

**SUBJECT** : Installation of an external baggage compartment not fitted with smoke detector on a CS-29 rotorcraft

**REQUIREMENTS incl. Amdt.** : CS 29.855(d) at Amdt. 2

**ASSOCIATED IM/MoC<sup>1</sup>** : Yes  / No  *[Delete last page of associated IM/MoC if not applicable]*

**ADVISORY MATERIAL** : ---

### Content for Public Comments

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<sup>1</sup> Associated Interpretative Material and/or Means of Compliance may be published for awareness only and they are not subject to public consultation.

## INTRODUCTORY NOTE

The following Special Condition has been classified as important 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.) 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."*

## ABBREVIATIONS

CS	Certification Specifications
EBC	External Baggage Compartment
ICAO	International civil Aviation Organisation
MoC	Means of Compliance
RFM	Rotorcraft Flight Manual
SC	Special Condition

## IDENTIFICATION OF ISSUE

EASA received an application for a major change to type design of a large CS-29 rotorcraft.

The design change introduces an externally mounted baggage compartment that is inaccessible in flight. The compartment is installed on the lower rear fuselage structure and is removable when on the ground. Its main characteristics are:

- volume available for baggage: 0.6 m<sup>3</sup>
- loadable baggage weight: 120 kg
- access doors installed on both sides
- compartment / fuselage attachment by means of metallic fittings

The design of the external baggage compartment is based on the same principles (materials, construction, sealing) as the integral cargo compartment of the modified rotorcraft, except that it has no fire or smoke detector installed.

EASA has determined that the proposed baggage compartment installation is not specifically addressed in CS-29.

Considering all the above, to establish an adequate level of safety for the installation in question the following Special Condition, and the associated means of compliance, are proposed. All changes compared to the SC and MoC previously published in SC-D29.855-01 Issue 1, made to address comments received during the consultation period, are marked and the current consultation paper applies to the revised / amended text only.

**SC-D29.855-01****Special Condition****SC-D29.855-01: Installation of an external baggage compartment  
not fitted with a fire or smoke detector on a CS-29 rotorcraft****1. APPLICABILITY**

This SC is applicable to a large CS-29 rotorcraft with an externally mounted baggage compartment, that is inaccessible in flight, and whose design is based on the same principles (materials, construction, sealing) as the integral cargo compartment of the rotorcraft, except that it has no fire or smoke detector installed.

**1.1 RELATED CS**

CS 29.855(d) at Amendment 2.

**2. SPECIAL CONDITION**

In lieu of complying with the current related CS identified in chapter 1.1 above, the actual external baggage compartment design shall comply with the following special detailed technical specifications:

- (a) The external baggage compartment must be sealed to completely contain cargo fires without endangering the safety of the rotorcraft or its occupants. Additionally, the RFM must contain operating limitations that prohibit the carriage inside the external baggage compartment of:
  - i. dangerous goods (ref. ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air, ICAO Doc 9284-AN/905);
  - ii. mail;
  - iii. piercing items.
- (b) It must be demonstrated that a fire that develops inside the external baggage compartment will not result in:
  - i. flame impingement or transfer of heat that may cause a catastrophic or hazardous failure condition of the rotorcraft structure or systems.
  - ii. accumulation of harmful quantities of smoke, flame, extinguishing agents, and other noxious gases in any crew or passenger compartment.
  - iii. detachment of the external baggage compartment from the rotorcraft or release of cargo items contained within it.
- (c) The RFM must contain an emergency procedure addressing the scenario in which flames or smoke emitting from the external baggage compartment is visually detected by the occupants.
- (d) The RFM must contain the instructions necessary to ensure the safe loading and unloading of the external baggage compartment.
- (e) The RFM must require that before each flight the passengers receive a briefing that identifies passengers' personal belongings that are not allowed to be transported inside the external baggage compartment and that mandates that passengers are asked to remove any prohibited items from their baggage to be transported in that compartment.
- (f) There must be means to prevent cargo items from interfering with any feature that ensures the sealing of the external baggage compartment, including the opening mechanism of the doors.
- (g) Placards must be installed on the external baggage compartment to specify instructions and limitations related to the loading of this compartment.
- (h) Maintenance tasks must be introduced to ensure that unacceptable levels of damage as well as of wear and tear of the external baggage compartment are timely detected and corrected.

**Associated Means of Compliance**

The associated Means of Compliance is published for awareness only and is not subject to public consultation.

**MoC to SC-D29.855-01**

- (a) The transportation of dangerous goods inside the EBC is prohibited by SC-D29.855-01(a). The EBC loading instructions required in SC-D29.855-01(d) should include detailed information on items that may be transported as personal belongings of the passengers and that are considered dangerous goods. Examples of dangerous goods in question are batteries (including batteries contained in, or packed with, equipment), flammable fluids, aerosol cans, cigarette lighters, matches, etc.

Only the transportation of non-radioactive medicinal articles (excluding aerosols) and toiletry articles (excluding aerosols) is allowed. The relevant restrictions specified in Table 8-1 of the ICAO Technical Instructions (ICAO Doc 9284) should be amended to limit the total net quantity of all articles to 1 kg or 1 l per person.

The transportation of piercing items may be allowed if the loading instructions required in SC-D29.855-01(d) explain how to adequately encapsulate them in protective material and provided all such items are encapsulated in accordance with these instructions.

- (b) Reserved  
(c) Reserved  
(d) Instead of the detailed instructions on the loading and unloading of the EBC, the RFM may contain a reference to another document that specifies the instructions. In such case, the document containing the instructions is incorporated by reference in the RFM and needs to be made available to the helicopter operator.  
(e) The pre-flight briefing delivered to the passengers should include a detailed list of the personal belongings that are considered as dangerous goods and that therefore are not allowed to be transported inside the EBC. Information to be provided to the passengers may be specified in another document which should be managed as per section (d) of this MoC.  
(f) The use of securing nets is considered an acceptable means of compliance with SC-D29.855-01(f). In order to avoid the use of securing nets in a narrow EBC, the RFM may prescribe a minimum loading factor (i.e. Volume of transported cargo / Volume of the empty cargo compartment) for the EBC volume, combined with a limitation to load only soft bags, not reinforced by hard plastic/ metal features, even in their inside.  
(g) Placards should be installed in conspicuous locations, so that they are visible with doors open or closed, and when the EBC is fully loaded.  
(h) Reserved