



AIRCRAFT OWNERS AND PILOTS ASSOCIATION

421 Aviation Way • Frederick, MD 21701-4798
Telephone (301) 695-2000 • Fax (301) 695-2375
www.aopa.org

June 28, 2005

Mr. Mike Reyer
Federal Aviation Administration
Small Airplane Directorate, ACE-111
901 Locust Street
Kansas City, MO 64106

RE: Proposed Advisory Circular 23-13A, Fatigue, Fail-Safe, and Damage Tolerance Evaluation of Metallic Structure for Part 23 Airplanes

Dear Mr. Reyer:

The Aircraft Owners and Pilots Association (AOPA), representing over 400,000 members has several recommendations regarding the Federal Aviation Administration's (FAA) Proposed Advisory Circular (AC) 23-13A, Fatigue, Fail-Safe, and Damage Tolerance Evaluation of Metallic Structure for Part 23 Airplanes, Notice of Availability published in the Federal Register on April 25, 2005.

AOPA supports the FAA's inclusion, in the AC, its longstanding internal policy for continued operational flight with known cracks in the structure of small airplanes. This policy allows continued flight if the crack is not in a primary structure and does not affect an airplane's ability to sustain ultimate load. However, the language in this proposed AC does not go far enough because it only references aircraft certified under 14 CFR Part 23. Because the scope of the crack policy extends to aircraft certified under Civil Aviation Regulations (CAR) Part 3 and other standards, AOPA recommends that the FAA clarify the proposed advisory information, to reinforce the crack policy's applicability to all small aircraft certified under all FAA statutes.

AOPA believes that the FAA's policy on flight with known cracks provides important guidance to aircraft owners and facilitates their ability to maintain and operate their aircraft. Further, it assures that aircraft safety is held to the highest of standards.

In addition, AOPA recommends that the FAA retain in this AC previously accepted analysis and test options to substantiate flight with known cracks.

FAA policy on flight with known cracks affects all general aviation airplanes

While the Notice of Availability clearly states that the AC's purpose is to provide information and guidance for showing compliance with 14 CFR Part 23, it does not address other aircraft certification standards. The AC should reflect that the crack policy also applies to airplanes certified under the CAR-3 or earlier regulatory requirements, considering that the FAA has previously applied this policy to CAR 3 airplanes.

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Keep analysis and test options to substantiate flight with known cracks

AOPA is also concerned that the FAA's proposed AC now excludes previously acceptable methods to substantiate an airplane's ability to sustain ultimate load with known cracks.

The proposed requirements to allow for operation of airplanes with known cracks as described in section 6 are very specific and it is not clear whether alternative approaches will be accepted. The FAA's 1996 policy memorandum allows for various combinations of analysis and test to be used for complying with paragraph 6-2.a (2) and (3) of the proposed AC. The removal of those options would eliminate viable alternative methods to substantiate the ability to sustain ultimate load with known cracks. AOPA recommends that the FAA not eliminate these previously accepted combinations of analysis and test from the Agency's policy for continued operational flight with known cracks.

AOPA recommends the following revisions to AC 23-13A:

The AC should clearly indicate that the information is applicable to all airplanes regardless of their certification basis. Further, the title of the AC is not reflective of this policy or the new rotorburst requirements. The guidance in this AC has significance beyond Part 23 airplanes and this should be reflected in the AC's title and purpose. That information would not be found otherwise.

Amend page i, Forward as follows, "This Advisory Circular (AC) sets forth an acceptable means, but not the only means..."

Amend page 1, number 4 – The paragraph states that the material has no legal status yet uses the phrase "However, to ensure standardization in the certification process, these procedures should be considered during all small airplane Type Certification (TC) and Supplemental Type Certification (STC) activities." This paragraph is vague enough to cause an Aircraft Certification Office to apply the AC as the only means to comply with the appropriate regulations during TC/STC projects. Delete the reference to standardization and change "procedures" to "guidance," the AC is a guidance document and not procedural.

Add a reference(s) to CAR 3 on page 1, number 5 - CAR 3 is discussed throughout the AC, particularly around the subject of 'fail safe' structures.

Define "primary structure" under the common terms listed on pages 2 and 3. This term is used in section 6 as a limitation for flight with known cracks and should therefore be defined early on in the document.

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Amend section 6 on page 29 to clearly indicate that the policy's scope is inclusive of all general aviation airplanes given that the policy has been previously applied to CAR 3 airplanes.

Add to the References section on page 32 the FAA Policy Memorandum issued in 1996, signed by the Standards Staff Manager for the Small Airplane Directorate. This is the policy that the FAA currently uses and should be mentioned in the AC.

Summary

AOPA strongly recommends that FAA adopt the above recommendations to strengthen this proposed guidance on continued operational flight with known cracks. We believe that incorporating these changes would be the best approach considering that this policy has significant meaning for the entire general aviation community. AOPA also recommends that the FAA retain in the policy previously accepted analysis and test options to substantiate flight with known cracks.

AOPA appreciates the opportunity to comment.

Sincerely,

A handwritten signature in black ink, appearing to read "Luis M. Gutierrez", written in a cursive style.

Luis M. Gutierrez
Director, Regulatory and Certification Policy
Aircraft Owners and Pilots Association