

**SFAR 89**

On May 31, 2001, the Boeing Company (Boeing) petitioned the FAA for exemptions for three of its airplane models that did not meet the resolution requirements of appendix M for certain parameters, and for an exemption to the August 20, 2001, compliance date. Boeing requested that operators of its airplanes be allowed to continue operating without meeting the resolution requirements of appendix M, or that appendix M be revised to reflect the current recording capabilities of the affected airplanes.

After reviewing the petition, the FAA determined that it could not issue an exemption from an operating rule to a manufacturer on behalf of the operators of its affected airplanes. Further, the FAA found that the issues raised in Boeing's petition were complex and could not be resolved before the August 20 compliance date. The FAA found that additional time was needed to gather the technical and cost information necessary to make an informed decision and implement a solution.

In order to prevent the grounding of non-compliant airplanes, the FAA issued Special Federal Aviation Regulation Number 89 (SFAR 89)—Suspension of Certain Flight Data Recorder Requirements, on August 15, 2001 (66 FR 44270, August 22, 2001). The SFAR, published as a final rule with request for comments, provides temporary relief by suspending the resolution recording requirements for certain parameters on specified airplanes operating under part 121, part 125, or part 135, until August 18, 2003.

In memos dated June 25 and 27, 2001, Dassault Aviation (Dassault) notified the FAA that two of its model airplanes could not comply with DFDR resolution requirements. Dassault stated that, as configured with the current flight data acquisition unit and bus assembly, affected airplanes did not meet the resolution requirements of the regulation. Dassault indicated development of a new data acquisition unit to meet the resolution requirements of appendix M would be expensive, and requested relief similar to that previously granted to Airbus. Similar to the Boeing request, the FAA determined that there was not enough time to gather the information necessary to resolve these issues before the August 20, 2001, compliance date. The FAA included temporary relief for operators of affected Dassault airplanes in SFAR 89, and maintained that relief upon receiving a specific petition for rulemaking from Dassault on October 11, 2002.

Anticipating that there might be other airplanes with similar DFDR resolution issues that had not yet become evident, the FAA included a provision in SFAR 89 that provides relief to operators of other airplanes that might not meet the resolution recording requirements. Operators of those airplanes were required to notify the FAA of the situation and provide requested information in order to take advantage of the relief provided in the SFAR. Several operators of affected Boeing airplanes contacted the FAA to indicate that they were making use of the SFAR relief, but no other noncompliant aircraft models have been reported or identified.

**Disposition of Comments to SFAR 89**

Five comments were received in response to SFAR 89. Four of the five comments fully support the SFAR and urge the FAA to adopt a solution that would prevent the retrofit of currently installed equipment. The NTSB commented in favor of the SFAR as well, but also questioned some definitions and conclusions presented in the original Boeing petition. All of the comments addressed the problem on Boeing airplanes.

In a comment supplementing its original petition, Boeing stresses that the relief from the resolution requirements provided in SFAR 89 do not compromise the integrity of the DFDR signal and "should not hinder any accident or incident investigation." Boeing's comment includes detailed technical information illustrating the difference between the requirements of appendix M and the existing resolution recorded by affected Boeing airplanes. In specific instances, Boeing notes, the differences between the requirements and the actual resolution are negligible, such as 9/10,000 of an inch of movement on the aileron trailing edge.

Boeing estimates that it would cost \$38 million to redesign the components and modify the data frames in the 534 airplanes currently affected by the regulations, and the redesign and retrofit would take up to 3 years to complete. Boeing requests that the relief provided in the SFAR be made a permanent part of part 121 appendix M.

The Air Transport Association (ATA) submitted two comments on behalf of its member airlines. The first comment, dated September 21, 2001, supports the SFAR and recommends that the relief provided by the SFAR be made permanent for affected Boeing airplanes. Citing the parameters that were changed for specific Airbus airplanes, the ATA states that there is no justification for forcing further changes on Boeing

airplanes because they already meet the intended purpose of the rule. The ATA attached comments from two of its members—Airborne Express and American Airlines—which also support adoption of a permanent change to the rule.

In a comment dated October 16, 2001, the ATA forwarded comments from Delta Airlines who also urges permanent adoption of the SFAR specifications for Boeing airplanes. The ATA and two of its members each expressed concern that a retrofit of the affected airplanes would be costly without providing any discernible improvement in the quality of recorded data.

United Parcel Service (UPS) supports permanent relief for Boeing 767 model airplanes. In its comment, UPS notes that the NTSB has found the varied resolution acceptable, and that the FAA had set the precedent for such action by amending the regulations for Airbus airplanes. The UPS comment includes specific technical information for the 767 model airplane. UPS states that permanent relief will allow it to continue operating 32 Boeing 767 model airplanes without incurring additional modification costs, and suggests that the change be adopted in the form of a footnote, similar to those used for Airbus airplanes.

Airbus submitted a comment supporting the FAA's action to provide relief by suspending the resolution requirements. Most of the Airbus comment, however, addresses the relationship between the operating rules and the certification rules of part 25, and the steps required for certification. Airbus's comment is directed at some of the information provided in the initial Boeing petition that was not adopted as part of the SFAR. This includes a Boeing statement that if its definition of resolution were adopted, there would be no need for a list of specific resolution requirements in the regulations. Airbus recognizes that this topic is outside the scope of the SFAR, but indicates that the FAA should not simply accept Boeing's suggested changes, and instead should take a harmonized approach to adoption of working definitions for DFDR systems and specifications.

The National Transportation Safety Board (NTSB) concurs with the intent of the SFAR to provide temporary relief while reviewing the comments. The NTSB states that since the SFAR resulted from the May 2001 Boeing petition, the NTSB's comments address the specifics of the Boeing petition rather than the SFAR language itself.

The NTSB notes that the Boeing petition includes a number of requests