



## MAINTENANCE BULLETIN

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**APPROVED BY GARRY ALDERMAN, FIRE CHIEF:**

**DATE: December 26, 2007**

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### **MB 07-003**

#### **Tire Maintenance**

Properly maintained tires improve the steering, stopping, traction, and load-carrying capability of apparatus. Under-inflated tires and overloaded vehicles are a major cause of tire failure. Therefore, to avoid excessive tire wear and other types of tire damage, tires should be inspected on a regular basis. It is commonly agreed that a primary cause of early tire breakdown and poor tread life is under-inflation. Maintaining proper tire pressure levels improves tread mileage as indicated below:

- A continuous 10% over-inflation reduces tread wear by 5%
- Tire Life will be reduced by 30% if constantly under-inflated by 20%

In accordance with NFPA 1911, tires shall be inspected for damage and tire pressures checked on a regular basis. Vehicles with dual tires have a hidden tire (inner tire position) behind the outside tire. They are more difficult to reach and easier to neglect. Checking the air pressure of the inside tires is an utter necessity. Even if an inside tire is completely flat, it will be supported by the outside tire, making it appear properly inflated.

**Effective immediately**, tires shall be inspected and maintained on all HCFR apparatus as follows:

1. Tires shall be inspected on a daily bases for damage and wear. Tires that have cuts in the sidewall that penetrate to the cord shall be taken out of service. Tires shall be considered for replacement when the tread depth reaches a measurement of 6/32. Using 6/32 as a point of notification will allow for the apparatus tires to be ordered (if needed) and scheduled for a tire change through Horry County Fleet Services. This will still allow for safe operation of the apparatus until they reach the minimum tread depth recommended by the Department of Transportation (DOT), which is a minimum of 4/32 for the front and 2/32 for the rear. Apparatus will not be taken out of service for tread depth unless they have reached the DOT minimums or if they have noticeable defects (bulges, cuts, etc.). Maintenance personnel have tire gauges and can measure the tires if they are

thought to be near or below 6/32. A work order request should be submitted for tire measurements/replacement.

2. Tire pressured shall be measured for all apparatus tire at least once a week. Tires shall not be allowed to drop more than 20% of their maximum pressure. For example, a tire with a maximum inflation pressure of 120 psi should not be allowed to drop below 96 psi. Maintenance personnel have air compressors and can inflate tires to the pressures when pressures near or below 20% of their maximum pressure. A work order request should be submitted for tire inflation.

3. When checking tire pressures, use the following steps:

**Step 1:** The recommended tire inflation pressure that vehicle manufacturers provide reflects the proper psi when a tire is cold. The term cold does not relate to the outside temperature. Rather, a cold tire is one that has not been driven on for at least three hours.

**Step 2:** Locate the recommended tire pressure on the vehicle's tire information placard, or certification label.

**Step 3:** Record the tire pressure of all tires.

**Step 4:** If the tire pressure is too high in any of the tires, slowly release air by gently pressing on the tire valve stem with the edge of your tire gauge until you get to the correct pressure.

**Step 5:** If the tire pressure is too low, note the difference between the measured tire pressure and the correct tire pressure. If the pressure is 20% or more below the recommended tire pressure, a work order shall be submitted.

4. When checking tire pressures on apparatus with chrome rim simulators, the simulators shall be removed prior to checking the tire pressures. The rims on the apparatus shall be visually inspected for damage and cleaned with soap and water before the simulators are reinstalled.

This directive supercedes HCFR Directive 2003-6. This directive is to serve as policy until the newly revised standard operating procedure on apparatus maintenance is revised.

This bulletin is also posted on the department's website. You can review it on-line by going to [www.horrycountyfirerescue.com](http://www.horrycountyfirerescue.com). It is filed under the Member's Only/Member Information menu in the Admin Communications section.

Please contact the Apparatus Maintenance Division at 915-7053 if you have any questions.