

March 01, 2021



U.S. Department  
of Transportation

East Building, PHH-30  
1200 New Jersey Avenue S.E.  
Washington, D.C. 20590

**Pipeline and Hazardous  
Materials Safety Administration**

DOT-SP 21056  
(FIRST REVISION)

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: (See individual authorization letter)
2. PURPOSE AND LIMITATION:
  - a. This special permit authorizes the transportation in commerce of prototype and low production lithium ion batteries in plywood crates. 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. Unless otherwise stated herein, this special permit consists of the special permit authorization letter issued to the grantee together with this document.
  - d. This special permit serves as an approval under Special Provision A88 and State Variation US 3 of the ICAO TI and as a "Competent Authority Approval" as defined under 49 CFR § 107.1. and does not waive the requirements of any user of this special permit to seek approval for the transport of the subject batteries herein, from other Government Agencies, States of Destination, or transit.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180 and the ICAO TI.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.101 Hazardous Materials Table Column (9B) in that the net weight of the battery may not exceed 35 kg; § 173.185(a)(1) in that each

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lithium battery must be of the type proven to meet the criteria in Part III, subsection 38.3 of the UN Manual of Tests and Criteria; and § 173.185(b)(3)(i) in that batteries must be placed in non-metallic inner packagings, except as herein.

5. BASIS: This special permit is based on the application of Cummins Inc. received May 15, 2020, submitted in accordance with § 107.105 and the public proceeding thereon and additional information dated December 14, 2020.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Lithium ion batteries	9	UN3480	N/A

7. SAFETY CONTROL MEASURES:

- a. OPERATIONAL CONTROLS:

(1) Only prototype and low production lithium ion batteries with cell configurations as described in Cummins Inc.'s application dated May 15, 2020 and on file with the Office of Hazardous Materials Safety Approvals and Permits Division (OHMSAPD) may be offered for transportation under the terms of this special permit. ("Low production" is defined as a production run of no more than 100 cells or batteries annually of a particular type.)

(2) The batteries are of five (5) configurations:

(i) Goodwood Battery Packs, consisting of Nissan 56.3 Ah cells, with a 75 kWh rating maximum.

(ii) Monza I (Truck) Sub-Packs, consisting of Samsung 49.5 Ah cells, with an 18 kWh rating maximum.

(iii) Monza I Battery Packs, consisting of 2 Monza I Sub-Packs, with a 36 kWh rating maximum.

(iv) Monza II (Bus) Sub-Packs, consisting of Samsung 60.6 Ah cells, with a 63 kWh rating maximum.

(v) Monza II Battery Packs, consisting of 2 Monza II Sub-Packs, with a 126 kWh rating maximum.

(3) All batteries (including Sub-Packs and Battery Packs) must be offered for transportation at a state of charge not exceeding 30 percent.

(4) The batteries must be equipped with an effective means of preventing dangerous reverse current flow for the batteries that contain cells connected in parallel.

(5) Cells and batteries must be protected against short circuiting.

b. TESTING:

(1) Nissan 56.3 Ah cells contained in the Goodwood Battery Packs and both Samsung 49.5 Ah and 60.6 Ah cells contained in the Monza I and Monza II Battery Sub-Packs and Battery Packs must be of a type proven to have passed all required tests as specified in the "UN Manual of Tests and Criteria" 6<sup>th</sup> Revised Edition.

(2) Each Battery Sub-Pack or Battery Pack must be equipped with a battery management system verified to prevent short circuits, overcharge or over-discharge between the modules.

c. PACKAGING REQUIREMENTS:

(1) The lithium Battery Sub-Packs and Battery Packs must have strong, impact-resistant outer casings;

(2) The Goodwood Battery Packs must be packaged in one of two packaging options;

(i) A 50D plywood crate meeting Packing Group II performance standard. The 50D plywood crate serves as a strong outer packaging; or

(ii) A non-UN specification plywood crate.

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(3) The Monza I and II Battery Sub-Packs and Battery Packs must be packaged in non-UN specification plywood crates.

(4) The Battery Sub-Packs and Battery Packs must be secured within the crate in such a way that they will not become loose during normal conditions of transport.

(5) The net weight of batteries within a single package may not exceed the following:

(i) Greenwood Battery Pack: 610 kg (1,345 pounds).

(ii) Monza I Sub-Pack: 140 kg (309 pounds).

(iii) Monza I Battery Pack: 280 kg (617 pounds).

(iv) Monza II Sub-Pack: 360 kg (794 pounds).

(v) Monza II Battery Pack: 720 kg (1,588 pounds).

d. MARKING REQUIREMENTS: Each package, and overpack if used, prepared under the provisions of this special permit must be plainly marked with the special permit number: DOT-SP 21056.

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 and it is reoffered for transportation in conformance with this special permit, the HMR, and the ICAO TI.

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

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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, and destination.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, and cargo-only aircraft.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each aircraft or motor vehicle 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

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"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 Schoonover  
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-30, 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 [http://hazmat.dot.gov/sp\\_app/special\\_permits/spec\\_perm\\_index.htm](http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm). Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: Steve H/Kenny Herzog