



Republic of the Philippines  
**CIVIL AVIATION AUTHORITY OF THE PHILIPPINES**

**ADVISORY CIRCULAR NO: 18-005**

**TO : ALL CONCERNED**

**SUBJECT : GUIDELINES FOR THE SAFE TRANSPORT OF PORTABLE ELECTRONIC DEVICES (PEDs) POWERED BY LI-BATT FOR AIR TRANSPORT**

**DATE : 07 MARCH 2025**

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**SECTION 1 PURPOSE**

- 1.1.** This Advisory Circular (AC) provides guidance to aviation companies, including both Dangerous Goods (DG) and Non-Dangerous Goods (Non-DG) carriers, on the proper handling, packaging, and risk mitigation of Portable Electronic Devices (PEDs) in air transportation. This is in compliance with Philippine Civil Aviation Regulations (PCAR) Part 18, ensuring the safe transport of these batteries and preventing fire hazards during flight operations.

**SECTION 2 APPLICABILITY**

- 2.1** This AC applies to:
- All Air Operators handling lithium-ion batteries, including DG and Non-DG carriers.
  - Airport Security Personnel and Handling Agents responsible for baggage and cargo screening.
  - Passengers and Crew Members carrying electronic devices powered by lithium batteries, non-spillable batteries, nickel-metal hydride batteries and dry batteries.

**SECTION 3 BACKGROUND**

- 3.1** Recent incidents of in-flight fires caused by lithium-ion batteries highlight the importance of stringent safety measures in handling these energy storage devices. Damaged, defective, or recalled (DDR) lithium batteries pose a heightened risk, including thermal runaway, fire, and explosion. Operators shall adhere to strict handling, storage, and transport regulations to prevent such hazards.

**SECTION 4 REGULATORY REQUIREMENTS**

**4.1 COMPLIANCE WITH PCAR PART 18**

- Lithium batteries are classified as dangerous goods and shall comply with applicable regulations for carriage by air.

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- Prohibited in Checked Baggage: Spare/loose batteries, shall not be placed in checked baggage. They shall be transported only in carry-on baggage.
- Packaging Standards: All batteries shall be securely packaged to prevent short circuits, overheating, or damage. Battery terminals shall be insulated to avoid accidental contact.
- DDR Batteries: Batteries identified as damaged, defective, or recalled **SHALL NOT BE TRANSPORTED ON A PASSENGER AIRCRAFT.**
- DDR Batteries: Batteries identified as damaged, defective, or recalled may be transported by Cargo Aircraft Only (CAO) unless they are packaged and shipped in accordance with special provisions outlined in safety guidelines.

## 4.2 PASSENGER EDUCATION AND AWARENESS

To further mitigate safety risks, operators shall enforce additional measures on top of the existing PCAR and ICAO TI requirements:

- PEDs shall not be used at any time during the flight, except under Operators-controlled conditions.
- Charging PEDs using the aircraft's power supply or external battery packs is strictly prohibited to prevent overheating incidents.
- Passengers carrying PEDs with damaged, defective, or recalled lithium-ion batteries shall be denied boarding.
- Crew shall conduct random inspections to verify compliance with PED handling policies.

## 4.3 BATTERY CAPACITY LIMITS & COMPLIANCE

A. Operators shall strictly enforce the following watt-hour (Wh) capacity limits for lithium-ion batteries carried by passengers:

- **Up to 100Wh** – Operator shall establish maximum allowable spare batteries.
- **100Wh to 160Wh** – Permitted **only with prior Operators approval**, with a maximum of two (2) spare batteries units per passenger. **POWER BANK** is considered as spare batteries and Additional screening measures shall be implemented.
- **Above 160Wh** – **Strictly prohibited onboard** under any circumstances.

B. Operators shall strictly enforce the following s lithium content for lithium metal batteries carried by passengers:

- **Up to 2g of lithium content per cell battery** – Allowed in carry-on baggage without airline approval.
- **2g to 8g of lithium content per battery** – Permitted **only with prior airline approval**, with a maximum of **two (2) spare batteries per passenger for PMED only.**
- **Above 8g of lithium content** – **Strictly prohibited onboard**



**Note1: PORTABLE ELECTRONIC DEVICES** – Each installed or spare lithium battery must be of a type proven to meet the requirements of each test in the UN Manual of Tests and Criteria, Part III, Sub-section 38.3, and each spare lithium battery must be individually protected so as to prevent short circuits (e.g., by placement in original retail packaging, by otherwise insulating terminals by taping over exposed terminals, or placing each battery in a separate plastic bag or protective pouch). In addition, each installed or spare lithium battery:

**Note 2: FOR THE USE OF MEDICAL DEVICES ONLY** – For a lithium metal battery, the lithium content must not exceed 2 grams. With the approval of the operator, portable medical electronic devices (e.g., automated external defibrillators (AED), nebulizer, continuous positive airway pressure (CPAP), etc.) may contain lithium metal batteries exceeding 2 grams, but not exceeding 8 grams. With the approval of the operator, no more than two lithium metal batteries each exceeding 2 grams, but not exceeding 8 grams, may be carried as spare batteries for portable medical electronic devices in carry-on baggage and must be carried with the portable medical electronic device the spare batteries are intended to operate;

- Above 2 grams MUST be transported as cargo with a Shipper for Dangerous Goods

*Note: Refer to ICAO TI table 8-1 and/or IATA DGR table 2.3a. and IATA Battery Guidance Document for further information*

#### 4.4 PASSENGER INFORMATION AND AWARENESS

All Operators are required to actively inform passengers about PEDs safety measures through:

- **Pre-flight communications** via booking confirmations, airline websites, and mobile applications.
- **Airport signage** at check-in counters, security checkpoints, and boarding gates.
- **In-flight safety briefings** that include proper storage and use of lithium-ion-powered devices.

#### 4.5 WATT-HOUR RATING REQUIREMENT

To ensure compliance, passengers shall check the watt-hour (Wh) rating of their batteries before traveling.

- The Watt-hour rating (Wh) is calculated by multiplying the rated capacity in ampere-hours (Ah) by the nominal voltage (V).
- All lithium-ion batteries shall have the Wh rating clearly marked on the exterior of the battery case.
- Operators shall implement verification procedures to prevent the transport of unmarked or non-compliant batteries.

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- The operator has the right to reject the acceptance in case the information is not adequate.

## **SECTION 5 HANDLING OF DAMAGED, DEFECTIVE, OR RECALLED (DDR) LITHIUM BATTERIES**

**5.1** CAAP offers guidelines determining what constitutes a DDR battery and what you should look for. Criteria include:

- The condition of external and internal short circuit protection, voltage, or isolation measures.
- The state of the safety features for the lithium cell or battery.
- Damage to any internal safety components, such as the battery management system.
- Acute hazards, such as gas, fire, or noticeable leaking electrolyte.
- Lithium batteries showing signs of physical or mechanical damage, such as:
  - a. Swelling, relative to the same battery in its original state
  - b. Discoloration of the battery casing
  - c. Smell or corrosion
  - d. Loose or damaged wires
  - e. Known conditions of use or misuse

**5.2** DDR lithium batteries pose an increased fire risk and shall be identified before transportation AND ARE TOTALLY FORBIDDEN FOR AIR TRANSPORT.

**5.3** Packaging and Transport Of DDR Lithium Batteries

- DDR lithium batteries shall be packed in non-metallic, insulated containers.
- Each battery shall be enclosed in individual protective packaging.
- Batteries shall be clearly labeled as "Damaged/Defective Lithium Battery" with appropriate hazard markings.
- DDR lithium batteries shall not be transported on passenger aircraft.

## **SECTION 6 INCIDENT REPORTING AND RESPONSE**

**6.1** Operators shall report any incidents involving Portable Electronic Devices to the Civil Aviation Authority of the Philippines (CAAP) as soon as possible but not later than 72 hours. Incident reports should include:

- Details of the battery involved (type, capacity, suspected cause of failure).
- Actions taken by the flight crew or ground personnel.
- Preventive measures adopted to mitigate future incidents.

## **SECTION 7 LITHIUM BATTERY TRAINING REQUIREMENT**

**7.1** All Dangerous Goods employees must receive training (Initial and Recurrent Training) that includes general awareness/familiarization training, function-specific training on

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Transport of Lithium Metal, Lithium Ion and Sodium Ion Batteries as an independent course with a Separate Certificate of Completion.

**7.2** The provisions of the DGR with respect to lithium and sodium ion batteries may also be found in the IATA Battery Shipping Regulations (BSR) 12th Edition. In addition to the content from the DGR, the BSR also has additional classification flowcharts and detailed packing and documentation examples for these batteries.

**7.3** Reference to “sodium ion battery” in this document, is to be taken as those that meet the testing and classification criteria for UN 3551, Sodium Ion Battery with organic electrolyte set out in the Manual of Tests and Criteria, part III, sub-section 38.3.

**7.4** All topic areas covered in the modules include:

- IATA DGR Section 4 - Identification (Blue Page)
- Shipper's Declaration For Dangerous Goods (DGD) and Airwaybill (AWB)
- Marking and Labeling
- Placarding
- Packing Instruction / Packaging
- Mode of Transportation Requirements
- Security Requirements

## **SECTION 8 ENFORCEMENT AND COMPLIANCE**

**8.1** Failure to comply with the requirements of this advisory circular may result in penalties as prescribed under PCAR. Operators shall conduct periodic audits and risk assessments to ensure compliance with safety guidelines.

## **SECTION 9 CELL/BATTERY REGULATORY REFERENCES**

**9.1** This document is based on the provisions set out in the 2025-2026 Edition of the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air (Technical Instructions) and the 66th Edition (2025) of the IATA Dangerous Goods Regulations (DGR) as shown below:

**9.2** References

- Philippine Civil Aviation Regulations (PCAR) Part 18 – The Safe Transport of Dangerous Goods by Air.
- ICAO Technical Instructions (ICAO TI) – Standards for the transport of lithium batteries.
- IATA Dangerous Goods Regulations (IATA DGR) – International best practices for battery transport.

## 9.2 References

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- ICAO Technical Instructions (ICAO TI) – Standards for the transport of lithium batteries.
- IATA Dangerous Goods Regulations (IATA DGR) – International best practices for battery transport.


## SECTION 10 CONTACT INFORMATION

**10.1** For inquiries regarding this Advisory Circular, operators may contact:

**Civil Aviation Authority of the Philippines (CAAP) Flight Standards Inspectorate Service (FSIS)**

- Trunk line **(02) 8246 4988**
  - o Local **2234** and **2235**
- Email:
  - o [fsis@caap.gov.ph](mailto:fsis@caap.gov.ph)
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*This Advisory Circular is effective immediately upon issuance.*

  
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