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Motorcycle braking – Global Technical Regulation No. 3

Proposal for an Amendment to global technical regulation No. 3 (Motorcycle Brake Systems)

Submitted by the expert from the International Motorcycle Manufacturers Association*

The text reproduced below was prepared by the expert from the International Motorcycles Manufacturer Association (IMMA) clarifying the current text of the gtr for the use of combined braking systems (CBS). The modifications to the current text of the gtr are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para. 106 and ECE/TRANS/2010/8, program activity 02.4), 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

I. Proposal

A. Statement of technical rationale and justification

1. Objective

1. This proposal recommends adopting an amendment to the current global technical regulation (gtr) on motorcycle brake systems. At the March 2013 session of the Executive Committee (AC.3), Contracting Parties to the 1998 Global Agreement, under the World Forum for Harmonization of Vehicle Regulations (WP.29), endorsed the development of Amendment 1 to gtr No. 3 on Motorcycle Brake Systems.

2. This amendment is necessary to clarify the current text for the use of Combined Braking Systems (CBS) and to align the provisions with those of UN Regulation No. 78.

2. Justification (of changes)

3. All Combined Brake Systems (CBS) that guarantee, in case of failure in one system, compliance to single brake system performance requirements of the other, should be allowed.

4. Most traditional motorcycles are equipped with a conventional brake system with two separate service brake systems. In case of a failure in one system (a brake operating on one wheel), the other system (the brake operating on the other wheel) can still be activated to reduce the vehicle's speed and stop the motorcycle.

5. In this case, the required minimum deceleration, as given in para. 4.3.3., is 4.4 m/s² (Front wheel MFDD) or 2.9 m/s² (Rear wheel MFDD)

6. On the other hand, in case of a failure, CBS is required so that deceleration should be 5.1 m/s² or 2.5 m/s² based on the requirements as shown in para. 4.3.3, which is dependent on interpretation of paragraph 3.1.9.

7. For combined brake systems, the requirements are (Category L3):

MFDD = 5.1 m/s²

MFDD = 2.5 m/s² (for the secondary service brake system).

8. A combined braking system should be acceptable in which a failure in one system still guarantees that the other system meets the single brake system performance as this is at least equivalent to the requirements for conventional (independent) brake systems.

9. This amendment clarifies the interpretation of para. 3.1.9. according to the above justification.

B. Text of the Regulation

Paragraph 3.1.9., amend to read:

"3.1.9. In cases where two separate service brake systems are installed, ~~the systems may share a common brake,~~ if a failure in one system ~~occurs does not affect the performance of the other,~~ **such a failure does not preclude the other**

system from meeting the single brake system performance requirements."

II. Justification

The International Motorcycle Manufacturers Association (IMMA) proposed to clarify the provisions for Combined Braking Systems (CBS) in case of failure of one part of the system.
