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REQUEST TO LIST IN THE COMPENDIUM OF CANDIDATES
THE UNITED STATES OF AMERICA FEDERAL MOTOR VEHICLE SAFETY
STANDARD FMVSS No. 135 – PASSENGER CAR BRAKE SYSTEMS

Transmitted by the representative of the United States of America

Note: The document reproduced below is submitted by the United States of America to the Executive Committee (AC.3) for consideration. It contains a request to include in the Compendium of Candidates FMVSS No. 135 on Passenger car brake systems.

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REQUEST TO LIST IN THE COMPENDIUM OF CANDIDATES
THE UNITED STATES OF AMERICA FEDERAL MOTOR VEHICLE SAFETY
STANDARD FMVSS No. 135 – PASSENGER CAR BRAKE SYSTEMS

The United States of America requests that the Federal Motor Vehicle Safety Standard (FMVSS) No. 135 – Passenger car brake systems be listed in the Compendium of Candidates.

Background

The National Traffic and Motor Vehicle Safety Act requires that each FMVSS be objective and practicable so that a manufacturer can certify that each of its vehicles meets all applicable standards. Each FMVSS specifies the performance requirements and any necessary test conditions and procedures that the National Highway Traffic Safety Administration (NHTSA) uses in its periodic tests of motor vehicles and motor vehicle equipment. Each tested vehicle must meet the objective requirements contained within the applicable FMVSS. Under this self-certification system, the Government does not subjectively approve or disapprove a type of vehicle or a type of braking system.

Unlike the self-certification system used in the United States of America, the European Community has established a "type approval" system in which the Government approves each type of motor vehicle or item of motor vehicle equipment, based on whether it can meet the safety requirements. For example, the current United Nations Economic Commission for Europe (UNECE) braking Regulation, Regulation No. 13 and its harmonized Regulation No. R13-H, use a calculation method to determine the adhesion utilization of a vehicle as designed. Manufacturers submit their calculations (or the input parameters necessary to make the calculations) to governmental authorities along with a prototype vehicle, and the Governments then approve or disapprove the vehicle type based on a review of those calculations and testing of actual vehicles.

In order to eliminate any unnecessary non-tariff barriers to trade in accordance with the General Agreement on Tariffs and Trade (GATT), the United States of America participated in discussions held within the Meeting of Experts on Brakes and Running Gear (GRRF) of the UNECE. As a result of these discussions, NHTSA issued a series of rulemaking notices proposing to establish a new FMVSS, FMVSS No. 135, Passenger Car Brake Systems. Likewise, the GRRF also developed a proposed new Regulation No. 13-H, which would be compatible with FMVSS No. 135. Throughout the rulemaking, NHTSA emphasized that any requirements it adopts must be consistent with the need for safety and the Safety Act. The agency emphasizes that safety cannot be sacrificed in its efforts to harmonize the FMVSS with the UNECE regulations.

On 10 May 1985, NHTSA published in the Federal Register (50 FR 19744) a notice of proposed rulemaking (NPRM; Docket 85-06, Notice 1) to establish FMVSS No. 135, which would replace FMVSS No. 105 as it applies to passenger cars. On 14 January 1987, NHTSA published in the Federal Register (52 FR 1474) a supplemental notice of proposed rulemaking (SNPRM; Docket 85-06, Notice 4), to improve and refine the proposed Standard. On 3 July 1991, NHTSA published in the Federal Register (56 FR 30528) a second SNPRM (Docket 85-06, Notice 5) as a result of comments on the SNPRM and vehicle testing by NHTSA.

In these previous notices, NHTSA set out its overall approach to developing the proposed harmonized standard. The agency stated that the new standard would differ from the existing one primarily in containing a revised test procedure based on harmonized international procedures developed during discussions held between NHTSA and GRRF. NHTSA stated its belief that the new FMVSS would ensure the same level of safety for the aspects of performance covered by FMVSS No. 105, while improving safety by addressing some additional safety issues. The agency proposed establishing new adhesion utilization requirements that it believes would ensure stability during braking under all friction conditions.

NHTSA made several minor revisions to the requirements proposed in the July 1991 SNPRM. This document explains the changes incorporated in the final rule and the reasons for the agency's decision.

Description of Regulations

FMVSS 135 – Passenger Car Brake Systems

Standard No. 135 specifies requirements for passenger vehicle service brakes and associated parking brake systems. The purpose of the regulation is to ensure safe braking performance under normal and emergency driving conditions. It applies to all passenger cars manufactured after 1 September 2000 and to multi-purpose passenger vehicles, trucks and buses with a gross vehicle weight rating (GVWR) of 3,500 kilograms (7,716 pounds) or less, manufactured on or after 1 September 2002.

The standard includes equipment requirements, dynamic road test requirements, system failure requirements, and parking brake requirements, as well as test conditions and procedures related to these requirements. With respect to the equipment requirements, FMVSS No. 135 includes provisions addressing the brake lining wear indicator, an ABS disabling switch, reservoir labelling, and a brake system warning indicator. With respect to the test conditions, FMVSS No. 135 includes provisions addressing the ambient temperature, the road test surface, instrumentation, and the initial brake temperature. With respect to the dynamic road tests, FMVSS No. 135 includes provisions addressing permissible wheel lockup, the test sequence, burnish, the wheel lock sequence test, the torque wheel test, the cold effectiveness test, the high speed effectiveness test, the hot performance test, and the fade and recovery test. FMVSS No. 135 also includes requirements for a static parking brake test and several types of system failure tests, including stops with the engine off, ABS functional failure, proportional valve functional failure, hydraulic circuit failure, and power assist failure.

Safety Benefit

NHTSA considered the economic implications of this Regulation and found that FMVSS No. 135 ensures an equivalent level of safety for those aspects of performance covered by FMVSS No. 105 and will also address additional areas of brake performance which offer safety benefits while offering decreased costs for the production of passenger cars, by reducing non-tariff barriers to trade. Further, the agency believes that the full test procedure in the new standard will require approximately the same amount of time and money to complete as the existing procedures under FMVSS No. 105.

Costs

Some cost savings can be realized from the revisions made to testing procedures. NHTSA estimated the savings to amount as much as US\$ 256.00 when indirect labor, labor overhead, general administration, and profits are included.

Related documents:

FMVSS No. 135 Final Rule - Passenger Car Brake Systems

Final Regulatory Evaluation – International Standard for Passenger Car Brake Systems, FMVSS No. 135
