HELLENIC CAA	FLIGHT STANDARDS DIVISION ***INFORMATION BULLETIN***	**FSD/OPS/IB/ 06/2014**
	Αποδέκτες: **ΕΛΛΗΝΕΣ ΑΕΡΟΜΕΤΑΦΟΡΕΙΣ** ΚΑΙ ΑΙΤΟΥΝΤΕΣ ΑΟC	**1η ΕΚΔΟΣΗ 18/8/2014**

Subject	**Dealing with Dangerous Goods Incidents in the aircraft cabin**

SCOPE

This information Bulletin provides guidance to all AOC holders as well as potential Air Operator Certificate (AOC) applicants on dealing with Dangerous Goods Incidents in the aircraft cabin.

Recipients are asked to ensure that this Information Notice is copied to all members of their staff who may have an interest in the information (including any 'in-house' or contracted maintenance organisations and relevant outside contractors).

1 Introduction

1.1 Following a number of fires in the cabin caused by lithium battery powered portable electronic devices, the International Civil Aviation Organization (ICAO) has amended its "Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods" (ICAO Doc 9481 AN/928) to include guidance to cabin crew to assist in dealing with such incidents.

1.2 The ICAO guidance has also been revised to include separate checklists for incidents involving dangerous goods within the passenger cabin entitled "Fire Involving Dangerous Goods" and "Spillage or Leakage of Dangerous Goods".

1.3 For operations without cabin crew, the procedures for flight crew should take into account the revised ICAO guidance in so far as this is practical. Alternative options should be considered, such as enlisting the assistance of a passenger.

2 Purpose

2.1 This Information Bulletin provides updated guidance to operators in dealing with dangerous goods incidents occurring in the passenger cabin.

2.2 The Appendix to this IB reproduces checklists and text from the "ICAO Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods", which will be effective from 1 January 2015. The new guidance replaces the material currently published in Sections 3.3 and 3.4 of the 2013-2014 Edition of the ICAO document.

3 Recommendation

3.1 Operators should update the guidance provided to flight and cabin crew within Operations Manuals and training material. In light of the potential consequences of a portable electronic device fire in the cabin, it is recommended that guidance be updated in advance of the revised procedures being published within ICAO Doc 9481.

3.2 Operators should also verify that adequate equipment for the purpose of responding to dangerous goods incidents, including portable electric device fires, is carried within the cabin. This is particularly relevant to operators of smaller aircraft which may not carry items found on larger aircraft (e.g. toilet waste bins, oven gloves) that can be utilised in the event of an emergency.

APPENDIX

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

BATTERY / PORTABLE ELECTRONIC DEVICE (PED) FIRE / SMOKE

Step ***Cabin Crew Action***

1. **Identify the item**

   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.

   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

2. **Apply fire-fighting procedure:**

   i. Obtain and use the appropriate fire extinguisher
   ii. Retrieve and use protective equipment, as applicable to the situation
   iii. Move passengers away from the area, if possible
   iv. Notify pilot-in-command / other cabin crew members

   Note — Actions should occur simultaneously in a multi-crew operation

3. **Remove power:**

   i. Disconnect the device from the power supply, if safe to do so
   ii. Turn off in-seat power, if applicable
   iii. Verify that power to the remaining electrical outlets remains off, if applicable

   Caution: Do not attempt to remove the battery from the device

4. **Douse the device with water (or other non-flammable liquid)**

   Note — Liquid may turn to steam when applied to the hot battery

5. **Leave the device in its place and monitor for any re-ignition**

   i. If smoke or flames re-appear, repeat Steps 2 then 4

   Caution:

   i. Do not attempt to pick-up or move the device
   ii. Do not cover or enclose the device
   iii. Do not use ice or dry ice to cool the device

6. **When the device has cooled (e.g. approximately 10 to 15 minutes):**

   i. Obtain a suitable empty container
   ii. Fill the container with enough water (or other non-flammable liquid) to submerge the device
   iii. Using protective equipment, place the device in the container and completely submerge in water (or other non-flammable liquid)
   iv. Stow and (if possible) secure the container to prevent spillage

7. **Monitor the device and the surrounding area for the remainder of the flight**
8. **After landing at the next destination: Apply operator's post-incident procedures.**

OVERHEAD BIN BATTERY / PORTABLE ELECTRONIC DEVICE (PED) FIRE/SMOKE

Step ***Cabin Crew Action***

1. **Apply fire-fighting procedure:**
   i. Obtain and use the appropriate fire extinguisher
   ii. Retrieve and use protective equipment, as applicable to the situation
   iii. Move passengers away from the area, if possible
   iv. Notify pilot-in-command / other cabin crew members
   Note — Actions should occur simultaneously in a multi-crew operation

2. **Identify the item:**
   If the device is visible and accessible, or if the device is contained in baggage and flames are visible:
   i. Re-apply Step 1 to extinguish the flames, if applicable
   ii. Apply Steps 3 to 5
   If smoke is coming from the overhead bin, but the device is not visible or accessible:
   i. Remove other baggage from the overhead bin to access the affected baggage/item
   ii. Identify the item
   iii. Apply Steps 3 to 5
   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

3. **Douse the device (baggage) with water (or other non-flammable liquid)**
   Note — Liquid may turn to steam when applied to the hot battery

4. **When the device has cooled:**
   i. Obtain a suitable empty container
   ii. Fill the container with enough water (or other non-flammable liquid) to submerge the device
   iii. Using protective equipment, place the device in the container and completely submerge in water (or other non-flammable liquid)
   iv. Stow and (if possible) secure the container to prevent spillage

5. **Monitor the device and the surrounding area for the remainder of the flight**

6. **After landing at the next destination: Apply operator's post-incident procedures**

OVERHEATED BATTERY / ELECTRICAL SMELL INVOLVING A PORTABLE ELECTRONIC DEVICE (PED) - NO VISIBLE FIRE OR SMOKE

Step	*Cabin Crew Action*
1.	**Identify the item**
2.	**Instruct the passenger to turn off the device immediately**
3.	**Remove power:** i. Disconnect the device from the power supply, if safe to do so ii. Turn off in-seat power, if applicable iii. Verify that power to the remaining electrical outlets remains off, if applicable iv. Verify that the device remains off for the remainder of the flight Caution: Do not attempt to remove the battery from the device
4.	**Instruct the passenger to keep the device visible and monitor closely** Caution: i. Unstable batteries may ignite even after the device is turned off
5.	**If smoke or flames appear:** i. Apply **BATTERY / PED FIRE / SMOKE** checklist
6.	**After landing at the next destination:** i. Apply operator's post-incident procedures

PED INADVERTENTLY CRUSHED OR DAMAGED IN ELECTRICALLY ADJUSTABLE SEAT

Step	Cabin Crew Action
1.	**Notify the pilot-in-command / other cabin crew members**
2.	**Obtain information from passenger, by asking him/her:** i. To identify the item ii. Where he/she suspects that the item may have dropped or slipped into iii. If the seat was moved since misplacing the item
3.	**Retrieve and use protective equipment, if available**
4.	**Retrieve the item.** Caution: i. Do not move the seat electrically or mechanically when attempting to retrieve the item.
5.	**If smoke or flames appear:** i. Apply **BATTERY / PED FIRE / SMOKE** checklist
6.	**After landing at the next destination:** i. Apply operator's post-incident procedures
7.	**After landing at the next destination:** i. Apply operator's post-incident procedures

FIRE INVOLVING DANGEROUS GOODS

Step	Cabin Crew Action
1.	**Identify the item** *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.* Caution: In order to avoid injury from a flash fire, it is not recommended to not open the affected baggage when there is any indication of smoke or flames.
2.	**Apply fire-fighting procedure:** i. Obtain and use the appropriate fire extinguisher / check use of water ii. Retrieve and use protective equipment, as applicable to the situation iii. Move passengers away from the area, if possible iv. Notify pilot-in-command / other cabin crew members *Note — Actions should occur simultaneously in a multi-crew operation*
3.	**Monitor for any re-ignition:** i. If smoke/flames re-appear, repeat Step 2.
4.	**Once the fire has been extinguished:** i. Apply **SPILLAGE OR LEAKAGE OF DANGEROUS GOODS** checklist, if required.
5.	**After landing at the next destination:** i. Apply operator's post-incident procedures

SPILLAGE OR LEAKAGE OF DANGEROUS GOODS

Step	Cabin Crew Action
1.	Notify pilot-in-command/ other cabin crew members
2.	Identify the item
3.	Collect emergency response kit or other useful items
4.	Don rubber gloves and smoke hood
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 items stowed away / contaminated furnishings
11.	After landing at the next destination: i. Apply operator's post-incident procedures

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

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

1) IDENTIFY THE ITEM

It may not be possible to identify the item (source of fire) right away, especially if the fire has started in a seat pocket or the device is not readily accessible. In this case, fire-fighting procedures should be applied as a first step. Once it is possible to do so, identify the item after the fire is under control. 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.

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.

2) APPLY FIRE-FIGHTING PROCEDURE

Any occurrence concerning a fire 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 are kept fully informed of the other's actions and intentions.

Appropriate fire-fighting and emergency procedures must be used to deal with any fire. In a multi-cabin crew operation, the actions detailed in the fire-fighting 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.

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. 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 is of utmost importance. The use of the interphone is the primary means of communication unless the interphone system fails.

3) REMOVE POWER

It is important to 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.

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.

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 douse the device). Depending on the aircraft type, in-seat power may have to be turned-off by the flight crew members.

Caution:

Do not attempt to remove the battery from the device.

4) DOUSE THE DEVICE WITH WATER (OR OTHER NON-FLAMMABLE LIQUID)

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.

Note — Liquid may turn to steam when applied to the hot battery.

5) LEAVE THE DEVICE IN ITS PLACE AND MONITOR FOR ANY RE-IGNITION

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 risk 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).

Caution:

i. 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;

ii. Do not cover or enclose the device as it could cause it to overheat; and

iii. 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.

6) WHEN THE DEVICE HAS COOLED (E.G. APPROXIMATELY 10-15 MINUTES)

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 approximatly10-15 minutes). The waiting period may vary based on the device and its size. The different circumstances (e.g. types of devices, phase of flight, etc.) should be addressed in the operator's training programme.

A suitable empty container, such as a pot, jug, galley unit or toilet waste bin, must 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.

7) MONITOR THE DEVICE AND THE SURROUNDING AREA FOR THE REMAINDER OF THE FLIGHT

Monitor the device and the surrounding area for the remainder of the flight to verify that the device does not pose further risk.

8) AFTER LANDING AT THE NEXT DESTINATION

Upon arrival, 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.

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.

3.4.2 OVERHEAD BIN BATTERY / PORTABLE ELECTRONIC DEVICE (PED) FIRE / SMOKE

1) APPLY FIRE-FIGHTING PROCEDURE

Any occurrence concerning a fire 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 are kept fully informed of the other's actions and intentions.

Appropriate fire-fighting and emergency procedures must be used to deal with an overhead bin fire. In a multi-cabin crew operation, the actions detailed in the fire-fighting 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.

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.

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 is of utmost importance. The use of the interphone is the primary means of communication unless the interphone system fails.

2) IDENTIFY THE ITEM

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.

If the device is visible and accessible or if the device is contained in baggage and flames are visible, the fire-fighting procedures should be applied as a first step.

If smoke is coming from the overhead bin, but the device is not visible or accessible, or there is no indication of fire, the fire-fighting 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 steps 3 to 5 of the OVERHEAD BIN BATTERY / PORTABLE ELECTRONIC DEVICE (PED) FIRE / SMOKE checklist.

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.

3) DOUSE THE DEVICE (BAGGAGE) WITH WATER (OR OTHER NON-FLAMMABLE LIQUID)

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.

Note — Liquid may turn to steam when applied to the hot battery.

4) WHEN THE DEVICE HAS COOLED

The device should be moved from the overhead bin to prevent a hidden fire from potentially developing. 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. The waiting period may vary based on the device and its size. The different circumstances (e.g. types of devices, phase of flight, etc.) should be addressed in the operator's training programme.

A suitable empty container, such as a pot, jug, galley unit or toilet waste bin, must 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.

5) MONITOR THE DEVICE AND THE SURROUNDING AREA FOR THE REMAINDER OF THE FLIGHT

Monitor the device and the surrounding area for the remainder of the flight to verify that the device does not pose further risk.

6) AFTER LANDING AT THE NEXT DESTINATION

Upon arrival, 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.

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.

3.4.3 OVERHEATED BATTERY OR ELECTRICAL SMELL INVOLVING A PORTABLE ELECTRONIC DEVICE (PED) - NO VISIBLE FIRE OR SMOKE

1) IDENTIFY THE ITEM

Identify the source of overheat or electrical smell. Ask the passenger concerned to identify the item.

2) INSTRUCT THE PASSENGER TO TURN OFF THE DEVICE IMMEDIATELY

It is important to instruct the passenger to turn off the device immediately.

3) REMOVE POWER

It is important to 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.

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.

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 douse the device). Depending on the aircraft type, in-seat power may have to be turned-off by the fight crew members.

It is important to verify that the device remains powered off for the duration of the flight.

Caution:

Do not attempt to remove the battery from the device.

4) INSTRUCT THE PASSENGER TO KEEP THE DEVICE VISIBLE AND MONITOR CLOSELY

The device must 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 that the device is stowed for landing.

5) IF SMOKE OR FLAMES APPEAR

If smoke or flames appear, apply the BATTERY / PORTABLE ELECTRONIC DEVICE (PED) FIRE / SMOKE checklist.

6) AFTER LANDING AT THE NEXT DESTINATION

Upon arrival, 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.

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.

3.4.4 PED INADVERTENTLY CRUSHED OR DAMAGED IN ELECTRICALLY ADJUSTABLE SEAT

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 risk of fire.

1) NOTIFY THE PILOT-IN-COMMAND / OTHER CABIN CREW MEMBERS

Any occurrence concerning a risk of fire 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 are kept fully informed of the other's actions and intentions.

2) OBTAIN INFORMATION FROM PASSENGER

Ask the passenger concerned to identify the item, and where he/she suspects it may have dropped or slipped into, and if he/she has moved the seat since misplacing the item.

3) RETRIEVE AND USE PROTECTIVE EQUIPMENT, IF AVAILABLE

If available, cabin crew members should don fire gloves before trying to retrieve the item.

4) RETRIEVE THE ITEM

To prevent crushing of the PED and reduce the potential fire risk to the device and the surrounding area, cabin crew members and/or passengers must not use the electrical or mechanical seat functions in an attempt to retrieve the item. Move the passenger and, if applicable, the passenger seated next to the affected seat from the area, to facilitate the search. Do not move the seat. If the cabin crew member is unable to retrieve the item, it may be necessary to move the passenger to another seat.

5) IF SMOKE OR FLAMES APPEAR

If smoke or flames appear, apply the BATTERY / PORTABLE ELECTRONIC DEVICE (PED) FIRE / SMOKE checklist.

6) AFTER LANDING AT THE NEXT DESTINATION

Upon arrival, 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.

Complete the required documentation, as per operator procedures, so that the operator is notified of the event, proper maintenance action is undertaken and any aircraft equipment used is replenished or replaced, if applicable.

3.4.5 FIRE INVOLVING DANGEROUS GOODS

1) IDENTIFY THE ITEM

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 for the appropriate emergency response drill.

It may not be possible 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, fire-fighting procedures should be

applied as a first step. Once it is possible to do so, identify the item after the fire is under control. 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.

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.

2) APPLY THE FIRE-FIGHTING PROCEDURE

Any occurrence concerning a fire 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 are kept fully informed of the other's actions and intentions.

Appropriate fire-fighting and emergency procedures must be used to deal with any fire. In a multi-cabin crew operation, the actions detailed in the fire-fighting 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.

In general, 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.

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 is of utmost importance. The use of the interphone is the primary means of communication unless the interphone system fails.

3) MONITOR FOR ANY RE-IGNITION

Monitor the area regularly to identify if there is any indication that a fire risk may still exist. If there is any smoke or indication of fire continue to apply the fire-fighting procedure.

4) ONCE THE FIRE HAS BEEN EXTINGUISHED

In the event of a fire involving dangerous goods, the SPILLAGE OR LEAKAGE INVOLVING DANGEROUS GOODS checklist may need to be applied once the fire has been extinguished.

5) AFTER LANDING AT THE NEXT DESTINATION

Upon arrival, 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.

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.

3.4.6 SPILLAGE OR LEAKAGE INVOLVING DANGEROUS GOODS

1) NOTIFY PILOT-IN-COMMAND

Any incident concerning dangerous goods should be notified immediately to the pilot-in-command who should be kept informed of all actions taken and of their effect. It is essential that the cabin crew and the flight crew coordinate their actions and that each are 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 is of utmost importance. The use of the interphone is the primary means of communication unless the interphone system fails.

2) IDENTIFY THE ITEM

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 for the appropriate emergency response drill.

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.

3) COLLECT EMERGENCY RESPONSE KIT OR OTHER USEFUL ITEMS

Collect emergency response kit, if provided, or collect for use in dealing with the spillage or leakage:

— a supply of paper towels or newspapers or other absorbent paper or absorbent fabric (e.g. seat cushion covers, head rest protectors);

— oven gloves or fire-resistant gloves, if available;

— at least two large polyethylene waste bin bags; and

— at least three smaller polyethylene bags, such as those used for duty-free or bar sales or, if none available, airsickness bags.

4) DON RUBBER GLOVES AND SMOKE HOOD

The 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.

Gas-tight breathing equipment should always be worn when attending to an incident involving smoke, fumes or fire.

5) MOVE PASSENGERS AWAY FROM AREA

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.

6) PLACE DANGEROUS GOODS ITEM IN POLYETHYLENE BAGS

Note — In the case of a spill of known or suspected dangerous goods in powder form:

— leave everything undisturbed;

— do not use fire agent or water;

— cover area with polyethylene or other plastic bags and blankets;

— keep area isolated until after landing.

With emergency response kit

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. Place the item in a polyethylene bag as follows:

— prepare two bags by rolling up the sides and placing them on the floor;

— 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;

— take off the rubber gloves while avoiding skin contact with any contamination on them;

— place the rubber gloves in the second bag;

— close the first bag while squeezing out the excess air;

— 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;

— 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.

With no emergency response kit

Pick up the item and place it in a polyethylene bag. Ensure the receptacle containing the dangerous goods is kept upright or the area of leakage is at the top. Using paper towels, newspaper, etc., 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. Place the soiled towels, etc., in another polyethylene bag. 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, place the towels, gloves, etc., in the same bag as the item. Expel excess air from the bags and close tightly so as to be secure but not so tight that pressure equalization cannot take place.

7) STOW POLYETHYLENE BAGS

If there is a catering or bar box on board, empty any contents and place the box on the floor, with the door upward. Place the bag(s) containing the item and any soiled towels, etc., in the box and close the door. 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, consider taking

the box or bag(s) there, unless it is close to the flight deck. Use a rear galley or toilet wherever possible, but do 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.

Ensure when moving a box that the opening is kept upward or when moving a bag that either receptacle containing the dangerous goods is kept upright or the area of leakage is kept at the top.

Wherever the box or bag(s) have been located, wedge them firmly in place to prevent them from moving and to keep the item upright. Ensure that the position of the box or bags will not impede disembarkation from the aircraft.

8) TREAT AFFECTED SEAT CUSHIONS / COVERS IN THE SAME MANNER AS DANGEROUS GOODS ITEM

Seat cushions, seat backs or other furnishings which have been contaminated by a spillage should be removed from their fixtures and placed in a large bin bag or other polyethylene bag, together with any bags used initially to cover them. They should be stowed away in the same manner as the dangerous goods item causing the incident.

9) COVER SPILLAGE ON CARPET / FLOOR

Cover any spillage on the carpet or furnishings with a waste bag or other polyethylene bags, if available. If not, use airsickness bags opened out so that the plastic side covers the spillage or use the plastic covered emergency information cards.

Carpet which has been contaminated by a spillage and which is still causing fumes despite being covered, should be rolled up, if possible, and placed in a large bin bag or other polyethylene bag. It should be placed in a waste bin and stowed, 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.

10) REGULARLY INSPECT ITEMS STOWED AWAY / CONTAMINATED FURNISHINGS

Any dangerous goods, contaminated furnishings or equipment which have been removed and stowed away or covered for safety should be subject to regular inspection.

11) AFTER LANDING AT THE NEXT DESTINATION

Upon arrival, 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.

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.

Ο *Προϊστάμενος*
Διεύθυνσης Πτητικών Προτύπων

Κ.Σφακιανάκης

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