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**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 25**

**[Docket No. FAA-2019-0329; Special Conditions No. 25-760-SC]**

**Special Conditions: The Boeing Company (Boeing) Model 777-9 Series Airplane; Interior Design to Facilitate Searches Above Passenger Cabin High Wall Suites.**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final special conditions.

**SUMMARY:** These special conditions are issued for The Boeing Company (Boeing) Model 777-9 series airplane. This airplane will have novel or unusual design features when compared to the state of technology envisioned in the airworthiness standards for transport category airplanes. These design features are passenger cabins with high wall suites (HWS). The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. These special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

**DATES:** Effective [INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER].

**FOR FURTHER INFORMATION CONTACT:** Shannon Lennon, Airframe and Cabin Safety Section, AIR-675, Transport Standards Branch, Policy and Innovation Division, Aircraft Certification Service, Federal Aviation Administration, 2200 South 216th Street, Des Moines, Washington 98198; telephone and fax 206-231-3209; email [shannon.lennon@faa.gov](mailto:shannon.lennon@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Background**

On April 24, 2018, Boeing applied for an amendment to Type Certificate No. T00001SE to include the new Model 777-9 series airplane. The Boeing Model 777-9 series airplane, which is a derivative of the 777-300ER currently approved under Type Certificate No. T00001SE, is a twin-engine, transport category airplane with seating for up to 495 passengers depending upon airplane configuration, and a maximum takeoff weight of approximately 775,000 lbs.

### **Type Certification Basis**

Under the provisions of title 14, Code of Federal Regulations (14 CFR) 21.101, Boeing must show that the Model 777-9 series airplane continues to meet the applicable provisions of part 25, through amendment 139, and the regulations listed in Type Certificate No. T00001SE, or the applicable regulations in effect on the date of application for the change, except for earlier amendments as agreed upon by the FAA.

If the Administrator finds that the applicable airworthiness regulations (e.g., 14 CFR part 25) do not contain adequate or appropriate safety standards for the Boeing Model 777-9 series airplane because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16.

Special conditions are initially applicable to the model for which they are issued. Should the type certificate for that model be amended later to include any other model that incorporates the same novel or unusual design feature, these special conditions would also apply to the other model under § 21.101.

In addition to the applicable airworthiness regulations and special conditions, the Boeing Model 777-9 series airplane must comply with the fuel vent and exhaust emission requirements of 14 CFR part 34, and the noise certification requirements of 14 CFR part 36.

The FAA issues special conditions, as defined in 14 CFR 11.19, in accordance with § 11.38, and they become part of the type certification basis under § 21.101.

### **Novel or Unusual Design Features**

The Boeing Model 777-9 series airplane will incorporate the following novel or unusual design features:

This airplane will include a passenger cabin with six HWS arranged in two rows of three suites each in a 1-1-1 configuration. Each HWS has a door and walls that extend from the floor to the ceiling or close to the ceiling. The characteristics of the HWS design are novel or unusual in that the suites are within, but not fully open to the cabin (such as for conventional mini-suites with partial height surrounds). They are not remote from the main cabin, as are overhead crew rest areas.

### **Discussion**

This Boeing Model 777-9 series airplane HWS with interfacing ceiling design is novel or unusual since its design was not specifically considered during the development of § 25.795(c)(3), which requires that certain areas of the airplane incorporate features that deter the concealment, or promote the discovery, of weapons, explosives, or other objects. The areas regulated by that rule are toilets, life preservers and their storage areas, and the areas above overhead bins. These areas are not readily visible, but are readily accessible. For example, areas above overhead bins may not be easily visible when

conducting a search due to light fixtures that could inhibit both the visual and physical inspection, but these areas could be accessible places to hide an explosive device.

The wall-to-ceiling interface presented in the HWS design in this application is similar to overhead bin designs with respect to such challenges associated with conducting searches. These special conditions address those challenges.

However, as opposed to areas above overhead bins, which often exist in continuous sections in the passenger cabin, the search challenges associated with HWS designs, and therefore the particular conditions necessary, may be limited when there are a relatively small number of installed suites, and therefore a smaller amount of area in which objects could be concealed.

In consideration of the HWS design and ceiling interface, an installation incorporating six suites or less limits the search challenge due to the limited overhead area involved, which is similar to the search area presented by installation of a combined galley and lavatory area. Installations incorporating more than six suites present a large overhead area that more closely resembles the search challenges presented by the large overhead bin areas currently addressed by the rule. Since the development of HWS designs such as this one were not specifically considered during development of the rule, special conditions are needed for interior configurations incorporating HWS.

Special Conditions 25-703-SC were previously issued for HWS installations on Model 777-300ER. Those special conditions, however, did not address the novel wall-to-ceiling interface design proposed for Model 777-9 HWS installations. In order to ensure that the Model 777-9 design facilitates a search for dangerous objects, these additional special conditions were proposed for Boeing Model 777-9 airplanes.

The associated guidance material presented in Advisory Circular 25.795-8, Interior Design to Facilitate Searches, dated October 24, 2008, specific to overhead bins designs can also be applied to the Model 777-9 HWS designs.

The special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

### **Discussion of Comments**

The FAA issued Notice of Proposed Special Conditions No. 25-19-06-SC for The Boeing Company (Boeing) Model 777-9 series airplane, which was published in the *Federal Register* on August 9, 2019 (84 FR 39234). No comments were received, and the special conditions are adopted as proposed, except that information about the availability of AC 25.795-8 as a method of compliance was moved from required text to the preceding general discussion.

### **Applicability**

As discussed above, these special conditions are applicable to the Boeing Model 777-9 series airplanes with HWS installations that interface with the ceiling. Should Boeing apply at a later date for a change to the type certificate to include another model incorporating the same novel or unusual design feature, these special conditions would apply to that model as well.

### **Conclusion**

This action affects only certain novel or unusual design features on one model series of airplanes. It is not a rule of general applicability.

## **List of Subjects in 14 CFR Part 25**

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

### **Authority Citation**

The authority citation for these special conditions is as follows:

**Authority:** 49 U.S.C. 106(f), 106(g), 40113, 44701, 44702, 44704.

### **The Special Conditions**

Accordingly, pursuant to the authority delegated to me by the Administrator, the following special conditions are issued as part of the type certification basis for Boeing Model 777-9 series airplanes with HWS installed. These conditions are in addition to existing FAA Special Condition No. 25-703-SC published in the Federal Register on October 26, 2017 (82 FR 49492).

### **Interior Design to Facilitate Searches Above Passenger Cabin High Wall Suites**

1. The area above each HWS must be designed such that there should be no hazards to a person performing a physical search above the HWS (e.g., no hot surfaces, no sharp edges, and no corners).

2. Where there are more than six (6) HWS installed on the aircraft, design features must be incorporated that will deter concealment or promote discovery of weapons, explosives, or objects from a simple inspection. Areas above the HWS must be designed to prevent objects from being hidden from view in a simple, visual search from the aisle.

Issued in Des Moines, Washington, on February 14, 2020.

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