

(1) Transport category large airplanes.

(2) Jet (Turbojet powered) airplanes (regardless of category). For airplanes to which this paragraph applies, "acoustical changes" do not include changes in type design that are limited to one of the following—

(i) Gear down flight with one or more retractable landing gear down during the entire flight, or

(ii) Spare engine and nacelle carriage external to the skin of the airplane (and return of the pylon or other external mount), or

(iii) Time-limited engine and/or nacelle changes, where the change in type design specifies that the airplane may not be operated for a period of more than 90 days unless compliance with the applicable acoustical change provisions of Part 36 of this chapter is shown for that change in type design.

(3) Propeller driven commuter category and small airplanes in the primary, normal, utility, acrobatic, transport, and restricted categories, except for airplanes that are:

(i) Designated for "agricultural aircraft operations" (as defined in §137.3 of this chapter, effective January 1, 1966) to which §36.1583 of this chapter does not apply, or

(ii) Designated for dispensing fire fighting materials to which §36.1583 of this chapter does not apply, or

(iii) U.S. registered, and that had flight time prior to January 1, 1955 or

(iv) Land configured aircraft reconfigured with floats or skis. This reconfiguration does not permit further exception from the requirements of this section upon any acoustical change not enumerated in §21.93(b).

(4) Helicopters except:

(i) Those helicopters that are designated exclusively:

(A) For "agricultural aircraft operations", as defined in §137.3 of this chapter, as effective on January 1, 1966;

(B) For dispensing fire fighting materials; or

(C) For carrying external loads, as defined in §133.1(b) of this chapter, as effective on December 20, 1976.

(ii) Those helicopters modified by installation or removal of external equipment. For purposes of this paragraph, "external equipment" means any in-

strument, mechanism, part, apparatus, appurtenance, or accessory that is attached to, or extends from, the helicopter exterior but is not used nor is intended to be used in operating or controlling a helicopter in flight and is not part of an airframe or engine. An "acoustical change" does not include:

(A) Addition or removal of external equipment;

(B) Changes in the airframe made to accommodate the addition or removal of external equipment, to provide for an external load attaching means, to facilitate the use of external equipment or external loads, or to facilitate the safe operation of the helicopter with external equipment mounted to, or external loads carried by, the helicopter;

(C) Reconfiguration of the helicopter by the addition or removal of floats and skis;

(D) Flight with one or more doors and/or windows removed or in an open position; or

(E) Any changes in the operational limitations placed on the helicopter as a consequence of the addition or removal of external equipment, floats, and skis, or flight operations with doors and/or windows removed or in an open position.

(c) For purposes of complying with part 34 of this chapter, any voluntary change in the type design of the airplane or engine which may increase fuel venting or exhaust emissions is an "emissions change."

[Amdt. 21-27, 34 FR 18363, Nov. 18, 1969]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §21.93, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.

§21.95 Approval of minor changes in type design.

Minor changes in a type design may be approved under a method acceptable to the Administrator before submitting to the Administrator any substantiating or descriptive data.

§21.97 Approval of major changes in type design.

(a) In the case of a major change in type design, the applicant must submit

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substantiating data and necessary descriptive data for inclusion in the type design.

(b) Approval of a major change in the type design of an aircraft engine is limited to the specific engine configuration upon which the change is made unless the applicant identifies in the necessary descriptive data for inclusion in the type design the other configurations of the same engine type for which approval is requested and shows that the change is compatible with the other configurations.

[Amdt. 21-40, 39 FR 35459, Oct. 1, 1974]

§ 21.99 Required design changes.

(a) When an Airworthiness Directive is issued under Part 39 the holder of the type certificate for the product concerned must—

(1) If the Administrator finds that design changes are necessary to correct the unsafe condition of the product, and upon his request, submit appropriate design changes for approval; and

(2) Upon approval of the design changes, make available the descriptive data covering the changes to all operators of products previously certificated under the type certificate.

(b) In a case where there are no current unsafe conditions, but the Administrator or the holder of the type certificate finds through service experience that changes in type design will contribute to the safety of the product, the holder of the type certificate may submit appropriate design changes for approval. Upon approval of the changes, the manufacturer shall make information on the design changes available to all operators of the same type of product.

[Doc. No. 5085, 29 FR 14567, Oct. 24, 1964, as amended by Amdt. 21-3, 30 FR 8826, July 24, 1965]

§ 21.101 Designation of applicable regulations.

(a) An applicant for a change to a type certificate must show that the changed product complies with the airworthiness requirements applicable to the category of the product in effect on the date of the application for the change and with parts 34 and 36 of this

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chapter. Exceptions are detailed in paragraphs (b) and (c) of this section.

(b) If paragraphs (b)(1), (2), or (3) of this section apply, an applicant may show that the changed product complies with an earlier amendment of a regulation required by paragraph (a) of this section, and of any other regulation the Administrator finds is directly related. However, the earlier amended regulation may not precede either the corresponding regulation incorporated by reference in the type certificate, or any regulation in §§ 23.2, 25.2, 27.2, or 29.2 of this chapter that is related to the change. The applicant may show compliance with an earlier amendment of a regulation for any of the following:

(1) A change that the Administrator finds not to be significant. In determining whether a specific change is significant, the Administrator considers the change in context with all previous relevant design changes and all related revisions to the applicable regulations incorporated in the type certificate for the product. Changes that meet one of the following criteria are automatically considered significant:

(i) The general configuration or the principles of construction are not retained.

(ii) The assumptions used for certification of the product to be changed do not remain valid.

(2) Each area, system, component, equipment, or appliance that the Administrator finds is not affected by the change.

(3) Each area, system, component, equipment, or appliance that is affected by the change, for which the Administrator finds that compliance with a regulation described in paragraph (a) of this section would not contribute materially to the level of safety of the changed product or would be impractical.

(c) An applicant for a change to an aircraft (other than a rotorcraft) of 6,000 pounds or less maximum weight, or to a non-turbine rotorcraft of 3,000 pounds or less maximum weight may show that the changed product complies with the regulations incorporated by reference in the type certificate. However, if the Administrator finds that the change is significant in an