

## The Carriage by Passengers of Batteries and Battery-Powered Equipment

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It has become a way of life for air passengers to travel with a wide variety of electronic devices, e.g. laptop computers, mobile phones and MP3 players, and when installed in such devices the batteries which power them are unlikely to create a safety problem. However, over the last few years, a number of fires have occurred at airports around the world caused by batteries because they had not been appropriately treated. In general, the incidents fall into one of two types:

### 1 Loose batteries being short circuited

The following incidents illustrate the type of incident which can be caused by loose batteries:

- In May 2006, a spare laptop computer battery which had been stored in the laptop carrying case caught fire whilst the aircraft was waiting to depart. Cabin crew threw the burning case from the aircraft onto the ramp, where the fire was extinguished by the fire service.
- In February 2007, a fire occurred in an overhead locker in the cabin of an aircraft which had just taken off from New York JFK Airport. Prompt action by cabin crew ensured the fire was extinguished without it resulting in any injuries to passengers or crew. The aircraft returned to New York for an emergency landing. It is believed that the fire was caused by a battery, being carried by a cameraman, which had short circuited and overheated.

Batteries can be short circuited if their terminals (marked + and -) are bridged by a metallic object, e.g. a coin or jewellery. A few simple measures can be taken to ensure that spare batteries can be carried safely:

- i) Keep spare batteries in original retail packaging. Original packaging (e.g. cardboard/plastic blister packs) is manufactured for the purposes of transporting the batteries and will ensure the terminals are protected.
- ii) If original packaging is not available, insulate the terminals so they cannot come into contact with other metallic items. This can be achieved by packing each battery in its own protective case, resealable plastic bag (e.g. sturdy freezer or sandwich bag) or package, or by covering the terminals with insulation tape. It is suggested that both measures be taken for batteries with protruding or sharp terminals, such as those found inside smoke detectors.
- iii) Pack spare batteries in carry-on baggage. If an incident occurs involving a battery, it is easier to detect and deal with if carriage is in the cabin, as opposed to the hold.
- iv) Do not carry counterfeit batteries. In some parts of the world, fake batteries are produced which although appearing to be the same as the battery they are imitating, will not be fitted with necessary safety features. Batteries should only be purchased from reputable sources.
- v) Do not carry batteries which have been recalled for safety reasons. From time to time, manufacturers recall batteries because of safety concerns. These should not be carried by passengers.

## 2 Inadvertent activation

The following picture illustrates what can happen if a battery-powered portable drill is not protected against inadvertent activation.



In this incident, the drill was activated, but the chuck could not rotate and so it overheated, resulting in a fire. Devices which can generate this type of heat if inadvertently activated must be carried in protective cases and, if possible, have trigger locks engaged.

More detailed information about the types and quantities of batteries that can be carried is available in the [Travelling with Spare Batteries](#) webpage.

For further information, please contact the Dangerous Goods Office at [dgo@caa.co.uk](mailto:dgo@caa.co.uk).