



DANGEROUS GOODS PANEL (DGP)

TWENTY-NINTH MEETING

Montréal, 13 to 17 November 2023

Agenda Item 2: Managing air-specific safety risks and identifying anomalies (Ref: REC A DGS 2025)

2.4: Development of proposals, if necessary, for amendments to the *Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods (Doc 9481)* for incorporation in the 2025-2026 Edition

AMENDMENT OF CABIN CREW PROCEDURES FOR DANGEROUS GOODS INCIDENTS IN THE PASSENGER CABIN DURING FLIGHT

(Presented by the Secretary)

SUMMARY

This working paper proposes an amendment to the cabin crew procedures to be applied in response to an incident involving lithium batteries in the passenger cabin, as well as other dangerous goods, contained in Doc 9481. The amendment takes into consideration experience and best practices from States, industry, and international organizations that are part of the ICAO Cabin Safety Group.

Action by the DGP: The DGP is invited to consider the proposed amendment to the cabin crew procedures for dangerous goods incidents in the passenger cabin during flight contained in Sections 3.3 and 3.4 of the *Emergency Response Guidance for Aircraft Incidents involving Dangerous Goods (Doc 9481)*, as shown in Appendix B to this working paper.

1. BACKGROUND

1.1 An amendment to the cabin crew provisions in the *Emergency Response Guidance for Aircraft Incidents involving Dangerous Goods (Doc 9481)* was proposed at the twenty-fourth meeting of the Dangerous Goods Panel (DGP/24, Montréal, 28 October to 8 November 2013) (see paragraph 4.2 of the DGP/24 Report). Noting the multi-disciplinary nature of the proposal, and primarily the need to obtain feedback from cabin safety experts, the DGP requested that the ICAO Cabin Safety Group (ICSG), the Organization's joint industry-regulatory group composed of cabin safety experts, to review the proposals contained in the working paper. The ICSG delivered a revised version of Sections 3.3 and 3.4 of Doc 9481.

The ICSG and DGP jointly discussed and agreed to revised guidance material that was incorporated in the 2015-2016 Edition of Doc 9481. Following this successful collaboration, the DGP called upon the ICSG to review subsequent proposals for the amendment of cabin crew provisions and cabin safety-related aspects in Doc 9481. The list of nominating organizations on the ICSG is presented in Appendix A to this working paper.

1.2 During the twenty-first meeting of the ICSG (ICSG/21), held in Montréal from 25 to 27 October 2022, the study group finalized ICAO's Cabin Safety Work Programme for the 2023-2025 triennium. One of the items deemed of high priority was the revision of the cabin crew procedures for dangerous goods incidents in the passenger cabin during flight contained in Sections 3.3 and 3.4 of Doc 9481. The ICSG noted a gap in the provisions due to the absence of procedures related to:

- a) battery / portable electronic device (PED) fire / smoke on the flight deck, which requires the intervention of cabin crew; and
- b) battery / portable electronic device (PED) fire / smoke when fire containment equipment is carried on board aircraft.

1.3 In addition, the ICSG noted that the last complete amendment of the cabin crew provisions in Doc 9481 dated back to 2013. Members expressed the need to revise the provisions taken into consideration experience and best practices from States, industry, and international organizations over the last decade.

2. PROPOSED AMENDMENT

2.1 From April to September 2023, the ICSG worked on the amendment of Doc 9481 which resulted in a completed revision of the content of Sections 3.3. and 3.4. The revision of content proposed for the 2025-2026 Edition of Doc 9481 includes the following:

- a) addition of lithium battery firefighting procedures, focusing on portable electronic device (PED) fires on the flight deck, as new Sections 3.3.5 and 3.4.5; and
- b) addition of guidance on the use of fire containment equipment by cabin crew to respond to lithium battery fires as new Section 3.3.6.

2.2 Main issues raised during the discussions regarding the addition of new content in Doc 9481 are:

- a) the guidance developed addresses PEDs in the flight deck, but is not specific to electronic flight bags (EFB), as originally discussed by the ICSG. This is due to the varying classes of EFBs as well as their location in the flight deck, which makes it difficult to create general guidance;
- b) the proposed text addresses the need for operators to review cabin crew and flight crew interaction during lithium battery fire occurrences, including the use of communication systems and standard phraseology; and
- c) due to the quantity and diversity of existing fire containment products, as well as their location on board different aircraft, it is not possible to design a procedure that encompasses all products. The proposed text provides overarching guidance for the

use of such equipment. Amplified procedures need to be developed based on manufacturer instructions and are not included in Section 3.4. In addition, the terminology proposed refers to fire containment “equipment” versus the original proposal, which used the term fire containment “bags”. It was noted that some equipment takes the form of other objects, not just bags.

2.3 In addition to the new sections, the ICSG conducted a full revision of existing content in Sections 3.3 and 3.4 and proposed amendments, mainly:

- a) a rework of all the tables in Sections 3.3 and 3.4 to align with the task lists and terminology in the ICAO *Cabin Crew Safety Training Manual* (Doc 10002), which contains guidance for cabin crew dangerous goods training through a competency-based approach. It includes only crew actions in the heading of the tables and adds details to the amplified procedures (Section 3.4);
- b) terminology was revised to ensure proper understanding for non-native English speakers (e.g. the term “douse” was deemed confusing and replaced with “pour”);
- c) a recommendation was added for operators to ensure aircraft are equipped with appropriate firefighting and protective equipment for use by crew members (e.g. protective gloves);
- d) considerations were included for multi-cabin crew and single cabin crew member operations;
- e) text was added to clarify that liquid should be poured onto the device until signs of steam and crackling have subsided completely (the ICSG noted the need to clarify how long liquid should be poured on a device). The revised text was deemed to assist crew by providing the intent of the action of pouring water or non-flammable liquid on the device (to cool cells and prevent thermal runaway) and helping them to assess when it is safe to move the device;
- f) text was revised to state that the cooling period is approximately 15 minutes (versus previous text which cited an example of time period);
- g) text was revised to provide the reason for not moving a device which has been extinguished but not cooled;
- h) guidance was provided specific to overhead bin firefighting procedures;
- i) guidance on “PED potentially crushed / damaged in adjustable passenger seat” was provided and the section was renamed as “PED fallen into / trapped in a passenger seat” to best reflect the content;
- j) mention was added of the use of fire containment equipment in existing procedures, if carried;
- k) additional guidance was included on locating the origin of the fire;
- l) guidance was revised on managing the incident when affected PED is inside carry-on baggage; and

- m) clarification that guidance encompasses a crew member's PED, not just passengers', was added.

2.4 The proposed amendments to Doc 9481 are shown in Appendix B and a clean version is presented in Appendix C to this working paper.

3. ACTION BY THE DGP

3.1 The DGP is invited to consider the proposed amendment to the cabin crew procedures for dangerous goods incidents in the passenger cabin during flight contained in Sections 3.3 and 3.4 of the *Emergency Response Guidance for Aircraft Incidents involving Dangerous Goods* (Doc 9481), as shown in Appendix B to this working paper.

APPENDIX A

LIST OF NOMINATING ORGANIZATIONS ON THE ICAO CABIN SAFETY GROUP

| | |
|---|---|
| Air Canada | International Federation of Air Line Pilots' Associations |
| Air Canada Rouge | International Society of Air Safety Investigators |
| Air China | ITA Airways |
| Air Line Pilots Association, International | International Transport Workers' Federation |
| Airbus | Jamaica Civil Aviation Authority |
| All Nippon Airways | Japan Airlines |
| American Airlines | Kenya Airways |
| Avianca | Kenya Civil Aviation Authority |
| Azul | LATAM Airlines |
| Boeing | LBA Germany |
| Civil Aviation Administration of China | Lufthansa |
| Civil Aviation Authority of Singapore | Lufthansa Aviation Training |
| Civil Aviation Safety Authority | Mexican School of Aviation |
| China Eastern Airlines | Middle East Airlines |
| Commercial Aircraft Corporation of China | National Civil Aviation Agency of Brazil |
| Directorate General of Civil Aviation of Peru | National Transportation Safety Board |
| Directorate General of Civil Aviation of Türkiye | PAL Airlines |
| DINACIA Uruguay | South African Civil Aviation Authority |
| European Union Aviation Safety Agency | Singapore Airlines |
| Embraer | Sunexpress Airlines |
| Emirates Airline | Swiss International Air Lines |
| Federal Aviation Administration | Transport Canada Civil Aviation |
| Flight Attendant School – Russian Federation | Turkish Airlines |
| General Authority of Civil Aviation of Saudi Arabia | UK Civil Aviation Authority |
| International Air Transport Association | United Airlines |

APPENDIX B

PROPOSED AMENDMENT TO THE EMERGENCY RESPONSE GUIDANCE FOR AIRCRAFT INCIDENTS INVOLVING DANGEROUS GOODS

Section 3

EXAMPLES OF DANGEROUS GOODS INCIDENT PROCEDURES

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3.3 CABIN CREW PROCEDURES FOR DANGEROUS GOODS INCIDENTS IN THE PASSENGER CABIN DURING FLIGHT

This section consists of cabin crew procedures for dangerous goods incidents in the passenger cabin during flight involving:

- a) battery / portable electronic device (PED) fire / smoke (see 3.3.1);
- b) overhead bin battery / portable electronic device (PED) fire / smoke (see 3.3.2);
- c) overheated battery / electrical smell involving a portable electronic device (PED) — no visible fire or smoke (see 3.3.3);
- d) PED ~~inadvertently crushed or damaged~~ fallen into / trapped in ~~electrically adjustable~~ a passenger seat (see 3.3.4);
- e) battery / portable electronic device (PED) fire / smoke on the flight deck (see 3.3.5);
- f) battery / portable electronic device (PED) fire / smoke when fire containment equipment is carried on board aircraft (see 3.3.6);
- eg) fire involving dangerous goods (see 3.3.57); and
- fh) spillage or leakage of dangerous goods (see 3.3.68)

Note. 1— Although this guidance material presents sequences of tasks, some of these actions occur simultaneously when carried out by crew members in a multi-cabin crew operation.

Note. 2— The operator should ensure its aircraft are equipped with appropriate firefighting and protective equipment for use by crew members.

Note. 3— In a single cabin crew member operation, some of the actions listed in this section should be carried out with the assistance of other persons (e.g. able-bodied passengers). The operating cabin crew member should assign those persons to communicate with the flight crew and provide back-up while the cabin crew member fights the fire.

Note. 4— Although this guidance refers to passenger PEDs, procedures are also applicable to crew member PEDs.

3.3.1 Battery / portable electronic device (PED) fire / smoke

| Procedures for battery / portable electronic device (PED) fire / smoke | |
|--|--|
| Step | Cabin crew action |
| 1. | <p>IDENTIFY THE ITEM</p> <p><i>Note.— It may not be possible to identify the item (source of fire) immediately. In this case, apply Step 2 first, and then attempt to identify it.</i></p> <p>Caution: In order to avoid injury from a flash fire, it is not recommended to open the affected baggage when there is any indication of smoke or flames.</p> |
| 2. | <p>APPLY FIREFIGHTING PROCEDURE</p> <p>a) Obtain and use the appropriate fire extinguisher. b) Retrieve and use protective equipment, as applicable to the situation. c) Move passengers away from the area, if possible. d) Notify pilot-in-command / other cabin crew members.</p> <p><i>Note.— Actions should occur simultaneously in a multi-crew operation.</i></p> |
| 3. | <p>REMOVE POWER</p> <p>a) Disconnect the device from the power supply, if safe to do so. b) Turn off in-seat power, if applicable. c) Verify that power to the remaining electrical outlets remains off, if applicable.</p> <p>Caution: Do not attempt to remove the battery from the device.</p> |
| 4. | <p><u>DO NOT LEAVE THE DEVICE WITHIN ITS PLACE AND POUR WATER (OR OTHER NON-FLAMMABLE LIQUID) ON THE DEVICE</u></p> <p><i>Note.— Liquid may turn to steam when applied to the hot battery.</i></p> |
| 5. | <p><u>LEAVE THE DEVICE IN ITS PLACE AND MONITOR FOR ANY INDICATION OF REIGNITION AND CONTINUE TO POUR WATER (OR OTHER NON-FLAMMABLE LIQUID) ON THE DEVICE</u></p> <p>a) If smoke or flames reappear, repeat Steps 2 and 4.</p> <p>Caution: — Do not attempt to pick up or move the device. — Do not cover or enclose the device. — Do not use ice or dry ice to cool the device.</p> |

| Procedures for battery / portable electronic device (PED) fire / smoke | |
|---|--|
| <i>Step</i> | <i>Cabin crew action</i> |
| 6. | <p>WHEN <u>WAIT UNTIL THE DEVICE HAS COOLED</u> (e.g. approximately 10 to 15 minutes)</p> <p>a) Obtain a suitable empty container. b) Fill the container with enough water (or other non-flammable liquid) to submerge the device. c) Using protective equipment, place the device in the container and completely submerge in water (or other non-flammable liquid). d) Stow and secure (if possible) the container to prevent spillage.</p> |
| <u>7.</u> | <u>OBTAIN A SUITABLE EMPTY CONTAINER</u> |
| <u>8.</u> | <u>FILL THE CONTAINER WITH ENOUGH WATER (OR OTHER NON-FLAMMABLE LIQUID) TO SUBMERGE THE DEVICE</u> |
| <u>9.</u> | <u>PLACE THE DEVICE IN THE CONTAINER AND COMPLETELY SUBMERGE IN WATER (OR OTHER NON-FLAMMABLE LIQUID), USING PROTECTIVE EQUIPMENT</u> |
| <u>10.</u> | <u>STOW AND SECURE (IF POSSIBLE) THE CONTAINER TO PREVENT SPILLAGE</u> |
| 7 <u>11.</u> | MONITOR THE DEVICE AND THE SURROUNDING AREA FOR THE REMAINDER OF THE FLIGHT |
| 8 <u>12</u> | <p><u>APPLY POST-INCIDENT PROCEDURES</u> AFTER LANDING AT THE NEXT DESTINATION</p> <p>a) Apply operator's post-incident procedures.</p> |

3.3.2 Overhead bin battery / portable electronic device (PED) fire / smoke

| Procedures for overhead bin battery / portable electronic device (PED) fire / smoke | |
|--|--|
| Step | Cabin crew action |
| 1. | <p>APPLY FIREFIGHTING PROCEDURE</p> <p>a) Obtain and use the appropriate fire extinguisher. b) Retrieve and use protective equipment, as applicable to the situation. c) Move passengers away from the area, if possible. d) Notify pilot-in-command / other cabin crew members.</p> <p><i>Note.— Actions should occur simultaneously in a multi-crew operation.</i></p> |
| 2. | <p>IDENTIFY THE ITEM</p> <p>If the device is visible and accessible, or, if the device is contained in baggage and flames are visible:</p> <p>a) Re-apply Step 1 to extinguish the flames, if applicable. b) Apply Steps 3 to 5.</p> <p>If smoke is coming from the overhead bin, but the device is not visible or accessible:</p> <p>c) Remove other baggage from the overhead bin to access the affected baggage/item. d) Identify the item. e) Apply Steps 3 to 5.</p> <p>Caution: In order to avoid injury from a flash fire, it is not recommended to open the affected baggage when there is any indication of smoke or flames.</p> |
| 3. | <p><u>DOUSE/LEAVE THE DEVICE (BAGGAGE) WITHIN ITS PLACE AND POUR WATER (OR OTHER NON-FLAMMABLE LIQUID) ON THE DEVICE (BAGGAGE)</u></p> <p><i>Note.— Liquid may turn to steam when applied to the hot battery.</i></p> |
| 4. | <p><u>MONITOR FOR ANY INDICATION OF REIGNITION AND CONTINUE TO POUR WATER (OR OTHER NON-FLAMMABLE LIQUID) ON THE DEVICE</u></p> |
| 45. | <p><u>WHEN/WAIT UNTIL THE DEVICE HAS COOLED</u></p> <p>a) Obtain a suitable empty container. b) Fill the container with enough water (or other non flammable liquid) to submerge the device. c) Using protective equipment, place the device in the container and completely submerge in water (or other non flammable liquid). d) Stow and secure (if possible) the container to prevent spillage.</p> |
| 6. | <p><u>OBTAIN A SUITABLE EMPTY CONTAINER</u></p> |
| 7. | <p><u>FILL THE CONTAINER WITH ENOUGH WATER (OR OTHER NON-FLAMMABLE LIQUID) TO SUBMERGE THE DEVICE</u></p> |

| Procedures for overhead bin battery / portable electronic device (PED) fire / smoke | |
|--|--|
| <i>Step</i> | <i>Cabin crew action</i> |
| <u>8.</u> | <u>PLACE THE DEVICE IN THE CONTAINER AND COMPLETELY SUBMERGE IN WATER (OR OTHER NON-FLAMMABLE LIQUID), USING PROTECTIVE EQUIPMENT</u> |
| <u>9.</u> | <u>STOW AND SECURE (IF POSSIBLE) THE CONTAINER TO PREVENT SPILLAGE</u> |
| <u>10.</u> | MONITOR THE DEVICE AND THE SURROUNDING AREA FOR THE REMAINDER OF THE FLIGHT |
| <u>11.</u> | <u>APPLY POST-INCIDENT PROCEDURES</u> AFTER LANDING AT THE NEXT DESTINATION a) Apply operator's post-incident procedures. |

3.3.3 Overheated battery / electrical smell involving a portable electronic device (PED) — no visible fire or smoke

| Procedures for overheated battery / electrical smell involving a portable electronic device (PED) — no visible fire or smoke | |
|---|---|
| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | IDENTIFY THE ITEM |
| 2. | INSTRUCT THE PASSENGER TO TURN OFF THE DEVICE IMMEDIATELY |
| 3. | <p>REMOVE POWER</p> <p>a) Disconnect the device from the power supply, if safe to do so. b) Turn off in-seat power, if applicable. c) Verify that power to the remaining electrical outlets remains off, if applicable. d) Verify that the device remains off for the remainder of the flight.</p> <p>Caution: Do not attempt to remove the battery from the device.</p> |
| 4. | <p>INSTRUCT THE PASSENGER TO KEEP THE DEVICE VISIBLE AND MONITOR CLOSELY</p> <p>Caution: Unstable batteries may ignite even after the device is turned off.</p> |
| 5. | <p>IF SMOKE OR FLAMES APPEAR <u>APPLY PROCEDURES FOR</u></p> <p>a) Apply BATTERY / PED FIRE / SMOKE procedures (see 3.3.1). <u>IF SMOKE OR FLAMES APPEAR</u></p> |
| 6. | <p><u>APPLY POST-INCIDENT PROCEDURES</u> AFTER LANDING AT THE NEXT DESTINATION</p> <p>a) Apply operator's post-incident procedures.</p> |

3.3.4 PED ~~inadvertently crushed or damaged in electrically adjustable~~ fallen into / trapped in a passenger seat

| Procedures for PED inadvertently crushed or damaged in electrically adjustable <u>fallen into / trapped in a passenger seat</u> | |
|--|--|
| Step | Cabin crew action |
| 1. | NOTIFY THE PILOT-IN-COMMAND / OTHER CABIN CREW MEMBERS |
| 2 <u>1.</u> | OBTAIN INFORMATION FROM THE PASSENGER, BY ASKING THE PASSENGER a) To identify the item. b) Where the passenger suspects that the item may have dropped or slipped into. c) If the seat was moved since misplacing the item. |
| 3 <u>2.</u> | RETRIEVE AND USE PROTECTIVE EQUIPMENT, IF AVAILABLE |
| 3. | <u>NOTIFY THE PILOT-IN-COMMAND / OTHER CABIN CREW MEMBERS</u> |
| 4. | RETRIEVE THE ITEM <u>IF SAFE TO DO SO</u> Caution: Do not move the seat electrically or mechanically when attempting to retrieve the item. |
| 5. | IF SMOKE OR FLAMES APPEAR <u>APPLY PROCEDURES FOR</u> a) Apply BATTERY / PED FIRE / SMOKE procedures (see 3.3.1). <u>IF SMOKE OR FLAMES APPEAR</u> |
| 6. | <u>MONITOR THE SEAT AND THE SURROUNDING AREA FOR THE REMAINDER OF THE FLIGHT</u> |
| 6 <u>7.</u> | <u>APPLY POST-INCIDENT PROCEDURES</u> AFTER LANDING AT THE NEXT DESTINATION a) Apply operator's post-incident procedures. |

3.3.5 Battery / portable electronic device (PED) fire / smoke on the flight deck

| <u>Procedures for battery / portable electronic device (PED) fire / smoke on the flight deck</u> | |
|---|---|
| <u>Step</u> | <u>Cabin crew action</u> |
| <u>1.</u> | <u>RECOGNIZE SIGNAL FOR FIRE / SMOKE ON THE FLIGHT DECK</u> |
| <u>2.</u> | <u>APPLY FIREFIGHTING PROCEDURE</u> |
| <u>3.</u> | <u>REMOVE THE DEVICE FROM THE FLIGHT DECK</u> |
| <u>4.</u> | <u>CLOSE THE FLIGHT DECK DOOR</u> |
| <u>5.</u> | <u>APPLY PROCEDURES FOR BATTERY / PED FIRE / SMOKE IF SMOKE OR FLAMES APPEAR</u> |
| <u>6.</u> | <u>APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION</u> |

3.3.6 Procedures for battery / portable electronic device (PED) fire / smoke when fire containment equipment is carried on board aircraft

Due to the quantity and diversity of existing fire containment products available to operators, it is not possible to design a procedure that encompasses all products. Therefore, this section provides overarching guidance for the use of such equipment. The operator should develop detailed procedures based on the original equipment manufacturer (OEM) instructions. If carried on board the aircraft, one of the fire containment equipment should be located in the flight deck. Additional fire containment should be carried in the cabin. They should be placed in a suitable location(s) that is easily accessible by the cabin crew. When operating multi-deck aircraft, the operator should assess the need for additional fire containment equipment on each deck. Cabin crew members should use the equipment following the OEM's instructions, which should be incorporated in the cabin crew operations manual (CCOM). Cabin crew members should be drilled and capable in the use of the specific fire containment equipment carried on board the operator's aircraft.

Note.— Fire containment equipment may not be suitable for all types of PEDs, due to size and shape.

3.3.57 Fire involving dangerous goods

| Procedures for fire involving dangerous goods | |
|--|---|
| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | <p>IDENTIFY THE ITEM</p> <p><i>Note.</i> — It may not be possible to identify the item (source of fire) immediately. In this case, apply Step 2 first, and then attempt to identify it.</p> <p>Caution: In order to avoid injury from a flash fire, it is not recommended to open the affected baggage when there is any indication of smoke or flames.</p> |
| 2. | <p>APPLY FIREFIGHTING PROCEDURE</p> <p>a) Obtain and use the appropriate fire extinguisher / check use of water. b) Retrieve and use protective equipment, as applicable to the situation. c) Move passengers away from the area, if possible. d) Notify pilot-in-command / other cabin crew members.</p> <p><i>Note.</i> — Actions should occur simultaneously in a multi-crew operation.</p> |
| 3. | <p>MONITOR FOR ANY REIGNITION <u>INDICATION OF REIGNITION</u></p> <p>a) If smoke/flames reappear, repeat Step 2.</p> |
| 4. | <p>ONCE THE FIRE HAS BEEN EXTINGUISHED</p> <p>a) Apply <u>APPLY PROCEDURES FOR SPILLAGE OR LEAKAGE OF DANGEROUS GOODS</u> procedures, if required (see 3.3.6)., <u>IF REQUIRED, ONCE THE FIRE HAS BEEN EXTINGUISHED</u></p> |
| 5. | <p><u>APPLY POST-INCIDENT PROCEDURES</u> AFTER LANDING AT THE NEXT DESTINATION</p> <p>a) Apply operator's post-incident procedures.</p> |

3.3.68 Spillage or leakage of dangerous goods

| Procedures for spillage or leakage of dangerous goods | |
|---|--|
| Step | Cabin crew action |
| 1. | NOTIFY THE PILOT-IN-COMMAND / OTHER CABIN CREW MEMBERS |
| 2. | IDENTIFY THE ITEM |
| 3. | COLLECT EMERGENCY RESPONSE KIT OR OTHER USEFUL ITEMS |
| 4. | DON RUBBER GLOVES RETRIEVE AND SMOKE HOOD USE PROTECTIVE EQUIPMENT |
| 5. | MOVE PASSENGERS AWAY FROM AREA AND DISTRIBUTE WET TOWELS OR CLOTHS |
| 6. | PLACE DANGEROUS GOODS ITEM IN POLYETHYLENE BAGS |
| 7. | STOW POLYETHYLENE BAGS |
| 8. | TREAT AFFECTED SEAT CUSHIONS / COVERS IN THE SAME MANNER AS DANGEROUS GOODS ITEM |
| 9. | COVER SPILLAGE ON CARPET / FLOOR |
| 10. | REGULARLY INSPECT MONITOR ITEMS STOWED AWAY / CONTAMINATED FURNISHINGS |
| 11. | <u>APPLY POST-INCIDENT PROCEDURES</u> AFTER LANDING AT THE NEXT DESTINATION a) Apply operator's post-incident procedures. |

3.4 AMPLIFIED CABIN CREW PROCEDURES FOR DANGEROUS GOODS INCIDENTS IN THE PASSENGER CABIN DURING FLIGHT

This section consists of amplified cabin crew procedures for dangerous goods incidents in the passenger cabin during flight involving:

- a) battery / portable electronic device (PED) fire / smoke (see 3.4.1);
- b) overhead bin battery / portable electronic device (PED) fire / smoke (see 3.4.2);
- c) overheated battery / electrical smell involving a portable electronic device (PED) — no visible fire or smoke (see 3.4.3);
- d) PED ~~inadvertently crushed or damaged~~ fallen into / trapped in ~~electrically adjustable~~ a passenger seat (see 3.4.4);

~~— e~~ e) battery / portable electronic device (PED) fire / smoke on the flight deck (see 3.4.5);

~~— f~~ f) fire involving dangerous goods (see 3.4.56); and

~~— fg~~ fg) spillage or leakage of dangerous goods (see 3.4.67).

~~— Note. — Although this guidance material presents sequences of tasks, some of these actions occur simultaneously when carried out by crew members.~~

3.4.1 Battery / portable electronic device (PED) fire / smoke

| Amplified procedures for battery / portable electronic device (PED) fire / smoke | |
|--|---|
| Step | Cabin crew action |
| 1. | <p>IDENTIFY THE ITEM</p> <p>It may not be possible <u>for cabin crew</u> to identify the item (source of fire <u>or smoke</u>) right away, especially if the fire has started in a seat pocket or the device is not readily accessible. In this case, <u>cabin crew should apply</u> firefighting procedures should be applied, as a first step- <u>(Step 2) and then attempt to identify the item (Step 1)</u>. If the item is contained in baggage, the crew's actions would be similar to the actions for a device that is visible or readily accessible.</p> <p>Caution: In order to avoid injury from a flash fire, it is not recommended to open the affected baggage when there is any indication of smoke or flames. However, in certain situations cabin crew members may assess and deem it necessary to slightly open baggage to allow entry of the extinguishing agent and non-flammable liquid. This should be done with extreme caution and only after donning appropriate protective equipment available on the aircraft.</p> |
| 2. | <p>APPLY FIREFIGHTING PROCEDURE</p> <p><u>a) Apply communication procedures.</u> <u>b) Use appropriate firefighting equipment and protective equipment, as required.</u> <u>c) Fight fire.</u> <u>d) Manage passengers and cabin, as required.</u></p> <p><u>During any</u> occurrence concerning a fire in the cabin, <u>the cabin crew</u> should be notified immediately to<u>notify</u> the pilot-in-command who should be kept<u>immediately and keep the flight crew</u> informed of all actions taken and of the effect. It is essential that the cabin crew and the flight crew coordinate their actions and that each is kept fully informed of the other's actions and intentions. <u>Minimizing the spreading of smoke and fumes into the flight deck is critical for the continued safe operation of the aircraft, therefore it is essential to keep the flight deck door closed at all times. Crew communication and coordination are of utmost importance. The use of the interphone is the primary means of communication between crew members, unless the interphone system fails.</u></p> <p>Appropriate firefighting and emergency procedures must be used to deal with any fire. In a multi-cabin crew operation, the actions detailed in the firefighting procedure should be conducted simultaneously. On aircraft operated with only one cabin crew member, the aid of a passenger should be sought in dealing with the situation.</p> <p>Halon, Halon replacement or water extinguisher should be used to extinguish the fire and prevent its spread to additional flammable materials. It is important to wear available protective equipment (e.g. protective breathing equipment, fire gloves) when fighting a fire.</p> |

| Amplified procedures for battery / portable electronic device (PED) fire / smoke | |
|---|---|
| Step | <i>Cabin crew action</i> |
| | <p>If fire develops, cabin crew should take prompt action to move passengers away from the area involved and, if necessary, provide wet towels or cloths and give instructions for passengers to breathe through them. Minimizing the spreading of smoke and fumes into the flight deck is critical for the continued safe operation of the aircraft, therefore it is essential to keep the flight deck door closed at all times. Crew communication and coordination are of utmost importance. The use of the interphone is the primary means of communication unless the interphone system fails. Appropriate firefighting procedures should be used to deal with any fire. Cabin crew should use firefighting equipment to extinguish the fire and prevent its spread to additional flammable materials. It is Important that cabin crew use protective equipment (e.g. protective breathing equipment, protective gloves) when fighting a fire.</p> <p><u>If fire develops, cabin crew should take prompt action to move passengers away from the area involved and, if necessary, provide wet towels or cloths and give instructions for passengers to breathe through them.</u></p> <p style="text-align: center;">_____</p> <p style="text-align: center;">The following is moved from step 1:</p> <p style="text-align: center;">_____</p> <p>Caution: In order to avoid injury from a flash fire, it is not recommended to open the affected baggage when there is any indication of smoke or flames. However, in certain firefighting situations cabin crew members may assess and deem it necessary to slightly open baggage to allow entry of the extinguishing agent and non-flammable liquid. In order to avoid injury from a flash fire, cabin crew should use caution when opening the affected baggage when there is any indication of smoke or flames. This should only be done with extreme caution and only after donning appropriate protective equipment available on the aircraft.</p> |
| 3. | <p>REMOVE POWER</p> <p><u>a) Disconnect the device from the power supply, if safe to do so.</u> <u>b) Turn off in-seat power, if applicable.</u> <u>c) Verify that power to the remaining electrical outlets remains off, if applicable.</u></p> <p style="text-align: center;">_____</p> <p style="text-align: center;">The following is moved from the end of this step:</p> <p style="text-align: center;">_____</p> <p>Caution: <u>Do not attempt to remove the battery from the device.</u></p> <p>It is important to<u>that cabin crew</u> instruct the passenger to disconnect the device from the power supply, if it is deemed safe to do so. A battery has a higher likelihood of catching fire due to overheating during or immediately following a charging cycle, although the effects may be delayed for some period of time. By removing the external power supply from the device, it will be assured that additional energy is not being fed to the battery to promote a fire.</p> |

| Amplified procedures for battery / portable electronic device (PED) fire / smoke | |
|---|---|
| Step | Cabin crew action |
| | <p><u>Cabin crew should</u> Tturn off the in-seat power to the remaining electrical outlets until it can be assured that a malfunctioning aircraft system does not contribute to additional failures of the passengers' portable electronic devices.</p> <p><u>Cabin crew should</u> Vvisually check that power to the remaining electrical outlets remains off until the aircraft's system can be determined to be free of faults, if the device was previously plugged in.</p> <p>The removal of power may occur simultaneously to other cabin crew actions (e.g. obtaining water to douse<u>pour on</u> the device). Depending on the aircraft type, in-seat power may have to be turned off by the flight crew members <u>may turn off in-seat power</u>.</p> <p>Caution: Do not attempt to remove the battery from the device.</p> |
| 4. | <p><u>LEAVE THE DEVICE IN ITS PLACE AND DOUSE THE DEVICE WITH POUR WATER (OR OTHER NON-FLAMMABLE LIQUID) ON THE DEVICE</u></p> <p><u>Cabin crew need to use</u> Wwater (or other non-flammable liquid) must be used to cool a battery that has ignited to prevent the spread of heat to other cells in the battery. If water is not available, any non-flammable liquid may be used to cool the device. <u>Cabin crew should pour liquid onto the device until signs of steam and crackling have subsided completely.</u></p> <p><u>Note.</u>—Liquid may turn to steam when applied to the hot battery. <u>The action of pouring water or non-flammable liquid on the device cools the battery cells and prevents thermal runaway.</u></p> <p style="text-align: center;">_____</p> <p style="text-align: center;">The following is moved from Step 5:</p> <p style="text-align: center;">_____</p> <p>A battery involved in a fire can reignite and emit flames multiple times as heat is transferred to other cells in the battery. Therefore, <u>cabin crew should monitor</u> the device must be monitored regularly to identify if there is any indication that a fire hazard may still exist. If there is any smoke or indication of fire, the device must be doused with<u>crew should pour</u> more water (or other non-flammable liquid) on the device.</p> <p>Caution:</p> <ol style="list-style-type: none"> a) Do not attempt to pick up or move the device; batteries may explode or burst into flames without warning. The device must<u>should</u> not be moved if displaying any of the following: flames/flaring, smoke, unusual sounds (such as crackling), debris, or shards of material separating from the device. b) Do not cover or enclose the device as it could cause it to overheat. c) Do not use ice or dry ice to cool the device. Ice or other materials insulate the device, increasing the likelihood that additional battery cells will reach thermal runaway. |

| Amplified procedures for battery / portable electronic device (PED) fire / smoke | |
|---|---|
| Step | Cabin crew action |
| 5. | <p><u>LEAVE THE DEVICE IN ITS PLACE AND MONITOR FOR ANY INDICATION OF REIGNITION AND CONTINUE TO POUR WATER (OR OTHER NON-FLAMMABLE LIQUID) ON THE DEVICE</u></p> <p>A battery involved in a fire can reignite and emit flames multiple times as heat is transferred to other cells in the battery. Therefore, the device must be monitored regularly to identify if there is any indication that a fire hazard may still exist. If there is any smoke or indication of fire, the device must be doused with more water (or other non-flammable liquid).</p> <p>Caution:</p> <p>a) Do not attempt to pick up or move the device; batteries may explode or burst into flames without warning. The device must not be moved if displaying any of the following: flames/flaring, smoke, unusual sounds (such as crackling), debris, or shards of material separating from the device.</p> <p>b) Do not cover or enclose the device as it could cause it to overheat.</p> <p>c) Do not use ice or dry ice to cool the device. Ice or other materials insulate the device, increasing the likelihood that additional battery cells will reach thermal runaway.</p> <p><u>If smoke or flames reappear, cabin crew should repeat Steps 2 and 4.</u></p> |
| 6. | <p><u>WHENWAIT UNTIL THE DEVICE HAS COOLED (e.g. APPROXIMATELY 10-15 MINUTES)</u></p> <p>TheCabin crew may move the device can be moved with caution following a certain period, once it has cooled down and if there is no evidence of smoke, heat, or if there is a reduction in the crackling or hissing sound usually associated with a lithium battery fire (e.g. after approximately10 this may take approximately 15 minutes). The waiting period may vary based on the device and its size. The different circumstances (e.g. types of devices, phase of flight) should be addressed in the operator's training programme.</p> |
| 7. | <p><u>OBTAIN A SUITABLE EMPTY CONTAINER</u></p> <p>A suitable empty container, such as may include a pot, jug, galley unit or toilet waste bin, must. When selecting a suitable empty container, cabin crew should consider the size of the device to be submerged in it. Cabin crew should select a container which can be filled with enough water or non-flammable liquid to completely submerge the device. It is important to wear available protective equipment (e.g. protective breathing equipment, fire gloves), when moving any device involved in a fire. Once the device is completely submerged, the container used must be stowed and, if possible, secured to prevent spillage.</p> <p><u>Note.— If the aircraft is equipped with a fire containment equipment and the device fits inside it, cabin crew should use the equipment following the manufacturer's instructions.</u></p> |

| Amplified procedures for battery / portable electronic device (PED) fire / smoke | |
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| <i>Step</i> | <i>Cabin crew action</i> |
| <u>8.</u> | <p><u>FILL THE CONTAINER WITH ENOUGH WATER (OR OTHER NON-FLAMMABLE LIQUID) TO SUBMERGE THE DEVICE</u></p> <p><u>Cabin crew should fill the suitable empty container with enough water or non-flammable liquid to completely submerge the device.</u></p> |
| <u>9.</u> | <p><u>PLACE THE DEVICE IN THE CONTAINER AND COMPLETELY SUBMERGE IN WATER (OR OTHER NON-FLAMMABLE LIQUID), USING PROTECTIVE EQUIPMENT</u></p> <p><u>It is important that cabin crew wear protective equipment (e.g. protective breathing equipment, protective gloves), when moving any device involved in a fire.</u></p> |
| <u>10.</u> | <p><u>STOW AND SECURE (IF POSSIBLE) THE CONTAINER TO PREVENT SPILLAGE</u></p> <p><u>Once the device is completely submerged, cabin crew should stow the container and, if possible, secured to prevent spillage.</u></p> |
| <u>711.</u> | <p>MONITOR THE DEVICE AND THE SURROUNDING AREA FOR THE REMAINDER OF THE FLIGHT</p> <p><u>Monitor</u>Cabin crew should monitor the device and the surrounding area for the remainder of the flight to verify that the device does not pose further hazard.</p> |
| <u>812.</u> | <p><u>APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION</u></p> <p>Upon arrival, <u>cabin crew should</u> apply the operator's post-incident procedures. These may include identifying to ground personnel where the item is stowed and providing all information about the item.</p> <p><u>Complete</u>Crew should complete the required documentation, as per operator procedures, so that the operator is notified of the event, proper maintenance action is undertaken and the emergency response kit or any aircraft equipment used is replenished or replaced, if applicable.</p> |

3.4.2 Overhead bin battery / portable electronic device (PED) fire / smoke

| Amplified procedures for overhead bin battery / portable electronic device (PED) fire / smoke | |
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| Step | Cabin crew action |
| 1. | <p>APPLY FIREFIGHTING PROCEDURE</p> <p><u>a) Apply communication procedures.</u> <u>b) Use appropriate firefighting equipment and protective equipment, as required.</u> <u>c) Fight fire.</u> <u>d) Manage passengers and cabin, as required.</u></p> <p>During <u>Any</u> occurrence concerning a fire in the cabin, <u>the cabin crew</u> should be notified immediately to<u>notify</u> the pilot-in-command who should be kept<u>immediately and keep the flight crew</u> informed of all actions taken and of the effect. It is essential that the cabin crew and the flight crew coordinate their actions and that each is kept fully informed of the other's actions and intentions.</p> <p style="text-align: center;"><u>The following is moved from the end of Step 1:</u></p> <p>Minimizing the spreading of smoke and fumes into the flight deck is critical for the continued safe operation of the aircraft, therefore it is essential to keep the flight deck door closed at all times. Crew communication and coordination are of utmost importance. The use of the interphone is the primary means of communication <u>between crew members,</u> unless the interphone system fails.</p> <p>Appropriate firefighting and emergency procedures must <u>should</u> be used to deal with any overhead bin fire. In a multi-cabin crew operation, the actions detailed in the firefighting procedure should be conducted simultaneously. On aircraft operated with only one cabin crew member, the aid of a passenger should be sought in dealing with the situation. <u>Cabin crew should use firefighting equipment to extinguish the fire and prevent its spread to additional flammable materials. It is important that cabin crew use protective equipment (e.g. protective breathing equipment, protective gloves) when fighting a fire. Due to the weight and size of some overhead bins, and their opening movement, the cabin crew member who is fighting the fire may require assistance in opening and controlling the overhead bin. When fighting an overhead bin fire, the cabin crew member should position themselves at the opposite end of the overhead bin, where the smoke / flames are visible. This action prevents further spreading embers due to the force of the extinguishing agent as it is discharged and comes into contact with the overhead bin.</u></p> <p>Halon, Halon replacement or water extinguisher should be used to extinguish the fire and prevent its spread to additional flammable materials. It is important to wear available protective equipment (e.g. protective breathing equipment, fire gloves) when fighting a fire.</p> <p>If fire develops, cabin crew should take prompt action to move passengers away from the area involved and, if necessary, provide wet towels or cloths and give instructions for passengers to breathe through them.</p> <p><u>Note.— If the origin of the fire / smoke cannot be confirmed visually, cabin crew should use the back of the hand to search for hot overhead bin surfaces.</u></p> |

| Amplified procedures for overhead bin battery / portable electronic device (PED) fire / smoke | |
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| Step | <i>Cabin crew action</i> |
| | <p>Caution: <u>Do not use the palm of the hand but the back of the hand since it is more sensitive to temperature differences.</u></p> <p>Caution: <u>In certain firefighting situations, cabin crew may assess and deem it necessary to slightly open baggage to allow entry of the extinguishing agent and non-flammable liquid. In order to avoid injury from a flash fire, cabin crew should use caution when opening the affected baggage when there is any indication of smoke or flames. This should only be done after donning appropriate protective equipment.</u></p> |
| 2. | <p>IDENTIFY THE ITEM</p> <p>It may not be possible to identify the item right away, especially if the fire has started in the overhead bin and the device is not readily accessible.</p> <p>If the device is visible and accessible, or, if the device is contained in baggage and flames are visible, the firefighting procedures should be applied as a first step:</p> <p>a) Re-apply Step 1 to extinguish the flames, if applicable. b) Apply Steps 3 to 10.</p> <p>If smoke is coming from the overhead bin, but the device is not visible or accessible, or there is no indication of fire, the firefighting procedures should be applied as a first step. Afterwards, all baggage should be removed from the overhead bin with caution until the item can be identified. Once the item is identified, apply:</p> <p>a) Remove other baggage from the overhead bin to access the affected baggage/item. b) Identify the item. c) Apply Steps 3 to 10.</p> <p>It may not be possible for cabin crew to identify the item (source of fire or smoke) right away, especially if the fire has started in an overhead bin or the device is not readily accessible.</p> <p>If the device is visible and accessible or if the device is contained in baggage and flames are visible, cabin crew should apply firefighting procedures, as a first step.</p> <p>If smoke is coming from the overhead bin, but the device is not visible or accessible, or there is no indication of fire, cabin crew should apply firefighting procedures, as a first step. Afterwards, cabin crew should remove all baggage from the overhead bin with caution until the item can be identified. Once the item is identified, apply Steps 3 to 10.</p> <p>Caution: In order to avoid injury from a flash fire, it is not recommended to open the affected baggage when there is any indication of smoke or flames. However, in certain situations cabin crew members may assess and deem it necessary to slightly open baggage to allow entry of the extinguishing agent and non-flammable liquid. This should be done with extreme caution and only after donning appropriate protective equipment available on the aircraft.</p> |

| Amplified procedures for overhead bin battery / portable electronic device (PED) fire / smoke | |
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| <i>Step</i> | <i>Cabin crew action</i> |
| 3. | <p><u>DOUSE LEAVE THE DEVICE (BAGGAGE) WITH IN ITS PLACE AND POUR WATER (OR OTHER NON-FLAMMABLE LIQUID) ON THE DEVICE (BAGGAGE)</u></p> <p>Water (or other non-flammable liquid) must be used to cool a battery that has ignited to prevent the spread of heat to other cells in the battery. If water is not available, any non-flammable liquid may be used to cool the device. <u>Cabin crew need to use water (or other non-flammable liquid) to cool a battery that has ignited to prevent the spread of heat to other cells in the battery. Cabin crew should pour liquid onto the device until signs of steam and crackling have subsided completely.</u></p> <p><u><i>Note.</i>— Liquid may turn to steam when applied to the hot battery. The action of pouring water or non-flammable liquid on the device cools the battery cells and prevents thermal runaway.</u></p> <p><u>A battery involved in a fire can reignite and emit flames multiple times as heat is transferred to other cells in the battery. Therefore, cabin crew should monitor the device regularly to identify if there is any indication that a fire hazard may still exist. If there is any smoke or indication of fire, crew should pour more water (or other non-flammable liquid) on the device.</u></p> <p><u>Caution:</u></p> <p>a) <u>Do not attempt to pick up or move the device; batteries may explode or burst into flames without warning. The device should not be moved if displaying any of the following: flames/flaring, smoke, unusual sounds (such as crackling), debris, or shards of material separating from the device.</u></p> <p>b) <u>Do not cover or enclose the device as it could cause it to overheat.</u></p> <p>c) <u>Do not use ice or dry ice to cool the device. Ice or other materials insulate the device, increasing the likelihood that additional battery cells will reach thermal runaway.</u></p> |
| 4 | <p><u>MONITOR FOR ANY INDICATION OF REIGNITION AND CONTINUE TO POUR WATER (OR OTHER NON-FLAMMABLE LIQUID) ON THE DEVICE</u></p> <p><u>If smoke or flames reappear, cabin crew should repeat Steps 1 and 3.</u></p> |
| 4.5. | <p><u>WHEN WAIT UNTIL THE DEVICE HAS COOLED</u></p> <p>The device should be moved from the overhead bin to prevent a hidden fire from potentially developing. The device can be moved. <u>Cabin crew may move the device with caution following a certain period, once it has cooled down and if there is no evidence of smoke, heat, or if there is a reduction in the crackling or hissing sound usually associated with a lithium battery fire (this may take approximately 15 minutes).</u> The waiting period may vary based on the device and its size. The different circumstances (e.g. types of devices, phase of flight) should be addressed in the operator's training programme.</p> |

| Amplified procedures for overhead bin battery / portable electronic device (PED) fire / smoke | |
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| <i>Step</i> | <i>Cabin crew action</i> |
| <u>6.</u> | <p><u>OBTAIN A SUITABLE EMPTY CONTAINER</u></p> <p>A suitable empty container, such as <u>may include</u> a pot, jug, galley unit or toilet waste bin, must. <u>When selecting a suitable empty container, cabin crew should consider the size of the device to be submerged in it. Cabin crew should select a container which can be filled with enough water or non-flammable liquid to completely submerge the device. It is important to wear available protective equipment (e.g. protective breathing equipment, fire gloves), when moving any device involved in a fire. Once the device is completely submerged, the container used must be stowed and, if possible, secured to prevent spillage.</u></p> <p><u>Note.— If the aircraft is equipped with a fire containment equipment and the device fits inside it, cabin crew should use the equipment following the manufacturer's instructions.</u></p> |
| <u>7.</u> | <p><u>FILL THE CONTAINER WITH ENOUGH WATER (OR OTHER NON-FLAMMABLE LIQUID) TO SUBMERGE THE DEVICE</u></p> <p><u>Cabin crew should fill the suitable empty container with enough water or non-flammable liquid to completely submerge the device.</u></p> |
| <u>8.</u> | <p><u>PLACE THE DEVICE IN THE CONTAINER AND COMPLETELY SUBMERGE IN WATER (OR OTHER NON-FLAMMABLE LIQUID), USING PROTECTIVE EQUIPMENT</u></p> <p><u>It is important that cabin crew wear protective equipment (e.g. protective breathing equipment, protective gloves), when moving any device involved in a fire.</u></p> |
| <u>9.</u> | <p><u>STOW AND SECURE (IF POSSIBLE) THE CONTAINER TO PREVENT SPILLAGE</u></p> <p><u>Once the device is completely submerged, cabin crew should stow the container and, if possible, secured to prevent spillage.</u></p> |
| <u>510.</u> | <p><u>MONITOR THE DEVICE AND THE SURROUNDING AREA FOR THE REMAINDER OF THE FLIGHT</u></p> <p>Monitor <u>Cabin crew should monitor</u> the device and the surrounding area for the remainder of the flight to verify that the device does not pose further hazard.</p> |

| Amplified procedures for overhead bin battery / portable electronic device (PED) fire / smoke | |
|---|--|
| Step | Cabin crew action |
| 611. | <p><u>APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION</u></p> <p>Upon arrival, <u>cabin crew should</u> apply the operator's post-incident procedures. These may include identifying to ground personnel where the item is stowed and providing all information about the item.</p> <p><u>CompleteCrew should complete</u> the required documentation, as per operator procedures, so that the operator is notified of the event, proper maintenance action is undertaken and the emergency response kit or any aircraft equipment used is replenished or replaced, if applicable.</p> |

3.4.3 Overheated battery / electrical smell involving a portable electronic device (PED) — no visible fire or smoke

| Amplified procedures for overheated battery / electrical smell involving a portable electronic device (PED) — no visible fire or smoke | |
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| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | <p>IDENTIFY THE ITEM</p> <p><u>Cabin crew should identify the source of overheat or electrical smell, or Ask the passenger concerned to identify the item.</u></p> |
| 2. | <p>INSTRUCT THE PASSENGER TO TURN OFF THE DEVICE IMMEDIATELY</p> <p>It is important to<u>that cabin crew</u> instruct the passenger to turn off the device immediately, <u>if possible and safe to do so, to remove the power supply and prevent further overheating or a fire.</u></p> |
| 3. | <p>REMOVE POWER</p> <p><u>a) Disconnect the device from the power supply, if safe to do so.</u> <u>b) Turn off in-seat power, if applicable.</u> <u>c) Verify that power to the remaining electrical outlets remains off, if applicable.</u> <u>d) Verify that the device remains off for the remainder of the flight.</u></p> <hr/> <p>The following is moved from the end of Step 3:</p> <p>Caution: <u>Do not attempt to remove the battery from the device.</u></p> <p>It is important to<u>that cabin crew</u> instruct the passenger or crew member to disconnect the device from the power supply, if it is deemed safe to do so. A battery has a higher likelihood of catching fire due to overheating during or immediately following a charging cycle, although the effects may be delayed for some period of time. By removing the external power supply from the device, it will be assured that additional energy is not being fed to the battery to promote a fire.</p> <p><u>Cabin crew should turn off the in-seat power to the remaining electrical outlets until it can be assured that a malfunctioning aircraft system does not contribute to additional failures of the passengers' portable electronic devices.</u></p> <p><u>Cabin crew should visually check that power to the remaining electrical outlets remains off until the aircraft's system can be determined to be free of faults, if the device was previously plugged in. Depending on the aircraft type, in-seat power may have to be turned off by the flight crew.</u></p> |

| Amplified procedures for overheated battery / electrical smell involving a portable electronic device (PED) — no visible fire or smoke | |
|---|--|
| <i>Step</i> | <i>Cabin crew action</i> |
| | <p>The removal of power may occur simultaneously to other cabin crew actions (e.g. obtaining water to douse the device). Depending on the aircraft type, in-seat power may have to be turned off by the flight crew members.</p> <p>It is important to <u>that cabin crew</u> verify that the device remains turned off for the duration of the flight.</p> <p>Caution: Do not attempt to remove the battery from the device.</p> |
| 4. | <p>INSTRUCT THE PASSENGER TO KEEP THE DEVICE VISIBLE AND MONITOR CLOSELY</p> <p>The device must<u>should</u> remain visible (not stowed such as in baggage or seat pocket or on a person (pocket)) and should be monitored closely. Unstable batteries may ignite even after the device is turned off. Verify<u>Cabin crew should verify</u> that the device is stowed <u>only</u> for landing.</p> |
| 5. | <p><u>APPLY PROCEDURES FOR BATTERY / PED FIRE / SMOKE IF SMOKE OR FLAMES APPEAR</u></p> <p>If smoke or flames appear, apply the BATTERY / PORTABLE ELECTRONIC DEVICE (PED) FIRE / SMOKE procedures (see 3.4.1).</p> |
| 6. | <p><u>APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION</u></p> <p>Upon arrival, <u>cabin crew should</u> apply the operator's post-incident procedures. These may include identifying to ground personnel where the item is stowed and providing all information about the item.</p> <p><u>Crew should</u> Ccomplete the required documentation, as per operator procedures, so that the operator is notified of the event, proper maintenance action is undertaken and the emergency response kit or any aircraft equipment used is replenished or replaced, if applicable.</p> |

3.4.4 PED ~~inadvertently crushed or damaged in electrically adjustable~~ fallen into / trapped in a passenger seat

The following paragraph is moved to Step 3:

~~Due to the design of some electrically adjustable passenger seats, a PED can slip under a seat covering and/or cushion, behind an armrest or down the side of a seat. Inadvertent crushing of the device poses a fire hazard.~~

| Amplified procedures for PED inadvertently crushed or damaged in electrically adjustable <u>fallen into / trapped in a passenger seat</u> | |
|---|--|
| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | <p>Moved to Step 3:</p> <p>NOTIFY THE PILOT-IN-COMMAND / OTHER CABIN CREW MEMBERS</p> <p>Any occurrence concerning a fire hazard in the cabin should be notified immediately to the pilot-in-command who should be kept informed of all actions taken and of the effect. It is essential that the cabin crew and the flight crew coordinate their actions and that each is kept fully informed of the other's actions and intentions.</p> |
| 21. | <p>OBTAIN INFORMATION FROM <u>THE PASSENGER BY ASKING THE PASSENGER</u></p> <p>a) Ask the passenger to identify the item. b) Ask where the passenger suspects that the item may have dropped or slipped into. c) Ask if the seat was moved since misplacing the item.</p> <p>Cabin crew should Ask the passenger concerned to identify the item, and where the passenger suspects it may have dropped or slipped into, and if the passenger has moved the seat since misplacing the item.</p> |
| 32. | <p>RETRIEVE AND USE PROTECTIVE EQUIPMENT, <u>IF AVAILABLE</u></p> <p>If available, Cabin crew members should don fire protective gloves before trying to retrieve the item.</p> |
| 3. | <p>Moved from Step 1:</p> <p>NOTIFY THE PILOT-IN-COMMAND / OTHER CABIN CREW MEMBERS</p> <p>The following is moved from before this table:</p> <p>Due to the design of some electrically adjustable passenger seats, a PED can slip under a seat covering and/or cushion, behind an armrest or down the side of a seat. Inadvertent crushing of the device poses a fire hazard.</p> <p>Moved from Step 1:</p> <p>Any occurrence concerning a fire hazard in the cabin should be notified immediately to the pilot-in-command who should be kept informed of all actions taken and of the effect. It is essential that the cabin crew and the flight crew coordinate their actions and that each is kept fully informed of the other's actions and intentions.</p> |

| Amplified procedures for PED inadvertently crushed or damaged in electrically adjustable <u>fallen into / trapped in a passenger seat</u> | |
|---|---|
| Step | <i>Cabin crew action</i> |
| 4. | <p><u>RETRIEVE THE ITEM IF SAFE TO DO SO</u></p> <p><u>Caution:</u> <u>Do not move the seat electrically or mechanically when attempting to retrieve the item.</u></p> <p>To prevent crushing of the PED and reduce the potential fire hazard to the device and the surrounding area, cabin crew members and/or the passengers must <u>should</u> not use the electrical or mechanical seat functions in an attempt to retrieve the item. <u>Cabin crew should</u> Mmove the passenger and, if applicable, the passenger(s) seated next to the affected seat from the area, to facilitate the search. Do <u>Cabin crew should</u> not move the seat. <u>If the cabin crew is unable to retrieve the item without moving the seat, it may need to be retrieved by personnel on the ground, after landing at the next destination. If the item cannot be retrieved, the cabin crew member is unable to retrieve the item, it may be necessary to</u> should <u>should</u> move the passenger to another seat, if available.</p> <p><u>Cabin crew should turn off the individual in-seat power, if possible, to do so. Depending on the aircraft type, in-seat power may have to be turned off by the flight crew.</u></p> |
| 5. | <p><u>APPLY PROCEDURES FOR BATTERY / PED FIRE / SMOKE IF SMOKE OR FLAMES APPEAR</u></p> <p>If smoke or flames appear, apply the BATTERY / PORTABLE ELECTRONIC DEVICE (PED) FIRE / SMOKE procedures (see 3.4.1).</p> |
| <u>6.</u> | <p><u>MONITOR THE SEAT AND THE SURROUNDING AREA FOR THE REMAINDER OF THE FLIGHT</u></p> <p><u>Cabin crew should monitor the seat and the surrounding area for the remainder of the flight to verify that the device does not pose further hazard.</u></p> |
| <u>6-7.</u> | <p><u>APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION</u></p> <p>Upon arrival, <u>cabin crew should</u> apply the operator's post-incident procedures. These may include identifying to ground personnel where the item is located and providing all information about the item.</p> <p><u>Crew should</u> Ccomplete the required documentation, as per operator procedures, so that the operator is notified of the event, proper maintenance action is undertaken and <u>the emergency response kit or</u> any aircraft equipment used is replenished or replaced, if applicable.</p> |

3.4.5 Battery / portable electronic device (PED) fire / smoke on the flight deck

| <u>Amplified procedures for battery / portable electronic device (PED) fire / smoke on the flight deck</u> | |
|---|--|
| <u>Step</u> | <u>Cabin crew action</u> |
| <u>1.</u> | <p><u>RECOGNIZE SIGNAL FOR FIRE / SMOKE ON THE FLIGHT DECK</u></p> <p><u>a) Receive call out from the flight deck (e.g. “back up assistance P-E-D!”).</u> <u>b) Retrieve and use protective equipment, as applicable to the situation.</u> <u>c) Obtain the appropriate fire extinguisher.</u> <u>d) Enter the flight deck.</u></p> <p><u><i>Note.— The first cabin crew member ready to act should enter the flight deck.</i></u></p> <p><u>The flight crew’s main responsibility during any occurrence is to maintain control of the aircraft. Therefore, they may call upon the cabin crew to assist in the event of fire / smoke on the flight deck. As notifying the cabin crew of the fire / smoke occurrence on the flight deck by interphone may delay the response, the use of the public address (PA) system is considered the preferred method of notification. The flight crew should use phraseology that clearly explains the type of emergency situation to the cabin crew without creating panic amongst the passengers. The flight crew should use specific sentence, such as “back up assistance P-E-D!”, over the PA system to alert the cabin crew. The first cabin crew member who is ready to act should enter the flight deck.</u></p> <p><u>It is important that cabin crew use protective equipment (e.g. protective breathing equipment, protective gloves) when fighting a fire. Cabin crew should use firefighting equipment to extinguish the fire and prevent its spread to additional flammable materials.</u></p> |

| <u>Amplified procedures for battery / portable electronic device (PED) fire / smoke on the flight deck</u> | |
|---|--|
| <u>Step</u> | <u>Cabin crew action</u> |
| <u>2.</u> | <p><u>APPLY FIREFIGHTING PROCEDURE</u></p> <p><u>a) If the item is on fire, in coordination with the flight crew, extinguish the fire.</u> <u>b) Once the fire has been extinguished or the device is not on fire (it may emit visible smoke or be overheated), remove it from the flight deck, if possible.</u> <u>c) If the device cannot be moved, pour water (or other non-flammable liquid) on it.</u></p> <p><u>The joint action between the flight crew and the cabin crew depends on the location and type of the affected device. The flight crew would normally have started the appropriate emergency procedures to deal with the fire before the arrival of the cabin crew, including removing the device from any power source. In that case, cabin crew should join the firefighting actions according to the situation. When the decision is taken to fight the fire on the flight deck, in coordination with the flight crew, the cabin crew should use firefighting equipment to extinguish the fire and prevent its spread to additional flammable materials. It is important that cabin crew wear protective equipment (e.g. protective breathing equipment, protective gloves) when fighting a fire in a confined space, such as the flight deck.</u></p> <p><u>Caution:</u> <u>In certain firefighting situations (e.g. to prevent flight crew incapacitation or a loss of control in-flight), crew may assess and deem it necessary to remove the device immediately from the flight deck even if it is still emitting smoke or flames are present. In order to avoid injury, cabin crew should use caution and only attempt this action after donning protective equipment. In such case, cabin crew should apply the firefighting procedure in 3.4.1, after the device is removed from the flight deck.</u></p> |
| <u>3</u> | <p><u>REMOVE THE DEVICE FROM THE FLIGHT DECK</u></p> <p><u>Once the fire has been extinguished or the device is no longer on fire (even if it is still emitting visible smoke or feels overheated), cabin crew should remove it from the flight deck, if possible. Minimizing the spreading of smoke and fumes in the flight deck is critical for the continued safe operation of the aircraft. If it cannot be moved, cabin crew should use water (or other non-flammable liquid) to cool a battery that has ignited to prevent the spread of heat to other cells in the battery.</u></p> <p><u>After the device is removed from the flight deck, the cabin crew should apply the firefighting procedure, as described in 3.4.1, if it is still on fire. Water (or other non-flammable liquid) should be used to cool a battery that has ignited to prevent the spread of heat to other cells in the battery.</u></p> |
| <u>4</u> | <p><u>CLOSE THE FLIGHT DECK DOOR</u></p> <p><u>The flight deck door should be maintained closed once the device is removed from the flight deck. Crew communication and coordination are of utmost importance. The use of the interphone is the primary means of communication unless that system fails.</u></p> |

| <u>Amplified procedures for battery / portable electronic device (PED) fire / smoke on the flight deck</u> | |
|---|---|
| <u>Step</u> | <u>Cabin crew action</u> |
| <u>5</u> | <u>APPLY PROCEDURES FOR BATTERY / PED FIRE / SMOKE IF SMOKE OR FLAMES APPEAR</u> <u>After the device is removed from the flight deck, apply the BATTERY / PORTABLE ELECTRONIC DEVICE (PED) FIRE / SMOKE procedures (see 3.4.1).</u> |
| <u>6.</u> | <u>APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION</u> <u>Upon arrival, cabin crew should apply the operator's post-incident procedures. These may include identifying to ground personnel where the item is stowed and providing all information about the item. Crew should complete the required documentation, as per operator procedures, so that the operator is notified of the event, proper maintenance action is undertaken and the emergency response kit or any aircraft equipment used is replenished or replaced, if applicable.</u> |

3.4.56 Fire involving dangerous goods

| Amplified procedures for fire involving dangerous goods | |
|---|---|
| Step | Cabin crew action |
| 1. | <p>IDENTIFY THE ITEM</p> <p><u>Cabin crew should</u> ask the passenger concerned to identify the item. The passenger may be able to give some guidance on the hazard(s) involved and how these could be dealt with. If the passenger can identify the item, refer to Section 4 of this document for the appropriate emergency response drill.</p> <p>It may not be possible <u>for cabin crew</u> to identify the item right away, especially if the source of the fire is unknown or the item is not readily accessible. In this case, <u>cabin crew should apply</u> firefighting procedures should be applied as a first step <u>(Step 2)</u>. Once it is possible to do so, and then attempt to identify the item after the fire is under control (Step 1). If the item is contained in baggage, the crew's actions would be similar to the actions for an item that is visible or readily accessible.</p> <p>Caution: In order to avoid injury from a flash fire, it is not recommended to open the affected baggage when there is any indication of smoke or flames. However, in certain situations cabin crew members may assess and deem it necessary to slightly open baggage to allow entry of the extinguishing agent and non-flammable liquid. This should be done with extreme caution and only after donning appropriate protective equipment available on the aircraft.</p> |
| 2. | <p>APPLY THE FIREFIGHTING PROCEDURE</p> <p><u>a) Apply communication procedures.</u> <u>b) Use appropriate firefighting equipment and protective equipment, as required.</u> <u>c) Fight fire.</u> <u>d) Manage passengers and cabin, as required.</u></p> <p><u>During</u> Any occurrence concerning a fire in the cabin, <u>the cabin crew</u> should be notified immediately to <u>notify</u> the pilot-in-command immediately who should be kept and keep the flight crew informed of all actions taken and of the effect. It is essential that the cabin crew and the flight crew coordinate their actions and that each is kept fully informed of the other's actions and intentions.</p> <hr/> <p>The following is moved from the last paragraph of this step</p> <hr/> <p>Minimizing the spreading of smoke and fumes into the flight deck is critical for the continued safe operation of the aircraft, therefore it is essential to keep the flight deck door closed at all times. Crew communication and coordination are of utmost importance. The use of the interphone is the primary means of communication <u>between crew members</u>, unless the interphone system fails.</p> |

| Amplified procedures for fire involving dangerous goods | |
|--|--|
| Step | <i>Cabin crew action</i> |
| | <p>Appropriate firefighting and emergency procedures must <u>should</u> be used to deal with any fire. In a multi-cabin crew operation, the actions detailed in the firefighting procedure should be conducted simultaneously. On aircraft operated with only one cabin crew member, the aid of a passenger should be sought in dealing with the situation. <u>Cabin crew should use firefighting equipment to extinguish the fire and prevent its spread to additional flammable materials.</u></p> <p>In general, <u>cabin crew should not use</u> water should not be used on a spillage or when fumes are present since it may spread the spillage or increase the rate of fuming. Consideration should also be given to the possible presence of electrical components when using water extinguishers. <u>It is important that cabin crew use protective equipment (e.g. protective breathing equipment, protective gloves) when fighting a fire.</u></p> <p>If fire develops, cabin crew should take prompt action to move passengers away from the area involved and, if necessary, provide wet towels or cloths and give instructions for passengers to breathe through them.</p> <div style="text-align: center; border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>The following is moved to the end of the first paragraph after the letter list of this step.</p> </div> <p>Minimizing the spreading of smoke and fumes into the flight deck is critical for the continued safe operation of the aircraft, therefore it is essential to keep the flight deck door closed at all times. Crew communication and coordination are of utmost importance. The use of the interphone is the primary means of communication unless the interphone system fails.</p> <p>Caution: <u>In certain firefighting situations, cabin crew may assess and deem it necessary to slightly open baggage to allow entry of the extinguishing agent and non-flammable liquid. In order to avoid injury from a flash fire, cabin crew should use caution when opening the affected baggage when there is any indication of smoke or flames. This should only be done after donning appropriate protective equipment.</u></p> |
| 3. | <p>MONITOR FOR ANY <u>INDICATION OF REIGNITION</u></p> <p>Monitor the area regularly to identify if there is any indication that a fire hazard may still exist. If there is any smoke or indication of fire, continue to apply the firefighting procedure. If smoke or flames reappear, cabin crew should repeat Step 2.</p> |
| 4. | <p><u>APPLY PROCEDURES FOR SPILLAGE OR LEAKAGE OF DANGEROUS GOODS, IF REQUIRED, ONCE THE FIRE HAS BEEN EXTINGUISHED</u></p> <p>In the event of a fire involving dangerous goods, <u>cabin crew may need to apply</u> the SPILLAGE OR LEAKAGE INVOLVING DANGEROUS GOODS procedures (see 3.4.67) may need to be applied once the fire has been extinguished.</p> |

| Amplified procedures for fire involving dangerous goods | |
|---|--|
| Step | Cabin crew action |
| 5. | <p><u>APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION</u></p> <p>Upon arrival, <u>cabin crew should</u> apply the operator's post-incident procedures. These may include identifying to ground personnel where the item is stowed and providing all information about the item.</p> <p><u>Crew should</u> complete the required documentation, as per operator procedures, so that the operator is notified of the event, proper maintenance action is undertaken and the emergency response kit or any aircraft equipment used is replenished or replaced, if applicable.</p> |

3.4.67 Spillage or leakage of dangerous goods

| Amplified procedures for spillage or leakage of dangerous goods | |
|--|---|
| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | <p>NOTIFY THE PILOT-IN-COMMAND / OTHER CABIN CREW MEMBERS</p> <p>During any incident occurrence concerning dangerous goods, the cabin crew should be notified immediately to notify the pilot-in-command immediately who should be kept and keep the flight crew informed of all actions taken and of their the effect. It is essential that the cabin crew and the flight crew coordinate their actions and that each is kept fully informed of the other's actions and intentions.</p> <p>Minimizing the spreading of smoke and fumes into the flight deck is critical for the continued safe operation of the aircraft, therefore it is essential to keep the flight deck door closed at all times. Crew communication and coordination are of utmost importance. The use of the interphone is the primary means of communication between crew members, unless the interphone system fails.</p> |
| 2. | <p>IDENTIFY THE ITEM</p> <p>Cabin crew should ask the passenger concerned to identify the item and indicate its potential hazards. The passenger may be able to give some guidance on the hazard(s) involved and how these could be dealt with. If the passenger can identify the item, refer to Section 4 of this document for the appropriate emergency response drill.</p> <p>On aircraft with only one cabin crew member, consult with the pilot-in-command as to whether the aid of a passenger should be sought in dealing with the incident.</p> |
| 3. | <p>COLLECT EMERGENCY RESPONSE KIT OR OTHER USEFUL ITEMS</p> <p>Cabin crew should collect emergency response kit, if provided, or collect for use in dealing with the spillage or leakage:</p> <ul style="list-style-type: none"> —a) a A supply of paper towels or newspapers or other absorbent paper or absorbent fabric (e.g. seat cushion covers, head rest protectors); —b) even Protective gloves or fire-resistant gloves, if available; —c) a At least two large polyethylene waste bin bags; and —d) a At least three smaller polyethylene bags, such as those used for duty-free or bar sales or, if none available, airsickness bags. |

| Amplified procedures for spillage or leakage of dangerous goods | |
|--|---|
| <i>Step</i> | <i>Cabin crew action</i> |
| 4. | <p><u>DON RUBBER GLOVES AND SMOKE HOOD</u> <u>RETRIEVE AND USE PROTECTIVE EQUIPMENT</u></p> <p><u>It is important that cabin crew use protective equipment (e.g. protective breathing equipment, protective gloves) when handling a spillage or leakage of dangerous goods.</u></p> <p><u>The Cabin crew should always protect their</u> hands should always be protected before touching suspicious packages or items. Fire-resistant gloves or oven gloves covered by polyethylene bags are likely to give suitable protection.</p> <p>Gas-tight breathing equipment should always be worn when attending to an incident involving smoke, fumes or fire.</p> |
| 5. | <p>MOVE PASSENGERS AWAY FROM AREA AND DISTRIBUTE WET TOWELS OR CLOTHS</p> <p>The use of therapeutic oxygen bottles or the passenger drop-out oxygen system to assist passengers in a smoke- or fume-filled passenger cabin should not be considered since considerable quantities of fumes or smoke would be inhaled through the valves or holes in the masks. A more effective aid to passengers in a smoke- or fume-filled environment would be the use of a wet towel or cloth held over the mouth and nose. A wet towel or cloth aids in filtering and is more effective at doing this than a dry towel or cloth. Cabin crew should take prompt action if smoke or fumes develop and move passengers away from the area involved and, if possible, provide wet towels or cloths and give instructions to breathe through them.</p> |
| 6. | <p>PLACE DANGEROUS GOODS ITEM IN POLYETHYLENE BAGS</p> <p><u>Note.</u>—In the case of a spill of known or suspected dangerous goods in powder form, <u>cabin crew should:</u></p> <ul style="list-style-type: none"> —a) <u>L</u>leave everything undisturbed.; —b) <u>d</u>o not use fire agent or water.; —c) <u>C</u>over area with polyethylene or other plastic bags and blankets.; —d) <u>K</u>keep area isolated until after landing. |

| Amplified procedures for spillage or leakage of dangerous goods | |
|--|---|
| Step | <i>Cabin crew action</i> |
| | <p>With emergency response kit</p> <p>If it is absolutely certain that the item will not create a problem, the decision may be made not to move it. In most circumstances, however, it will be better to move the item, and this should be done as suggested below. <u>Cabin crew should</u> <u>P</u>lace the item in a polyethylene bag as follows:</p> <ul style="list-style-type: none"> —a) <u>P</u>repare two bags by rolling up the sides and placing them on the floor. —b) <u>P</u>lace the item inside the first bag with the closure of the item, or the point from which it is leaking from its container, at the top. —c) TTake off the rubber gloves while avoiding skin contact with any contamination on them. —d) <u>P</u>lace the rubber gloves in the second bag. —e) <u>C</u>lose the first bag while squeezing out the excess air. —f) TWist the open end of the first bag and use a bag tie to tie it sufficiently tight to be secure but not so tight that pressure equalization cannot take place. —g) <u>P</u>lace the first bag (containing the item) in the second bag, which already contains the rubber gloves and secure the open end in the same manner as that used for the first bag. <p>With no emergency response kit</p> <p><u>Cabin crew should</u> <u>P</u>ick up the item and place it in a polyethylene bag. <u>They should</u> <u>E</u>nsure the receptacle containing the dangerous goods is kept upright or the area of leakage is at the top. Using paper towels, newspaper, etc., <u>cabin crew should</u> mop up the spillage, after having ascertained there will be no reaction between what is to be used to mop up and the dangerous goods. <u>They should</u> <u>P</u>lace the soiled towels, etc., in another polyethylene bag. <u>Cabin crew should</u> <u>P</u>lace the gloves and bags used to protect the hands either in a separate small polyethylene bag or with the soiled towels. If extra bags are not available, <u>cabin crew should</u> place the towels, gloves, etc., in the same bag as the item. <u>They should</u> <u>E</u>xpel excess air from the bags and close tightly so as to be secure but not so tight that pressure equalization cannot take place.</p> |
| 7. | <p>STOW POLYETHYLENE BAGS</p> <p>If there is a catering or bar box on board, <u>cabin crew should</u> empty any contents and place the box on the floor, with the door upward. <u>They should</u> <u>P</u>lace the bag(s) containing the item and any soiled towels, etc., in the box and close the door. <u>Cabin crew should</u> Take the box or, if there is no box, the bag(s) to a position as far away as possible from the flight deck and passengers. If a galley or toilet is fitted, <u>cabin crew should</u> consider taking the box or bag(s) there, unless it is close to the flight deck. <u>Cabin crew should</u> <u>U</u>se a rear galley or toilet wherever possible, but do <u>should</u> not place the box or bag(s) against the pressure bulkhead or fuselage wall. If a galley is used, the box or bag(s) can be stowed in an empty waste bin container. If a toilet is used, the box can be placed on the floor or the bag(s) stowed in an empty waste container. The toilet door should be locked from the outside. In a pressurized aircraft, if a toilet is used, any fumes will be vented away from passengers. However, if the aircraft is unpressurized there may not be positive pressure in a toilet to prevent fumes from entering the passenger cabin.</p> |

| Amplified procedures for spillage or leakage of dangerous goods | |
|--|---|
| <i>Step</i> | <i>Cabin crew action</i> |
| | <p><u>Cabin crew should E</u>nsure when moving a box that the opening is kept upward or when moving a bag that either the receptacle containing the dangerous goods is kept upright or the area of leakage is kept at the top.</p> <p>Wherever the box or bag(s) have been located, <u>cabin crew should</u> wedge them firmly in place to prevent them from moving and to keep the item upright. <u>They should E</u>nsure that the position of the box or bags will not impede disembarkation from the aircraft.</p> |
| 8. | <p>TREAT AFFECTED SEAT CUSHIONS / COVERS IN THE SAME MANNER AS DANGEROUS GOODS ITEM</p> <p><u>Cabin crew should remove S</u>eat cushions, seat backs or other furnishings which have been contaminated by a spillage should be removed from their fixtures and placed <u>them</u> in a large bin bag or other polyethylene bag, together with any bags used initially to cover them. They <u>Cabin crew</u> should be stowed <u>them</u> away in the same manner as the dangerous goods item causing the incident.</p> |
| 9. | <p>COVER SPILLAGE ON CARPET / FLOOR</p> <p><u>Cabin crew should C</u>over any spillage on the carpet or furnishings with a waste bag or other polyethylene bags, if available. If not, <u>cabin crew should</u> use airsickness bags opened out so that the plastic side covers the spillage or use the plastic covered emergency information cards.</p> <p><u>If possible, cabin crew should roll up C</u>arpet which has been contaminated by a spillage and which is still causing fumes despite being covered, should be rolled up, if possible, and placed <u>it</u> in a large bin bag or other polyethylene bag. It <u>Cabin crew</u> should be placed <u>it</u> in a waste bin and stowed <u>it</u>, when possible, either in the rear toilet or rear galley. If the carpet cannot be removed it should remain covered by a large bin bag or polyethylene bags, etc., and additional bags should be used to reduce the fumes.</p> |
| 10. | <p><u>REGULARLY INSPECT</u> <u>MONITOR</u> ITEMS STOWED AWAY / CONTAMINATED FURNISHINGS</p> <p><u>Cabin crew should monitor A</u>ny dangerous goods, contaminated furnishings or equipment which have been removed and stowed away or covered for safety should be subject to regular inspection.</p> |

| Amplified procedures for spillage or leakage of dangerous goods | |
|---|---|
| Step | Cabin crew action |
| 11. | <p><u>APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION</u></p> <p>Upon arrival, <u>cabin crew should</u> apply the operator's post-incident procedures. These may include identifying to ground personnel where the item is stowed and providing all information about the item.</p> <p><u>Crew should</u> <u>complete</u> the required documentation, as per operator procedures, so that the operator is notified of the event, proper maintenance action is undertaken and the emergency response kit or any aircraft equipment used is replenished or replaced, if applicable.</p> |

APPENDIX C

CLEAN VERSION OF PROPOSED AMENDMENT TO THE EMERGENCY RESPONSE GUIDANCE FOR AIRCRAFT INCIDENTS INVOLVING DANGEROUS GOODS

Section 3

EXAMPLES OF DANGEROUS GOODS INCIDENT PROCEDURES

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3.3 CABIN CREW PROCEDURES FOR DANGEROUS GOODS INCIDENTS IN THE PASSENGER CABIN DURING FLIGHT

This section consists of cabin crew procedures for dangerous goods incidents in the passenger cabin during flight involving:

- a) battery / portable electronic device (PED) fire / smoke (see 3.3.1);
- b) overhead bin battery / portable electronic device (PED) fire / smoke (see 3.3.2);
- c) overheated battery / electrical smell involving a portable electronic device (PED) — no visible fire or smoke (see 3.3.3);
- d) PED fallen into / trapped in a passenger seat (see 3.3.4);
- e) battery / portable electronic device (PED) fire / smoke on the flight deck (see 3.3.5);
- f) battery / portable electronic device (PED) fire / smoke when fire containment equipment is carried on board aircraft (see 3.3.6);
- g) fire involving dangerous goods (see 3.3.7); and
- h) spillage or leakage of dangerous goods (see 3.3.8)

Note. 1— Although this guidance material presents sequences of tasks, some of these actions occur simultaneously when carried out by crew members in a multi-cabin crew operation.

Note. 2— The operator should ensure its aircraft are equipped with appropriate firefighting and protective equipment for use by crew members.

Note. 3— In a single cabin crew member operation, some of the actions listed in this section should be carried out with the assistance of other persons (e.g. able-bodied passengers). The operating cabin crew member should assign those persons to communicate with the flight crew and provide back-up while the cabin crew member fights the fire.

Note. 4— Although this guidance refers to passenger PEDs, procedures are also applicable to crew member PEDs.

3.3.1 Battery / portable electronic device (PED) fire / smoke

| Procedures for battery / portable electronic device (PED) fire / smoke | |
|---|---|
| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | IDENTIFY THE ITEM |
| 2. | APPLY FIREFIGHTING PROCEDURE |
| 3. | REMOVE POWER |
| 4. | LEAVE THE DEVICE IN ITS PLACE AND POUR WATER (OR OTHER NON-FLAMMABLE LIQUID) ON THE DEVICE |
| 5. | MONITOR FOR ANY INDICATION OF REIGNITION AND CONTINUE TO POUR WATER (OR OTHER NON-FLAMMABLE LIQUID) ON THE DEVICE |
| 6. | WAIT UNTIL THE DEVICE HAS COOLED |
| 7. | OBTAIN A SUITABLE EMPTY CONTAINER |
| 8. | FILL THE CONTAINER WITH ENOUGH WATER (OR OTHER NON-FLAMMABLE LIQUID) TO SUBMERGE THE DEVICE |
| 9. | PLACE THE DEVICE IN THE CONTAINER AND COMPLETELY SUBMERGE IN WATER (OR OTHER NON-FLAMMABLE LIQUID), USING PROTECTIVE EQUIPMENT |
| 10. | STOW AND SECURE (IF POSSIBLE) THE CONTAINER TO PREVENT SPILLAGE |
| 11. | MONITOR THE DEVICE AND THE SURROUNDING AREA FOR THE REMAINDER OF THE FLIGHT |
| 12. | APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION |

3.3.2 Overhead bin battery / portable electronic device (PED) fire / smoke

| Overhead bin battery / portable electronic device (PED) fire / smoke | |
|---|---|
| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | APPLY FIREFIGHTING PROCEDURE |
| 2. | IDENTIFY THE ITEM |
| 3. | LEAVE THE DEVICE IN ITS PLACE AND POUR WATER (OR OTHER NON-FLAMMABLE LIQUID) ON THE DEVICE (BAGGAGE) |
| 4. | MONITOR FOR ANY INDICATION OF REIGNITION AND CONTINUE TO POUR WATER (OR OTHER NON-FLAMMABLE LIQUID) ON THE DEVICE |
| 5. | WAIT UNTIL THE DEVICE HAS COOLED |
| 6. | OBTAIN A SUITABLE EMPTY CONTAINER |
| 7. | FILL THE CONTAINER WITH ENOUGH WATER (OR OTHER NON-FLAMMABLE LIQUID) TO SUBMERGE THE DEVICE |
| 8. | PLACE THE DEVICE IN THE CONTAINER AND COMPLETELY SUBMERGE IN WATER (OR OTHER NON-FLAMMABLE LIQUID), USING PROTECTIVE EQUIPMENT |
| 9. | STOW AND SECURE (IF POSSIBLE) THE CONTAINER TO PREVENT SPILLAGE |
| 10. | MONITOR THE DEVICE AND THE SURROUNDING AREA FOR THE REMAINDER OF THE FLIGHT |
| 11. | APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION |

3.3.3 Overheated battery / electrical smell involving a portable electronic device (PED) — no visible fire or smoke

| Procedures for overheated battery / electrical smell involving a portable electronic device (PED) — no visible fire or smoke | |
|---|--|
| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | IDENTIFY THE ITEM |
| 2. | INSTRUCT THE PASSENGER TO TURN OFF THE DEVICE IMMEDIATELY |
| 3. | REMOVE POWER |
| 4. | INSTRUCT THE PASSENGER TO KEEP THE DEVICE VISIBLE AND MONITOR CLOSELY |
| 5. | APPLY PROCEDURES FOR BATTERY / PED FIRE / SMOKE IF SMOKE OR FLAMES APPEAR |
| 6. | APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION |

3.3.4 PED fallen into / trapped in a passenger seat

| Procedures for PED fallen into / trapped in a passenger seat | |
|---|--|
| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | OBTAIN INFORMATION FROM THE PASSENGER BY ASKING THE PASSENGER |
| 2. | RETRIEVE AND USE PROTECTIVE EQUIPMENT |
| 3. | NOTIFY THE PILOT-IN-COMMAND / OTHER CABIN CREW MEMBERS |
| 4. | RETRIEVE THE ITEM IF SAFE TO DO SO |
| 5. | APPLY PROCEDURES FOR BATTERY / PED FIRE / SMOKE IF SMOKE OR FLAMES APPEAR |
| 6. | MONITOR THE SEAT AND THE SURROUNDING AREA FOR THE REMAINDER OF THE FLIGHT |
| 7. | APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION |

3.3.5 Battery / portable electronic device (PED) fire / smoke on the flight deck

| Procedures for battery / portable electronic device (PED) fire / smoke on the flight deck | |
|--|--|
| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | RECOGNIZE SIGNAL FOR FIRE / SMOKE ON THE FLIGHT DECK |
| 2. | APPLY FIREFIGHTING PROCEDURE |
| 3. | REMOVE THE DEVICE FROM THE FLIGHT DECK |
| 4. | CLOSE THE FLIGHT DECK DOOR |
| 5. | APPLY PROCEDURES FOR BATTERY / PED FIRE / SMOKE IF SMOKE OR FLAMES APPEAR |
| 6. | APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION |

3.3.6 Procedures for battery / portable electronic device (PED) fire / smoke when fire containment equipment is carried on board aircraft

Due to the quantity and diversity of existing fire containment products available to operators, it is not possible to design a procedure that encompasses all products. Therefore, this section provides overarching guidance for the use of such equipment. The operator should develop detailed procedures based on the original equipment manufacturer (OEM) instructions. If carried on board the aircraft, one of the fire containment equipment should be located in the flight deck. Additional fire containment should be carried in the cabin. They should be placed in a suitable location(s) that is easily accessible by the cabin crew. When operating multi-deck aircraft, the operator should assess the need for additional fire containment equipment on each deck. Cabin crew members should use the equipment following the OEM's instructions, which should be incorporated in the cabin crew operations manual (CCOM). Cabin crew members should be drilled and capable in the use of the specific fire containment equipment carried on board the operator's aircraft.

Note.— Fire containment equipment may not be suitable for all types of PEDs, due to size and shape.

3.3.7 Fire involving dangerous goods

| Procedures for fire involving dangerous goods | |
|--|--|
| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | IDENTIFY THE ITEM |
| 2. | APPLY FIREFIGHTING PROCEDURE |
| 3. | MONITOR FOR ANY INDICATION OF REIGNITION |
| 4. | APPLY PROCEDURES FOR SPILLAGE OR LEAKAGE OF DANGEROUS GOODS, IF REQUIRED, ONCE THE FIRE HAS BEEN EXTINGUISHED |
| 5. | APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION |

3.3.8 Spillage or leakage of dangerous goods

| Procedures for spillage or leakage of dangerous goods | |
|--|---|
| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | NOTIFY THE PILOT-IN-COMMAND / OTHER CABIN CREW MEMBERS |
| 2. | IDENTIFY THE ITEM |
| 3. | COLLECT EMERGENCY RESPONSE KIT OR OTHER USEFUL ITEMS |
| 4. | RETRIEVE AND USE PROTECTIVE EQUIPMENT |
| 5. | MOVE PASSENGERS AWAY FROM AREA AND DISTRIBUTE WET TOWELS OR CLOTHS |
| 6. | PLACE DANGEROUS GOODS ITEM IN POLYETHYLENE BAGS |
| 7. | STOW POLYETHYLENE BAGS |
| 8. | TREAT AFFECTED SEAT CUSHIONS / COVERS IN THE SAME MANNER AS DANGEROUS GOODS ITEM |
| 9. | COVER SPILLAGE ON CARPET / FLOOR |
| 10. | MONITOR ITEMS STOWED AWAY / CONTAMINATED FURNISHINGS |
| 11. | APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION |

3.4 AMPLIFIED CABIN CREW PROCEDURES FOR DANGEROUS GOODS INCIDENTS IN THE PASSENGER CABIN DURING FLIGHT

This section consists of amplified cabin crew procedures for dangerous goods incidents in the passenger cabin during flight involving:

- a) battery / portable electronic device (PED) fire / smoke (see 3.4.1);
- b) overhead bin battery / portable electronic device (PED) fire / smoke (see 3.4.2);
- c) overheated battery / electrical smell involving a portable electronic device (PED) — no visible fire or smoke (see 3.4.3);
- d) PED fallen into / trapped in a passenger seat (see 3.4.4);
- e) battery / portable electronic device (PED) fire / smoke on the flight deck (see 3.4.5);
- f) fire involving dangerous goods (see 3.4.6); and
- g) spillage or leakage of dangerous goods (see 3.4.7).

3.4.1 Battery / portable electronic device (PED) fire / smoke

| Amplified procedures for battery / portable electronic device (PED) fire / smoke | |
|---|---|
| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | <p>IDENTIFY THE ITEM</p> <p>It may not be possible for cabin crew to identify the item (source of fire or smoke) right away, especially if the fire has started in a seat pocket or the device is not readily accessible. In this case, cabin crew should apply firefighting procedures, as a first step (Step 2) and then attempt to identify the item (Step 1). If the item is contained in baggage, the crew's actions would be similar to the actions for a device that is visible or readily accessible.</p> |
| 2. | <p>APPLY FIREFIGHTING PROCEDURE</p> <p>a) Apply communication procedures. b) Use appropriate firefighting equipment and protective equipment, as required. c) Fight fire. d) Manage passengers and cabin, as required.</p> <p>During any occurrence concerning a fire in the cabin, the cabin crew should notify the pilot-in-command immediately and keep the flight crew informed of all actions taken and of the effect. It is essential that the cabin crew and the flight crew coordinate their actions and that each is kept fully informed of the other's actions and intentions. Minimizing the spreading of smoke and fumes into the flight deck is critical for the continued safe operation of the aircraft, therefore it is essential to keep the flight deck door closed at all times. Crew communication and coordination are of utmost importance. The use of the interphone is the primary means of communication between crew members, unless the interphone system fails.</p> <p>Appropriate firefighting procedures should be used to deal with any fire. Cabin crew should use firefighting equipment to extinguish the fire and prevent its spread to additional flammable materials. It is important that cabin crew use protective equipment (e.g. protective breathing equipment, protective gloves) when fighting a fire.</p> <p>If fire develops, cabin crew should take prompt action to move passengers away from the area involved and, if necessary, provide wet towels or cloths and give instructions for passengers to breathe through them.</p> <p>Caution: In certain firefighting situations cabin crew may assess and deem it necessary to slightly open baggage to allow entry of the extinguishing agent and non-flammable liquid. In order to avoid injury from a flash fire, cabin crew should use caution when opening the affected baggage when there is any indication of smoke or flames. This should only be done after donning appropriate protective equipment.</p> |

| Amplified procedures for battery / portable electronic device (PED) fire / smoke | |
|---|---|
| <i>Step</i> | <i>Cabin crew action</i> |
| 3. | <p>REMOVE POWER</p> <p>a) Disconnect the device from the power supply, if safe to do so. b) Turn off in-seat power, if applicable. c) Verify that power to the remaining electrical outlets remains off, if applicable.</p> <p>Caution: Do not attempt to remove the battery from the device.</p> <p>It is important that cabin crew instruct the passenger to disconnect the device from the power supply, if it is deemed safe to do so. A battery has a higher likelihood of catching fire due to overheating during or immediately following a charging cycle, although the effects may be delayed for some period of time. By removing the external power supply from the device, it will be assured that additional energy is not being fed to the battery to promote a fire.</p> <p>Cabin crew should turn off the in-seat power to the remaining electrical outlets until it can be assured that a malfunctioning aircraft system does not contribute to additional failures of the passengers' portable electronic devices.</p> <p>Cabin crew should visually check that power to the remaining electrical outlets remains off until the aircraft's system can be determined to be free of faults, if the device was previously plugged in. The removal of power may occur simultaneously to other cabin crew actions (e.g. obtaining water to pour on the device). Depending on the aircraft type, flight crew members may turn off in-seat power.</p> |

| Amplified procedures for battery / portable electronic device (PED) fire / smoke | |
|---|---|
| <i>Step</i> | <i>Cabin crew action</i> |
| 4. | <p>LEAVE THE DEVICE IN ITS PLACE AND POUR WATER (OR OTHER NON-FLAMMABLE LIQUID) ON THE DEVICE</p> <p>Cabin crew need to use water (or other non-flammable liquid) to cool a battery that has ignited to prevent the spread of heat to other cells in the battery. Cabin crew should pour liquid onto the device until signs of steam and crackling have subsided completely. Liquid may turn to steam when applied to the hot battery. The action of pouring water or non-flammable liquid on the device cools the battery cells and prevents thermal runaway.</p> <p>A battery involved in a fire can reignite and emit flames multiple times as heat is transferred to other cells in the battery. Therefore, cabin crew should monitor the device regularly to identify if there is any indication that a fire hazard may still exist. If there is any smoke or indication of fire, crew should pour more water (or other non-flammable liquid) on the device.</p> <p>Caution:</p> <ul style="list-style-type: none"> a) Do not attempt to pick up or move the device; batteries may explode or burst into flames without warning. The device should not be moved if displaying any of the following: flames/flaring, smoke, unusual sounds (such as crackling), debris, or shards of material separating from the device. b) Do not cover or enclose the device as it could cause it to overheat. c) Do not use ice or dry ice to cool the device. Ice or other materials insulate the device, increasing the likelihood that additional battery cells will reach thermal runaway. |
| 5. | <p>MONITOR FOR ANY INDICATION OF REIGNITION AND CONTINUE TO POUR WATER (OR OTHER NON-FLAMMABLE LIQUID) ON THE DEVICE</p> <p>If smoke or flames reappear, cabin crew should repeat Steps 2 and 4.</p> |
| 6. | <p>WAIT UNTIL THE DEVICE HAS COOLED</p> <p>Cabin crew may move the device with caution following a certain period, once it has cooled down and if there is no evidence of smoke, heat, or if there is a reduction in the crackling or hissing sound usually associated with a lithium battery fire (this may take approximately 15 minutes). The waiting period may vary based on the device and its size.</p> |
| 7. | <p>OBTAIN A SUITABLE EMPTY CONTAINER</p> <p>A suitable empty container may include a pot, jug, galley unit or toilet waste bin. When selecting a suitable empty container, cabin crew should consider the size of the device to be submerged in it. Cabin crew should select a container which can be filled with enough liquid to completely submerge the device.</p> <p><i>Note.— If the aircraft is equipped with a fire containment equipment and the device fits inside it, cabin crew should use the equipment following the manufacturer's instructions.</i></p> |

| Amplified procedures for battery / portable electronic device (PED) fire / smoke | |
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| <i>Step</i> | <i>Cabin crew action</i> |
| 8. | <p>FILL THE CONTAINER WITH ENOUGH WATER (OR OTHER NON-FLAMMABLE LIQUID) TO SUBMERGE THE DEVICE</p> <p>Cabin crew should fill the suitable empty container with enough water or non-flammable liquid to completely submerge the device.</p> |
| 9. | <p>PLACE THE DEVICE IN THE CONTAINER AND COMPLETELY SUBMERGE IN WATER (OR OTHER NON-FLAMMABLE LIQUID), USING PROTECTIVE EQUIPMENT</p> <p>It is important that cabin crew wear protective equipment (e.g. protective breathing equipment, protective gloves), when moving any device involved in a fire.</p> |
| 10. | <p>STOW AND SECURE (IF POSSIBLE) THE CONTAINER TO PREVENT SPILLAGE</p> <p>Once the device is completely submerged, cabin crew should stow the container and, if possible, secured to prevent spillage.</p> |
| 11. | <p>MONITOR THE DEVICE AND THE SURROUNDING AREA FOR THE REMAINDER OF THE FLIGHT</p> <p>Cabin crew should monitor the device and the surrounding area for the remainder of the flight to verify that the device does not pose further hazard.</p> |
| 12. | <p>APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION</p> <p>Upon arrival, cabin crew should apply the operator's post-incident procedures. These may include identifying to ground personnel where the item is stowed and providing all information about the item. Crew should complete the required documentation, as per operator procedures, so that the operator is notified of the event, proper maintenance action is undertaken and the emergency response kit or any aircraft equipment used is replenished or replaced, if applicable.</p> |

3.4.2 Overhead bin battery / portable electronic device (PED) fire / smoke

| Amplified procedures for overhead bin battery / portable electronic device (PED) fire / smoke | |
|--|--|
| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | <p>APPLY FIREFIGHTING PROCEDURE</p> <p>a) Apply communication procedures. b) Use appropriate firefighting equipment and protective equipment, as required. c) Fight fire. d) Manage passengers and cabin, as required.</p> <p>During any occurrence concerning a fire in the cabin, the cabin crew should notify the pilot-in-command immediately and keep the flight crew informed of all actions taken and of the effect. It is essential that the cabin crew and the flight crew coordinate their actions and that each is kept fully informed of the other's actions and intentions.</p> <p>Minimizing the spreading of smoke and fumes into the flight deck is critical for the continued safe operation of the aircraft, therefore it is essential to keep the flight deck door closed at all times. Crew communication and coordination are of utmost importance. The use of the interphone is the primary means of communication between crew members, unless the interphone system fails.</p> <p>Appropriate firefighting procedures should be used to deal with any fire. Cabin crew should use firefighting equipment to extinguish the fire and prevent its spread to additional flammable materials. It is important that cabin crew use protective equipment (e.g. protective breathing equipment, protective gloves) when fighting a fire. Due to the weight and size of some overhead bins, and their opening movement, the cabin crew member who is fighting the fire may require assistance in opening and controlling the overhead bin. When fighting an overhead bin fire, the cabin crew member should position themselves at the opposite end of the overhead bin, where the smoke / flames are visible. This action prevents further spreading embers due to the force of the extinguishing agent as it is discharged and comes into contact with the overhead bin.</p> <p>If fire develops, cabin crew should take prompt action to move passengers away from the area involved and, if necessary, provide wet towels or cloths and give instructions for passengers to breathe through them.</p> <p style="text-align: center;"><i>Note.— If the origin of the fire / smoke cannot be confirmed visually, cabin crew should use the back of the hand to search for hot overhead bin surfaces.</i></p> <p>Caution: Do not use the palm of the hand but the back of the hand since it is more sensitive to temperature differences.</p> |
| | <p>Caution: In certain firefighting situations, cabin crew may assess and deem it necessary to slightly open baggage to allow entry of the extinguishing agent and non-flammable liquid. In order to avoid injury from a flash fire, cabin crew should use caution when opening the affected baggage when there is any indication of smoke or flames. This should only be done after donning appropriate protective equipment.</p> |

| Amplified procedures for overhead bin battery / portable electronic device (PED) fire / smoke | |
|--|---|
| <i>Step</i> | <i>Cabin crew action</i> |
| 2. | <p>IDENTIFY THE ITEM</p> <p>If the device is visible and accessible, or, if the device is contained in baggage and flames are visible:</p> <ul style="list-style-type: none"> a) Re-apply Step 1 to extinguish the flames, if applicable. b) Apply Steps 3 to 10. <p>If smoke is coming from the overhead bin, but the device is not visible or accessible:</p> <ul style="list-style-type: none"> a) Remove other baggage from the overhead bin to access the affected baggage/item. b) Identify the item. c) Apply Steps 3 to 10. <p>It may not be possible for cabin crew to identify the item (source of fire or smoke) right away, especially if the fire has started in an overhead bin or the device is not readily accessible.</p> <p>If the device is visible and accessible or if the device is contained in baggage and flames are visible, cabin crew should apply firefighting procedures, as a first step.</p> <p>If smoke is coming from the overhead bin, but the device is not visible or accessible, or there is no indication of fire, cabin crew should apply firefighting procedures, as a first step. Afterwards, cabin crew should remove all baggage from the overhead bin with caution until the item can be identified. Once the item is identified, apply Steps 3 to 10.</p> |
| 3. | <p>LEAVE THE DEVICE IN ITS PLACE AND POUR WATER (OR OTHER NON-FLAMMABLE LIQUID) ON THE DEVICE (BAGGAGE)</p> <p>Cabin crew need to use water (or other non-flammable liquid) to cool a battery that has ignited to prevent the spread of heat to other cells in the battery. Cabin crew should pour liquid onto the device until signs of steam and crackling have subsided completely. Liquid may turn to steam when applied to the hot battery. The action of pouring water or non-flammable liquid on the device cools the battery cells and prevents thermal runaway.</p> <p>A battery involved in a fire can reignite and emit flames multiple times as heat is transferred to other cells in the battery. Therefore, cabin crew should monitor the device regularly to identify if there is any indication that a fire hazard may still exist. If there is any smoke or indication of fire, crew should pour more water (or other non-flammable liquid) on the device.</p> |

| Amplified procedures for overhead bin battery / portable electronic device (PED) fire / smoke | |
|--|---|
| <i>Step</i> | <i>Cabin crew action</i> |
| | <p>Caution:</p> <p>a) Do not attempt to pick up or move the device; batteries may explode or burst into flames without warning. The device should not be moved if displaying any of the following: flames/flaring, smoke, unusual sounds (such as crackling), debris, or shards of material separating from the device.</p> <p>b) Do not cover or enclose the device as it could cause it to overheat.</p> <p>c) Do not use ice or dry ice to cool the device. Ice or other materials insulate the device, increasing the likelihood that additional battery cells will reach thermal runaway.</p> |
| 4 | <p>MONITOR FOR ANY INDICATION OF REIGNITION AND CONTINUE TO POUR WATER (OR OTHER NON-FLAMMABLE LIQUID) ON THE DEVICE</p> <p>If smoke or flames reappear, cabin crew should repeat Steps 1 and 3.</p> |
| 5. | <p>WAIT UNTIL THE DEVICE HAS COOLED</p> <p>Cabin crew may move the device with caution following a certain period, once it has cooled down and if there is no evidence of smoke, heat, or if there is a reduction in the crackling or hissing sound usually associated with a lithium battery fire (this may take approximately 15 minutes). The waiting period may vary based on the device and its size.</p> |
| 6. | <p>OBTAIN A SUITABLE EMPTY CONTAINER</p> <p>A suitable empty container may include a pot, jug, galley unit or toilet waste bin. When selecting a suitable empty container, cabin crew should consider the size of the device to be submerged in it. Cabin crew should select a container which can be filled with enough liquid to completely submerge the device.</p> <p><i>Note.— If the aircraft is equipped with a fire containment equipment and the device fits inside it, cabin crew should use the equipment following the manufacturer's instructions.</i></p> |
| 7. | <p>FILL THE CONTAINER WITH ENOUGH WATER (OR OTHER NON-FLAMMABLE LIQUID) TO SUBMERGE THE DEVICE</p> <p>Cabin crew should fill the suitable empty container with enough water or non-flammable liquid to completely submerge the device.</p> |
| 8. | <p>PLACE THE DEVICE IN THE CONTAINER AND COMPLETELY SUBMERGE IN WATER (OR OTHER NON-FLAMMABLE LIQUID), USING PROTECTIVE EQUIPMENT</p> <p>It is important that cabin crew wear protective equipment (e.g. protective breathing equipment, protective gloves), when moving any device involved in a fire.</p> |

| Amplified procedures for overhead bin battery / portable electronic device (PED) fire / smoke | |
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| <i>Step</i> | <i>Cabin crew action</i> |
| 9. | <p>STOW AND SECURE (IF POSSIBLE) THE CONTAINER TO PREVENT SPILLAGE</p> <p>Once the device is completely submerged, cabin crew should stow the container and, if possible, secured to prevent spillage.</p> |
| 10. | <p>MONITOR THE DEVICE AND THE SURROUNDING AREA FOR THE REMAINDER OF THE FLIGHT</p> <p>Cabin crew should monitor the device and the surrounding area for the remainder of the flight to verify that the device does not pose further hazard.</p> |
| 11. | <p>APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION</p> <p>Upon arrival, cabin crew should apply the operator's post-incident procedures. These may include identifying to ground personnel where the item is stowed and providing all information about the item. Crew should complete the required documentation, as per operator procedures, so that the operator is notified of the event, proper maintenance action is undertaken and the emergency response kit or any aircraft equipment used is replenished or replaced, if applicable.</p> |

3.4.3 Overheated battery / electrical smell involving a portable electronic device (PED) — no visible fire or smoke

| Amplified procedures for overheated battery / electrical smell involving a portable electronic device (PED) — no visible fire or smoke | |
|---|--|
| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | <p>IDENTIFY THE ITEM</p> <p>Cabin crew should identify the source of overheat or electrical smell or ask the passenger concerned to identify the item.</p> |
| 2. | <p>INSTRUCT THE PASSENGER TO TURN OFF THE DEVICE IMMEDIATELY</p> <p>It is important that cabin crew instruct the passenger to turn off the device immediately, if possible and safe to do so, to remove the power supply and prevent further overheating or a fire.</p> |
| 3. | <p>REMOVE POWER</p> <p>a) Disconnect the device from the power supply, if safe to do so. b) Turn off in-seat power, if applicable. c) Verify that power to the remaining electrical outlets remains off, if applicable. d) Verify that the device remains off for the remainder of the flight.</p> <p>Caution: Do not attempt to remove the battery from the device.</p> <p>It is important that cabin crew instruct the passenger to disconnect the device from the power supply, if it is deemed safe to do so. A battery has a higher likelihood of catching fire due to overheating during or immediately following a charging cycle, although the effects may be delayed for some period of time. By removing the external power supply from the device, it will be assured that additional energy is not being fed to the battery to promote a fire.</p> <p>Cabin crew should turn off the in-seat power to the remaining electrical outlets until it can be assured that a malfunctioning aircraft system does not contribute to additional failures of the passengers' portable electronic devices.</p> <p>Cabin crew should visually check that power to the remaining electrical outlets remains off until the aircraft's system can be determined to be free of faults, if the device was previously plugged in. Depending on the aircraft type, in-seat power may have to be turned off by the flight crew.</p> <p>It is important that cabin crew verify that the device remains turned off for the duration of the flight.</p> |

| Amplified procedures for overheated battery / electrical smell involving a portable electronic device (PED) — no visible fire or smoke | |
|---|---|
| <i>Step</i> | <i>Cabin crew action</i> |
| 4. | <p>INSTRUCT THE PASSENGER TO KEEP THE DEVICE VISIBLE AND MONITOR CLOSELY</p> <p>The device should remain visible (not stowed such as in baggage or seat pocket or on a person (pocket)) and should be monitored closely. Unstable batteries may ignite even after the device is turned off. Cabin crew should verify that the device is stowed only for landing.</p> |
| 5. | <p>APPLY PROCEDURES FOR BATTERY / PED FIRE / SMOKE IF SMOKE OR FLAMES APPEAR</p> <p>If smoke or flames appear, apply the BATTERY / PORTABLE ELECTRONIC DEVICE (PED) FIRE / SMOKE procedures (see 3.4.1).</p> |
| 6. | <p>APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION</p> <p>Upon arrival, cabin crew should apply the operator's post-incident procedures. These may include identifying to ground personnel where the item is stowed and providing all information about the item.</p> <p>Crew should complete the required documentation, as per operator procedures, so that the operator is notified of the event, proper maintenance action is undertaken and the emergency response kit or any aircraft equipment used is replenished or replaced, if applicable.</p> |

3.4.4 PED fallen into / trapped in a passenger seat

| Amplified procedures for PED fallen into / trapped in a passenger seat | |
|---|---|
| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | <p>OBTAIN INFORMATION FROM THE PASSENGER BY ASKING THE PASSENGER</p> <p>a) Ask the passenger to identify the item. b) Ask where the passenger suspects that the item may have dropped or slipped into. c) Ask if the seat was moved since misplacing the item.</p> <p>Cabin crew should ask the passenger concerned to identify the item, and where the passenger suspects it may have dropped or slipped into, and if the passenger has moved the seat since misplacing the item.</p> |
| 2. | <p>RETRIEVE AND USE PROTECTIVE EQUIPMENT</p> <p>Cabin crew should don protective gloves before trying to retrieve the item.</p> |
| 3. | <p>NOTIFY THE PILOT-IN-COMMAND / OTHER CABIN CREW MEMBERS</p> <p>Due to the design of some passenger seats, a PED can slip under a seat covering and/or cushion, behind an armrest or down the side of a seat. Inadvertent crushing of the device poses a fire hazard.</p> <p>Any occurrence concerning a fire hazard in the cabin should be notified immediately to the pilot-in-command who should be kept informed of all actions taken and of the effect. It is essential that the cabin crew and the flight crew coordinate their actions and that each is kept fully informed of the other's actions and intentions.</p> |
| 4. | <p>RETRIEVE THE ITEM IF SAFE TO DO SO</p> <p>Caution: Do not move the seat electrically or mechanically when attempting to retrieve the item.</p> <p>To prevent crushing of the PED and reduce the potential fire hazard to the device and the surrounding area, cabin crew and/or the passenger should not use the electrical or mechanical seat functions in an attempt to retrieve the item. Cabin crew should move the passenger and, if applicable, the passenger(s) seated next to the affected seat from the area, to facilitate the search. Cabin crew should not move the seat. If the cabin crew is unable to retrieve the item without moving the seat, it may need to be retrieved by personnel on the ground, after landing at the next destination. If the item cannot be retrieved, cabin crew should move the passenger to another seat, if available.</p> <p>Cabin crew should turn off the individual in-seat power, if possible, to do so. Depending on the aircraft type, in-seat power may have to be turned off by the flight crew.</p> |
| 5. | <p>APPLY PROCEDURES FOR BATTERY / PED FIRE / SMOKE IF SMOKE OR FLAMES APPEAR</p> <p>If smoke or flames appear, apply the BATTERY / PORTABLE ELECTRONIC DEVICE (PED) FIRE / SMOKE procedures (see 3.4.1).</p> |

| Amplified procedures for PED fallen into / trapped in a passenger seat | |
|---|--|
| <i>Step</i> | <i>Cabin crew action</i> |
| 6. | <p>MONITOR THE SEAT AND THE SURROUNDING AREA FOR THE REMAINDER OF THE FLIGHT</p> <p>Cabin crew should monitor the seat and the surrounding area for the remainder of the flight to verify that the device does not pose further hazard.</p> |
| 7. | <p>APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION</p> <p>Upon arrival, cabin crew should apply the operator's post-incident procedures. These may include identifying to ground personnel where the item is located and providing all information about the item.</p> <p>Crew should complete the required documentation, as per operator procedures, so that the operator is notified of the event, proper maintenance action is undertaken and the emergency response kit or any aircraft equipment used is replenished or replaced, if applicable.</p> |

3.4.5 Battery / portable electronic device (PED) fire / smoke on the flight deck

| Amplified procedures for battery / portable electronic device (PED) fire / smoke on the flight deck | |
|--|--|
| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | <p>RECOGNIZE SIGNAL FOR FIRE / SMOKE ON THE FLIGHT DECK</p> <ul style="list-style-type: none">a) Receive call out from the flight deck (e.g. “back up assistance P-E-D!”).b) Retrieve and use protective equipment, as applicable to the situation.c) Obtain the appropriate fire extinguisher.d) Enter the flight deck. <p><i>Note.— The first cabin crew member ready to act should enter the flight deck.</i></p> <p><u>The flight</u> crew’s main responsibility during any occurrence is to maintain control of the aircraft. Therefore, they may call upon the cabin crew to assist in the event of fire / smoke on the flight deck. As notifying the cabin crew of the fire / smoke occurrence on the flight deck by interphone may delay the response, the use of the public address (PA) system is considered the preferred method of notification. The flight crew should use phraseology that clearly explains the type of emergency situation to the cabin crew without creating panic amongst the passengers. The flight crew should use specific sentence, such as “back up assistance P-E-D!”, over the PA system to alert the cabin crew. The first cabin crew member who is ready to act should enter the flight deck.</p> <p>It is important that cabin crew use protective equipment (e.g. protective breathing equipment, protective gloves) when fighting a fire. Cabin crew should use firefighting equipment to extinguish the fire and prevent its spread to additional flammable materials.</p> |

| Amplified procedures for battery / portable electronic device (PED) fire / smoke on the flight deck | |
|--|---|
| <i>Step</i> | <i>Cabin crew action</i> |
| 2. | <p>APPLY FIREFIGHTING PROCEDURE</p> <p>a) If the item is on fire, in coordination with the flight crew, extinguish the fire. b) Once the fire has been extinguished or the device is not on fire (it may emit visible smoke or be overheated), remove it from the flight deck, if possible. c) If the device cannot be moved, pour water (or other non-flammable liquid) on it.</p> <p>The joint action between the flight crew and the cabin crew depends on the location and type of the affected device. The flight crew would normally have started the appropriate emergency procedures to deal with the fire before the arrival of the cabin crew, including removing the device from any power source. In that case, cabin crew should join the firefighting actions according to the situation. When the decision is taken to fight the fire on the flight deck, in coordination with the flight crew, the cabin crew should use firefighting equipment to extinguish the fire and prevent its spread to additional flammable materials. It is important that cabin crew wear protective equipment (e.g. protective breathing equipment, protective gloves) when fighting a fire in a confined space, such as the flight deck.</p> <p>Caution: In certain firefighting situations (e.g. to prevent flight crew incapacitation or a loss of control in-flight), crew may assess and deem it necessary to remove the device immediately from the flight deck even if it is still emitting smoke or flames are present. In order to avoid injury, cabin crew should use caution and only attempt this action after donning protective equipment. In such case, cabin crew should apply the firefighting procedure in 3.4.1, after the device is removed from the flight deck.</p> |
| 3 | <p>REMOVE THE DEVICE FROM THE FLIGHT DECK</p> <p>Once the fire has been extinguished or the device is no longer on fire (even if it is still emitting visible smoke or feels overheated), cabin crew should remove it from the flight deck, if possible. Minimizing the spreading of smoke and fumes in the flight deck is critical for the continued safe operation of the aircraft. If it cannot be moved, cabin crew should use water (or other non-flammable liquid) to cool a battery that has ignited to prevent the spread of heat to other cells in the battery.</p> <p>After the device is removed from the flight deck, the cabin crew should apply the firefighting procedure, as described in 3.4.1, if it is still on fire. Water (or other non-flammable liquid) should be used to cool a battery that has ignited to prevent the spread of heat to other cells in the battery.</p> |
| 4 | <p>CLOSE THE FLIGHT DECK DOOR</p> <p>The flight deck door should be maintained closed once the device is removed from the flight deck. Crew communication and coordination are of utmost importance. The use of the interphone is the primary means of communication unless that system fails.</p> |

| Amplified procedures for battery / portable electronic device (PED) fire / smoke on the flight deck | |
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| <i>Step</i> | <i>Cabin crew action</i> |
| 5 | <p>APPLY PROCEDURES FOR BATTERY / PED FIRE / SMOKE IF SMOKE OR FLAMES APPEAR</p> <p>After the device is removed from the flight deck, apply the BATTERY / PORTABLE ELECTRONIC DEVICE (PED) FIRE / SMOKE procedures (see 3.4.1).</p> |
| 6. | <p>APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION</p> <p>Upon arrival, cabin crew should apply the operator's post-incident procedures. These may include identifying to ground personnel where the item is stowed and providing all information about the item. Crew should complete the required documentation, as per operator procedures, so that the operator is notified of the event, proper maintenance action is undertaken and the emergency response kit or any aircraft equipment used is replenished or replaced, if applicable.</p> |

3.4.6 Fire involving dangerous goods

| Amplified procedures for fire involving dangerous goods | |
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| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | <p>IDENTIFY THE ITEM</p> <p>Cabin crew should ask the passenger concerned to identify the item. The passenger may be able to give some guidance on the hazard(s) involved and how these could be dealt with. If the passenger can identify the item, refer to Section 4 of this document for the appropriate emergency response drill.</p> <p>It may not be possible for cabin crew to identify the item right away, especially if the source of the fire is unknown or the item is not readily accessible. In this case, cabin crew should apply firefighting procedures as a first step (Step 2) and then attempt to identify the item (Step 1). If the item is contained in baggage, the crew's actions would be similar to the actions for an item that is visible or readily accessible.</p> |
| 2. | <p>APPLY FIREFIGHTING PROCEDURE</p> <p>a) Apply communication procedures. b) Use appropriate firefighting equipment and protective equipment, as required. c) Fight fire. d) Manage passengers and cabin, as required.</p> <p>During any occurrence concerning a fire in the cabin, the cabin crew should notify the pilot-in-command immediately and keep the flight crew informed of all actions taken and of the effect. It is essential that the cabin crew and the flight crew coordinate their actions and that each is kept fully informed of the other's actions and intentions.</p> <p>Minimizing the spreading of smoke and fumes into the flight deck is critical for the continued safe operation of the aircraft, therefore it is essential to keep the flight deck door closed at all times. Crew communication and coordination are of utmost importance. The use of the interphone is the primary means of communication between crew members, unless the interphone system fails.</p> <p>Appropriate firefighting procedures should be used to deal with any fire. Cabin crew should use firefighting equipment to extinguish the fire and prevent its spread to additional flammable materials.</p> <p>In general, cabin crew should not use water on a spillage or when fumes are present since it may spread the spillage or increase the rate of fuming. Consideration should also be given to the possible presence of electrical components when using water extinguishers. It is important that cabin crew use protective equipment (e.g. protective breathing equipment, protective gloves) when fighting a fire.</p> <p>If fire develops, cabin crew should take prompt action to move passengers away from the area involved and, if necessary, provide wet towels or cloths and give instructions for passengers to breathe through them.</p> |

| Amplified procedures for fire involving dangerous goods | |
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| <i>Step</i> | <i>Cabin crew action</i> |
| | <p>Caution: In certain firefighting situations, cabin crew may assess and deem it necessary to slightly open baggage to allow entry of the extinguishing agent and non-flammable liquid. In order to avoid injury from a flash fire, cabin crew should use caution when opening the affected baggage when there is any indication of smoke or flames. This should only be done after donning appropriate protective equipment.</p> |
| 3. | <p>MONITOR FOR ANY INDICATION OF REIGNITION</p> <p>If smoke or flames reappear, cabin crew should repeat Step 2.</p> |
| 4. | <p>APPLY PROCEDURES FOR SPILLAGE OR LEAKAGE OF DANGEROUS GOODS, IF REQUIRED, ONCE THE FIRE HAS BEEN EXTINGUISHED</p> <p>In the event of a fire involving dangerous goods, cabin crew may need to apply the SPILLAGE OR LEAKAGE INVOLVING DANGEROUS GOODS procedures (see 3.4.7) once the fire has been extinguished.</p> |
| 5. | <p>APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION</p> <p>Upon arrival, cabin crew should apply the operator's post-incident procedures. These may include identifying to ground personnel where the item is stowed and providing all information about the item.</p> <p>Crew should complete the required documentation, as per operator procedures, so that the operator is notified of the event, proper maintenance action is undertaken and the emergency response kit or any aircraft equipment used is replenished or replaced, if applicable.</p> |

3.4.7 Spillage or leakage of dangerous goods

| Amplified procedures for spillage or leakage of dangerous goods | |
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| <i>Step</i> | <i>Cabin crew action</i> |
| 1. | <p>NOTIFY THE PILOT-IN-COMMAND / OTHER CABIN CREW MEMBERS</p> <p>During any occurrence concerning dangerous goods, the cabin crew should notify the pilot-in-command immediately and keep the flight crew informed of all actions taken and of the effect. It is essential that the cabin crew and the flight crew coordinate their actions and that each is kept fully informed of the other's actions and intentions.</p> <p>Minimizing the spreading of smoke and fumes into the flight deck is critical for the continued safe operation of the aircraft, therefore it is essential to keep the flight deck door closed at all times. Crew communication and coordination are of utmost importance. The use of the interphone is the primary means of communication between crew members, unless the interphone system fails.</p> |
| 2. | <p>IDENTIFY THE ITEM</p> <p>Cabin crew should ask the passenger concerned to identify the item. The passenger may be able to give some guidance on the hazard(s) involved and how these could be dealt with. If the passenger can identify the item, refer to Section 4 of this document for the appropriate emergency response drill.</p> |
| 3. | <p>COLLECT EMERGENCY RESPONSE KIT OR OTHER USEFUL ITEMS</p> <p>Cabin crew should collect emergency response kit, if provided, or collect for use in dealing with the spillage or leakage:</p> <ul style="list-style-type: none"> a) A supply of paper towels or newspapers or other absorbent paper or absorbent fabric (e.g. seat cushion covers, head rest protectors). b) Protective gloves. c) At least two large polyethylene waste bin bags. d) At least three smaller polyethylene bags, such as those used for duty-free or bar sales or, if none available, airsickness bags. |
| 4. | <p>RETRIEVE AND USE PROTECTIVE EQUIPMENT</p> <p>It is important that cabin crew use protective equipment (e.g. protective breathing equipment, protective gloves) when handling a spillage or leakage of dangerous goods.</p> <p>Cabin crew should always protect their hands before touching suspicious packages or items. Fire-resistant gloves or oven gloves covered by polyethylene bags are likely to give suitable protection.</p> |

| Amplified procedures for spillage or leakage of dangerous goods | |
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| <i>Step</i> | <i>Cabin crew action</i> |
| 5. | <p>MOVE PASSENGERS AWAY FROM AREA AND DISTRIBUTE WET TOWELS OR CLOTHS</p> <p>The use of therapeutic oxygen bottles or the passenger drop-out oxygen system to assist passengers in a smoke- or fume-filled passenger cabin should not be considered since considerable quantities of fumes or smoke would be inhaled through the valves or holes in the masks. A more effective aid to passengers in a smoke- or fume-filled environment would be the use of a wet towel or cloth held over the mouth and nose. A wet towel or cloth aids in filtering and is more effective at doing this than a dry towel or cloth. Cabin crew should take prompt action if smoke or fumes develop and move passengers away from the area involved and, if possible, provide wet towels or cloths and give instructions to breathe through them.</p> |
| 6. | <p>PLACE DANGEROUS GOODS ITEM IN POLYETHYLENE BAGS</p> <p>In the case of a spill of known or suspected dangerous goods in powder form, cabin crew should:</p> <ol style="list-style-type: none"> a) Leave everything undisturbed. b) Not use fire agent or water. c) Cover area with polyethylene or other plastic bags and blankets. d) Keep area isolated until after landing. <p>With emergency response kit</p> <p>If it is certain that the item will not create a problem, the decision may be made not to move it. In most circumstances, however, it will be better to move the item, and this should be done as suggested below. Cabin crew should place the item in a polyethylene bag as follows:</p> <ol style="list-style-type: none"> a) Prepare two bags by rolling up the sides and placing them on the floor. b) Place the item inside the first bag with the closure of the item, or the point from which it is leaking from its container, at the top. c) Take off the rubber gloves while avoiding skin contact with any contamination on them. d) Place the rubber gloves in the second bag. e) Close the first bag while squeezing out the excess air. f) Twist the open end of the first bag and use a bag tie to tie it sufficiently tight to be secure but not so tight that pressure equalization cannot take place. g) Place the first bag (containing the item) in the second bag, which already contains the rubber gloves and secure the open end in the same manner as that used for the first bag. |

| Amplified procedures for spillage or leakage of dangerous goods | |
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| <i>Step</i> | <i>Cabin crew action</i> |
| | <p>With no emergency response kit</p> <p>Cabin crew should pick up the item and place it in a polyethylene bag. They should ensure the receptacle containing the dangerous goods is kept upright or the area of leakage is at the top. Using paper towels, newspaper, etc., cabin crew should mop up the spillage, after having ascertained there will be no reaction between what is to be used to mop up and the dangerous goods. They should place the soiled towels, etc., in another polyethylene bag. Cabin crew should place the gloves and bags used to protect the hands either in a separate small polyethylene bag or with the soiled towels. If extra bags are not available, cabin crew should place the towels, gloves, etc., in the same bag as the item. They should expel excess air from the bags and close tightly so as to be secure but not so tight that pressure equalization cannot take place.</p> |
| 7. | <p>STOW POLYETHYLENE BAGS</p> <p>If there is a catering or bar box on board, cabin crew should empty any contents and place the box on the floor, with the door upward. They should place the bag(s) containing the item and any soiled towels, etc., in the box and close the door. Cabin crew should take the box or, if there is no box, the bag(s) to a position as far away as possible from the flight deck and passengers. If a galley or toilet is fitted, cabin crew should consider taking the box or bag(s) there, unless it is close to the flight deck. Cabin crew should use a rear galley or toilet wherever possible but should not place the box or bag(s) against the pressure bulkhead or fuselage wall. If a galley is used, the box or bag(s) can be stowed in an empty waste bin container. If a toilet is used, the box can be placed on the floor or the bag(s) stowed in an empty waste container. The toilet door should be locked from the outside. In a pressurized aircraft, if a toilet is used, any fumes will be vented away from passengers. However, if the aircraft is unpressurized there may not be positive pressure in a toilet to prevent fumes from entering the passenger cabin.</p> <p>Cabin crew should ensure when moving a box that the opening is kept upward or when moving a bag that either the receptacle containing the dangerous goods is kept upright or the area of leakage is kept at the top.</p> <p>Wherever the box or bag(s) have been located, cabin crew should wedge them firmly in place to prevent them from moving and to keep the item upright. They should ensure that the position of the box or bags will not impede disembarkation from the aircraft.</p> |
| 8. | <p>TREAT AFFECTED SEAT CUSHIONS / COVERS IN THE SAME MANNER AS DANGEROUS GOODS ITEM</p> <p>Cabin crew should remove seat cushions, seat backs or other furnishings which have been contaminated by a spillage from their fixtures and place them in a large bin bag or other polyethylene bag, together with any bags used initially to cover them. Cabin crew should stow them away in the same manner as the dangerous goods item causing the incident.</p> |

| Amplified procedures for spillage or leakage of dangerous goods | |
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| <i>Step</i> | <i>Cabin crew action</i> |
| 9. | <p>COVER SPILLAGE ON CARPET / FLOOR</p> <p>Cabin crew should cover any spillage on the carpet or furnishings with a waste bag or other polyethylene bags, if available. If not, cabin crew should use airsickness bags opened out so that the plastic side covers the spillage or use the plastic covered emergency information cards.</p> <p>If possible, cabin crew should roll up carpet which has been contaminated by a spillage and which is still causing fumes despite being covered and place it in a large bin bag or other polyethylene bag. Cabin crew should place it in a waste bin and stow it, when possible, either in the rear toilet or rear galley. If the carpet cannot be removed it should remain covered by a large bin bag or polyethylene bags, etc., and additional bags should be used to reduce the fumes.</p> |
| 10. | <p>MONITOR ITEMS STOWED AWAY / CONTAMINATED FURNISHINGS</p> <p>Cabin crew should monitor any dangerous goods, contaminated furnishings or equipment which have been removed and stowed away or covered.</p> |
| 11. | <p>APPLY POST-INCIDENT PROCEDURES AFTER LANDING AT THE NEXT DESTINATION</p> <p>Upon arrival, cabin crew should apply the operator's post-incident procedures. These may include identifying to ground personnel where the item is stowed and providing all information about the item.</p> <p>Crew should complete the required documentation, as per operator procedures, so that the operator is notified of the event, proper maintenance action is undertaken and the emergency response kit or any aircraft equipment used is replenished or replaced, if applicable.</p> |
