

for changes to the regulations addressing flight data recorders that are not relevant to the action providing relief for resolution requirements on certain Boeing airplanes.

The NTSB states that resolution is critical to the quality of digital flight data. If coarser resolution is allowed, data quality could be reduced to an unacceptable level and would more easily be subject to misinterpretation. The NTSB concludes that explicit resolution requirements should remain in the regulations.

The NTSB also notes that for many parameters, the resolution requirement is expressed as a percentage of the full range of travel of the control surface being measured, rather than the actual range of travel, since the latter differs widely between aircraft models. The NTSB notes that when the total range of motion is short, the percentages make the regulation more stringent. In such cases, the NTSB concludes, "The minimum resolution for a given parameter should be evaluated to determine if regulatory relief could be granted and the accuracy requirements maintained." Using that criterion, the NTSB concludes it has no objection to the specific resolution relief requested by Boeing (with the exception of vertical acceleration in the Boeing 717 model airplane).

The NTSB comment goes on to give its position regarding each of the 11 specific changes requested in the Boeing petition.

FAA Response

The FAA agrees with Airbus that the issue of a new resolution definition is beyond the scope of the rulemaking. The FAA will continue to consider the broader issues outlined in the Boeing request, but will not change the current format of the regulation or adopt definitions that affect virtually all airplanes operating today. Any changes the FAA may choose to propose would be accomplished only after input from the industry.

In its original petition, Boeing requested that the amendments affecting its aircraft be codified as footnotes to the affected parameters. Based on discussions with Boeing technical representatives and NTSB, the FAA is amending the affected appendices by making appropriate changes requested by Boeing, except for the change to parameter 5 (vertical acceleration).

Boeing was asked to submit additional data to the FAA in order to clarify questions and concerns raised in the original petition and the NTSB comment. Boeing submitted the requested data and the new information

was reviewed in a June 26, 2002, meeting between FAA personnel and NTSB representatives. In the meeting, NTSB agreed that global changes for the following parameters under appendix M of part 121 were acceptable: 12a, 14a, 16, 23, and 26. An amendment to footnote 12 to coordinate with changes to parameter 23 was also accepted during the meeting. The NTSB does not support a global change to the appendix concerning parameter 5. Instead, the NTSB agrees with the insertion of a footnote into each affected appendix providing the necessary relief for the Boeing B-717 airplane.

Boeing submitted another petition on October 18, 2002, seeking changes to three additional parameters. The requested changes would affect parameters 9, 87, and 88 for Boeing 737 and 777 airplanes. FAA personnel later discussed the request with NTSB representatives and the changes were found to be acceptable. The additional petition is consistent with a request by the FAA for information regarding airplane models that could not meet the resolution requirements, but were not included in the relief granted in SFAR 89.

No comments were received concerning Dassault's request to amend the resolution recording requirements for parameters 5 and 26 for two of its airplane models. Therefore, the FAA is revising footnotes 9 and 14 in each affected appendix to accommodate Dassault's requested relief from the existing requirement.

If the rule is not changed, operators of certain Boeing and Dassault airplanes would be required to complete costly retrofits. The incremental differences in the measurements obtained are considered insignificant. By incorporating global changes and footnotes into this rule, retrofits will not be necessary, and it is accepted that accident investigations will not be compromised. Therefore, the FAA has determined that retrofitting to meet the higher standards is unnecessary.

Accordingly, the FAA is amending the resolution recording requirements for parameters 9, 12a, 14a, 16, 19, 23, 87, 88, and adding revised footnotes to parameters 5 and 26 of appendix M of part 121, appendix E of part 125, and appendix F of part 135. This rule also makes a correction to footnote 11 to add a missing decimal point. The revision of the recording requirements for parameters 9 and 19 will remove the need for the footnotes (9 and 14) in the current regulation. Rather than renumber each footnote in this rule, we are using footnotes 9 and 14 to apply the specific changes requested for the B-717

and Dassault airplanes. Therefore, footnotes 9 and 14 will be revised to apply to parameters 5 and 26 respectively.

Exceptions to DFDR Requirements

When the FAA developed the 1997 DFDR regulations, we recognized that the costs of retrofitting some older aircraft models would be prohibitive and would likely force the aircraft out of service. The regulations incorporated an exceptions paragraph into each of the operating rule parts; these paragraphs list specific aircraft models that are not subject to the 1997 upgrade requirements. These aircraft must continue to comply with the flight data recorder regulations previously in effect for their operation. The FAA also noted in the final rule that operators that found other models of aircraft appropriate for exception status could petition the FAA for inclusion of the aircraft model in the exceptions paragraph. In general, the FAA bases exception status on the age of the aircraft, the number of aircraft still in operation, and the expected cost of DFDR upgrades.

Since the 1997 rule was promulgated, the FAA has received a number of requests for exception status. After reviewing information submitted, most of the models were granted exemptions to continue operating without the upgrades until the operating rules were changed. No opposing comments were received when the exemption requests were published. Accordingly, this rulemaking includes those additions to the lists of excepted aircraft. While these aircraft are excepted from upgrade requirements, most are still covered under other current sections and as such, all installed equipment must continue to be used and maintained according to the regulation. The sections that are being amended to include additional excepted aircraft are Sections 121.344(l)(2), 121.344a(f), 125.226(l)(2), and 135.152(k).

Paperwork Reduction Act

There are no current or new requirements for information collection associated with this amendment.

International Compatibility

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to comply with International Civil Aviation Organization (ICAO) Standards and Recommended Practices to the maximum extent practicable. The FAA has determined that there are no ICAO Standards and Recommended Practices that correspond to these regulations.