

## Transport of Lithium Batteries on Passenger and Cargo Aircraft

On 17 July 2015, the Boeing Company issued a Multi Operator Message (MOM-MOM-15-0469-01B) on the transport of lithium batteries as cargo on passenger and cargo aircraft manufactured by Boeing, which referenced recommendations made previously by the International Coordinating Council of Aerospace Industries Association (ICCAIA) on this subject.

The following week, on 24 July, Airbus also issued a notice in an In-Service Information publication (ISI number 00.00.00182, "Transport of Dangerous Goods, Lithium Batteries) to its customer airlines. The Airbus document references the ICCAIA recommendations and calls on operators of its aircraft to conduct a full risk assessment regarding the carriage of high quantities of lithium batteries as cargo.

These welcome announcements (referenced below) are consistent with IFALPA's longstanding position on the transport of lithium batteries, and the Federation strongly encourages all its Member Associations to ensure that they are being fully implemented by all Operators within their State. IFALPA fully supports the Airbus and Boeing recommendations and believes that they should be adhered to by ALL airlines until proper packaging standards are developed and limits on quantity in packages and shipments are implemented.

For additional information, please refer to IFALPA's Position Papers available here:  
<http://www.ifalpa.org/publications/ifalpa-statements/dangerous-goods.html>

### **Boeing Company Statement on Lithium Batteries**

The risks associated with transporting high density lithium packages of batteries as cargo by air, coupled with the knowledge that the volume of such cargo is continually increasing, requires action to be taken.

The Boeing Company supports and advocates for global harmonized requirements related to the air transport of batteries. We support efforts to develop effective protective packaging materials to facilitate the safe shipment of lithium batteries as cargo.

Boeing agrees with the recommendation by the International Coordination Council for Aerospace Industry Association (ICCAIA) that high density packages of lithium ion batteries and cells not be transported as cargo on passenger airplanes until such time as safer methods of transport are established and followed. The company relayed this guidance to operators on 17 July 2015.

Boeing also agrees with the ICCAIA recommendation that appropriate packaging be developed and shipping regulations established to more safely ship lithium metal and lithium ion batteries as cargo on freighter airplanes. Boeing recommended that operators choosing to carry lithium ion batteries as cargo, either on passenger or cargo-only airplanes, conduct a safety assessment.

**Q. What specifically does Boeing recommend operators consider when making the safety assessment?****A. Boeing recommends a safety assessment that considers the following:**

- The types and quantities of lithium batteries carried
- The fire protection features of each model aircraft in their fleet
- The expected flight profile (flight duration, ETOPS, etc.)
- History of battery shippers compliance to dangerous goods transport regulations
- Quantity of batteries per flight
- Location of batteries within the cargo compartment
- Proximity to other dangerous goods
- Potential ignition sources in compartment
- Other relevant aspects of the operator's cargo carriage experience

**Excerpt from Airbus In-Service Information (ISI) 00.00.00182, Transport of Dangerous Goods, Lithium Batteries, 24 July 2015**

Regarding the carriage of high quantities of lithium batteries as cargo, Airbus recommends that operators conduct a full risk assessment, taking into account factors such as industry available information and guidance. The assessment should consider other mitigating factors, for example but not exhaustive:

- The quantity and density of lithium battery shipment
- The type of lithium batteries to be shipped
- The separating of lithium battery shipments into smaller and separated groupings to minimize the size of a potential battery fire
- Who the supplier/shipper of lithium batteries is and their quality control
- The identification and notification of all shipments of lithium batteries (especially Section II)
- Accepting only lithium battery shipments that comply with applicable regulations (ICAO and/or local regulations)
- Provision of customer education materials to increase awareness on the safe shipping of lithium batteries and to minimize undeclared battery shipments
- Training and education of employees regarding regulations, handling procedures, the dangers of mishandling, and methods to identify lithium battery shipments
- The capabilities of the aircraft cargo compartment in which the batteries are to be carried
- Use of the most efficient means that are available for containment of Lithium Battery fires
- Consideration of the routing of the flight, and location of nearest diversionary airfield
- The likely location of the pallets/containers in the cargo hold, and their proximity to key aircraft systems, such as Gaseous Oxygen systems and Additional Center Tanks
- Segregation of any lithium battery shipments from other dangerous goods that present a fire hazard (e.g. Class 3 flammable liquid shipments) to minimize the effects of a lithium battery fire and the potential for involving lithium batteries in adjacent cargo fire events
- Potential sources of ignition within the cargo compartment
- Consider establishing a policy to notify the flight crew of all lithium battery shipments (including exempted shipments, Section II) so the flight crew is aware of the potential hazard