Tire Wear Meeting Kit

What’s At Stake

TIRE WEAR MATTERS

Too little tire tread can create unsafe driving conditions. When tires can’t grip the road, a driver may lose control of his or her vehicle. When roads are wet or snowy, tire tread depth is very important. Anytime precipitation gets between your tires and the road, you need the tread to cut through it and maintain as much contact with the road surface as possible. The shallower your tread, the more easily you may lose traction when driving in the wet or snow.

THE MINIMUM TIRE TREAD DEPTH

Most states have established a 2/32-inch minimum tread depth requirement, which require motorists to replace a tire when the tire wears down to that depth. Regardless of which state you live in, a tire be replaced when any portion of the tread is at 2/32-inch depth.

What’s the Danger

CAUSES OF IRREGULAR TIRE WEAR

Improper Inflation Pressure

When a tire is improperly inflated, there’s a good chance it will start to wear more rapidly and/or unevenly. Not only do vehicle manufacturers specify the inflation pressures for the front and rear tires to optimize performance for ride comfort, handling, and fuel economy, they also take into consideration tire wear. Proper inflation pressure helps optimize distribution of vehicle load, acceleration, braking, and cornering forces in the tread. If the tire pressure is too low, or even too high, the contact patch of the tire tread is not optimized to handle the wide variety of jobs it is asked to do. Thus, different parts of the tread may be abraded away more quickly and/or irregularly.

Out-Of-Spec Tire Alignment

Tire alignment, also known as wheel alignment, refers to the adjustment of the vehicle’s steering and suspension components – the system that connects and controls the motion of the wheels. It is not an adjustment of the tires or wheels themselves. The key to proper alignment is to adjust the angles of the tires and their contact with the road in accordance with the vehicle manufacturer’s specifications for parameters such as camber, toe, and caster.

Improper tire alignment can cause your tires to wear unevenly and prematurely. Common

irregular tire tread wear conditions from improper alignment include the following:

Heel/toe tire wear: This happens when one side of the tread blocks is wearing faster than the other side circumferentially. When you run your hand over the tread blocks, they will feel like saw teeth. Heel/toe wear typically occurs in a shoulder rib and is often caused by excessive positive or negative toe.

Feather edge tire wear: Tires are “feathered” when the tread ribs are worn lower/smoother on one side and higher/sharper on the other. This is often caused by a combination of improper alignment settings, such as excessive toe and caster.

One-sided shoulder tire wear: This type of irregular tread wear means the inside or outside shoulder rib of the tread is significantly more worn than the other ribs. Also known as camber wear, excessive positive or negative camber often causes this type of wear.

COMMON TIRE DEFECTS – A GLIMPSE

- Tread separation
- Manufacturing defects
- Older tires that appear good but are worn
- Inadequate puncture repair
- Retread failure
- Tires that are unsuitable for the vehicle
- Steel belt and tread separation due to the difficulty of attaching steel to rubber
- Tires manufactured without adequate separation prevention design features
- Tires damaged while being mounted

HOW TO PROTECT YOURSELF

TIPS TO EXTEND THE LIFE OF CAR TIRES

Make the Right Buy. When you are about to purchase tires, do not make the mistake of buying poor quality or counterfeit branded tires. Although you can find cheaper tire options, these often wear down faster and will need replacing more often, costing you more money in the long run. That said, do take the time to shop around. Buying your tires from your car dealership is usually significantly more expensive, and you can often find the same tires in petrol station tire shops for much cheaper.

Adjust Driving Habits. You can’t avoid all tire wear, but you can avoid driving behaviors that tend to trigger it. For instance, taking curves too fast can wear the edges of your front tires. Hitting a pothole can create tire leaks and wear, and even mess with your wheel alignment. Take care to avoid speeding over puddles that could be hiding deep potholes.

Check Your Tires Weekly. Make it a habit to check your tires for signs of wear and damage as part of your pre-drive vehicle checks. Regular inspection can detect problems that can be easily dealt with, preventing extensive or costly damage to the tires or car.

Maintain Proper Air Pressure. Experts recommend checking the air pressure of your tires at least once a month, if not every two weeks, using a reliable gauge. The recommended air pressure can usually be found on a sticker attached to the door frame or fuel cover.

Rotate the Tires. Rotating your tires periodically is essential for maintenance. Since each tire performs a different task, the tires wear at different rates. Rotation ensures that such wear pattern is distributed more uniformly across the four tires, extending their life.

Keep an Eye on The Wheel Alignment. While your car’s wheels don’t need periodic alignment, if you ever notice that the car is beginning to pull one way or the other, the wheel alignment may need to be reset. If left unchecked, improperly aligned wheels and axles will cause the tires to undergo premature wear.

Pay Heed to Vibrations. Out of balance wheels can cause a car to vibrate on a smooth road, especially at high speeds. If you notice the vibrations, you need to get the wheels and tires balanced immediately.

Repair and Replace. If damage on a tire is identified early, such as cuts in the tread, the tire can be repaired instead of having to be replaced. However, it may not be economical to repair very old tires. Old tires should be replaced before they become a safety hazard.

FINAL WORD

Of all the potential points of failure on a vehicle, tires are among the most critical, because they’re the only vehicle part that makes contact with the road. There’s a lot riding on your tires—including the safety of you, your loves ones, and everyone you share the road with. The risk of tire failure is not overinflated, as the statistics make clear.