GRVA-15-17
Proposal for a supplement to the 12 series of amendments to UN Regulation No. 13 (Heavy vehicle braking)

Scope of amendment and affected sections and paragraphs

Workshop in Brussels – March 29\textsuperscript{th}/30\textsuperscript{th}
GRVA-15-17 is a proposal for a supplement to the 12 series of amendments to UN Regulation No. 13 (Heavy vehicle braking)
• Contains 27 pages: 14 pages of UN R13 supplements and 13 pages Justification
• Supplement aims to amend following parts
  o Para 2 Definitions 1 page
  o Para 5 Specifications 7 pages
  o Annex 2 Communication concerning the approval ½ page
  o Annex 4 Braking tests and performance of braking systems 1 page
  o Annex 7 Provisions relating to energy sources and energy storage devices
    *New part D* 4 pages
  o Annex 8 Provisions relating to specific conditions for spring braking systems
    → exclusion of EMB change in title only
  o Annex 13 Test requirements for vehicles fitted with anti-lock systems ½ page
Main body includes

- Definitions: 2 modified and 8 new definitions
- Specifications:
  - 5.1.4. Provisions for the periodic technical inspection (PTI) of braking systems (data and reference braking forces)
  - 5.2.1. Characteristics of braking systems for Vehicles of categories M2, M3 and N
    - Seamless integration of EMB-requirements with same safety level e.g. two braking circuits, failure response, warning (current 5.2.1.27 “Special additional requirements for service braking systems with electric control transmission” has been amended by “except electro-mechanical braking system”)
    - New 5.2.1.35. “Special additional requirements for service braking systems with electro-mechanical braking system with electric transmission” (3.5 pages)
UN R13 and Electro-Mechanical Brakes (EMB)
Energy Transmission principles (Pneumatic vs Electric)

E-APU Pneumatic energy storage
EBS Modulator
Actuator
Caliper

Pneumatic Energy

EBS

Energy supply
Annex 7 part A
5.2.1.27
Energy reserve
Actuation

Electric Energy

EMB
Annex 7 new part D
New 5.2.1.35.

Energy supply
DC/DC
Electric energy storage
Drive and Motor
Gears
Caliper