



WORKING PAPER

DANGEROUS GOODS PANEL (DGP)

TWENTY-FIFTH MEETING

Montréal, 19 to 30 October 2015

Agenda Item 5: Development of a comprehensive strategy to mitigate risks associated with the transport of lithium batteries including development of performance-based packaging standards and efforts to facilitate compliance

**REVIEW OF THE MEANING OF “EQUIPMENT”
FOR THE PURPOSES OF LITHIUM BATTERIES PACKED WITH AND CONTAINED IN
EQUIPMENT**

(Presented by D. Brennan)

SUMMARY

This working paper proposes a revision to the definition of “equipment” as currently included in Section I of Packing Instructions 966 and 969. It also proposes to add a definition for “equipment” into Packing Instructions 967 and 970 to ensure a consistent application.

Action by the DGP: The DGP is invited to revise Packing Instructions 966, 967, 969 and 970 as shown in the appendix to this working paper.

1. INTRODUCTION

1.1 Packing Instructions 966 and 969, which apply to lithium batteries packed with equipment, currently include a definition of what constitutes “equipment” for the purposes of these packing instructions.

1.2 There though continues to be discussion around what constitutes “equipment” for the purposes of determining whether an article should be considered as a “battery” and therefore assigned to UN 3090 or UN 3480, or if it is equipment and assigned to UN 3091 or UN 3481. There is also an issue around whether an article can be deemed to be “equipment” such that lithium batteries can be packed with the article and then assigned to UN 3091 or UN 3481.

1.3 On this last item there have been a number of approaches by consignors to ship lithium ion batteries with the battery charger for the lithium ion batteries as UN 348 — **Lithium ion batteries packed with equipment.**

1.4 Notwithstanding that the lithium ion batteries connect to the battery charger, it is believed that for the purposes of the provisions of Packing Instruction 966 that the battery charger is not “equipment” in the sense that the lithium ion batteries do not power the charger.

1.5 Here it is believed that the wording set out in Packing Instruction 966 is not sufficiently clear to prevent misunderstanding or misapplication on just what can be considered equipment. The wording in Packing Instruction 966 currently reads as follows: “For the purpose of this packing instruction, “equipment” means apparatus requiring the lithium ion batteries with which it is packed for its operation”.

1.6 Logically the battery charger does not “require” the lithium ion battery to operate; however, it could be considered that the charger only operates when the lithium battery is in place in the charger.

1.7 On that basis it is suggested that the wording in Packing Instruction 966 and Packing Instruction 969 could be improved to make it clear that to be considered “equipment” and therefore assigned to UN 3481 or UN 3091 that the article must be powered by the lithium batteries with which they are being packed.

1.8 The other issue is that currently the definition of equipment is only contained in Section I of Packing Instruction 966 and Packing Instruction 969, and for consistency it is believed that the definition of equipment should appear at the top of each packing instruction as part of the introductory paragraph.

1.9 To ensure that the definition of equipment is applied consistently it is also believed that the same definition should be included into Packing Instructions 967 and 970.

1.10 For the information of the DGP, a proposal to this affect was submitted in an informal (INF) paper to the 47th session of the UN Subcommittee. The INF was well received by the Subcommittee and IATA was invited to bring this back to the Subcommittee in a formal paper for the 48th session. This has been done, although the 48th session of the Subcommittee will not take place until after DGP/25.

2. ACTION BY THE DGP

2.1 The DGP is invited to revise Packing Instructions 966, 967, 969 and 970 as shown in the appendix to this working paper.

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APPENDIX

PROPOSED AMENDMENT TO PART 4 OF THE TECHNICAL INSTRUCTIONS

Part 4

PACKING INSTRUCTIONS

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Chapter 11

CLASS 9 — MISCELLANEOUS DANGEROUS GOODS

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Packing Instruction 966

Passenger and cargo aircraft for UN 3481 (packed with equipment) only

1. Introduction

This entry applies to lithium ion or lithium polymer batteries packed with equipment.

Section I of this packing instruction applies to lithium ion and lithium polymer cells and batteries that are assigned to Class 9. Certain lithium ion and lithium polymer cells and batteries offered for transport and meeting the requirements of Section II of this packing instruction, subject to paragraph 2 below, are not subject to other additional requirements of these Instructions.

Note.— A new paragraph clarifying what is meant by “single cell battery” is proposed in DGP/25-WP/14 for the sake of harmonization with the UN Model Regulations. If the proposed text below is agreed by DGP/25, it should be included after the single cell battery text.

For the purpose of this packing instruction, “equipment” means apparatus for which the lithium cells or batteries will provide electrical power for its operation.

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I. SECTION I

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I.2 Additional requirements

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— The number of cells or batteries in each package must not exceed the appropriate number for the equipment’s operation, plus two spares.

~~— For the purpose of this packing instruction, “equipment” means apparatus requiring the lithium ion batteries with which it is packed for its operation.~~

— Batteries manufactured after 31 December 2011 must be marked with the Watt-hour rating on the outside case.

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II. SECTION II

With the exception of Part 1:2.3 (Transport of dangerous goods by post), 7:4.4 (Reporting of dangerous goods accidents and incidents), 8:1.1 (Dangerous goods carried by passengers or crew) and paragraphs 1 and 2 of this packing instruction, lithium ion cells and batteries packed with equipment offered for transport are not subject to other additional requirements of these Instructions if they meet the requirements of this section.

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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.

Section I of this packing instruction applies to lithium ion and lithium polymer cells and batteries that are assigned to Class 9. Certain lithium ion and lithium polymer cells and batteries offered for transport and meeting the requirements of Section II of this packing instruction, subject to paragraph 2 below, are not subject to other additional requirements of these Instructions.

Note.— A new paragraph clarifying what is meant by "single cell battery" is proposed in DGP/25-WP/14 for the sake of harmonization with the UN Model Regulations. If the proposed text below is agreed by DGP/25, it should be included after the single cell battery text.

For the purpose of this packing instruction, "equipment" means apparatus for which the lithium cells or batteries will provide electrical power for its operation.

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I. SECTION I

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II. SECTION II

With the exception of Part 1;2.3 (Transport of dangerous goods by post), 7;4.4 (Reporting of dangerous goods accidents and incidents), 8;1.1 (Dangerous goods carried by passengers or crew) and paragraphs 1 and 2 of this packing instruction, lithium ion cells and batteries contained in equipment offered for transport are not subject to other additional requirements of these Instructions if they meet the requirements of this section.

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Packing Instruction 969

Passenger and cargo aircraft for UN 3091 (packed with equipment) only

1. Introduction

This entry applies to lithium metal or lithium alloy batteries packed with equipment.

Section I of this packing instruction applies to lithium metal and lithium alloy cells and batteries that are assigned to Class 9. Certain lithium metal and lithium alloy cells and batteries offered for transport and meeting the requirements of Section II of this packing instruction, subject to paragraph 2 below, are not subject to other additional requirements of these Instructions.

Note.— A new paragraph clarifying what is meant by “single cell battery” is proposed in DGP/25-WP/14 for the sake of harmonization with the UN Model Regulations. If the proposed text below is agreed by DGP/25, it should be included after the single cell battery text.

For the purpose of this packing instruction, “equipment” means apparatus for which the lithium cells or batteries will provide electrical power for its operation.

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I. SECTION I

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I.2 Additional requirements

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- The number of cells or batteries in each package must not exceed the appropriate number for the equipment's operation, plus two spares.
- ~~— For the purpose of this packing instruction, “equipment” means apparatus requiring the lithium batteries with which it is packed for its operation.~~
- For lithium metal cells and batteries prepared for transport on passenger aircraft as Class 9:
 - cells and batteries offered for transport on passenger aircraft must be packed in intermediate or outer rigid metal packaging surrounded by cushioning material that is non-combustible and non-conductive and placed inside an outer packaging.

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II. SECTION II

With the exception of Part 1;2.3 (Transport of dangerous goods by post), 7;4.4 (Reporting of dangerous goods accidents and incidents), 8;1.1 (Dangerous goods carried by passengers or crew) and paragraphs **1 and 2** of this packing instruction, lithium metal cells and batteries packed with equipment offered for transport are not subject to other additional requirements of these Instructions if they meet the requirements of this section.

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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.

Section I of this packing instruction applies to lithium metal and lithium alloy cells and batteries that are assigned to Class 9. Certain lithium metal and lithium alloy cells and batteries offered for transport and meeting the requirements of Section II of this packing instruction, subject to paragraph 2 below, are not subject to other additional requirements of these Instructions.

Note.— A new paragraph clarifying what is meant by “single cell battery” is proposed in DGP/25-WP/14 for the sake of harmonization with the UN Model Regulations. If the proposed text below is agreed by DGP/25, it should be included after the single cell battery text.

For the purpose of this packing instruction, “equipment” means apparatus for which the lithium cells or batteries will provide electrical power for its operation.

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II. SECTION II

With the exception of Part 1;2.3 (Transport of dangerous goods by post), 7;4.4 (Reporting of dangerous goods accidents and incidents), 8;1.1 (Dangerous goods carried by passengers or crew) and paragraphs 1 and 2 of this packing instruction, lithium metal cells and batteries contained in equipment offered for transport are not subject to other additional requirements of these Instructions if they meet the requirements of this section.

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