

Procedure for Dismantling & Re-Assembling
Swing Check Valve And Changing From
Right Hand Mounting To Left Hand Mounting
Figure No. 250-D

The following is a proper sequence for dismantling the Swing Check Valve. Before dismantling any part of the valve, isolate the valve from line pressure. By removing the pipe plug, part #22, slowly and carefully, bleed pressure from the check valve slowly, until an atmospheric condition prevails in the pipeline.

When all of the pressure has been dissipated, the valve disc should close to its seat.

1. Remove valve cover, part #9. A spare cover gasket, part #8, should be available for any re-assembly later.
2. Support disc on inside of valve to prevent its dropping into the valve body.
3. Counterweight Arm
 - A. Mark position of counterweights on counterweight arm(s). Loosen the counterweight set screws, part #31A, and remove counterweights, part #31.
 - B. Loosen counterweight arm set screw, part #30A, and remove the counterweight arm, part #30. Be careful not to lose the counterweight arm key, part #30B.
4. Cushion Chamber
 - A. Remove lever cotter pin, part #29C, and then remove the lever pin, part #29B.
 - B. The lever, part #29, and link, part #28, are now separate. Loosen the lever set screw, part #29A, and remove the lever from the shaft.
 - C. The cushion chamber may be removed as an assembly from the body by removing the chamber screws, part #21.
5. Remove the shaft lock pin, part #18, by screwing a 10-24 thread eyebolt into top of lock pin.
6. Remove gland stud nuts, gland, gland packing, and inner shaft bushings, parts #16, #15, #17, #13, and #14. To remove the bushings, parts #13 and #14, there are two 10-24 tapped holes in the end of each bushing. Screw two pieces of 10-24 all thread into these tapped holes. Attach a flat bar to the end of the all thread rods and pull the bushings out of the body.
7. Loosen disc arm set screws, part #12. With disc properly supported, slide shaft, part #11, out of valve. Be careful not to lose the disc arm key, part #19.

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8. Lift disc arm and disc, parts #3 and #4, from the valve.

To replace the resilient seat ring, remove seat follower screws, parts #5C, to enable removal of seat follower and renewable seat, parts #5B and #5A.

If it should ever be required that the part #2 body seat be removed from the valve body, it is first necessary that the spring pins, parts #2B, be removed. Since they are spring pins, they must be compressed until the "bit" is released in the valve body. This can best be accommodated by the use of "vice-grips" and removing the pins in a radial direction toward the valve centerline. If it is anticipated that this ring must be removed, it is wise to have on hand a suitable seat O-Ring, part #2A, for the re-installation procedure.

Re-Assembly

1. Prior to re-assembly inspect all machined surfaces and polish with a very fine emery paper or crocus cloth. Coat all of the machined surfaces with light film of grease. Lubriplate Marine Lube "A" is good waterproof grease obtainable from most marine supply stores. Vaseline is also satisfactory.
2. The renewable seat and the gland packing should be examined to see if they need replaced.
3. The disc and seat assembly and the disc arm shall be lifted into the valve and supported until the shaft is inserted to hold them in place.
4. Facing the valve body's inlet side, the inner bushing, part #13, lock pin, part #18, and part #34, #35, and #36 will all be installed on the right side of the valve body. All other parts will be installed on the left side of the valve body.
5. Facing the valve body's inlet side, the inner bushing, part #13, will now be installed on the right side of the valve body.

There is a hole in the inner bushing which should line up with the hole in the top of the valve body so that the shaft lock pin can be inserted through the hole into the groove in the shaft. Before replacing the shaft, line up the hole in the inner bushing and the valve body. Carefully replace the shaft so as not to move the inner bushing. The shaft must go through the opening in the disc arm. Be sure the disc arm key is in place.

6. When the shaft and the inner bushing are installed replace the shaft lock pin. Be sure the lock pin is inserted in the groove in the shaft.
7. Secure the disc arm by tightening the disc arm screw.
8. Install the outer bushing and replace the gland packing. Secure the outer bushing and gland packing by installing the gland and the gland studs.

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9. Install cushion chamber assembly, to left side of body with chamber screws, part #21.
10. Slide the lever onto the shaft. Align the lever and the link and join them together with the lever pin and the lever cotter pins. Tighten the lever set screw.
11. Replace the counterweight arm making certain the counterweight arm key is in place. Tighten the counterweight arm set screw.
12. Return the counterweights to their original marked positions and tighten the counterweight set screws.
13. Be sure the cover gasket surface area has been cleaned. Replace the cover gasket. Replace the cover. Be sure the cover gasket is seated properly and install the cover bolts. Tighten the cover bolts by alternating from opposite sides of the cover.
14. Replace the body pipe plug. The valve is now ready for operation.

