

## Is It Time To Rotate Your Tires?

I was recently contacted concerning when and how to rotate the tires on a Miata. I thought this would be a good subject with the driving season soon to be here. You may ask “why” rotate them? The reason is that road conditions, conditions of the shocks, alignment, and the way you drive the car all effect the way the tread of the tire wears. The tire can wear with cupping in the tread, wear unevenly, and other problems may surface. All of these can cause a rough ride or shorter tread life.

When and how are determined by the type of tire you have, the type of roads you drive on, how you drive the car, and how many miles you drive it a year for example.

Let's first look at how often to rotate them. From what I have read, the accepted intervals are between 3,000 to 5,000 miles. If you are driving back roads, and/or always pushing the car in the corners, the lower mileage may be your best choice. If you do LOTS of straight line highway driving, the higher mileage might be best for your style of driving. I used to drive 46 miles a day on a 4 lane highway in my round trip commute for work. I changed the synthetic oil, and rotated the tires every 6,000 miles. For even wear, it is best to pick an interval, and stay with it. I just simply rotate my tires every time I change the oil.

How to rotate them is based on the tire itself, and whether you have front or rear wheel drive. Our Miatas are rear wheel drive, so I will focus on that. The other variable is whether you have Directional or Non-Directional tires. Note that the function of a tread pattern is only to move snow and/or water around so the rubber part of the tread can grip the road surface. Different patterns can give different results.

The picture #5 is a Non-Directional tire. When you look at the grooves that go ACROSS the tread, you will see the grooves have different angles. Some grooves are straight across, and some are at varied angles. This type of tread pattern is designed to squeegee water on the road surface into the wide grooves that run around the circumference of the tire, so the tread can have traction on the road surface. This kind of tire can be rotated front to back, as well as side to side. This rotation pattern is called the “Modified X Pattern”. So for your Miata, see picture #1. The rear tires move straight front, and the front tires cross to the opposite side rear. This modified X pattern give the most even wear, and the smoothest ride in the car. This is why I stick with Non-Directional tires. (Picture #2 is for front wheel drive cars).



Some people like the Directional tire which can be found in some of the higher end performance tires. Note the tread pattern in picture #4. This is a Directional tread, and this is how you would see the tread on the top of the tire. When looking at the top of the tire, the “arrow head points” formed by the grooves should always point to the front of the car. This type of tread pattern is designed to squeegee water on the road to the outside of the tire so the tread can have traction on the road surface. If you run this type of tread “backwards”, this tread pattern will actually trap water under the tire and you can lose control in a hard rain storm. So rotation of this type of tire is always on the same side of the car. You can only rotate Directional tires front to back.

Pick a rotation pattern and interval that works with your style of driving and the type of tires you have, and go from there. Make sure the tire air pressure is correct, get the car out and have fun! Feel free to ask if you have any questions .

Zoom-Zoom! Bill Latsha