

INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS

Review Date: 01/18/2012

Original Date: 12/15/1994

Installation, Maintenance and Operation Instructions for NIBCO[®] Series F510 and F530 Unibody Flanged Ball Valves

CAUTION: It is important for your safety and protection that the following precautionary measures are taken prior to removing the valve from service or before any disassembly of the valve.

1. Keep hands out of the inside of the valve. A remotely actuated valve may close at any time.
2. Know the application of the valve to be serviced. If any doubt exists, consult the proper authority.
3. Protective clothing should be worn commensurate with the media involved.
4. De-pressurize the line and valve as follows:
 - a. Open valve, drain line.
 - b. Cycle valve to relieve residual pressure that may be trapped in valve. The valve should be left in the partially open position.
 - c. After removal of valve from line, place in vertical position and drain any remaining media.

I. INSTALLATION

1. Place valve in partially open position.
2. Check connecting pipe flanges for accuracy. Make sure the pipe flange faces are clean of any foreign material such as scale, metal shaving or welding slag.
3. To ensure proper installation, standard piping practices should be followed.
4. The NIBCO flanged ball valve is a bi-directional valve.
5. Use correct size flange bolts and follow the recommended procedures of the gasket manufacturer when tightening the flange bolts.

II. MAINTENANCE

1. Routine maintenance consists of tightening the packing to compensate for wear. If there is seepage present at stem seal, tighten the packing nut (8) 1/4 turn until snug.
2. General maintenance consists of periodic observation of valve to ensure that the valve is functioning correctly.
3. For seat and seal replacement, refer to disassembly and assembly procedures listed below. Seat and seal kits may be purchased through your local NIBCO distributor.

CAUTION: Only qualified personnel should undertake the procedures outlined in this document. NIBCO INC., its agents, representatives and employees assumes no liability for the use of these procedures. These procedures are offered as suggestions only.

III. DISASSEMBLY

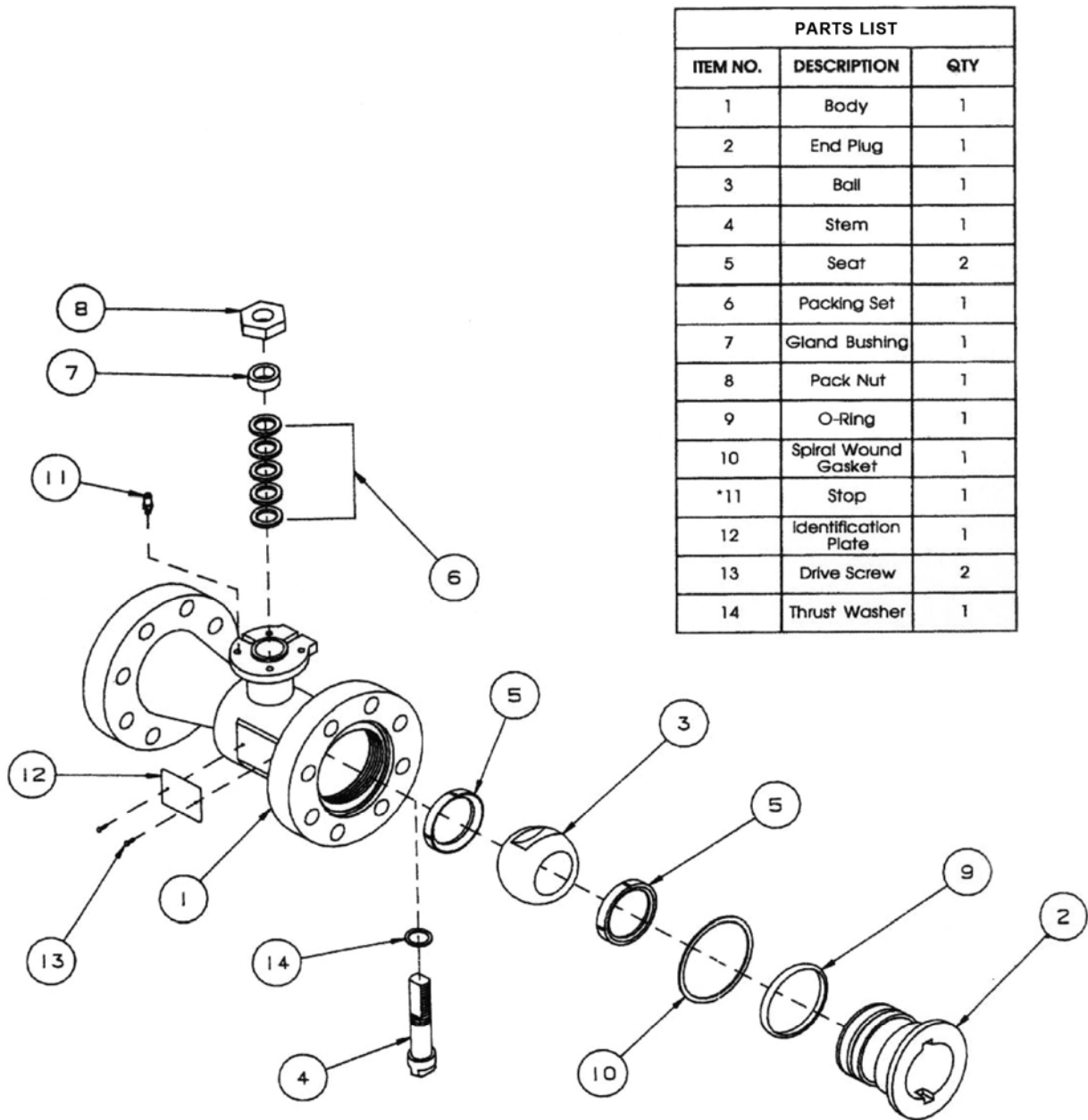
1. If complete disassembly is necessary, all seats and seals should be replaced. Read cautionary statements prior to disassembly. Refer to Figure 1 for material list and parts reference.
2. Place body on workbench or in a vice with the end plug facing up. Remove end plug by rotating counter clockwise, using appropriate spanner wrench or tool to engage end plug.
3. Turn ball (3) to closed position. Lift ball from body cavity. If ball will not lift from body in closed position, use a piece of wood or other soft material to gently tap the ball (from opposite end of body).
4. With all seats and seals removed (5), (9) and (10), using the appropriate wrench, screw the end plug into the body until the end plug shoulder hits the body. Mark the end plug and body at this position. Unscrew and remove the end plug and proceed to the next step.

IV. ASSEMBLY

1. Clean all parts. Care should be taken not to scratch sealing surfaces in the body and on the end plug. Lightly lubricate the seats, ball, stem and O-ring with a lubricant compatible with the fluid that will be handled by the respective valve.
2. Slide one seat ring (5) into seat pocket in body (1) with flat side of seat ring positioned against the bottom of the pocket and the angled side toward the ball.
3. Slip thrust washer (14) over stem (4) to fit against the head of the stem.
4. Push the stem (4) and thrust washer (14) through the stem hole from the inside of the body (1) so that the stem protrudes out of the body. Position the stem so that the flats on the stem head point toward the seat ring.
5. Carefully place the ball (3) into the body (1) so the stem head fits into the milled slot on the ball. The ball should remain in the closed position during the assembly process.
6. Place O-ring (9) into the groove on the end plug (2).
7. Place seat ring (5) into the pocket of end plug (2) being careful to have angled side of seat ring facing the ball (3).
8. Place spiral wound gasket (10) into pocket on end of valve body (1).
9. Push end plug (2) into body (1) so that end plug threads engage allowing end plug to be tightened.
10. Tighten end plug (2) until a firm stop is reached (should line up with marks made during step 3).
11. Open and close valve slowly a few times to work in seats against ball.
12. Place valve on its side so stem is pointing upright. Place packing set (6) over stem (4) being careful that the individual rings have the "V" turned upside down.
13. Slip gland bushing (7) over stem (4) to fit on top of packing.
14. Thread pack nut (8) on stem (4) and tighten firmly to assure packing is forced to bottom of stuffing box and seated against stem.

CAUTION: HANDLE ALL PARTS CAREFULLY PAYING PARTICULAR ATTENTION TO SEATS, SEALS AND BALL TO PREVENT SCRATCHES OR OTHER DAMAGE THAT MIGHT AFFECT THE PERFORMANCE OF THE VALVE.

FIGURE 1



* Stop configuration may differ depending upon valve size.

For any technical enquiries please call NIBCO Technical Services.