MACK TRUCKS, INC.
2100 MACK BOULEVARD
P.O. BOX M
ALLENTOWN, PA 18105-5000

July 13, 2005

TO: DISTRIBUTOR PRINCIPALS
SERVICE MANAGERS

SUBJECT: Vehicle Safety Recall - SC0293
FXL Axle Dust Shield Bolt Interference - CXN model

On Mack CXN model vehicles manufactured from July 2004 through February 2005 equipped with the FXL axle, and Meritor 16.5 x 5 brakes with dust shields, there exists an interference between a dust shield mounting bolt and the knuckle on the front axle. As a result of the interference, the bolt joint between the brake spider and knuckle may not meet the design specified torque. This may result in vibration and/or a brake performance issue.

Approximately 280 vehicles (39 US, 78 Canada, 163 Export) are involved in this safety recall.

A copy of the service bulletin covering the repair instructions and procedures is enclosed.

It is important that preparation be made immediately to assure prompt inspection and/or correction of all vehicles involved. The National Traffic and Motor Vehicle Safety Act and Canadian Motor Vehicle Safety Act requires dealers to insure that all new and used vehicles are free of safety defects and comply with all relevant safety standards at the time of delivery to the consumer. All Safety Recalls, which affect new or used inventory, must be performed before the vehicle is sold or leased. Please refer to Service Operations Service Letter #SL-004-001 dated 11/19/92 regarding the aforementioned amendment.

Please note that Dealers are responsible for performing the recall on all vehicles subject to the recall at no charge to the owner regardless of mileage, age of vehicle, or ownership from this time forward. Additionally, the National Traffic and Motor Vehicle Safety Act requires that the owner's vehicle(s) be corrected within a reasonable time after parts are available to the Dealer. The law states that failure to repair a vehicle within (60) days after tender for repair shall be a prima facia evidence of unreasonable time. However, circumstances of a particular situation may reduce the sixty (60) day period. If the vehicle is not repaired within a reasonable time, the vehicle owner may be entitled, without charge, to a reasonable equivalent vehicle or refund of the purchase price, less reasonable allowances for depreciation.

Please use the enclosed Notice of Mandatory Safety Campaign card(s) to report sold or transferred trucks. Make sure these cards are returned to us and not directly to the customer or to another dealer. A notice of the recall will be mailed to all identified registrants of affected vehicles. To avoid warranty denial of your claim for reimbursement of expenses connected with this recall, first, make sure the truck presented for the recall work is on your list. If not, check for the recall authorization on the MACKnet chassis inquiry. Also, check that another Mack dealer has not previously completed the recall.

Mack Trucks, Inc., recommends a follow-up by telephone or a personal visit, of all owners of vehicles subject to the recall who fail to bring the vehicle(s) in for repair. Your District Service Manager will be contacting you to assure that this recall attains the visibility we feel is necessary to ensure 100% completion. Please be prepared to review your progress and/or any problems associated with the recall.

If you have any questions about this recall, which may not have been covered in this letter or enclosures, please contact the Regulatory Compliance Adminstrator by calling (336) 393-2233.

Very truly yours,

MACK TRUCKS, INC.

Enclosures: Customer Notice
Service Bulletin
Notification Cards

VEHICLE RECALL

SC293

(Not applicable to Mack Trucks Australia)

Date: 08/08/05

To: All MACK Dealers

Subject: Interference Condition Between Front Axle Brake Dust Shield Mounting Bolt and Lower King Pin Boss — CXN Model Chassis with FXL12 or FXL14.6 Front Steer Axle and 16.5" x 5" Brakes

Information:

It has been determined that on certain CXN model chassis equipped with either an FXL12 or FXL14.6 front axle and ArvinMeritor 16.5" x 5" brakes, the front axle brake dust shield mounting bolt may interfere with the lower king pin boss. To eliminate the interference, revised dust shields (part Nos. 8235-3264D1486, left-hand shield, and 8235-3264C1485, right-hand shield) must be used to replace the existing shield on all affected chassis. The revised dust shields have cutouts in the area of the lower mounting bolt.

Approximately 280 CXN model chassis manufactured between July 16, 2004 and July 14, 2005 are involved in this campaign. A list of affected chassis has been sent to all affected dealers.

Procedures:

NOTE

Before proceeding, check the campaign status in the MACKnet system to see if the campaign has already been completed. Campaign status can also be checked by looking at the Campaign Completion Label located on the lower edge of the passenger-side door. If the campaign has been completed, the campaign number (SC293) and the completion date should be written on the label.

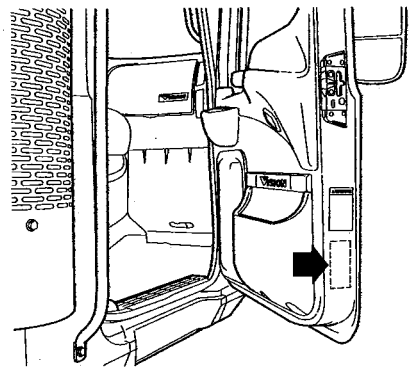

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Figure 1 — Campaign Label Location

The following procedures are used to remove and reinstall the front axle dust shields.

1. Secure the chassis for service, apply the parking brakes and place blocks at the rear wheels to prevent the vehicle from moving.
2. Remove the wheel, tire and front hub assembly as follows:
   a. Back off the slack adjuster to provide clearance between the brake shoes and brake drum to facilitate removal of the drum. Refer to the *Air and Brake System Service Manual,* 16-104, for information on backing off the slack adjuster.
   b. Position a wheel dolly under the front wheel.
   c. Remove the ABS sensor from the steering knuckle assembly by first pulling the sensor wire retainer from its mounting hole in the knuckle, and then pull the sensor from the sensor mounting hole and clip. After removing the sensor, remove the sensor retaining spring clip.

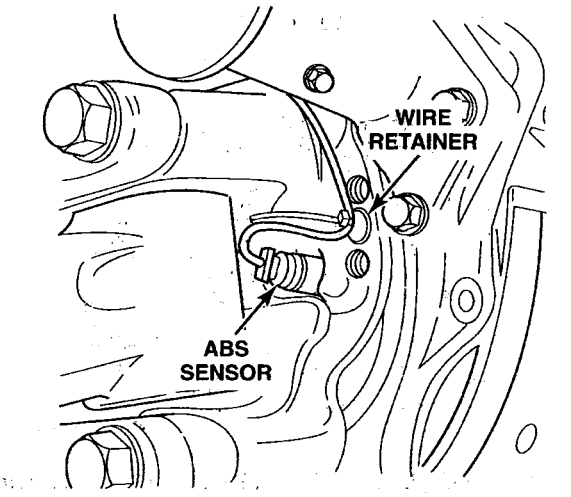

Figure 2 — ABS Sensor

   d. Using hubcap removal/installation tool J 45996, remove the hubcap.
   e. Raise the vehicle so that the front wheels are off the ground, and then position heavy-duty jackstands under the front axle beam on both side of the chassis.

⚠ DANGER

Do not work on or around a vehicle that is supported only by a hydraulic jack, as the jack can fail suddenly and unexpectedly, resulting in serious personal injury or death. Use jackstands of adequate capacity to support the weight of the vehicle.

f. Remove the snap ring from the axle spindle using a suitable snap ring pliers.

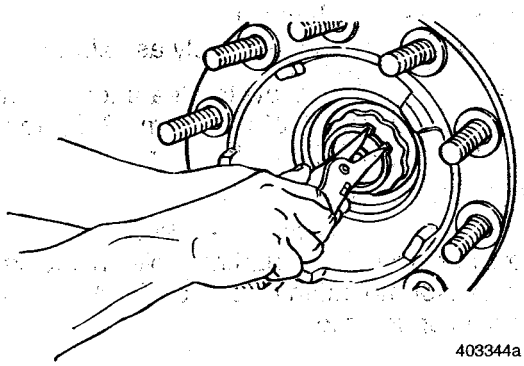

Figure 3 — Removing Snap Ring (Shown with Wheel Removed)

g. Remove the locking plate from the spindle.

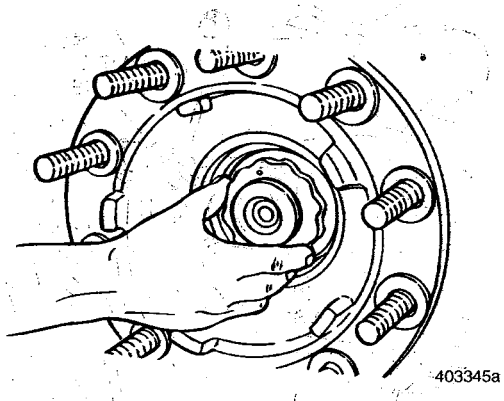

Figure 4 — Removing Locking Plate (Shown with Wheel Removed)

h. Using a 70 mm socket (OTC tool No. 1953M), extension and handle, remove the hub nut.

i. Using hand pressure, remove the "D"-shaped washer.

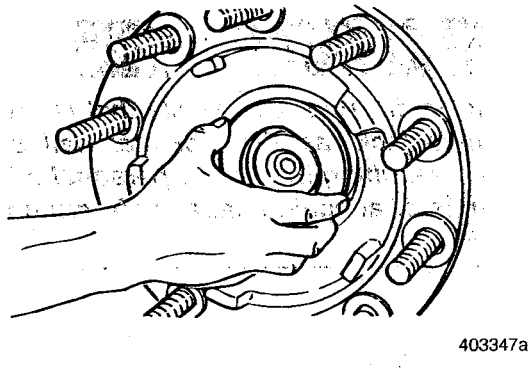

Figure 5 — Removing "D" Washer (Shown with Wheel Removed)

j. Using the wheel dolly, remove the wheel, tire and hub assembly from the axle spindle.

3. Remove the brake assembly as follows:

NOTE

Before removing the brake assembly, make sure that the ABS sensor has been removed from the steering knuckle.

a. Disconnect the air line from the brake chamber.

b. Secure the brake assembly to a hoist or other suitable lifting device.

c. Using a 20 mm Torx® socket, remove the eight capscrews that secure the brake assembly to the steering knuckle.

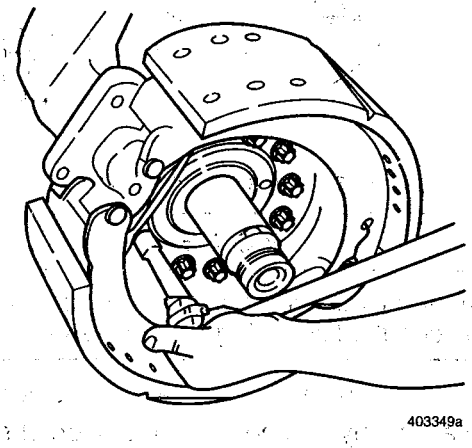

Figure 6 — Removing Brake Assembly Capscrews

d. While supporting the brake assembly with the lifting device, carefully remove the assembly complete with the spider assembly.

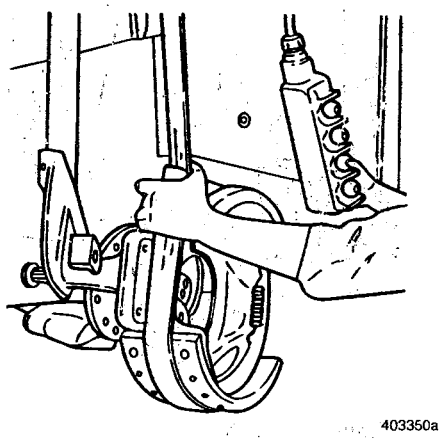

Figure 7 — Removing Brake Assembly

4. Remove the existing dust shield from the spider.
5. Install the replacement dust shield (part Nos. 8235-3264D1486, left-hand side, and 8235-3264C1485, right-hand side) using five fasteners. Do not install a fastener in the bottom of the dust shield where it would contact the lower king pin boss.

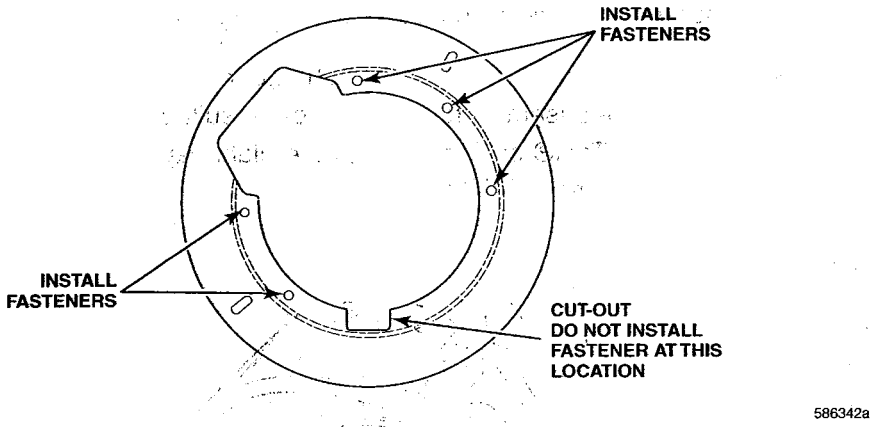

Figure 8 — Dust Shield Installation

NOTE

The replacement dust shields are designed to provide adequate clearance between the lower king pin boss and the shield.

6. After the dust shield has been installed, reinstall the brake assembly as follows:
   a. Secure the brake assembly to a hoist or other type of suitable lifting device.

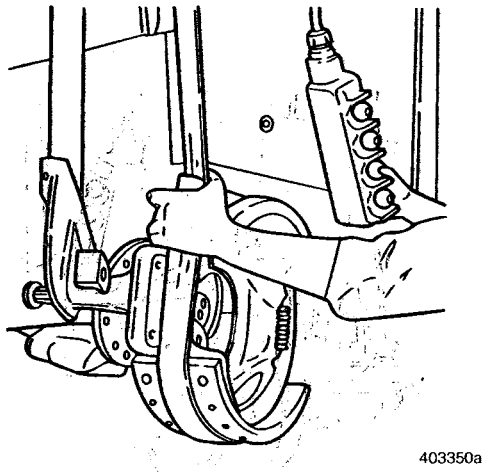

Figure 9 — Lifting Brake Assembly

b. Position the brake assembly on the steering knuckle and align the mounting holes in the spider with the mounting holes in the knuckle.

c. Install the eight capscrews securing the brake assembly to the steering knuckle. Using an alternating criss-cross pattern, tighten the eight capscews to 151–181 lb-ft (205–245 N•m).

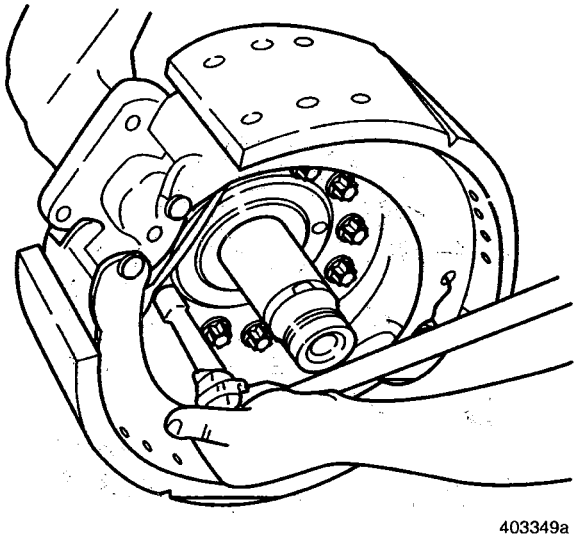

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Figure 10 — Tightening Brake Assembly Capscrews

d. Connect the air line to the brake chamber.

7. Install the wheel, tire and hub assembly as follows:

a. Apply a light coating of special spindle grease (part No. 6000-1161247) to the axle spindle.

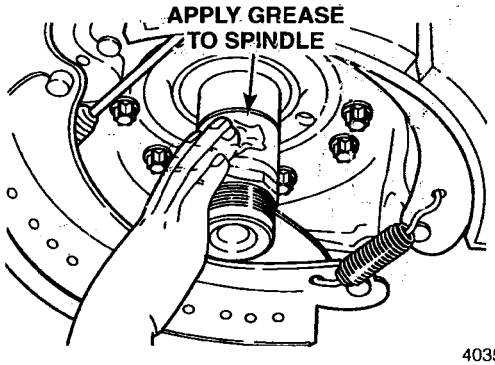

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Figure 11 — Applying Grease to Spindle

⚠ CAUTION

The spindle must be lightly coated with special spindle grease (part No. 6000-1161247) prior to installation of the hub assembly. DO NOT use regular MG-C chassis grease.

b. Install a new O-ring (part No. 530AM5) in the groove at the back of the wheel hub. Use a small amount of the special spindle grease to hold the O-ring in place if necessary.

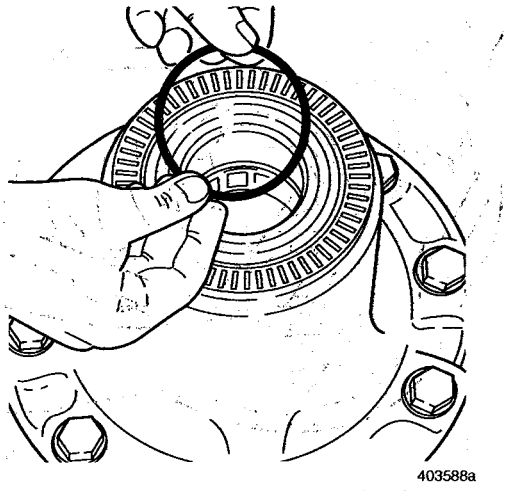

Figure 12 — Installing O-Ring in Hub Assembly

c. Using a wheel dolly, slide the wheel, tire and hub assembly onto the axle spindle as far as it will go (until the inner bearing of the hub contacts the knuckle flange).

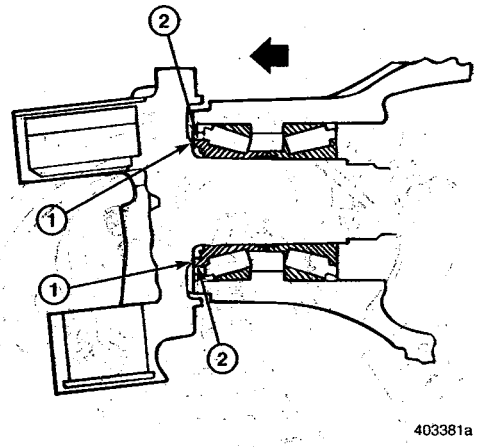

Figure 13 — Wheel Hub Installation

1. Knuckle Flange	2. Inner Bearing

d. Install the "D" washer and a new hub nut (part No. 153AM5). Hand-tighten the nut.

⚠ CAUTION

Always use a new hub nut when installing the hub assembly.

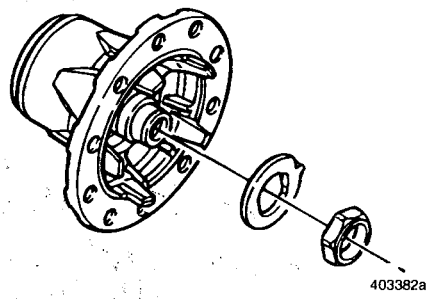

Figure 14 — Installing "D" Washer and Hub Nut

e. Using a 70 mm socket (OTC tool No. 1953M), tighten the hub nut to 89–133 lb-ft (120–189 N•m).

f. Rotate the wheel 20 revolutions in either direction.

g. After rotating the wheel 20 revolutions, tighten the nut to 664–811 lb-ft (900–1100 N•m). It is important to support the torque wrench with a jackstand to stabilize the wrench while applying this relatively high torque value. If using a dial-type torque wrench, have an assistant observe the reading on the dial while torque is being applied.

NOTE

With unitized hub assemblies, bearing end play adjustment is not necessary. Tightening the hub nut to the proper torque value ensures proper end play.

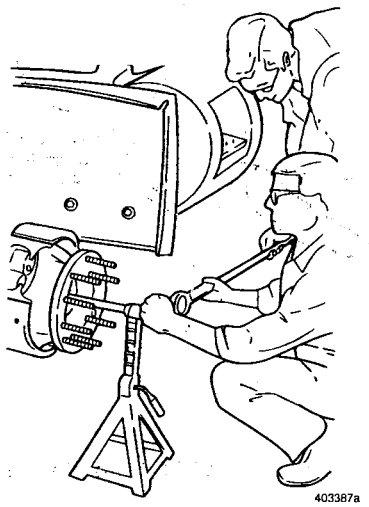

Figure 15 — Final Hub Nut Tightening (Shown with Wheel Removed)

h. Install the lock plate by indexing the plate around the hub until the plate aligns with the flats of the nut. The lock plate must not be forced over the nut. Install the snap ring. The lock plate and snap ring are properly installed when the snap ring rotates freely in the snap ring groove.

⚠ CAUTION

Do not hammer on the lock plate. Rotate the snap ring to ensure engagement.

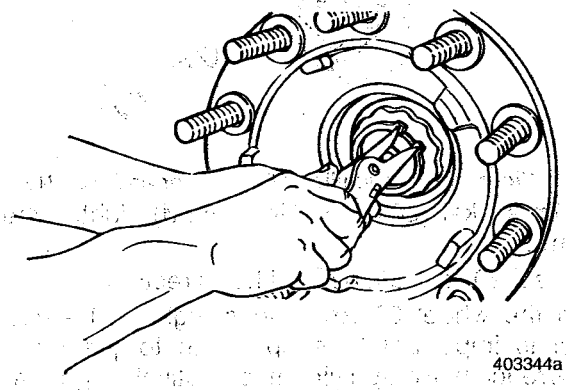

Figure 16 — Installing Snap Ring (Shown with Wheel Removed)

i. Install a new O-ring (part No. 6000-3197784) in the hubcap and coat with MG-C grease.

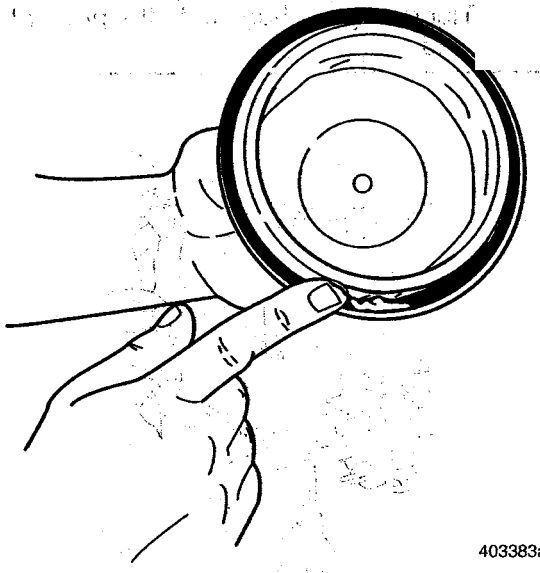

Figure 17 — Applying MG-C Grease to Hubcap O-Ring

j. Install the hubcap and hand-tighten.

k. Apply Never-Seize® or equivalent, to a new ABS sensor retaining spring clip (part No. 745-801534), and then install the retaining spring clip into the ABS sensor hole located on the forward edge of the steering knuckle.

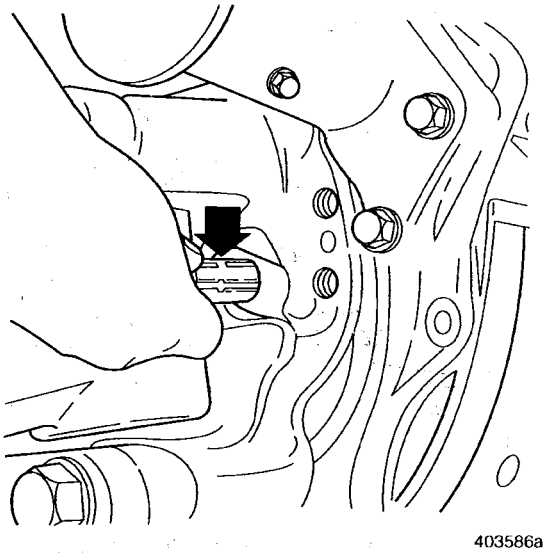

Figure 18 — Installing ABS Sensor Retaining Clip

l. Install the ABS sensor until it fully engages the spring clip.

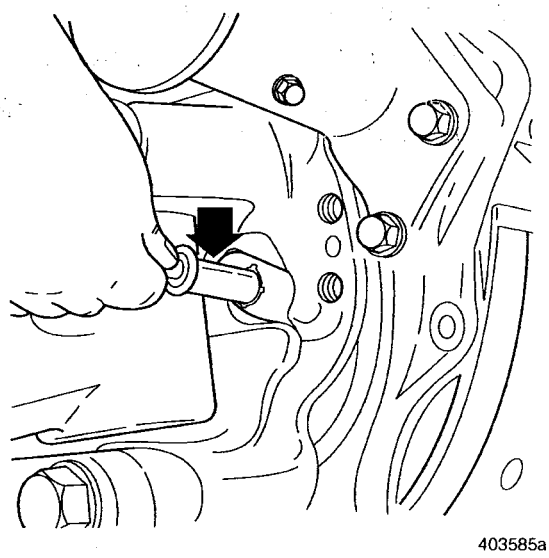

Figure 19 — Installing ABS Sensor

m. Insert the ABS sensor wire retainer into the hole located above and forward of the ABS sensor hole

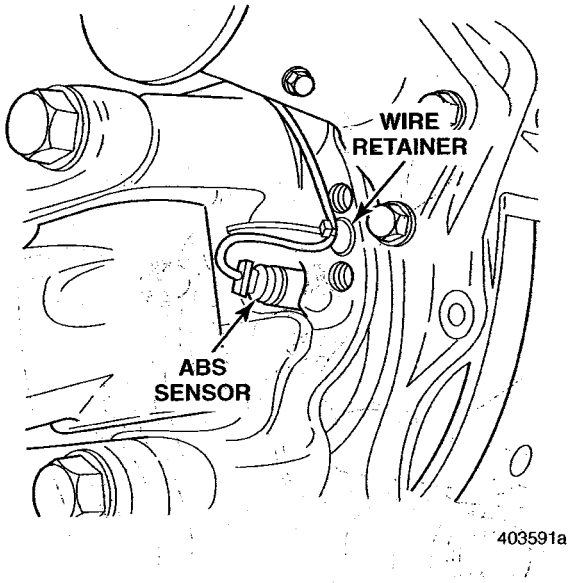

Figure 20 — ABS Sensor Wire Retainer

8. Repeat the above procedures for the opposite side of the vehicle.
9. Lubricate the brake cam tubes and slack adjusters on both sides of the chassis with MG-C grease.
10. Adjust the front brakes. For detailed information on brake adjustment procedures, refer to the *Air and Brake System Service Manual,* 16-104.
11. Remove the jackstands and lower the vehicle to the ground.
12. Using the hubcap removal/installation tool, tighten the hubcaps to 159–210 lb-ft (215–285 N•m) on both sides of the chassis.

NOTE

To signify that the campaign has been completed, use a permanent-type marker (such as a Sharpie®) to write the campaign number (SC293) and completion date in the spaces provided on the Campaign Completion label located on the lower edge (below the door latch) of the passenger-side door. If a label is not already affixed to the door, apply a label (part No. TS897) and supply the information as required. Campaign Completion labels are available in packs of 50 and can be ordered by faxing a completed BR313 to Pacesetters Business Services at 610-264-9465.

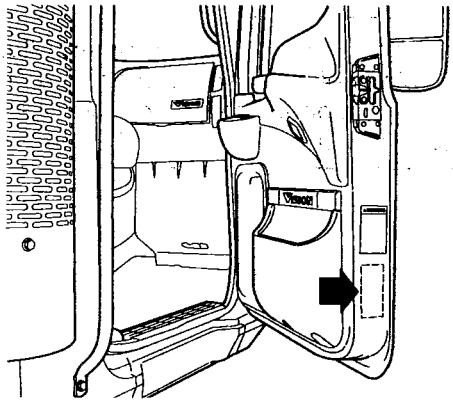

Figure 21 — Campaign Label Location

Required Parts:

Order vehicle recall parts on a separate stock order and process through the parts distribution center normally serving your area. Do not include parts on this requisition that are not required for this recall campaign.

International orders are to be prefixed — V.O.R.

Qty.	Part No.	Description
1	8235-3264D1486	Dust shield, front axle brake, left-hand side
1	8235-3264C1485	Dust shield, front axle brake, right-hand side
*	6000-1161247	Special spindle grease
2	530AM5	O-ring, front hub
2	6000-3197784	O-ring, hubcap
2	153AM5	Hub nut
2	745-801534	Retainer spring clip, ABS sensor

* Supplied in 1.1 lb. (500 g) containers)

Removed Parts:

The removed dust shields can be scrapped locally.

Reimbursement:

Campaign expenses are to be recovered through normal warranty claim procedures. Enter the following information on the warranty claim:

UNDER	ENTER	
Failed Part No.	SC293	
Labor Code/Allowance	512 5A YJ 95— 0.2 hr.	Time allowed to take charge of vehicle and determine campaign status.
	512 5B YJ 95 — 3.2 hrs.	Time allowed to remove and replace front axle brake dust shields on left- and right-hand sides of chassis and adjust front axle brakes. Does not include "take-charge" time.

NOTE

As required by Federal Motor Vehicle Safety Standards 49 CFR 573.11, no vehicle subject to an open safety campaign shall be delivered to the customer until such time as the defect or noncompliance is remedied.