

MANUFACTURED BY PARKER - PGI DIVISION

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## Installation, Operation, Maintenance Assembly, and Disassembly Instructions for Models AL410P, AL411P, AL412P, and AL413P Globe and Angle Valves

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

### WARNING!

1. Contact with or inhalation of Liquid Anhydrous Ammonia (NH<sub>3</sub>) 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 NH<sub>3</sub>, 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 NH<sub>3</sub> 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 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

12" Adjustable Wrench, Bench Vise, 18" Pipe Wrench, Screwdriver and Safety Equipment (i.e. gloves, goggles, and clothing).

### Removal of Any Globe or Angle 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.

**Note: See Warning Above**

### 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.*

## Disassembly Procedure For Repair

1. With the valve secured in a bench mounted vise, remove the Bonnet ④ from the Body ⑥, which will expose the complete Bonnet and Stem Assembly.

**Note:** It is important to inspect the Disc Holder ⑩ rotation. If it does not rotate freely, do not use the valve but consult your local dealer for instructions. Remove the old Body Gasket ⑤.

2. Remove the Screw ①, Washer ⑭, and Hand wheel ②.
3. Remove the Packing Nut ③, and the Hat Gasket ⑧ over the end of the Stem ⑨.
4. Rotate the Stem ⑨ clockwise using the Hand wheel ② if necessary until the Stem ⑨ is disengaged from the Bonnet ④.
5. Before reassembly, clean and inspect the valve seat at ①. Clean all metal components with solvent and wipe or blow dry with air.

## Assembly Procedure

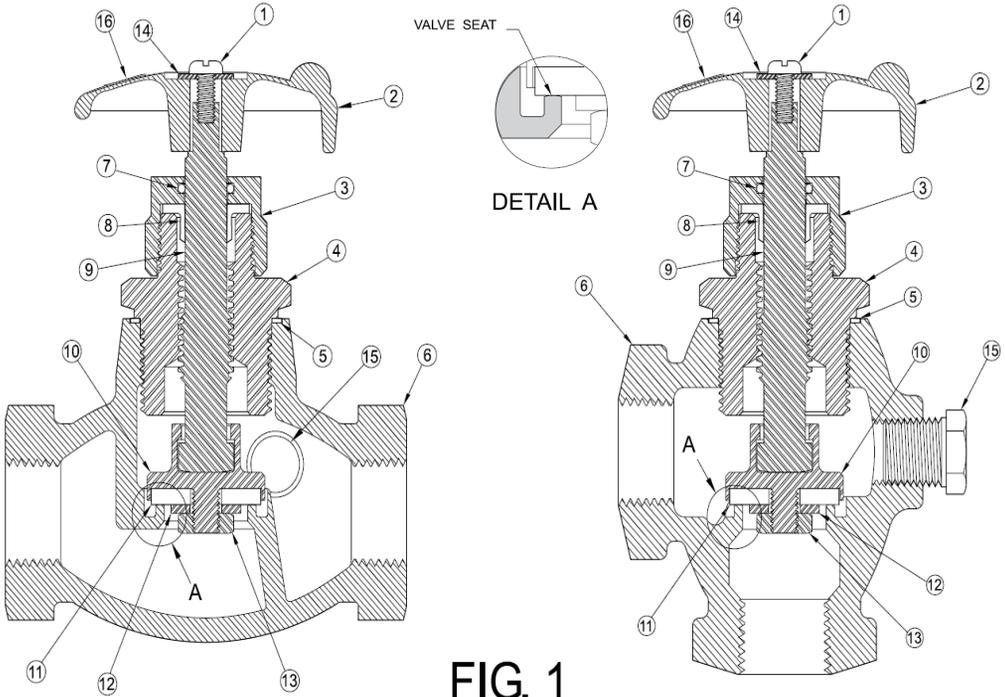
1. Install Disc ⑪, Disc Nut ⑬, and Disc Washer ⑫ with the injection marks of the Disc ⑪, against the Disc Holder ⑩. Secure the Disc Nut ⑬ to the threads of the Disc Holder ⑩, with the center punch mark at the thread interface of the Disc Holder ⑦, with the center punch mark at the thread interface.
2. Lubricate the threads of the Stem ⑨ with a good quality grease and install the Stem ⑨ into the Bonnet ④, until the Disc Holder ⑩ rests against the bottom of the Bonnet ④.
3. With the Bonnet ④ and Stem Assembly secured in a bench vise, install the Hat Gasket ⑧ with the small end first over the Stem ⑨.
4. Replace the O-Ring ⑦ in the groove of the Packing Nut ③.
5. Lubricate the exposed surface of the Stem ⑨, with John Crane Style 279A Packing Lubricant or equal.
6. Install the Packing Nut ③ over the Stem ⑨, and onto the Bonnet ④. Tighten the Packing Nut ③, with a torque wrench to 55 ft.-lbs.
7. Secure the Body ⑥ in the vise. Place the Body Gasket ⑤ over the Bonnet Threads, and lubricate the threads with a good quality grease.
8. Install the Bonnet Assembly into the Body ⑥, and tighten with a torque wrench to 55 ft.-lbs.
9. Install the Hand wheel ② and the Washer ⑭ and tighten the Screw ① on the Stem ⑨.
10. Check the Stem Packing and Valve Seat for leaks. Operate the Hand wheel ② fully open to fully closed to insure smooth operation.

## Installation of New or Repaired Globe or Angle Valve

1. Apply PTFE tape or sealant on the male pipe threads of the mating part, and place the Hand wheel ② in full open position.
2. Install the valve and tighten to the desired position, taking caution to not over tighten. Pressurize valve with air and check for leaks. If leaks are present, do not use the valve but consult your local dealer for instructions.

ITEM	DESCRIPTION	QTY.
1	SCREW	1
2	HANDWHEEL	1
3	PACKING NUT	1
4	BONNET	1
5	BODY GASKET	1
6	BODY	1
7	O-RING	1
8	HAT GASKET	1
9	STEM	1
10	DISC HOLDER	1
11	DISC	2
12	DISC WASHER	1
13	DISC NUT	1
14	WASHER	1
15	PLUG	1
16	WARNING LABEL	1

AVAILABLE KITS		
NUMBER	NAME & PARTS INCLUDED	ASSEMBLY PROCEDURE
410-0021	SEAL KIT ⑤, ⑦, ⑧, ⑪, ⑬	1 thru 10
410-1300	STEM AND DISC HOLDER ASSY	2 thru 10
420-1100	BONNET ASSY ③, ④, ⑦, ⑧, ⑨, ⑩, ⑪, ⑫, ⑬	7 thru 10



**FIG. 1**

MODEL AL410P & AL412P

MODEL AL411P & AL413P

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## User Safety Responsibility Statement for All Parker Products

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