



Billing Code 4910-13

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No.: FAA-2019-0343; Notice No. 19-04]

RIN 2120-AL11

Decompression Criteria for Interior Compartments

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to revise its standards for pressurized compartment loads such that partitions located immediately adjacent to a decompression hole need not be designed to withstand certain decompression conditions. This action is necessary because, in some cases, it is not practical to design partitions in certain airplane compartments to withstand a large decompression event that occurs within that compartment. Even though individual partition failure would be allowed, continued safe flight and landing would still be required.

DATES: Send comments on or before [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER.]

ADDRESSES: Send comments identified by docket number FAA-2019-0343 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.

Privacy: In accordance with 5 USC 553(c), DOT solicits comments from the public to better inform its rulemaking process. DOT posts these comments, without edit, including any personal information the commenter provides, to www.regulations.gov, as described in the system of records notice (DOT/ALL-14 FDMS), which can be reviewed at www.dot.gov/privacy.

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 questions concerning this action, contact Todd Martin, Airframe and Cabin Safety Section, AIR-675, Transport Standards Branch, Policy and Innovation Division, Aircraft Certification Service, Federal Aviation Administration, 2200 South 216th Street,

Des Moines, WA 98198; telephone and fax (206) 231-3210; e-mail

Todd.Martin@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 issued 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 as it prescribes new safety standards for the design and performance of transport category airplanes.

I. Overview of Proposed Rule

The FAA proposes to revise § 25.365, "Pressurized compartment loads," in Title 14, Code of Federal Regulations (14 CFR) Part 25, "Airworthiness Standards: Transport Category Airplanes."

The airworthiness standards in § 25.365 address the safety effects of decompression. When the fuselage skin or another part of the pressurized boundary of an airplane fails for any reason, a decompression occurs if the cabin pressure is greater than the outside air pressure. When a decompression occurs, the pressurized air inside the

airplane exits the hole, or opening, in the fuselage until equilibrium is reached. This can result in potentially high air loads on floors, partitions, and bulkheads.

Section 25.365(e) addresses the structural integrity of the airplane by requiring that the airplane be capable of continued safe flight and landing following a sudden release of pressure through an opening in any compartment (i.e., a “sudden decompression”).

Section 25.365(g) requires applicants to design bulkheads, floors, and partitions, in pressurized compartments for occupants, to withstand the sudden decompression conditions specified in paragraph (e). Section 25.365(g) also requires applicants to take reasonable design precautions to minimize the probability of parts becoming detached and injuring seated occupants.

For certain smaller compartments on the airplane, such as lavatories, private suites, and crew rest areas, it may be difficult to achieve compliance with § 25.365(g) because a large decompression hole, of the size specified in § 25.365(e)(2), occurring in one of these compartments would result in very high air loads on the partitions that form the compartment. Thus, strengthening the partitions to sustain such high loads has been shown to be impractical in many cases for these smaller compartments because it could adversely affect the structural integrity of the aircraft and continued safe flight and landing. Further, alternative design strategies may impede the compartment’s intended function.

Therefore, due to the difficulty of safely designing partitions around small compartments to withstand the decompression without adversely affecting the safety of the airplane or the compartment’s intended function, the FAA proposes to revise § 25.365(g) to allow the failure of partitions that are immediately adjacent to the

decompression hole. This allowance would only apply to the formula decompression hole specified in § 25.365(e)(2). A hole of this size is typically the most severe decompression load design requirement for small compartments, such as lavatories, private suites, and crew rest areas. Finally, partition failure would only be allowed if (1) failure of the partition would not interfere with continued safe flight and landing, and (2) meeting the decompression condition in paragraph (e)(2) would be impractical.

II. Background

A. Statement of the Problem

As previously noted, for compartments such as lavatories, private suites, and crew rest areas, compliance with the partition strength requirements of § 25.365(g) may be difficult for applicants to achieve and could potentially reduce the safety of the airplane since the current regulation requires all partitions to withstand all decompression events. Therefore, designing compliant lavatories, private suites, and crew rest areas may not be practical unless the FAA grants relief, such as an exemption in accordance with 14 CFR part 11 or an equivalent level of safety finding in accordance with 14 CFR 21.21.

B. History

Amendment 25-54 to § 25.365, 45 FR 60154, September 11, 1980, introduced the requirement that bulkheads, floors, and partitions be designed to withstand the decompression conditions specified in the rule.

In amendment 25-71 to § 25.365, 55 FR 13474, April 10, 1990, the specific references to “bulkheads, floors, and partitions” were moved from paragraph (e) to paragraph (g) to stipulate the passenger protection criteria related to failure of these structures in occupied compartments, regardless of whether their failure could interfere with safe flight and landing.

The current rule requires that the applicant consider partition failure in terms of the effects on occupant safety. However, in developing this requirement, the FAA recognized that structural integrity might not be maintained near the decompression hole. The preamble of the NPRM for amendment 25-71, 53 FR 8742, March 16, 1988, states, “The loss of structural integrity at the opening location or physiological effects on occupants are not considerations of the proposed rule,” which indicates the FAA was aware of and accepted this risk to the occupant next to the opening location.

The FAA has certified numerous airplanes for which the partition strength criteria in § 25.365(e) at amendment 25-54 or § 25.365(g) at amendment 25-71 were included in the certification basis. Since the issuance of amendment 25-54, the FAA has found compliance on several projects to install small compartments on these airplanes based on a finding of equivalent level of safety (ELOS) to § 25.365(e) at amendment 25-54 or § 25.365(g) at amendment 25-71 (as applicable) in accordance with 14 CFR 21.21, the first of which was made in 1989.¹

The FAA notes, however, that it has not consistently applied the rule and applicants have raised questions about the intent of the rule during recent certification programs.

III. Discussion of the Proposal

Section 25.365 addresses the safety effects of decompression. When the fuselage skin or another part of the pressurized boundary of an airplane fails for any reason, a

¹ An ELOS finding is made when the design does not comply with the applicable airworthiness provisions, but compensating factors, such as incorporating mitigating features (e.g., lanyards to restrain loose parts, and frangible structure to cause structural failure in a direction away from the seated occupant), provide an equivalent level of safety in accordance with 14 CFR 21.21(b)(1) for small compartment design. The FAA documents an ELOS finding in an ELOS memorandum that communicates to the public the rationale for the FAA’s determination of equivalency to the level of safety intended by the regulations.

decompression occurs if the cabin pressure is greater than the outside air pressure.

Decompressions can occur due to a number of causes, such as a fatigue failure, an engine rotor burst, or an explosive or incendiary device. When a decompression occurs, the pressurized air inside the airplane exits the hole, or opening, in the fuselage until equilibrium is reached. This can result in potentially high air loads on floors, partitions, and bulkheads. The magnitude of these forces depends on the size of the hole, its location, and the initial pressure differential between the cabin and the outside air.

Section 25.365(e) requires structural integrity of the airplane following a sudden decompression. The rule specifies that the design be able to withstand the following sudden decompression conditions:

Paragraph (e)(1)—penetration of any pressurized compartment by a portion of an engine following engine disintegration;

Paragraph (e)(2)—an opening up to a “formula” size calculated from the diameter of the airplane’s fuselage; and

Paragraph (e)(3)—any other opening caused by failures not shown to be extremely improbable.

Section 25.365(g) addresses occupant safety in that it requires applicants to design bulkheads, floors, and partitions, in pressurized compartments for occupants, to withstand the sudden decompression conditions specified in paragraph (e). Section 25.365(g) also requires applicants to take reasonable design precautions to minimize the probability of parts becoming detached and injuring seated occupants.

For certain smaller compartments on the airplane, such as lavatories, private suites, and crew rest areas, it may be difficult to achieve compliance with § 25.365(g)

because a large decompression hole, of the size specified in § 25.365(e)(2), occurring in one of these compartments would result in very high air loads on the partitions that form the compartment. Compliance is typically demonstrated by either: 1) Strengthening the partition to the extent that it would not fail, or 2) adding sufficient venting to reduce the loads on the partition, or some combination thereof. In some cases, both of these approaches have been shown to be impractical because the design cannot maintain the airplane's structural integrity or the partition's intended function, or a combination thereof. For example, strengthening the partition to the extent that it would not fail can actually increase the loads on the floor, thereby causing a potentially more serious floor failure, which could jeopardize continued safe flight either through structural failure or by damaging control systems routed through the floor. Adding venting would reduce loads on the partition, but in some cases, it is not possible to add enough venting and also maintain the intended purpose of the compartment. Additionally, if a large decompression hole occurs in one of these compartments, the risk to occupants of that compartment from the decompression itself is likely to be significant, and exceed any risk from the partition collapse.

Therefore, due to the difficulty of safely designing partitions around small compartments to withstand the decompression without adversely affecting the safety of the airplane, the FAA proposes to revise § 25.365(g) to allow the failure of partitions. This proposed change would not impact safety because it conforms the regulatory text to longstanding FAA practice established through equivalent level of safety findings and methods of compliance for small compartment design. This proposed change would also improve certification efficiency by eliminating the need for design-by-design equivalent

level of safety analyses and findings to allow for such partition design. Accordingly, the FAA proposes to revise § 25.365(g) to state that partitions adjacent to the opening specified in paragraph (e)(2) need not be designed to withstand that condition if (1) failure of the partition would not interfere with continued safe flight and landing, and (2) meeting this decompression condition would be impractical.

The proposed rule would only apply to partitions, meaning any non-structural wall, non-structural floor, or non-structural ceiling panel, the failure of which would not compromise the structural integrity of the airplane. The term “floor” means a structural floor, such as a passenger or cargo floor that carries airplane structural loads. The floor of an overhead crew rest area, which is elevated above the main floor, would not be a structural floor because it does not carry airplane structural loads. This type of non-structural floor is a partition. The term “bulkhead,” as used in the proposed regulation, means a structural pressure bulkhead. The FAA considers a non-structural, non-pressure bulkhead to be a partition because it does not carry airplane structural loads. The applicability of this rule is limited to partitions because the integrity of bulkheads and floors must be maintained to ensure continued safe flight and landing.

The proposed rule would only allow failure of partitions for the decompression condition specified in § 25.365(e)(2). This decompression condition, referred to as the “formula” hole size, is typically the most severe condition required by § 25.365(e). Partition failure due to the other decompression conditions specified in § 25.365(e) would continue to be prohibited because it is practical to design partitions to withstand those less significant decompression events.

The exception provided in proposed § 25.365(g)(2) only applies to the occupant safety provision of § 25.365(g)(1). All partitions would still be required to meet the requirements in § 25.365(e), which requires continued safe flight and landing. For example, if flight control cables run through a particular partition, and failure of that partition would cause a hazardous or catastrophic flight control system failure, then that partition would still be required to withstand all the decompression conditions specified in § 25.365(e).

The proposed rule would also only allow failure of partitions for the “formula hole” decompression condition of paragraph (e)(2) if the applicant can show that withstanding that condition is impractical (i.e., there is no way to design the partitions to withstand the decompression condition of paragraph (e)(2) without adversely affecting safety or without affecting the functionality of the compartment). In some cases, depending on the particular partition configuration and the formula decompression hole size for the airplane, it may be practical to design all partitions to meet the decompression condition specified in paragraph (e)(2), regardless of their location. For example, the applicant may be able to add venting or make other changes to relieve the decompression loads on the partitions. Under the proposed rule, the applicant would only be allowed to design for partition failure if there is no practical way to design the partitions to withstand the decompression condition of paragraph (e)(2).

For a compartment such as a lavatory, remote crew rest, or private suite, having a solid door is a fundamental feature for the intended use of the compartment. While using a curtain in place of a solid door would greatly improve the decompression capability of the compartment and is physically practical for the purpose of compliance with

§ 25.365(g), the FAA accepts that changing the door to a curtain in these instances would be impractical because the resulting design would not fulfill the purpose of the compartment.

The second sentence of § 25.365(g) requires that applicants take reasonable design precautions to minimize the probability of parts becoming detached and injuring occupants while in their seats. This proposal would not change that requirement. Therefore, in those cases where partitions are not required to withstand the decompression condition of § 25.365(e)(2), the applicant must nevertheless take reasonable design precautions to minimize the probability that a failed partition will injure an occupant in the compartment. For example, the applicant can employ lanyards or other devices to reduce the chance that a failed partition will impact the occupant. The applicant, in this situation, must also add venting, as a reasonable design precaution, to the extent practical to reduce the chance the partition will fail as a result of smaller decompression hole sizes.

IV. Regulatory Notices and Analyses

A. Regulatory Evaluation

Changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 and Executive Order 13563 direct 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 (Public Law 96-354) requires agencies to analyze the economic impact of regulatory changes on small entities. Third, the Trade Agreements Act (Public Law 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 (Public Law 104-4) requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local, or tribal governments, in the aggregate, or by the private sector, of \$100 million or more annually (adjusted for inflation with base year of 1995). This portion of the preamble summarizes the FAA's analysis of the economic impacts of this proposed rule.

This proposed rule would codify current practice and would not result in additional costs or significant benefits to airplane manufacturers. As noted previously, in some cases, the FAA accepted the possibility of local partition failure based on a finding of equivalent level of safety. This proposed rule would relieve type certification applicants who might otherwise be required to submit requests for an equivalent level of safety under § 21.21(b)(1). However, cost savings for the FAA would be minimal because the FAA received only two such type certification applications in the past 5 years, and would not expect numerous similar applications in the future. Cost savings for industry would be minimal because the cost of administration of the FAA's finding of equivalent safety on each applicable certification project is not high, even though it is applied several times per year. The FAA, therefore, has determined that this proposed rule is not a "significant regulatory action" as defined in section 3(f) of Executive Order 12866.

B. Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (Public Law 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.

This proposed rule would only have impact on transport category airplanes. All United States transport category aircraft manufacturers exceed the Small Business Administration small-entity criteria of 1,500 employees.

If an agency determines that a rulemaking will not result in a significant economic impact on a substantial number of small entities, the head of the agency may so certify under section 605(b) of the RFA. Therefore, based on the foregoing analysis, as provided in section 605(b), the head of the FAA certifies that this rulemaking will not result in a significant economic impact on a substantial number of small entities.

C. International Trade Impact Assessment

The Trade Agreements Act of 1979 (Public Law 96-39), as amended by the Uruguay Round Agreements Act (Public Law 103-465), prohibits Federal agencies from establishing standards or engaging in related activities that create unnecessary obstacles to the foreign commerce of the United States. Pursuant to these Acts, the establishment of standards is not considered an unnecessary obstacle to the foreign commerce of the United States, so long as the standard has a legitimate domestic objective, such as the protection of safety, and does not operate in a manner that excludes imports that meet this objective. 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 no costs on domestic and international entities and thus has a neutral trade impact.

D. Unfunded Mandates Assessment

Title II of the Unfunded Mandates Reform Act of 1995 (Public Law 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 \$155 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 would be no new requirement for information collection associated with this proposed rule.

F. International Compatibility

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

G. Environmental Analysis

FAA Order 1050.1F 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 5-6.6 of FAA Order 1050.1F 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 has determined that this action would 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, would not have Federalism implications.

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

The FAA 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 would not be 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.

C. Executive Order 13609, International Cooperation

Executive Order 13609, “Promoting International Regulatory Cooperation,” promotes international regulatory cooperation to meet shared challenges involving health, safety, labor, security, environmental, and other issues and to reduce, eliminate, or prevent unnecessary differences in regulatory requirements. The FAA has analyzed this action under the policies and agency responsibilities of Executive Order 13609, and has determined that this action would have no effect on international regulatory cooperation.

D. Executive Order 13771, Reducing Regulation and Controlling Regulatory Costs

This proposed rule is an Executive Order 13771 deregulatory action. Details on the regulatory relief provided by this proposed rule can be found in the Regulatory Evaluation section.

VI. Additional Information

E. 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.

F. Availability of Rulemaking Documents

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

1. Searching the Federal eRulemaking Portal (<http://www.regulations.gov>);
2. Visiting the FAA's Regulations and Policies web page at http://www.faa.gov/regulations_policies or
3. Accessing the Government Printing Office's web page at <http://www.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(f), 106(g), 40113, 44701, 44702 and 44704.

2. Amend § 25.365 by revising paragraph (g) to read as follows:

§ 25.365 Pressurized compartment loads.

* * * * *

(g)(1) Except as provided in paragraph (g)(2) of this section, bulkheads, floors, and partitions in pressurized compartments for occupants must be designed to withstand the conditions specified in paragraph (e) of this section. In addition, reasonable design precautions must be taken to minimize the probability of parts becoming detached and injuring occupants while in their seats.

(2) Partitions adjacent to the opening specified in paragraph (e)(2) of this section need not be designed to withstand that condition provided—

(i) Failure of the partition would not interfere with continued safe flight and landing; and

(ii) The applicant shows that designing the partition to withstand the condition specified in paragraph (e)(2) of this section would be impractical.

Issued under authority provided by 49 U.S.C. 106(f), 44701(a), and 44703 in Washington, DC, on May 3, 2019.

Earl Lawrence
Executive Director
Aircraft Certification Service
[FR Doc. 2019-09823 Filed: 5/14/2019 8:45 am; Publication Date: 5/15/2019]