6.1.1. Part A family definition

For Part A: Verification of Monitors

Only vehicles that are identical / substantially similar with respect to the following elements may be part of the same monitor family:

(a) Algorithm for estimating SOCR and SOCE whether included or not in the Battery Management System, and for determining flag conditions described in Annex 2, including software version.

(b) Sensor configuration (for sensors used in determination of SOCR and SOCE estimates and flag conditions).

(c) Characteristics of battery cell which have a non negligible influence on accuracy of monitorType and dimension of cell (including format and chemistry).

(d) Battery management system (BMS) (with regards to battery durability monitoring and estimations).

(e) Type of vehicle (PEVs or OVC-HEVs).

* At the request of the manufacturer and the approval of the responsible authority the monitor family may be extended in the case of a different algorithm or BMS if there is sufficient evidence that the performance of the monitor will not be affected.

OICA supports the text in the latest GTR draft after EVE # 48
6.1.2. Part B family definition

6.1.2. 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:

(a) Type and number of electric machines: construction type (asynchronous/synchronous, etc.), type of coolant (air, liquid), method of cooling and any other characteristics having a non-negligible influence on battery durability;

(b) Type of traction REESS (dimensions, type of cell, including format and chemistry, capacity (Ampere-hour), nominal voltage, nominal power, type of coolant (air, liquid));

(c) Battery management system (BMS) (with regards to battery durability monitoring and estimations);

(d) Insulation/packaging and placing of the battery in vehicle; (d) Passive and active thermal management performance

(e) Transmission type (e.g., manual, automatic, CVT) and transmission model (e.g., torque rating, number of gears, numbers of clutches, etc.);

(f) Number of powered axles;

(g) Type of electric energy converter between the electric machine and traction REESS, between the recharge-plug-in and traction REESS, and any other characteristics having a non-negligible influence on battery durability;

(h) Operation strategy of all components influencing the battery durability;

(i) n/v ratios (engine rotational speed divided by vehicle speed). This requirement shall be considered fulfilled if, for all transmission ratios concerned, the difference with respect to the n/v ratios of the most commonly installed transmission type and model is within 8 per cent.]

(j) Maximum power rating of the electric drivetrain **Addressed by (a) and (b)**

(k) Certified vehicle energy consumption (within x percent) - better to strike it out at this stage (x cannot be defined in the short timeframe)

(l) Maximum charging power

*With the approval of the responsible authority, the manufacturer may deviate from the above criteria for families with appropriate technical justification.