

Performance Standards for Single-Occupant, Side-Facing Seats in Civil Rotorcraft,
Transport Aircraft, and General Aviation Aircraft

RATIONALE

Single Place side facing seats are currently installed on Transport Category aircraft by Special Conditions. This Aircraft Standard describes dynamic test procedures and pass/fail criteria for single place side-facing seats that are considered to provide an equivalent level of safety when compared to fore and aft facing seats. These test criteria are considered the Minimum Performance Standard for that would allow for TSO-C127 approval for single-place side facing seats, and streamline the certification effort for the installation of these seats onto the aircraft.

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1. SCOPE

1.1 Purpose

This Society of Automotive Engineers (SAE) Aerospace Standard (AS) Annex defines Minimum Performance Standards (MPS), qualification requirements, and minimum documentation requirements for side-facing seats in civil rotorcraft, transport aircraft, and general aviation aircraft. The goal is to define test and evaluation criteria to demonstrate occupant protection when a single-occupant side-facing seat/occupant/restraint system is subjected to statically applied ultimate loads and to dynamic test conditions set forth in the applicable 14, Code of Federal Regulations (CFR) Part 23, 25, 27 or 29.

While this Annex addresses system performance, responsibility for the seating system is divided between the seat supplier and the installation applicant. The seat supplier's responsibility consists of meeting all the seat system performance requirements and obtaining and supplying to the installation applicant all the data prescribed by this document. The installation applicant has the final responsibility in assuring that all requirements for safe seat installation have been met.

1.2 Applicability

This document addresses the performance criteria for single occupant side-facing seat systems requiring dynamic testing to be used in civil rotorcraft, transport aircraft, and general aviation aircraft.

1.3 Product Classification

This document covers passenger seats for use in aircraft type-certificated as defined in AS8049 section 1.3.

2. REFERENCES

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. 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.

2.1 SAE Publications

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

J211/1	Instrumentation for Impact Tests - Part 1 - Electronic Instrumentation
J211/2	Instrumentation for Impact Tests - Part 2 - Photographic Instrumentation
J1733	Sign Convention for Vehicle Crash Testing
J826	Devices for Use in Defining and Measuring Vehicle Seating Accommodation
ARP5482	Photometric Data Acquisition Procedures for Impact Test
ARP5526	Aircraft Seat Design Guidance and Clarifications
AS8043	Restraint System for Civil Aircraft,
1999-01-1609	A Lumbar Spine Modification to the Hybrid III ATD for Aircraft Seat Tests