

vehicle cannot be ascertained. For this reason, we recommend that vehicles not previously subject to FMVSS 214 requirements also have the same three-year lead time and four year phase-in schedule as proposed above for the rear impact requirement, with the allowance for early compliance. Starting the lead time and the phase-in for both the rear and side impact requirements at the same time would also be logical and provide clarity since both are contained in the single notice.

As we note below in the section on costs, only one out of more than 100 vehicles tested failed Standard No. 301's fuel leakage requirements using Standard No. 214's side impact test. Based on those test results, the agency believes that few vehicles, approximately 1%, will have to be modified to meet Standard No. 301's leakage requirements using Standard No. 214's side impact test. Therefore, the one-year lead time without a phase-in is adopted, as was proposed.

F. Benefits

The target population of crashes includes multi-vehicle crashes in which a passenger vehicle is struck in the rear by another passenger vehicle and the fire starts in the struck vehicle. There are an estimated 58 burn-related fatalities and 119 non-fatal burn-related injuries annually in the target population. The non-fatal burn injuries in that population of crashes were mostly minor and were typically not the most severe injury to the occupant. The agency estimates that approximately 8 to 21 fatalities will be prevented once all vehicles on the road comply with the upgraded rear impact test. The cost per life saved is estimated to be \$1.96 million to \$5.13 million (\$41 million/21 lives to \$41 million/8 lives). The agency is not estimating the number of reduced non-fatal burn-related injuries because there are only a few cases each year in which the injured person's most serious injury was a burn injury.

There are fewer than 100 fatalities annually in multi-vehicle side impacts that result in fire. The agency believes that the Standard No. 214 side impact test is somewhat stricter than the existing lateral impact test in Standard No. 301. However, the agency was unable to quantify any benefits from switching to the Standard No. 214 side impact test.

NHTSA disagrees with the VW comment that the benefits of this rulemaking are too low compared to its costs. VW did not provide any data to support their comment. However, the agency believes that VW's cost estimates may be based on costs of issues, such as post-crash door operability, seat back failures, and dummy responses, which

were discussed in the NPRM but not adopted in this final rule.

G. Costs

The agency estimates that the average cost for vehicles that will need to be modified to comply with the upgraded rear impact test is \$5.31 per vehicle.²⁵ Based on its belief that the test failures in the agency's testing were more the result of design differences than vehicle weight differences, the agency estimates that 46 percent of the vehicle fleet does not currently meet the upgraded rear impact test. It further estimates that approximately 16.7 million vehicles are sold each year in the U.S. Together, this information indicates that the total cost for the fleet will be approximately \$41 million per year.

Using the Standard No. 214 side impact test as the Standard No. 301 side impact test will eliminate the cost of conducting a unique Standard No. 301 test as well as the cost of an extra test vehicle. Since the average current Standard No. 301 side impact test is roughly \$4,300 and the average test vehicle costs about \$21,000, the total savings would be about \$25,200 per vehicle model.²⁶

Only one out of more than 100 vehicles tested failed Standard No. 301's fuel leakage requirements using Standard No. 214's side impact test. Based on those test results, the agency believes that few vehicles will have to be modified to meet Standard No. 301's side impact leakage requirements using Standard No. 214's side impact test.

NHTSA disagrees with the Honda comment that the agency's cost estimates are too low. The agency's cost estimates are based on the changes that will be needed to remedy those noncompliant vehicles needing only minor modifications. Since most vehicles readily pass the fuel leakage requirements using the Standard No. 214 side impact test, we do not believe modifications will be required which are not minor. Neither Honda nor any of the other vehicle manufacturers provided data indicating that the costs of modifying vehicles to comply will be greater than the agency's estimates.²⁷ Furthermore, 54 percent of the vehicles tested were able to pass at the higher test speed and the measures required to

²⁵ This is a \$0.31 increase from the figure used in the NPRM.

²⁶ The figures in the NPRM were \$4,000 for the average lateral test for Standard No. 301 costs, \$20,000 for average test vehicle cost, and a total of about \$24,000 per vehicle model.

²⁷ The agency believes that Honda's cost estimates are overstated since they include vehicle models that complied with the amendments in this final rule when the agency tested them.

address the failing vehicles do not involve structural changes.

H. Additional Issues

1. Real World Data

None of the commenters provided any real-world data on the relationship between crash severity and the risk of occupant injury due to fire. Thus, as discussed above in the section on Costs and Benefits, it appears that the data files NHTSA used in developing the NPRM are the best available data sources.

2. Head and Neck Injury Criteria

The agency agrees with the Alliance's comment that the issue of occupant protection would best be discussed in the context of a rulemaking focused on that issue. The agency notes that it is in the process of developing a final rule for Standard No. 202 and a proposed rule for Standard No. 207, and will address rear impact protection in those rulemakings.

3. Seat Back Failure

NHTSA agrees with the DC comment that the issue of seat back failure best be discussed in the context of a rulemaking focused on that issue. The agency notes that it is considering an upgrade of Standard No. 207, where this issue will be addressed.

4. Use of 5th Percentile Female Dummies

NHTSA agrees with the GM comment that using various dummy sizes to study the safety consequences to vehicle occupants due to the rear impact test upgrade should be a subject for future research. The agency will address the use of various dummy sizes in rear impact tests in separate rulemakings.

5. Test Vehicle Loading Conditions

The agency is adopting GM's suggested revision of S7.1.6(b) of Standard No. 301. That paragraph is revised to read as follows:

S7.1.6(b) Except as specified in S7.1.1, a multipurpose passenger vehicle, truck, or bus with a GVWR of 4,536 kg or less is loaded to its unloaded vehicle weight, plus the necessary test dummies as specified in S6, plus 136 kg or its rated cargo and luggage capacity weight, whichever is less, secured in the load carrying area and distributed as nearly as possible in proportion to its GAWR. For the purpose of this standard, unloaded vehicle weight does not include the weight of work-performing accessories. Each dummy is restrained only by means that are installed in the vehicle for protection at its seating position.

This provision is revised to simplify the language and provide clearer