



BU-3050

MAINTENANCE INSTRUCTIONS FOR K206 BALL VALVE

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- 1.0 Reference
 - 1.1 BuTech Assembly Drawing C-1310, Latest Revision
- 2.0 Disassembly
 - 2.1 Remove valve assembly, with side connection adapters intact, from system.
 - 2.1.1 IMPORTANT NOTE: Vent all pressure before removing valve from system.**
 - 2.2 Place valve assembly in vise equipped with "soft jaws" and tighten vise.
 - 2.3 Place appropriate open-ended wrench on side adapters (items 4 or 5) and turn the side adapter counter-clockwise to loosen. Continue to turn side adapter until adapter and "o" ring (item 11) are disengaged from the valve body (item #1). Repeat for remaining side adapter.
 - 2.4 Insert standard 3/16" hex wrench into the hex soc set screw (item 16) and loosen the set screw. Remove handle (item 7) and the hub (item 6) from the stem (item 3).
 - 2.5 Place a 5/8" open-ended wrench on the packing gland (item 2) and turn the packing gland counter-clockwise to loosen. Continue to turn packing gland until disengaged from valve body (item 1) and remove from stem (item 3).
 - 2.6 Re-attach handle (item 7) and hex soc set screw (item 16) on to the stem (item 3) and tighten the set screw with a standard 3/16" hex wrench.
 - 2.7 Utilizing the reattached handle, remove the stem (item 3), the bottom washer (item 14), the packing (item 13) and the packing support washers (item 12) from the valve body (item 1).
 - 2.8 To remove the ball (item 8) and the seat retainers (item 9) and the seals (item 10) from the valve body (item 1), insert a wooden dowel pin and tap gently.
 - 2.9 Inspect the valve body for unusual wear and/or damage.



3.0 Reassembly

- 3.1 Lightly lubricate all exterior surfaces of the replacement ball (item 8) with "Christo-Lube" and/or "Dow Corning #33" type lubricant.
- 3.2 Insert ball (item 8) into the valve body (item 1).

CAUTION: *Slot in ball (Item 8) to be in up position. See assembly drawing for proper orientation.*

- 3.3 Lightly lubricate the stem (item 3) in the areas where there is contact with the bottom washer (item 14), the packing support washers (item 12) and the packing (item 13).
- 3.4 Assemble the bottom washer (item 14), the packing support washers (item 12) and the packing (item 13) on to the stem (item 3).

CAUTION: *See assembly drawing for proper component orientation.*

- 3.5 Insert stem and packing sub-assembly into the valve body (item 1) and rotate the stem (item 3) until the male slotted end engages the female slot in the ball (item 8).

NOTE: *Rotate stem (item 3) until the ball (item 8) is in the open position.*

- 3.6 Lightly lubricate the threads of the packing gland (item 2). Slide packing gland (item 2) over the stem (Item 3) and while turning clockwise, engage the threads in the valve body (item 1) stuffing box. To hold ball in place, tighten packing gland (item 2) finger tight.
- 3.7 Lightly lubricate the seal (item 10) and seat retainer (item 9) sub-assembly, on the exterior surface of the seal, and insert into the valve body (item 1).
- 3.8 Lightly lubricate all surfaces of the "o" ring (item 17) and insert into the valve body (item 1). Repeat steps 3.7 and 3.8 for remaining seal.
- 3.9 Place new "o" ring (item 11) on the side adapter (item 4). Lightly lubricate the exterior threads of the side adapter (item 4) and while turning clockwise, engage the threads in the valve body (item 1) and tighten until finger tight. Repeat for remaining side adapter (item 5).
- 3.10 Rotate stem (item 3) and engaged ball (item 8) until ball is in the closed position.
- 3.11 Place appropriate open-ended wrench on side adapter (item 4) and tighten. Torque side adapter (item 4) to approximately 100-110 ft. lbs. Repeat step 3.11 for remaining side adapter (item 5).



- 3.12 Place a 5/8" open-ended wrench on the packing gland (item 2) and tighten. Torque packing gland (item 2) to approximately 35-40 ft. lbs.
- 3.13 Reassemble handle (item 7) and the hex soc set screw (item 16) with the stem (item 3) and tighten set screw with a standard 3/16" hex wrench.

CAUTION: Do not reassemble the hub (item 6) with the stem (item 3) at this time.

General Note

The ball valve, assembled with the replacement packing, seals, and new components, is now ready to be pressure tested.

4.0 Pressure Test

- 4.1 With the ball in the closed position, connect pressure source to side adapter (item 4) and pressurize to approximately 18,000 to 20,000 PSI. Dwell time is five (5) to ten (10) seconds.

NOTE: A pressure drop may occur as seals form to replacement ball.

- 4.2 Release pressure in the ball valve and turn the handle (item 7) approximately 120 deg. back and forth several times to assure free movement of the ball.
- 4.3 Loosen and remove hex soc set screw and handle sub-assembly from the stem (item 3).
- 4.4 Reassemble the hub (item 6), the handle (item 7) and the hex soc set screw (item 16) with the stem (item 3) and tighten hex soc set screw (item 16).
- 4.5 Loosen vise and remove valve assembly.
- 4.6 The refurbished valve is now ready to be returned to service.



RECORD OF REVISION

| REV NO | DESCRIPTION OF CHANGES | DATE | BY | APPR |
|--------|------------------------|-----------|-----|------|
| 0 | Original document | 28-Feb-94 | RWF | RAC |