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OPERATION OF AIRCRAFT

GENERAL

AMENDMENT TO THE TECHNICAL INSTRUCTIONS FOR THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR (DOC 9284) RELATING TO A PROHIBITION ON THE TRANSPORT OF LITHIUM ION BATTERIES AS CARGO ON PASSENGER AIRCRAFT AND ADDITIONAL MITIGATION MEASURES FOR CARGO AIRCRAFT

1. The ICAO Council has approved amendments to the 2015-2016 Edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Technical Instructions, Doc 9284) which prohibit the transport of lithium ion batteries as cargo on passenger aircraft and incorporate additional requirements to mitigate risks posed by lithium batteries as cargo on cargo aircraft. The Council has also approved amendments to the Supplement to the Technical Instructions (Doc 9284SU) which introduce guidance to States on the transport of lithium batteries. The amendments are contained in Addenda Nos. 3 and 4 to the Technical Instructions and Addendum to the Supplement to the Technical Instructions, all of which are applicable 1 April 2016. The addenda are available on www.icao.int/safety/DangerousGoods.

Prohibition on the transport of lithium batteries as cargo on passenger aircraft.

*2. A prohibition on the transport of UN 3090 — **Lithium metal batteries** as cargo on passenger aircraft was introduced into the 2015-2016 Edition of the Technical Instructions in response to tests which demonstrated that aircraft cargo fire protection systems could not control a lithium metal fire. The prohibition on the transport of UN 3480 — **Lithium ion batteries** was made in response to more recent tests which demonstrate that a fire involving high-density packages of UN 3480 may exceed the capability of aircraft cargo fire protection systems (see EB 2015/48). The prohibition is intended as a temporary measure until controls are in place which establish an acceptable level of safety. The controls, which would need to be in place in order to consider lifting the prohibition, include a performance-based packaging standard. At the request of ICAO, SAE International has established a committee to develop such a standard. Development is currently underway.*

3. The prohibition applies to lithium batteries packed on their own and not to lithium batteries packed with or contained in equipment. It applies to lithium batteries transported as cargo and not to lithium batteries carried by passengers and crew. Although baggage may be loaded in an aircraft's cargo compartment, it is not considered as cargo for the purposes of the Technical Instructions (see definitions for cargo and baggage in Part 1, Chapter 3 of the Technical Instructions). Passengers and crew may continue to carry lithium batteries on aircraft in accordance with Part 8 of the Technical Instructions.

Additional requirements to mitigate risks posed by lithium batteries transported as cargo on cargo aircraft.

4. The additional requirements to mitigate risks posed by lithium batteries, which will continue to be permitted for transport on cargo aircraft, include transporting all lithium ion batteries at a state of charge not exceeding 30 per cent of their rated capacity and limiting the number of packages of lithium ion or lithium metal shipped in accordance with Section II of Packing Instructions 965 or 968 of the Technical Instructions. While these measures provide significant improvements to safety, they do not eliminate all risks and should be coupled with other mitigation strategies as part of a layered approach to safety. States are encouraged to ensure that cargo operators perform safety risk assessments to establish whether they can manage the risks posed and, if so, how. At a minimum, the criteria listed in the addendum to the Supplement to the Technical Instructions should be identified as part of a safety risk assessment. Operators who have previously performed a risk assessment should re-evaluate their assessment in light of the potential for greater quantities of lithium batteries offered for transport on cargo aircraft as a result of the prohibition on passenger aircraft.

Need for effective oversight to address non-compliance

5. There have been reports of both deliberate and unintentional non-compliance with respect to the transport of lithium batteries by air. Types of non-compliance include: batteries not packed in compliance with the Technical Instructions; batteries not meeting testing requirements; batteries classified as being contained in or packed with equipment when they are, in fact, packed on their own; and undeclared shipments. There are concerns that the prohibition on the transport of lithium ion batteries on passenger aircraft may result in an increase in misdeclared or undeclared lithium battery consignments. States are therefore encouraged to increase their surveillance efforts and to apply effective enforcement when necessary. States are also invited to encourage operators to consider the history of compliance by shippers with dangerous goods regulations before accepting lithium batteries for transport. Finally, States are encouraged to participate in cooperative efforts with other States concerning violations of dangerous goods regulations as recommended in Annex 18 — The Safe Transport of Dangerous Goods by Air.

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