

Everything you should know about tire rotation

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Tire rotation is a method of swapping tires and wheels of a vehicle from its actual position to other position. There are a myriad of rotation patterns which one can follow as per specifications given for wheel drive of vehicle. It is suggested by the manufacturers of a vehicle to rotate their tires in order to improve the longevity and at the same time the performance of tires.

Due to unequal weights experienced by the front axle and rear axle, the tires experience not so smooth wear as expected. Majority of car brands are equipped with the engines that are towards the front side. Basically, the drive vehicles equipped with front wheel possess transaxle and would add more stress on the tires while steering and braking that falls on the front tires. Rotation helps to consider all these aspects.

Is it necessary to rotate tires?

All automobile manufacturers recommend tire rotation after travelling for 8,000 to 13,000 kilometres, since the car tires would worn out and this would not be safe for car owners to travel longer distance with the worn tires. By doing so, you can attain uniform wear and at the same time the life of the tires would be enhanced. Though, there is no legal specification to rotate tires, but to have a smooth and safe ride for car owners, they need to do it.

How should Tires be rotated?

Tire rotation depends upon various aspects. Predominantly, the rotation would depend for direction and non-directional car tires and also from front-wheel or rear-wheel drive cars. If it is directional, there will be little arrows on the sidewall and it can either be rotated for the left or right side. To rotate

the tire, you can change the front right with rear right or the front left with the rear left.

If it is non-directional, you can switch the sides using the cross pattern and can mount on the wheel to change the rotation direction. Ideally, the front-wheel drive vehicles will move the right rear towards the left front and the left rear towards the right front while keeping the front one on the same side whereas in rear-wheel drive vehicles the procedure is quite contrary. You need to move the front ones to the other side of the rear while the rear side would be kept straight.

You can also use a spare unit to rotate the tire. In this case, start with the right rear and move it to the right front. You can move the right front to left rear and then this left rear has to be moved to the left front. Finally, you can use the front tire towards the left side as a new spare.

How do you rotate tires on a 4 wheel drive?

The 4-wheel drive vehicle is non-directional and has a full spare; tire rotation is achieved by moving the left rear towards the left front and right rear towards the right front. The right front moves towards the left rear and the spare tire would go towards the right rear. Now, the tire on the left front would become your new spare.

Can you rotate AWD tires?

Tire rotation is easy to perform on a 4-wheel drive vehicles or AWD vehicles and is in fact, beneficial to them so that it does not put a lot of pressure on the AWD component systems. The rotation pattern that is followed is to swap left rear with front right and the right rear with front left.

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Tyre Rotation Patterns

There are different types of tire rotation patterns available and these are based on various aspects that are as follows.

Whether the tire can be rotated in one direction or cannot rotate in either directions

Whether the vehicle is front-wheel, rear-wheel or 4-wheel drive

Whether you have a choice of full-size spare

For non-directional tires that are of same size, you would find three types of rotation patterns which are explained below in brief.

Forward cross - Basically, in the front-wheel drive vehicles, you find the front wheels moving towards the rear whereas the rear ones are moved in the opposite direction of the front axle.

Rearward cross - This type of pattern is mainly found in 4-wheel drive vehicles where the rear units move towards the front whereas the front ones move towards the opposite rear ends.

X-pattern - This is another important type of rotation pattern that is available in addition to forward cross pattern for the front-wheel drive vehicles. In this type of pattern, the front tires are swapped with the tires in the opposite rear positions.

Apart from the above mentioned three rotational patterns, there are two more patterns available and these are listed below.

Front-to-back - As the name suggests, if the tires are directional, rotation can be performed by easily swapping the front to back tires on the same side.

Side-to-side - In case of non-directional units, rotation is easy to perform by swapping with either end of the axle to another end.

How often should you rotate your Tires?

Tire rotation has the capability to travel between 8, 000 to 12, 000 kilometres so that there is uniform wear on all the tires. The automobile industry will recommend for tire rotation after changing the oil every time.

In fact, every automobile manufacturer has its own recommendation regarding the same and with the prevalence of more 4-wheel drive vehicle these days, it has become all the more necessary. It is important that 4-wheel drive vehicles have all even tires with the same condition of tread quality so that any damage to the all-wheel-drive system can be avoided.

Do you need to balance your tires every time you rotate them?

It is not mandatory or essential to balance the tires each tire rotation is performed on them. These days, most balancing happens off of the vehicle and unless tires are balanced on the vehicle, it is not at all needed after a rotation. Therefore, balancing can be easily avoided after a rotation.

What is the difference between wheel alignment and tire rotation?

Wheel alignment includes tread check for poor alignment signs and inspecting the toe, chamber, and caster for measuring the orientation of the wheel. Thereafter, the needed adjustments are done and the process is completed. On the other hand, a rotation is all about interchanging of tires and both processes are independent and different from each other.

How much does it cost to have your tires rotated?

In India, there is no fixed rate for tire rotation and it can be dependent on the make of a vehicle. For example, the rotation for a small car can be easily done within Rs. 100 to Rs. 200 whereas the same may need about Rs. 800 to Rs. 1, 000 for vans, trucks or buses.

However, for private vehicles, it can be a wise idea to complete the exercise on one's own as it hardly takes any time and some money can also be saved. Alternately, while buying a tire or during an oil change, rotation can be performed free of cost by certain dealers and mechanics.