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**Progress on the development of new global technical regulations
and of amendments to established global technical regulations:
Global technical regulation No. 3 (Motorcycle braking)**

Authorisation to develop Amendment 3 to global technical regulation No. 3 (Motorcycle braking)

Submitted by the representative of Italy*

The text reproduced below (based on ECE/TRANS/WP.29/2017/51) was submitted by the representative of Italy with the aim to adapt the global technical regulation (gtr) No. 3 to technical progress, addressing among others: ensuring electromagnetic immunity of Anti-lock Braking Systems (ABS), introducing ABS performance requirements for category 3-5 vehicles (three-wheelers), ensuring uniform requirements for equipment such as Electronic Stop Signal System and the means to disable the ABS, if equipped. This amendment aims to harmonise the gtr with recent amendments made to UN Regulation No. 78. It was adopted by the World Forum for Harmonization of Vehicle Regulations (WP.29) and the Executive Committee of the 1998 Agreement (AC.3) in March 2017. This authorization is transmitted to the Working Party on Brakes and Running Gear (GRRF). In accordance with the provisions of paragraphs 6.3.4.2, 6.3.7 and 6.4 of the 1998 Agreement, this document shall be appended to any new and/or amended global technical regulation once adopted.

* In accordance with the programme of work of the Inland Transport Committee for 2016–2017 (ECE/TRANS/254, para. 159 and ECE/TRANS/2016/28/Add.1, cluster 3.1), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

Authorisation to develop Amendment 3 to global technical regulation No. 3 (Motorcycle braking)

I. Objective

1. The objective is of this proposal to develop, in the framework of the 1998 Agreement, an amendment to global technical regulation (gtr) No. 3 on motorcycle braking to adapt the Regulation to technical progress addressing: electromagnetic immunity of ABS-systems, introducing ABS performance requirements for category 3-5 vehicles (three-wheelers), ensuring uniform requirements for equipment such as Electronic Stop Signal System and the means to disable the ABS, if equipped. This amendment aims to harmonise the gtr with recent amendments made to UN Regulation No. 78. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Executive Committee of the 1998 Agreement (AC.3) for consideration.

II. Background

2. One of the main purposes of gtr No. 3 is to reduce the injuries and fatalities associated with motorcycle accidents by addressing the braking performance of motorcycles as a means of improving road safety.

3. The first objective of this proposal is to harmonise the gtr with the provisions of Supplement 3 to the 03 series of amendments to UN Regulation No. 78, as adopted at June 169th session of WP.29 (ECE/TRANS/WP.29/2016/56, amended by WP29-169-03). The main technical issues, including their justification for updating the global technical regulation are:

(a) To include Electromagnetic Compatibility (EMC) requirements for ABS. With the increasing number and complexity of electronic braking devices, it is important to ensure that the braking performance is not affected electromagnetic perturbations by verifying the electromagnetic immunity. The corresponding provisions are reproduced in Annex 4 to the eightieth session report of the Working Party on Brake and Running Gear (GRRF). When transposing this matter into the 1998 Agreement, the specificities of self-certification will have to be addressed.

(b) To apply to tri-cycles (category 3-5 Vehicles)¹ the existing Anti-Lock Braking Systems (ABS) requirements for Powered Two Wheelers (PTWs) based on ECE/TRANS/WP.29/GRRF/2015/42. If such vehicles were equipped with ABS, without the amendment, there would be no specific requirements for the ABS braking performance. The scope extension of the ABS requirements to L₆ and L₇ vehicles² shall not be transposed into the gtr due to the absence of definitions for this type of vehicles in (S.R.1) the 1998 Agreement.

(c) To introduce the installation of Emergency Stop Signal on motorcycles based on ECE/TRANS/WP.29/2016/56, amended by WP29-169-03. The associated amendment

¹ As defined in the Special Resolution No. 1 concerning the common definitions of vehicle categories, masses and dimensions (S.R.1), document ECE/TRANS/WP.29/1045, Amend 1 and 2, Annex 2 - www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29resolutions.html

² As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.4, para. 2 - www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29resolutions.html

of UN Regulation No. 53 (lighting installation) was adopted at 168th session of WP.29 (ECE/TRANS/WP.29/2016/22). This proposed amendment to the gtr would only include the emergency stop signal activation conditions, not the corresponding lighting requirements. The benefit of defining for category 3 vehicles Emergency Stop Signal provisions is to ensure similar behaviour as other road vehicles by harmonising the activation and deactivation criteria of the Emergency Stop Signal as applied to cars.

4. The second objective is to clarify the requirements of a means to disable the ABS function ('ABS Switch') in certain conditions for category 3 vehicles, if equipped. With this amendment, it is ensured that the implementation and operation of an 'ABS switch' is clear and uniform across different markets: for example, if a vehicle is equipped with a function to disable the ABS, the ABS operating status should be clearly displayed to the operator. In addition, deactivation of the ABS function should not be possible inadvertently. Reference is made to ECE/TRANS/WP.29/2016/114 as amended by WP.29-170-05.

5. The development of draft language for updating the gtr No.3 with the above listed items will require consideration of the differences between the respective 1998 Agreement and 1958 Agreement. Specific solutions for the different technical items will need to be found. GRRF experts will be requested to support and contribute in this process.

III. Subject of amendment

6. The amendment to gtr No. 3 shall include:
- (a) Amendment of the Statement of technical rationale and justification;
 - (b) Amendment of the Text of the global technical regulation
 - (c) Technical Report

IV. Organization of process and timeline

7. The proposal will be drafted by the experts from Italy with the support of the International Motorcycle Manufacturers Association (IMMA) and in cooperation with all interested GRRF experts to ensure maximum of support to the final proposal. Specific meetings of interested experts are not yet planned but may be organized, if necessary.

8. The proposed action plan:
- (a) November 2016: Request for amendment of gtr No. 3 at AC.3
 - (b) January 2017: Introduction and consideration of the proposal (informal document) at the eighty-third GRRF session;
 - (c) March 2017: Formal request for amendment of gtr No. 3 at AC.3
 - (d) September 2017: Proposal for adoption at the eighty-fourth GRRF session and technical report;
 - (e) March 2018: Adoption of the proposal and technical report by AC.3, if all remaining issues had been solved

9. The work progress will be reported to AC.3 at its March, June, November 2017 sessions.
