

Two-stage MASTER CYLINDER



Service Instructions

DISASSEMBLY

(Refer to Figure 1)

NOTE

Most repair kits include a check valve (7), spring (8), and seat (6), but not all power cylinders use them. Notice what type cylinder you have and replace these parts only if your cylinder uses them.

1. Drain fluid from unit before disassembling.
2. Remove upper tube nut on tubing assembly (28) from fitting (29).
3. Remove line bolt (1), gaskets (2 & 4) and fitting block (3). Tubing assembly (28) need not be removed from fitting block.

CAUTION

End plug (5) is under tension of spring (12).

4. Remove end plug (5). Remove spring (8), check valve (7), and seat (6) from end plug (5). **NOTE: Not all models use spring (8), check valve (7), or seat (6).**
5. Retainer assembly (10) should follow end plug (5) as it is removed. Remove o-ring (11) from housing (22).
6. Remove spring (12) from housing (22).
7. Remove piston assembly (21) from housing (22) by pushing on piston assembly with a wooden dowel from the small diameter end of housing.
8. Remove cups (18 & 20) from piston (19).
9. Depress piston (14) and remove retaining ring (13). Hold firmly, spring (17) will force piston (14) out of piston (19) bore. Remove cup (15) from piston.
10. Remove retainer (16) and spring (17).
11. Remove relief valve assembly (27) from housing (22). With a box end wrench remove end cap (26). Remove o-ring (25) from end cap. **NOTE: End cap is under tension of spring (24).**
12. Remove spring (24).
13. Remove filler cap (31) and gasket (30) from housing (22). **NOTE: Some models use a standpipe in filler plug (31) hole, remove this standpipe.**

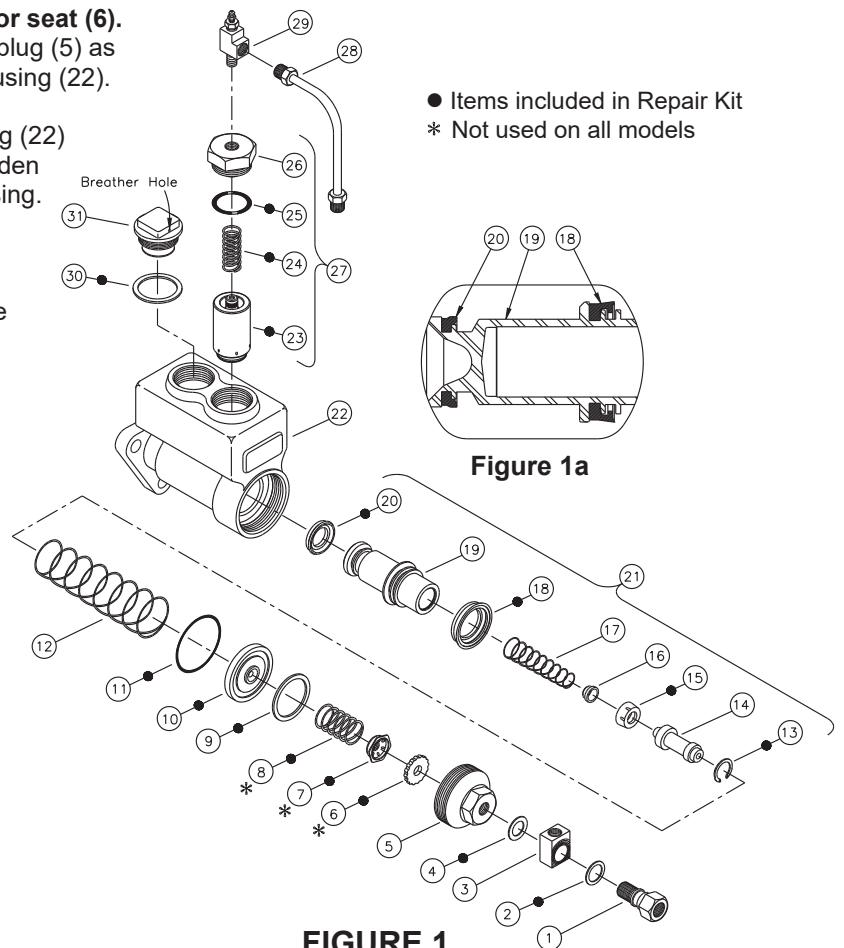
ASSEMBLY

(Refer to Figure 1)

LUBRICATE ALL RUBBER COMPONENTS FROM REPAIR KIT WITH CLEAN TYPE FLUID USED IN THE SYSTEM.

1. Clean cylinder bore and all parts thoroughly in clean system fluid.
2. Install retainer (16) on end of spring (17). Install spring, large end first, into piston (19).
3. Install new cup (15) on piston (14).
4. Insert piston (14) into piston (19) with cup (15) against retainer (16). Depress piston and install new retaining ring (13).
5. Install new cup (18) and new cup (20) on piston (19). Note direction of cups (18 & 20), see Figure 1a.
6. Install piston assembly (21) into housing (22). Note direction of piston assembly.

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7. Install spring (12) over piston assembly (21).
8. Install new o-ring (11) in housing (22) and new seal (9) on new retainer assembly (10). Install new retainer assembly into housing. Note direction of retainer assembly.
9. Assemble new seat (6), new check valve (7), and new spring (8) between retainer assembly (10) and end plug (5). **NOTE: Not all models use seat (6), check valve (7), or spring (8).**
10. Lubricate threads of end plug (5). Install end plug (5) into housing (22) and torque 67.80-108.48 N·m (50-80 lb·ft).
11. Insert piston and body assembly (23) into housing (22).
12. Install new spring (24) in piston and body assembly (23).
13. Install new o-ring (25) on end cap (26). Install end cap (26) into housing (22) and torque end cap (26) 88.1-101.7 N·m (65-75 lb·ft).
14. Assemble new gaskets (2 & 4), fitting block (3), and line bolt (1) into end plug (5). Finger tighten line bolt (1).
15. Install upper tube nut on tubing assembly (28) into fitting (29). Torque upper and lower tube nuts 12.2-20.3 N·m (9-15 lb·ft).
16. **NOTE: Before installing filler plug (31) be sure the filler plug breather hole is free of all contaminants. Use air pressure to clean and dry this hole.** Install new gasket (30) and filler plug (31) on housing (22). Finger tighten filler plug (31). **NOTE: If your model uses a standpipe, install standpipe and torque 33.9-47.5 N·m (25-35 lb·ft).**
17. Install unit on vehicle and connect fluid lines. Hold fitting block (3) in a fixed position and torque line bolt (1) 47.5-61.0 N·m (35-45 lb·ft). Connect push rod. Fill reservoir and bleed system of air. Tighten fittings if leaks occur. Make several applications to be sure brake valve is working properly. **NOTE: All fittings must be inspected for leaks and tightened if leaks occur.**
18. After bleeding is completed, fill reservoir to within 12.7 mm (0.50 in) of top. Torque filler plug (31) 33.9-47.5 N·m (25-35 lb·ft).

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