

**Applicability: All AOC Holders**

**TRANSPORT OF BATTERY-POWERED WHEELCHAIRS**

**1 Introduction**

- 1.1 The CAA has recently been notified of three incidents involving battery-powered mobility aids, one of which resulted in a fire. The purpose of this FODCOM is to remind operators of the conditions under which such items may be carried.

**2 Background**

- 2.1 On 7 September 2008 at Manchester Airport, ground staff unloading baggage from the forward hold of a Boeing 757 noticed blue sparks coming from a battery-powered wheelchair. The chair was removed from the aircraft and placed on a vehicle, where it immediately burst into flames and was destroyed. It was established that the two batteries fitted to the chair were of the non-spillable type and an investigation into why the chair caught fire is in progress.
- 2.2 The two other incidents involving battery-powered wheelchairs which were recently reported to the CAA were as follows:
- During unloading from a Boeing 747 at New York JFK Airport, acrid smoke emanated from a wheelchair, apparently almost overcoming the baggage handlers. An item of baggage was found to have been lying across the wheelchair's control stick, causing the wheelchair to power-up.
  - During unloading from a Boeing 757 at Stansted, a wheelchair was found to be powered up, although no heat or smoke was generated.

**3 Issue**

- 3.1 The International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air provides for the carriage by passengers of battery-powered mobility aids, in checked baggage, subject to the approval of the operator. By far the most common battery used on mobility aids is the non-spillable type, most of which have a gel electrolyte.
- 3.2 During air transport, such batteries must be securely attached to the mobility aid and protected from:
- a) **inadvertent operation** - there are a variety of ways a wheelchair can be protected, and in the first instance the passenger should be asked how this can be achieved; generally this will involve certain actions being taken with the joystick, but may also be as simple as removing a key or turning a deactivation switch. If the latter, care must be taken during loading to ensure that the switch cannot be activated by adjacent baggage.  
NOTE: Application of the brake is not sufficient; unless the motor is rendered inoperative the motor can still be activated and overheat;
  - b) **short circuit of the battery** – adequate protection may already be afforded by the battery being contained in a battery box fitted to the mobility aid; and
  - c) **damage** – including to associated wiring, by the movement of baggage, mail, stores or other cargo.
- 3.3 The Technical Instructions do not require disconnection of non-spillable batteries, since this is often very difficult to do, and if not done properly can increase the risk of a fire. Consequently, only if deactivation, as in 3.2 (a) above, cannot be achieved should disconnection be considered. If this is

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done it must be ensured that the battery terminals are protected against short circuit, e.g. by the effective insulation of exposed terminals.

- 3.4 Spillable batteries are subject to further restrictions, which are detailed in Part 8 Chapter 1 of the Technical Instructions.

## 4 Information Required

- 4.1 Operators should review their ticket booking process to require any passenger who intends to travel with a mobility aid to declare the fact when making the booking and provide the following information:

- a) the type and number of batteries fitted to the mobility aid; and
- b) what measures are required to prevent inadvertent operation. If disconnection is the only way that this can be achieved, details of how this is done should be requested from the passenger.

In turn, the operator should ensure that this information is provided to all relevant staff (e.g. check-in, loading, etc.)

## 5 Recommendation

- 5.1 **Operators should review their ticket booking process to require any passenger who intends to travel with a mobility aid to declare the fact when making the booking and provide appropriate details of that mobility aid.**

## 6 Queries

- 6.1 Any queries as a result of this FODCOM should be addressed to Head of Flight Operations Policy Department at the following e-mail address: [FOP.Admin@caa.co.uk](mailto:FOP.Admin@caa.co.uk).

19 November 2008

***Recipients of new FODCOMs are asked to ensure that these are copied to their 'in house' or contracted maintenance organisation, to relevant outside contractors, and to all members of their staff who could have an interest in the information or who need to take appropriate action in response to this Communication.***

**Review DGO November 2009**