

on the applicability of the proposed standard?

One commenter, GRRF, supported 1975 as cut-off date for the new tire standard and suggested the retention of FMVSS No. 109 for tires for earlier vehicles. The applicability for FMVSS Nos. 109 and 139 established by this final rule mirrors this suggestion, since both seem reasonable.

The agency seeks comment on whether the four required inflation pressures in FMVSS No. 109 should be retained in English units in the proposed standard and/or only be specified in metric units?

Currently, FMVSS No. 109 specifies that a tire's maximum permissible inflation pressure shall be 32, 36, 40, or 60 psi, or 240, 280, 300, 340, or 350 kPa. The 32, 36, 40, and 60 psi figures were originally based on bias ply tire specifications, and are not the English equivalents of the metric listing of maximum permissible inflation pressure values, 240, 280, 300, 340, and 350 kPa, established for and used on radial tires.

RMA supports retaining the 32, 36, 40, and 60 psi specifications in FMVSS No. 109 but not including them in FMVSS No. 139. The Alliance, on the other hand, suggested including the figures in the new standard but formatting them so that they would be specified in metric units followed by the English equivalent in parentheses.

Based on the agency's decision to retain the requirements for bias ply tires under FMVSS No. 109, FMVSS No. 139 will contain a listing of only 240, 280, 300, 340, and 350 kPa as maximum permissible inflation pressures. As required in S5.5.4(a) of FMVSS No. 139, tires are required to be labeled with the maximum inflation pressure value in metric followed by the equivalent psi in parenthesis.

6. Other

RMA suggests that NHTSA adopt the tolerances listed in ASTM-F-551 Standard Practice for Using a 67.23-in. (1.707-m) Diameter Laboratory Test Wheel in Tire Testing. NHTSA will consider this suggestion in its tire testing.

RMA suggests that NHTSA should adopt a specific tire pressure reserve limit and comments that they will be petitioning the agency for such a ruling in the near future. Since the time that RMA submitted this comment, it has petitioned the agency for a rulemaking to adopt a tire pressure reserve limit. The agency is currently evaluating the petition and the practicability of initiating such a rulemaking.

VII. Benefits

For a fuller discussion of the benefits, see the agency's Final Regulatory Evaluation (FRE). A copy of the FRE has been placed in the docket.

The final rule will increase the strength, endurance, and heat resistance of tires by raising the stringency of the existing standard on endurance and high speed tests and by requiring a low pressure performance test. The agency anticipates that tires that meet these tests will experience fewer tire failures. Based on the tires tested by the agency and tire tests provided by RMA, the agency estimates that 2 to 3 percent will fail the new high speed test, 2 to 3.5 percent will fail the new endurance test, and 0–6 percent will fail the low pressure test. In total, 5 to 11 percent of tires currently will not pass the adopted tests.

As discussed in the FRE, we estimate a target population, 414 fatalities and 10,275 non-fatal injuries annually, for tire problems (flat tire/blowout). However, the agency does not know how many of these crashes are influenced by tire design or under-inflation. The agency assumes that under-inflation is involved in 20 percent of flat tire/blowout cases that resulted in a crash. The agency assumes that the influence that under-inflation has on the chances of a blowout is affected by both tire pressure and the properties of the tire. Therefore, the agency assumes that proper inflation will address 50 percent of these cases and improved tires will address the other 50 percent of these cases. Consequently, 41 fatalities ($414 \times .2 \times .5$) and 1,028 injuries are addressed by the TPMS final rule. This leaves the target population for this proposal at 373 fatalities and 9,247 injuries.

We assume a 5–10 percent reduction in flat tire/blowouts for making improvements to those tires not passing the tests. Thus, the total potential improvement would be 19 to 37 lives saved ($373 \times .05$ to $.10$) and 462 to 925 ($9,247 \times .05$ to $.10$) injuries avoided if only those tires in the target population were the ones that needed improvements. For those tires currently not passing the adopted tests (5 to 11 percent), the benefits will be 1 to 4 lives saved (19×0.05 to 37×0.11) and 23 to 102 injuries reduced ($462 \times .05$ to $925 \times .11$) when all tires on the road meet the adopted requirements.

VIII. Costs

The following is a summary of the costs associated with the performance requirements contained light vehicle tire standard. It is based on the

increased stringency of the high speed and endurance tests and the addition of a low inflation pressure performance test.

A. Original Equipment Tire and Vehicle Costs

The adopted tests will result in tires being designed that are less susceptible to heat build-up. For the proposed requirements, the agency believed that many, if not all, of the P-metric tires rated C for Temperature resistance and some LT tires will not be able to pass the new tests. In the NPRM, the agency attempted to determine the difference in price between two tires that appear to be similar in all characteristics except that one tire is rated B for temperature resistance while the other is rated C. The agency estimated that the difference in price between a B or C-rated tire that might fail the proposed standard and a B-rated tire that will pass the proposed standard is \$3 per tire (in 2001 dollars) and that the cost differential for a vehicle model equipped with C-rated tires, depending on whether it had a full-size spare, was \$12 to \$15 per vehicle. No comments were received on these estimates.

The final rule contains different, less burdensome test parameters than those in the NPRM. The estimated failure rate for currently produced tires was 33% for the parameters in the NPRM. For the parameters adopted in this final rule, the rate is 5% to 11%. Additionally, the average tires that failed the tests in the final rule did so at a later point in the tests or failed during inspection after the tests were completed. This indicates that, in addition to the decreased failure rate, the degree of failure is less for tires that fail when tested to the parameters in the final rule as compared to those that failed when tested to the parameters in the NPRM. Therefore, the costs per failing tire should be less than our previous estimate of \$3 per tire. We believe the incremental costs, on an average tire basis, are in the range of \$0.25 to \$1.00 per failing tire. Since we estimate that 5 to 11 percent of the current tires would fail the final rule requirements, the average cost is estimated to range from \$0.01 per tire ($\$0.25 \times .05$) to \$0.11 per tire ($\$1 \times .11$).

Since only a portion of new vehicles are equipped with tires that do not meet the final rule, the agency estimates the average price increase for new vehicles by weighting the vehicles that will receive improvements at \$0.25 to \$1 per tire with the vehicles whose tires and prices will not change.

The agency estimates that approximately 85 percent of light vehicles (passenger cars, pickups, SUVs,