



MPC1 Variable Volume Repair Kit

Installation Instructions

MPC1 VARIABLE VOLUME REPAIR KIT, P/N 401828, INCLUDES:

QTY	PART NO	DESCRIPTION
2	103112	O-ring, 607A001-02
3	103113	O-ring, 607X001-04
3	103114	O-ring, 607X001-05
2	103115	O-ring, 607X001-06
1	103116	O-ring, 607X001-08
1	103117	O-ring, 607X001-07
1	103118	Back-up ring, 607A002-02
1	103119	Back-up ring, 607X002-05



Refer to drawing on overleaf for location of assembly parts listed in the following instructions.

DISASSEMBLY OF THE BALANCE VALVE:

- ➊ Remove the top cover of the unit by removing the four screws under the gray tabs.
- ➋ Remove the balance valve knob (27), this is secured with a set screw through the side of the knob.
- ➌ Remove the allen head screws that secure the balance valve to the body and remove the assembly.
- ➍ Using a 1/2 inch wrench, remove valve retaining nut (22) and the spool valve (21) from the body.
- ➎ Separate the spool valve (21) from the retaining nut (22) and replace the O-ring (14) on the spool valve.
- ➏ Remove the front packing nut (8) from the retaining nut (22) and replace the back-up ring (19), O-ring (14) and outer O-ring (13).
- ➐ Remove the rear packing nut (8) from the valve body (6) and replace the back-up ring (19) and the O-ring (14).

ASSEMBLY OF THE BALANCE VALVE:

- ➑ Install front packing nut (8) into retaining nut (22). **DO NOT TIGHTEN.**
- ➒ Insert spool valve (21) into retaining nut (22) through the O-ring, back-up ring and into the retaining nut.
- ➓ Tighten the packing nut (8) to compress the O-ring and back-up ring around the spool valve shaft.

- ➔ Install the retaining nut (22) and spool valve (21) into the body (6).
- ➕ Tighten the retaining nut (22) into the body (6).
- ➖ Replace O-rings (15) and install balance valve to the body (5).
- ➗ Install valve knob (27) and check operation of the valve.

DISASSEMBLY OF THE PRESSURE VOLUME:

- ➑ Remove the pressure line from the rear of the volume assembly.
- ➒ Remove the eight retaining bolts (11) and the end cap (7) from the body (5).
- ➓ Remove the adjustment knob (26) from the front of the controller, this is secured by a set screw on the side of the knob.
- ➔ Remove the retaining ring (20).
- ➕ Turn the shaft clockwise until the lead screw (3) is separated from the actuator (2).
- ➖ Insert long screwdriver into the body (5) and gently push the actuator (2) out of the rear opening.

ASSEMBLY OF THE PRESSURE VOLUME:

- ➑ Clean and inspect the lead screw (3).
- ➒ Remove and replace the back-up ring(18) and O-ring (13).
- ➓ Replace the O-ring (17) on the piston (23).
- ➔ Install the actuator assembly into the body (5) and through the actuator washer (4).
- ➕ Apply lubrication to the threads of the lead screw (3) and insert the screw assembly into the body (5).
- ➖ Turn the shaft counter clockwise until the lead screw (3) is threaded into the actuator assembly (2).
- ➗ Install the retaining ring (20) into the body to secure the shaft.
- ➘ Replace the end cap O-ring (16) and install the end cap (7) into the body (5).
- ➙ Install and tighten the eight retaining bolts (11) for the end cap.
- ➚ Install the adjustment knob (26) and rear pressure line.

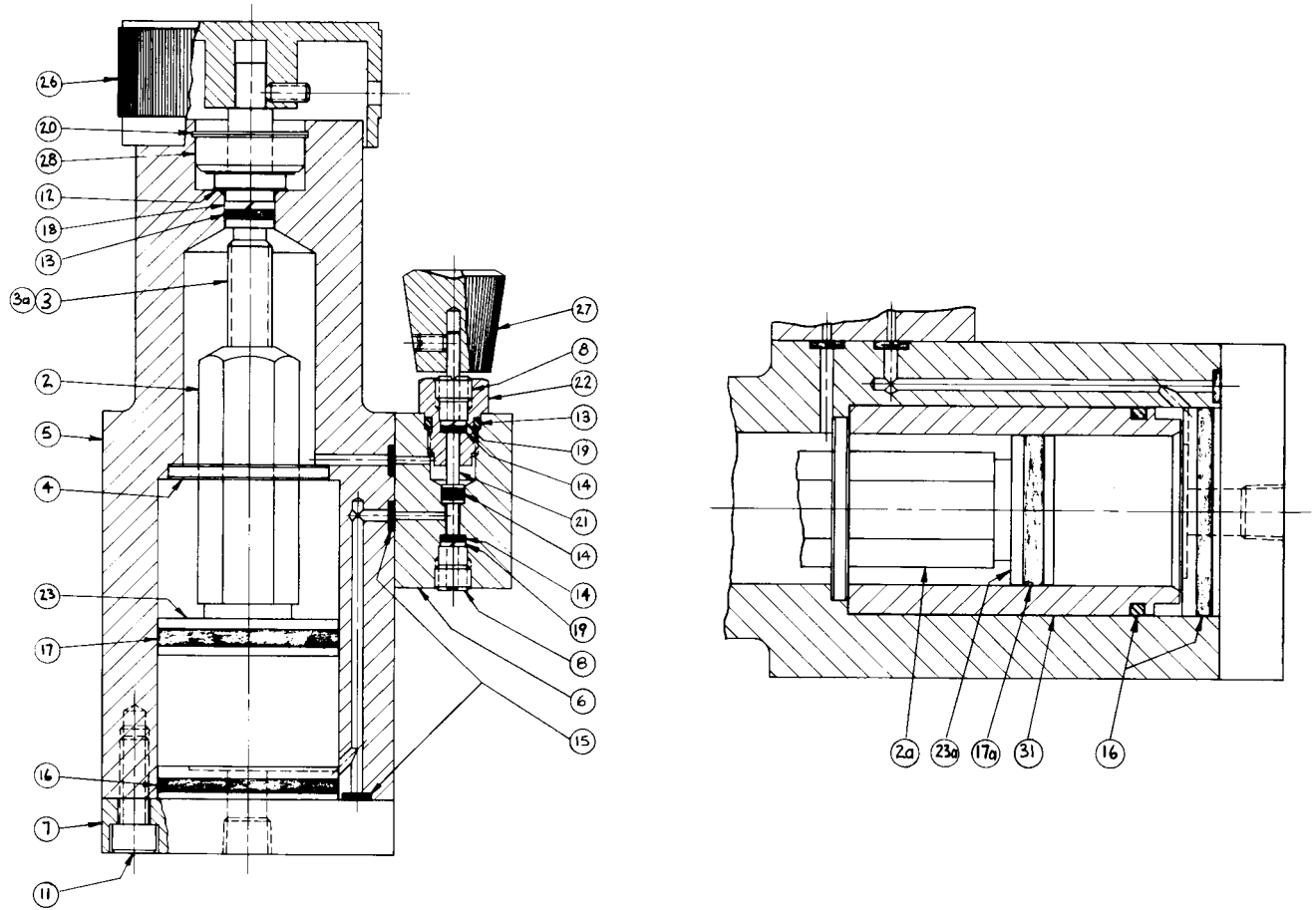


Figure 1 Schematic

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|----------------------------|----------------------------|--------------------------|
| 2. Actuator | 11. Retaining bolts, 8 ea. | 19. Back-up ring |
| 3. Lead screw | 13. O-ring, outer | 20. Retaining ring |
| 4. Actuator washer | 14. O-ring, 2 ea. | 21. Spool valve |
| 5. Body | 15. O-ring, 2 ea. | 22. Retaining nut, valve |
| 6. Body, valve | 16. O-ring, end cap | 23. Piston |
| 7. End cap | 17. O-ring, piston | 26. Adjustment knob |
| 8. Packing nut, front/rear | 18. Back-up ring | 27. Balance valve knob |

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