

November 10, 2020



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 21014

EXPIRATION DATE: 2022-10-31

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Volvo Cars of North America LLC
Mahwah, NJ
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of lithium ion batteries in excess of 35 kg 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 A99 of the ICAO TI as a "Competent Authority Approval" as defined under 49 CFR §107.1.
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 lithium ion batteries may not exceed 35 kg, except as specified herein.

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5. BASIS: This special permit is based on the application of Volvo Cars North America LLC dated March 9, 2020, 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	Identi- fication Number	Packing Group
Lithium ion batteries <i>including lithium ion polymer batteries</i>	9	UN3480	N/A

7. SAFETY CONTROL MEASURES:

a. SAFETY CONTROLS:

- (1) Each battery rated at a nominal energy capacity of 11.6 kWh is composed of up of six battery modules each consisting of 16 cells with all 96 cells in series connection.
- (2) Cells and batteries must be protected against short-circuiting.
- (3) Battery terminals must be protected to prevent damage from the weight of other material that may be superimposed during transportation.
- (4) All of the batteries must be offered at a state of charge not greater than 30% for transportation aboard cargo aircraft.

b. TESTING REQUIREMENTS:

- (1) Each cell and battery module must be of a type that has successfully passed the required tests in accordance with the UN Manual of Tests and Criteria, 6th Revised Edition.

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(2) The battery must be equipped with a battery management system which has been verified as preventing overcharge, short-circuits, and over discharge between the modules.

c. PACKAGING:

(1) Inner Packaging: Each battery must be individually packaged in a non-metallic inner packaging that completely encloses the battery and separates the battery from contact with conductive materials in the packaging.

(2) Outer Packaging: The outer packaging must be UN specification 4D plywood boxes mounted on a pallet and meet the Packing Group I performance level.

(3) Packaging must comply with other requirements in ICAO TI Packing Instruction 965, Section IA.

(4) The net weight of the battery within each package must not exceed 115 kg.

(5) The maximum gross weight of a package may not exceed 250 kg.

d. MARKING REQUIREMENTS: Each package, and overpack if used, prepared under the provisions of this approval must be plainly marked with the special permit number "DOT-SP 21014".

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.

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

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10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each 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

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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. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: Steve H/Kenny Herzog