SAFETY RECALL BULLETIN

NHTSA RECALL 24V383

AUTOCAR, LLC ACX-2402 DC-2405

July 2024

ATTENTION:

Service Managers / Parts Managers.

SUBJECT:

Autocar, LLC has determined the wheel end lock nuts may not be properly secured on certain ACX (Xpeditor) and DC (Legend) vehicles.

SAFETY RECALL INFORMATION:

This Recall bulletin provides instructions for the securing the wheel end lock nuts.

VEHICLES AFFECTED:

Certain, 2023–2024 model year Xpeditor (ACX) and Legend (DC) chassis manufactured between May 23, 2023, and April 22, 2024. The ACX chassis are identified by non-sequential serial numbers in the range of 240663 through 249965. The DC chassis are identified by non-sequential serial numbers in the range of 241082 through 248634.

SERVICE RESPONSIBILITY:

Service sites must perform this Recall on affected vehicles at no charge to the owner regardless of vehicle mileage, age, or ownership. If a vehicle affected by this Recall is taken into or is currently in your vehicle inventory, or at your center for service, you must perform this Recall before the vehicle is sold or released to the owner.

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CLAIMS FOR REIMBURSEMENT:

Submit a claim for reimbursement in accordance with Autocar's Warranty Administration Manual with the following claim coding information.

CLAIM CODING INFORMATION FOR ACX VEHICLES:

Labor Operation Code Number	Time Allowance SRT	Description
77313-0-05	.50 HR	Per Wheel End

CLAIM CODING INFORMATION FOR DC VEHICLES:

Labor Operation Code Number	Time Allowance SRT	Description
77313-0-06	.50 HR	Per Wheel End

Note: If you have questions or concerns regarding this Recall Bulletin, please contact Autocar technical support at 888-218-3611

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SAFETY NOTICES:

WARNING

Allow the vehicle's engine and cooling system to cool to ambient temperature before performing the repair procedure. A hot engine or cooling assembly may cause burns or other personal injury.

WARNING

Never rely on the hydraulic pressure to hold the cab in an open position. Always use the safety pin in the cab tilt lock tube to prevent serious personal injury or death.

WARNING

To prevent eye injury, always wear eye protection when performing vehicle maintenance, service or inspection.

WARNING

Before working on a vehicle, set the parking brake, place the transmission in neutral and block the wheels. Failure to do so can result in unexpected vehicle movement and can cause serious personal injury or death.

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Working on CNG/LNG Trucks

SAFETY INSTRUCTIONS

If you store or dispense Compressed Natural Gas (CNG) or Liquefied Natural Gas (LNG), or if you work on CNG or LNG trucks, your location must be fully compliant with applicable codes, regulations and standards, including National Fire Protection Associate (NFPA) codes, Society of Automotive Engineers (SAE) standards, American National Standards Institute (ANSI) Natural Gas Vehicle (NGV) standards, the United States Code of Federal Regulations (CFR) and your state and local fire and other applicable codes (including, for example, the California Code of Regulations and the Texas Administrative Code).

Contact your local fire department for guidance and additional compliance information.

Technicians working on Autocar trucks with CNG or LNG engines must be trained in the proper repair of CNG and LNG trucks and engines and the safe storage and dispensing of CNG and LNG.

Working on CNG Fuel Systems

⚠ WARNING

CNG fuel systems include a high pressure (3600 psi) system for fuel storage and a low pressure system (125 psi) for consumption by the engine. Understanding the characteristics of CNG and how the fuel system works will prevent injury and damage to persons and property.

Attempting to operate or maintain any CNG fuel system without proper training is dangerous. Complete training and consult instructional bulletins from the CNG system suppliers, such as Agility Fuel Systems' Field Service Bulletin, Safely Working on CNG Fuel Systems.

Welding and Hot Work Near CNG and LNG Trucks

⚠ WARNING

Welding, grinding, and other "hot work" can be safely performed on or near a CNG or LNG vehicle, but certain precautions must be followed. Understand and perform the necessary precautions provided by the CNG system suppliers, such as Agility Fuel Systems' Field Service Bulletin, *Welding and Hot Work Precautions Near CNG and LNG Vehicles*.

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CNG Cylinders

WARNING

CNG fuel containers must meet Federal Motor Vehicle Safety Standard (FMVSS) 304 (Compressed Natural Gas Fuel Container Integrity) and/or ANSI/CSA NGV2 (Basic Requirements for Compressed Natural Gas Vehicle Fuel Containers). Both standards specify a detailed visual examination every three years.

Truck owners are required to complete all necessary inspections, in accordance with the applicable standards and other resources, such as the Clean Vehicle Education Foundation and NGVAmerica's Compressed Natural Gas (CNG) Container Visual Inspection Advisory.

FMVSS 304 also requires that cylinders not be used after the end of life (EOL) date provided on the tank label. The EOL date is also displayed in the engine compartment and at the fueling connection of each truck. If there are any question as to proper decommissioning of a cylinder, contact the manufacturer, whose name and address is also required to be on the label.

CNG Fuel Container Pressure Relief Devices (PRDs)

WARNING

PRDs must be properly maintained and positioned for safe operation of a CNG fuel system. Missing vent caps can allow moisture into PRDs and vent lines, which can freeze and damage these safety components. Debris which clogs the PRDs and/or vent lines can prevent proper function.

PRDs must be positioned to vent upward, not outward, from a vehicle.

Ensure that every truck owner completes periodic inspections of the PRDs and vent lines and systems, in accordance with guidance provided by the system component suppliers.

Alert First Responders to CNG and LNG

DANGER

In the event of a fire or other emergency, alert first responders to the presence and location of CNG fuel systems, tanks and dispensers. Ensure that emergency personnel are aware of proper precautions, such as those provided in Agility's *First Responder Guide: CNG and LNG Vehicle Fuel Systems.*

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LOCKOUT/TAGOUT PROCEDURES:

⚠ CAUTION

Before entering the vehicle or vehicle body, read and follow OSHA regulations concerning entry and working in “CONFINED SPACE” OSHA 1910.146 and “LOCKOUT/TAGOUT” OSHA 1910.147. Follow OSHA regulations while performing any work on the vehicle. The vehicle must be disabled by the following Steps before performing any work on the vehicle:

1. Place the transmission in NEUTRAL.
2. Set the parking brake.
3. Shut the engine OFF.
4. Lock cab doors, keep the key in your pocket. Block the wheels before entering the body or performing any work on the vehicle.
5. Turn the battery disconnect switch OFF, if equipped.
6. Completely drain the air from the primary/A system and secondary/B system by opening the drain valves on the air tanks themselves or by using the drain manifold if supplied. When draining the air tanks, do not look into the area where air is draining. Dirt or sludge particles may be expelled in the air stream and can cause eye injury.
7. Place magnetic “DANGER” signs on both cab doors before entering the body or performing any work on the vehicle.
8. Take proper precautions before working under the vehicle. Use ramps approved for the weight of your vehicle, or use floor jacks and stands. Never work under a vehicle supported by jacks alone. Always use jack stands to support the vehicle.

Note: This recall Bulletin provides singular instructions that are intended to be repeated for each wheel end.

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WHEEL END LOCK NUTS INSPECTION REPAIR INSTRUCTIONS:

1. Follow all lockout/tagout procedures and verify the air tanks are fully drained and the battery disconnect switch is in the “OFF” position. If the unit is not equipped with a battery disconnect switch, disconnect the battery cables beginning with the negative cables, followed by the positive cables.
2. Raise the wheel end and support with an appropriate jack stand.
3. Release the park brake.
4. Remove the axle flange nuts, washers and axle and set aside for reinstallation *(see Figure 1)*.
5. Remove the axle shaft gasket and discard *(see Figure 1)*.

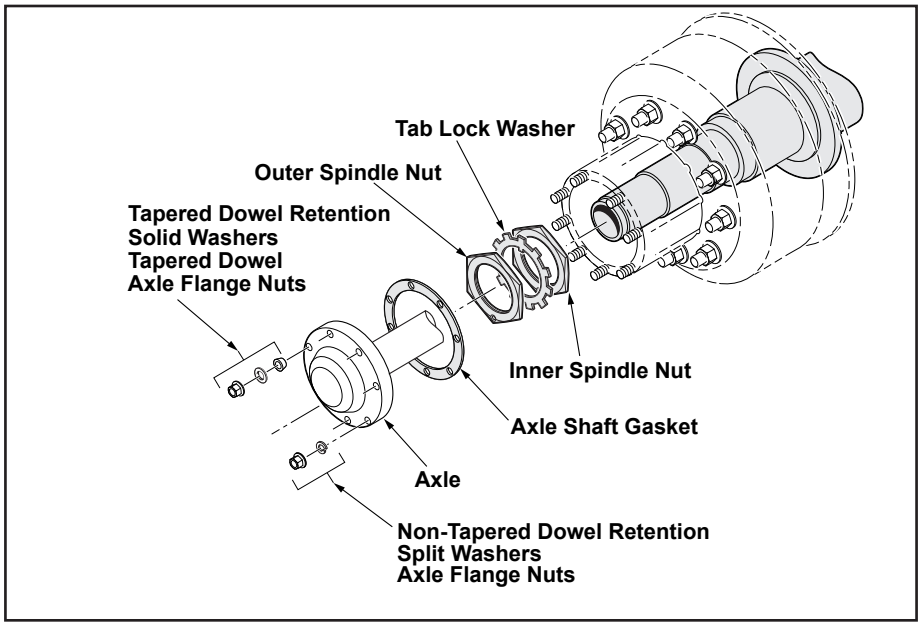

Figure 1

6. Visually inspect the spindle nuts and using a dial indicator on the outer spindle nut, check the wheel end run out to verify end play is between .001” and .003”.

Note: If the wheel end run out is correct proceed to “Reinstalling The Axle”, page 13. If the wheel end run out is not correct, proceed to “Three-Piece Axle Fastener With Tang-Type Lock Washer”, page 8.

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Three-Piece Axle Fastener With Tang-Type Lock Washer:

1. Remove the outer spindle nut and tab lock washer and set aside for reinstallation *(see Figure 2).*
2. Tighten the inner spindle nut to 200 Lbs.-Ft of torque then rotate the wheel end assembly at least 1 full turn *(see Figure 2)*.
3. Repeat Step 2.
4. Using a counterclockwise motion, back off the inner spindle nut one full turn.
5. Tighten the inner spindle nut to 50 Lbs.-Ft of torque then rotate the wheel end assembly at least 1 full turn.
6. Repeat Step 4.
7. Using a counterclockwise motion, back off the inner spindle nut a 1/4 turn.
8. Reinstall the tab lock washer set aside in Step 1.
9. Reinstall the outer spindle nut that was set aside in Step 1 with the part number facing outward and tighten to 200 Lbs.-Ft of torque.
10. Using a dial indicator on the outer spindle nut, check the wheel end run out to verify end play is between .001” and .003”.

Note: After Step 10, if the wheel end play is not within the specified range, repeat Steps 1 through 7, adjusting the back off amount until the end play is within the specified range.

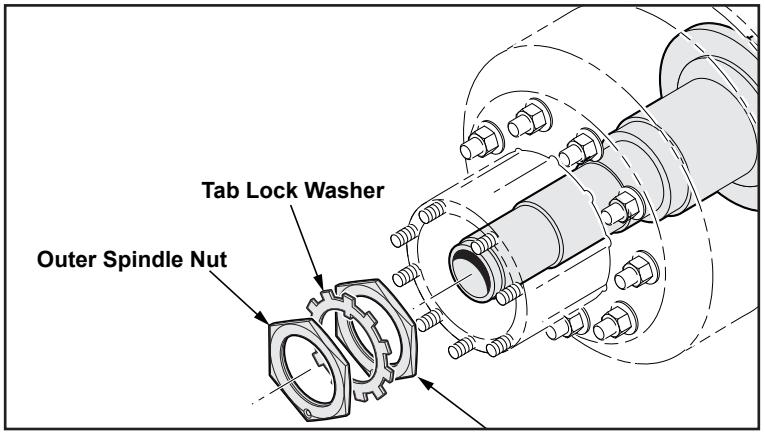

Figure 2

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10. Bend two tabs on the tab lock washer 180 degrees across from each other over the outer spindle nut and inner spindle nut *(see Figure 3)*.

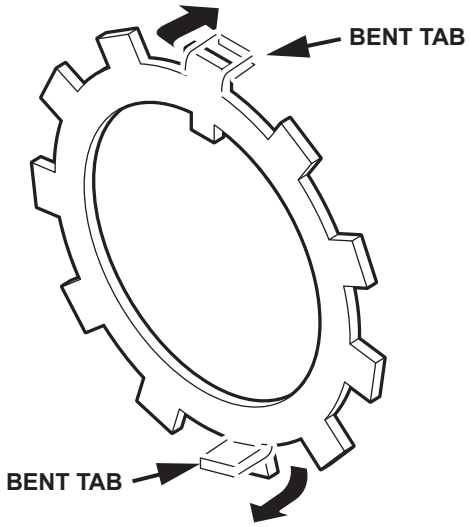

Figure 3

11. Proceed to **"Reinstalling The Axle",** page 13.

Three-Piece Axle Fastener With Dowel-Type Lock Washer:

1. Remove the outer spindle nut and dowel-type lock washer and set aside for reinstallation *(see Figure 4)*.
2. Tighten the inner spindle nut to 200 Lbs.-Ft of torque then rotate the wheel end assembly at least 1 full turn.
3. Repeat Step 2.
4. Using a counterclockwise motion, back off the inner spindle nut one full turn.
5. Tighten the inner spindle nut to 50 Lbs.-Ft of torque then rotate the wheel end assembly at least 1 full turn.
6. Repeat Step 5.
7. Using a counterclockwise motion, back off the inner spindle nut a 1/4 turn.
8. Reinstall the dowel-type lock washer and verify the dowel pin on the inner spindle nut is fully inserted into the lock washer. Flipping the lock washer may be required.
9. Reinstall the outer spindle nut that was set aside in Step 1 with the part number facing outward and tighten to 350 Lbs.-Ft of torque.
10. Using a dial indicator on the outer spindle nut, check the wheel end run out to verify end play is between .001” and .003”.

Note: After Step 10, if the wheel end play is not within the specified range, repeat Steps 1 through 7, adjusting the back off amount until the end play is within the specified range.

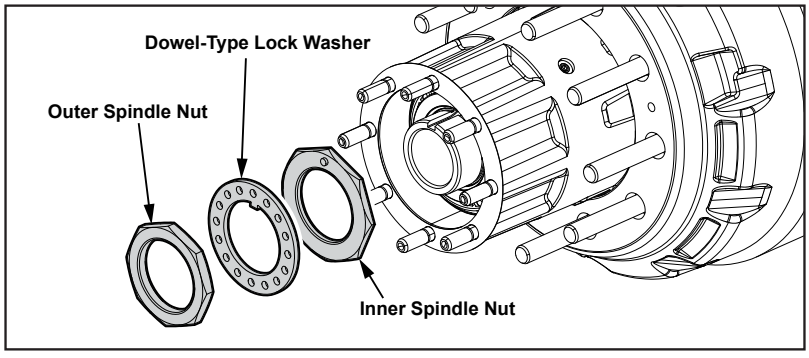

Figure 4

11. Proceed to **“Reinstalling The Axle”,** page 13.

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Pro-Torq Axle Fastener:

1. Remove the Pro-Torq (orange) keeper and set aside for reinstallation *(see Figure 5)*.
2. Tighten the spindle nut to 200 Lbs.-Ft of torque then rotate the wheel end assembly at least 1 full turn.
3. Repeat Step 2.
4. Using a counterclockwise motion, back off the inner spindle nut one full turn.
5. Tighten the spindle nut to 100 Lbs.-Ft of torque then rotate the wheel end assembly at least 1 full turn.
6. Repeat Step 5.
7. Using a counterclockwise motion, back off the inner spindle nut a 1/8 turn.
8. Using a dial indicator on the spindle nut, check the wheel end run out to verify end play is between .001” and .003”.

Note: After Step 8 if the wheel end play is not within the specified range, repeat Steps 1 through 7, adjusting the back off amount until the end play is within the specified range.

9. With the orange side of the Pro-Torq keeper facing outward, reinstall the keeper by inserting the keeper tab into the undercut groove of the nut and engage the keyway tang in the axle keyway.
10. Engage the mating teeth.
11. Compress and insert the keeper arms, one at a time, into the undercut groove *(see Figure 5)*.

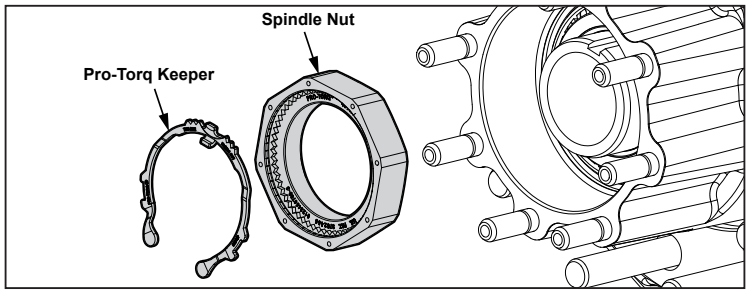

Figure 5

12. Proceed to **“Reinstalling The Axle”,** page 13.

Zip-Torq Axle Fastener:

1. Tighten the spindle nut to 200 Lbs.-Ft of torque then rotate the wheel end assembly at least 1 full turn *(see Figure 6)*.
2. Repeat Step 1.
3. Using a counterclockwise motion, back off the inner spindle nut one full turn.
4. Tighten the spindle nut to 100 Lbs.-Ft of torque then rotate the wheel end assembly at least 1 full turn.
5. Repeat Step 4.
6. Using a counterclockwise motion, back off the inner spindle nut a 1/8 turn.
7. Using a dial indicator on the spindle nut, check the wheel end run out to verify end play is between .001” and .003”.

Note: After Step 7, if the wheel end play is not within the specified range, repeat Steps 1 through 6, adjusting the back off amount until the end play is within the specified range.

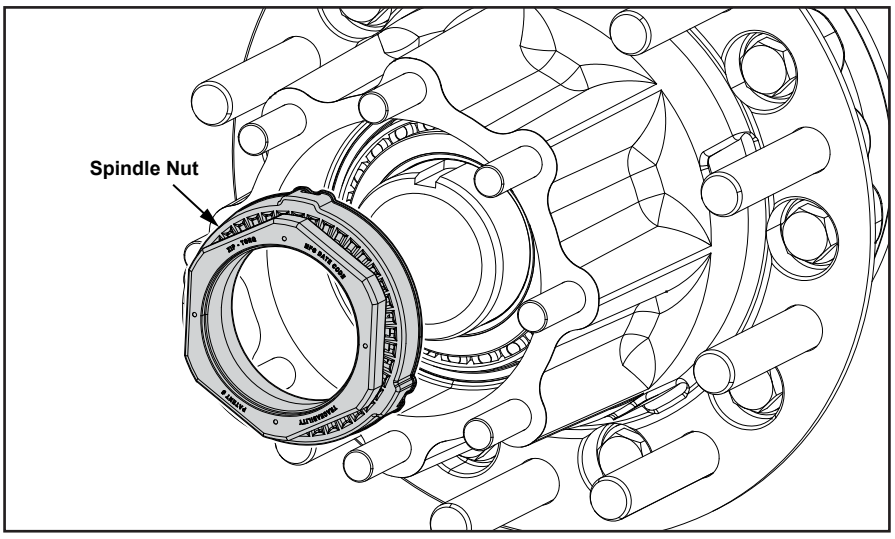

Figure 6

8. Proceed to **“Reinstalling The Axle”,** page 13.

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Reinstalling The Axle:

1. Clean the hub and axle flange of all residual gasket material.
2. Install a new axle shaft gasket (obtained locally) *(see Figure 1)*.
3. Reinstall the axle and secure with the axle flange nuts and washers that were set aside in Step 1 *(see Figure 1)*.
4. Tighten the axle flange nuts to 190 Lbs.-Ft of torque.

Front Wheel Ends:

1. Remove the hub cap bolts, washers and hub cap and set aside for reinstallation.
2. Remove the hub cap gasket and discard *(see Figures 7 and 8)*.

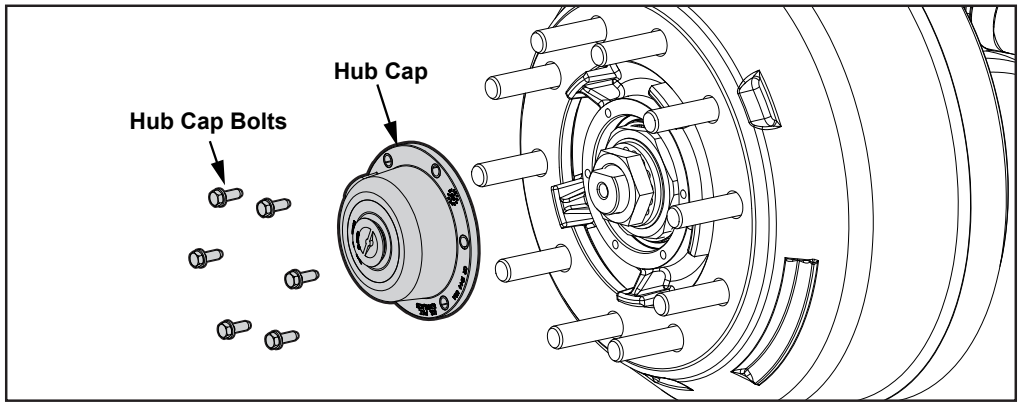

Figure 7

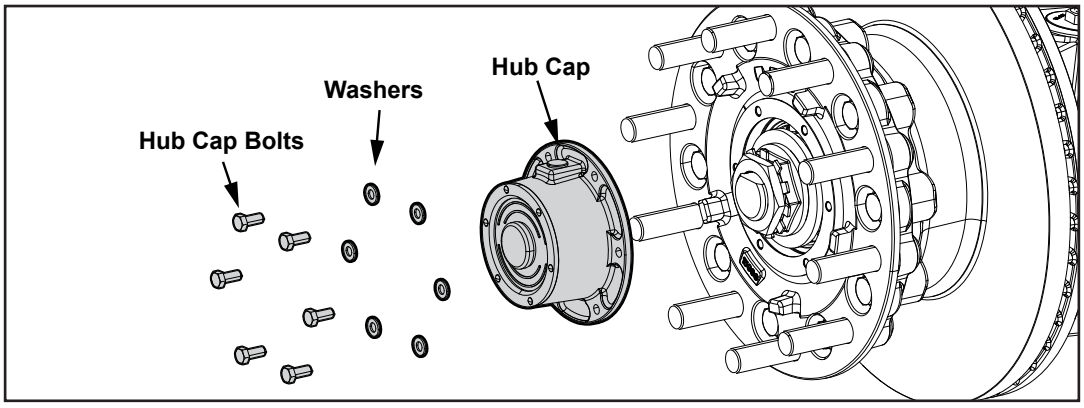

Figure 8

3. Visually inspect the spindle nuts and using a dial indicator on the outer spindle nut, check the wheel end run out to verify end play is between .001” and .003”.

Note: If the wheel end run out is correct proceed to “Reinstalling The Hub Cap For Front Wheel Ends”, page 21. If the wheel end run out is not correct, proceed to “Four-Piece Axle Fastener With Tang-Style Washer”, page 15, or to “Four-Piece Axle Fastener With Dowel-Style Washer”, page 16.

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Four-Piece Axle Fastener With Tang-Style Washer:

1. Remove the outer spindle nut and tang lock washer and set aside for reinstallation *(see Figure 9)*.
2. Tighten the inner spindle nut to 200 Lbs.-Ft of torque then rotate the wheel end assembly at least 1 full turn.
3. Repeat Step 2.
4. Using a counterclockwise motion, back off the inner spindle nut one full turn.
5. Tighten the inner spindle nut to 50 Lbs.-Ft of torque then rotate the wheel end assembly at least 1 full turn.
6. Repeat Step 5.
7. Using a counterclockwise motion, back off the inner spindle nut a 1/4 turn.
8. Reinstall the tab lock washer set aside in Step 1.
9. Reinstall the outer spindle nut that was set aside in Step 1 with the part number facing outward and tighten to 200 Lbs.-Ft of torque.
10. Using a dial indicator on the outer spindle nut, check the wheel end run out to verify end play is between .001” and .003”.

Note: After Step 10, if the wheel end play is not within the specified range, repeat Steps 1 through 7, adjusting the back off amount until the end play is within the specified range.

11. Bend two tabs on the tang lock washer outward 180 degrees across from each other over the outer spindle nut.

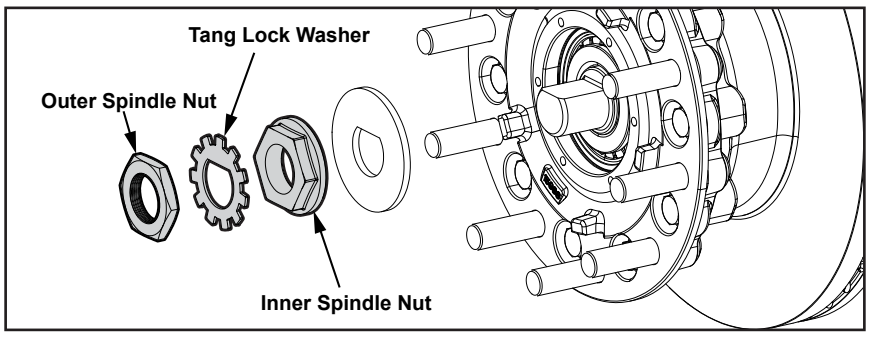

Figure 9

12. Proceed to **“Reinstalling The Hub Cap For Front Wheel Ends”,** page 21.

Four-Piece Axle Fastener With Dowel-Style Washer:

1. Remove the outer spindle nut, retainer washer and dowel-type lock washer and set aside for reinstallation *(see Figure 10)*.
2. Tighten the inner spindle nut to 200 Lbs.-Ft of torque then rotate the wheel end assembly at least 1 full turn.
3. Repeat Step 2.
4. Using a counterclockwise motion, back off the inner spindle nut one full turn.
5. Tighten the inner spindle nut to 50 Lbs.-Ft of torque then rotate the wheel end assembly at least 1 full turn.
6. Repeat Step 5.
7. Using a counterclockwise motion, back off the inner spindle nut a 1/4 turn.
8. Reinstall the dowel-type lock washer and verify the dowel pin on the inner spindle nut is fully inserted into the lock washer. Flipping the lock washer may be required.
9. Reinstall the retainer washer and verify the dowel pin on the retainer washer is fully inserted into the lock washer.
10. Reinstall the outer spindle nut that was set aside in Step 1 with the part number facing outward and tighten to 200 Lbs.-Ft of torque.
11. Using a dial indicator on the outer spindle nut, check the wheel end run out to verify end play is between .001” and .003”.

Note: After Step 11, if the wheel end play is not within the specified range, repeat Steps 1 through 7, adjusting the back off amount until the end play is within the specified range.

12. Bend two opposite sides of the retainer washer over two flat edges of the outer nut.

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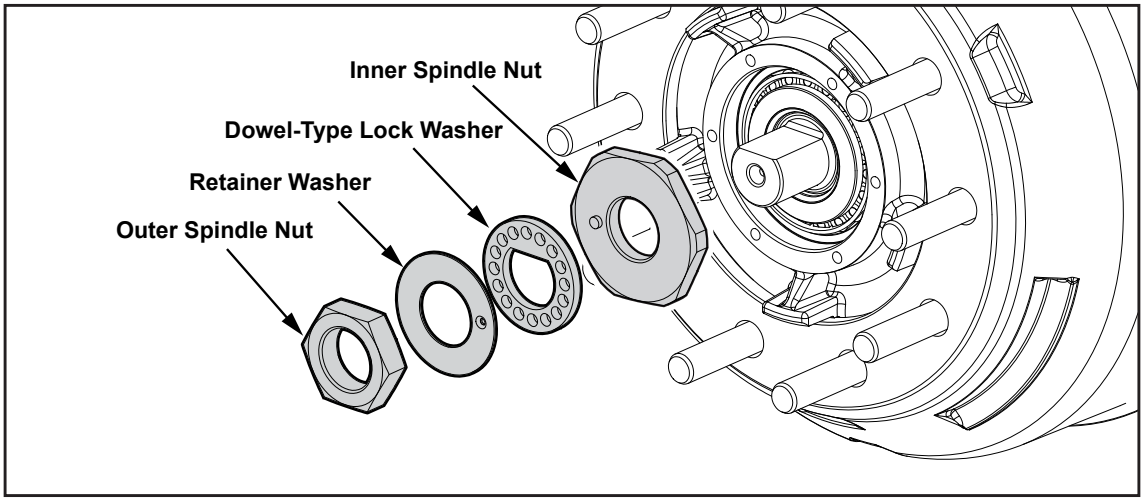

Figure 10

13. Proceed to "**Reinstalling The Hub Cap For Front Wheel Ends**", page 21.

Hendrickson Axle Fastener:

1. Remove the outer spindle nut, tang washer and dowel-type lock washer and set aside for reinstallation *(see Figure 11)*.
2. Tighten the inner spindle nut to 200 Lbs.-Ft of torque then rotate the wheel end assembly at least 1 full turn.
3. Repeat Step 2.
4. Using a counterclockwise motion, back off the inner spindle nut one full turn.
5. Tighten the inner spindle nut to 50 Lbs.-Ft of torque then rotate the wheel end assembly at least 1 full turn.
6. Repeat Step 5.
7. Using a counterclockwise motion, back off the inner spindle nut a 1/4 turn.
8. Reinstall the dowel-type lock washer and verify the dowel pin on the inner spindle nut is fully inserted into the lock washer. Flipping the lock washer may be required.
9. Reinstall the tang washer and verify the dowel pin on the retainer washer is fully inserted into the lock washer.
10 Reinstall the outer spindle nut that was set aside in Step 1 with the part number facing outward and tighten to 200 Lbs.-Ft of torque.
11. Using a dial indicator on the outer spindle nut, check the wheel end run out to verify end play is between .001” and .003”.

Note: After Step 11, if the wheel end play is not within the specified range, repeat Steps 1 through 7, adjusting the back off amount until the end play is within the specified range.

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12. Bend two opposite sides of the retainer washer over two flat edges of the outer nut *(see Figure 11)*.

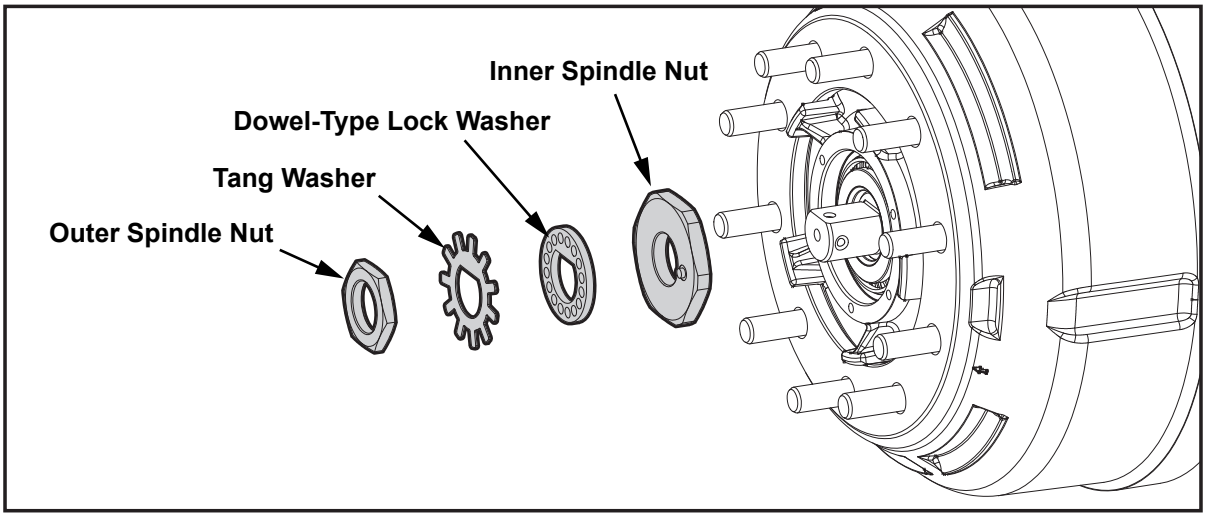

Figure 11

13. Proceed to "**Reinstalling The Hub Cap For Front Wheel Ends**", page 21.

Zip-Torq Axle Fastener:

1. Tighten the spindle nut to 200 Lbs.-Ft of torque then rotate the wheel end assembly at least 1 full turn *(see Figure 12)*.
2. Repeat Step 1.
3. Using a counterclockwise motion, back off the inner spindle nut one full turn.
4. Tighten the spindle nut to 100 Lbs.-Ft of torque then rotate the wheel end assembly at least 1 full turn.
5. Repeat Step 4.
6. Using a counterclockwise motion, back off the inner spindle nut a 1/8 turn.
7. Using a dial indicator on the spindle nut, check the wheel end run out to verify end play is between .001” and .003”.

Note: After Step 7, if the wheel end play is not within the specified range, repeat Steps 1 through 7, adjusting the back off amount until the end play is within the specified range.

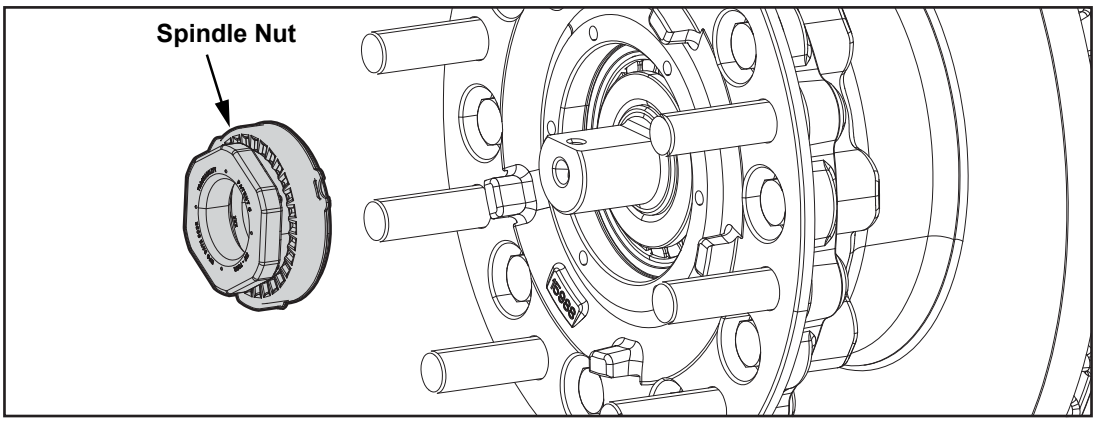

Figure 12

8. Proceed to **“Reinstalling The Hub Caps”,** page 21.

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Reinstalling The Hub Caps For Front Wheel Ends:

1. Clean the hub and axle flange of all residual gasket material *(see Figures 7 and 8).*
2. Reinstall the hub cap a new gasket (obtained locally) and secure with bolts and washers set aside in "**Front Wheel Ends**", Step 1 *(see Figures 7 and 8)*.
3. Tighten bolts to 12-16 Lbs.-Ft of torque.

Tag And Pusher Wheel Ends:

1. Remove the hub cap bolts, washers and hub cap and set aside for reinstallation *(see Figure 13).*
2. Remove the hub cap gasket and discard.

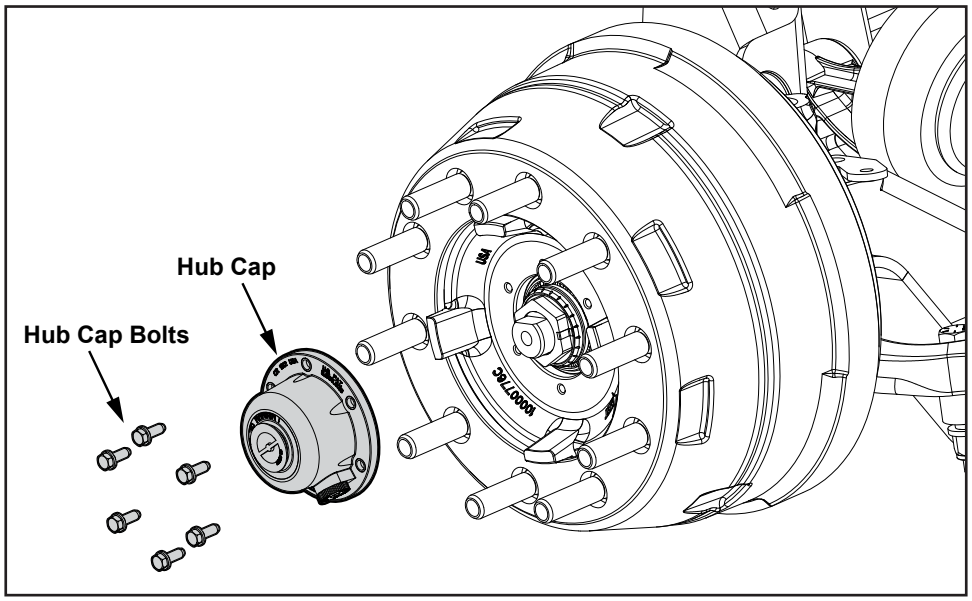

Figure 13

3. Visually inspect the spindle nuts and using a dial indicator on the outer spindle nut, check the wheel end run out to verify end play is between .001" and .003".

Note: If the wheel end run out is not correct, proceed to "Four-Piece Axle Fastener With Dowel Washer", page 22 or "Axilok Fastener" page 24.

Four-Piece Axle Fastener With Dowel Washer:

1. Remove the outer spindle nut, retainer washer and dowel-type lock washer and set aside for reinstallation *(see Figure 14)*.
2. Tighten the inner spindle nut to 200 Lbs.-Ft of torque then rotate the wheel end assembly at least 1 full turn.
3. Repeat Step 2.
4. Using a counterclockwise motion, back off the inner spindle nut one full turn.
5. Tighten the inner spindle nut to 50 Lbs.-Ft of torque then rotate the wheel end assembly at least 1 full turn.
6. Repeat Step 5.
7. Using a counterclockwise motion, back off the inner spindle nut a 1/4 turn.
8. Reinstall the dowel-type lock washer and verify the dowel pin on the inner spindle nut is fully inserted into the lock washer. Flipping the lock washer may be required.
9. Reinstall the retainer washer and verify the dowel pin on the retainer washer is fully inserted into the lock washer.
10. Reinstall the outer spindle nut that was set aside in Step 1 with the part number facing outward and tighten to 200 Lbs.-Ft of torque.
11. Using a dial indicator on the outer spindle nut, check the wheel end run out to verify end play is between .001” and .003”.

Note: After Step 11, if the wheel end play is not within the specified range, repeat Steps 1 through 7, adjusting the back off amount until the end play is within the specified range.

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12. Bend two opposite sides of the retainer washer over two flat edges of the outer spindle nut *(see Figure 14)*.

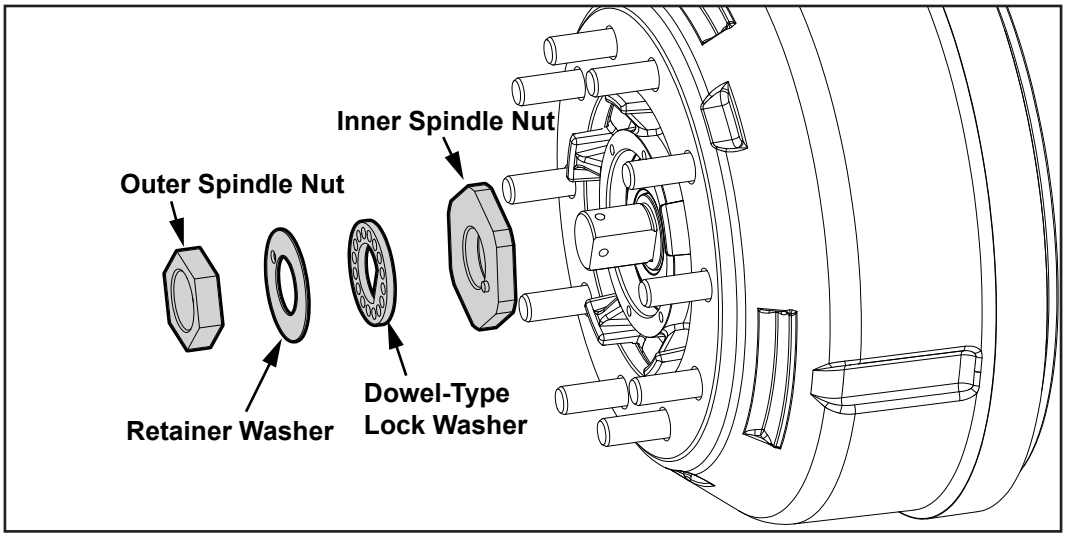

Figure 14

13. Proceed to "**Reinstalling The Hub Cap For Tag And Pusher Wheel Ends**", page 25.

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Axilok Axle Fastener:

1. Install correct size 6-point socket completely over the hex of the Axilok. Be sure that both the locking clips are completely disengaged from the retainer cage, permitting free rotation *(see Figure 15).*
2. Tighten the Axilok to 150 Lbs.-Ft of torque while rotating hub.
3. Using a counterclockwise motion, back off the Axilok one full turn.
4. Tighten the Axilok to 75 Lbs.-Ft of torque while rotating the hub.
5. Using a counterclockwise motion, back off the Axilok a 1/5 turn.
6. Using a dial indicator on the spindle nut, check the wheel end run out to verify end play is between .001” and .003”.

Note: After Step 6 if the wheel end play is not within the specified range, repeat Steps 1 through 6, adjusting the back off amount until the end play is within the specified range.

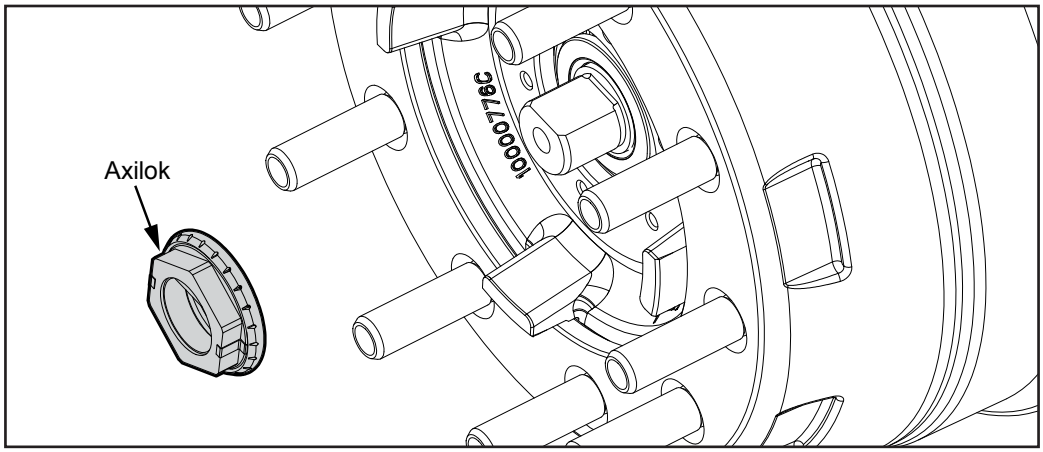

Figure 15

7. Proceed to “**Reinstalling The Hub Cap For Tag And Pusher Wheel Ends**”, page 25.

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Reinstalling The Hub Cap For Tag And Pusher Wheel Ends:

1. Clean the hub and axle flange of all residual gasket material *(see Figure 13).*
2. Reinstall the hub cap a new gasket (obtained locally) and secure with bolts and washers set aside in "**Tag And Pusher Wheel Ends**", Step 1 *(see Figure 13)*.
3. Tighten bolts to 12-16 Lbs.-Ft of torque.

Lower The Wheel End:

1. Set the park brake and lower the wheel end.
2. Repairs are complete.