



BU-3067

MAINTENANCE INSTRUCTIONS FOR K63 MANUAL BALL VALVES

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1.0 REFERENCE

- 1.1 BuTech Assembly Drawing C-1377, latest revision

2.0 PURPOSE

- 2.1 To establish maintenance instructions for 3K63 ball valves.

3.0 SCOPE

- 3.1 This maintenance instruction (BU-3067) is to be used for all K63 ball valves.

4.0 INSTRUCTIONS

CAUTION: Vent all pressure from system before removing valve for maintenance.

4.1 Disassembly

- 4.1.1 Remove valve assembly from system.
- 4.1.2 Place valve assembly in vise equipped with "soft jaws" and tighten vise.
- 4.1.3 Loosen and remove one of the side adapters (items 4 or 5) from the body (item 1). The adapter "o" ring (item 14) and the seals and seat retainer assembly will be attached. Repeat step for remaining side adapter (item 5).
- 4.1.4 Loosen and remove the set screw (item 20) holding the handle and hub on the stem (item 3). Remove handle (item 19) and the hub (item 21) from the stem.
- 4.1.5 Loosen and remove the packing gland (item 2) from the body and stem.
- 4.1.6 Re-attach the handle (item 19) to the stem (item 3) and secure with the set screw. Pull straight up to remove the stem (item 3) with attached bottom washer (item 9), packing (item 10), packing support washer (item 11) and spring washer (item 22) from the valve body (item 1). The ball (item 6) will drop free. Remove and discard packing (item 10).
- 4.1.7 Inspect all components for damage. Replace any defective items.



4.2 Reassembly

- 4.2.1 Lightly lubricate the stem (Item 3) with "christo-lube" in the areas where there is contact with the bottom washer (item 9), the packing (item 10), the support washer (item 11) and the spring washer (item 22).
- 4.2.2 Assemble the bottom washer (item 9), packing (item 10), support washer (item 22) and spring washer (item 22) onto the stem (item 3). See assembly drawing for proper component orientation. Insert stem and packing subassembly into the valve body.
- 4.2.3 Lightly lubricate the threads of the packing gland (item 2). Slide packing gland over the stem (item 3) and tighten into the body "finger tight".
- 4.2.4 Pull the seal and retainer (item 8) assembly from one of the side adapters (items 4 or 5). Remove and discard o-ring (item 13) and backup washers (item 16). Lightly lubricate the seal (item 7) and the shaft of the retainer (item 8). Insert new o-ring and backup washers in the configuration shown on the attached assembly drawing. Lightly lubricate the assembled o-ring and backup washers. Gently push completed assembly into the side adapters. Repeat for other side adapter.
- 4.2.5 Remove the old o-ring (item 14) from side adapter and replace with new o-ring. Lightly lubricate the exterior threads of the side adapter with "moly-lit". Tighten into the body "finger tight".
- 4.2.6 Lightly lubricate all exterior surfaces of the replacement ball (item 6) with "christo-lube". Turn stem (item 3) so the "tang" is axial to the valve body. Drop ball into the valve body to engage the slot in the ball with the stem "tang."
- 4.2.7 Rotate stem (item 3) and engaged ball (item 6) 90⁰ degrees until ball is in the closed position. This is important to prevent damage to the seal assembly. Repeat step for other side adapter.
- 4.2.8 Secure the valve vertically in the vise by holding one of the side adapters in the jaws of the vise. Tighten top adapter (both will tighten simultaneously) to 35 to 40 ft-lbs.
- 4.2.9 Tighten the packing gland (item 2) to 8 ft-lbs.
- 4.2.10 Reassemble the hub (item 21), the handle (item 19) and secure with the set screw (item 20).
- 4.2.11 Loosen vise and remove valve assembly. The refurbished valve is now ready to be returned to service.

GENERAL NOTE: BuTech Pressure Systems recommends that refurbished valves be pressure tested before being returned to service.

RECORD OF REVISION

REV NO	DESCRIPTION OF CHANGES	DATE	BY	APPR
0	Original document	10/10/97	DTG	DTG
1	Reformatted procedure	10/17/02	DTG	DTG