



WORKING PAPER

**DANGEROUS GOODS PANEL (DGP)
MEETING OF THE WORKING GROUP OF THE WHOLE**

Montreal 15 – 19 April 2013

**Agenda Item 5: Review of provisions for the transport of lithium batteries including:
5.2: Simplification and clarification of provisions**

CONSIDERATION OF WHAT IS “EQUIPMENT”

(Presented by D. Brennan)

SUMMARY

This working paper seeks some clarification of what constitutes “equipment” for the purposes of Packing Instruction 967 and Packing Instruction 970 for devices whose sole purpose is to provide power to an electronic device.

Action by the DGP-WG is in paragraph 2.

1. INTRODUCTION

1.1 Packing Instructions 967 and 970 set out provisions for the packing of lithium ion batteries contained in equipment and lithium metal batteries contained in equipment respectively. These packing instructions offer some relaxations in the types of packagings permitted compared to the other packing instructions for lithium batteries on the basis that the “equipment” affords protection for the batteries.

1.2 Equally the provisions for dangerous goods permitted in passenger and crew baggage specify that spare lithium batteries must be in carry-on baggage, whereas lithium batteries contained in a portable electronic device may be in checked baggage.

1.3 There exist however, articles containing lithium batteries, which may be rechargeable or non-rechargeable, that are designed for the sole purpose of being an external power source to a piece of electronic equipment; see Figure 1 for an example of these types of articles.



Figure 1. An external power source to a piece of electronic equipment

1.4 It is believed that these articles should be treated as “lithium batteries” and not as “lithium batteries contained in equipment”. When consigned as cargo they therefore should be assigned to UN 3090 or UN 3480 and meet the applicable provisions of Packing Instruction 968 or Packing Instruction 965 respectively and when carried in passenger or crew baggage must be treated as spare lithium batteries and limited to carry-on baggage.

2. ACTION BY THE DGP-WG

2.1 The DGP-WG is invited to consider amendment to the lithium battery packing instructions and to the provisions for passengers and crew as shown in the appendices to this working paper.

APPENDIX A

PROPOSED AMENDMENT TO PART 4 OF THE TECHNICAL INSTRUCTIONS

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Part 4
PACKING INSTRUCTIONS

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Chapter 11

CLASS 9 — MISCELLANEOUS DANGEROUS GOODS

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Packing Instruction 967

Passenger and cargo aircraft for UN 3481 (contained in equipment) only

1. Introduction

This entry applies to lithium ion or lithium polymer batteries contained in equipment. Articles containing lithium ion cells or batteries that have the sole purpose of providing power to a piece of equipment such as a mobile phone are considered to be "batteries" and must be assigned to UN 3480 and packed according to the applicable provisions of Packing Instruction 965.

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Packing Instruction 970

Passenger and cargo aircraft for UN 3091 (contained in equipment) only

1. Introduction

This entry applies to lithium metal or lithium alloy batteries contained in equipment. Articles containing lithium metal cells or batteries that have the sole purpose of providing power to a piece of equipment such as a mobile phone are considered to be "batteries" and must be assigned to UN 3090 and be packed according to the applicable provisions of Packing Instruction 968.

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APPENDIX B

PROPOSED AMENDMENT TO PART 8 OF THE TECHNICAL INSTRUCTIONS

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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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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			
...						
19) Portable electronic devices (such as watches, calculating machines, cameras, cellular phones, laptop computers, camcorders)						
Portable electronic devices containing lithium metal or lithium ion cells or batteries. Articles containing lithium metal or lithium ion cells or batteries that have the sole purpose of providing power to a device such as a mobile phone are considered to be "spare batteries" and must be carried as per the item below.	Yes	Yes	Yes	No	No	<ul style="list-style-type: none"> a) carried by passengers or crew for personal use; b) should be carried as carry-on baggage; c) each battery must not exceed the following: <ul style="list-style-type: none"> — 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. d) if devices are carried in checked baggage, measures must be taken to prevent unintentional activation; and e) 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

Spare batteries for portable electronic 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"> — 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. <p>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</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 <i>UN Manual of Tests and Criteria</i>, Part III, subsection 38.3.</p>