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14 CFR Parts 121, 125, and 135
Revisions to Digital Flight Data Recorder Requirements; Final Rule

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 121, 125, and 135

[Docket No.: FAA–2002–11705; Amendment No. 121–292, 125–39 and 135–85]

RIN 2120–AH81

Revisions to Digital Flight Data Recorder Requirements

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action amends the flight data recorder regulations by expanding the recording ranges for certain data parameters for all covered airplanes. This amendment is necessary because certain airplanes are unable to record certain flight parameters under the existing resolution criteria without undergoing unintended and expensive retrofit.

DATES: This final rule is effective on August 20, 2002.

FOR FURTHER INFORMATION CONTACT: Gary Davis, Flight Standards Service, Air Transportation Division, AFS–201A, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 267–8166; facsimile (202) 267–5229, e-mail *gary.davis@faa.gov*.

SUPPLEMENTARY INFORMATION:

Availability of Rulemaking Documents

You can get an electronic copy using the Internet by taking the following steps:

(1) Go to the search function of the Department of Transportation's electronic Docket Management System (DMS) web page (*http://dms.dot.gov/search*).

(2) On the search page type in the last five digits of the Docket number shown at the beginning of this notice. Click on ''search.''

(3) On the next page, which contains the Docket summary information for the Docket you selected, click on the document number for the item you wish to view.

You can also get an electronic copy using the Internet through the Office of Rulemaking's web page at *http://www.faa.gov/avr/armhome.htm* or the Government Printing Office's web page at *http://www.access.gpo.gov/su_docs/aces/aces140.html*.

You can also get a copy by submitting a request to the Federal Aviation Administration, Office of Rulemaking, ARM–1, 800 Independence Avenue SW., Washington, DC 20591, or by calling (202) 267–9680. Make sure to identify the amendment number or docket number of this rulemaking.

Small Business Regulatory Enforcement Fairness Act

The Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996 requires FAA to comply with small entity requests for information or advice about compliance with statutes and regulations within its jurisdiction. Therefore, any small entity that has a question regarding this document may contact their local FAA official, or the person listed under **FOR FURTHER INFORMATION CONTACT**. You can find out more about SBREFA on the Internet at our site, *http://www.faa.gov/avr/arm/sbrefa.htm*. For more information on SBREFA, e-mail us *9–AWA–SBREFA@faa.gov*.

Background

The regulations adopted by the FAA in August of 1997 (62 FR 38362) substantially improved the requirements for flight data recorders and mandated that up to 88 parameters of flight data of recorded for diagnostic use in the event of an accident or serious incident. Most of the improvements in the recording capacity did not directly affect Airbus airplanes, however, because almost all of the additional parameters required by the FAA had been incorporated previously into Airbus product specifications. In the case of a few parameters, however, Airbus airplanes were unable to meet the parameter recording requirements adopted in the rule. In 1997, the FAA stated that it had tailored the rule to avoid major equipment redesign or retrofits. The new requirements were to be met in stages, with the first 34 parameters being required at the next heavy maintenance check after August 18, 1999, but no later than August 20, 2001; followed by parameters 35 through 57 for aircraft manufactured after August 18, 2000, upon delivery; and finally parameters 58 through 88 for aircraft manufactured after August 19, 2002, upon delivery.

On August 24, 1999 (64 FR 46117), the FAA amended the digital flight data recorder (DFDR) resolution and sampling requirements for several parameters for Airbus airplanes. The amendments addressed only the first 34 parameters. Similarly, on August 24, 2000 (64 FR 51741), the FAA revised the DFDR regulations, making technical changes related to parameters 35 through 57 to accommodate Airbus airplanes.

Petition for Rulemaking

By letter dated February 22, 2002, Airbus petitioned the FAA to further amend Appendix M to part 121 and Appendix E to part 125. The letter states that Airbus had completed its audit of compliance requirements for parameters 58 through 88, and identified three specific technical issues of compliance for which it sought relief. Specifically, Airbus seeks minor technical changes to the recording requirements for parameter 83 (cockpit trim control input position—roll), parameter 84 (cockpit trim control input position—yaw), and parameter 88 (cockpit flight control input force—rudder). However, since its February letter, Airbus has withdrawn its request for changes to the requirements for parameter 88.

Airbus notes that the FAA, in adopting the new DFDR recording resolution requirements, did not intend to require equipment redesign or retrofit, and that the requested specification changes would be consistent with that intent. Airbus airplanes have been recording these parameters for many years, and Airbus claims that there would be no safety or analytic benefit to replace sensors that are virtually compliant with the regulatory specifications. According to Airbus, the deviations to current resolution requirements they are seeking are small, and are consistent with the smallest increment employed in the parameters for actual measurement of the respective flight control surfaces.

Specifically, Airbus seeks changes to the DFDR recording requirements for the following parameters as contained in Appendix M to part 121 and appendix E to part 125 of 14 CFR:

Parameter 83, cockpit trim control input position—roll, is required to be resolved to 0.028 degrees (0.2% of operational range of ±7 degrees). On A310 and A300–600 series aircraft this is implemented with a resolution of 0.096 degrees. Airbus asserts that this resolution is nearly identical to the smallest increment used in deflection of the roll control surfaces for each model, which is 0.092 degrees in the A310 aircraft and 0.091 degrees in the A300–600 aircraft. Airbus states that achieving the additional resolution would provide no substantive benefit. Airbus requests that a footnote be added in Appendix M to part 121 and Appendix E to part 125, to reflect this deviation for the airplane models noted.

Parameter 84, cockpit trim control input position—yaw, is required to be resolved to 0.08 degrees (0.2% of operational range of ±20 degrees). On A318/319/320/321 series aircraft, this is

implemented with a resolution of 0.088 degrees. Airbus asserts that this resolution surpasses the smallest increment used to deflect the yaw control surfaces for each model, which is 0.112 degrees for the A320 family. Airbus requests that a footnote be added in Appendix M to part 121 and Appendix E to part 125, to reflect this deviation for the airplane models noted.

Airbus states that U.S. operators of the affected airplanes would incur substantial costs associated with being involved in the redesign and installation of new DFDR equipment to achieve precise compliance with the recording resolution requirements of the current regulations. In addition, if new aircraft were delivered with DFDR recording equipment that differs from that installed on existing aircraft, operators would have to maintain the equipment separately, increasing recordkeeping requirements and costs. Airbus states that these added costs would not be balanced by any increase in safety or investigative capability. Accordingly, Airbus concludes that it is in the public interest to make the requested regulatory modifications.

Discussion of Comments

On April 22, 2002, the FAA published a notice of petition for rulemaking, with a request for comments, discussing this Airbus request (67 FR 19534). The comment period for that notice (Notice No. PE–2002–28) closed on May 22, 2002. In response to that notice we received two generally favorable comments, one from the Air Transport Association (ATA) and another from the Boeing Airplane Company (Boeing). The ATA supports the Airbus petition, reaffirming that the 1997 rule was not intended to necessitate retrofit modifications. The ATA agrees with the petitioner's claim that the required changes to the production configurations and the resulting differences with the configurations for airplanes already in service would be neither cost effective nor beneficial in mishap investigations.

Boeing concurs with the requested revisions to the parameter 83 and parameter 84 resolutions, stating that they are minor and would not significantly affect the ability of accident investigators to perform their investigation. However, Boeing questioned the need to revise the accuracy requirement for parameter 88, and is concerned that any changes to the rule might affect the method of compliance for which it had received approval. Since Airbus withdrew its request to amend the recording requirements of parameter 88, no change to that parameter is included in this amendment.

FAA's Response

The FAA considered carefully all the comments received. Because no commenter opposed the requested changes to parameters 83 and 84, the FAA has determined that the changes would be in the public interest.

Airbus requested that these amendments be codified as footnotes to the affected appendixes. After considerable discussion with technical representatives and accident investigators, however, the FAA has determined the requested changes can be made to the appendices and made available to all airplanes without compromising resources available to accident investigators. The incremental difference in the measurements obtained are considered insignificant. Further, the FAA notes that the same parameters and resolution requirements appear in Appendix F to part 135. Because the changes requested will apply to all airplanes subject to parts 121 and 125, the FAA finds that the same changes are appropriate for the part 135 requirements. Accordingly, in Part 121 Appendix M, Part 125 Appendix E, and Part 135 Appendix F, resolution recording requirements for parameters 83 and 84 will be amended to read 0.7% and 0.3% of full range, respectively.

Good Cause for Immediate Adoption

Sections 553(b)(3)(B) and 553(d)(3) of the Administrative Procedure Act (APA) (5 U.S.C. Sections 553(b)(3)(B) and 553(d)(3)) authorize agencies to dispense with certain notice procedures for rules when they find ''good cause'' to do so. Under section 553(b)(3)(B), the requirements of notice and opportunity for comment do not apply when the agency, for good cause, finds that those procedures are ''impracticable, unnecessary, or contrary to the public interest.'' Section 553(d)(3) allows an agency, upon finding good cause, to make a rule effective immediately, thereby avoiding the 30-day delayed effective date requirement in section 553.

The FAA finds that the requirements for notice and public comment to this amendment have been met because the FAA published for comment Airbus's original petition for rulemaking. Further, if the changes are delayed awaiting additional public notice and comment, regulated entities would be unable to comply with an August 20, 2002, compliance deadline. Therefore, the FAA finds that further notice and comment are unnecessary and that good cause exists for making these amendment effective on August 20, 2002.

Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)), the FAA has determined that there are no new requirements for information collection associated with this rule.

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 determined that there are no ICAO Standards and Recommended Practices that correspond to these regulations.

Economic Evaluation, Regulatory Flexibility Determination, Trade Impact Assessment, and Unfunded Mandates Assessment

Proposed changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 directs each Federal agency to propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the economic impact of regulatory changes on small entities. Third, the Trade Agreements Act (19 U.S.C. section 2531–2533) prohibits agencies from setting standards that create unnecessary obstacles to the foreign commerce of the United States. In developing U.S. standards, this Trade Act also requires agencies to consider international standards and, where appropriate, use them as the basis of U.S. standards. Fourth, the Unfunded Mandates Reform Act of 1995 (Public Law 104–4) requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local, or tribal governments, in the aggregate, or by the private sector, of $100 million or more annually (adjusted for inflation.)

Regulations with an expected minimal impact the above-specified analyses are not required. The Department of Transportation Order DOT 2100.5 prescribes policies and procedures for simplification, analysis, and review of regulations. If it is determined that the expected impact is so minimal that the proposal does not warrant a full Evaluation, a statement to

that effect and the basis for it is included in the proposed regulation. The FAA has determined that there are no costs associated with this final rule. Instead, this rule change relieves operators of Airbus airplanes from a cost that would have been inadvertently imposed on them in the adoption of the 1997 regulations. This cost would have been imposed beginning on August 20, 2002. This change effectuates the original intent of the 1997 regulations.

In conducting these analyses, FAA has determined this rule (1) has benefits which justify its costs; (2) is not a ''significant regulatory action'' as defined in section 3(f) of Executive Order 12866 and is not ''significant'' as defined in DOT's Regulatory Policies and Procedures; (3) will not have a significant impact on a substantial number of small entities; (4) will have little effect on international trade; and (5) does not impose an unfunded mandate on state, local, or tribal governments, or on the private sector.

The purpose of this rule is to eliminate the necessity to incorporate unnecessary changes into an existing type of airplane that already meets the requirements of the rule except for minor variations in the resolution recording requirement. The FAA has determined that allowing the continued resolution-recording at a slightly different value will not impact safety or the collection of accident investigation data. This rule would result in cost savings because air carriers would not have to make minor, but costly, changes and subsequently pass those costs on to the public in the form of higher ticket prices.

Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 (RFA) establishes ''as a principle of regulatory issuance that agencies shall endeavor, consistent with the objective of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation.'' To achieve that principle, the Act requires agencies to solicit and consider flexible regulatory proposals and to explain the rationale for their actions. The Act covers a wide range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Agencies must perform a review to determine whether a proposed or final rule will have a significant economic impact on a substantial number of small entities. If the determination is that it will, the agency must prepare a regulatory flexibility analysis as described in the Act. However, if an agency determines that a proposed or final rule is not expected to have a significant economic impact on a substantial number of small entities, section 605(b) of the 1980 Act provides that the head of the agency may so certify and a regulatory flexibility analysis is not required. The certification must include a statement providing the factual basis for this determination, and the reasoning should be clear.

This final rule will relieve unnecessary costs to operators of certain airplanes. Therefore, the FAA expects this rule to impose no cost on small entities. Consequently, the FAA certifies that the rule will not have a significant economic impact on a substantial number of small entities.

Trade Impact Assessment

The Trade Agreement Act of 1979 prohibits Federal agencies from engaging in any standards or related activities that create unnecessary obstacles to the foreign commerce of the United States. Legitimate domestic objectives, such as safety, are not considered unnecessary obstacles. The statute also requires consideration of international standards and where appropriate, that they be the basis for U.S. standards. The FAA has assessed the potential effect of this rulemaking and has determined that it will reduce costs to U.S. operators of certain airplanes but will have a minimal effect on international trade.

Unfunded Mandates Assessment

The Unfunded Mandates Reform Act of 1995 (the Act), enacted as Public Law 104–4 on March 22, 1995, is intended, among other things, to curb the practice of imposing unfunded Federal Mandates on State, local, and tribal governments. Title II of the Act requires each Federal agency to prepare a written statement assessing the effects of any Federal mandate in a proposed or final agency rule that may result in a $100 million or more expenditure (adjusted annually for inflation) in any one year by State, local, and tribal governments, in the aggregate, or by the private sector; such a mandate is deemed to be a ''significant regulatory action.''

This final rule does not contain such a mandate. Therefore, the requirements of Title II of the Unfunded Mandates Reform Act of 1995 do no apply.

Executive Order 3132, Federalism

The FAA has analyzed this final rule under the principles and criteria of Executive Order 13132, Federalism. We determined that this action will not have a substantial direct effect on the States, or the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, we determined that this final rule does not have federalism implications.

Environmental Analysis

FAA Order 1050.1D defines FAA actions that may be categorically excluded from preparation of a National Environmental Policy Act (NEPA) environmental impact statement. In accordance with FAA order 1050.1D, appendix 4, paragraph 4(j), this rulemaking action qualifies for a categorical exclusion.

Energy Impact

The energy impact of the notice has been assessed in accordance with the Energy Policy and Conservation Act (EPCA) Public Law 94–163, as amended (42 U.S.C. 6362) and FAA Order 1053.1. It has been determined that the final rule is not a major regulatory action under the provisions of the EPCA.

List of Subjects

14 CFR Part 121

Air carriers, Aircraft, Aviation safety, Reporting and recordkeeping requirements, Safety, Transportation.

14 CFR Part 125

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

14 CFR Part 135

Air taxis, Aircraft, Airmen, Alcohol abuse, Aviation safety, Drug abuse, Drug testing, Reporting and recordkeeping requirements.

The Amendment

In consideration of the foregoing, the Federal Aviation Administration amends Chapter 1 of Title 14, Code of Federal Regulations as follows:

PART 121—OPERATING REQUIREMENTS: DOMESTIC, FLAG, AND SUPPLEMENTAL OPERATIONS

1. The authority citation for part 121 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 40119, 41706, 44101, 44701–44702, 44705, 44709–44711, 44713, 44716–44717, 44722, 44901, 44903–44904, 44912, 45101–45105, 46105, Pub. L. 107–71, 115 Stat. 597–647.

2. Amend Appendix M to part 121 to revise numbers 83 and 84 to read as follows:

Appendix M to Part 121—Airplane Flight Recorder Specifications

The recorded values must meet the designated range, resolution, and accuracy requirements during dynamic and static conditions. All data recorded must be correlated in time to within one second.

Parameters	Range	Accuracy (sensor input)	Seconds per sampling interval	Resolution	Remarks
*	*	*	*	*	*
83. Cockpit trim control input position—roll.	Full Range	±5%	1	0.7% of full range.	Where mechanical means for control inputs are not available, cockpit display trim position should be recorded.
84. Cockpit trim control input position—yaw.	Full range	±5%	1	0.3% of full range.	Where mechanical means for control input are not available, cockpit display trim positions should be recorded.

* * * * *

PART 125—CERTIFICATION AND OPERATIONS: AIRPLANES HAVING A SEATING CAPACITY OF 20 OR MORE PASSENGERS OR A MAXIMUM PAYLOAD CAPACITY OF 6,000 POUNDS OR MORE; AND RULES GOVERNING PERSONS ON BOARD SUCH AIRCRAFT

3. The authority citation for part 125 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701–44702, 44705, 44710–44711, 44713, 44716–44717, 44722.

4. Amend Appendix E to part 125 to revise item numbers 83 and 84 to read as follows:

Appendix E to Part 125—Airplane Flight Recorder Specifications

The recorded values must meet the designated range, resolution, and accuracy requirements during dynamic and static conditions. All data recorded must be correlated in time to within one second.

Parameters	Range	Accuracy (sensor input)	Seconds per sampling interval	Resolution	Remarks
*	*	*	*	*	*
83. Cockpit trim control input position—roll.	Full Range	±5%	1	0.7% of full range.	Where mechanical means for control inputs are not available, cockpit display trim position should be recorded.
84. Cockpit trim control input position—yaw.	Full Range	±5%	1	0.3% of full range.	Where mechanical means for control input are not available, cockpit display trim positions should be recorded.

* * * * *

PART 135—OPERATING REQUIREMENTS: COMMUTER AND ON DEMAND OPERATIONS AND RULES GOVERNING PERSONS ON BOARD SUCH AIRCRAFT

5. The authority citation for part 135 continues to read as follows:

Authority: 49 U.S.C. 106(g), 41706, 44113, 44701–44702, 44709, 44705, 44711–44713, 44715–44717, 44722.

6. Amend Appendix F to part 135 revise item numbers 83 and 84 to read as follows:

Appendix F to Part 135—Airplane Flight Recorder Specifications

The recorded values must meet the designated range, resolution, and accuracy requirements during dynamic and static conditions. All data recorded must be correlated in time to within one second.

Parameters	Range	Accuracy (Sensor input)	Seconds per sampling interval	Resolution	Remarks
*	*	*	*	*	*
83. Cockpit trim control input position—roll.	Full Range	±5%	1	0.7% of full range.	Where mechanical means for control inputs are not available, cockpit display trim position should be recorded.

Parameters	Range	Accuracy (Sensor input)	Seconds per sampling interval	Resolution	Remarks
84. Cockpit trim control input position—yaw.	Full Range	±5%	1	0.3% of full range.	Where mechanical means for control input are not available, cockpit display trim positions should be recorded.

* * * * *

Issued in Washington, DC, on August 15, 2002.

Monte R. Belger,

Acting Administrator.

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