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GLOBAL REGISTRY

Created on 18 November 2004, pursuant to Article 6 of the
AGREEMENT CONCERNING THE ESTABLISHING OF GLOBAL TECHNICAL
REGULATIONS FOR WHEELED VEHICLES, EQUIPMENT AND PARTS WHICH CAN
BE FITTED AND/OR BE USED ON WHEELED VEHICLES
(ECE/TRANS/132 and Corr.1)
Done at Geneva on 25 June 1998

Addendum

Global technical regulation No. 8

ELECTRONIC STABILITY CONTROL SYSTEMS

(Established in the Global Registry on 26 June 2008)

Appendix

Proposal and report pursuant to Article 6, paragraph 6.3.7. of the Agreement

- Proposal to develop a global technical regulation concerning electronic stability control systems (TRANS/WP.29/AC.3/16)
- Progress report and recommendation on the development of a global technical regulation concerning electronic stability control systems (ESC) for light vehicles (ECE/TRANS/WP.29/2008/70), adopted by AC.3 at its twenty-third session (ECE/TRANS/WP.29/1068, para. 63)



UNITED NATIONS

PROPOSAL TO DEVELOP A GLOBAL TECHNICAL REGULATION CONCERNING ELECTRONIC STABILITY CONTROL SYSTEMS

I. OBJECTIVE OF THE PROPOSAL

1. The United States of America proposes the development of a global technical regulation (gtr) under the 1998 Agreement for Electronic Stability Control (ESC) systems. Crash data studies conducted in Europe, Japan and the United States of America indicate that ESC systems are very effective in reducing single-vehicle crashes involving light vehicles (passenger cars, multipurpose passenger vehicles (vans and sport utility vehicles), buses and pickup trucks with a gross vehicle weight rating of 4,536 kg or less). Studies in the United States of America indicate that the installation of ESC systems would reduce single-vehicle crashes of passenger cars by 34 per cent and single vehicle crashes of sport utility vehicles (SUVs) by 59 percent in the United States of America.

2. ESC systems use automatic, computer-controlled braking of individual wheels to assist the driver in maintaining control (and the vehicle's intended heading) in critical driving conditions in which the vehicle is beginning to lose either directional stability at the rear wheels (spin out) or directional control at the front wheels (plow out). It is estimated that if all light vehicles on the road in the United States of America were equipped with ECS systems, 5,300 to 10,300 lives would be saved and 168,000 to 252,000 injuries would be prevented in all types of crashes annually. These would be the greatest benefits produced by any vehicle safety device since the introduction of seat belts.

3. Work on the proposed gtr for ESC systems would provide an opportunity to consider international safety concerns as well as available technological developments. This proposal reflects a recent proposal to establish an ESC standard in the United States of America. In light of its rulemaking proceeding, the United States of America believes that this would be an excellent opportunity for the international community to take the next step and develop and establish a gtr in this area.

II. DESCRIPTION OF THE PROPOSED REGULATION

4. The gtr would specify requirements for ESC systems to reduce the loss of control of vehicles and the risk of death and serious injury resulting from loss of control. The United States of America expects the gtr will specify the requirements for ESC systems, and require that vehicles be equipped with those systems, and meet dynamic performance tests.

5. Any element of the gtr that could not be resolved by the Working Party would be identified and dealt with in accordance with the protocol established by AC.3 and WP.29. The proposed gtr would be drafted in the format adopted by WP.29 (TRANS/WP.29/882).

III. EXISTING REGULATIONS AND DIRECTIVES

6. The following regulations and standards would be taken into account during the development of the new gtr regarding ESC systems:

- (a) U.S. Code of Federal Regulations (CFR) Title 49: Transportation; Parts 571 and 585: Electronic Stability Control Systems (Proposed).
- (b) International Voluntary Standards – SAE J2564 revised in June 2004 – Automotive Stability Enhancement Systems.

PROGRESS REPORT AND RECOMMENDATION ON THE DEVELOPMENT OF A GLOBAL TECHNICAL REGULATION ON ELECTRONIC STABILITY CONTROL (ESC) FOR LIGHT VEHICLES

I. OBJECTIVE OF THE REPORT

7. The purpose of this report is to provide details on the progress made on the development of a global technical regulation (gtr) for Electronic Stability Control systems for Light Vehicles (ESC) and seek guidance on the last few remaining issues that could not be resolved at GRRF. It also makes recommendations concerning adoption of the regulation should the issues be resolved by the Executive Committee of the 1998 Agreement.

II. DEVELOPMENT OF THE REGULATION

8. The Executive Committee of the 1998 Agreement (AC.3) tasked GRRF to develop the regulation following its acceptance of the formal proposal from the United States of America (United States) seeking to establish a gtr in this area. The document, which contains the safety rationale, consulted regulations and standards, etc., can be found under the following reference: ECE/TRANS/WP.29/AC.3/16 dated on 2 May 2007. AC.3 further instructed GRRF to plan its work expeditiously so that the regulation can be adopted by mid 2008.

9. Under the guidelines governing the development of a gtr, GRRF immediately began work through an informal working group that met June 2007. The ESC informal working group deliberated further at a second meeting in September 2007 before providing a progress report to the GRRF September session. GRRF accepted much of the work, provided guidance on the remaining parts, and further tasked the informal working group to meet for a third time to address the open issues (this meeting took place in January 2008). The informal working group presented its second progress report to GRRF at its February 2008 session, where the updated latest draft was accepted with just a few issues still remaining. GRRF is now seeking guidance from AC.3 to help resolve the last outstanding issues.

III. DESCRIPTION OF OUTSTANDING ISSUES

10. Informal document No. WP.29-144-05 is the latest complete draft of the gtr on ESC. That draft contains bracketed alternatives on two areas of disagreement in the text of the regulation. These are:

- (a) Paragraph 5.5.1.: The last paragraph in the paragraph requires the default mode of an ESC system for a particular drive configuration (for the rare cases when there are multiple ESC modes available that all satisfy the requirements of the regulation) to be the one with the highest margin of compliance relative to the stability requirement described in paragraph 5.1. The manufacturers and several Contracting Parties (CPs) argue that the best default modes for each drive configuration are not necessarily the ones with the highest margin of compliance relative to the stability performance requirement in paragraph 5.1., but the ones that manufacturers specify based on their own analysis. As such, they have proposed alternative text that

allows each manufacturer to specify the safest mode for each vehicle drive configuration.

- (b) Paragraph 5.5.3.: This paragraph requires multipurpose controls that have the function of deactivating the ESC system to be labelled with either the text "ESC OFF" or the ISO ESC symbol in conjunction with the word "OFF". Industry and most CPs have opposed this as unnecessary (with regard to safety) since there is also a tell-tale that indicates when ESC has been deactivated. The alternative text offered simply requires that the control be labelled with either "ESC" or the ISO symbol for ESC.

IV. GUIDANCE, BY CONSENSUS DECISION OF AC.3

11. At its March 2008 session, AC.3 considered the above mentioned pending issues (WP.29-144-05) and agreed by consensus decision with the proposal by the GRRF Chairman (WP.29-144-28). The secretariat was requested to incorporate the amendments adopted into the draft gtr, for its consideration and vote at the June 2008 session. AC.3 invited the GRRF Chairman, in connection with the technical sponsors, to provide the secretariat, in due time, with an updated text of the preamble taking into account the decisions made during the session.
