



Memorandum

**U.S. Department of
Transportation**

Office of the Secretary
of Transportation

Office of Inspector General

Subject: **ACTION:** Aviation Industry Notification
Regarding Testing Specifications for Threaded
Fasteners and Components
AV-1998-177

Date: July 17, 1998

From: **Kenneth M. Mead**
Inspector General *K. Mead*

Reply to
Attn of: JA-10

To: Federal Aviation Administrator

At the request of the National Transportation Safety Board (NTSB) Chairman, the Office of Inspector General reviewed the potential effects on the commercial aviation industry of the May 1997 inactivation of military specification MIL-S-8879C. Military specifications are technical standards established by the Department of Defense for manufacturing and testing parts, processes, and materials used in many industries, including the aerospace industry. Many manufacturers of commercial aviation products cite military specifications as a technical standard in product design data submitted to FAA for approval to manufacture aviation products. MIL-S-8879C applies to the testing standards for threaded fasteners and components used in high stress systems, such as aircraft engines and landing gear.

Earlier this year, we were provided information relative to the inactivation of MIL-S-8879C for threaded aviation fastener products. Since that time, the Office of Inspector General has been researching the impact of inactivation of the subject specification for threaded products used by the commercial aviation industry and has made contact on the issue with staff of the Chairman of the Senate Committee on Commerce, Science, and Transportation and FAA.

It was reassuring to read your May 6, 1998 letter to Senator McCain affirming FAA's position that "Cancellation or supersession of the specification by the issuing organization, such as the military, does not affect its binding authority under the FAA approval." This letter presents FAA's position that a manufacturer is required to continue to comply with the technical specifications submitted to FAA to obtain FAA production approval for aviation products, regardless of inactivation of that specification by the issuing organization.

We contacted 35 entities from the aviation industry to assess the safety impact of the inactivation of this military specification. These entities include aircraft manufacturers, large U.S. air carriers, professional organizations, and NTSB. Based on our discussions with the technical experts in the industry and our analysis of the data provided, we concluded the inactivation of MIL-S-8879C could cause some manufacturers to use a less stringent specification for testing of threaded aviation products. We agreed with the NTSB engineer's opinion that the use of a less stringent standard could over time pose an aviation safety risk.

Recommendation

To ensure that your May 6, 1998, message is fully communicated to the aviation industry and FAA field staff, the Office of Inspector General recommends FAA issue an appropriate notice to the aviation industry, such as an advisory circular, and inform FAA field staff of the policy stated in your letter to Senator McCain. Please respond to our recommendation within 10 days and identify the action FAA plans to take in notifying the industry.

Additionally, the Office of Inspector General plans to perform an audit of the FAA's oversight of the quality assurance systems used by FAA approved manufacturers. Our audit will focus on the quality assurance systems of manufacturers producing and testing critical aviation threaded fasteners and components. We plan to begin our audit in fiscal year 1999.

A copy of this memorandum will be provided to Senator McCain, Congresswoman Constance Morella, and the NTSB Chairman. If you have any questions, please contact either me on x61959 or Ms. Alexis M. Stefani, Deputy Assistant Inspector General for Aviation, on x60500.

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cc: The Secretary
The Deputy Secretary
Chief of Staff