

LOOSE WHEEL CAUSES & CONDITIONS

The following items, though not necessarily all inclusive, can serve as a follow-up list for things to look for when a loose wheel condition has been identified. There are four major reasons for loose wheels; LOW INITIAL TORQUE, EXCESSIVE INITIAL TORQUE, TORQUE/TENSION OK with subsequent tension loss, and INITIAL TORQUE OK with initial tension low. Keep in mind that there is a natural settling in of axle end components and Motor Wheel recommends the use of retorque procedures.

By category, the following are a listing of those items to follow-up on for the various reasons;

1. LOW INITIAL TORQUE/TENSION

- a. Operator Error/Inadequate Training
- b. Worn Impact Wrench
- c. Inadequate Air Supply to Impact Wrench
- d. Torque Wrench out of Calibration
- e. Ice in the Impact Wrench
- f. Air Gauge out of Calibration

2. EXCESSIVE INITIAL TORQUE

- a. Pre-load Tension in Excess of 63,000 lbs. or Individual Bolt Torque Greater than 750 ft.lbs.
- b. Operator Error/Inadequate Training
- c. Torque Wrench out of Calibration
- d. Air Gauge out of Calibration

3. INITIAL TORQUE/TENSION OK; Reason for subsequent tension loss

- a. Thick Paint, Greater than 3 mils
- b. Uncured Paint
- c. Dirt/Corrosion on Mating Surface
- d. Cocked/Unseated Brake Drum
- e. Anti-Corrosion Compound on Mating Surface
- f. Cocked Wheel
- g. Crevice Corrosion in Hub Flange/Drum Pilot area
- h. Corroded Wheel Mounting Surfaces
- i. Bolt Not Pressed Flush to Hub Flange

4. INITIAL TORQUE OK; Initial tension low

- a. Corroded/Dirty Bolts
- b. Corroded/Dirty Nuts
- c. Torque Wrench out of Calibration
- d. Damaged Nut Body/Cone Interfaces
- e. Wheel Bolts that have been Yielded (stretched)
- f. Stripped Threads
- g. Non-Lubricated Hub Pilot Bolts/Nuts
- h. Damaged Threads on Fasteners