



LIPPERT
COMPONENTS®

Formerly  Atwood Mobile Products

LITERATURE NUMBER **MPD 85233**

DISC BRAKE ACTUATORS

USED FOR DISC BRAKE APPLICATIONS

ENGLISH

•Installation •Operation •Maintenance


Effective 12/04/07

REFER TO MPD 85778 FOR COMPLETE HYDRAULIC SURGE BRAKE INSTALLTION, OPERATION AND MAINTENANCE INSTRUCTIONS.

SAFETY ALERT SYMBOLS

Safety Symbols alerting you to potential personal safety hazards. Obey all safety messages following these symbols.

 **WARNING**
avoid possible
injury or death

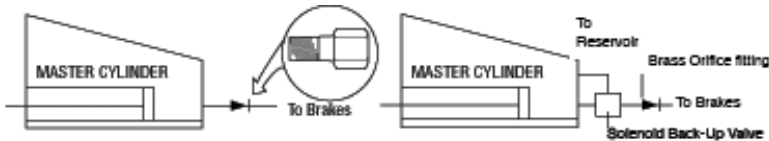
 **CAUTION**
avoid possible
injury and/or property damage

**FOR YOUR SAFETY READ ALL INSTRUCTIONS
BEFORE INSTALLATION AND OPERATION**

Installer: Provide these instructions to the consumer.

Consumer: Keep documents for future reference.

SCHEMATIC REPRESENTATION OF HYDRAULIC CIRCUIT



INSTALLATION - DISC BRAKE ACTUATOR SOLENOID BACK-UP VALVE

WARNING **DEATH OR PERSONAL INJURY**

- This system requires the solenoid wire leads be connected ONLY into the tow vehicle back-up light circuit.

8,000 LB. ACTUATORS are equipped with a solenoid back-up valve.

1. Connect the solenoid valve wire leads to the tow vehicle back-up light circuit.
2. Connect trailer brake line to actuator.
3. Bleed brake system.

6,000 LB. ACTUATORS are not equipped with a solenoid back-up valve.

To install Atwood solenoid back-up valve -

1. Remove the plug in return port of master cylinder (this is the upper port in the master cylinder).
2. Install straight barbed fitting (torque to 16-20 in/lb).
3. Install assembly in supply port of master cylinder (this is the lower port in the master cylinder).
4. Connect the solenoid wire leads only into the reverse back-up light circuit.
5. Connect trailer brake line to actuator.
6. Bleed brake system.

CAUTION **BRAKE FAILURE**

- DO NOT use brake fluid drained from brake system in refilling master cylinder. Brake fluid can be contaminated from the system.

INSTALLATION - BRASS ORIFICE FITTING

CAUTION **DAMAGE TO BRAKE ACTUATOR OR VEHICLE**

- If brass orifice fitting is not installed, trailer-braking action may cause vehicle(s) to shake during brake applications.

The brass orifice fitting installed in the master cylinder of the brake actuator assembly must remain in the hydraulic circuit to the brakes of the trailer.

If the brass orifice fitting must be moved to accommodate plumbing for a back up solenoid valve, it must be replaced in the hydraulic circuit in line to brakes.

WARNING **DEATH OR PERSONAL INJURY**

- Contaminated brake fluid in system could plug brass orifice fitting. This could render brakes inoperative.

Be especially careful to clean all fittings, tubing and threads between master cylinder and brass orifice fitting. A very small particle of dirt or thread sealant can plug the hole in the orifice.

- Do not use Teflon™ tape on fittings.
- If a liquid or paste thread sealant is used, keep it back two threads from end of male fitting.
- Do not apply sealant to female threads. Clean female threads thoroughly.

BLEED BRAKE SYSTEM

1. Remove master cylinder filler cap and fill reservoir with DOT type 3 or 4 automotive brake fluid.
2. Check all hydraulic line fittings & connections to make sure they are leak free.
3. At brake assembly, connect a bleeder hose to bleeder fitting on wheel cylinder and submerge free end in a container with brake fluid. DO NOT reuse brake fluid.

NOTE: Use power bleeder or bar with 2" diameter hitch ball attached. Do not use breakaway cable for purpose of bleeding brake system. If a power bleeder is used air pressure 35 PSI is most effective.

NOTE: On tandem axle trailers, bleed brakes on rear most axle furthest from the actuator first.

4. Loosen bleeder fitting at top of brake assembly.
5. Apply actuator and tighten bleeder fitting. Return actuator to forward position. Again, loosen bleeder valve and apply actuator. Repeat this procedure until fluid expelled from bleeder hose is free of air bubbles. It is helpful to lower the trailer tongue to promote air bubble movement in the brake tubing. It is also helpful to tap gently along the brake tubing during brake bleeding to keep air bubbles from sticking to the inside of the brake tubing. During this procedure, master cylinder reservoir fluid level must be maintained at no less than 1/2 full and no more than 1/2" from top of reservoir.
6. When no air bubbles are visible, close bleeder valve securely and remove bleeder hose.
7. Repeat STEP 1-6 for remaining brake, then brakes on forward axle.
8. If installation is tandem axle with brakes on both axle, repeat bleeding procedure on rear axle brakes for second time to assure positive purging of all air in system.
9. After bleeding has been completed, re-check fluid level in master cylinder.