

MANUFACTURED BY PARKER - PGI DIVISION

March 2014

Form FVC040 Rev 02

Installation, Operation, Maintenance Disassembly and Assembly Instructions for Models AL416 and AL417

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 ② or handle.
7. To ensure a long term and 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

Safety Equipment (i.e. gloves, goggles, and clothing), 12" Adjustable Wrench, a 3/16" diameter Drift Pin, and a small Ball Peen Hammer.

REMOVAL OF VALVE FOR REPAIR OR REPLACEMENT

REFER TO FIGURE 1 FOR THE FOLLOWING STEPS:

1. Safety Equipment (i.e. goggles, gloves and clothing) must be worn before continuing with the next step.
2. Before removing valve, place in **FULL OPEN POSITION** to insure all pressure is bled from the system.

NOTE: See Warning at top of page.

DISASSEMBLY PROCEDURE FOR REPAIR

REFER TO FIGURE 1 FOR THE FOLLOWING STEPS:

1. With valve secured in a bench vise, remove the 3/16" diameter Roll Pin ③, which allows the Handle Assembly ① to be removed from the Stem and Disc Holder Assembly ②.
2. Remove Bonnet ⑤ from Body ⑬.
NOTE: The Bonnet will move upward approximately 1/16" after the last thread is disengaged from the Body, allowing the Seat Spring ⑫ to relax to its maximum length. Remove the entire Bonnet Assembly from the Body ⑬.
3. With the Bonnet Assembly in hand, remove the Stem and Disc Holder Assembly ② and Seat Spring ⑫ from the Bonnet ⑤.
4. Remove the Swivel Pad ④ and O-ring ⑥ from the top of the Bonnet ⑤. To remove the Seal Retainer ⑨, O-ring ⑧, and Seal Washer ⑦ from the Bonnet ⑤ place the 3/16 diameter Drift Pin thru the top hole of the Bonnet ⑤, and gently push against the top shoulder of the Bonnet Bushing (7).
NOTE: Take care not to let the Drift Pin scratch the Bonnet / O-ring sealing surface as the seal is removed.

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

REFER TO FIGURE 2 FOR THE FOLLOWING STEPS

1. Place Stem and Disc Holder Assembly ② on seat inside Body ⑬. Place Seat Spring ⑫ over Stem onto Disc Holder. Place Seal Washer ⑩ over stem and push down to rest on top of the Seat Spring ⑫.
2. Place O-Ring ⑧ over Seal Retainer ⑨ and lubricate O-Ring with a good quality grease compatible with service conditions
3. Place O-Ring and Seal Retainer Assembly over Stem with the shoulder side of Seal Retainer ⑨ facing up. Install Bonnet Bushing ⑦ over Stem.
4. Install Bonnet Gasket ⑪ in groove on Body ⑫. Install Bonnet ⑤ over Stem and press down firmly to engage threads on Bonnet with internal threads on Body. In order to properly install Bonnet Bushing ⑦, O-Ring ⑧, and Seal Retainer ⑨ into the bore of Bonnet ⑤, a straight downward push on Bonnet ⑤ is required for proper alignment. Maintaining a downward push while rotating Bonnet ⑤ will engage the Bonnet threads into the Body ⑬. Tighten the Bonnet hard against Bonnet Gasket ⑪.
5. Place O-Ring ⑥ into groove on Bonnet ⑤ and install Swivel Pad ④ over Stem.
NOTE: Swivel Pad ④ may remain attached to the Bonnet. Lubricate the top surface of Swivel Pad ④ with a small amount of grease.
6. Place Handle Assembly ① over Stem, and replace Roll Pin ③.
7. Open and Close Valve several times, then pressure test Valve for leaks at the Stem and Outlet Connections before returning to service.

INSTALLATION OF NEW OR REPAIRED QUICK ACTING

1. Apply PTFE tape or sealant on male pipe threads of mating part, and place Valve in Open position.
2. Install Valve and tighten to desired position taking care to not over tighten.

OPERATION OF THE QUICK ACTING VALVE

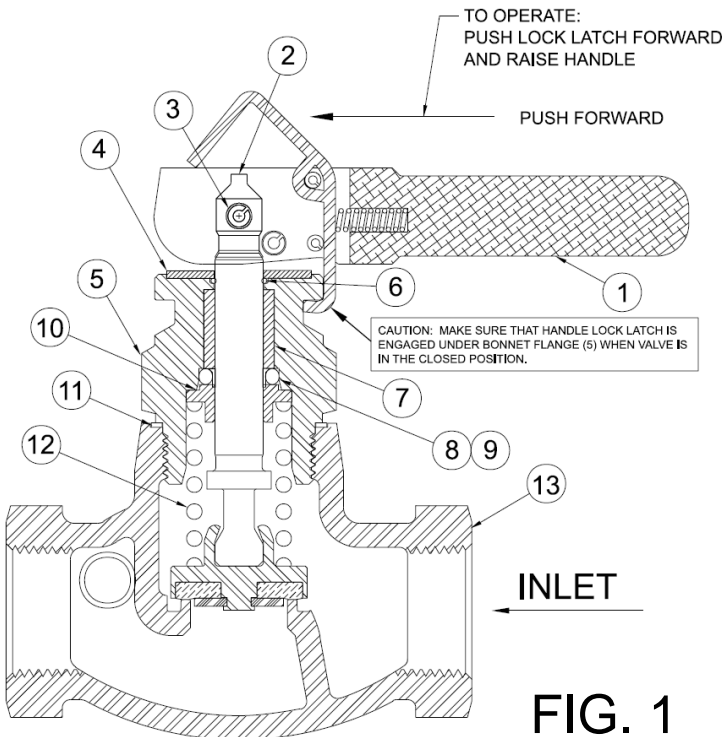
1. To open the valve, push lock latch forward and raise Handle ① to a vertical position. When the valve is in the full open position, the heel of the handle will rest squarely on the Swivel Pad ④, and Handle ① will be cammed over slightly past the center of the valve.
2. To close the valve, tap the Handle ① with the heel of the hand in the closing direction. The handle will rotate in a "Quick Acting" manner to the closed position. The closing spring action of the valve assembly is designed to force the Handle lock latch to lock under the Bonnet Flange ⑤, and therefore prevent accidental opening of the valve.

WARNING: If the valve is closed slowly by holding the handle as it is moved toward the closed position, be sure the handle continues to its stop position, to ensure that the Handle lock latch engages the Bonnet Flange ⑤.

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* INCLUDED IN SEAL
KIT # 417-0022

13	Body	1	
12	Seat Spring	1	
*	11	Bonnet Gasket	1
*	10	Seal Washer	1
*	9	Seal Retainer	1
*	8	O-Ring	1
*	7	Bonnet Bushing	1
*	6	O-Ring	1
	5	Bonnet	1
	4	Swivel Pad	1
*	3	Roll pin	1
*	2	Stem & Disc Holder Assy.	1
	1	Handle Assembly	1
ITEM	DESCRIPTION	QTY	



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USER SAFETY RESPONSIBILITY STATEMENT FOR ALL PARKER PRODUCTS

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- 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.

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