DOE Lessons Learned

Title: Tire Tread Separation Incident
Date: 8/16/2001

Identifier:

Lessons Learned Statement: Tread on tires more than four years old can separate due to dry rot. This can present a potentially dangerous situation to occupants in the vehicle and to others.

Discussion of Activities:

An employee of the Oak Ridge Operations Office (EOC) was returning from a remote work assignment when the left front tire on a government-owned sedan failed suddenly due to tread separation. The driver was traveling in daylight on a clear day at seventy miles per hour in the inside lane in heavy (truck) traffic on I-24. Other traffic was moving in excess of the speed limit making for a more hazardous situation. The driver was able to control the vehicle and move from the center lane to the right side shoulder of the Interstate without causing an accident or causing others to have an accident. This was a potentially dangerous situation that could have caused serious injury or death to the driver and many others.

The driver placed a call to the Emergency Operations Center (EOC) in Oak Ridge and was advised to drive the car to the next exit and look for a place to have the tire repaired. At a gasoline station the driver called a wrecker and was taken to a tire dealer where all four tires were replaced. (She was told and shown that all four tires were dry rotted and; therefore, unsafe.) The driver brought the four old tires back in for inspection.

Upon receiving this information, Facility Management personnel placed calls to two other travelers and instructed them immediately to have the tires on their vehicles checked and replaced if necessary. To date, twenty-two tires have been replaced on six vehicles.

Analysis:

The subject vehicle was a 1996 sedan with an odometer reading of 58,000 miles and with the original tires (five years old). During a scheduled routine maintenance check in March of 2001, the tire tread was considered acceptable and there was no visible indication that the tires needed to be changed. Inspection of the tires by DOE personnel after the trip confirmed that the tire tread was still acceptable; however, the inspection of the uninflated tires revealed that all four tires were dry rotted. A call placed to the manufacturer revealed that the tires are guaranteed against dry rot for four years. DOE personnel responsible for the vehicle fleet confirmed that there was no established policy for replacing tires after four years. The policy has been revised to require tire replacement every four years.
Recommended Actions:

1. Immediately inspect tires for dry rot and general deterioration.
2. Immediately remove vehicles with unsafe tires from use until tires can be replaced.
3. Revise inspection schedule to check for dry rot and general deterioration every six months.
4. Revise inspection schedule to replace tires when the manufacturers dry rot warranty expires.
5. Check tire inflation at each refueling.
6. Conduct awareness training for all drivers regarding tire safety.
7. Encourage employees to use this information and check personal vehicles.

Estimated Savings/Cost Avoidance (if applicable):

This incident could have resulted in major accidents causing injury/death to employees and the general public. In the event of a major accident, the potential for lawsuits could have amounted to multiplied millions of dollars. In the event of serious injury to the employee substantial workmen:s compensation could have been required. In the event of death, payment of insurance claims would have to be paid.

Priority Descriptor: Yellow

Work / Function(s): Conduct of Operations: Work Planning

User-Defined Category:

Hazard(s): Traffic: Dry rotted tires causing traffic accidents and potential injury to employees and the general public.

ISM Core Function(s): Analyze hazards and develop/implement controls.

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Keywords: Tire, tread, separation, dry rot

References: