



Policy Statement

Subject: Classification of Type Design Changes That Would Materially Alter Safety Critical Information as Major Design Changes

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Initiated By: AIR-63A

Summary

This policy statement is part of the Federal Aviation Administration (FAA) implementation of Section 105(a) of the Aircraft Certification, Safety, and Accountability Act, Pub. L. 116-260, (the Act). Section 105(a) mandates that FAA require an applicant for, or holder of, a type certificate (TC) to disclose to the Administrator, in such a manner as the Administrator may require, any design or analysis change that would materially alter any submission previously made to the Administrator under paragraph (1) of Title 49, United States Code (49 U.S.C.) of 44704(e). As noted in this policy, a proposed type design change that would materially alter safety critical information is not minor within the meaning of FAA regulations.

Applicability

This policy applies to Aviation Safety staff involved in the certification of Title 14, Code of Federal Regulations (14 CFR) part 25 transport category airplanes.

Note: FAA designees, including holders of an Organization Designation Authorization (ODA), should be aware of this guidance when working with applicants for amended TC programs for transport category airplanes.

Background

Section 105(a), Disclosure, amended Section 44704 of Title 49, United States Code (49 U.S.C.). New section 49 USC 44704(e) provides the following direction to the FAA:

(e) DISCLOSURE OF SAFETY CRITICAL INFORMATION.—

(1) IN GENERAL.—Notwithstanding a delegation described in section 44702(d), the Administrator shall require an applicant for, or holder of, a type certificate for a transport category airplane covered under part 25 of title 14, Code of Federal Regulations, to submit

safety critical information with respect to such airplane to the Administrator in such form, manner, or time as the Administrator may require...

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(2) ONGOING COMMUNICATIONS.—

(A) NEWLY DISCOVERED INFORMATION.—The Administrator shall require that an applicant for, or holder of, a type certificate disclose to the Administrator, in such form, manner, or time as the Administrator may require, any newly discovered information or design or analysis change that would materially alter any submission to the Administrator under paragraph (1).

The “paragraph (1)” referenced in 49 U.S.C. 44704(e)(2)(A) is paragraph 49 U.S.C. 44704(e)(1), which requires an applicant for, or holder of, a TC for a transport category airplane to submit safety critical information to the Administrator. That paragraph defines safety critical information as including:

- (A) “any design and operational details, intended functions, and failure modes of any system that, without being commanded by the flight crew, commands the operation of any safety critical function or feature required for control of an airplane during flight or that otherwise changes the flight path or airspeed of an airplane;
- (B) “the design and operational details, intended functions, failure modes, and mode annunciations of autopilot and autothrottle systems, if applicable;
- (C) “any failure or operating condition that the applicant or holder anticipates or has concluded would result in an outcome with a severity level of hazardous or catastrophic, as defined in the appropriate Administration airworthiness requirements and guidance applicable to transport category airplanes defining risk severity;
- (D) “any adverse handling quality that fails to meet the requirements of applicable regulations without the addition of a software system to augment the flight controls of the airplane to produce compliant handling qualities; and
- (E) “a system safety assessment with respect to a system described in subparagraph (A) or (B) or with respect to any component or other system for which failure or erroneous operation of such component or system could result in an outcome with a severity level of hazardous or catastrophic, as defined in the appropriate airworthiness requirements and guidance applicable to transport category airplanes defining risk severity.”

A TC holder proposing a change to a type design that it holds must determine the proper classification of the change as either major or minor. 14 CFR § 21.95 allows certain applicants to approve¹ minor changes to a type design prior to the submittal to the FAA of substantiating or descriptive data. Per 14 CFR § 21.93(a), a minor design change is one that has no appreciable effect on the weight, balance, structural strength, reliability, operational characteristics, or other characteristic affecting the airworthiness of the product. Type certificate holders seeking FAA approval of major design changes, including those that incorporate a design or an analysis change that could affect the airworthiness of the product, must gain approval of the requested change in accordance with 14 CFR § 21.97(a).

Policy

This policy applies to applications to amend the TC for 14 CFR part 25 transport category airplanes when proposed by existing TC holders.

Classification and Disclosure of Proposed Design or Analysis Changes that Would Materially Alter Safety Critical Information

Since “safety critical information,” as defined by Section 105, relates to the airworthiness characteristics of the product, any proposed design or analysis change that would materially alter safety critical information, including related substantiation data, does not meet the minor change classification criteria per 14 CFR § 21.93(a). Therefore, it may not be approved as a minor change.

To prevent such erroneous approval, FAA personnel and designees including ODA holders must review and update any relevant documentation, such as ODA procedures manuals,² within six months of the effective date of this policy, as necessary, to ensure that design or analysis changes that would materially alter safety critical information are not approved by the TC holder as a minor change.

Effect of Policy

The contents of this document, by itself, do not have the force and effect of law and are not meant to bind the public in any way. This document is intended only to provide information to the public regarding existing requirements and definitions under the law (including Section 105(a) and 14 CFR §§ 21.93, 21.95, 21.97, and 21.101) or agency policies.

¹ 14 CFR § 21.101(a) requires the holder to show that the change (including minor changes) and areas affected by the change comply with airworthiness requirements.

² Including any provisions related to “No Program Notification Letters” (i.e., projects with certification activities that may be conducted without prior notification to the FAA) in accordance with FAA Order 8100.15B, *Organization Designation Authorization*, Change 3.