

August 16, 2019



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 20476
(FOURTH 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 lithium ion batteries exceeding 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. This special permit serves as an approval under Special Provision A99 of the ICAO TI and as a "Competent Authority Approval" as defined under 49 CFR § 107.1.
 - d. Unless otherwise stated herein, this special permit consists of the special permit authorization letter issued to the grantee together with this document.
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 the net weight of batteries per package exceeds 35 kg and § 173.185(b) in that alternative packaging is authorized.

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5. BASIS: This special permit is based on the application of A123 Systems LLC dated May 22, 2019 and submitted in accordance with § 107.109 and additional information dated August 12, 2019.
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

*Only lithium ion batteries identified as Volvo Bus Battery Packs each meeting the requirements in this special permit and containing lithium ion cells and modules of tested type designated as 14 Ah Prismatic Cells and Modules for PVP000114, respectively.

7. SAFETY CONTROL MEASURES:

a. Safety Controls:

(1) All battery modules are made of 45.54 Wh prismatic cells in electrical configurations as specified in the May 25, 2017 A123 Systems, LLC application on file with the Office of Hazardous Materials Safety Approvals and Permits Division (OHMSAPD).

(2) The Volvo Bus Battery Pack is constructed from the battery modules in which eight (8) modules are electrically connected into a Battery Pack of a nominal Wh rating of 8.9 kWh in configurations as specified in the application on file with the OHMSAPD.

(3) Cells, battery modules, and battery packs must be protected against short-circuiting.

(4) All of the battery packs must be offered for transportation at a state of charge no greater than 30%.

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(5) Only production lithium ion battery packs may be offered for transportation under the terms of this special permit.

b. Testing:

(1) Each cell type within each battery pack must have passed the required tests in accordance with the UN Manual of Tests and Criteria 5th Revised Edition, Amendment 2.

(2) Each type battery module within each battery pack must have passed the required tests in accordance with the UN Manual of Tests and Criteria, 6th Revised Edition.

(3) Battery packs (each of which has a Wh rating exceeding 6,200 Wh) need not be tested in accordance with the UN Manual of Tests and Criteria, 6th Revised Edition if the battery pack is equipped with a battery management system that has been verified as preventing overcharge, short circuits and over-discharge between the battery modules.

c. Packaging Requirements:

(1) Each battery pack having a mass of 12 kg or greater must have a strong, impact-resistant outer casing;

(2) The battery pack must be packed in strong outer packagings (custom designed fully enclosed plywood crate) and seated on a wooden pallet;

(3) The net weight of a package may not exceed 264 kg (the gross weight of the battery pack in a packaging may not exceed 330 kg); and

(4) Only one battery pack may be packed within a packaging.

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 20476.

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, 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.

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.

d. The special permit grantee must maintain the following record and upon request and make this information available to DOT representatives or enforcement officials. The record to be maintained is as follows:

(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 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.

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- 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

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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: Andrew Eckenrode