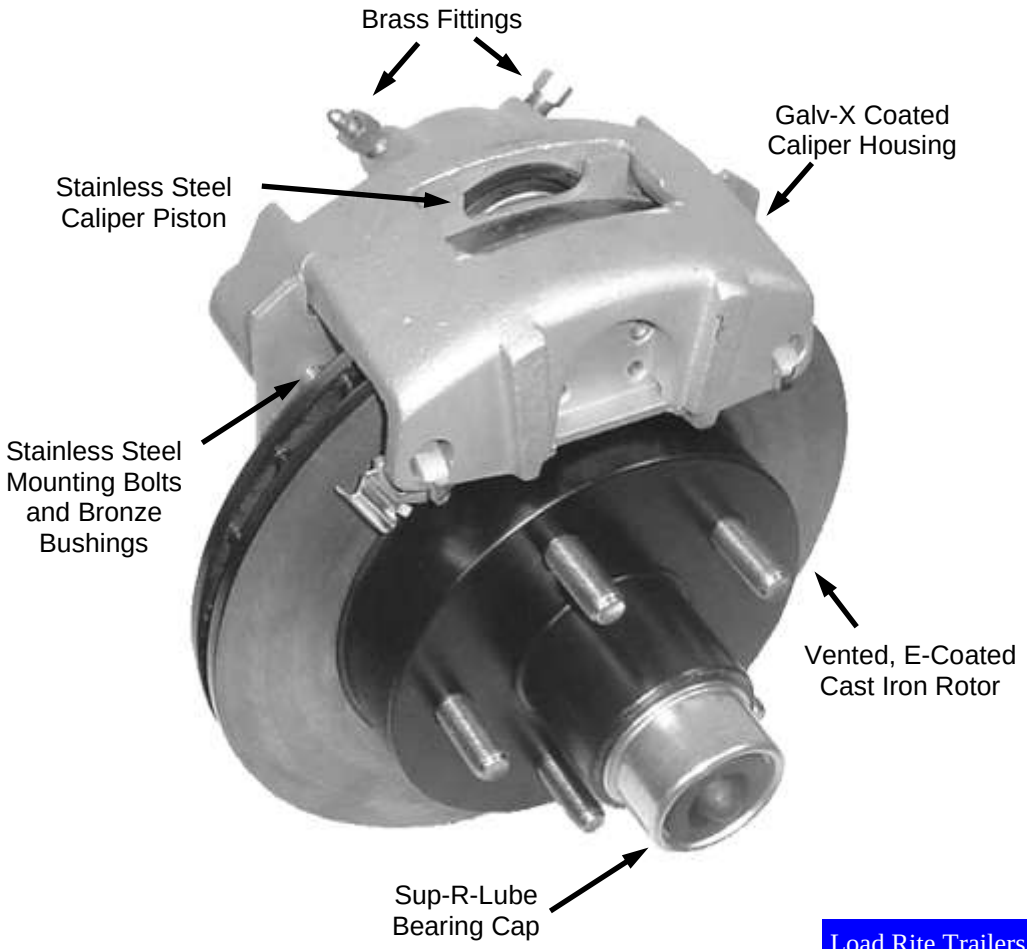
Service Bulletin

Guide to the Safe Operation of Your ***LOAD RITE*** Trailer Equipped with Disc Brakes



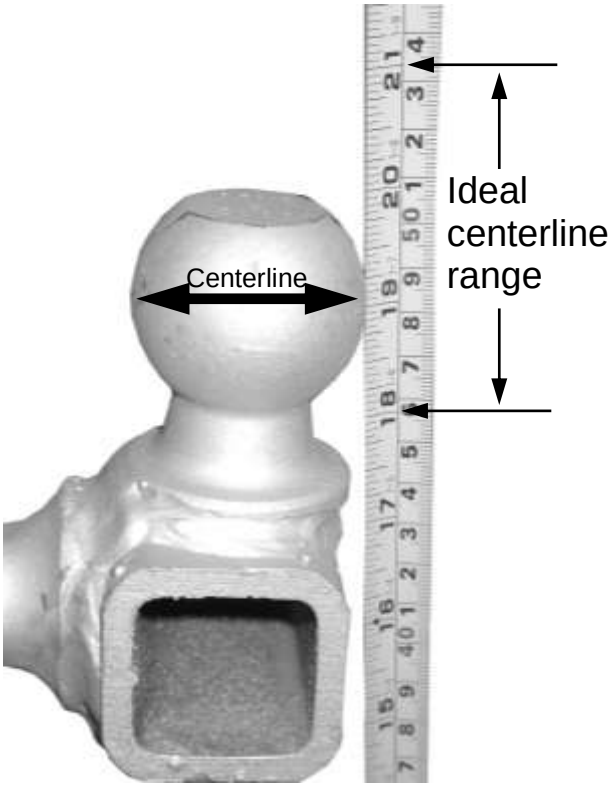
Load Rite Trailers, Inc.
265 Lincoln Highway
Fairless Hills, PA 19030

Congratulations on your purchase of the finest value in the boat trailer industry. Your new Load Rite trailer is equipped with safe, reliable, sure-stopping marine grade disc brakes. Disc brakes have been standard equipment in the automotive and light truck market for years. Now you can enjoy the very same safety and relative ease of maintenance on your boat trailer!

Properly attaching your trailer to the tow vehicle

Mechanical attachment of your trailer to the tow vehicle

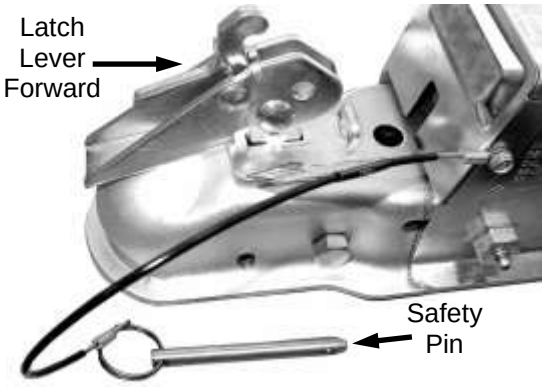
Your trailer is equipped with a braking actuator that accepts a 2" tow ball with a centerline 18" to 21" from the ground. Make certain your tow vehicle is properly equipped and set up.



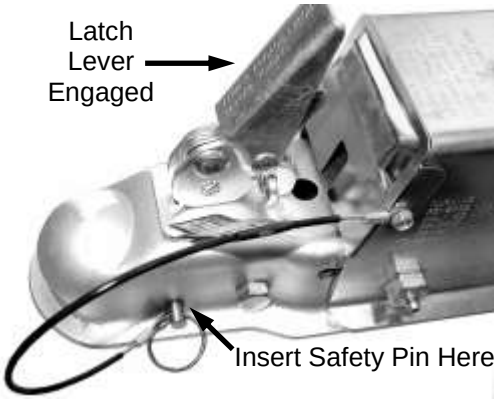
IMPORTANT SAFETY NOTE

Standard 2" tow balls are rated at 6,000 pounds capacity. This will safely serve all applications up to 6,000 pounds GVWR. If your trailer is rated in excess of 6,000 pounds GVWR, a heavy duty 2" tow ball should be attached to the actuator at delivery.

If this ball is not present, *immediately verify with your dealer if the 2" heavy-duty ball is mandated for your application*. Again, use of the heavy-duty 2" ball applies to all boat and trailer combinations with a GVWR between 6,000 and 8,000 pounds.



Actuator - Latch Open

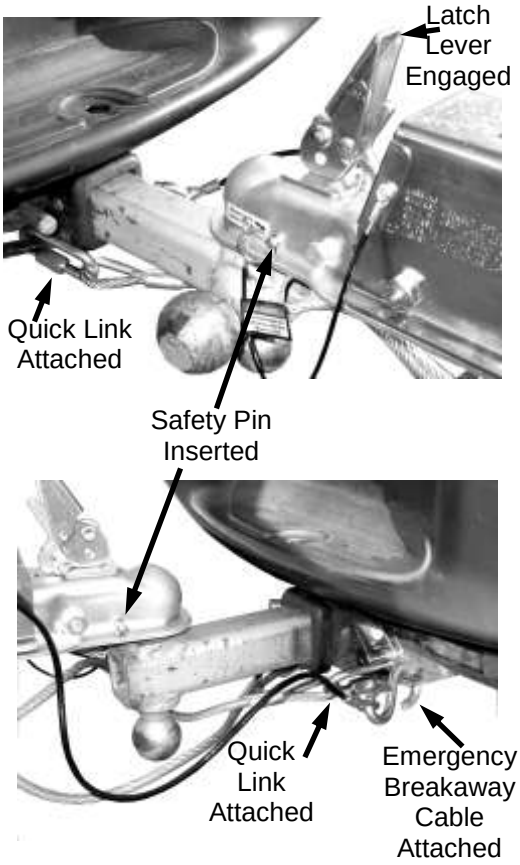


Actuator - Latch Engaged

Attach the safety cables from the trailer to their proper and respective attachment points on the tow vehicle. Make certain the quick-link fasteners are properly positioned and completely tightened. Attach the safety brake activation cable from the actuator to the tow vehicle adjacent to one of the quick links.

Your trailer should now be properly and safely mechanically attached to your tow vehicle. Proceed to electrical system attachment.

Once you are certain that your tow vehicle is equipped with a properly sized, rated, and positioned ball, raise the trailer on the tongue jack so that the ball of the tow vehicle can be maneuvered underneath the ball socket of the actuator. Remove any safety lock pins from the actuator lever and move the lever to the forward position. Crank the handle of the tongue jack and lower the actuator socket over the tow vehicle ball. Once you are certain the actuator is fully seated on the ball, move the latch to the engaged position and insert the safety pin through the actuator slider in the hole located directly behind the ball socket. Continue to raise the tongue jack to its fully retracted position. Rotate the jack to its horizontal position for travel.



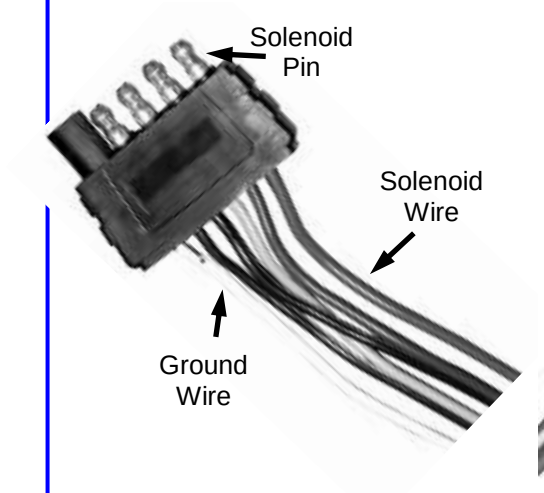
Properly Attached Trailer

Electrical system attachment of your trailer to the tow vehicle

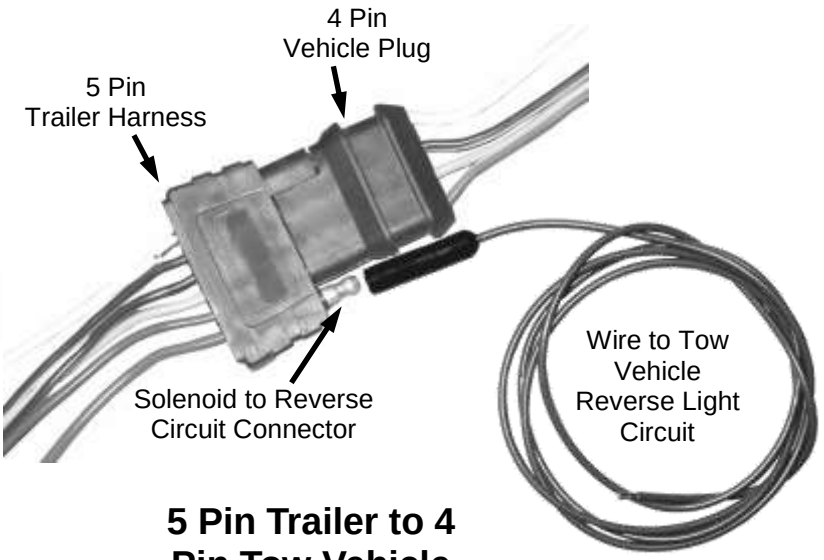
Your trailer is equipped with a six-wire, five-connector wiring harness. The colors function as follows:

- ***White*** – ground
- ***Brown*** (2) – taillights, sidemarker lights, and clearance lights for each side of the trailer
- ***Yellow*** – left turn and stop light
- ***Green*** – right turn and stop light
- ***Blue*** – disc brake free-backing solenoid, to be wired into tow vehicle back up lights

The above wires each correspond with individual circuits on the tow vehicle. Refer to your dealer, hitch installer, or local automotive repair shop to have



5 Pin - 6 Wire Trailer Harness



5 Pin Trailer to 4 Pin Tow Vehicle

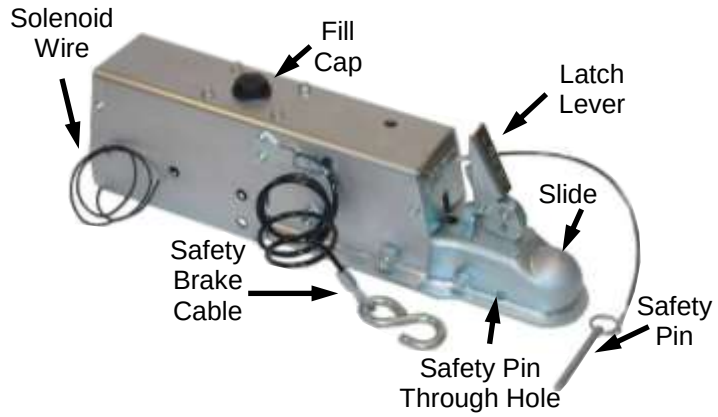
If your tow vehicle is equipped with a five-wire, four-connector harness, it will be necessary to retrofit the vehicle to the proper connector. Alternatively, the five-wire four-connector tow vehicle harness can be used with the six-wire five -connector harness. If the trailer is equipped with disc brakes, the exposed terminal must be wired to the reverse light circuit of the tow vehicle for proper brake operation while backing the rig.

Operating your trailer equipped with disc brakes

The disc brakes on your trailer function under the surge principle. As the tow vehicle brakes are applied, the trailer pushes, or "surges", against the tow ball. This action generates pressure in the trailer hydraulic system and causes the brake calipers to squeeze the brake pads and grip the rotors. While operating the vehicle in reverse, pressure is applied to the trailer hydraulic system as the tow ball pushes back on the actuator. With the solenoid wire properly attached to the reverse light circuit on the tow vehicle and the vehicle gear selector in reverse position, the actuator free-reverse solenoid is energized. When energized, a third port in the solenoid bleeds all hydraulic line pressure and fluid flow directly to the actuator master cylinder reservoir. The wheels then rotate freely in reverse.

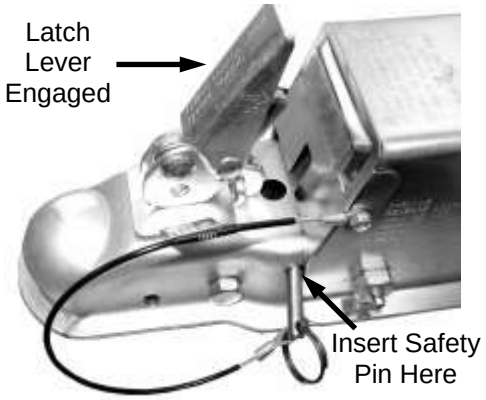
CHECK FLUID LEVEL

Remove the fill cap and check the brake fluid level at each use. <u>Always top off with DOT 3</u> brake fluid as needed.



IMPORTANT SAFETY NOTE

Once properly wired, the tow vehicle / trailer rig may be safely operated on the highway.
***<u>In an emergency</u>*, the trailer may be jockeyed about the yard or ramp by any vehicle through utilizing the tethered lock pin placed in the left side of the actuator inner slide adjacent to the fixed housing. This hole does not go through both sides of the slide.**
<u>This feature is for emergency trailer movement only, and is not designed to supplant use of the solenoid system under roadway operation.</u>

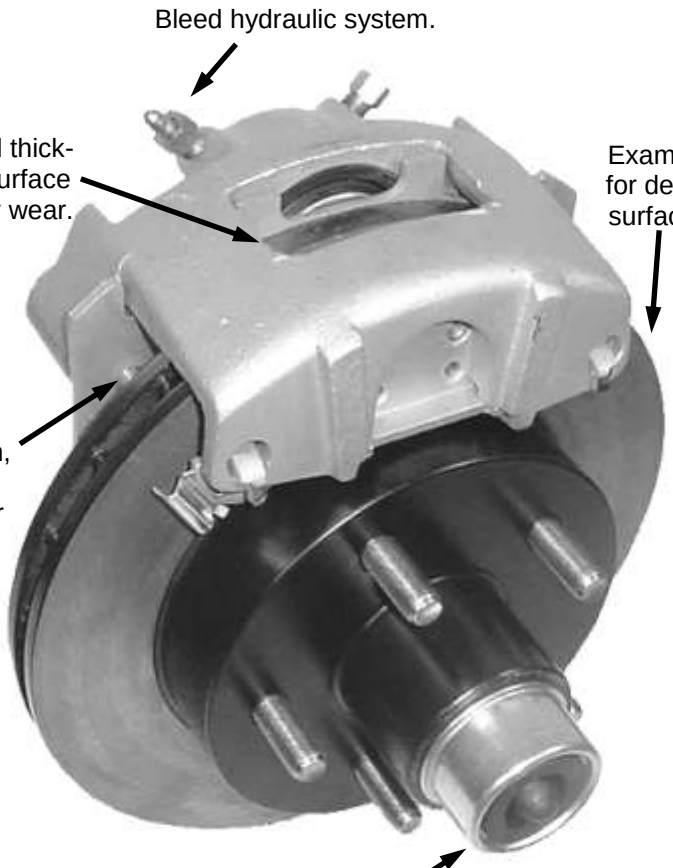


Actuator - Emergency Backup Engaged

Maintaining your trailer equipped with disc brakes

The disc brakes on your trailer have been engineered for the rigorous duty of a marine environment. An E-coated rotor and Galv-X coated caliper resist external rust. A stainless steel caliper piston and brass fittings fight internal corrosion. Stainless steel mounting bolts and bronze slider bushings promote even wear for season long performance.
Like any mechanical system, the disc brakes on your trailer require periodic inspection and preventive maintenance. Load Rite recommends this service be performed annually for optimum, reliable system performance. The end of the season is the ideal time to perform preventive maintenance on your trailer.

Annual Hub and Disc Brake Maintenance Overview



REGULAR MAINTENANCE NOTE

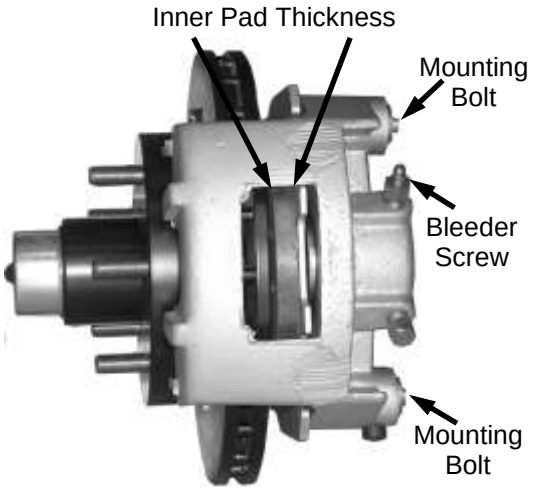
Add grease easily at any time by removing the rubber grommet on the bearing cover and exposing the standard grease fitting.
To prevent inopportune maintenance problems, LOAD RITE recommends you grease this way after each water immersion.

Disc brake maintenance procedure

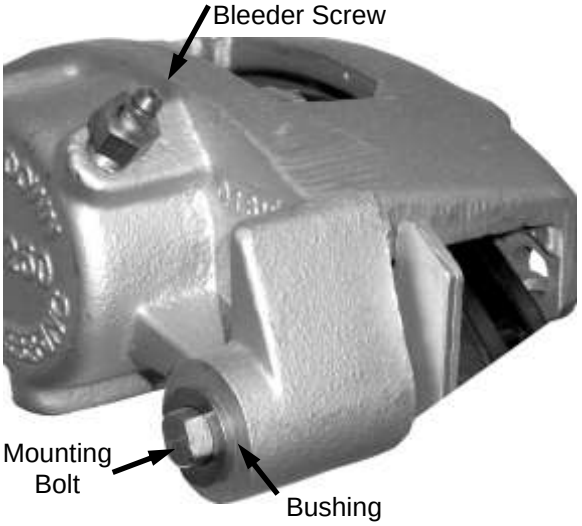
IMPORTANT SAFETY NOTE

Never raise a trailer wheel off the ground for service unless the trailer is safely attached to the tow vehicle, and one wheel on each side of the trailer is fully chocked.

Work on only one wheel at a time. Begin by removing each wheel and visually inspecting brake pad thickness. This will help indicate the amount of remaining pad life. Examine the faces of each rotor for signs of uneven wear. Run a fingernail across each face. If this test indicates ridges or other imperfections exist in the rotor face, you may want to consider having the rotors resurfaced. Resurface the rotors in pairs and always replace the pads when resurfacing the rotors.



Remove the bolts securing the caliper to the mounting bracket. Inspect the face of the brake pad in the same way you inspected the rotor. Replace the pads if there are any surface irregularities or if the pads have 3/16” or less material from the surface to the most shallow rivet. If one pad needs replacement, always replace all of the pads on the same axle. Always resurface the rotors when replacing the pads.



Secure the caliper to the frame and out of the way of the rotor with a zip tie or bungee cord. *Do not allow the caliper to hang from the brake hose!*

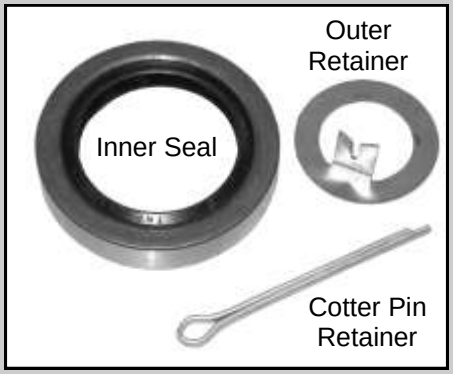
Remove the outer bearing protector. Remove the locking mechanism and large outer nut from the spindle.

Carefully remove the rotor from the spindle taking care to prevent the outer bearing from falling out of the rotor. Remove the outer bearing and set aside. Invert the rotor so the inner seal is visible. Remove the inner seal and discard. Replace with a new seal at reassembly. Remove the inner bearing and set aside.

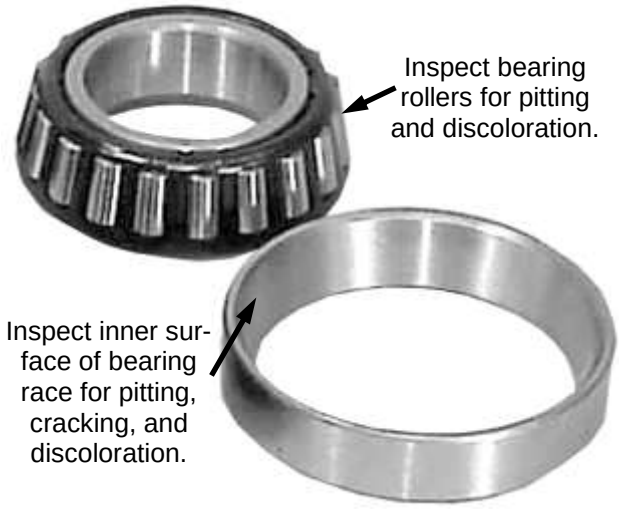
Wipe each bearing with a clean cloth. Be careful to remove all excess and contaminated lubricant. Wipe the spindle clean with a clean cloth. Examine all bearing and spindle surfaces for discoloration or pitting. If evidence of either, replace all affected components. In the case of evidence of water contamination, replace all bearings and seals immediately.

SERVICE NOTE

Always **replace these items at each hub service! Retainer design may vary by model.**



Pack each bearing with high-temperature lithium based NLGI #2 wheel bearing grease. Reassemble in the reverse order of disassembly. Remember to install a new seal and a new spindle nut locking device.



Reinstall the caliper over the rotor and secure with the stainless mounting bolts. Apply blue Loctite to the threads of the slider bolts before torquing to 20 lb. ft.

Install the wheel. While rotating the wheel, torque the spindle nut to 20 lb. ft. Loosen ¼ turn and retighten by hand until snug. Securely fit the spindle nut locking device.

Torque the wheel lugs to 80 – 95 lb. ft. Repeat all of the above for each wheel on your trailer.

Bleed your brakes

Bleeding the brake hydraulic system at each caliper should be part of annual trailer maintenance. Brake fluid absorbs moisture and becomes ineffective at converting hydraulic pressure to braking action. It is possible for the brakes to become ineffective or even lock during operation if the fluid is not serviced annually.