

# RE-TORQUING VEHICLE LUG NUTS

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## DESCRIPTION:

A worker was travelling down the highway in a pickup truck at approximately 100 kilometers per hour when the truck began to shake. The worker immediately slowed down and began to pull over. As the vehicle slowed, the driver and passenger saw the rear driver's side wheel roll into the adjacent ditch. The driver was able to pull over without further incident.



VIEW OF WHEEL RESTING SPOT RELATIVE TO VEHICLE



BROKEN AND MISSING LUG NUTS AND BOLTS

## CAUSE:

The lug nuts loosened resulting in the wheel breaking free from the axle.

## CONTRIBUTING FACTORS:

- » Re-torquing of the lug nuts was not completed since the last vehicle service, as per the dealership's direction
- » The dealership uses re-torque window stickers to remind drivers, but the sticker was missing on this vehicle
- » There is no standard process to trigger a reminder for the employees as to when to re-torque the lug nuts

## CORRECTIVE ACTIONS:

- » Follow up with dealerships to ensure the window stickers standard is understood and followed; communicate this standard to all personnel
- » Include lug nut re-torque into log books and daily inspection books to ensure drivers can verify the vehicle's last re-torque
- » Look for gaps in the fleet maintenance program by reviewing service records and verifying the last re-torque

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**CORRECTIVE ACTIONS:**

- » Review with drivers the signs of a loose wheel or lug nut and include these items on the trip inspections. Potential signs could include the following:
  - Noticeable gap between the lug nuts and wheel rim
  - Fresh metal wear (shiny surfaces) on the wheel rim or lug nuts
  - Metal filings on or around the lug nuts
  - Cracks on the wheel rim in the vicinity of the lug nut holes
  - Radiating rust lines from the lug nuts