



LIPPERT
COMPONENTS

BRAKE MAINTENANCE AND INSPECTION

TI-082

AXLES AND SUSPENSION

⚠ WARNING

Prior to testing or adjusting brakes, be sure area is clear of any pedestrians and vehicles. Failure to perform test in a clear area may result in death or serious injury.

Brake Adjustment

Lippert Components, Inc. electric brakes are manually adjustable only. If manual adjusting is needed, the following 6-step procedure can be utilized. Initially, brakes should be adjusted after the first 200 miles of operation when the brake shoes and drums have "seated." Next, check and adjust brakes at 3,000 mile intervals or sooner if they are not performing as intended. The brakes should be adjusted in the following manner:

1. Jack up trailer and secure on adequate capacity jack stands. Follow trailer manufacturer's recommendations for lifting and supporting the unit. Make sure the wheel and drum rotates freely.

⚠ WARNING

Lift unit by the frame and never the axle or suspension. Do not go under unit unless it is properly supported by jack stands. Unsupported units can fall causing death or serious injury.

2. Remove the adjusting hole cover from the adjusting slot on the bottom of the brake backing plate.
3. With a screwdriver or standard adjusting tool, rotate the starwheel of the adjuster assembly to expand the brake shoes. Adjust the brake shoes out until the pressure of the linings against the drum makes the wheel very difficult to turn.
4. Then rotate the starwheel in the opposite direction until the wheel turns freely with a slight lining drag.
5. Replace the adjusting hole cover and lower the wheel to the ground.
6. Repeat the above procedure on all brakes. For best results, the brakes should all be set at the same clearance.

Clean and Inspect Brakes

In the event the braking system encounters symptoms of improper application or failure, immediate inspection and service **MUST** be implemented. During normal use, servicing the braking system once a year is considered normal. Increased usage will require service on a regulated schedule based on 3,000-6,000 mile increments. As magnets and shoes become worn, they need to be changed to maintain maximum braking capability.

Be sure, when disassembling brakes for cleaning, to clean the backing plate, magnet arm, magnet and shoes. Also, make sure that any and all parts removed for cleaning are placed back into the same brake drum assembly. This is also an excellent time to check for parts that have become loose or worn.

Inspection Procedure

1. Magnets and shoes must be free of oil or grease.
2. Magnet surface and drum surface should not be out of flat by more than $\frac{1}{32}$.
3. Use amp meter to fully check electrical system.
4. Use a battery to connect to trailer plug or jumper wires from truck to trailer plug.
5. Place amp meter in series with hot wire.

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6. With a 12-volt input a tandem trailer should pull 10 amps or more.
7. Each magnet pulls 3 amps so a reading of 8 means one magnet is open and connections need checked or magnet replaced.
8. A short can be caused by wire insulation being chaffed or cut, or magnet wear into the coil.
9. Each magnet should have a resistance of 3.2 ohms.

Magnets

This electric braking system utilizes an electromagnet to actuate the brake shoes. These high-quality magnets provide superior force and friction to safely and effectively stop the trailer. These magnets should be inspected and serviced on the same schedule as the rest of the axle system, at least once a year for normal use and more often if the trailer is used extensively. Abnormal or uneven wear is a sign that the magnet needs to be replaced. Check the surface of the magnet with a straight edge to check for uneven wear. The surface of the magnet should be completely flat.

If the magnet's coil is exposed in any way, even if normal wear is evident, the magnets should be replaced immediately. If the electromagnets are replaced, the drum armature surface should also be refaced. If a magnet is replaced on one side of an axle, it is recommended that the magnet on the opposite brake assembly also be replaced to ensure even braking capacity.

Fig. 1

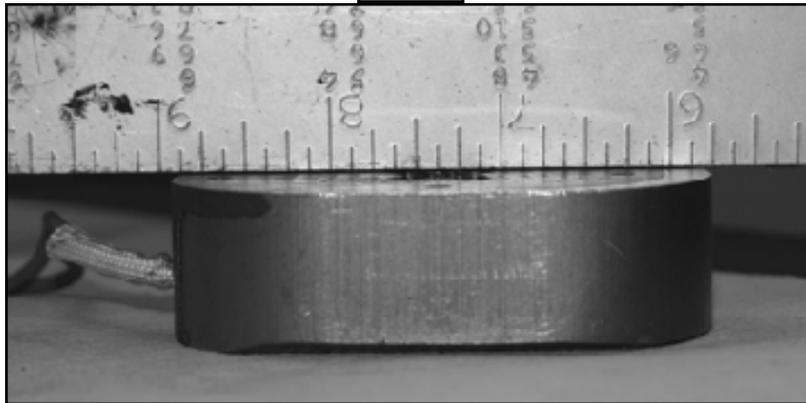


Fig. 1 shows an Electro-Magnet with little or no wear. If there are any pronounced gaps on the surface of the Electro-Magnet, the magnet should be replaced.

Shoes and Linings

Linings should be replaced if the material is worn to $\frac{1}{16}$ " or less. Shoes should also be replaced if they become contaminated with grease or oil or have become scored, pitted or gouged. Heat cracks are normal and rarely require attention. When replacing shoes, both shoes on the same brake and the brakes on the same axle should all be replaced at the same time, once again ensuring even braking capacity.

After replacing shoes and linings, your trailer brakes should be burnished-in by applying the brakes 20-30 times with a 20 mph. decrease in speed, e.g. 40 mph. to 20 mph. Allow ample time for brakes to cool between application. This allows the brake shoes and magnets to begin seating to the brake drum.

As a supplier of components to the RV industry, safety, education and customer satisfaction are our primary concerns. Should you have any questions, please do not hesitate to contact us at (574) 537-8900 or by email at customerservice@lci1.com. Self-help tips, technical documents, product videos and a training class schedule are available at lci1.com or by downloading the MyLCI app.