



Technical Bulletin

Brake Drum Installation

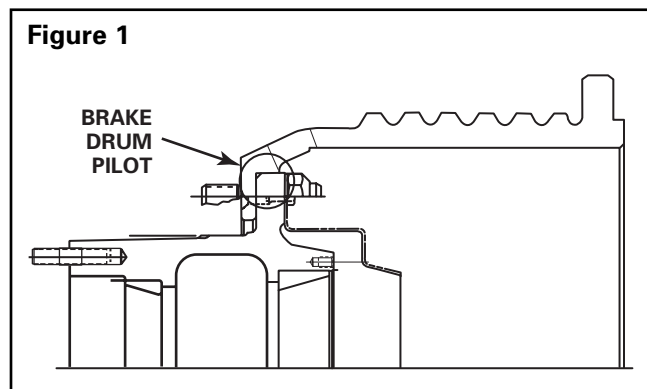
Meritor 17000, 59000, 61000, 71000
and RC-26-700 Series Bus and
Coach Steer, Center and Drive
Axles Equipped with
W Series Brakes

How to Obtain Additional Maintenance and Service Information

Refer to Maintenance Manual 23, Bus and Coach Front Axles; and Maintenance Manual 23A, Bus and Coach Rear Axles. To obtain these publications, call ArvinMeritor's Customer Service Center at 800-535-5560 or visit the Tech Library on our website at arvinmeritor.com.

Before You Install the Brake Drum

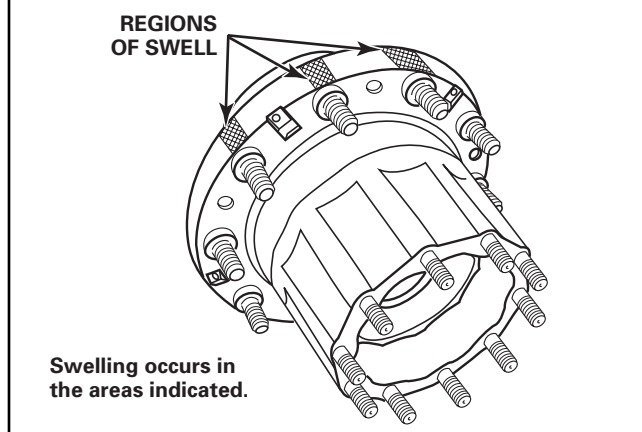
The internal machined brake drum pilot on Meritor 17000, 59000, 61000, 71000 and RC-26-700 Series bus and coach steer, center and drive axles fits over the machined flange of the hub. **Figure 1.** A correct drum-to-hub installation is essential to maintain the integrity of the wheel-end assembly.



Replacing wheel studs can affect the fit of the drum onto the hub. If new wheel studs have been installed in the hub, there may be some localized swelling on the hub flange. The amount of swelling is usually small and localized. **Figure 2.**

In a correct installation, the brake drum pilot should install easily over the machined flange of the hub. If it does not, perform the following procedures.

Figure 2



Brake Drum Installation Procedure

WARNING

To prevent serious eye injury, always wear safe eye protection when you perform vehicle maintenance or service.

ASBESTOS AND NON-ASBESTOS FIBERS WARNING

Some brake linings contain asbestos fibers, a cancer and lung disease hazard. Some brake linings contain non-asbestos fibers, whose long-term effects to health are unknown. You must use caution when you handle both asbestos and non-asbestos materials.

WARNING

Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving. Support the vehicle with safety stands. Do not work under a vehicle supported only by jacks. Jacks can slip and fall over. Serious personal injury and damage to components can result.

You must carefully follow installation procedures when you install a brake drum onto a hub. An incorrect installation can cause the drum to fracture, which will affect braking performance. Loss of vehicle control, serious personal injury and damage to components can result.

CAUTION

When you install a brake drum and there's swelling on the hub flange, use a hand grinder to remove a small amount of material over each stud. Do not remove material from the flange area between the studs, which will weaken the drum mounting area. Damage to components can result.

1. Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving. Set the parking brake.
2. Use a ring gauge measuring 12.7510-12.7520-inches (323.875-323.900 mm) to check flange diameter.
 - **If the ring gauge fits over the flange:** Proceed to Step 3.
 - **If the ring gauge does not fit over the hub flange because of swelling:** Use one of the following methods to remove the swelling on the hub flange. Remove only enough material to allow for an easy ring gauge or drum fit. Do not remove material from the flange area between the studs, which will weaken the drum mounting area.
 - A. Use a hand grinder to remove a small amount of material over each stud. Check the ring gauge or drum fit frequently to ensure that you're not removing too much material.
 - B. Use a lathe to machine the hub flange and remove any swells. Locate the lathe on the bearing cups. Check the ring gauge or drum fit frequently to ensure that you're not removing too much material.

3. Use a wire brush to remove any rust, burrs and debris on both mating surfaces. Use a cloth dampened with water or a water-base solution to clean the brake drum pilot on both the brake drum and hub flange.

Check Brake Drum Surface Total Indicator Runout (TIR)

A Hub Mounted on the Axle

1. Install the drum onto the hub. Carefully slide the drum onto the hub flange. Do not force the brake drum over the flange.
 - **If the brake drum does not install easily over the hub flange:** Use the procedure above to remove swelling on the hub flange.
2. Install the wheel nuts and suitable spacers to fasten the drum to the hub.
3. Attach the magnetic base of a dial indicator to the axle housing. Measure brake drum total indicator runout (TIR) approximately one-inch (25 mm) from the open end of the drum. The runout should not exceed 0.015-inch (0.381 mm).
 - **If runout exceeds specifications:** Remove the drum from the hub. Rotate the drum and install it. Verify that runout does not exceed 0.015-inch (0.381 mm).
 - **If you are unable to rotate the drum to provide the correct runout:** Remove and turn the drum. The maximum diameter should be at least 0.1-inch (2.5 mm) less than the maximum dimension marked on the outer edge of the drum to maintain correct drum wear allowance. Install the drum. Verify that runout does not exceed 0.015-inch (0.381 mm).
 - **If turning the drum does not provide correct runout:** Replace the drum.

A Hub Not Mounted on the Axle

1. Assemble the hub, drum and wheel. Do not force the brake drum over the flange.
 - **If a brake drum does not install easily over the hub flange:** Use the procedure above to remove swelling on the hub flange.
2. Mount the hub, drum and wheel assembly onto a suitable spindle with the wheel bearings correctly adjusted.

3. Attach the magnetic base of a dial indicator to the spindle base. Measure brake drum total indicator runout (TIR) approximately one-inch (25 mm) from the open end of the drum. The runout should not exceed 0.015-inch (0.381 mm).
 - **If runout exceeds specifications:** Remove the drum from the hub. Rotate the drum and install it. Verify that runout does not exceed 0.015-inch (0.381 mm).
 - **If you are unable to rotate the drum to provide the correct amount of runout:** Remove and turn the drum. The maximum diameter should be at least 0.1-inch (2.5 mm) less than the maximum dimension marked on the outer edge of the drum to maintain correct drum wear allowance. Install the drum. Verify that runout does not exceed 0.015-inch (0.381 mm).
 - **If turning the drum does not provide the correct amount of runout:** Replace the drum.
4. Mount the hub assembly onto the axle. Refer to the hub installation instructions in Maintenance Manual 23, Bus and Coach Front Axles; and Maintenance Manual 23A, Bus and Coach Rear Axles.

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