

Service Instructions

DISASSEMBLY

(Refer to Figures 1 and 2)

1. Remove the master cylinder from the vehicle by disconnecting the necessary fluid lines. Disconnect the push rod and remove the mounting bolts. Drain fluid from the master cylinder.
2. Remove push rod (15) and boot (14) from housing cap (11).
3. Loosen cap screws (13) evenly and remove. Separate housing cap (11) from housing (5).

⚠ CAUTION

Housing cap (11) is under tension from springs (7 & 8).

4. Remove piston assembly (9) and springs (7 & 8) from housing (5).
5. Carefully remove piston (10) and cup (12) from housing cap (11). **NOTE: Be careful not to scratch or mar housing cap (11) bore or piston (10).**
6. Remove o-ring (6).
7. Remove end plug (1) and spring (3) from housing (5). Remove o-ring (2) from end plug (1).
8. Remove piston assembly (4) from housing (5) by pushing on piston assembly (4) with a wooden dowel from the large diameter bore end of housing (5).

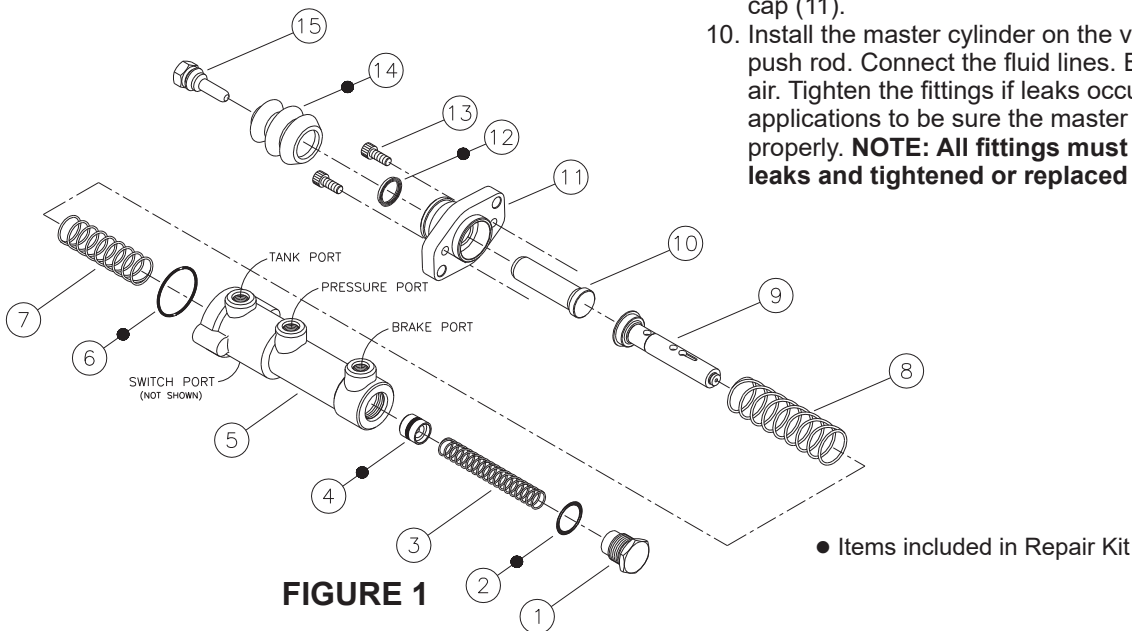


FIGURE 1

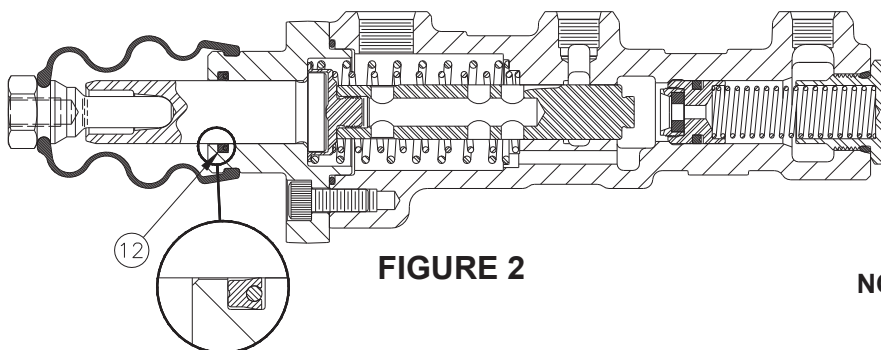


FIGURE 2

ASSEMBLY

(Refer to Figures 1 and 2)

LUBRICATE ALL RUBBER COMPONENTS FROM THE REPAIR KIT WITH CLEAN MINERAL BASE HYDRAULIC OIL

1. Clean all parts thoroughly and allow to dry before reassembling.
2. Thoroughly inspect housing (5) bore for damage or wear. If damage or wear is present, a new master cylinder may be required.
3. Carefully install new cup (12) and piston (10) in housing cap (11). Note direction of cup (12). **NOTE: Be careful not to damage housing cap (11) bore or piston (10).**
4. Install springs (7 & 8) and piston assembly (9) in housing (5).
5. Install new o-ring (6) in housing (5). Be sure o-ring (6) is properly seated in housing (5) bore.
6. Connect housing cap (11) to housing (5) using two cap screws (13). Tighten evenly and torque 33.9-40.7 N·m (25-30 lb·ft).
7. Install new piston assembly (4) and spring (3) in housing (5). Note direction of piston assembly (4).
8. Install new o-ring (2) on end plug (1). Install end plug (1) in housing (5) and torque 54.2-67.8 N·m (40-50 lb·ft).
9. Install push rod (15) and new boot (14) on housing cap (11).
10. Install the master cylinder on the vehicle. Connect the push rod. Connect the fluid lines. Bleed the system of air. Tighten the fittings if leaks occur. Make several applications to be sure the master cylinder is working properly. **NOTE: All fittings must be inspected for leaks and tightened or replaced if leaks occur.**

NOTE: Valve assembly for use with Mineral Base Hydraulic Oil or Caterpillar Bio Hydro (HEES) #137-1740.

