



Technical Bulletin

Input Cage O-Ring Installation

Meritor Forward Tandem Drive Axles

RP 140 and 160 Series (With a Pump)
MD and RD 140 and 160 Series (Without a Pump)

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.

How to Obtain Additional Maintenance and Service Information

Refer to Maintenance Manual 5L, Single-Reduction Forward Differential Carriers on Tandem and Tridem Axles. To obtain this publication, call ArvinMeritor's Customer Service Center at 800-535-5560 or visit the Tech Library at arvinmeritor.com.

Service Procedure

Refer to Maintenance Manual 5L, Single-Reduction Forward Differential Carriers on Tandem and Tridem Axles, for complete maintenance and service procedures.

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.

1. Park the vehicle on a level surface. Wear safe eye protection.
2. Disconnect the drive shaft from the forward-rear axle.
3. Check and document the input shaft endplay for reference later in this procedure.

Input shaft endplay = _____.

4. Inspect for evidence of a drive yoke seal leak before removing the input bearing cage. Figure 1. Lube from input seal leaks is most often seen on the input bearing cage in the area below the seal. Clean and inspect the joint for leakage at the input cage.

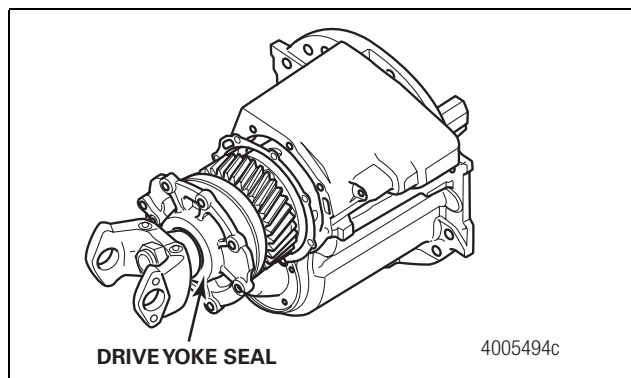


Figure 1

5. Remove the seven input bearing cage cap screws. Figure 2.

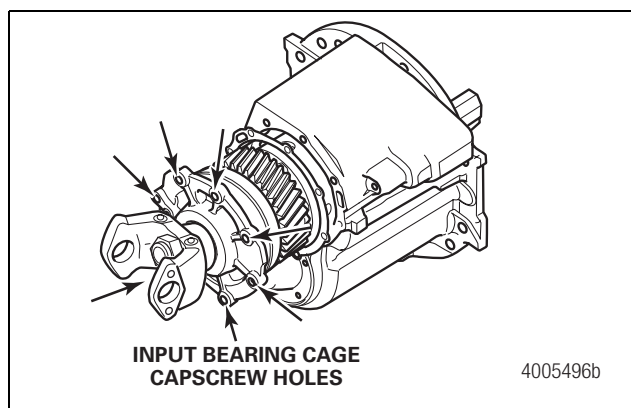


Figure 2

6. Carefully withdraw the input shaft bearing cage assembly two to three inches only.
7. Remove the shim pack, but keep it intact. Measure the shim pack thickness for later reference.

Shim pack thickness = _____.

- Remove the O-ring(s) from the input bearing cage and inspect them for cuts and nicks. Figure 3. The O-ring(s) can be removed by stretching them over the input cage and yoke. A nick or cut may indicate the presence of lead in chamfer damage.

The O-ring condition is _____.

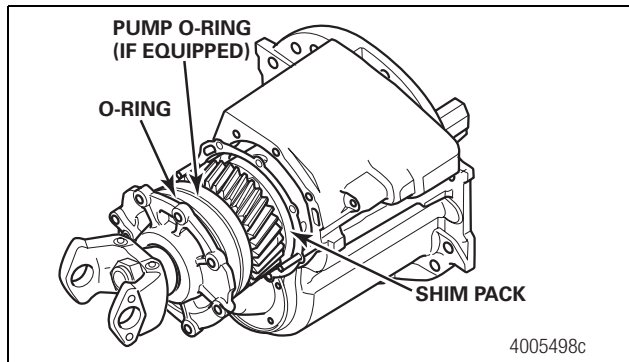


Figure 3

- Clean all sealant from surfaces surrounding the oil ports of the bearing cage and carrier assembly. Figure 4.

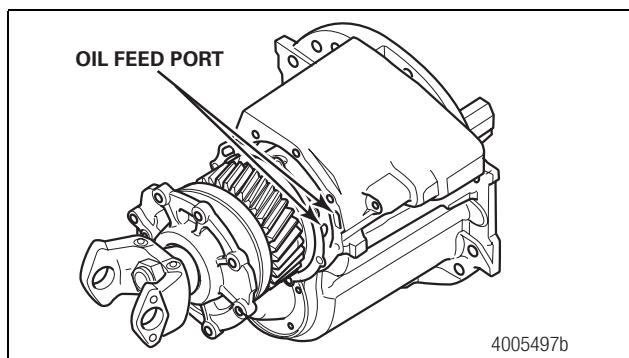


Figure 4

- Inspect the flange and lead in chamfer of the bore for nicks or other surface anomalies. Surface and chamfer conditions OK = Yes/No.
- Install the new O-ring(s) by stretching them over the yoke and flange. Be careful not to damage the O-ring(s). Ensure they are positioned correctly once installed. Install the O-ring marked with a yellow dot into the channel around the entire circumference of the input cage. For axles with pumps, install the unmarked O-ring into the channel at the input cage-to-pump interface. Figure 5.

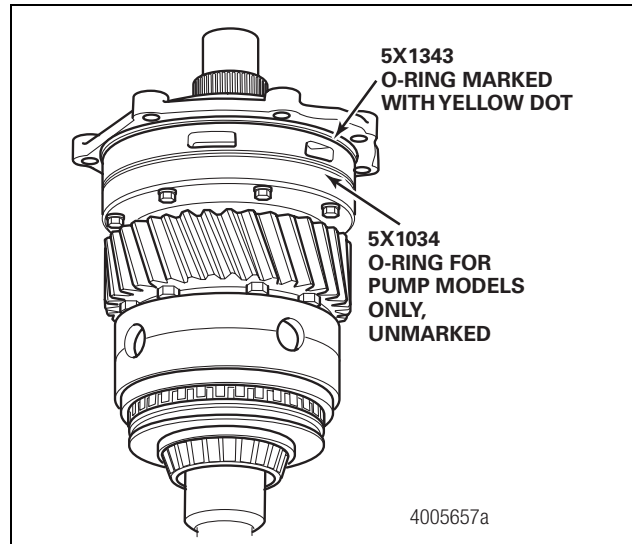


Figure 5

- Create a new shim pack to match the thickness of the original.

⚠ WARNING

Take care when you use Loctite® adhesive to avoid serious personal injury. Read the manufacturer's instructions before using this product. Follow the instructions carefully to prevent irritation to the eyes and skin. If Loctite® adhesive material gets into your eyes, follow the manufacturer's emergency procedures. Have your eyes checked by a physician as soon as possible.

- For carriers without a pump only:** Use Loctite® 518 sealant on the shims around the lubricant passage location only. Each shim leaf should be lightly coated on both sides around the lube passage only.
- Install two guide pins in the carrier. This will assist with keeping the cage and shims aligned.
- Push the input shaft assembly completely back into the carrier.
- Reinstall and tighten the seven input cage fasteners to 90 lb-ft (122 N•m). **ⓘ**
- Measure the input shaft endplay. It should measure the same as documented during disassembly. Adjust as necessary to achieve the specification of 0.002 inch to 0.008 inch. Refer to Maintenance Manual 5L, Single-Reduction Forward Differential Carriers on Tandem and Tridem Axles.

ArvinMeritor™

Meritor Heavy Vehicle Systems, LLC
2135 West Maple Road
Troy, MI 48084 USA
800-535-5560
arvinmeritor.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 2006
ArvinMeritor, Inc.
All Rights Reserved

Printed in USA

TP-0631
Issued 01-06
(16579/22882)