

SAFETY RECALL

Mack Trucks Inc.
Greensboro, NC USA



This Safety Recall replaces SC0403 dated 5.16.

Note: Also applies to Mack Trucks Australia.

Date	Number	Page
7.16	SC0403	1(12)

Interaxle Yoke Retaining Nut

SAFETY RECALL INFORMATION

Mack Trucks Inc. has determined the cap nut that retains the interaxle driveshaft yoke to the rear axle input shaft may be subject to premature loosening on certain CHU, CMH, CMM, CXU, GU, LEU, LR, MRU and TD model vehicles. The potential risk is that if the nut comes off, the yoke can separate from the axle input shaft and cause the driveshaft to disconnect. If this occurs, a disconnected driveshaft can disable the vehicle and result in debris in the roadway, which increases the risk of a vehicle crash.

To address these concerns, Mack has developed an inspection and repair procedure that will help identify suspect components and prevent the possibility of future damage. Follow the procedure outlined in this document.

VEHICLES AFFECTED

Certain 2012 through 2015 model Mack vehicles manufactured from September 1, 2011 through April 30, 2014 equipped with Mack proprietary axle. Models and Model Years are CHU, CMH, CMM, CXU, GU, LEU, MRU, TD 2012 – 2015; LR 2015.

VEHICLE QUANTITY

There are 25,588 (20,741 U.S., 1068 Canada, 405 Mexico, 415 Australia, 2959 Export) vehicles affected by this recall.

REQUIRED PARTS

- 21187820 – Yoke Cap Nut
- U-Joint Strap/Bolt Kit (see table on page 2)

OPTIONAL PARTS (replace only if needed, see Step 10)

- 21126859 – Pinion Seal

REQUIRED TOOLS

- 88800551 – Special Clamp Plate
- 88800552 – Bearing Cone Installation Tool
- 88800553 – Bearing Seal Installation Tool
- 88800554 – Yoke Installation Tool
- 2.5-inch $\frac{3}{4}$ -16UN Hex Head Bolt
- $\frac{3}{4}$ -Inch Flat Washer

To schedule parts orders, please call 1-877-986-5862 and provide the following:

- 17 digit Vehicle Identification Number (VIN)
- Recall Number (SC0403)
- Dealer Code
- Purchase Order Information (PO Information)

U-JOINT KITS

Note: Refer to the manufacturer for the correct U-joint hardware kit

Driveline Series	Hardware/Kit	Quantity
MXL 18XT	8235-KT17SB	1
1810 HR	2104-657018X	1
SPL250HD HR	2104-212214X	1
MXL 176XT	8235-KT17SB	1
1760 HR	2104-657018X	1
SPL250HR	2104-2507018X	1
MXL 17XT	8235-KT17SB	1
1710 HR	2104-657018X	1
SPL170 HR	2104-1707018X	1
MXL 17XN	8235-S165B2	4
1710 FR	2104-673209	4
MXL 17T	8235-KT17SB	1

REPAIR AND INSPECTION PROCEDURE

You must read and understand the precautions and guidelines in Service Information, Function Group 40, "General Safety Practices" before performing this procedure. If you are not properly trained and certified in this procedure, ask your supervisor for training before you perform it.

Note: Information is subject to change without notice. Illustrations are used for reference only, and may differ slightly from the actual vehicle being serviced. However, key components addressed in this information are represented as accurately as possible.



Do not attempt to repair or service this vehicle without having sufficient training, the correct service literature and the proper tools. Failure to follow this could make the vehicle unsafe and lead to serious personal injury or death.

1. Verify service program eligibility by checking service program status in VDA.
2. Secure the vehicle for service by parking it on a flat level surface, applying the parking brake, chocking the rear wheels, and placing the transmission in neutral.
3. Raise the rear axle, place jack stands underneath the axle.
4. Release the parking brake.
5. Remove fasteners on rear axle U-joint. Discard fasteners.



6. Remove U-joint and shaft from rear axle yoke.



7. Secure driveshaft to frame. Apply parking brake.



8. Perform the following inspections:



- i. Is the nut already loose?
 - a. Yes, proceed to step 8.2
 - b. No, proceed to step ii
- ii. Is the seal leaking?
 - a. Yes, proceed to step 8.2.
 - b. No, proceed to step 8.1

- iii. Is the yoke loose?
 - a. Yes, proceed to step 8.2.
 - b. No, proceed to step 8.1

8.1 Torque Inspection Procedure:

- i. Scribe a line on the nut and a corresponding line on yoke that meet where the nut contacts the yoke (figure 1).



Figure 1

- ii. Check for a breakaway torque by applying 2440 Nm (1800 lb-ft) to the nut in the counter-clockwise direction.
- iii. Verify the nut did not move by observing the alignment of the scribed lines on the nut and yoke
- iv. If the marks are no longer aligned, continue to remove the nut and proceed to step 8.2.
- v. If the alignment remains, nut replacement is not required, proceed to step 22.

NOTE:

If the yoke is loose but the nut has been verified to be tight, it is assumed that there is internal damage. Bearing damage not associated with the yoke nut being loose is not covered under SC0403 and should be applied to any remaining carrier warranty or customer responsibility.

8.2 Remove the yoke nut. Refer to UCHP instructions for disposition of the nut.

- i. Use a $\frac{3}{4}$ " or 1" drive impact wrench to remove the nut. Proceed to step 9.
- ii. If the nut cannot be removed by normal methods, proceed to step 8.3

8.3 Heating the yoke nut using a torch:

- i. Use a torch to heat the nut in two locations, 180 degrees apart (between the orange arrows in figure 2) to break down the thread locker.
- ii. Immediately remove the nut using a 1" drive impact wrench.



Figure 2

NOTE:

If heat is used to remove the nut, it is mandatory that the seal is replaced.

9. Use a hand-held wire brush to clean locking compound from the bevel pinion threads.

10. Install special tool 88800551, with a 2.5 inch $\frac{3}{4}$ -16UN hex head bolt, on bevel pinion shaft.



11. Remove yoke using suitable puller.



12. Remove pinion seal and discard.



13. Remove debris and excess oil from seal housing bore.

14. Insure the seal installation tool is clean and free of nicks or damage that would cause premature seal failure. Apply lubricant to the seal lip and position the seal on tool 88800552. Apply a light film of lubricant on the outside diameter of the new seal and in the seal housing bore. Lubricate the bolt threads and under the bolt head. Install a flat washer on the bolt and thread the bolt through the seal tool and into tool 88800551.



15. Turn the bolt to fully seat the seal in the housing.



16. Slide yoke onto shaft over top of 88800551.



17. Apply the park brake.
18. Install 88800553 on top of yoke. Lubricate the bolt threads and underneath the bolt head. Install a flat washer on the bolt and thread the bolt through the seal tool and into tool 88800551. Hand tighten bolt until yoke bottoms out. Remove tools from bevel pinion shaft.



19. Verify cleanliness of the bevel pinion threads. If necessary, use a hand held wire brush to clean locking compound from the bevel pinion threads.
20. Install new bevel pinion nut. Thread nut by hand for the first few threads, then use an air tool to tighten nut until it stops.



21. Using a torque multiplier and a torque wrench, torque tighten bevel pinion nut to 1220 +/- 136 Nm (900 +/- 100 lb-ft).



22. Release the park brake.
23. Remove the strap from the driveshaft securing shaft to frame. Install driveshaft in position on yoke, hand start new fasteners.



24. Refer to the manufacturer for the correct U-joint torque values.
25. Raise rear axle and remove jack stands. Lower rear axle.
26. Apply parking brakes.
27. Remove wheel chocks.
28. Check gear oil level and add oil as necessary before returning vehicle to service.

REIMBURSEMENT

This repair is covered by an authorized Safety Recall campaign. Reimbursement is obtained through the normal claim handling process.	
Claim Type (used only when uploading from the Dealer Business System)	40
Recall Status	
Vehicle repaired per instructions	
Labor Code	
Primary Labor Code, Yoke Cap Nut Inspection or Replacement	4651-03-02-12 – 0.6 hrs
Additional Labor Code, Yoke Seal Replacement	4651-03-09-01 – 0.2 hrs
Additional Labor Code, Torque Check	4651-25-09-01 – 0.3 hrs
Additional Labor Code, Heat Nut	4651-25-09-02 – 0.4 hrs
Time to take charge of vehicle and determine campaign status	1700-16-01-01 - 0.3 hrs
Parts Disposition	Claim material must be held for seven days following the claim going on a credit statement.
Causal Part	21187820
SCC Code	C6577

Note: Take Charge Time is not included in the labor code for this operation. Take charge may be eligible, but can only be used once per vehicle repair visit. If the vehicle is having other warranty repairs performed, take-charge should be charged to the warranty repair, otherwise take-charge can be charged to this Safety Recall campaign.

Note: Dealers are to perform Safety Recall Campaigns on all subject vehicles at no charge to the vehicle owner regardless of mileage, age of vehicle or ownership (original purchaser or subsequent purchasers). Whenever vehicles are subject to a safety recall are brought to your dealership for service, or taken into your dealership vehicle inventory, it is strongly recommended that every effort be made to perform the recall correction before the vehicle is sold or released to the owner.