



AEROSPACE RECOMMENDED PRACTICE

ARP4101™/3**REV. A**

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Superseding ARP4101/3

(R) Crew Rest Facilities

RATIONALE

The Federal Aviation Administration enacted updated flight time and duty time regulations for flight crew members (14 CFR Part 117) effective January 4, 2014. The regulation defined three levels of in-flight rest facilities: Class 1, Class 2, and Class 3. The maximum allowable flight duty period limitations vary based on the FAA-approved class of the in-flight rest facility. Similarly, EASA enacted Commercial Specification - Flight Time Limitation (CS-FTL) regulations, also referenced in this ARP.

1. SCOPE

This document recommends criteria for the design and installation of flight crew rest facilities (FCRF) on transport category aircraft when operations with an augmented flight crew are performed.

NOTE: Within this ARP, the term “must” will indicate items required for compliance with outside known government regulations, especially 14 CFR Part 117. “Shall” describes sections which are required if this ARP is used as a means of compliance. The term “should” will indicate optional requirements, preferences, and recommendations of the approving SAE committee.

Wherever noted and bracketed as [FAA] or [EASA], this document includes agency regulations for reference that are not otherwise evaluated herein.

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

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Documents
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2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

AIR512	Aircraft Cabin Illumination
ARP378	Passenger Reading Lights
ARP1323	Type Measurements of Airplane Interior Sound Pressure Levels During Cruise
ARP4245	Quantities for Description of the Acoustical Environment of the Interior of Aircraft
ARP4769	Crew Rest Container for Main Deck or Lower Deck
ARP5873	LED Passenger Reading Light Assembly

2.1.2 Other Publications

14 CFR Part 117 Flight Crew Rest (U.S. Federal Regulations) ("FAA" in subsequent sections).

EASA CS-FTL.1 Commercial Air Transport by Aeroplane - Scheduled and Charter Operations, Section CS-FTL.1.205 ("EASA" in subsequent sections).

FAA Human Factors Design Standard, HF-STD-001, DOT/FAA/CT-03/05, FAA Technical Center, Atlantic City, 2003.

Fryar CD, Gu Q, Ogden CL. Anthropometric reference data for children and adults: United States, 2007-2010. National Center for Health Statistics. Vital Health Stat 11(252). 2012.

2.2 Definitions

AUGMENTED FLIGHT CREW: A flight crew staffed by more than the minimum number of qualified members required by the aircraft type certificate to operate the aircraft, to allow a flight crew member to be replaced by another qualified flight crew member for in-flight rest [FAA].

FLIGHT CREW REST FACILITY (FCRF): An area designated for the purpose of providing sleeping, stowage, and changing clothes for off-duty flight crew [EASA and FAA regulatory variations appear in the subsequent Section 3 text].

- **CLASS 1 REST FACILITY:** A bunk or other surface that allows for a flat sleeping position and is located separate from both the flight deck and passenger cabin in an area that is temperature-controlled, allows the flight crew member to control light, and provides isolation from noise and disturbance.
- **CLASS 2 REST FACILITY:** A seat in an aircraft cabin that allows for a flat or near flat sleeping position, is separated from passengers by a minimum of a curtain to provide darkness and some sound mitigation, and is reasonably free from disturbance by passengers or flight crew members.
- **CLASS 3 REST FACILITY:** A seat in an aircraft cabin or flight deck that reclines at least 40 degrees and provides leg and foot support.

NOTE: The three facility definitions comprise the entirety of 14 CFR Part 117 guidance on FCRF design.

SLEEPING SURFACE: Any horizontal surface, or near horizontal surface such as a bed, bunk, or sleeping seat, that meets the criteria defined by this ARP [and EASA and/or FAA referenced regulations as applicable to the operator].

FREE SPACE: An area designated for the use of the flight crew to change and stow clothing.