

Brake Actuator (spring/hydraulic apply) for CNH Power Components



Installation and Service Instructions

| Model Number | Repair Kit Number | Model Number | Repair Kit Number |
|--------------|-------------------|--------------|-------------------|
| 03-460-220 | 02-400-201 | 03-460-258 | 02-400-200 |
| 03-460-222 | 02-400-201 | 03-460-260 | 02-400-200 |
| 03-460-256 | 02-400-200 | | |

NOTE: If your product number is not listed, contact ZF Off-Highway Solutions Minnesota Inc. for information.

INSTALLATION

(Refer to Figures 1 and 2)

1. Remove end plug (23), gasket (22), spring (21), lock nut (20), and retainer (19) from brake actuator.
2. Carefully slide brake actuator over axle push rod and into access port of axle. Orientate actuator so hydraulic connections are aligned and bleeders are at the upper most position. **NOTE: Extreme care must be taken so as not to damage axle push rod threads and o-ring (1).**
3. Secure brake actuator to axle with bracket. Connect all necessary fluid lines to actuator and bleed system.
4. Install retainer (19) on end of axle push rod and tighten snugly. **NOTE: Apply a high pressure lubricating compound to mating surfaces of stop (16) and retainer (19).**
5. Introduce hydraulic pressure 20.7-82.7 bar (300-1200 PSI) through spring brake inlet port located in end plug (18). This will expose approximately 12.7 mm (0.50 in) more of axle push rod.
6. Bleed hydraulic release line through bleeder screw (10).
7. Retighten retainer (19). Torque 2.83-5.65 N·m (25-50 lb·in) then back off retainer two turns.
8. Install lock nut (20) on axle push rod and tighten until it contacts retainer.
9. Install spring (21), gasket (22), and end plug (23). Torque end plug (23) 24.4-27.1 N·m (18-20 lb·ft).
10. Release brake. Reapply spring release and bleed hydraulic apply section until all air is removed.

REMOVAL

(Refer to Figures 1 and 2)

1. Introduce hydraulic pressure 20.7-82.7 bar (300-1200 PSI) through spring brake inlet port located in end plug (18).
2. Remove end plug (23), gasket (22), and spring (21) from brake actuator.
3. Remove lock nut (20) and retainer (19) from axle push rod.
4. Release hydraulic pressure and remove all fluid lines from brake actuator.
5. Remove bracket and carefully slide brake actuator off of axle push rod. **NOTE: Extreme care must be taken so as not to damage axle push rod threads.**
6. Proceed to DISASSEMBLY on the back page.

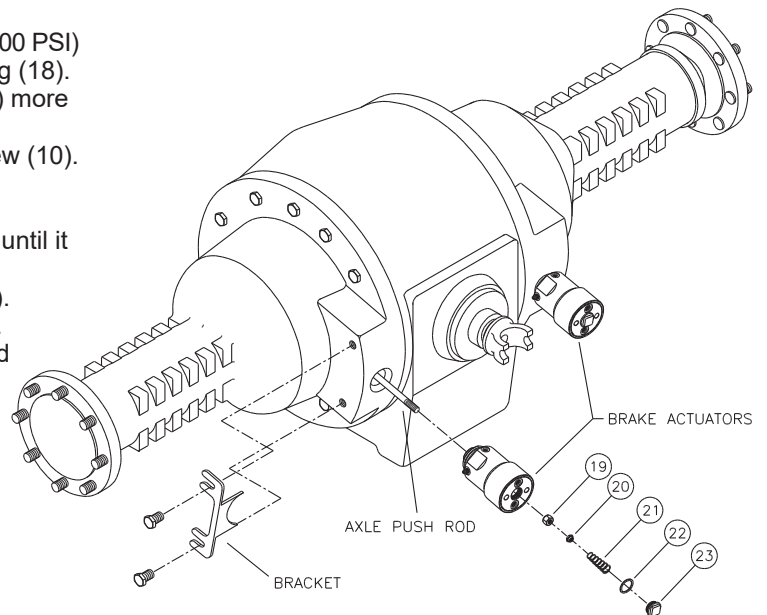


FIGURE 1

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DISASSEMBLY

(Refer to Figure 2)

1. Remove o-ring (1) from housing (2). **NOTE: Not all models use o-ring (1).**
2. Using a spanner wrench, remove end plug (18) from housing (2). Remove o-ring (17) from end plug (18).
3. Remove bleeder plug (10) from end plug (18). Remove o-ring (9) from bleeder plug (10).
4. Remove stop (16) from housing (2).
5. Remove piston (11) from housing (2). Remove o-ring (15), cup (13), and back-up rings (12 & 14) from piston (11). **NOTE: Be careful not to scratch or mar piston (11).**
6. Remove spring (8) from housing (2).
7. Remove piston (7) through end plug (18) end of housing (2).
8. Remove o-rings (4 & 5) and back-up rings (3 & 6) from housing (2). **NOTE: Be careful not to scratch or mar bore of housing (2).**

ASSEMBLY

(Refer to Figure 2)

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

1. Install new o-rings (4 & 5) and new back-up rings (3 & 6) into bore of housing (2). Note the order of o-rings and back-up rings. **NOTE: Be careful not to scratch or mar bore of housing (2).**
2. Carefully install piston (7) into housing (2). Note direction of piston (7).
3. Install spring (8) into housing (2).
4. Install new o-ring (15), new cup (13), and new back-up rings (12 & 14) on piston (11). Note the order of o-ring, cup, and back-up rings. **NOTE: Be careful not to scratch or mar piston (11).**
5. Install piston (11) into housing (2). Note direction of piston (11). **NOTE: Be careful not to scratch or mar bore of housing (2).**
6. Install stop (16) into housing (2). Note the direction of stop (16). **NOTE: Apply a high pressure lubricating compound to mating surfaces of stop (16) and piston (11).**
7. Install new o-ring (9) on bleeder plug (10) and install in end plug (18).
8. Install new o-ring (17) on end plug (18). Lubricate the threads of end plug (18) with clean type fluid used in system. Thread end plug into housing and torque 325.4-339.0 N·m (240-250 lb-ft).
9. Install new o-ring (1) on housing (2). **NOTE: Not all models use o-ring (1).**
10. Proceed to Step 2 of INSTALLATION on front page.

