



**WORKING PAPER**

**DANGEROUS GOODS PANEL (DGP)  
WORKING GROUP MEETING (DGP-WG/15)**

**Montreal, 27 April to 1 May 2015**

**Agenda Item 2: Development of recommendations for amendments to the *Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284)* for incorporation in the 2017-2018 Edition**

**2.8: Part 8 — Provisions Concerning Passengers and Crew**

**PORTABLE MEDICAL ELECTRONIC DEVICES**

(Presented by B. Carrara)

**SUMMARY**

This working paper proposes a revision on the restrictions of Items 8) and on some entries of Item 19) of Table 8-1.

**Action by the DGP-WG:** The DGP is invited to provide their views and approve the amendments presented in the appendix to this working paper.

**1. INTRODUCTION**

1.1 DGP-WG/13 approved changes applicable to portable medical electronic devices carried by passengers in order to correct existent inconsistencies between provisions to those devices and PEDs considered as consumer articles.

1.2 The original proposal presented in DGP-WG/13-WP/19 brought some restrictions (from a) to d)) that should be applicable to all entries belonging to Item 8) of Table 8-1. But this format was not followed in the published version of the Technical Instructions 2015-2016 edition and all restrictions were applied just for the very first entry (*Portable medical electronic devices containing lithium metal cells or batteries not exceeding 2 grams or lithium ion cells or batteries not exceeding 100 Wh*).

1.3 It is recognized that some of those restrictions should be included to all entries in Item 8) and that restriction letter d) just makes sense in the last entry of this item (*Spare batteries for portable medical electronic devices containing lithium metal batteries exceeding 2 grams but not exceeding 8 grams or lithium ion batteries exceeding 100 Wh but not exceeding 160 Wh*).

1.4 In addition to that it might be noted that there are no specific entries sharing texts of restrictions in Table 8-1 and so all entries in Item 8) should repeat the applicable text to be consistent with the other items in the table.

1.5 It is also noted that the simple existence of a specific entry for portable medical electronic devices is enough to delete the words “(including medical devices)” from the text of the first two entries of Item 19).

1.6 In translating Item 19) to local language we realize a possible mistake in the wordings of letter c) of the first two entries because of confusion with the double negative in the sentence:

*c) each battery **must not exceed** the following:*

*— for lithium metal batteries, a lithium content of **not more than 2 grams**; or*

*— for lithium ion batteries, a Watt-hour rating of **not more than 100 Wh**;*

1.7 In this case we would like to ask English natives opinion about the expressions formed by the sentences of this item: “*must not exceed not more than 2 grams*” and “*must not exceed not more than 100 Wh*”.

1.8 Taking the opportunity we would also like to ask the panel participants opinions on the lack of limits for the number of batteries not exceeding 2 grams or 100 Wh.

## 2. ACTION BY THE DGP-WG

1.1 The DGP-WG is invited to:

- a) amend Items 8) and 19) of Table 8-1 as presented in the appendix to this working paper;
- b) provide comments about the wording of restriction c) in the first two entries of Item 19) of Table 8-1;
- c) provide comments about the lack of limits in the number of batteries not exceeding 2 grams or 100Wh and, if applicable, establish limits for them.

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APPENDIX

PROPOSED AMENDMENT TO PART 8 OF THE TECHNICAL INSTRUCTIONS

Part 8

PROVISIONS CONCERNING  
PASSENGERS AND CREW

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Table 8-1. Provisions for dangerous goods carried by passengers or crew

Items or articles	Location			Approval of the operator(s) is required	The pilot-in-command must be informed	Restrictions
	Checked baggage	Carry-on baggage	On the person			
Medical necessities						
...						
8) Portable medical electronic devices (automated external defibrillators (AED), nebulizer, continuous positive airway pressure (CPAP), etc.) containing lithium metal or lithium ion cells or batteries						
Portable medical electronic devices containing lithium metal cells or batteries not exceeding 2 grams or lithium ion cells or batteries not exceeding 100 Wh	Yes	Yes	Yes	No	No	<ul style="list-style-type: none"> <li>a) carried by passengers for medical use;</li> <li>b) each installed or spare battery must be of a type which meets the requirements of each test in the UN <i>Manual of Tests and Criteria</i>, Part III, subsection 38.3;</li> <li>c) spare batteries must be individually protected so as to prevent short circuits (by placement in original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch); and</li> <li>d) <del>no more than two spare batteries exceeding 2 grams lithium content for lithium metal or a watt hour rating exceeding 100 Wh for lithium ion may be carried by a passenger.</del></li> </ul>

Items or articles	Location			Approval of the operator(s) is required	The pilot-in-command must be informed	Restrictions
	Checked baggage	Carry-on baggage	On the person			
Spare batteries for portable medical electronic devices containing lithium metal cells or batteries not exceeding 2 grams or lithium ion cells or batteries not exceeding 100 Wh	No	Yes	Yes	No	No	<p>a) <u>carried by passengers for medical use;</u></p> <p>b) <u>each installed or spare battery must be of a type which meets the requirements of each test in the UN Manual of Tests and Criteria, Part III, subsection 38.3; and</u></p> <p>c) <u>spare batteries must be individually protected so as to prevent short circuits (by placement in original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch).</u></p>
Portable medical electronic devices containing lithium metal batteries exceeding 2 grams but not exceeding 8 grams or lithium ion batteries exceeding 100 Wh but not exceeding 160 Wh	Yes	Yes	Yes	Yes	No	<p>a) <u>carried by passengers for medical use;</u></p> <p>b) <u>each installed or spare battery must be of a type which meets the requirements of each test in the UN Manual of Tests and Criteria, Part III, subsection 38.3; and</u></p> <p>c) <u>spare batteries must be individually protected so as to prevent short circuits (by placement in original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch).</u></p>
Spare batteries for portable medical electronic devices containing lithium metal batteries exceeding 2 grams but not exceeding 8 grams or lithium ion batteries exceeding 100 Wh but not exceeding 160 Wh	No	Yes	Yes	Yes	No	<p>a) <u>carried by passengers for medical use;</u></p> <p>b) <u>each installed or spare battery must be of a type which meets the requirements of each test in the UN Manual of Tests and Criteria, Part III, subsection 38.3;</u></p> <p>c) <u>spare batteries must be individually protected so as to prevent short circuits (by placement in original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch); and</u></p> <p>d) <u>no more than two spare batteries exceeding 2 grams lithium content for lithium metal or a watt-hour rating exceeding 100 Wh for lithium ion may be carried</u></p>
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Items or articles	Location			Approval of the operator(s) is required	The pilot-in-command must be informed	Restrictions
	Checked baggage	Carry-on baggage	On the person			
Consumer articles						
• • •						
19) Portable electronic devices (such as watches, calculating machines, cameras, cellular phones, laptop computers, camcorders)						
≠ Portable electronic devices (including medical devices) containing lithium metal or lithium ion cells or batteries (articles containing lithium metal or lithium ion cells or batteries the primary purpose of which is to provide power to another device must be carried as spare batteries in accordance with the item below)	Yes	Yes	Yes	No	No	<p>a) carried by passengers or crew for personal use;</p> <p>b) should be carried as carry-on baggage;</p> <p>c) each battery must not exceed the following:</p> <ul style="list-style-type: none"> <li>— for lithium metal batteries, a lithium content of not more than 2 grams; or</li> <li>— for lithium ion batteries, a Watt-hour rating of not more than 100 Wh;</li> </ul> <p>d) if devices are carried in checked baggage, measures must be taken to prevent unintentional activation; and</p> <p>e) batteries and cells must be of a type which meets the requirements of each test in the UN <i>Manual of Tests and Criteria</i>, Part III, subsection 38.3.</p>
Spare batteries for portable electronic devices (including medical devices) containing lithium metal or lithium ion cells or batteries	No	Yes	Yes	No	No	<p>a) carried by passengers or crew for personal use;</p> <p>b) must be individually protected so as to prevent short circuits (by placement in original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch);</p> <p>c) each battery must not exceed the following:</p> <ul style="list-style-type: none"> <li>— for lithium metal batteries, a lithium content of not more than 2 grams; or</li> <li>— for lithium ion batteries, a Watt-hour rating of not more than 100 Wh; and</li> </ul> <p>d) batteries and cells must be of a type which meets the requirements of each test in the UN <i>Manual of Tests and Criteria</i>, Part III, subsection 38.3.</p>
Portable electronic devices containing lithium ion batteries exceeding a Watt-hour rating of 100 Wh but not exceeding 160 Wh	Yes	Yes	Yes	Yes	No	<p>a) carried by passengers or crew for personal use;</p> <p>b) should be carried as carry-on baggage; and</p> <p>c) batteries and cells must be of a type which meets the requirements of each test in the UN <i>Manual of Tests and Criteria</i>, Part III, subsection 38.3.</p>

<i>Items or articles</i>	<i>Location</i>			<i>Approval of the operator(s) is required</i>	<i>The pilot-in-command must be informed</i>	<i>Restrictions</i>
	<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
Spare batteries for portable electronic devices containing lithium ion batteries exceeding a Watt-hour rating of 100 Wh but not exceeding 160 Wh	No	Yes	Yes	Yes	No	a) carried by passengers or crew for personal use; b) no more than two individually protected spare batteries per person; c) must be individually protected so as to prevent short circuits (by placement in original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch); and d) batteries and cells must be of a type which meets the requirements of each test in the <i>UN Manual of Tests and Criteria</i> , Part III, subsection 38.3.
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