



MANUFACTURED BY PARKER - PGI DIVISION

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Installation, Operation, Maintenance Assembly, and Disassembly Instructions for Models AL316P, AL317P 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 (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 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, 9/16" Open End Wrench, Bench Vise, 18" Pipe Wrench, 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.

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 four (4) Hex Bolts ⑱. Remove the complete Bonnet ⑤ and Stem Assembly.
NOTE: It is important to inspect the Disc Holder ⑦ rotation. If it does not rotate freely, do not use the valve but consult your local dealer for instructions. Remove the old Body Gasket ⑮.
2. Secure the Bonnet ⑤ in a bench vise and remove the Hand wheel Nut ①, Hand wheel Washer ⑳, and Hand wheel ②.
3. Remove the Disc Nut ⑨ and the Disc ⑧.
4. Remove the Packing Nut ④, Chevron Packing ⑪, Male Adapter ⑫, Packing Spring ⑭, and Packing Nut Gasket ⑬, over the end of the Stem ③.
5. Rotate the Stem ③ clock wise using the Hand Wheel ② if necessary, until the Stem ③ is disengaged from the Bonnet ⑤.
6. Before reassembly, clean and inspect the Valve Seat. Clean all metal components with solvent and wipe or blow dry with air.

Assembly Procedure

1. Install Disc ⑧ and Disc Nut ⑨, [with the injection marks of the Disc ⑧], against the Disc Holder ⑦. Secure the Disc Nut ⑨ to the threads of the Disc Holder ⑦, with the center punch mark at the thread interface.
2. Lubricate the threads of the Stem ③ with a good quality grease and install the Stem ③ into the Bonnet ⑤, until the Disc Holder ⑦ rests against the bottom of the Bonnet ⑤.
3. With the Bonnet ⑤ and Stem Assembly secured in a bench vise, install the Packing Nut Gasket ⑬ and the Packing Spring ⑭.
4. Replace O-Ring ⑩ in the groove of the Packing Nut ④.
5. Install the Chevron Packing ⑪ and the Male Adapter ⑫ into the Packing Nut ④.
6. Lubricate the exposed surface of the Stem ③ with John Crane Style 279A Packing Lubricant or equal.
7. Place a block under the Disc Holder ⑦ to keep the Stem ③ and the Disc Holder Assembly from backing out when installing the Packing Nut Assembly to the Bonnet ⑤. Place the Packing Nut ④ with the packing in place over the Stem ③ and engage the Bonnet threads in the Bonnet ⑤. Rotate the Packing Nut ④ while making contact with the Bonnet threads. Tighten the Packing Nut ④ with a torque wrench to 55 ft-lbs.
8. Secure Body ⑮ in a vise. Place the Body Gasket ⑮ onto the body.
9. Place the Bonnet Assembly on top of the Body ⑮ making sure that all four bolt holes line up. Install the four Bolts ⑱ and tighten the bolts ⑱ with a torque wrench to 55 ft-lbs.
10. Install the Hand wheel ②, Hand wheel Washer ⑳, and the Hand wheel Nut ①. Tighten the Hand wheel Nut ① on the Stem ③.
11. Check the Stem Packing and Valve Seat for leaks. Operate the Hand Wheel ② full open to full closed to insure a smooth operation.

Installation of New or Repaired Service Valves

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.

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.

User Safety Responsibility Statement for All

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.

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ITEM	DESCRIPTION	QTY.	AVAILABLE KITS		
1	HANDWHEEL NUT	1	NUMBERS	NAME & PARTS INCLUDED	ASSEMBLY PROCEDURE
2	HANDWHEEL	1			
3	STEM	1	AL316P OR AL317P	SEAL KIT ⑧ ⑩ ⑪ ⑬ ⑮	STEPS 1 THRU 11
4	PACKING NUT	1			
5	BONNET	1	316-0022	STEM & DISC HOLDER ASSEMBLY ③ ⑥ ⑦ ⑧ ⑨ ⑰	STEPS 2 THRU 11
6	BALL	14			
7	DISC HOLDER	1	316-1300	BONNET ASSEMBLY ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑰	STEPS 8 THRU 11
8	DISC	1			
9	DISC NUT	1	316-1100		
10	O-RING	1			
11	CHEVRON PACKING	2			
12	MALE ADAPTER	1			
13	GASKET	1			
14	PACKING SPRING	1			
15	BODY GASKET	1			
16	BODY	1			
17	RETAINING SCREW	1			
18	1/4"NPT HEX HD. PLUG	1			
19	1/4-13X1 1/4" HEX HD BOLT	4			
20	HANDWHEEL WASHER	1			
21	WARNING LABEL	1			

