

---

## Subject: Personal Electronic Device (PED) Overheat Containment Kits and Gloves

---

### Background

Many lithium batteries are carried on every Delta flight to power cell phones, laptop computers, and other PEDs.

Delta Air Lines will begin installing PED overheat containment equipment on all fleets to help crews respond to the potential threat from lithium battery thermal runaway. The goal is to have a full containment kit on each flight deck and at least one in every cabin. While the vendor is producing containment kits as fast as possible, limited inventory will require prioritizing the placement of kits. Delta's strategy is to equip the overwater fleets by the end of 2016. To accomplish this, Delta will install a PED Overheat Containment Kit in each wide-body cabin, and a pair of fire retardant gloves on each flight deck this year. An EP-19, installed in the aircraft logbook, will be the flight crew notification that an aircraft has been modified.

In 2017, Delta will expand the initial program to include narrow-body fleets, as well as possibly installing additional containment kits to wide-body fleets.

This bulletin contains updated non-normal procedures as well as containment equipment location and preflight information. The updated non-normal procedure stems from a new philosophy regarding handling batteries experiencing thermal runaway. The objectives of the procedure are to:

- Extinguish any positively identified device battery fire.
- Remove the device from the flight deck.
- Contain the device by surrounding it with liquid in a PED Overheat Containment Kit or empty cabin trash bin.

Regarding use of the containment kit and/or the QRH Non-Normal Checklist, a PED or EFB is considered overheated if it is smoking or cannot be touched/held with a bare hand.

Non-Normal Procedures

**EFB or PED Overheat or Fire**

Condition: An EFB or PED has overheated or is on fire.

**Warning! Use this procedure only when an electronic device overheats or fire is positively identified. If in doubt, Go to the Smoke, Fire or Fumes checklist on page 8.6.**

- 1 External power source . . . . . Disconnect  
Disconnect the device from an external battery or external power.
- 2 If available, don fire retardant gloves.
- 3 If the device can be safely removed from the flight deck, coordinate removal and positive transfer of the device with the cabin crew. If conditions of the thermal runaway require immediate removal, take the device outside the flight deck, secure the flight deck door and coordinate device containment with the flight attendants.
- 4 If device on fire or smoldering . . . . . Extinguish  
Use a halon fire extinguisher, water fire extinguisher, or available liquid to extinguish fire.

**Warning! Do not cover the device or use ice to cool the device. Ice or other materials insulate the device, increasing the likelihood that additional battery cells will reach thermal runaway.**

- 5 Contain the device in a PED Overheat Containment Kit by following the bag's included instructions which detail how to surround the device in liquid, or place the device in a container (empty trash bin if available) and douse the device with water or other liquid to cool the device and prevent additional battery cells from reaching thermal runaway. When able, ensure the device is removed from the flight deck if not previously accomplished.



---

## Equipment Location and Preflight Procedures

A pair of fire retardant gloves will be on the flight deck in a plastic pouch either in a storage compartment with a door or in an open compartment secured with velcro.

During the flight deck preflight, the first officer will ensure the gloves are onboard and serviceable. The gloves are NOT a required for dispatch item. NEF 25-32-13, outlined in the EP-19, provides relief when a containment kit or gloves are damaged or missing.

Modified aircraft will have a containment kit (gloves and instruction sheet) located in the cabin, and flight attendants are responsible for preflight and bag procedures. The containment kit is also NOT a required for dispatch item. The placard shown here will indicate the cabin bin location of the PED Overheat Containment Kit.



The following table depicts the flight deck glove locations and cabin containment kit locations.

| Flight Deck Location                                                                                                                | Cabin Location                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| One set of gloves (bagged) located in the flight deck in the stowage compartment with the fire axe, adjacent to the captain's seat. | One kit located in the right-hand side emergency equipment bin on top of the bracket housing the EEMK. |

---

### Summary

These revised non-normal procedures have been coordinated with Inflight Service. The captain's flight attendant brief should review the pertinent information in this bulletin and provide any special instructions for cabin crews in the event of a lithium battery thermal runaway.

Flight Operations is confident that the provided lithium battery containment equipment, utilized effectively, will help mitigate the threat of PED battery thermal runaway.

---

### Approved By:

Pat Dever  
747-400 Fleet Captain

Steve Hanlon  
747-400 CLCP

Michael Mannino  
747-400 Technical Manager