

## **Proposed Special Condition on Installation of Cargo Seat Bags** **Applicable to Large Aircraft**

### **Introductory note:**

The hereby presented Special Condition has been classified as an important Special Condition and as such shall be subject to public consultation, in accordance with EASA Management Board decision 12/2007 dated 11 September 2007, Article 3 (2.) of which states:

"2. Deviations from the applicable airworthiness codes, environmental protection certification specifications and/or acceptable means of compliance with Part 21, as well as important special conditions and equivalent safety findings, shall be submitted to the panel of experts and be subject to a public consultation of at least 3 weeks, except if they have been previously agreed and published in the Official Publication of the Agency. The final decision shall be published in the Official Publication of the Agency."

### **Statement of Issue:**

EASA was made aware of minor changes to install Cargo Seat Bags on passenger seats in order to conduct flights for transportation of mail and/or cargo.

A Certification Memo EASA CM – CS – 003 Installation of “Cargo Seat Bags” on Passenger Seats was issued on 14<sup>th</sup> Nov 2012 requiring application for major modification or STC.

EASA recently received an application for a STC and therefore started the process to issue applicable Special Conditions.

While this is the first application the conditions prescribed below are linked to the project and any future application may require new or revised conditions.

Since this installation of Cargo Seat Bags is a change in the scope of operation of the aircraft, and in the absence of operational requirements covering this kind of operation, the installation and the procedures for operation have to be addressed taking into account the specific configuration of each aircraft model affected.

While the certification base for the aircraft models affected by the change may vary the configuration of the aircraft cabins modified for transportation of mail shall conform to a minimum standard with respect to the affected parts of CS 25.

## **Generic applicability to Large Aircraft – Special Condition – Installation of Cargo Seat Bags**

Due to the fact that there are no certification requirements in place for the installation of Cargo Seat Bags Special Conditions and acceptable Means of Compliance have been defined for installation.

The installation of cargo seat bags into passenger cabins is affecting mainly:

- the structural integrity and retention of mass item under flight and emergency landing conditions, and
- the fire worthiness due to the amount of cargo in the passenger cabin
- emergency evacuation provisions.

The intent of this SC is to provide requirements for the installation and instruction for operation for cargo seat bags in passenger aircraft. Due to lack of requirements in some part of the CS 25 and the operating rules Special Conditions are listed as listed below are proposed by EASA.

The change of the cabin when fitted with Cargo Seat Bags is of temporary nature. When converted into the configuration for transportation of mail the cabin shall comply with the requirements outlined in SC below.

### **Special Conditions**

#### **1. Structural integrity**

- a. Mail is seen as cargo in respect to cargo seat bags, so the bags must be fully enclosed and the enclosure must withstand the loads specified in CS 25.561 (CS25.787(a)).
- b. The Cargo Seat Bags must retain its content under loads in flight (flight and landing loads of the specific aircraft model) and the emergency landing conditions specified in CS 25.561(b). (CS 25.789(a) – Retention of items of mass in passenger and crew compartments and galleys).

#### **2. Fire-worthiness**

In the absence of compartments classified under CS 25.855 compensating factors shall be provided for each installation of cargo bags on passenger seats. If no smoke detection or fire suppression system is installed dedicated and trained personnel shall accompany mail/cargo on those flights where cargo seat bags are installed and mail/cargo is loaded into the cabin. In addition compliance with the following conditions shall be shown:

- a. Regardless the number of passenger seats installed in the aircraft cabin, there must be an adequate number of fire extinguishers installed in the cabin containing extinguishing agent sufficient to fight a fire in at least one Cargo Seat Bag taking into account all bag loading configurations.

- b. There must be at least the following fire fighting equipment installed in the front of the cabin and readily accessible for fire fighting personnel:
  - i. A smoke hood (ETSO C116 or equivalent)
  - ii. Fire protecting gloves
  - iii. Crow bar
  - iv. One torchThe equipment may be part of the aircraft's basic emergency equipment
- c. There must be provisions for detecting a fire or smoke in the compartment in which the cargo seat bags are installed. In the absence of a detection system installed in the compartment approved alternative means must be provided, refer to the MOC section in appendix B
- d. The Cargo Seat Bags shall comply at least with the criteria defined in appendix F Part 1(a)(1)(iv) and (v)
- e. If the mail/cargo is accompanied by other staff occupying seat(s) in the same compartment there must be provisions to protect the occupants from hazardous quantities of smoke (ETSO C116 or equivalent).

### **3. Emergency Evacuation**

- a. The installation of Cargo Seat Bags in the passenger cabin excludes the transportation of fare-paying passengers.
- b. Cargo Seat Bags installed, but not filled with mail must be fully closed and secured to prevent anyone becoming trapped in an emergency case.
- c. CS 25.813 – Emergency exit access; the Cargo Seat Bags shall not be installed in seat rows fore and aft or leading to emergency exits (especially Type III or IV emergency exits) regardless the fact whether occupants are transported in addition to the mail or not.
- d. CS 25.815 – Width of aisle; the installation of Cargo Seat Bags must not decrease the width of the aisle(s) beyond the dimensions defined in 25.815 whereas the number of all passenger seats (regardless they are occupied by a person or a Cargo Seat Bag) installed defines the dimensions in the table in § 25.815
- e. CS 25.812 – Emergency lighting; the installation of the Cargo Seat Bags must not obscure any portion of the emergency lighting system e.g. non electrical floor path marking installations, low level exit identifier, etc. regardless the number of occupants in the passenger cabin.

### **Means of Compliance**

#### **1. Structural integrity**

- a. The supplier of the Cargo Seat Bags shall provide any limitations regarding loading and installation, instruction for CAW, instructions for use.

#### **2. Fire worthiness**

- a. While the requirement base is different for the various applications the CS 25.851 at change 4 is acceptable with respect to the installation of Cargo Bags. The applicant shall verify that the fire-fighting capability is sufficient for the change applied to the cabin taking into account the equipment already

installed in the passenger cabin. If it is necessary to install further equipment (fire extinguisher and/or smoke protection equipment) this equipment may be stowed in the cabin using existing stowage provisions (overhead bins, stowage's) if the location is identifiable for the crew.

- b. CS 25.855 – Cargo and baggage compartments; while this paragraph applies for cargo compartments not occupied by passenger and crew an equivalent safe level must be achieved when the cabin is occupied by a limited number company staff. Company staff can be either personnel to escort the mail or regular airline staff (cabin crew) for the return flight of the aircraft. Since there is no cargo compartment classification suitable for this kind of operation the following provides acceptable means of compliance:
  - i. The mail/cargo must be transported in enclosed containers (boxes or bags)
  - ii. In the absence of a smoke detection system installed in the compartment there must be:
    - 1. One or more trained personnel acting as fire-fighter (not part of the flight crew) on flights where mail/cargo is transported
    - 2. Adequately located to detect smoke in the cabin compartment fitted with cargo bags within 60sec, or performing visual checks at acceptable regular intervals in order to detect the presence of a fire.
- c. Occupants sharing the same compartment with mail/cargo must be protected from hazardous quantities of smoke and gas by providing adequate equipment e.g. smoke hood or equivalent to the occupants.

### 3. **Emergency Evacuation**

- a. A limited number of company staff may be carried on a flight for transportation of mail. Occupants must not share seat rows with Cargo Seat Bags installed. There must be a clear separation of areas occupied by occupants and those fitted with Cargo Seat Bags.
- b. The time to charge the non-electrical floor path marking stripes must be defined for a cabin fitted with the Cargo Bags if the system is required to guide occupants to an emergency exit (for example, if company staff is transported in the cabin and located in an area which makes it necessary to move through the aisle(s) to reach any emergency exit, or if the flight crew have to move through the cabin to reach any emergency exit).