DISCUSSION PAPER

Aviation Security Implications related to Power Banks in Hold Baggage

Background

On 27 March 2026, the ICAO Council approved an amendment to the *Technical Instructions for the Safe Transport of Dangerous Goods* (Doc 9284) relating to Power Banks. As a result, ICAO Electronic Bulletin EB2026/10 on 07 April 2026[1]). In addition, ICAO published Addendum No 1 to Doc 9284-AN/905 2025-2026 Edition on 27 March 2026. The EB is accessible to Contracting States via the ICAO portal, who may elect to share with their regulated and/or affected operators.

As a result, IATA has since published guidance documents for Operators including Changes Regarding Power Banks (31 March 2026), and for Passengers Travelling with Lithium Batteries (31 March 2026). These new technical instructions and guidance materials are intended to address underlying hazard lithium battery incidents on aircraft such as thermal runaway events (overheating, smoke, fire) and more specifically with power banks carried by passengers for personal use during flight.

Consequently, the safety of flight risks associated with undeclared power banks carried in hold baggage are now unacceptable and further mitigation is required, including the need to gain support from safety and security regulators for globally adopted operational procedures when undeclared power banks are detected during security processes.

From an aviation security perspective, the detection of Dangerous Goods (DGs) in Hold Baggage (HB) for example, whether declared or undeclared, has been the subject of ongoing discussions between the ICAO Dangerous Goods Panel and the Aviation Security (AVSEC) Panel for some time.

Since 1992, the ICAO Annex 17 definition of screening[2] has included the identification and/or detection of dangerous devices, articles or substances. A note[3] to this definition has been added in 2006 to highlight the link between security and safety regarding dangerous articles or substances classified as DGs, which must be declared and transported safely in accordance with the Technical Instructions contained in ICAO Doc 9284 and IATA Dangerous Goods Regulations (DGR).

In 2019, the ICAO Security Manual (Doc 8973, restricted) introduced Attachment D to Appendix 12, covering the Dangerous Goods Awareness Training programme for screeners of passenger baggage, cargo and mail to be included into National Civil Aviation Security Training Programmes (now called National Training Policies).

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1 *Please register to the SeMS Aviation Community through aviationsecurity@iata.org for accessing all documents hyperlinked. Please visit the public IATA Aviation Security Page, and the IATA Position Papers*

2 Annex 17 definition for *Screening. The application of technical or other means which are intended to identify and/or detect weapons, explosives or other dangerous devices, articles or substances which may be used to commit an act of unlawful interference.*

3 *Note.— Certain dangerous articles or substances are classified as dangerous goods by Annex 18 and the associated* Technical Instructions for the Safe Transport of Dangerous Goods by Air *(Doc 9284) and must be transported in accordance with those instructions. In addition, the* Aviation Security Manual *(Doc 8973 — Restricted) provides a list of prohibited items that must never be carried in the cabin of an aircraft.*

As outlined in the Attachment D to Appendix 12 of Doc 8973, while the Technical Instructions provide the training requirements for all personnel engaged in the transport of DGs by air, including screeners for passenger baggage, cargo and mail, one of the learning objectives focuses on what the ICAO guidance defines as "recognition of DGs of high consequence[4]".

High Consequence Dangerous Goods (HCDGs) are defined by the United Nations and integrated into all modal transport standards such as ICAO for air, IMDG (International Maritime Dangerous Goods) for sea and ADR (European Agreement on International Carriage of DGs by roads) for roads.

In the civil aviation context, HCDGs have the potential to be misused for a deliberate attack, resulting in serious consequences such as mass casualties or mass destruction. Finally, the ICAO guidance states that screeners should also know the fundamental differences between "high consequence DGs" (or HCDG) and ICAO Annex 17 define "high-risk cargo".

At the time of drafting, the situation regarding aviation security screening capabilities in the context of DG detection may be summarized as follows:

1- All security screeners involved in passenger, staff, crew, hold baggage, cargo and mail screening operations are required to be trained irrespective of whether the aircraft and/or airport operator accepts/transports classes of DG according to IATA Dangerous Goods Regulations (DGR) Chapter 1.5.1, as well as in ICAO Doc 9284.

2- Security screeners are required to be certified according to Annex 17 Standard 3.4.4 and therefore creating the expectation that they can identify and/or detect potential DGs of high consequence when reviewing screening images on X-Ray for example.

3- Current security screening equipment including Explosive Detection System (EDS) deployed globally are designed, calibrated and certified for the detection of explosives and improvised explosive devices (IEDs) and not broadly known to be used for detection of DG items, including power banks.

4- There are security screening equipment providers who offer dedicated detection algorithms screening technologies that can alarm on items other than explosives. In this case potentially including items that contain different types of power banks. However, the operational impacts of automatically generated alarms, including higher level of false alarms and potential distraction of security screeners from the primary security requirement of explosives, need to be further explored, and comprehensively tested and/or piloted. In addition, it must be noted that technology already allows to share automated DG detection results with personnel other that security officers. The impact on airport operations has also been studied by EASA in 2022-2024[5].

5- Any ancillary changes to primary security measures should, in the first instance, be risk-based, voluntary in nature, and subject to consultation with industry. Their effectiveness should be reviewed periodically, and they should only be mandated where an actual reduction in safety risk for aircraft and airport operators is demonstrated. Where such measures are ultimately mandated, they should be funded through mechanisms other than a direct increase in operating costs borne by customers.

6- Furthermore, the further development and update of a specific to civil aviation HCDGs list is essential to support all industry stakeholders in assessing future capability requirements and implementing iterative improvements of existing technologies.

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[4] *Dangerous goods of high consequence are mentioned in the paragraph 2 d) in the Attachment D to Appendix 12 of the ICAO Security Manual (Doc 8973, Restricted)*

[5] *EASA Detection of Lithium Batteries using Security Screening Equipment (12/2022-10/2024)*

7- It is also important to reiterate that the current ICAO Annex 17 relating to screening of staff (Standard 4.2.6), passengers and cabin bags (Standard 4.4.2) and hold baggage (Standard 4.5.2) remain exclusively focused on the detection of explosives and IEDs.

Operational Considerations

Passengers are informed during booking, check-in and baggage acceptance that power banks should not be carried in checked baggage. However, these warnings may not always be noticed or understood, especially during automated self-service drop processes.

As a result, power banks may still be placed in hold baggage unintentionally.

Prevention before baggage acceptance remains the most effective mitigation measure.

Greater emphasis should therefore be placed on:

- ⇨ Passenger awareness campaigns, involving airlines, airports, authorities and relevant organizations, ideally in different languages;
- ⇨ Check-in reminders;
- ⇨ Self-baggage drop notifications;
- ⇨ Gate announcements and signage;
- ⇨ Clear visual messaging, including websites, apps, etc.; and
- ⇨ Potential legal/criminal consequences of failing to declare dangerous goods in baggage.

Different scenarios could occur:

(1) Power banks may be identified during standard hold baggage screening by security screeners; or

(2) Passengers may voluntarily declare the presence of power banks after boarding the aircraft; or

(3) Passengers may declare the presence of power banks when the aircraft is already in the air.

Each situation may create operational challenges for airlines, airports and ground handling service providers, especially where baggage retrieval is required after baggage loading.

Implementation of any retrieval procedures should remain subject to:

- National regulations;
- Airport procedures;
- Operational feasibility;
- Operator requirements; and
- Respective operational risk assessments conducted by operators and authorities.

Proposed Operational Procedures

The following procedures are proposed to address these operational challenges:

(1) Power Banks identified during Standard Hold Baggage Screening Process

1. The power bank should be removed from the baggage, secured, and safely disposed of or otherwise processed in accordance with national regulations and local standard operating procedures.
2. The airline concerned should be informed to help prevent scenario (2).
3. The passenger should also be informed that the undeclared power bank has been disposed of.
4. Where permitted by local airport procedures, aircraft operator procedures, and national regulations, the power bank may be returned to the passenger for carriage in the cabin without additional cabin baggage screening, provided it has been confirmed by the screener that no potential cabin prohibited items are concealed within the power bank.

(2) Power Banks Declared After Passenger Boarding (when the aircraft is still on the ground)

An Operational Safety and Security Risk Assessment should be conducted to determine whether power banks that were not detected through standard hold baggage screening procedures should be retrieved from hold baggage. Where operational risk assessments conducted by operators, local procedures and national regulations authorize the retrieval of power banks and their delivery to the passenger for carriage in the cabin, the following procedures are proposed:

1. The passenger should provide hold baggage tag details.
2. Where operationally feasible, the airline or ground service provider may retrieve the hold baggage.
3. The hold baggage should be made available in a secure and controlled area identified by the operator or airport authority.
4. Where operationally feasible and necessary, only the passenger should open the hold baggage.
5. When this is not feasible, an airline or airport representative may open the hold baggage to remove the power bank, provided this is permitted under applicable local and national security procedures.
6. No items other than the power bank should be removed from or added to the hold baggage.
7. The power bank may then be subjected to applicable security procedures.
8. Personnel should conduct only a basic visual check for obvious signs of tampering, including:
    a. Damages such as scratch marks on screws or on the front or rear housing of the power bank;
    b. Unreasonable or disproportionate weight or balance, or any unusual odor;
    c. Signs of modification, or components that do not match most of the parts used;
    d. Overheating, leakage, swollen, or any other obvious indication of modification.

(3) Power Banks Declared After the Aircraft is in the Air

1. The airline should conduct a Safety risk assessment and take the most appropriate actions.

Summary

The safe carriage of lithium batteries and power banks remains primarily a dangerous goods and safety matter. Improved passenger awareness, together with preventive measures applied before baggage acceptance, remains the most effective means of reducing the operational disruptions and safety risks they present in hold and cabin baggage.