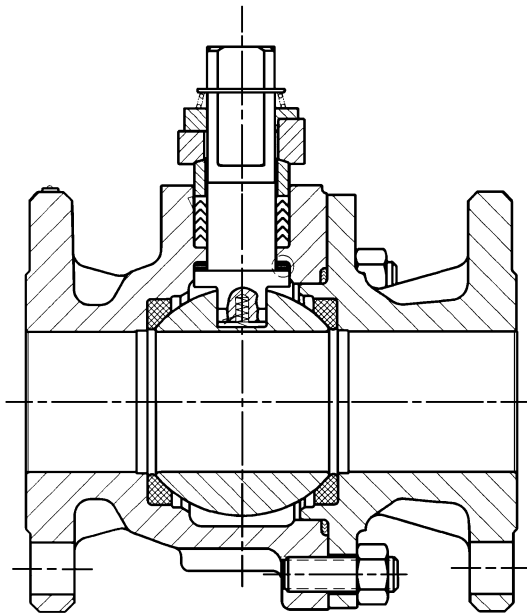


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INSTALLATION, MAINTENANCE, AND OPERATING INSTRUCTIONS

SERIES 9000

910D, 916D, 925D, 940D, DN 50 – 150, PN10 – PN40 FULL BORE VALVES



Read entire instructions carefully before installation or servicing

1 GENERAL

This instruction manual contains important information regarding the installation, maintenance, and troubleshooting of Jamesbury® Series 9000 910D/916D, 925D/940D, DN50-150, PN10 – PN40 Full Bore Valves. Please read the instructions carefully and save them for future reference.

5. SEAT AND BODY RATINGS – THE PRACTICAL AND SAFE USE OF THIS PRODUCT IS DETERMINED BY BOTH THE SEAT AND BODY RATINGS. READ THE NAME TAG AND CHECK BOTH RATINGS. THIS PRODUCT IS AVAILABLE WITH A VARIETY OF SEAT MATERIALS. SOME OF THE SEAT MATERIALS HAVE PRESSURE RATINGS THAT ARE LESS THAN THE BODY RATINGS. ALL OF THE BODY AND SEAT RATINGS ARE DEPENDENT ON VALVE TYPE AND SIZE, SEAT MATERIAL, BOLTING MATERIAL, AND TEMPERATURE. DO NOT EXCEED THESE RATINGS.

1.1 WARNING

FOR YOUR SAFETY AND PROTECTION, IT IS IMPORTANT THAT THE FOLLOWING PRECAUTIONS BE TAKEN PRIOR TO REMOVING THE VALVE FROM SERVICE OR BEFORE ANY DISASSEMBLY OF THE VALVE:

1. AT ALL TIMES DURING THIS ENTIRE PROCEDURE, KEEP HANDS OUT OF THE VALVE. A REMOTELY ACTUATED VALVE COULD CLOSE AT ANY TIME AND RESULT IN SERIOUS INJURY.
2. KNOW WHAT MEDIA IS IN THE LINE. IF THERE IS ANY DOUBT, CHECK WITH THE PROPER AUTHORITY.
3. WEAR ANY PROTECTIVE CLOTHING OR EQUIPMENT NORMALLY REQUIRED WHEN WORKING WITH THE MEDIA INVOLVED.
4. DEPRESSURIZE THE LINE AND VALVE AS FOLLOWS:
 - A. OPEN THE VALVE AND DRAIN THE LINE.
 - B. CLOSE AND OPEN THE VALVE TO RELIEVE ANY RESIDUAL PRESSURE THAT MAY BE IN THE VALVE PRIOR TO REMOVING THE VALVE FROM SERVICE. LEAVE THE VALVE IN THE OPEN POSITION.
 - C. AFTER REMOVAL AND PRIOR TO ANY DISASSEMBLY, DRAIN ANY REMAINING MEDIA BY PLACING THE VALVE IN THE VERTICAL POSITION AND CAREFULLY OPEN AND CLOSE THE VALVE SEVERAL TIMES.

2 INSTALLATION

1. Place the valve in the open position.
2. Flow through a Jamesbury valve can be in either direction. It is recommended, however, that the valve be installed with the insert facing upstream.
3. **IMPORTANT:** Tighten the valve between flanges using gaskets and fasteners appropriate for the service and in compliance with applicable piping codes and standards.
4. If there is weepage past the packing upon installation, the valve may have been subjected to wide temperature variations in shipment. "Leak-tight" performance will be restored by a packing adjustment described in the **MAINTENANCE** Section.

3 MAINTENANCE

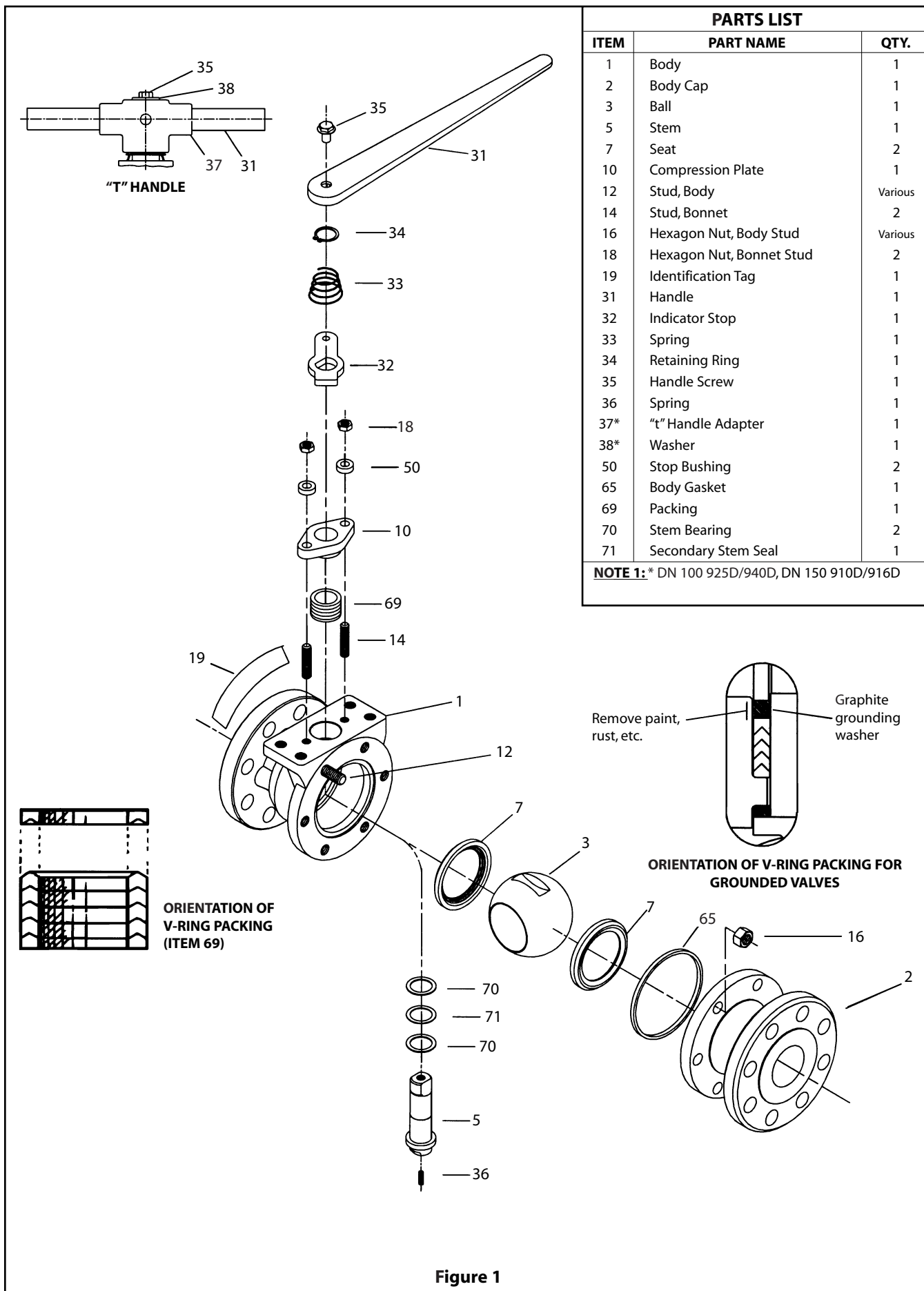
General maintenance requires periodic observation to ensure that the valve is functioning well. Routine maintenance consists of tightening the bonnet stud nuts (18) periodically to compensate for stem seal wear. This may be done by tightening the bonnet stud nuts (18) until snug, then tighten an additional 1/4 turn.

3.1 Disassembly

NOTE: If complete disassembly becomes necessary, replacement of all seats, packing and bearings is recommended. (Refer to Service Kits, Table 1.)

1. Follow the steps in the **WARNING** Section before performing any work on the valve.
2. Open and close the valve and leave in the closed position.
3. Remove handle screw (35), handle (31), and retaining ring (34) from the top of the stem.
4. Pull off the spring (33) and indicator stop (32).
5. Remove the bonnet stud nuts (18).
6. Remove stop bushings (50) and compression plate (10).
7. Mark the body joint flanges to assure correct body (1) and body cap (2) orientation during assembly. Remove body stud nuts (16) and remove body cap (2). **BE CAREFUL NOT TO SCRATCH THE BALL.**
8. Remove the body gasket (65) and the seat (7) from the cap.
9. If the ball (3) does not swing free 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 the body cap). This should loosen the ball so that it can be pivoted free of the stem (5).
10. Remove the second seat (7) from the body (1).
11. Press the stem (5) from the top into the valve body and remove it through the end of the body.
12. Pry out from the inside the old thrust bearings (70), secondary stem seal (71) and packing (69). **BE CAREFUL NOT TO SCRATCH ANY SEALING SURFACES IN THE BODY.**
13. Remove the spring (36) from the bottom of the stem.
14. If the valve is to be grounded, clean packing bore with crocus cloth or equivalent, to bare-metal surface.
15. Standing the body (1) carefully on end, install one seat (7).
16. From inside the valve, place a thrust bearing (70), a secondary stem seal (71), and the second thrust bearing into the stem bore. (See Figure 1 for proper orientation.) Place the spring (36) into the bottom of the stem.
17. Insert the stem (5) from inside the body through the bonnet of the valve.
18. Install the packing (69). (If the packing is V-ring type, be certain that they are installed in the orientation shown in Figure 1.) If the valve is to be grounded, remove one middle V-ring and place graphite grounding washer on top of stack. (See Figure 1.)
19. Place compression plate (10) over the stem (5) and studs (14). Place stop bushings (50) and nuts (18) on studs (14) and tighten "finger tight," then tighten an additional 1/4 turn.
20. Install the ball (3) rotating it onto the stem (5) in the closed position. Gently rock the ball to make sure the stem is centered in the ball slot (see Figure 1, stem-to-ball location).
21. Gently place the body gasket (65) into the machined recess of the body (1).
22. Place the remaining seat (7) on top of the ball.
23. Place the body cap (2) over body studs (12) being careful to properly orient body cap and body as originally assembled by matching orientation marks made prior to disassembly. Take care not to damage body gasket (65) or seat (7) during this operation.
24. Lubricate the threads and face of nuts (16) with Never-Seez® or equivalent. Install nuts (16) on body studs (12) and tighten sequentially as shown in the diagram (Figure 2), to the recommended torques as shown in the torque chart (Table 2).
25. Place the indicator stop (32) with "bottom" facing down over the stem so that the longer part is over the body.
26. Place the spring (33) over the stem (5) with the larger diameter contacting the indicator stop (32).
27. Compress the spring (33) and hold down by putting the retaining ring (34) in the groove in the stem (5).
28. If the valve is to be grounded, test as follows:
 - a. Use an ohmmeter accurate to within +/-10%.
 - b. Check continually between top of stem and body base metal, also check between ball and body base metal. Precaution should be taken to prevent scratching the ball O.D.
 - c. Resistance in either the open, half open or closed position shall not exceed 10 ohms using a source not exceeding 12 volts.

(text continued on page 4)



PARTS LIST		
ITEM	PART NAME	QTY.
1	Body	1
2	Body Cap	1
3	Ball	1
5	Stem	1
7	Seat	2
10	Compression Plate	1
12	Stud, Body	Various
14	Stud, Bonnet	2
16	Hexagon Nut, Body Stud	Various
18	Hexagon Nut, Bonnet Stud	2
19	Identification Tag	1
31	Handle	1
32	Indicator Stop	1
33	Spring	1
34	Retaining Ring	1
35	Handle Screw	1
36	Spring	1
37*	"t" Handle Adapter	1
38*	Washer	1
50	Stop Bushing	2
65	Body Gasket	1
69	Packing	1
70	Stem Bearing	2
71	Secondary Stem Seal	1

NOTE 1: * DN 100 925D/940D, DN 150 910D/916D

Figure 1

4 SERVICE KITS

We recommend that valves be directed to our service centers for maintenance. The service centers are equipped to provide rapid turn around at reasonable cost and offer a new valve warranty with all reconditioned valves. Standard service kits (**Table 1**) include seats, packing, thrust washers and a 316 stainless steel spiral wound body gasket. The body

gasket is suitable for valves with carbon steel or stainless steel trim. Consult the factory for replacement parts of valves with trim other than carbon or stainless steel, and for seat materials not listed or for special services.

5 REPAIR KITS/SPARE PARTS

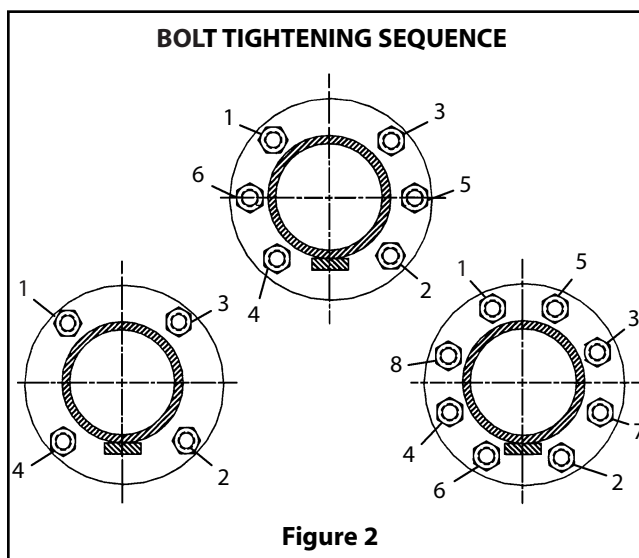
For further information on spare parts and service or assistance visit our web-site at www.Jamesbury.com.

TABLE 1 – SERVICE KITS*						
Seat Material	Valve Size					
	DN 50 910D/916D 925D/940D	DN 80 910D/916D	DN 80 925D/940D	DN 100 910D/916D	DN 100 925D/940D	DN 150 910D/916D
PTFE (T)	RKN-168-TTT	RKN-183-TTT	RKN-169-TTT	RKN-184-TTT	RKN-170-TTT	RKN-185-TTT
FILLED PTFE (M)	RKN-168-MTT	RKN-183-MTT	RKN-169-MTT	RKN-184-MTT	RKN-170-MTT	RKN-185-MTT
PFEP	RKN-168-FTT	RKN-183-FTT	RKN-169-FTT	RKN-184-FTT	RKN-170-FTT	RKN-185-FTT
PFA SEATS & SEALS	RKN-168-BPT	RKN-183-BPT	RKN-169-BPT	RKN-184-BPT	RKN-170-BPT	RKN-185-BPT
XTREME®	RKN-168-XTZ	RKN-183-XTZ	RKN-169-XTZ	RKN-184-XTZ	RKN-170-XTZ	RKN-185-XTZ

* For grounded valves, grounding washers listed below are also needed when ordering. (One per valve)

	DN 50	DN 80	DN 100	DN 150
910D/916D	004-0847-60	004-0847-60	004-0848-60	004-0849-60
925D/940D	004-0847-60	004-0848-60	004-0849-60	-

TABLE 2		
Recommended Torques – N*m		
Fastener Size	Fastener Material	
	EN 10269 Gr. 1.7225	ISO 3506 A2-70/A4-70
	N*m	N*m
M12	90 - 110	70 - 85
M16	180 - 220	140 - 170
M20	320 - 390	245 - 300
M22	520 - 630	395 - 480



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