



Heavy-Duty Vehicles CO₂ determination and standards in the EU

GRPE Workshop – 23 May 2024

Update on EU HDV CO₂ Regulations

- Overview of what happened on EU HDV CO₂ regulations since the last GRPE workshop on FE harmonization:
 - A new amendment (2nd amendment) to the Regulation on HDV CO₂ determination was adopted in 2022
 - A regulation on the determination of the performances for heavy-duty trailers was introduced in 2022
 - The Commission proposed a revision of the CO₂ emission standards for HDV in 2023, which is about to be adopted
 - Another amendment (3rd amendment) to the Regulation on HDV CO₂ determination is in the making and should be adopted this year

2nd amendment of HDV CO₂ determination Regulation

- The scope was expanded to new categories of vehicles:
 - Medium lorries (down to 5t TPMLM)
 - Heavy buses
- New technologies such as hybrid and pure electric vehicles, or dual fuel technologies, were also additionally covered
- Various other changes

Trailers

- A new regulation (Regulation (EU) 2022/1362) was introduced to set up provisions for the determination of the performance of new heavy-duty trailers (most trailers of categories O₃ and O₄) with regard to their influence on the CO₂ emissions/fuel consumption/energy consumption/range
- Features such as aerodynamic devices and tyres characteristics are fed into a simulation tool (VECTO trailer) that determines the performance of the trailer attached to a generic tractor
- VECTO trailer shall be used for all new trailers concerned as from 1 January 2024

Revision of the CO₂ standards regulation

- The EU co-legislators adopted the revisions of the HDV CO₂ standards regulation, which is about to be formally adopted
- This revision includes strengthened CO₂ emission standards for heavy-duty vehicles from 2030 onwards, and an extension of the scope to cover smaller trucks, city buses, long-distance buses and trailers
- In details, this includes the following targets:
 - For new heavy-duty vehicles in general: CO₂ emission reduction of 45% by 2030 (compared to 2019), 65% by 2035 and 90% by 2040
 - Specifically for city buses: all new city buses will have to be zero-emission by 2035 (and 90% will have to be zero-emission by 2030)

3rd amendment of HDV CO₂ determination Regulation

- New technologies not covered yet will be included:
 - Vehicles running on H₂ (ICE or FCS)
 - Vehicles driven by multiple independent powertrains
 - Efficient wheel ends
- Changes to the air drag determination procedure (Constant Speed Test) to be introduced:
 - Improvements/tightening of CST conditions
 - Possibility to use CFD
- Various other changes

Thank you



© European Union 2023

Unless otherwise noted the reuse of this presentation is authorised under the [CC BY 4.0](#) license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.

Slide xx: [element concerned](#), source: [e.g. Fotolia.com](#); Slide xx: [element concerned](#), source: [e.g. iStock.com](#)