

SUBJECT : **ESF to CS 25.783(h)(2) Servicing Doors**

REQUIREMENTS incl. Amdt. : **CS 25.783(h)(2) Amdt.19**

ASSOCIATED IM/AMC¹ : Yes ☐ / No ☒

ADVISORY MATERIAL : **N/A**

INTRODUCTORY NOTE:

The following Equivalent Safety Finding (ESF) 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."

IDENTIFICATION OF ISSUE:

CS 25.783(h)(2) requires that doors "that are not a hazard" would remain inside the aeroplane or remain attached to the aeroplane if it opens either in pressurised or unpressurised portions of the flight. This determination must include the consideration of inadvertent and intentional opening by persons during either pressurised or unpressurised portions of the flight.


On the Dassault Falcon 6X airplane, the refuelling door and the aft toilet servicing door located on body fairing outside the pressurized compartments may detach from the body fairing in case of opening in flight.

EASA has reviewed the design proposed by Dassault and confirmed that it is not literally compliant with CS 25.783(h)(2). The safety intent of 25.783(h)(2) is to ensure that an unlatched door (service panel in this case) will remain inside the A/C (not applicable here, as the service panels are outward opening) or will remain attached to the aircraft if it opens. Both cases should ensure that the door cannot create a hazard for the aeroplane.

For that reason, Dassault proposed the following compensating factors to ensure that the aircraft will not get airborne with an unlatched/opened service panel:

- In case of an open door there is an amber warning message for the cockpit crew at the park and during taxi phases.

¹ In case of SC, the associated Interpretative Material and/or Acceptable Means of Compliance may be published for awareness only and they are not subject to public consultation.

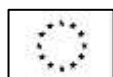
 European Union Aviation Safety Agency	<p align="center">Equivalent Safety Finding to CS 25.783 (h)(2) – Servicing doors</p>	<p>Doc. No. : ESF-D25.783-01</p> <p>Issue : 1</p> <p>Date : 25 FEB 2020</p> <p>Proposed <input type="checkbox"/> Final <input checked="" type="checkbox"/></p> <p>Deadline for comments: 17 MAR 2020</p>
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- In case of an unlatched door on ground, the doors remains in open position due to gravity and hinges at the bottom. In addition, red paint is applied on the side faces of the doors to enhance contrast. This design ensures that an open door is clearly visible on ground during the pre-flight walk.
- Both doors latching system consist of secured latches with a “lock” device; two actions are needed to unlatch.
- The doors have three respectively four latches. It will be demonstrated that with one latch open, the door remains attached to the aircraft considering aerodynamic loads.

Justification of the ESF:

The safety intent of the requirement CS 25.783(h)(2) is met by ensuring that the service doors are closed and latched at departure, so they cannot open and consequently detach during flight.

Considering all the above, the following alternative requirement and related compensating factors providing an Equivalent Safety Finding (ESF) are proposed:



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Equivalent Safety Finding ESF-D25.783-01 to CS 25.783(h)(2) Amdt. 19, Fuselage Doors

The refuelling door and the aft toilet servicing door located on body fairing outside the pressurised compartments may detach from the body fairing in case of opening in flight. It is difficult to demonstrate that servicing doors remain attached to the aircraft if they open in flight and if they are connected to a composite fairing. For connections to metallic fuselage parts, it is generally achievable to remain attached to the aircraft. Therefore, this Equivalent Safety Finding is limited to servicing doors attached to composite body fairings.

To compensate the non compliance with CS 25.783(h)(2), for servicing doors attached to composite body fairings the following factors are considered adequate.

Compensating Factors:

The following compensating factors provide an Equivalent Safety Level to CS 25.783(h)(2) by ensuring that the service doors are closed and latched at departure, so they cannot open and consequently detach during flight:

- In case of an open door there is an amber warning message for the cockpit crew at the park and during taxi phases.
- In case of an unlatched door on ground, the doors remains in open position due to gravity and hinges at the bottom. In addition, red paint is applied on the side faces of the doors to enhance contrast. This design ensures that an open door is clearly visible on ground during the pre-flight walk.
- Both doors latching system consist of secured latches with a “lock” device; two actions are needed to unlatch.
- The doors have three respectively four latches. It will be demonstrated that with one latch open, the door remains attached to the aircraft considering aerodynamic loads.

