PREVOST

MAINTENANCE INFORMATION

MI25-15

DATE:	May 2025	SECTION: 11 REAR AXLE
SUBJECT:	**DRIVE AXLE WHEEL BEARING INSPECTION AND ADJUSTMENT**	

First Release 07-10-2025

APPLICATION

Model	VIN
Model Year: 2000 - today	All Prevost vehicles

DESCRIPTION

This information is based on the Meritor Bus and Coach Rear Drive Axles Manual 23A. No information contained herein supersedes or contradicts the vendor information. We have added some small steps to ensure every eventuality is covered. Any steps which were added to those in the Meritor Manual are in italics. These steps do not significantly change the time required to complete the job.

SAFETY PRECAUTIONS

- Eye protection should always be worn when working in a shop.
- Rules for Personal Protection Equipment should always be respected. Wear your PPE including but not limited to the following:

PROCEDURE

DANGER

Park vehicle safely, apply parking brake, stop the engine. Prior to working on the vehicle, set the ignition switch to the OFF position and trip the main circuit breakers equipped with a trip button. On Commuter type vehicles, set the battery master switch (master cut-out) to the OFF position.

Lock out & Tag out (LOTO) must be performed during set-up, maintenance or repair activities. Refer to your local procedure for detailed information regarding the control of hazardous energy.

FAILURE OF A WHEEL BEARING

1. In the event of a wheel bearing failure, an effort should be made to obtain the recent history of service on that axle.

   - Were the brakes recently worked on?
   - Differential oil changed?
   - Wheel seals replaced?

   Having this information will assist the technician in determining the root cause of the failure. Generally speaking, wheel bearings do not spontaneously fail. The failure is a symptom of another issue.

2. In addition to the coach serial number, the drive axle serial number should be obtained. This is on a metal tag on the curbside axle tube, near the differential, facing aft.

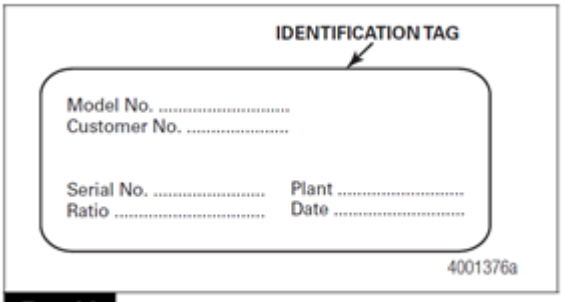


Figure 2.8

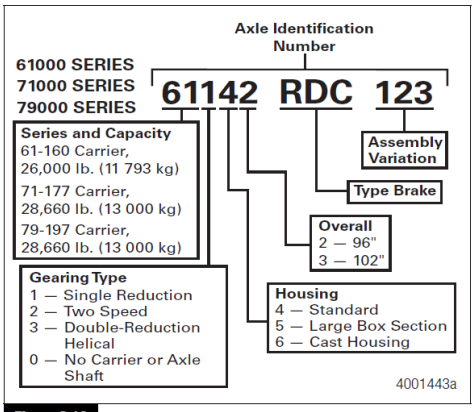


Figure 2.10

3. After a failure we need to drain and flush the differential. Before draining, remove the fill plug and get an idea as to how much differential oil is present.
4. Failure of a wheel bearing contaminates all the oil in the unit. It also generally fails one side first, downing the coach before failing the opposite bearing set. It is recommended to inspect and service the undamaged wheel bearing as it is in all likelihood contaminated.
5. Service the axle tube as required, up to replacement of the load tube, if needed. The axle housing should be bore-brushed out several times in an effort to remove all shavings and metal particles in the drive axle housing.
6. Thoroughly inspect any parts judged to be re-useable.

HUB REASSEMBLY

Refer to Meritor Bus and Coach Rear Drive Axles Manual 23a

7. *Before hub reassembly ensure inner and outer bearings slide onto load tube.*
8. Install bearing cups in hub using a press and a sleeve.

9. Install the oil seal in retainer **using <u>correct seal driver and bearing pilot.</u> Do NOT use any other tool (wood) to install the seal. If the correct seal driver and bearing pilot is not available, obtain it using the CR driver number on the seal box.**

   Note: As it states here, in the event you are replacing the bearing, Meritor recommends seal installation into the retainer before the installation of the retainer in the hub. This prevents banging an oil seal into a retainer and possibly damaging the gasket between the retainer and hub face/flange.

10. Pack the **inner** bearing cone with grease, Meritor specification O-617-A or O-617-B (Prevost 7771213). O-617-B is thinner than 0-617-A and permits easier packing of the bearing**.**

11. Install the inner bearing retainer, using the correct gasket, and torque bolts to 20 pounds-foot.

Adjustment

Wheel Bearings

⚠ WARNING

When you perform a wheel bearing adjustment, observe the following guidelines.

- **Always use the correct size wrench socket.**
- **Always use a torque wrench to tighten the adjusting nuts to their correct adjusting torque.**
- **Do not tighten or loosen the adjusting nuts by hitting the nuts with a hammer or by hitting a chisel or a drift placed against the nuts with a hammer. Damage to the nuts can result. Damaged adjusting nuts can prevent a correct wheel bearing adjustment, cause possible loss of vehicle wheel-end equipment and cause serious personal injury.**

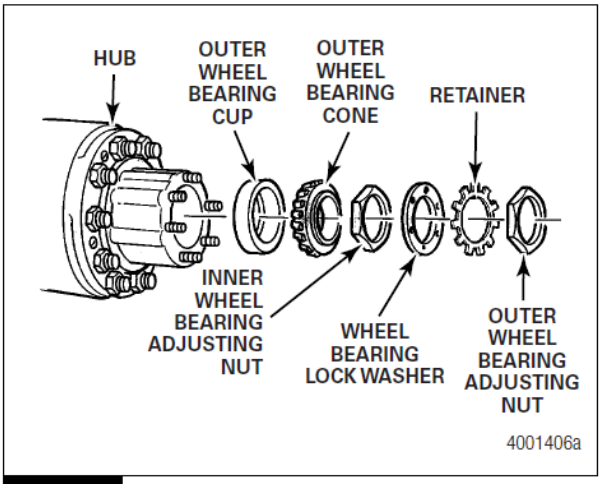


Figure 5.15

12. Carefully slide the hub onto load tube being careful not to damage the inner seal. *A very light coating of oil can help the hub slide onto the load tube*.

13. *Do not install the hub completely on the load tube. Before it is fully seated fill the hub cavity with gear oil to ensure initial lubrication of the outer bearing. The inner bearing is already greased packed (Step 10). Pour oil into outer bearing ensuring it is fully lubricated before installation.*

14. Install the outer bearing carefully.
15. Install the inner adjusting nut and **while turning the hub a minimum of five revolutions**, torque the inner adjusting nut to **200 pounds-foot of torque. Back nut off one full turn**.
16. **Retighten inner adjusting nut to 50 pounds-foot or torque. Back off nut one/third of a turn**.
17. Assemble the lock washer, the retainer, and the outer nut. **Torque the outer nut to 250-400 pounds-foot torque**.
18. The end play (axial) should be .001” to .010”. Readjust if necessary to obtain this value.
19. Install axle. Torque axle flange retaining nuts.

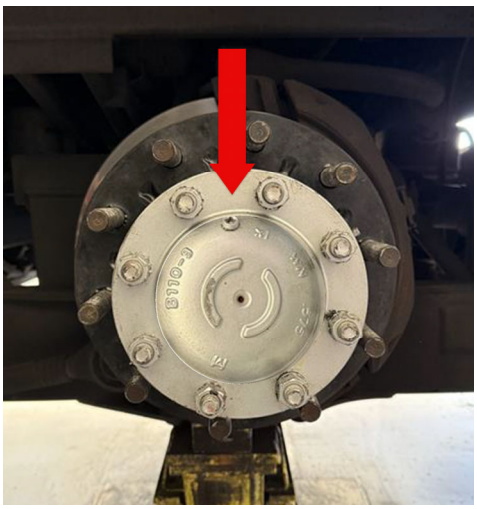
Table I: 61000, 71000, 79000, RC-23-160 and RC-26-700 Series Rear Axle

		Torque Range*	
Description	Size	Lb-ft	N•m
Axle Shaft-to-Flange Nut	0.438"-20	50-75	68-102
Plain Nut	0.50"-20	75-115	102-156
	0.562"-18	110-165	149-224
	0.625"-18	150-230	203-312

20. After completion, refill differential to the correct level using the correct spec lubricant.

WHEEL BEARING LUBRICATION

21. Rotate the hub until the fill plugs are at the top.



22. Remove the oil fill plugs. Fill each hub cavity with two pints (1 L) of rear axle lubricant.
23. Install and tighten the fill plugs to 10 lb-ft (13.8 N-m) minimum.
24. Road test the vehicle after the initial hub fill in an unloaded condition for one to two miles at safe speeds, but no higher than 25 mph (40 km/h). During the road test, make at least four full left turns and four full right turns with some articulation each time between left and right sides.
25. Wait approximately ten minutes after completing the road test for the oil to settle. Remove the oil fill plug in the axle housing and check the axle oil level.
26. If necessary, add oil so the oil level is at the bottom of the fill plug.
27. Install and tighten the axle fill plug. Refer to Section 8 for the correct torque values.

GENERAL NOTES:

Air impact wrench cannot deliver accurate torque values. There is no substitute for torque wrenches in this application.

Ensuring the hubs are oiled is critical for the initial lubrication of the bearings.

Service recommended to the customer but refused should be clearly noted on the RO.

The next two pages are the wheel bearing adjustment procedure pulled from the **Meritor Bus and Coach Rear Drive Axles Manual 23a**.

Adjustment

Wheel Bearings

⚠ WARNING

When you perform a wheel bearing adjustment, observe the following guidelines.

- **Always use the correct size wrench socket.**
- **Always use a torque wrench to tighten the adjusting nuts to their correct adjusting torque.**
- **Do not tighten or loosen the adjusting nuts by hitting the nuts with a hammer or by hitting a chisel or a drift placed against the nuts with a hammer. Damage to the nuts can result. Damaged adjusting nuts can prevent a correct wheel bearing adjustment, cause possible loss of vehicle wheel-end equipment and cause serious personal injury**.

1. For disc brake wheel ends, back off the brake caliper until the rotor is clear from the pad linings about 1/16-inch (1.588 mm) gap or more. Refer to Maintenance Manual MM-0467, DiscPlus™ EX225 Air Disc Brake, for more information about EX225 disc brake inspection and adjustment. To obtain this publication, refer to the Service Notes page on the front inside cover of this manual. Figure 5.14.

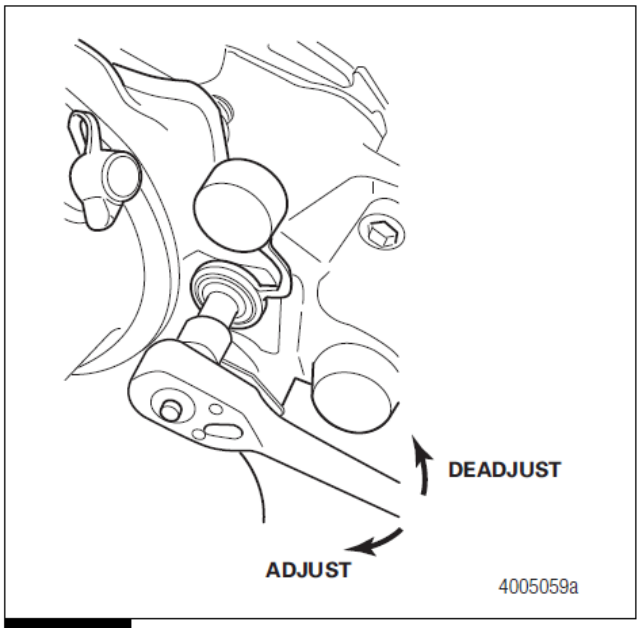


Figure 5.14

2. Install the inner wheel bearing adjusting nut onto the spindle and against the outer bearing so that the pin in the inner bearing adjusting nut is pointing away from the bearing. Figure 5.15.

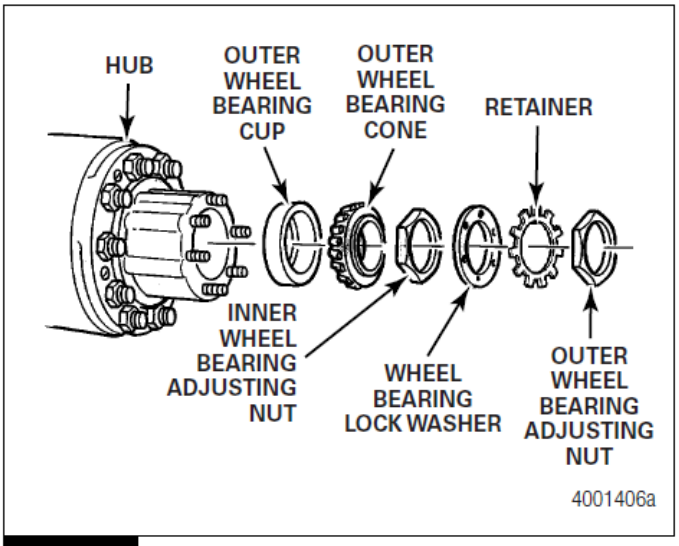


Figure 5.15

3. Tighten the adjusting nut to 200 lb-ft (272 N•m) while rotating the hub a minimum of five revolutions to fully seat the wheel bearings. ❶
4. Loosen the inner adjusting nut one full turn.
5. Retighten to 50 lb-ft (68 N•m). ❶
6. Loosen the inner adjusting nut 1/4 turn.
7. Install the lock washer. If the hole in the washer is not aligned with the inner adjusting nut pin, remove the washer, turn the washer over and reinstall it. The pin and the hole should now be aligned. If not, slightly adjust the inner adjusting nut. Use whichever lock washer side causes the least movement of the adjusting nut. Figure 5.16.

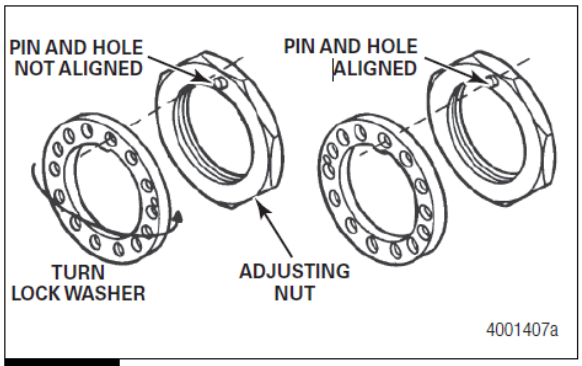


Figure 5.16

8. Assemble the stamped retainer and the outer wheel bearing adjusting nut onto the spindle.

9. Tighten the outer nut.
   - **If the thread pitch diameter is 2.62-inches or greater**: Tighten the outer nut to 100-250 lb-ft (136-399 N•m).
   - **If the thread pitch diameter is 1.12-2.61-inches:** Tighten the outer nut to 100-150 lb-ft (136-203 N•m).

10. Check and adjust the wheel end play to ensure it is 0.001-0.005 inch (0.025-0.127 mm). Use the following procedure to check the end play.

    A. Attach the magnetic base of a dial indicator to the hub face. Touch the dial indicator stem against the end of the spindle.

    B. Slightly rotate the hub in both directions while pushing inward until the dial indicator does not change. Set the dial indicator to ZERO.

    C. Slightly rotate the hub in both directions while pulling OUTWARD until the dial indicator does not change.

    D. Read the end play measurement on the dial indicator.

    - **If end play does not meet specification:** Remove the outer wheel bearing adjusting nut, the stamped retainer and the lock washer. Tighten or loosen the inner adjusting nut as required to set the correct end play. Repeat Step 6 through Step 8.

NOTE: If you rotate the inner adjusting nut by one hole position, the end play setting will change by approximately 0.005-inch (0.127 mm). If the lock washer is turned over and installed, the end play setting will change by approximately 0.002 inch (0.051 mm).

11. When end play is correct, bend the two opposing tabs on the stamped retainer over the flats of the outer wheel bearing adjusting nut.

12. For optional grease-lubricated wheel ends, install a new grease seal onto the hub studs and the housing spindle. Refer to Section 3.

13. Install the axle shafts, gasket and tapered dowels at each stud.

14. Install the nuts and the washers onto the studs. Tighten the nuts to the correct torque value. Refer to Section 8.

PARTS / WASTE DISPOSAL

Discard according to applicable environmental regulations (Municipal/State[Prov.]/ Federal)

Access all our Service Bulletins on http://techpub.prevostcar.com/en/
Or scan the QR-Code with your smart phone
.

Are you a Vehicle owner?
*E-mail us at **technicalpublications_prev@volvo.com** and type "ADD" in the subject to receive warranty bulletins applicable to your vehicle(s) by e-mail.*