



**EVE IWG 55th session**  
**OICA EVE TF on HD Battery Durability**



# General

- OICA welcomes and supports the activities from legislators on developing a technology neutral, feasible and competitive regulation on battery durability of heavy duty trucks
- Accordingly, a EVE TF on HD Battery Durability has been formed 2021
- Piloting has been aligned:

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External Affairs

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External Affairs



# Draft Criteria Proposal to be discussed for a Heavy Duty GTR Battery Performance & Durability – Daimler Truck

## Regulatory scope

- GTR valid for battery cell only?
- Other HV battery components excluded?

## Indicators

- Usable battery energy (UBE)
- Time and energy throughput/equivalent full cycles reflecting calendar and cycle aging

## Minimum performance requirements/segmentation

- e.g.  $\geq 80\%$  of certified UBE up to 5 years and xx kWh
- e.g.  $\geq 70\%$  of certified UBE up to 8 years and xx kWh
- kWh/equivalent full cycles depending on VECTO group

## Test method

- Preferably same test method for UBE begin of life and during life
- Bench testing: Precise measurement, but requires removal of the battery
- In-vehicle-testing: Less precise, measurement uncertainty for validity to be specified

## Boundary conditions

- Amount of fast charging cycles
- Restriction of operation and storage conditions (e.g. high temperatures, storage at high SoC)



# EU-Commission JRC Contribution to EVE IWG - HDV in-vehicle battery durability, 16th February 2022

## ➤ General comments:

- Timeline for the project and indication when an implementation in European regulation is possible should be indicated by the commission.
- Is a separate GTR for heavy duty battery durability requirements planned?
- Alignment with battery regulation is necessary. Today there are different requirements between light duty GTR for battery durability and the battery regulation

## ➤ LDV vs. HDV

- TA of components and the use of the VECTO tool is valid for vehicles with TPMLM > 5 tons.
- There is also a large number of vehicles with a lower TPMLM and different TA requirements.

## ➤ HDV Battery Capacity Retention Test

- Why is this step needed?
- The charging process isn't suitable to get information about battery durability. Comparing with the light duty procedure, there is also no "charging step"
- Another important topic is the question how to deal with additional electric on-board load.
- For example a vehicle with a cooling system/ refrigerator/ generator, etc.
- Requirements for battery durability have to reflect this additional energy consumption and its effects on durability.
- Responsibility between bodybuilder & OEM in a multistage TA process must be clearly defined.