

APOLLO[®]

INSTALLATION, OPERATION AND MAINTENANCE GUIDE

For Saturn Series Ball Valves



******CAUTION******

BEFORE INSTALLATION: Ensure that the component materials of the valve being installed are compatible with the media, with regard to corrosiveness, pressure, and temperature.

THREADED END INSTALLATION

1. Pipe connections to be threaded into these valves should be accurately threaded, clean and free of dirt and metal shavings.
2. Teflon tape is recommended for use as the pipe joint sealant. This material should be applied to the manufacturer's specifications.
3. Apply wrench on the hex pads nearest the joint being tightened to any distortion of the valve body.

SOLDER END INSTALLATION

1. Piping connections to be soldered into these valves should be cut square and then cleaned with an appropriate cleaner or flux.
2. These valves are designed to be soft soldered. Apply heat with the flame directed AWAY from the center of the valve body. Excessive heat can harm the Teflon seats. Solder valves only in the fully open position.

OPERATION

Lever rotation is clockwise for "OFF" and counterclockwise for "ON". Use only sufficient force to open valve without damage to stops.

NOTE: Valves must be installed in piping systems that comply to the applicable A.N.S.I. B31 Standard. Special considerations must be taken with respect to pipe line expansions and contractions and the media expansions and contractions within the piping system.

MAINTENANCE

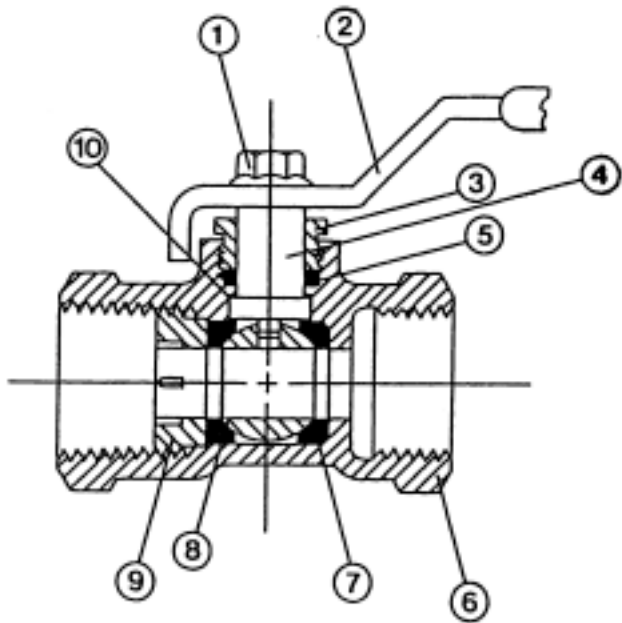
Normal stem packing wear can be compensated for by tightening the packing gland nut (except 91-200 Series). If all of the adjustment to the packing gland nut has been made, remove the lever and packing gland nut and add one or two replacement bearings on top of the old packing. Reassemble the lever and packing gland nut.

General repair of the valve can be made by:

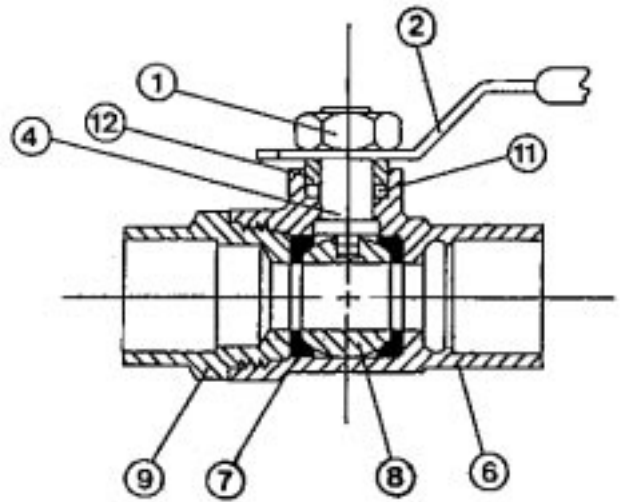
1. Close valve.
2. Remove retainer by turning clockwise.*
3. Pry out the top seat, being careful not to damage the ball.
4. Push ball out of body with finger.
5. Remove packing gland nut by turning counterclockwise and push stem down into body to remove.
6. Remove all seats and seals. To facilitate removal of the stem packing, cut with knife.
7. Replace all seats and seals as furnished in the Service Kit. Inspect the ball and stem for excessive wear or damage and replace if necessary.
8. Reverse the above procedure to reassemble using an anaerobic sealant on the retainer threads. NOTE: VALVES IN OXYGEN SERVICE CAN ONLY BE SEALED WITH A COMPATIBLE SEALANT.

* A suitable tool for removing the retainer can be made from a square piece of steel by using the dimensions shown below.

VALVE SIZE	1/2	3/4	1	1-1/4	1-1/2	2
STEEL SIZE	5/16	13/32	1/2	5/8	3/4	15/16



- 1. LEVER SCREW OR NUT
- 2. LEVER & GRIP ASSEMBLY
- 3. PACKING GLAND NUT
- 4. STEM (Blow-Out-Proof Type)
- 5. STEM PACKING
- 6. VALVE BODY



- 7. SEAT
- 8. BALL
- 9. RETAINER
- 10. STEM BEARING
- 11. "O"-RING
- 12. PACKING GLAND