

OICA comments for
EVE-IWG #58
21-22.11.2022

Annex 2

Values to be read from vehicles:

1. On board SOCE value
2. On board SOCR value
3. Odometer (in km)
4. Date of manufacture of the vehicle
5. Total distance (sum of the distance driven and the virtual distance) [km], if applicable
6. Percentage of virtual distance [in per cent], if applicable
7. Worst case certified energy consumption of PART B family [Wh/km], if applicable
8. Total discharge energy in V2X [Wh], if applicable
9. Elapsed time since last charged by more than 50 per cent SOC swing [Days]
10. Average battery temperature during charging, during propulsion system active and (if equipped) during non-usage of the vehicles (i.e. non-propulsion system active, non-charging)
11. ~~Energy throughput~~
12. ~~Capacity throughput~~
13. ~~Total time of use of the battery~~

- OICA propose to discuss the parameters 11.-13. when EU Battery Regulation is finalised with these criteria
- Technical feasibility shall be discussed in EVE-IWG as well


Background:

- UNECE EVE-IWG agreed, that the MPR for Category 2 vehicles shall be for monitoring in phase 1
- During EVE-IWG 56 in June 2022 EU-Commission indicated, that it will take to long to wait for monitoring data from phase 1
- In EVE-IWG 57 in September JRC presented a first proposal as discussion starter
- The Euro 7 draft was published recently with an MPR for N1 (Category 2) vehicles as presented by JRC

Table 2: Euro 7 Minimum performance requirements (MPR) for battery durability for N₁ vehicles

Battery energy based MPR	Start of life to 5 years or 100 000 km whichever comes first	Vehicles more than 5 years or 100 000 km, and up to whichever comes first of 8 years or 160 000 km	Vehicles up to additional lifetime*
OVC-HEV	75%	65%	
PEV	75%	65%	

- EVE-IWG agreed, that LCV have a different usage of the Battery than passenger cars that has to be reflected in the MPR
 - Wide variation of usecases
 - Continous use in a stationary state
 - Higher loads during operation that are different from WLTP
- OICA discussed internally the metric of Energy Throughput (Wh) as appropriate to assess the usage of the Battery

 Seperate presentation prepared by ACEA

Family Criteria proposal from Japan EVE-IWG 57

parameters	GTR21 Family Requirements
(a) Hybrid system configuration	Same system layout *
(b) Engine nominal performance	UNR85 engine single unit output
(c) Motor nominal performance	UNR85 motor single unit output
(d) Battery performance	UNR100 REESS specification

- The Japan proposal for the family concept was appreciated as a starting point for the discussion.
- CPs asked for harmonisation with the GTR22 definitions
- OICA has checked if the definitions would be appropriate for GTR 21 as well

Family Criteria in GTR 22

For Part B: Verification of Battery Durability

Only vehicles that are substantially similar with respect to the following elements may be part of the same battery durability family:

- Type and number of electric machines, including net power**, construction type (asynchronous/synchronous, etc.), and any other characteristics having a non-negligible influence on battery durability;
- Type of battery** (dimensions, type of cell, including format and chemistry, capacity (Ampere-hour), nominal voltage, nominal power;
- Battery management system (BMS) (with regards to battery durability monitoring and estimations);
- Passive and active thermal management of the battery;
- Type of electric energy converter between the electric machine and battery, between the recharge-plug-in and battery, and any other characteristics having a non-negligible influence on battery durability;
- Operation strategy of all components** influencing the battery durability;
- Declared maximum charging power.

- **Many Family Criteria from GTR22 are not relevant for GTR21**
- **Each criterion should be evaluated if a harmonisation between the GTRs has really a benefit**
- **Priority are appropriate criteria that allow families with a reasonable test effort**

Seperate presentation