



**U.S. Department
of Transportation
Federal Aviation
Administration**

SAFO

Safety Alert for Operators

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Flight Standards Service
Washington, DC

http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo

A SAFO contains important safety information and may include recommended action. Besides the specific action recommended in a SAFO, an alternative action may be as effective in addressing the safety issue named in the SAFO. The contents of this document do not have the force and effect of law and are not meant to bind the public in any way. This document is intended only to provide clarity to the public regarding existing requirements under the law or agency policies.

Subject: Carriage of Battery Powered Mobility Aids (BPMA) on aircraft.

Purpose: This SAFO serves to inform all Title 14 of the Code of Federal Regulations (14 CFR) Operators, including Part 121 Air Carriers, about the importance of properly loading and restraining BPMAs in the forward and aft lower cargo compartments.

Background: A part 121 air carrier aircraft recently incurred aircraft cargo compartment floor damage that might have occurred from improper BPMA carriage (no shoring and no restraint). The operator requested and received instructions for loading and restraint of BPMAs from the Type Certificate (TC) holder. The Federal Aviation Administration (FAA) is concerned that BPMAs are being transported without proper shoring or restraints.

Discussion: Battery Powered Mobility Aids are manually operated power-driven devices designed primarily for persons with disabilities to aid in mobility. They include battery-powered wheelchairs or scooters, with some weighing over 400 pounds and are powered by spillable or non-spillable batteries. BPMAs typically have tires with a surface contact patch of 1-3 square inches at each tire/wheel depending on size and inflation. The concentrated loads at the contact patch of a 300-pound BPMA can be as high as 75 pounds per square inch. The maximum concentrated floor load limit in cargo compartments of some aircraft can be less than 75 pounds per square inch., thereby creating the risk of exceeding the maximum suggested concentrated floor load limit without shoring.

Cargo shifting can also damage cargo compartments. It is suggested that BPMAs should be secured against movement in the cargo compartment by use of straps, tie-downs or other restraint devices.

Examples of good practice for securing mobility aids include:

- Use tie-down points.
- Keep the BPMA in an upright position where possible.
- Secure the mobility aid using the base frame – BASE IS BEST.
- Secure removable and fragile parts in the cabin before going into the cargo area.
- Avoid unnecessary tilting of the mobility aid.

- Disengage freewheel mode.
- Disconnect/isolate power.
- Ensure adequate clearance when loading.
- Avoid over-tightening tie-down straps or other securing devices.
- Load last when possible.

As a reminder, 14 CFR § 382.127(a) provides in part that whenever baggage compartment size and aircraft airworthiness considerations do not prohibit doing so, a carrier must accept a passenger's battery-powered wheelchair or other similar mobility device.

Recommended Action: Air Carriers that transport BPMAs should be aware of their respective Original Equipment Manufacturer (OEM) instructions on how to properly load and secure BPMAs in aircraft cargo compartments.

Contact: Questions or comments regarding this SAFO should be directed to the Aircraft Evaluation Division's Air Carrier Branch at 9-avs-afs-100@faa.gov.