



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 22005

EXPIRATION DATE: 2027-07-31

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Caterpillar Inc.
Irving, TX
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of prototype lithium ion batteries that have not completed all U.N. tests and exceed 35 kg net weight by cargo-only aircraft. This special permit provides no relief from the Hazardous Materials Regulations (HMR) or the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in the development of this special permit only considered the hazards and risks associated with the transportation in commerce.
 - c. No party status will be granted to this special permit.
 - d. This special permit serves as an approval under Special Provision A88 of the ICAO TI, and as a "Competent Authority Approval" as defined under 49 CFR § 107.1.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.101 Hazardous Materials Table Column (9B) in that lithium batteries may have a mass exceeding 35 kg per package; and § 173.185(a) in that prototype lithium batteries need not be of a type proven to meet the 38.3 criteria in the UN Manual of Tests and Criteria, as specified herein.
5. BASIS: This special permit is based on the application of Caterpillar, Inc. dated April 28, 2025, submitted in accordance with § 107.105 and the public proceeding thereon.

6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Lithium ion batteries <i>including lithium ion polymer batteries*</i>	9	UN3480	N/A

*Only prototype and low production lithium ion batteries as described in Caterpillar's request submitted on April 28, 2025 and on file with the Office of Hazardous Materials Safety (OHMS) may be offered for transportation under the terms of this special permit. ("Low production" is defined as a production run of not more than 100 cells or batteries annually of a particular type).

7. SAFETY CONTROL MEASURES:

a. PACKAGING:

- (1) Prescribed packagings are as described in Caterpillar's application dated April 28, 2025, on file with OHMS.
- (2) Each battery must be equipped with a strong, impact-resistant outer casing.
- (3) Each battery must be placed in a foam cushioned UN 4D outer packaging tested and certified to the Packing Group I performance level; and packed as described in the application on file.
- (4) Packaging must comply with the requirements of Packing Instructions 910 of the supplement to the ICAO TI for cargo aircraft transportation.
- (5) Waste lithium battery assemblies and lithium battery assemblies being shipped for recycling or disposal are forbidden from air transport, and lithium battery assemblies must not be packed in the same outer packaging with substances and articles of Class 1 (explosives) other than Division 1.4S, Division 2.1 (flammable gases), Class 3 (flammable liquids), Division 4.1 (flammable solids), or Division 5.1 (oxidizers).
- (6) No more than one battery is allowed per package.
- (7) The net weight of a battery in a single package must not exceed the weight shown in the table in paragraph 7.c.(3).
- (8) The total energy rating in a single package may not exceed the energy rating shown in the table in paragraph 7.c.(3).

(9) Cells and batteries must be protected against short-circuiting and be equipped with a means of preventing dangerous reverse current flow when cells or modules are connected in parallel.

b. TESTING: All cells must be of a type that have passed all the requires tests as specified in the UN Manual of Tests and Criteria, 7th Revised Edition.

c. OPERATIONAL CONTROLS:

(1) The state of charge for lithium ion batteries must be not more than 30% when offered for aircraft transportation.

(2) Lithium ion cells or batteries that are leaking or liable to rapidly disassemble, dangerously react produce a flame or a dangerous evolution of heat or a dangerous emission of toxic, corrosive, or flammable gases, or vapors under normal conditions of transport may not be transported under this special permit.

(3) Authorized batteries are in the following as described in Caterpillar's application dated April 28, 2025, and on file with OHMS:

Battery Model	Number of Cells	Cell Manufacture	kWh	Mass (kg/pounds)
2.4 793 3 string	2,376	Gotion	32.3	3,901/8,600
2.4 793 2 string	1,584	Gotion	28.7	2,540/5,600
2.5 Mobile Module	58	EVE	32	233/512
2.4 Module	36	Gotion	4.6	47/103
Cairo Flex Battery	672	LG Energy Solution, LTD	21.7	75/165
2.5 Rail single module	39	EVE	28.7	245/539
2.5 EB 57SP1 Mobile module	57	EVE	41.95	232/511
2.5 Marine Module	39	EVE	28.89	219/482

d. **MARKING:** Each package must be marked with the special permit number “DOT-SP 22005” in accordance with § 172.301(c).

8. **SPECIAL PROVISIONS:**

a. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modification or change is made to the package or its contents and it is reoffered for transportation in conformance with this special permit and the HMR.

b. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

c. This special permit in no way affects the need to obtain any required authorizations from other agencies of the United States Government or from the competent authorities of countries of origin, transit, destination, and State of the Operator.

d. The grantee must maintain a record of all activity conducted under the authority granted in this special permit and upon request make this information available to DOT representatives or enforcement officials. The record must contain a listing and number of shipments made to include:

(1) Dates of shipment; and

(2) Description of each type of shipment.

9. **MODES OF TRANSPORTATION AUTHORIZED:** Cargo-only aircraft.

10. **MODAL REQUIREMENTS:** A current copy of this special permit must be carried aboard each cargo-only aircraft used to transport packages covered by this special permit. The shipper must furnish a copy of this special permit to the air carrier before or at the time the shipment is tendered.

11. **COMPLIANCE:** Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.

o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.

o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) — “The Hazardous Materials Safety and Security Reauthorization Act of 2005” (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term “exemption” to “special permit” and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for William Quade

Acting Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-13, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at <https://www.phmsa.dot.gov/approvals-and-permits/hazmat/special-permits-search>. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: Steve H/KH