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Installation, Operation, Maintenance, Disassembly and Assembly Instructions for Models AL344, AL345 & AL360, AL361

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

WARNING!

Before installation or removal of Quick Acting Valves, the system must be purged completely of all product. Use proper safety equipment at all times. An abundant supply of clean water must be readily available and easily accessible as a means of providing IMMEDIATE First Aid treatment for exposure to ANHYDROUS AMMONIA. For LP-Gas service, follow NFPA / ANSI 58 Standard for the Storage and Handling of Liquefied Petroleum Gases, plus all Local and State Safety Regulations. **To insure 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. To prevent the accidental opening of any valve, never grasp or carry a valve by its handwheel or handle.**

CAUTION:
Contact with or inhalation of Liquid Anhydrous Ammonia or LP-Gas, or their vapors, can cause serious injury or death.
Dispersing must be in accordance with local regulations.
For the proper handling and storage of Anhydrous Ammonia, refer to ANSI Standard K61.1.
For the proper handling and storage of Liquefied Petroleum Gas, refer to NFPA Pamphlet 58.

TOOLS REQUIRED

Safety Equipment (i.e. gloves, goggles, and clothing), 12” Pipe Wrench, 1/4” diameter Drift Pin, small Ball Peen Hammer, 7/16” Open-End or Boxed-End Wrench, Center Punch

REMOVAL OF VALVE FOR REPAIR OR REPLACEMENT

REFER TO FIGURE 1 FOR THE FOLLOWING STEPS:

1. Safety equipment (i.e. gloves, goggles, and clothing) must be worn before continuing to the next step.
2. The Valve to be repaired must be in the CLOSED position, as shown in Figure 1. Make sure that all product has been removed from the system prior to any disassembly. NOTE: See ‘WARNING!’ at the top of this page.

DISASSEMBLY & REASSEMBLY PROCEDURE FOR REPAIR

REFER TO FIGURE 1 FOR THE FOLLOWING STEPS:

1. Remove the Valve from the service line or tank.
2. With the Handle ① in the ‘CLOSED’ position, drive out the Handle Pivot Pin ② and re move the Handle .
3. Remove the Handle Centering Ring ③ from the Stem ④ and keep it for re-assembly.
4. Clean the part of the Stem that is sticking out of the top of the Bonnet ⑤ and remove any burrs or debris.

DISASSEMBLY & REASSEMBLY PROCEDURE FOR REPAIR CONTINUED

5. Secure the Valve Body ⑥ in a bench-mounted vise, and remove the Bonnet ⑤ by turning it in a counter-clockwise direction. The Stem ④ and the Disc Holder ⑦ may come out with the Bonnet. If so, hold the Bonnet in an upright position and push the Stem through the Bonnet.
   NOTE: Take note of the position of the parts as the Stem is removed from the Bonnet. This will help in the reassembly of the Valve.
6. Remove any Seals that may be on the Stem.
7. Remove the Spring ⑧ and the Centering Bushing ⑨ from the Stem.
8. Inspect the Stem for "pitting", damage or undue wear. The Stem must be replaced if any one of these conditions exist. If the Stem is in good condition, clean it thoroughly and keep it for reassembly.
9. Place the Disc Holder ⑦ in a bench-mounted vice and secure it just tightly enough to allow removal of the Jam Nut ⑩, the Disc Washer ⑪, and the Disc ⑫. Discard the old Disc and the Jam Nut.
10. Install the new Disc, followed by the old Disc Washer, then the new Jam Nut. Tighten the Jam Nut, then, with the Jam Nut facing upward, "stake" the thread and the Jam Nut at point Ⓐ using a sharp-pointed punch.
11. Remove and discard the Seals from the Stem (Body/Bonnet Seal ⑬, Seal Retainer ⑭, Stem Seal ⑮, Seal Sleeve ⑯, and Seal Washer ⑰).
12. Inspect the Bonnet ⑤ for thread damage.
13. Clean the Bonnet, the Handle Assembly, and the Body thoroughly prior to beginning the reassembly process.
14. Lubricate the new Seal Washer ⑰ with a small amount of the lubricant provided in the kit. Then use a pencil, or a round object, to guide the Seal Washer into the counterbore of the Bonnet until it is bottomed out.
15. Lubricate the Body/Bonnet O-Ring Seal ⑬ with a small amount of the lubricant provided in the kit. Then place the O-Ring over the threads of the Bonnet, taking care not to cut the O-Ring.
16. Secure the Valve Body ⑥ in the vise. Use abrasive cloth to remove any rust or pitting on the Seat Surface Ⓑ. If the Seat Surface cannot be polished to near new-valve condition, the Valve Body must be replaced.
17. Lubricate the Sealing Area Ⓒ of the Stem and then place the Stem and the Disc Holder into the Valve Body.
18. Install the Centering Bushing ⑨, larger diameter first, over the Stem until the Bushing rests on the Disc Holder.
19. Place the Spring ⑧ over the Stem and onto the Bushing.
20. Place the new Seal Retainer ⑭, larger diameter first, over the Stem and on top of the Spring.
21. Lubricate the new Stem Seal ⑮ and slide it over the Stem, against the Seal Retainer.
22. Lubricate the Seal Sleeve ⑯ and install it over the Stem, small end first, until it slips behind the Stem Seal.

DISASSEMBLY & REASSEMBLY PROCEDURE FOR REPAIR CONTINUED

23. Lightly lubricate the threads of the Bonnet, then place the Bonnet (with the previously assembled Seal Washer) over the Stem. Gently push the Bonnet downward while turning it in a clockwise direction to engage the threads of the Valve Body. Tighten the Bonnet securely, using a 12" pipe wrench.
24. Place the Handle Guide ③, with the angled diameter facing downward,  over the end of the Stem.
25. Secure the Valve Body in the vise as if it were laying on its side, and rotate the Stem until the cross hole is facing upward.
26. Lay the Handle ① on its side and start the new Handle Pivot Pin ② into one side.
27. With the Pin pointing upward and the Handle in the 'CLOSED' position, align the Pin with the Stem's cross hole, and drive the Pin through the Stem and into the other side wall of the Handle. The Pin should be flush on both sides of the Handle.
28. **LATCH TEST**
    A) Open and close the Handle three (3) times.
    B) In the 'CLOSED' position, spin the Handle around three (3) times.
    C) In the 'OPEN' position, rotate the Handle three (3) full revolutions. (This action will "seat" the Stem Seals.)
    D) Check the camming action by opening the Valve Handle fully and then pushing slowly on the Handle, allowing it to snap shut with its own cam action. **NOTE:** When in the 'CLOSED' position, there must be at least 1/16" gap between the Handle and the Handle Bearing ⑱.
29. **PRESSURE TEST**
    After the Latch Test is complete, with the Valve in the 'CLOSED' position, the seal between the Valve Seat and Stem Seal (surface Ⓑ) should be 'bubble-tight', when pressurized at the inlet side to 75 PSIG with air and submerged in water.

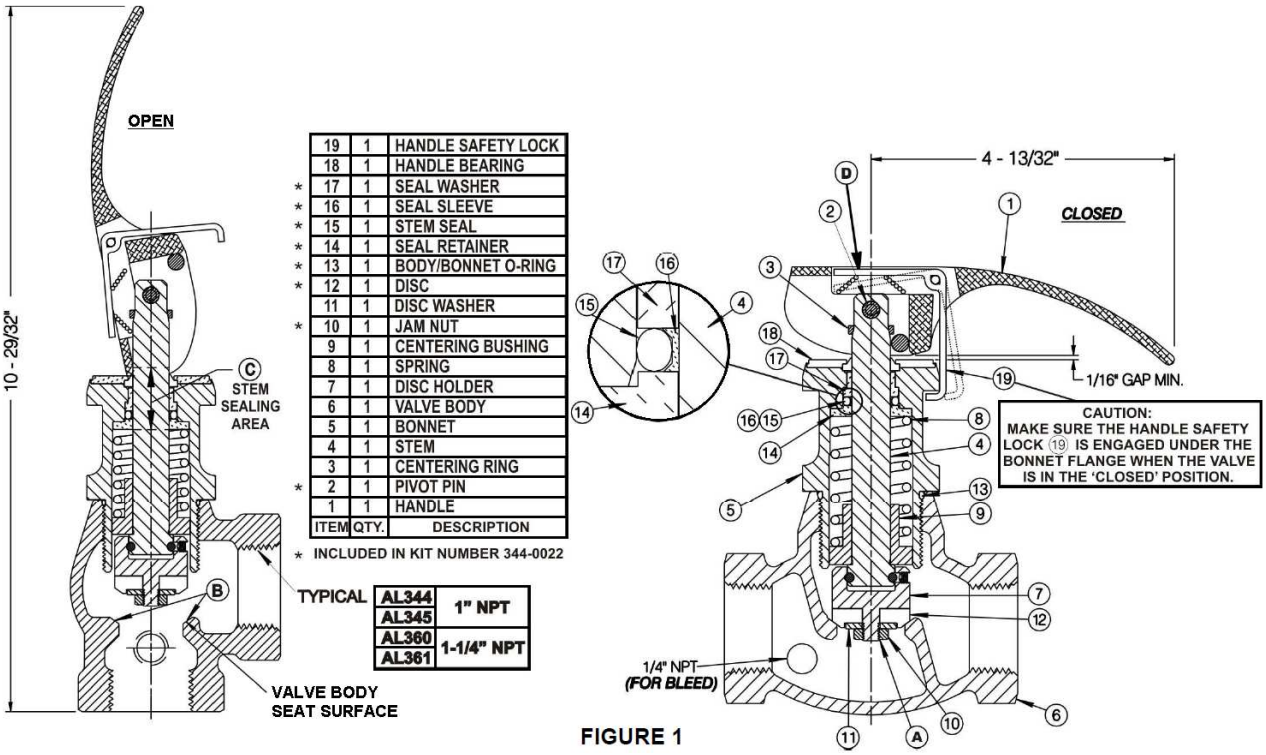
OPERATION OF THE QUICK ACTING VALVE

REFER TO FIGURE 1 FOR THE FOLLOWING STEPS:

1. To open the Valve, depress the top surface of the Handle Safety Lock at Ⓓ and lift the Handle to its vertical position. When the Valve is in the full 'OPEN' position, the heel of the Handle with rest squarely on the Handle Bearing ⑱ and the Handle will be cammed over slightly past the center of the Valve.
2. To close the Valve, tap the Handle in the closing direction. The Handle will pivot in a 'Quick Acting' manner to the CLOSED position. The closing spring action of the Valve Assembly is designed to force the Handle Safety Lock ⑲ to lock under the Bonnet

WARNING!

If the Valve is not allowed to snap shut under its own spring action, but is instead closed slowly by holding the Handle as it is moved toward the CLOSED position, the Handle may not continue to its STOP position. Make sure the handle Safety Lock ⑲ is engaged under the Bonnet Flange when the Valve is in the CLOSED position.



ITEM	QTY.	DESCRIPTION
19	1	HANDLE SAFETY LOCK
18	1	HANDLE BEARING
* 17	1	SEAL WASHER
* 16	1	SEAL SLEEVE
* 15	1	STEM SEAL
* 14	1	SEAL RETAINER
* 13	1	BODY/BONNET O-RING
* 12	1	DISC
11	1	DISC WASHER
* 10	1	JAM NUT
9	1	CENTERING BUSHING
8	1	SPRING
7	1	DISC HOLDER
6	1	VALVE BODY
5	1	BONNET
4	1	STEM
3	1	CENTERING RING
* 2	1	PIVOT PIN
1	1	HANDLE

* INCLUDED IN KIT NUMBER 344-0022

FIGURE 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.

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