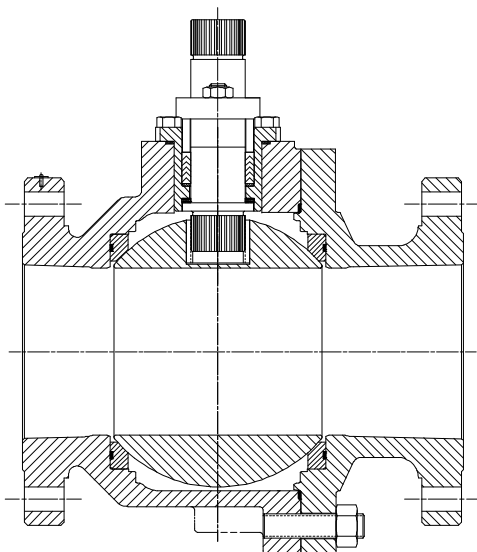




NELES-JAMESBURY

IMO - 298

Installation, Maintenance & Operating Instructions

SERIES MBV, METAL SEATED 8" - 12" CLASS 150 FULL-BORE 6" - 12" CLASS 300 FULL-BORE

Read these instructions carefully before installation or servicing.

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 A VERTICAL POSITION AND CAREFULLY CLOSING AND OPENING THE VALVE SEVERAL TIMES.

5. SEAT AND BODY RATINGS - THE PRACTICAL AND SAFE USE OF THIS PRODUCT IS DETERMINED BY BOTH THE SEAT AND THE BODY RATINGS. READ THE IDENTIFICATION PLATE AND CHECK BOTH RATINGS. THIS PRODUCT IS AVAILABLE WITH A VARIETY OF SEAT MATERIALS. SOME OF THESE 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, BOLTING MATERIAL AND TEMPERATURE. DO NOT EXCEED THESE RATINGS, DAMAGE OR PERSONNEL INJURY MAY RESULT.

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.

DISASSEMBLY

We recommend that valves be directed to our service center for maintenance. The service center is equipped to provide rapid turn around at reasonable cost and offers a new valve warranty with all reconditioned valves.

SERVICE CENTERS

320 Thornton Road Suite 102 Lithia Springs, GA. 30057	(404) 739-1100 (800) 825-8376 (404) 739-2747 (FAX)
N. Sam Houston Pkwy. 1424 East North Belt Drive Suite 190 Houston, TX. 77032	(713) 987-0929 (800) 762-5359 (713) 987-2911 (FAX)
11800 Industriplex Suite 13 Baton Rouge, LA. 70809	(504) 752-1400 (800) 452-7034 (504) 753-2755 (FAX)
Southwest Industrial Park One Polito Drive Shrewsbury, MA. 01545	(508) 799-6190 (800) 255-2669 (508) 799-6497 (FAX)
12906 N.E. 95TH Street Vancouver, WA. 98682	(206) 254-6900 (800) 535-3745 (206) 254-6955 (FAX)
Edmonton Service Centre 4613-101 Street Edmonton, Alberta T6E 5C6	(403) 434-7744 (403) 497-6980 (24 HRS) (403) 434-7867 (FAX)
Montreal Service Centre 9460 Route Trans-Canadienne St-Laurent, Quebec H4S 1R7	(514) 336-5908 (514) 336-8208 (FAX)

INSTALLATION

1. Place the valve in the open position.
2. Flow through a Neles-Jamesbury valve can be in either direction. To ensure that good installation is achieved, standard piping practices should be followed.
3. Use proper size flange bolts and follow recommended practices of the gasket manufacturer when tightening the flange bolts.

NOTE: If complete disassembly becomes necessary, replacement of all seats, packing and seals is recommended. Refer to Service Kit Chart (Table 2) under **Maintenance** section. For valves with locked metal seats, (K & H) we recommend they be sent to our service centers.

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 the bonnet stud nuts (18), compression plate (10) and gland follower (9).
4. Mark the body joint flanges to assure correct body (1) and body cap (2) orientation during reassembly.
5. Remove body stud nuts (16) and remove the body cap (2).
6. Remove the body gasket (65), the seat (7), and back seal (63) from the cap.
BE CAREFUL NOT TO SCRATCH THE BALL.
7. Remove the ball (3).
8. Remove the spline driver (4) by pulling it away from the stem (5).
9. Remove the stem (5) and stem retainer (8) as a subassembly by removing cap screws (13). It may be necessary to loosen with a block of wood and hammer.
10. Press down on top of stem to remove it from the stem retainer.
11. Remove thrust bearings (70) and also the secondary stem seal (71) from the stem. Pry out the packing (69) from the stem retainer (8). **BE CAREFUL NOT TO SCRATCH ANY SEALING SURFACES.**
12. Remove and discard the stem retainer seal (66) from the body.
13. Remove the second seat (7) and back seal (63) from the body (1).

ASSEMBLY

1. Clean all valve components.
2. Inspect all components for damage before reassembling the valve. Look for damage to the sealing areas on ball, stem, body and body cap, and look for wearing in the bearing areas.
3. Carefully clean and polish the ball sealing surface. It should be free of all scratches and grooves.
4. If the ball is slightly damaged, it may be possible to smooth the sealing surface with crocus cloth or equivalent. If deep scratches are present, replace the ball or return the valve to the factory for service.
5. Place the back seals (63) in the seat grooves (7) located on the flat surface before assembly. (As shown in Figure 2.)
6. Standing the body (1) carefully on end, install one seat (7) with the flat surface down.
7. Slide the thrust bearings (70), and secondary stem seal (71) over the top of the stem and down to the stem shoulder. (See Figure 2 for proper orientation.)
8. Slide the spline driver (4) onto the bottom of the stem (See Figure 1 for proper orientation).
9. Insert stem subassembly through the stem retainer and install packing. (If V-ring packing is used, it must be oriented as shown in Figure 2.)

10. Place the stem retainer seal (66) into it's position on top of the bonnet. (See Figure 2).
11. Place the stem retainer subassembly into the body bonnet hole.
12. Install the ball (3) rotating it onto the spline driver (4) in the closed position.
13. Align the holes of the stem retainer (8) with the tapped holes in the bonnet. Lubricate the four hex head cap screw (13) threads and bottom of the head with "Never-Seez" or equivalent. Place the cap screws through the stem retainer flange and thread them into the body. Tighten per Table 1 and Figure 3.
14. Gently rock the ball to make sure the spline driver (4) is centered in the ball slot.
15. Place the body gasket (65) in the body groove.
16. Place the remaining seat (7) on top of the ball with the back seal up.
17. Place the body cap (2) over body studs (12) being careful to properly orientate 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.
18. Using "Never-Seez" or equivalent, lubricate the threads and underside of the body stud nuts (16). Install and tighten per Table 1 and Figure 3.
19. Place the gland follower (9) over the stem so that the beveled side faces up.
20. Place compression plate (10) (inside chamfer down) over the stem (5) and bonnet studs (14). Install lockwashers (15) and bonnet stud nuts (18) on studs (14) and tighten finger tight.
21. Cycle the valve slowly twice to insure permanent position of the ball between the two seats. Tighten bonnet stud nuts (18) 1 1/2 to 2 turns beyond the finger tight condition. If there is weepage past the packing upon installation, "Leak-tight " performance may be restored by a packing adjustment described in the maintenance section.

TABLE 1					
RECOMMENDED TORQUES (LB. - FT.)					
FASTENER SIZE	FASTENER MATERIAL	A193 GR. B7	A193 GR. B8	A193 GR. B7M	A193 B8M
	FASTENER IDENT. MARK	B7	B8	B7M	B8M
1/2" - 13		75 - 85	70 - 85	55 - 65	60-75
5/8" - 11		160 - 190	155 - 180	125 - 145	135-160
3/4" - 10		250 - 290	235 - 275	190 - 220	205-240
7/8" - 9		380 - 445	290 - 340	290 - 340	250-295
1" - 8		575 - 630	435 - 510	435 - 510	375-445
1 1/8" - 8		850 - 1000	526 - 615	650 - 760	475-555
1 1/4" - 8		1160 - 1360	715 - 840	885 - 1030	645 - 755

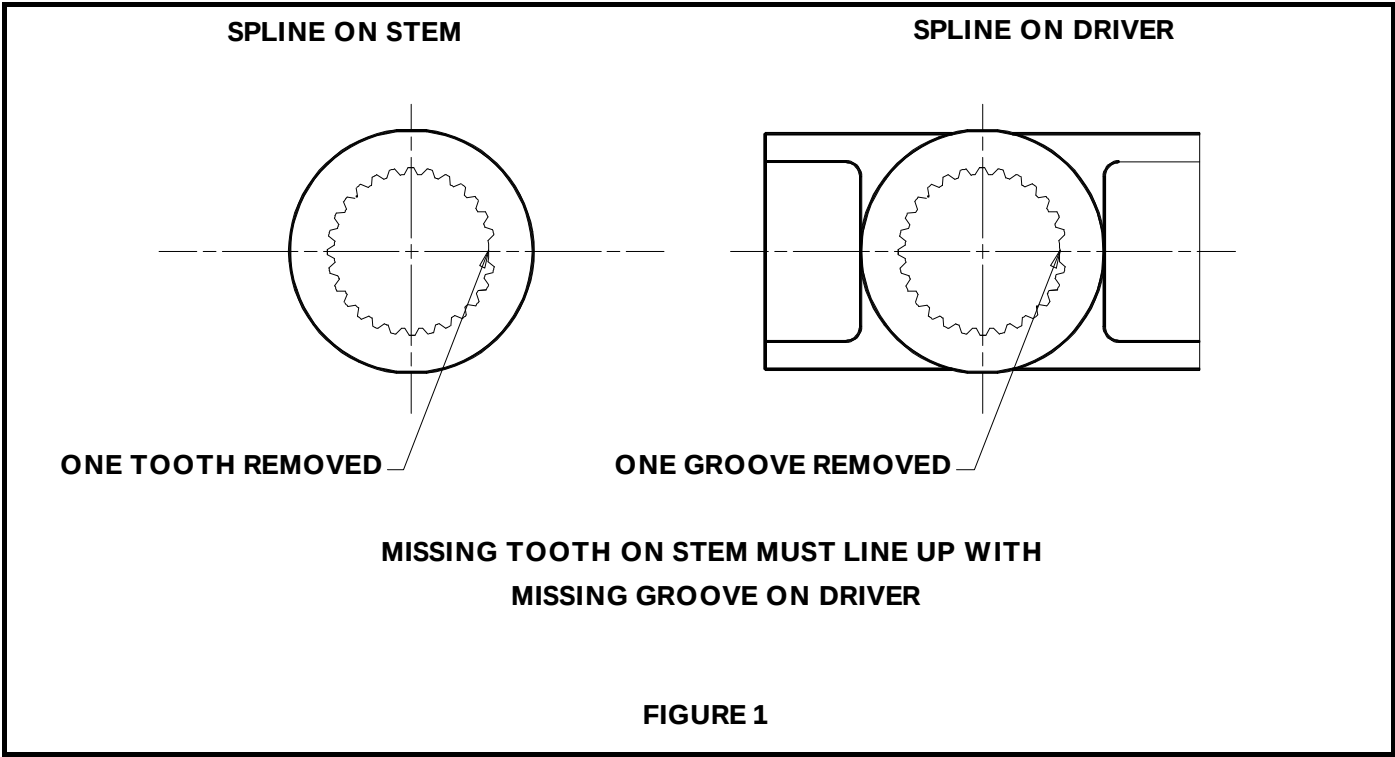
MAINTENANCE

1. 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.

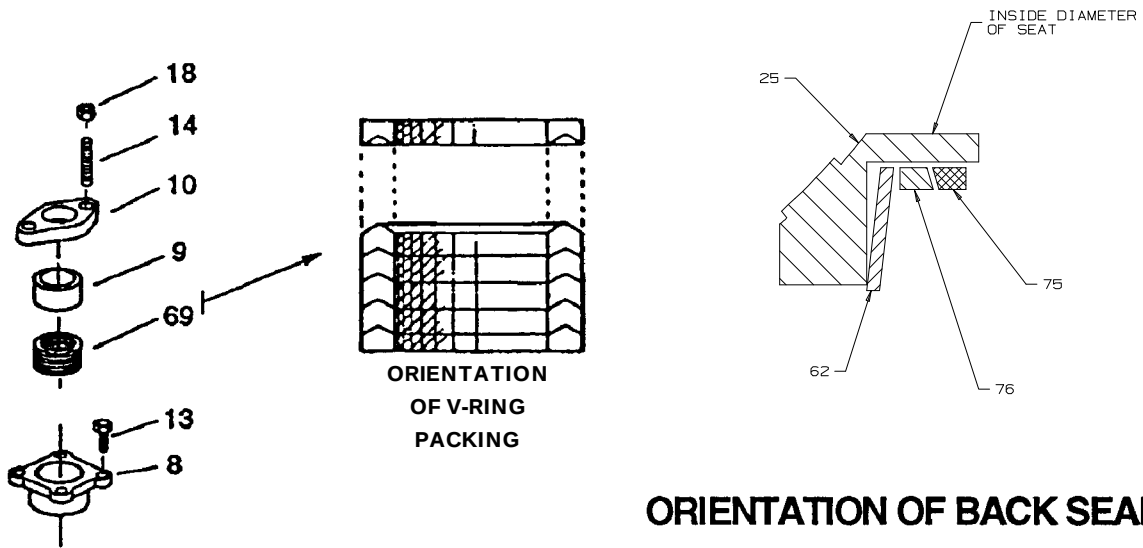
SERVICE KITS

Standard service kits (Table 2) include seats, packing and a 316 stainless steel/PTFE 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 or for seat materials not listed.

TABLE 2				
VALVE SIZE	6"	8"	10"	12"
S SEATS	RKN171-STT	RKN172-STT	RKN188-STT	RKN189-STT
K SEATS	RKN171-KTT	RKN172-KTT	RKN188-KTT	RKN189-KTT
H SEATS	RKN171-HGG	RKN172-HGG	RKN188-HGG	RKN189-HGG



ORIENTATION OF H SEAT PARTS



ORIENTATION OF BACK SEAL

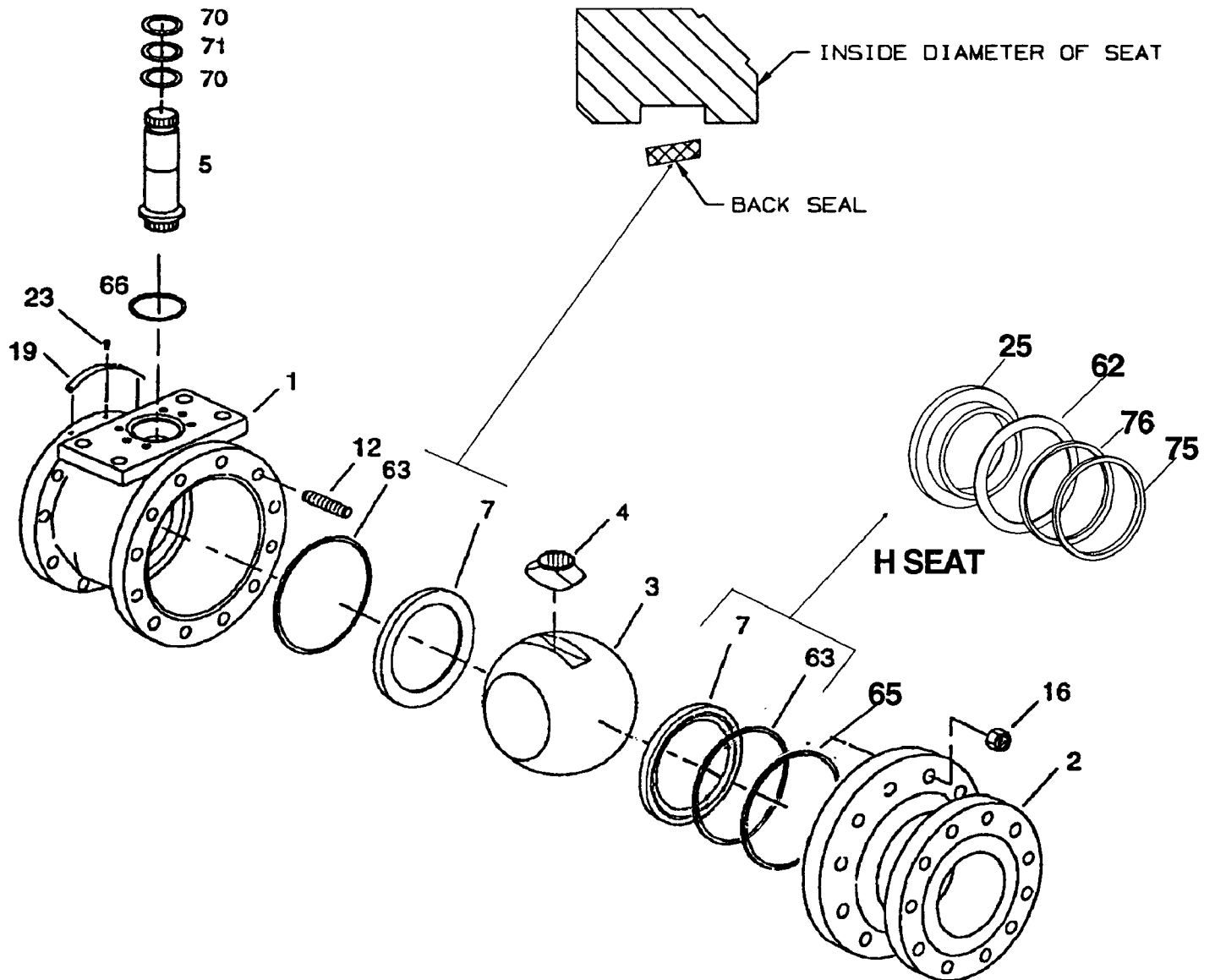
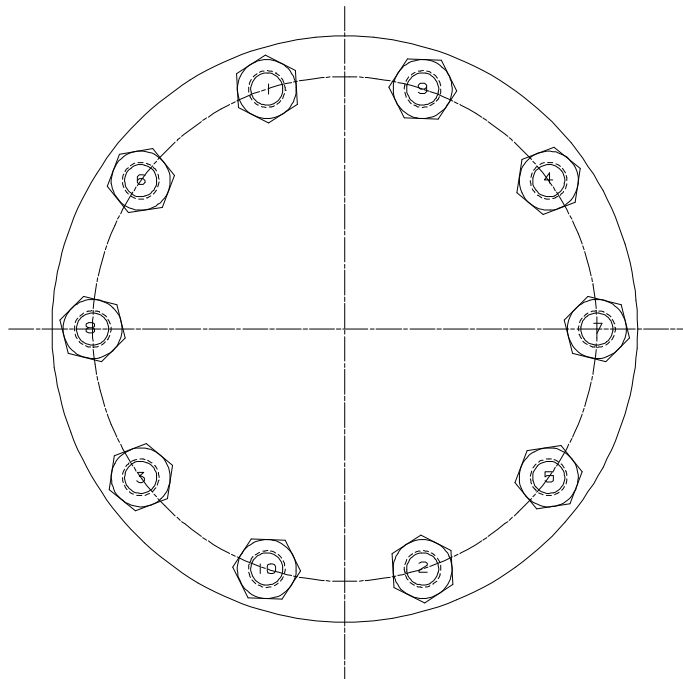
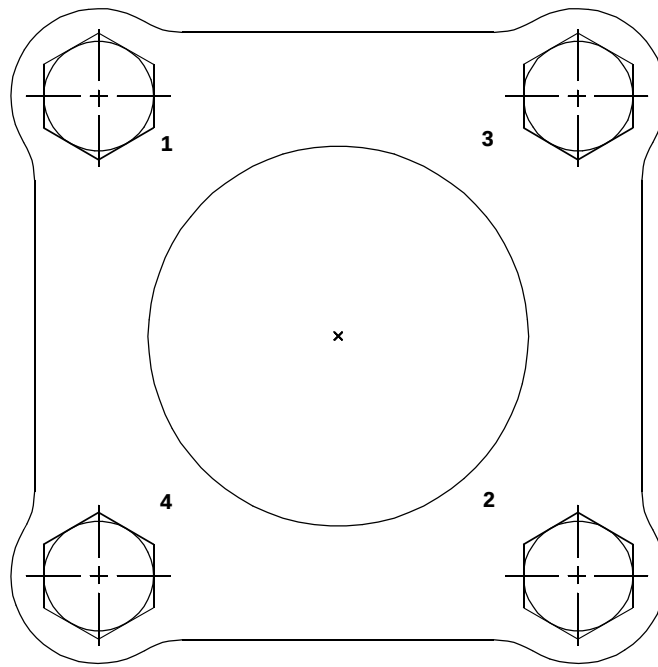


FIGURE 2

PARTS LIST		
ITEM	PART NAME	QTY.
1	BODY	1
2	BODY CAP	1
3	BALL	1
4	SPLINE DRIVER	1
5	STEM	1
7	SEAT	2
8	STEM RETAINER	1
9	GLAND FOLLOWER	1
10	COMPRESSION PLATE	1
12	STUD, BODY	12*
13	CAP SCREW	4
14	STUD, BONNET	2
16	HEXAGON NUT, BODY STUD	12*
18	HEXAGON NUT, BONNET STUD	2
19	IDENTIFICATION PLATE	1
23	RIVET	3
25	SEAT, HIGH TEMP.	1
62	SPRING	1
63	BACK SEAL	2
65	BODY GASKET	1
66	STEM RETAINER SEAL	1
69	PACKING	1
70	THRUST BEARING	1
71	SECONDARY STEM SEAL	2
75	BACK SEAL	1
76	BACK UP RING	1
* FASTENERS REQUIRED		
Valve Size	Qty.	
8" 150#	12	
6" - 8" 300#	12	
10" 150#	10	
10" 300#, 12" 150#	14	
12" 300#	20	

BOLT TIGHTENING SEQUENCE

STEM RETAINER

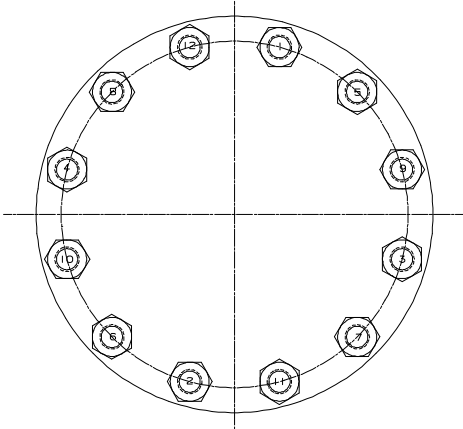


10 HOLE PATTERN

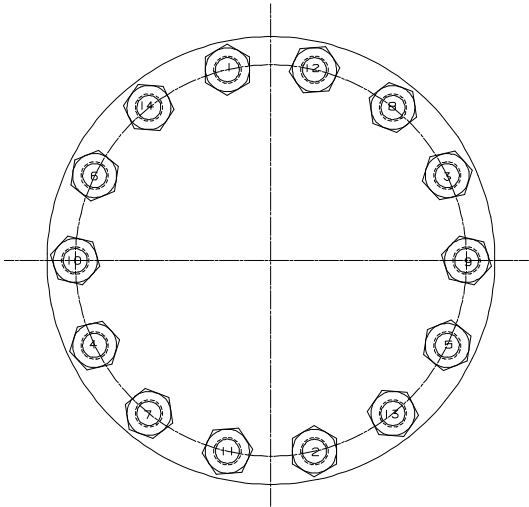
FIGURE 3

BOLT TIGHTENING SEQUENCE (CONTINUED)

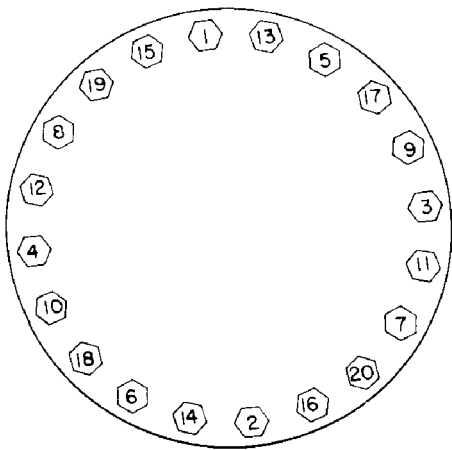
BODY FLANGES



12 HOLE PATTERN



14 HOLE PATTERN



20 HOLE PATTERN

FIGURE 3 (CONTINUED)

NOTES

Neles-Jamesbury, Inc.

640 Lincoln Street, Box 15004

Worcester, Massachusetts 01615-0004, U.S.A.

Phone: (508) 852-0200

Fax: (508) 852-8172

NELES-JAMESBURY

11/93

Neles-Jamesbury Oy

Levytie 6 PL6

00881 Helsinki, Finland

Phone: 90-75999

Telex: 121211, Telefax: 90-75998418