Recall Campaign

FREIGHTLINER® LLC
A DaimlerChrysler Company

January **2007**
FL484A
NHTSA #06V-424

Copy of Letter to Owner

Subject: Front Axles with Pro-Torq Spindle Nuts

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act. This notice is also sent in accordance wilh the Canadian Motor Vehicles Safety Act.

Freightliner LLC, on behalf of its Freightliner Trucks Division, has decided that a defect which relates to motor vehicle safety exists on specific Freightliner Columbia vehicles with front axles assembled by ArvinMeritor between November 2, 2005, and September 12, 2006.

Some front spindle nuts may have been over tightened, causing preload on the front wheel bearings. This may lead to premature bearing wear which, if allowed to progress, could cause the front wheel assemblyto separate from the vehicle, resulting in a possible vehicle crash without prior warning.

The front axle wheel bearings will be replaced.

Replacement parts are now available for authorized dealers to order. Contact your authorized dealer to arrange to have your vehicle(s) modified and to assure that parts are available at the dealer. To locate a dealer, search online at www.FreightlinerTrucks.comor contact the Warranty Campaigns Department for assistance.

When you contact your dealer, refer to campaign number **FL484A**. Once replacement parts are received at the dealership, the modification will take approximately two and a half hours and will be performed at no charge to you.

IMPORTANT: When the recall has been completed, please ensure that a label has been affixed to your vehicle referencing **FL484A**.

If you do not own the vehicle that corresponds to the identification number(s) which appears on the Recall Notification, please return the notification to the Warranty Campaigns Department with any information you can furnish that will assist us in locating the present owner. If you have leased this vehicle, Federal law requires that you forward this notice to the lessee within 10 days.

If you are not able to have the defecl remedied without charge and within a reasonable time, which is not longer than 60 days after you tender the vehicle for repair, please contact the Warranty Campaigns Department at (800) 547-0712, 7:00 a.m. to 4:00 p.m. Pacific Time, Monday through Friday, e-mail address WarrantyCampaigns@freightliner.com,or the Customer Assistance Center at (800) FTL-HELP or (800) STL-HELP, after normal business hours. You may also wish to submit a complaint to the Administrator, National Highway Traffic Safety Administration, 400 7th Street SW, Washington, DC 20590; or call the Vehicle Safety Hotline at (888) 327-4236 (TTY: 800-424-9153); or to http:llwww.safercar.gov. If your vehicle is involved in the Canadian portion, you may wish to notify Transport Canada, ASFAD, Place de Ville Tower C, 330 Sparks Street, Ottawa, ON K1A 0N5, or phone (800) 333-0510.

We regret any inconvenience this action may cause but feel certain you understand our interest in motor vehicle safety.

WARRANTY CAMPAIGNS DEPARTMENT

Enclosure

FREIGHTLINER LLC
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Work Instructions

Subject: Front Axles with Pro-Torq Spindle Nuts

Models Affected: Specific Freightliner Columbia vehicles with front axles assembled by **ArvinMeritor** between November **2,2005,** and September 12, **2006.**

IMPORTANT: Replacement kits will not be used for this recall. Please use the parts listed in Table 1.

Bearing Replacement Procedure

1. Check the base label (Form WAR259) for a completion sticker for FL484 (Form WAR260) indicating this work has been done. The base label is usually located on the passenger-side door about 12 inches (30 cm) below the door latch. If a sticker for FL484 is present, nothing further needs to be done. If no sticker is present, go to the next step.
2. Shut down the engine, set the parking brake, and chock the tires.

⚠ WARNING

Never work under a vehicle that is supported only by a jack. Jacks can slip, resulting in serious **personal** injury or death. Always use safety stands to support the vehicle when working under it.

3. Raise the front of the vehicle until the tires clear the ground. Then place safety stands under the axle.
4. Back off the slack adjusters to release the front-axle brake shoes.
5. Remove the wheel-and-tire assemblies.

⚠ WARNING

Breathing brake lining dust (asbestos or **non-asbestos)** could cause lung cancer or lung disease. OSHA has set maximum levels of exposure and requires workers to wear an air purifying respirator approved by MSHA or NIOSH. Wear a respirator at all times when servicing the brakes, starting with removal of the wheels and continuing through assembly.

6. On one side of the vehicle, remove the brake drum.
7. Place a basin under the hub to catch any oil.
8. Remove the capscrews, washers, and hubcap. Remove and discard the hubcap gasket.
9. Compress the lockring, then remove the Pro-Torq retaining nut. See Fig. **1**.
10. Cover the axle spindle threads with tape to protect them.
11. Remove the hub, bearings, and oil seal as a unit from the axle. Be careful not to damage the axle spindle threads.
12. If the oil seal or any part of it is still on the axle spindle, remove it. Discard the inner and outer wheel bearings.
13. Check the inside of the hub for any metal particles or shavings. Completely remove any metal particles, and clean the inside of the hub as needed.

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14. Install the new oil seal in the hub

    14.1 Seat the small outside edge of the seal in the recess of the tool adapter. See Fig. 2. The correct adapter is identified on the box.

    14.2 Insert the centering plug of the tool in the bore of the inner bearing cone. See Fig. 3. The plug prevents cocking of the seal in the bore.

    14.3 Hold the tool handle firmly, and strike it until the sound of the impact changes as the seal bottoms out. See Fig. **4.** Hold the tool firmly to avoid bounce or unseating of the seal from the adapter.

    14.4 After the seal is bottomed in the bore, check for freedom of movement by manually moving the interior rubber part of the seal back and forth. A slight movement indicates a damage-free installation.

15. Wipe a film of axle oil on the axle spindle to prevent rust from forming behind the inner wheel bearing

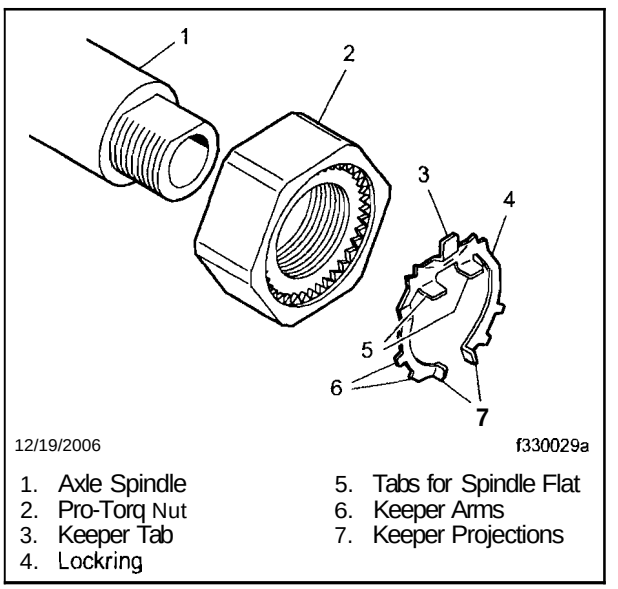
16. Install the new inner wheel bearing in the hub.

17. Carefully mount the hub, inner wheel bearing assembly, and oil seal on the axle spindle. Be careful not to unseat the inner wheel bearing or seal.

⚠ CAUTION

Do not remove the outer wheel bearing once the hub is installed on the axle. Removing the outer bearing could cause the oil seal to become misaligned, which could cause damage to the wheel bearings, the hub, and the axle spindle.

18. Remove the tape from the axle spindle threads.



1. Axle Spindle
2. Pro-Torq Nut
3. Keeper Tab
4. Lockring
5. Tabs for Spindle Flat
6. Keeper Arms
7. Keeper Projections

Fig. **1,** Pro-Torq Retaining Nut

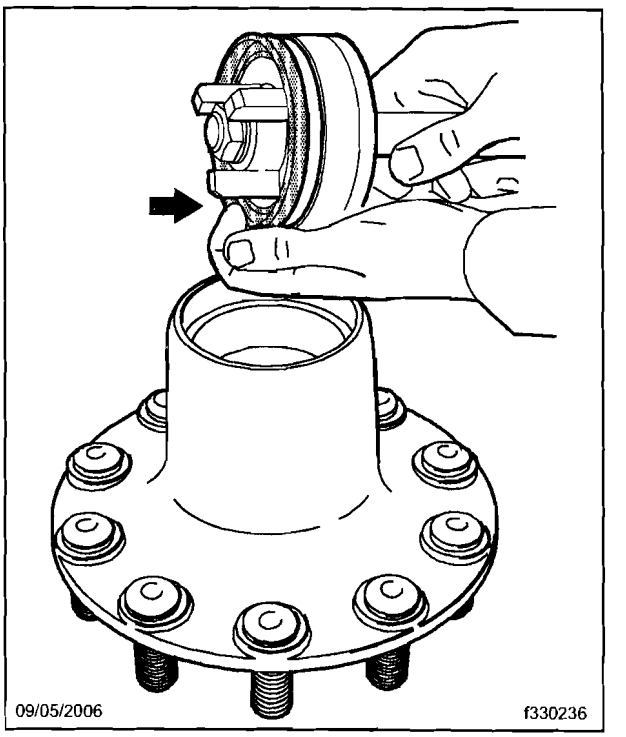


Fig. 2, Placing the Seal on the Installation Tool

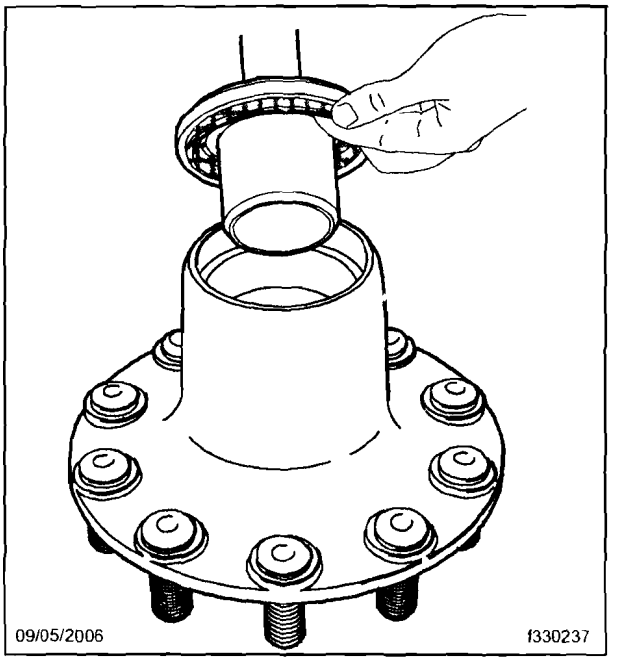


Fig. 3, Inserting the Tool in the Hub Bore

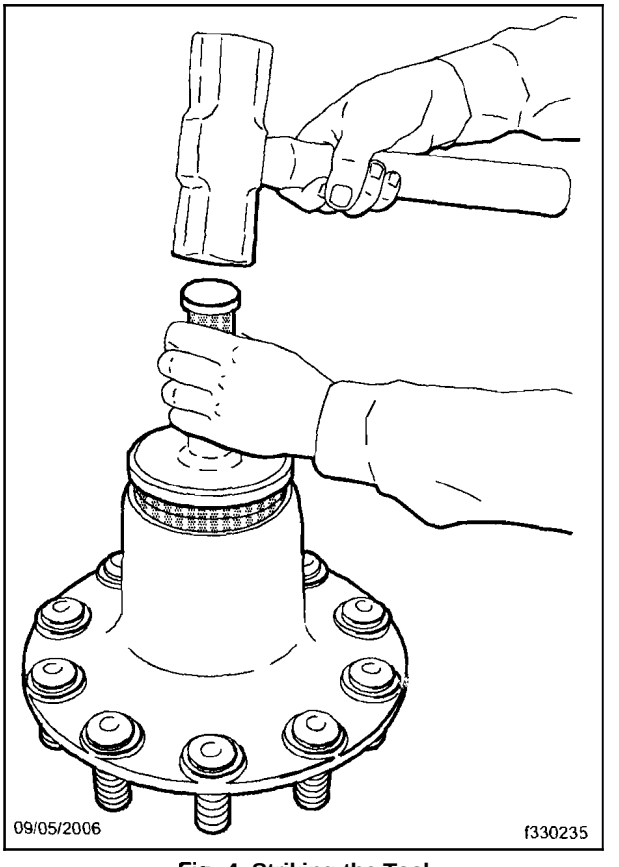


Fig. 4, Striking the Tool

19. Fill the hub cavity with oil, then install the new outer wheel bearing; handle the bearings with clean, dry hands. Use care not to damage the bearings as they are seated in the bearing cups.
20. Install the Pro-Torq nut and tighten it 90 to 110 lbf·ft (122 to 149 N·m) while rotating the hub. Back off the nut one-half turn to achieve zero torque.
21. Install the brake drum, then rotate the wheel once to make sure there is sufficient clearance between the drum and the brake shoes. Any brake shoe drag will affect the wheel bearing adjustment.
22. Tighten the Pro-Torq nut 90 to 110 lbf·ft (122 to 149 N·m).
23. Back off the nut one-quarter turn. Rotate the hub and drum a few turns,
24. Hold the lockring with the keeper projections facing outboard. See Fig. 5.
25. Insert the keeper tab in the undercut groove of the Pro-Torq nut, while pressing the keyway tabs on the flat surface of the axle spindle, engaging the mating teeth.

⚠ CAUTION

Do not use pliers or similar devices on the keeper projections to compress the lockring. This could result in damage or breakage of the lockring.

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26. Insert a screwdriver, or similar tool, in the undercut groove of the nut, between the keeper arms. See **Fig. 6.** Using the tool, compress the lockring to lock in place.

    Using the screwdriver, press around the edges of the lockring to be sure it is locked in place. See **Fig. 7**.

27. Using a new gasket, install the hubcap.

CAUTION

Make sure the hubs are filled **with oil. Driving with hubs dry will cause bearing damage.**

28. Fill the hub with fresh oil to the level shown on the hubcap. Do not overfill.
29. Repeat the entire hub replacement procedure on the other side of the vehicle.
30. Install the wheel-and-tire assemblies.

    Tighten the wheel nuts 450 to 500 lbf·ft (610 to 678 N·m).

31. Raise the vehicle, remove the safety stands, then lower the vehicle.

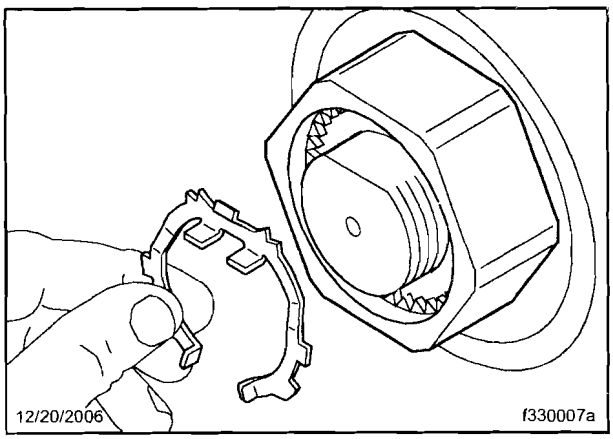

Fig. 5, Lockring Position

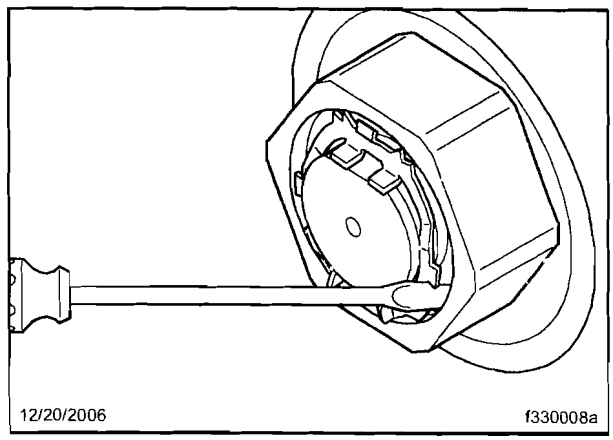

Fig. 6, Compressing the Lockring

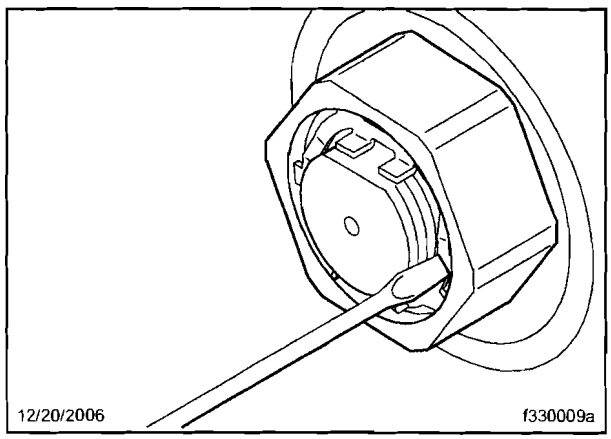

Fig. 7, Making Sure the Lockring is Locked

32. Clean a spot on the base label (Form WAR259). Write the recall number, FL484, on a blank red completion sticker (Form WAR260) and attach it to the base label.