

**Exemption No. 9801**

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

In the matter of the petition of

**The Boeing Company**

for an exemption from § 25.1447(c)(1) of  
Title 14, Code of Federal Regulations

**Regulatory Docket No. FAA-2008-0660**

**GRANT OF EXEMPTION**

By letter BDCO-08-02063, dated May 7, 2008, Mr. D.B. Macrander, Lead Project Administrator, Puget Sound, The Boeing Company, PO Box 3707, Seattle, Washington, 98124, petitioned for an exemption from § 25.1447(c)(1) of Title 14, Code of Federal Regulations (14 CFR). Additional data to support the petition for exemption was submitted via letter BDCO-08-04790, dated October 16, 2008. The proposed exemption, if granted, would permit relief from the requirement for passenger oxygen masks to be automatically presented before the cabin pressure altitude exceeds 15,000 feet for the Boeing Model 787 series airplanes.

**The petitioner requests relief from the following regulations:**

**Section 25.1447(c)(1)** states that there must be an oxygen dispensing unit connected to oxygen supply terminals immediately available to each occupant, wherever seated. If certification for operation above 30,000 feet is requested, the dispensing units providing the required oxygen flow must be automatically presented to the occupants before the cabin pressure altitude exceeds 15,000 feet and the crew must be provided with a manual means to make the dispensing units immediately available in the event of failure of the automatic system.

**The petitioner supports its request with the following information:**

The following material is quoted from Boeing's petition.

To provide the baseline operation for the 787 series airplane's maximum take off and landing at airports with elevations that approach the standard automatic passenger oxygen mask deployment cabin altitude, the Model 787 Passenger Oxygen System automatic activation is accomplished as the cabin pressure altitude approaches the greater of 15,000 feet or 2,000 feet above take off and or landing altitude in the event of a depressurization. Therefore, when operating into and out of an airport with an altitude in excess of 13,000 feet, the automatic activation of the passenger oxygen system will exceed 15,000 feet. The maximum cabin pressure altitude for the baseline passenger oxygen system mask deployment will be limited to 16,000 feet.

**PUBLIC INTEREST STATEMENT**

Granting this exemption would be in the public interest by allowing airlines that operate 787 series aircraft to compete with other operators of airplanes at high altitude airports already approved by FAA and other authorities.

**FACTORS SUPPORTING THE PETITION**

To prevent the unintentional actuation of the passenger oxygen system at high altitude airport operations such as ground operation, take off and landing, the Model 787 passenger oxygen system automatic actuation setting is set as the cabin pressure altitude approaches the greater of 15,000 feet or 2,000 feet above take off and or landing altitude when operating into and out of airports that exceed 13,000 feet. An alert message is implemented in the system to indicate that the oxygen system has been activated.

This actuation setting is consistent with the following EASA acceptable means of compliance:

AMC 25.1447(c)(1), "The design of the automatic presentation system should take into account that when the landing field altitude is less than 610 m (2000 feet) below the normal preset automatic presentation altitude, the automatic presentation altitude may be reset to landing field altitude plus 610 m (2000 feet)."

***Federal Register* publication**

A summary of this petition was not published in the *Federal Register*. The FAA determined that this exemption does not set a precedent and any delay in acting on this petition would be detrimental to Boeing.

## **The FAA's analysis**

The petitioner requests an exemption for the Boeing Model 787 series airplanes. We agree with the petitioner and find their public interest statement acceptable.

The petitioner requests relief from the requirement in § 25.1447(c)(1), which states that oxygen dispensing equipment for occupants must be automatically presented before the cabin pressure altitude reaches 15,000 feet. A requirement for automatic presentation of masks for airplanes certificated to operate above 30,000 feet originated in § 4b.651(d)(3)(i) of the Civil Aviation Regulations (CAR) and was carried over as 14 CFR 25.1447(c)(1) when part 25 was codified. The CAR requirement did not specify the maximum cabin altitude pressure allowed prior to presentation. The requirement that the oxygen equipment be automatically presented before the cabin pressure altitude reaches 15,000 feet was added at Amendment 25-41, effective September 1, 1977.

To provide the baseline operation for the 787 series airplane the passenger oxygen masks automatically deploy when the cabin pressure altitude approaches the greater of 15,000 feet or 2,000 feet above take off and or landing altitude. Therefore, when operating into and out of an airport with an altitude in excess of 13,000 feet, the automatic activation of the passenger oxygen system will exceed 15,000 feet. This feature is necessary to allow a margin between the airport altitude and the automatic deployment altitude, thus reducing the occurrence of inadvertent oxygen mask deployment. The maximum cabin pressure altitude for the baseline passenger oxygen system mask deployment will be limited to 16,000 feet.

## **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, The Boeing Company is granted an exemption from the requirement of § 25.1447(c)(1) that the passenger oxygen equipment be automatically presented before the cabin pressure altitude exceeds 15,000 feet. For Boeing Model 787 series airplanes, this grant of exemption will permit passenger oxygen masks to be automatically presented at cabin pressure altitudes between 15,000 and 16,000 feet when operating into and out of airports with altitudes above 13,000 feet.

This exemption will remain in effect unless superseded or rescinded.

Issued in Renton, Washington, on December 12, 2008.

*Signed by Michael J. Kaszycki*

Michael J. Kaszycki  
Acting Manager, Transport Airplane Directorate  
Aircraft Certification Service