U.S. Department
of Transportation
**Federal Aviation
Administration**

Office of the Chief Counsel

800 Independence Ave., S.W.
Washington, D.C. 20591

MAR 26 2008

Mr. Christopher Witkowski, Director
Association of Flight Attendants, CWA, AFL-CIO
Air Safety, Health, & Security Department
501 Third Street, N.W.
Washington, D.C. 20001-2797

Re: Request for Interpretation of 14 C.F.R. §§ 91.7(b) and 3.5(a)

Dear Mr. Witkowski:

By letters to the Federal Aviation Administration's (FAA) Office of the Chief Counsel, dated August 7, 2006, and February 5, 2007, you sought clarification of what you characterized as "the overlap between Federal Aviation Administration (FAA) design standards and operating requirements." We apologize for the delay in responding to you. Your request addressed both operating and maintenance-related issues. We are responding to these in order.

Operational issue

You stated it was your organization's "understanding that design standards may be interpreted as de facto operating requirements under Federal Aviation Regulations (FAR) 91.7(b) and FAR 3.5(a). Specifically:" [You then follow with the text of those regulations.]

Section 91.7(b):

> The pilot of a civil aircraft is responsible for determining whether that aircraft is in condition for safe flight. The pilot in command shall discontinue the flight when unairworthy mechanical, electrical, or structural conditions occur.

Section 3.5(a):

> Airworthy means the aircraft conforms to its type design and is in condition for safe operation.

You state that your organization "would interpret these *standards* [presumably, the above-referenced regulations] to mean that a flight must be discontinued if the aircraft no longer meets the design standards under which it was certified for flight." (Emphasis added.) We interpret your request to be one that asks what type of defect would render an aircraft sufficiently unairworthy to trigger the application of section 91.7(b), such that the pilot in command would be required to discontinue the flight.

The National Transportation Safety Board (NTSB) long ago adopted a standard for airworthiness that was based on the statutory requirement for the issuance by the FAA of an airworthiness certificate for an aircraft. A seminal case is *Administrator v. Doppes*, 5 NTSB 50, 52 n.6 (1985) ("The term 'airworthiness' is best defined by reference to Section 603(c) of the Federal Aviation Act of 1958 (49 U.S.C. § 1423(c)) which imposes a two-prong definition. In order to be airworthy, an aircraft (1) must conform to its type certificate, if and as that certificate has been modified by supplemental type certificates and by Airworthiness Directives; and (2) must be in condition for safe operation.") This currently is found in 49 U.S.C. § 44704(d), which provides that: "The Administrator shall issue an airworthiness certificate when the Administrator finds that the aircraft conforms to its type certificate and, after inspection, is in condition for safe operation." In FAA civil penalty cases the Administrator, citing to NTSB case law, has adopted the same two-pronged test for airworthiness, though sometimes referring to "type design" instead of "type certificate." *See, e.g., In the Matter of America West Airlines*, FAA Order No. 96-3 at 29 n.26 and 27; *In the Matter of USAir*, FAA Order No. 96-25 at 11.

The regulatory definition of airworthiness referenced in your letter, (14 C.F.R. § 3.5(a)), is less encompassing than the NTSB's statutory-based standard noted above because it refers only to conformance to an aircraft's "type design" rather than to its "type certificate." Also, the applicability of the section 3.5 definition is limited to the purpose of that section. The term "type certificate" used in the statute and the NTSB's decisions includes not only the type design, but also "the operating limitations, the certificate data sheet, the applicable regulations of this subchapter with which the Administrator records compliance and any other conditions or limitations prescribed for the product in this subchapter." 14 C.F.R. § 21.41. Because your question uses the term "design standards," we assume you are referring to information contained in the type design. While most mechanical, electrical, or structural unairworthy conditions would probably implicate issues with the type design, our answer applies to the broader concept of airworthiness that includes compliance with the type certificate, including supplemental type certificates, and Airworthiness Directives.

While the statute sets forth the requirements for the issuance of an airworthiness certificate, NTSB case law has recognized the difference between a new aircraft and one that has been in service, *i.e.*, an aircraft may have accumulated a certain amount of wear and minor defects and still be considered to substantially conform to its type certificate and therefore be airworthy, if it still is in condition for safe operation. *Administrator v. Calavaero*, 5 NTSB 1099, 1101 (1986) ("However, we do not agree that every scratch, dent, 'pinhole' of corrosion, missing screw, or other defect, no matter how minor or where

located on the aircraft, dictates the conclusion that the aircraft's design, construction, or performance has been impaired by the defect to a degree that the aircraft no longer conforms to its type certificate."). Important in the NTSB's reasoning was that the FAA had not shown that "the alleged defects or discrepancies had had an adverse impact on the level of safety that an aircraft's conformity with its type certificate is intended to insure, or to counter the substantial evidence adduced by respondent that they had not had such an impact." *Id.* at 1101; *Administrator v. Calavaero,* 5 NTSB 1105 (1986) (quoting in part *Id.* at 1101). See also *Administrator v. Frost*, NTSB Order No. EA-4680 (1998).

Also, as you know, an air carrier airplane may operate legally with certain instruments and equipment inoperative if they are included on an approved Minimum Equipment List (MEL), and the air carrier operates the airplane under all applicable conditions and limitations contained in the approved MEL. 14 C.F.R. § 121.628 and 14 C.F.R. § 135.179; *see also* 14 C.F.R. § 91.213. The approved MEL is considered to be either a supplemental type certificate (STC) (14 C.F.R. § 91.213(a)(2)), or an approved change to the type design without requiring recertification (14 C.F.R. § 121.628(a)(2) and 14 C.F.R. § 135.179(a)(2)). Accordingly, an aircraft operating under the conditions and limitations of an approved MEL would, with respect to the inoperative item, by definition, conform to its type certificate.

A related regulation is 14 C.F.R. § 121.563, on **Reporting mechanical irregularities.** This section requires the following:

> The pilot in command shall ensure that all mechanical irregularities occurring during flight time are entered in the maintenance log of the airplane at the end of that flight time. Before each flight the pilot in command shall ascertain the status of each irregularity entered in the log at the end of the preceding flight.

A similar requirement is found in 14 C.F.R. § 135.65(b).

In addition, 14 C.F.R. § 121.627, on **Continuing flight in unsafe conditions**, provides:

> (a) No pilot in command may allow a flight to continue toward any airport to which it has been dispatched or released if, in the opinion of the pilot in command or dispatcher (domestic and flag operations only), the flight cannot be completed safely; unless in the opinion of the pilot in command, there is no safer procedure. In that event, continuation toward that airport is an emergency situation as set forth in § 121.557.
>
> (b) If any instrument or item of equipment required under this chapter for the particular operation becomes inoperative en route, the pilot in command shall comply with the approved procedures for such an occurrence as specified in the certificate holder's manual.

Similarly, 14 C.F.R. § 135.69(b), on **Restriction or suspension of operations: Continuation of flight in an emergency**, provides:

> (b) No pilot in command may allow a flight to continue toward any airport of intended landing under the conditions set forth in paragraph (a) of this section [. . . that are a hazard to safe operations], unless, in the opinion of the pilot in command, the conditions that are a hazard to safe operations may reasonably be expected to be corrected by the estimated time of arrival or, unless there is no safer procedure. In the latter event, the continuation toward that airport is an emergency situation under § 135.19.

Based on the above discussion, it is our opinion that the "standards" to which you refer do not always require "that a flight must be discontinued if the aircraft no longer meets the design standards under which it was certified for flight." It is not clear what you mean by "no longer meets the design standards." An airplane that has been in service a number of years clearly is not in exactly the same condition as when it left the factory. Nevertheless, if the airplane has properly been inspected and maintained in accordance with 14 C.F.R. parts 91 and 43, it should substantially conform to its type certificate to the extent that will provide a level of safety that conformity with its type certificate is intended to insure. The determination of when a mechanical, electrical, or structural discrepancy is sufficiently serious to render an aircraft unairworthy is, in many cases, a judgment call. If the defect is an obvious safety issue, the air carrier regulations noted above provide procedures that a pilot in command must follow if an unsafe condition develops during a flight.

Maintenance issue

Quoting excerpts from the maintenance regulations (14 C.F.R. § 43.13(a) and (b)), you state:

> FAA performance rules require that for factors that affect airworthiness, aircraft maintenance be performed,
>
> > per the methods, techniques, and practices prescribed in the current manufacturer's maintenance manual or . . . other methods, techniques, and practices acceptable to the Administrator . . . . (FAR 43.13(a))
>
> to a standard that is
>
> > at least equal to its original or 'properly altered' condition . . . . (FAR 43.13(b))

You then state that the quoted regulations

> appear to require that any necessary maintenance, whether in response to a pilot entry in the aircraft maintenance log or regular scheduled maintenance, must restore an aircraft to its original condition, presumably defined by the design standards set out in Part 25, supporting the definition of "airworthy" under FAR 3.5(a) cited above.

We agree that under 14 C.F.R. part 43 aircraft maintenance must be done, at a minimum, using methods, techniques, and practices acceptable to the Administrator, and that maintenance performed must restore an aircraft to its "original or properly altered condition (with regard to aerodynamic function, structural strength, resistance to vibration and deterioration, and other qualities affecting airworthiness.)" 14 C.F.R. § 43.13(b). While 14 C.F.R. part 25 contains the airworthiness standards for transport category aircraft, as we discussed above, the maintenance rules do not require that an aircraft that has undergone maintenance be restored to a "new" or "like new" condition. *See Calavaero*, 5 NTSB at 1101, and *Calavaero,* 5 NTSB 1105.

This response was prepared by Edmund Averman, an Attorney in the Regulations Division of the Office of the Chief Counsel. If you have additional questions regarding this matter, please contact us at your convenience at (202) 267-3073.

Sincerely,

Rebecca B. MacPherson
Assistant Chief Counsel for Regulations, AGC-200