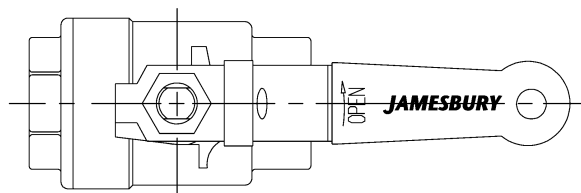


IMO - 208

Issue Date: 1/02

INSTALLATION, MAINTENANCE, AND OPERATING INSTRUCTIONS



SERIES 6F VALUE-LINE™ 1/2" – 3" (DN 50 – 80) 2-PIECE BALL VALVES

Read entire instructions carefully before installation or servicing

1 GENERAL

This instruction manual contains important information regarding the installation, maintenance and troubleshooting of the Jamesbury Series 6F *VALUE-LINE* 1/2" – 3" (DN 50 – 80) 2-Piece Ball Valves. Please read these instructions carefully and save them for future reference.

1.1 WARNING

FOR YOUR SAFETY, IT IS IMPORTANT THAT THE FOLLOWING PRECAUTIONS BE TAKEN PRIOR TO REMOVAL OF THE VALVE FROM THE LINE OR BEFORE ANY DISASSEMBLY.

1. WEAR ANY PROTECTIVE CLOTHING OR EQUIPMENT NORMALLY REQUIRED WHEN WORKING WITH THE FLUID INVOLVED.
2. DEPRESSURIZE THE LINE AND CYCLE THE VALVE AS FOLLOWS:
 - A. PLACE THE VALVE IN THE OPEN POSITION AND DRAIN THE LINE.
 - B. CYCLE THE VALVE TO RELIEVE RESIDUAL PRESSURE IN THE BODY CAVITY BEFORE REMOVAL FROM THE LINE.
 - C. AFTER REMOVAL AND BEFORE ANY DISASSEMBLY, CYCLE THE VALVE AGAIN SEVERAL TIMES.
3. WHEN INSTALLING OR REMOVING PIPING FROM THE VALVE, PLACE A WRENCH ON THE BODY OR THE BODY CAP NEAREST THE END BEING WORKED. MAKE CERTAIN BODY CAP END OF VALVE DOES NOT TURN OUT OF THE VALVE BODY. (BODY/BODY CAP JOINT IS A RIGHT HAND THREAD.) **NOTE:** IF FITTING OF PIPE REMOVAL IS TO BE A REGULAR PRACTICE, METSO AUTOMATION RECOMMENDS EITHER THE WELDED BODY CAP VERSION OF THE ELIMINATOR® OR OTHER VALVE STYLES (CLINCHER®, SERIES 4000), WHICH ARE OF THE BOLT-TOGETHER OR UNIT BODY DESIGN.

(NOTE: ROUND HANDLES ARE OPTIONALLY AVAILABLE FOR THESE VALVES IN PLACE OF LEVER HANDLES.)

2 INSTALLATION

The valve may be installed for flow in either direction. It is recommended, however, that a screwed valve be installed with the body cap facing upstream. Use standard piping practices when installing valves with threaded parts. When tightening the valve to the pipe, apply the wrench to the end nearest the pipe being worked. Adjust packing prior to installation. See **MAINTENANCE** Section of this IMO.

2.1 Disassembly

NOTE: If complete disassembly becomes necessary, replacement of all seats and seals is recommended. Refer to **(Table 2)**.

1. Close the valve. Then remove the upper stem nut (16), lockwasher (9), handle (15) and lower stem nut (16).
2. Remove the compression ring (18).
3. Unscrew and remove the body cap (2) and body seal (6). Heat may be required.

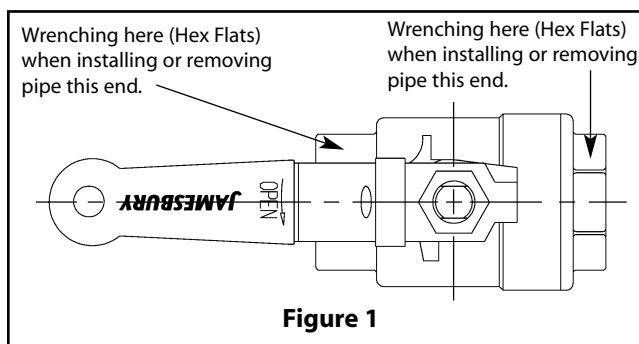


Figure 1

4. If the ball (3) and seats (5) do not fall from the body with the ball in the fully closed position, use a piece of wood or some other soft material to gently tap the ball (from the end opposite body cap). This will unseat these parts without damaging the ball.
5. Press the stem (4) from the top into the valve body and remove it through the body cap end of the body.
6. Using a wire brush, clean the body cap thread and body threads to remove any excess thread lock.
7. Using a pointed instrument, pry out and discard the old stem seals (7), stem bearings (8) and Fire-Tite® bearing (13), if applicable. Be very careful not to scratch any sealing surfaces in the valve body (surfaces on which seats and seal rest).

2.2 Assembly

1. Clamping valve body (1) securely in a vise, drop in one seat (5) with the flat surface on the bottom.
2. Insert from the inside a stem bearing (8), a *FIRE-TITE* seal (13), and another stem bearing (8) into the lower stem bore.
3. Insert the stem (4) through the open end of the body (1), being careful not to scratch the stem bearings and stem bearing surfaces. Press it gently up into the stem hole.
4. Holding the stem bearing in place from inside the valve, install two stem seals (7), the compression ring (18), and thread on one of the stem nuts (16) until the stem starts to turn.
5. Place a wrench through the body on the bottom of the stem blade to hold the stem stationary. Place another wrench on the stem nut (16), and turn the nut down until the seals bottom and the stem comes snugly in place. Tighten the stem nut (16) until snug, plus an additional 1/4 - 1/2 turn.
6. Align the stem blade inside the valve body (1) with the ball (3). Insert the ball (3) and rotate the stem (4) to the ball fully closed position.
7. Insert second seat (5) into the body (1) so that the sealing surface of the seat is towards the ball. Insert the body seal (6).
8. Apply Loctite® 272 or equivalent, one bead 360° around the body cap (2) covering a minimum of two threads.
9. Insert the body cap (2), screw it down and tighten to the required torque, (**see Table 1 for Body Cap Torque specifications**).
10. Place the handle (15), lockwasher (9) and stem nut (16) over the stem (4). Tighten the stem nut (16) until snug.
11. Cycle the valve slowly twice to ensure permanent position of the ball between the two seats.

TABLE 1	
Body Cap Assembly Torque	
Valve Size	Body Cap Torque
1/2" (DN 15)	100 lb-ft (136 Nm)
3/4" (DN 20)	150 lb-ft (203 Nm)
1" (DN 25)	225 lb-ft (305 Nm)
1-1/4" (DN 30)	275 lb-ft (373 Nm)
1-1/2" (DN 40)	350 lb-ft (475 Nm)
2" (DN 50)	600 lb-ft (814 Nm)
3" (DN 80)	600 lb-ft (814 Nm)

3 MAINTENANCE

Periodically observe the valve to be sure of proper performance. More frequent observation is recommended under extreme operating conditions.

Routine maintenance consists of tightening the stem nut 1/4 turn periodically to compensate for the wear caused by the stems turning against the resilient PTFE seal.

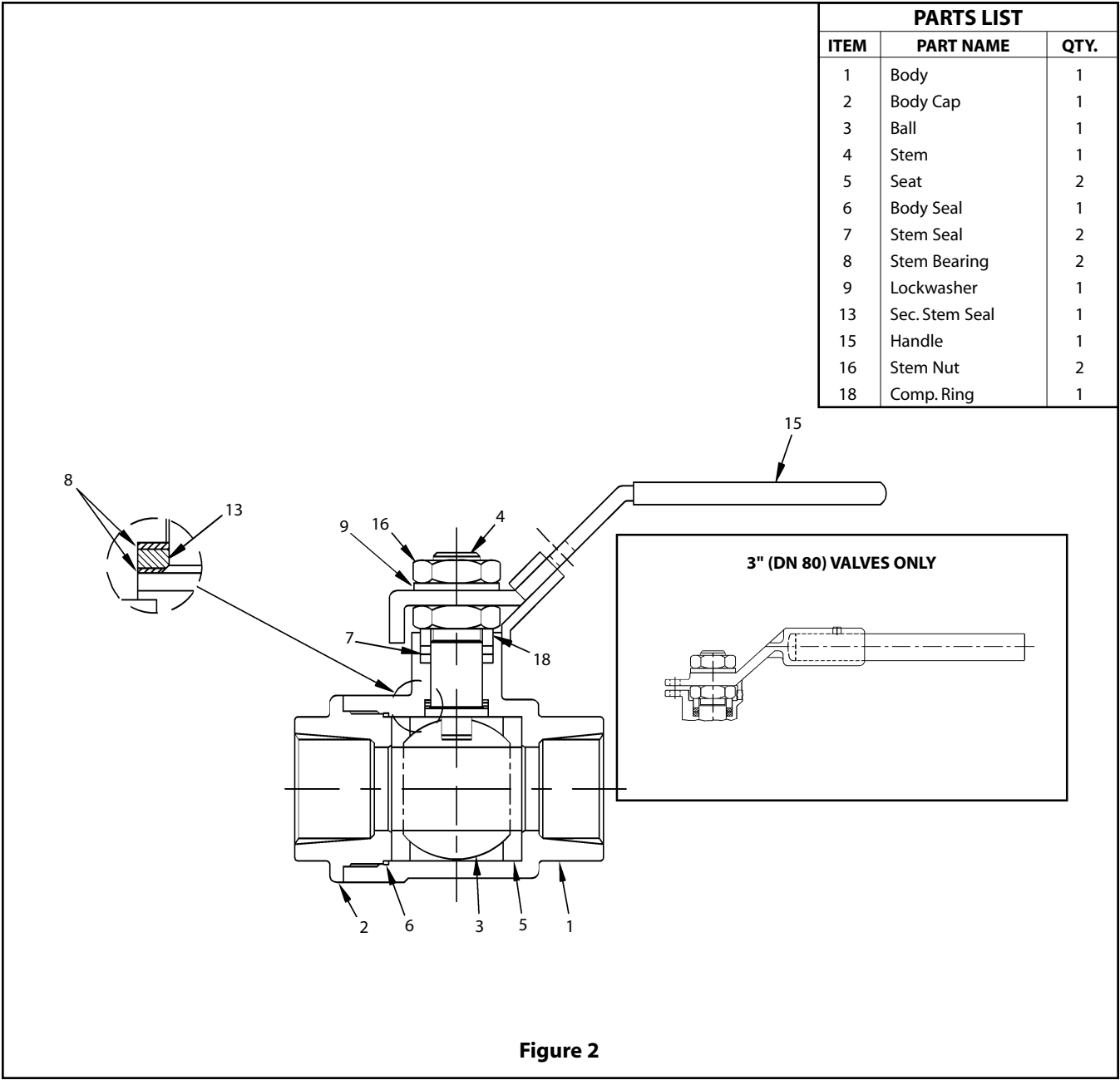
4 SERVICE KITS

FIRE-TESTED service kits include two seats (5), two stem seals (7), two stem bearings (8), a secondary seal (13), and one body seal (6).

TABLE 2		
Service Kits		
Valve Size	T Seats	M Seats
1/2" (DN 15)	RKN107-TT	RKN107-MT
3/4" (DN 20)	RKN109-TT	RKN109-MT
1" (DN 25)	RKN110-TT	RKN110-MT
1-1/4" (DN 30)	RKN111-TT	RKN111-MT
1-1/2" (DN 40)	RKN112-TT	RKN112-MT
2" (DN 50)	RKN198-TT	RKN198-MT
3" (DN 80)	RKN225-TT	RKN225-MT

5 REPAIR KITS/SPARE PARTS

For further information on spare parts and service or assistance visit our web-site at www.jamesbury.com.



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