Executive order, including E.O. 12968, as amended, and the agency's own procedural regulations, and must:

(a) Ensure that the records used in making the decision are accurate, relevant, timely, and complete to the extent reasonably necessary to assure fairness to the individual in any determination;

(b) Consider all available, relevant information in reaching its final decision; and

(c) At a minimum, subject to requirements of law, rule, regulation, or Executive order:

(1) Provide the individual concerned notice of the specific reason(s) for the decision, an opportunity to respond, and notice of appeal rights, if any; and

(2) Keep any record of the agency action required by OPM as published in its issuances.

§ 1400.302 Reporting to OPM.

(a) Each agency conducting an investigation under E.O. 10450 is required to notify OPM when the investigation is initiated and when it is completed.

(b) Agencies must report to OPM an adjudicative determination and action taken with respect to an individual investigated pursuant to E.O. 10450 as soon as possible and in no event later than 90 days after receipt of the final report of investigation.

(c) To comply with process efficiency requirements, additional data may be collected from agencies conducting investigations or taking action under this part. These collections will be identified in separate OPM guidance, issued as necessary under 5 CFR 732.103.

[FR Doc. 2013–12556 Filed 5–23–13; 11:15 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No.: FAA–2013–0142; Notice No. 25–139]

RIN 2120–AK12

Harmonization of Airworthiness Standards—Gust and Maneuver Load Requirements

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to amend certain airworthiness regulations for transport category airplanes based on recommendations from the Aviation Rulemaking Advisory Committee (ARAC). Adopting this proposal would eliminate certain regulatory differences between the airworthiness standards of the FAA and European Aviation Safety Agency (EASA) without affecting current industry design practices. This action would revise the pitch maneuver design loads criteria; revise the gust and turbulence design loads criteria; revise the application of gust loads to engine mounts, high lift devices, and other control surfaces; add a ''round-the-clock'' discrete gust criterion and a multi-axis discrete gust criterion for airplanes equipped with wing-mounted engines; revise the engine torque loads criteria; add an engine failure dynamic load condition; revise the ground gust design loads criteria; revise the criteria used to establish the rough air design speed, and require the establishment of a rough air Mach number.

DATES: Send comments on or before August 26, 2013.

ADDRESSES: Send comments identified by docket number FAA–2013–0142 using any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov* and follow the online instructions for sending your comments electronically.
- *Mail:* Send comments to Docket Operations, M–30; U.S. Department of Transportation (DOT), 1200 New Jersey Avenue SE., Room W12–140, West Building Ground Floor, Washington, DC 20590–0001.
- *Hand Delivery or Courier:* Take comments to Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- *Fax:* Fax comments to Docket Operations at (202) 493–2251.

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

Privacy: The FAA will post all comments it receives, without change, to *http://www.regulations.gov,* including any personal information the commenter provides. Using the search function of the docket Web site, anyone can find and read the electronic form of all comments received into any FAA dockets, including the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.). DOT's complete Privacy Act Statement can be found in the **Federal Register** published on April 11, 2000 (65 FR 19477–19478), as well as at *http://DocketsInfo.dot.gov.*

Docket: Background documents or comments received may be read at *http://www.regulations.gov* at any time. Follow the online instructions for accessing the docket or go to the Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: For technical questions concerning this action, contact Todd Martin, Airframe and Cabin Safety Branch, ANM–115, Transport Airplane Directorate, Aircraft Certification Service, Federal Aviation Administration, 1601 Lind Avenue SW., Renton, WA 98057–3356; telephone (425) 227–1178; facsimile (425) 227–1232; email *Todd.Martin@faa.gov.*

For legal questions concerning this action, contact Sean Howe, Office of the Regional Counsel, ANM–7, Federal Aviation Administration, 1601 Lind Avenue SW., Renton, Washington 98057–3356; telephone (425) 227–2591; facsimile (425) 227–1007; email *Sean.Howe@faa.gov.*

SUPPLEMENTARY INFORMATION:

Authority for This Rulemaking

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

This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, ''General Requirements.'' Under that section, the FAA is charged with promoting safe flight of civil aircraft in air commerce by prescribing regulations and minimum standards for the design and performance of aircraft that the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority. It prescribes new safety standards for the design and operation of transport category airplanes.

I. Overview of Proposed Rule

The FAA proposes to amend the airworthiness regulations described below. This action would harmonize Title 14, Code of Federal Regulations (14 CFR) part 25 requirements with the corresponding requirements in Book 1 of EASA Certification Specifications and Acceptable Means of Compliance for Large Aeroplanes (CS–25).

The following proposals result from ARAC recommendations made to the FAA and EASA:

1. Amend § 25.331, ''Symmetric maneuvering conditions;''

2. Amend § 25.341, ''Gust and turbulence loads;''

3. Amend § 25.343, ''Design fuel and oil loads;''

4. Amend § 25.345, ''High lift devices;''

5. Amend § 25.361, ''Engine torque;''

6. Add § 25.362, ''Engine failure loads;''

7. Amend § 25.371, ''Gyroscopic loads;''

8. Amend § 25.373, ''Speed control devices;''

9. Amend § 25.391, ''Control surface loads: General;''

10. Amend § 25.395, ''Control system;''

11. Amend § 25.415, ''Ground gust conditions;''

12. Amend § 25.1517, ''Rough air speed, V_{RA};''

13. Remove appendix G, ''Continuous Gust Design Criteria.''

II. Background

Part 25 prescribes airworthiness standards for type certification of transport category airplanes for products certified in the United States. EASA CS–25 Book 1 prescribes the corresponding airworthiness standards for products certified in Europe. While part 25 and CS–25 Book 1 are similar, they differ in several respects. To improve certification efficiency, the FAA tasked ARAC through the Loads and Dynamics Harmonization Working Group (LDHWG) to review existing structures regulations and recommend changes that would eliminate differences between the U.S. and European airworthiness standards, while maintaining or improving the level of safety in the current regulations.

All of the proposals below are based on LDHWG recommendations, which EASA has already incorporated into CS–25 Book 1. The FAA agrees with the ARAC recommendations as adopted by EASA, and we propose to amend part 25 accordingly. The proposals are not expected to be controversial and should reduce certification costs to industry without adversely affecting safety. The complete analyses for the proposed changes made in response to ARAC recommendations can be found in the ARAC recommendation reports, located in the docket for this rulemaking.

Note: In most cases, the language and diagrams in this proposed rule are similar to related rules found in CS–25, Book 1 with one exception: The FAA uses the term ''flight deck'' where EASA uses the term ''cockpit.'' The meaning and intent of these terms are the same.

III. Discussion of the Proposal

A. Revise ''Symmetric Maneuvering Conditions'' (§ 25.331)

Section 25.331(c)(2) currently prescribes a checked pitching maneuver (a design load condition) in which the flight deck pitch control is first displaced in a nose-up direction, then the control is displaced in the opposite direction sufficient to ''check'' the pitching motion. The control displacements must develop specified nose-up and nose-down pitching accelerations. The pitching accelerations prescribed in the current regulations do not account for the size, configuration, or characteristics of the airplane. Also, the current regulations do not fully account for the characteristics of advanced electronic flight control systems in which the achievable maneuvering load factors are governed by computer control laws.

We propose to revise § 25.331(c)(2) based on the recommendation from the LDHWG. The proposed requirement would prescribe both positive and negative checked pitch maneuver loads that take into account the size of the airplane and any effects of the flight control system. We would also revise the introductory paragraph, § 25.331(c), by moving some criteria to § 25.331(c)(2) where those criteria apply.

The LDHWG recommended a checked pitching maneuver requirement that was based on the corresponding requirement in the former Joint Aviation Regulations (JAR) but with some modifications to account for advanced flight control systems. The proposal specifies a control input in the form of a sine wave as a baseline control motion. This control motion is applied with the initial movement in the nose-up direction so that the maximum positive limit maneuvering load factor is achieved. As a separate condition, the control motion is applied with the initial movement in the nose-down direction, so that a maneuvering load factor of 0g is reached. In both cases, the control motion is applied at a frequency related to the short-period rigid body mode of the airplane. The short-period rigid body mode is one of the two longitudinal stability modes that are inherent in every airplane and identified during the design phase.

In cases where the load factors are not achievable with a simple sine wave using amplitude that fits within the limits of the control stops or the pilot effort limits, a modified sine wave within these limits is required with a dwell at the maximum control displacement. The time delay is varied to the extent necessary to achieve the specified load factors up to a maximum time beyond which the maneuver would no longer be considered rational.

These actions would harmonize § 25.331 with the corresponding EASA standards.

B. Revise ''Gust and Turbulence Loads'' (§ 25.341) and ''Continuous Gust Design Criteria'' (Appendix G to Part 25)

Section 25.341 requires that the airplane be designed for gust and turbulence loads. These loads are currently specified in § 25.341(a) Discrete Gust Design Criteria (representing a singular gust), and § 25.341(b) Continuous Gust Design Criteria (representing continuous turbulence). Section 25.341(b) references the continuous gust criteria specified in appendix G of part 25 and requires that these criteria be used for the evaluation of continuous turbulence. We propose to:

1. Remove appendix G and specify the continuous turbulence requirement directly in § 25.341(b); and remove the optional mission analysis method currently specified in appendix G in favor of the design envelope analysis method.

The elimination of the optional mission analysis method would not be significant since few manufacturers currently use it as the primary means of addressing continuous turbulence. The LDHWG determined that predicting the mission is not always reliable since missions can change after the airplane goes into operation. Furthermore, the mission analysis design loads are sensitive to small changes in the definition of the aircraft mission. Therefore, small variations in approach can provide inconsistent results. The elimination of the mission analysis method leaves only the design envelope analysis method.

2. Revise the turbulence intensity criteria in § 25.341(b) to take into account in-service measurements of derived gust intensities.

The FAA and other organizations have endeavored to better define the atmospheric model to be used for gust and turbulence loads. The Civil Aviation Authority (CAA) of the United Kingdom conducted a comprehensive gust measurement program for transport airplanes in airline service. The program, called Civil Aircraft Airworthiness Data Recording Program (CAADRP), resulted in an extensive collection of reliable gust data that provided an improved insight into the distribution of gusts in the atmosphere. The FAA already revised § 25.341(a) (Amendment 25–86, 61 FR 5218, dated February 9, 1996) to provide a revised discrete gust methodology along with a refined gust distribution model of the atmosphere based on the CAADRP data. The FAA proposes to retain the design envelope criterion and prescribe the gust intensity distribution based on the CAADRP data. In addition, the flight profile alleviation factor already defined for the discrete gust in § 25.341(a) would be used to adjust the gust intensity distribution according to certain aircraft parameters that relate to the intended use of the airplane. The FAA considers this to be a reliable and uniform means of accounting for airplane mission.

The introduction of advanced flight control systems into transport airplanes has presented special problems in the treatment of continuous turbulence. Some of these systems can exhibit significant non-linearities, while the standard mathematical approaches to continuous turbulence (i.e., frequency domain solutions) are valid only for linear systems. The proposed rule would require that any significant non-linearity be considered in a realistic or conservative manner.

3. Revise § 25.341(a) to require evaluation of discrete gust conditions at airplane speeds from V_B to design cruising speed, V_C, (currently required only at V_C) and to expand the definition of gust speeds up to 60,000 feet (currently defined up to 50,000 feet).

The change to the discrete gust criteria is necessary to ensure airplanes are designed to withstand gust loads at lower speeds and is consistent with the proposed continuous turbulence criteria.

Some current part 25 airplanes have maximum certified operating altitudes up to 51,000 feet. To be fully applicable to these and future part 25 airplanes, this proposal defines gust intensities for altitudes up to 60,000 feet. Currently, § 25.341(a) defines the discrete gust velocities up to 50,000 feet. Therefore, as a conforming change, we propose to amend § 25.341(a)(5)(i) to define discrete gust velocities up to 60,000 feet for consistency between discrete gust and continuous turbulence criteria.

■ 4. Add a new paragraph § 25.341(c) that specifies a ''round-the-clock'' discrete gust criterion and a multi-axis discrete gust criterion for airplanes equipped with wing-mounted engines.

Following an accident in which an airplane shed a large wing-mounted nacelle, the National Transportation Safety Board (NTSB) recommended that the FAA amend the design load requirements to consider multiple axis loads encountered during severe turbulence (NTSB Safety Recommendation A–93–137, November 15, 1993). This recommendation was specifically aimed at gust loads on wing-mounted engines. To address the NTSB's concern, the FAA contracted an independent organization to develop a method of performing multi-axis discrete gust analysis for wing-mounted nacelles. The results of that study were reported to FAA in Stirling Dynamics Limited Report No. SDL–571–TR–2 dated May 1999 (*http://www.tc.faa.gov/its/worldpac/techrpt/ar99-62.pdf*). The recommendations of that report were accepted by ARAC and the FAA and are set forth in this proposal. This proposal would address the NTSB recommendation by prescribing two dynamic gust criteria for airplanes with wing-mounted engines. These are known as a ''round-the-clock'' discrete gust criterion, which is a discrete gust assumed to occur at any angle normal to the flight path, and a multi-axis dual discrete gust criterion, which is a pair of discrete gusts—one vertical and one lateral. These criteria would be set forth in a new paragraph § 25.341(c).

These actions would harmonize § 25.341 with the corresponding EASA standards.

C. Revise ''Design Fuel and Oil Loads'' (§ 25.343), ''High Lift Devices'' (§ 25.345), ''Gyroscopic Loads'' (§ 25.371), ''Speed Control Devices'' (§ 25.373), and ''Control Surface Loads: General'' (§ 25.391)

Sections 25.343, 25.345, 25.371, 25.373, and 25.391 specify various design load criteria and currently require consideration of only the discrete load criteria specified in § 25.341(a). However, the FAA believes that both the continuous turbulence criteria and the discrete gust criteria should be included when evaluating these other discrete load conditions since they account for the response to different, but still realistic, atmospheric characteristics. Therefore, the FAA proposes to add to each of these regulations a requirement to evaluate the continuous turbulence loads criteria in § 25.341(b). These actions would harmonize each of these requirements with the corresponding EASA standards.

D. Revise ''Engine Torque'' (§ 25.361) and Add a New Section: ''Engine Failure Loads'' (§ 25.362)

We propose to revise the engine loads design requirements for engine mounts, auxiliary power unit mounts, engine pylons, and adjacent supporting airframe structures. The proposed amendment would differentiate between various engine failure conditions and specify design loads criteria that depend on the failure condition being considered. This proposal is intended to ensure that engine mounts and adjacent supporting structures are able to withstand the most severe loads expected in service, which the current regulations do not fully address. In numerous recent certification programs, the FAA has applied special conditions (under the provisions of § 21.16) that include the engine load design requirements proposed here.

Section 25.361 currently requires that the engine mounts and their supporting structure be designed for engine torque loads combined with flight loads, engine torque loads due to maximum acceleration, and engine torque loads due to malfunction or structural failure. Section 25.361 currently specifies requirements for turbopropeller engines, turbine engines, and reciprocating engines, and does not explicitly refer to auxiliary power unit (APU) installations.

We propose to revise § 25.361 to (1) remove the requirement to assess engine torque loads due to engine structural failures (this requirement is re-established in the new § 25.362, outlined below); (2) provide specific engine torque load criteria for auxiliary power unit installations; and (3) remove the requirements that apply to reciprocating engines. The title of § 25.361 would also be changed from ''Engine torque'' to ''Engine and auxiliary power unit torque.'' The proposed § 25.361(a) would apply to the main engines, while § 25.361(b) would apply to APUs. The proposed § 25.362, discussed below, would not apply to APUs.

We propose to establish a new § 25.362 that would require engine mounts and supporting airframe structure be designed for 1g flight loads combined with the most critical transient dynamic loads and vibrations resulting from failure of a blade, shaft, bearing or bearing support, or bird strike event.

Studies made by the engine and the airframe manufacturers have shown that large turbofan engines exhibit two distinct classes of sudden deceleration events. The first type of event involves transient deceleration conditions and rapid slowing of the rotating system. These events are usually associated with temporary loss of power or thrust capability, and often result in some engine distress, such as blade and/or wear strip damage. Examples are high power compressor surges and blade tip rub during maneuvers, or combinations of these events. These events are covered by the proposed § 25.361. Based on the frequency of occurrence, the FAA considers these events to be limit load conditions that require the 1.5 factor of safety prescribed in § 25.303 to obtain ultimate loads. (The terms ''limit,'' ''ultimate,'' and ''factor of safety'' are discussed in § 25.301, ''Loads,'' § 25.303, ''Factor of safety,'' and § 25.305, ''Strength and deformation.'')

The second type of event, which would be covered by the proposed § 25.362, involves structural failures that result in extensive engine damage and permanent loss of thrust-producing capability. Examples of these types of events are fan blade failures, bearing failures, and shaft failures. It is evident from service history that these more severe sudden engine failure events are sufficiently infrequent to be considered ultimate load conditions. Because of the rare occurrence of these events and the conservative method in which the loads are to be obtained, the FAA proposes that these ultimate load conditions be applied to engine mounts and pylon structure without an additional factor of safety. At the same time, to provide additional protection for the more critical airframe structure, the FAA proposes that these ultimate loads be multiplied by an additional factor of 1.25 when applied to the adjacent supporting airframe structure.

For these ultimate load conditions, deformation in the engine supporting structure would be allowed. However, any deformation resulting from these conditions must not prevent continued safe flight and landing. Lastly, the proposed new conditions in § 25.362 would be required to be treated as dynamic conditions, including all significant input and response loads.

These actions would harmonize §§ 25.361 and 25.362 with the corresponding EASA standards.

E. Revise ''Control Surface Loads: General'' (§ 25.391), ''Control System'' (§ 25.395), and ''Ground Gust Conditions'' (§ 25.415)

Section 25.415 currently requires that the flight control system be designed for loads due to ground gusts when parked or while taxiing. Section 25.415 is intended to protect the airplane flight control system and control surfaces from damage in these conditions. Although damage from ground gusts may not be an immediate hazard, the rule is intended to prevent damage to the control system that may not be detected before takeoff.

Several incidents have occurred in which airplanes sustained such undetected but severe damage to the flight control system due to the dynamic effects of ground gust conditions. The incidents occurred on airplanes with unpowered mechanical controls with significant flexibility between the control surface and the gust locking devices. This flexibility allows dynamic loads, greater than the static design gust loads, to occur.

This proposal would revise § 25.415 to stand alone in regard to the required multiplying factors and provide an additional multiplying factor to account for dynamic amplification. The design conditions would be set forth as two design cases—one with gust locks engaged and another as a taxiing case with the gust locks disengaged but controls restrained by the pilot and/or powered system. A 1.25 factor would apply to the design hinge moments to obtain static limit loads for the design of the control system. A further multiplying factor of 1.6 (total multiplying factor of 2.0) would be applied for those parts of the control system where dynamic effects could be significant. A factor lower than 1.6, but not less than 1.2, could be used if substantiated by a rational analysis. If a dynamic factor of 1.2 is accepted, the total multiplying factor would then be $1.2 \times 1.25 = 1.5$.

These changes would provide the greatest effect on mechanical, unpowered control systems which have shown the greatest susceptibility to damage. Powered control systems have hydraulic actuators that naturally protect them against dynamic loads due to ground gusts.

We also propose to revise § 25.415 to reorganize and clarify the design conditions to be considered, and to identify the components and parts of the control system to which each of the conditions apply.

As a result of the changes to § 25.415, we propose removing the references to ground gusts in §§ 25.391 and 25.395(b).

These actions would harmonize §§ 25.391, 25.395, and 25.415 with the corresponding EASA standards.

F. Revise ''Rough Air Speed, V_{RA}'' (§ 25.1517)

Section 25.1517 currently provides criteria for establishing the rough air speed, V_{RA}, for use as the recommended turbulence penetration airspeed to be included in the airplane flight manual. The rough air speed definition is currently based on several considerations, including V_B.

We would revise § 25.1517 to remove the reference to V_B in the definition of rough air speed and require that a rough air Mach number, M_{RA}, be established in addition to rough air speed. Also, the reference to § 25.1585, ''Operating procedures,'' is no longer applicable since that regulation was modified. The reference would therefore be removed.

V_B is the ''design speed for maximum gust intensity.'' This is a *design speed* and is specified in § 25.335(d). V_{RA} is the ''rough air speed.'' This is an *operational speed* to be included in the airplane flight manual (AFM) and is defined in § 25.1517. In the presence of turbulence, the AFM directs the pilot to slow to the rough air speed, V_{RA}.

In general, for a given gust intensity (gust speed), the gust loads on an airplane increase with increasing airplane speed. In the past, the discrete gust and continuous turbulence requirements of § 25.341 specified the highest gust speeds at V_B. (Lower gust speeds were specified at the higher airplane speeds, V_C and design diving speed, V_D.) The operational speed, V_{RA}, was established at a value less than or equal to V_B to ensure the airplane would be travelling at a sufficiently low airspeed to be able to withstand the highest expected gust speed. In this way, the airplane would not operate beyond its design capability.

Section 25.341 would be revised as described previously, and would no longer specify a unique gust speed at V_B. Rather, the gust speed would be assumed constant between V_B and V_C. Therefore, there would be no particular reason to link the rough air speed and V_B. The reference to V_B would therefore be removed, while the other criteria used to define rough air speed are maintained.

Above a certain altitude, the maximum operating limit speed, V_{MO}, is typically limited by Mach number on transport category airplanes. Therefore, we propose to revise § 25.1517 to require that a rough air Mach number, M_{RA}, also be established, in addition to rough air speed, V_{RA}.

These actions would harmonize § 25.1517 with the corresponding EASA standards. We would include a minor clarifying addition to the rule language that would not change the intent of the rule. We have notified EASA of this addition.

G. Advisory Material

The FAA is developing three new proposed advisory circulars (ACs) to be published concurrently with the proposed regulations contained in this NPRM. The proposed ACs would provide guidance material for acceptable means, but not the only means, of demonstrating compliance with proposed §§ 25.341, 25.362, and 25.415, respectively. We will accept public comments to the following proposed ACs on the ''Aviation Safety Draft Documents Open for Comment''

Internet Web site at *http://www.faa.gov/aircraft/draft_docs/:*

- AC 25.341–X, ''Dynamic Gust Loads.''
- AC 25.362–X, ''Engine Failure Loads.''
- AC 25.415–X, ''Ground Gust Conditions.''

IV. Regulatory Notices and Analyses

A. Regulatory Evaluation

Proposed changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 and Executive Order 13563 directs that each Federal agency shall propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 (Pub. L. 96–354) requires agencies to analyze the economic impact of regulatory changes on small entities. Third, the Trade Agreements Act (Pub. L. 96–39) prohibits agencies from setting standards that create unnecessary obstacles to the foreign commerce of the United States. In developing U.S. standards, the Trade Act requires agencies to consider international standards and, where appropriate, that they be the basis of U.S. standards. Fourth, the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local, or tribal governments, in the aggregate, or by the private sector, of $100 million or more annually (adjusted for inflation with base year of 1995). This portion of the preamble summarizes the FAA's analysis of the economic impacts of this proposed rule.

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

The FAA proposes to amend the airworthiness regulations that would harmonize 14 CFR part 25 requirements with the corresponding requirements in Book 1 of EASA CS–25. Meeting two sets of certification requirements raises the cost of developing a new transport category airplane often with no increase in safety. In the interest of fostering international trade, lowering the cost of aircraft development, making the certification process more efficient, and improving certification efficiency, the FAA tasked ARAC through the LDHWG to review existing structures regulations and recommend changes that would eliminate differences between the U.S. and European airworthiness standards, while maintaining or improving the level of safety in the current regulations.

All of the proposals below are based on LDHWG recommendations, which EASA has incorporated into CS–25. The FAA agrees with the ARAC recommendations as adopted by EASA, and we propose to amend part 25 accordingly, with minor variations in wording that do not change the intent. The proposed changes would eliminate differences between the U.S. and European airworthiness standards. These efforts are referred to as harmonization.

This proposed rule would revise §§ 25.331, ''Symmetric maneuvering conditions,'' 25.341, ''Gust and turbulence loads,'' 25.343, ''Design fuel and oil loads,'' 25.345, ''High lift devices,'' 25.361, ''Engine torque,'' 25.371, ''Gyroscopic loads,'' 25.373, ''Speed control devices,'' 25.391, ''Control surface loads: General,'' 25.395, ''Control system,'' 25.415, ''Ground gust conditions,'' and 25.1517, ''Rough air speed;'' add a new § 25.362, ''Engine failure loads''; and remove appendix G to part 25 to remove differences with EASA CS–25. The FAA has concluded for the reasons previously discussed in the preamble that the adoption of these EASA requirements into the FAA certification standards is the most efficient way to harmonize these sections and, in so doing, the existing level of safety will be preserved.

The FAA estimates that there are no costs associated with this proposal. A review of current manufacturers of transport category aircraft certificated under part 25 has revealed that all such future aircraft are expected to be certificated under both U.S. (part 25) and EASA (CS–25). Since future certificated transport category aircraft are expected to meet the existing EASA CS–25 Book 1 requirements, and this proposed rule would adopt the same EASA requirements, manufacturers would incur no additional cost resulting from this proposal. The FAA expects the costs to be minimal and the benefits to be positive but difficult to estimate as this proposed rule is one part of a larger effort to minimize differences between U.S. and EASA certification standards. The FAA, however, has not attempted to quantify the cost savings that may accrue due to these specific proposals, beyond noting that while they may be minimal, they contribute to a large potential harmonization savings. The agency concludes that these proposed changes would eliminate regulatory differences between the airworthiness standards of the FAA and EASA without affecting current industry practices and that savings will result. Further analysis is not required.

The FAA requests comments with supporting documentation in regard to the conclusions contained in this section.

FAA has, therefore, determined that this proposed rule is not a ''significant regulatory action'' as defined in section 3(f) of Executive Order 12866, and is not ''significant'' as defined in DOT's Regulatory Policies and Procedures.

B. Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (Pub. L. 96–354) (RFA) establishes ''as a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that such proposals are given serious consideration.'' The RFA covers a wide range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Agencies must perform a review to determine whether a rule will have a significant economic impact on a substantial number of small entities. If the agency determines that it will, the agency must prepare a regulatory flexibility analysis as described in the RFA.

However, if an agency determines that a rule is not expected to have a significant economic impact on a substantial number of small entities, section 605(b) of the RFA provides that the head of the agency may so certify, and a regulatory flexibility analysis is not required. The certification must include a statement providing the factual basis for this determination, and the reasoning should be clear.

As noted above, the proposed changes to part 25 are cost relieving because this proposed rule creates a single certification standard and removes the burden of having to meet two sets of certification requirements. The FAA believes that this proposed rule would not have a significant economic impact on a substantial number of small entities.

The net effect of the proposed rule is minimum regulatory cost relief. Airplane manufacturers already meet or expect to meet this standard. The FAA uses the size standards from the Small Business Administration for Aircraft Manufacturing specifying companies having less than 1,500 employees are small entities. Given that this proposed rule is cost-relieving, and there are no small entity manufacturers of part 25 airplanes with less than 1,500 employees, the FAA certifies that this proposed rule will not have a significant economic impact on a substantial number of small entities. The FAA requests comments regarding this determination. Specifically, the FAA requests comments on whether the proposed rule creates any specific compliance costs unique to small entities. Please provide detailed economic analysis to support any cost claims.

C. International Trade Impact Assessment

The Trade Agreements Act of 1979 (Pub. L. 96–39) prohibits Federal agencies from establishing any standards or engaging in related activities that create unnecessary obstacles to the foreign commerce of the United States. Legitimate domestic objectives, such as safety, are not considered unnecessary obstacles. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards. The FAA has assessed the potential effect of this proposed rule and has determined that the proposed rule is in accord with the Trade Agreements Act as it uses European standards as the basis for United States regulation.

D. Unfunded Mandates Assessment

Title II of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) requires each Federal agency to prepare a written statement assessing the effects of any Federal mandate in a proposed or final agency rule that may result in an expenditure of $100 million or more (in 1995 dollars) 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 $143.1 million in lieu of $100 million. This proposed rule does not contain such a mandate; therefore, the requirements of Title II of the Act do not apply.

E. Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)) requires that the FAA consider the impact of paperwork and other information collection burdens imposed on the public. The FAA has determined that there is no new requirement for information collection associated with this proposed rule. To the extent you may have comments on the information collection burdens associated with the aircraft certification application process, please direct those comments to the information collection associated with OMB Control Number 2120–0018.

F. International Compatibility and Cooperation

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

Executive Order (EO) 13609, Promoting International Regulatory Cooperation, (77 FR 26413, May 4, 2012) promotes international regulatory cooperation to meet shared challenges involving health, safety, labor, security, environmental, and other issues and reduce, eliminate, or prevent unnecessary differences in regulatory requirements. The FAA has analyzed this action under the policy and agency responsibilities of Executive Order 13609, Promoting International Regulatory Cooperation. The agency has determined that this action would eliminate differences between U.S. aviation standards and those of other civil aviation authorities by creating a single set of certification requirements for transport category airplanes that would be acceptable in both the United States and Europe.

G. Environmental Analysis

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

V. Executive Order Determinations

A. Executive Order 13132, Federalism

The FAA has analyzed this proposed rule under the principles and criteria of Executive Order 13132, Federalism. The agency determined that this action will not have a substantial direct effect on the States, or the relationship between the Federal Government and the States, or on the distribution of power and responsibilities among the various levels of government, and, therefore, will not have Federalism implications.

B. Executive Order 13211, Regulations That Significantly Affect Energy Supply, Distribution, or Use

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

VI. Additional Information

A. Comments Invited

The FAA invites interested persons to participate in this rulemaking by submitting written comments, data, or views. The agency also invites comments relating to 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. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit only one time.

The FAA will file in the docket all comments it receives, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, the FAA will consider all comments it receives on or before the closing date for comments. The FAA will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. The agency may change this proposal in light of the comments it receives.

Proprietary or Confidential Business Information: Commenters should not file proprietary or confidential business information in the docket. Such information must be sent or delivered directly to the person identified in the FOR FURTHER INFORMATION CONTACT section of this document, and marked as proprietary or confidential. If submitting 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), if the FAA is aware of proprietary information filed with a comment, the agency does not place it in the docket. It is held in a separate file to which the public does not have access, and the FAA places a note in the docket that it has received it. If the FAA receives a request to examine or copy this information, it treats it as any other request under the Freedom of Information Act (5 U.S.C. 552). The FAA processes such a request under Department of Transportation procedures found in 49 CFR part 7.

B. Availability of Rulemaking Documents

An electronic copy of rulemaking documents may be obtained from the Internet by—

1. Searching the Federal eRulemaking Portal at *http://www.regulations.gov,*

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

3. Accessing the Government Printing Office's Web page at *http://www.gpo.gov/fdsys/.*

Copies may also be obtained 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. Commenters must identify the docket or notice number of this rulemaking.

All documents the FAA considered in developing this proposed rule, including economic analyses and technical reports, may be accessed from the Internet through the Federal eRulemaking Portal referenced in item (1) above.

List of Subjects in 14 CFR Part 25

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

The Proposed Amendment

In consideration of the foregoing, the Federal Aviation Administration proposes to amend chapter I of title 14, Code of Federal Regulations 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 § 25.331 by revising paragraph (c) introductory text and paragraph (c)(2) to read as follows:

§ 25.331 Symmetric maneuvering conditions.

* * * * *

(c) *Maneuvering pitching conditions.* The following conditions must be investigated:

(1) * * *

(2) *Checked maneuver between V_A and V_D.* Nose-up checked pitching maneuvers must be analyzed in which the positive limit load factor prescribed in § 25.337 is achieved. As a separate condition, nose-down checked pitching maneuvers must be analyzed in which a limit load factor of 0g is achieved. In defining the airplane loads, the flight deck pitch control motions described in paragraphs (c)(2)(i) through (c)(2)(iv) of this section must be used:

(i) The airplane is assumed to be flying in steady level flight at any speed between V_A and V_D and the flight deck pitch control is moved in accordance with the following formula:

$\delta(t) = \delta_1 \sin(\omega t)$ for $0 \leq t \leq t_{max}$

Where—

δ_1 = the maximum available displacement of the flight deck pitch control in the initial direction, as limited by the control system stops, control surface stops, or by pilot effort in accordance with § 25.397(b);

$\delta(t)$ = the displacement of the flight deck pitch control as a function of time. In the initial direction, $\delta(t)$ is limited to δ_1. In the reverse direction, $\delta(t)$ may be truncated at the maximum available displacement of the flight deck pitch control as limited by the control system stops, control surface stops, or by pilot effort in accordance with § 25.397(b);

$t_{max} = 3\pi/2\omega$;

ω = the circular frequency (radians/second) of the control deflection taken equal to the undamped natural frequency of the short period rigid mode of the airplane, with active control system effects included where appropriate; but not less than:

$$\omega = \frac{\pi V}{2V_A} \text{ radians per second;}$$

Where—

V = the speed of the airplane at entry to the maneuver.

V_A = the design maneuvering speed prescribed in § 25.335(c).

(ii) For nose-up pitching maneuvers, the complete flight deck pitch control displacement history may be scaled down in amplitude to the extent just necessary to ensure that the positive limit load factor prescribed in § 25.337 is not exceeded. For nose-down pitching maneuvers, the complete flight deck control displacement history may be scaled down in amplitude to the extent just necessary to ensure that the normal acceleration at the center of gravity does not go below 0 g.

(iii) In addition, for cases where the airplane response to the specified flight deck pitch control motion does not achieve the prescribed limit load factors, then the following flight deck pitch control motion must be used:

$\delta(t) = \delta_1 \sin(\omega t)$ for $0 \leq t \leq t_1$

$\delta(t) = \delta_1$ for $t_1 \leq t \leq t_2$

$\delta(t) = \delta_1 \sin(\omega[t + t_1 - t_2])$ for $t_2 \leq t \leq t_{max}$

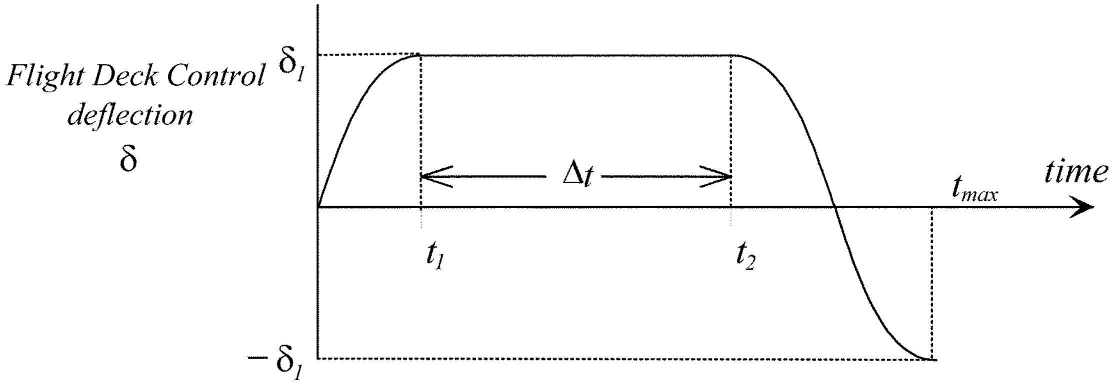
Where—

$t_1 = \pi/2\omega$

$t_2 = t_1 + \Delta t$

$t_{max} = t_2 + \pi/\omega$;

Δt = the minimum period of time necessary to allow the prescribed limit load factor to be achieved in the initial direction, but it need not exceed five seconds (see figure below).



(iv) In cases where the flight deck pitch control motion may be affected by inputs from systems (for example, by a stick pusher that can operate at high load factor as well as at 1 g), then the effects of those systems shall be taken into account.

(v) Airplane loads that occur beyond the following times need not be considered:

(A) For the nose-up pitching maneuver, the time at which the normal acceleration at the center of gravity goes below 0 g;

(B) For the nose-down pitching maneuver, the time at which the normal acceleration at the center of gravity goes above the positive limit load factor prescribed in § 25.337;

(C) t_{max}..

■ 3. Amend § 25.341 by revising paragraph (a)(5)(i) and paragraph (b), and by adding a new paragraph (c) to read as follows:

§ 25.341 Gust and turbulence loads.

(a) * * *

(5) * * *

(i) At airplane speeds between V_B and V_C: Positive and negative gusts with reference gust velocities of 56.0 ft/sec EAS must be considered at sea level. The reference gust velocity may be reduced linearly from 56.0 ft/sec EAS at sea level to 44.0 ft/sec EAS at 15,000 feet. The reference gust velocity may be further reduced linearly from 44.0 ft/sec EAS at 15,000 feet to 20.86 ft/sec EAS at 60,000 feet.

* * * * *

(b) *Continuous turbulence design criteria.* The dynamic response of the airplane to vertical and lateral continuous turbulence must be taken into account. The dynamic analysis must take into account unsteady aerodynamic characteristics and all significant structural degrees of freedom including rigid body motions. The limit loads must be determined for all critical altitudes, weights, and weight distributions as specified in § 25.321(b), and all critical speeds within the ranges indicated in § 25.341(b)(3).

(1) Except as provided in paragraphs (b)(4) and (b)(5) of this section, the following equation must be used:

$$P_L = P_{L-1g} \pm U_\sigma \overline{A}$$

Where—

P_L = limit load;

P_{L-1g} = steady 1 g load for the condition;

$\overline{A}$ = ratio of root-mean-square incremental load for the condition to root-mean-square turbulence velocity; and

U_σ = limit turbulence intensity in true airspeed, specified in paragraph (b)(3) of this section.

(2) Values of $\overline{A}$ must be determined according to the following formula:

$$\overline{A} = \sqrt{\int_0^\infty \left|H(\Omega)\right|^2 \Phi(\Omega)\,d\Omega}$$

Where—

$H(\Omega)$ = the frequency response function, determined by dynamic analysis, that relates the loads in the aircraft structure to the atmospheric turbulence; and

$\Phi(\Omega)$ = normalized power spectral density of atmospheric turbulence given by—

$$\Phi(\Omega) = \frac{L}{\pi} \frac{1 + \frac{8}{3}(1.339\Omega L)^2}{\left[1 + (1.339\Omega L)^2\right]^{11/6}}$$

Where—

Ω = reduced frequency, radians per foot; and

L = scale of turbulence = 2,500 ft.

(3) The limit turbulence intensities, U_σ, in feet per second true airspeed required for compliance with this paragraph are—

(i) At airplane speeds between V_B and V_C:

$U\sigma = U_{\sigma\rho\epsilon\phi} F_g$

Where—

$U\sigma_{ref}$ is the reference turbulence intensity that varies linearly with altitude from 90 fps (TAS) at sea level to 79 fps (TAS) at 24,000 feet and is then constant at 79 fps (TAS) up to the altitude of 60,000 feet.

F_g is the flight profile alleviation factor defined in paragraph (a)(6) of this section;

(ii) At speed V_D: $U\sigma$ is equal to ½ the values obtained under paragraph (b)(3)(i) of this section.

(iii) At speeds between V_C and V_D: U_σ is equal to a value obtained by linear interpolation.

(iv) At all speeds, both positive and negative incremental loads due to continuous turbulence must be considered.

(4) When an automatic system affecting the dynamic response of the airplane is included in the analysis, the effects of system non-linearities on loads at the limit load level must be taken into account in a realistic or conservative manner.

(5) If necessary for the assessment of loads on airplanes with significant non-linearities, it must be assumed that the turbulence field has a root-mean-square velocity equal to 40 percent of the U_σ values specified in paragraph (b)(3) of this section. The value of limit load is that load with the same probability of exceedance in the turbulence field as $\overline{A}U_\sigma$ of the same load quantity in a linear approximated model.

(c) *Supplementary gust conditions for wing-mounted engines.* For airplanes equipped with wing-mounted engines, the engine mounts, pylons, and wing supporting structure must be designed for the maximum response at the nacelle center of gravity derived from the following dynamic gust conditions applied to the airplane:

(1) A discrete gust determined in accordance with § 25.341(a) at each angle normal to the flight path, and separately,

(2) A pair of discrete gusts, one vertical and one lateral. The length of each of these gusts must be independently tuned to the maximum response in accordance with § 25.341(a). The penetration of the airplane in the combined gust field and the phasing of the vertical and lateral component gusts must be established to develop the maximum response to the gust pair. In the absence of a more rational analysis, the following formula must be used for each of the maximum engine loads in all six degrees of freedom:

$$P_L = P_{L-1g} \pm 0.85\sqrt{L_V^2 + L_L^2}$$

Where—

P_L = limit load;

P_{L-1g} = steady 1g load for the condition;

L_V = peak incremental response load due to a vertical gust according to § 25.341(a); and

L_L = peak incremental response load due to a lateral gust according to § 25.341(a).

■ 4. Amend § 25.343 by revising paragraph (b)(1)(ii) to read as follows:

§ 25.343 Design fuel and oil loads.

* * * * *

(b) * * *

(1) * * *

(ii) The gust and turbulence conditions of § 25.341, but assuming 85% of the gust velocities prescribed in § 25.341(a)(4) and 85% of the turbulence intensities prescribed in § 25.341(b)(3).

* * * * *

■ 5. Amend § 25.345 by revising paragraph (c)(2) to read as follows:

§ 25.345 High lift devices.

* * * * *

(c) * * *

(2) The vertical gust and turbulence conditions prescribed in § 25.341.

* * * * *

■ 6. Revise § 25.361 to read as follows:

§ 25.361 Engine and auxiliary power unit torque.

(a) For engine installations—

(1) Each engine mount, pylon, and adjacent supporting airframe structures must be designed for the effects of—

(i) A limit engine torque corresponding to takeoff power/thrust and, if applicable, corresponding propeller speed, acting simultaneously with 75% of the limit loads from flight condition A of § 25.333(b);

(ii) A limit engine torque corresponding to the maximum continuous power/thrust and, if applicable, corresponding propeller speed, acting simultaneously with the limit loads from flight condition A of § 25.333(b); and

(iii) For turbopropeller installations only, in addition to the conditions specified in paragraphs (a)(1)(i) and (ii) of this section, a limit engine torque corresponding to takeoff power and propeller speed, multiplied by a factor accounting for propeller control system malfunction, including quick feathering, acting simultaneously with 1g level flight loads. In the absence of a rational analysis, a factor of 1.6 must be used.

(2) The limit engine torque to be considered under paragraph (a)(1) of this section must be obtained by—

(i) For turbopropeller installations, multiplying mean engine torque for the specified power/thrust and speed by a factor of 1.25;

(ii) For other turbine engines, the limit engine torque must be equal to the maximum accelerating torque for the case considered.

(3) The engine mounts, pylons, and adjacent supporting airframe structure must be designed to withstand 1g level flight loads acting simultaneously with the limit engine torque loads imposed by each of the following conditions to be considered separately:

(i) Sudden maximum engine deceleration due to malfunction or abnormal condition; and

(ii) The maximum acceleration of engine.

(b) For auxiliary power unit installations, the power unit mounts and adjacent supporting airframe structure must be designed to withstand 1g level flight loads acting simultaneously with the limit torque loads imposed by each of the following conditions to be considered separately:

(1) Sudden maximum auxiliary power unit deceleration due to malfunction or abnormal condition or structural failure; and

(2) The maximum acceleration of the auxiliary power unit.

■ 7. Add a new § 25.362 to read as follows:

§ 25.362 Engine failure loads.

(a) For engine mounts, pylons, and adjacent supporting airframe structure, an ultimate loading condition must be considered that combines 1g flight loads with the most critical transient dynamic loads and vibrations, as determined by dynamic analysis, resulting from failure of a blade, shaft, bearing or bearing support, or bird strike event. Any permanent deformation from these ultimate load conditions must not prevent continued safe flight and landing.

(b) The ultimate loads developed from the conditions specified in paragraph (a) of this section are to be—

(1) Multiplied by a factor of 1.0 when applied to engine mounts and pylons; and

(2) Multiplied by a factor of 1.25 when applied to adjacent supporting airframe structure.

■ 8. Revise § 25.371 to read as follows:

§ 25.371 Gyroscopic loads.

The structure supporting any engine or auxiliary power unit must be designed for the loads, including gyroscopic loads, arising from the conditions specified in §§ 25.331, 25.341, 25.349, 25.351, 25.473, 25.479, and 25.481, with the engine or auxiliary power unit at the maximum rotating speed appropriate to the condition. For the purposes of compliance with this paragraph, the pitch maneuver in § 25.331(c)(1) must be carried out until the positive limit maneuvering load factor (point A_2 in § 25.333(b)) is reached.

■ 9. Amend § 25.373 by revising paragraph (a) to read as follows:

§ 25.373 Speed control devices.

* * * * *

(a) The airplane must be designed for the symmetrical maneuvers prescribed in §§ 25.333 and 25.337, the yawing maneuvers in § 25.351, and the vertical and lateral gust and turbulence conditions prescribed in § 25.341(a) and (b) at each setting and the maximum speed associated with that setting; and

* * * * *

■ 10. Amend § 25.391 by revising the introductory text to read as follows:

§ 25.391 Control surface loads: General.

The control surfaces must be designed for the limit loads resulting from the flight conditions in §§ 25.331, 25.341(a) and (b), 25.349, and 25.351, considering the requirements for—

* * * * *

■ 11. Amend § 25.395 by revising paragraph (b) to read as follows:

§ 25.395 Control system.

* * * * *

(b) The system limit loads of paragraph (a) of this section need not exceed the loads that can be produced by the pilot (or pilots) and by automatic or power devices operating the controls.

* * * * *

■ 12. Revise § 25.415 to read as follows:

§ 25.415 Ground gust conditions.

(a) The flight control systems and surfaces must be designed for the limit loads generated when the aircraft is subjected to a horizontal 65 knots ground gust from any direction, while taxiing with the controls locked and unlocked and while parked with the controls locked.

(b) The control system and surface loads due to ground gust may be assumed to be static loads, and the hinge moments H must be computed from the formula:

$$H = K\,(1/2)\,\rho_o V^2 c\,S$$

Where—

K = hinge moment factor for ground gusts derived in paragraph (c) of this section;

ρ_o = density of air at sea level;

V = 65 knots relative to the aircraft;

S = area of the control surface aft of the hinge line;

c = mean aerodynamic chord of the control surface aft of the hinge line.

(c) The hinge moment factor K for ground gusts must be taken from the following table:

Surface	K	Position of controls
(a) Aileron	0.75	Control Column locked or lashed in mid-position.
(b) Aileron	*±0.50	Ailerons at full throw.
(c) Elevator	*±0.75	Elevator full down.
(d) Elevator	*±0.75	Elevator full up.
(e) Rudder	0.75	Rudder in neutral.
(f) Rudder	0.75	Rudder at full throw.

* A positive value of K indicates a moment tending to depress the surface, while a negative value of K indicates a moment tending to raise the surface.

(d) The computed hinge moment of paragraph (b) of this section must be used to determine the limit loads due to ground gust conditions for the control surface. A 1.25 factor on the computed hinge moments must be used in calculating limit control system loads.

(e) Where control system flexibility is such that the rate of load application in the ground gust conditions might produce transient stresses appreciably higher than those corresponding to static loads, in the absence of a rational analysis, an additional factor of 1.6 must be applied to the control system loads of paragraph (d) of this section to obtain limit loads. If a rational analysis is used, the additional factor must not be less than 1.2.

(f) For the condition of the control locks engaged, the control surfaces, the control system locks, and the parts of the control systems (if any) between the surfaces and the locks must be designed to the resultant limit loads. Where control locks are not provided, then the control surfaces, the control system stops nearest the surfaces, and the parts of the control systems (if any) between the surfaces and the stops must be designed to the resultant limit loads. If the control system design is such as to allow any part of the control system to impact with the stops due to flexibility, then the resultant impact loads must be taken into account in deriving the limit loads due to ground gust.

(g) For the condition of taxiing with the control locks disengaged, the following apply:

(1) The control surfaces, the control system stops nearest the surfaces, and the parts of the control systems (if any) between the surfaces and the stops must be designed to the resultant limit loads.

(2) The parts of the control systems between the stops nearest the surfaces and the flight deck controls must be designed to the resultant limit loads, except that the parts of the control system where loads are eventually reacted by the pilot need not exceed:

(i) The loads corresponding to the maximum pilot loads in § 25.397(c) for each pilot alone; or

(ii) 0.75 times these maximum loads for each pilot when the pilot forces are applied in the same direction.

■ 13. Revise § 25.1517 to read as follows:

§ 25.1517 Rough air speed, V_{RA}.

(a) A rough air speed, V_{RA}, for use as the recommended turbulence penetration airspeed, and a rough air Mach number, M_{RA}, for use as the recommended turbulence penetration Mach number, must be established. V_{RA}/M_{RA} must be sufficiently less than V_{MO}/M_{MO} to ensure that likely speed variation during rough air encounters will not cause the overspeed warning to operate too frequently.

(b) At altitudes where V_{MO} is not limited by Mach number, in the absence of a rational investigation substantiating the use of other values, V_{RA} must be less than V_{MO}–35 KTAS.

(c) At altitudes where V_{MO} is limited by Mach number, M_{RA} may be chosen to provide an optimum margin between low and high speed buffet boundaries.

■ 14. Remove and reserve appendix G to part 25.

Issued under authority provided by 49 U.S.C. 106(f), 44701(a), and 44703 in Washington, DC, on May 6, 2013.

Dorenda D. Baker,

Director, Aircraft Certification Service.

[FR Doc. 2013–12445 Filed 5–24–13; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2008–0288; Directorate Identifier 2006–SW–25–AD]

RIN 2120–AA64

Airworthiness Directives; Bell Helicopter Textron, Inc., Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Supplemental notice of proposed rulemaking (SNPRM); reopening of comment period.

SUMMARY: We are revising an earlier proposed airworthiness directive (AD) for Bell Helicopter Textron, Inc. (Bell), Model 214B and B–1 helicopters, which proposed to require inspecting certain pylon support spindle assemblies (spindles) for any corrosion, or a nick, scratch, dent, or crack, and repairing or replacing any unairworthy spindle before further flight. This SNPRM proposes to revise those requirements by updating the cost of compliance, revising the recording requirements, adding a requirement to reduce the retirement life of an installed spindle, and adding Bell Model 214ST to the applicability.

DATES: We must receive comments on this proposed AD by July 29, 2013.

ADDRESSES: You may send comments by any of the following methods:

- *Federal eRulemaking Docket:* Go to *http://www.regulations.gov.* Follow the online instructions for sending your comments electronically.
- *Fax:* 202–493–2251.
- *Mail:* Send comments to the U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590–0001.
- *Hand Delivery:* Deliver to the ''Mail'' address between 9 a.m. and 5