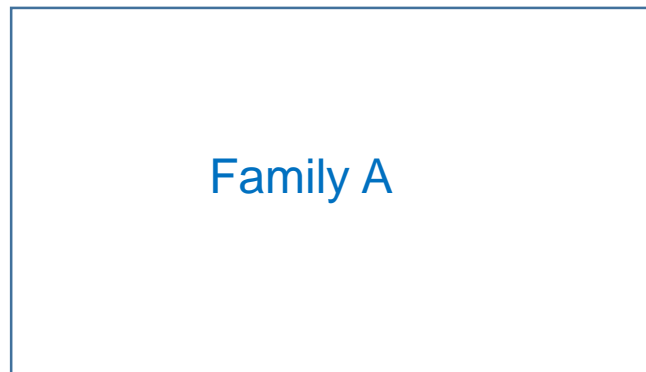
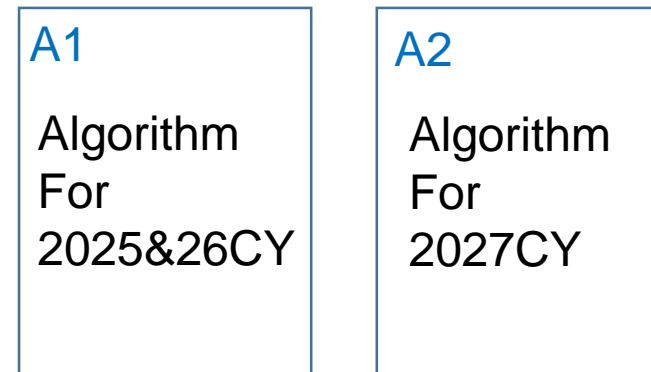


# Part B families shall be subsets of Part A families

most cases



possibility



## For Part A: Verification of Monitors

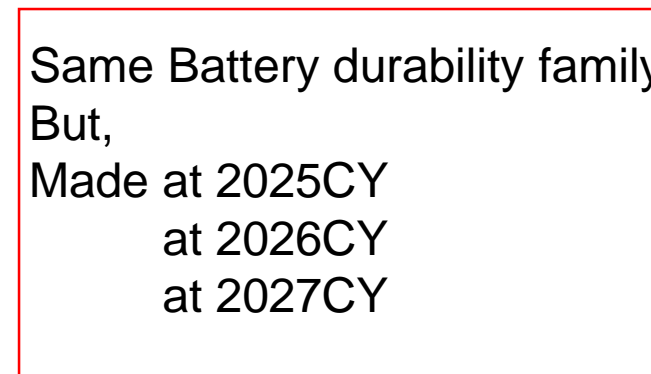
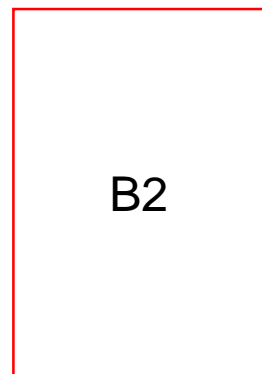
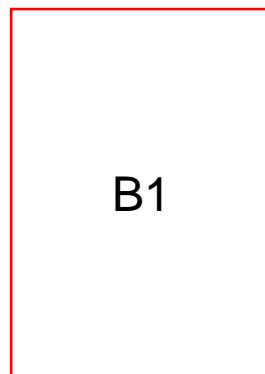
Only vehicles that are identical with respect to the following elements may be part of the same **monitor family**:

- [(a) Algorithm for estimating SOCR and SOCE, and for determining flag conditions described in Annex 2, including software version\*]
- [(b) Sensor configuration (for sensors providing data used in determination of SOCR and SOCE estimates and flag conditions)]
- [(c) Type 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)]

## For Part B: Verification of Battery Durability

Only vehicles that are identical with respect to the following electric powertrain/transmission characteristics 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 of the battery;]
- [(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.]



**Purpose**  
 Part A; Confirmation of the certainty of the relationship between measured SOCE and on board SOCE  
 Part B; Confirmation of Battery Durability

**If A1 family and A2 family pass ISC Part A respectively, Japan understood that there was no problem with the right combination.**