

Goodyear Recipe for SUV Tires Features Dash of Kevlar, Volcanic Ash

by Mark Maynard

Carbon fiber, volcanic ash and Kevlar might seem odd ingredients for a tire, but Goodyear has called on that recipe to improve grip and handling in some of its tires.

Representatives from the tire maker were in San Diego recently to run service employees and the media through tests of two new tires, the Eagle ResponsEdge performance touring tire and the Fortera TripleTred for minivans and SUVs.

The event at Qualcomm Stadium featured an open-air classroom and three testing zones to simulate dry and wet handling, slalom and emergency lane changes, and a slip-and-slide sheet of Teflon-infused vinyl to represent icy conditions.

TIRE TESTING - Goodyear is utilizing carbon fiber, volcanic ash and Kevlar to improve grip and handling in some of its tires. CNS Photo.

The tires were tested on Chevy Tahoes and Cadillac CTS sedans. And because Goodyear is targeting Michelin with these new tires, test vehicles were also equipped with the competition's Energy MXV4 Plus touring and Cross Terrain SUV tires.

Goodyear's Eagle ResponsEdge touring tire uses carbon fiber as a woven fabric in the outside sidewall for stiffness. That helps reduce tire flex and sharpens steering response. A thin belt of Kevlar under the tread helps absorb shocks and road noise.

The tire has a split personality - an asymmetric tread design. The outer half is the high-performance zone, the inner half is for all-season traction. Another design feature is the rim protector, a lower sidewall edge that protrudes above the wheel flange to act as a cushion between the wheel and a curb.

The Fortera SUV tire has a three-zone tread design that is intended to be good in dry, wet or icy conditions. The dry zones are the inside and outside edges, with square shoulders for a wider braking patch and more stability for taller vehicles.

Interconnected tread-block elements are supposed to reduce noise and help with even wear.

The water zones, just inside the dry zones, are composed of diagonal "traction fingers" separated by "Aquachutes." The fingers make contact with the road while the chutes channel away water.

The ice zone is a center median with a flat weave appearance. This strip is a softer rubber that will stay pliant in cold weather and is embedded with volcanic ash and tiny bits of Fiberglas that roughen over time.

The validation was in the driving.

The testing was not a free-for-all with tires smoking and cars sliding. Testers were told to carefully steer through the courses and absorb the feedback that was being transmitted from the road surface. We made several runs through each course to get a good "feel" for both brands of tires.

For the ice patch, with the Teflon-vinyl, the left side of the Tahoe was shod with Goodyears, with Michelins on the right. That's never recommended in real-world driving, but it made a point on this closed course.

Drivers were to proceed at about 15 mph through the 180-foot or so patch and make two to three turns with a 180-degree, lock-to-lock turn of the steering wheel. In my testing, the left side, the Forteras, gripped sooner than the Michelins, but at slightly higher speeds the Michelins also performed well.

The Cadillacs were used on the slalom and emergency lane change course. Both tire brands performed well through the cone slalom, but there was visibly less body roll to the Eagle ResponsEdge cars.

I also noted a sharper turn-in with the ResponsEdge and steady handling through the decreasing radius turn that was sprayed with water.

The car also was easily controlled through the emergency lane change. In the Michelin-equipped car, there was more slide in the turn and more rear-end wag coming out of the wet corner - so much that I spun out. And there was more tire flex, a wobble, when making the aggressive emergency maneuver and less stability when trying to straighten out afterward.

Putting the SUVs on a dry and wet course was meant to demonstrate real-world steering response.

Vehicles were to be driven at 28 mph into a 180-degree corner without using the brakes or steering wheel to alter course and stay within the cones. Only the throttle was to be used for directional corrections, lifting off to tighten the turn or gentle pressure to the pedal to push the nose out to avoid trampling cones, or intruding into

another lane.

Again, the Goodyear tires took a set quicker in the turn and cornered with stability through the turn. The Michelins did not grip as quickly when entering the turn and felt softer and more inconsistent as the Tahoe slid around the corner.

Throttle-steering the Goodyears was intuitive, but I had to fight the urge to adjust the steering angle with the Michelins.

I've recommended Michelins for years as a good upgrade, mostly because the Michelin MXV4 is commonly used on imports from BMW to Hyundai. It is a quiet rolling touring tire that responds well to sporty driving.

But the Eagle ResponsEdge has more of a performance edge, that also, apparently, does well in the wet.

Absent from this test were on-road trials to demonstrate tire noise and the transfer of road harshness, an area where Michelin excels at being quiet and smooth.

Goodyear's test program showed that using higher technology on higher-end tires can make a safer vehicle. The company doesn't provide consumer ride-and-drive events, but such a program could be valuable to drivers who haven't ridden on a set of Goodyears.

GOODYEAR TOUR:Goodyear will take its training tour to 35 cities this year to promote the Eagle ResponsEdge and Fortera TripleTred tires. Events are held on a large parking lot at a major stadium or arena.

In a typical visit, a Goodyear 18-wheeler - a big, blue trailer emblazoned with big tire graphics - rolls into town on the day prior to the start of the event.

Test vehicles, tires, displays, tables and chairs are unloaded. Test courses are laid out with orange cones.

"Our intention is to create an experience for our retailers that allows them to feel the performance of these products," says Melissa Montisano of Goodyear. "We want them to have firsthand knowledge of how the tires perform in varied conditions, so they can share the experience with a consumer during an in-store conversation."

Store managers and salespeople learn about the tires in a classroom setting, under an awning attached to the trailer.

Following class, the hands-on sessions begin.

"The returns have been positive, Montisano says. "Salespeople have told us manuals and videos are helpful, but there's nothing like truly feeling the interaction between tire and pavement."

MICHELIN DEBUTS SUV TIREJust as the Goodyear tour began making its rounds, Michelin launched its next-generation luxury SUV tire, called the Michelin Latitude Tour HP.

It is an all-season tire with two types and zones of rubber compound for on-road performance and foul-weather traction. The tire is reinforced with Kevlar and has two sidewall plies for curb and pothole protection.

A focus in development was low rolling resistance, which Michelin says will help owners stretch fuel mileage.

The Latitude Tour HP is sold in 15 dimensions for 17- to 22-inch rims. It is used on the Mercedes-Benz M- and R-Class and the Volvo XC90, and is a suitable replacement for other luxury SUVs and crossover vehicles.

Prices at www.Tirerack.com start at \$148 per tire for the 17-inch, \$196 for the 18-inch and \$239 for a 19-inch.

Michelin also offers a 30-day trial period, two years of 24-hour roadside assistance and free tire rotation reminders.

TIRE TRACKSPricing for the Goodyear Eagle ResponsEdge starts about \$140 per tire for a sedan such as the Cadillac CTS. Pricing for the Goodyear Fortera TripleTred for a Chevy Tahoe starts at about \$185 per tire.

Prices include:- A 30-day trial period. If a buyer doesn't like the tires, the dealer will install a different set of Goodyears.- Two-year roadside assistance program.- Nationwide warranty program, which is handy for summer travel from state to state if you have a tire problem.- Online Goodyear Garage Program that will send out news, tire rotation reminders and discount coupons.Copley News Service

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