European Union Aviation Safety Agency

Lithium Batteries

What is the EASA position on Lithium batteries installed as "loose parts"? For example Lithium batteries installed in portable In-Flight Entertainment systems (with multiple cells 100Wh) ?

Answer

Loose parts are addressed by EASA SIB 2016/08. In the SIB, the Agency reminds operators of the need to obtain from their competent authority an authorisation when the limits are exceeded. To calculate the limits, the SIB establishes that the addition of Wh of all the batteries powering the device should be considered instead of that of each individual battery.

Last updated:
19/10/2019

Link:
https://www.easa.europa.eu/en/faq/104953

Can an electric wheelchair in the cabin be treated as a Portable Electronic Devices (PED)? If not how could the battery system be managed to ensure safety during flight?

Answer

Regulations on the transport of dangerous goods by passengers and crew, including mobility aids, medical equipment and PEDs, are contained in Part 8 of ICAO Doc. 9284 Technical Instructions for the Safe Transport of Dangerous Goods by Air. However, airlines may impose further restrictions for safety reasons. Therefore, it is advised to consult the Dangerous goods information provided by the airline before flying.

Last updated:
19/10/2019

Link:
https://www.easa.europa.eu/en/faq/104955

Lithium Battery: How many cases where investigated to conclude that the

traditional practices were inefficient? No Airworthiness Directive known to correct interference issue on in service aircraft. (ref. to Electrical System updates presentation)

Answer

This was the conclusion of the working group EUROCAE WG-31 and SAE AE-4. Please refer to ED-248 section 4.2

Last updated:
19/10/2019

Link:
https://www.easa.europa.eu/en/faq/104957

Lithium Battery: When is CS-25 be expected to be updated to reflect different types of energy storage devices (Lithium technology, Fuel Cells etc.)?

Answer

This is a planned rulemaking task with no fix date yet, due to the recent/on-going publication of the qualification standards and ETSOs. When the topic is considered mature enough to publish requirements and Acceptable Means of Compliance the rulemaking task will be started.

Last updated:
19/10/2019

Link:
https://www.easa.europa.eu/en/faq/104958

Minimum Operational Performance Standards for non-rechargeable Lithium Batteries: DO-227 and other referenced standards are applicable to permanently installed equipment. Is there any mandatory requirement for “carry-on” medical equipment?

Answer

Carry on medical equipment is regulated by operational rules, not certified as part of the aircraft. Regulations on the transport of dangerous goods by passengers and crew, including

mobility aids, medical equipment and PEDs, are contained in Part 8 of ICAO Doc. 9284 Technical Instructions for the Safe Transport of Dangerous Goods by Air. However, airlines may impose further restrictions for safety reasons. Therefore, it is advised to consult the Dangerous goods information provided by the airline before flying.

Last updated:
19/10/2019

Link:
https://www.easa.europa.eu/en/faq/104959

Lithium Batteries: How many incidents with Lithium Batteries have been recognised in the past year. Are Lithium Batteries still dangerous?

Answer

There have been some significant incidents in the last year that show that Lithium battery technology poses a hazard for the aircraft.

Last updated:
19/10/2019

Link:
https://www.easa.europa.eu/en/faq/104960

Lithium Battery: Will EASA mandate actions against existing designs?

Answer

EASA is currently gathering information about existing installations and working with FAA to determine the potentially existing hazardous cases. The need to mandate actions against some specific designs is still under review and no decision has been taken yet.
In case of specific incidents, EASA is already issuing Airworthiness Directives to improve some current installations in a case by case basis.

Last updated:
19/10/2019

Link:
https://www.easa.europa.eu/en/faq/104962

How do we control the Lithium batteries in all smart phones and other

devices?

Answer

Portable Electronic Devices are regulated by operational rules. Please refer to: https://ad.easa.europa.eu/ad/2017-04R1. More info can be found here: https://www.iata.org/whatwedo/cargo/dgr/Documents/passenger-lithium-bat…

Last updated:
19/10/2019

Link:
https://www.easa.europa.eu/en/faq/104964

is EASA having in service occurences linked to Lithium batteries installed within Cockpit Voice Recorder and Flight Data Recorders current 30 days Underwater Locator Device (ULD) ?

Answer

Many Lithium batteries are being introduced because of the 90 days requirement for the ULD. The risks associated to Lithium batteries is not dependant on the equipment where it is installed, but to the chemistry of the battery, which is highly explosive and flammable.

Last updated:
19/10/2019

Link:
https://www.easa.europa.eu/en/faq/104967

Will EASA issue an Airworthiness Directive to replace all Emergency Locator Transmitters and Underwater Locator Devices currently installed, if TSO/ ETSO standards are not acceptable to EASA?

Answer

No action/initiative (in coordination with FAA) was taken so far.

Last updated:
19/10/2019

Link:

https://www.easa.europa.eu/en/faq/104970

It is good that the DO community is made aware about the Lithium Battery Special Conditions. Design Organisations not aware of those might wrongly classify the design changes including a Lithium battery.

Answer

agreed

Last updated:
19/10/2019

Link:
https://www.easa.europa.eu/en/faq/104971

Lithium battery: Is there any generic Certification Review Item issued?

Answer

Yes, please check the EASA website for the applicable Special Conditions.

For a particular aircraft please verify on the associated Type Certificate Data Sheet.

Last updated:
22/11/2021

Link:
https://www.easa.europa.eu/en/faq/104961

Why does the current Special Conditions CRI for non rechargeable batteries not explicitly state that it would be applicable to Batteries which were qualified to the ETSO C142 Standard?

Answer

Previous Means of Compliance proposed:
Due to missing a more appropriate standard, ETSO C-142a + Risk assessment at A/C level was an acceptable MoC to the SC contained in the CRI.
Current Means of Compliance proposed:
Minimum Operational Performance Standards (MOPS) for Non–Rechargeable Lithium Batteries DO-227A/ETSO C-142b + risk assessment at A/C level (limited to Special Conditions

3, 4, 5 & 6) is an acceptable MoC to the Special Conditions 1 to 6 contained in this CRI.

ETSO C-142b referring DO-227A material was published in 2020.

Last updated:

22/11/2021

Link:

https://www.easa.europa.eu/en/faq/104954

What is the EASA approach for rechargeable lithium batteries installation on aircraft types other than CS-25?

Answer

The same policy is currently applicable to CS-25 aircraft types applies also to CS-29, CS-23 level 4, and CS-27 Cat A aircraft types. For CS-23 levels 1, 2, and 3 and for CS-27 non-CAT A, EASA will evaluate the need for using the same approach on a case-by-case basis, based on the risk that the installation could pose to aircraft safety.

When validation with foreign authorities would be envisaged, EASA recommends checking potential means of compliance discrepancies related to lithium batteries.

Last updated:

15/11/2024

Link:

https://www.easa.europa.eu/en/faq/140596