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Airworthiness Directive

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [62 FR 28322 NO. 100 05/23/97]

Docket No. 96-SW-06-AD; Amendment 39-10029; AD 97-10-16

RIN 2120-AA64

Airworthiness Directives; Hiller Aircraft Corporation Model UH-12, UH-12A, UH-12B, UH-12C, UH-12D, UH-12E, CH-112, H-23A, H-23B, H-23C, H-23D, H-23F, HTE-1, HTE-2, and OH-23G Helicopters

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▼ Preamble Information

AGENCY: Federal Aviation Administration, DOT

ACTION: Final rule

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to Hiller Aircraft Corporation Model UH-12, UH-12A, UH-12B, UH-12C, UH-12D, UH-12E, CH-112, H-23A, H-23B, H-23C, H-23D, H-23F, HTE-1, HTE-2, and OH-23G helicopters, and UH-12D and UH-12E helicopters converted to turbine engine power in accordance with Supplemental Type Certificate (STC) No.'s SH177WE and SH178WE, having a certain control rotor blade spar tube (blade spar tube) or cuff installed, that currently requires inspections of the blade spar tube and cuff for cracks, and repair or replacement as necessary. This amendment requires inspections of the blade spar tube and cuff for corrosion or cracks, or elongation, corrosion, burrs, pitting or fretting of the bolt holes, and repair as necessary, and defines specific intervals in which the inspections must be performed. This amendment is prompted by analyses that show that the amount of calendar time that elapses between the current repetitive inspections may allow corrosion to develop. The actions specified by this AD are intended to prevent separation of the control rotor blade assembly and subsequent loss of control of the helicopter.

DATES: Effective June 27, 1997.

The incorporation by reference of certain publications listed in the regulations is approved by

the Director of the Federal Register as of June 27, 1997.

ADDRESSES: The service information referenced in this AD may be obtained from Hiller Aircraft Corporation, 3200 Imjin Road, Marina, California 93933-5101. This information may be examined at the FAA, Office of the Assistant Chief Counsel, 2601 Meacham Blvd., Room 663, Fort Worth, Texas; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Mr. Charles Matheis, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, 3960 Paramount Blvd., Lakewood, California 90712-4137, telephone (562) 627-5235, fax (562) 627-5210.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 77-07-05, Amendment 39-2862 (42 FR 17868, April 4, 1977) and Amendment 39-2917 (42 FR 30604, June 16, 1977), which is applicable to Hiller Aircraft Corporation Model UH-12, UH-12A, UH-12B, UH-12C, UH-12D, UH-12E, CH-112, H-23A, H-23B, H-23C, H-23D, H-23F, HTE-1, HTE-2, and OH-23G helicopters, and UH-12D and UH-12E helicopters converted to turbine engine power in accordance with STC No.'s SH177WE and SH178WE, was published in the Federal Register on September 13, 1996 (61 FR 48441). That action proposed to require, within the next 100 hours time-in-service (TIS) after the effective date of this AD, unless accomplished within the last 100 hours TIS, and thereafter at intervals not to exceed 100 hours TIS from the date of the last inspection, or at the next annual inspection, whichever occurs first, an inspection of the blade spar tube and cuff for corrosion or cracks, or elongation, corrosion, burrs, pitting or fretting of the bolt holes, and repair, as necessary, in accordance with Hiller Aviation Service Bulletin No. 36-1, Revision 3, dated October 24, 1979.

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

The commenter suggests several changes to the Hiller Aircraft Corporation service bulletin and the proposed rule. These include changes in the disassembly/reassembly techniques, such as warming of the cuff to facilitate blade removal, and replacement of certain lubrication and corrosion prevention materials. The manufacturer and the FAA have evaluated the suggestions to facilitate disassembly/reassembly, and the FAA has determined that while helpful, the changes are not necessary to accomplish the inspections of the AD. Further, the manufacturer reports no service experience that would indicate a needed change in lubrication or corrosion protection materials or techniques as suggested by the commenter. The suggested changes are not adopted.

The commenter also suggests two type design changes that are outside the scope of the proposal. The FAA will consider these suggested changes for future rulemaking action.

Finally, the commenter also cites a conflict between the mandatory replacement times (total service life) in the Hiller Inspection Guide and those proposed in the proposal. The conflict results because cuff mandatory replacement time, as

specified in the Inspection Guide, depends on certain combinations of cuff, control blades, and main rotor blades. This dependency was not adequately considered in the proposal. Since the FAA did not intend to change these mandatory replacement times by the proposal, and since it is unnecessary to repeat Inspection Guide information in the AD, paragraphs (d)(1) and (d)(2) are removed from this final rule and paragraph (d)(3) becomes paragraph (d).

The FAA has determined that several blade spar tube and cuff part numbers were omitted from the proposal. The proposed rule's Applicability has been changed to specify that only helicopters having a blade spar tube, part numbers (P/N) 36003, 36006, 36129, 36129-25, 36203, 36203-15, 36203-21, or 36209-3, or cuff, P/N 36101-1, 36101-4, 36108, 36115-1, 36115-4, 36115-6, 36115-8, or 36124, installed, are affected.

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes described previously. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

The FAA estimates that 673 helicopters of U.S. registry will be affected by this AD, that it will take approximately 2 work hours per helicopter to accomplish the inspection, 1 work hour to accomplish the repair, and 8 work hours to accomplish the replacement, if necessary, and that the average labor rate is \$60 per work hour. Required parts will cost approximately \$1,000 per cuff, if replacement is necessary. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be \$121,140, assuming after inspection that repairs are necessary on all of the fleet, or \$246,772, assuming inspection of all the fleet and replacement of a cuff in one-sixth of the fleet is necessary.

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation

Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 USC 106(g), 40113, 44701.

§ 39.13 - [Amended]

2. Section 39.13 is amended by removing Amendment 39-2862 (42 FR 17868, April 4, 1977), and Amendment 39-2917 (42 FR 30604, June 16, 1977), and by adding a new airworthiness directive (AD), Amendment 39-10029, to read as follows:

▼ Regulatory Information

97-10-16 HILLER AIRCRAFT CORPORATION: Amendment 39-10029. Docket No. 96-SW-06-AD. Supersedes AD 77-07-05, Amendment 39-2862 and Amendment 39-2917.

Applicability: Model UH-12, UH-12A, UH-12B, UH-12C, UH-12D, UH-12E, CH-112, H-23A, H-23B, H-23C, H-23D, H-23F, HTE-1, HTE-2, and OH-23G helicopters, and UH-12D and UH-12E helicopters converted to turbine engine power in accordance with Supplemental Type Certificate (STC) No.'s SH177WE and SH178WE, having a control rotor blade spar tube (blade spar tube), part numbers (P/N) 36003, 36006, 36129, 36129-25, 36203, 36203-15, 36203-21, or 36209-3, or cuff, P/N 36101-1, 36101-4, 36108, 36115-1, 36115-4, 36115-6, 36115-8, or 36124, installed, certificated in any category.

NOTE 1: This AD applies to each helicopter identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For helicopters that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must use the authority provided in paragraph (e) to request approval from the FAA. This approval may address either no action, if the current configuration eliminates the unsafe condition, or different actions necessary to address the unsafe condition described in this AD. Such a request should include an assessment of the effect of the changed configuration on the unsafe condition addressed by this AD. In no case does the presence of any modification, alteration, or repair remove any helicopter from the applicability of this AD.

Compliance: Required as indicated, unless accomplished previously.

To prevent separation of the control rotor blade assembly and subsequent loss of control of the helicopter, accomplish the following:

(a) Within the next 100 hours time-in-service (TIS) after the effective date of this AD, unless previously accomplished within the last 100 hours TIS, and thereafter at intervals not to exceed 100 hours TIS from the date of the last inspection, or at the next annual inspection, whichever occurs first, inspect the blade spar tube and cuff for corrosion or cracks, or elongation, corrosion, burrs, pitting or fretting of the bolt holes, and repair, as necessary, in accordance with the Accomplishment Instructions of Hiller Aviation Service Bulletin No. 36-1, Revision

3, dated October 24, 1979.

(b) After any reaming procedure is accomplished in accordance with Hiller Aviation Service Bulletin No. 36-1, Revision 3, dated October 24, 1979, the blade spar tube (faired and unfaired) and cuff must be retired at or before accumulating an additional 2,500 hours TIS after repair or when the current approved total service life (total service life before repair plus service life after repair) is reached, whichever comes first.

(c) Fabric covered, metal covered, faired and unfaired control rotor blades are not interchangeable and must not be intermixed.

(d) For cuffs, P/N 36124, without a complete prior service history, within the next 25 hours TIS, unless already accomplished within the last 25 hours TIS prior to the effective date of this AD, and at intervals not to exceed 50 hours TIS, perform a dye penetrant inspection of the cuff in accordance with paragraph G of the Accomplishment Instructions of Hiller Aviation Service Bulletin, No. 36-1, Revision 3, dated October 24, 1979. If a crack is discovered, remove the cracked cuff from service prior to further flight. A cuff for which the prior service history cannot be documented cannot be used as a replacement part. Remove from service all cuffs prior to the accumulation of 225 hours total TIS since April 7, 1977.

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles Aircraft Certification Office, FAA. Operators shall submit their requests through an FAA Principal Maintenance Inspector, who may concur or comment and then send it to the Manager, Los Angeles Aircraft Certification Office.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles Aircraft Certification Office.

(f) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the helicopter to a location where the requirements of this AD can be accomplished.

(g) The inspections and repair, if necessary, shall be done in accordance with Hiller Aviation Service Bulletin No. 36-1, Revision 3, dated October 24, 1979. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Hiller Aircraft Corporation, 3200 Imjin Road, Marina, California 93933-5101. Copies may be inspected at the FAA, Office of the Assistant Chief Counsel, 2601 Meacham Blvd., Room 663, Fort Worth, Texas; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(h) This amendment becomes effective on June 27, 1997.

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▼ **Comments**

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