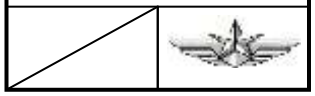
No. 3433-P-24

SAFETY PROMOTION NOTICE

SUBJECT: ELECTRICAL POWER

Lithium Battery Safety in Personal Electronic Devices (PED)
Recommendations to operators

For the attention of



AIRCRAFT CONCERNED	Version(s)	
	Civil	Military
EC120	B	
AS350	B, BA, BB, B1, B2, B3, D	L1
AS550		A2, C2, C3, U2
AS355	E, F, F1, F2, N, NP	
AS555		AF, AN, SN, UF, UN, AP
EC130	B4, T2	
SA365 / AS365	C1, C2, C3, N, N1, N2, N3	F, Fs, Fi, K, K2
AS565		MA, MB, SA, SB, UB, MBe
SA366		GA
EC155	B, B1	
SA330	J	Ba, L, Jm, S1, Sm
SA341	G	B, C, D, E, F, H
SA342	J	L, L1, M, M1, Ma
ALOUETTE II	313B, 3130, 318B, 318C, 3180	
ALOUETTE III	316B, 316C, 3160, 319B	
LAMA	315B	
EC225	LP	
EC725		AP
AS332	C, C1, L, L1, L2	B, B1, F1, M, M1
AS532		A2, U2, AC, AL, SC, UE, UL
EC175	B	
H160	B	
EC339		KUH/Surion
BO105	C (C23, CB, CB-4, CB-5), D (DB, DBS, DB-4, DBS-4, DBS-5), S (CS, CBS, CBS-4, CBS-5), LS A-3	CBS-5 KLH, E-4
MBB-BK117	A-1, A-3, A-4, B-1, B-2, C-1, C-2, C-2e, D-2, D-2m, D-3, D-3m	D-2m, D-3m
EC135	T1, T2, T2+, T3, P1, P2, P2+, P3, EC635 T1, EC635 T2+, EC635 T3, EC635 P2+, EC635 P3, T3H, P3H, EC635 T3H, EC635 P3H	

Resaon for Revision: With this Revision the list of affected helicopters is extended.

1. BACKGROUND

Lithium batteries are widely used in a range of consumer **Portable Electronic Devices** including smartphones, tablets, laptops and cameras.
A number of events across the global aviation community have been caused by lithium batteries going into **Thermal Runaway**.
This occurs during charging or due to crushing, high temperatures or manufacturing defects that lead to an unanticipated failure. This reaction, when started, cannot be stopped.

The resulting effects of thermal runaway can be the following:

- **Overheating**
- **Fire**
- **Overpressure, Burst**
- **Corrosive Leakage**
- **Toxic vapors**

Power banks and electronic cigarettes have been identified as a particular risk.
Power banks must not be used to charge devices in flight - they must be packaged and handled as spare batteries.
Electronic cigarettes must not be used or charged in flight.

Helicopters are smaller machines compared to airplanes and are thus more vulnerable to a thermal runaway event in the cargo compartment and the occupants or crew can be more exposed in the cabin.
Resulting effects of Thermal Runaway can lead to pilot(s) incapacitation, loss of visible references, burns.
In some conditions, the thermal runaway of a device can increase the crew workload and deteriorate the crew's ability to work effectively as a team.

This Information Notice thus aims to give recommendations to our operators to help them manage the risk of lithium batteries and to provide information on some documents/information from Civil Airworthiness Authorities related to this subject.

2. RECOMMENDATIONS TO OPERATORS CONCERNING PED

- Lithium Batteries must only be carried in the cabin where people inside the helicopter can access the devices / potential fire source [refer to EASA SIB 2017-04R1]

- Avoid the crushing (drop, crush, impact, compressing, hitting…) of devices and be especially careful when moving seats or other equipment that can trap or damage any devices

- Avoid overheating PEDs or other lithium battery powered devices by minimizing exposure to sunlight and high temperatures for long periods

- Make sure not to use PEDs that have been damaged (overheated, fallen, shocked, broken, cracked, etc.) - also avoid recharging such damaged items during flight

- Where possible, use devices from known, legitimate manufacturers with "CE" markings or equivalent approvals, this includes the use of original branded cables and chargers

- Never use power banks in flight to charge devices
- Never use or charge Electronic Cigarettes in flight
- Electronic Flight Bags are particular items that are not considered as PEDs. Consider compliance with the relevant regulations when selecting Electronic Flight Bags
- Operators must develop operational procedures within their Safety Management Systems (SMS) for the handling of Lithium Battery thermal runaway situations depending on their specific operations. Such measures must consider:
  - How to access devices and other potential sources of fire
  - Options for extinguishing / containing any fire using the available extinguishers or other mitigating means (fire blanket, PED containment bag). This must include procedures in which it is clear who must use which extinguishing / containing means and in which situation. Any extinguishers must be appropriate for both the type of fire and the location they will be used in (e.g. confined space in a helicopter cabin). If responsibilities are given to passengers, they must be briefed on their responsibilities
  - Also, consider procedures to cope with the situation in a safe manner from inside the helicopter

Equivalent guidance to that described above can have been published by other Airworthiness authorities.

3. NOTES

- Operators remain responsible for compliance with local airworthiness regulations (FAA, EASA, CAAC, ANAC, JCAB, DGAC, CAA…) (including operational regulations) provided by local authorities for the country where the aircraft is operated
- Operators remain responsible for the use of such PEDs onboard as they are not certified items
- Items installed and certified by Airbus Helicopters are out of the scope of this note, as dedicated airworthiness regulations apply
- This Information Notice does not cover and deal with aircraft tolerance to adverse interference from PEDs, contact Airbus Helicopters if further information is needed
- Items transported but not intended to be used or powered during flight are out of scope, further guidance for transportation can be found in **Lithium Battery Guidance Document - IATA**