

Proposal for amendments to UN Regulation No. 13

The proposal aims to allow the PTI to perform the necessary tests and verifications related the HDV braking systems in an easy and reliable way to grant the road safety without burdening the vehicle owners/managers. This document proposes amendments to Un Regulation No. 13.

Proposed changes compared to UN Regulation No. 13 are indicated in *italic*, **bold** for new characters and **~~bold strikethrough~~** for deleted characters.

I. Proposal

Insert new paragraphs 2.44. to 2.45., to read:

- 2.44. "Wheel brake demand value" means the demand value for the braking force of a single wheel brake being electrically actuated. This value is expressed as a percent of the wheel braking force under Type-0 conditions.**
- 2.45. "Wheel brake actuator value" means the value applied to the wheel brake actuator being electrically actuated for a determined wheel brake demand value. The magnitude for this value shall be determined by the manufacturer (e.g. voltage or power demand).**

Renumber current paragraphs 5.1.4.6.2. and 5.1.4.6.3. as 5.1.4.6.1.1. and 5.1.4.6.1.2.

Insert new paragraph 5.1.4.6.2. to read:

- 5.1.4.6.2. Reference braking forces for an electrical transmission braking system using a roller brake tester shall be defined according to the following requirements.**
- 5.1.4.6.2.1. It shall be possible on the vehicle to evaluate the relationship between the wheel brake demand value or the wheel brake actuator value and the measured braking force on a roller brake tester. The vehicle manufacturer shall indicate which is the parameter applied for the wheel brake demand value or wheel brake actuator value and it shall be readable live through the OBD-II connector (SAE J1962) in a harmonized way with a universal OBD diagnostic tool.**
- 5.1.4.6.2.2. Reference braking forces are to be determined for each axle for a wheel brake demand value or wheel brake actuator value from zero to a value corresponding to a braking force generated under Type-0 conditions. The applicant for type approval shall nominate these reference braking forces. These data shall be made available by the vehicle manufacturer, according to paragraph 5.1.4.5.1. above.**

II. Justification

This amendment to UN Regulation 13 aims the inclusion of pertinent provisions for Periodic Technical Inspection (PTI) regarding electrical transmission braking systems in Heavy Duty Vehicles (HDV).

The justification for this amendment is rooted in the necessity to update and reinforce vehicular safety standards, acknowledging the increasing prevalence and complexity of the electrical transmission braking systems in the automotive industry.

Furthermore, this measure aims to ensure the effectiveness and reliability of technical inspections, promoting the safeguarding vehicle's safety, the reduction of road accidents, and the enhancement of road safety worldwide, without burdening the vehicle owner and/or fleet managers, while aligning with current provisions.