



**Committee of Experts on the Transport of Dangerous Goods
and on the Globally Harmonized System of Classification
and Labelling of Chemicals****Sub-Committee of Experts on the Transport of Dangerous Goods****Forty-seventh session**

Geneva, 22 – 26 June 2015

Item 4 (d) of the provisional agenda

Electric storage systems: miscellaneous**Amendments to Special Provision 376 for Damaged or
Defective Cells or Batteries****Transmitted by the Rechargeable Battery Association (PRBA) and the
Dangerous Goods Advisory Council (DGAC)¹****Introduction**

1. During the Lithium Battery informal working group meeting that was held in Brussels, Belgium 16 – 17 March 2015, a discussion was undertaken based on a paper from a DGAC representative in relation to the text in Special Provision 376. SP 376 addresses the transport of damaged or defective batteries. It was noted that the introductory language in SP 376 defines a damaged and defective battery when a cell or battery has been identified as being damaged or defective such that they do not conform to the type tested according to sub-section 38.3 of the Manual of Tests and Criteria. It was questioned how a consignor could practically determine whether a potentially damaged or defective battery meets the type tested according to 38.3. It was noted that this is not practical because it would require a person to either make an assumption or test a cell or battery in order to make such a determination. DGAC indicated that the text in special provision 376 has resulted in significant confusion and the frustration of shipments due to the fact that the text is subjective and in some cases impractical to apply. DGAC suggested that the determination of whether a damaged cell or battery could pose a risk of generating heat, smoke or fire should be based on a determination by the consignor or the manufacturer. If a consignor is not capable of making a determination then a conservative approach must be

¹ In accordance with the programme of work of the Sub-Committee for 2015–2016 approved by the Committee at its seventh session (see ST/SG/AC.10/C.3/92, paragraph 95 and ST/SG/AC.10/42, para. 15).

taken following the conditions in SP 376. It was suggested that modifying the text in SP 376 to provide additional clarification when a battery may be damaged or defective would be beneficial. Members of the working group generally supported the need to clarify SP 376 on the basis of a formal paper submitted to the Sub-Committee. PRBA and DGAC agreed to jointly submit a paper for the forty-seventh session of the Sub-Committee.

Proposal

5. It is proposed to amend Special Provision 376. The proposed amended text focuses on the nature of the damage and whether it has a safety impact:

“376 When it has been determined that lithium ion or metal cells or batteries have been damaged or are defective such that the cell or battery could pose a risk of dangerous generation of heat, smoke or fire in transport then the requirements specified in this special provision must be met. Additionally, if a determination can’t be made prior to transport and there is reason to suspect that a cell or battery make pose a risk in transport then the cell or battery must also be offered for transport according to the requirements listed in this special provision.

Indications for use in determining whether a cell or battery shall be transported in accordance with the requirements of this special provision include:

- Cells or batteries that are leaking;
- Cells or batteries that have undergone a thermal event and may continue to be unstable as a result (e.g. a multicell battery where not all of the cells have experienced a thermal event);
- Cells or batteries that have sustained sufficient physical or mechanical damage to the extent that they may pose a risk of dangerous generation of heat, smoke or fire in transport and the consignor is unable to determine if a safety hazard exists;
- Cells and batteries liable to rapidly disassemble, dangerously react, produce a flame or a dangerous evolution of heat or a dangerous emission of toxic, corrosive or flammable gases or vapours under normal conditions of transport shall not be transported except under conditions specified by the Competent Authority”;
- Cells and batteries shall be transported according to the provisions applicable to UN3090, UN3091, UN3480 and UN3481, except Special Provision 230 and as otherwise stated in this special provision.

Packages shall be marked “Damaged/Defective Lithium-ion Batteries” or “Damaged/Defective Lithium Metal Batteries”, as applicable. The size of the mark shall be at least 12 mm.

Cells and batteries shall be packed in accordance with Packing Instructions P908 of 4.1.4.1 or LP904 of 4.1.4.3, as applicable.
