appropriateness for their particular purpose, system requirements and certifications. The manufacturer reserves the right to change product designs and specifications without notice.

Assembly Procedure

1. Insert the Disc ⑪, with the injection marks against the Disc Holder ③. followed by the Disc Washer ⑫, and Disc Nut ⑬. (Secure the Disc Nut ⑬ to the threads of the Disc Holder with the center punch mark at the thread interface).
2. Lubricate the threads of the Stem ⑩ with a good quality grease and install the Stem ⑩, into the Bonnet ①, until the Disc Holder ③ rests against the bottom of the Bonnet ①.
3. Secure the Bonnet/Stem Assembly in the bench mounted vise and install the Hat Gasket ⑨, with the small end first over the Stem ⑩.
4. Replace the O-Ring ⑭ in the groove of the Packing Nut ⑧.
5. Lubricate the exposed surface of the Stem ⑩ with John Crane Style 279A Packing Lubricant or an equivalent.
6. Place the Packing Nut ⑧ over the Stem ⑩, and engage the Bonnet ① threads. Tighten the Packing Nut ⑧ with a torque wrench to 55ft-lbs.
7. Secure the Valve Body ② in the vise. Place the Body Gasket ④ over the Bonnet ① threads, and lubricate the threads with a good quality grease.
8. Install the Bonnet Assembly into the Body ②, and tighten with the torque wrench to 55ft-lbs.
9. Install the Hand wheel ⑦, the Lock Washer ⑥, and tighten the Screw ⑤ on the Stem ⑩.
10. Check the Stem packing and Valve seat for leaks. Operate the Hand wheel ⑦ FULL OPEN to FULL CLOSED to ensure smooth operation.

Removal of Any Service Valve For Repair or Replacement

1. Before removing the valve from service, place the valve in the FULL OPEN POSITION to ensure all pressure is bled from the system.

Installation of New or Repaired Service Valves

Step 1: Apply PTFE tape or sealant to the 3/4" male NPT threads at the bottom of the valve, and place the handwheel in the FULL OPEN position.

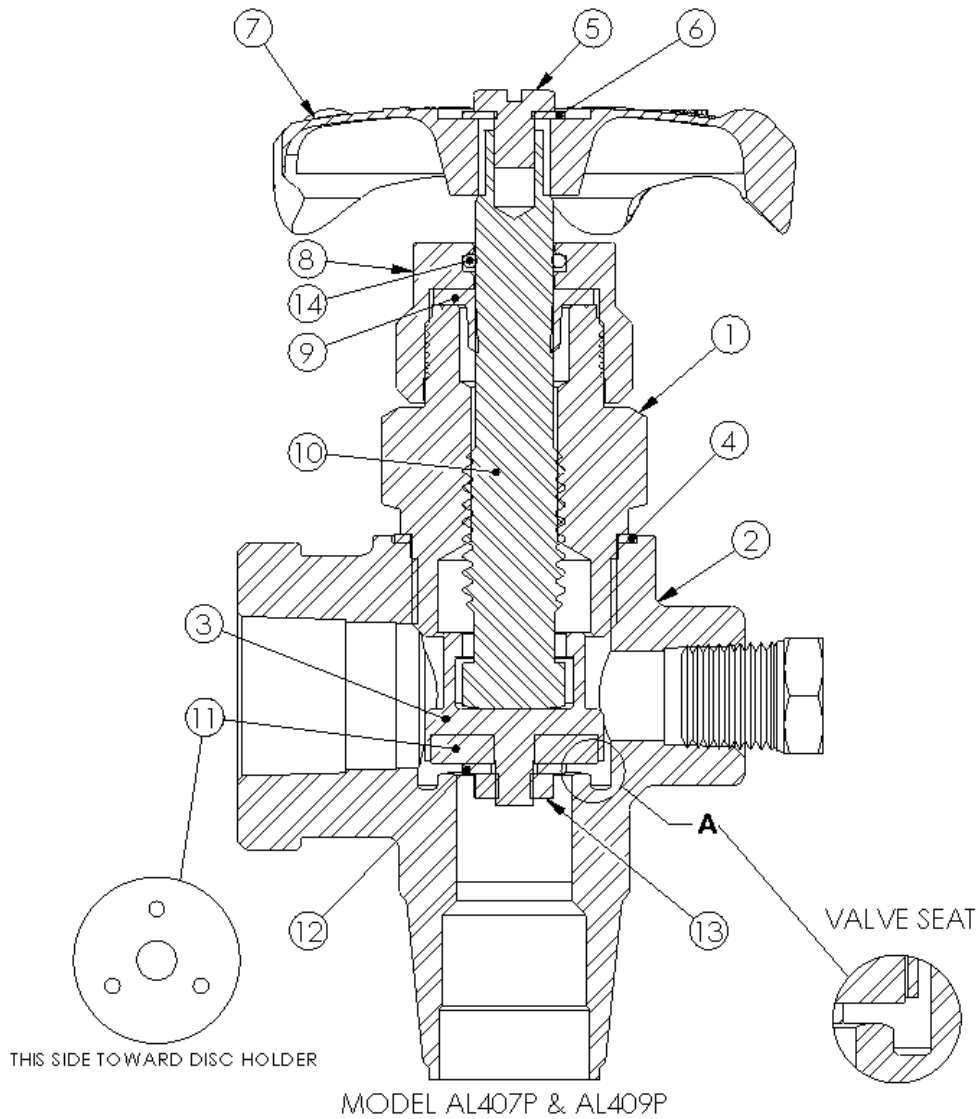
Step 2: Install the valve and tighten it to the desired position, taking care to not over-tighten.

Safety Tips For Shut Down and Storage When Tanks Are Not In Use

1. Make sure all valves are CLOSED and any exposed outlets/inlets are capped to keep out debris and moisture, which will help prevent condensation or corrosion of internal parts.
2. Store tanks in accordance with federal, state, and local codes and manufacturer's instructions. Check periodically for leakage or excessive pressure build up. Make corrections or repairs as necessary.

While this information is presented in good faith and believed to be accurate, Individuals using this literature must exercise their independent judgment in evaluating product selection and determining product appropriateness for their particular purpose, system requirements and certifications. The manufacturer reserves the right to change product designs and specifications without notice.

ITEM	DESCRIPTION	QTY.	AVAILABLE KITS		
			NUMBER	NAME & PARTS INCLUDED	ASSEMBLY PROCEDURE
1	BONNET	1	407-0021	SEAL KIT ④, ⑨, ⑪, ⑬, ⑭	1 thru 10
2	VALVE BODY	1			
3	DISC HOLDER	1			
4	BODY GASKET	1			
5	SCREW	1	407-1300	STEM AND DISC HOLDER ASSY ③, ⑩, ⑪, ⑫, ⑬	2 thru 10
6	WASHER	1			
7	HAND WHEEL	1			
8	PACKING NUT	1			
9	HAT GASKET	1	407-1100	BONNET ASSY ①, ③, ⑧, ⑨, ⑩, ⑪, ⑫, ⑬, ⑭	7 thru 10
10	STEM	1			
11	DISC	1			
12	DISC WASHER	1			
13	DISC NUT	1			
14	O-RING	1			



User Safety Responsibility Statement for All Parker Products

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

- This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.
- The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.

To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

While this information is presented in good faith and believed to be accurate, Individuals using this literature must exercise their independent judgment in evaluating product selection and determining product appropriateness for their particular purpose, system requirements and certifications. The manufacturer reserves the right to change product designs and specifications without notice.