

**FEDERAL COMMUNICATIONS COMMISSION****47 CFR Part 73**

[DA 05-3211; MB Docket No. 04-339, RM-11060]

**Radio Broadcasting Services; Grand Portage, MN****AGENCY:** Federal Communications Commission.**ACTION:** Final rule.

**SUMMARY:** The Audio Division, at the request of Cook County Broadcasting of Minnesota, allots Channel 245C0 at Grand Portage, Minnesota, as the community's first local FM service. Channel 245C0 can be allotted to Grand Portage, Minnesota, in compliance with the Commission's minimum distance separation requirements at city reference coordinates without site restriction. The coordinates for Channel 245C0 at Grand Portage, Minnesota, are 47-57-50 North Latitude and 89-41-05 West Longitude. The Government of Canada has concurred in this allotment, which is located within 320 kilometers (199 miles) of the U.S.-Canadian border.

**DATES:** Effective January 30, 2006.**ADDRESSES:** Federal Communications Commission, 445 Twelfth Street, SW., Washington, DC 20554.**FOR FURTHER INFORMATION CONTACT:** Deborah Dupont, Media Bureau, (202) 418-2180.

**SUPPLEMENTARY INFORMATION:** This is a synopsis of the Commission's *Report and Order*, MB Docket No. 04-339, adopted December 14, 2005, and released December 16, 2005. The full text of this Commission decision is available for inspection and copying during normal business hours in the FCC Information Center, Portals II, 445 12th Street, SW., Room CY-A257, Washington, DC 20554. The complete text of this decision also may be purchased from the Commission's duplicating contractor, Best Copy and Printing, Inc., 445 12th Street, SW., Room CY-B402, Washington, DC 0554, (800) 378-3160, or via the company's Web site, [www.bcpweb.com](http://www.bcpweb.com). The Commission will send a copy of this *Report and Order* in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act, see U.S.C. 801(a)(1)(A).

**List of Subjects in 47 CFR Part 73**

Radio, Radio broadcasting.

■ Part 73 of title 47 of the Code of Federal Regulations is amended as follows:

**PART 73—RADIO BROADCAST SERVICES**

■ 1. The authority citation for Part 73 continues to read as follows:

**Authority:** 47 U.S.C. 154, 303, 334 and 336.

**§ 73.202 [Amended]**

■ 2. Section 73.202(b), the Table of FM Allotments under Minnesota, is amended by adding Grand Portage, Channel 245C0.

Federal Communications Commission.

**John A. Karousos,**

*Assistant Chief, Audio Division, Media Bureau.*

[FR Doc. 06-111 Filed 1-5-06; 8:45 am]

**BILLING CODE 6712-01-P****DEPARTMENT OF TRANSPORTATION****National Highway Traffic Safety Administration****49 CFR Part 571**

[Docket No. NHTSA-2005-23439]

**RIN 2127-AJ65****Federal Motor Vehicle Safety Standards; Tires****AGENCY:** National Highway Traffic Safety Administration (NHTSA), Department of Transportation.**ACTION:** Final rule; response to petitions for reconsideration.

**SUMMARY:** In June 2003, NHTSA published a final rule establishing upgraded tire performance requirements for new tires for use on vehicles with a gross vehicle weight rating of 10,000 pounds or less. This document responds to petitions for reconsideration of that final rule. After carefully considering the petitions, the agency is modifying certain performance requirements to better address snow tires and certain specialty tires. Specifically, we are amending the performance requirements for snow tires used on light vehicles. Further, we decided that the safety performance of certain other specialty tires is better addressed through the requirements of a different Federal safety standard.

**DATES:** The amendments in this rule are effective June 1, 2007, and delay the effective date of the Final Rule published on June 26, 2003 (68 FR 38115) from June 1, 2007 until September 1, 2007. Voluntary compliance is permitted before that time. In addition, "snow tires," as defined in S3 of 49 CFR 571.139 need not comply with the requirements of 49

CFR 571.139 until September 1, 2008, if they comply with applicable requirements in effect as of the date of this Final Rule. The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of September 1, 2007.

**FOR FURTHER INFORMATION CONTACT:** For technical and policy issues: George Soodoo, Office of Crash Avoidance Standards. Telephone: (202) 366-2720. Fax: (202) 366-4329. E-mail: [George.Soodoo@nhtsa.dot.gov](mailto:George.Soodoo@nhtsa.dot.gov).

For legal issues: George Feygin, Attorney Advisor, Office of Chief Counsel. Telephone: (202) 366-2992. Fax: (202) 366-3820. E-mail: [George.Feygin@nhtsa.dot.gov](mailto:George.Feygin@nhtsa.dot.gov).

Both persons may be reached at the following address: NHTSA, 400 7th Street, SW., Washington, DC 20590.

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**I. Summary of Final Rule**

First, this final rule amends Federal Motor Vehicle Safety Standard (FMVSS) No. 139, "*New pneumatic tires for light vehicles*" to reduce the endurance and low-pressure test speeds from 120 km/h to 110 km/h for snow tires. Second, this rule amends the application of FMVSS No. 139 to exclude light truck radial tires with a tread depth of 18/32 inches or greater. Instead these tires will be subject to the requirements of FMVSS No. 119. Third, this rule makes several technical corrections and amendments to the regulatory texts of FMVSS Nos. 109, 110, 119, 120 and 139. For example, because a test laboratory may not be able to maintain a constant ambient temperature the agency is specifying a tolerance during certain tests. Finally, we have delayed the effective date of the upgraded tire safety requirements from June 1, 2007 until September 1, 2007. Voluntary compliance is permitted before that date.

## II. Background

The Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act, Section 10, "Endurance and resistance standards for tires," required NHTSA to revise and update Federal Motor Vehicle Safety Standard (FMVSS) No. 109, *New Pneumatic Tires*, and FMVSS No. 119, *New Pneumatic Tires for Vehicles Other than Passenger Cars*.<sup>1</sup> In response to this mandate, NHTSA published a final rule on June 26, 2003, establishing a new FMVSS No. 139, *New Pneumatic Radial Tires for Light Vehicles*, which will apply to new tires used on light vehicles; *i.e.*, vehicles with a gross vehicle weight rating of 10,000 pounds or less, except motorcycles and low speed vehicles.<sup>2</sup>

The new standard is scheduled to become effective on June 1, 2007. It features substantially more stringent high speed and endurance tests, and a new low-pressure performance test. The purpose of the new and more stringent requirements is to improve the ability of tires to withstand the effects of tire heat build-up and severe under-inflation during highway travel in fully loaded conditions. Unlike the existing tire safety standards, which previously differentiated between light trucks and passenger cars,<sup>3</sup> FMVSS No. 139 applies to tires used on both.

The June 2003 final rule deferred action on proposals to revise the existing strength and bead unseating resistance tests, and to add a new tire-aging test, because the agency believed that additional research should be undertaken before reaching decision in these areas. Finally, the final rule changed the applicability of FMVSS No. 109 and FMVSS No. 119. Beginning June 1, 2007, FMVSS No. 109 would apply only to bias-ply tires and certain other specialty tires used on light vehicles. FMVSS No. 119 would apply to tires used on motorcycles, low speed vehicles, and heavy vehicles; *i.e.*, vehicles with a gross vehicle weight rating of more than 10,000 pounds.

## III. Petitions for Reconsideration

NHTSA received petitions for reconsideration of the June 2003 final rule from eight petitioners who requested that NHTSA reconsider or otherwise address 18 issues described

below.<sup>4</sup> The petitioners were Denman Tire (Denman), the Rubber Manufacturers Association (RMA), Japan Automobile Tyre Manufacturers Association (JATMA), European Tyre and Rim Technical Organization (ETRTO), Specialty Equipment Market Association (SEMA), Alliance of Automobile Manufacturers (Alliance), Tire and Rim Association (TRA), and Strategy Safety. Two commenters, the Small Business Administration (SBA) and the Tire Industry Association (TIA) submitted letters in support of Denman's petition to exclude its tires from FMVSS No. 139. The issues or subject areas addressed by the petitioners include the following:

- RMA, ETRTO, and JATMA requested that NHTSA either redefine tire chunking or not consider tire chunking to be an indication of tire failure during endurance testing.
- Denman petitioned the agency to exclude tires manufactured in quantities of less than 15,000 tires from the requirements of FMVSS No. 139, and instead subject these tires to the requirements of FMVSS No. 119.
- RMA, ETRTO, and JATMA petitioned the agency to clarify which tire safety standard applies to spare tires.
- JATMA petitioned the agency to revise the test conditions and procedures specified for the low-pressure performance test.
- JATMA, ETRTO, and RMA petitioned the agency to include a temperature tolerance of  $\pm 3$  °C to the ambient temperature of 38 °C specified for endurance and low-pressure testing of FMVSS No. 139.
- The RMA and ETRTO petitioned the agency to amend the method by which vehicle manufacturers calculate the vehicle normal load on the tire.
- Exclude ST, FI, and 8–12 rim diameter code tires.
- Definition of passenger car tire.
- RMA petitioned the agency to delete CT tires from the requirements of FMVSS No. 139 and other tire safety standards because CT tires are no longer being offered for sale in the U.S.
- Alliance petitioned the agency to change the effective date of FMVSS No. 139 from June 1, 2007 to September 1, 2007 to coincide with the traditional start of the new model year introduction.
- Allow FMVSS No. 139 tires on vehicles over 10,000 pounds.
- De-rating requirement.
- Measuring post-test inflation pressure.

- RMA petitioned the agency to correct the test pressures for LT tires with a nominal cross section larger than 295 mm.

- JATMA petitioned the agency to clarify the bead unseating test conditions for light truck tires.

## IV. Discussion and Analysis

### A. Endurance Test Failure Due to Tire Chunking

Under the new requirements of FMVSS No. 139, tires are subjected to endurance testing under different loading conditions at the speed of 120 km/h, for a combined duration of 34 hours. After completing the endurance test, the same tire is then subjected to a low-pressure performance test for an additional 90 minutes. S6.3.2(a) and S6.4.2(a) of FMVSS No. 139, require that when the tire is tested for endurance and low-pressure performance, " \* \* \* there shall be no visual evidence of tread, sidewall, ply, cord, belt or bead separation, chunking, open splices, cracking or broken cords." Chunking is defined as " \* \* \* breaking away of pieces of the tread or sidewall."<sup>5</sup>

RMA, ETRTO, and JATMA requested that NHTSA either redefine tire chunking or not consider tire chunking to be an indication of tire failure during endurance testing because petitioners believe that endurance test failures due to chunking are not representative of tire failures occurring in the real world.

RMA recommended that we either delete "chunking" from Sections S6.3.2(a) and S6.4.2(a), or modify the definition of "chunking" as follows: "Chunking means the breaking away of pieces of the tread or sidewall rubber extending to the reinforcement cord or wire material." That is, chunking would only be considered to occur if the breakaway pieces of tread or sidewall were deep enough to reach reinforcement cord or wire material. JATMA also asked the agency to redefine chunking such that it would be permitted for deep tread, winter type snow tires, and on light truck tires so long as it did not expose reinforcement cords.

RMA argued that chunking mostly occurs during endurance testing and is rarely experienced in the real world. RMA believes that chunking occurs in testing because the test road-wheel artificially overheats the tire by

<sup>1</sup> Pub. L. 106–414, November 1, 2000, 114 Stat. 1800.

<sup>2</sup> 68 FR 38115; June 26, 2003.

<sup>3</sup> Historically, FMVSS No. 109 applied to tires for use on passenger cars and FMVSS No. 119 applied to tires for use on all other vehicles, including light trucks.

<sup>4</sup> To examine the petitions please see Docket No. NHTSA–03–15400 at <http://dms.dot.gov/search/searchFormSimple.cfm>.

<sup>5</sup> The existing tire safety requirements, FMVSSs No. 109 and 119, contain the same definition of "chunking." Additionally, the European Union tire regulations, Economic Commission for Europe (ECE) Regulation 30 for light vehicle tires and ECE Regulation 54 for heavy vehicle tires also contain a similar definition.

deflecting the tire's outer edges.<sup>6</sup> This deflection occurs because the tire's contact patch flexes when contacting the curved surface of the test road-wheel, which is typically 67 inches (1.7 meters) in diameter. The difference between flat and curved surface performance increases as the tire's outside diameter increases, and/or the tread depth increases. According to RMA, this results in more energy being transferred into the tire, resulting in higher running temperatures.

According to RMA and ETRTO, the test road-wheel temperature difference is more pronounced for deep tread snow tires and certain light truck tires because

deep tread snow tires depend on the traction characteristics of higher hysteretic tread compounds, molded in greater tread depth, and smaller tread blocks. These tread designs and compounds are adversely affected by the greater deflection on the road-wheel and consequently run at disproportionately higher temperatures. Petitioners argue that the resultant tread chunking is uncharacteristic of real-world tire performance.

RMA states that its members subjected 352 passenger car tires of various sizes, service descriptions, load ranges and types to endurance and low-pressure testing. We note that the

duration of these tests exceeded the duration of tests specified in FMVSS No. 139 by six hours.<sup>7</sup> Thirteen of the 35 deep tread snow tires failed that endurance test. All 13 failures were attributed to tread chunking. Out of 129 light truck (LT) tires of various sizes, 38 tires failed the 40-hour endurance test. Tread chunking was attributed to 44 percent of failures.

After we issued the June 2003 final rule, RMA performed additional testing using the FMVSS No. 139 duration parameters.<sup>8</sup> The data are summarized below:

| Tire type           | Number tested | Number chunked | Percent failure |
|---------------------|---------------|----------------|-----------------|
| PC tires .....      | 157           | 9              | 6               |
| PC snow tires ..... | 67            | 33             | 49              |
| LT tires .....      | 87            | 6              | 7               |
| LT snow tires ..... | 2             | 1              | 50              |
| <b>Total .....</b>  | <b>313</b>    | <b>49</b>      | <b>16</b>       |

\*PC means passenger car.

RMA believes that the "no chunking" requirement penalizes larger tires because of material thickness (heavier lugs, ribs, plies, and deeper tread depth), especially at higher speed and reduced inflation pressure. The petitioners argue that the "no chunking" requirement will force tire manufacturers to redesign deep tread winter type snow tires and LT tires and that these tire design changes will not improve but will, to the contrary, reduce snow traction and off-road traction performance.

As an alternative to redefining chunking, petitioners suggested that the agency subject light truck tires and deep tread snow tires to the performance requirements of FMVSS No. 119, instead of FMVSS No. 139.

Agency Testing. Before issuing the June 2003 final rule, we tested a select sample of tires to assess their performance under the more stringent high-speed and endurance tests, and the new low-pressure test. Our tire sample varied not only in size, but also in price. We found that 19 out of 20 sampled tires passed all tests being contemplated by the agency. All five LT tires subjected to this testing passed. Fourteen out of 15 passenger car (PC) tires passed all the tests. One snow tire failed the endurance testing due to chunking.<sup>9</sup>

To address the issues raised in the petitions for reconsideration, the agency conducted additional testing on a larger sample of tires. We focused on the tires selected by vehicle manufacturers as

original equipment for new light vehicles, and similar-sized tires readily available in the replacement market. We also tested certain specialty tires discussed in Section IV(B). The test results are summarized in Table I below.

In addition to FMVSS No. 139 testing, the agency performed modified testing to assess the effectiveness of cooling fans in reducing the incidence of tire chunking during testing. We used a circulating fan to simulate the airflow across the tire that would normally occur on the roadway. The addition of fan did not affect tire performance. The tires that failed FMVSS No. 139 endurance and low-pressure performance tests did not pass the modified tests.

TABLE 1.—SUMMARY OF ENDURANCE/LOW-PRESSURE TIRE TESTING RESULTS

| Tire category                   | Number tested | Number passed (%)   | Number failed (%)                           | Number failed due to chunking (%)     |
|---------------------------------|---------------|---|---|---------------------------------------|
| <b>Passenger Car Tires (PC)</b> |               |   |   |                                       |
| Regular PC .....                | 19            | 11 (58%) 2 of 2 (Michelin, Yokohama, Uniroyal, and Cooper). 3 of 4 Kelly-Springfield. | 8 (42%) 7 of 8 Cokers, 1 Kelly-Springfield. | 4 (50%) 1 Kelly-Springfield, 3 Coker. |
| Snow PC .....                   | 28            | 18 (64%) .....  | 10 (36%) 2 of 2 Bridgestone Blizzak.        | 10 (100%).                            |

<sup>6</sup>Road-wheel machine is curved test wheel pressed against the test tire, rotating it to the specified test speed.

<sup>7</sup>RMA tested tires to the proposed requirements of FMVSS No. 139, which specified testing for a

combined duration of 40 hours. As explained above, the June 2003 final rule specifies endurance testing for a combined duration of 34 hours.

<sup>8</sup>The test data is available at Docket No. NHTSA-15400-21.

<sup>9</sup>The agency tested Bridgestone Blizzak tire with a Q speed rating. Bridgestone describes the Blizzak as a "dedicated winter tire."

TABLE 1.—SUMMARY OF ENDURANCE/LOW-PRESSURE TIRE TESTING RESULTS—Continued

| Tire category                    | Number tested | Number passed (%)                             | Number failed (%)  | Number failed due to chunking (%) |
|----------------------------------|---------------|---|--|-----------------------------------|
| <b>Light Truck Tires (LT)</b>    |               |   |  |                                   |
| Regular LT .....                 | 12            | 7 (58%) .....                                 | 5 (42%) 1 Michelin, 2 Cooper, & 2 Fisk (Uniroyal).           | 0 (0%).                           |
| Snow LT .....                    | 4             | 2 (50%) 2 of 2 Dunlop .....                   | 2 (50%) 2 of 2 Yokohama.                                     | 2 (100%) Both Yokohama.           |
| Specialty LT *see Section IV(b). | 16            | 5 (31%) 1 of 8 Denman & 4 of 4 Goodyear ..... | 11 (69%) 7 of 8 Denman & 4 of 4 Speciality Tires of America. | 3 (27%).                          |

*Observations:*

- Chunking: Half of the failures (19/36, 53%) were due to chunking.
- Specialty LT: All four Goodyear 31x10.50R15 passed, while all 4 Denman 31x10.50R15 failed.
- Effectiveness of fan is inconclusive: 1 Kelly-Springfield PC did better with the fan; however 1 Coker PC did better without the fan.

Transport Canada conducted testing of LT and PC snow tires to FMVSS No. 139 test requirements, except that the test speed was reduced from 120 km/h to 110 km/h. The tests were performed at the Standards Testing Labs (STL) and Smithers Scientific Services (Smithers). STL tested 13 tires and Smithers Scientific Services tested 20 tires, including six LT snow tires. Of the 13 tires tested by STL, none failed. Of the 20 tires tested by Smithers, two PC snow tires failed because of chunking.<sup>10</sup> The overall tire failure rate was 6%, or 2 out of 33 tires.

Agency Decision. Based on analysis of agency research and testing, as well as testing conducted by RMA and Transport Canada, we decided to amend certain performance requirements of FMVSS No. 139 as they apply to PC snow tires and LT snow tires. Specifically, we decided to reduce the endurance and low pressure performance test speeds in S6.3.1.2.3 and S6.4.2.1 from 120 km/h to 110 km/h for all PC snow tires and LT snow tires with load ranges of C, D, and E. All of the other test parameters in S6.3 and S6.4 remain unchanged.

The agency decided against eliminating “chunking” as a test failure condition because we did not receive data demonstrating that some fixed percentage of a tire’s tread could break away without detrimental effect on safe vehicle operation.

In real world riving conditions, operating a vehicle with chunked tires creates a potential safety hazard due to wheel imbalance and vehicle vibrations. Further, allowing tread chunking just short of exposing the reinforcement

cords would create an unacceptable risk of imminent tire failure. Finally, we note that international standards such as ECE R 30 and ECE R 54 also deem tire chunking to be an indication of a safety problem.

The agency believes that because of the nature of snow tire construction, the speed specified in certain current tests of FMVSS No. 139 are impracticable for special tires. Specifically, snow tires usually feature higher hysteretic tread compounds, molded in greater tread depth, and smaller tread blocks. This construction is used to provide special performance in snow conditions. These tread designs and compounds are disproportionately affected at high speeds when tested on the road wheel. The technical design challenges and the costs to redesign existing snow tires to pass the 120 km/h test would far outweigh the negligible safety benefits associated with that redesign. By reducing the endurance and low-pressure test speeds from 120 km/h to 110 km/h for all PC snow tires and LT snow tires with load ranges of C, D, and E we can ensure virtually all the safety benefits from upgrading the test speed for snow tires and eliminate practicability and cost concerns.

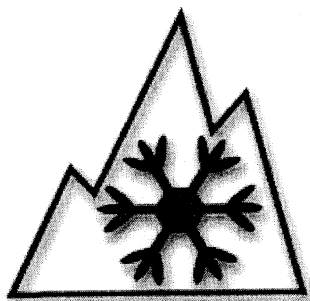
The agency has decided not to reduce the test speed for non-snow LT tires. These tires did not experience chunking in our tests, and we believe the higher test speed is practicable for non-snow LT tires. The test results provided by RMA also indicate that chunking occurs infrequently in non-snow LT tires when tested at speeds and duration specified in S6.3.1.2.3 and S6.4.1.2.1.

The tire industry classifies tires as “snow tires” if they attain a traction index equal to or greater than 110, compared to the ASTM E-1136 Standard Reference Test Tire, when

using the snow traction test as described in ASTM F-1805, Standard Test Method for Single Wheel Driving Traction in a Straight Line on Snow- and Ice-Covered Surfaces. We are incorporating this voluntary consensus standard by reference in order to insure that the tires that do not attain a certain level of traction are not labeled as snow tires and subjected to less stringent testing.

In order to enable the agency to ascertain which tires are to be tested at 110 km/h, the agency is adding a labeling requirement to all PC snow tires and LT snow tires with load ranges of C, D, and E that are certified at this test speed. The manufacturers must mark their snow tires with the Alpine Symbol if they wish to certify their snow tires to the special requirements applicable to snow tires. The use of the Alpine Symbol will have the added benefit of enabling consumers to identify snow tires that provide a higher level of snow traction compared to all-season tires. However, the tire manufacturers are not obligated to do so if they wish to certify their snow tires to the normal requirements of the Standard. Thus, only the snow tires certified to the reduced test speed requirements must display an Alpine symbol (as shown below), on at least one sidewall. The symbol is currently required in Canada as a means of identifying snow tires.

<sup>10</sup>The two snow tires that chunked during testing at Smithers are Kumho Izen Stud (P205/75R15, 97Q) and Bridgestone Dueler DM-Z2 (P235/75R15, 105Q).



If the manufacturers choose to mark their snow tires with the Alpine Symbol, the mountain profile must have a minimum base of 15 mm and a minimum height of 15 mm, and must contain three peaks with the middle peak being the tallest. Inside the mountain profile, there must be a six-sided snowflake having a minimum height of one-half the tallest peak.

#### B. Deep Tread LT Specialty Tires

Denman produces Radial Deep Tread On-road/Off-road LT specialty radial tires (deep tread tires) used for significant off-road operations necessitating extended mobility on harsh terrain. Denman petitioned the agency to exclude these deep tread tires from the requirements of FMVSS 139 because the costs of compliance testing and certification would, according to the petitioner, cause it to go out of business. Instead, Denman asked that the agency subject their deep tread tires to the less stringent requirements of FMVSS No. 109 or FMVSS No. 119. The agency received letters from the U.S. Congress, the Small Business Administration, the Tire Industry Association and SEMA in support of Denman's petition.

Denman stated it has not tested any of their deep tread tires to the new requirements of FMVSS No. 139, because such tests are cost prohibitive. Denman argued that when issuing the June 2003 final rule, the agency excluded bias-ply tires for the reasons of practicability, and the same rationale should exclude their deep tread tires from the requirements of FMVSS No. 139. Denman argued that mandating more stringent and expensive tire performance requirements for specialty deep tread radial tires, but not for bias ply tires would encourage manufacturing of bias ply deep tread tires instead of deep tread radial tires. Denman recommended that NHTSA exclude radial tires with a  $20/32$ -inch tread depth or greater and a rubber-to-void ratio of  $2/3$  or lower.

#### Agency Testing and Research

Because there is no standard industry definition of rubber-to-void ratio, the

agency has decided to consider only the tread depth, which is an easily measured parameter, in addressing the issues raised by the Denman petition.

NHTSA tested sixteen of Denman's deep tread tires ( $\geq 18/32$  inch tread depth) to the FMVSS No. 139 performance parameters. Our test results showed a higher failure rate for deep tread tires compared to the failure rates for original equipment non-deep tread tires. We believe the deep tread tires experienced chunking because of their tread depth. The results are as follows:

| Type of test   | Number of Denman tires tested | Number and percentage of Denman tires that passed |
|--|-------------------------------|---|
| FMVSS No. 139 endurance and low-pressure tests ..... | 8                             | 2 (25%)   |
| FMVSS No. 139 high speed test .....                  | 5                             | 2 (40%)   |
| FMVSS No. 119 endurance test .....                   | 3                             | 3 (100%)  |

Our research indicates that, with one exception,<sup>11</sup> vehicle manufacturers typically do not install tires with tread depth exceeding  $18/32$  inches on their vehicles either as standard or optional equipment.

#### Agency Decision

Based agency testing and analysis, we believe that a number of the requirements in FMVSS No. 139 are impracticable for deep tread specialty tires with tread depth of at least  $18/32$  inches. Because the thickness of the tread rubber of these tires causes higher tire temperatures, we believe that it is more appropriate to subject these tires to the requirements of FMVSS No. 119.<sup>12</sup> We note that in a letter to the agency on October 4, 2004, RMA provided endurance test results on 16 deep tread tires with tread depths of  $18/32$ -inch or greater; 62 percent (10 of 16) failed due to chunking. The agency believes that any potential countermeasures could be cost prohibitive, and could also negatively impact the utility of deep tread tires, which serve a special purpose of

<sup>11</sup> Jeep Wrangler Rubicon is equipped with 245/75R16 Goodyear Wrangler MT/R tires with a tread depth of  $19/32$  inches.

<sup>12</sup> FMVSS No. 119 endurance test for load range E tires is conducted at 40 mph at loading conditions of 70 percent/88 percent/106 percent for 47 hours (7/16/24 hours) at an inflation pressure corresponding to the maximum load rating marked on the tire sidewall.

providing increased navigational capabilities for vehicles used off-road.

#### C. Tire Conditioning Prior to Low Pressure Performance Test

JATMA petitioned the agency to revise the test conditions and procedures specified for the low pressure performance test such that at the completion of the endurance test, all hot air would be purged from the test tire and refilled with cold air before beginning the low-pressure test. JATMA did not provide a rationale or data supporting this recommendation, but its petition suggests that the tire would cool down quicker if purged of its hot air and refilled with cold air.

The agency believes that complete deflation and re-inflation of the test tire is unnecessary. Instead, in order to ensure that the tire is sufficiently cooled-off after completion of the endurance test, we are amending the low-pressure test conditions and procedures to specify that the tire is conditioned for a period of at least 3 hours prior to beginning the low-pressure test.<sup>13</sup>

#### D. Test Temperature Tolerance

JATMA, ETRTO, and RMA petitioned the agency to include a temperature tolerance of  $\pm 3$  °C to the ambient temperature of 38 °C specified for endurance and low-pressure testing of FMVSS No. 139. The petitioners note that this tolerance is currently specified in FMVSS No. 109. The RMA also petitioned the agency to lower the ambient temperature for the tire dimensions test since this test is typically performed in an area with an ambient of 20 °C–30 °C.

Because a test laboratory may not be able to maintain a constant ambient temperature of 38 °C, the agency is specifying a tolerance of +0 °C, –6 °C. That is, the tires subject to the high speed, endurance, and low pressure performance tests of FMVSS No. 139 must meet the applicable requirements at the full range of temperatures between 32 °C and 38 °C. For the tire dimensions test, the agency is specifying an ambient room temperature of 20 °C to 30 °C.

#### E. Calculation of Vehicle Normal Load

RMA and ETRTO petitioned the agency to amend the method by which vehicle manufacturers calculate the vehicle normal load on the tire, as specified by S4.2.1.2, S4.2.2.2 and S4.2.2.3 of FMVSS No. 110.

<sup>13</sup> The agency has also amended the conditioning procedure which precedes the endurance testing by adding a tolerance of  $\pm 5$  minutes.

Specifically, the petitioners suggested that the vehicle normal load on the tire should not exceed 88 percent of tire maximum load.

The agency revised the definition of vehicle normal load to change the frame of reference from a percentage of the tire's maximum load to the percentage of the tire's load at the manufacturer's recommended tire pressure. Specifically, the normal load is defined as 94 percent of the vehicle manufacturer's recommended cold inflation pressure.

We believe that it is not appropriate to define normal load as 88% of maximum load rating because the manufacturer's recommended tire pressure for some vehicles equipped with, for example, LT load range E tires, could be far below their maximum inflation pressure. If we were to require normal load calculation based on the maximum inflation pressure, the normal load calculation would be different. Accordingly, the agency is denying the petitioner's request.

#### *F. Time Limit for Measuring Post-Test Inflation Pressure*

RMA and ETRTO petitioned the agency to amend the time limit for checking post-test inflation pressure from "at least one hour" to "at least 15 minutes after the end of the test."<sup>14</sup> RMA explained that when post-test time period exceeds one hour, inflation pressure in the tires often falls below pre-test levels. Petitioners argue that the tire inflation pressure should be measured when the tire temperature has stabilized, which occurs within one hour, but not sooner than 15 minutes.

In the June 2003 final rule, the agency specified that all post-test pressure measurements be taken at least one hour after the test is completed. We indicated that the one-hour period provides a sufficient time for tire cooling and would prevent superficially high tire temperatures from masking test-induced pressure losses that would not be detectable at an earlier time. Further, this time period reduces the risk of tire explosion, which RMA stated could occur if tire pressure measurement was taken immediately after testing.

The agency is amending the time limit for post-test pressure measurement from "at least one hour" to "at any time between 15 minutes and 25 minutes" after the tests are completed. This change ensures that the pressure measurement does not occur after 25 minutes have elapsed. For tires known to retain more heat and therefore, higher inflation pressure, the change offers

enough flexibility to allow measurement after the 15 minute time period, in order to address technician safety. The agency believes that if a rapid loss of pressure to a level below the initial test pressure is to occur, it is likely to occur during the test or within the first 15 minutes after the end of the test. Thus, this change will not affect the stringency of the upgraded tire safety performance requirements.

#### *G. Permissible Level of Tire Pressure Loss*

RMA and ETRTO petitioned the agency to amend FMVSS No. 139 to allow for a pressure loss of not greater than 10 percent below the initial test pressure. Petitioners noted that small air losses occur during and after tests as a result of air diffusion through the tire casing. Further, some air also escapes during pressure measurement. According to the petitioners, additional variability factors could include tire pressure gauge accuracy, and the "initial break-in" factor; *i.e.* testing of new tires could result in some small mechanical growth of the tire casing (increase in pressure vessel volume). As a result, some post-test tire pressure measurements will show small pressure losses below the initial test pressure, which should not be indicative of tire failure. RMA suggested that a minimum permissible tire pressure loss criteria be specified.

RMA submitted information, data, and graphs on its testing by RMA member companies. A total of 313 tires (224 passenger car and 89 light truck tires) were tested to the FMVSS No. 139 endurance and low pressure performance tests. Of the 313 tires tested, 42 percent (133) experienced pressure loss per the FMVSS No. 139 conditions and procedures. The loss of pressure was attributed to the longer cool-down time periods addressed above. RMA stated that the 42 percent estimate could be higher as some tire manufacturers did not report pressure loss data to the RMA.

The agency agrees that some small mechanical growth of the tire casing could occur during the initial break-in of new tires, which could result in post-test pressures being slightly lower than the initial test pressure once the tire has cooled to ambient temperature. Although our testing did not show significant losses in tire pressure at 15 to 25 minutes after the completion of endurance and low-pressure testing, we believe that it is reasonable to allow for a nominal amount of post-test pressure drop. Accordingly, the agency will require that the post-test pressure loss

be no greater than 5% of the specified initial inflation pressure.

#### **V. Miscellaneous Issues and Technical Corrections to the Regulatory Text**

1. JATMA, ETRTO, RMA petitioned the agency to remove references to T-Type spare tires from S6.1.1.1.2 of FMVSS No. 139. Petitioners noted that footnote 38 of the June 2003 final rule indicated that temporary spare tires would not be subject to the requirements of FMVSS No. 139.<sup>15</sup>

The agency did not intend to subject T-Type temporary spare tires to the requirements of FMVSS No. 139. Therefore, NHTSA is amending the regulatory text of FMVSS No. 139 to remove references to T-Type temporary spare tires.

2. The RMA and ETRTO petitioned the agency to replace the term "P-metric" with the term "passenger car" in the regulatory text of FMVSS Nos. 109, 110 and 139. The RMA stated that using "P-metric" as a generic term for "passenger car" tires is not correct since the use of this terminology could exclude "Hard" metric or any other radial passenger car tire that does not have "P-metric" size designation.

NHTSA has reviewed the tire industry Year Books (TRA, JATMA, and ETRTO) and notes that tires used on passenger cars are referred to as "passenger car" tires and not "P-metric" tires.<sup>16</sup> Therefore, the agency is amending the regulatory text of the relevant tire safety standards by removing references to "P-metric tires" where it is more appropriate to use the term "passenger car." In conjunction with this change, we are adding a definition of passenger car tires to FMVSS No. 139.

3. Alliance petitioned the agency to amend FMVSS No. 120 to allow the use of tires meeting FMVSS 139 in addition to those meeting FMVSS No. 119 for vehicles with a GVWR over 10,000 pounds.

The agency agrees that FMVSS No. 120 should allow the use of tires that comply with FMVSS No. 139. For example, LT tires with a load range E are sometimes used on vehicles with a GVWR below 10,000 pounds. Since FMVSS No. 139 applies to LT tires load range E tires, a reference to this standard should have been included in S5.1.1 of FMVSS No. 120. NHTSA believes this reference was inadvertently omitted from the June 2003 final rule.

<sup>15</sup> See 68 FR 38116 at 38145.

<sup>16</sup> The TRA Year Book states that the prefix, "P", when used in tire size designations identifies a tire primarily intended for service on passenger cars. In addition to the P-Type passenger car tires, the Year Book also includes information on T-Type passenger car tires and other passenger car tires.

<sup>14</sup> See Docket No. NHTSA-2003-15400-23.

Accordingly, the agency is amending the regulatory text of S5.1.1 of FMVSS No. 120 to add a reference to FMVSS No. 139.

4. RMA, TRA, and ETRTO petitioned the agency to amend the “application” sections of FMVSS No. 119, “*New pneumatic tires for vehicles other than passenger cars*,” to indicate that it applies to Special Trailer (ST), Farm Implement (FI), and 8–12 rim diameter code and below tires. We note that in the June 2003 final rule, the agency decided to exclude bias, ST, FI, and 8–12 rim diameter tires from the requirements of FMVSS No. 139 and indicated that they would remain subject to the requirements of FMVSS Nos. 109 and 119.<sup>17</sup> However, the petitioners indicate that all such tires have been, and remain subject to only FMVSS No. 119 because they are not used on passenger cars.

The agency is amending the application sections of FMVSS Nos. 109, 119, and 139 in order to clarify that ST, FI, and 8–12 rim diameter code and below tires are subject to the requirements of FMVSS No. 119.

5. When a passenger car tire is installed on a traditionally heavier vehicle such as an MPV, truck, bus, or trailer, the normal load rating is “de-rated” by a factor of 1.10. That is, the normal load rating is reduced by dividing it by 1.10. The Alliance petitioned the agency to clarify that the de-rating requirement in FMVSS No. 120 applies only to passenger car tires, and not to all tires.

The agency intended to apply the 1.10 de-rating requirement in FMVSS No. 120 only to passenger car tires when installed on vehicles other than passenger cars. The agency did not intend to subject other tires to the same requirements. Accordingly, the agency is amending S5.1.2 of FMVSS No. 120 to clarify the application of the de-rating requirement.

6. Safety Research and Strategies (SRS) submitted comments urging the agency to address tire aging.<sup>18</sup> In short, SRS is asking the agency to require that tires be labeled with an “expiration date” that would inform consumers that their tires are no longer safe after an X number of years have elapsed since their manufacture.

The agency is currently conducting research on tire aging. When this research is complete, the agency will decide how to proceed.

7. This document amends the titles to FMVSS No. 109 and FMVSS No. 139 to

more accurately reflect their application. The new titles read as follows: § 571.109—Standard No. 109—New pneumatic and certain specialty tires, and § 571.139—Standard No. 139—New pneumatic radial tires for light vehicles.

8. This document amends the table located below Figure 1 in FMVSS No. 109 to add a 20 rim diameter code because the Tire & Rim Association’s 2003 and newer Yearbooks now include LT tires of that size.

9. ETRTO and RMA petitioned the agency to remove references to CT Tires from FMVSS No. 139 because CT tires are not being manufactured for sale or distribution in the United States.<sup>19</sup> The petitioners also indicated that this tire type is being withdrawn as an active classification in the ETRTO Standards Manual.

This rule amends FMVSS No. 139 by removing references to CT tires because these tires are not being sold in the United States.

10. RMA and ETRTO petitioned the agency to amend Tables I and II in FMVSS No. 119. Specifically, the petitioners requested that Table I include the plunger diameter for motorcycles. The petitioners also requested that Table II include the minimum static breaking energies for load ranges “A” through “E” tires used on 12 rim diameter code or smaller, and light truck tires, because FMVSS No. 119 applies to these types of tires.

NHTSA agrees with the petitioners that Tables I and II of FMVSS No. 119 should be revised to reflect the change in applicability of FMVSS No. 119. The agency has retained the current strength requirements of FMVSS No. 119 but since LT load range C, D, and E tires are now subject to the requirements of FMVSS No. 139, the tables need to reflect this change.

11. RMA petitioned the agency to correct the test pressures for LT tires with a nominal cross section larger than 295 mm. The petitioner indicated that these tires, as shown in the Tire and Rim Association Year Book, have a lower inflation pressure to attain the load range C, D, or E maximum load limits and do not follow the normal load range C, D, and E inflation pressures for tire maximum load limits. Therefore, to ensure that all LT tires within a single load range category are subject to the same level of performance requirements, the petitioners recommend that FMVSS

No. 139 be amended to specify correct inflation pressures for these tires.

NHTSA agrees with the petitioner that LT tires with a nominal cross section greater than 295 mm have a different load range for the same maximum inflation pressure as tires equal to or less than 295 mm wide and therefore amend S6.2.1.1.1, S6.3.1.1.1 and S6.4.1.1.1 accordingly.

12. JATMA petitioned the agency to clarify the bead unseating test conditions (inflation pressure and dimension “A”) for light truck tires, since they were not stipulated in the June 2003 final rule. The current requirement in FMVSS No. 139, S6.6, reference FMVSS No. 109, which does not include test parameters for LT tires.

We are amending the regulatory text to specify the test inflation pressure for the LT tires undergoing resistance to bead unseating test. The pressure is the same for the endurance test. The dimension “A” parameters are the same as those specified in FMVSS No. 109.

## VI. Effective Date

Alliance petitioned the agency to change the effective date of FMVSS No. 139 from June 1, 2007 to September 1, 2007 to coincide with the traditional start of the new model year introduction. Petitioners argue that an effective date of September 1, 2007 would help in the transition from the 2007 to 2008 model year. RMA petitioned the agency to extend the effective date for an additional 2 years to 2009 arguing that tire manufacturers are waiting for the agency’s response to petitions for reconsideration.

In light of potential impact of mid-model year introduction of a new set of requirements, the agency is delaying the effective date of FMVSS No. 139 until September 1, 2007. Furthermore, we are delaying the effective date of applicability of FMVSS No. 139 to snow tires until September 1, 2008 because of changes to snow tire construction that may be necessitated by the more stringent performance requirements. However, we believe that a two-year delay in the effective date, as requested by the RMA is unwarranted. As indicated in 49 CFR § 553.35(d) a petition for reconsideration does not stay the effectiveness of the rule. Therefore, the manufacturers need to continue their efforts to comply with the new requirements while their petitions are being considered.

## VII. Rulemaking Notices and Analyses

### A. Executive Order 12866 and DOT Regulatory Policies and Procedures

Executive Order 12866, “Regulatory Planning and Review” (58 FR 51735,

<sup>17</sup> See 68 FR 38116 at 38141.

<sup>18</sup> See Docket No. NHTSA–2003–15400–12, 31, 32.

<sup>19</sup> CT means a pneumatic tire with an inverted flange tire and rim system in which the rim is designed with rim flanges pointed radially inward and the tire is designed to fit on the underside of the rim in a manner that encloses the rim flanges inside the air cavity of the tire.

October 4, 1993), provides for making determinations whether a regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and to the requirements of the Executive Order. The Order defines a "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or Tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

This rulemaking action was not reviewed under Executive Order 12866. The rulemaking action is not significant under Department of Transportation regulatory policies and procedures. The agency is modifying certain performance requirements to better address snow tires and certain deep tread specialty tires. The effect of this change is a decreased regulatory burden on manufacturers of snow tires and deep tread specialty tires through more practicable tire safety performance requirements. This final rule also makes a number of technical corrections to the regulatory text of all Federal tire safety regulations. This action will not affect the impacts estimated in the final regulatory evaluation for the June 2003 final rule.

#### B. Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 (5 U.S.C. § 601 *et seq.*) requires agencies to evaluate the potential effects of their proposed and final rules on small business, small organizations and small governmental jurisdictions. I hereby certify that this rulemaking action will not have a significant economic impact on a substantial number of small entities.

This document decreases the regulatory burden on small entities by subjecting the specially manufactured deep-tread tires to more practicable tire safety performance requirements. According to the petitioners and the Small Business Administration, this rulemaking action will result in substantial cost savings for the one

small business that petitioned the agency to amend our regulations.

#### C. National Environmental Policy Act

NHTSA has analyzed this document for the purposes of the National Environmental Policy Act. The agency has determined that implementation of this rulemaking action does not have any significant impact on the quality of the human environment.

#### D. Executive Order 13132 (Federalism)

The agency has analyzed this rulemaking in accordance with the principles and criteria contained in Executive Order 13132 and has determined that it does not have sufficient federal implications to warrant consultation with State and local officials or the preparation of a federalism summary impact statement. The final rule does not have any substantial impact on the States, or on the current Federal-State relationship, or on the current distribution of power and responsibilities among the various local officials.

#### E. Unfunded Mandates Act

The Unfunded Mandates Reform Act of 1995 requires agencies to prepare a written assessment of the costs, benefits and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local or tribal governments, in the aggregate, or by the private sector, of more than \$100 million annually (\$120.7 million as adjusted annually for inflation with base year of 1995).

The agency previously estimated that the June 2003 final rule establishing more stringent tire performance requirements was likely to result in the expenditure by automobile manufacturers and/or tire manufacturers of more than \$109 million annually.<sup>20</sup>

This document amends certain performance requirements to better address snow tires and certain specialty tires. This final rule also makes a number of technical corrections to the regulatory text of all Federal tire safety regulations. The effect of these changes is a decreased regulatory burden on manufacturers of snow tires and certain other specialty tires. Accordingly, this rulemaking action will not result in expenditures by State, local or tribal governments of more than \$120 million annually. Further this rulemaking action will not result in private sector expenditure of more than \$120 million annually.

<sup>20</sup> The written assessment of costs is available at Docket No. NHTSA-2003-15400-2 at <http://dms.dot.gov/search/searchResultsSimple.cfm>.

#### F. Civil Justice Reform

This final rule does not have any retroactive effect. Under 49 U.S.C. 21403, whenever a Federal motor vehicle safety standard is in effect, a State may not adopt or maintain a safety standard applicable to the same aspect of performance which is not identical to the Federal standard, except to the extent that the state requirement imposes a higher level of performance and applies only to vehicles procured for the State's use. 49 U.S.C. 21461 sets forth a procedure for judicial review of final rules establishing, amending or revoking Federal motor vehicle safety standards. That section does not require submission of a petition for reconsideration or other administrative proceedings before parties may file suit in court.

#### G. Paperwork Reduction Act

Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501, *et seq.*), Federal agencies must obtain approval from the Office of Management and Budget (OMB) for each "collection of information" they conduct, sponsor, or require through regulations. NHTSA has reviewed this final rule and determined that it does not contain collection of information requirements.

In order to enable the agency to ascertain which tires are to be tested to less stringent requirements, the agency is adding a labeling requirement to all PC snow tires and LT snow tires with load ranges of C, D, and E that are certified under the less stringent requirements. The manufacturers must mark their snow tires with the Alpine Symbol described in Section IV(A), if they wish to certify their snow tires to the requirements applicable to snow tires. However, the tire manufacturers are not obligated to do so if they wish to certify their snow tires to the normal requirements of the Standard. Thus, only the snow tires certified to the reduced test speed requirements must display an Alpine symbol (as shown below), on at least one sidewall. The use of the Alpine Symbol will have the added benefit of enabling consumers to identify snow tires that provide a higher level of snow traction compared to all-season tires.

Under CFR 1320.3(h)(1), "information" does not generally include certifications such as that described in the previous paragraph, which only identify tires certified to the less stringent requirements.

#### H. Privacy Act

Anyone is able to search the electronic form of all comments



received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70; Pages 19477-78) or you may visit <http://dms.dot.gov>.

**VIII. Regulatory Text**

**List of Subjects in 49 CFR Part 571**

Motor vehicle safety, Reporting and recordkeeping requirements, Tires.

■ In consideration of the foregoing, part 571 is amended as follows:

**PART 571—FEDERAL MOTOR VEHICLE SAFETY STANDARDS**

■ 1. The authority citation for part 571 continues to read as follows:

**Authority:** 49 U.S.C. 322, 30111, 30115, 30117, and 30166; delegation of authority at 49 CFR 1.50.

■ 2. Section 571.109 is amended by revising the section heading, S2, and the Table located below Figure 1:

FIGURES FOR FMVSS NO. 109

| Wheel size | Dimension "A" for tires with maximum inflation pressure |                    |             |         |
|------------|---|--------------------|-------------|---------|
|            | Other than 60 psi (in)                                  | Other than 420 kPa | 60 psi (in) | 420 kPa |
| 20         | 13.50   | 345                |             |         |
| 19         | 13.00   | 330                | 12.00       | 305     |
| 18         | 12.50   | 318                | 11.40       | 290     |
| 17         | 12.00   | 305                | 10.60       | 269     |
| 16         | 11.50   | 292                | 9.90        | 251     |
| 15         | 11.00   | 279                | 9.40        | 239     |
| 14         | 10.50   | 267                | 8.90        | 226     |
| 13         | 10.00   | 254                | 8.40        | 213     |
| 12         | 9.50  | 241                |             |         |
| 11         | 9.00  | 229                |             |         |
| 10         | 8.50  | 216                |             |         |
| 320        | 8.50  | 216                |             |         |
| 340        | 9.00  | 229                |             |         |
| 345        | 9.25  | 235                |             |         |
| 365        | 9.75  | 248                |             |         |
| 370        | 10.00   | 254                |             |         |
| 390        | 11.00   | 279                |             |         |
| 415        | 11.50   | 292                |             |         |

\* \* \* \* \*

■ 3. Section 571.110 is amended by revising S4.2.2.2 and S4.2.2.3(a), to read as follows:

**§ 571.110 Standard No. 110—Tire selection and rims for motor vehicles with a GVWR of 4,536 kilograms (10,000 pounds) or less.**

\* \* \* \* \*

S4.2.2.2 When passenger car tires are installed on an MPV, truck, bus, or trailer, each tire's load rating is reduced by dividing it by 1.10 before determining, under S4.2.2.1, the sum of the maximum load ratings of the tires fitted to an axle.

S4.2.2.3(a) For vehicles equipped with passenger car tires, the vehicle normal load on the tire shall be no greater than the value of 94 percent of the derated load rating at the vehicle manufacturer's recommended cold inflation pressure for that tire.

\* \* \* \* \*

■ 4. Section 571.119 is amended by revising S3, and Tables I and II to read as follows:

**§ 571.119 Standard No. 119—New pneumatic tires for motor vehicles with a GVWR of more than 4,536 kilograms (10,000 pounds) and motorcycles.**

\* \* \* \* \*

S3. *Application.* This standard applies to:

(a) New pneumatic tires for use on motor vehicles with a GVWR of more than 4,536 kilograms (10,000 pounds) manufactured after 1948;

(b) New pneumatic light truck tires with a tread depth of 18/32 inch or greater, for use on motor vehicles with a GVWR of 4,536 kilograms (10,000 pounds) or less manufactured after 1948;

(c) Tires for use on special-use trailers (ST, FI and 8-12 rim or lower diameter code); and

(d) Tires for use on motorcycles manufactured after 1948.

\* \* \* \* \*

**§ 571.109 Standard No. 109—New pneumatic and certain specialty tires.**

\* \* \* \* \*

S2. *Application.* This standard applies to new pneumatic radial tires for use on passenger cars manufactured before 1975, and new pneumatic bias ply tires for use on passenger cars manufactured after 1948.

\* \* \* \* \*

TABLE I.—STRENGTH TEST PLUNGER DIAMETER

| Tire type                                      | Plunger diameter |          |
|--|------------------|----------|
|  | (mm)             | (inches) |
| Light truck                                    | 19.05            | ¾        |
| Motorcycle                                     | 7.94             | 5/16     |
| ≤ 12 rim diameter code (except motorcycle)     | 19.05            | ¾        |
| Tubeless:                                      |                  |          |
| ≤ 17.5 rim diameter code ...                   | 19.05            | ¾        |
| > 17.5 rim diameter code, load range F or less | 31.75            | 1¼       |
| > 17.5 rim diameter code, load range over F    | 38.10            | 1½       |
| Tube-type:                                     |                  |          |
| Load range F or less                           | 31.75            | 1¼       |
| Load range over F                              | 38.10            | 1½       |

TABLE II.—MINIMUM STATIC BREAKING ENERGY  
[Joules (J) and Inch-Pounds (inch-lbs)]

| Tire characteristic<br>Plunger diameter (mm and inches) | Motorcycle |        | All 12 rim diameter code or smaller rim size except motorcycle |        | Light truck and 17.5 rim diameter code or smaller rim Tubeless |        | Tires other than Light Motorcycle, 12 rim diameter code or smaller |        |  |        |           |        |  |        |
|---|------------|--------|--|--------|--|--------|--|--------|--|--------|-----------|--------|--|--------|
|   | 7.94 J mm  | 5/16"  |  |        |  |        | Tube type  |        | Tubeless greater than 17.5 rim diameter code |        | Tube type |        | Tubeless Greater than 17.5 rim diameter code |        |
|   | J          | In-lbs | 19.05 J mm   | 3/4"   | 19.05J mm  | 3/4"   | 31.75J mm  | 1 1/4" | 31.75 mm                                     | 1 1/4" | 38.10J mm | 1 1/2" | 38.10 mm                                     | 1 1/2" |
|   |            |        | J  | In-lbs | J  | In-lbs | J  | In-lbs | J  | In-lbs | J         | In-lbs | J  | In-lbs |
| Load Range:   |            |        |  |        |  |        |  |        |  |        |           |        |  |        |
| A   | 16         | 150    | 67   | 600    | 225  | 2,000  |  |        |  |        |           |        |  |        |
| B   | 33         | 300    | 135  | 1,200  | 293  | 2,600  |  |        |  |        |           |        |  |        |
| C   | 45         | 400    | 203  | 1,800  | 361  | 3,200  | 768  | 6,800  | 576  | 5,100  |           |        |  |        |
| D   |            |        | 271  | 2,400  | 514  | 4,550  | 892  | 7,900  | 734  | 6,500  |           |        |  |        |
| E   |            |        | 338  | 3,000  | 576  | 5,100  | 1,412  | 12,500 | 971  | 8,600  |           |        |  |        |
| F   |            |        | 406  | 3,600  | 644  | 5,700  | 1,785  | 15,800 | 1,412  | 12,500 |           |        |  |        |
| G   |            |        |  |        | 711  | 6,300  |  |        |  |        | 2,282     | 20,200 | 1,694  | 15,000 |
| H   |            |        |  |        | 768  | 6,800  |  |        |  |        | 2,598     | 23,000 | 2,090  | 18,500 |
| J   |            |        |  |        |  |        |  |        |  |        | 2,824     | 25,000 | 2,203  | 19,500 |
| L   |            |        |  |        |  |        |  |        |  |        | 3,050     | 27,000 |  |        |
| M   |            |        |  |        |  |        |  |        |  |        | 3,220     | 28,500 |  |        |
| N   |            |        |  |        |  |        |  |        |  |        | 3,389     | 30,000 |  |        |

\* \* \* \* \*

■ 5. Section 571.120 is amended by revising S5.1.1 and S5.1.2 to read as follows:

**§ 571.120—Standard No. 120—Tire selection and rims for motor vehicles with a GVWR of more than 4,536 kilograms (10,000 pounds).**

\* \* \* \* \*

S5.1.1 Except as specified in S5.1.3, each vehicle equipped with pneumatic tires for highway service shall be equipped with tires that meet the requirements of § 571.109, § 571.119 or § 571.139, and rims that are listed by the manufacturer of the tires as suitable for use with those tires, in accordance with S4.4 of § 571.109 or S5.1 of § 571.119, as applicable, except that vehicles may be equipped with a non-pneumatic spare tire assembly that meets the requirements of § 571.129, New non-pneumatic tires for passenger cars, and S8 of this standard. Vehicles equipped with such an assembly shall meet the requirements of S5.3.3, S7, and S9 of this standard.

S5.1.2 Except in the case of a vehicle which has a speed attainable in 3.2 kilometers of 80 kilometers per hour or less, the sum of the maximum load ratings of the tires fitted to an axle shall be not less than the gross axle weight rating (GAWR) of the axle system as specified on the vehicle's certification label required by 49 CFR part 567. Except in the case of a vehicle which has a speed attainable in 2 miles of 50 mph or less, the sum of the maximum load ratings of the tires fitted to an axle shall be not less than the gross axle weight rating (GAWR) of the axle system as specified on the vehicle's

certification label required by 49 CFR part 567. If the certification label shows more than one GAWR for the axle system, the sum shall be not less than the GAWR corresponding to the size designation of the tires fitted to the axle. If the size designation of the tires fitted to the axle does not appear on the certification label, the sum shall be not less than the lowest GAWR appearing on the label. When a passenger car tire is installed on a multipurpose passenger vehicle, truck, bus, or trailer, the tire's load rating shall be reduced by dividing by 1.10 before calculating the sum (i.e., the sum of the load ratings of the tires on each axle, when the tires' load carrying capacity at the recommended tire cold inflation pressure is reduced by dividing by 1.10, must be appropriate for the GAWR).

\* \* \* \* \*

■ 6. Section 571.139 is amended by:  
 ■ a. Adding new paragraphs S2.1 and S2.2 to S2; adding to S3, in alphabetical order, new definitions of "Passenger car tire" and "Snow tire" and adding a new paragraph (i) to S5.5;  
 ■ b. Revising S2; the first sentence of S5.5; S6.1.1.1.2; S6.1.1.1.4; S6.2.1.1.1; S6.2.1.2.6; S6.2.1.2.8; S6.2.2; S6.3.1.1.1; S6.3.1.1.2; S6.3.1.2.2; S6.3.1.2.3; S6.3.1.2.5; S6.3.2; S6.4.1.1.1; S6.4.1.1.2; S6.4.1.2.1; S6.4.1.2.5; S6.4.1.2.6; S6.4.2; S6.5.1; and S6.6 as set forth below.

**§ 571.139—Standard No. 139—New pneumatic radial tires for light vehicles.**

\* \* \* \* \*

S2 Application and Incorporation by Reference.

S2.1 Application. This standard applies to new pneumatic radial tires for use on motor vehicles that have a gross

vehicle weight rating (GVWR) of 10,000 pounds or less, and that were manufactured after 1975. This standard does not apply to tires for use on new pneumatic light truck tires with a tread depth of 1 8/32 inch or greater; ST, FI and 8–12 rim or lower diameter code tires; tires for use on low speed vehicles; and tires for use on motorcycles manufactured after 1948.

S2.2 Incorporation by reference. ASTM F–1805–00, Standard Test Method for Single Wheel Driving Traction in a Straight Line on Snow- and Ice-Covered Surfaces is incorporated by reference in S3 of this section. The Director of the Federal Register has approved the incorporation by reference of this material in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. A copy of ASTM F–1805–00 may be obtained from the ASTM Web site <http://www.astm.org/> or by contacting ASTM, or by contacting ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959. A copy of ASTM F–1805–00 may be obtained from the NHTSA docket at Docket No. 2005–23439, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

\* \* \* \* \*

S3. Definitions.

\* \* \* \* \*

Passenger car tire means a tire intended for use on passenger cars, multipurpose passenger vehicles, and

trucks, that have a gross vehicle weight rating (GVWR) of 10,000 pounds or less.

\* \* \* \* \*

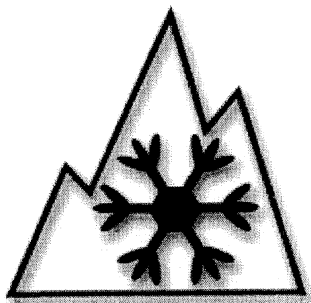
*Snow tire* means a tire that attains a traction index equal to or greater than 110, compared to the ASTM E-1136 Standard Reference Test Tire, when using the snow traction test as described in ASTM F-1805-00, Standard Test Method for Single Wheel Driving Traction in a Straight Line on Snow- and Ice-Covered Surfaces, and which is marked with an Alpine Symbol specified in S5.5 (i) on at least one sidewall.

\* \* \* \* \*

S5.5 *Tire Markings*. Except as specified in paragraphs (a) through (h) of S5.5, each tire must be marked on each sidewall with the information specified in S5.5 (a) through (d) and on one sidewall with the information specified in S5.5 (e) through (h) according to the phase-in schedule specified in S7 of this standard. \* \* \*

\* \* \* \* \*

(i) *Alpine Symbol*. A tire meeting the definition of a snow tire as defined in paragraph S3 may, at the option of the manufacturer, show the pictograph of a mountain with a snowflake as shown below. If the manufacturer chooses to mark the snow tire with the alpine symbol, the mountain profile must have a minimum base of 15 mm and a minimum height of 15 mm, and must contain three peaks with the middle peak being the tallest. Inside the mountain, there must be a six-sided snowflake having a minimum height of one-half the tallest peak.



\* \* \* \* \*

S6.1.1.1.2 For passenger car tires, inflate to the pressure specified in the following table:

| Inflation pressure (kPa) |            |
|--------------------------|------------|
| Standard                 | Reinforced |
| 180 .....                | 220        |

\* \* \* \* \*

S6.1.1.1.4 Condition the assembly at an ambient room temperature of 20 °C to 30 °C for not less than 24 hours.

\* \* \* \* \*

S6.2.1.1.1 Mount the tire on a test rim and inflate it to the pressure specified for the tire in the following table:

| Tire application           | Test pressure (kPa) |
|----------------------------|---------------------|
| <b>Passenger car tires</b> |                     |
| Standard load .....        | 220                 |
| Extra load .....           | 260                 |
| Load Range C .....         | 320                 |
| Load Range D .....         | 410                 |
| Load Range E .....         | 500                 |

| Light truck tires with a nominal cross section > 295 mm (11.5 inches) |     |
|---|-----|
| Load Range C .....  | 230 |
| Load Range D .....  | 320 |
| Load Range E .....  | 410 |

\* \* \* \* \*

S6.2.1.2.6 During the test, the ambient temperature, measured at a distance of not less than 150 mm and not more than 1 m from the tire, is maintained at not less than 32 °C or more than 38 °C.

\* \* \* \* \*

S6.2.1.2.8 Allow the tire to cool for between 15 minutes and 25 minutes. Measure its inflation pressure. Then, deflate the tire, remove it from the test rim, and inspect it for the conditions specified in S6.2.2(a).

\* \* \* \* \*

S6.2.2 Performance requirements. When the tire is tested in accordance with S6.2.1:

(a) There shall be no visual evidence of tread, sidewall, ply, cord, innerliner, belt or bead separation, chunking, open splices, cracking, or broken cords.

(b) The tire pressure, when measured at any time between 15 minutes and 25 minutes after the end of the test, shall not be less than 95% of the initial pressure specified in S6.2.1.1.1.

\* \* \* \* \*

S6.3.1.1.1 Mount the tire on a test rim and inflate it to the pressure specified for the tire in the following table:

| Tire application           | Test pressure (kPa) |
|----------------------------|---------------------|
| <b>Passenger car tires</b> |                     |
| Standard load .....        | 180                 |
| Extra load .....           | 220                 |
| Load Range C .....         | 260                 |
| Load Range D .....         | 340                 |
| Load Range E .....         | 410                 |

| Tire application  | Test pressure (kPa) |
|---|---------------------|
| <b>Light truck tires with a nominal cross section &gt; 295 mm (11.5 inches)</b> |                     |
| Load Range C .....  | 190                 |
| Load Range D .....  | 260                 |
| Load Range E .....  | 340                 |

**Light truck tires with a nominal cross section > 295 mm (11.5 inches)**

|                    |     |
|--------------------|-----|
| Load Range C ..... | 190 |
| Load Range D ..... | 260 |
| Load Range E ..... | 340 |

S6.3.1.1.2 Condition the assembly at 32 to 38 °C for not less than 3 hours.

\* \* \* \* \*

S6.3.1.2.2 During the test, the ambient temperature, at a distance of not less than 150 mm and not more than 1 m from the tire, is maintained at not less than 32 °C or more than 38 °C.

S6.3.1.2.3 Conduct the test, without interruptions, at the test speed of not less than 120 km/h with loads and test periods not less than those shown in the following table. For snow tires, conduct the test at not less than 110 km/h.

| Test period | Duration (hours) | Load as a percentage of tire maximum load rating |
|-------------|------------------|--|
| 1 .....     | 4                | 85   |
| 2 .....     | 6                | 90   |
| 3 .....     | 24               | 100  |

\* \* \* \* \*

S6.3.1.2.5 Allow the tire to cool for between 15 minutes and 25 minutes after running the tire for the time specified in the table in S6.3.1.2.3, measure its inflation pressure. Inspect the tire externally on the test rim for the conditions specified in S6.3.2(a).

\* \* \* \* \*

S6.3.2 Performance requirements. When the tire is tested in accordance with S6.3.1:

(a) There shall be no visual evidence of tread, sidewall, ply, cord, belt or bead separation, chunking, open splices, cracking or broken cords.

(b) The tire pressure, when measured at any time between 15 minutes and 25 minutes after the end of the test, shall not be less than 95% of the initial pressure specified in S6.3.1.1.1.

\* \* \* \* \*

S6.4.1.1.1 This test is conducted following completion of the tire endurance test using the same tire and rim assembly tested in accordance with S6.3 with the tire deflated to the following appropriate pressure:

| Tire application           | Test pressure (kPa) |
|----------------------------|---------------------|
| <b>Passenger car tires</b> |                     |
| Standard load .....        | 140                 |
| Extra load .....           | 160                 |

| Tire application  | Test pressure (kPa) |
|---|---------------------|
| Load Range C .....  | 200                 |
| Load Range D .....  | 260                 |
| Load Range E .....  | 320                 |
| <b>Light truck tires with a nominal cross section &gt; 295 mm (11.5 inches)</b> |                     |
| Load Range C .....  | 150                 |
| Load Range D .....  | 200                 |
| Load Range E .....  | 260                 |

S6.4.1.1.2 Condition the assembly at 32 to 38 °C for not less than 2 hours.  
\* \* \* \* \*

S6.4.1.2.1 The test is conducted for ninety minutes at the end of the test specified in S6.3, continuous and uninterrupted, at a speed of 120 km/h (75 mph). For snow tires, conduct the test at not less than 110 km/h.  
\* \* \* \* \*

S6.4.1.2.5 During the test, the ambient temperature, at a distance of not less than 150 mm and not more than 1 m from the tire, is maintained at not less than 32 °C or more than 38 °C.

S6.4.1.2.6 Allow the tire to cool for between 15 minutes and 25 minutes. Measure its inflation pressure. Then, deflate the tire, remove it from the test rim, and inspect it for the conditions specified in S6.4.2(a).

S6.4.2 Performance requirements. When the tire is tested in accordance with S6.4.1:

- (a) There shall be no visual evidence of tread, sidewall, ply, cord, innerliner, belt or bead separation, chunking, open splices, cracking, or broken cords, and
- (b) The tire pressure, when measured at any time between 15 minutes and 25 minutes after the end of the test, shall not be less than 95% of the initial pressure specified in S6.4.1.1.1.

\* \* \* \* \*

S6.5.1 *Tire strength for passenger car tires.* Each tire shall comply with the requirements of S5.3 of § 571.109.

\* \* \* \* \*

S6.6 *Tubeless tire bead unseating resistance.* Each tire shall comply with the requirements of S5.2 of § 571.109. For light truck tires, the maximum permissible inflation pressure to be used for the bead unseating test is as follows:

|                    |          |
|--------------------|----------|
| Load Range C ..... | 260 kPa. |
| Load Range D ..... | 340 kPa. |
| Load Range E ..... | 410 kPa. |

\* \* \* \* \*

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**Jacqueline Glassman,**  
*Deputy Administrator.*

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