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Economic Commission for Europe**Inland Transport Committee****World Forum for Harmonization of Vehicle Regulations****Working Party on Automated/Autonomous and Connected Vehicles****Twenty-third session**

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Item 8(b) of the provisional agenda

**UN Regulations Nos. 13, 13-H, 139, 140 and UN GTR No. 8:
Electrical Transmission Braking Systems (brake-by-wire)**

**Proposal for supplement 1 to the 14 series of amendments to
UN Regulation No. 13 (Heavy Vehicle Braking)****Submitted by the experts from the International Motor Vehicle
Inspection Committee (CITA)***

The text reproduced below was prepared by the experts from the International Motor Vehicle Inspection Committee (CITA), aimed to enabling the live reading of brake demand values during Periodic Technical Inspections (PTI), which is crucial for enhancing road safety by ensuring more accurate assessments of brake system performance. It is based on formal document ECE/TRANS/WP.29/2024/143, ECE/TRANS/WP.29/GRVA/2025/18 and informal documents GRVA-19-17, GRVA-20-39, GRVA-22-08 and GRVA-22-34. The modifications to the existing text of the Regulation are marked in bold for new characters and in bold strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2025 as outlined in proposed programme budget for 2025 (A/79/6 (Sect. 20), table 20.6), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate..



I. Proposal

Insert new paragraph 2.56., to read:

- 2.56. **“On-Board Diagnostic (OBD) system” means an on-board diagnostic system for the vehicle’s self-diagnostic and reporting, which has the capability of detecting the occurrence of a malfunction and of identifying the likely area of malfunction by means of fault codes stored in computer memory. OBD live values refer to the real-time data streamed from vehicle’s sensors and systems.**

Paragraph 5.1.4.6.2.1., amend to read:

- 5.1.4.6.2.1. It shall be possible to evaluate the relationship between the brake demand value(s) and the measured braking force on a roller brake tester. The brake demand value(s) shall be displayed on the vehicle and easily readable from the driver's seat during the roller brake test (e.g., using a menu system, automatic demand, etc.). **Additionally, it shall be possible to read the brake demand value(s) through the OBD connector, if existing, using a scan tool.** The vehicle manufacturer shall describe how to display **and access** those values and make this information available according to paragraph 5.1.4.5.1. above.

Insert new paragraph 12.1.2.1., to read:

- 12.1.2.1. [As from the official date of entry into force of the supplement 1 to the 14 series of amendments, Contracting Parties applying this Regulation shall require the compliance of paragraph 5.1.4.6.2.1. for granting type approval extensions for a vehicle equipped with an electrical transmission braking system.]

II. Justification

1. This supplement to the 14 series of amendments to UN Regulation No. 13 aims to include pertinent provisions for Periodic Technical Inspection (PTI) regarding electrical transmission braking systems in Heavy Duty Vehicles (HDV) in a non-discriminatory way for Contracting Parties applying the reference forces method.

2. This supplement is justified by the need to update and strengthen vehicle safety standards in response to the growing complexity of electrical transmission braking systems. It aligns with current technologies and measurement practices to ensure reliable, efficient inspections, enhancing road safety worldwide without placing undue burden on vehicle owners or fleet managers, and while maintaining consistency with existing regulations. The functionality exposed in this document relies in software updates, which average lead time for deployment use to be 3-6 months but, as the transitional provisions stated in the 14 series of amendments to UN Regulation No. 13 already consider three years, the lead time is covered and no additional transitional provisions are required.

3. Paragraph 12.1.2.1. is introduced with the objective of implementing the functionality required in this document as soon as possible, while minimizing the impact on both Contracting Parties and vehicle manufacturers. However, CITA proposes to present this paragraph in square brackets, allowing the final decision on its inclusion to be taken by the Contracting Parties themselves, without this approach being exclusive of the rest of the proposal.

4. The technical requirements exposed in the present document pertains solely and exclusively to the reading of a specific value, as it is the brake demand value, and under no circumstances does it involve, imply, or permit the modification or manipulation of said value or any other.
