



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2019-1008; Product Identifier AD-2019-00110-P]**

**RIN 2120-AA64**

**Airworthiness Directives; Hamilton Sundstrand Corporation Propellers**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to adopt a new airworthiness directive (AD) for certain Hamilton Sundstrand Corporation (Hamilton Sundstrand) 54H60 model propellers. This proposed AD was prompted by the failure of a propeller blade that resulted in the loss of the airplane. This proposed AD would require initial and repetitive eddy current inspections (ECI) of the affected propeller blades and replacement of the propeller blades that fail the inspection. The FAA is proposing this AD to address the unsafe condition on these products.

**DATES:** The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Hamilton Sundstrand, 1 Hamilton Road, Windsor Locks, CT, 06096-1010, United States; phone: 877-808-7575; email: CRC@collins.com. You may view this service information at the FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA, 01803. For information on the availability of this material at the FAA, call 781-238-7759.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-1008; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Maureen Maisttison, Aerospace Engineer, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7076; fax: 781-238-7199; email: maureen.maisttison@faa.gov.

### **SUPPLEMENTARY INFORMATION:**

#### **Comments Invited**

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2019-1008; Product Identifier AD-2019-00110-P” at the beginning of your comments. The FAA specifically invites comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. The FAA will consider all comments received by the closing date and may amend this NPRM because of those comments.

Except for Confidential Business Information as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact received about this NPRM.

### **Confidential Business Information**

Confidential Business Information (CBI) is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Maureen Maisttison, Aerospace Engineer, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

### **Discussion**

The FAA received of a report of the separation of a 54H60 model propeller blade installed on a United States Marine Corps Reserve KC-130T airplane during a flight in July 2017. The separation of the blade resulted in the loss of the airplane and 17 fatalities. The investigation of this event revealed the Hamilton Sundstrand 54H60 model propeller blade separated due to corrosion that was not corrected at the last propeller overhaul. The investigation further revealed that 54H60 model propeller blades manufactured before

1971 are susceptible to this unsafe condition. The applicability of this AD is therefore limited to those Hamilton Sundstrand 54H60 model propellers blades with a blade serial number below 813320, which are those propeller blades manufactured before 1971. This condition, if not addressed, could result in failure of the propeller blade, blade separation, and loss of the airplane.

### **Related Service Information under 1 CFR part 51**

The FAA reviewed Hamilton Sundstrand Corporation Alert Service Bulletin (ASB) 54H60-61-A154, dated August 26, 2019. The ASB describes procedures for performing an ECI of the propeller blade taper bore. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **FAA's Determination**

The FAA is proposing this AD because the agency evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

### **Proposed AD Requirements**

This proposed AD would require an initial and repetitive ECI of the affected propeller blades and removal from service of any blades that fail these inspections.

### **Differences Between this Proposed AD and the Service Information**

This proposed rule does not require that operators send blades that fail the inspection to a designated repair facility. Hamilton Sundstrand ASB 54H60-61-A154, dated August 26, 2019 indicates that these blades should be sent to a designated repair facility.

**Interim Action**

The FAA considers this proposed AD interim action. The root cause of the 54H60 model propeller blade separation is still under investigation. The FAA may consider further rulemaking action.

**Costs of Compliance**

The FAA estimates that this proposed AD affects 212 propellers installed on 53 aircraft of U.S. registry.

The FAA estimates the following costs to comply with this proposed AD:

**Estimated costs**

<b>Action</b>	<b>Labor Cost</b>	<b>Parts Cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
ECI of propeller	8 work-hours x \$85 per hour = \$680	\$700	\$1,380	\$292,560

The FAA estimates the following costs to do any necessary replacements that would be required based on the results of the proposed inspection. The FAA has no way of determining the number of aircraft that might need these replacements:

**On-condition costs**

<b>Action</b>	<b>Labor Cost</b>	<b>Parts Cost</b>	<b>Cost per product</b>
Replace blade	1 work-hour x \$85 per hour = \$85	\$63,500	\$63,585

**Paperwork Reduction Act**

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 1 hour per response,

including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

## **Regulatory Findings**

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect 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.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, 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.

## **List of Subjects in 14 CFR Part 39**

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

## **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

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

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**Hamilton Sundstrand: Docket No. FAA-2019-1008; Product Identifier AD-2019-00110-P.**

**(a) Comments Due Date**

The FAA must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all Hamilton Sundstrand Corporation (Hamilton Sundstrand) model 54H60 propellers with a blade having a serial number (S/N) below S/N 813320.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 6111, Propeller Blade Section.

**(e) Unsafe Condition**

This AD was prompted by the separation of a propeller blade that resulted in the loss of an airplane and 17 fatalities. The FAA is issuing this AD to detect cracking in the propeller blade taper bore. The unsafe condition, if not addressed, could result in failure of the propeller blade, blade separation, and loss of the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions**

(1) For affected propellers identified in Planning Information, paragraph 1.E.(1), of Hamilton Sundstrand Corporation Alert Service Bulletin (ASB) 54H60-61-A154, dated August 26, 2019 (“the ASB”), perform an eddy current inspection (ECI) of all blades installed on the propeller within one year or 500 flight hours after the effective date of this AD, whichever occurs first.

(2) For affected propellers identified in Planning Information, paragraph 1.E.(2), of the ASB, perform an ECI of all blades installed on the propeller within two years or 1,000 flight hours after the effective date of this AD, whichever occurs first.

(3) Perform the ECI of the affected propeller blades in accordance with the Accomplishment Instructions, paragraph 3.C. of the ASB.

(4) If any propeller blade fails the inspections required by this AD, based on the criteria in paragraph 3.C. of the ASB, remove the blade from service prior to next flight and replace with a blade eligible for installation.

(5) For all affected propellers, repeat the inspection required by paragraphs (g)(1) through (4) of this AD at intervals not exceeding 3 years or 1,500 flight hours, whichever comes first, after the previous inspection.

(6) Report the results of the ECI required by paragraphs (g)(1) through (5) of this AD in accordance with the Accomplishment Instructions, paragraph 3.C.(6) of the ASB.

**(h) Installation Prohibition**

After the effective date of this AD, do not install any Hamilton Sundstrand propeller blades having an S/N below 813320 on any propeller, unless the blade has first passed the inspection required by this AD. After the effective date of this AD, do not install any propeller assemblies with affected propeller blades onto any aircraft unless the affected propeller blades have passed the inspection required by paragraph (g) of this AD.

**(i) Paperwork Reduction Act Burden Statement**

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding

this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

**(j) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Boston ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (k)(1) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(k) Related Information**

(1) For more information about this AD, contact Maureen Maisttison, Aerospace Engineer, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7076; fax: 781-238-7199; email: maureen.maisttison@faa.gov.

(2) For service information identified in this AD, contact Hamilton Sundstrand, 1 Hamilton Road, Windsor Locks, CT, 06096-1010, United States; phone: 877-808-7575; email: CRC@collins.com. You may view this referenced service information at the FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA, 01803. For information on the availability of this material at the FAA, call 781-238-7759.

Issued in Burlington, Massachusetts, on January 22, 2020.

Karen M. Grant,  
Acting Manager, Engine & Propeller Standards Branch,  
Aircraft Certification Service.  
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