

SUBJECT : Installation of an unoccupied Passenger Rest Compartment

REQUIREMENTS incl. Amdt. : CS 25.791, 25.787, 25.812, 25.813, 25.815, 25.851, 25.853, 25.858, 25.1411, 25.1439, 25.1541, 25.1557, 25.1561, 25.1581 at Amdt. 28

ASSOCIATED IM/MoC : Yes / No

ADVISORY MATERIAL :

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INTRODUCTORY NOTE:

The following Special Condition (SC) 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:

PRC	Passenger Rest Compartment

IDENTIFICATION OF ISSUE:

EASA has received an application for a Supplemental Type Certificate (STC) covering the installation of a Passenger Rest Compartment (PRC). The PRC is a main deck sleeping compartment intended solely for in-flight passenger use. It consists of a series of berths/bunks, passenger amenities and the required safety systems. For its initial installation, however, the PRC will not be approved for occupancy, and no passengers, cargo or passenger baggage within the PRC will be permitted to be placed or transported inside of it.

Due to the PRC unique design, the current CS-25 certification specifications do not provide adequate or appropriate safety standards for the certification of this passenger compartment. Therefore, in accordance with paragraphs 21.A.101(d) and 21.B.75 of Annex Part 21 to Regulation (EU) No 748/2012, Special Conditions are required for the certification of the unoccupied PRC installation.

Considering all the above, the following Special Condition is proposed.

M-TS-0000436**Special Condition****Installation of an unoccupied Passenger Rest Compartment****1. APPLICABILITY**

This SC is applicable to Large Aeroplanes with a provisional installation of a PRC. Under this provisional configuration, the transportation of passengers, and/or cargo or passenger baggage in the PRC will not be allowed. A subsequent Major Change to (S)TC would be required to activate the PRC.

2. SPECIAL CONDITION

In the absence of adequate CS with which compliance could be demonstrated, the actual design shall comply with the following special detailed technical specifications:

- 1) Transportation of occupants, and/or cargo or passenger baggage in the Passenger Rest Compartment (PRC) is not allowed.
- 2) There must be appropriate placards outside the entrance to the PRC, to indicate that:
 - a) no passenger is allowed in the PRC ,
 - b) smoking is prohibited in the PRC,
 - c) the PRC must not be used for the stowage of cargo or passenger baggage.
- 3) No doors must be installed inside the PRC.
- 4) A physical barrier must be installed to prevent passengers from entering the PRC. The barrier must allow visibility of the inside of the PRC from the cabin.
- 5) In case of emergency, e.g. a fire developing inside the PRC, it must be possible for a cabin crew member to remove the barrier, without using any special tools.
- 6) A smoke or fire detection system (or systems) must be provided that monitors each area within the PRC. Each system (or systems) must provide:
 - a) a visual indication to the flight crew within one minute after the start of a fire,
 - b) a visual indication, at a suitable location, providing information about the origin of the fire, e.g. in which compartment, and
 - c) a warning in the main passenger cabin. This warning must be readily detectable by a cabin crew member, taking into consideration the positioning of cabin crew members throughout the passenger compartment during various phases of flight.
- 7) A means to fight and suppress a fire must be provided. This means can either be a built-in extinguishing system or a manual handheld bottle extinguishing system.

- a) The design shall be such that any fire within the compartment can be controlled without entering the compartment or the design of the access provisions must allow crew members equipped for firefighting to have unrestricted access to the compartment.
 - b) If a built-in fire extinguishing system is used in lieu of manual firefighting, the system must have adequate capacity to suppress any fire occurring in the PRC, considering the fire threat, volume of the compartment, the ventilation rate and the minimum performance standards (MPS) that have been established for the agent being used.
 - c) The firefighting procedures must describe the methods to search the PRC for fire source(s). Training and procedures must be demonstrated by test and documented in the appropriate manuals.
 - d) The time allowed for a crew member in the passenger cabin to respond to the fire alarm, don the firefighting equipment and gain access to the PRC must not exceed the time it takes for the compartment to become smoke-filled to the extent that locating the fire source becomes difficult.
- 8) There must be a means provided to prevent hazardous quantities of smoke or extinguishing agent originating in the PRC from entering any other compartment occupied by crew members or passengers.

M-TS-0000436**Associated Means of Compliance****Installation of an unoccupied Passenger Rest Compartment**

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

MOC to SC 1: A limitation in the Airplane Flight Manual or other suitable means should be established to prohibit occupancy of the Passenger Rest Compartment (PRC) during all phases of flight. Cabin crew procedures should be introduced to ensure no passenger can access the PRC during flight. Any design feature (e.g. curtains) that may visually divide or separate the PRC into sections should remain permanently stowed.

MOC to SC 2: The placards required by SC 2 should be readable when approaching the entrance to the PRC from a distance of 30 inches under emergency lighting conditions.

MOC to SC 4: The barrier should be effective also in the event of an emergency, including an emergency evacuation, and when no flight attendant is present. No emergency escape floor path marking should be installed in the PRC, as this could inadvertently direct passengers into the PRC during an evacuation. It should be possible for a crew member standing at the entrance of the PRC to have visibility through the barrier on the inside of the PRC.

MOC to SC 6: Depending on the design and the location of the PRC installation, it may be demonstrated and substantiated through a safety risk assessment that the installation of a smoke detection system is not required to ensure the timely detection of a fire developing inside the PRC. The safety risk assessment should consider factors such as the geometry of the PRC, including that of the barrier required by SC 4, the potential ignition sources and the overall fire load within the PRC, the design and performance of the ventilation system, and the likelihood that any smoke generated inside the PRC could be detected by the cabin occupants.

MOC to SC 7: The following safety equipment should be provided near the entrance area of the PRC:

- a) At least one approved hand-held fire extinguisher appropriate for the kinds of fires likely to occur, and
- b) One Portable Protecting Breathing Equipment (PBE) approved to European Technical Standard Order (ETSO) - C116 or equivalent and meeting CS 25.1439, closed to each hand-held fire extinguisher.

For accessibility and firefighting purposes, a means should be provided to enable a person entering the compartment to readily gain visibility of the interior. Such means may be:

- c) a conveniently located, easy to find and use lighting control for the compartment;
- d) a flashlight within close proximity to the entrance of the compartment; or
- e) automatic illumination in the event the smoke/fire detection system in the compartment triggers.

MOC to SC 8: The accumulation of hazardous quantities of smoke in occupied areas should be prevented also during the time period in which the PRC is accessed to manually fight a fire.

M-TS-0000436**Associated Interpretative Material****Installation of an unoccupied Passenger Rest Compartment**

The associated Interpretative Material is published for awareness only and is not subject to public consultation.

1. Materials and constructions that are part of the PRC design are required to comply with the relevant requirements of CS 25.853. This includes seat cushions and mattresses, which should meet the requirements of CS-25 App. F Part II.
2. The interiors of the PRC need not to meet the standards of CS-25 App. F Parts IV and V, provided that they are fully isolated from the main passenger cabin by the physical barrier required by SC 4.