

Tire Service Life and Replacement Guidelines for Passenger and Light Truck Tires

Passenger and light truck tires are engineered to deliver thousands of miles of reliable performance. However, like all tires, their safe and effective use depends on several factors and conditions that may influence when they should be removed from service and replaced. Paragon offers these guidelines to help customers and tire service professionals extend tire life and evaluate whether a tire remains suitable for continued use.

Taking Care of Tire Maintenance

A tire's unsuitability for continued use is most often caused by damage or wear sustained during regular operation. Consumers should inspect their tires regularly, checking both the tire's physical condition and its air pressure using a reliable gauge. While detailed inspection guidelines are provided later in this bulletin, always watch for signs of damage, excessive or uneven tread wear, and indications of improper inflation or overloading.

Take seriously any noticeable changes in tire performance—such as increased air loss, unusual noise, or vibration. These symptoms may signal a problem requiring immediate attention, possibly including the removal of the affected tire from service.

Thoroughly inspect all tires, including spare tires, at least once a month. These inspections become even more critical as tires age. Consult a professional tire technician if any damage is discovered or suspected in order to assess the tire's condition and suitability for use.

Chronological Age Alone Does Not Define Tire Life

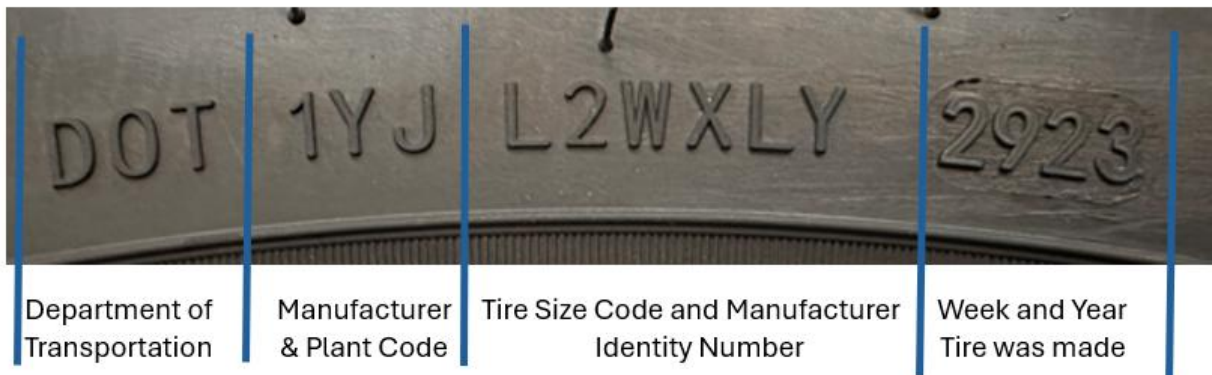
A tire's service life is influenced by numerous factors beyond its chronological age. Instead, a tire's usability is also impacted by conditions such as temperature, storage environment, and the way the tire is used—including load, speed, inflation pressure, impacts, and exposure to road hazards. Because these service and storage conditions can vary greatly, it is not possible to accurately determine a tire's lifespan based solely on its age.

Tire Service Life: What is Recommended

Although tires are used under different conditions and no technical data supports any specific age limit, the longer a tire remains in service, there is greater the chance the tire will accumulate damage that necessitates replacement. After 6 years of use, closely inspect tires for any signs of aging cracks and sidewall damage and replace if seen. While most tires will need to be replaced before reaching 10 years of age, Paragon recommends that all Paragon tires—including spares—be replaced after 10 years from the date of manufacture, regardless of appearance or tread wear. Regardless, no tire service life guideline should be viewed as a guarantee of safe use for a minimum period. Even relatively new tires may sustain damage that requires immediate replacement.

Tire Manufacture Date

The tire manufacture date is determined by the last 4 digits of the DOT serial number imprinted on the tire sidewall, which identifies the week the tire was made in a particular year. A DOT number ending in 2923 indicates the 29th week of 2023.



Maintenance Practices for Maximizing Tire Service Life

- Check tire pressure regularly—at least once a month and before long trips—and adjust it to the level specified on the vehicle’s placard or in the owner’s manual. Always measure the pressure when the tires are “cold,” meaning before the vehicle has been driven, since driving even a short distance warms the tires and raises air pressure. Have a tire demonstrating consistent pressure loss inspected immediately by a tire service professional. Regular tire pressure checks and inflation to the recommended level are necessary even if the vehicle is equipped with a tire pressure monitoring system.
- It is crucial that all tires are balanced correctly when mounted on a rim. Correct balance weights will result in a smoother ride and prevent abnormal tread wear resulting in longer tire life.

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- Regularly inspect tires for cuts, cracks, splits, uneven wear, vibrations, or bulges in the tread or sidewall, as these signs may indicate internal tire separation. If any such conditions are noticed or suspected, the tire should be inspected immediately by a qualified tire service professional. In some cases, the tire may need to be removed from the wheel for a thorough examination. Request such inspections whenever your tires are rotated.
- After a tire strikes or impacts any unusual condition or object on the roadway, it should be demounted from the wheel and inspected by a qualified tire service professional. This step is essential because damage may exist internally even if no signs are visible on the tire's outer surface.
- Routinely inspect your tires to ensure sufficient tread depth. A tire is considered dangerously worn and must be replaced immediately if the tread is worn down to the built-in indicators at 2/32 inch (1.6 mm), if any tread groove measures less than 2/32 inch, or if the cord, steel, or fabric is exposed.
- Always inspect your tires for uneven wear. Excessive wear on one side of the tread or the presence of flat spots may indicate an issue with the tire or the vehicle. If such conditions are observed, the tire should be evaluated by a qualified tire service professional.
- Regularly inspect your tire's rims, valves, valve stems, valve caps, and lug nuts. Promptly replace any bent or cracked rims or valve stems, as well as missing valve caps or lug nuts.
- Inspect and maintain the spare tire with the same care and frequency as the other tires on the vehicle.

Tire Rotation and Storage Recommendations

Always store tires in a cool, dry, and well-ventilated area. Avoid storage locations that are exposed to extreme temperatures, moisture, direct sunlight, petroleum-based products, or sources of ozone such as electric motors. Storage areas should also be clean and free of gasoline, grease, or other chemicals that can damage rubber.

If the vehicle is equipped with a full-size matching spare tire, always follow the vehicle manufacturer's recommendations for spare tire rotation. In the absence of such guidance, Paragon recommends a five-tire rotation, incorporating the full-size matching spare into the rotation cycle. Whenever a spare tire is placed into service, its inflation pressure must be checked and adjusted to match the vehicle placard specification.