

## Proposed Special Condition on “Cargo Fire Containment in an occupied Passenger Cabin”

### Applicable to Learjet 45

#### Introductory note:

The following 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."*

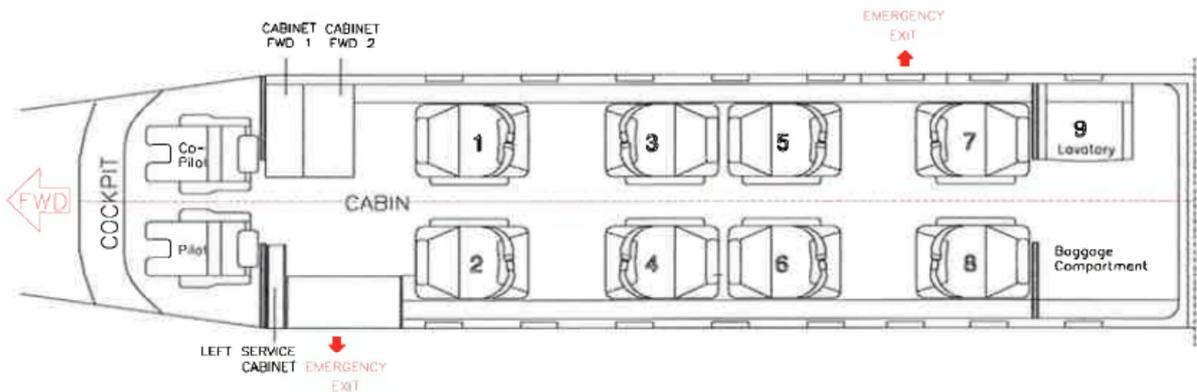
#### Statement of Issue

The current Change is proposed to remove five (5) passenger seats and to install two (2) baggage pallets by using the existing seat tracks. The modified aircraft will be used to carry cargo for disaster relief situations. Such operations are greatly facilitated by the ability to also carry passengers on the same aircraft.

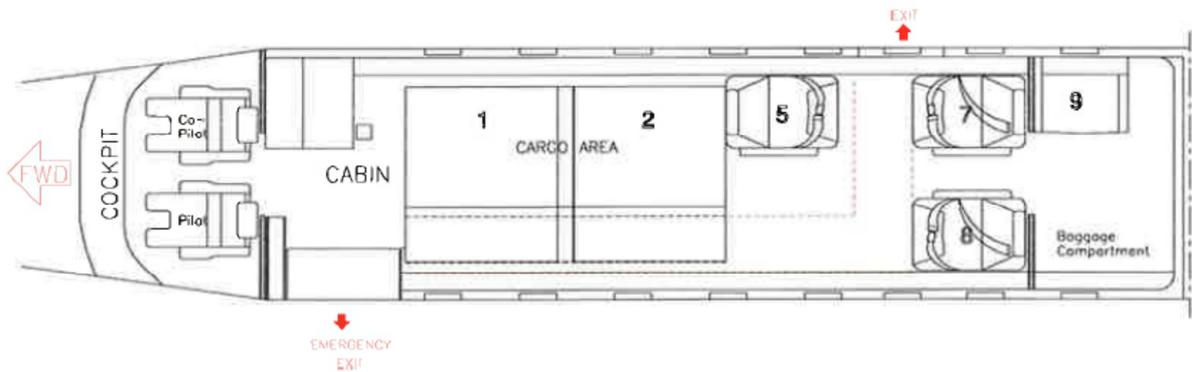
Each pallet will be attached to the seat-tracks on both sides of the cabin. Both pallets will form a combined cargo/baggage area.

The current and proposed cabin layouts are shown below.

Configuration prior to modification



## Configuration post modification



The cargo items to be carried are specific to the intended disaster relief operations, and this change is restricted by a content limitation.

The cargo items are to be placed in several separate boxes known as Fire Containment Boxes (FCB). Each pile of boxes is secured on a pallet and covered by a Fire Containment Cover (FCC).

Only specific production controlled FCBs are allowed by the Change.

The fire protection is achieved by “fire containment” method. This fire containment is afforded by the two layers of containment:

- (a) Fire Containment Boxes (FCB)
- (b) Fire Containment Covers (FCC)

The EASA airworthiness standards for this installation in the Learjet 45 cabin has been determined as CS 25 Amendment 4, issued 27 December 2007.

The installation of cargo in the same compartment as passengers, and the use of fire containment covers in the cabin, are unusual design features that are not sufficiently addressed in any CS 25 amendment. After due consideration, with the humanitarian nature of the intended operations in mind, and in accordance with 21.A.16B, the Agency has concluded that the carriage of cargo in the same compartment as passengers as proposed by this particular STC design can be found acceptable provided the following Special Conditions are met. Any change to the interior configuration or diversion from the humanitarian nature of the intended operation requires a re-assessment by the Agency.

## **Learjet 45 - Special Condition**

### **- Cargo Fire Containment in an occupied Passenger Cabin -**

After due consideration, and with the humanitarian nature of the intended operations in mind, the Agency has concluded that, the lack of a smoke detector or fire detector system and the carriage of cargo in the same compartment as passengers can be found acceptable providing the following Special Conditions are met:

1. The cargo must be enclosed inside fire containment containers.
  - a. The proposed fire containment provisions must provide for a very high level of confidence that a cargo fire that would prevent continued safe flight and landing will not occur.
  - b. The proposed fire containment provisions must provide for a very high level of confidence that the emission of hazardous quantities of smoke, fumes or flames into any compartment occupied by the crew or passengers will not occur.
2. The applicant must develop procedures to ensure that the cargo is correctly loaded and secured within the agreed fire containment features.
  - a. These procedures must be documented in an AFM supplement.
  - b. These procedures should require the carriage on board of a specially trained person on every flight to supervise such issues as inspection of the Fire Containment Boxes (FCB) and Fire Containment Covers (FCC) for damage, the loading of cargo, the limitations in cargo content, etc.
3. There should be a Content Limitation, as agreed with the Agency, which is clearly identified with placards on the FCBs and/or FCCs as appropriate, and addressed in the AFM and appropriate weight and balance or loading document. The Content Limitation should be justified on the basis of operational need.
4. FCCs must meet CS 25 Appendix F Part I (a)(1)(ii) and FCBs must meet CS 25 Appendix F Part I (a)(1)(iv) at Amendment 4.