MAINTENANCE INSTRUCTIONS
KR75 Regulator

Only qualified personnel should perform maintenance.

Be sure that system pressure has been VENTED prior to disassembly.

All instructions, illustrations and item numbers refer to the manual operated regulator, 40-1509. Refer to specific installation drawing for corresponding items.

Repair Procedure

Preparation

1. Prepare a clean surface for disassembly, free of dust, grease, grit, etc. A vise is not necessary, but helpful. Have rags, degreasing solvent and lubricant available.
2. Critical surfaces to protect during disassembly are the inside diameter of the piston guide 24, the inside diameters of the seal container 16, the flat sealing surfaces of the seal rings 12 and 13 and the flat surfaces of the flow plates 14 and 15. Lapped surfaces should NEVER come in contact with any hard surface.
3. All O-rings and back-up rings are recommended to be replaced at a minimum. See the parts list for kit contents.
4. Special tools used in assembly include a punch for securing the pin retainer (step 3), a blunt ended rod for seating backup rings, (step 4), medium strength (blue) threadlocker (step 7) and a flat spacer about 3/16" thick for reinstalling the main and blind flanges (step 8 and 10).

Disassembly

1. To relieve the compression on the internal operator springs (25, 26) loosen the lock handle 21 and rotate the adjustment handle 22 counter-clockwise until the resistance is fully relieved. Springs must be loose to safely remove the adjustment head.

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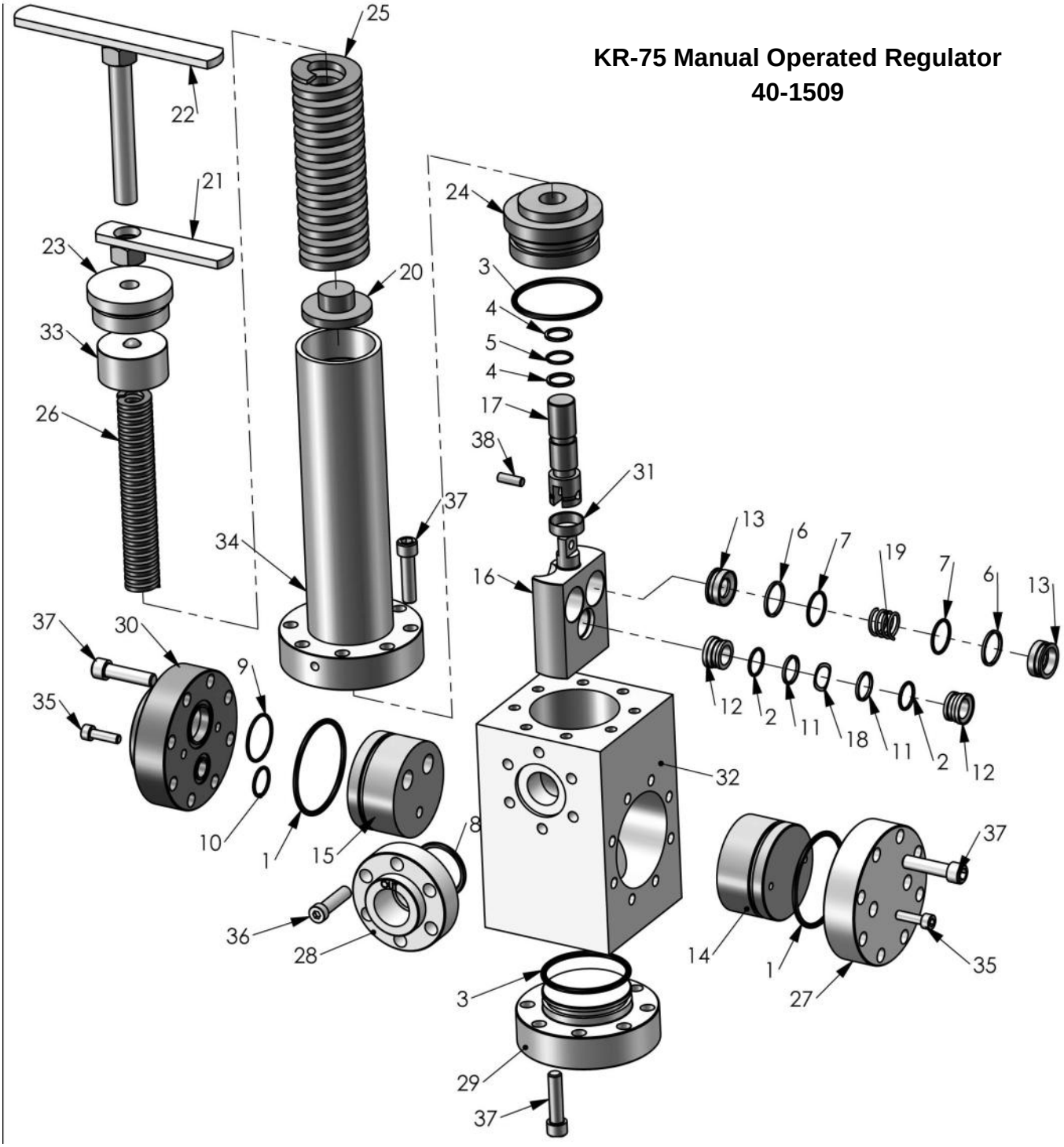
2. With a 5/16” Allen wrench, loosen and remove the socket head cap screws. Remove the adjustment head 34 and spring assembly by lifting and tilting and holding the spring plate 20 to clear the piston guide 24. Remove springs, guide 23 and spring plate and clean barrel and all parts.
3. Remove the flange screws from the main flange 30 and blind flange 27. Carefully remove these flanges and attached flow plates.
4. Remove the flow plates from the main and blind flanges by unscrewing the screws 35. Do not place the flow plates lapped side down on any hard surface.
5. From both sides of the body, remove the seal rings and springs from the seal container 16. Carefully set these aside.
6. Remove the outlet flange and lower flange by removing the screws.
7. Using a soft tool, lightly tap the seal container from the bottom to loosen the piston guide from the body. Lift this assembly through the top of the body.
8. If the seal container is to be replaced, remove the pin retainer 31 by cutting through it with a screw driver or wire snip. Take care not to scratch the piston.
9. Remove all o-rings and back-up rings. Clean all parts with a degreaser and wipe with clean rags.
10. Inspect all lapped surfaces for scratches, dings or dull spots that would prevent them from re-use. Inspect the bores of the seal container for linear scratches that would propagate leaks.

Reassembly

1. Before replacing the seals and rebuilding the regulator, apply a light coating of lubricant.
2. Replace all o-rings and back-up rings on seal rings, flow plates, piston, piston guide and flanges, lubricating generously.
3. Install the piston 17 on the seal container, insert the pin 38, then drop the new pin retainer 31 over the piston. With a punch, crimp the pin retainer at both sides opposite the ends of the pin.
4. Carefully install the seal rings (do not scratch the sealing surface of the seal ring or the bore of the seal container) from one side of the seal container, using a soft, blunt tool to help compress the back-up ring to engage in the hole. From the opposite side, install the springs 18 and 19. Then install the opposite seal rings.
5. Slide the piston guide over the piston and snug it down.
6. Slide the seal container assembly down into the top of the regulator body, making sure the seal container faces are parallel with the opposing ports. Note that the NOTCHED side of the seal container must face the supply (main flange).
7. Install the flow plates on their respective flanges, using the screws and medium strength (blue) threadlocker. The main flange 30 also must have the o-rings seated in the face grooves before attaching the flange to the supply flow plate. Use rags to protect the flow plate lapped surface and edges.

KR-75 Manual Operated Regulator
40-1509



8. Important! To protect the seal rings in the seal container during reassembly, ease the blind flow plate into the body using a 3/16" thick spacer between the flange and the body to prevent over-travel. Orient the blind flange so that the retaining screws 35 are parallel with the bottom of the body. Remove the spacer.

9. Insert the socket head screws 37 and tighten evenly around the flange. The flow plate should be in light contact with the seal rings.

10. Important! In the same way, install the main flange using the spacer to prevent the flow plate from hitting the seal rings. Orient the flange before seating it against the seal rings. The inlet port of the main flange will be vertical. Evenly tighten all socket screws.

11. Install the outlet flange and bottom flange with their o-rings, evenly tightening all screws.

12. Reassemble the springs, spring plate and guide into the barrel of the adjustment head using a light coat of grease. Lower the operator assembly with screws onto the body and evenly tighten the socket screws.

13. Rotate the handle down to its original position and set the lock nut. The regulator is now ready for normal operation. Some adjustment of the operator may be necessary to achieve the desired output. To increase pressure, rotate the handle clockwise, to decrease pressure rotate the screw counter-clockwise. Always tighten the lock nut after setting the regulator.

#	Part No.	Description	Qty	Kits
1	23-1263	O-Ring	2	1
2	23-1293	O-Ring	2	1
3	23-1319	O-Ring	2	1
4	23-1320	Back-Up Ring	2	1
5	23-1321	O-Ring	1	1
6	23-1322	Back-Up Ring	4	1
7	23-1323	O-Ring	4	1
8	23-1324	O-Ring	1	1
9	23-1325	O-Ring	1	1
10	23-1326	O-Ring	1	1
11	23-1329	Back-Up Ring	2	1
12	40-0013	Seal Ring, Vent	2	2
13	40-0014	Seal Ring, Supply	4	2
14	40-0015	Flow Plate, Blind	1	3
15	40-0016	Flow Plate, Supply	1	3
16	40-0106	Seal Container	1	4
17	40-0107	Piston	1	
18	40-0109	Wave Spring	1	2
19	40-0110	Spring	2	2
20	40-0134	Spring Plate	1	
21	40-0135	Locking Handle	1	
22	40-0136	Adj Screw & Handle	1	
23	40-0140	Sealing Plug	1	
24	40-0186	Piston Guide	1	
25	40-0189	Compression Spring, Outer	1	
26	40-0190	Compression Spring, Inner	1	
27	40-0195	Flange, Blind	1	
28	40-0196	Flange, Outlet	1	
29	40-0197	Flange, Lower	1	
30	40-0198	Flange, Main	1	
31	40-0199	Pin Retainer	1	4
32	40-0200	Body	1	
33	40-0300	Ball Guide	1	
34	40-0383	Adjustment Head	1	
35	50-0066	Screw	4	2
36	50-0068	Screw	6	
37	50-0069	Screw	32	
38	50-0087	Pin	1	4

Kit contents:

1: (40-1504) O-ring Kit

2: (40-1590) Seal Kit, includes O-ring Kit

3: (40-1503) Minor Repair Kit, includes Seal Kit

4: (40-1566) Major Repair Kit, includes Minor Repair Kit