

**Committee of Experts on the Transport of Dangerous Goods  
and on the Globally Harmonized System of Classification  
and Labelling of Chemicals**

4 July 2019

**Sub-Committee of Experts on the Transport of Dangerous Goods  
Fifty-fifth session**

Geneva, 1-5 July 2019

Item 4 (a) of the provisional agenda

**Electric storage systems:  
testing of lithium batteries**

**Amendment to 38.3.3 (d) and (g) of the Manual of Tests and  
Criteria**

**Transmitted by the European Association for Advanced Rechargeable  
Batteries (RECHARGE) and The Rechargeable Battery Association  
(PRBA)**

**Introduction**

1. This document is following the presentation of the ST/SG/AC.10/C.3/2019/33 and takes into account the comments from the Sub Committee members.
2. The comments indicates a general approval of the benefit to add a note at the end of the paragraph 38.3.3 (g) of the Manual of Tests and Criteria, with the text in the reference working document:  

*“Note: For an assembled battery not equipped with overcharge protection that is designed for use only as a component in another battery, in equipment, or in a vehicle, which affords such protection, the overcharge protection may be verified at the battery, equipment or vehicle level, as appropriate”*
3. Nevertheless, some concerns were expressed that overcharge protection of the large battery may not be always ensured, if the large battery was not charged in the adequate charging equipment. Suggestions were made that a process should be implemented to avoid potential risk of using non adequate charging systems prior to transport.
4. The authors of the document are proposing an additive sentence to clarify that this risk can be prevented either by physical systems (today, the connection interface enabling the connection of a part of battery to a larger battery, equipment or vehicle, or to another charging system are not standardized, making the connection by error impossible) or by quality systems ( such as technical instructions, warnings, usage manuals, etc).
5. Finally, number of members of the Sub Committee also expressed support to the addition of the term “vehicle” in the last paragraph in 38.3.3(d). This proposal is repeated here-below.

## Proposal

6. Add a note at the end of the existing text of 38.3.3 (g) as follows (new text is underlined):

“(g) When batteries that have passed all applicable tests are electrically connected to form a battery in which the aggregate lithium content of all anodes, when fully charged, is more than 500g, or in the case of lithium ion battery, with a Watt-hour rating of more than 6200 Wh, the assembled battery does not need to be tested if the assembled battery is of a type that has been verified as preventing:

- (i) Overcharge,
- (ii) Short circuits, and
- (iii) Over discharge between the batteries.

*Note: For an assembled battery not equipped with overcharge protection that is designed for use only as a component in another battery, in equipment, or in a vehicle, which affords such protection:*

*- the overcharge protection may be verified at the battery, equipment or vehicle level, as appropriate, and*

***-a process (either based on a physical system or a quality system) shall be implemented to prevent usage of charging systems without overcharge protection.”***

7. Add “vehicle” in the last paragraph in 38.3.3 (d):

“Batteries or single cell batteries not equipped with battery overcharge protection that are designed for use only as a component in another battery, vehicle, or in equipment, which affords such protection, are not subject to the requirements of this test.”.

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