



OICA statement on EV Battery Durability

- OICA understands the need for customer information regarding battery life performance to strengthen user technology confidence and facilitate market acceptance for this propulsion technology.
 - Information to vehicle owners must be correct and reflect life expectancy estimations during real life conditions.
 - Manufacturers offer warranty on battery durability to protect vehicle owner in case of unexpected battery life performance.
 - OICA believes battery durability is best handled by manufacturer-customer relation mechanisms, i.e. warranty or other contractual agreements intended to protect customer from unexpected and unreasonable performance deviations.
 - OICA will not accept regulatory requirements and verification methodology which mandates manipulation of the battery system or test procedures that may affect the test result, and hence pose a risk of being misleading compared to field performance.
- Battery aging and understanding of degradation mechanisms is complex
 - The Li ion technology, which is currently the most widespread and well known REESS technology, still undergoes rapid and frequent changes
 - Upcoming technologies may have completely different degradation mechanisms and aging characteristics
- Life time estimation models are used by all manufactures
 - Existing standardized life time estimation test methods and models are too simplistic to provide satisfactory correlation with durability outcomes in the field
 - OEMs have different models for different vehicle categories due to strong impact of application conditions on battery durability
- Currently used simulation models are still being verified against field data from real customer usage.
- EVE leadership team proposed 4 different approaches:
 - A) Pursue development of durability test profiles
 - B) Seek to identify default deterioration factors (DF)
 - C) Investigate Testing with aged or age-emulated battery
 - D) Determine DF by simulation
 - ❖ Out of this recommendations OICA can support only approach B
 - Approach A) and C) would require accelerated aging process that is deemed to be premature
 - D) risks becoming misleading due to assumptions based on current technology understanding and model validation against historical data sets that may not be representative of future technology development directions