

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 39**

[Docket No. 98-SW-31-AD; Amendment 39-11101; AD 99-07-15]

RIN 2120-AA64

Airworthiness Directives; Bell Helicopter Textron, Inc.-manufactured Model HH-1K, SW204, SW204HP, SW205, SW205A-1, TH-1F, TH-1L, UH-1A, UH-1B, UH-1E, UH-1F, UH-1H, UH-1L, and UH-1P Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to Bell Helicopter Textron, Inc. (BHTI)-manufactured Model HH-1K, SW204, SW204HP, SW205, SW205A-1, TH-1F, TH-1L, UH-1A, UH-1B, UH-1E, UH-1F, UH-1H, UH-1L, and UH-1P helicopters. This action requires inspecting the tail rotor yoke (yoke) assembly historical records to determine if the affected yoke assembly has been involved in any incidents that may have induced a bending load. It further requires replacement of the yoke assembly with a yoke assembly that has been x-ray diffraction inspected or has zero hours time-in-service (TIS); installing and inspecting an airworthy flapping stop or trunnion assembly to detect excessive bending loads; and revising the applicable Rotorcraft Flight Manual. This amendment is prompted by in-flight failures of yokes installed on civilian and military helicopters of similar type design, including three reported accidents. The actions specified in this AD are intended to detect static or dynamic overload on the yoke due to external bending forces, which could result in failure of the yoke, loss of the tail rotor, and subsequent loss of control of the helicopter.

DATES: Effective May 3, 1999.

Comments for inclusion in the Rules Docket must be received on or before June 1, 1999.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Office of the Regional Counsel, Southwest Region, Attention: Rules Docket No. 98-SW-31-AD, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

FOR FURTHER INFORMATION CONTACT: Charles Harrison, Aerospace Engineer, FAA, Rotorcraft Directorate, Rotorcraft

Standards Staff, 2601 Meacham Blvd., Fort Worth, Texas 76137, telephone (817) 222-5128, fax (817) 222-5961.

SUPPLEMENTARY INFORMATION: This amendment adopts a new AD that is applicable to BHTI-manufactured Model HH-1K, SW204, SW204HP, SW205, SW205A-1, TH-1F, TH-1L, UH-1A, UH-1B, UH-1E, UH-1F, UH-1H, UH-1L, and UH-1P helicopters. This action requires, before further flight, inspecting the yoke assembly historical records to determine if it has been involved in any incidents that may have induced a bending load in the yoke, and if so, immediately replacing the yoke assembly with a yoke assembly that has been x-ray diffraction inspected or has zero hours TIS as well as replacing the flapping stop or trunnion assembly. It further requires, within the next 180 calendar days, for yokes other than those that are required to be replaced before further flight, removing and replacing the yoke assembly with an airworthy assembly. This AD also requires inspection of the replaced trunnion assembly or flapping stop at intervals not to exceed 25 hours time-in-service (TIS), or before further flight, after any incident involving a hard landing, or any other incident involving excessive tail rotor flapping loads. Examples of bending loads include high wind gusts (such as those from prop blast), improper ground handling (in which the tail rotor blade has been used as a hand hold), improper feathering bearing removal (in which the yoke is not properly supported when pressing out bearings), or a static ground strike of some type (such as being struck by a vehicle). This amendment is prompted by reports of in-flight failures of yokes installed on civilian and military helicopters of similar type design, including 3 reported accidents. The actions specified in this AD are intended to detect static or dynamic overload on the yoke due to external bending forces, which could result in failure of the yoke, loss of the tail rotor, and subsequent loss of control of the helicopter.

Since an unsafe condition has been identified that is likely to exist or develop on other BHTI Model HH-1K, SW204, SW204HP, SW205, SW205A-1, TH-1F, TH-1L, UH-1A, UH-1B, UH-1E, UH-1F, UH-1H, UH-1L, and UH-1P helicopters of the same type design, this AD is being issued to detect static or dynamic overload on the yoke due to excessive bending forces, which could result in failure of the yoke, loss of the tail rotor, and subsequent loss of control of the helicopter. The short compliance time involved is required because the

previously described critical unsafe condition can adversely affect the controllability and structural integrity of the helicopter tail rotor. Therefore, the actions contained in the AD are required prior to further flight, and this AD must be issued immediately.

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

Cost Impact

The FAA estimates that 75 helicopters will be affected by this AD, that it will take approximately 9 work hours to accomplish the inspections and installations, and that the average labor rate is \$60 per work hour. Required parts will cost approximately \$6,637 per yoke, and \$936 per flapping stop or \$1,028 per trunnion. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be \$608,475 to replace the yoke and flapping stop in the entire fleet, or \$615,375 to replace the yoke and trunnion in the entire fleet.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this 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 under the caption **ADDRESSES**. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the 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 that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 98-SW-31-AD." The postcard will be date stamped and returned to the commenter.

Regulatory Impact

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.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, 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, 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 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:

AD. 99-07-15 California Department of Forestry; Firefly Aviation Helicopter Services (Previously Erickson Air-Crane); Garlick Helicopters; Hawkins & Powers Aviation, Inc.; International Helicopters, Inc.; Ranger Helicopter Services; Robinson Airplane, Inc.; Scott Paper Co. (Formerly Off Shore); Smith Helicopters; Southern Helicopter, Inc.; Southwest Florida Aviation; Utah State University; UNC Helicopter Inc. (Formerly Williams Helicopter); US Helicopter, Inc.; and Western International Aviation Inc.: Amendment 39-11101. Docket No. 98-SW-31-AD. q

Applicability: Model HH-1K (Type Certificate Data Sheet (TCDS) H5NM), TH-1F (TCDS H12NM, and R0008AT), TH-1L (TCDS H5NM, H7SO, and H4NM), UH-1A (TCDS H3SO), UH-1B (TCDS H1RM, H3NM, H13WE, H3SO, H5SO, and R00012AT), UH-1E (TCDS H5NM, H7SO, H8NM, and H4NM), UH-1F (TCDS H2NM, H7NE, H11SW, H12NM, and R0008AT), UH-1H (TCDS H13WE, H3SO, and H15NM), UH-1L (TCDS H5NM, H7SO, and H4NM), UH-1P (TCDS H12NM, and R0008AT), and SW204 (TCDS H6SO), SW204HP (TCDS H6SO), SW205 (TCDS H6SO), and SW205A-1 (TCDS H6SO) helicopters, with tail rotor yoke, part number (P/N) 212-011-702-all dash numbers, P/N 212-010-704-all dash numbers, or P/N 212-010-744-all dash numbers, 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 otherwise 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 request approval for an alternative method of compliance in accordance with paragraph (g) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it. Compliance: Required as indicated, unless accomplished previously.

To detect static or dynamic overload on the tail rotor yoke (yoke) due to external bending forces, which could result in failure of the yoke, loss of the tail rotor, and subsequent loss of control of the helicopter, accomplish the following:

(a) Before further flight, review all historical records of the helicopter and the identified yoke assembly for any static or dynamic incident history that could have imposed an excessive bending load on the yoke. If such a history exists, before further flight, replace the yoke assembly with a yoke assembly specified in paragraph (c) and install the flapping stop or trunnion assembly as specified in paragraph (d).

Note 2: Examples of excessive bending loads include exposure to high wind gusts

(such as those from rotor wash or prop blast), improper ground handling (in which the tail rotor blade has been used as a hand hold), improper feathering bearing removal (in which the yoke is not properly supported when pressing out bearings), or an incident in which a damaged tail rotor blade was replaced due to a static ground blade strike.

(b) Identify the trunnion assembly or flapping stop that is installed on the aircraft tail rotor assembly to determine if it is a flapping stop or trunnion and, if it is a flapping stop, to determine if the correct flapping stop is installed (see Figures 1 and 2).

Note 3: Helicopters with yoke assemblies, P/N 212-010-704-all dash numbers or P/N 212-010-744-all dash numbers, have trunnion assemblies installed that look similar. Trunnion assemblies, P/N 205-012-716-001 and P/N 212-010-703-001, are manufactured from machined material and do not have the proper characteristics to act as a yield indicators for the yoke assembly. When installed, these trunnion assemblies may be identified by the presence of a flanged bushing (split lines) at each bolt hole, readily visible externally when viewed inboard of the trunnion halves adjacent to each bearing. The trunnion assembly, P/N 212-010-738-001, is manufactured from a casting and does not incorporate bushings at the bolt locations. No bushing will be visible when viewing the assembled trunnion. Helicopters with yoke assemblies, P/N 212-011-702-all dash numbers, are assembled with a flapping stop configuration. The original flapping stop, P/N 212-011-713-001 has been redesigned. The redesigned flapping stop, P/N 212-011-713-103, will act as a yield indicator to provide visual verification of a yoke assembly that has been subjected to excessive out-of-plane bending loads (see Figure 5).

(c) Within the next 180 calendar days (for yokes not replaced immediately in accordance with paragraph (a) of this AD), remove the yoke assembly and replace it with an airworthy yoke assembly having zero hours time-in-service (TIS), or with an airworthy yoke assembly (regardless of TIS) that has passed an X-ray diffraction inspection in accordance with Part II of Bell Helicopter Textron, Inc. Alert Service Bulletin 212-96-100, Revision A, dated May 18, 1998.

(d) When the yoke assembly is replaced, for helicopters with a yoke assembly, P/N 212-011-702-all dash numbers, install an airworthy tail rotor flapping stop, P/N 212-011-713-103, and for helicopters with yoke assemblies, P/N 212-010-704-all dash numbers or P/N 212-010-744-all dash numbers, install an airworthy trunnion assembly, P/N 212-010-738-001. If any incident as described in paragraph (a) of this AD occurs after the effective date of this AD and prior to compliance with paragraph (c), then compliance with paragraphs (c) and (d) is required before further flight.

Note 4: Yoke assemblies that have passed an x-ray diffraction inspection at BHTI will have the letters "FM" vibro-etched on them following the serial number.

(e) After accomplishing the requirements of paragraphs (c) and (d) of this AD, thereafter,

at intervals not to exceed 25 hours TIS, or before further flight after any incident as described in paragraph (a) of this AD, inspect the trunnion assembly or flapping stop as follows:

(1) Gain access to the tail rotor assembly to allow close viewing of the inboard section of the trunnion assembly or flapping stop, whichever is installed. Perform a visual inspection of the inboard section of the

trunnion assembly (see Figure 3) or the flapping stop (see Figure 4) for deformation. Inspect by gently placing the tail rotor yoke against one flapping stop or trunnion stop, allowing full view of the opposite stop. Repeat in opposite direction to allow viewing of the opposite stop.

(2) If either the trunnion stop or flapping stop is deformed or bent as shown in Figure 3 or Figure 4, the yoke assembly and

trunnion stop or flapping stop are no longer serviceable and must be replaced with an airworthy yoke assembly that has zero hours TIS or has passed x-ray diffraction inspection, and an airworthy flapping stop or trunnion stop.

BILLING CODE 4910-13-P

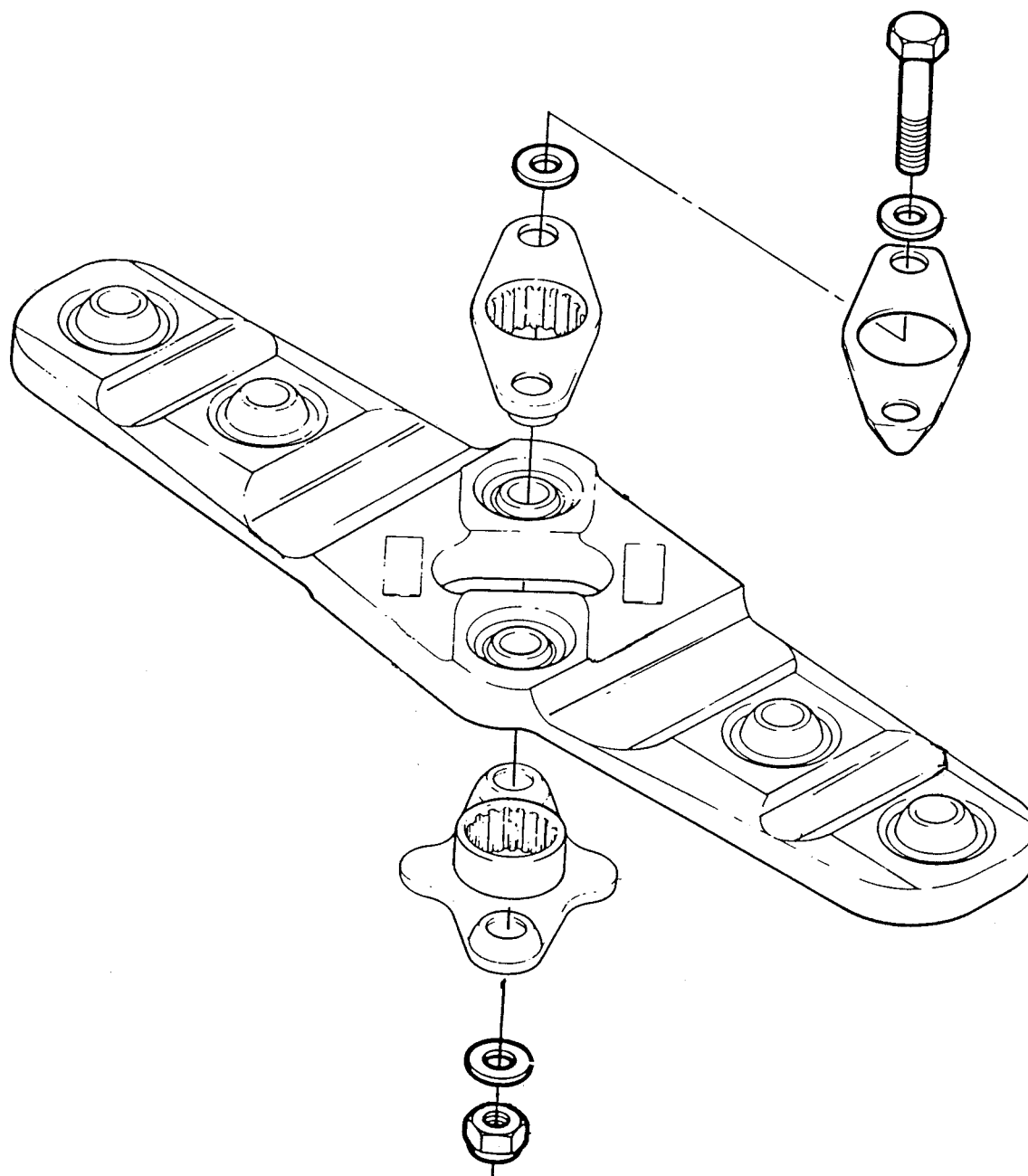


FIGURE 1. 212-010-704 and -744 Style Yoke Assy

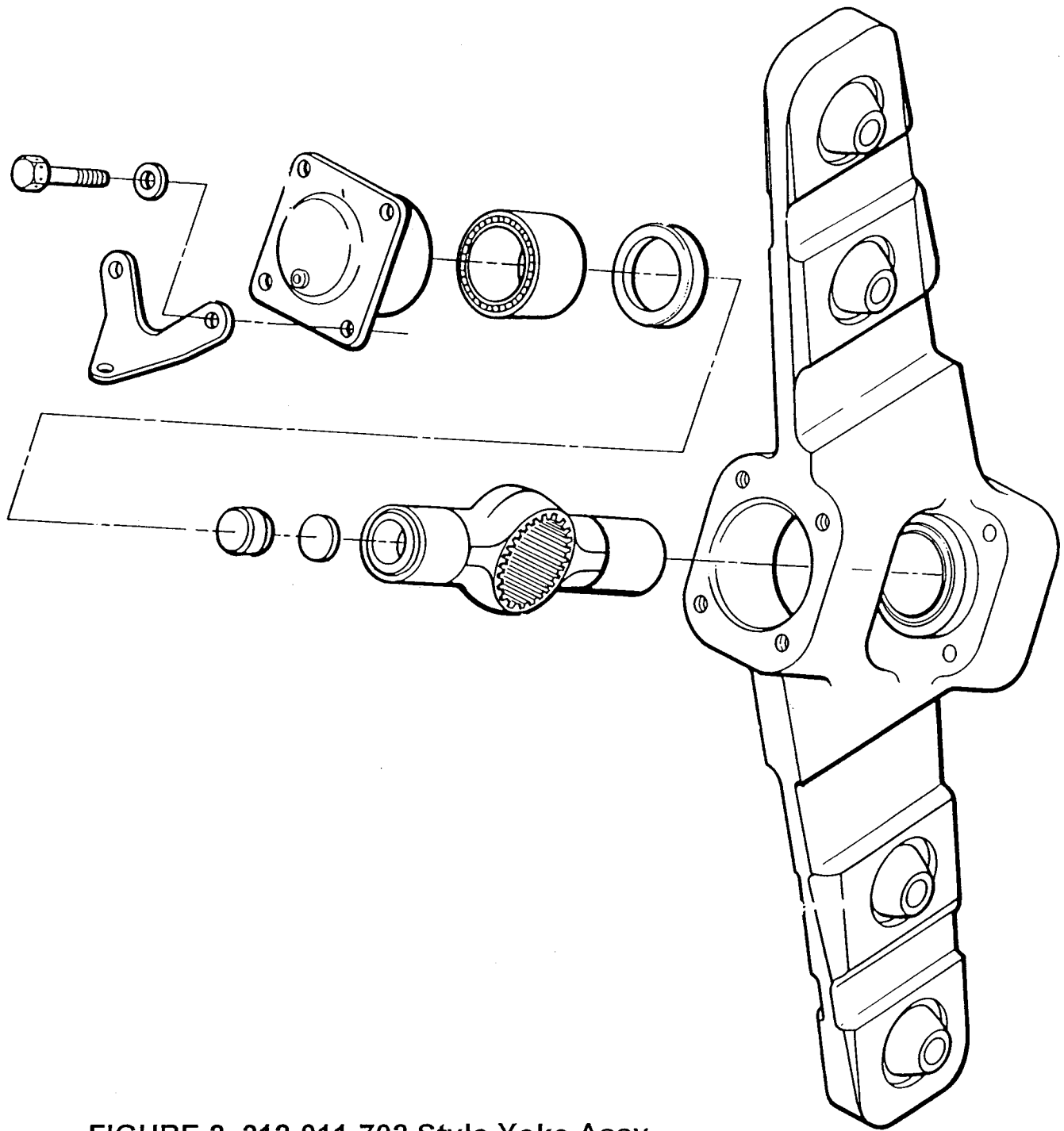
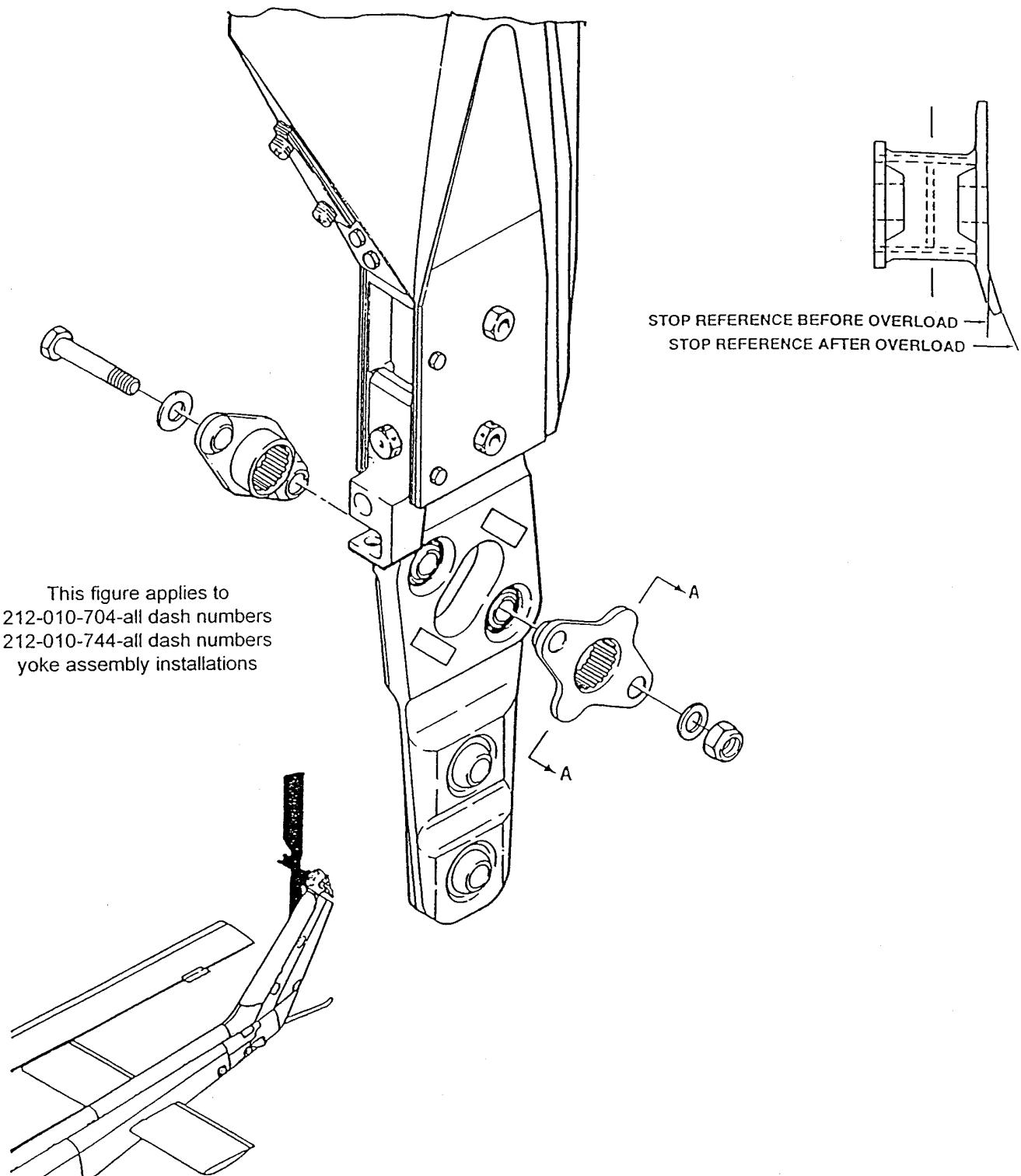
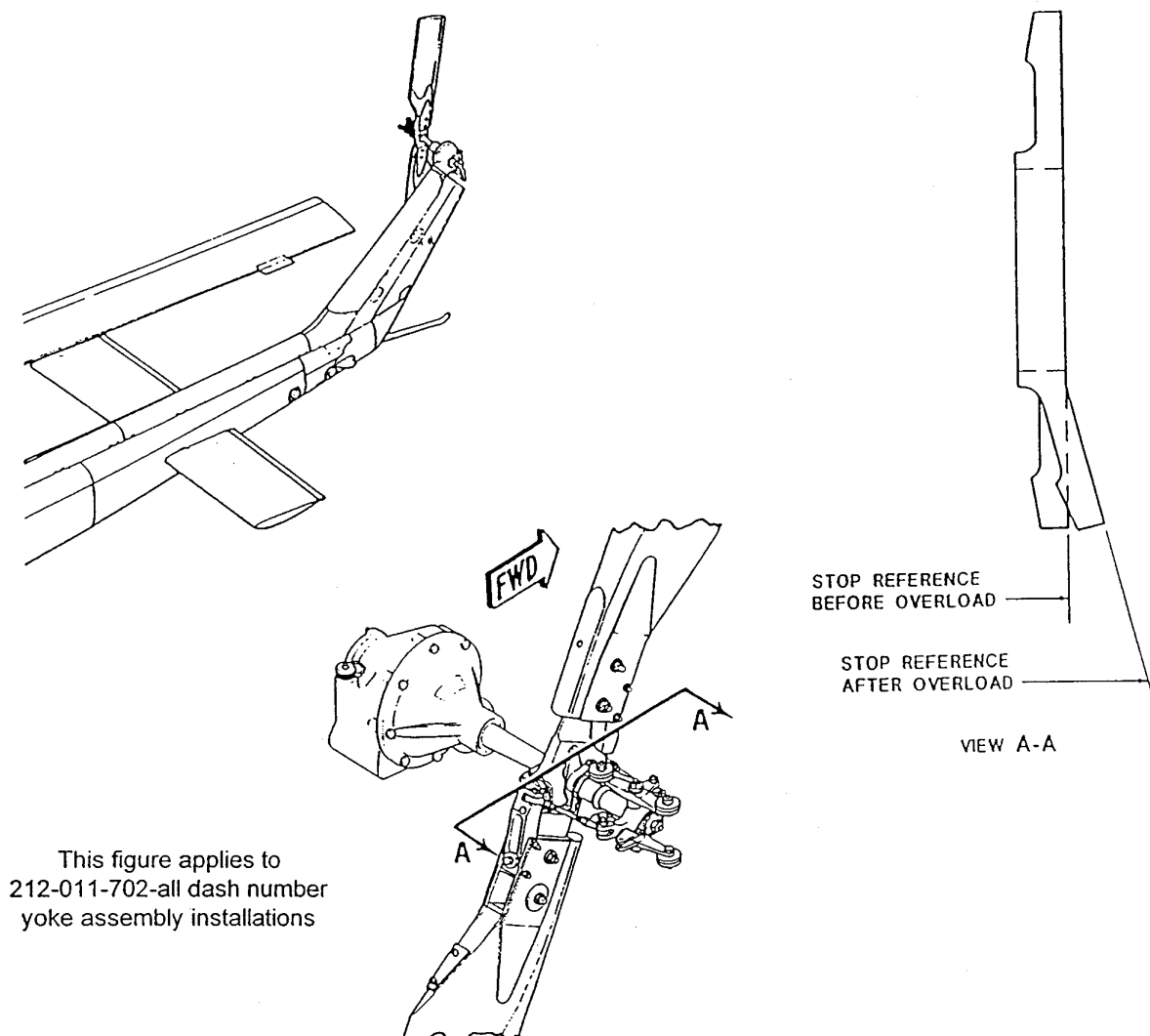


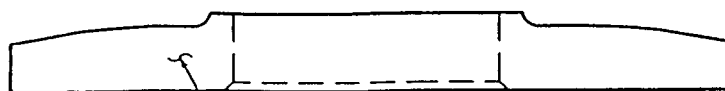
FIGURE 2.212-011-702 Style Yoke Assy.



**FIGURE 3. Inspection Criteria for
212-010-704 and -744 Style Yoke Assy.**

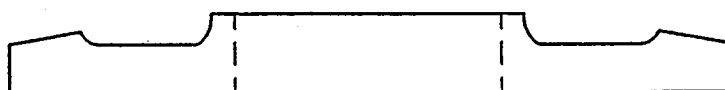


**FIGURE 4. Inspection Criteria for
212-011-702 Style Yoke Assy.**



PART NUMBER INK STAMPED
OR VIBRO-ETCHED.

212-011-713-001
(FLAPPING STOP)



FLAPPING STOP
212-011-713-103

FIGURE 5. Flapping Stop Identification

(f) Within 30 calendar days after the effective date of this AD, insert the following pen and ink changes under the Operating Procedures and Maneuvers Pre-Flight Checks section of the Rotorcraft Flight Manual or Operational Manual:

"Tail rotor yoke—Preflight visual check for static stop contact damage (deformed static stop or trunnion yield indicator)."

Note 5: Operators who use aircraft that have any of these affected yoke assemblies installed should use tail rotor tie downs when the aircraft is parked or stored.

(g) 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, Rotorcraft Standards Staff, Rotorcraft Directorate, FAA. Operators shall submit their requests through an FAA Principal Maintenance Inspector, who may concur or comment and then send it to the Manager, Rotorcraft Standards Staff.

Note 6: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Rotorcraft Certification Office.

(h) 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.

(i) This amendment becomes effective on May 3, 1999.

Issued in Fort Worth, Texas, on March 23, 1999.

Mark R. Schilling,

*Acting Manager, Rotorcraft Directorate,
Aircraft Certification Service.*

[FR Doc. 99-7778 Filed 3-31-99; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 97-SW-60-AD; Amendment 39-11102; AD 99-07-16]

RIN 2120-AA64

Airworthiness Directives; Sikorsky Aircraft-manufactured Model CH-54A Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to Sikorsky Aircraft-manufactured Model CH-54A helicopters, that requires an initial and recurring inspections and rework or replacement, if necessary, of the second stage lower planetary plate (plate). This amendment is prompted by cracked plates that have been found during

overhaul and inspections. The actions specified by this AD are intended to prevent failure of the plate due to fatigue cracking, which could result in failure of the main gearbox, failure of the drive system, and subsequent loss of control of the helicopter.

EFFECTIVE DATE: May 6, 1999.

FOR FURTHER INFORMATION CONTACT:

Uday Garadi, Aerospace Engineer, FAA, Rotorcraft Directorate, Rotorcraft Certification Office, Fort Worth, Texas 76193-0170, telephone (817) 222-5157, fax (817) 222-5959.

SUPPLEMENTARY INFORMATION:

A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to Sikorsky Aircraft-manufactured Model CH-54A helicopters was published in the **Federal Register** on February 10, 1998 (63 FR 6685). That action proposed to require an initial and recurring inspections and rework or replacement, if necessary, of the plate. It is believed that cracks on the plate, part number 6435-20229-102, initiate at and radiate from the lightening holes in the plate web due to fatigue.

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

The sole commenter states that the inclusion of an Erickson Air-Crane Company Service Bulletin (SB) in the Compliance Section of the AD should be removed. The commenter states that the FAA does not have the authority to utilize Erickson Air-Crane Company documentation for continued airworthiness of CH-54A model helicopters or any other helicopters other than Erickson Air-Crane S-64E helicopters. The FAA concurs with the comment to the extent that the Erickson Air-Crane SB only applies to the Erickson Air-Crane Company Model S-64E series helicopters. However, Note 2 of the Notice of Proposed Rulemaking (NPRM) only stated that the Erickson Air-Crane SB pertained to the same subject as is addressed by the FAA in this rule. It was not incorporated by reference into the compliance procedures proposed by the NPRM. However, to avoid any confusion as to the model applicability, the FAA has deleted proposed Note 2 relating to the Erickson Air-Crane Company SB because the note is unnecessary. Also, the wording of Note 1 has changed from that published in the NPRM.

After careful review of the available data, including the comment 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 9 helicopters of U.S. registry will be affected by this AD, that it will take approximately 8 work hours per helicopter to accomplish the proposed inspections and 56 hours to remove and replace the plate, and that the average labor rate is \$60 per work hour. Required parts will cost approximately \$8,000 per helicopter. Based on these figures, the total cost impact of the proposed AD on U.S. operators is estimated to be \$106,560; \$4,320 to accomplish the inspections and rework, and \$102,240 to replace the plate in the main gearbox assembly in all 9 helicopters, if 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 FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, 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: