Effective Date

(a) This airworthiness directive (AD) becomes effective December 17, 2008.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Rolls-Royce plc RB211 Trent 553–61, 553A2–61, 556–61, 556A2–61, 556B–61, 556B2–61, 560–61, and 560A2–61 turbofan engines with a low-pressure turbine (LPT) stage 3 disc, part number (P/N) FK29581, installed. These engines are installed on, but not limited to, Airbus A340–500 and A340–600 series airplanes.

Reason

(d) European Aviation Safety Agency (EASA) AD No. 2008–0098, dated May 21, 2008, states the unsafe condition as follows:

Recent analysis of the LPT discs 1–5 carried out by Rolls-Royce plc concluded that it is necessary to reduce the declared safe cyclic life of all Trent 500 LPT stage 3 discs, P/N FK29581.

Rolls-Royce plc has reduced the declared safe cyclic life of these LPT stage 3 discs to 7,990 cycles-since-new (CSN). We are issuing this AD to prevent an uncontained failure of the LPT stage 3 disc, resulting in damage to the airplane.

Actions and Compliance

(e) After the effective date of this AD, remove LPT stage 3 discs, P/N FK29581, from service before reaching the new reduced declared safe cyclic life of 7,990 CSN.

(f) Do not install an LPT stage 3 disc, P/N FK29581, onto any engine, unless it has been verified that the disc has not yet accumulated 7,990 CSN.

Alternative Methods of Compliance (AMOCs)

(g) The Manager, Engine Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

Related Information

(h) Refer to EASA Airworthiness Directive 2008–0098, dated May 21, 2008, and Rolls-Royce plc Alert Service Bulletin No. RB.211–72–AF781, dated April 2, 2008, for related information. Contact Rolls-Royce plc, P.O. Box 31, Derby, England, DE248BJ; telephone: 011–44–1332–242424; fax: 011–44–1332–245418, for the alert service bulletin.

(i) Contact James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; *e-mail: james.lawrence@faa.gov;* telephone (781) 238–7176; fax (781) 238–7199, for more information about this AD.

Issued in Burlington, Massachusetts, on November 24, 2008.

Francis A. Favara,

Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. E8–28549 Filed 12–1–08; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 91, 121, and 125

[Docket No. FAA–1999–6482; Amendment No. 91–304, 125–56, 121–342]

RIN 2120–AG87

Revisions to Digital Flight Data Recorder Regulations for Boeing 737 Airplanes and for All Part 125 Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA amends the regulations governing flight data recorders to increase the number of digital flight data recorder parameters for all Boeing 737 series airplanes manufactured after August 18, 2000. This change is based on safety recommendations from the National Transportation Safety Board following its investigations of two accidents and several incidents involving 737s. The rule also adopts a prohibition on deviations from flight recorder requirements for all airplanes operated under part 125.

DATES: These amendments become effective February 2, 2009.

FOR FURTHER INFORMATION CONTACT: For technical issues: Brian A. Verna, Avionics Systems Branch, Aircraft Certification Service, AIR–130, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 385–4643; facsimile (202) 385–4651; e-mail *brian.verna@faa.gov.* For legal issues: Karen L. Petronis, Senior Attorney, Regulations Division, AGC–200, Office of the Chief Counsel, Federal Aviation Administration, 800 Independence Ave., SW., Washington, DC 20591; telephone (202) 267–3073; facsimile (202) 267–7971; e-mail: *karen.petronis@faa.gov.*

SUPPLEMENTARY INFORMATION:

Authority for This Rulemaking

The FAA's authority to issue rules on aviation safety is found in Title 49 of the United States Code. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority.

This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart III, Section 44701. Under that section, the FAA is charged with prescribing regulations providing minimum standards for other practices, methods and procedures necessary for safety in air commerce. This regulation is within the scope of that authority since flight data recorders are the only means available to account for aircraft movement and flight crew actions critical to finding the probable cause of incidents or accidents, including data that could prevent future incidents or accidents.

I. Background

The following is a summary of the events leading up to this final rule. For a more detailed discussion of these events, please refer to the ''Background'' section of the supplemental notice of proposed rulemaking that preceded this final rule (71 FR 52382, September 5, 2006).

A. Statement of the Problem

Two accidents in the United States involving Boeing 737 series airplanes (737s) appear to have been caused by an uncommanded rudder hardover, with resultant roll and sudden descent. These accidents were United Airlines flight 585, near Colorado Springs, Colorado, on March 3, 1991, and USAir flight 427, near Aliquippa, Pennsylvania, on September 8, 1994. In addition, between 1996 and 1999, seven incidents of suspected uncommanded rudder movement involving U.S.-registered 737s occurred that did not result in the loss of control of the airplanes involved.

All the 737s mentioned above were equipped with the flight data recorders required by the regulations then in effect. However, these 737s were not required to record (nor were they equipped to provide) information about the airplanes' movement about their three axes or the position of flight control surfaces immediately preceding the accidents or incidents. Without such data, neither the FAA nor the National Transportation Safety Board (NTSB) could definitively identify the causes of these suspected uncommanded rudder events.

B. FAA Actions

Following piloted computer simulations of the USAir accident and reports of malfunctions in the 737's yaw damper system (which moves the rudder independent of flight crew input), the FAA mandated design changes to the 737's rudder system. First, we issued Airworthiness Directive (AD) 97–14–03 (62 FR 34623, June 27, 1997). This AD requires installation of a newly designed rudder-limiting device and a newly designed yaw damper system to address possible rudder hardover situations and uncommanded yaw damper movements. Second, in

response to the possibility of a secondary slide jam and rudder reversal, we issued AD 97–14–04 (62 FR 35068, June 30, 1997). That AD requires operators to install a new vernier control rod bolt and a new main rudder power control unit servo valve.

C. NTSB Safety Recommendations

Between 1995 and 1997, the NTSB issued 20 safety recommendations dealing with the 737. Three of those (A–95–25, A–95–26, and A–95–27) specifically addressed upgrades to the flight data recorders for all 737s. The NTSB stressed the importance of data on the flight control surface positions, flight control inputs, and lateral acceleration. The NTSB stated that with this data, it would have been able to identify quickly any abnormal control surface movements and configuration changes or autopilot status changes that may have been involved in the loss of control of the 737s involved in the United and USAir accidents.

While the NTSB acknowledged the design changes made to the rudder system under the above ADs, the NTSB stated that these changes did not eliminate the possibility of other potential failure modes and malfunctions.

D. FAA Response: 1997 Regulations

In response to the NTSB's safety recommendations, the FAA published revisions to the digital flight data recorder (DFDR) requirements for all airplanes (Revisions to Digital Flight Data Recorder Rules; Final Rule (62 FR 38362, July 17, 1997)). The revised DFDR regulations prescribe the 88 parameters that must be recorded on DFDRs, with the exact number of parameters required to be recorded determined by the date of airplane manufacture. The number of parameters that must be recorded range from 18 for a transport category airplane manufactured on or before October 11, 1991, to 88 for airplanes manufactured after August 19, 2002.

E. NTSB's 1999 Findings and Safety Recommendations

On March 24, 1999, the NTSB issued the final report of its investigation into the crash of USAir flight 427. The NTSB determined the probable cause of the accident was a loss of control resulting from the movement of the rudder surface position to its blowdown limit. The NTSB stated that the 1997 regulations for upgrading DFDRs did not address this problem because they do not require specific flight control information to be recorded. Since several rudder-related events have been associated with the 737's yaw damper system, the NTSB concluded that it is important that yaw damper status, yaw damper command, standby rudder status, and control wheel, control column, and rudder pedal forces be recorded on all 737s.

On April 16, 1999, the NTSB sent two recommendations to the FAA on recording these additional parameters on all 737 DFDRs (Nos. A–99–28 and A–99–29).

F. FAA Response: Notice of Proposed Rulemaking (Notice No. 99–19)

The FAA agreed with the intent of the two NTSB safety recommendations and issued a notice of proposed rulemaking (Notice No. 99–19) entitled ''Revisions to Digital Flight Data Recorder Regulations for Boeing 737 Airplanes and for Part 125 Operators'' (64 FR 63140, November 18, 1999) (NPRM). In this NPRM, we proposed:

- Requiring all 737s to record the parameters listed in § 121.344(a)(1) through (a)(22), (a)(88), plus three new parameters: yaw damper status, yaw damper command and standby rudder status (designated as (a)(89) through (a)(91)).
- Increasing the required sampling rate for the control forces listed in current paragraph (a)(88) for 737s.
- Requiring all 737s equipped with a flight data acquisition unit (FDAU) of any type as of July 16, 1996, or manufactured after July 16, 1996, to comply by August 18, 2000. For all 737s not equipped with a FDAU of any type as of July 16, 1996, we proposed a compliance date of August 20, 2001.

G. Notice of Proposed Rulemaking: Comments

We received 17 comments on the NPRM. Only one commenter supported the proposed rule as published. The other commenters generally supported the intent of the proposed rule, but expressed concern about items such as:

- The proposed time frame for compliance,
- The availability of installation instructions,
- The lack of parts, and
- The likelihood of considerable airplane out-of-service time.

H. Significant Events After Publication of the NPRM

Several events occurred after publication of the NPRM that might have affected the applicability of a final rule:

- Boeing began its 737 Rudder System Enhancement Program (RSEP), which Boeing claimed would make the 737 rudder system functionally equivalent to the 3-actuator system found on its 757 and 767 model airplanes.
- The 737 Engineering Test and Evaluation Board (ETEB) was formed in May 1999 to conduct a failure analysis of the rudder actuation control system of the 737. The ETEB issued its final report in July 2000.
- On October 7, 2002, the FAA published AD 2002–20–07 (and later revisions) that requires the installation of a new rudder control system (and accompanying changes to nearby systems) (67 FR 62341). This AD gives all 737 operators six years to install a new rudder control system. Compliance is due by November 12, 2008.
- Boeing began installing the same newly designed rudder control system on all 737s manufactured after January 2003.
- Boeing began installing the equipment necessary to record the proposed parameters on all 737s it manufactured beginning in July 2000.

I. Need for an SNPRM

Following the publication of the rudder system AD, we began to draft a final rule that included the additional flight recorder parameters. We soon realized that the number of 737s to which the final rule would apply—those with the original rudder system—would be shrinking at a constant pace as these rudder control systems were replaced. By the 2008 compliance date for the rudder system AD, no 737s in the U.S. fleet would have the original rudder system. That system had been the original target for the addition of flight data sensors.

We issued a supplemental notice of proposed rulemaking (SNPRM) in 2006 (Notice No. 06–12; Revisions to Digital Flight Data Recorder Regulations for Boeing 737 Airplanes and for Part 125 Operators; 71 FR 52382, September 5, 2006) to address the changed circumstances introduced by the events that occurred after publication of the NPRM. The SNPRM also proposed a compliance time that was the same as the rudder system AD (November 12, 2008). We requested comment on this change in applicability and sought updated economic information on installing the proposed equipment.

II. Comments to SNPRM

A. Summary

The FAA received seven comments in response to the SNPRM. The NTSB, the Air Line Pilots Association (ALPA) and one individual commenter expressed support for the proposed rule. The ALPA recognized the impact of the cost

of the proposed rule and encouraged the FAA to work with the manufacturer to develop a cost-effective rudder force measurement system. While the NTSB agreed with the proposal, it did not agree that the current means for recording rudder pedal force provides adequate data.

Boeing, the Air Transport Association (ATA) and AirTran Airways asked the FAA to either abandon the proposed rulemaking or, at a minimum, remove the retrofit requirement for the 737–100/–200/–300/–400/–500 series airplanes.

US Airways provided information regarding its 737 fleet composition and costs in response to our requests in the SNPRM.

B. Airplane Age and Applicability

Several commenters noted a distinct difference between newer and older fleets of 737s. The older 737 fleet includes many types of data recording systems and installation variations. These commenters generally concluded that compliance with the rule as proposed would result in significant costs for new equipment and software modifications for older models of the 737, plus supplemental type certificates for an unknown number of variations.

1. Boeing Comments on Next-Generation 737s (–600/–700/–800/–900)

Boeing Next-Generation 737s have been manufactured since January 1997. For those 737s with line numbers 1 through 129, (manufactured between January 1997 and September 1998), Boeing stated that the flight recorder requirements of the SNPRM could be met with the installation of modifications described in two service bulletins:

- Boeing Service Bulletin 737–31–1124 describes the installation of the rudder pedal force transducer that is required for compliance with parameter 88 (all cockpit flight control forces). It would cost an average of $10,285 an airplane to complete this installation.
- Boeing Service Bulletin 737–31–1170, which addresses parameter 91 (standby rudder valve status), includes instructions for additional wiring and would require new digital flight data acquisition unit (DFDAU) software. Further, six models of Teledyne DFDAUs would need to be replaced. On average, it would cost $35,000 an airplane to complete this Boeing Service Bulletin.

Thus, the total cost for a Next-Generation 737 to complete both Boeing Service Bulletins would be $45,285.

Boeing stated that Next-Generation 737s with line numbers between 130 and 621 (manufactured between October 1998 and July 2000) could comply with the requirements of the SNPRM with the installation of Service Bulletin 737–31–1170, described above. The estimated cost of installation of these modifications is $35,000 per airplane.

Other than the rewiring, software changes and some DFDAU replacement, no other equipment is required for older Next-Generation 737s to meet the proposed requirements.

Boeing stated that Next-Generation 737s with line numbers 622 and higher (manufactured beginning in July 2000) were designed to comply with ''the intent of the SNPRM.'' For these 737s, there is no cost associated with recording the proposed parameters other than the minimal costs for operators to adopt and maintain them as part of the flight data recording system.

2. Boeing Comments on Older 737s (–100/–200/–300/–400/–500)

In contrast to the minimal changes required for newer airplanes, Boeing submitted data showing that older 737s might require a significant amount of new equipment. This includes a DFDAU, digital flight data recorder, engine accessory unit, flight control computer, yaw damper coupler replacement and software modification to meet the proposed SNPRM requirements. Boeing also indicated its concern for possible collateral damage to existing FDR wiring in the introduction of a DFDAU and the extensive wiring modifications that would be necessary on these older 737s. We calculate that it would cost an average of $160,000 to meet the SNPRM's requirements for those older 737s that have a DFDAU and $425,000 for those that do not.

3. Rudder Modification Operational History (ADs 97–14–03 and 2002–20–07)

In the SNPRM, we noted that the FAA possessed limited historical data on the function and reliability of the enhanced rudder that resulted from Boeing's RSEP program and the rudder system AD. In its comment, the ATA estimated that, since 1999, the worldwide 737 fleet has accumulated approximately 74 million flight hours with no reported rudder control events. The ATA used 1999 as the comparison date because it coincides with the compliance date for the AD requiring modifications to the yaw damper (AD 97–14–03) and the implementation of the rudder modifications. For comparison, there were nine rudder control events (two accidents and seven incidents) between 1991 and 1999 covering approximately 57 million flight hours.

Boeing stated that it is not aware of any data or service experience that suggests the modified rudder system is anything other than safe.

Boeing stated that the modified 737 rudder system (installed pursuant to the AD or at manufacture) should not be treated any differently than any other rudder system.

The ATA estimated that since the rudder system AD was adopted in 2002, approximately one-third of the 20 million hours accumulated by U.S.-registered 737s were on airplanes with the new rudder system installed.

4. Conclusion

Based on the comments to the SNPRM, we re-evaluated the composition of the 737 fleet to determine whether we were justified in mandating additional flight recorder equipment for all 737s. We have determined that the costs of retrofitting older 737s with the equipment necessary to comply with the SNPRM requirements is excessive, and does not result in benefits that justify those costs. The details of these costs are provided in the regulatory evaluation section later in this document.

Data presented by the commenters led to our conclusion to limit the applicability of this rule to 737s manufactured after August 18, 2000. As indicated by Boeing, these airplanes were equipped at manufacture with the additional parameters and they have been recorded by the operators since delivery. We chose that date so as not to introduce yet another date into the existing flight data recorder regulations that were adopted in 1997. Several of the upgrades proposed in that regulation were required for all aircraft manufactured after that date. Adoption of this date for manufacture means that all of the 737s required by this rule to record the additional parameters have been capable of doing so since manufacture.

This final rule requires all 737s manufactured after August 18, 2000 to record the three additional flight recorder parameters as proposed. Mandating the recording of these parameters will ensure that the data will continue to be collected and periodically checked to verify that the data are complete and accurate.

C. Cost Impact

In response to our request for additional data on compliance costs, the ATA estimated it would cost $300 million for its members to comply with the SNPRM. The ATA estimated that its members operate about 75 percent of the U.S. fleet of 737s. The equivalent cost

estimated by the FAA was $130 million in 2003 dollars (which is $143 million in 2006 dollars). The ATA noted that one third of this $157 million dollar difference ($48 million) is due to differences in equipment and labor costs while two thirds of this difference ($109 million) is due to differences in estimates for out-of-service losses.

As the ATA equipment and labor costs are based on the most current information, we are using its data for our cost estimates of alternatives to the final rule.

However, as we have noted in several previous rulemakings, we evaluate the loss from out-of-service time to the aviation system—not to an individual operator. There would be minimal losses to the aviation system when Airline A takes an airplane out of service and its potential customers book on Airline B because the net revenue loss to Airline A is largely offset by the net revenue gain by Airline B. As a result, using net operating revenue losses for an airline without accounting for the net operating revenue gains for other airlines would overestimate the losses to the aviation system from out-of-service time. A more significant loss to the aviation system would arise if some potential customers decide not to fly because Airline A could not provide the service. There would also be a consumer surplus loss if the Airline B option were a second-best solution to the Airline A option (either due to a higher ticket price or due to a less convenient flight time) for any consumer. Based on this evaluation, we continue to use the lease rate (the daily cost of leasing a similarly sized airplane) as a proxy for the aviation system loss due to an out-of-service day.

D. Compliance Period Proposed in SNPRM

For those 737s manufactured before August 19, 2000, the ATA stated that we should extend the proposed compliance period to five years after the projected availability of service instructions and parts. In view of the time it would take to adopt the proposed rule and the proposed compliance period, the ATA noted that operators would have between 12 and 18 months after the rule's publication to retrofit their 737s under the proposed compliance period. The ATA argued that this period would prove wholly incompatible with the time required to develop and gain approval for the estimated 21 supplemental type certificates (STCs) that would be required to address the 815 applicable airplanes of ATA members, for producing retrofit kits, and for subsequently modifying the 815 airplanes during scheduled maintenance visits.

Boeing estimated that a minimum of three years would be required for potential suppliers to develop methods of compliance with the rule. After this time period, operators would need time to incorporate the change in a scheduled manner. Boeing recommended that we consider mandating an operational compliance starting three years after the rule becomes effective to accommodate supplier development of methods of compliance. In the case of an inability of suppliers to develop an appropriate method of compliance, the operator compliance period would need to be extended proportionally.

As indicated above, there are no retrofit requirements associated with this final rule, so there is no need for an adjusted compliance time. Operators may incur costs in adding the new parameters to those required to be recorded, but the impact is estimated to be minimal. This final rule only affects Boeing 737 series airplanes manufactured after August 18, 2000.

The rudder system modifications required by various ADs apparently have rectified the rudder hardover issues of the 1990s. There are no remaining significant safety factors that would effectively be addressed by requiring an expensive retrofit of the older 737 fleet with further rudder monitoring equipment that does not affect its function.

In addition, cost estimates provided by ATA and Boeing indicate that our estimates of the cost of retrofit were understated. We also underestimated the time that would be required for such retrofits without a significant disruption of normal maintenance cycles. We also determined that if there were a sufficient length of time given to comply, many of the affected aircraft would be retired from the fleet, or that this retrofit would force retirement of the airplanes because of the costs of compliance. Accordingly, we are unable to justify the costs required to make older 737s comply with the requirements proposed in the SNPRM.

The data also allowed us to determine that there is only minimal impact on requiring the additional parameters be recorded on those airplanes already equipped to do so. We agree with Boeing and the ATA that more information from the DFDRs helps speed investigations, and it is logical to take advantage of this technology that is already installed and collect this information. We have found that there will be only minimal impact on operators to require that this additional information be recorded.

Since we have changed the applicability of this final rule, we have also changed the compliance time. For 737s manufactured after August 18, 2000, compliance with the recording requirements is required two years after the effective date of this rule.

E. Discussion of Retrofit Comments

Since the proposed retrofit modifications have not been adopted in this final rule, comments regarding specific provisions are no longer relevant and are not being addressed in this document.

F. Recording Rudder Pedal Force

The SNPRM included significant discussion of the FAA's decision not to implement modifications to 737s to record the force applied to individual rudder pedals. The ALPA, the ATA and the NTSB again disagreed that the current means for recording rudder pedal force (a single midstream transducer that meets the requirements of parameter 88) is adequate, and provided the same support they used in response to the NPRM.

Our position on this issue has not changed. The 737 rudder control force parameter differentiates a rudder input from the flight deck as opposed to input from rudder trim, yaw damper, or auto pilot. As we found previously, it would require significant airplane redesign and retrofit cost to install sensors at each rudder pedal location. We have no basis for concluding that such a retrofit would be cost beneficial when the costs themselves cannot readily be estimated without a significant investment of time and energy. Nor have we been presented with any information that the difference in information obtained after such a modification would be critical to accident investigation, or even relevant to the original issue of uncommanded rudder hardover. We received no new information in these comments on the cost of such a modification. We have once again concluded that our information on estimated costs falls short of the legal requirements for imposing such a cost on operators and the manufacturer, especially without a definitive benefit.

G. Error in the SNPRM

The ATA noted that proposed Appendices M and E specify a resolution for parameter 88 of ''0.2% of full range.'' This differs from the existing requirement of 0.3% of full range and should be corrected.

The proposed change to Appendices M and E were in error. In the final rule, the resolution for parameter 88 in these Appendices is ''0.3% of full range.''

H. Change to Part 125 Deviation Authority

Separate from the requirements for 737s, the FAA proposed that airplanes operating under deviation authority from part 125 must comply with the flight data recorder requirements of part 125 for the aircraft being operated. The FAA specified that this deviation requirement would apply to all aircraft, not only the 737. The FAA specifically sought comments on why the flight data recorder requirements of part 125 should not be made applicable to aircraft operated under deviation authority. In addition, the FAA sought comments from affected persons operating aircraft under deviation authority from part 125 concerning the proposed compliance schedule. We received no comments in response to the NPRM request. We included the same provision in the SNPRM published in 2006 and again received no comments.

Accordingly, the changes to part 91, applicable to part 125 airplanes operated under deviation authority, and the changes to part 125 are adopted as proposed. Three years after the effective date of this rule, deviations to the flight recorder requirements of part 125 will no longer be granted, and any existing deviations to those requirements will expire on that date. Operators holding deviations from the flight recorder requirements of part 125 are advised to begin planning for this change. We consider the three year notice of this operational change to be sufficient and will not consider exemption requests to continue operation without the required digital flight data recorder system after that time.

I. Paragraph Designations

The paragraph and footnote designations in the original and supplemental proposed rules have been used in other FAA rulemakings. Accordingly, the designations adopted here have been updated to use the next available paragraph and footnote numbers, as applicable.

III. Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)) requires that the FAA consider the impact of paperwork and other information collection burdens imposed on the public. This final rule contains new information collection requirements. On September 19, 2008, the Department of Transportation (Department) published a Notice of Intent To Request Approval From the Office of Management and Budget of a New Information Collection Activity, Request for Comments in the **Federal Register** (73 FR 54448). In that notice, the Department requested comments on whether the proposed collection of information is necessary for the proper performance of the functions of the Department, including whether the information will have practical utility; the accuracy of the Department's estimates of the burden of the proposed information collection; ways to enhance the quality, utility and clarity of the information to be collected; and ways to minimize the burden of the collection of information on respondents, including the use of automated collection techniques or other forms of information technology. The comment period for the notice ended on November 18, 2008.

As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)), the FAA has submitted the information requirements associated with this proposal to the Office of Management and Budget for its review. According to the 1995 amendments to the Paperwork Reduction Act (5 CFR 1320.8(b)(2)(vi)), an agency may not collect or sponsor the collection of information, nor may it impose an information collection requirement unless it displays a currently valid OMB control number. The OMB control number for this information collection will be published in the **Federal Register**, after the Office of Management and Budget approves it.

IV. International Compatibility

In keeping with U.S. obligations under the Convention on International Civil Aviation, FAA policy is to comply with International Civil Aviation Organization (ICAO) Standards and Recommended Practices to the maximum extent practicable. The FAA has reviewed the corresponding ICAO Standards and Recommended Practices and has identified no differences with these regulations.

V. Regulatory Evaluation, Regulatory Flexibility Determination, International Trade Impact Assessment, and Unfunded Mandates Assessment

Changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 directs that each Federal agency shall 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 (Pub. L. 96–354) requires agencies to analyze the economic impact of regulatory changes on small entities. Third, the Trade Agreements Act (Pub. L. 96–39) prohibits agencies from setting standards that create unnecessary obstacles to the foreign commerce of the United States. In developing U.S. standards, the Trade Act requires agencies to consider international standards and, where appropriate, that they be the basis of U.S. standards. Fourth, the Unfunded Mandates Reform Act of 1995 (Pub. L. 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 with base year of 1995). This portion of the preamble summarizes the FAA's analysis of the economic impacts of this rule.

Department of Transportation Order DOT 2100.5 prescribes policies and procedures for simplification, analysis, and review of regulations. If the expected cost impact is so minimal that a proposed or final rule does not warrant a full evaluation, this order permits that a statement to that effect and the basis for it to be included in the preamble if a full regulatory evaluation of the cost and benefits is not prepared. Such a determination has been made for this rule. The reasoning for this determination follows:

This rule requires that all 737s manufactured after August 18, 2000, record the parameters numbered 89, 90, and 91 in Appendix M of part 121, and Appendix E of part 125. Boeing reported that it has equipped each 737 manufactured after June 2000 with the equipment needed to record these parameters. Thus, the rule requirements will impose minimal costs on operators of these newer 737s.

The FAA has, therefore, determined that this rule 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.

Aviation Industry Affected

This rule applies to the operators of 737s manufactured after August 18, 2000.

Benefit and Cost Baseline

The baseline for determining this rule's benefits and costs is the current DFDR systems found on each 737 manufactured after August 18, 2000.

Costs

Boeing reported that all of the 737s to which the rule will apply have been manufactured with the capability to record these flight data parameters.

There are minimal operating costs from recording 91 flight data parameters rather than the 88 flight data parameters. The only cost of compliance will be the minimal cost for the operator to notify the FAA that its airplane DFDR systems are, in fact, recording these parameters as required, and to maintain the entire data set as part of its DFDR record.

Benefits

The primary benefit from this rule is to make flight data parameters already recorded by the affected airplanes' DFDR systems available to accident investigators. As previously noted, Boeing and the ATA agreed that more information provided by the DFDR helps speed investigations. We concur with their determinations and have incorporated them into a final rule in order to ensure that all affected existing and future 737 DFDR systems continue to record these flight data parameters.

Benefit Cost Analysis

Boeing had already implicitly determined that the benefits from recording these flight data parameters on its 737s outweigh its costs when it began installing the necessary equipment in its 737s beginning in July 2000. Accordingly, there are minimal operating and maintenance costs for operators of these existing and future 737s associated with this rule. The additional flight data parameters may provide important information to accident investigators. Consequently, we determined that the benefits from requiring these flight data parameters to be recorded are greater than the costs.

Economic Analyses of Alternatives to This Rule

We evaluated several alternatives to this rule that involve retrofitting 737s. These alternatives were selected on the basis of the equipment necessary for those airplanes' FDR systems to meet the final rule requirements if they were applied to those airplanes.

For the purposes of this analysis, there are three 737 categories. The first category includes the currently manufactured 737 models: The 737–600, 737–700, 737–800, and 737–900 series (plus any future 737 series). These were first delivered in January of 1997 and are commonly referred to as Next-Generation 737s (737–NG).

The second category includes the 737–300, 737–400, and 737–500 series, which are out of production. These were first delivered in 1984 with the last one delivered to a U.S. operator in early 1999. These models are commonly referred to as the Classic 737s.

The third category includes the 737–200 series, which is also out of production. These were first delivered in 1968 with the last one delivered to a U.S. operator in early 1988.

Boeing sequentially numbers each of its 737–NGs based on the date when airplane assembly began. The first 737–NG, delivered in 1997, was designated Line Number 1, with subsequent production numbered sequentially. The first 621 737–NGs do not record flight data parameters 89, 90, and 91. All 737–NGs beginning with Line Number 622, delivered in July 2000, have a DFDR system that meets the requirements of this rule.

Of the first 621 737–NGs that do not record parameters 89, 90, and 91, 242 were sold to U.S. operators. If the final rule were to apply to these airplanes, their operators would need to complete Boeing Service Bulletin 737–31–1170 on 240 of them (2 of these airplanes are already in compliance). The ATA commented that completing the Service Bulletin would require 100 labor hours to schedule, install, inspect, etc. At a labor rate of $80 for an airline mechanic, the labor cost would be $8,000 an airplane. The ATA also estimated that the equipment costs would be $5,000. In the Service Bulletin, Boeing estimated that installing the equipment would require the airplane to be out of service for 35 hours. Even if the installation were performed during an overnight check, it would require an additional day of out-of-service time, at a (lease rate) cost to the aviation industry of $7,000 for a newer airplane. This calculation is based on the assumption that the operator would be allowed sufficient time to schedule this retrofit during an overnight check. Finally, each DFDAU would need to be either reprogrammed (the most common occurrence) or replaced (for 737s with one of six Teledyne DFDAU models). We do not know and Boeing was unable to tell us the number of airplanes that may have one of the Teledyne DFDAUs. Based on the general data in the ATA comment, it would cost $50,000 for each airplane that requires a new DFDAU and $10,000 for each airplane if the DFDAU can be reprogrammed. From these data we estimated an average cost of $15,000 for each 737–NG. At a cost of $35,000 to complete Service Bulletin 737–31–1170 on one 737–NG, we estimate a total cost of $8,400,000 for all 240 737–NGs to comply with the final rule.

In addition, Boeing stated that operators of 737–NG Line Numbers 1 through 129 would also need to complete Boeing Service Bulletin 737–31–1124 to meet the rule requirements. Of these 129 airplanes, 55 were sold to U.S. operators. Two of these 55 airplanes already have the equipment required under Service Bulletin 737–31–1124 installed, leaving 53 airplanes that would need equipment upgrades. Completing that service bulletin would require 12 labor hours to schedule, install, inspect, etc. At a labor rate of $80 for an airline mechanic, the labor cost would be $960 for each airplane. The equipment costs (wiring, sensors, etc.) would be $2,325. In its service bulletin, Boeing estimated that installing the equipment would require the airplane to be out of service for 10 hours. If the work were performed during an overnight check in conjunction with completing Service Bulletin 737–31–1170, one further day of out-of-service time (for a total of two out-of-service days) would be needed at a cost of $7,000. Thus, it would cost $10,285 to complete Service Bulletin 737–31–1124 for each 737–NG, resulting in a total cost of $545,105 for all 53 NG airplanes.

In summary, each of the older 53 737–NGs would incur a cost of $45,285 to complete Boeing Service Bulletins 737–31–1170 and 737–31–1124. The total cost of compliance for these 53 737–NGs would be $2,400,105. Each of the remaining newer 187 737–NGs would incur a cost of $35,000 to complete Boeing Service Bulletin 737–31–1170. The total cost for these 187 737–NGs would be $6,545,000. The total cost for all 240 737–NGs would be $8,945,105.

There were 641 U.S.-registered Classic 737s as of January 1, 2007. Using a 30 year life expectancy for a 737, all of these airplanes would be in operation on January 1, 2009. For purposes of this analysis, these U.S.-registered Classic 737s were divided into two categories: Those that have DFDAUs and those that do not.

The ATA reported that of these 641 airplanes, 174 have either no FDAU or an analog FDAU. If the final rule were to apply to these airplanes, the operator would need to install a DFDAU, replace the FDR, reprogram the flight control computer, and install sensors and wiring. The ATA reported that it would cost $385,000 in equipment and labor for each of these airplanes to be brought into compliance with the final rule. Each airplane would be out-of-service for 10 days. As these are older 737s, the loss to the aviation industry for a day out of service would be $4,000, for a total out-of-service cost of $40,000. The cost per airplane would be $425,000. Thus, the total cost for these 174 U.S.-registered 737 Classic airplanes would be $73,950,000.

For the remaining 467 U.S.-registered Classic 737s that have a DFDAU, the ATA reported that the equipment and labor cost would be $140,000 per airplane and the airplane would be out-of-service for 4 days. As these airplanes are newer, the loss to the aviation industry for a day out of service would be $5,000, for a total out-of-service cost of $20,000. The cost per airplane would be $160,000. Thus, the total cost for these 467 U.S.-registered Classic 737s would be $74,720,000.

Finally, we estimate that there are 101 U.S.-registered 737–200s manufactured without a FDAU that will be in operation on January 1, 2009. The ATA reported that the equipment and labor costs for a 737–200 would be $385,000 (the same as for a Classic 737 that does not have a DFDAU). As the 737–200s are smaller than the Classic 737s, the loss to the aviation industry for a day out of service would be $3,000, for a total loss of $30,000 for the ten days out of service. The cost per airplane would be $415,000. Thus, the total cost for these 101 N-Registered 737–200s would be $41,915,000.

These results are summarized in Table 1.

TABLE 1—COSTS TO RETROFIT 737S TO COMPLY WITH ALTERNATIVES TO THE FINAL RULE

Retrofit	Number of airplanes	Cost per airplane	Total cost (in millions $)
On 737–NGs Starting with Line Number 130	187	$35,000	6.545
On 737–NGs Line Numbers 1–129	53	45,285	2.400
On All 737–NGs	240	.....	8.945
On Classic 737s that have a DFDAU	467	160,000	74.720
On Classic 737s that do not have a DFDAU	174	425,000	73.950
On All Classic 737s	641	.....	148.670
On All 737–200s	101	415,000	41.915
On All 737s	982	.....	199.530

Based on Table 1, we evaluated the following options:

1. Applying the rule to 737–NGs starting from Line Number 129.
2. Applying the rule to all 737–NGs.
3. Applying the rule to all 737s that have a DFDAU.
4. Applying the rule to all 737–NGs and to all Classic 737s
5. Applying the rule to all 737s.

As shown in Table 1, Alternative one would cost $6.545 million, Alternative 2 would cost $8.945 million, Alternative 3 would cost $83.665 million, Alternative 4 would cost $157.615 million, and Alternative 5 would cost $199.530 million.

Thus, the older the airplane, the more it would cost to comply with this rule. In addition, the older the airplane, the fewer the remaining flight hours of data that would be recorded. In particular, we expect no 737–200s or 737–300s to be in scheduled service by 2012. Consequently, little safety data would be obtained from these airplanes. As a result, the most expensive retrofits (about $415,000 to $425,000 an airplane) would be on airplanes that have a limited service life after the retrofit.

Moreover, the new rudder control system will be installed on all 737s by November 2008. There have been no reports of uncommanded rudder hardover on airplanes equipped with the new rudder control system and other modifications required by AD. Accordingly, we concluded that spending even the minimum of $35,000 to retrofit some newer 737s to record the additional flight data parameters would not be worth the limited potential benefits from this recording.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (Pub. L. 96–354) (RFA) establishes ''as a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives 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 this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that such proposals are given serious consideration.'' The RFA 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 rule will have a significant economic impact on a substantial number of small entities. If the agency determines that it will, the agency must prepare a regulatory flexibility analysis as described in the RFA.

However, if an agency determines that a rule is not expected to have a significant economic impact on a substantial number of small entities, section 605(b) of the RFA 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 rule requires that parameters already being recorded be maintained as part of the regulatory flight data recorder requirements. All 737s manufactured since July 2000 record flight data parameters 89, 90, and 91. Only one small entity has purchased new 737s since July 2000; Sun Country Airlines has purchased 6 of them, and all are in compliance. As this rule imposes minimal incremental costs, the expected outcome is only a minimal impact on any small entity that may purchase a future 737.

Therefore, as the Acting FAA Administrator, I certify that this rule will not have a significant economic impact on a substantial number of small entities.

International Trade Impact Analysis

The Trade Agreements Act of 1979 (Pub. L. 96–39) prohibits Federal agencies from establishing any standards or engaging in 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 impact of this final rule and has determined that it responds to a domestic safety objective and is not considered an unnecessary obstacle to trade.

Unfunded Mandates Assessment

Title II of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) 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 an expenditure of $100 million or more (adjusted annually for inflation with the base year 1995) 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.'' The equivalent of $100 million in CY 1995, adjusted for inflation to CY 2007 levels by the Consumer Price Index for all Urban Consumers (CPI–U) as published by the Bureau of Labor Statistics, is $136.1 million.

The rule does not contain such a mandate.

Executive Order 13132, 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 Federal Government and the States, or on the distribution of power and responsibilities among the various levels of government, and therefore does not have federalism implications.

Regulations Affecting Intrastate Aviation in Alaska

Section 1205 of the FAA Reauthorization Act of 1996 (110 Stat. 3213) requires the FAA, when modifying its regulations in a manner affecting intrastate aviation in Alaska, to consider the extent to which Alaska is not served by transportation modes other than aviation, and to establish appropriate regulatory distinctions. We have determined that while intrastate operators of 737s in Alaska may be affected (as are all 737 operators), any impact is minimal, and there is no need to make any regulatory distinctions applicable to intrastate aviation in Alaska.

Environmental Analysis

FAA Order 1050.1E identifies FAA actions that are categorically excluded from preparation of an environmental assessment or environmental impact statement under the National Environmental Policy Act in the absence of extraordinary circumstances. The FAA has determined this rulemaking action qualifies for the categorical exclusion identified in paragraph 312d and involves no extraordinary circumstances.

Regulations That Significantly Affect Energy Supply, Distribution, or Use

The FAA has analyzed this rule under Executive Order 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use (May 18, 2001). We have determined that it is not a ''significant energy action'' under the executive order because it is not a ''significant regulatory action'' under Executive Order 12866, and it is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

Availability of Rulemaking Documents

You can get an electronic copy of rulemaking documents using the Internet by—

1. Searching the Federal eRulemaking Portal (*http://www.regulations.gov*);

2. Visiting the FAA's Regulations and Policies Web page at *http://www.faa.gov/regulations_policies/*; or

3. Accessing the Government Printing Office's Web page at *http://www.gpoaccess.gov/fr/index.html.*

You can also get a copy by sending 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.

Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70; Pages 19477–78), or you may visit *http://DocketsInfo.dot.gov.*

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. If you are a small entity and you have a question regarding this document, you may contact your local FAA official, or the person listed under the **FOR FURTHER INFORMATION CONTACT** heading at the beginning of the preamble. You can find out more about SBREFA on the Internet at *http://www.faa.gov/regulations_policies/rulemaking/sbre_act/*.

List of Subjects

14 CFR Part 91

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

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.

The Amendment

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

PART 91—GENERAL OPERATING AND FLIGHT RULES

■ 1. The authority citation for part 91 continues to read as follows:

Authority: 49 U.S.C. 106(g), 1155, 40103, 40113, 40120, 44101, 44111, 44701, 44709, 44711, 44712, 44715, 44716, 44717, 44722, 46306, 46315, 46316, 46504, 46506–46507, 47122, 47508, 47528–47531, articles 12 and 29 of the Convention on International Civil Aviation (61 stat. 1180).

■ 2. Amend § 91.609 by adding a new paragraph (k) to read as follows:

§ 91.609 Flight data recorders and cockpit voice recorders.

* * * * *

(k) An aircraft operated under this part under deviation authority from part 125 of this chapter must comply with all of the applicable flight data recorder requirements of part 125 applicable to the aircraft, notwithstanding such deviation authority.

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

■ 3. 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, 46301.

■ 4. Amend § 121.344 by removing the word ''and'' after paragraph (a)(87); by removing the period after paragraph (a)(88) and adding a semicolon in its place; by adding new paragraphs (a)(89), (90), and (91), (e)(3) and (n); and by revising paragraph (f) to read as follows:

§ 121.344 Digital flight data recorders for transport category airplanes.

(a) * * *

(89) Yaw damper status;

(90) Yaw damper command; and
(91) Standby rudder valve status.
* * * * *
(e) * * *
(3) In addition to the requirements of paragraphs (e)(1) and (e)(2) of this section, all Boeing 737 model airplanes must also comply with the requirements of paragraph (n) of this section, as applicable.
(f) For all turbine-engine-powered transport category airplanes manufactured after August 19, 2002—
(1) The parameters listed in paragraphs (a)(1) through (a)(88) of this section must be recorded within the ranges, accuracies, resolutions, and recording intervals specified in appendix M to this part.
(2) In addition to the requirements of paragraphs (f)(1) of this section, all Boeing 737 model airplanes must also comply with the requirements of paragraph (n) of this section.
* * * * *
(n) In addition to all other applicable requirements of this section, all Boeing 737 model airplanes manufactured after August 18, 2000 must record the parameters listed in paragraphs (a)(88) through (a)(91) of this section within the ranges, accuracies, resolutions, and recording intervals specified in Appendix M to this part. Compliance with this paragraph is required no later than February 2, 2011.

■ 5. Amend Appendix M to part 121 by revising item 88 and adding items 89 through 91 and footnote 19 to read as follows:

Appendix M to Part 121—Airplane Flight Recorder Specifications

* * * * *

Parameter	Range	Accuracy (sensor input)	Seconds per sampling interval	Resolution	Remarks
*	*	*	*	*	* *
88. All cockpit flight control input forces (control wheel, control column, rudder pedal) [18] [19].	Full range ..... Control wheel ±70 lbs. Control column ±85 lbs. Rudder pedal ±165 lbs.	±5%	1	0.3% of full range ..	For fly-by-wire flight control systems, where flight control surface position is a function of the displacement of the control input device only, it is not necessary to record this parameter. For airplanes that have a flight control break away capability that allows either pilot to operate the control independently, record both control force inputs. The control force inputs may be sampled alternately once per 2 seconds to produce the sampling interval of 1.
89. Yaw damper status.	Discrete (on/off)	.....	0.5		
90. Yaw damper command.	Full range	As installed	0.5	1% of full range.	
91. Standby rudder valve status.	Discrete	.....	0.5		

[18] For all aircraft manufactured on or after April 7, 2010, the seconds per sampling interval is 0.125. Each input must be recorded at this rate. Alternately sampling inputs (interleaving) to meet this sampling interval is prohibited.
[19] For 737 model airplanes manufactured between August 19, 2000 and April 6, 2010: the seconds per sampling interval is 0.5 per control input; the remarks regarding the sampling rate do not apply; a single control wheel force transducer installed on the left cable control is acceptable provided the left and right control wheel positions also are 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

■ 6. 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.

■ 7. Amend § 125.3 by adding a new paragraph (d) to read as follows:

§ 125.3 Deviation authority.

* * * * *

(d) After February 2, 2012, no deviation authority from the flight data recorder requirements of this part will be granted. Any previously issued deviation from the flight data recorder requirements of this part is no longer valid.

■ 8. Amend § 125.226 by removing the word ''and'' after paragraph (a)(87); by removing the period after paragraph (a)(88) and adding a semicolon in its place; by adding new paragraphs (a)(89), (90), and (91), (e)(3), and (n); and by revising paragraph (f) to read as follows:

§ 125.226 Digital flight data recorders.

(a) * * *
(89) Yaw damper status;
(90) Yaw damper command; and
(91) Standby rudder valve status.
* * * * *
(e) * * *
(3) In addition to the requirements of paragraphs (e)(1) and (e)(2) of this section, all Boeing 737 model airplanes must also comply with the requirements of paragraph (n) of this section, as applicable.
(f) For all turbine-engine-powered transport category airplanes manufactured after August 19, 2002—
(1) The parameters listed in paragraphs (a)(1) through (a)(88) of this section must be recorded within the ranges, accuracies, resolutions, and recording intervals specified in appendix M to this part.
(2) In addition to the requirements of paragraphs (f)(1) of this section, all Boeing 737 model airplanes must also comply with the requirements of paragraph (n) of this section.
* * * * *
(n) In addition to all other applicable requirements of this section, all Boeing 737 model airplanes manufactured after August 18, 2000, must record the parameters listed in paragraphs (a)(88) through (a)(91) of this section within the ranges, accuracies, resolutions, and

recording intervals specified in Appendix M to this part. Compliance with this paragraph is required no later than February 2, 2011.

■ 9. Amend Appendix E to part 125 by revising item 88, and adding items 89 through 91 and footnote 19 to read as follows:

Appendix E to Part 125—Airplane Flight Recorder Specifications

* * * * *

Parameter	Range	Accuracy (sensor input)	Seconds per sampling interval	Resolution	Remarks
*	*	*	*	*	* *
88. All cockpit flight control input forces (control wheel, control column, rudder pedal)[18] [19].	Full range Control wheel ±70 lbs. Control column ±85 lbs. Rudder pedal ±165 lbs.	±5%	1	0.3% of full range ..	For fly-by-wire flight control systems, where flight control surface position is a function of the displacement of the control input device only, it is not necessary to record this parameter. For airplanes that have a flight control break away capability that allows either pilot to operate the control independently, record both control force inputs. The control force inputs may be sampled alternately once per 2 seconds to produce the sampling interval of 1.
89. Yaw damper status.	Discrete (on/off)	.....	0.5		
90. Yaw damper command.	Full range	As installed	0.5	1% of full range.	
91. Standby rudder valve status.	Discrete	.....	0.5		

[18] For all aircraft manufactured on or after April 7, 2010, the seconds per sampling interval is 0.125. Each input must be recorded at this rate. Alternately sampling inputs (interleaving) to meet this sampling interval is prohibited.

[19] For all 737 model airplanes manufactured between August 19, 2000, and April 6, 2010: The seconds per sampling interval is 0.5 per control input; the remarks regarding the sampling rate do not apply; a single control wheel force transducer installed on the left cable control is acceptable provided the left and right control wheel positions also are recorded.

Issued in Washington, DC, on November 20, 2008.

Robert A. Sturgell,

Acting Administrator.

[FR Doc. E8–28562 Filed 12–1–08; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF THE TREASURY

Internal Revenue Service

26 CFR Part 301

[TD 7964]

Procedure and Administration; Tax Shelter Registration; Correction

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Correcting amendment.

SUMMARY: This document contains a correction to temporary regulations (TD 7964) that were published in the **Federal Register** on Wednesday, August 15, 1984 (49 FR 32712) relating to tax shelter registration. In addition, the text of the temporary regulations set forth in this document also serves as the text of the proposed regulations cross-referenced in the Notice of Proposed Rulemaking in the Proposed Rules section of this issue of the **Federal Register**. Changes to the applicable tax law were made by the Tax Reform Act of 1984. The regulations affect organizers, sellers, investors and certain other persons associated with investments that are considered tax shelters.

DATES: This correction is effective December 2, 2008, and is applicable after August 31, 1984.

FOR FURTHER INFORMATION CONTACT: Charles D. Wien, (202) 622–3070 (not a toll-free number).

SUPPLEMENTARY INFORMATION:

Background

The temporary regulations that are the subject of this document are under sections 6707 and 6111 of the Internal Revenue Code prior to The American Jobs Creation Act of 2004, Public Law 108–357 (118 Stat. 1418), which was enacted on October 22, 2004.

Need for Correction

As published, temporary regulations (TD 7964) contain an error that may prove to be misleading and is in need of clarification.

List of Subjects in 26 CFR Part 301

Employment taxes, Estate taxes, Excise taxes, Gift taxes, Income taxes, Penalties, Reporting and recordkeeping requirements.

Correction of Publication

■ Accordingly, 26 CFR part 301 is corrected by making the following correcting amendment:

PART 301—PROCEDURE AND ADMINISTRATION

■ **Paragraph 1.** The authority citation for part 301 continues to read, in part, as follows:

Authority: 26 U.S.C. 7805 * * *

■ **Par. 2.** Section 301.6111–1T A–30 is amended by revising the first sentence to read as follows:

§ 301.6111–1T Questions and answers relating to tax shelter registration.

* * * * *

A–30. No. The performance of an act described in A–27 through A–29 of this section will not constitute participation in the organization or management of a tax shelter unless the person performing the act is related to the tax shelter (or any principal organizer of the tax shelter) or the person participates in the