



Technical Standard Order

Subject: TSO-C39b, AIRCRAFT SEATS AND BERTHS

a. Applicability.

(1) Minimum Performance Standards. This technical standard order (TSO) prescribes the minimum performance standards that aircraft seats and berths of the following types must meet in order to be identified with the applicable TSO marking:

- Type I - Transport (9g forward load)
- Type II - Normal and Utility
- Type III - Acrobatic
- Type IV - Rotorcraft

Seats and berths that are to be so identified and that are manufactured on or after the date of this TSO must meet the minimum performance standards set forth in National Aircraft Standard (NAS) Specification 809, dated January 1, 1956, with the exceptions covered in subparagraph a.(2) of this TSO. Seats and berths approved prior to the date of this TSO may continue to be manufactured under the provision of their original approval.

(2) Exceptions.

(i) The sideward loads as specified in 4.1.2. Table I of NAS 809 need not exceed the requirements of the applicable Federal Aviation Regulations (FAR).

(ii) In lieu of compliance with 2.1, 3.1.2, and 4.3.2 of NAS 809, materials in Type I seats must comply with the fire protection provisions of FAR Section (§) 25.853, including the requirements of § 25.853(c), effective 11/26/84. Materials in Type I berths must comply with the fire protection provisions of § 25.853(b).

(3) Additions. Test for Fire Blocking of Seat Cushions: Tests must be conducted in accordance with Appendix F, Part II of FAR Part 25.

b. Marking. In addition to the marking specified in FAR § 21.607(d), the following additional information must be shown when tested to the fire blocking requirements of paragraph a.(3) of this TSO.

“Complies with FAR § 25.853(c), effective 11/26/84.”

c. Data Requirements. In addition to FAR § 21.605, the manufacturer must furnish the Manager, Aircraft Certification Office (ACO), Federal Aviation Administration, having purview of the manufacturer’s facilities, one copy of the following technical data:

- (1) A drawing list, enumerating all of the drawings and processes that are necessary to define the articles design.
- (2) The manufacturer’s equipment operating instructions and limitations.
- (3) The applicable installation instructions indicating restrictions or other conditions pertinent to installation.
- (4) The manufacturer’s test report of tests results required in 4.3 of NAS 809.
- (5) The manufacturer’s special cleaning and maintenance instructions.
- (6) When testing is conducted to the fire blocking requirements of paragraph a.(3) of this TSO, a report containing the test results must be submitted.
- (7) In addition, a note with the following statement must be included:

“The conditions and tests required for TSO approval of this article are minimum performance standards. It is the responsibility of those desiring to install the article either on or within a specific type or class of aircraft to determine that the aircraft installation conditions are within the TSO standards. If not within the TSO standards, the article may be installed only if further evaluation by the applicant documents an acceptable installation and is approved by the Administrator.”

d. Availability or Referenced Documents.

- (1) Copies of NAS Specification No. 809 may be purchased from the National Standards Association, 5161 River Road, Bethesda, Maryland 20816.
- (2) Federal Aviation Regulations, Part 21, Subpart O, and Advisory Circular 20-110C, “Index of Aviation Technical Standard Orders,” may be reviewed at FAA

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Headquarters in the Office of Airworthiness, Aircraft Engineering Division, (AWS-120), and at all regional ACO's.

/S/ M. C. Beard
Director of Airworthiness