TIRE SAFETY WARNINGS:

When you have a question about tires, there are various sources of information available. Below are some examples of such source:

- The Rubber Manufacturers Association (www.rma.org)
- The National Highway Traffic Safety Administration (www.safercar.gov)

Important Factors in Tire Safety Are:

- Proper Inflation Pressure
- Proper Vehicle Loading
- Regular Tire Rotation
- Regular Inspection

PROPER TIRE INFLATION

The recommended inflation pressures for tires are specified in PSI (pounds per square inch) or kPa (kilopascals) as indicated on the vehicle tire placard, certification label or in the owner's manual. Never set tire inflation pressures below the recommended inflation pressure found on the vehicle tire placard, certification label or owner's manual. Under inflation causes excessive heat build-up and internal structural damage that may lead to a tire failure, including tread/belt separation, even at a later date. Do not exceed the maximum inflation pressure shown on the tire sidewall. Over inflated tires (over the maximum molded on the tire sidewall) are more likely to be cut, punctured or damaged by sudden impact from hitting an obstacle, such as a pothole.

Proper Inflation is Critical

Inflation pressure enables a tire to support the load and to control the vehicle, therefore proper inflation is critical. With the right amount of inflation pressure, the vehicle and the tires will achieve their optimum performance. In addition to tire safety, this means your tires will wear longer and improve vehicle fuel consumption. Note that some vehicles may have different cold inflation pressures for tires on the front and rear axles.

WARNING

Driving on tires with improper inflation pressure is dangerous.

- Under inflation causes excessive heat build-up and internal structure damage.
- Over inflation makes it more likely for tires to be cut, punctured or broken by sudden impact.

These situations can cause a tire failure, including tread/belt separation, even at a later date, which could lead to an accident and serious personal injury or death. Consult the vehicle tire placard, certification label or the owner’s manual for the recommended inflation pressures.

NOTE

The pressure indicated on the tire sidewall is the maximum allowed in the tire, irrespective of the vehicle. Follow the vehicle manufacturer's recommendations for inflation pressure found on the vehicle tire placard, certification label or in the owner's manual.

It is impossible to determine whether radial tires are properly inflated just by looking at them. You must use a tire gauge to properly check the inflation pressure. Motorists should have their own gauge and keep it in the vehicle.

One of these tires is dangerously under inflated. You cannot tell just by looking.

Check inflation pressure with an accurate tire gauge. A gauge calibrated in 1 psi increments up to 60 psi is sufficient for most passenger tires. A dual head gauge calibrated in 2 psi increments up to 100 psi is sufficient for light truck tires. Also, check the inflation pressures of inside tires in dual fitments, since it is imperative that these inflation pressures be checked and properly maintained because the inside dual tires are subjected to more severe operating conditions, such as:

- High heat exposure, due to close proximity to brakes
- Lower air circulation to assist in cooling
- Crowned road surfaces (which can cause inside dual tires to support more of the load than the outside dual tires)

When to Check Inflation Pressure

Check inflation pressure when tires are cold, that is, when the vehicle has been parked for at least 3 hours or has been driven less than one mile at moderate speed. The inflation pressure in all tires, including the spare tire and inside duals, should be checked with an accurate tire gauge at least once a month. Additional checks should be made before long trips, carrying heavy loads, towing a trailer and any time high speeds are anticipated. This includes vehicles equipped with a Tire Pressure Monitoring System (TPMS). Maintaining proper inflation pressure maximizes fuel economy and optimizes overall tire performance.

Never "bleed" or reduce inflation pressure when tires are hot from driving, as it is normal for pressures to increase above recommended cold pressures. If a hot tire pressure reading is at or below recommended cold inflation pressure, it may be dangerously under inflated. In this case, immediately determine the cause and/or have the tire checked by a tire service professional.

Passenger and light truck tires may lose 1 to 2 psi inflation pressure per month under normal conditions and 1 to 2 psi for every 10 degrees F temperature drop. If a tire continually loses more than 2 psi per month, have it checked by a tire service professional. Significant changes in altitude or temperature will result in changes in inflation pressure and will require an adjustment.

Continuous Inflation Pressure Loss

Any tire that continually requires re-inflation is a serious safety risk. The cause may be a puncture, road hazard damage, leaking valve, corroded or damaged rim, tire mounting damage or other irregular condition. Continuous use of a tire in an under inflated condition will result in heat build-up and internal tire damage. This may result in a tire failure, including tread/belt separation. Tires that continuously require re-inflation should be inspected thoroughly by a tire service professional and be properly serviced or replaced immediately.

WARNING

Inflating an unsecured tire is dangerous. If it bursts, it could be hurled into the air with explosive force resulting in serious personal injury or death.

Never inflate a tire unless it is secured to a vehicle, tire mounting machine or other restraining device.

PROPER VEHICLE LOADING

Proper Tire Loading

To avoid over loading tires, maintain the proper inflation pressure and never exceed the vehicle's load capacity, gross axle weight ratings (GAWR) or the Gross Vehicle Weight Rating (GVWR) stated on the vehicle tire placard, certification label or the owner's manual. The vehicle load must also be distributed so that no individual axle, tire or dual assembly is over loaded.

WARNING

Under inflation and/or over loading of a tire causes excessive heat build-up and internal structural damage. This many cause a tire failure, including tread/belt separation, even at a later date, which can lead to an accident and serious personal injury or death.

Over loading a vehicle can have other serious safety consequences such as suspension or wheel failure, increased braking distance or brake failure (particularly on steep grades), and adverse vehicle handling/stability.

Consult the vehicle tire placard, certification label or owner's manual for the recommended vehicle load limits and tire inflation pressures.

The maximum load for each tire is molded on the tire sidewall (along with the maximum inflation pressure for that load). Never exceed the maximum limits on the tire or the rim/wheel.

For improved fuel efficiency, reduce vehicle weight as much as possible by removing unnecessary items from your cargo storage areas (in addition to keeping tires properly inflated).

Consult your vehicle owner's manual for load recommenda-tions and special instructions (such as trailer towing).

REGULAR TIRE ROTATION

Rotation Patterns

Tire rotation procedures are established to equalize the tread wear for each tire to prolong tread life. By regularly changing a tire to another position on the vehicle, any abnormal wear patterns that were starting to develop may be corrected.

Before rotating tires, always consult the vehicle and/or tire manufacturer for specific recommendations regarding rotation. If no rotation period is specified, tires should be rotated every 5,000 to 8,000 miles (or per the tire manufacturer's recommendations) or at any sign of uneven wear. The first rotation is the most important. If tires show uneven tread wear, check for and correct any misalignment, imbalance, or other mechanical problems before rotation. Any vehicle showing a tendency for wear differential should have tires rotated more often.

Many vehicle manufacturers recommend replacing all tires on the vehicle at the same time. This makes rotation even more important for maintaining uniform tread depth and optimum tread wear of the entire set.

When tires are rotated, the inflation pressures must be adjusted for the tires' new positions in accordance with the vehicle manufacturer's recommendations.

REGULAR TIRE INSPECTION

Tire Inspection Guidelines

In addition to maintaining proper inflation pressure, regularly inspect the tire tread and sidewalls for irregular tread wear, cracking, scrapes, bulges, cuts, snags, foreign objects or other damage resulting from use. Stones, glass, and other foreign objects embedded in the tread should be removed to prevent further damage. Even minor damage can lead to further injury and eventual tire failure. Tires with excessive cracking on the tread or sidewall(s) should be removed from service. This is typically caused by under inflation, over loading, improper storage, and/or improper long-term parking.

You should check their tire tread and sidewall areas during monthly inflation pressure checks, looking for uneven or irregular tread wear or other conditions as noted above. It is recommended that tires, including the spare, be periodically inspected by a tire service professional during routine maintenance intervals such as oil changes and tire rotations.

WARNING
Driving on damaged tires is dangerous. A damaged tire can suddenly fail leading to situations that may result in serious personal injury or death. Tires should be regularly inspected by a qualified tire service professional.

Replace tires when worn to 2/32” tread depth remaining anywhere on the tread face. Built-in tread wear indicators or “wear bars,” which look like narrow strips of smooth rubber across the tread, will appear on the tire when the tread is worn to 2/32.” When a wear bar is flush with the tread surface, the tire is worn out and it is time to replace it. If not replaced, loss of traction in adverse weather conditions is more likely to occur.

Based on the tread wear indicators on the tire above, the tire is worn out

In addition to wear out, if any of the following conditions below are found when inspecting a tire, rim/ wheel or valve, the item should be removed from service. (Note: this list is not all-inclusive.)

Localized spot wear

Exposed cord or fabric material

Unrepairable punctures

Previous improper repairs

Bulges, blisters

Deep cuts/cracks

Run flat damage

Bent, cracked, corroded or damaged rim/wheel

Damaged valve and/or valve core

Consult a tire service professional with any questions or concerns regarding tire, rim/wheel or valve conditions.

The “Penny Test” is an easy way to determine if your tires are worn out. The test requires a penny. Place the penny upside down into a tread groove of a tire. If part of Lincoln’s head is covered by the tread, the tires have the proper amount of tread. If you can see all of Lincoln’s head, it is time to replace the tire.

Tire Service Life

It is important to have tires in good operating condition, thus tires may need to be replaced because of service conditions long before the tread is worn out. To determine if tires, including the spare, should remain in service, it is recommended that they be periodically inspected by a tire service professional during routine maintenance intervals like oil changes and tire rotations. The service life of tires includes their overall condition and vehicle usage factors, not just tread wear. All of these factors should be taken into account when considering tire replacement.

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 service life of any specific tire based on calendar age is not possible. RMA 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. Furthermore, any such recommendation should not be considered a minimum service life for the tire.