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

Office of the Chief Counsel
800 Independence Avenue, S.W.
Washington, D.C. 20591

September 29, 2017

Mr. Daniel Murphy
[redacted]

Re: Legal Interpretation on Whether an Aircraft may be Operated with an Inoperative Item that is Included on the Aircraft's Minimum Equipment List Removed from the Aircraft and on the Meaning of the Term "Repair"

Dear Mr. Murphy:

This is in response to your May 22, 2017 request for a legal interpretation on whether an aircraft may be operated with an inoperative item of equipment that is listed on the aircraft's FAA-approved Minimum Equipment List (MEL) physically removed from the aircraft. You also asked that our office define the term "repair"—a word used in the FAA's definition of "maintenance," and that we opine on two fact-based scenarios based on how we define "repair."

While the FAA's rules governing operation of aircraft with inoperative/inoperable instruments and equipment[1] authorize operations with certain inoperative items under conditions and limitations specified in the applicable FAA-approved MELs, they do not address issues related to whether the listed item may be absent from the aircraft during operation. Whether an aircraft may be operated with an item removed requires a fact-specific determination, and may depend on the specifics of a given MEL. We believe your question should be directed to the Aircraft Maintenance Division (AFS-300) in the FAA's Flight Standards Service.

You also asked this office to provide a definition of the term "repair" that "is generally applicable to both major and minor repairs." While the precise meaning of "repair" may depend on the specific context in which the term is used, in general the plain meaning dictionary definition of "repair" ("to restore to sound condition after damage or injury"[3]) is consistent with

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[1] See, e.g., 14 C.F.R. §§ 91.213, 121.628, 125.201, and 135.179.

[3] Webster's II New Riverside University Dictionary, (1984 by Houghton Mifflin Company).

its meaning in the FAA's maintenance regulations. You asked two follow-on questions and requested that the answer be based on our newly-formulated definition of repair.

First, you asked: Does the FAA recognize the concept of a "time-limited repair?" You provided a scenario where an operator discovered a discrepant condition and, due to maintenance convenience, the operator obtained a temporary repair from the aircraft manufacturer that would allow the aircraft to fly under normal conditions for a specified period of time before the operator installed a permanent repair.

Secondly, you asked: Whether a maintenance action taken in preparation for a ferry flight (*i.e.*, for a special flight permit issued under 14 C.F.R. § 21.197(a)(1)), that did not restore the aircraft to its original or properly altered condition, would be considered a "repair"—such that it would require "full FAA approval process and documentation for repair data in the case of a major repair?" Your example was the installation of a "small aluminum doubler installed per manufacturer instructions" to repair damage to a fuselage (*e.g.*, after impact with a ground vehicle)—a repair that would render the aircraft capable of safe flight to an airport where a permanent repair could be made that would restore the aircraft to its originally or properly altered condition.

Because your questions raise technical and fact-specific rather than legal issues, we believe your questions are better directed to the Aircraft Maintenance Division (AFS-300) in the FAA's Flight Standards Service. However, in discussions with that office, we determined that, in some cases, the FAA does recognize the concept of "time-limited" (temporary) repairs. For example, air carrier maintenance manuals acceptable under 14 C.F.R. § 43.13(c) often have procedures that provide for these types of repairs and specify the conditions under which they may be made and the aircraft operated.

In answer to your second question as to whether the "maintenance action" taken to prepare the aircraft for a ferry flight after fuselage damage would be considered a repair in the context of the FAA's maintenance regulations, our opinion is that these actions would constitute a type of repair that, at a minimum, would be subject to part 43 requirements. The common definition of "repair" noted above requires that the aircraft be restored to a sound condition—albeit for one flight. The maintenance actions taken for a ferry flight would be intended to restore the aircraft to a "safe for flight" condition. Actions taken in preparation for a ferry flight do not necessarily restore the aircraft to a *sound* condition such that it would meet all applicable airworthiness standards—the actions taken must, however, place the aircraft in condition for safe flight for the intended purpose. A permanent repair for the damage described in your hypothetical would be *major* and require approved data. The installation of the "small aluminum doubler" in your scenario would require inspection by a qualified person for an assessment of whether the aircraft was safe for the intended flight. If the special flight permit were issued, it would be valid only to fly the aircraft to the airport where permanent repairs could be made, and only under the conditions and limitations specified in the special flight permit.

Finally, you asked an un-related question as to whether a manufacturer's "serial number specific instructions" for an aircraft constitute acceptable data suitable for minor repair or alterations of that aircraft. Because these would not appear in the specific sources listed in 14 C.F.R. § 43.13(a) ("current manufacturer's maintenance manual or Instructions for Continued Airworthiness . . ."), you asked whether those specific instructions would constitute "other methods, techniques, and practices acceptable to the Administrator," also as referenced in that regulation. The answer, in general, is yes, unless the FAA found a problem with those instructions and could demonstrate how they would not be acceptable. Please note that even if a manufacturer provided specific instructions for a particular repair, these would have to include technical data approved by the Administrator if the damage required a major repair.[4]

I hope this response is useful to you. This response was coordinated with the Aircraft Maintenance Division, AFS-300, of the Flight Standards Service. It was prepared by Edmund Averman, an attorney in the Regulations Division of the FAA's Office of the Chief Counsel. If you have additional questions regarding this matter, please contact us at your convenience at (202) 267-3073.

Sincerely,



Lorelei Peter
Assistant Chief Counsel for Regulations, AGC-200

[4] *See, e.g.*, 14 C.F.R. §§ 65.95(a)(1), 121.379(b), 135.437(b), and 145.201(c)(2).

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Daniel Murphy
[redacted]

05/22/2017

To whom it may concern:

Please review the following three items and provide Chief Counsel interpretation/opinion:

1.) When an aircraft is operated with a specific system inoperative per the FAA approved Minimum Equipment List, does this imply that a specific component of that system may be removed provided removal is performed per acceptable data (e.g. maintenance manual instructions)? For example, if a specific system component fails and, in the interest of convenience or safety, the operator desires to remove that specific component (e.g. a radio, an enhanced vision system overhead projector unit, an HF antenna coupler, etc.) so that the item may be sent out for repair, because the specific failure causes interference with other systems, or because of concern for safety due to an internal electrical short, etc. Provided the operator's Minimum Equipment List states that this specific system may be inoperative, may the operator remove the discrepant component per maintenance manual instructions, and operate the aircraft per the requirements specified in the MEL even if the relevant MEL section does not specifically mention equipment removal?

I note that 14 C.F.R §91.213 (d)(3)(i) contains a requirement to remove the specific inoperative component however, this section only applies to aircraft without an approved Minimum Equipment List and there is no such requirement or implication for aircraft with an approved Minimum Equipment List.

2.)

a.) Within the context of Appendices A and B to Part 43, please provide a definition of the term "repair" that is generally applicable to both major and minor repairs.

b.) Based on the definition of the term "repair" provided, does the FAA recognize the concept of a "time-limited repair?" In this case please address the scenario in which an operator has discovered a discrepant condition and, due to maintenance convenience, obtains a temporary repair from the manufacturer that allows the aircraft to fly under normal conditions (i.e. not a ferry flight) for a specified time period (or number of flight cycles) prior to installing a permanent repair. In this case the temporary repair does not comply with the full requirements