



NOTE DE TRAVAIL

GROUPE D'EXPERTS SUR LES MARCHANDISES DANGEREUSES (DGP)

VINGT-CINQUIÈME RÉUNION

Montréal, 19 – 30 octobre 2015

Point 2 : Élaboration de recommandations relatives à des amendements des *Instructions techniques pour la sécurité du transport aérien des marchandises dangereuses (Doc 9284)* à introduire dans l'édition 2017-2018

BALISES DE DÉTRESSE TRANSPORTÉES PAR DES PASSAGERS

(Note présentée par B. Firkins)

(Faute de ressources, seuls le résumé et l'appendice ont été traduits.)

RÉSUMÉ

La présente note contient des informations sur les balises de localisation d'urgence (balises de détresse), leur rôle en tant qu'appareil de sauvetage, les piles ou batteries au lithium métal qui leur servent de source d'énergie, les restrictions relatives à leur transport par des passagers ou des membres d'équipage, ainsi qu'une proposition visant à élargir le transport de telles balises par des passagers et des membres d'équipage, comprenant des conditions supplémentaires pour préserver la sécurité de l'aviation.

Suite à donner par le Groupe DGP : Le Groupe DGP est invité à faire des observations sur la proposition d'amendement figurant en appendice et à envisager de l'accepter.

1. INTRODUCTION

1.1 Personal locator beacons (PLBs), emergency location transmitters (ELTs) and emergency position indicating radio beacons (EPIRBs) are emergency locating beacons which are used by people in distress to request emergency assistance, and aid in the subsequent detection and location of themselves, boats and aircraft and people in distress. Generally, EPIRBs are registered to vessels such as ships and ELTs to aircraft, although it is commonplace to treat ELTs as being synonymous with EPIRBs. PLBs are "registered" to individuals. When activated, both EPIRBs and PLBs emit a coded message via the 406 MHz distress frequency, which is relayed via the COSPAS/SARSAT satellite network, to a ground-based Rescue Coordination Centre.

1.2 Statistics indicate that these devices have assisted in over 28,000 rescues since 1982. With advances in technology and affordability these devices are increasing in popularity and passengers are carrying them as part of their personal baggage on adventure holidays. As the device may not be activated for many years; but is still required to function when needed, they are usually fitted with a lithium metal battery as these have a long electrical storage life. They also tend to be manufactured to survive in a harsh operating environment e.g. robust and durable.

1.3 A growing number of EPIRBs and PLBs are powered by lithium metal batteries that exceed the current 2 g limit, and therefore cannot be legally carried as part of the passenger provisions in Part 8 of the ICAO Technical Instructions. The methods for passengers to legally carry these devices in a personal capacity, are either to consign them as cargo (UN 3091) which is a cumbersome and bureaucratic process and may not be practical or available; or they travel without the battery (if it can be removed) and buy them at destination – which could be difficult in some of the remote locations of the world that attract these adventure-bound travellers.

1.4 Discussions with a number of manufacturers, retailers and aircraft operators have revealed that even though passengers are being advised that non-medical devices powered by lithium metal batteries with a lithium metal content between 2 g – 8 g are not permitted by airlines, they are still being carried.

1.5 A number of retailers provide safety data sheets (SDS) which detail the chemistry of the lithium metal battery and content of lithium metal, and those which fall within the current provisions for portable electronic devices will often be declared as permitted for carriage by passengers on aircraft; whilst those that do not meet the passenger provisions are usually silent. Following up with manufacturers and retailers has shown that they are aware of the restrictions, and if asked will provide an honest response to their customers, yet they are still reluctant to label their product or provide comment in the SDS that the batteries used in their device exceed the 2 g limitation and are therefore not permitted under the normal provisions for carriage by passengers.

2. EXISTING PROVISIONS

2.1 Part 8; Table 8-1; item 8 of the Technical Instructions, deals specifically with portable medical electronic devices, and permits the carriage of portable medical electronic devices and larger lithium metal batteries.

“8) Portable medical electronic devices (automated external defibrillators (AED), nebulizer, continuous positive airway pressure (CPAP), etc.) containing lithium metal or lithium ion cells or batteries”

Where the fourth entry is

“Portable medical electronic devices containing lithium metal batteries exceeding 2 grams but not exceeding 8 grams or lithium ion batteries exceeding 100 Wh but not exceeding 160 Wh”

2.2 This is not an appropriate entry to consider for EPIRBs and PLBs.

2.3 Part 8; Table 8-1; item 19 deals with more general portable electronic devices containing batteries:

“19) Portable electronic devices (such as watches, calculating machines, cameras, cellular phones, laptop computers, camcorders)”

“Portable electronic devices (including medical devices) containing lithium metal or lithium ion cells or batteries...”

With the condition that:

“c) each battery must not exceed the following:

—for lithium metal batteries, a lithium content of not more than 2 grams”

2.4 There is no provision in Part 8 of the Technical Instructions for general PEDs, powered by lithium metal batteries, which exceed 2 g but not 8 g of lithium metal.

3. PASSENGER PROVISIONS: LIFE SAVING AND MEDICAL PURPOSES

3.1 Part 8 permits the carriage of battery powered ‘portable medical electronic devices’ and cites examples of Automated External Defibrillators (AED) and Continuous Positive Airways Pressure (CPAP) devices.

3.2 Conceptually, an AED is generally a lithium metal battery powered, life-saving device; whilst a CPAP or oxygen concentrator is usually a lithium ion powered medical for preventive purposes.

3.3 That is, a CPAP is a medical device, which is used as a preventive measure, in reasonably foreseeable medical conditions; and to prevent the passenger having an in-flight medical emergency. An AED is a device, which is often unused and only operated after a person is suspected of having had a cardiac-related event.

3.4 Within the medically-related items that passengers may take as dangerous goods, there are other, non-battery operated preventive items such as portable oxygen cylinders and medicinal articles.

3.5 Part 8 also includes certain devices, containing dangerous goods, which are not battery powered and which have a life-saving purpose for the adventure-based traveller, such as avalanche rescue backpacks and inflatable life jackets.

4. THE PROPOSAL

4.1 Passengers are carrying emergency personal location beacons, powered by lithium metal batteries exceeding 2g, on aircraft today; and will continue to do so as they consider them a potential lifesaving tool. Rather than continue to perpetuate an ineffectual prohibition, it is proposed that provision should be made to enable the lawful carriage of these devices, but in a way that enables the airline to manage and monitor the risk i.e. through requiring the approval of the Operator.

4.2 The provision should be constructed so to continue in the context of being “for the personal use of the passenger or crew member”. The bulk transportation of EPIRBs/PLBs for an entire ship’s crew or hiking party, should be via the normal cargo provisions; but there is a reluctance to limit them to one per passenger.

4.3 A number of enquiries received by the Civil Aviation Safety Authority of Australia have been in respect of requests to carry EPIRBs/ELTs for the ship/aircraft that the passenger has purchased or will command. Therefore the proposal in Appendix A has been constructed around facilitating the carriage of EPIRBs and ELTs, and not restricting it just PLBs.

4.4 As these emergency locating beacons are designed to have a long shelf life; it is not proposed to make any provision for the carriage of spare lithium metal batteries.

4.5 With this philosophy in mind and given that an EPIRB/PLB is used in life-saving situations it is a timely opportunity to amend Part 8 to catch up with these technological advances.

5. **ACTION BY THE DGP**

5.1 The DGP is invited to comment upon, and consider accepting, the proposed amendment as shown in the appendix to this working paper.

APPENDICE

PROPOSITION D'AMENDEMENT DE LA PARTIE 8
DES INSTRUCTIONS TECHNIQUES

Partie 8

DISPOSITIONS RELATIVES AUX PASSAGERS
ET AUX MEMBRES D'ÉQUIPAGE

(...)

Chapitre 1

DISPOSITIONS RELATIVES AU TRANSPORT DE
MARCHANDISES DANGEREUSES PAR LES PASSAGERS
OU LES MEMBRES D'ÉQUIPAGE

*Certaines parties du présent chapitre font l'objet de la divergences d'État US 15 ;
voir Tableau A-1.*

1.1 TRANSPORT DE MARCHANDISES DANGEREUSES PAR
LES PASSAGERS OU LES MEMBRES D'ÉQUIPAGE

(...)

Tableau 8-1. Dispositions relatives au transport de marchandises dangereuses
par les passagers ou les membres d'équipage

Produits ou articles	Emplacement			Approbation de l'exploitant ou des exploitants requise	Renseignements à fournir au pilote commandant de bord	Restrictions
	Bagages enregistrés	Bagages de cabine	Sur soi			
Produits médicaux de première nécessité						
(...)						

- 19) Appareils électroniques portables (tels que des montres, calculatrices, appareils photographiques, téléphones cellulaires, ordinateurs portables, enregistreurs vidéo)

Produits ou articles	Emplacement			Approbation de l'exploitant ou des exploitants requise	Renseignements à fournir au pilote commandant de bord	Restrictions
	Bagages enregistrés	Bagages de cabine	Sur soi			
Appareils électroniques portables (y compris des appareils à usage médical) contenant des piles ou des batteries au lithium métal ou au lithium ionique (les objets contenant des piles ou des batteries au lithium métal ou au lithium ionique dont la fonction principale est d'alimenter un autre dispositif doivent être transportés comme batteries de rechange en conformité avec les dispositions ci-après)	Oui	Oui	Oui	Non	Non	<p>a) transportés par des passagers ou des membres d'équipage pour un usage personnel ;</p> <p>b) devraient être transportés comme bagages de cabine ;</p> <p>c) pour chaque batterie, les valeurs ci-après ne doivent pas être dépassées :</p> <ul style="list-style-type: none"> — pour les batteries au lithium métal, une quantité de lithium n'excédant pas 2 grammes ; ou — pour les batteries au lithium ionique, une énergie nominale en wattheures n'excédant pas 100 Wh ;
<u>Balises de localisation personnelle (balises de localisation d'urgence portables individuelles) à piles ou batteries au lithium métal contenant une quantité de lithium excédant 2 grammes mais n'excédant pas 8 grammes</u>	<u>Non</u>	<u>Oui</u>	<u>Oui</u>	<u>Oui</u>	<u>Non</u>	<p>a) <u>transportées par des passagers ou des membres d'équipage pour un usage personnel ;</u></p> <p>b) <u>les batteries et les piles doivent être d'un type qui satisfait aux prescriptions de chaque épreuve de la sous-section 38.3 de la Partie III du Manuel d'épreuves et de critères de l'ONU ;</u></p>

(...)