

ETRTO Position on Directional Tires

For many years directional tires have been sold in the European market. These are tires that the manufacturer recommends to be used in one direction of rotation.

In the marketplace, a directional tire is considered by some consumers to have a sportier look than a non directional tire. It is also associated with good wet performance, notably with optimized aquaplaning.

While it is true that the aquaplaning performance of a directional tire may be better than its non directional cousin, the performance difference is slight, and much less than the natural dispersion seen in the marketplace between different tire brands or different tread patterns within the same brand.

Mounting a directional tire in the wrong direction is not an inherently unsafe condition. Although the tire will not perform as well as if mounted in the correct direction, its safety performance levels continue to assure adequate control of the vehicle.

To prove this, three different tire companies performed tests on different brands and designs of tires, where wet road performance was evaluated when one tire was incorrectly mounted. The results were compared to the same tires mounted correctly.

The two most important wet weather characteristics, namely wet braking and wet handling, were completely unaffected by running one tire in the reverse direction. These are the wet weather driving requirements encountered by all drivers: stopping the vehicle and negotiating curves. Since professionally conducted tests under controlled conditions were not able to detect any measurable differences in stopping distance on wet surfaces, or in the ability to control a vehicle when negotiating curves on wet roads, we can conclude that these 2 important safety characteristics are not impacted by running a tire in the wrong direction.

There were measurable differences in aquaplaning performance noted in most of the tests. In all cases it was shown that the decrease in aquaplaning performance of a tire mounted in the wrong direction was less than the dispersion of aquaplaning performance encountered between different tire brands or different tread patterns within the same brand. In no case was the decrease of aquaplaning seen as a safety concern. The differences are small in relation to the overall spread of aquaplaning performance seen in the marketplace.

The tire industry concludes that using a directional tire in the wrong direction is not unsafe. Nevertheless, it should be discouraged, and drivers who are obliged to mount a directional tire in the wrong way should do so as a temporary measure only. Continued use of a directional tire rotating in the opposite direction can lead to customer satisfaction issues such as uneven tire wear, and/or the generation of increased noise and vibration levels.

We therefore recommend that directional tires mounted in the wrong direction not be included in the definition of temporary use spare tires within UN/ECE Regulation No. 64.

JUSTIFICATION

ETRTO will present a study on directional tyres' performances assessment.
