2 February 2021

Agreement

Concerning the Adoption of Harmonized Technical United Nations Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these United Nations Regulations*

(Revision 3, including the amendments which entered into force on 14 September 2017)

Addendum 139 – UN Regulation No. 140

Amendment 4

Supplement 4 to the original version of the Regulation – Date of entry into force: 3 January 2021

Uniform provisions concerning the approval of passenger cars with regard to Electronic Stability Control (ESC) Systems

This document is meant purely as documentation tool. The authentic and legal binding text is: ECE/TRANS/WP.29/2020/68.

UNITED NATIONS

* Former titles of the Agreement:
Agreement concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, done at Geneva on 20 March 1958 (original version);
Agreement concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these Prescriptions, done at Geneva on 5 October 1995 (Revision 2).

Paragraph 7, amend to read (the footnote should remain):

"7. Performance requirements

During each test performed under the test conditions of paragraph 8. and the test procedure of paragraph. 9.9., the vehicle with the ESC system engaged shall satisfy the directional stability criteria of paragraphs 7.1. and 7.2., and it shall satisfy the responsiveness criterion of paragraph 7.3. during each of those tests conducted with a commanded steering wheel[5] angle of 5A or greater but limited as per paragraph 9.9.4., where A is the steering wheel angle computed in paragraph 9.6.1.

Notwithstanding the above, the responsiveness criterion is deemed to be satisfied also for systems where the maximum operable steering wheel angle defined in paragraph 9.9.4. and the lateral displacement prescribed in paragraph 7.3. are achieved at a commanded steering wheel angle less than 5A.

Where a vehicle has been physically tested in accordance with paragraph 8., the compliance of versions or variants of that same vehicle type may be demonstrated by a computer simulation, which respects the test conditions of paragraph 8. and the test procedure of paragraph 9.9. The use of the simulator is defined in Annex 1 to this Regulation.

…"

Paragraph 9.9.4., amend to read:

"9.9.4. The steering amplitude of the final run in each series is the greater of 6.5 A or 270 degrees, provided the calculated magnitude of 6.5 A is less than or equal to 300 degrees. If any 0.5 A increment, up to 6.5 A, is greater than 300 degrees, the steering amplitude of the final run shall be 300 degrees.

If the above calculated steering amplitude of the final run is greater than the maximum operable steering wheel angle determined by design of the steering system, the final angle amplitude for the series test shall be greater than 98 per cent of the maximum operable angle."