

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
RENTON, WASHINGTON 98057-3356

In the matter of the petition of

Bombardier Aerospace

for an exemption from § 25.809(a) of
Title 14, Code of Federal Regulations

Regulatory Docket No. FAA-2014-0932

GRANT OF EXEMPTION

By letter dated October 30, 2014, Mr. Tim Bilic, Airworthiness Section Chief-Global 7000/8000, Bombardier Aerospace, 400 Côte-Vertu Road West, Dorval, Québec, Canada, H4S 1Y9, petitioned the Federal Aviation Administration (FAA) for an exemption from the requirements of § 25.809(a) of Title 14, Code of Federal Regulations (14 CFR). This exemption, if granted would permit partial relief from the outside-viewing requirements for overwing emergency exits on Bombardier Global 7000/8000 Model BD-700-2A12 and BD-700-2A13 airplanes.

The petitioner requests relief from the following regulation(s):

Section 25.809(a), at Amendment 25-116, requires, in pertinent part, that each emergency exit be provided with a means to permit viewing of the likely areas of evacuee ground contact prior to opening the exit during all lighting conditions with the landing gear extended as well as in all conditions of landing gear collapse.

The petitioner supports its request with the following information:

This section quotes the relevant information from the petitioner's request, with minor edits for clarity. The complete petition is available at the Department of Transportation's Federal Docket Management System, on the Internet at <http://regulations.gov>, in Docket No. FAA-2014-0932.

The Extent of Relief We Seek

Bombardier requests an exemption from compliance with 14 CFR § 25.809(a) with respect to the requirement to view the ground contact area under all lighting and landing gear conditions for over-wing passenger exits. This request is identical in all material

respects to previously granted exemptions and does not set a precedent (see FAA Exemption No. 10840 for Bombardier C Series, and FAA Exemption No. 10757 for Embraer EMB-550).

The Reason We Seek Relief

The Global 7000/8000 emergency exits will be subject to the standards of 14 CFR § 25.809(a) which require a means to view the area of occupant ground contact from each emergency exit prior to opening the door. The evacuation means from the Global 7000/8000 over-wing emergency exit (OWEE) is to slide or jump off the trailing edge of the wing and, while the OWEE window allows for outside viewing to assess the conditions prior to opening the exit, the likely area of evacuee ground contact is obstructed by the wing and is not viewable from the OWEE.

How Our Request Would Benefit the Public as a Whole

Granting this petition is in the public interest because it:

- a) Avoids expenditure of resources to meet some aspects of the present regulation which will be changed in the future due to recognized implementation difficulties.
- b) Allows the Global 7000/8000 airplane models BD-700-2A12 and BD-700-2A13 to meet EASA, FAA, and TCCA anticipated future harmonized regulation preventing competitive disadvantage due to additional design/manufacturing complexity and increased weight.
- c) Avoids additional airline operation costs associated with:
 - The maintenance/spare parts for a more complex viewing system, and
 - The fuel consumption/emissions produced by additional weight of such system.

Reasons Why the Exemption Would Not Adversely Affect Safety

Granting this petition does not affect safety because:

- a) As stated under the section titled *Summary* and *Background* of the 14 CFR final rule publication, the objective of the changes was not to address a known safety issue, but to update the regulation to catch-up with industry state-of-the-art and design practices (Code of Federal Regulations Final Rule, Docket No. FAA-2004-19412, titled “Miscellaneous Cabin Safety Changes,” issued on 2004-10-15).
- b) The design of the Global 7000/8000 airplane models BD-700-2A12 and BD-700-2A13 is consistent with industry present state-of-the-art and design practice.

- c) The Global 7000/8000 airplane models BD-700-2A12 and BD-700-2A13 will comply with all other aspects of AWM 525-809(a).

Exemption Request Summary

The Bombardier Global 7000 and Global 8000 are ultra-long-range, executive interior business jets, with maximum certified passenger capacity of 19. The exit configuration in these aircraft consists of a Type 1 main passenger door on the left side of the fuselage and a Type 3 emergency exit located over the right wing. Bombardier Inc., has encountered difficulties complying with the requirement of 14 CFR § 25.809(a) for the Global 7000/8000 airplane models BD-700-2A12 and BD-700-2A13, with respect to the viewing of the ground contact area under all lighting and landing gear conditions for the over-wing exit. As is the case with similar, low-wing aircraft, the view of the likely area of evacuee ground contact is obstructed by the wing when in position to open the exit, and, therefore, compliance with the requirement for viewing of the ground contact area under all lighting and landing gear conditions is not possible.

Bombardier requests an exemption from compliance with 14 CFR § 25.809(a) with respect to the requirement to view the ground contact area under all lighting and landing gear conditions for over-wing passenger exits. This request is identical in all material respects to previously granted exemptions and, as concluded by the FAA in reference to the exemption granted to the Bombardier CSeries airplane with respect to 14 CFR 25.809(a), there is no adverse impact on safety if an occupant cannot simultaneously see conditions immediately outside the exit door and the ground-contact point under all lighting and landing-gear conditions.

The Global 7000/8000 airplane models BD-700-2A12 and BD-700-2A13 will nonetheless comply with anticipated, harmonized requirements now incorporated in EASA CS 25.809(a) at Amendment 25/12.

Federal Register publication

The FAA has determined that good cause exists for waiving the requirement for *Federal Register* publication for public comment because the request is identical in all material respects to previously granted exemptions; the exemption, if granted, would not set a precedent; and any delay in acting on this petition would be detrimental to Bombardier Aerospace.

The FAA's Analysis

The FAA has determined that there is not an adverse impact on safety if an occupant cannot simultaneously see conditions immediately outside the exit door and the ground-contact point under all lighting and landing gear conditions. The impact of the regulation, as codified, went beyond what was envisioned in the rulemaking process for the overwing exits on some airplanes.

On many overwing exits, the location where the evacuee makes first contact on the ground is a considerable distance from the point from which they exit the passenger cabin. The distance the

evacuee moves either forward or aft on the upper wing surface, and then down to the ground either by escape slide, or by jumping off the wing, or sliding down the leading or trailing edge of the wing, makes it impossible to see the ground contact point from inside the airplane because of the distance or the wing itself blocking the view. Some commenters to the notice of proposed rulemaking (Notice No. 96-9) made this point, and the FAA response was:

With respect to the potential for the exit to be somewhat remote from the point where the evacuees would contact the ground, the FAA agrees that this may be the case. The intent of the requirement is to enable a person to ascertain whether to open an exit, and whether it is safe to evacuate through the exit, based on an assessment of the outside conditions. To the extent that the means used for determination of the former does not also allow an assessment of the ground, the FAA agrees that an additional viewing means may be necessary, and that the additional means may be somewhat remote from the exit. We have therefore reworded the amendment to allow for the dual purpose of the viewing means, and to distinguish the required locations of the two.

Our intent in this rule was that it is not necessary for a person to be able to view the ground contact point while in position to open an overwing exit. The rule itself refers to the ground-contact view separately from the view of conditions outside the exit, but the intent of the rule was not clearly expressed in the rule language. The FAA worked with the European Aviation Safety Agency (EASA) to improve the rule language based on our experience applying this rule. EASA incorporated the improved language in their certification specifications (CS) at amendment 25/12, dated July 13, 2012. CS 25.809(a)(3) states:

For non-over-wing passenger emergency exits, a means must also be provided to permit viewing of the likely areas of evacuee ground contact when the exit is closed with the landing gears extended or in any condition of collapse. Furthermore, the likely areas of evacuee ground contact must be viewable with the exit closed during all ambient lighting conditions when all landing gears are extended.

The FAA is considering rulemaking to harmonize this requirement with EASA.

The proposed configuration provides a level of safety consistent with the intent of the rule. The window does allow for outside viewing to assess the outside conditions prior to opening the exit. The evacuee can then open the exit and step out onto the wing and move along the wing to assess the conditions where they would make first contact with the ground. At that point, if the conditions were not acceptable, evacuees would search for another location from which to exit off of the wing. To enforce literal compliance that is more stringent than our original intent for the rule would result in an unnecessary burden on the petitioner.

The FAA's decision

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. §§ 40113 and 44701 delegated to me

by the Administrator, I grant Bombardier Aerospace an exemption from 14 CFR § 25.809(a) at amendment 25-116. The exemption is granted to the extent necessary to allow Bombardier Aerospace to partially comply with the outside-viewing requirements for the overwing exits. Specifically, the exemption provides relief from the requirement that overwing exits permit viewing of the likely areas of evacuee ground contact when the exits are closed. This exemption allows viewing the first point of contact with the ground after the exit has been opened and the evacuee is on the upper surface of the wing, under all lighting and landing-gear conditions, on the Bombardier Global 7000/8000 Model BD-700-2A12 and BD-700-2A13 airplanes. Bombardier Aerospace must demonstrate compliance with all other requirements of 14 CFR 25.809(a) at amendment 25-116 for these airplanes.

Issued in Renton, Washington, on January 30, 2015

/s/

Jeffrey E. Duven
Manager, Transport Airplane Directorate
Aircraft Certification Service