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## **Economic Commission for Europe**

**Inland Transport Committee** 

#### **World Forum for Harmonization of Vehicle Regulations**

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# Proposal for Supplement 15 to Regulation No. 13-H (Brakes of $M_1$ and $N_1$ vehicles)

### Submitted by the Working Party on Brakes and Running Gear\*

The text reproduced below was adopted by the Working Party on Brakes and Running Gear (GRRF) at its seventy-fourth session (ECE/TRANS/WP.29/GRRF/74, para. 13). It is based on ECE/TRANS/WP.29/GRRF/2012/16, as amended in Annex VIII of the report. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee AC.1 for consideration.

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, programme 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.



Annex 3, paragraph 1.4.1.2.3., amend to read:

"1.4.1.2.3. In the case of a vehicle ...

Category A. ..

Category B. The contribution of the electric regenerative braking system to the braking force generated shall not exceed that minimum level guaranteed by the system design.

This condition is deemed to be satisfied if the state of charge of the batteries is in one of the following conditions:

- (a) At the maximum charge level recommended by the manufacturer, as listed in the vehicle specification;
- (b) At a level not less than 95 per cent of the full charge level, where the manufacturer has made no specific recommendation;
- (c) At a maximum level resulting from automatic charge control on the vehicle; or
- (d) When the tests are conducted without a regenerative braking component regardless of the state of charge of the batteries."

Annex 3, paragraph 1.5.2.4., amend to read:

"1.5.2.4. In the case of vehicles ...

... of this annex.

The tests may be conducted without a regenerative braking component. In this case, the requirement on the state of charge of the batteries is not applicable."

Annex 3, paragraph 1.5.3.1., amend to read:

"1.5.3.1. Vehicles equipped with an electrical regenerative braking system of category B may have their batteries re-charged or replaced by a charged set, in order to complete the recovery procedure.

The procedures may be conducted without a regenerative braking component."

*Annex 3, Appendix, introductory paragraph, second sentence,* amend to read:

"The procedure requires the use of a bi-directional DC Watt-hour meter or a bi-directional DC Ampere-hour meter."

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