

Proposed Rules

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This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 96-SW-05-AD]

Airworthiness Directives; Schweizer Aircraft Corporation Model 269A, A-1, B, and C, and TH-55A Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes the adoption of a new airworthiness directive (AD) that is applicable to Schweizer Aircraft Corporation Model 269A, A-1, B, and C, and TH-55A helicopters, with a certain main rotor transmission ring gear (ring gear) installed. This proposal would require inspections of the ring gear teeth for pitting, wearing, cracking or corrosion, and replacement of the ring gear if such ring gear teeth surface deterioration is found; and would also require creating a main rotor transmission component log card, if none is available, and making a notation on the main rotor transmission component log card if a ring gear is changed. This proposal is prompted by reports of failures of the ring gear due to single tooth distress as a result of improper gear tooth spacing during the manufacturing of the ring gear. The actions specified by the proposed AD are intended to prevent failure of the ring gear, loss of drive to the main rotor gearbox, and a subsequent forced landing.

DATES: Comments must be received by January 3, 1997.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Office of the Assistant Chief Counsel, Attention: Rules Docket No. 96-SW-05-AD, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137. Comments may be inspected at this location between 9:00

a.m. and 3:00 p.m., Monday through Friday, except Federal holidays.

The service information referenced in the proposed rule may be obtained from Schweizer Aircraft Corporation, P.O. Box 147, Elmira, NY 14902, ATTN: Publications Dept. This information may be examined at the FAA, Office of the Assistant Chief Counsel, 2601 Meacham Blvd., Room 663, Fort Worth, Texas.

FOR FURTHER INFORMATION CONTACT: Mr. Raymond Reinhardt, Aerospace Engineer, New York Aircraft Certification Office, FAA, 181 South Franklin Ave., Room 202, Valley Stream, New York 11581, telephone (516) 256-7532, fax (516) 568-2716.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments, specified above, will be considered before taking action on the proposed rule. The proposals contained in this notice may be changed in light of the comments received.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report summarizing each FAA-public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 96-SW05-AD." The postcard will be date stamped and returned to the commenter.

Availability of NPRMs

Any person may obtain a copy of this NPRM by submitting a request to the FAA, Office of the Assistant Chief

Counsel, Attention: Rules Docket No. 96-SW-05-AD, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

Discussion

This document proposes the adoption of a new AD that is applicable to Schweizer Aircraft Corporation Model 269A, A1, B, and C, and TH-55A helicopters, with ring gear, part number (P/N) 269A5104-5, installed. This proposal is prompted by 35 reports of failures of the ring gear since July 1975. The failures were attributed to single tooth distress as a result of improper gear tooth spacing during the manufacturing of the gear. The tooth spacing variation forces the tooth that is improperly spaced to accept more of the load at longer duration or at a location that leads to higher point contact loads and surface distress. This surface distress eventually leads to subsurface cracking and finally fatigue failure. One of these failures resulted in loss of drive to the main rotor gearbox resulting in a forced autorotational landing of the helicopter. Three failures caused the "XMSN TEMP./PRESS" red warning indicator on the main instrument panel to illuminate due to low oil pressure caused by a secondary failure of the main transmission lube pump. The other failures resulted only in increased noise and/or vibration. This proposal would require inspections of the ring gear teeth for pitting, wearing, cracking or corrosion, and replacement of the ring gear if such ring gear teeth surface deterioration is found. The proposed inspections would be accomplished before further flight if clicking, tapping, or other unusual noises, or unusual vibration is detected while operating the helicopter, or if metal particles are found on the magnetic drain plug during routine maintenance; or, upon installation of replacement serviceable parts or transmissions; and within the next 50 hours TIS or at the next annual inspection, whichever occurs first. Thereafter, the notice proposes repetitive inspections at each 50 hours TIS inspection in accordance with the manufacturer's service bulletin. The actions specified by the proposed AD are intended to prevent failure of the ring gear, loss of drive to the main rotor gearbox, and a subsequent forced landing.

The FAA has reviewed Schweizer Aircraft Corporation Service Bulletin B-

244.2, dated February 19, 1996, which describes procedures for inspection of the ring gear for surface deterioration, pitting, wearing, cracking, or corrosion, and replacement of the main transmission if surface deterioration, pitting, wearing, cracking, or corrosion is found.

Since an unsafe condition has been identified that is likely to exist or develop on other Schweizer Aircraft Corporation Model 269A, A-1, B, and C, and TH-55A helicopters of the same type design, the proposed AD would require an inspection of the ring gear for surface deterioration, pitting, wearing, cracking, or corrosion, and replacement of the ring gear with ring gear, P/N 269A5104-7, if surface deterioration, pitting, wearing, cracking, or corrosion is found; and, creation of a main rotor transmission component log card if none is available, and a notation on the main rotor transmission component log card if a ring gear, P/N 269A5104-7, is installed. Schweizer Aircraft Corporation has blank component log cards available for main rotor transmissions that do not currently have a component log card. The actions would be required to be accomplished in accordance with the service bulletin described previously.

The FAA estimates that 87 helicopters of U.S. registry would be affected by this proposed AD, that it would take approximately 2 work hours per helicopter to accomplish the initial inspections, 0.5 hours to create a main rotor transmission component log card, and 28 work hours if removal and replacement of the ring gear is required, and that the average labor rate is \$60 per work hour. Required parts would cost approximately \$6,400 per ring gear and \$1,219 per overhaul kit. Based on these figures, the total cost impact of the proposed AD on U.S. operators is estimated to be \$822,063, assuming creation of a component log card and replacement of the ring gear in the entire fleet is necessary.

The regulations proposed herein would 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 proposal would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this proposed regulation (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under the DOT

Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) if promulgated, 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 copy of the draft regulatory evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption **ADDRESSES**.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend 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 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding a new airworthiness directive to read as follows:

Schweizer Aircraft Corporation: Docket No. 96-SW-05-AD.

Applicability: Model 269A, A-1, B, and C, and TH-55A helicopters, with main rotor transmission ring gear (ring gear), part number (P/N) 269A5104-5, 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 (f) 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 failure of the ring gear, loss of drive to the main rotor gearbox, and a subsequent forced landing, accomplish the following:

(a) Inspect the ring gear teeth for surface deterioration, pitting, wearing, cracking or corrosion in accordance with Schweizer Service Bulletin B-244.2, dated February 19, 1996, as follows:

(1) Before further flight, if a clicking or tapping sound or other unusual noise or unusual vibration is detected while operating the helicopter, or if a metal particle is found on the magnetic drain plug during routine maintenance;

(2) Before installing a main rotor transmission which contains an affected ring gear on the helicopter;

(3) Within the next 50 hours time-in-service (TIS) after the effective date of this AD, or at the next annual inspection, whichever occurs first.

(b) Thereafter, inspect the ring gear teeth at intervals not to exceed 50 hours TIS in accordance with Schweizer Service Bulletin B-244.2, dated February 19, 1996.

(c) If surface deterioration, pitting, wearing, cracking or corrosion is discovered, before further flight, remove the transmission from service and replace the ring gear with a ring gear, P/N 269A5104-7.

(d) At the next main rotor transmission overhaul, remove and replace the ring gear, P/N 269A5104-5, identified on the face of the ring gear by the letters EGC, ACR, or the manufacturer code number 23751 (EGC) or 57152 (ACR) and replace it with a ring gear, P/N 269A5104-7.

(e) Installation of a ring gear, P/N 269A5104-7, is considered a terminating action for this AD and must be annotated on a Schweizer Aircraft Corporation component log card. A new component log card must be created if a component log card is not in the applicable maintenance records.

(f) 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, New York 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, New York 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 New York Aircraft Certification Office.

(g) 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, provided no clicking or tapping sound or other unusual noise or unusual vibration was detected on any previous flight.

Issued in Fort Worth, Texas, on October 25, 1996.

Eric Bries,

Acting Manager, Rotorcraft Directorate, Aircraft Certification Service.

[FR Doc. 96-28168 Filed 11-1-96; 8:45 am]

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