

**Proposal for the Development of a Global Technical Regulation on Door Locks
and Door Retention Components**

Submitted to the Executive Committee of the 1998 Global Agreement (AC.3)

Transmitted by the Representative of the United States of America

Objective of the proposal

In the U.S., between 1994 and 1999, complete and partial ejections resulted in approximately 9,864 fatalities and 9,767 serious injuries per year. Door ejections accounted for 1,668 of those fatalities (19 %) and 1,976 of the serious injuries (22 %). Hinged side door openings accounted for approximately 90% of all door ejection fatalities and 93 % of all door ejection serious injuries. This situation is likely to be a problem elsewhere.

The objective of this proposal is to develop a global technical regulation regarding door locks and door retention components intended to reduce door latch system failures. In view of the 1998 Global Agreement, we now have an opportunity to develop an improved and harmonized door locks and door retention components regulation. Moreover, the work on the global regulation will provide an opportunity to consider in the new regulation most, if not all, international safety concerns as well as available technological developments.

The US is currently looking into upgrading its door locks and door retention components regulation to provide more stringent requirements. The current regulation was designed to test for door openings in vehicles that were built in the 1960s. Changes in vehicle latch designs common in the 1960s and 1970s have rendered the existing regulations largely obsolete. Likewise, the ECE regulation is now over 30 years old. Neither regulation has been amended significantly since their original adoption. Accordingly, the existing regulations have become less effective and likely do not provide many safety benefits at this time.

In light of the US regulatory upgrade effort, we believe that this would be an excellent opportunity for the international community to develop a GTR concurrently with the US. Everyone could benefit from harmonization and new technology-based improvements of the door locks and door retention components regulation. The benefits to the governments would be the improvement of the door locks and door retention components adoption of the best safety practices, the leveraging of resources, and the harmonization of requirements. Manufacturers would benefit from reduction of the cost of development, testing and fabrication process of new models. Finally the consumer would benefit by having better choice of vehicles built to higher, globally recognized standards providing a better level of safety at a lower price.

Description of the proposed regulation

The current requirements only test individual latch components without regard to how those components interact with each other, with other portions of the door, or with the directions of force loading conditions occurring in real world crashes. Door openings are frequently caused by a combination of longitudinal and lateral forces during the crash, which can subject the latch system to compressive longitudinal and tensile lateral forces. These forces often result in structural failures of the latch system as well as other non-latch systems such as hinge strike supports, door frame and door sheet metal. Hence, it would be beneficial to consider developing full system requirements. In addition, current requirements have no test procedure for evaluating the safety of sliding doors. Consideration of such requirements would be valuable.

The GTR will be applicable for passenger vehicles, multi-purpose vehicles as well as trucks. The performance and test requirements for the door latch, striker and hinges will be based on the stringency needed to attain reasonable safety benefits in a cost effective manner. The GTR will be developed based in part on existing national regulations, directives of contracting parties as well as the international standards and regulations listed below. The US prepared a table to facilitate comparison of the present US and ECE regulations, which are currently being widely used by many contracting parties. The table is available in the docket for this notice.

The results of additional research and testing conducted by any contracting parties since the existing regulations were promulgated will also be factored into the requirements of the draft GTR and may result in the proposal of new requirements.

Elements of the GTR, which cannot be resolved by the Working Party will be identified and dealt with in accordance with protocol established by AC.3 and WP.29. The proposed GTR will be drafted in the format adopted by WP.29 (TRANS/WP.29/882).

Existing regulations and directives

Though there are no regulations currently contained in the Compendium of Candidates, the following regulations and standards will be taken into account during development of the new global technical regulation regarding door locks and door retention components.

- UN/ECE Regulation 11 – Uniform provisions concerning the approval of vehicles with regard to door latches and door retention components.
- U.S. Code of Federal Regulations (CFR) Title 49: Transportation; Part 571.206: Door locks and door retention components.
- EU Directive 70/387/EEC, concerning the doors of motor vehicles and their trailers.
- Canada Motor Vehicle Safety Regulation No. 206 - Door locks and door retention components.
- Japan Safety Regulation for Road Vehicle Article 25 – Entrance
- Australian Design Rule 2/00 – Side Door Latches and Hinges.

International Voluntary Standards

- SAE J839, September 1998 - Passenger Car Side Door Latch Systems
 - SAE J934, September 1998 - Vehicle Passenger Door Hinge Systems
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