



**WORKING PAPER**

**DANGEROUS GOODS PANEL (DGP)**

**TWENTY-SECOND MEETING**

**Montréal, 5 to 16 October 2009**

**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 2011-2012 Edition**

**MEDICAL AID CONTAINING LITHIUM BATTERIES**

(Presented by M. Paquette)

**SUMMARY**

This paper proposes the addition of medical devices containing lithium batteries in Part 8 of the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284).

**Action by the DGP:** The DGP is invited to consider two different options to address the issue of lithium batteries in medical aids, as presented in the appendix.

**1. INTRODUCTION**

1.1 Part 8 of the Technical Instructions was re-organized in the 2009-2010 Edition of the Technical Instructions by listing the various dangerous goods under three categories (medical necessities, articles used in dressing or grooming and consumer articles). Paragraph 1;1.1.3.1 provides general exceptions to dangerous goods, including those to provide, during flight medical aid to a patient.

1.2 We recently encountered problems with passengers wishing to transport automated external defibrillators (AED), which have, as a power source, lithium batteries. The issue is that in the provisions of 1;1.1.3.1 a) there is a note stating: “*Note.— For dangerous goods that passengers are permitted to carry as medical aid, see 8;1.1.2.*”. With the reformatting of the list in Part 8 in three categories (medical necessities, articles used in dressing or grooming and consumer articles), lithium batteries do not appear in the category “medical necessities”.

1.3 Some may argue that the lithium battery exemption could apply to all three categories but since the exemption for aerosols is repeated in the three different categories (8;1.1.2 c), h) and k)) there is room for different interpretations.



**APPENDIX**  
**AMENDMENT TO THE TECHNICAL INSTRUCTIONS**

**OPTION 1**

**Part 1**

**GENERAL**

**Chapter 1**

**SCOPE AND APPLICABILITY**

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**1.1 GENERAL APPLICABILITY**

1.1.3 General exceptions

1.1.3.1 Except for 7;4.2, these Instructions do not apply to dangerous goods carried on an aircraft where the dangerous goods are:

a) to provide, during flight, medical aid to a patient when those dangerous goods:

- 1) have been placed on board with the approval of the operator; or
- 2) form part of the permanent equipment of the aircraft when it has been adapted for specialized use;

providing that:

- 1) gas cylinders have been manufactured specifically for the purpose of containing and transporting that particular gas;
- 2) equipment containing wet cell batteries is kept and, when necessary, secured in an upright position to prevent spillage of the electrolyte;

*Note.*— For dangerous goods that passengers are permitted to carry as medical aid, see 8;1.1.2.

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OPTION 2

Part 8

PROVISIONS CONCERNING  
PASSENGERS AND CREW

Chapter 1

PROVISIONS FOR DANGEROUS GOODS  
CARRIED BY PASSENGERS OR CREW

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1.1 DANGEROUS GOODS CARRIED BY PASSENGERS OR CREW

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1.1.2 Notwithstanding any additional restrictions which may be implemented by States in the interests of aviation security, except for the incident reporting provisions of 7.4.4, the provisions of these Instructions do not apply to the following when carried by passengers or crew members or in baggage that has been separated from its owner during transit (e.g. lost baggage or improperly routed baggage):

*Medical necessities*

- g) one small medical or clinical thermometer which contains mercury, for personal use, when in its protective case;

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*Editorial Note.*— New h) below is similar to current subparagraph q)

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h) with the approval of the operator(s), portable **medical** electronic devices (Automated External Defibrillators (AED), Nebulizer, Continuous Positive Airway Pressure (CPAP), etc.) containing lithium or lithium ion cells or batteries when carried by passengers for personal use, which should be carried as carry-on baggage. 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 carried in carry-on baggage only. In addition, each installed or spare battery must not exceed the following:

- for lithium metal or lithium alloy 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.

With the approval of the operator, lithium ion batteries exceeding a watt-hour rating of 100 Wh but not exceeding 160 Wh may be carried as spare batteries in carry-on baggage or in equipment in either checked or carry-on baggage. No more than two individually protected spare batteries per person may be carried.

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*Renumber* subsequent paragraphs accordingly

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