



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0032; Project Identifier AD-2020-01314-P]

RIN 2120-AA64

Airworthiness Directives; Hamilton Sundstrand Corporation Propellers; Initial Regulatory Flexibility Analysis

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

ACTION: Initial regulatory flexibility analysis (IRFA); request for comment.

SUMMARY: The FAA is publishing and requesting comments on this IRFA for the previously published notice of proposed rulemaking (NPRM), Project Identifier AD-2020-01314-P, applicable to Hamilton Sundstrand Corporation 54H model propellers with a 54H60 model propeller hub installed. That NPRM proposed to supersede Airworthiness Directive (AD) 2020-12-07, which applies to certain Hamilton Sundstrand Corporation (Hamilton Sundstrand) 54H model propellers.

DATES: Comments on this IRFA for the NPRM published on February 25, 2021 (86 FR 11473), must be received on or before [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 <http://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 FURTHER INFORMATION CONTACT: Michael Schwetz, Aviation Safety Engineer, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7761; fax: (781) 238-7199; email: michael.schwetz@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this IRFA. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0032; Project Identifier AD-2020-01314-P” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) 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 agency will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

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 Michael Schwetz, Aviation Safety 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.

Background

The FAA issued AD 2020-12-07, Amendment 39-21142 (85 FR 36145, June 15, 2020) (AD 2020-12-07) for certain Hamilton Sundstrand 54H model propellers. AD 2020-12-07 was prompted by a report of the separation of a 54H60 model propeller blade installed on a United States Marine Corps Reserve (USMCR) KC-130T airplane during a flight in July 2017. The USMCR investigation of this event revealed the Hamilton Sundstrand 54H60 model propeller blade separated due to corrosion pitting and a resultant intergranular radial crack that was not corrected at the last propeller overhaul. From this intergranular crack, a fatigue crack initiated and grew under service loading until the Hamilton Sundstrand 54H60 model propeller blade could no longer sustain the applied loads and ultimately the blade separated. The separation of the blade resulted in the loss of the airplane and 17 fatalities. The investigation further revealed that 54H60 model propeller blades manufactured before 1971 are susceptible to cracks of the propeller blade in the area of the internal taper bore. The applicability of AD 2020-12-07 was therefore limited to those Hamilton Sundstrand 54H60 model propellers blades with a blade serial number (S/N) below 813320, which are those propeller blades manufactured before 1971. AD 2020-12-07 required initial and repetitive eddy current inspections (ECIs) of the affected propeller blades and replacement of any propeller blade that fails inspection. The agency issued AD 2020-12-07 to detect cracking in the propeller blade taper bore.

Actions Since AD 2020-12-07 Was Issued

Since the FAA issued AD 2020-12-07, the manufacturer determined that all propeller blades installed on Hamilton Sundstrand 54H model propellers with a 54H60 model propeller hub are susceptible to intergranular corrosion cracking in the blade taper bore. As a result, the manufacturer published Hamilton Sundstrand Alert Service Bulletin (ASB) 54H60-61-A154, Revision 1, dated May 29, 2020, to expand the effectivity of the ASB to include propeller blades with a blade S/N below 813320, all propeller blades if the propeller contains a propeller blade with a blade S/N below 813320, and all propeller blades that have not been overhauled within ten years.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (Public Law 96-354) (RFA) establishes as a principle of regulatory issuance that agencies shall endeavor, consistent with the objective of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation.

To achieve that principle, the RFA requires agencies to solicit and consider flexible regulatory proposals and to explain the rationale for their actions. The RFA covers a wide-range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Agencies must perform a review to determine whether a proposed or final rule will have a significant economic impact on a substantial number of small entities. If the agency determines that it will, the agency must prepare a regulatory flexibility analysis as described in the Act. Based on the comments received following publication of the NPRM, the FAA has completed an IRFA and requests comments from affected small entities. The purpose of this analysis is to identify the number of small entities affected, assess the economic impact of the proposed regulation on them, and consider less burdensome alternatives and still meet the agency's statutory objectives.

Initial Regulatory Flexibility Act Analysis

The Regulatory Flexibility Act (RFA) of 1980, Public Law 96-354, 94 Stat. 1164 (5 U.S.C. 601-612), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104-121, 110 Stat. 857, Mar. 29, 1996) and the Small Business Jobs Act of 2010 (Pub. L. 111-240, 124 Stat. 2504, Sept. 27, 2010), requires Federal agencies to consider the effects of the regulatory action on small business and other small entities and to minimize any significant economic impact. The term "small entities" comprises small businesses and small organizations that are independently owned and operated and are not dominant in their fields, and small governmental jurisdictions with populations of less than fifty thousand (50,000).

The FAA is publishing this Initial Regulatory Flexibility Analysis (IRFA) to aid the public in commenting on the potential impacts to small entities from this proposal.

The FAA invites interested parties to submit data and information regarding the potential economic impact that would result from the proposal. The FAA will consider comments when making a determination or when completing a Final Regulatory Flexibility Assessment.

Under Sections 603(b) and (c) of the RFA, the initial regulatory flexibility analysis for a proposed rule must: contain the following:

- (1) A description of the reasons why the action by the agency is being considered;
- (2) A succinct statement of the objectives of, and legal basis for, the proposed rule;
- (3) A description of and, where feasible, an estimate of the number of small entities to which the proposed rule will apply;
- (4) A description of the projected reporting, recordkeeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record;
- (5) An identification, to the extent practicable, of all relevant Federal rules that may duplicate, overlap, or conflict with the proposed rule; and
- (6) A description of any significant alternatives to the proposed rule which accomplish the stated objectives of applicable statutes and which minimize any significant economic impact of the proposed rule on small entities.

1. Reasons the Action is Being Considered

AD 2020-12-07 was prompted by a report of the separation of a 54H60 model propeller blade installed on a USMCR KC-130T airplane during a flight in July 2017. The subsequent NPRM proposed to retain certain requirements of AD 2020-12-07 and proposed to require initial and repetitive ECIs of all propeller blades installed on Hamilton Sundstrand 54H model propellers with a propeller hub, model 54H60, installed. Additionally, the NPRM proposed to require replacement of any propeller blade that fails inspection.

2. Objectives and Legal Basis of the Proposed Rule

The FAA issued NPRM, Project Identifier AD-2020-01314-P, under the authority described in Title 49, Subtitle VII, Part A, Subpart III, Section 44701, General requirements. Under that section, the FAA is charged with promoting safe flight of civil aircraft in air commerce by prescribing minimum safety standards required in the interest of safety. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on the propellers identified in the NPRM.

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.

3. All Federal Rules That May Duplicate, Overlap, or Conflict

There are no relevant Federal rules that may duplicate, overlap, or conflict with the proposed rule.

4. Description and Estimate of the Number of Small Entities

FAA used the definition of small entities in the RFA for this analysis. The RFA defines small entities as small businesses, small governmental jurisdictions, or small organizations. In 5 U.S.C. section 601(3), the RFA defines "small business" to have the same meaning as "small business concern" under section 3 of the Small Business Act. The Small Business Act authorizes the Small Business Administration (SBA) to define "small business" by issuing regulations.

SBA (2019) has established size standards for various types of economic activities, or industries, under the North American Industry Classification System (NAICS).¹ These size standards generally define small businesses based on the number of employees or annual receipts.

The FAA identified fifty-three (53) airplanes with 54H model propellers having propeller hub, model 54H60, installed. These 53 airplanes are registered to twenty (20)

¹ Small Business Administration (SBA). 2019. Table of Size Standards. Effective August 12, 2019. <https://www.sba.gov/document/support--table-size-standards>.

entities. Twenty (20) airplanes are registered to the United States Government entities, including the U.S. Customs and Border Protection, which operates thirteen (13) of these airplanes. The FAA determined that these government entities are not small businesses or other forms of small entity.

The remaining thirty-three (33) airplanes are owned and operated by sixteen (16) private entities. All of these private entities fall under the 481112 NAICS Code (Scheduled Freight Air Transportation) with a small business size standard of a maximum of 1,500 employees to be considered small business.

Six (6) of these thirty-three (33) airplanes are registered to Lynden Air Cargo, LLC, affiliated with the Lynden Incorporated, which, with 2,500 employees on its payroll, is not a small entity per the SBA definition. The FAA considered all other entities that own and operate similar airplanes as small entities since they all employ less than 1,500 employees. Therefore, the FAA estimated that this proposed AD would impact fifteen (15) small entities.

5. Projected Reporting, Recordkeeping, and Other Compliance Requirements

There are no reporting or recordkeeping costs with this proposed AD. However, the FAA estimated that there would be compliance costs due to the proposed requirements as discussed below.

Using the compliance cost estimate that Lynden Air Cargo LLC provided in its public comment to the proposed AD (\$9,190 to inspect all propeller blades installed on each propeller, or \$36,760 to inspect an airplane with four (4) propellers), the FAA calculated the total compliance costs of this AD on fifteen (15) small businesses that own and operate twenty-seven (27) airplanes at \$992,520 ($\$36,760 \times 27$). Eight (8) small businesses that own and operate one airplane would incur \$36,760. The compliance costs of one small entity with five (5) airplanes would be \$183,800. The average compliance costs of this AD on small entities would be \$66,168 ($\$992,520 / 15$).

The FAA estimated the revenue impact of complying with this proposed AD's requirements on these 15 small entities would vary from under 1 percent (0.12 percent) of affected companies' annual revenues to approximately 2 percent (1.69 percent) of their annual revenues.

To the extent that small entities provide more unique services or serve markets with less competition, they may also be able to pass on costs in the form of price increases. However, the FAA assumed that none of these small entities would be able to pass these compliance costs to their customers in terms of higher prices.

6. Significant Alternatives Considered

The FAA did not find any significant regulatory alternatives to the proposed AD that would still accomplish the safety objectives of this proposed AD.

Issued on July 21, 2021.

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