KENTUCKY
AGC Self Insurers' Fund

## Tire and Wheel Safety on Heavy Equipment & Haul Trucks

Tire and wheel failures on heavy equipment and haul trucks can result in serious injuries, fatalities, and costly downtime. Proper inspection, inflation, and awareness of blowout risks are critical components of a safe jobsite.

1. **Pre-Operation Inspection:** Conduct a thorough inspection at the start of each shift:
    a. **Visual Condition:** Check for cuts, cracks, bulges, embedded debris, and uneven wear.
    b. **Tread Depth:** Ensure adequate tread for traction and stability.
    c. **Sidewalls:** Look for weathering, separation, or damage.
    d. **Rims & Components:** Inspect for cracks, bent rims, missing or loose lug nuts, and corrosion.
    e. **Leaks:** Identify slow leaks through hissing sounds or visible damage.
    f. **Tip:** Never operate equipment with visibly damaged or compromised tires.
2. **Proper Inflation Practices:** Maintaining correct tire pressure is essential for performance and safety.
    a. **Follow Manufacturer Specifications:** Always inflate to recommended PSI.
    b. **Use Calibrated Gauges:** Inaccurate readings can lead to over- or under-inflation.
    c. **Cold Tire Checks:** Measure pressure before operation, as heat increases PSI.
    d. **Inflation Safety:**
        i. Use clip-on air chucks and remote inflation systems when possible.
        ii. Stand clear of the trajectory zone during inflation.
        iii. Never lean over or stand directly in front of a tire during inflation.
    e. **Over-inflation Risks:** Increased likelihood of blowouts and reduced traction.
    f. **Under-inflation Risks:** Excess heat buildup, sidewall damage, and premature failure.
3. **Blowout Hazards and Prevention:** Tire blowouts on heavy equipment can release explosive energy.
    a. **Common Causes:** Overloading equipment beyond rated capacity. Improper inflation (over or under). Heat buildup from excessive speed or long hauls. Structural damage or previous repairs
    b. **Warning Signs:** Bulging or deformities. Unusual vibrations or noise. Rapid loss of pressure.
    c. **Prevention Measures:** Adhere to load limits and haul speeds. Conduct routine inspections throughout the shift. Remove damaged tires from service immediately. Allow tires to cool during extended operations.
4. **Safe Work Practices**
    a. Only trained personnel should service or repair tires.
    b. Use proper tools and restraining devices (e.g., tire cages) during inflation or repair.
    c. Deflate tires completely before removing wheels.
    d. Establish exclusion zones when working on large haul truck tires.
    e. Communicate hazards clearly to all nearby workers.
5. **Emergency Response:** In the event of a tire failure:
    a. **Stop Operations Immediately** and secure the area.
    b. **Evacuate Personnel** to a safe distance.
    c. **Report the Incident** according to company procedures.
    d. **Do Not Re-approach** the tire until it has cooled and been assessed by qualified personnel.

**Key Takeaways:** Daily inspections prevent most tire-related incidents. Proper inflation is critical to safe operation. Blowouts are violent and often preventable. Training and adherence to safety procedures save lives.