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World Forum for Harmonization of Vehicle Regulations (WP.29)
Executive Committee (AC.3) of the 1998 Global Agreement

PROPOSAL TO DEVELOP A GLOBAL TECHNICAL REGULATION
CONCERNING MOTORCYCLE BRAKE SYSTEMS

Technical Sponsor: Canada

Note : The text reproduced below was considered and adopted by the Executive Committee (AC.3) of the 1998 Global Agreement at its seventh session, in March 2003. It is based on document TRANS/WP.29/2003/18 that had been submitted by Canada, as amended (TRANS/WP.29/909, paras. 136 and 145).

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Objective of the proposal

Based on statistics from the United States of America for the period from 1990 to 2000, about 13 percent of an average of 2,500 motorcycle fatalities were related to braking maneuvers.

In view of the 1998 Global Agreement, we now have an opportunity to develop an improved and harmonized motorcycle brake systems regulations. Moreover, the work on the global forum will provide an opportunity to consider in the new regulation most, if not all, international safety concerns as well as available technological developments.

The objective of this proposal is to develop a global technical regulation regarding motorcycle brake systems.

The proposed regulation will be based on existing national regulations of contracting parties as well as international standards and regulations, and is intended to contain provisions regarding modern technologies such as Anti-Lock Brake System (ABS) and Combined Brake System (CBS).

As motorcycles are sold around the world, everyone could benefit from harmonization and new technology based improvement of motorcycle brake systems regulations. The benefits to the governments would be the improvement of motorcycle safety by looking at best practices, and the leveraging of resources. Manufacturers would benefit from reduction of the cost of development, testing and production process of new models. Finally the consumer would benefit by having better choice of motorcycle models built to higher, globally recognized standards providing a better level of safety at a lower price.

With the improvement of disc brake systems and the recent introduction of new technologies such as ABS and CBS, modern motorcycles are available with very sophisticated and effective braking systems. It is now of interest to the international regulatory community to assess whether the current standards for motorcycle brakes are still appropriate in light of these developments and whether these new technologies could provide significant improvement in rider safety.

Description of the proposed regulation

The global technical regulation will be developed based on best practices in the existing regulations, directives and industry standards listed below.

The development will consist of two stages aimed at creation of one final gtr document embracing new advances in technology. The first stage of gtr development will consist of comparing the existing regulations based on their stringency, cost effectiveness, safety benefit, and developing a harmonized draft. The second stage of the development of the gtr will consider any additional advance technological and safety improvements and the corresponding economic effectiveness arising from incorporation of provisions related to new technologies such as ABS and CBS.

The work already carried out by the International Motorcycle Manufacturers Association (IMMA) and the results of the motorcycle brakes test programme initiated by the United States and conducted by Canada will form the foundation for the proposed gtr.

Elements, which cannot be agreed upon by the Working Party on Brakes and Running Gear will be identified and dealt with in accordance with protocol established by AC.3 and WP.29.

The proposed global technical regulation will be based on existing national regulations of contracting parties as well as voluntary standards listed below. It will contain provisions acceptable to all concerned.

Proposed gtr will be drafted in the format adopted by WP.29.

Existing regulations and directives

Though there are no regulations currently contained in the Compendium of Candidates, the following regulations will be taken into account during development of the new global technical regulation regarding motorcycle brake systems.

Europe: UNECE Regulation No. 78 – Uniform provisions concerning the approval of vehicles of category L vehicles with regard to braking.

EU Directive 93/14/EEC, braking for category L vehicles
(in effect, the same as ECE Regulation No. 78)

USA: U.S. Code of Federal Regulations (CFR) Title 49: Transportation;
Part 571.122: Motorcycle brake systems.

Canada: Canadian Motor Vehicle Safety Regulation No. 122 – Motorcycle brake systems.

Japan: Japanese Safety Standard JS12-61

Australia: Australian Design Rule 33/00 – Brake systems for motorcycles and mopeds.

International Voluntary Standards

ISO 8710:1995, Motorcycles – Brakes and braking devices
- tests and measurement methods

ISO 12364:2001, Two-wheeled motorcycles - Antilock braking systems (ABS)
- tests and measurement methods

ISO 8709:1995, Mopeds – Brakes and braking devices
- tests and measurement methods

ISO 12366:2001, Two-wheeled mopeds - Antilock braking systems (ABS)
- tests and measurement methods

SAE J109 MAR87 Service Brake System Performance Requirements
- Motorcycles and Motor-driven Cycles.
