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SERVICE PROCEDURE

14501

MARCH 2014

SUBJECT: SAFETY RECALL

S-Cam tube bracket on certain LoneStar[®], PayStar[®], ProStar[®], WorkStar[®], and 9900 models built 20 June 2011 thru 26 October 2012 with feature code 0504501, 0504504, or 0004EWM without feature code 0004WCS. Also certain LoneStar[®] and ProStar[®] models built 16 December 2011 thru 26 October 2012 with feature code 0004WCS.

DEFECT DESCRIPTION

The S-Cam tube bracket assemblies on steer axles may exhibit fractures between the wing bracket and the steel tube when mounted to stamped spiders. These fractures may cause an inoperative brake on the affected wheel end, resulting in an unexpected pull condition during braking application or an unexpected increase in stopping distance, which may contribute to a vehicle crash.

MODELS INVOLVED

This Safety Recall involves certain LoneStar[®], PayStar[®], ProStar[®], WorkStar[®], and 9900 models built 20 June 2011 thru 26 October 2012 with feature code 0504501, 0504504, or 0004EWM without feature code 0004WCS. Also certain LoneStar[®] and ProStar[®] models built 16 December 2011 thru 26 October 2012 with feature code 0004WCS.

PARTS INFORMATION – VEHICLES WITH REDUCED STOPPING DISTANCE (RSD) BRAKES (FEATURE CODES 0504501, 0504504, or 0004EWM)

NOTE: You will need one of 8900238R91 and either 8900239R91 or 8900240R91 depending on the axle type in the vehicle you are working on. Order 2511003C1 ONLY if the unit you are working on is equipped with dust shields.

Part Number	Part Description	Quantity
8900238R91	S-Cam Kit, Meritor Parts	1
8900239R91	Kit, Dana / Meritor Axle S-Cam Hardware	1 (As Required)
8900240R91	Kit, Hendrickson Axle S-Cam Hardware	1 (As Required)
2511003C1	Kit, Dust Shield (If vehicle is equipped)	1 (As Required)

8900238R91 S-Cam Kit, Meritor Parts contains the following parts:

Part Description	Quantity
Left Cast Spider	1
Right Cast Spider	1
Left Brake Chamber Bracket	1
Right Brake Chamber Bracket	1
Screw, Cap	8
Clip, Spring	2
Clip, Spring	2
Spring, Return	2
Spring, Retainer	4
O-ring, Spider	2

8900239R91 Kit, Dana / Meritor Axle S-Cam Hardware contains the following parts:

Part Description	Quantity
Hub Cap Gasket	2
Wheel Seal	2
Bolt, Hex	14
Washer, Special	14
Nut, Hex	14

8900240R91 Kit, Hendrickson Axle S-Cam Hardware contains the following parts:

Part Description	Quantity
Hub Cap Gasket	2
Wheel Seal	2
Washer, Special	14
Nut, Hex	8
Bolt	6
Bolt	8

PARTS INFORMATION – VEHICLES WITH RSD BRAKES WITH LX500 BRAKE ASSEMBLIES (FEATURE CODE 0004WCS)

NOTE: You will need one of 3756164C91 and 3756165C91 and either 8900239R91 or 8900240R91 depending on the axle type in the vehicle you are working on. Order 2511003C1 ONLY if the unit you are working on is equipped with dust shields.

Part Number	Part Description	Quantity
3756164C91	Left Side LX500 Brake Assy	1
3756165C91	Right Side LX500 Brake Assy	1
8900239R91	Kit, Dana / Meritor Axle S-cam Hardware	1 (As Required)
8900240R91	Kit, Hendrickson Axle S-cam Hardware	1 (As Required)
2511003C1	Kit, Dust Shield (If vehicle is equipped)	1 (As Required)
2024771C1	Clip, Spring	2
2024772C1	Clip, Spring	2

8900239R91 Kit, Dana / Meritor Axle S-Cam Hardware contains the following parts:

Part Description	Quantity
Hub Cap Gasket	2
Wheel Seal	2
Bolt, Hex	14
Washer, Special	14
Nut, Hex	14

8900240R91 Kit, Hendrickson Axle S-Cam Hardware contains the following parts:

Part Description	Quantity
Hub Cap Gasket	2
Wheel Seal	2
Washer, Special	14
Nut, Hex	8
Bolt	6
Bolt	8

SERVICE PROCEDURE

WARNING! PARK VEHICLE ON HARD FLAT SURFACE, TURN THE ENGINE OFF, SET THE PARKING BRAKE AND INSTALL WHEEL CHOCKS TO PREVENT THE VEHICLE FROM MOVING IN BOTH DIRECTIONS. FAILURE TO COMPLY MAY RESULT IN PROPERTY DAMAGE, PERSONAL INJURY, AND / OR DEATH.

WARNING! IF THE VEHICLE MUST BE RAISED, DO NOT WORK UNDER THE VEHICLE SUPPORTED ONLY BY JACKS. JACKS CAN SLIP OR FALL OVER, POTENTIALLY RESULTING IN PROPERTY DAMAGE, PERSONAL INJURY, AND / OR DEATH.

WARNING! ALWAYS WEAR SAFE EYE PROTECTION WHEN PERFORMING VEHICLE MAINTENANCE. FAILURE TO COMPLY MAY RESULT IN PERSONAL INJURY AND / OR DEATH.

WARNING! ALLOW COMPONENTS IN ENGINE COMPARTMENT TO COOL BEFORE SERVICING ENGINE OR VEHICLE. FAILURE TO COMPLY MAY RESULT IN PROPERTY DAMAGE, PERSONAL INJURY, AND / OR DEATH.

WARNING! FILL THE HUB WITH THE CORRECT AMOUNT OF LUBRICANT. FAILURE TO COMPLY COULD CAUSE PREMATURE FAILURE OF PRESET[®] HUB ASSEMBLY, AND COULD RESULT IN PROPERTY DAMAGE, PERSONAL INJURY, AND / OR DEATH.

WARNING! REMOVE THE GROUND CABLE FROM THE NEGATIVE TERMINAL OF THE BATTERY BOX BEFORE DISCONNECTING ANY ELECTRICAL COMPONENTS. ALWAYS CONNECT THE GROUND CABLE LAST. FAILURE TO COMPLY MAY RESULT IN PROPERTY DAMAGE, PERSONAL INJURY, AND / OR DEATH.

1. Bring vehicle into shop and park on flat surface.
2. Shift transmission to park or neutral and set parking brakes.
3. Install wheel chocks.
4. Unlatch and open hood.

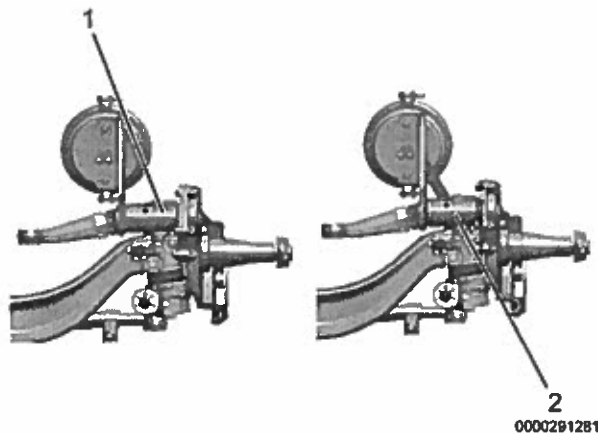


Figure 1. Brake S-Cam Tube.

1. Brake S-Cam tube without gusset
2. Brake S-Cam tube with gusset

5. Inspect brake S-Cam tube:

- Vehicles equipped with S-Cam tube gusset (Figure 1, Item 2) will not require brake component replacement.
- Vehicles equipped without gusset on S-Cam tube (Figure 1, Item 1) will require replacement of brake components.

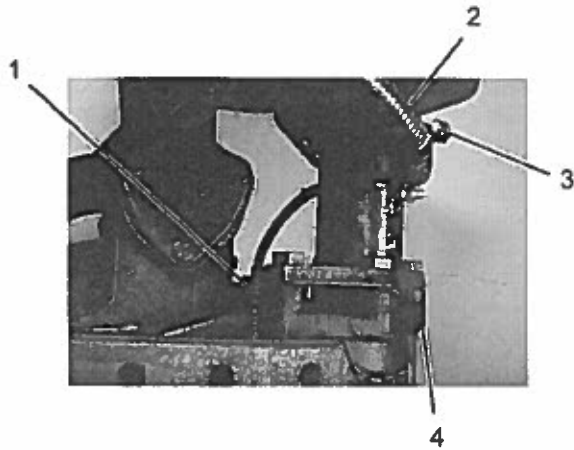
NOTE: For vehicles with Standard RSD (Reduced Stopping Distance) Brakes built with ONLY feature codes 0504501, 0504504 or 0004EWM, refer to Steps 7 - 51.

NOTE: For vehicles with RSD Brakes having Lube for Life Brake Assemblies built with ONLY feature codes 0004WCS with 0504501 or 0004WCS with 0504504, refer to Steps 52 - 71.

6. Determine style of brake assembly on vehicle.

NOTE: Procedure steps 7 - 51 represent vehicles equipped with standard RSD brakes.

7. Using jack, raise truck and install jack stands under steer axle. Remove jack.
8. Remove hub cap, wheel, and drum following service procedures in Wheels, Rims, and Tires Service Manual (s17001y).

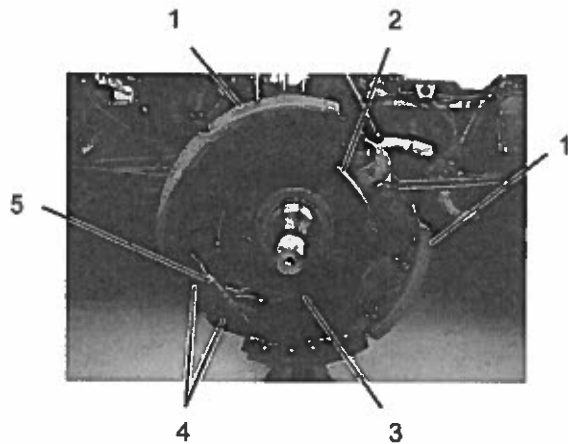


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Figure 2. Wheel Speed Sensor.

1. Wheel speed sensor
2. ABS harness
3. Tie strap
4. Brake spider

9. Cut and remove tie strap (Figure 2, Item 3) from ABS harness (Figure 2, Item 2).
10. Remove wheel speed sensor (Figure 2, Item 1) from front brake spider (Figure 2, Item 4).

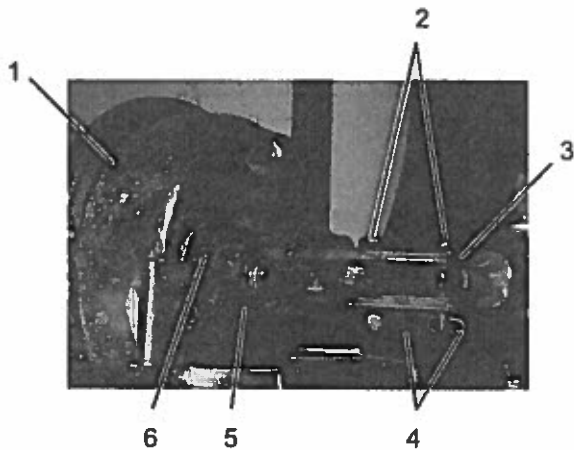


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Figure 3. Brake Shoes.

1. Brake shoe (2)
2. Return spring
3. Brake spider
4. Anchor pin (2)
5. Keeper spring (2) (1 not shown)

11. Remove two keeper springs (Figure 3, Item 5), return spring (Figure 3, Item 2), two brake shoes (Figure 3, Item 1), and anchor pins (Figure 3, Item 4) from brake spider (Figure 3, Item 3). Discard return springs and two keeper springs.



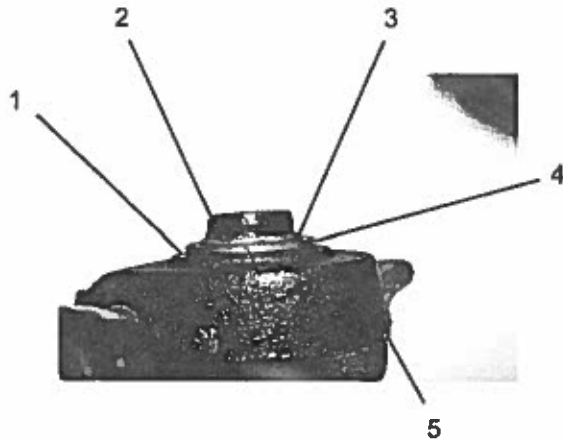
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Figure 4. Brake Chamber.

1. Brake chamber
2. Clevis pin (2)
3. Winged bracket
4. Clip (2)
5. Nut (2) (1 not shown)
6. Washer (2) (1 not shown)

NOTE: If vehicle is equipped with Haldex slack adjusters, there will only be one clip and clevis pin when performing the next step.

12. Remove two clips (Figure 4, Item 4) and clevis pins (Figure 4, Item 2) from yoke of brake chamber (Figure 4, Item 1) shaft. Discard clips.
13. Remove two nuts (Figure 4, Item 5), washers (Figure 4, Item 6), and brake chamber (Figure 4, Item 1) from winged bracket (Figure 4, Item 3).
14. Remove hub following service procedure in appropriate ConMet service manual (refer to <http://www.conmet.com>).



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Figure 5. Camshaft Attaching Hardware.

1. Spacer (as equipped)
2. Camshaft
3. Snap ring
4. Thrust washer
5. Slack adjuster

15. Remove snap ring (Figure 5, Item 3), thrust washer (Figure 5, Item 4), and spacer (as equipped) (Figure 5, Item 1) from camshaft (Figure 5, Item 2). Discard snap ring.
16. Clean and inspect thrust washers and spacer for possible use in installation.
17. Remove slack adjuster (Figure 5, Item 5) from camshaft (Figure 5, Item 2).

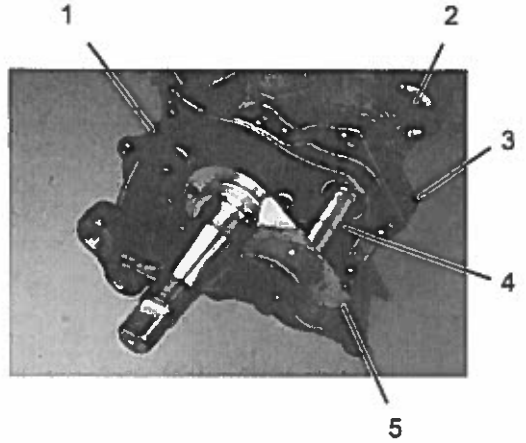
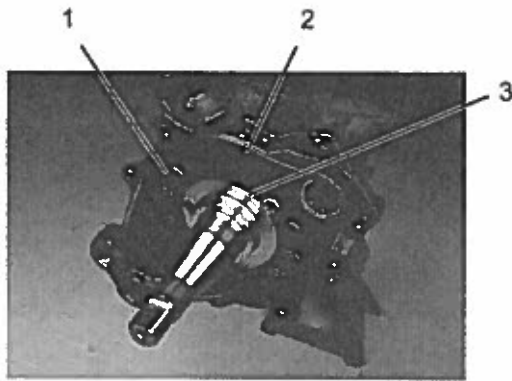


Figure 6. Front Brake Camshaft.

1. Brake spider
2. Air chamber and brake camshaft support bracket
3. Bolt (4) (3 not shown)
4. Camshaft
5. Cam head washer

18. Remove front brake camshaft (Figure 6, Item 4), cam head washer (Figure 6, Item 5) from brake spider (Figure 6, Item 1) and air chamber and brake camshaft support bracket (Figure 6, Item 2). Discard cam head washer.
19. Remove four bolts (Figure 6, Item 3) and air chamber and brake camshaft support bracket (Figure 6, Item 2). Discard air chamber and brake camshaft support bracket.

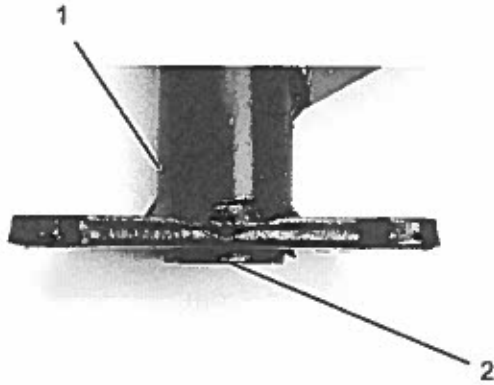


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Figure 7. Brake Spider.

1. Bolt, washer, and nut (7) (1 called out)
2. Brake spider
3. Front axle spindle

20. Remove seven bolts, nuts, washers (Figure 7, Item 1), and brake spider (Figure 7, Item 2) from front axle spindle (Figure 7, Item 3). Discard bolts, nuts, washers, and brake spider.
21. Clean rust and debris from axle mount flange.
22. Install new brake spider (Figure 7, Item 2) on front axle spindle (Figure 7, Item 3) with seven new washers, bolts, and nuts (Figure 7, Item 1).
23. Using torque wrench, tighten seven bolts (Figure 7, Item 1) to 275 - 300 lb-ft (373 - 407 N•m).

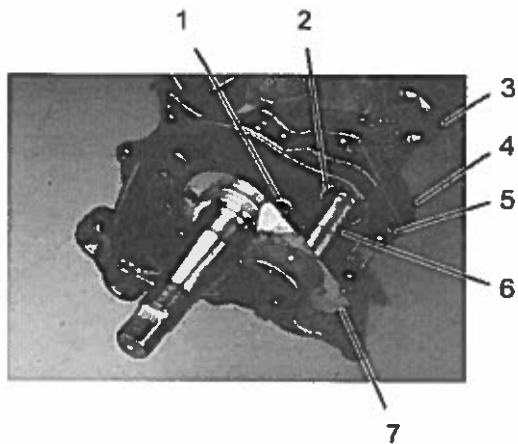


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Figure 8. Air Chamber and Brake Camshaft Support Bracket O-Ring.

1. Air chamber and brake camshaft support bracket
2. O-ring

24. Install new O-ring (Figure 8, Item 2) onto pilot end of new air chamber and brake camshaft support bracket (Figure 7, Item 1).

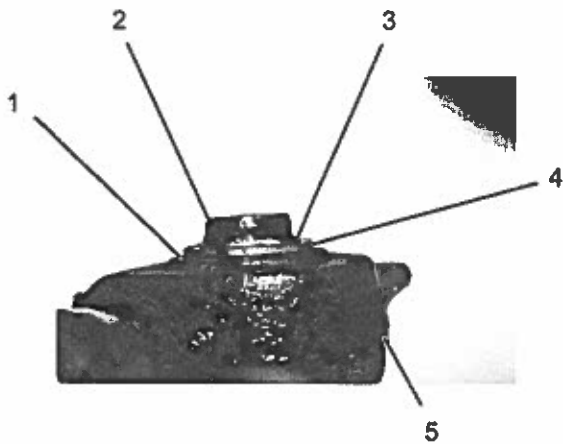


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Figure 9. Brake Camshaft Installation.

1. Brake spider bushing
2. Air chamber and camshaft support bracket bushing
3. Air chamber and brake camshaft support bracket
4. Bolt (4) (3 not shown)
5. Brake spider
6. Camshaft
7. Cam head washer

25. Position new air chamber and brake camshaft support bracket (Figure 9, Item 3) onto brake spider (Figure 9, Item 5) with four bolts (Figure 9, Item 4). Using torque wrench, tighten four bolts in a cross pattern to 90 - 120 lb-ft (122 - 163 N·m).
26. Lubricate brake spider bushing (Figure 9, Item 1) and seals with grease.
27. Lubricate air chamber and camshaft support bracket bushing (Figure 9, Item 2) and seals with grease.
28. Install new cam head washer (Figure 9, Item 7) and camshaft (Figure 9, Item 6) into air chamber and brake camshaft support bracket (Figure 9, Item 3).

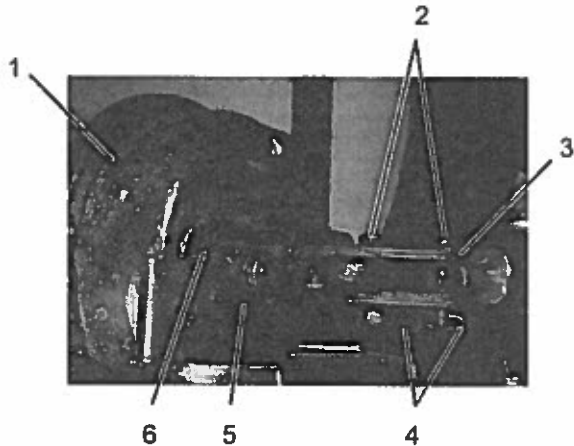


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Figure 10. Camshaft Attaching Hardware.

1. Spacer (as equipped)
2. Camshaft
3. Snap ring
4. Thrust washer
5. Slack adjuster

29. Install slack adjuster (Figure 10, Item 5) onto camshaft (Figure 10, Item 2), with spacers (as necessary) (Figure 10, Item 1), new thrust washer (Figure 10, Item 4), and new snap ring (Figure 10, Item 3).



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Figure 11. Brake Chamber.

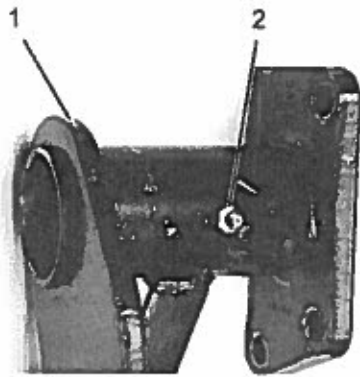
1. Brake chamber
2. Clevis pin (2)
3. Winged bracket
4. Clip (2)
5. Nut (2) (1 not shown)
6. Washer (2)

30. Install brake chamber (Figure 11, Item 1) onto winged bracket (Figure 11, Item 3) with two washers (Figure 11, Item 6) and nuts (Figure 11, Item 5).

31. Using torque wrench, tighten two nuts (Figure 11, Item 5) to 130 - 150 lb-ft (176 - 203 N•m).

NOTE: If vehicle is equipped with Haldex slack adjusters, there will only be one clip and clevis pin when performing the next step.

32. Install two clevis pins (Figure 11, Item 2) and new clips (Figure 11, Item 4) into yoke of brake chamber (Figure 11, Item 1) shaft.

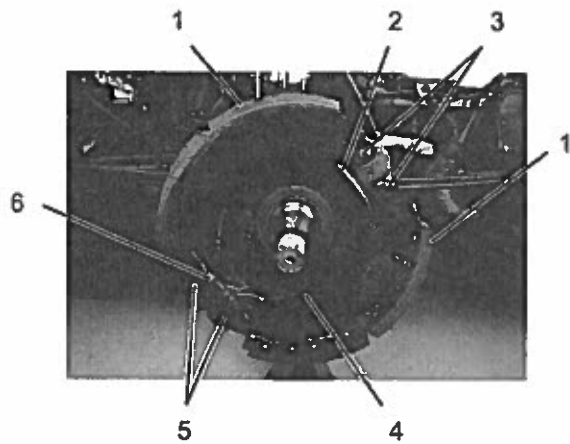


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Figure 12. Air Chamber and Brake Camshaft Support Bracket Fitting.

1. Air chamber and brake camshaft support bracket
2. Grease fitting

33. Install grease fitting (Figure 12, Item 2) into air chamber and brake camshaft support bracket (Figure 12, Item 1).
34. Lubricate grease fitting (Figure 12, Item 2).

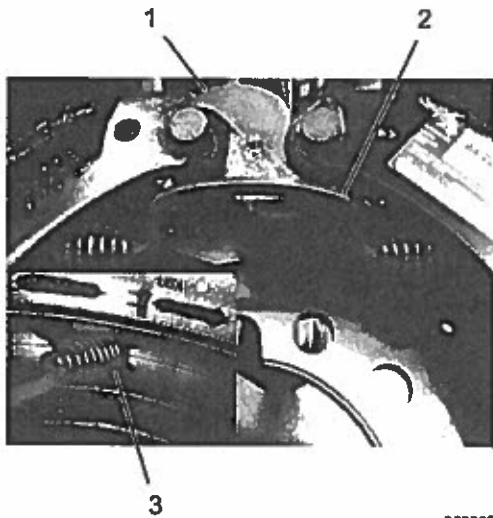


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Figure 13. Brake Shoes.

1. Brake shoe (2)
2. Return spring
3. Roller with retainer (2)
4. Brake spider
5. Anchor pin (2)
6. Keeper spring (2) (1 not shown)

35. Install two anchor pins (Figure 13, Item 5) into brake spider (Figure 13, Item 4).



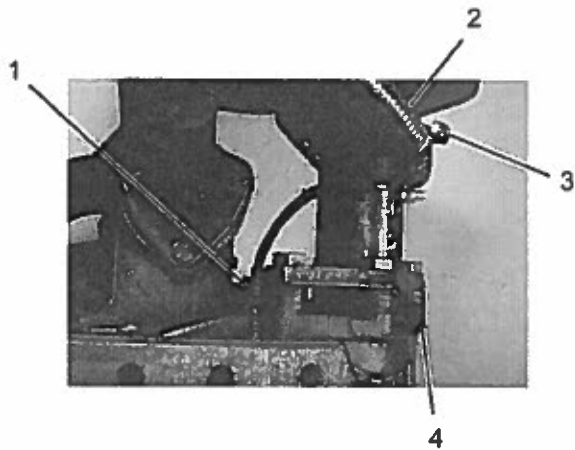
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Figure 14. Return Springs.

1. Cam head
2. Center bar spring
3. Hook

CAUTION: Return spring hooks must be installed toward brake shoe rollers and center bar spring touching cam head. Failure to comply could result in property damage.

36. Install brake shoes (Figure 13, Item 1), new return spring (Figure 13, Item 2) with hook (Figure 14, Item 3) toward brake shoe rollers and center bar spring (Figure 14, Item 2) touching cam head (Figure 14, Item 1), and two new keeper springs (Figure 13, Item 6) onto brake spider (Figure 13, Item 4).
37. Install two rollers with retainers (Figure 13, Item 3) on brake shoes (Figure 13, Item 1).

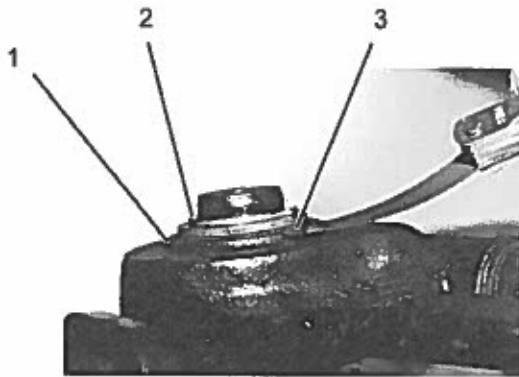


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Figure 15. Wheel Speed Sensor.

1. Wheel speed sensor
2. ABS harness
3. Tie strap
4. Brake spider

38. Install wheel speed sensor (Figure 15, Item 1) into front brake spider (Figure 15, Item 4).
39. Install new tie strap (Figure 15, Item 3) onto ABS harness (Figure 15, Item 2).



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Figure 16. Axial End Play.

1. Slack adjuster
2. Snap ring
3. Axial end play

NOTE: If shims need to be added to obtain correct axial endplay, use removed shims provided they are not damaged.

40. Verify axial end play (Figure 16, Item 3) on slack adjuster (Figure 16, Item 1) is 0.005 - 0.010 in (0.127 - 0.254 mm). If axial end play is not within measurement tolerance, remove snap ring (Figure 16, Item 2) and add or remove appropriate number of shims and / or spacers until correct end play is obtained.
41. Remove and discard wheel seal.
42. Inspect wheel bearing cup for damage. If damaged, replace wheel bearing cup.
43. Inspect wheel bearing cone for damage. If damaged, replace wheel bearing cone.
44. Install new wheel seal.

WARNING: Fill hub with correct amount of lubricant to prevent premature failure of the PreSet[®] hub assembly, which may result in property damage, personal injury, and / or death.

45. Vehicle may be equipped with PreSet[®] or PreSet[®] Plus[™] hub assembly.

- If equipped with PreSet[®] hub, proceed to Step 45a.
- If equipped with PreSet[®] Plus[™] hub, proceed to Step 45i.
- If not equipped with PreSet[®] or PreSet[®] Plus[™] hub assembly, refer to Axle Jam Nut Installation Procedure in Service Manual Section Hubs, Bearings, and Seals (Non-Drive Axles) (s02002s).
 - a. Clean spindle and remove any lubricant, corrosion prevention coating, foreign material, or surface rust that may be present.
 - b. Lubricate bearing journals on spindle, or inside diameter of bearing cones, with Grade 2 grease or lubricant that will be used in wheel end.
 - c. Lubricate inside diameter of seal with same lubricant used in wheel end.
 - d. Hold bearing spacer and outer bearing cone in place while installing hub assembly onto spindle.
 - e. Using a smooth, firm motion, place hub onto spindle. Verify alignment between spindle, bearing cones, and bearing spacer.

CAUTION: Make sure to maintain alignment between spindle, bearing cones, and bearing spacer. Failure to comply may result in damage to equipment.

NOTE: Make sure to engage any locking device.

- f. If equipped with one-piece spindle nut, using torque wrench, tighten spindle nut to 300 lb-ft (407 N•m). Do not back off spindle nut.
- g. If equipped with double jam nut, using torque wrench, tighten inner spindle nut to 300 lb-ft (407 N•m) while rotating hub. Do not back off spindle nut. Install outer spindle nut and using torque wrench, tighten outer spindle nut to 200 lb-ft (271 N•m).
- h. Install hub cap with new gasket. Using torque wrench, tighten hub cap bolts to 12 - 18 lb-ft (16 - 24 N•m).

- i. Clean spindle and remove any lubricant, corrosion prevention coating, foreign material, or surface rust that may be present.
- j. Lubricate bearing journals on spindle, or inside diameter of bearing cones, with Grade 2 grease or lubricant that will be used in wheel end.
- k. Lubricate inside diameter of seal with same lubricant used in wheel end.
- l. Remove red locking snap ring from spindle nut.
- m. Make sure bearing spacer is in proper alignment.
- n. Align key or flat washer with any keyway or flat on spindle as hub is placed onto spindle.
- o. Using a smooth, firm motion, place hub onto spindle.
- p. When threads on nut engage threads on spindle, rotate nut clockwise to fully engage threads.
- q. Using torque wrench, tighten spindle nut to 300 lb-ft (407 N•m). Do not back off spindle nut.
- r. Visually examine three holes on face of spindle. One hole will line up with holes in inner washer.
- s. Install tab of red locking snap ring through holes in nut and washer that are aligned.

CAUTION: Do not bend locking ring permanently. If locking ring is damaged or bent, replace locking ring. Failure to comply may result in damage to equipment.

- t. Spread locking ring and push over spindle nut and into machined grooves in spindle nut.
- u. Install hub cap with new gasket. Using torque wrench, tighten hub cap bolts to 12 - 18 lb-ft (16 - 24 N•m).

46. Install drum, wheel, and hub cap following service procedures in Wheels, Rims, and Tires Service Manual (s17001y).

47. Reset initial brake adjustment by performing the following:

- a. Check brake slack adjuster position (BSAP).

- b. Adjust slack adjuster to clevis. Do not pull clevis to slack adjuster.
- c. Adjust slack adjuster until resistance is felt and drum is difficult to turn, and then back off 1/2 turn.
- d. Measure free stroke. Should be 1/2 in - 5/8 in max and close to equal side to side per axle.

48. Repeat Steps 8 - 47 on opposite front wheel.

49. Raise truck with jack and remove jackstands, then lower vehicle.

50. Close and latch hood.

51. Remove wheel chocks.

NOTE: PROCEDURE STEPS 52 - 71 REPRESENT VEHICLES EQUIPPED WITH RSD BRAKES WITH LUBE FOR LIFE BRAKE ASSEMBLIES (0004WCS)

52. Using jack, raise truck and install jack stands under steer axle. Remove jack.

53. Remove hub cap, wheel, and drum following service procedures in Wheels, Rims, and Tires Service Manual (s17001y).

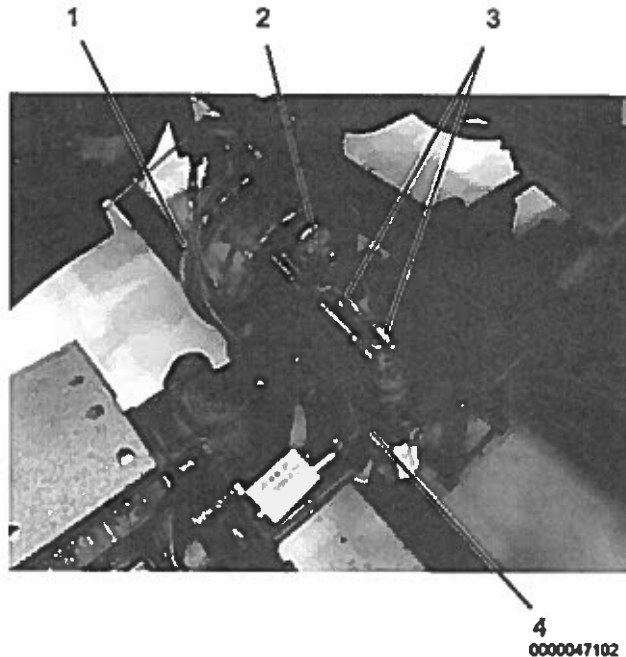
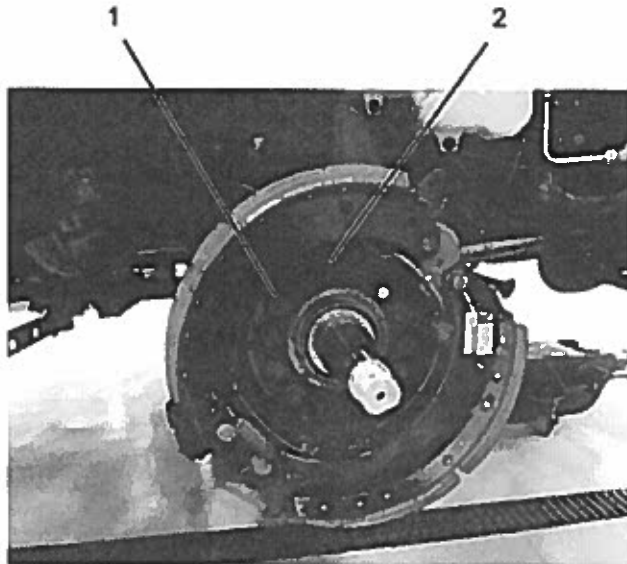


Figure 17. Brake Chamber Assembly.

1. Brake chamber
2. Nut and washer (2) (1 not shown)
3. Clevis pin and clip (2)
4. Winged bracket

NOTE: If vehicle is equipped with Haldex slack adjusters, there will only be one clip and clevis pin when performing the next step.

54. Remove two clevis pins and clips (Figure 17, Item 3) from yoke of brake chamber (Figure 17, Item 1) shaft. Discard clips.
55. Remove two nuts and washers (Figure 17, Item 2) and brake chamber (Figure 17, Item 1) from winged bracket (Figure 17, Item 4). Set brake chamber aside.
56. Remove hub following service procedure in appropriate ConMet service manual (refer to <http://www.conmet.com>).
57. Remove seven bolts, nuts, and washers, and stamped brake assembly from axle flange. Discard bolts, nuts, and washers.
58. Clean rust and debris from axle mount flange.



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Figure 18. Cast Brake Assembly.

1. Bolt, nut, and washer (7) (1 called out)
2. Cast brake assembly

59. Install cast brake assembly (Figure 18, Item 2) on axle flange with seven bolts, nuts, and washers (Figure 18, Item 1). Using torque wrench, tighten bolts to 275 - 300 lb-ft (372 - 407 N·m).

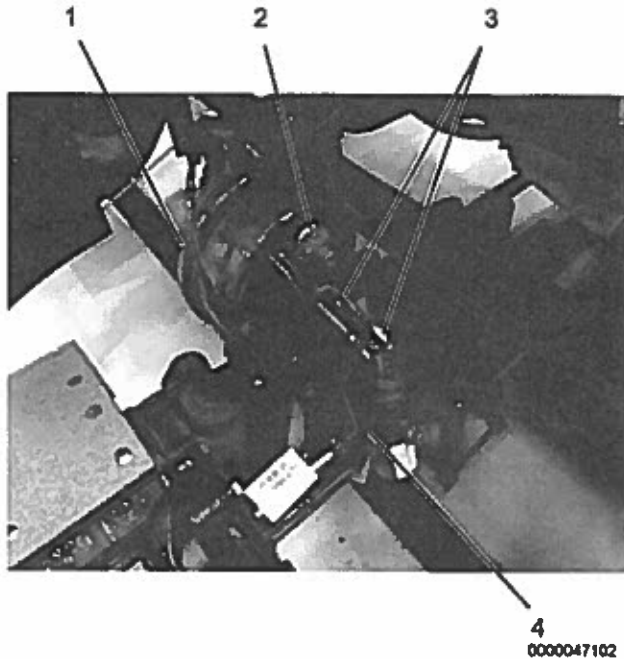


Figure 19. Brake Chamber Assembly.

1. Brake chamber
2. Nut and washer (2) (1 not shown)
3. Clevis pin and clip (2)
4. Winged bracket

60. Install brake chamber (Figure 19, Item 1) on winged bracket (Figure 19, Item 4) with two nuts and washers (Figure 19, Item 2). Using torque wrench, tighten nuts to 70 - 100 lb-ft (95 - 136 N·m).

NOTE: If vehicle is equipped with Haldex slack adjusters, there will only be one clip and clevis pin when performing the next step.

61. Install two clevis pins and clips (Figure 19, Item 3) into yoke on brake chamber (Figure 19, Item 1) shaft.

NOTE: LX500 brake assemblies are lubed for life; a grease zerk should not be installed in the S-Cam tube.

62. Remove and discard wheel seal. Inspect wheel bearing cup for damage. If damaged, replace wheel bearing cup.

63. Install new wheel seal. Inspect wheel bearing cone for damage. If damaged, replace wheel bearing cone.

64. Vehicle may be equipped with PreSet[®] or PreSet[®] Plus[™] hub assembly:

- If equipped with PreSet[®] hub, proceed to Step 64a.
- If equipped with PreSet[®] Plus[™] hub, proceed to Step 64i.
- If not equipped with PreSet[®] or PreSet[®] Plus[™] hub assembly, refer to Axle Jam Nut Installation Procedure in Service Manual Section Hubs, Bearings, and Seals (Non-Drive Axles) (s02002s).
 - a. Clean spindle and remove any lubricant, corrosion prevention coating, foreign material, or surface rust that may be present.
 - b. Lubricate bearing journals on spindle, or inside diameter of bearing cones, with Grade 2 grease or lubricant that will be used in wheel end.
 - c. Lubricate inside diameter of seal with same lubricant used in wheel end.
 - d. Hold bearing spacer and outer bearing cone in place while installing hub assembly onto spindle.
 - e. Using a smooth, firm motion, place hub onto spindle. Verify alignment between spindle, bearing cones, and bearing spacer.

CAUTION: Make sure to maintain alignment between spindle, bearing cones, and bearing spacer. Failure to comply may result in damage to equipment.

NOTE: Make sure to engage any locking device.

- f. If equipped with one-piece spindle nut, using tighten wrench, torque spindle nut to 300 lb-ft (407 N•m). Do not back off spindle nut.
- g. If equipped with double jam nut, using torque wrench, tighten inner spindle nut to 300 lb-ft (407 N•m) while rotating hub. Do not back off spindle nut. Install outer spindle nut and using torque wrench, torque outer spindle nut to 200 lb-ft (271 N•m).
- h. Install hub cap with new gasket. Using torque wrench, tighten hub cap bolts to 12 - 18 lb-ft (16 - 24 N•m).
- i. Clean spindle and remove any lubricant, corrosion prevention coating, foreign material, or surface rust that may be present.

- j. Lubricate bearing journals on spindle, or inside diameter of bearing cones, with Grade 2 grease or lubricant that will be used in wheel end.
- k. Lubricate inside diameter of seal with same lubricant used in wheel end.
- l. Remove red locking snap ring from spindle nut.
- m. Make sure bearing spacer is in proper alignment.
- n. Align key or flat washer with any keyway or flat on spindle as hub is placed onto spindle.
- o. Using a smooth, firm motion, place hub onto spindle.
- p. When threads on nut engage threads on spindle, rotate nut clockwise to fully engage threads.
- q. Using torque wrench, tighten spindle nut to 300 lb-ft (407 N•m). Do not back off spindle nut.
- r. Visually examine three holes on face of spindle. One hole will line up with holes in inner washer.
- s. Install tab of red locking snap ring through holes in nut and washer that are aligned.

CAUTION: Do not bend locking ring permanently. If locking ring is damaged or bent, replace locking ring. Failure to comply may result in damage to equipment.

- t. Spread locking ring and push over spindle nut and into machined grooves in spindle nut.
 - u. Install hub cap with new gasket. Using torque wrench, tighten hub cap bolts to 12 - 18 lb-ft (16 - 24 N•m).
65. Install drum, wheel, and hub cap following service procedures in Wheels, Rims, and Tires Service Manual (s17001y).
66. Adjust slack adjuster following Meritor slack adjustment procedure (refer to www.meritor.com).
67. Repeat steps 53 – 66 on opposite side.
68. Raise truck with jack and remove jackstands, then lower vehicle.
69. Close and latch hood.

70. Remove wheel chocks.

NOTE: The following step only applies to vehicles with LX500 brake assemblies.

71. Burnish brakes and perform test as follows:

- While driving vehicle at 20 mph (32 km/h), apply brakes to reduce speed at approximately 10 ft (3.05 m) per second, to 5 mph (8 km/h). Repeat this operation 10 times at regular intervals of 500 ft (150 m) or 0.1 mile (0.16 km) without stopping vehicle.
- After 10 brake applications, make one complete stop from 20 mph (32 km/h) to 0 mph (0 km/h).

END OF SERVICE PROCEDURE

LABOR INFORMATION

Operation Number	Description	Time
A40-14501-1	Inspect Only; S-Cam Tubes with Gussets Present	0.3 hr
A40-14501-2	Inspect and Replace Brake Spider and S-Cam Tube Bracket (Both Sides); NOT with 0004WCS	2.6 hrs
A40-14501-3	Inspect and Replace Steer Axle Brake Assembly (Both Sides); with LX500 Greased for Life S-Cam Tube Brackets - 0004WCS	2.4 hrs

CAMPAIGN IDENTIFICATION LABEL

Each vehicle corrected in accordance with this campaign must be marked with a CTS-1075 Campaign Identification Label.

Complete the label and attach on a clean surface next to the vehicle identification number (VIN) plate.

DO NOT REMOVE
INTERNATIONAL
Campaign No.
VIN
Eng. #
COMPLETED
Service Location Code #
DO NOT REMOVE

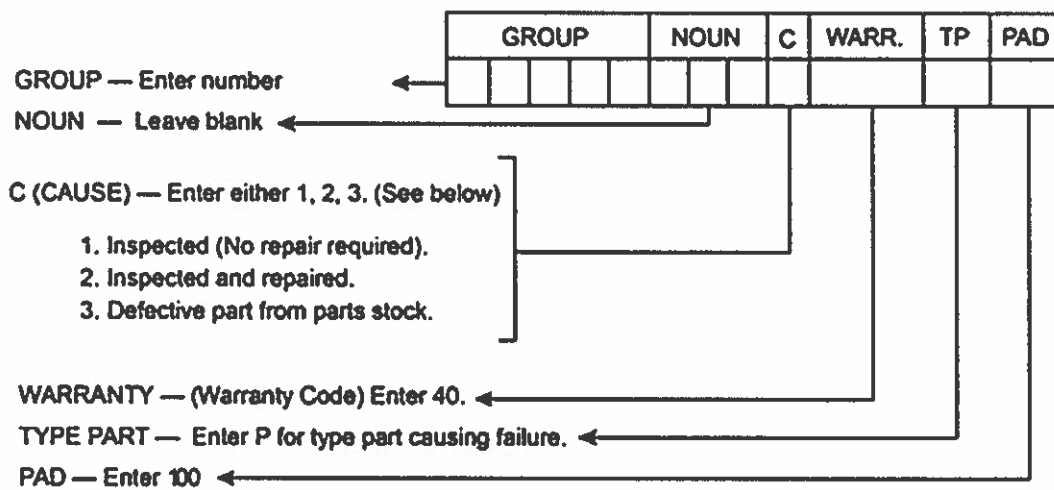
ADMINISTRATIVE / DEALER RESPONSIBILITIES

WARRANTY CLAIMS

Warranty claim expense is to be charged to Warranty. Claims are to be submitted in the normal manner, making reference to Safety Recall 14501.

It is important that the coding be completed properly to assist in processing the warranty claim. Complete instructions will be found in the Warranty Policy Manual, Section 7.1.8.

As with all claim submissions, items acquired locally must be submitted in the "Other Charges" tab. The cost of any bulk items (such as a bag of cable tie straps, roll of wire, barrel of oil, or a tube of silicone) should be prorated for the cost of the individual pieces / amount used during each repair.



UNITED STATES AND POSSESSIONS

The National Traffic and Motor Vehicle Safety Act, as amended, provides that each vehicle that is subject to a vehicle recall campaign must be adequately repaired within a reasonable time after the owner has tendered it for repair. A failure to adequately repair within 60 days after a tender of a vehicle is prima facie evidence of failure to repair within a reasonable time. If the condition is not adequately repaired within 60 days, the owner may be entitled to replacement with an identical or reasonable equivalent vehicle at no charge, or to a refund of the purchase price less a reasonable allowance for depreciation.

Dealers must correct all vehicles subject to this campaign at no charge to the owner, regardless of mileage, age of vehicle, or ownership, from this time forward.

Dealers should proceed immediately to make necessary correction to units in inventory. All inventory vehicles subject to this recall campaign must be corrected prior to sale, transfer or delivery. If vehicles have been sold or transferred and you are in receipt of Customer Notification Letters and Authorization for Recall Service cards for those vehicles, the transfer location or customer must be notified immediately from your dealer location.

Dealers must make every effort to promptly schedule an appointment with each owner to repair his or her vehicle as soon as possible. However, consistent with the customer notification, dealers are expected to complete the repairs on the mutually agreed upon service date.

Dealers involved in the recall process will be furnished a listing of owner names and addresses to enable them to follow up with owners and have the vehicles corrected. Use of this listing must be limited to this campaign because the list may contain information obtained from state motor vehicle registration records, and the use of such motor vehicle registration data for purposes other than this campaign is a violation of law in several states.

CANADA

Dealers must correct all vehicles subject to this campaign at no charge to the owner, regardless of mileage, age of vehicle, or ownership, from this time forward.

Dealers should proceed immediately to make necessary correction to units in inventory. All inventory vehicles subject to this recall campaign must be corrected prior to sale, transfer or delivery. If vehicles have been sold or transferred and you are in receipt of Customer Notification Letters and Authorization for Recall Service cards for those vehicles, the transfer location or customer must be notified immediately from your dealer location.

Dealers must make every effort to promptly schedule an appointment with each owner to repair his or her vehicle as soon as possible. However, consistent with the customer notification, dealers are expected to complete the repairs on the mutually agreed upon service date.

Dealers involved in the recall process will be furnished a listing of owner names and addresses to enable them to follow up with owners and have the vehicles corrected. Use of this listing must be limited to this campaign because the list may contain information obtained from state motor vehicle registration records, and the use of such motor vehicle registration data for purposes other than this campaign is a violation of law in several states.

EXPORT

Export Distributors should proceed immediately to make necessary correction to units in inventory. All inventory vehicles subject to this recall campaign must be corrected prior to sale, transfer or delivery. If vehicles have been sold or transferred and you are in receipt of Customer Notification Letters and Authorization for Recall Service cards for those vehicles, the transfer location or customer must be notified immediately from your distributor location.

Export Distributors are to submit warranty claims in the usual manner making reference to this recall number.

Export Distributors are expected to provide full cooperation and follow-up with respect to this important subject matter. If you have any questions or need further assistance, please contact the Regional Service Manager at your regional office.

NAVISTAR, INC.