

Docket Management System (DMS)
U.S. Department of Transportation
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Boeing Comments: Safe Disposition of Life-Limited Aircraft Parts

PART 43--MAINTENANCE, PREVENTIVE MAINTENANCE, REBUILDING, AND ALTERATION

Sec. 43.10 Disposition of life-limited aircraft parts.

(a) For the purposes of this section the following definitions apply. Life-limited part means any part for which a mandatory replacement time is specified in the Airworthiness Limitations section of a type certificate holder's maintenance manual or Instructions for Continued Airworthiness.

- FAA Proposed Language:
Life status means the accumulated cycles, hours, or any other mandatory replacement time of a life-limited part.
- Boeing does not support the proposed language for this paragraph and recommends the paragraph read as follows: **“Life status means the accumulated time in service and is usually accounted for in terms of the number of landings, flight cycles, flight hours or any other mandatory replacement time of a life-limited part.”**
- *Reason: The term “life limits” is not usually expressed in terms of cycles or hours but in terms of the number of landings, flight cycles or flight hours. Cycles cannot be used alone because there are many cycles in one flight and the number of cycles vary from flight to flight. Cycles are not tracked but the number of landings, flight cycles or flight hours are.*
- FAA Proposed Language:

(b) After [the effective date of the final rule], each person who removes a life-limited part from a type-certificated product must ensure that the part is controlled using one of the methods in paragraphs (b)(1) through (6) of this section. The method must prevent the part from being installed after it has reached its life limit.

- Boeing does not support the proposed language for this paragraph and recommends the paragraph read as follows: **(b) After [the effective date of the final rule], each person who removes a life-limited part from a type-certificated product because**

that part has reached its certified life limit, must ensure that the part is controlled using one of the methods in paragraphs (b)(1) through (6) of this section. The method must prevent the part from being re-installed after it has reached its life limit unless for some reason its life limit has been extended.

- *Reason: The way the proposed para.(b) is written, if any life-limited part is removed from a type-certificated product for any reason, then para (b)(1) to (b)(6) applies. However, parts are removed for a short period of time for the purpose of overhaul (as is the case with the majority of landing gear life-limited parts). If a part is removed for overhaul, is the intent to keep it segregated from other parts during the overhaul period? This is confusing. Is the intent to mark its life limit even though its going back into service immediately after its overhaul process. We believe paragraph (b) requires rewording so that parts removed temporarily (say for the purpose of overhaul) will not be affected by this rule.*

Approved methods include:

- (1) The part may be segregated under circumstances that preclude its installation on a type-certificated product. These circumstances must include, at least--
 - (i) Keeping a record of the serial number and current life status of the part, and
 - (ii) Ensuring the part is stored separately from serviceable parts.

- FAA Proposed Language:

(2) The part may be permanently and legibly marked, if practical, to indicate its life status. The life status must be updated each time the part is removed from service. Unless the part is permanently removed from service, this marking must be accomplished in accordance with the manufacturer's marking instructions, in order to maintain the integrity of the part, as required under Sec. 45.14 of this chapter.

- Boeing does not support the proposed language for this paragraph and recommends the paragraph read as follows: **(2) The part may be permanently and legibly marked, if practical, to indicate its life status. Unless the part is permanently removed from service, this marking must be accomplished in accordance with the manufacturer's marking instructions, in order to maintain the integrity of the part, as required under Sec. 45.14 of this chapter.**
- *Reason: Para. (b)(2) is confusing,. the topic of re-part marking each time the part is removed from service is introduced without explanation. Furthermore para. (b)(4) talks about re-part marking, so why duplicate the effort here. We suggest that the paragraph (b)(2) be changed as shown for clarification.*

(3) The part may be destroyed in any manner that prevents installation in a type-certificated product.

- FAA Proposed Language:

(4) The part may be marked, if practical, to include the life status. The life status must be updated each time the part is removed from service. This marking must be accomplished in accordance with the pertinent manufacturer's marking instructions, in order to maintain the integrity of the part, as required under Sec. 45.14 of this chapter.

- Boeing does not support the proposed language for this paragraph and recommends the paragraph read as follows: **(4) If the part has been previously marked to indicate its life status and was re-introduced into service, the life status must be updated each time the part is again removed from service. This marking must be accomplished in accordance with the pertinent manufacturer's marking instructions, in order to maintain the integrity of the part, as required under Sec. 45.14 of this chapter.**
- *Reason: The topic of re-part marking is introduced without explanation. A sentence or explanation should be added to para. (b)(4) to explain the re-part marking. We suggest that the paragraph (b)(4) be changed as shown for clarification.*
- FAA Proposed Language:

(5) If it is impractical to mark the part, a tag may be attached to the part to include the life status. The tag must be updated to reflect life status each time the part is removed from service.

- Boeing does not support the proposed language for this paragraph and recommends the paragraph read as follows: **(5) If it is impractical to mark the part, a tag may be attached to the segregated part to indicate its' the life status. The tag must reflect its current life status at all times.**
- *Reason: A good percentage of landing gear safe life parts will fall under this paragraph since it is not practical to permanently mark the life status on the part. The way this paragraph has been written, it implies that the tag will stay attached to the part at all times even though the part may have re-entered service. Isn't the intent here is to tag the parts in segregation if it is not practical to permanently mark them. We suggest that the paragraph (b)(5) be changed as shown for clarification.*
- Boeing recommends that, if parts removed temporarily are affected by this rule, then under the above paragraph the following new subparagraph be added.

(6) The part may be dispositioned for refurbishment or recycling in a manner that precludes re-installation until such refurbishment is completed. Adequate marking (i.e., rework tag) or temporary physical alteration shall be used to clearly identify the status of the item or prevent it's use until refurbishment is completed.
- *Reason: This recognizes the economic benefits of reusing, refurbishing or recycling parts which may be a common practice and requires a means of segregating in-process parts from airworthy parts.*