

RMA, SEMA, ITRA/TANA, Denman, Hoosier, and Specialty tires stated that no cost/benefit analysis has been undertaken for limited production bias-ply and radial specialty aftermarket tires and the new testing requirements associated with NHTSA's proposed FMVSS No. 139 will jeopardize the specialty aftermarket tire industry unless special dispensation is made for these manufacturers. SEMA stated that at least three separate specialty tire manufacturers, Denman, Specialty Tires, and Hoosier are small businesses employing less than 1,000 people.

GM and the Alliance stated that NHTSA has not considered the potential influence of changes to the tire on the performance of the vehicle and that vehicle modifications of significant magnitude would cost the industry substantial amounts in investment and unit costs per vehicle.

L. Benefits²³

GRRF asserted that the analysis of benefits appears to be incorrectly based on the assumption that the problems recently experienced have been caused primarily by incorrect design rather than by difficulties in manufacture,

improper application, general poor maintenance or abuse during service.

The Alliance stated that the basis for the estimated benefits is unsubstantiated because of the lack of specific information on the causes of tire failures and because of the agency's inability to estimate what proportion of tires would need improvement and by what amount.

Advocates argued that there is little doubt that a reduction in tire failure rates would result in fewer blowouts and, therefore, fewer rollover crashes. They also asserted that tire failures and their role in crashes are severely underreported and, therefore, that the benefits are much greater than the agency is able to quantify. Advocates agreed with the agency that the benefits of stronger standards ensuring greater speed and heat tolerance for both P-metric and LT tires are intuitively apparent even though it is typically more difficult to quantify benefits for crash avoidance rulemaking proposals than for crashworthiness proposals.

PC argued that the resulting societal costs (e.g., loss of workplace productivity, fatalities, medical costs, property damage costs and costs of

travel delay on congested roadways) of motor vehicle crashes must be considered when estimating the benefits of a proposed regulation and that reducing the variability of tires could yield benefits from the proposed tests.

VI. Agency Decision Regarding Final Rule

A. Summary of Final Rule and Rationale

The agency is establishing a single standard for light vehicle tires, FMVSS No. 139, *New Pneumatic Radial Tires for Light Vehicles*. Under this standard, light vehicle tires are required to meet a high-speed test, an endurance test, a low inflation pressure performance test, a resistance-to-bead unseating test, and a road hazard impact/strength test. The standard applies to tires for passenger cars, multipurpose passenger vehicles, trucks, buses and trailers with a gross vehicle weight rating (GVWR) of 4,536 kilograms (10,000 pounds) or less, manufactured after 1975.²⁴ The following chart compares the types of test requirements that currently exist, those that have been suggested by third parties, and those are being established by this agency:

TABLE 1.—COMPARISON OF TYPES OF TIRE PERFORMANCE REQUIREMENTS IN VARIOUS EXISTING AND DRAFT TIRE STANDARDS

Tests	FMVSS 109	FMVSS 119††	GRRF draft GTR	GTS-2000	RMA 2000	ECE R30	FMVSS No. 139 (As adopted)
High Speed	X	.....	X†	X	X	X	X
Endurance	X	X	X*	X**	X	.....	X
Low pressure performance .....	.....	.....	.....	.....	.....	.....	X
Strength; or Road Hazard Impact	X	X	.....	.....	.....	.....	X
Bead Unseating	X	.....	X***	.....	.....	.....	X
Accelerated Aging .....	.....	.....	.....	.....	.....	.....	.....

* Endurance test for radial tires rated "Q" and below. Identical testing parameters as FMVSS No. 109 Endurance Test.

** Endurance test for radial tires rated "Q" and below.

*** Identical testing parameters as FMVSS No. 109 bead unseating test.

† Testing parameters had not been agreed upon by the ad hoc working group.

†† For LT tires only.

Both the high speed test and the endurance test specify testing parameters (ambient temperature, load, inflation pressure, speed, and duration) that make the tests more stringent than those tests currently found in FMVSS Nos. 109 and 119, as well as the tests suggested by industry. Most significantly, the proposed high speed test specifies test speeds (140, 150 and 160 km/h (87, 93, and 99 mph)) substantially higher than those specified in FMVSS No. 109 (120, 128, 136 km/h (75, 80, 85 mph)). Likewise, the endurance test specifies a test speed

50% higher (120 km/h (75 mph)) than that currently specified in FMVSS No. 109 (80km/h (50 mph)), as well as a duration 2 hours longer (24 hours) in the final load step than that proposed in the NPRM (22 hours). At the specified test speed (120 km/h), the endurance test mileage (2,550 miles) is 50% longer than the mileage that a tire endures under the current endurance test (1,700 miles).

The final rule also adopts a low inflation pressure performance test that seeks to ensure a minimum level of

performance safety in tires when they are underinflated to 140 kPa (20 psi).

Instead of replacing the current strength test in FMVSS No. 109, the agency is retaining that test for passenger cars and retaining the strength test in FMVSS No. 119 for LT tires. Agency testing data and public comments called into question whether the test proposed in the NPRM, a road hazard impact test that is modeled after a SAE recommended practice, is both more stringent than the FMVSS No. 109 "plunger test" and correlates well with actual field performance. The FMVSS

²³ Comments on benefits are discussed in greater detail in the FRE.

²⁴ This final rule is applicable to LT tires up to load range E. This load range is typically used on large SUVs, vans, and trucks.