

## December 2008 Safety Meeting

### Tire and Wheel Safety

On a typical bobtail, less than 120 squares inches of tire tread are in contact with the road surface at any given time. Literally and figuratively a great deal is riding on this small contact area. The traction generated on the road surface by the tires allows you to turn, accelerate, stop and steer clear of disaster. Anything that interferes with a tire's ability to generate traction can ruin your whole day. In this meeting, we want to discuss tire and wheel safety, especially as it applies to drivers, because most tire and wheel failures can be averted with proper inspection and care.

Listed below are some tire inspection items:

- Check for bulges, sidewall separation, cut, exposed fabric or steel and proper alignment.
- Run your hands over the tire to check for 'feathering' and 'cupping'.
- Check for proper tire inflation. Remember not all tires are designed to hold the same inflation pressures. Refer to the tire sidewall or the vehicle manufacture for proper inflation pressures. Most tire failures are attributable to under inflated tires allowing excess heat to build up causing the tire to fail. Studies have shown that running a tire under inflated by 20% increases wear by 16% and increases fuel consumption by 2%. Experts at Goodyear Tire and Rubber suggest that tires be checked for inflation at least once a week using a good, high quality pressure gauge. Tire pressure should always be checked when the tire is cold.
- Check the rear dual tires. The tires should be of the same type, size and construction. Check to ensure that objects are not stuck in between the tires such as rocks, wood or other road debris. Similarly, both tires on the steering axle should be of the same make, design and load rating.
- Check for defective welds, cracks, elongated bolt holes, loose nuts, lugs or clamps.
- Check wheels for evidence of road damage such as bent rims or physical damaged caused by an accident or road debris.
- Tread Depth—tires on steering axles must have at least 4/32" tread depth. Tires not on a steering axle must have at least 2/32" of tread depth. Use a good, high quality tread depth gauge that can be purchased at any auto service department. Tread depth measurements should not be made where tie bars, humps, or fillets are located.
- Ensure tires/wheels are balanced when possible. Check for evidence that wheel weights have fallen off wheels causing them to become unbalanced.
- Check on the inside of the tire/rim assembly for evidence of damage by broken suspension components or road hazards. Tires can look great on the outside but could be in very poor condition on the inside.
- Check load rating on tires to ensure they are not overloaded.

- Check for evidence of extreme ‘weather checking’. Tires can deteriorate over time while absorbing the sun’s rays. This deterioration could ultimately lead to tire failure.

### Class Discussion

Ask participants to discuss tire safety and various tire issues they have encountered over the years.

### Closing

When was the last time you carefully examined all the tires/wheels on your vehicle? If you’re like many drivers, you can’t remember. Take the next opportunity to closely examine each tire/wheel on your truck. Additionally, take a look at the tires on your personal vehicle when you get home. Tires operate in a very tough environment and their condition changes each day. Carefully monitor their condition and take the appropriate action when you discover problems. Remember, most tire failures can be averted with good high quality inspections.

## December 2008 Test

### Tire and Wheel Safety

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Instructions: Read and answer each of the following questions. When complete, grade the test and review incorrect answers so each employee is “armed” with the correct answers before they leave the training.

1. Small cracks on a tire surface are usually OK as long as the cracks aren't deep enough to expose underlying fabric.
  - a. True
  - b. False
  
2. Tire pressure should be checked at least once every
  - a. week
  - b. 2 weeks
  - c. month
  - d. year
  
3. A tire under inflated by 20 % will increase its wear rate by:
  - a. 10 %
  - b. 12%
  - c. 16%
  - d. 30%
  
4. Tread depth on front tires must be at least:
  - a. 1/32”
  - b. 2/32 “
  - c. 3/32”
  - d. 4/32”
  
5. Tires should never be overloaded:
  - a. True
  - b. False
  
6. During a tire/wheel inspection, its not necessary to look on the inside surface:
  - a. True
  - b. False
  
7. Wheels can wear and crack; they should also be carefully examined:
  - a. True
  - b. False

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### Answer Sheet

1. a.
2. a.
3. c.
4. d.
5. a.
6. b.
7. a.