

MANUFACTURED BY PARKER - PGI DIVISION

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Form FVC020 Rev 04

**Installation, Operation,  
Maintenance, Instructions  
for Models AL306P, AL307P,  
AL308P, AL309P, AL310P,  
AL311P and A329AL 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 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, Bench-Mounted Vise, 18" Pipe Wrench, John Crane Style 279A Packing Lubricant or equivalent, Torque Wrench.

**INTRODUCTION / REMOVAL**

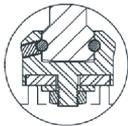
1. Safety equipment (i.e. gloves, goggles, and clothing) must be worn before continuing with the next step.
2. Before removing the valve from the tank, place the valve in **FULL OPEN POSITION** to ensure all pressure is bled from the system.
3. Place an 18" adjustable wrench on the body portion ⑰ of the valve and turn counter-clockwise to remove.

**DISASSEMBLY PROCEDURE FOR REPAIR**

1. With the valve secured in a bench vise, remove the Bonnet ⑤ from the Body ⑰, which will expose the 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. Consult your local dealer for instructions.
2. Remove the old Gasket ⑭ from the Bonnet ⑤.
3. Secure the Bonnet ⑤ in the bench vise and remove the two Disc Nuts ①, the Lock Washer ⑩, the Disc Washer ⑨, the Disc ⑧, and the Hand wheel ②.
4. Remove Packing Nut ④, Chevron Packing ⑫, Male Adapter ⑬, and Packing Spring ⑮ over the end of the Stem ③.
5. Rotate the Stem ③ clockwise, using the Hand wheel ② if necessary, until the Stem ③, is disengaged from the Bonnet ⑤. Remove the old Gasket ⑭ from the Male Adapter ⑬.
6. Before re-assembly, clean and inspect the Valve Seat at (A). Clean all metal components with solvent and wipe or blow dry with air.

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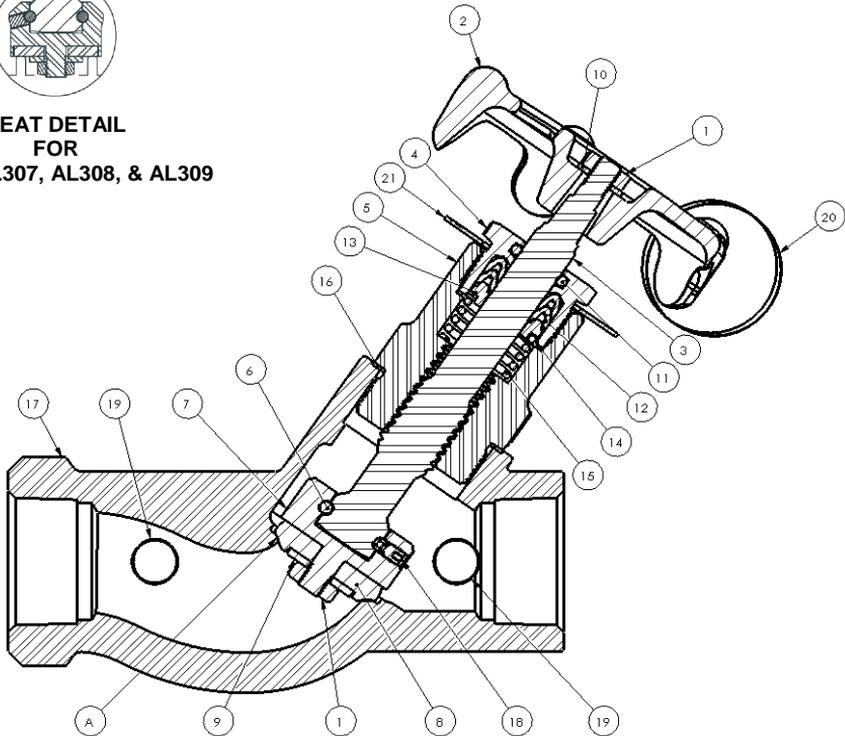
ITEM	QTY	DESCRIPTION	AVAILABLE KITS			
1	2	HANDWHEEL NUT/DISC NUT	KIT NUMBERS			
2	1	HANDWHEEL				
3	1	STEM				
4	1	PACKING NUT				
5	1	BONNET	AL306P, AL307P, AL308P OR AL309P	AL310P AL311P OR A329AL	KIT NAME & PARTS INCLUDED	ASSEMBLY PROCEDURE
6	15	BALL	308-0022	310-0022	SEAL KIT ① ⑧ ⑪ ⑫ ⑭ ⑯	1 thru 10
7	1	DISC HOLDER				
8	1	DISC	308-1300	310-1300	STEM & DISC ① ③ ⑥ ⑦ ⑧ ⑨ ⑱	2 thru 10
9	1	DISC WASHER				
10	1	LOCK WASHER				
11	1	O-RING				
12	2	CHEVRON PACKING	308-1100	310-1100	BONNET ASSEMBLY ① ③ ④ ⑤ ⑥ ⑦ ⑧ ⑪ ⑫ ⑬ ⑰ ⑱ ⑲	8 thru 10
13	1	MALE ADAPTER				
14	1	GASKET				
15	1	PACKING SPRING				
16	1	BODY GASKET				
17	1	BODY				
18	1	RETAINING SCREW				
19	1	1/4"NPT HEX HEAD PLUG				
20	1	WARNING LABEL				
21	1	INFO DISC				



**SEAT DETAIL  
FOR**

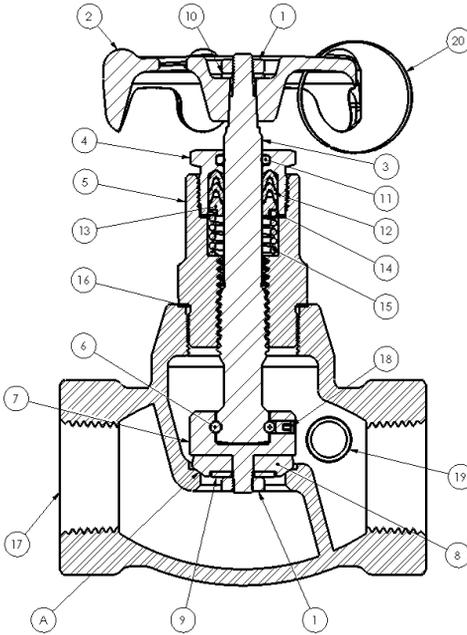
**AL306, AL307, AL308, & AL309**

**A329AL**

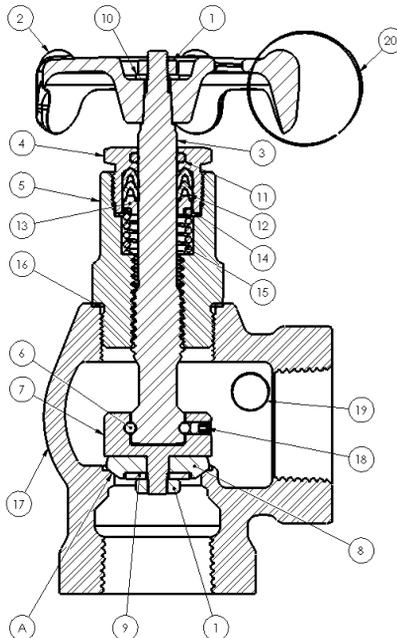


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### AL310P



### AL311P



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## ASSEMBLY PROCEDURE

1. Install the Disc ⑧, with the injection marks against the Disc Holder ⑦, Disc Washer ⑨, and Disc Nut ①, to Disc Holder ⑦. Secure the Disc Nut ①, 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 it 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 Gasket ⑬, and Packing Spring ⑭.
4. Replace the O-Ring ⑪, in the groove of the Packing Nut ④.
5. Install the Chevron Packing ⑫, and the Male Adapter ⑩, 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 the Packing Nut ④, (along with the Packing) onto the Stem ③, and install into the Bonnet Threads. Tighten the Packing Nut ④, with a torque wrench to 55ft-lbs.
8. Secure the Valve Body ⑰, in a vise. Place the Body Gasket ⑱, onto the Bonnet ⑤, and lubricate the threads with a good quality grease. Install the Bonnet Assembly into the Valve Body ⑰, and tighten with a torque wrench to 95ft-lbs. (For A329AL install Info Disc ⑳).
9. Install the Hand wheel ②, Lock Washer ⑯, and Hand wheel Nut ①, onto the Stem ③.
10. Check the Stem Packing and Valve Seat for leaks. Operate the Hand wheel ② full "OPEN" to full "CLOSED" to ensure smooth operation.

## INSTALLATION OF NEW OR REPAIRED GLOBE OR ANGLE VALVES.

1. Apply PTFE tape or sealant on the male pipe threads of the mating part, and place the hand wheel in the FULL OPEN position.
2. Install the valve and tighten to the desired position, taking care to not over tighten.

## SAFETY TIPS FOR SHUT DOWN AND STORAGE

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 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.

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