

**FREIGHTLINER**  
LLC

North America's leading commercial vehicle manufacturer

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**Timothy Blubaugh**  
Director  
Government Technical Affairs

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January 26, 2007

Dan Smith  
Associate Administrator for Vehicle Safety  
National Highway Traffic Safety Administration  
400 Seventh Street, S.W.  
Washington, D.C. 20590

**Re: Defect Information Report (FL-484), NHTSA 06V-424, Supplemental No.: 2  
Pro Torq Spindle Nut Adjustment with Non-preset Front Hubs**

Mr. Smith:

In accordance with Part 573 of Title 49 of the Code of Federal Regulations, Freightliner LLC herewith submits supplemental defect information concerning **xxx** description **xxx**.

(c)(1) **Manufacturer: FREIGHTLINER LLC**  
P.O. BOX 3849  
Portland, Oregon 97208  
(503) 745-5219

(c)(3) **Total number of vehicles potentially affected: one**

(c)(9) **Copies of documents to be distributed to dealers and owners are enclosed.**  
Communications sent to dealers: posted January 13, 2007  
Communications sent to owners: mailed January 22, 2007

Please contact me if you have any questions.

Sincerely yours.

  
Timothy Blubaugh

Cc: Michael Mason, CAL-OSHA  
Certified Mail#70023150000414054486

North America's leading commercial vehicle manufacturer

## 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.

### General Information

Freightliner LLC, on behalf of its Freightliner Trucks Division, has decided that a defect which relates to motor vehicle safety exists on the vehicles mentioned above.

There are 16 vehicles involved in this campaign.

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 assembly to separate from the vehicle, resulting in a possible vehicle crash without prior warning.

The front axle wheel bearings will be replaced.

#### Additional Repairs

Dealers must complete all outstanding recall and field service campaigns prior to the sale or delivery of a vehicle. A Dealer will be liable for any progressive damage that results from its failure to complete campaigns before sale or delivery of a vehicle.

Owners may be liable for any progressive damage that results from its failure to complete campaigns within a reasonable time after receiving notification.

### Work Instructions

Please refer to the attached work instructions. Prior to performing the campaign, check the vehicle for a completion sticker (Form WAR260).

### Replacement Parts

Replacement kits are now available and can be obtained by ordering the kit number(s) listed below from your facing Parts Distribution Center.

If our records show your dealership has ordered any vehicles involved in campaign number FL484A, a list of the customers and vehicle identification numbers will be available on [AccessFreightliner.com](http://AccessFreightliner.com). Please refer to this list when ordering parts for this recall.

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

# Recall Campaign



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

Table 1 - Replacement Parts for FL484A

Campaign Number	Part	Part Description	Part Number	Qty. Needed Per Vehicle	Suggested Wholesale Ea *
FL484A	Bearings	Cone-Bearing Inner 2.625 X 1.500	SBN HM212049	2 ea	\$13.47 U.S. \$19.03 CAN
		Cup-Inner	SBN HM212011	2 ea	\$6.88 U.S. \$11.62 CAN
		Cone-Bearing Outer 1.750 X 1.187	SBN 3782	2 ea	\$11.70 U.S. \$7.29 CAN
		Cup-Outer	SBN 3720	2 ea	\$3.37 U.S. \$5.27 CAN
	Seals	Wheel Seal	CHR 537065 10	2 ea	\$20.88 U.S. \$27.15 CAN
	Gaskets	Hub Cap Gasket	CHR 453869	2 ea	\$.85 U.S. \$1.29 CAN
	Lubricant	80W-90 Gear Oil 75W-90 Synthetic Gear Oil	N/A	Up to 2 quarts per vehicle	N/A

\* Please charge all Direct Warranty Customers the above-listed price for the kit, as they are authorized to perform their own Recalls.

Table 1

## Removed Parts

Please follow Warranty Failed Parts Tracking shipping instructions for the disposition of all removed parts.

## Labor Allowance

Table 2 - Labor Allowance

Campaign Number	Procedure	Time Allowed (hours)	SRT Code	Damage Code
FL484A	Replace front axle wheel bearings on both sides.	2.1	996-0698A	000-Modifiedx

Table 2

IMPORTANT: When the recall has been completed, locate the base completion label in the appropriate location on the vehicle, and attach the red completion sticker provided in the recall kit (Form WAR260). If the vehicle does not have a base completion label, clean a spot on the appropriate location of the vehicle and first attach the base completion label (Form WAR259). If a recall kit is not required or there is no completion sticker in the kit, write the recall number on a blank sticker and attach it to the base completion label.

## Claims for Credit

You will be reimbursed for your parts, labor, and handling by submitting your claim through the Warranty system within 30 days of completing this campaign. Please reference the following information in QuickClaim®:

- Claim type is Recall
- In the FTL Authorization field, enter the campaign number and appropriate condition code (**FL484**).
- In the Primary Failed Part Number field, enter 25-FL484-000.
- In the Parts field, enter the appropriate part number(s) as shown in the Replacement Parts Table. IMPORTANT: Replacement kits will not be used for this recall. Please use the parts listed in Table 1 above.
- In the Labor field, first enter the appropriate SRT from the Labor Allowance Table. For administrative time, enter SRT 939-0010A 0.3 hours.

# Recall Campaign

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**IMPORTANT:** ServicePro® must be viewed prior to performing the recall to ensure the vehicle is involved and the campaign has not been previously completed. Also, check for a completion sticker prior to beginning work.

Contact the Warranty Campaigns Department at (800) 547-0712, from 7:00 a.m. to 4:00 p.m. Pacific Time, Monday through Friday, Web inquiry at [AccessFreightliner.com/Support/SubmitanInquiry](http://AccessFreightliner.com/Support/SubmitanInquiry), or the Customer Assistance Center at (800) **385-4357**, after normal business hours, if you have any questions or need additional information.

To return excess kit inventory related to this campaign, U.S. dealers must submit a Parts Authorization Return (PAR) to the Memphis PDC. Canadian dealers must submit a PAR to their facing PDC. All kits must be in resalable condition. PAR requests must include the original purchase invoice number.

The letter notifying vehicle owners is included for your reference.

Please note that the National Traffic and Motor Vehicle Safety Act, as amended (Title 49, United States Code, Chapter 301), requires the owner's vehicle(s) be corrected within a reasonable time after parts are available to you. The Act states that failure to repair a vehicle within 60 days after tender for repair shall be prima facie evidence of an unreasonable time. However, circumstances of a particular situation may reduce the 60 day period. Failure to repair a vehicle within a reasonable time can result in either the obligation to (a) replace the vehicle with an identical or reasonably equivalent vehicle, without charge, or (b) refund the purchase price in full, less a reasonable allowance for depreciation. The Act further prohibits dealers from selling a vehicle unless all outstanding recalls are performed. Also, any lessor is required to send a copy of the recall notification to the lessee.

# Recall Campaign



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 with 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 assembly to 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.com](http://www.FreightlinerTrucks.com) or 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 defect 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](mailto: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://www.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

## 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.

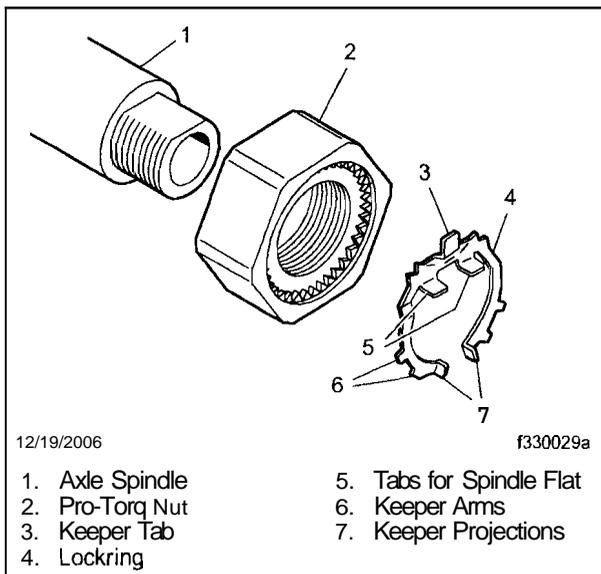


Fig. 1, Pro-Torq Retaining Nut

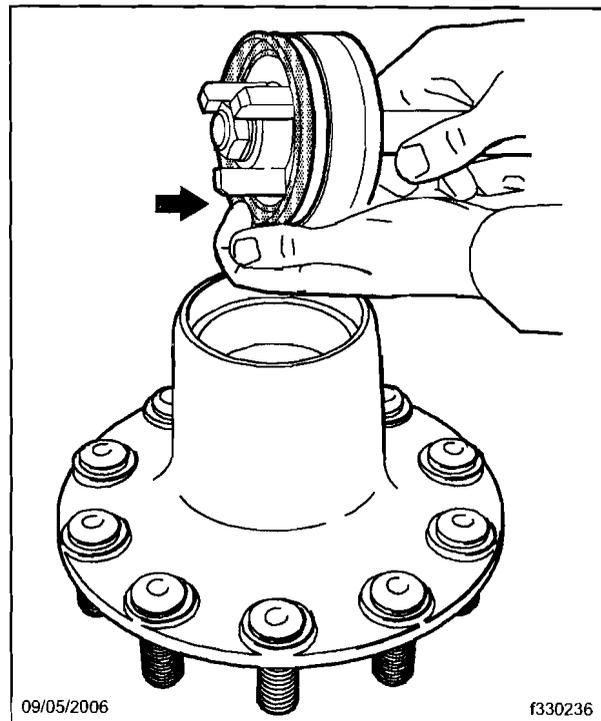


Fig. 2, Placing the Seal on the Installation Tool

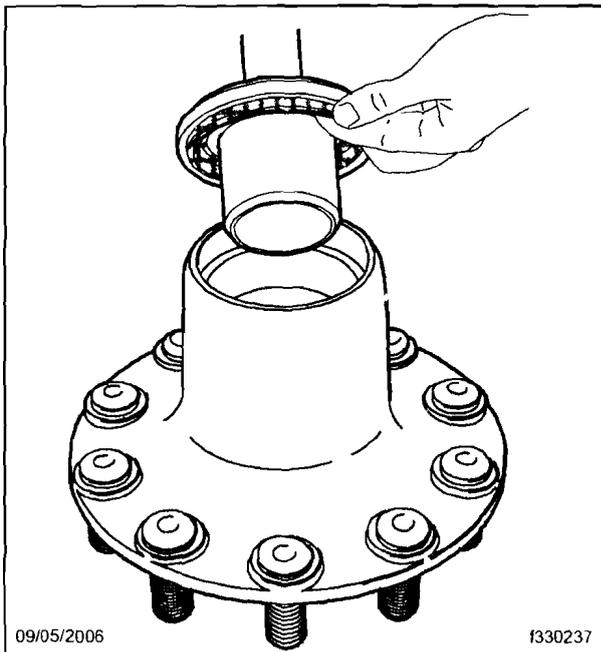


Fig. 3, Inserting the Tool in the Hub Bore

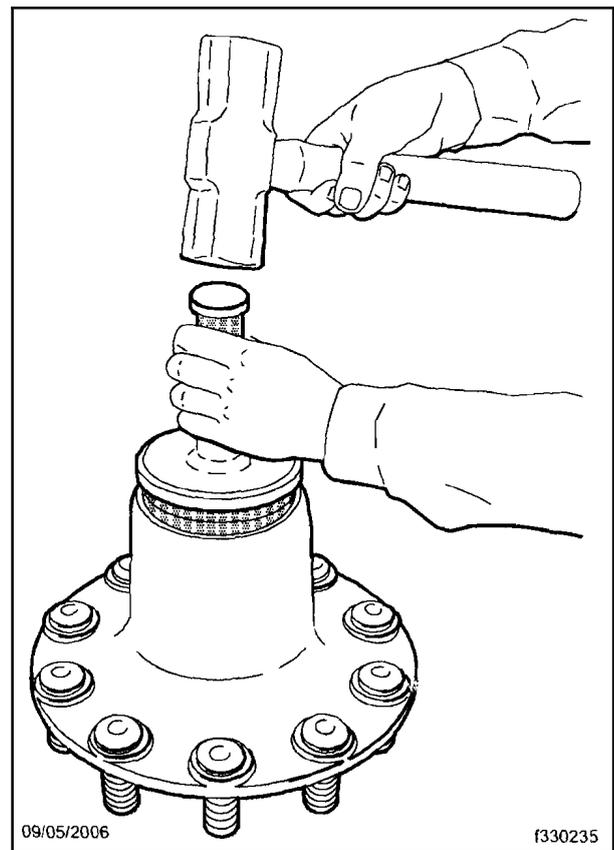


Fig. 4, Striking the Tool

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 locking 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.

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**CAUTION**

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

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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 locking to lock in place.

Using the screwdriver, press around the edges of the locking 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.**

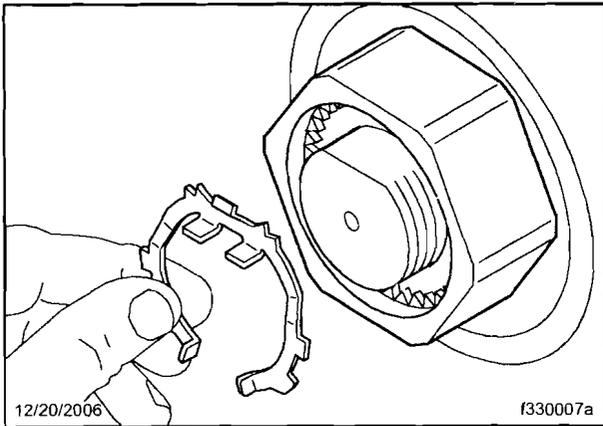
28. Fill the hub with fresh oil to the level shown on the hubcap. Do not overfill.

29. Repeat the entire hub replacement procedure on the other side of the vehicle.

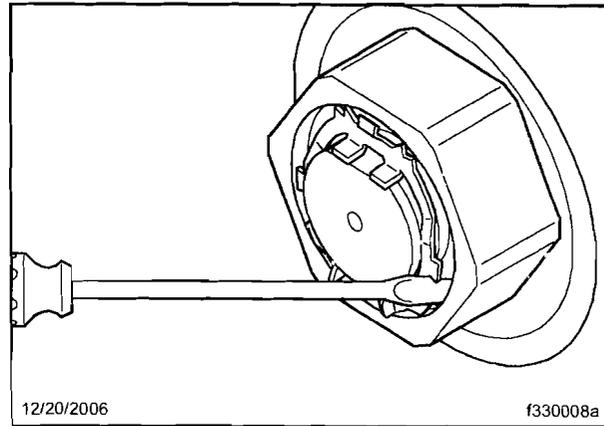
30. Install the wheel-and-tire assemblies.

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

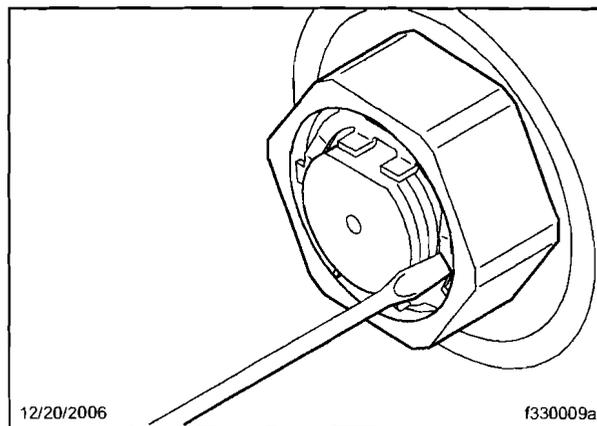
31. Raise the vehicle, remove the safety stands, then lower the vehicle.



**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.