



WORKING PAPER

**DANGEROUS GOODS PANEL (DGP)
WORKING GROUP MEETING (DGP-WG/26)**

Centurion, South Africa, 26 to 30 October 2026

- Agenda Item 2: Managing air-specific safety risks and identifying anomalies (REC-A-DGS-2029)**
2.2: Develop proposals, if necessary, for amendments to the Technical Instructions for the *Safe Transport of Dangerous Goods by Air* (Doc 9284) for incorporation in the 2029-2030 Edition

DAMAGED PERSONAL ELECTRONIC DEVICES (PEDs) AND LITHIUM BATTERIES

(Presented by D. Sylvestre)

SUMMARY

Following a recent incident involving an electronic cigarette (vape) which started to overheat onboard, we obtained a statement from the passengers involved, stating: “that the vape started to malfunction in the terminal, and the passenger brought it on the plane where it started to overheat.”

While doing the analysis, we believe that a layer of defence or safety barrier could be added to the present model to prevent passengers bringing damaged PED and lithium batteries onboard.

Action by the DGP-WG is in paragraph 2.

1. INTRODUCTION

1.1 The following are some of the signs of potential failure in a Personal Electronic Device (PED) or in lithium batteries:

- a) **Physical Changes:** Deformation, bulging, or cracks. Swelling indicating a buildup of gas inside.
- b) **Abnormal Heat:** If the battery becomes hot (not just warm) to the touch during use or charging, it could indicate an internal short circuit or cell failure.
- c) **Unusual Smells:** A chemical or burning odor coming from the battery may indicate internal failure.

1.2 British psychologist James Reason's "Swiss Cheese" Model of risk management and accident causation framework demonstrate that various system's defence layers allow the mitigation or elimination of some of the risks. In the model, each slice of cheese, represents a layer of defense or safety barrier in an organization (such as training, technology, or regulations). We already have multiple layers of protection in place, but "incidents" are still occurring on a weekly basis.

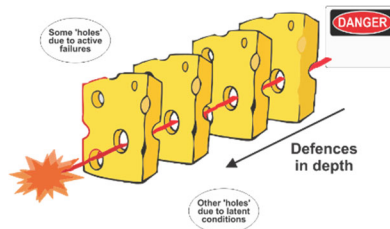


Figure 1. Reason J. Managing the Risks of Organizational Accidents. Aldershot, UK: Ashgate; 1997

1.3 By looking at this model, and the present requirements, we believe that an additional layer of defence can be developed. In the present Technical Instructions, other than for Special Provision A183 related to waste cells and batteries and cells or batteries being shipped for recycling or disposal, being forbidden from air transport, there is no guidance on personal electronic devices (PEDs) or on lithium batteries that shows signs of potential failure.

1.4 What we are proposing is adding a supplemental layer of protection by recommending that:

- a) Add the following text to Table 8-1 (Provisions concerning passengers and crew): Personal electronic devices (PEDs) or lithium batteries showing signs of potential failure such as physical changes or damage, emanating abnormal heat or producing unusual smell, are not permitted onboard aircrafts.
- b) Add a recommendation to Part 7;5.1 (Information to passengers) for the operator or the operator's handling agent and the airport operator to promote information to passengers that personal electronic devices (PEDs) or lithium batteries showing signs of potential failure such as physical changes or damage, emanating abnormal heat or producing unusual smell, are not permitted onboard aircraft.

1.5 We believe that such changes would:

- a) Increase awareness of the potential hazard to passengers; and
- b) Assist operators and ground handling agents in having a clear reference to explain to passengers, why devices showing signs of potential failure are not allowed on aircraft.

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

2.1 The DGP-WG is invited to:

- a) add a new restriction for item 1 of Table 8-1 (Lithium batteries (including power banks) and portable electronic devices), stating that they are not permitted on aircraft if they show signs of potential failure, as presented in the appendix to this working paper; and

Note.— The restriction should be added to the beginning of the list, as the remaining restrictions would not be relevant once refused.

- b) amend Part 7;5.1 (Information to passengers) as presented in the appendix to this working paper.

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APPENDIX

PROPOSED AMENDMENTS TO THE TECHNICAL INSTRUCTIONS

Part 8

PROVISIONS CONCERNING PASSENGERS AND CREW

Chapter 1

PROVISIONS FOR DANGEROUS GOODS CARRIED BY PASSENGERS AND CREW

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1.1 DANGEROUS GOODS CARRIED BY PASSENGERS AND CREW

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Table 8-1. Provisions for dangerous goods carried by passengers and crew

Dangerous Goods	Location		Approval of the operator(s) is required	Restrictions
	Checked baggage	Carry-on baggage		
Batteries				
1) Lithium batteries (including power banks) and portable electronic devices	Yes (except h), i) and j))	Yes	(see c) and d))	a) each battery 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; <u>b) personal electronic devices or lithium batteries showing signs of potential failure such as physical changes or damage, emanating abnormal heat or producing an unusual smell, are not permitted onboard aircraft.</u> ...

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Part 7

OPERATOR'S RESPONSIBILITIES

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Chapter 5

PROVISIONS CONCERNING PASSENGERS AND CREW

5.1 INFORMATION TO PASSENGERS

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5.1.2 An operator or the operator's handling agent and the airport operator must ensure that information on the types of dangerous goods which passengers are forbidden to transport aboard an aircraft is communicated effectively to them. This information must be presented at each of the places at an airport where tickets are issued, boarding passes are issued, passenger baggage is dropped off and aircraft boarding areas are maintained, and at any other location where passengers are issued boarding passes and/or checked baggage is accepted. This information must include visual examples of dangerous goods forbidden from transport aboard an aircraft. It is recommended that the information also contain information indicating that Personal Electronic Device (PED) or lithium batteries showing signs of potential failure such as physical changes or damage, emanating abnormal heat or producing unusual smell, are not permitted onboard aircraft.

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