



K-SERIES VALVE

REBUILD

INSTRUCTIONS

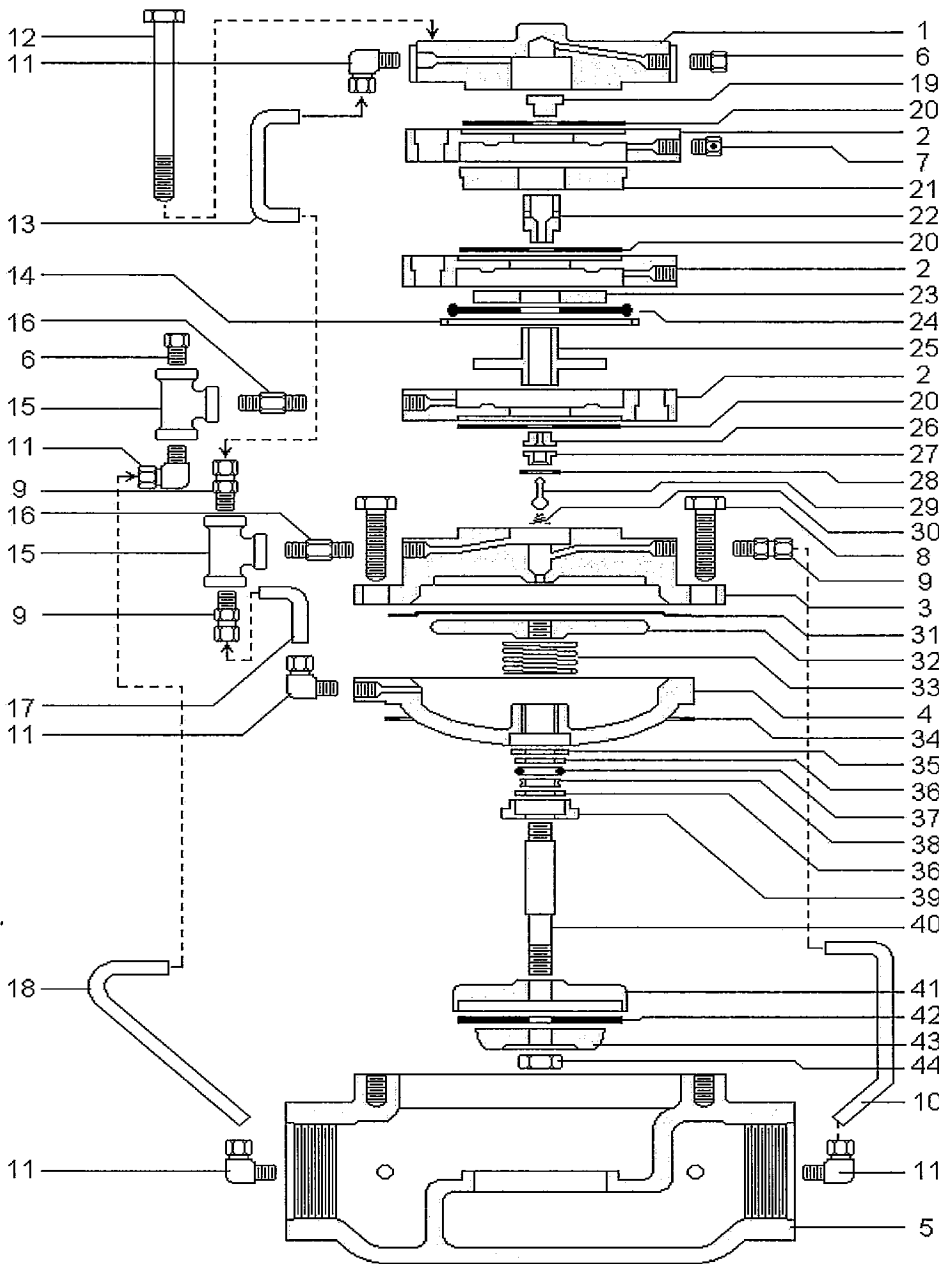


INSTRUCTIONS FOR DISASSEMBLY & REPAIR

- Depressurize valve, disassemble positioner diaphragm stack, taking note of port orientation for re-assembly
- Check balance diaphragms (see exploded view drawing – item #20) and pilot diaphragm (item #24) for damage, replace as necessary.
- Remove large pilot seat (item #27) and examine pilot seat gasket (item #28), pilot plug (item #29) and conical spring (item #30), replace as necessary. Reassemble pilot plug assembly and snugly tighten large pilot seat.
- Remove upper housing screws (item #8). Examine motor valve diaphragm (item #31) for damage, replace as necessary.
- Remove lower housing (item #4) from valve body (item #5). Extract valve stem (item #40) from lower housing by unthreading diaphragm plate (item #32). Remove seal retainer (item #39) and examine back up, O-ring and channel seal (items #36, 37, 38) for damage, replace as necessary.
- Examine valve seat (item #42), replace if worn or damaged.
- When reassembling stem/lower housing first apply a light coat of lubricant to the valve stem. Slide the seal retainer (item #39), back up (item #36), channel seal & O-ring assembly (items #38 & 37), second back up and stem seal spacer (item #35) onto the stem before inserting stem into the lower housing. Tighten seal retainer to the lower housing, install assist spring (item #33) and diaphragm plate.
- Place lower housing on the valve body, center the motor valve diaphragm over the diaphragm plate and install upper housing. Torque upper housing screws to 20 lb-ft.



- Re-assemble positioner. Balance diaphragm stack assembly is sensitive to over tightening (items# 26, 25, 22, 19), components should be hand tight or hand tight plus one-eighth turn.
- Tighten the bonnet screws (item #12) with a crossover pattern starting with one and then go to the one directly across from it. This will ensure that all four screws are evenly tightened. The screws should initially just make contact with the flange on the diaphragm bonnet housing. Then tighten the screws one turn further in the same alternate pattern. Torque the four screws in small increments to a minimum of 12 ft lbs. a maximum of 18 ft lbs- DO NOT OVER TIGHTEN
- Supply upstream pressure to valve with no pressure at set point input or downstream of valve. If the valve remains closed, the screws are not too tight. If it opens, back off screws until valve closes.
- Supply pressure to set point input. If the control module is leaking from the area around the diaphragm bonnet depressurize and re-torque bonnet screws.
- Supply full upstream pressure set point/servo pilot input. With the set point pressure equal to the inlet pressure the pressure drop across the valve (offset pressure) should not exceed 4 PSID at rated flow. High offset pressure drop may indicate improper bonnet bolt tightness, internal valve leakage or that positioner diaphragm adjustment is required. Before disassembling positioner attempt to reduce high offset pressure drop by rapidly depressurizing the servo pilot to atmospheric pressure and pressurizing to full inlet line pressure, repeat several times. This will allow the valve to go through the full range of travel and reduce internal friction. Consult factory if problem persist.



KEY	DESCRIPTION
1	BONNET
2	HOUSING
3	UPPER HOUSING
4	LOWER HOUSING
5	BODY
6	PLUG
7	BREATHER PLUG
8	SCREW (UPPER HOUSING)
9	CONNECTOR
10	TUBING (UPSTREAM)
11	ELL
12	SCREW (BONNET)
13	TUBING (BALANCING)
14	DIAPHRAGM RING
15	TEE
16	NIPPLE
17	TUBING (ACTUATING)
18	TUBING (DOWNSTREAM)
19	DIAPHRAGM PLUG
20	BALANCE DIAPHRAGM
21	SPACER
22	SEAT EXTENSION
23	NUT
24	PILOT DIAPHRAGM
25	PLATE
26	PILOT SEAT (SMALL)
27	PILOT SEAT (LARGE)
28	PILOT SEAT GASKET
29	PILOT PLUG
30	CONICAL SPRING
31	MOTOR VALVE DIAPHRAGM
32	DIPHGRAM PLATE
33	ASSIST SPRING
34	LOWER HOUSING GASKET
35	STEM SEAL SPACER
36	BACK UP
37	O-RING
38	CHANNEL SEAL
39	SEAL RETAINER
40	STEM
41	SEAT DISC
42	SEAT
43	RATIO PLUG
44	LOCK NUT

Items included in valve repair kit: 14, 20, 24, 26, 27, 28, 29, 30, 31, 34, 36, 37, 38, 42, 44

Items included in positioner repair kit: 14, 20, 24

Items included in pilot seat repair kit: 26, 27, 29

- CA-000877..... 2" Valve Repair Kit (KP/KE-1750)
- CA-000548..... 3" Valve Repair Kit (KP/KE-2600 & KP/KE-3500)
- CA-000549..... 4" Valve Repair Kit (KP/KE-5500 & KP/KE-6500)
- CA-000878..... 6" Valve Repair Kit (KP/KE-8500)
- KC-115..... 2"-6" Positioner Repair Kit (KP/KE-1750 to KP/KE-8500)
- CA-000665..... 2"-6" Pilot Seat Repair Kit (KP/KE-1750 to KP/KE-8500)