



DANGEROUS GOODS PANEL (DGP)

TWENTY-SIXTH MEETING

Montréal, 16 to 27 October 2017

Agenda Item 6: Resolution, where possible, of the non-recurrent work items identified by the Air Navigation Commission or the panel:

6.3: Mitigating risks posed by the carriage of lithium batteries by air (*Job card DGP.003.01*)

POWER BANKS

(Presented by the Secretary)

SUMMARY

This working paper invites the panel to reconsider an amendment to the provisions for portable electronic devices in Table 8-1 of the Technical Instructions proposed at DGP-WG/17 which was developed to address emerging risks associated with the carriage of power banks by passengers and crew (see paragraph 3.5.3.7 of DGP/26-WP/3). The amendment was agreed by the working group but later withdrawn after reports from some operators that the amendment would preclude crew from using power banks to power devices used during flight because of the connection between the operator exceptions in Part 1;2.2.1 d) and the passenger provisions for PEDs in Table 8-1. The ANC subsequently requested that the panel consider how best to address the risks posed while taking the potential impact on passengers and operators into account.

This working paper also invites the panel to consider whether referring to passenger provisions in the operator exceptions of Part 1;2.2 is appropriate or whether including operator exceptions in the Technical Instructions is the most appropriate place for them.

Action by the DGP: The DGP is invited to establish a working group to:

- a) consider how the risks posed by power banks can be mitigated, taking into account the feedback from the ANC presented in this paper; and
- b) review the current exceptions for the operator contained in Part 1;2.2 and consider whether connecting them to the passenger provisions is appropriate or whether the Technical Instructions is the most appropriate place for them.

1. INTRODUCTION

1.1 The 2017 working group meeting of the Dangerous Goods Panel (DGP-WG/17, Montréal, 24 to 28 April 2017) considered an amendment to Table 8-1 of the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) to address emerging risks associated with the carriage of power banks by passengers and crew (see paragraph 3.5.3.7 of the DGP-WG/17 Report contained in DGP/26-WP/3). This was evidenced by a number of incidents involving power banks being reported in the cabin, and a recognition that the manufacturing and use of them was on the rise.

1.2 It had been noted that power banks were often considered as portable electronic devices (PEDs) despite the fact that the Technical Instructions required lithium cells or batteries whose primary purpose was to provide power to another device to be carried as spare batteries. Since power banks did not offer the same level of protection that was provided to batteries contained in PEDs, the amendment proposed required power banks to be subject to the same additional restrictions as spare batteries. The amendment also proposed prohibiting spare batteries and power banks from being recharged or from being electrically connected or providing power to an external device as a method of risk mitigation. While there was strong support for the amendment in principle, some suggested it would be difficult to enforce and that it was too prescriptive and would therefore not capture emerging technological devices powered by batteries. However, given the risks identified, it was agreed. Recognizing that the amendments did enhance safety, it was proposed to incorporate them in the 2017-2018 Edition of the Technical Instructions by way of an addendum. The Air Navigation Commission supported the amendment and its early implementation and agreed to recommend it to the Council. It did, however, raise a number of questions on the interpretation of the proposed provisions. It also stressed the need for data to support the need for such an amendment.

1.3 Subsequent to the Commission's but prior to the Council's review, consequential difficulties for some operators should the amendment be adopted were reported. These operators were using power banks as a secondary or emergency power supply for electronic flight bags (EFBs) and other devices used during flight through the use of the operator exception in Part 1;2.2.1 d). It was suggested that because this exception required the batteries to meet the provisions of the entry for PEDs in Table 8-1, the operator would no longer be permitted to use the power banks during flight should the amendment be adopted. Not all panel members believed that the amendment would preclude operators from continuing to use power banks on the aircraft during flight, but the fact that there were different interpretations of the provisions made it clear that clarity was needed. The ANC decided that the amendment should be withdrawn to allow time for the panel to re-consider how best to address the risks posed. It stressed the need for thorough consideration of the issue while taking the potential impact on passengers and operators into account. The Commission also asked that the panel return with meaningful criteria that passengers and staff could realistically apply when carrying PEDs, recognizing the impracticality of expecting passengers to know whether batteries met the requirements of each test in the *UN Manual of Tests and Criteria* Part III, 38.3. The Commission specifically asked the panel to consider:

- a) clarification of language used with respect to exceptions for dangerous goods of the operator in Part 1;2.2 to avoid misinterpretation and unintended consequences;
- b) effects of power bank provisions on operators providing them for use by passengers during flight;
- c) manufacturing requirements and feasibility of requiring batteries carried by passengers or crew to have been subject to UN testing requirements; and

- d) development of meaningful guidance for States, operational staff and passengers on criteria for carriage of devices on board an aircraft.

1.4 The Commission further emphasized that the panel should consider that the devices be:

- a) professionally manufactured, preferably indicating a trademark and model number;
- b) in good repair and free from damage;
- c) used in accordance with manufacturer's instructions when carried on the aircraft;
- d) switched off completely if carried but not in use (not hibernation); and
- e) meaningfully labelled with information on watt and amp hours.

1.5 Some panel members had questioned whether referring to passenger provisions in the operator exceptions or whether including operator exceptions in the Technical Instructions at all was appropriate. It was suggested a more appropriate place for these exceptions might be Annex 6 — *Operation of Aircraft*. The multidisciplinary Cargo Safety Group, which was tasked with addressing the safety impact of requiring PEDs to be carried in checked baggage (see DGP/26-IP/1), included a recommendation in the report of its second meeting (Paris, 19 to 21 July 2017) for the Airworthiness Panel (AIRP), Flight Operations Panel (FLTOSP) and the DGP to review the issue of operators placing charged PEDs in the cabin for passenger use, utilizing the provisions of the Technical Instructions rather than seeking airworthiness certification approval.

2. ACTION BY THE DGP

2.1 The DGP is invited to establish a working group to:

- a) consider how the risks posed by power banks can be mitigated, taking into account the feedback from the ANC presented in this paper;
- b) review the current exceptions for the operator contained in Part 1;2.2 and determine whether the Technical Instructions is the most appropriate place for them.

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