

**1. USE:**

- 1.1 Life of valve can be maximized if the valve is used within the rated range, in accordance with pressure, temperature, and corrosion data.

**2. MANUAL OPERATION:**

- 2.1 To open or close the valve, turn the handle ¼ turn (90 degrees).
- A. Valve in Open Position – the handle is in parallel (in-line) with the valve or pipeline.
- B. Valve in Closed Position – the handle is perpendicular (crossed) with the valve or pipeline.

**3. DISASSEMBLING & CLEANING THE VALVE:**

- 3.1 Ball valves can trap fluids in ball cavity when it is in closed position.
- 3.2 If the valve has been used in hazardous media, it must be decontaminated before disassembly.
- A. Relieve the line pressure.
- B. Place valve in half-open position and flush the line to remove any hazardous material from valve.
- C. All persons involved in the removal and disassembly of the valve should wear the proper protective clothing, such as face shield, glove, apron, etc.

**4. REPLACING THE THRUST WASHER, PACKING, AND SEATS**

- 4.1 Before replacing the thrust washer and the packing, the pipeline must be de-pressurized.
- 4.2 Take-off the valve from the pipeline.
- 4.3 Place valve in its' fully open position.
- 4.4 Take-off end cap.
- 4.5 Close the valve and remove the seat, body seals and ball.
- 4.6 Remove the valve stem nut, handle, gland nut and remove the valve stem through the body cavity.
- 4.7 Remove the stem thrust washer from the stem cavity.
- 4.8 Examine all metallic sealing surfaces such as ball, stem and end cap for damage, if the ball or stem is excessively damaged, ball and stem need to be replaced.

**5. RE-ASSEMBLING**

Having assured that all critical surfaces and components have been inspected, cleaned and or replaced, re-assemble can be begun.

- 5.1 Place new thrust washer on stem and install the stem.
- 5.2 Re-install gland nut and tighten to the torques listed on Table A.
- 5.3 Lightly lubricate seats and body seals using a lubricant.
- 5.4 Re-install end cap.
- 5.5 Re-install handle and secure with stem nut.

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