

MASTER CYLINDER



Service Instructions

TABLE 1

Model Number	Repair Kit Number	Model Number	Repair Kit Number
04-020-082 (HO)	02-001-285	04-020-112 (HO)	02-001-296
04-020-087 (BF)	02-001-268	04-020-118 (BF)	02-001-268
04-020-093 (BF)	02-001-268	04-020-124 (HO)	02-001-285
04-020-099 (BF)	02-001-283	407 120 002 0 (BF)	02-001-286

BF = DOT 3, 4, 5, and 5.1 brake fluid HO = mineral base hydraulic oil
NOTE: If your product number is not listed, contact ZF Off-Highway Solutions Minnesota Inc. for information.

DISASSEMBLY

1. Remove boot (2), sleeve (3) and push rod (1) from housing (10).
2. Remove boot (2) from push rod (1).
3. Remove sleeve (3) from boot (2).
4. Remove retaining ring (4) from housing (10).

⚠ CAUTION

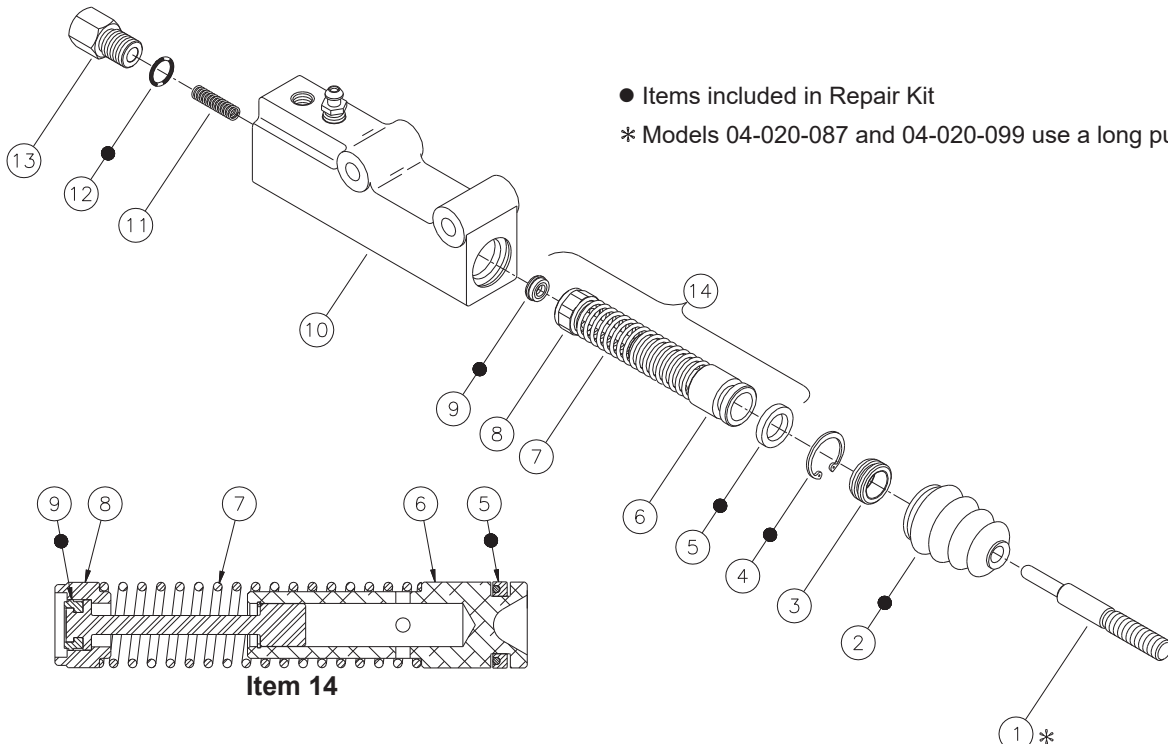
Retaining ring (4) is under tension of spring (11).

5. Remove internal assembly (14) from housing (10) bore.
6. Remove spring (11) from housing (10) bore.
7. Remove adapter (13) from housing (10). Remove o-ring (12) from adapter (13).
8. Remove cup (5) from internal assembly (14). Note direction of cup. **NOTE: Be careful not to scratch or mar piston (6).**
9. Carefully remove seat (9) by depressing and holding retainer (8) and spring (7). Note direction of seat.

ASSEMBLY

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

1. Thoroughly clean all components and housing bore. Lubricate with clean type fluid used in the system.
2. Install new seat (9) by depressing and holding retainer (8) and spring (7). Note direction of seat.
3. Install new cup (5) on internal assembly (14). Note the direction of cup. **NOTE: Be careful not to scratch or mar piston (6).**
4. Install internal assembly (14) into housing (10) bore. Note direction of internal assembly.
5. Install new o-ring (12) on adapter (13). Place spring (11) into adapter (13) and install adapter into housing (10). Torque 27.1-33.9 N·m (20-25 lb·ft).
6. Install new retaining ring (4) in housing (10) bore.
7. Insert sleeve (3) into new boot (2). Install lip of new boot (2) in housing (10). Work sleeve (3) into position inside of boot (2) and housing (10).
8. Install push rod (1) into new boot (2) and housing (10).
9. Install the master cylinder on the vehicle and connect the fluid lines. Bleed system of air. Tighten fittings if leaks occur. Make several applications to be sure the master cylinder is working properly. **NOTE: See form no. 81-600-001 instructions to bleed the master cylinder. Refer to vehicle manufacture specifications to bleed the vehicle brake system. All fittings must be inspected for leaks and tightened if leaks occur.**



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