Proposed Rules

Federal Register
Vol. 71, No. 77
Friday, April 21, 2006

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25, 121, 129

[Docket No. FAA–2005–21693; Notice No. 05–11]

RIN 2120–AI32

Damage Tolerance Data for Repairs and Alterations

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This action would require holders of design approvals to make available to operators damage tolerance data for repairs and alterations to fatigue critical airplane structure. This proposal is needed to support operator compliance with the requirement to include damage tolerance inspections and procedures in their maintenance programs, and to enable operators to take into account the possible adverse effects of repairs and alterations on fatigue critical structure. The intended effect of this proposal is to ensure the continued airworthiness of fatigue critical airplane structure by requiring design approval holders to support operator compliance with specified damage tolerance requirements.

DATES: Send your comments by July 20, 2006.

ADDRESSES: You may send comments [Identified by Docket Number FAA–2005–21693] using any of the following methods:

- DOT Docket Web site: Go to *http://dms.dot.gov* and follow the instructions for sending your comments electronically.
- Government-wide rulemaking Web site: Go to *http://www.regulations.gov* and follow the instructions for sending your comments electronically.
- Mail: Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL–401, Washington, DC 20590–0003.
- Fax: 1–202–493–2251.
- Hand Delivery: Room PL–401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For more information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document.

Privacy: We will post all comments we receive, without change, to *http://dms.dot.gov,* including any personal information you provide. For more information, see the Privacy Act discussion in the **SUPPLEMENTARY INFORMATION** section of this document.

Docket: To read background documents or comments received, go to *http://dms.dot.gov* at any time or to Room PL–401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Greg Schneider, ANM–115, Airframe and Cabin Safety, Federal Aviation Administration, 1601 Lind Avenue SW., Renton, Washington 98055–4056, telephone: (425–227–2116); facsimile (425–227–1232), e-mail *greg.schneider@faa.gov.*

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites interested persons to participate in this rulemaking by sending written comments, data, or views. We also invite comments about the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. We ask that you send us two copies of written comments.

We will file in the docket all comments we receive, as well as a report summarizing each substantive public contact with FAA personnel about this proposed rulemaking. The docket is available for public inspection before and after the comment closing date. If you wish to review the docket in person, go to the address in the **ADDRESSES** section of this preamble between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. You may also review the docket using the Internet at the web address in the **ADDRESSES** section.

Privacy Act: Using the search function of our docket web site, anyone can find and read the comments received into any of our dockets, including the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477–78) or you may visit *http://dms.dot.gov.*

Before acting on this proposal, we will consider all comments we receive by the closing date for comments. We will consider comments filed late if it is possible to do so without incurring expense or delay. We may change this proposal because of the comments we receive.

If you want the FAA to acknowledge receipt of your comments on this proposal, include with your comments a pre-addressed, stamped postcard on which the docket number appears. We will stamp the date on the postcard and mail it to you.

Proprietary or Confidential Business Information

Do not file in the docket information that you consider to be proprietary or confidential business information. Send or deliver this information directly to the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this document. You must mark the information that you consider proprietary or confidential. If you send the information on a disk or CD–ROM, mark the outside of the disk or CD–ROM and identify electronically within the disk or CD–ROM the specific information that is proprietary or confidential.

Under 14 CFR 11.35(b), when we are aware of proprietary information filed with a comment, we do not place it in the docket. We hold it in a separate file to which the public does not have access, and place a note in the docket that we have received it. If we receive a request to examine or copy this information, we treat it as any other request under the Freedom of Information Act (5 U.S.C. 552). We process such a request under the DOT procedures found in 49 CFR part 7.

Availability of Rulemaking Documents

You can get an electronic copy using the Internet by:

(1) Searching the Department of Transportation's electronic Docket Management System (DMS) Web page (*http://dms.dot.gov/search*);

(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 docket number, notice number, or amendment number of this rulemaking.

Authority for This Rulemaking

The FAA's authority to issue rules about 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, ''General requirements.'' Under that section, the FAA is charged with promoting safe flight of civil aircraft in air commerce by prescribing—

- Minimum standards required in the interest of safety for the design and performance of aircraft;
- Regulations and minimum standards in the interest of safety for inspecting, servicing, and overhauling aircraft; and
- Regulations for other practices, methods, and procedures the Administrator finds necessary for safety in air commerce.

This regulation is within the scope of that authority because it requires DAHs to support compliance with damage tolerance requirements that are necessary for continued airworthiness of transport category airplanes.

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I. Executive Summary

Fatigue cracking has been a major aviation safety concern for many years. Unless detected and repaired, fatigue cracks can grow to the point of catastrophic failure. Since 1978 the FAA has required new types of airplanes to meet damage tolerance [1] (DT) requirements to ensure their continued airworthiness. Industry has also used this method successfully to develop inspection programs for older airplanes. Since the 1980s, the FAA has mandated that operators of most large transport airplanes carry out these programs.

While these programs have been effective, industry has not carried out DT methods comprehensively. In particular, while these programs apply to the airplane ''baseline'' structure (the airplane structure as originally manufactured), they often do not apply to repairs and alterations. This is important because airplanes are subject to many repairs and alterations throughout their operational lives. If fatigue cracking occurs in a repaired or altered area, the results can be just as catastrophic as if it occurs in the baseline structure.

The FAA adopted the Aging Airplane Safety final rule (AASFR) [2] in early 2005, which, among other things, requires airline operators of certain large transport category airplanes [3] to implement DT based inspection programs for airplane structure; that is, structure susceptible to fatigue cracking that could contribute to a catastrophic failure. In this proposal, we refer to this structure as ''fatigue critical structure.'' Most importantly for this rulemaking, the AASFR requires these inspection programs to ''take into account the adverse effects repairs, alterations, and modifications [4] may have on fatigue cracking and the inspection of this airplane structure.''

With the AASFR, we now have in place the regulatory means to provide for comprehensive implementation of DT methods on all large transport airplanes used by air carriers. To carry out these requirements fully, however, we find it necessary to place corresponding requirements on the holders of FAA design approvals for these airplanes. Otherwise, the operators may not be able to obtain the data and documents they need to comply with the AASFR. As the owners of the data for these airplanes, the design approval holders [5] (DAHs) are in the best position to identify the fatigue critical structure and the methods and frequency of inspections that may be needed. Therefore, the FAA proposes to require DAHs to develop and make available to operators the data and documents they need to support compliance with the DT requirements of the AASFR.

Specifically, today's proposal would require DAHs to develop and make available the following four types of documents to operators, which we describe in more detail in the discussion section of this proposal:

(1) Lists of fatigue critical structure (to aid operators in identifying repairs and

[1] Damage tolerance (DT) is a method used to evaluate the crack growth and residual strength characteristics of structure. Based on the results, inspections or other procedures are established as necessary to prevent catastrophic failures due to fatigue. Most commonly, the maintenance actions developed are directed inspections for fatigue cracking.

[2] 70 FR 5518, February 2, 2005.

[3] The rule applies to turbine powered airplane models with a maximum type certificated passenger seating capacity of 30 or more, or a maximum payload capacity of 7,500 pounds or more.

[4] Throughout this proposal, reference is made to ''alterations.'' We consider this term to be synonymous with the term ''modification.'' An ''alteration'' is a design change that is made to an airplane; however, various segments of industry have also defined these changes as ''modifications.'' We use the term ''alteration'' in the proposed rule to be all-inclusive of any design change.

[5] For purposes of this proposal, design approval holders (DAHs) are holders of type certificates (TCs) or supplemental type certificates (STCs) issued under 14 CFR part 21.

alterations that need to be addressed for DT).

(2) Damage tolerance inspections to provide operators with the necessary inspection times and methods for the following—

- Repair data published by type certificate (TC) holders; [6]
- TC holder's future repair data not published for general use; [7]
- Repair data developed by supplemental type certificate (STC) holders; and
- Alteration data developed by TC and STC holders.

(3) Damage tolerance evaluation guidelines for all other repairs (to enable operators to develop the necessary damage tolerance inspections).

(4) Implementation schedules (to define the necessary timing for performing damage tolerance evaluations and developing damage tolerance inspections, and for incorporating the DT data into their maintenance programs).

This proposed rule transfers the responsibility of developing DT based data from operators to DAHs and, therefore, has minimal to no costs. The aviation industry as a whole would also benefit because DAHs could amortize their development costs for DT data over a larger fleet.

II. Background

Structural fatigue cracking of aging airplanes has been a major aviation safety concern for many years. If not detected and repaired, fatigue cracking can eventually lead to catastrophic structural failure and loss of the airplane. Since the late 1970s, the FAA has issued numerous airworthiness directives [8] (ADs) and other regulations to reduce the likelihood of fatigue cracking and to ensure its timely detection and correction. Most recently, on February 2, 2005, the FAA published the Aging Airplane Safety final rule (AASFR, 70 FR 5518). This rule addresses airworthiness safety concerns associated with structural fatigue cracking on turbine powered transport category airplanes having a passenger seating capacity of 30 or more or a maximum payload of 7,500 pounds or more.

The airplanes affected by this rulemaking are normally operated by air carriers (airlines). Domestic air carriers operate these airplanes under the regulations contained in 14 CFR part 121. Foreign airlines operating United States registered airplanes operate under 14 CFR part 129.[9] The AASFR includes a requirement for these air carriers to incorporate supplemental inspections of fatigue critical structure, referred to as damage tolerance inspections, into their maintenance programs by December 20, 2010. The damage tolerance inspections are necessary to preclude catastrophic failure resulting from fatigue cracking. The damage tolerance inspections must take into account the adverse effects [10] that repairs and alterations may have on the fatigue life [11] or inspectability [12] of fatigue critical structure.

Before publishing the final rule, we published an interim final rule [13] and asked for public comments, which we responded to in the February 2005 AASFR. We received comments from airplane operators, stating they would have difficulty complying with the supplemental inspection requirements of the AASFR without support from the design approval holders (DAHs). As the owners of the design data for the affected airplanes, the DAHs are in the best position to identify the fatigue critical structure and the maintenance actions (*e.g.*, inspections, modifications) necessary to avoid failures due to fatigue cracking. The commenters expressed concern that operators had to rely on voluntary efforts by DAHs to provide data operators needed to meet the compliance deadline in the AASFR. After reviewing these comments, we determined the proper course of action was to require DAHs to develop data necessary to support operator compliance.

We informed the public of our intent to propose DAH requirements in the July 30, 2004 publication of the ''Fuel Tank Safety Compliance Extension (Final rule) and Aging Airplane Program Update (Request for comments)'' [14] (Aging Program Update). In the Aging Program Update, the FAA requested comments about requiring DAHs to support an operator's compliance with several safety rules. Generally, operators support this concept, while manufacturers oppose it.

On July 12, 2005, the FAA issued a Policy Statement [15] that explains our criteria for adopting DAH requirements in any future rulemaking. At the same time we published a disposition of comments addressing the comments received on the Aging Program Update. As we explain more fully later in this preamble, we have concluded that DAH requirements may be necessary when the safety objective for continuing airworthiness of aging airplanes can only be fully achieved if the DAHs provide operators with certain necessary information in a timely manner. Today's proposal supports this determination.

III. Evolution of Damage Tolerance Requirements

Throughout the history of the transport airplane airworthiness standards, various technical approaches have been employed to address structural fatigue. The original Civil Aviation Regulations (CAR) used a ''fatigue strength'' approach, which was based on achieving a design where fatigue cracking was not likely to occur within the operational life of the airplane.

One of the first significant changes in the standard for airplane structure occurred in March 1956 when the fatigue evaluation requirements contained in CAR 4b.270 were revised to add ''fail-safe strength'' as an option to the ''fatigue strength'' approach. This was largely motivated by the realization that precluding the occurrence of fatigue cracking might not always be possible and, therefore, as an option, the

[6] Published repair data are generally applicable instructions for accomplishing repairs, such as those contained in structural repair manuals (SRMs) and service bulletins. These data are approved for general application to a particular airplane model or airplane configuration.

[7] This may include repairs that are developed for individual airplanes at the request of an operator. These repairs are often complex or unique to a particular airplane or group of airplanes experiencing similar damage conditions.

[8] The FAA issues airworthiness directives (ADs) to address unsafe conditions that may exist or develop on particular types of aircraft. See 14 CFR part 39.

[9] Under international law, the FAA can regulate the airworthiness of an airplane operated by a foreign operator only if the airplane is U.S.-registered.

[10] The term ''take into account the adverse effects,'' means a DT evaluation is performed to address any degradation in the fatigue life or inspectability of fatigue critical structure that may result from a repair or alteration. Degradation in fatigue life (earlier occurrence of critical fatigue cracking) may result from an increase in loading, while degradation of inspectability may result from physical changes made to the structure. The DT evaluation would also address the fatigue life and inspectability of any fatigue critical structure that may be added to an airplane by a repair or alteration. The evaluation would be performed within a time frame that ensures the continued airworthiness of affected or added fatigue critical structure.

[11] The term ''fatigue life,'' means the life span, in terms of airplane flight cycles or hours, that structure is expected to achieve in service without the presence of critical fatigue cracking. Critical fatigue cracking refers to cracking that could contribute to a structural failure. Repairs and alterations may increase or change the load distribution acting on structure, resulting in the earlier onset of such cracking.

[12] The term ''inspectability'' means the ability to inspect fatigue critical structure. In certain cases, as a result of physical changes made to this structure by repairs or alterations, the DT inspections established for this structure may no longer be an effective means for detecting fatigue cracking.

[13] 67 FR 72726, December 6, 2002.

[14] 69 FR 45936, July 30, 2004.

[15] 70 FR 40166, July 12, 2005.

structure may be designed to survive an obviously detectable structural failure caused by fatigue cracking.

The fail-safe approach assumed that cracking could occur and was based on maintaining a specified minimum strength after a ''fatigue failure or obvious partial failure'' had occurred. The success of the fail-safe approach was dependent both on the structure retaining the specified minimum strength with the fatigue damage present and on the damage being found during normal maintenance. As applied, the fail-safe approach emphasized structural redundancy, as opposed to fatigue resistance, while detectability of damage through inspections was generally assumed and not evaluated. The fail-safe option was the predominant approach chosen for the majority of large transport category airplanes certified in the 1960s and 1970s.

As these airplanes accumulated more and more usage, however, there was increasing concern about the ability of the airframe to meet long-term fail-safe requirements. The FAA recognized that the capability of a redundant design to survive a ''fatigue failure or obvious partial failure'' of an element could decrease with time since all elements could be subject to fatigue and would eventually crack. Additionally, we realized in many cases failures that were assumed to be obvious during certification were not readily apparent in practice. These concerns, coupled with findings during service, resulted in the decision to remove the fail-safe approach for structures from the airworthiness standards and adopt damage tolerance as the preferred approach for addressing fatigue. This was accomplished in 1978 with Amendment 25–45 to 14 CFR 25.571.

IV. What Is Damage Tolerance?

Damage tolerance (DT) as applied to civil aircraft is a method used to evaluate the crack growth and residual strength characteristics of a structure. Based on the results, inspections or other procedures are established, as necessary, to prevent catastrophic failures due to fatigue. Damage tolerance can and has been applied to existing designs as well as to new designs.

V. Application of Damage Tolerance

The first step in applying DT methods is to identify fatigue critical structure. This generally includes all structure commonly referred to as ''primary structure'' such as the wing, empennage, control surfaces and their systems, the fuselage, engine mounting, landing gear and their related primary attachments. Once identified, this structure is subject to an evaluation [16] that includes identification and quantification of—

- Site—the potential areas where fatigue cracks could start;
- Scenario—how the cracking will proceed;
- Detectable crack size—what can be found reliably (probability of detection) with the inspection method planned;
- Critical crack size—the crack size that reduces the strength of the structure down to the minimum level that we want to assure with the assumed crack(s) present; and
- Duration—the time it will take the crack(s) to grow from ''detectable crack size'' to ''critical crack size.''
- Inspection threshold—the time in airplane hours/cycles when inspections are initiated to detect a crack.

Once these elements are defined and quantified, decisions can be made about required maintenance actions. In many cases an in-service directed inspection for fatigue cracking may be reliable and practical. However, there may be cases where the results of the evaluation show that inspections are neither reliable nor practical. When this is the case, replacement or modification of the structure may be the best solution.[17]

VI. Damage Tolerance Requirements

A. Requirements of § 25.571 for Establishing Inspections or Other Procedures

Under 14 CFR 21.17, the version of the airworthiness standards that applies to a type certificate (TC) is the version in effect on the date of application for the TC. For any given TC, this is referred to as the ''certification basis'' of the airplane. Since these standards have been revised several times, different types of airplanes may have complied with different versions of these standards.

The current DT requirements of 14 CFR 25.571 include—

- Evaluation of the airplane structure to identify structure that is susceptible to fatigue cracking;
- Performance of a damage tolerance evaluation of the fatigue critical structure; and,
- Establishment of necessary inspections and procedures.

B. Damage Tolerance Applied to Pre-Amendment 25–45 Airplanes

On May 6, 1981, we issued Advisory Circular (AC) 91–56 to provide guidance to TC holders on the development of Supplemental Inspection Documents (SIDs) for pre-Amendment 25–45 airplanes. Type certificate holders voluntarily performed damage tolerance evaluations of the baseline structure [18] of their airplane designs.[19] Based on these evaluations, DT data (*e.g.*, inspections) were published in SIDs that were mandated by airworthiness directive (AD), starting in the early 1980s.

The SIDs did not provide a comprehensive means to ensure repairs and alterations were evaluated for DT. As a result, the FAA and industry recognized that coverage for these airplanes relative to potential fatigue of repairs and alterations was incomplete. In part to address this problem, the B–727 [20] and 737–100/200 [21] SID ADs were superseded to require damage tolerance evaluations of all repairs and alterations made to structures covered by the SID. However, repairs and alterations are not adequately addressed by SID ADs that have been issued for the other affected airplane models.

C. Damage Tolerance Applied to Amendment 25–45 (and Later) Airplanes

Amendment 25–45 amended § 25.571 to require DT and fatigue evaluation of structure for transport airplane type designs.[22] The resulting inspections or other procedures had to be included in the maintenance manual as required by § 25.1529.

The fatigue strength approach was retained as a default option to be used only if the DT approach was shown to be impractical for certain areas of the airplane (*e.g.*, landing gear). Airplanes certificated to the Amendment 25–45 requirements include—

- Bombardier model CL–600;
- SAAB 340; and

[16] The term ''damage tolerance evaluation (DTE)'' as used in this rule means a process that leads to a determination of maintenance actions necessary to detect and remove fatigue cracking that could contribute to a catastrophic failure if left undetected. As applied to repairs and alterations, a damage tolerance evaluation includes the evaluation of both the repair or alteration and of the fatigue critical structure affected by the repair or alteration. The evaluation may include analysis, tests, or specialized processes developed by a TC holder that operators could use to establish damage tolerance inspections for existing and future repairs (*e.g.*, Repair Assessment Guidelines).

[17] For additional information on applying DT methods, see Advisory Circular (AC) 25.571–1C.

[18] Structure designed under the original TC or amended TC for that airplane model.

[19] The affected airplanes are the Airbus Model A300, British Aerospace Model BAC 1–11, Boeing Model 707, 720, 727, 737, 747, McDonnell Douglas Model DC–8, DC–9/MD–80, DC–10, Fokker Model F28, and Lockheed Model L–1011.

[20] AD 98–11–03 R1 [64 FR 989 No. 4 01/07/99].

[21] AD 98–11–04 R1 [64 FR 987 No. 4 01/07/99].

[22] ''Type design'' generally includes the engineering data necessary to define the configuration and design features of an aviation product (airplane, engine, or propeller) that is shown to comply with the applicable airworthiness standards. See 14 CFR 21.31.

• Boeing models 757 and 767 airplanes.

Amendment 25–54 revised § 25.571 and § 25.1529 to mandate that the damage tolerance inspections and procedures required by § 25.571 be included in the newly created Airworthiness Limitations section of the Instructions for Continued Airworthiness (ICA) required by § 25.1529. Section 25.1529 requires the applicant for a TC to prepare ICA according to appendix H to part 25.

Airplanes certificated to Amendment 25–54 or later requirements include—

• Airbus models A300–600, A310, A318, A319, A320, A321;
• Boeing models B717, B737–900, 777, MD–11, MD–90;
• Empresa Brasiliera de Aeronautica (Embraer) models EMB 120, 135, 145, 170;
• Aerospatiale ATR 42/72;
• BAE (Operations) Limited AVRO/BAE 146;
• Construcciones Aeronautics, S.A. CN 235;
• Bombardier DHC 8;
• BAE (Operations) Limited JTSRM 4101;
• SAAB Aircraft, A.B. SAAB 340; and
• AvCraft Aerospace GMBH DO 328.

In 1998, we again revised the DT requirements of § 25.571 in Amendment 25–96 to prescribe how inspection thresholds should be established for certain types of structure.[23] This change required, in part, that these inspection thresholds be established based on crack growth analyses and tests, assuming the structure contained an initial flaw of the maximum probable size that could exist because of manufacturing- or service-induced damage.

D. Damage Tolerance Applied to Repairs and Alterations

On April 25, 2000, the FAA published a final rule entitled ''Repair Assessment for Pressurized Fuselages.'' [24] This rule adopted four new operating rules [25] applicable to the twelve large transport category airplane models that had been certified to the pre-amendment 25–45 fail-safe standards. That final rule prohibits operation of these airplanes beyond a specified implementation time, unless FAA-approved DT based repair assessment guidelines (RAG), which only apply to fuselage skin, door skin, and bulkhead webs, are incorporated in the operator's operations specifications or approved inspection program. Generally, these guidelines, most of which were developed by the TC holders for the affected models,[26] provide a streamlined approach for operators to assess the DT of repairs. Based on this assessment, operators determine whether their existing inspection programs are adequate, or whether additional inspections or replacement of the repair are necessary.[27]

In accordance with 14 CFR 21.101, certain amended TCs and supplemental type certificates (STCs), whose original type certification basis did not require DT, may require damage tolerance inspections (Amendment 25–45 or later) for new or significantly modified structure.[28] However, structure that was not significantly altered on these airplanes would not have to comply with these requirements. In addition, for alterations that were not considered significant, in some cases SIDs were not developed for the altered structure, even though the DAH had developed a SID for the original airplane model. As a result, in many cases, alterations to these airplanes were not assessed for DT.

For airplanes certified to comply with Amendment 25–45 or later amendments, the DT requirement applies to fatigue critical structure, which may include certain baseline structure, repairs, and alterations. Nevertheless, for repairs and alterations to this structure TC holders and others have not always complied with the requirement to develop DT data. Some of the circumstances that resulted in a shortfall of DT data for repairs and alterations are summarized below.

In some cases, TC holders' damage tolerance evaluations of baseline structure were not completed at the time of type certification. This was permitted because we recognized that the fatigue problems that inspections are intended to detect would not occur until the airplanes had operated for many years. However, because operators needed structural repair manuals [29] (SRMs) when they first placed the airplanes into service, the TC holders provided SRMs for which damage tolerance evaluations also had not been performed. The FAA erroneously approved these SRMs for compliance to the damage tolerance requirements of § 25.571.

In many cases there are similarities between structural elements of pre-Amendment 25–45 and Amendment 25–45 and later airplanes. If SRM repairs for a pre-Amendment 25–45 airplane were applicable to the new airplane structure, in some cases the FAA approved them without consideration of the requirement for DT. Under bilateral aviation safety agreements,[30] other national aviation authorities granted similar approvals.

Many airplanes that were certified to comply with the DT requirements of Amendment 25–45 or later contain repairs and alterations that have not been adequately evaluated for DT. Because some TC holders did not develop DT data for the baseline structure at the time of type certification (and in some cases for several years thereafter), in some cases repairs and alterations developed by them and published in service bulletins did not give adequate consideration to DT. For the same reason, STC applicants were unable to evaluate the effects of their alterations on the DT of the baseline structure. Designers of repairs had the same difficulty. In some cases, STC applicants and designers of alterations and repairs were unfamiliar with the requirements and methods for DT. Finally, in some cases, air carriers improperly classified repairs and alterations that affect fatigue critical structure as ''minor'' and damage tolerance evaluations were not conducted. This proposed rule would correct the shortfall of DT data as described in these three circumstances.

Table 1 below provides a summary of the regulatory requirements for DT based inspections and procedures that were in place before the adoption of the AASFR. The table addresses airplanes that are subject to the AASFR. It shows areas of the affected airplanes that are

[23] The inspection ''threshold'' is the time, usually measured in flight hours or flight cycles, when the first DT inspection must be performed.

[24] 65 FR 24108, April 25, 2000.

[25] § 91.410 (Amdt. 91–264); § 121.370 (Amdt. 121–275); § 125.248 (Amdt. 25–33); and § 129.32 (Amdt. 129–28).

[26] Airbus Model A300, British Aerospace Model BAC 1–11, Boeing Model 707, 720, 727, 737, 747, McDonnell Douglas Model DC–8, DC–9/MD–80, DC–10, Fokker Model F28, and Lockheed Model L–1011.

[27] For more information on methods of compliance with this rule, see AC 120–73, ''Damage Tolerance Assessment of Repairs to Pressurized Fuselages,'' dated December 14, 2000.

[28] See AC 21.101–1, ''Establishing the Certification Basis of Changed Aeronautical Products. A copy can be downloaded from *http://www.airweb.faa.gov/rgl.*

[29] Various regulations, including 14 CFR 121.379(b), require that operators obtain FAA approval of ''major repairs'' before approving airplanes for return to service following such repairs. As a source of pre-approved repairs, the structural repair manual (SRM) provides the means for operators to make timely repairs to airplanes without risk of disruption of operations while awaiting the required approval. While the part 25 airworthiness standards do not require TC holders to develop SRMs, it has been a common practice for many years.

[30] Under these agreements, the ''importing state'' (the civil aviation authority with oversight of the airplane operator) agrees to accept the compliance findings of the exporting state (the civil aviation authority with oversight of the airplane manufacturer).

addressed by these requirements. The shaded areas in the table represent the structural areas for which, prior to § 121.370a, there were no regulatory requirements to develop DT data and for which almost none are in existence. The DAHs would need to develop DT data to support operator compliance with the § 121.370a of the AASFR.

TABLE 1

Airplane models	Regulatory actions prior to § 121.370a that require damage tolerance data development			
§ 25.571 Amendment level	Baseline structure	Repairs to fuselage & door skin, bulkhead webs	Repairs to all other areas	Alterations/modifications
25–45 or later 737–900, 757, 767, 777, MD11, ATR42, ATR72, F100, A320, A321, A318, A319, A300–600, A310, A340, A330, EMB 135, EMB 145, SAAB 340, SAAB 2000, CL–600, DHC–8, DO–328, BAE146, BAE Jetstream 4100.	*Certification Basis:* § 25.571. —Amdt 25–45 and later amendments require damage tolerance (DT) inspections.	*Certification Basis:* § 25.571. —Repaired airplane structure must meet structure type requirements.	*Certification Basis:* § 25.571. —Repaired airplane structure must meet structure type requirements.	*Certification Basis:* § 25.571. —Altered structure must meet type certification requirements.
Pre 25–45 727, 737–100/200	*SID AD's*	*§ 121.370 (Repair Assessment Rule) and SID ADs.*	*SID AD's* —ADs require repairs made to SID principal structural elements (PSEs) to be assessed for DT.	*SID AD's.* —ADs require alterations made to SID PSEs to be assessed for DT.
Pre 25–45 A300, 707, 720, 747, BAC 1–11, F–28, L–1011, DC–8, DC–9, MD–80, DC–10.	*SID AD's*	*§ 121.370*	*§ 121.370a*	*§ 121.370a.*
Pre 25–45 L–188, DHC–7	*SID AD*	*§ 121.370a*	*§ 121.370a*	*§ 121.370a.*
Pre 25–45 F.27, L–382	*DT data have been developed.*	*§ 121.370a*	*§ 121.370a*	*§ 121.370a.*
Pre 25–45 737–300/400/500	*A SID has been developed.* —AD is pending	*§ 121.370*	*§ 121.370a*	*§ 121.370a.*
Pre 25–45 737–600/700/800	*A SID will be developed* —An AD will need to be issued.	*§ 121.370*	*§ 121.370a*	*§ 121.370a.*

E. Damage Tolerance Requirements of the Aging Airplane Safety Final Rule

In adopting the Aging Aircraft Safety Act (AASA) of 1991, Congress required the FAA to ''prescribe regulations that ensure the continuing airworthiness of aging aircraft.'' [31] The AASA states, in part, that an air carrier must show ''that maintenance of the aircraft's structure, skin, and other age-sensitive parts and components have been adequate and timely enough to ensure the highest degree of safety.'' To comply with this requirement, the AASFR includes supplemental inspection requirements that address the continued airworthiness of fatigue critical structure.

These regulations apply to all fatigue critical structure, which includes the baseline structure of the airplane, repairs and alterations that affect fatigue critical baseline structure, and alterations that contain fatigue critical structure. Listed below are examples of alterations that are included.

- Passenger-to-Freighter Conversions.
- Operating Weight Increases.
- Re-engining and Hushkits.
- Winglets.
- Auxiliary Wing Tip Fuel Tanks.
- Auxiliary Fuel Tanks Installed in the Fuselage.
- External Door Installation in a Pressurized Fuselage.

The damage tolerance inspections and procedures required by the AASFR are based on the same methodology used to comply with 14 CFR 25.571, at Amendment 25–45 and later amendments. The AASFR, in effect, requires compliance with the DT airworthiness standard by all affected airplanes, regardless of original certification basis, past AD action, or other operating rules.

VII. Statement of the Problem

Without additional rulemaking, operators run the risk of not having the necessary DT data in time to support compliance with the supplemental inspection requirements of the AASFR, which has a final compliance date of December 20, 2010. DAHs may not voluntarily commit the resources needed to develop DT data within a time frame that would allow operators to revise programs as necessary to comply with the rule. We believe a regulatory approach that includes not just operational requirements, but corresponding DAH requirements, would result in a more uniform and timely response to the safety issues.

For pre-Amendment 25–45 airplanes, as stated in the preamble to the AASFR, the DT data contained in FAA-approved SIDs and RAG are an acceptable means of compliance with the AASFR for those structural areas addressed by the SIDs and RAG. Therefore, to support operator

[31] 49 U.S.C. 44717(a).

compliance with the AASFR adequately, DT data will need to be developed for fatigue critical structure in the following areas, unless previously accomplished:

- Existing repairs not addressed by RAG.
- Alterations, including those documented in TC holders' service bulletins and in STCs.
- New repairs, including those documented in TC holders' SRMs and service bulletins.

For Amendment 25–45 (and later) airplanes, to support operator compliance with the AASFR, DT data may need to be developed for existing and new repairs and alterations.

VIII. Requirements for Design Approval Holders

The FAA believes the proposed requirements are not a significant shift in the responsibilities of DAHs for the continued airworthiness of airplanes. Airplane operators always have the ultimate responsibility for maintaining their airplanes in a condition that allows for their continued safe operation. The DAH requirements would support this responsibility by making documents and data available to the operators that are necessary to meet their airworthiness obligation. Such actions include performing assessments, developing design changes, revising ICAs, and making available necessary documentation to affected persons. We believe this requirement is necessary to facilitate compliance by air carriers with operating rules. DAHs, in this proposal, would only be responsible for their repairs and alterations, and for the development of guidelines applicable only to their type design structure.

A. Ongoing Responsibility of Design Approval Holders for Continued Airworthiness

Several recent safety regulations necessitated action by air carriers and other operators but did not require DAHs to develop and provide the necessary data and documents to facilitate the operators' compliance. As noted earlier, on July 12, 2005, we issued policy PS–ANM110–7–12–2005, ''Safety—A Shared Responsibility—New Direction for Addressing Airworthiness Issues for Transport Airplanes.'' The policy states, in part, ''Based on our evaluation of more effective regulatory approaches for certain types of safety initiatives and the comments received from the Aging Airplane Program Update (July 30, 2004), the FAA has concluded that we need to adopt a regulatory approach recognizing the shared responsibility between design approval holders (DAH) and operators. When we decide that general rulemaking is needed to address an airworthiness issue, and believe the safety objective can only be fully achieved if the DAHs provide operators with the necessary information in a timely manner, we will propose requirements for the affected DAHs to provide that information by a certain date.''

We believe the safety objectives contained in this proposal can only be reliably achieved and acceptable to the FAA if the DAHs provide the parts 121 and 129 operators with the DT data for repairs and alterations to fatigue critical structure. Our determination that DAH requirements are necessary to support the initiatives contained in this proposal is based on several factors:

- Developing DT data is complex. Operators do not have access to the necessary type design data needed for the timely and efficient development of the required DT data.
- FAA-approved DT data need to be available in a timely manner. Due to the complexity of these data, we need to ensure that the DAHs submit them for approval on schedule. This will allow the FAA Oversight Office having approval authority to ensure the data are acceptable, are available on time, and can be readily implemented by the affected operators. Additionally, accurate and timely information is necessary to ensure the operators are able to obtain the data in enough time to meet the December 20, 2010 compliance date of the AASFR.
- The proposals in this NPRM affect a large number of different types of transport category airplanes. Because the safety issues addressed by this proposal are common to many airplanes, we need to ensure that technical requirements are met consistently and the processes of compliance are consistent. This will ensure that the proposed safety enhancements are implemented in a standardized manner.

Based on the above reasons and the stated safety objectives of FAA policy PS–ANM110–7–12–2005, we are proposing to implement DAH requirements applicable to the development of DT data to support compliance to the AASFR with respect to repairs and alterations.

Operators are often dependent on action by a DAH before they can implement new safety rules. Ongoing difficulty reported by operators in attempting to meet these rules has convinced us that corresponding DAH responsibilities may be warranted under certain circumstances to enable operators to meet regulatory deadlines.

When DAHs fail to provide the required data in a timely manner, operators may be forced to incur the costs associated with obtaining the expertise to develop the data. Some examples of programs in which some DAHs did not develop and make available the necessary information in a timely manner include—

- Thrust reversers, where it took 10 years to develop some service information for AD-related items;
- Class D to Class C Cargo Conversions, where one holder of a TC did not develop the necessary alterations in time to support operator compliance and where several operators were unable to obtain timely technical support and alteration parts from holders of an STC;
- The Reinforced Flight Deck Door Program, where most operators had substantially less than the one-year compliance time originally anticipated because of delays in developing and certifying the new designs;
- Repair Assessment Rule, where an operator had to develop data for FAA approval to meet the rule's compliance date; and
- SRMs, where operators are still awaiting DAH action to ensure repairs are damage tolerant, even though the DAH committed to completing this activity by 1993. (In reference to the bulleted items ADA had this question: Did FAA also contribute in any way to these delays?

In addition, DAHs have committed in the past to providing data to the FAA to support the certification basis of an airplane. In some instances, the DAH has missed the due date given for this by several years.

We intend to require TC holders, manufacturers, and others to take actions when necessary to support the continued airworthiness and to improve the safety of transport category airplanes. We believe this regulation is necessary to facilitate compliance by air carriers with operating rules that require the use of new safety features.

To address this problem, we propose to amend subpart A of part 25 to expand its coverage and to add a new subpart I to establish requirements for certain design approval holders. As contemplated in ''FAA Policy Statement: Safety—A Shared Responsibility—New Direction for Addressing Airworthiness Issues for Transport Airplanes'' the FAA proposes to add provisions to a new subpart I requiring actions by DAHs that will allow operators to comply with our rules.

Part 25 currently sets airworthiness standards for the issuance of TCs and changes to those certificates for transport category airplanes. It does not list the specific responsibilities of manufacturers to ensure continued airworthiness of these airplanes once the certificate is issued. Therefore, we propose to revise § 25.1 by adding paragraph (c) to make clear that part 25 creates such responsibilities for holders of existing TCs and STCs for transport category airplanes and applicants for approval of design changes to those certificates.

This proposal would establish a new subpart I, Continued Airworthiness and Safety Improvements, where we would locate rules imposing ongoing responsibilities on DAHs. In the past, this type of requirement took the form of a Special Federal Aviation Regulation (SFAR). These regulations are difficult to locate because they are scattered throughout Title 14. Placing all these types of requirements in a single subpart of part 25, which contains the airworthiness standards for transport category airplanes, would provide ready access to critical rules.

To ensure the effectiveness of this change, we would add § 25.3 to require compliance to a new Subpart I by DAHs, which may require design changes and other actions by TC and STC holders.

In preliminary discussions with foreign aviation authorities, regarding harmonization of our airworthiness rules, they expressed concern about adopting parallel requirements in their counterparts to part 25. They suggested that it may be more appropriate to place them in part 21 or elsewhere. Therefore, we specifically request comments from the public, including foreign authorities, on the appropriate place for these airworthiness requirements for TC holders currently proposed in subpart I.

We reserve additional sections in this proposed subpart to include other future airworthiness requirements such as aging airplane rules, several of which are under development. Some of these proposals include similar language establishing the general airworthiness responsibilities of DAHs. Once any proposal establishing these broad responsibilities becomes a final rule, we will delete the duplicative requirements from the other proposals and retain only that language pertinent to any specific new safety regulations (such as fuel-tank flammability reduction).

For safety reasons, we are requiring that any application for a type design change not degrade the level of safety that this rule proposes to achieve. Currently, when reviewing an application for such a change, we employ the governing standards in part 21, specifically § 21.101. That section generally requires compliance with standards in effect on the date of application but contains exceptions that may allow applicants to show compliance with earlier standards. For example, if a change is not considered significant, the applicant may be allowed to show compliance with standards that applied to the original TC. With the adoption of subpart I rules, we must ensure that safety improvements that result from DAH compliance with these requirements are not undone by later modifications. Therefore, even when we determine under § 21.101 that applicants need not comply with the latest airworthiness standards, they will be required to demonstrate that the change would not degrade the level of safety provided by the TC holder's compliance with the subpart I requirements.

B. Need for Design Approval Holder Requirements To Support Compliance With the Aging Airplane Safety Final Rule

Based on public comments received on the interim final rule to the AASFR, as well as comments provided by the Air Transport Association (ATA) in a February 28, 2003 public meeting, the FAA concluded that compliance with the AASFR would require a DT assessment for a large number of repairs and alterations made to transport category airplanes. The ATA expressed concern that industry will not have the resources to handle a large portion of DT assessments. They said Boeing has indicated that there are about 3,100 U.S. registered airplanes for which they might have to provide support for DT assessments. The ATA also said that Boeing might be required to provide DT analysis for 142,600 [32] repairs installed on these airplanes. The ATA estimated that about 3,300 [33] STCs may require damage tolerance evaluation. Based on current industry practice of performing damage tolerance evaluations of individual repairs, the FAA agrees with the ATA that, without DAH support, industry will likely not have the resources needed to evaluate the repairs that will be required to be assessed for compliance with the AASFR.

The current practice of conducting evaluations of individual repairs will require an excessive amount of industry time and resources. This process would typically involve, for example, data collection for each repair, documentation of repair data, and submittal of documentation from operators to the DAH. The DAH would, at the request of an operator, review the repair data and determine if damage tolerance inspections would be required for the repair and any fatigue critical structure affected by the repair. This determination by the DAH can be a complex task, depending on the repair configurations, and the fatigue critical structure that it may affect. Therefore, to support operator compliance, DT guidance that provides a streamlined approach for assessing repairs will need to be made available.

The DAHs possess the requisite technical expertise, proprietary data, and procedures to develop the required DT guidance. While some air carriers have extensive engineering departments that may be able to develop the DT data required to comply with the AASFR, they would still be dependent on the TC holder to provide detail data for the fatigue critical structure to perform the evaluation. For smaller airlines that do not have extensive engineering capabilities, reliance on the TC holder is all the more necessary for compliance with the rule. Airlines in general are unable to generate DT based service information (as the TC holder typically does) and, most significantly for this rulemaking, would be unable to develop the guidance required to assess the thousands of existing repairs.

Although the involvement of DAHs is necessary, we also recognize that it would be unreasonable to require them to assume responsibility for the DT of repairs and alterations they did not develop. However, as discussed later, while the DAHs would only be responsible for providing specific DT data for repairs and alterations they developed, they are required to make available guidelines on how to assess the effects of other repairs on their baseline structure.

C. Alternatives to This Proposal

The FAA considered three alternatives to this proposed rule. These were to—

(1) Not mandate DAH requirements;

[32] This estimate includes repairs installed on all airplane models subject to the DT requirements of the AASFR, which includes those airplanes certificated to the DT requirements of § 25.571 at Amendment 25–45 or later amendments. The type certification basis of airplanes certificated at amendment 25–45 or later amendments, requires that repairs and alterations made to these airplanes meet the DT requirements of § 25.571. Therefore, the percentage of repairs estimated by the ATA that apply to airplanes certificated at amendment 25–45 or later amendments is about 40%. The ATA estimate is based on 3.5 repairs being installed per year on each Boeing model airplane.

[33] The percentage of alterations that apply to airplane models type certificated at amendment 25–45 or later amendments is about 40%. The certification basis for these airplanes requires that all alterations meet the DT requirements of § 25.571.

(2) Rescind §§ 121.370a and 129.16; and

(3) Rescind approval of SRMs and other published service information that do not contain the necessary damage tolerance inspection data.

We concluded that Alternative 1 is not a viable option. As discussed in section IX of this preamble, if we adopt this alternative, the operators may not be able to comply with the requirement to incorporate damage tolerance inspections and procedures by December 20, 2010. The reason is the DAH may not voluntarily develop the DT data required for compliance.

Under Alternative 2, the FAA recognizes that many repairs and alterations made to fatigue critical structure would not have supplemental inspections necessary to maintain the continued airworthiness of affected airplanes.

Alternative 3 would place an unacceptable burden on operators. Future major repairs or alterations to affected airplanes would not be possible without FAA approval. As operators routinely use these documents to support their operations, it is possible that airplanes may be taken out of service for extensive periods until the DT data for a particular repair or alteration are FAA approved.

The FAA has concluded that these alternatives may not preclude the installation of repairs or alterations that could contribute to a catastrophic failure. As noted in the AASFR, the AASA specified that an air carrier must demonstrate to the Administrator ''that maintenance of the aircraft's structure, skin, and other age-sensitive parts and components have been adequate and timely enough to ensure the highest degree of safety.''

D. ''Retroactivity'' of Design Approval Holder Requirements

In the past, and particularly in comments to the Aging Airplane Program Update, DAH requirements have been referred to as ''retroactive.'' They are considered ''retroactive'' in the sense that they impose requirements on holders of existing design approvals. But they are not ''retroactive'' in the legal sense that they impose legal consequences in the past.[34] On the contrary, all of the proposed DAH requirements are only prospective in effect. In each case they would require DAHs to take actions in the future. For example, in this proposal, DAHs would be required to develop DT data and submit them for FAA approval before a specified future compliance time.

This proposal would not change the certification basis of any airplane, nor would it invalidate any previous FAA approval. This proposal would not change any past or current airworthiness standards, including § 25.571; although it would require future applicants for design changes to pre-Amendment 25–45 airplanes to meet additional requirements. This proposal would not invalidate the approval of any previously installed repair or alteration. But it would require DAHs to develop and make available DT data for use by operators to inspect or replace such repairs and alterations in the future.

In this sense, this proposal is similar to many ADs. We have identified a safety problem (fatigue cracking) with existing airplanes that, unless addressed, may result in accidents in the future. To prevent those accidents, we have adopted the AASFR to require operators to implement programs to detect and fix the problem. And, to enable the operators to comply with the AASFR, we are now proposing requirements for DAHs to make the necessary data available to the operators.

IX. Proposed Regulatory Changes

As discussed earlier, the AASFR requires operators to take into account the effects repairs and alterations may have on fatigue critical structure. This proposal would require DAHs to take several different actions to support operators' compliance with the AASFR with respect to repairs and alterations. Table 2 summarizes the proposed regulatory changes.

TABLE 2.—SUMMARY OF PROPOSED RULES

14 CFR	Description of proposal	Applies to
25.1	Expands applicability to current holders of TCs and STCs	Applicants for TCs, and changes to those TCs for transport category airplanes.
25.3	New § 25.3 to make reference to the proposed subpart I	
Subpart I 25.1801	Defines the intent of the subpart	TCs, and design changes to those TCs for transport category airplanes.
25.1823	Requires a list of fatigue critical baseline structure, DT data for repairs to baseline structure, and repair evaluation guidelines.	Holders of a TC for the affected airplane model(s).
25.1825	Requires a list of fatigue critical alteration structure, DT data for alterations and repairs to those alterations.	Holders of a TC for the affected airplane model(s).
25.1827	Requires a list of fatigue critical alteration structure, DT data for alterations and repairs to those alterations.	Holders of an STC for the affected airplane models.
25.1829	Requires Compliance Plans for each section	Holders of a TC and an STC.

A. Applicability

Today's proposal would apply to current and future holders of TCs, holders of STCs, and future applicants for changes to TCs. This rule would apply to transport category, turbine powered airplane models with an original TC issued after January 1, 1958. Specifically, with certain exceptions, this proposal would apply to those airplanes, that, as a result of the original certification, or later increase in capacity, have a maximum type certificated passenger seating capacity of 30 or more or a maximum payload capacity of 7,500 pounds or more. There are a number of these airplanes that are not operated under 14 CFR parts 121 or 129 and, therefore, are not subject to the AASFR. Proposed § 25.1823(h) would exclude those airplanes because the purpose of this rule is to require DAHs to support operators of airplanes under 14 CFR parts 121 or 129. We specifically request comments on whether there are other airplanes of this size that are not operated under 14 CFR parts 121 or 129 and that should be excluded from this rule.

[34] In *Bowen* v. *Georgetown University Hospital*, 488 U.S. 204 (1988), the Supreme Court invalidated a 1984 Social Security Administration regulation on the grounds that it was not authorized to issue such a ''retroactive'' regulation. That regulation changed a Medicare reimbursement schedule, effective as of 1981. The effect was to require hospitals to refund fees they had been entitled to when the fees were paid.

As discussed earlier, § 25.571 has required new TCs to meet DT requirements since 1978, but for a variety of reasons, these requirements have not been met for many repairs and alterations. Therefore, to ensure that repair and alteration data for future TCs will meet these requirements, today's proposal would apply to DAHs for future TCs, as well as existing TCs. This proposal is different in this respect from other DAH requirements currently being considered by the FAA, which would not apply to TCs for which application is made in the future. This is because these rulemaking initiatives would adopt a change to the airworthiness standards in 14 CFR part 25 to impose a similar requirement on those future applicants.

Today's proposal, if adopted, would apply to both domestic and foreign DAHs. This rule would be different from most type certification programs for new TCs, where foreign applicants typically work with their responsible certification authority and the FAA relies upon that authority's findings of compliance per the conditions of bilateral airworthiness agreements. Presently, no other certification authority has adopted requirements addressing DT for repairs and alterations for existing TCs.

Accordingly, the FAA will retain the authority to make all the necessary compliance determinations and, where appropriate, may request certain compliance determinations by the appropriate foreign authorities, using procedures developed under the bilateral agreements. The compliance planning provisions of this proposed rule are equally important for domestic and foreign DAHs and applicants, and we will work with the foreign authorities to ensure that their DAHs and applicants perform the planning necessary to comply with those requirements.

B. Lists of Fatigue Critical Structure for Baseline Structure and Alterations

The first step in evaluating the DT of repairs or alterations is for TC and STC holders to determine which ones affect fatigue critical structure.[35] This can only be done once the fatigue critical structure that may be repaired or altered is identified. Therefore, for each airplane model subject to today's proposal, a list of fatigue critical structure for the following three areas would be required:

- Baseline structure.
- Alterations developed by TC holders that affect any fatigue critical baseline structure.
- Alterations developed by STC holders that affect any fatigue critical baseline structure.

In most cases, TC holders have already performed the technical analyses necessary to produce the list for baseline structure, either in developing SIDs (for pre-Amendment 25–45 airplanes) or in showing compliance with § 25.571 (for Amendment 25–45 and later airplanes). To ensure the list includes the full range of structural designs that operators and STC holders need to know about, TC holders would be required to address all of their current and out of production model variations and derivatives. TC holders would also be required to identify all post-production alterations they developed (typically documented in service bulletins) that affect fatigue critical baseline structure. For these alterations, the TC holder would determine whether the alterations themselves contain fatigue critical structure. For example, installation of a large cargo door would clearly affect fatigue critical baseline structure, but the door installation also may contain fatigue critical structure, such as door webs, frames, hinge installations, and door attachment structure installed on the baseline structure.

Today's proposal would require TC holders to submit the list of fatigue critical structure for both the baseline airplane and alterations no later than 90 days after the effective date of the rule, for review and approval by the FAA Oversight Office. Upon approval, they would have to make the list available to operators required to comply with the supplemental inspection requirements of the AASFR and to STC holders required to comply with this rule.

STC holders would also be required to identify their alterations that affect fatigue critical baseline structure. For these alterations, the STC holder would then determine whether the alterations themselves contain fatigue critical structure. STC holders would have to submit the list of fatigue critical alteration structure no later than 270 days after the effective date of the rule, for review and approval by the FAA Oversight Office, and upon approval, make the list available to affected operators. The six-month difference between the STC and TC holder submittal dates is intended to allow STC holders time to obtain and review the list of fatigue critical baseline structure developed by the TC holder. STC holders may need this list to determine if any of their alterations approved under an STC affect this structure.

Throughout this proposal, the term ''make available'' is used in the same sense that it is currently used in 14 CFR 21.50, which requires DAHs to make ICAs available to operators and others required to comply with them. We do not intend by this proposal to alter or interfere with the existing commercial relationships between DAHs and these other persons. We anticipate that DAHs would be allowed reasonable compensation for developing all of the required documents, which is consistent with current practice.

C. Damage Tolerance Evaluations and Damage Tolerance Inspections

Because holders of TCs and STCs have not performed damage tolerance evaluations for many of their repairs and alterations, damage tolerance evaluations must be performed for operators to comply with the AASFR. Additionally, unless already accomplished, all future repairs and alterations affecting fatigue critical structure identified in the lists described above would need to have damage tolerance evaluations performed and damage tolerance inspections developed.

In today's proposal, repair and alteration data developed by TC and STC holders are divided into the following six categories:

(1) Repair data published by TC holders.

(2) Existing unpublished repair data developed by TC holders.

(3) Future repair data developed by TC holders.

(4) Alteration data developed by TC holders.

(5) Alteration data developed by STC holders.

(6) Repair data developed by STC holders.

For repairs identified in category 2, TC holders would have to develop repair evaluation guidelines that provide a process operators could use to establish new or confirm the acceptability of existing damage tolerance inspections for those repairs. These guidelines will be discussed later in this section of the preamble. For the other categories of repair and alteration data, today's proposal would require TC and STC holders to develop damage tolerance inspections.

[35] This proposal would define ''Fatigue critical structure'' as ''airplane structure that is susceptible to fatigue cracking that could contribute to a catastrophic failure, as determined by § 25.571.'' This proposal would also define ''affects'' to mean, ''fatigue critical structure has been physically repaired, altered, or modified, or the structural loads acting on fatigue critical structure have been increased or redistributed.'' Because of industry's extensive experience in showing compliance with the damage tolerance requirements of § 25.571, these key terms should be readily understood and applied.

Repair data published by TC holders: TC holders publish repair data in SRMs, service bulletins, and other forms of data transmittal. They develop data for general application to a particular airplane model or airplane configuration. Since operators use these data for most repairs, providing damage tolerance inspections in these documents would enable them to comply with the AASFR for most existing and future repairs.

For their published repair data that is current [36] as of the effective date of this proposed rule, and for all later published repair data, the TC holder would be required to review the data and identify each repair that affects fatigue critical structure. For each such repair, unless previously accomplished, the TC holder would be required to perform damage tolerance evaluations and develop any necessary changes to the repair or damage tolerance inspections. If the DTE concludes that damage tolerance based supplemental structural inspections are not necessary for a repair or for fatigue critical baseline structure affected by a repair, the DTI would contain a statement to that effect. For repair data published by the TC holder, today's proposal would require the TC holder to submit DT data [37] by June 30, 2009 for review and approval by the FAA Oversight Office, or its properly authorized designees.[38] And, upon approval, make the damage tolerance inspections available to operators required to comply with the DT requirements of the AASFR.

Existing unpublished repair data developed by TC holders: This category consists of repairs that are typically developed for individual airplanes at the request of an operator. These repairs are often unique to a particular airplane or to a small group of airplanes experiencing similar damage conditions and, therefore, are typically not published for general application. Because of the significant number of these repairs that TC holders have developed, it would be very time consuming and costly for them to research and identify all the repair data that may affect fatigue critical structure. Today's proposal would not specifically [39] require TC holders to develop damage tolerance inspections for these repairs. To address these repairs, TC holders would be required by today's proposal to develop repair evaluation guidelines, as discussed later in this preamble.

Future unpublished repair data developed by a TC holder: While this category consists of the same types of repairs as the previous category, these repairs will be developed after the effective date of this proposed rule when TC holders will be fully aware of operators' needs for DT data. Therefore, we are proposing that TC holders be required to develop DT data for these repairs. However, these repairs are frequently developed for airplanes that are undergoing maintenance and must be repaired before they can be returned to service. Because requiring damage tolerance evaluations under these circumstances would significantly delay the airplanes' return to service, we are proposing that the DT data be developed according to an approved implementation schedule, as discussed later in this preamble.

Alteration data developed by TC holders: These data include alterations specified in service bulletins or other service information. TC holders would be required to evaluate their alteration data to determine whether the alteration affects fatigue critical structure. If so, the TC holder would be required to develop a list of fatigue critical structure of the alteration, perform damage tolerance evaluations, and develop damage tolerance based inspections, if necessary. For existing alterations, TC holders would be required to submit these data by June 30, 2009 for FAA approval. For future alterations, the DT data would be required before we approve the alteration data.

Alteration and repair data developed by STC holders: Similarly, STC holders would be required to determine whether their alterations affect fatigue critical structure (as identified in the list made available by the TC holder), develop lists of fatigue critical structure of their alterations, perform damage tolerance evaluations, and develop damage tolerance inspections. In addition to alterations, some STC holders have developed repairs that are applicable to their alterations. STC holders would be required to perform damage tolerance evaluations and develop damage tolerance based inspections, if necessary, for those repairs that affect any fatigue critical structure. For existing alterations, STC holders would be required to submit these data by June 30, 2009 for FAA approval. For future alterations, the DT data would be required before we approve the alteration data.

D. Repair Evaluation Guidelines

Today's proposal would require TC holders to develop guidelines that would provide processes that operators could use for establishing DT data for repairs that affect fatigue critical structure. The guidelines must include the following items:

- A process for conducting surveys of affected airplanes to identify and document all existing repairs that affect fatigue critical baseline structure.
- A process for establishing DT data for repairs and for fatigue critical baseline structure affected by the repairs.
- A DT data implementation schedule for repairs covered by the guidelines.

The DT data implementation schedule is discussed later as a separate topic as it applies to repairs addressed by the guidelines and future unpublished repairs for which the TC holders must develop damage tolerance inspections.

For operators to be able to determine effectively which existing repairs need damage tolerance evaluations performed, they would need a process to identify and document those repairs. Today's proposal would require TC holders to develop a survey process that operators can use for identification and documentation of repairs for the affected airplanes. Using the lists of fatigue critical structure developed by TC and STC holders, this process would provide operators with a means for determining which existing repairs affect fatigue critical structure. The process would also provide instructions for documenting those repairs by listing or describing the repair information [40] that will be necessary to establish DT data for the repair.

[36] By current, we mean repair data that is currently made available to operators by TC holders. We recognized that in some cases, TC holders will no longer have data for repairs they developed many years ago, and, therefore, would not be able to perform damage tolerance evaluations of those repairs. For these repairs, the TC holder would be required to develop repair evaluation guidelines that provide operators with a process for establishing DT data (see footnote 37). The repair evaluation guidelines are discussed later in this preamble.

[37] The term DT data as used in this rule means any DTE documentation and DTI that an operator may incorporate into their maintenance program for compliance with the AASFR.

[38] The term ''properly authorized designees'' is used throughout this proposal to refer to DERs who are fully trained in DT principles and who are specifically authorized by their supervising aircraft certification offices (ACOs) to make the referenced compliance findings. In many cases, we expect the initial compliance findings would be made by the ACOs themselves, and only later findings would be delegated.

[39] The process developed by the TC holder for the repair evaluation guidelines may, however, recommend that operators submit such repairs to the TC holder for a DTE. This may be the case if the TC holder determines there are not a large number of such repairs on that airplane model fleet.

[40] Examples of repair information include location, dimensions, materials, fastener configuration, physical changes made to fatigue critical structure, and proximity of repairs or alterations to other repairs.

Today's proposal would also require the TC holder to develop a process that operators can use for establishing DT data. The process most commonly used today by operators to obtain DT data is time consuming and resource intensive. The process required by today's proposal would provide operators with various methods for obtaining DT data for repairs. Possible methods for obtaining the required DT data may include—

• *Using existing FAA approved data.* These may include TC holder developed service information such as SRMs, service bulletins, and Repair Assessment Guideline (RAG) documents developed for compliance to § 121.370.

• *Making direct requests for support from the TC holder for repairs.* If the TC holder determines that the existing service information does not provide operators with the needed DT data, the process may recommend that the operator directly solicit DT data from a TC holder. In this case, the TC holder would evaluate the operator's request and make available damage tolerance inspections for a specific repair or alteration or group of repairs and alterations as needed. If the processes developed for the repair evaluation guidelines direct the operator to obtain assistance from the TC holder, the TC holder would be required to provide such assistance. This assistance must be provided in a manner that would support the DT data implementation schedule.

• *Using repair evaluation procedures.* These procedures would enable operators to establish damage tolerance inspections without having to contact the TC holder for direct support. These procedures may be similar in concept to the RAG documents.

E. Damage Tolerance Data Implementation Schedule

Today's proposal would require the TC holder to develop an implementation schedule that addresses the timing of key tasks required by this proposal. The DT data implementation schedule would specify appropriate timing for the following tasks:

• Conducting airplane surveys to identify and document repairs and alterations that affect fatigue critical structure.

• Performing damage tolerance evaluations and developing damage tolerance inspections for existing repairs that affect fatigue critical structure.

• Performing damage tolerance evaluations and developing damage tolerance inspections for unpublished future repairs that affect fatigue critical structure.

• Revising maintenance programs to incorporate damage tolerance inspections.

In establishing the timing of these tasks, TC holders would need to determine if the available industry resources are sufficient to perform the tasks within the proposed time. If not, the processes or timing developed for the tasks may need to be reassessed to provide schedules that make the most efficient use of resources, while ensuring the continued airworthiness of the affected airplanes.

For future unpublished repair data, the implementation schedule may define a process that allows an airplane to return to service before all necessary DT data are submitted for FAA approval. This process may involve an initial approval of repair data to allow an airplane to return to service and subsequent submittal and approval of the DT data. The details of the timing of when data are to be submitted and approved would be included in the implementation schedule. A phased process may be necessary to minimize the burden placed on TC holder resources and to reduce unnecessary down time of airplanes.

A similar process is described in AC 25.1529–1. A modified version of the process defined in AC 25.1529–1 has been approved by the FAA and is currently being used in industry. ARAC has established a process that is similar to the modified version of the process defined in AC 25.1529–1. This process has been incorporated into a proposed advisory circular and may be incorporated into the DT data implementation schedule for future repairs that is required by today's proposal.

For implementation schedules required for existing repairs, the TC holder would submit implementation schedules as part of the repair evaluation guidelines to the FAA Oversight Office, for review and approval by December 30, 2009. This proposal would mandate that future repair data be submitted to the FAA Oversight Office for review and approval, according to the implementation schedule approved as part of the Repair Evaluation Guidelines.

F. Compliance Plan

The FAA intends to establish the requirements for a compliance plan to ensure that affected DAHs and the FAA have a common understanding and agreement of what is necessary to achieve compliance with this proposed rule. The plan would also ensure that the DAHs produce the DT data in a timely manner that is acceptable in content and format. Integral to the compliance plan will be the inclusion of procedures to allow the FAA to monitor progress toward compliance. These aspects of the plan will help ensure that the expected outcomes will be acceptable and on time for incorporation by the affected operators into their maintenance programs as required by the AASFR. The affected DAHs would be required to submit a compliance plan that addresses the following:

• The proposed schedule for meeting the compliance dates, including all major milestones.

• A proposed means of compliance with the requirements to develop and make available DT data.

• Any planned alternatives to guidance provided in FAA advisory material.

• A draft of all required compliance items not less than 60 days before the stated compliance dates.

• A process for continuous assessment of service information for the affected transport category airplane fleet that includes:

—Effectiveness of the damage tolerance inspections and repair evaluation guidelines; and

—Development of new or revised DT data.

• Distribution of approved DT data.

The compliance plan is based substantially on ''The FAA and Industry Guide to Product Certification,'' which describes a process for developing project-specific certification plans for type certification programs. This guide [41] recognizes the importance of ongoing communication and cooperation between applicants and the FAA. Today's proposal, while regulatory in nature, is intended to encourage the establishment of the same type of relationship in the process of complying with DAH requirements.

We will issue an AC to include guidance for a compliance plan. FAA advisory material, while not mandatory, describes one means, but not the only means, of compliance. Similar to the process used in the type certification, applicants may propose acceptable alternatives to the means of compliance described in advisory circulars. When an applicant chooses to comply by an alternative means, it should identify the alternative as early as possible to provide an opportunity to resolve any issues that may arise that could lead to delays in the compliance schedule.

[41] This Guide is available at *http://www.faa.gov/certification/aircraft.*

One of the sections in the proposed compliance plan requires a detailed explanation of how the proposed means of compliance would meet the requirements of the section if the proposed means of compliance differs from that described in FAA advisory material. This part of the compliance plan would enable the FAA Oversight Office to identify and resolve any issues that may arise with the proposal of the DAH without jeopardizing the ability of the applicant or DAH to comply by the compliance time.

Today's proposal would require TC holders and applicants for TCs to correct a deficient plan, or deficiencies in implementing the plan, in a manner identified by the FAA Oversight Office. Before the FAA formally notifies a TC holder or TC applicant of deficiencies, we intend to establish a mutual understanding of the deficiencies and a way to correct them. Therefore, the notification referred to in this paragraph should document the corrective action. The TC holder or applicant will then have 30 days to implement the corrective action.

The ability of an operator to comply with the AASFR is dependent on TC holders, certain STC holders, and applicants complying on time with the approved compliance plan requirements. The FAA will carefully monitor compliance and take appropriate action if necessary to help ensure timely compliance. Failure to comply by the specified dates would constitute a violation of the requirements and may subject the violator to certificate action to amend, suspend, or revoke the affected certificate (49 U.S.C. 44709). It may also subject the violator to a civil penalty of not more than $25,000 per day, per certificate until the violator complies with these requirements (49 U.S.C. 46301).

For those persons applying after the effective date of the rule for STCs or amendments to TCs, the affected persons would not have to address DT for repairs and alterations until a compliance plan defining the certification basis for the overall STC or amended TC is needed. The proposal also specifies compliance dates for submitting compliance plans for evaluating design changes and developing service information for maintenance actions that must be performed. The compliance dates for the affected persons are as follows:

- Holders of TCs—no later than 90 days after the effective date of the rule.
- Holders of STCs—no later than 180 days after the effective date of the rule.
- Applicants for STCs and amendments to TCs if the certificate was not issued before the effective date of the final rule—before the certification of STC or amended TC.

X. New Subparts for Airworthiness Operational Rules

As we discussed earlier in this preamble, today's proposal would create a new subpart I, Continued Airworthiness and Safety Improvements, in part 25. This new subpart would provide a common location for rules that impose ongoing responsibilities on DAHs. In addition, the FAA proposes to create new subparts for airworthiness-related operational rules to provide a common location for these rules. The FAA believes creating new subparts where these rules could be located will enhance the reader's ability to readily identify rules pertinent to continued airworthiness. In addition, we believe this will ensure easy visibility of these requirements.

These new subparts would contain certain rules from other proposals (*e.g.*, Enhanced Airworthiness Program for Airplane Systems/Fuel Tank Safety (EAPAS/FTS)) and other existing and future rules related to the support of continued airworthiness. In particular, these new subparts would contain rules that address aging airplane issues. Unless stated otherwise in the specific aging airplane proposal, our purpose in moving requirements to these new subparts is to ensure easy visibility of those requirements applicable to the continued airworthiness of the airplane. We do not intend to change the legal effect of the requirements in any other way. In the context of today's proposal, the most significant effect of the proposed reorganization of the operational airworthiness requirements is to redesignate sections of the AASFR and place those sections in the new subparts. The affected sections include the supplemental inspection requirements, currently codified as §§ 121.370a and 129.16; the repair assessment for pressurized fuselages requirements, currently codified as §§ 121.370 and 129.32; and the aging airplane inspections and records reviews requirements, currently codified as §§ 121.368 and 129.33. This proposal would redesignate

- §§ 121.370a and 129.16 as § 121.1109 and § 129.109, respectively, and place them in new subparts AA and B, respectively.
- §§ 121.370 and 129.32 as § 121.1107 and § 129.107, respectively, and place them in new subparts AA and B, respectively.
- §§ 121.368 and 129.33 as §§ 121.1105 and 129.105, respectively, and place them in new subparts AA and B, respectively.

Some of the other planned aging airplane proposals include similar language that establishes the new operational subparts, redesignates certain sections of these rules, and establishes requirements common to each of the aging airplane proposals. In addition, certain of the proposals include new requirements specific to that rule. Today's proposal, however, does not include any new operational requirements. Once any one of the aging airplane proposals becomes a final rule, we will remove the duplicative requirements (*i.e.*, requirements that establish the new subparts and redesignate sections of certain operational rules) from the other aging airplane proposals.

XI. FAA Advisory Committee Tasking: Guidance Material

The FAA tasked the Aviation Rulemaking Advisory Committee (ARAC) [42] to help with the development of a process that operators can use for establishing DT data for repairs. The goal of this task was to have the ARAC develop guidance materials that would support industry compliance with the AASFR, as it applies to repairs affecting fatigue critical structure. The ARAC has developed guidelines and implementation schedules for existing and future repairs. These guidelines and implementation schedules are provided in proposed draft AC 120–XX, which the FAA has published with today's proposal. This AC will provide DAHs guidance for producing the DT data that would be necessary for compliance with this proposed rule. In addition, it will provide operators with a recommended process for incorporating DT data into their maintenance programs, after the data are approved by the FAA and made available to them.[43] We request comments on this draft AC.

XII. Paperwork Reduction Act

Information collection requirements in the AASFR have been previously approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)) and have been assigned OMB Control Numbers: 2120–0020 and 2120–0008. Part 129 record requirements can be found in

[42] 69 FR 26641, May 13, 2004.

[43] The means of incorporating the DT data into an air carrier's FAA-approved maintenance program is subject to approval by the certificate holder's Principal Maintenance Inspector (PMI) or other cognizant airworthiness inspector.

International Civil Aviation Organization Annexes.

The FAA reviewed data associated with compliance to the AASFR and data associated with this proposal. We have determined that this rule is a transfer of responsibility only and there is no additional paperwork burden on the public. The paperwork burden for compliance with the AASFR will be reduced as a result of today's proposal due to a reduction in the numbers of repairs and alterations that will need an individual damage tolerance assessment. This is because this proposal will require design approval holders to develop a streamlined approach for assessing repairs.

Under the Paperwork Reduction Act of 1995, (5 CFR 1320.8(b)(2)(vi)), an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

XIII. Regulatory Evaluation/Analysis

Regulatory Evaluation, Regulatory Flexibility Analysis, International Trade Impact Assessment, and Unfunded Mandates Assessment

Proposed 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 requires agencies to analyze the economic impact of regulatory changes on small entities. Third, the Trade Agreements Act (19 U.S.C. 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 requires agencies to consider international standards and, where appropriate, to 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).

The 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 proposal does not warrant a full evaluation, this order permits a statement to that effect. The basis for the minimal impact must 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 that determination follows.

The recently published Aging Airplane Safety final rule (AASFR) [44] requires airline operators of certain large transport category airplanes to implement damage tolerance (DT) based inspections and procedures for airplane structure susceptible to fatigue cracking that could contribute to catastrophic failure. This proposed rule is a counterpart to the AASFR. This proposed rule transfers the responsibility of developing DT data and documents from operators to Design Approval Holders (DAHs) and, therefore, has minimal to no costs. Additionally, the DAH requirements do not preclude DAHs from recouping their costs by seeking reasonable compensation from the operators for the proposal's required DT data and documents.

The purpose of this proposal is to ensure that operators have the necessary data and documents to support timely compliance with the requirements of §§ 121.370(a) and 129.16 of the AASFR. Timely operator compliance improves the safety of the fleet.

Existing certification and operational rules already require operators to implement the DT inspections and procedures this proposal would require DAHs to develop. Amendment 25–45 (or later) airplanes, affected by this proposal, are required by § 25.571 to incorporate damage tolerance inspections to the baseline structure, repairs, and alterations. On pre-Amendment 25–45 airplanes, DT inspection and procedures for the baseline structure are required by airworthiness directive (AD). In addition, damage tolerance inspections for repairs, alterations and modifications to affected Boeing 727 and 737–100/200 are also required by AD. Damage tolerance inspections for repairs to the pressurized fuselage [45] for certain pre-Amendment 25–45, airplanes [46] are required by § 121.370. By December 2010, damage tolerance inspections for the baseline structure and repairs, alterations, and modifications for the remaining pre-Amendment 25–45 affected airplanes will be required by §§ 121.370a and 129.16. Despite these requirements, in many cases, DT data and documents have not yet been developed for many repairs and alterations made to the affected airplanes.

The following table shows a summary of the regulatory requirements for DT inspection programs. The shaded areas in the table represent regulatory gaps filled by the AASFR (§ 121.370a) requirements to develop DT inspections and procedures for fatigue critical airplane structural areas.

Amendment level airplane models	Airplane damage tolerance requirements			
	Baseline structure	Repairs to fuselage & door skin, bulkhead webs	Repairs to all other areas	Alterations/modifications
25–45 or later 737–900, 757, 767, 777, MD11, ATR42, ATR72, F100, A320, A321, A318, A319, A300–600, A310, A340, A330, EMB 135, EMB 145, SAAB 340, SAAB 2000, CL–600, DHC–8, DO–328, BAE146, BAE Jetstream 4100.	Certification Basis: § 25.571. —Amdt 25–45 and later amendments require damage tolerance (DT) inspections.	Certification Basis: § 25.571. —Amdt 25–45 and later amendments require damage tolerance (DT) inspections.	Certification Basis: § 25.571. —Amdt 25–45 and later amendments require damage tolerance (DT) inspections.	Certification Basis: § 25.571. —Amdt 25–45 and later amendments require damage tolerance (DT) inspections.

[44] 70 FR 5518, February 2, 2005.

[45] Fuselage, door skins, and bulkhead webs.

[46] A–300 (excluding the –600 model), 707/720, 727, 737–300/400/500/600/700/800, 747, BAC 1–11, F–28, L–1011, DC–8, DC–9/MD–80, DC–10.

Amendment level airplane models	Airplane damage tolerance requirements			
	Baseline structure	Repairs to fuselage & door skin, bulkhead webs	Repairs to all other areas	Alterations/modifications
Pre 25–45 727, 737–100/200	SID[47] ADs	§ 121.370 (Repair Assessment Rule) and SID ADs.	SID ADs	SID ADs.
Pre 25–45 A300, 707, 720, 747, BAC 1–11, F–28, L–1011, DC–8, DC–9, MD–80, DC–10.	SID ADs	§ 121.370	121.370a	121.370a.
Pre 25–45 L–188, DHC–7	SID ADs	121.370a	121.370a	121.370a
Pre 25–45 F27, L–382	DT data has been developed.	121.370a	121.370a	121.370a.
Pre 25–45 737–300/400/500	A SID has been developed —AD is pending	§ 121.370	121.370a	121.370a.
Pre 25–45 737–600/700/800	A SID will be developed —An AD will need to be issued.	§ 121.370	121.370a	121.370a.

In summation, this proposed rule would transfer the responsibility from the existing requirements for developing DT based inspections and procedures from part 121 operators to DAHs. This would result in a decrease of the societal cost of compliance because the DAHs, with their greater expertise and access to design data, are in the best position to identify fatigue critical structure and methods and frequency of inspections operators need to comply with the AASFR. DAHs can develop these data with greater efficiency than individual operators and these costs would be amortized over a larger fleet. This proposed rule would ensure that the required data are developed in a timely manner to minimize the possibility for disruption of airline operations when the AASFR compliance deadline is reached.

The FAA has, therefore, determined this rulemaking action 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. In addition, the FAA has determined that this rulemaking action: (1) Would not have a significant economic impact on a substantial number of small entities; (2) would not affect international trade; and (3) would not impose an unfunded mandate on state, local, or tribal governments, or on the private sector. We solicit comments regarding these findings.

Regulatory Flexibility Analysis

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 business, organizations, and governmental jurisdictions subject to regulation.'' To achieve that principle, the RFA requires agencies to solicit and consider flexible regulatory proposals and to explain the rationale for their actions. 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 proposed or final 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 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 RFA provides that the head of the agency may so certify and a regulatory flexibility analysis is not required. The FAA believes the proposed rule would not have a significant economic impact on a substantial number of small entities.

The FAA recently adopted the Aging Airplane Safety final rule (AASFR),[48] which, among other things, requires airline operators of certain large transport category airplanes [49] to implement damage tolerance (DT) based inspections and procedures for airplane structure.

This proposed rule is a counterpart to the AASFR. By the effective date of this proposal, DT inspection programs, required by this proposal, will already be required by AD, certification or operational regulations for all part 121 airplanes affected by this proposal. The proposed rule would transfer the requirement to develop AASFR DT based inspections and procedures from part 121 operators to design approval holders (DAHs). A significant number of part 121 operators are small entities. By transferring the responsibility from part 121 operators to DAHs, this proposal would relieve small-entity part 121 operators of what could be a significant cost.

DAHs include manufacturers of part 25 airplanes and supplemental type certificate (STC) holders for repairs and alterations made to these airplanes.

The current United States part 25 airplane manufacturers include: Boeing, Cessna Aircraft, Gulfstream Aerospace, Learjet (owned by Bombardier), Lockheed Martin, McDonnell Douglas (a wholly owned subsidiary of The Boeing Company), and Raytheon Aircraft. These manufacturers would incur Type Certificate (TC) and Amended TC costs. Because all U.S. transport-aircraft category manufacturers have more than 1,500 employees, none are considered small entities.

STC holders include manufacturers and operators of part 25 airplanes, some of which are small-entities. Since the

[47] Supplemental Inspection Document.

[48] 70 FR 5518, February 2, 2005.

[49] The rule applies to turbine powered airplane models with a maximum type certificated passenger capacity of 30 or more, or a maximum payload capacity of 7,500 pounds or more.

DAH requirements do not preclude them from seeking reasonable compensation from the operators for the proposal's required DT data and documents, small-entities STC holders, with less than 1,500 employees, should be able to recoup their costs.

Therefore, the FAA certifies that this proposed rule would not have a significant economic impact on a substantial number of small entities. We request comments on this finding.

International Trade Impact Assessment

The Trade Agreement Act of 1979 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 effect of this proposed rule and determined that it would impose the same costs on domestic and international entities and thus have a neutral trade impact.

Unfunded Mandate Assessment

The Unfunded Mandate Reform Act of 1995 (the Act) 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 an expenditure of $100 million or more (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.'' The FAA currently uses an inflation-adjusted value of $120.7 million in lieu of $100 million.

This proposal does not contain such a mandate. The requirements of Title II do not apply.

List of Subjects

14 CFR Part 25

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

14 CFR Part 121

Air carriers, Aircraft, Airmen, Alcohol abuse, Aviation safety, Charter flights, Drug abuse, Drug testing, Reporting and recordkeeping requirements, Safety, Transportation.

14 CFR Part 129

Air carriers, Aircraft, Aviation safety, Reporting and recordkeeping requirements, Security measures, Smoking.

XIV. The Proposed Amendments

In consideration of the foregoing, the Federal Aviation Administration proposes to amend Chapter I of Title 14, Code of Federal Regulations part 25 as follows:

PART 25—AIRWORTHINESS STANDARDS: TRANSPORT CATEGORY AIRPLANES

1. The authority citation for part 25 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701, 44702 and 44704.

2. Amend § 25.1 by adding a new paragraph (c) to read as follows:

§ 25.1 Applicability.

* * * * *

(c) This part also establishes requirements for holders of type certificates and supplemental type certificates to take actions necessary to support the continued airworthiness of transport category airplanes.

3. Add a new section § 25.3 to read as follows:

§ 25.3 Design approval holder requirements.

Subpart I of this part contains requirements that apply to—

(a) Holders of type certificates and supplemental type certificates; and

(b) Applicants for type certificates and changes to those certificates.

4. Amend part 25 by adding a new subpart I to read as follows:

Subpart I—Continued Airworthiness

Sec.
25.1801 Purpose and definition.

Supplemental Structural Inspections

25.1823 Holders of type certificates—Repairs.
25.1825 Holders of type certificates—Alterations and repairs to alterations.
25.1827 Holders of and applicants for a supplemental type certificate—Alterations and repairs to alterations.
25.1829 Compliance plan.

Subpart I—Continued Airworthiness

§ 25.1801 Purpose and definition.

(a) This subpart establishes requirements for support of the continued airworthiness of transport category airplanes. These requirements may include performing assessments, developing design changes, developing revisions to Instructions for Continued Airworthiness, and making necessary documentation available to affected persons. This subpart applies to the following persons as specified in each section of this subpart:

(1) Holders of type certificates and supplemental type certificates.

(2) Applicants for type certificates and changes to those certificates (including services bulletins describing design changes). Applicants for changes to type certificates must comply with the requirements of this subpart in addition to the airworthiness requirements determined applicable under § 21.101 of this subchapter.

(b) For purposes of this subpart, the FAA Oversight Office is the aircraft certification office or office of the Transport Airplane Directorate with oversight responsibility for the relevant type certificate or supplemental type certificate, as determined by the Administrator.

Supplemental Structural Inspections

§ 25.1823 Holders of type certificates—Repairs.

(a) *Applicability.* Except as specified in paragraph (h) of this section, this section applies to transport category, turbine powered airplane models with a type certificate issued after January 1, 1958, that as a result of original type certification or later increase in capacity have—

(1) A maximum type certificated passenger seating capacity of 30 or more; or

(2) A maximum payload capacity of 7,500 pounds or more.

(b) *Definitions.* The following definitions apply to this section and §§ 25.1825, 25.1827, and 25.1829 of this subpart:

Affects means structure has been physically repaired, altered, or modified, or the structural loads acting on the structure have been increased or redistributed.

Baseline structure means structure that is designed under the original type certificate or amended type certificate for that airplane model.

Damage Tolerance Evaluation (DTE) means a process that leads to a determination of maintenance actions necessary to detect or preclude fatigue cracking that could contribute to a catastrophic failure. As applied to repairs and alterations, DTE includes the evaluation both of the repair or alteration and of the fatigue critical structure affected by the repair or alteration.

Damage Tolerance Inspection (DTI) means inspections and other procedures developed as a result of a DTE. These include the location of the airplane

structure to be inspected, the inspection method, the threshold and interval associated with those inspections, and corrective maintenance actions. In some cases the corrective actions may include replacement of structure. If the DTE concludes that damage tolerance based supplemental structural inspections are not necessary for a repair or alteration that affects fatigue critical structure, the DTI would contain a statement to that effect.

DT Data means DTE documentation and DTI.

DT data implementation schedule consists of documentation that establishes the timing for accomplishing the necessary actions for developing DT data for repairs and alterations, and for incorporating those data into an operator's continuing airworthiness maintenance program.

DTE documentation means data that identifies the evaluated fatigue critical structure, the basic assumptions applied in a DTE, and the results of a DTE.

Fatigue critical structure means airplane structure that is susceptible to fatigue cracking that could contribute to a catastrophic failure, as determined in accordance with § 25.571 of this part. Such structure may be part of the baseline structure or part of an alteration.

Published repair data means generally applicable instructions for accomplishing repairs, such as those provided in structural repair manuals and service bulletins.

(c) *List of fatigue critical baseline structure.* For airplanes specified in paragraph (a) of this section, the holder of a type certificate must:

(1) Identify fatigue critical baseline structure for all airplane model variations and derivatives approved under the type certificate.

(2) Develop and submit to the FAA Oversight Office for review and approval, a list of the structure identified in (c)(1) and, upon approval, make the list available to persons required to comply with § 25.1827 of this part and §§ 121.1109 and 129.109 of this chapter.

(d) *Existing and future published repair data.* For repair data published by a holder of a type certificate that is current as of [effective date of the final rule] and for all later published repair data, the holder of a type certificate must:

(1) Review the repair data, and identify each repair specified in the data that affects fatigue critical baseline structure identified in paragraph (c)(1).

(2) Perform a DTE and develop DTI for each repair identified in paragraph (d)(1), unless previously accomplished.

(3) Submit the DT data to the FAA Oversight Office or its properly authorized designees for review and approval.

(4) Upon approval, make the DTI available to persons required to comply with §§ 121.1109 and 129.109 of this chapter.

(e) *Future repair data not published.* For repair data developed by a holder of a type certificate that is approved after [effective date of the final rule] and is not published, the type certificate holder must accomplish the following for repairs specified in the repair data that affect fatigue critical baseline structure:

(1) Perform a DTE and develop DTI in accordance with the approved DT data implementation schedule developed for compliance with paragraph (f)(1)(iii) of this section.

(2) Submit the DT data in accordance with the implementation schedule for review and approval by the FAA Oversight Office or its properly authorized designees.

(3) Upon approval, make the approved DTI available to persons required to comply with §§ 121.1109 and 129.109 of this chapter.

(f) *Repair Evaluation Guidelines.* The holder of a type certificate for each airplane model subject to this section must—

(1) Develop repair evaluation guidelines for operators' use that include—

(i) A process for conducting surveys of affected airplanes that will enable identification and documentation of all existing repairs that affect fatigue critical baseline structure identified in paragraph (c)(1) of this section and § 25.1825(b)(2) of this part;

(ii) A process for establishing DT data for repairs identified in paragraph (f)(1)(i);

(iii) A DT data implementation schedule for repairs covered by the repair evaluation guidelines.

(2) Submit the repair evaluation guidelines to the FAA Oversight Office for review and approval. (3)Upon approval, make the guidelines available to persons required to comply with § 25.1827 of this part and §§ 121.1109 and 129.109 of this chapter.

(4) If the guidelines direct the operator to obtain assistance from the holder of a type certificate, provide such assistance in accordance with the DT data implementation schedule.

(g) *Compliance times.* Holders of type certificates must submit the following to the FAA Oversight Office or its properly authorized designees for review and approval by the specified compliance time:

(1) The list of fatigue critical baseline structure required by paragraph (c)(2) of this section must be submitted no later than 90 days after [the effective date of the rule].

(2) For published repair data that is current as of [the effective date of the rule], the DT data required by paragraph (d)(3) of this section must be submitted by June 30, 2009.

(3) For repair data published after [the effective date of the rule], the DT data required by paragraph (d)(3) of this section must be submitted before FAA approval of the repair data.

(4) The repair evaluation guidelines required by paragraph (f)(1) of this section must be submitted by December 30, 2009.

(h) *Exceptions.* The requirements of this section do not apply to the following ransport category airplane models:

(1) Convair CV–240, 340, 440, if modified to include turbine engines.

(2) Vickers Armstrong Viscount, TCDS No. A–814.

(3) Douglas DC–3, if modified to include turbine engines, TCDS No. A–618.

(4) Bombardier CL–44, TCDS No. 1A20.

(5) Mitsubishi YS–11, TCDS No. A1PC.

(6) British Aerospace BAC 1–11, TCDS No. A5EU.

(7) Concorde, TCDS No. A45EU.

(8) deHavilland D.H. 106 Comet 4C, TCDS No. 7A10.

(9) VFW-Vereinigte Flugtechnische Werk VFW–614, TCDS No. A39EU.

(10) Illyushin Aviation IL 96T, TCDS No. A54NM.

(11) Bristol Aircraft Britannia 305, TCDS No. 7A2.

(12) Handley Page Herald Type 300, TCDS No. A21N.

(13) Avions Marcel Dassault—Breguet Aviation Mercure 100C, TCDS No. A40EU.

(14) Airbus Caravelle, TCDS No. 7A6.

§ 25.1825 Holders of type certificates—Alterations and repairs to alterations.

(a) *Applicability.* This section applies to transport category airplanes subject to § 25.1823 of this part.

(b) *Fatigue critical alteration structure.* For each existing alteration, developed by the holder of a type certificate, the holder of a type certificate must:

(1) Review existing alteration data and identify all alterations that affect fatigue critical baseline structure identified in § 25.1823(c)(1) of this part.

(2) For each alteration identified in paragraph (b)(1) of this section, identify any fatigue critical alteration structure.

(3) Develop and submit to the FAA Oversight Office for review and approval a list of the structure identified in paragraph (b)(2) of this section.

(4) Upon approval, make the list required in paragraph (b)(2) of this section available to persons required to comply with §§ 121.1109 and 129.109 of this chapter.

(c) *DT Data For Alterations.* For each existing and future alteration developed by a holder of a type certificate, that affects fatigue critical baseline structure identified in § 25.1823(c)(1) of this part, unless previously accomplished, the type certificate holder must:

(1) Perform a DTE and develop DTI for the alteration.

(2) Submit the DT data developed in accordance with paragraph (c)(1) of this section to the FAA Oversight Office or its properly authorized designees for review and approval.

(3) Upon approval, make the DTI available to persons required to comply with §§ 121.1109 and 129.109 of this chapter.

(d) *DT Data for Repairs Made to Alterations.* For existing and future repair data developed by a holder of a type certificate, the type certificate holder must:

(1) Review the repair data, and identify each repair that affects any fatigue critical alteration structure identified in paragraph (b)(2) of this section.

(2) For each repair identified in (d)(1) of this section, unless previously accomplished, perform a DTE and develop DTI.

(3) Submit the DT data developed in accordance with paragraph (d)(2) of this section to the FAA Oversight Office or its properly authorized designees for review and approval;

(4) Upon approval, make the DTI available to persons required to comply with §§ 121.1109 and 129.109 of this chapter.

(e) *Compliance times.* Holders of type certificates must submit the following to the FAA Oversight Office or its properly authorized designees for review and approval by the specified compliance time:

(1) The list of fatigue critical alteration structure required by paragraph (b)(2) of this section must be submitted no later than 90 days after [the effective date of the rule].

(2) For alteration data developed and approved before [the effective date of the rule], the DT data required by paragraph (c)(2) of this section must be submitted by June 30, 2009.

(3) For alteration data approved on or after [the effective date of the rule], DT data required by paragraph (c)(2) of this section must be submitted before initial approval of the alteration data.

(4) For repair data developed and approved before [the effective date of the rule], the DT data required by paragraph (d)(3) of this section must be submitted by June 30, 2009.

(5) For repair data developed and approved after [the effective date of the rule], the DT data required by paragraph (d)(3) of this section, must be submitted within 12 months after initial approval of the repair data and before making the DT data available to persons required to comply with §§ 121.1109 and 129.109 of this chapter.

§ 25.1827 Holders of and applicants for a supplemental type certificate—Alterations and repairs to alterations.

(a) *Applicability.* This section applies to transport category airplanes subject to § 25.1823 of this part.

(b) *Fatigue critical alteration structure.* For each existing alteration developed by the holder of a supplemental type certificate, the STC holder must:

(1) Review existing alteration data and identify all alterations that affect fatigue critical baseline structure identified in § 25.1823(c)(1) of this part.

(2) For each alteration identified in paragraph (b)(1) of this section, identify any fatigue critical alteration structure.

(3) Develop and submit to the FAA Oversight Office or its properly authorized designees for review and approval a list of the structure identified in paragraph (b)(2) of this section.

(4) Upon approval, make the list required in paragraph (b)(2) of this section available to persons required to comply with §§ 121.1109 and 129.109 of this chapter.

(c) *DT Data for Alterations.* For each existing and future alteration developed by the holder of a supplemental type certificate that affects fatigue critical baseline structure identified in § 25.1823(c)(1) of this part, unless previously accomplished, the holder of a supplemental type certificate must:

(1) Perform a DTE and develop DTI for the alteration.

(2) Submit the DT data developed in accordance with paragraph (c)(1) of this section to the FAA Oversight Office or its properly authorized designees for review and approval.

(3) Upon approval, make the DTI available to persons required to comply with §§ 121.1109 and 129.109 of this chapter.

(d) *DT data for repairs made to alterations.* For existing and future repair data developed by a holder of a supplemental type certificate holder, the supplemental type certificate holder must:

(1) Review the repair data, and identify each repair that affects any fatigue critical alteration structure identified in paragraph (b)(2) of this section.

(2) For each repair identified in paragraph (d)(1) of this section, unless previously accomplished, perform a DTE and develop DTI.

(3) Submit the DT data developed in accordance with paragraph (d)(2) of this section to the FAA Oversight Office or its properly authorized designees for review and approval;

(4) Upon approval, make the DTI available to persons required to comply with §§ 121.1109 and 129.109 of this chapter.

(e) *Compliance times.* Holders of supplemental type certificates must submit the following to the FAA Oversight Office or its properly authorized designees for review and approval by the specified compliance time:

(1) The list of fatigue critical alteration structure required by paragraph (b)(3) of this section must be submitted no later than 270 days after [the effective date of the rule].

(2) For alteration data developed and approved before [the effective date of the rule], the DT data required by paragraph (c)(2) of this section must be submitted by June 30, 2009.

(3) For alteration data developed after [the effective date of the rule], the DT data required by paragraph (c)(2) of this section must be submitted before approval of the alteration data and before making it available to persons required to comply with §§ 121.1109 and 129.109 of this chapter.

(4) For repair data developed and approved before [the effective date of the rule], the DT data required by paragraph (d)(3) of this section must be submitted by June 30, 2009.

(5) For repair data developed and approved after [the effective date of the rule], the DT data required by paragraph (d)(3) of this section, must be submitted within 12 months after initial approval of the repair data and before making the DT data available to persons required to comply with §§ 121.1109 and 129.109 of this chapter.

§ 25.1829 Compliance plan.

(a) *Compliance plan.* Each person identified in §§ 25.1823, 25.1825, and 25.1827 of this subpart must submit a compliance plan consisting of the following:

(1) A project schedule identifying all major milestones for meeting the compliance times specified in §§ 25.1823(d) and (f), 25.1825(c) and (d),

and 25.1827(c) and (d) of this subpart, as applicable.

(2) A proposed means of compliance with §§ 25.1823, 25.1825, and 25.1827 of this subpart, as applicable.

(3) If the proposed means of compliance differs from that described in FAA guidance, an explanation of how the alternative means of compliance will be shown to comply with §§ 25.1823, 25.1825, and 25.1827 of this subpart.

(4) A plan for submitting a draft of all compliance items required by this section for review by the FAA Oversight Office not less than 60 days before the applicable compliance date.

(5) A process for continually assessing service information related to structural fatigue damage.

(b) *Compliance dates for compliance plans.* The following persons must submit the compliance plan described in paragraph (a) of this section to the FAA Oversight Office for approval on the following schedule—

(1) For holders of type certificates, no later than 90 days after [the effective date of the rule].

(2) For holders of supplemental type certificates no later than 180 days after [the effective date of the rule].

(3) For applicants for changes to type certificates no later than December 30, 2007 or 90 days after the date of application, whichever occurs later.

(c) *Compliance Plan Deficiencies.* Each affected person must implement the compliance plan as approved in compliance with paragraph (a) of this section. If either paragraph (c)(1) or (2) of this section applies, the affected person must submit a corrected plan to the FAA oversight office and implement the corrected plan within 30 days after:

(1) The FAA oversight office notifies the affected person of deficiencies in the proposed compliance plan and how to correct them; or

(2) The FAA oversight office notifies the affected person of deficiencies in the person's implementation of the plan and how to correct them.

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

5. The authority citation for part 121 continues to read:

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.

6. Amend § 121.1 by adding a new paragraph (g) to read as follows:

* * * * *

(g) This part also establishes requirements for operators to take actions to support the continued airworthiness of each airplane.

7. Amend part 121 by adding subpart AA, consisting of §§ 121.1101, 121.1103, 121.1111, 121.1113, and 121.1115, to read as follows:

Subpart AA—Continued Airworthiness and Safety Improvements

Sec.
121.1101 Purpose and definition.
121.1103 [Reserved]
121.1111 [Reserved]
121.1113 [Reserved]
121.1115 [Reserved]

Subpart AA—Continued Airworthiness and Safety Improvements

§ 121.1101 Purpose and definition.

(a) This subpart requires persons holding an air carrier or operating certificate under part 119 of this chapter to support the continued airworthiness of each airplane. These requirements may include, but are not limited to, revising the maintenance program, incorporating design changes, and incorporating revisions to Instructions for Continued Airworthiness.

(b) For purposes of this subpart, the ''FAA Oversight Office'' is the aircraft certification office or office of the Transport Airplane Directorate with oversight responsibility for the relevant type certificate or supplemental type certificate, as determined by the Administrator.

§ 121.1103 [Reserved]

§ 121.1111 [Reserved]

§ 121.1113 [Reserved]

§ 121.1115 [Reserved]

§ 121.368 [Redesignated]

8. Redesignate § 121.368 as § 121.1105.

§ 121.368 [Added and Reserved]

9. A new § 121.368 is added and reserved.

§ 121.370 [Redesignated]

10. Redesignate § 121.370 as § 121.1107.

§ 121.370 [Added and Reserved]

11. A new § 121.370 is added and reserved.

§ 121.370a [Redesignated]

12. Redesignate § 121.370a as § 121.1109.

§ 121.370a [Added and Reserved]

13. A new § 121.370a is added and reserved.

PART 129—OPERATIONS: FOREIGN AIR CARRIERS AND FOREIGN OPERATORS OF U.S.-REGISTERED AIRCRAFT ENGAGED IN COMMON CARRIAGE

14. The authority citation for part 129 continues to read as follows:

Authority: 49 U.S.C. 1372, 49113, 440119, 44101, 44701–44702, 447–5, 44709–44711, 44713, 44716–44717, 44722, 44901–44904, 44906, 44912, 44105, Pub. L. 107–71 sec. 104.

15. Amend § 129.1 by revising paragraph (b), and adding a new paragraph (d) to read as follows:

§ 129.1 Applicability and definition.

* * * * *

(b) *Operations of U.S.-registered aircraft solely outside the United States.* In addition to the operations specified under paragraph (a) of this section, §§ 129.14 and 129.20 and subpart B of this part also apply to U.S.-registered aircraft operated solely outside the United States in common carriage by a foreign person or foreign air carrier.

* * * * *

(d) This part also establishes requirements for an operator to take actions to support the continued airworthiness of each airplane.

* * * * *

16. Amend part 129 by designating existing §§ 129.1 through § 129.33 as subpart A and by adding the heading to read as follows:

Subpart A—General

17. Amend part 129 to adding subpart B to read as follows:

Subpart B—Continued Airworthiness and Safety Improvements

Sec.
129.101 Purpose and definition.
129.103–129.115 [Reserved]
129.117 [Reserved]

Subpart B—Continued Airworthiness and Safety Improvements

§ 129.101 Purpose and definition.

(a) This subpart requires a foreign person or foreign air carrier operating a U.S.-registered airplane in common carriage to support the continued airworthiness of each airplane. These requirements may include, but are not limited to, revising the maintenance program, incorporating design changes, and incorporating revisions to Instructions for Continued Airworthiness.

(b) For purposes of this subpart, the ''FAA Oversight Office'' is the aircraft certification office or office of the Transport Airplane Directorate with

oversight responsibility for the relevant type certificate or supplemental type certificate, as determined by the Administrator.

§ 129.103–129.115 [Reserved]

§ 129.117 [Reserved]

18. Redesignate § 129.16 as new § 129.109.

§ 129.16 [Added and Reserved]

19. A new § 129.16 is added and reserved.

§ 129.32 [Redesignated]

20. Redesignate § 129.32 as new § 129.107.

§ 129.32 [Added and Reserved]

21. A new § 129.32 is added and reserved.

§ 129.33 [Redesignated]

22. Redesignate § 129.33 as new § 129.105.

§ 129.33 [Added and Reserved]

23. A new § 129.33 is added and reserved.

Issued in Washington, DC, on April 13, 2006.

James J. Ballough,

Director, Flight Standards Service, Aviation Safety.

Dorenda D. Baker,

Acting Director, Aircraft Certification Service, Aviation Safety.

[FR Doc. 06–3758 Filed 4–20–06; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2006–24523; Directorate Identifier 2006–NM–057–AD]

RIN 2120–AA64

Airworthiness Directives; Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model ERJ 170 Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain EMBRAER Model ERJ 170 airplanes. This proposed AD would require inspecting for excess sealant applied to the attachment bolts of the negative pressure relief valve, and performing corrective actions if necessary. This proposed AD results from reports that excess sealant was applied to the attachment bolts of the negative pressure relief valve, which interfered with the valve's movable diaphragm. We are proposing this AD to prevent incorrect operation of the negative pressure relief valve, which could result in negative pressures that exceed the structural strength limits of the airframe and lead to reduced structural integrity of the airplane.

DATES: We must receive comments on this proposed AD by May 22, 2006.

ADDRESSES: Use one of the following addresses to submit comments on this proposed AD.

- *DOT Docket Web site:* Go to *http://dms.dot.gov* and follow the instructions for sending your comments electronically.
- *Government-wide rulemaking Web site:* Go to *http://www.regulations.gov* and follow the instructions for sending your comments electronically.
- *Mail:* Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, room PL–401, Washington, DC 20590.
- *Fax:* (202) 493–2251.
- *Hand Delivery:* Room PL–401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Contact Empresa Brasileira de Aeronautica S.A. (EMBRAER), P.O. Box 343—CEP 12.225, Sao Jose dos Campos—SP, Brazil, for service information identified in this proposed AD.

FOR FURTHER INFORMATION CONTACT: Todd Thompson, Aerospace Engineer, International Branch, ANM–116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055–4056; telephone (425) 227–1175; fax (425) 227–1149.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to submit any relevant written data, views, or arguments regarding this proposed AD. Send your comments to an address listed in the **ADDRESSES** section. Include the docket number ''FAA–2006–24523; Directorate Identifier 2006–NM–057–AD'' at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the proposed AD. We will consider all comments received by the closing date and may amend the proposed AD in light of those comments.

We will post all comments we receive, without change, to *http://dms.dot.gov*, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this proposed AD. Using the search function of that Web site, anyone can find and read the comments in any of our dockets, including the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477–78), or you may visit *http://dms.dot.gov.*

Examining the Docket

You may examine the AD docket on the Internet at *http://dms.dot.gov*, or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647–5227) is located on the plaza level of the Nassif Building at the DOT street address stated in the **ADDRESSES** section. Comments will be available in the AD docket shortly after the Docket Management System receives them.

Discussion

The Departamento de Aviacao Civil (DAC), which is the airworthiness authority for Brazil, notified us that an unsafe condition may exist on certain EMBRAER Model ERJ 170 airplanes. The DAC advises that it has received several reports that excess sealant was applied to the attachment bolts of the negative pressure relief valve, which interfered with the valve's movable diaphragm. This condition, if not corrected, could cause incorrect operation of the negative pressure relief valve, which could result in negative pressures that exceed the structural strength limits of the airframe and lead to reduced structural integrity of the airplane.

Relevant Service Information

EMBRAER has issued Service Bulletin 170–21–0014, dated August 19, 2005. The service bulletin describes procedures for examining the attachment bolts of the negative pressure relief valve for excess sealant, and performing corrective actions if necessary. Corrective actions include removing excess sealant, cleaning the affected area, and, if necessary, removing all the sealant and reapplying new sealant. Accomplishing the actions specified in the service information is intended to adequately address the unsafe condition. The DAC mandated the service information and issued