SAFETY ALERT SYMBOLS

Warning 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 OPERATING BRAKE SYSTEM

Installer: Provide this instruction to consumer.
Consumer: Keep documents for future reference.

INDEX

INSTALLATION

⚠️ WARNING BRAKE FAILURE

- Brake actuator MUST be installed with frame stops in contact with trailer tongue.

STRAIGHT TONGUE - BOLT ON APPLICATION (FIG 1)

8000 LB. BRAKE ACTUATORS SAE CLASS 4 - DISC AND DRUM APPLICATIONS
8000 LB. GVWR. MAX. TONGUE LOAD 1000 LB. - DO NOT EXCEED THESE RATINGS
PART NO. 83005, 83010 - DRUM APPLICATION / PART NO. 83660 - DISC APPLICATION
1. Determine proper location of brake actuator on trailer tongue. Set actuator on trailer tongue, push down and back until frame stops (FIG 1-A), making contact with tongue.
2. Drill 17/32” holes in trailer tongue where bolt holes are positioned.
3. Reinforcement of trailer tongue spacer must be 1/2” ID pipe or equiv. (FIG 3-A).
4. Attach brake actuator to trailer tongue with 1/2” diameter bolts (3) S.A.E. grade 5 lockwasher (3) and nuts (3) (FIG 1-B). Torque nuts to 110-120 ft-lbs.

6000 LB. BRAKE ACTUATORS SAE CLASS 4 - DISC AND DRUM APPLICATIONS
6000 LB. GVWR. MAX. TONGUE LOAD 900 LB. - DO NOT EXCEED THESE RATINGS
PART NO. 82543, 83153, 83154, 84132, 88730, 88740
1. Determine proper location of brake actuator on trailer tongue. Set actuator on trailer tongue, push down and back until the frame stops (FIG 1-A), making contact with tongue.
2. Drill 17/32” holes in trailer tongue where bolt holes are positioned.
3. Reinforcement of trailer tongue spacer must be 1/2” ID pipe or equiv. (FIG 3-A).
4. Attach brake actuator to trailer tongue with 1/2” diameter bolts (2) S.A.E. grade 5 or greater lockwasher (4) and nuts (4) (FIG 1-B). Torque nuts to 70-80 ft-lbs.

WARNING BRAKE FAILURE

- Trailer tongue must have adequate strength to support attachment of brake actuator without mounting nuts losing torque during life of trailer.
- Trailer tongue must be properly reinforced to prevent any potential loosening of brake actuator during service.

STRAIGHT TONGUE - WELD ON APPLICATION (FIG 2)

WELDING INSTRUCTIONS

- M.I.G. OR STICK - 5/32” fillet weld minimum.
- M.I.G. WELDING - Use A.W.S. ER 70S-3 or 6 wire or equivalent with a diameter of .035 - .045. The recommended shielding gas mixture is 75% - 95% Argon & 25% - 5% CO2.
- STICK WELDING - Use E6011 A.W.S. welding rod or equivalent. Recommended machine settings for specific electrode diameter are as follows: 1/8” electrode set power between 115-130 Amps DC or 5/32” electrode set power between 140-160 Amps DC.

8000 LB. BRAKE ACTUATORS SAE CLASS 4
8000 LB. GVWR. MAX. TONGUE LOAD 1000 LB. - DO NOT EXCEED THESE RATINGS
PART NO. 83005 - DRUM APPLICATION / PART NO. 83660 - DISC APPLICATION
1. Determine proper location of brake actuator on trailer tongue. Set actuator on trailer tongue, push down and back until frame stops (FIG 2-A), making contact with tongue.
2. Using WELDING INSTRUCTIONS weld actuator to trailer with a minimum of 9” weld per side. Make a 5/32” fillet weld (FIG 2-B).
3. Make sure to return weld on front end of frame of trailer up inside actuator frame to forward frame stop (FIG 2-C).

FOR YOUR SAFETY

PERSONAL INJURY & PRODUCT DAMAGE

- Observe maximum trailer weight for Atwood brake actuator Gross Vehicle Weight Rating (GVWR) and tongue load.
- Do not exceed these capacities. Gross Vehicle Weight Rating is total weight of trailer fully loaded included personal belongings. Know your trailer GVWR.

⚠️ WARNING
PRODUCT DAMAGE / BRAKE FAILURE

- Use only a 2” machined or forged ball with Atwood brake actuator. Ball capacity must be equal to or greater than trailer GVWR. DO NOT use a worn hitch ball-it is unsafe and must be replaced.
- DO NOT submerge actuator in water. Water may enter and corrode master cylinder, contaminating Brake System, causing brake failure.
NOTE: Carefully perform procedure in order given.

PAINTING THE BRAKE ACTUATOR

1. Determine proper location of brake actuator on trailer tongue. Set actuator on trailer tongue, push down and back until frame stops (fig 2-A), making contact with tongue.

2. Using WELDING INSTRUCTIONS weld actuator to trailer with a minimum of 7" weld per side. Make a 5/32" fillet weld (see fig 2-B).

3. Make sure to return weld on front end of frame of trailer up inside actuator frame to forward frame stop.

MANDATORY FUNCTIONAL CHECK AFTER PAINTING

1. Check function of ball socket and latching mechanism by inserting, locking and removing a 2" diameter hitch ball. Once hitch ball is fully inserted in socket, release handle must close completely and freely when released.

2. If ball socket and latching mechanism does not close completely and freely as described above.

a. Check for paint build-up in ball socket and clean if necessary.

b. Lubricate ball socket and latching mechanism with SAE 30 oil and work mechanism by inserting, locking and removing a 2" diameter hitch ball until latching mechanism does work freely.

3. Move back-up lever to indicated back-up position and lock. Operate brake actuator back-up lever, return to towing position freely using only return spring force. Clean off excess paint and lubricate as necessary to ensure lever assembly operates freely.

WELDING INSTRUCTIONS

WELD ACTUATOR TO TRAILER TONGUE BY WELDING ALONG FOUNDATION BRAKES (FIG 5-8)

TRAILER COULD DISCONNECT

- DO NOT use actuator if latching mechanism does not operate freely. Contact Atwood Service Department at 866-869-3118.

FOUNDATION BRAKES

<table>
<thead>
<tr>
<th>SIZE</th>
<th>RATED AXLE CAPACITY LBS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>7&quot;x1-3/4&quot;</td>
<td>1800 lbs. (2500 lb. axle capacity when used with an integral cast hub and drum)</td>
</tr>
<tr>
<td>10&quot;x2-1/4&quot;</td>
<td>3500 lbs.</td>
</tr>
<tr>
<td>12&quot;x2-1/4&quot;</td>
<td>6000 lbs.</td>
</tr>
</tbody>
</table>

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.

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. When a solenoid back-up valve is desired please contact Atwood for the solenoid back-up valve kit. Atwood Mobile Products 866-869-3118.

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.

FOR DISC BRAKE SYSTEMS

**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 master cylinder (forg 10A) of brake actuator assembly must remain in hydraulic circuit to brakes (fig 10C) of trailer.

If brass orifice fitting must be moved to accommodate plumbing (forg 10E) for a back up solenoid valve(fig 10D), it must be replaced in 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.
- 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**

**CAUTION**

**BRAKE FAILURE**
- Do not use brake fluid drained from brake system in refilling master cylinder.
- Brake fluid can be contaminated from the 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 (fig 9). Do not use breakaway cable for purpose of bleeding brake system. If a power bleeder is used air pressure 35 PSI is most effective.
- 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 hole in 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.

**OPERATION - TOWING**

**CAUTION**

**TRAILER MAY DISCONNECT**
- Release handle (fig 12A) must be fully closed before towing.
- Do not force release handle into closed position.

1. Position actuator ball socket above 2” ball.
2. Do not damage actuator when backing up towing vehicle for hook-up.
3. Hold release handle in open position (fig 11A). Release handle must be held in fully open position to remove from or place on ball.
4. Close release handle (fig 12A). Release handle will close freely with finger pressure when ball is properly inserted into ball socket.
5. To make sure actuator is securely latched onto ball, extend trailer tongue jack to ground and lift car and trailer combination 2” to 4”. If ball does not disengage, actuator is securely attached.
6. Insert padlock or bolt through lock hole for theft protection.
7. Connect breakaway cable solidly to bumper or frame of tow vehicle as near to center as possible. Cable must hang clear of trailer tongue and long enough to permit short radius turns without pulling breakaway cable forward.
8. Make sure breakaway cable (fig 13C) is in released position with indicator bead (fig 13B) touching or resting against cable spring stop (fig 13A).

**CAUTION**

**PRODUCT DAMAGE**
- Do not use breakaway cable as a parking brake.

**NOTE:** Check location of breakaway cable periodically during each trip, indicator should rest against spring stop. Accidental application will cause brakes to drag and heat up, causing failure.

9. Cross safety chains under tongue & securely attach to bumper or frame of tow vehicle.

**CAUTION**

**TRAILER DAMAGE**
- Safety chains must be used.

10. Retract jack fully. Remove and store castor, if applicable.
11. Check for proper car-trailer hook-up: tow vehicle and trailer should be level with positive tongue load. For further information, consult a dealer or Atwood Service Department.
12. Back-up lever knob must be positioned in TOWING POSITION (fig 15-A).
13. If actuator is used with equalizing hitch, be sure hanger chains (fig 14D) hang between straight down and forward up to 34° (fig 14C). Do not use less than 6-1/2” hanger chain length (fig 14x). For optimum brake performance, hang chains forward 34° (fig 14).
14. Do not use Atwood brake actuator with a sway controller, unless prior Atwood Engineering approval of sway control system has been received.
15. You are now ready to tow your vehicle.

**BACKING UP**

1. Follow step 1 through 15 for TOWING.
2. If equipped with solenoid valves skip to STEP 5.
3. Before backing up a slope or through soft ground, pull trailer forward slightly to assure actuator socket is in fully forward position.
4. Move lever knob on side of actuator downward from TOWING POSITION (fig 15A) along curved slot in actuator frame to BACK-UP POSITION (fig 15B). Slot has a notch at bottom of its travel. Push lever knob down to engage locking notch.
5. Back trailer up.

**CAUTION**

**PRODUCT & TRAILER DAMAGE**
- Avoid sharp turns. This could bend, create extreme stress or fracture either actuator or trailer tongue.

**NOTE:** Do not damage actuator when backing up towing vehicle for hook-up.

6. If trailer is to be uncoupled from tow vehicle after backing with lever knob engaged, block all trailer wheels and pull forward slightly to take strain off actuator. Uncouple actuator by lifting release handle and raising trailer tongue. Make sure lever knob is in TOWING POSITION (fig 15A) when uncoupling from trailer.
CAUTION PRODUCT & TRAILER DAMAGE

- Before towing trailer, lever knob must be disengaged and in TOWING POSITION.

MAINTENANCE

1. Keep all links and pivots lubricated to prevent rusting and ensure ease of operation. Use SAE 30 oil, lubricate inside release handle and inside actuator body reached from underside of actuator.

NOTE: Lubricate hitch ball with conventional automotive grease or a lubricant made for hitch balls.

2. Check for leaks in brake system. Periodic checks should be made on all hoses and fittings to guard against cuts and worn hoses which may cause failure (leaks, rupturing under pressure, and collapsing). Replace defective hoses.

3. Check brake fluid level in master cylinder reservoir. Keep filled to within 1/2˝ from top of reservoir. Use only DOT Type 3 or 4 brake fluid. Check electrical connections on reverse solenoid if system has one. Electrical connections should be sound and free of corrosion. Check reverse solenoid function.

CAUTION BRAKE FAILURE

- DO NOT fill master cylinder reservoir with used brake fluid.
- DO NOT fill reservoir beyond 1/2˝ from top.
- DO NOT overfill, brake fluid will damage paint.
- DO NOT use silicone type brake fluid.
- Yearly inspect brakes for excessive wear, replace lining if necessary.

4. Flush system yearly or when system is known to be contaminated. For Disc Brake Systems remove orifice fitting (FIG 10) before flushing. Check fitting orifice to make sure it is clear. The orifice is .015˝ DIA it may be replaced if it is plugged with Atwood P/N # MPD 80777. The orifice fitting must be replaced after flushing the system.

NOTE: Wheel bearing and seals should be inspected and packed at this time.

ADJUSTING 7˝, 10˝ & 12˝ DRUM BRAKES

Trailer brakes should be adjusted after the first 1,000 miles of use and at least every 2,000 miles of use thereafter. In addition, trailer brakes should also be inspected for excessive wear, replace lining if necessary and adjusted at the beginning of each season or yearly. Wheel bearings and seals should be inspected and packed at this time.

Raise one trailer wheel at a time, chock opposite wheel to prevent trailer from rolling. Remove dust clip from adjusting slot at lower part of back side of brake assembly and insert brake adjusting tool. Adjust brake shoes out until wheels will not turn by moving end of adjusting tool toward top of brake. When this condition is felt, by rotating wheel, back-off (loosening) adjustment until wheel will just turn freely.

Atwood Hardware Systems & Components Limited Warranty

Atwood Mobile Products warrants to the original owner this product will be free of defects in material and workmanship for a period of two years from the date of purchase. Atwood’s liability hereunder is limited to the replacement of product, repair of product or replacement of product with a reconditioned product, at the discretion of the manufacturer. The warranty is void if the product has been damaged by accident, unreasonable use, neglect, tampering or other causes not arising from defects in material workmanship. The warranty extends to the original consumer purchaser of the product only, and is subject to the following conditions:

1. For two (2) year commencing with the date of purchase, Atwood will replace or repair any Hardware System & Components that are found to be defective by Atwood in material or workmanship.

2. In the event of a warranty claim, the Original Purchaser must contact the Atwood Consumer Service Department, 1120 North Main St., Elkhart, IN 46514, Telephone: 866-869-3118 Fax: 574-206-9655. Warranty claim service must be performed as approved by the Atwood Consumer Service Department. Warranty replacement hardware systems and components or parts will be furnished freight prepaid. Labor cost to repair or replace will be limited to the amount of the original purchase price of the systems and components. The replaced warranty products or parts become the property of Atwood Mobile Products and must be returned to the Atwood Consumer Service Department freight prepaid, unless prior arrangements have been made.

3. This limited warranty is valid only when the product is applied, installed, maintained and operated in accordance with this Atwood Installation, Maintenance and Operating Manual (MPD 87984). Any deviation from these recommended specifications must be approved in writing by Atwood.

4. Any implied warranties are limited to the duration of this limited warranty as stated above. Atwood does not assume responsibility for consequential damage or loss, including loss of use of vehicle, loss of time, inconvenience, expense for gasoline, telephone, travel, lodging, loss or damage to personal properties, or loss of revenues. Some states do not allow limitations on how long an implied warranty lasts or limitations on consequential damages, so the above limitations may not apply to you. This limited warranty gives you specific legal rights which may vary from state to state.
TROUBLE SHOOTING GUIDE

Guides are only intended for use on Atwood® products by service technicians who have successfully completed Atwood® training. This guide should be used in conjunction with appropriate Instruction Manual provided with the product and any applicable Industry Standards. This is not intended to be a complete list. Please direct questions concerning service of Atwood® products to 866-869-3118 before proceeding.

WARNING PERSONAL INJURY AND/OR PRODUCT DAMAGE

* If any of the following conditions develop, trailer must not be used until proper corrective action is taken.

**SQUEAKING, CLATTER OR CHUCKING**

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>LACK OF HITCH BALL LUBRICATION</td>
<td>Lubricate with conventional automotive grease or commercial lubricant made for hitch balls</td>
</tr>
<tr>
<td>BINDING LINKAGE &amp; PIVOTS ON</td>
<td>Oil linkage &amp; pivots on brake actuator</td>
</tr>
<tr>
<td>BRAKE ACTUATOR</td>
<td>Inspect &amp; tighten</td>
</tr>
<tr>
<td>LOOSE HITCH BALL</td>
<td>Inspect &amp; tighten</td>
</tr>
<tr>
<td>LOOSE HITCH</td>
<td>Inspect &amp; tighten</td>
</tr>
<tr>
<td>ACTUATOR LOOSE ON TRAILER FRAME</td>
<td>Inspect brake actuator &amp; tighten</td>
</tr>
<tr>
<td>HITCH BALL WORN OR TOO SMALL</td>
<td>Replace</td>
</tr>
<tr>
<td>OVERHEATED BRAKES</td>
<td>Replace wheel bearing</td>
</tr>
<tr>
<td>BROKEN BRAKE DRUM(S)</td>
<td>Replace brake drum(s) &amp; check brake shoes</td>
</tr>
<tr>
<td>LOW BRAKE FLUID LEVEL</td>
<td>Fill &amp; bleed brakes, per IOM instructions</td>
</tr>
<tr>
<td>WORN OUT SHOCK ABSORBER</td>
<td>Replace</td>
</tr>
<tr>
<td>PARTIAL APPLICATION OF BREAKAWAY CABLE</td>
<td>Fully release breakaway cable</td>
</tr>
<tr>
<td>BRAKES IMPROPERLY ADJUSTED</td>
<td>Check brakes for adjustments per IOM instructions</td>
</tr>
<tr>
<td>BROKEN BRAKE RETURN SPRING</td>
<td>Replace return spring</td>
</tr>
<tr>
<td>SEIZED ACTUATOR MASTER CYLINDER</td>
<td>Replace/rebuild actuator master cylinder</td>
</tr>
<tr>
<td>WORK OUT BRAKE SHOES</td>
<td>Replace brake shoes and check brake drums</td>
</tr>
<tr>
<td>LEAKY WHEEL CYLINDER</td>
<td>Replace/rebuild wheel cylinders and replace brake shoes. Clean drums and other hardware</td>
</tr>
</tbody>
</table>

RELEASE HANDLE DOES NOT CLOSE EASILY

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>OVERSIZED BALL</td>
<td>Check ball size</td>
</tr>
<tr>
<td>BALL NOT FULLY INSERTED INTO SOCKET</td>
<td>Check for proper ball size. Check to see if tongue jack is fully retracted. Hold release handle open when inserting ball.</td>
</tr>
<tr>
<td>FOREIGN MATERIAL IN ACTUATOR SOCKET</td>
<td>Clean and lubricate</td>
</tr>
</tbody>
</table>

**BRAKE OVERHEATING, SIDE PULL, BRAKES DO NOT OPERATE, POOR BRAKE PERFORMANCE**

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONLY ONE BRAKE IS APPLYING</td>
<td>Check brake adjustment per IOM instructions.</td>
</tr>
<tr>
<td>LEAKING WHEEL CYLINDER</td>
<td>Check and replace wheel cylinder and bleed brakes per IOM instructions.</td>
</tr>
<tr>
<td>SEIZED WHEEL CYLINDER PISTON</td>
<td>Check and rebuild replace wheel cylinder and bleed system per IOM instructions.</td>
</tr>
<tr>
<td>FOREIGN MATERIAL IN BRAKE UNIT</td>
<td>Clean thoroughly</td>
</tr>
<tr>
<td>LOW HYDRAULIC FLUID LEVEL</td>
<td>Fill and bleed brakes, per IOM instructions</td>
</tr>
<tr>
<td>A BENT SHOULDER BOLT</td>
<td>Replace</td>
</tr>
<tr>
<td>A BEND PUSH ROD IN THE SHOCK ABSORBER</td>
<td>Replace shock absorber</td>
</tr>
<tr>
<td>A DAMAGED SOCKET ASSEMBLY</td>
<td>Replace actuator</td>
</tr>
<tr>
<td>BROKEN/PINCHED BRAKE LINES</td>
<td>Replace</td>
</tr>
<tr>
<td>BRAKE ACTUATOR FRAME DAMAGED</td>
<td>Replace actuator</td>
</tr>
<tr>
<td>WORN BRAKE SHOE(S)</td>
<td>Replace brake shoe(s)</td>
</tr>
</tbody>
</table>

**TOWING VEHICLE SHAKING BACK AND FORTH**

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>WORK VEHICLE SUSPENSION</td>
<td>Replace shock absorber</td>
</tr>
<tr>
<td>HITCH NOT SECURE</td>
<td>Tighten all bolts and nuts</td>
</tr>
<tr>
<td>UNDER-SIZED HITCH BALL</td>
<td>Ball should be 2” machined/forged type</td>
</tr>
</tbody>
</table>

EXTENDED STORAGE INSTRUCTIONS

Preventative maintenance is recommended for extended periods of storage.
1. Check brake system for proper fluid level in master cylinder, bleed all lines.
2. Lubricate all links and pivots to prevent any rusting.
3. Remove wheel and drum assemblies and spray a good anti-corrosion compound (CRC formula 5-56) under rubber boot on forward end of brake wheel cylinder. Avoid spraying drum and brake lining.
4. Grease all bearings and reinstall wheel and drum assemblies.
5. Make sure breakaway cable is fully released.
6. After extended storage refer to MAINTENANCE Steps 1 through 5, to insure trailer readiness for towing.
7. Adjust drum brakes

**PROPER TOWING CHECKLIST**

✔ Inspect brake fittings for leaks.
✔ Adjust brakes every 2000 miles.
✔ Lubricate all mechanical moving parts.
✔ Inspect the breakaway cable for any kinks.
✔ Verify a one-piece 2” ball is used, without chips, dirt or hairline cracks.
✔ Securely attach safety chains to trailer and tow vehicle.
✔ For proper braking, trailer should set level when attached to tow vehicle to produce a positive tongue load.
✔ DOT 3 or DOT 4 brake fluid should be used in master cylinder and fill it from 1/2 full to 1/2” from top of cylinder reservoir.
ATWOOD UNI-SERVO BRAKES

7" BRAKES

NEW STYLE Wheel Cylinder Kit (one axle only)

1 (1) WHEEL CYLINDER, R.H.
1A (1) WHEEL CYLINDER, L.H.
15 (4) 5/16" - 18 x 3/4" CAP SCREW
14 (2) 5/16" - 18 FLAT HEAD SCREW

Shoe & Lining Kit (one axle)

5 (2) PRIMARY SHOES WITH LINING
6 (2) SECONDARY SHOES WITH LINING

Spring Kit (one axle)

8 (2) ADJUSTING SCREW SPRINGS
9 (2) SECONDARY RETRACTOR SPRINGS
7 (1) TORSION SPRING R.H.
7A (1) TORSION SPRING L.H.
13 (4) SHOE HOLD DOWN SPRINGS

10" BRAKES

Wheel Cylinder Replacement Kit (1 axle)

6 (1) WHEEL CYLINDER, R.H.
6 (1) WHEEL CYLINDER, L.H.
19 (4) 5/16" - 8 X 1/2" MOUNTING SCREWS

Brake Shoe and Lining Kit (1 axle)

12 (2) PRIMARY SHOES WITH LINING
13 (2) SECONDARY SHOES WITH LINING

Adjusting Screw, Pivot Socket & Nut Assembly

10 (1) NUT
12 (1) PIVOT SOCKET
11 (1) ADJUSTING SCREW

Brake Shoe Spring & Hold Down Kit (1 axle)

8 (4) PRIMARY AND SECONDARY RETRACTOR SPRINGS
23385

18191 (2) Dust Clip

HYDRAULIC BRAKE ACTUATORS

TO ORDER: All kits available for field replacement are numbered. Parts illustrated but not numbered are not available for replacement. Contact the Service Department for further information.

NOTE: Save all attaching hardware when disassembling.

<table>
<thead>
<tr>
<th>KIT #</th>
<th>DESCRIPTION</th>
<th>REPLACEMENT KIT INCLUDES</th>
</tr>
</thead>
<tbody>
<tr>
<td>85830</td>
<td>SHOCK ABSORBER</td>
<td>4, 24-2 EA., 28-2 EA., 29-2 EA.</td>
</tr>
<tr>
<td>85478</td>
<td>CAP</td>
<td>15</td>
</tr>
<tr>
<td>85842</td>
<td>SHOULDER BOLT</td>
<td>20, 21, 24-2 EA., 25, 26, 27</td>
</tr>
<tr>
<td>85844</td>
<td>RELEASE HANDLE</td>
<td>5, 13, 18, 22, 24-3 EA., 30</td>
</tr>
<tr>
<td>85849</td>
<td>STOP &amp; SPRING ASSEMBLY</td>
<td>9, 11, 14, 24</td>
</tr>
<tr>
<td>85852</td>
<td>PUSH ROD ASSEMBLY</td>
<td>3, 7, 11, 14-5 EA., 16, 17, 24-2 EA., 34, 8, 9</td>
</tr>
<tr>
<td>84258</td>
<td>BOOT</td>
<td>8</td>
</tr>
<tr>
<td>80777</td>
<td>ORIFICE - DISC BRAKE APPLICATIONS ONLY</td>
<td>31</td>
</tr>
<tr>
<td>85837</td>
<td>MASTER CYLINDER - PUSH ROD KIT</td>
<td>3, 6, 7, 8, 9, 11, 14-5 EA., 16, 17, 24-2 EA., 34</td>
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<tr>
<td>85841</td>
<td>MASTER CYLINDER</td>
<td>6, 7, 14-4 EA.</td>
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<tr>
<td>85841</td>
<td>MASTER CYLINDER - DISC BRAKE APPLICATION</td>
<td>MUST ORDER 84258 SEPARATELY</td>
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<tr>
<td>85838</td>
<td>MASTER CYLINDER - PUSH ROD KIT</td>
<td>3, 6, 7, 8, 9, 11, 14-5 EA., 16, 17, 24-2 EA., 34, 15</td>
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<td>85840</td>
<td>MASTER CYLINDER</td>
<td>6, 7, 14-4 EA.</td>
</tr>
<tr>
<td>85376</td>
<td>SOLENOID KIT (DISC ONLY)</td>
<td>CYLINDER, GASKET, SCREW BACK UP SOLENOID ASSEMBLY</td>
</tr>
<tr>
<td>85271</td>
<td>6,000 LB DRUM BRAKE HOUSING KIT</td>
<td>7, 35, 36</td>
</tr>
<tr>
<td>85309</td>
<td>6,000 LB HOUSING KIT - DISC BRAKES</td>
<td>7, 35, 36</td>
</tr>
</tbody>
</table>