SUMMARY: These special conditions are issued for the Boeing Model 787–8 airplane. This airplane will have novel or unusual design features associated with installation of an overhead crew-rest (OCR) compartment. 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. Additional special conditions will be issued for other novel or unusual design features of the Boeing Model 787–8 airplanes.

DATES: Effective Date: March 28, 2011.


SUPPLEMENTARY INFORMATION:

Background

On March 28, 2003, The Boeing Commercial Airplane Group (hereafter referred to as “Boeing”) applied for an FAA type certificate for its new Boeing Model 787–8 passenger airplane. The company applied for an extension of time for the type certificate on March 9, 2009, and was granted that extension on March 13, 2009. The Boeing Model 787–8 airplane will be an all-new, two-engine, jet transport airplane with a two-aisle cabin. The maximum takeoff weight will be 476,000 pounds, with a maximum passenger capacity of 381.

Type Certification Basis

Under provisions of Title 14 Code of Federal Regulations (14 CFR) 21.17, Boeing must show that the Boeing Model 787–8 airplane (hereafter referred to as “the 787”) meets the applicable provisions of 14 CFR part 25, as amended by Amendments 25–1 through 25–117, 25–120, 25–124, 25–125 and 25–128, except that § 25.1309 remains at Amendment 25–117 for cargo-fire protection systems. If the Administrator finds that the applicable airworthiness regulations (i.e., 14 CFR part 25) do not contain adequate or appropriate safety standards for the 787 because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16.

In addition to complying with the applicable airworthiness regulations and special conditions, the 787 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. In addition, the FAA must issue a finding of regulatory adequacy pursuant to section 611 of Public Law 92–574, the “Noise Control Act of 1972.”

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 § 21.17(a)(2).

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 features, the special conditions would also apply to the other model under provisions of § 21.101.

Novel or Unusual Design Features

Crew-rest compartments have been installed and certificated on several Boeing airplane models in locations as varied as the main passenger-seating area, the overhead space above the main passenger-cabin seating area, and below the passenger-cabin seating area within the cargo compartment. In each case, the Administrator has determined that the applicable regulations (i.e., 14 CFR part 25) did not provide all of the necessary requirements because each installation had unique features by virtue of its design, location, and use on the airplane. The special conditions contain safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

Most recently for the Boeing Model 777 series airplanes, the FAA has issued Special Conditions No. 25–230–SC, dated April 9, 2003, for crew-rest compartments allowed to be occupied by crewmembers and flight crewmembers during flight, and Special Conditions No. 25–260–SC, dated April 14, 2004, for crew-rest compartments allowed to be occupied by crewmembers and flight crewmembers during TT&L, as well as during flight.

The OCR compartment on the 787 identified by Boeing as an overhead flight-attendant rest is located above the main passenger cabin, adjacent to Door 4, and will be accessed from the main deck by stairs through a vestibule. This OCR compartment will contain six private berths, an emergency hatch that opens directly into the main passenger-cabin area, a smoke-detection system, an oxygen system, and various occupant amenities. This OCR compartment will only be occupied by trained crewmembers in flight. It will not be