CONMET® Pointing the Way™

The ConMet Connection

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Brake Drum Inspection and Maintenance

The brake drums on a vehicle should be inspected and maintained anytime wheel end maintenance is done. Improper handling and maintenance procedures can lead to decreased brake performance and reduced brake component life. The procedures listed below should aid in achieving maximum brake life and performance.

Brake Drum Removal

A common industry practice is to strike the drum with a steel hammer to remove it from the hub. This is an unacceptable practice that can lead to cracked drums and decreased brake safety and performance. A rubber dead blow hammer is the only acceptable tool for drum removal if a drum must be struck. Once the drum has been removed from the hub, there are several things you should do to prevent drum removal problems in the future.

Figure 1

To provide proper seating and prevent the drum from becoming stuck on the hub, clean the drum mounting faces and the drum and wheel pilots on the hub to remove any build up of dirt and corrosion. A wire brush is one of the easiest methods of cleaning the flange face and the pilots on the hub (see Figure 1). Once the pilot diameter is cleaned, a small amount of anti-seize lubricant can be brushed on to the pilot diameter of the hub to help prevent the build up of dirt and corrosion in the future (see Figure 2). Be careful not get any anti-seize lubricant on the mounting flange faces of the hub. This could lead to improper clamping between the wheel, the brake drum, and the hub. ConMet recommends the use of Corrosion Block, a product of Lear Chemical Research (call 905-564-0018).

Figure 2

Figure 3

Brake Drum Inspection

When the brake drum is removed, clean the inner and outer mounting surface and the inside diameter of the mounting flange of the drum with a wire brush to remove any build up of dirt and corrosion. Inspect the drum for signs of damage or cracks. Measure the inside diameter of the braking surface with a brake drum caliper to insure that the drum has not worn beyond the maximum allowable diameter and that there is adequate material left on the braking surface of the drum to allow for additional service. The maximum allowable diameter will be cast or stamped on the outside of the brake drum (see Figure 3).

Brake Drum Installation

Rotate a drum pilot on the hub to the 12 o'clock position. Position the brake drum over the hub so it seats on the drum pilot and against the hub face. Place the wheel(s) into position and install one or more nuts to hold them in place. Snug the top nut first. Apply 50 ft. lbs. of torque to draw the brake drum up fully against the hub. Install the remaining wheel nuts and using a star pattern, torque all of the nuts to 50 ft. lbs., then retorque in a star pattern to 450-500 ft. lbs. The last nut rotation must be made with a calibrated torquing device.

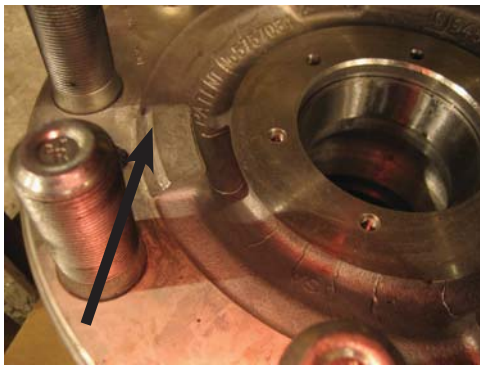

Figure 4: Note the damage to the drum pilot boss caused by a mis-mounted brake drum.

⚠WARNING

Failure to clean the mounting bosses and the flange face of the hub and drum and mis-mounting the drum can result in damage to the hub and cracked or broken drums. This could also make it necessary to replace the hub or drum, or lead to possible loss of braking ability or wheel off situations.