DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA–99–5101; Notice 1]

Comments on Truck Splash and Spray Reduction for a Report to Congress

AGENCY: National Highway Traffic Safety Administration (NHTSA), DOT.

ACTION: Notice requesting comments.

SUMMARY: The Senate Appropriations Committee has directed NHTSA to provide Congress with a report updating the agency's research on truck splash and spray by conducting a comprehensive review and evaluation of spray suppression measures that can be employed on heavy duty vehicles to provide clearer highway visibility and safety during periods of adverse weather conditions. The report is due to Congress by October 21, 1999. This notice invites any interested person to provide NHTSA with any information or data in this area that the person believes NHTSA should consider in preparing this report to Congress.

DATES: All comments received by NHTSA no later than June 21, 1999 will be considered in preparing this report to Congress on progress in heavy vehicle splash and spray suppression.

ADDRESSES: All comments should refer to Docket No. NHTSA–99–5101; Notice 7 and be submitted to: Docket Management, Room PL–401, 400 Seventh Street, SW, Washington, D.C. 20590. Docket hours are from 10:00 a.m. to 5:00 p.m. Monday through Friday.

For public comments and other information related to previous notices on this subject, please refer to Docket No. 83–005, NHTSA Docket, Room 5111, 400 Seventh Street, SW, Washington, DC 20590. NHTSA Docket hours are from 9:30 am to 4:00 pm Monday through Friday.

FOR FURTHER INFORMATION CONTACT: Mr. Jere Medlin, Office of Crash Avoidance Standards, NPS–20, National Highway Traffic Safety Administration, 400 Seventh Street, SW, Washington, DC 20590, telephone (202) 366–5276, fax (202) 366–4329.

SUPPLEMENTARY INFORMATION: The terms "splash and spray" are commonly used to describe the adverse effects on driver visibility caused by other vehicles when traveling on wet roads. While spray clouds are produced by all vehicles traveling on wet roads, those produced by large trucks and buses are much larger than the clouds produced by passenger cars and light trucks. This can result in reduced driver visibility for adjacent motorists and for the driver of the large truck or bus.

NHTSA and others have studied the subject of splash and spray for more than 30 years. The most recent time the agency evaluated this subject was in late 1993, in response to a request from the Senate Appropriations Committee. In its report on NHTSA's FY94 appropriation, the Committee asked that the agency report "* * * on the status of recent technological progress in the design and testing of splash and spray suppression devices [for large commercial vehicles] and NHTSA's view on the need for regulation in this safety area." In response, NHTSA submitted a report to Congress in March 1994, "Splash and Spray Suppression, Technological Developments in the Design and Testing of Spray Reduction Devices for Heavy Trucks" (DOT HS 808 085), copies of which are available from the National Technical Information Service, Springfield, Virginia 22161. The report provided a comprehensive evaluation and summary of available data and studies conducted before and after NHTSA terminated rulemaking on splash and spray in 1988. The 1994 report concluded the following about developments in splash and spray reduction for heavy trucks:

1. There are no data available to support the position that heavy truck splash and spray presents a major safety problem, in terms of crashes caused and injuries in those crashes. The greatest involvement ever found for splash and spray was that it was a factor in 0.41% of crashes studied according to a 1959 British study. A more recent study in Indiana found that splash and spray could not be documented as a cause of any crash studied, and a North Carolina study found that splash and spray was a factor in 0.0055% of 450,000 crashes evaluated. No information has become available since 1988 suggesting that splash and spray is a larger safety problem than was previously known.

2. No study or other information has become available since 1988 that would cause the Agency to change its previous determination that no technology or combination of technologies has been demonstrated that will consistently and significantly reduce splash and spray from tractors, semi-trailers, and trailers to the extent that driver visibility will be significantly improved.

3. Several manufacturers of large trucks believe that aerodynamic improvements, which were made to their vehicles in an effort to improve fuel economy and reduce operating costs, will also serve to reduce splash and spray. This belief is based on very limited testing under controlled conditions. More extensive testing conducted in connection with NHTSA's previous rulemaking indicated that aerodynamic devices are not as effective at suppressing spray in the presence of crosswinds. Previous engineering analysis suggested that aerodynamic devices on truck tractors would not be effective at reducing spray when the tractor was connected to a trailer or semitrailer that was not a van. The testing done to date by truck manufacturers of more aerodynamic tractors has not examined these previously identified concerns to see if they are still valid.

4. The truck manufacturers appear to be working to reduce the splash and spray generated by their vehicles in the absence of any government requirement for them to do so. In addition to the efforts of Freightliner and Paccar in testing more aerodynamic truck tractors, the SAE has worked for years to develop a consensus test procedure that can be used to evaluate the performance of spray suppression devices.

Given these circumstances and the information available to it, the Agency has no plans to initiate a new rulemaking action on heavy truck splash and spray reduction.

More recently, in its report on NHTSA's appropriation for fiscal year 1999, the Senate Committee on Appropriations has again asked the agency to review this matter as follows:

Spray suppression research.—The Committee acknowledges the work previously undertaken by NHTSA in the area of spray suppression research and evaluation of abatement technologies and continues to support further research by NHTSA in this area to make travel on the Nation's highways safer and less stressful. The Committee is aware of the progress made in the European Union in designing beneficial performance standards and implementing roadway spray suppression regulations to improve highway visibility. The Committee directs NHTSA to update its research by conducting a comprehensive review and evaluation of spray suppression measures that can be employed on heavy duty vehicles (over 8,500 pounds gross vehicle weight rating) to provide clearer highway visibility and safety during periods of adverse weather conditions. NHTSA shall publish and report its findings to Congress within 12 months of enactment.

The agency has begun gathering the information it will need to respond to this request. NHTSA will conduct a comprehensive review and evaluation of spray suppression measures that can be employed on heavy duty vehicles to update its research since 1993. However, to ensure that the agency is aware of and considers all relevant information on this subject when preparing the Report to Congress, NHTSA is publishing this notice to invite public comment. All interested persons are invited to provide data and other relevant information which has become available since 1993, particularly developments that were not included in NHTSA's 1994 Report to Congress, concerning spray suppression measures that can be employed on heavy duty vehicles.

The agency will consider all public comments it has received by June 21, 1999, when preparing the report to Congress. While NHTSA is interested in any splash and spray information the public may have to offer, the agency is especially interested in responses to the following questions.

Questions

1. Please provide information and data on any technological improvements made since 1993 in the design and/or testing of splash and spray devices for use on heavy duty vehicles. NHTSA is especially interested in supporting data that are the basis for the commenter's conclusion that the device represents a technological improvement that will consistently and significantly reduce splash and spray to the extent that driver visibility will be significantly improved.

2. Please provide information on any data bases that NHTSA should examine or consider to estimate the extent to which splash and spray from heavy duty vehicles contributes to crashes on the public roads.

3. In the agency's rulemaking on this subject that was terminated in 1988, NHTSA indicated that aerodynamic improvements, made by large truck manufacturers to their vehicles to improve fuel economy and reduce operating costs, had shown promise for reducing splash and spray in some situations. That is, if such aerodynamic devices were attached to a truck tractor pulling a van-type semitrailer and if there were little or no crosswind present, the devices could improve visibility to a level that would be helpful to other motorists. In its March 1994 report to Congress, the agency indicated that several large truck manufacturers believed that aerodynamic improvements made since 1988 would reduce splash and spray. However, this was based on very limited testing under controlled conditions. The testing done by truck manufacturers did not examine whether the previously identified concerns were still valid.

Please provide information on any aerodynamic improvements to truck tractors since 1993, and data showing to what extent, if any, such improvements have lessened the amount of splash and spray generated by tractor/van-semitrailer combinations with crosswinds present. NHTSA had found in its testing that a crosswind of 8 miles per hour or more significantly diminished the benefits of the splash and spray countermeasures that were tested. In a 1987 rulemaking notice on this subject, NHTSA cited National Weather Service data indicating the mean wind velocity for the vast majority of the United States is 8 mph or greater. Similarly, please provide information and supporting data on other solutions that have been developed since 1993, which lessen the amount of splash and spray generated by other tractor/trailer combinations, such as tanks or flatbeds, or other types of heavy duty vehicles with crosswinds present.

4. Please provide information on any aftermarket devices introduced since 1993 that are intended to reduce the amount of splash and spray generated by heavy duty vehicles. Include a specific description of the devices, a brief explanation of how they reduce splash and spray, and all tests and other data that demonstrate the devices are effective in reducing splash and spray across a range of heavy vehicles under representative weather conditions.

5. If a person believes that some means would be effective at reducing splash and spray from tractor-single trailer combinations, please provide any information and data on whether that means would also work to reduce spray from tractors combined with double or triple trailers.

6. In its March 1994 report to Congress, NHTSA provided a comprehensive summary of the data and studies that were conducted before and after the agency terminated its rulemaking on splash and spray in 1988. This included all relevant information of which the agency was aware. NHTSA would like commenters to provide information on any study or testing of splash and spray suppression measures that was not considered in the 1994 report to Congress but should be considered in preparing this report to Congress.

7. Please provide information on the costs associated with splash and spray devices introduced since 1993, both original equipment and aftermarket, along with data on how effective the devices are at reducing splash and spray across a range of heavy duty vehicles and representative weather conditions.

8. In its current request that NHTSA again review this matter, the Senate Appropriations Committee stated that "The Committee is aware of the progress made in the European Union in designing beneficial performance standards and implementing roadway spray suppression regulations to improve highway visibility." NHTSA is aware of European Economic Community (EEC) Directive 91–226, "Spray Suppression Systems," issued in April 1991. The Directive applies to heavy duty vehicles and involves EEC member component type-approval addressing two types of spray suppression devices: (1) energy absorption and (2) air/water separator. The Directive includes laboratory performance tests of the devices along with vehicle location and component marking requirements.

Please provide any information along with supporting data on how effective EEC Directive 91–226 has been at reducing splash and spray across a range of heavy duty vehicles and representative weather conditions, to what extent driver visibility is improved, and whether U.S. trucks would need additional equipment, like fenders, to achieve the same visibility benefits from the spray suppression equipment.

9. In 1994 the Society of Automotive Engineers published a "Recommended Practice For Splash and Spray Evaluation," J2245. It provides general guidelines for measuring splash and spray from vehicles operating over wet pavements. The guidelines describe two methods of analysis: (1) video-digitizing and (2) laser. The video-digitizing method uses video images and contrast measurements between black and white checkerboards when a spray cloud is superimposed on them as a means of measuring the obscuring spray. The laser method uses laser transmittance through the spray cloud as the means of measurement. The test procedures involve actual test vehicles fitted with splash and spray devices, and include measurements under various wind conditions.

NHTSA is interested in any information along with supporting data on the use of these two test procedures by manufacturers and others. Specifically, the agency would like to know whether one method is preferred over the other, and why, along with information on the extent to which each method represents real world conditions. In addition, please provide any information on how well reductions in splash and spray through either method correlate to improvements in actual driver visibility.

The agency invites written comments from all interested persons. It is requested that two copies of each written comment be submitted. As always, NHTSA will try to consider comments that it receives after the comment closing date. However, in this case, the deadline imposed by the Senate Appropriations Committee means that comments submitted after the closing date of June 21, 1999 are less likely to be considered.

All comments must not exceed 15 pages in length (49 CFR 553.21). Necessary attachments may be appended to these submissions without

regard to the 15 page limit. This limitation is intended to encourage commenters to detail their primary arguments in concise fashion.

If a commenter wishes to submit specified information under a claim of confidentiality, three copies of the complete submission, including purportedly confidential business information, should be submitted to the Chief Counsel, NHTSA, at the street address given above, and two copies from which the purportedly confidential information has been deleted should be submitted to the Docket Section. A request for confidentiality should be accompanied by a cover letter setting forth the information specified in the agency's confidential business information regulation, 49 CFR Part 512.

Comments on this notice will be available for inspection in the docket. NHTSA will continue to file relevant information as it becomes available in the docket after the closing date. Those persons desiring to be notified upon receipt of their written comments in the Docket Section should enclose, in the envelope with their comments, a self-addressed stamped postcard. Upon receipt, the docket supervisor will return the postcard by mail.

Issued on: May 4, 1999.

L. Robert Shelton,

Associate Administrator for Safety Performance Standards.

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