Lubricating the Wheel Bearings, Rear Drive Axles

> L-Line
> A-Line

Cargo
> Acterra

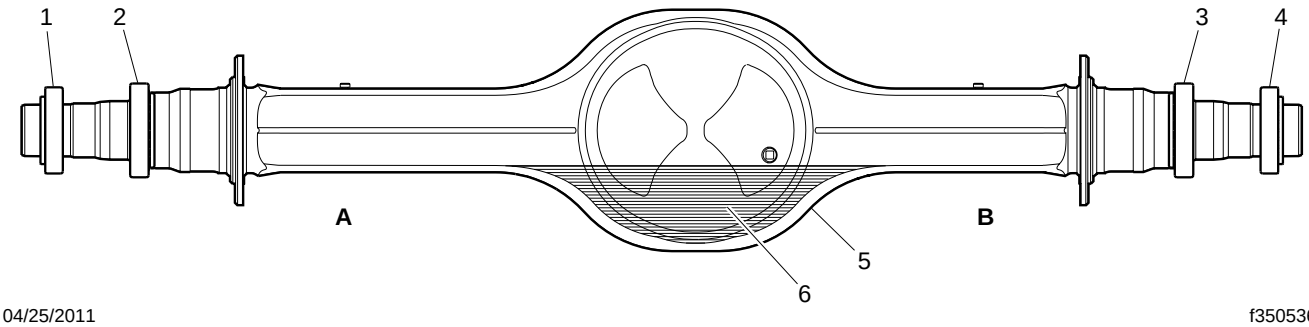
360
Bullet

Sterling
Service Bulletin

General Information

Proper wheel bearing lubrication is critical to sound wheel end health and safe vehicle operation. Insufficient lubrication can lead to catastrophic consequences that could have been avoided.

To lubricate drive axle wheel bearings (after a maintenance inspection, for example), lubricant must be transferred from the axle carrier housing to the hubs. To ensure each bearing is adequately lubricated, the axle must be filled with lubricant and tilted *three* times. See **Fig. 1** and use the following instructions to lubricate the wheel bearings on a rear drive axle.



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When side A is raised first, bearing 4 is lubricated. Side B is raised next to lubricate bearings 3 and 1. Side A is raised again to lubricate bearing 2. The carrier housing must be refilled before and after each time the axle is lifted to ensure there is enough lubricant to reach the bearings.

A. Driver Side
B. Passenger Side
1. Outer Wheel Bearing, Driver Side
2. Inner Wheel Bearing, Driver Side
3. Inner Wheel Bearing, Passenger Side
4. Outer Wheel Bearing, Passenger Side
5. Carrier Housing
6. Lubricant (full)

Fig. 1, Rear Drive Axle and Wheel Bearings

Lubricating the Wheel Bearings

1. Park the vehicle on level ground, apply the parking brakes, and chock the front wheels.

NOTE: Some Freightliner and Meritor axles have a small tapped and plugged hole located below the housing oil fill hole. This smaller hole is for the lubricant temperature sensor only and must not be used as a fill hole.

2. With the axle level and all wheels on the ground, clean the oil fill hole plug and the area surrounding it, then remove the fill plug. For Freightliner axles, see **Fig. 2**; for Meritor axles, see **Fig. 3**; for Dana Spicer axles, see **Fig. 4**.

⚠ WARNING

Failure to adequately lubricate wheel bearings can cause them to seize during vehicle operation. Seized wheel bearings can cause sudden, catastrophic damage to the wheel end and axle, possibly resulting in severe personal injury or death.

IMPORTANT: A lubricant level close enough to be seen or touched is not sufficient; it must be level with the bottom of the fill hole. See **Fig. 5**.

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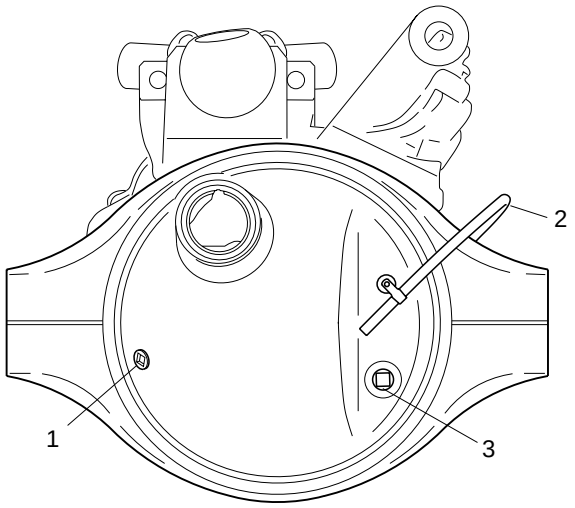

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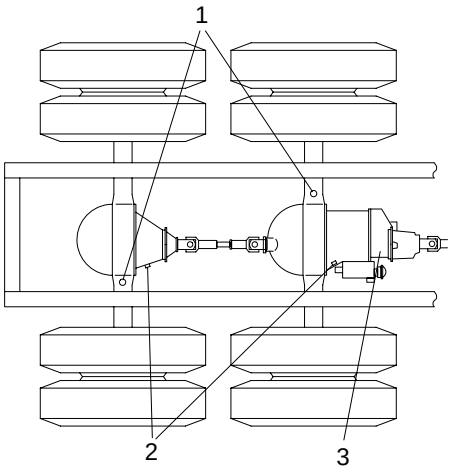
1. Oil Fill Plug
2. Breather Hose
3. Temperature Sensor Port

Fig. 2, Fill Hole Plug Location, Freightliner Tandem Axle (forward axle shown)



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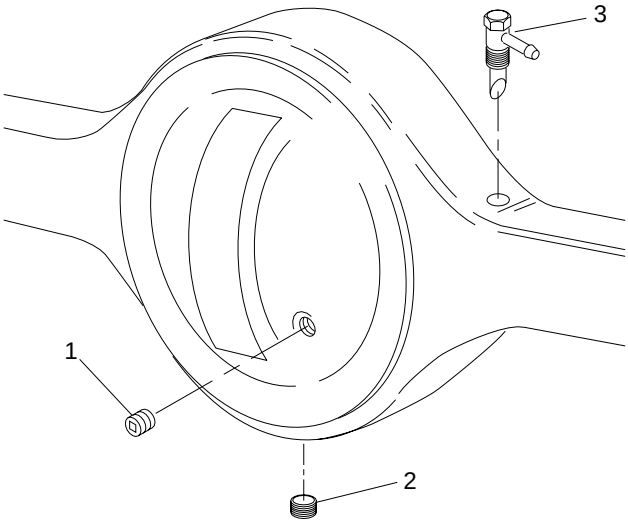
1. Axle Housing Breathers
2. Carrier Oil Fill Plugs
3. Interaxle Differential

Fig. 3, Fill Hole Plug Locations, Meritor Axles



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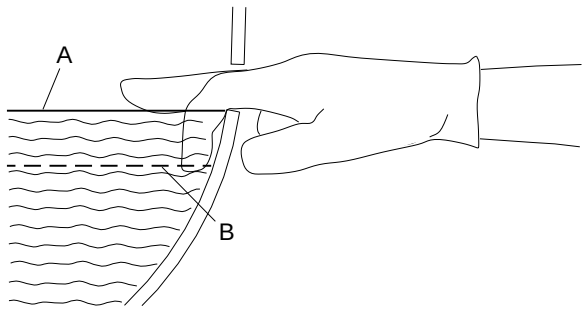
1. Oil Fill Plug
2. Oil Drain Plug
3. Axle Breather

Fig. 4, Fill Hole Plug Location, Dana Spicer Axles



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A. Correct (lube level at bottom of fill hole)
B. Incorrect (lube level below fill hole)

Fig. 5, Axle Lubricant Level Check

3. Use a clean funnel to add lubricant until it reaches the fill hole, then insert the fill plug. For recommended lubricants, see the vehicle maintenance manual.
4. To tilt the axle, position a suitable jack at a leaf spring U-bolt, and raise it until the bottom of the outside part of the outside tire is 8 inches (20 cm) above the ground. See **Fig. 6** and **Fig. 7**.

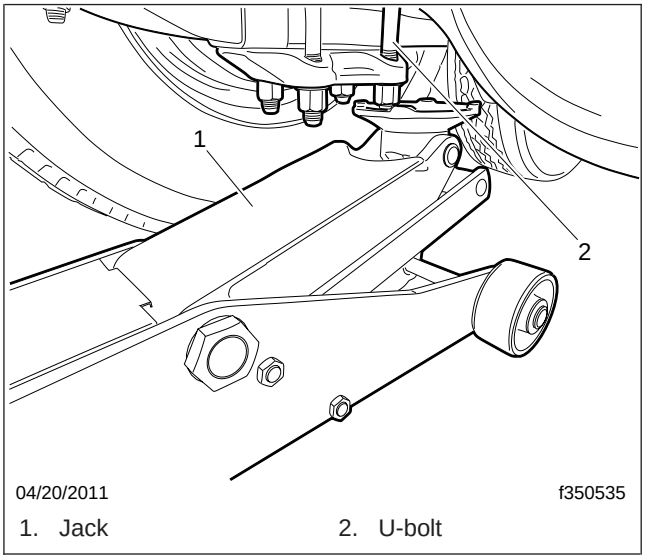


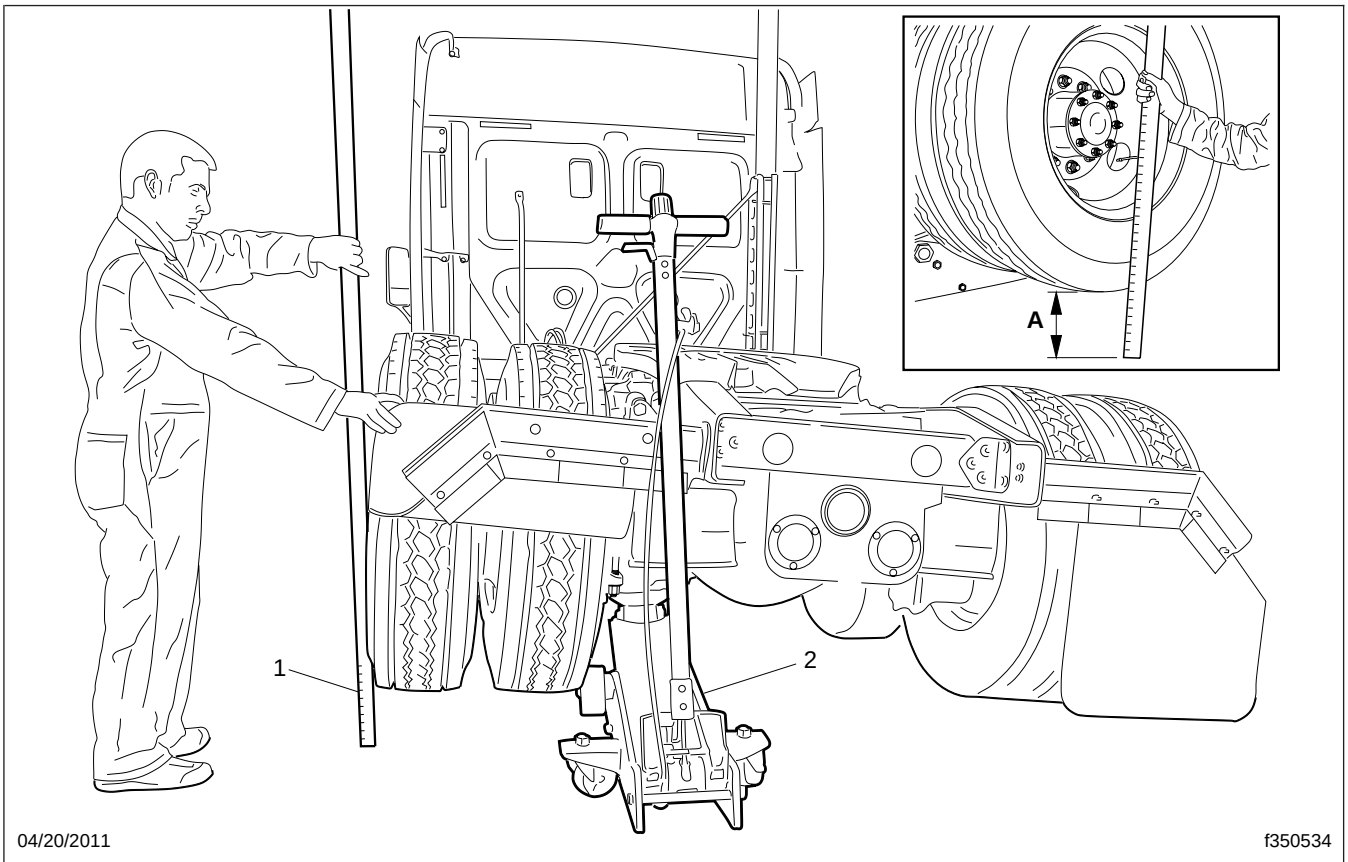
Fig. 6, Axle Lifted at Leaf Spring U-bolt

IMPORTANT: The axle must be tilted three times and the tilted position must be held for two minutes each time to allow enough lubricant to reach the hub and wheel bearings.

5. After two minutes, lower the axle, and add lubricant as described earlier in this procedure.
6. At a leaf spring U-bolt on the other end of the axle, tilt the axle as described earlier in this procedure.
7. After two minutes, lower the axle, and add lubricant as described earlier in this procedure.
8. At the U-bolt where the axle was first lifted, tilt the axle as described earlier in this procedure.
9. After two minutes, lower the axle, and add lubricant as described earlier in this procedure.

Warranty

This bulletin is informational only. Warranty does not apply.



Each time you lift a side of the axle to distribute lubricant, raise it until the bottom of the outside part of the outside tire is 8 inches (20 cm) above the ground.

A. 8 inches (20 cm)

1. Ruler
2. Jack

Fig. 7, Distributing Lubricant from Carrier Housing to Wheel Bearings