



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

# Advisory Circular

**Subject: REPLACING MIL-S-8879C  
WITH SAE AS8879**

**Date: 6/20/03**

**AC No: 21-41A**

**Initiated by: AIR-110 Change:**

**1. PURPOSE.** This advisory circular (AC) informs, clarifies, and guides the civil aviation industry on using the Society of Automotive Engineers’ (SAE) Aerospace Standard AS8879, *Screw Threads – UNJ Profile, Inch - Controlled Radius Root with Increased Minor Diameter*, instead of the Department of Defense’s (DoD) MIL-S-8879C, *General Specification For Screw Threads, Controlled Radius Root with Increased Minor Diameter*.

**2. CANCELLATION.** This AC cancels AC 21-41, *Continued Use Of MIL-S-8879C, General Specification For Screw Threads, Controlled Radius Root With Increased Minor Diameter*; dated February 26, 1999.

**3. USING THE CORRECT SPECIFICATION.** In general, Federal Aviation Administration (FAA) design and production approval holders should use the latest revision of referenced specifications unless their design data specifically references a previous revision. However, the DoD has specified that users of MIL-S-8879C should instead use AS8879. The following table helps FAA design and production approval holders determine which specification to use, based on what is referenced in their FAA-approved design data:

<b>If FAA-approved data specifies:</b>	<b>Then design and production approval holders should use:</b>
MIL-S-8879 (no revision specified)	AS8879 (latest revision)
MIL-S-8879 revision C	AS8879 (latest revision)
MIL-S-8879C Other Thread	AS8879 Category 1 (latest revision)
MIL-S-8879C Safety Critical Thread	AS8879 Category 2 (latest revision)
MIL-S-8879 revision B	MIL-S-8879B
MIL-S-8879 revision A	MIL-S-8879A

**4. BACKGROUND.**

**a.** The FAA, on February 26, 1999, issued AC 21-41 to address problems stemming from the DoD inactivating MIL-S-8879C (Notice 2; August 12, 1997) without designating a replacement document. The SAE had issued Aerospace Standard AS8879 Revision A (as a possible replacement for MIL-S-8879C, but the DoD did not officially designate it as a replacement. At that time AC 21-41 advised the civil aviation industry to continue to use MIL-S-8879C if they referenced it in their FAA-approved data.

**b.** The FAA Aviation Fastener Audit (FAA Report No. FAA-IR-01-02), conducted in 2000-2001, identified regulatory deficiencies with MIL-S-8879C and noted that the lack of a replacement specification harmed industry. In June 2001, industry stakeholders formed the Screw Thread Conformity Task Force (STC-TF) comprised of representatives from transport and general aviation aircraft and engine manufacturers, fastener manufacturers, FAA, DoD, and thread gage manufacturers. The STC-TF was tasked to develop a new specification that the DoD would designate as replacing MIL-S-8879C, would meet the FAA's regulatory needs, and would be accepted by the varied users of MIL-S-8879C.

**c.** The SAE published the STC-TF recommendation in January 2003 as AS8879C, *Screw Threads – UNJ Profile, Inch, Controlled Radius Root with Increased Minor Diameter*. The DoD accepted AS8879C and issued a Notice of Cancellation (Notice 3; February 24, 2003) which states in part:

MIL-S-8879C dated 25 July 1991, and AMENDMENT 1 dated 2 September 1992, are hereby cancelled, and superseded by the Society of Automotive Engineers (SAE) Aerospace Specification AS8879.

## **5. AVAILABILITY OF RELATED DOCUMENTS.**

**a.** You can buy copies of SAE Document AS8879 from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001; telephone 877-606-7323 (USA and Canada only) 724-776-4970 (outside USA and Canada), fax 724-776-0790. You can also obtain copies through the SAE Internet website at [www.sae.org](http://www.sae.org).

**b.** You can buy copies of the following Title 14 Code of Federal Regulation (CFR) sections from the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954; telephone 202-512-1800, fax 202-512-2250:

§ 21.53, Statement of Conformity.	§ 29.603, Materials.
§ 23.603, Materials and Workmanship.	§ 31.33(a) and (b), Materials.
§ 25.603, Materials.	§ 33.15(b), Materials.
§ 27.603, Materials.	§ 35.17(b), Materials.

**NOTE:** You can obtain free copies from the Government Printing Office electronic CFR Internet website at [www.access.gpo.gov/ecfr/](http://www.access.gpo.gov/ecfr/).

**c.** You can view a list of all ACs on the FAA's Regulatory and Guidance Library (RGL) at [www.airweb.faa.gov/rgl](http://www.airweb.faa.gov/rgl). On the RGL website, click on "Advisory Circulars." To request free ACs, contact: U.S. Department of Transportation, Subsequent Distribution Office, Ardmore East Business Center, 3341 Q 75th Avenue, Landover, MD 20785. To add your name to FAA's mailing list for free ACs, contact: U.S. Department of Transportation, Distribution Requirements Section, SVC-121.21, Washington, D.C. 20590.

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