

## ✓ Hub/Hubcap

Inspect the hub & hubcap for possible heat or damage issues. Look for:

- Excessive heat (might be discolored, have a burnt smell, visual smoke coming off of it)
- Hot to the touch
- If present, label on hubcap that's turned from white to black **OR** a red button that will pop out from a hubcap bolt if it has gotten too hot.
- Cracked hubcap and missing bolts—these can lead to loss of grease/oil
- On Wheel-ends that are equipped with a viewing glass on the hubcap, make sure oil is at correct level & filler plug present. If the hubcap window is distorted this might indicate the hub has gotten too hot in the past.



## ✓ Oil/Grease

Inspect each wheel for the presence of oil or grease leakage.

### On the front side of the wheel:

- Pooling of oil in the bottom groove of the rim
- Oil streaks on the sidewalls of the tires
- Shiny sidewall appearance on tire
- In a grease hub system, look for signs of grease slung all around the inside of the rim

### On the back side of the wheel:

- Oil streaks running down the tire
- Excessive grease in the brake shoe or seal area



The back side of the wheel can be inspected by looking from the opposite side of the unit.

**NOTE:** A small amount of oil/grease residue around the hubcap vent or seal is normal & should not be a concern.



# DRIVER'S INSPECTION GUIDE

Things to look for  
to reduce wheel end  
roll-offs

Wheel roll-offs and wheel end separations occur within the intermodal industry. Although they have a relatively low frequency they can carry catastrophic losses to include serious property damage, injury and/or death to the motoring public and bystanders.

*This document was designed to provide information to the driver to alert them to potential wheel end roll-offs.*

## ✓ Tire Tread

Inspect the tire for any type of irregular wear.

There are numerous reasons for irregular tire wear. Here is a list of reasons that could affect the wheel end:

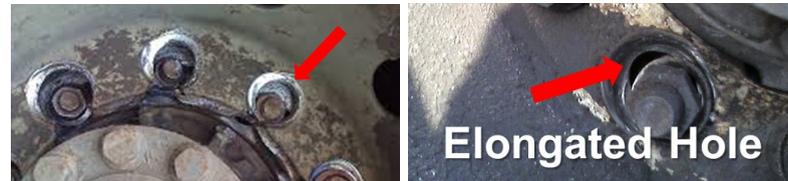
1. Non-concentric tire, rim, wheel mounting or other non-conformity.
2. Worn or improper bearing adjustment
3. Worn or damaged suspension parts.
4. Assembly out of balance.



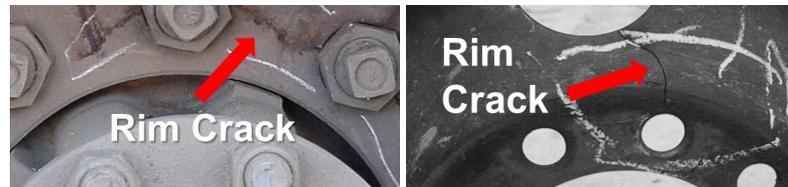
## ✓ Rim

Inspect around the rim area for issues. Look for:

1. Elongated or distorted stud and bolt holes



2. Cracking in the rim area (stud holes, hand holes & rim edges)



3. Rim Slippage where the rim is shiny or where the valve stem has been bent or cut



4. Evidence of welding repair in any area—there should be none. The flange of the rim should not be bent or distorted from its original shape or contour.



## ✓ Lug Nuts/Spoke Clamps

Should be present, tight & in good condition. Look for:

- Missing Lug Nuts, Missing Clamps and Loose Lug Nuts
- Variations in the number of stud threads after the nut may indicate loose lug nuts or spoke clamps
- Damaged/Broken Nuts & Clamps
- If present, loose wheel indicators. Make sure they are lined up. The device fits over the lug nuts & if a lug nut comes loose the indicator will point in another direction.

