



**NOTE DE TRAVAIL**

**GROUPE D'EXPERTS SUR LES MARCHANDISES DANGEREUSES (DGP)**

**VINGT ET UNIÈME RÉUNION**

**Montréal, 5 – 16 novembre 2007**

- Point 2 :** **Élaboration de recommandations relatives à des amendements des *Instructions techniques pour la sécurité du transport aérien des marchandises dangereuses* (Doc 9284) en vue de l'édition de 2009-2010**
- Point 5 :** **Dans la mesure du possible, règlement des questions non répétitives déterminées par la Commission de navigation aérienne ou par le groupe d'experts**
- 5.4 :** **Examen des dispositions relatives aux marchandises dangereuses liées aux piles au lithium**

**OBSERVATIONS SUR LES DISPOSITIONS RELATIVES AU TRANSPORT DE BATTERIES AU LITHIUM IONIQUE PAR LES PASSAGERS OU LES MEMBRES D'ÉQUIPAGE**

(Note présentée par la Portable Rechargeable Battery Association)

**AVERTISSEMENT**

Faute de ressources, seuls le sommaire, la suite à donner par le Groupe DGP et les amendements apportés au Doc 9284 ont été traduits.

**SOMMAIRE**

La présente note de travail a été soumise à l'origine au WG07 dans la note DGP-WG/07-WP/73. Elle invite le Groupe DGP à envisager d'amender les dispositions relatives au transport de batteries au lithium ionique par les passagers ou les membres d'équipage en raison des changements adoptés par le Comité d'experts des Nations Unies.

La suite à donner par le Groupe DGP figure au § 2.

**1. INTRODUCTION**

1.1 At the DGP Working Group of the Whole Meeting in 2007 (WG07), a proposed amendment to the lithium metal and lithium ion battery carry-on provisions in 8;1.1.2 q) to enhance the existing requirement to protect batteries from short circuits was accepted (DGP-WG/07-WP/54). The Portable Rechargeable Battery Association (PRBA) supports the amendment and has been working with portable equipment manufacturers (including those in the professional audio / video industry) to educate them on these important safety issues.

1.2 At present, the Technical Instructions allow certain lithium metal and lithium ion batteries to be carried in the cabin of a passenger carrying aircraft in accordance with 8;1.1.2 q) which states the following:

- q) consumer electronic devices (watches, calculating machines, cameras, cellular phones, laptop computers, camcorders, etc.) containing lithium or lithium ion cells or batteries when carried by passengers or crew for personal use. Spare batteries must be individually protected so as to prevent short circuits and carried in carry-on baggage only. In addition, each spare battery must not exceed the following quantities:
  - for lithium metal or lithium alloy batteries, a lithium content of not more than 2 grams; or
  - for lithium ion batteries, an aggregate equivalent lithium content of not more than 8 grams.

Lithium ion batteries with an aggregate equivalent lithium content of more than 8 grams but not more than 25 grams may be carried in carry-on baggage if they are individually protected so as to prevent short circuits and are limited to two spare batteries per person.

1.3 At the third session of the UN Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals (Geneva, 15 December 2006) significant changes to the lithium metal and lithium ion battery provisions in the UN Model Regulations were adopted. These changes are reflected in working paper DGP-WG/07-WP/4. One of the changes adopted by the UN Committee removed the “equivalent lithium content” provisions in the Model Regulations that apply to lithium ion cells and batteries and replaced it with watt-hours. Therefore, this paper proposes to replace the reference in 8;1.1.2 q) to “an aggregate equivalent lithium content of not more than 8 grams” with the appropriate watt-hour rating of “not more than 100 Wh” to be consistent with the changes adopted by the UN Committee.

1.4 This paper also is intended to inform the working group of the implications of its decision at the Working Group of the Whole Meeting in Beijing, China (WG/06) (DGP-WG/06-WP/29) to remove the following provision from 8;1.1.2 q): “*Lithium ion batteries with an aggregate equivalent lithium content of more than 8 grams but not more than 25 grams may be carried in carry-on baggage if they are individually protected so as to prevent short circuits and are limited to two spare batteries per person.*”

1.5 Below are three existing scenarios in which lithium ion batteries used by passengers and one industry segment exceed 8 grams of equivalent lithium content (100 watt-hours) and are frequently brought onboard passenger aircraft. (There may be others as well.) These batteries currently do not exceed 160 watt-hours.

- a) The professional audio/video industry uses lithium ion batteries that exceed 100 watt-hours. These are frequently carried onboard aircraft by camera crews, along with the equipment the batteries power, and are not placed in checked baggage (which is prohibited under 8;1.1.2 q). Examples of these batteries are shown in the appendix.
- b) Most portable oxygen concentrators (POC) on the market today are powered by lithium ion batteries. These products provide critical supplemental oxygen to individuals with medical disabilities and are quickly replacing oxygen tanks as the

preferred choice for such individuals. PRBA anticipates that the batteries used to power POCs will soon exceed 100 watt-hours so that they can provide necessary power for passengers that travel over 3 hours in an aircraft.

- c) There are numerous “universal” lithium ion batteries on the market that are designed to power a variety of portable electronic equipment. These batteries provide extended run time for passengers that use products such as notebook computers and DVD players. Examples of these batteries are shown in the appendix.

1.6 PRBA does not believe that a carry-on provision for lithium ion batteries with 25 grams of equivalent lithium content (approximately 300 watt-hours) is needed. However, there are numerous examples as noted above where larger lithium ion batteries with up to 160 watt-hours currently are being sold in the marketplace and brought onboard aircraft by passengers. Some of these batteries will be used to power portable medical equipment. Therefore, PRBA believes a carry-on provision for larger lithium ion batteries should allow up to two spare lithium ion batteries containing no more than 160 watt-hours.

## 2. SUITE À DONNER PAR LE GROUPE DGP

2.1 Le Groupe DGP est invité à *amender* la Partie 8, § 1.1.2, alinéa q), comme suit :

- q) les produits électroniques de consommation (montres, calculatrices, appareils photographiques, téléphones cellulaires, ordinateurs portables, caméscopes, etc.) contenant du lithium ou les piles ou batteries au lithium ionique lorsqu'ils sont transportés par des passagers ou des membres d'équipage pour un usage personnel. Les batteries de rechange doivent être protégées individuellement de manière à empêcher tout court-circuit et transportées uniquement dans les bagages à main. En outre, chaque batterie de rechange ne doit pas dépasser les quantités suivantes :

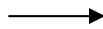
- pour les batteries au lithium métal ou à alliage de lithium, une quantité de lithium n'excédant pas 2 grammes ; ou
- pour les batteries au lithium ionique, ~~une quantité équivalente totale de lithium n'excédant pas 8 grammes~~ une énergie nominale en wattheures n'excédant pas 100 Wh.

Les batteries au lithium ionique ~~ayant une quantité équivalente totale de lithium de plus de 8 grammes mais n'excédant pas 25 grammes~~ d'une énergie nominale en wattheures dépassant 100 Wh mais n'excédant pas 160 Wh peuvent être transportées dans les bagages à main si elles sont individuellement protégées de manière à empêcher tout court-circuit et si elles sont limitées à deux batteries de rechange par personne.

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APPENDIX

130 watt-hour  
“universal”  
lithium ion  
battery



160 watt-hour  
lithium ion battery  
for professional  
audio / video  
equipment

