

Tire Service Life for Passenger Car and Light Truck Tires

Purpose:

Tires are designed and built to provide many thousands of kilometers of excellent service but must be maintained properly. As explained below, the service life of a tire is affected by many factors that are independent of the chronological age of the tire.

Service Life Is Not Determined By Chronological Age

Tires are composed of various materials, including rubber, having performance properties essential to the proper functioning of the tire. These component properties evolve over a combination of time, service and storage conditions. For each individual tire, this change is affected by many elements such as temperature, storage conditions, and conditions of use (e.g., load, speed, inflation pressure, impacts and road hazard injury) to which a tire is subjected throughout its life. Since service and storage conditions vary widely, accurately predicting the serviceable life of any specific tire based on simple calendar age is not possible. The RAC† is not aware of scientific or technical data that establishes or identifies a specific minimum or maximum service life for passenger and light truck tires. However, in some cases a tire or vehicle manufacturer may make a specific tire replacement recommendation regarding its products. If so, the consumer should consult the manufacturer with any questions with regard to following the recommendation. Further, any such recommendation should not be considered a minimum serviceable life for the tire.

Be Tire Smart is a national public education campaign designed to encourage Canadian motorists to adopt good tire maintenance practices. Although tire dealers should be doing so all the time, every spring Be Tire Smart Week involves tire dealers across Canada to teach motorists proper tire maintenance procedures and promote the Be Tire Smart - Play Your P.A.R.T. campaign. The acronym lists the most important maintenance procedures: P-ressure, A-lignment, R-otation and T-read.

The Consumer Plays A Primary Role in Tire Maintenance

The tire industry has long emphasized the consumers' role in the regular care and maintenance of their tires. (Tire care and service materials are available from RAC on its Be Tire Smart campaign website, www.betiresmart.ca.) Tires should be removed from service for several reasons, including tread worn down to minimum depth, signs of damage (cuts, cracks, bulges, vibration, etc) or signs of abuse (under inflation, overloading, etc). That is why it is recommended to have tires, including spares, inspected regularly by a tire professional. A monthly maintenance inspection, for which the consumer must be primarily responsible, should focus on proper inflation pressure, tread wear and tire damage. This monthly inspection should be supplemented by recurring rotation, balancing and alignment services. This inspection should occur whether or not the vehicle is equipped with a tire pressure monitoring system. Additionally, the condition of a tire should be assessed regularly to determine if there are any tactile or visual signs of damage that make replacement necessary.

More on Page 2 - *Storage, Rotation, and Other Conditions That May Affect Tire Service Life*

Storage, Rotation, and Other Conditions That May Affect Tire Service Life

Tires should always be stored in a dry, cool, well-ventilated place. Avoid storing tires in areas that are exposed to wetness, petroleum or petroleum-based products, extreme temperatures, direct sunlight, and/or other sources of ozone, such as electric motors. Storage areas should also be clean and free of grease, gasoline or any corrosive chemicals which can deteriorate the rubber.

If a vehicle is fitted with a matching full-size spare tire (same size and type as other in-service tires) the consumer should follow the vehicle manufacturer's recommendation for rotating the spare tire. When any spare tire is placed into service, its inflation pressure must be checked immediately.

Consumers are strongly encouraged to be aware not only of their tires' visual condition but also of any change in dynamic performance such as increased air loss, noise or vibration. Such a change in performance could be an indication of an internal condition that might dictate removing the tires from service immediately to prevent a tire failure. In these cases, the RAC recommends that consumers consult a tire service professional. (i.e. tire dealer)