Tire Inspection Chart

Abnormal Tread Wear

Tread wear issues appear as flat spots, or areas of rapid wear on the tire. They can also be seen as deformed tread blocks or cracking in the tread area. This type of wear is usually a result of brake problems, suspension or alignment problems, an unbalanced tire and wheel assembly, or misuse.

Mushroomed Tread
Rapid Shoulder Wear
Rapid Center Wear
Cracking Between Tread
Flatspot

Sidewall Damage

Sidewall damage appears as cuts, tears, bubbles, or scrapes anywhere along the sidewall of the tire. This type of damage usually occurs when a tire encounters a road hazard. This could include anything from a curb to a bolt or piece of metal. Sharp objects or very concentrated stresses usually cause cuts and tears. Bubbles and scrapes occur due to impact damage or prolonged abrasion.

Letter Defect
Sidewall Bubble - A bulge that appears on the outside of a tire is usually a sign of separation.
Sidewall Tear
Sidewall Cut

Tire Separations

Separations appear as bulges on the shoulder or tread face, or as localized wear above the separated region. A groove worn along the shoulder could be a sign of separation. Separations are mainly caused by abnormal heat build up. Excessive heat can build up during prolonged high speed driving, overloaded or under-inflated tire conditions. Separations can also be caused by penetration of water or foreign materials into the carcass of the tire. This material enters through cuts caused by road hazards.

Bead Separation
Tread Separation
Belt Separation
Shoulder Separation - A groove worn in the shoulder of the tire is usually evidence of separation.

Road Hazard

Road hazard damage appears as protruding objects or cuts in the tire. Misuse or neglect appears as wrinkles in the inner liner or scuffing that extends around the circumference of the tire. Road hazard damage occurs when a sharp object comes in contact with the tire. Misuse and neglect can occur to severely under-inflated tires or to tires with insufficient clearance between the tire and fenders. It can also occur when dual axle tires are overloaded, or there is not enough clearance between the two tires of the assembly.

Puncture - Normally, the only evidence of a puncture will be a cut that extends from the tread of the tire through the inner liner.
Under-Inflated Tire - An abrasion may run around the circumference of the tire and wrinkles may be observed in the inner liner.

Bead Problems

Bead Problems appear as a broken bead, chafing of the rubber around the bead, or deformation of the bead area. A broken bead can occur when a tire is mounted on an improper rim or carelessly mounted or dismounted. Bead chafing can occur when mounting a tire on a dirty or mismatched rim, or when the tire is in an overloaded or under-inflated condition. A bent or deformed bead usually occurs when the tire is improperly stored, or excessive stress is applied to the bead area during mounting.

Broken Bead
Damaged Bead
Bent Bead