



Technical Bulletin

Meritor Transfer Case

MTC-4208 X/XL/XP/XLEV, MTC-4210 X/XL/XP/XLEV Front and Rear Output Seal Installation and MTC-4213X Front Output Shaft Seal Installation

NOTE: This technical bulletin only applies to the specified Meritor MTC-4200 series transfer cases. Please discard this technical bulletin if service is for products other than the specified Meritor MTC-4200 series transfer cases.

If you are servicing an applicable transfer case, this technical bulletin provides important information and new procedures for correct output seal replacement.

Hazard Alert Messages

Read and observe all Warning and Caution hazard alert messages in this publication. They provide information that can help prevent serious personal injury, damage to components, or both.

WARNING

To prevent serious eye injury, always wear safe eye protection when you perform vehicle maintenance or service.

Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving. Support the vehicle with safety stands. Do not work under a vehicle supported only by jacks. Jacks can slip and fall over. Serious personal injury and damage to components can result.

How to Obtain Additional Maintenance, Service and Product Information

Refer to Maintenance Manual MM-0861, Transfer Cases MTC-4208 X/XL/XP/XLEV, MTC-4210 X/XL/XP/XLEV and MTC-4213X Series; and technical bulletin TP-10164, Yoke Installation Tool Instructions. To obtain these publications, visit Literature on Demand at Meritor.com.

Contact the Meritor OnTrac™ Customer Call Center for Additional Assistance

If you need additional assistance, contact the Meritor OnTrac™ Customer Call Center at 866-668-7221 or email the center at ontrac@meritor.com.

How to Obtain Parts and Tools

Parts used in this technical bulletin can be obtained locally or ordered from Meritor's Commercial Vehicle Aftermarket at 888-725-9388.

Parts Required (Front and Rear Output Shaft Positions)

Table A: KIT 4297

Quantity	Description	Part Number
1	Yoke Sleeve	A-1199L4198
1	Oil Seal	A-1205V2908
1	Hardened Spacer	1244A4239
1	Lock Nut, FIN	40X-1233
1	Output Seal Installation Guide	TP-16110

Tools Required

- Basic shop tools
- Seal driver, part number 2728T1*
- Sleeve driver, part number 2728T2*
- M45 Socket
- Brass drift or equivalent
- Yoke puller
- Yoke Installation Tool Kit MST-YT114* (Refer to technical bulletin TP-10164 for tool instructions.)

*Tool can be ordered from Meritor's Commercial Vehicle Aftermarket at 888-725-9388.

Output Shaft Seal Replacement

This technical bulletin provides updated instructions for removing and installing front and rear output shaft seals on all Meritor MTC-4208 X/XL/XP/XLEV and MTC-4210 X/XL/XP/XLEV series transfer cases, and front output shaft seals on MTC-4213X series transfer cases. Figure 1.

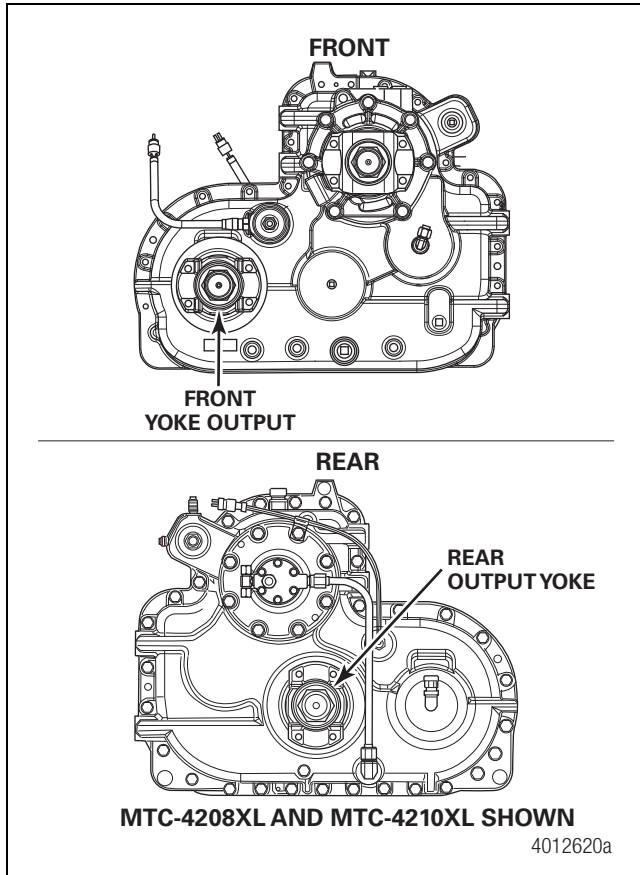


Figure 1

Depending on the vintage and model of transfer case, a spacer may be required when replacing output seals.

- Spacer is required on transfer cases with serial numbers lower than LRS00960152*
- Spacer is NOT required on transfer cases with serial numbers higher than LRS00960152*
- Yoke sleeve must now also be installed onto the yoke

*Transfer case serial numbers can be found on the transfer case front case half identification tag. Figure 2.

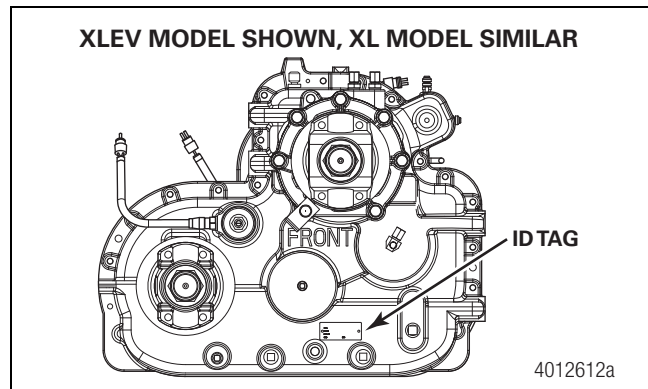


Figure 2

The instructions in this technical bulletin apply to both the front and rear output shaft positions.

Procedures

Output Yoke and Seal Removal

NOTE: It is not necessary to drain the transfer case oil to remove and replace the front or rear output seals and install the sleeve on the yoke.

1. Wear safe eye protection. Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving.
2. Remove either the front and/or rear output shaft drivelines, whichever applies, as per the OEM instructions.
3. Use a yoke retaining tool to prevent the yoke from turning. Remove the output yoke locknut and washer from the output shaft. Discard the output shaft locknut. Figure 3.

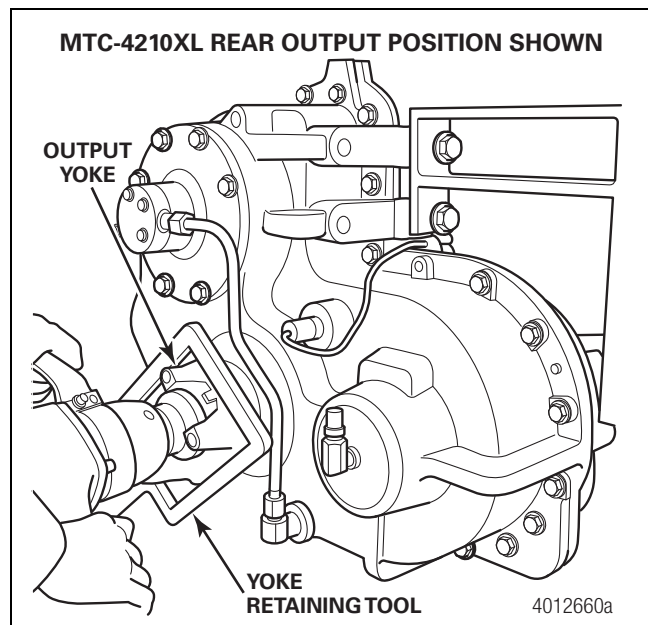


Figure 3

- Use a yoke puller to remove the yoke from the output shaft. Do not remove the deflector from the yoke unless it is damaged.
- Use a drift to remove the output shaft seal from the transfer case half. Figure 4.

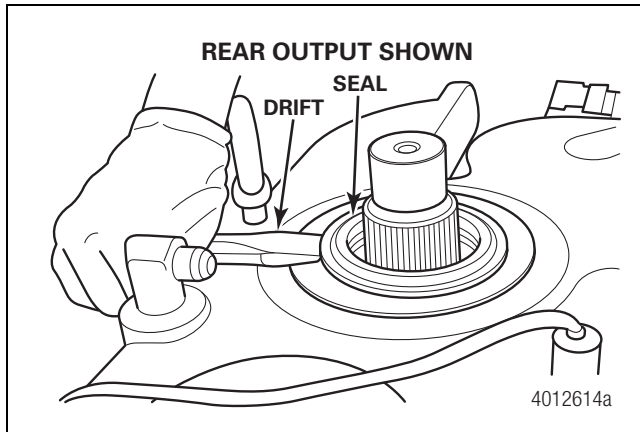


Figure 4

- Once the seal is removed, ensure the seal bore in the cover is clean and free from debris.

Output Shaft Seal and Yoke Installation

Install the Spacer and Seal

NOTE: Spacer installation is required for transfer case serial numbers before LRS00960152. On serial numbers LRS00960152 or higher, the spacer is not required and should not be used. Refer to the ID tag on the front case half for the serial number. Figure 2.

CAUTION

If a spacer is required, use only ONE spacer. Use of more than one spacer will lead to leaks or other damage.

- Install the hardened spacer, part number 1244A4239, over the output shaft and place it directly in front of the output shaft taper bearing. Figure 5.

NOTE: Some transfer cases may have a spacer already installed. Discard the old spacer and use new spacer provided in Kit 4297.

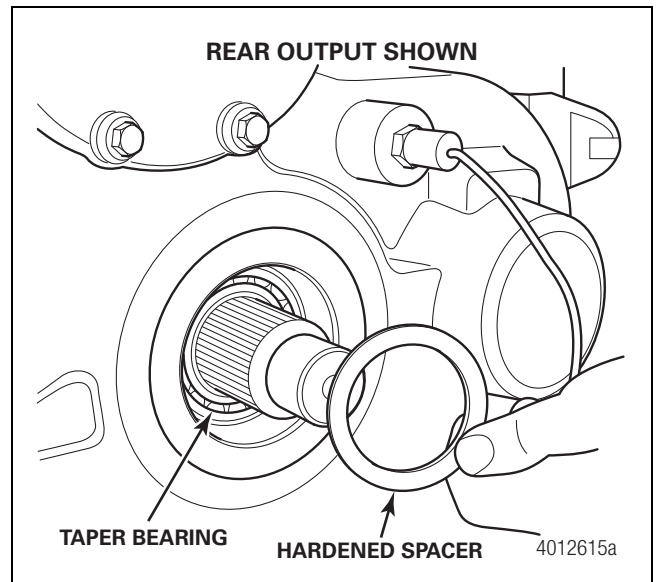


Figure 5

- Place the output shaft oil seal in position on the cover. Use the sleeve driver, part number 2728T1, to drive the seal until it is fully seated. Figure 6.

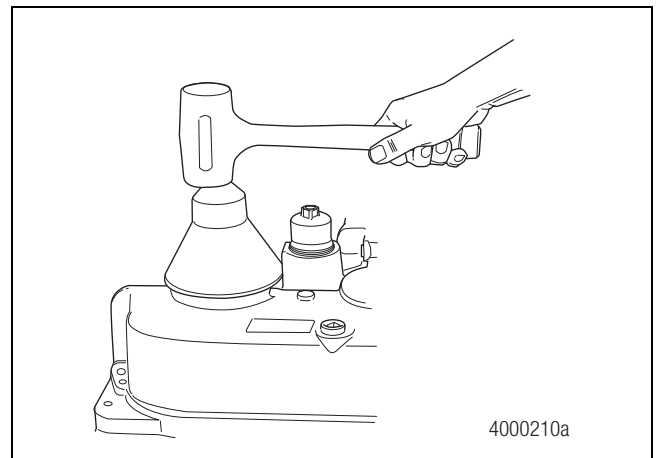


Figure 6

Install the Sleeve on the Yoke

⚠ WARNING

Solvent cleaners can be flammable, poisonous and cause burns. Examples of solvent cleaners are carbon tetrachloride, and emulsion-type and petroleum-base cleaners. Read the manufacturer's instructions before using a solvent cleaner, then carefully follow the instructions. Also follow the procedures below. Wear safe eye protection. Wear clothing that protects your skin. Work in a well-ventilated area. Do not use gasoline or solvents that contain gasoline. Gasoline can explode. You must use hot solution tanks or alkaline solutions correctly. Read the manufacturer's instructions before using hot solution tanks and alkaline solutions. Then carefully follow the instructions.

1. If a seal sleeve is installed onto a yoke, remove the sleeve using a bearing puller. Do not reuse the seal sleeves.
2. Inspect the yoke seal area for damage that could cause lubricant leaks after you install the seal. Use emery paper or an equivalent product to remove scratches, nicks or burrs only.
3. Clean the ground and polished surface of the yoke journal using a clean shop towel and a safe cleaning solvent. Do not use abrasive cleaners, towels or scrubbers to clean the yoke or flange surface. Do not use gasoline.
4. Inspect the yoke seal area for damage that could cause lubricant leaks after you install the seal. Use emery paper or an equivalent product to remove scratches, nicks or burrs only. Install the yoke. Apply a light coat of lubricant to the yoke seal journal.

⚠ WARNING

Observe all warnings and cautions provided by the press manufacturer to avoid damage to components and serious personal injury.

Do not hit steel parts with a steel hammer. Pieces of a part can break off. Serious personal injury and damage to components can result.

5. Position the sleeve into the yoke sleeve driver. Do not touch the greased areas of the sleeve. The sleeve must be kept clean prior to assembly into the seal. Use an arbor press and sleeve driver, part number 2728T2, to install the sleeve into the yoke. Verify that the sleeve is fully seated in the yoke to prevent damage to components. Figure 7.

The yoke must be fully pressed into the sleeve driver until the end of the yoke bottoms out in the sleeve driver. This will correctly position the sleeve on the yoke. When correctly seated, the sleeve is positioned 0.030-inch \pm 0.030-inch (0.76 mm \pm 0.76 mm) from the end of the yoke. Figure 8.

- **If you do not have a press:** Position the yoke on a five-inch (127 mm) spacer on a workbench. Use a dead-blow hammer and sleeve driver, part number 2728T2, to install the sleeve into the yoke. Figure 9.

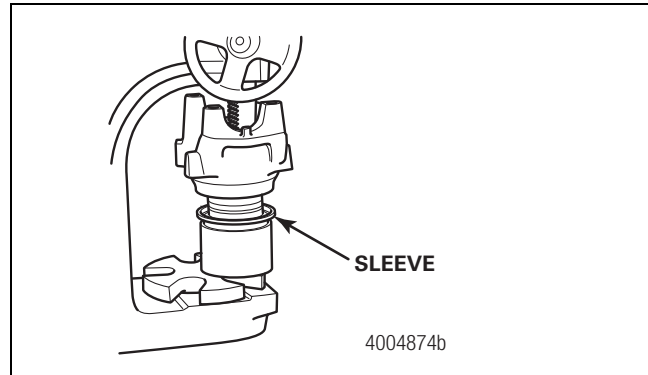


Figure 7

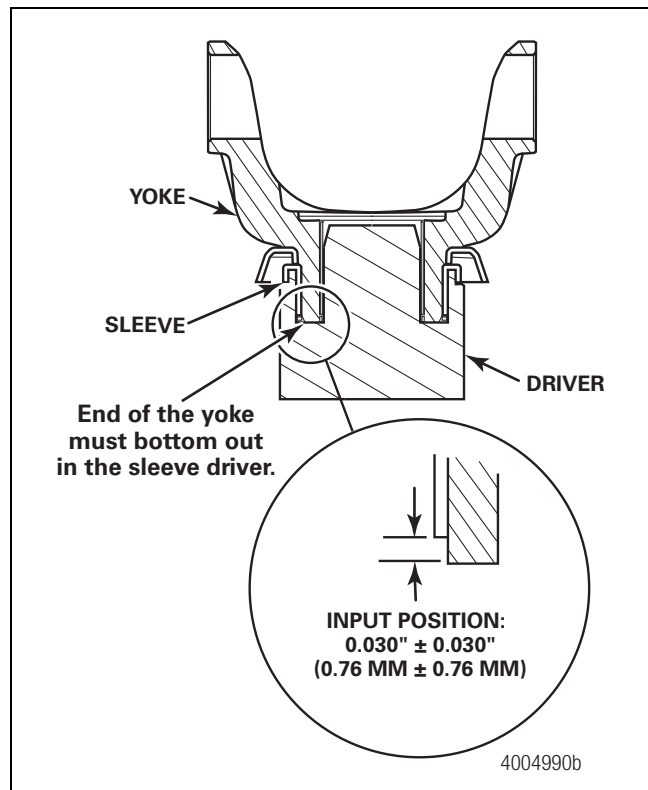


Figure 8

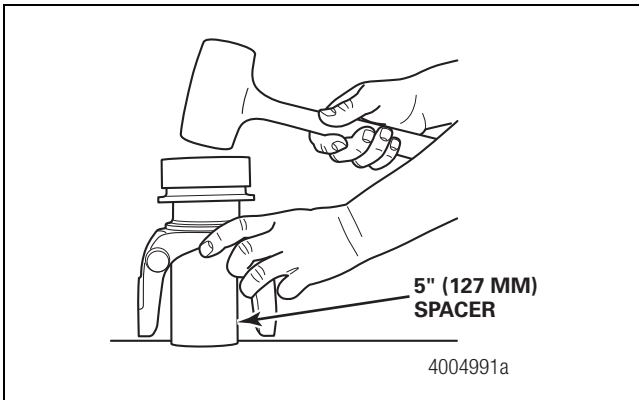


Figure 9

Install the Output Yoke

1. Before installing the yoke, clean the splines of old silastic.
2. Apply a 1/8-inch (3.175 mm) bead of RTV 732 sealant 360 degrees around the underside of the washer. Figure 10.

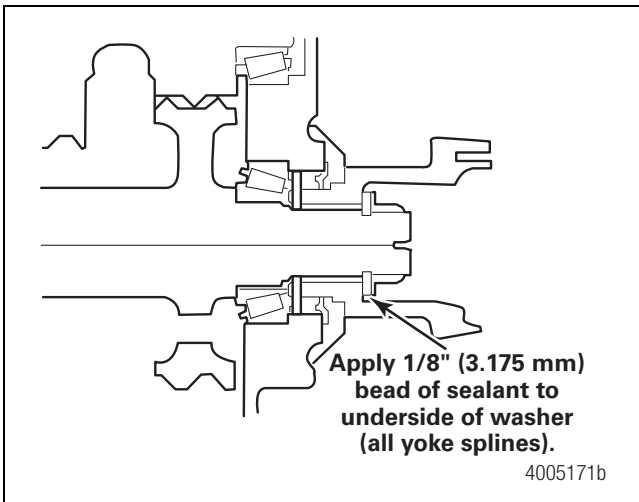


Figure 10

3. Apply a light coat of transfer case oil to the yoke journal. Install the output yoke, washer and new yoke nut. Tighten the yoke nut to 700-900 lb-ft (949-1220 N•m) using Meritor yoke installation tool MST-YT114. Refer to technical bulletin TP-10164, for tool instructions. ⓘ



Meritor Heavy Vehicle Systems, LLC
 2135 West Maple Road
 Troy, MI 48084 USA
 866-OnTrac1 (668-7221)
 meritor.com

Information contained in this publication was in effect at the time the publication was approved for printing and is subject to change without notice or liability. Meritor Heavy Vehicle Systems, LLC, reserves the right to revise the information presented or to discontinue the production of parts described at any time.

Copyright 2017
 Meritor, Inc.
 All Rights Reserved

Printed in USA

TP-16110
 Issued 12-17
 (16579)