

compartment design approvals (*i.e.*, type design changes and supplemental type certificates) administered by the FAA's Aircraft Certification Service. Prior to operational use of an overhead crew rest compartment, the FAA's Flight Standards Service must evaluate and approve the "basic suitability" of the overhead crew rest compartment for crew occupation. Additionally, if an operator wishes to utilize an overhead crew rest compartment as "sleeping quarters," the crew rest compartment must undergo an additional evaluation and approval (Reference §§A121.485(a), 121.523(b) and 135.269(b)(5)). Compliance with these special conditions does not ensure that the applicant has demonstrated compliance with the requirements of part 121 or part 135.

In order to obtain an operational evaluation, the type design holder must contact the Aircraft Evaluation Group (AEG) in the Flight Standards Service and request a "basic suitability" evaluation or a "sleeping quarters" evaluation of their crew rest. The results of these evaluations should be documented in a 777 Flight Standardization Board (FSB) Report Appendix. Individual operators may reference these standardized evaluations in discussions with their FAA Principal Operating Inspector (POI) as the basis for an operational approval, in lieu of an on-site operational evaluation.

Any changes to the approved overhead crew rest compartment configuration that affect crewmember emergency egress or any other procedures affecting the safety of the occupying crewmembers and/or related training shall require a re-evaluation and approval. The applicant for a crew rest design change that affects egress, safety procedures, or training is responsible for notifying the FAA's AEG that a new crew rest evaluation is required.

Procedures must be developed to assure that a crewmember entering the overhead crew rest compartment through the vestibule to fight a fire will examine the vestibule and the lavatory areas for the source of the fire prior to entering the remaining areas of the crew rest compartment. These procedures are intended to assure that the source of the fire is not between the crewmember and the primary exit. In the event a fire source is not immediately self-evident to the firefighter, the firefighter should check for potential fire sources at areas closest to the primary exit first, then proceed to check areas in such a manner that the fire source, when found, would not be between the firefighter and the primary exit. Procedures describing

methods to search the overhead crew rests for fire source(s) must be transmitted to the operator for incorporation into their training programs and appropriate operational manuals.

Discussion of the Special Conditions

In general, the requirements listed in these special conditions are similar to those previously approved in earlier certification programs, such as for the Boeing Model 777–200 series airplanes and Boeing Model 747 overhead crew rest compartments. These special conditions establish seating, communication, lighting, personal safety, and evacuation requirements for the overhead crew rest compartment. In addition, passenger information signs, supplemental oxygen, and a seat or berth for each occupant of the crew rest compartment are required. These items are necessary because of turbulence and/or decompression. When applicable, the requirements parallel the existing requirements for a lower deck service compartment and provide an equivalent level of safety to that provided for main deck occupants.

Special Condition No. 1

This special condition requires the seats and berths must be certified to the maximum flight loads. Due to the location and configuration of the overhead crew rest compartment, occupancy during taxi, takeoff, and landing is prohibited, and occupancy is limited to crewmembers during flight. Occupancy would be limited to four in the OFCR or the combined total of approved seats and berths in the OFCR whichever is less. Occupancy would be limited to twelve in an OFAR, or the combined total of approved seats and berths in the OFAR, whichever is less. This special condition has the requirements for door access and locking and the installation of ashtrays, and for appropriate placards to prohibit passenger access, access by crewmembers not trained in evacuation procedures, smoking and hazardous quantities of flammable fluids, explosives, or other dangerous cargo. The phrase "hazardous quantities" as used in this SC permits trained crewmembers to continue to carry baggage containing minute quantities of flammable fluids (*e.g.*, finger nail polish, aerosol hairspray, etc.) that would pose no threat to the airplane or its occupants. This wording is consistent with the existing wording of §§ 25.831(d), 25.855 (h)(2), 25.857 (b)(2), (c)(3) & (e)(4) and 25.1353(c)(3).

Special Condition No. 2

This special condition precludes occupants from being trapped in the crew rest compartment in the event of an emergency, there must be at least two emergency evacuation routes that could be used by each occupant of the overhead crew rest compartment to rapidly evacuate to the main cabin. These two routes must be sufficiently separated to minimize the possibility of an event rendering both routes inoperative. The main entry route meeting the appropriate requirements may be utilized as one of the emergency evacuation routes, or alternatively two other emergency routes must be provided. The intent of Special Condition No. 2(b) is to ensure that one of the two routes would be clear of moving occupants under most foreseeable circumstances.

The following clarifies the intent of Special Condition No. 2(b) concerning the utility of the egress routes. There are three issues that should be considered. First, occupied passenger seats are not considered an impediment to the use of an egress route (for example, the egress route drops into one row of seats by means of a hatch) provided that the seated occupants do not inhibit the opening of the egress route (for example, a hatch).

Second, an egress route may utilize areas where normal movement of passengers occurs if it is demonstrated that the passengers would not impede egress to the main deck. If the egress means (a hatch in this design) opens into a main aisle, cross aisle, or galley complex to an extent that it contacts a standing ninety-fifth percentile male, then the contact should only momentarily interrupt the opening of the egress hatch. The interruption to the egress means can be considered momentary if the egress means would continue to open normally once the person has moved out of the way.

Third, the escape hatch should be provided with a means to prevent it from being inadvertently closed by a passenger on the main deck. This will ensure main deck passengers can not prevent the overhead crew rest occupants from using the escape route. The crew should be able to stow the escape hatch prior to landing.

Training requirements for the occupants of the overhead crew rest area are included in this special condition.

New qualitative and quantitative criteria have been added to this special condition since the issuance of Special Conditions No. 25–192–SC to clarify how compliance can be shown to Special Condition No. 2(a).