

MAINTENANCE INSTRUCTIONS FOR  
CAT# DHP16F  
AND  
CAT# DHP12F

1.0 REFERENCE

- 1.1 Butech valve assembly drawings C-1533 and C-1349.

2.0 DISASSEMBLY INSTRUCTIONS

- 2.1 Remove valve from the system.

**CAUTION:** Before valve is removed from system, vent all pressure.

- 2.2 Place the valve body (item #1) of the assembly in a vice and tighten.

- 2.3 Turn valve handle (item #10) counter-clockwise to open the valve and maintain this open position to avoid damage to the seat or stem.

- 2.4 Loosen and remove the fillister head machine screw (item #8) that holds the locking device (item #7) into place. Remove the locking device as well.

- 2.5 Unscrew the packing gland (item #3) counter-clockwise with a wrench until it is loose enough to turn by hand. Now turn the handle (item #10) counter-clockwise until the packing gland (item #3) is free from the valve body and pull straight up removing the stem assembly (item #2) and the packing arrangement from the valve body.

- 2.6 Place the hex flats of the packing gland (item #3) in a vise and tighten.

- 2.7 Loosen the hex jam nuts (item #13). Now remove the hex socket set screws (item #11) from the hub (item #9) and pull the hub/handle assembly off the stem assembly (item #2).

- 2.8 Rotate the stem assembly (item #2) clockwise until it is free from the packing gland (item #3).

- 2.9 Referring to the stem assembly drawing #B-1727, place the lower portion of the lower stem (item #1) in a vise and tighten.

- 2.10 Loosen and remove the two hex nuts (item #7).

- 2.11 Remove the bearing washer (item #6).

- 2.12 Lift the stem sleeve (item #4) up and off the upper stem (item #2).

- 2.13 Remove the second bearing washer (item #5).

- 2.14 After locating the dowel pin (item #3), on the major O.D. of the upper stem, lay the assembly across the jaws of a vise and with a small rod you must drive the dowel pin (item #3) out until the stems separate.

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- 2.15 You now can remove the packing arrangement.
  - 2.16 Inspect all components for extrusion, galling or defect symptoms, and replace all defective items.

### 3.0 ASSEMBLY INSTRUCTIONS

- 3.1 Place the packing arrangement (items #4, #5, #6) per drawing C-1533 or C-1349 onto the lower stem (item #1) per drawing B-1727.
- 3.2 Place the upper stem (item #2) onto the lower stem (item #1) so that the holes for the dowel pin (item #3) line up and drive the dowel pin into the flush position. Refer to drawing B-1727.

**NOTE:** When lubricant is called for please use “christo-lube” and/or “moly-coat” type lubricant, which either is suitable for your application.

- 3.3 Lightly lubricate the bearing surface of the upper stem (item #2) and then drop the first bearing washer (item 5) onto the upper stem and push down into position as shown of drawing B-1727.
- 3.4 Lightly lubricate the top of the bearing washer (item #5).
- 3.5 Place the stem sleeve (item #4), threaded end down, onto the upper stem (item #2).
- 3.6 Lightly lubricate the top surface of the stem sleeve (item #4) and then drop the second bearing washer (item #6) into place on top of the stem sleeve as shown on drawing B-1727.
- 3.7 Lightly lubricate the top of the bearing washer (item #6).
- 3.8 Thread one of the hex nuts (item #7) onto the upper stem (item #2) so that it is hand-tight against the second bearing washer (item #6).
- 3.9 Place the lower portion of the lower stem (item #1) in a vise and tighten.
- 3.10 Holding the first hex nut in place with an open-ended wrench, thread the second hex nut down against the first hex nut. Now, with another wrench, tighten the two hex nuts together.
- 3.11 Place the packing gland (item #3), threaded end down, over the top of the stem assembly and rotate clockwise until it stops. (This places the stem in the full open position.)
- 3.12 Lightly lubricate the external threads of the packing gland.
- 3.13 Place the assembly, from step #3.11, into the valve body (item #1) and thread into place. Torque the packing gland (item #3) approximately 105 ft-lbs.  
**Note:** You may have to turn the packing gland slightly more to locate a hex flat for the locking device (item #7) to butt up against.
- 3.14 Place the locking device (item #7) in place and thread the fillister head machine screw (item #8) into the valve body and tighten.
- 3.15 Put the handle assembly (items 9, 10, 12) onto the stem assembly and thread the hex socket set screws (item #11) into the hub and tighten.
- 3.16 Install valve assembly in system and pressurize to test for leakage or adjustment.