



WORKING PAPER

**DANGEROUS GOODS PANEL (DGP)
WORKING GROUP MEETING (DGP-WG/17)**

Montreal, 24 to 28 April 2017

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 2019-2020 Edition

2.4: Part 4 — Packing Instructions

PACKING INSTRUCTION 952

(Presented by D. Brennan)

SUMMARY

This working paper proposes some revisions to Packing Instruction 952 to address protection against inadvertent operation for small vehicles packed in an outer packaging. It is also proposed to remove some redundant text and to add a note to address where a lithium battery is removed from a vehicle.

Action by the DGP-WG: The DGP-WG is invited to revise Packing Instruction 952 as shown in the appendix to this working paper.

1. INTRODUCTION

1.1 At the twenty-fifth meeting of the Dangerous Goods Panel (DGP/25, Montreal, 19 to 30 October 2015) text was adopted into Packing Instruction 952 to address small, mainly lithium battery powered vehicles to require the use of an outer packaging. What was not addressed in the change to Packing Instruction 952 at that time was the inclusion of some text to require that these small battery-powered vehicles must be protected against inadvertent activation.

1.2 Since DGP/25 there has also been some discussion around the carriage of battery powered vehicles such as e-bikes where the shipper removes the lithium ion battery from the e-bike and then packs the battery in a separate packaging which is then packed with the bike in the same outer packaging for transport. In this case the classification would change from being UN 3171, battery-powered vehicle to now become UN 3481, lithium ion batteries packed with equipment. It is believed that this should be specifically addressed in Packing Instruction 952.

1.3 In developing the text for this working paper it was identified that the text related to the battery being secured in the vehicle that is in subparagraph 2 for lithium batteries is already stated in the introductory paragraph under the heading “batteries” and as such is redundant and should be deleted.

2. **ACTION BY THE DGP-WG**

2.1 The DGP-WG is invited to revise Packing Instruction 952 as shown in the appendix to this working paper.

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 952

Passenger and cargo aircraft for UN 3171 only
(See Packing Instruction 220 for flammable gas-powered engines and machinery, Packing Instruction 378 for flammable liquid-powered engines and machinery, Packing Instruction 950 for flammable liquid-powered vehicles, Packing Instruction 951 for flammable gas-powered vehicles or Packing Instruction 972 for engines or machinery containing only environmentally hazardous fuels)

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ADDITIONAL PACKING REQUIREMENTS

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Where vehicles could possibly be handled in other than an upright position, the vehicle must be secured in a strong, rigid outer packaging of the type below. The vehicle must be secured by means capable of restraining the vehicle in the outer packaging to prevent any movement during transport which would change the orientation or cause the vehicle to be damaged. Vehicles must be equipped with an effective means of preventing accidental activation.

Battery-powered vehicles, machines or equipment must meet the following requirements:

Batteries

All batteries must be installed and securely fastened in the battery holder of the vehicle, machine or equipment and must be protected in such a manner so as to prevent damage and short circuits. In addition:

- 1) if spillable batteries are installed, and it is possible for the vehicle, machine or equipment to be handled in such a way that batteries would not remain in their intended orientation, they must be removed and packed according to Packing Instruction 492 or 870 as applicable;
- 2) if lithium batteries are installed in a vehicle, they must meet the provisions of subparagraphs a) to e) of Part 2;9.3.1, unless otherwise approved by the appropriate authority of the State of Origin, ~~must be securely fastened in the vehicle and must be protected in such a manner so as to prevent damage and short circuits~~ Where the lithium ion battery is removed from the vehicle and is packed separate from the vehicle in the same outer packaging, the package must be classified as UN 3481— Lithium ion batteries packed with equipment, and the provisions of Packing Instruction 966 apply; and
- 3) if sodium batteries are installed they must conform to the requirements of Special Provision A94.

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