

# 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. 2001-SW-17-AD]

RIN 2120-AA64

#### Airworthiness Directives; Bell Helicopter Textron, Inc.—Manufactured Model OH-13E, OH-13H, and OH-13S Helicopters

**AGENCY:** Federal Aviation Administration, DOT.

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

**SUMMARY:** This document proposes superseding an existing airworthiness directive (AD) for Model OH-13E, OH-13H, and OH-13S helicopters manufactured by Bell Helicopter Textron, Inc. (BHTI). That AD currently requires either recurring liquid penetrant or eddy current inspections of the main rotor blade grip (grip) threads for a crack. If a crack is detected, that AD requires, before further flight, replacing the cracked grip with an airworthy grip. That AD also establishes a retirement life of 1200 hours time-in-service (TIS) for each grip. This proposed AD would add two part numbers (P/N) to the applicability and requires only recurring eddy current inspections of the grip threads. This proposed AD would also require reporting any results of the grip inspections to the FAA Rotorcraft Certification Office. This proposal is prompted by the issuance of an AD for the civil BHTI Model 47 helicopters and the results of an accident investigation, an operator survey conducted by a trade association, various comments concerning the subject of the current AD, and a further analysis of field service data related to the BHTI Model 47 helicopters. The actions specified by this AD are intended to prevent failure of a grip, loss of a main rotor blade, and subsequent loss of control of the helicopter.

**DATES:** Comments must be received on or before December 28, 2001.

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), Office of the Regional Counsel, Southwest Region, Attention: Rules Docket No. 2001-SW-17-AD, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137. You may also send comments electronically to the Rules Docket at the following address: [9-asw-adcomments@faa.gov](mailto:9-asw-adcomments@faa.gov). Comments may be inspected at the Office of the Regional Counsel between 9 a.m. and 3 p.m. Monday through Friday, except Federal holidays.

**FOR FURTHER INFORMATION CONTACT:** Marc Belhumeur, Aviation Safety Engineer, FAA, Rotorcraft Directorate, Rotorcraft Certification Office, Fort Worth, Texas 76193-0170, telephone (817) 222-5177, fax (817) 222-5783.

#### 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 will be considered before taking action on the proposed rule. The proposals contained in this document 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 mailed comments submitted in response to this proposal must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 2001-SW-17-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 Regional Counsel, Southwest Region, Attention: Rules Docket No. 2001-SW-17-AD, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

#### Discussion

On May 12, 1987, the FAA issued AD 86-06-08R1, Amendment 39-5260 (52 FR 24135, June 29, 1987) that amended AD 86-06-08, Amendment 39-5626 (51 FR 11300, April 2, 1986) for BHTI Model 47 helicopters. Those ADs required certain fluorescent dye penetrant inspections of each grip. On August 31, 2000, the FAA issued Emergency AD 2000-18-51 for BHTI Model 47 helicopters that superseded AD 86-06-08 and the revision of that AD, 86-06-08R1. AD 2000-18-51 required certain liquid penetrant or eddy current inspections of the grip threads for a crack and, before further flight, replacing any cracked grip with an airworthy grip. That AD also established a retirement life of 1200 hours TIS for each grip. To address the same unsafe condition as addressed for the Model 47 series helicopters, the FAA issued Emergency AD 2001-18-52 on September 1, 2000, for Model OH-13E, OH-13H, and OH-13S helicopters manufactured by BHTI.

Those actions were prompted by the results of an investigation of an August 1998 Canadian accident in which a grip failed on a BHTI Model 47G-2 helicopter due to a fatigue crack. An analysis of field service data revealed fatigue cracks in the majority of the grips inspected. The requirements of AD 2000-18-52 are intended to prevent failure of a grip, loss of a main rotor blade, and subsequent loss of control of the helicopter.

Since issuing AD 2000-18-52, other cracked grips with less than 1200 hours TIS have been discovered, including one grip with a 2-inch crack through the grip. Since then, the FAA has determined that the liquid penetrant inspection is inadequate for finding smaller cracks in the grip threads. Additionally, two parts produced under a Parts Manufacturer Approval (PMA), P/Ns R74-120-252-11 and R74-120-135-5, were inadvertently omitted from the applicability of AD 2000-18-52. Based on these findings, an accident

investigation, a further analysis of field service data, and the results of an operator survey conducted by a trade association, the FAA is proposing to supersede AD 2000-18-52. Also, some of these proposals are based on the comments received in response to AD 2000-18-51 and addressed by the FAA in AD 2001-17-17, Amendment 39-12408 (66 FR 45584, August 29, 2001). Those comments pertain to the Model 47 series helicopters as well as the Model OH-13E, OH-13H, and OH-13S helicopters that have the same blade grips installed.

We have identified an unsafe condition that is likely to exist or develop on Model OH-13E, OH-13H, and OH-13S helicopters. The proposed AD would supersede AD 2000-18-52 to require the following:

- For grips, P/N 47-120-135-2, 47-120-135-3, 47-120-135-5, 47-120-252-1, 47-120-252-7, 47-120-252-11, and for grips manufactured under PMA, P/N 74-120-252-11, 74-120-135-5, R74-120-252-11, and R74-120-135-5, conduct eddy current inspections of the threads of both grips as follows:

- Within 300 hours TIS since initial installation on any helicopter or within 10 hours TIS for grips with 300 or more hours TIS, or within 200 hours TIS since last liquid penetrant or eddy current inspection, whichever comes first, conduct an eddy current inspection in accordance with the procedures in Appendix 1 of this AD or an equivalent FAA-approved procedure that contains the requirements of the procedure in Appendix 1. Thereafter, conduct the eddy current inspection at intervals not to exceed 300 hours TIS.

- Report the results of each inspection to the FAA Rotorcraft Certification Office by providing the information requested in the sample format report in Appendix 3 of this AD. Reporting requirements have been approved by the Office of Management and Budget and assigned OMB control number 2120-0056.

- Before further flight, replace any cracked grip with an airworthy grip.

The proposed AD would require maintaining the current retirement life of 1200 hours TIS for each affected grip.

The FAA estimates that 300 helicopters of U.S. registry would be affected by this AD, that it would take approximately 10 work hours per helicopter to accomplish the disassembly, inspection, and reassembly of the grips from the helicopter, and that the average labor rate is \$60 per work hour. Required parts, if a grip needs to be replaced, would cost approximately \$4,000 per grip. There are two grips on each helicopter. Based on these figures,

the total cost impact of the AD on U.S. operators is estimated to be \$2,580,000, assuming one inspection per helicopter and replacement of both grips on each helicopter.

The regulations adopted herein 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. Therefore, it is determined that this proposal would not have federalism implications under Executive Order 13132.

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 removing Amendment 39-11984 and by adding a new airworthiness directive to read as follows:

**Continental Copters, Inc.; Gifton McCreay (Formerly Aerodyne Systems Engineering, Ltd., Formerly Texas Helicopter Corp.); Hawkeye Rotor and Wing Flight School; and Teryjon Aviation Inc.:** Docket No. 2001-SW-17-AD. Supersedes AD 2000-18-52, Amendment 39-11984, Docket No. 2000-SW-36-AD.

**Applicability:** Model OH-13E, OH-13H, and OH-13S helicopters manufactured by Bell Helicopter Textron, Inc. (BHTI), with

main rotor blade grips, part number (P/N) 47-120-135-2, 47-120-135-3, 47-120-135-5, 47-120-252-1, 47-120-252-7, 47-120-252-11, 74-120-252-11, 74-120-135-5, R74-120-252-11, or R74-120-135-5, 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 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 (e) 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 prevent failure of a main rotor blade grip (grip), separation of a main rotor blade, and subsequent loss of control of the helicopter, accomplish the following:

(a) Conduct an eddy current inspection of the threads of both grips for a crack in accordance with Appendix 1 of this AD or an equivalent FAA-approved procedure containing the requirements of the procedure in Appendix 1 within 300 hours time-in-service (TIS) since initial installation on any helicopter or within 10 hours TIS for grips with 300 or more hours TIS or within 200 hours TIS since the last liquid penetrant or eddy current inspection of grip threads, whichever comes first.

(1) Thereafter, conduct the eddy current inspection in accordance with Appendix 1 of this AD or an equivalent FAA-approved procedure containing the requirements of the procedure in Appendix 1 at intervals not to exceed 300 hours TIS.

(2) Report the results of each inspection to the FAA Rotorcraft Certification Office within 7 calendar days. Reporting requirements have been approved by the Office of Management and Budget and assigned OMB control number 2120-0056.

**Note 2:** See Appendix 2 of this AD for a list of known eddy current inspection facilities.

(b) If a crack is detected, before further flight, replace any cracked grip with an airworthy grip.

(c) On or before 1200 hours TIS, replace each grip with an airworthy grip.

(d) This AD establishes a retirement life of 1200 hours TIS for the grips, P/N 47-120-135-2, 47-120-135-3, 47-120-135-5, 47-120-252-1, 47-120-252-7, 47-120-252-11, 74-120-252-11, 74-120-135-5, R74-120-252-11, and R74-120-135-5.

(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, Rotorcraft 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, Rotorcraft Certification Office.

**Note 3:** Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Rotorcraft Certification Office.

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

**Appendix 1**

**BILLING CODE 4910-13-U**

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**NONDESTRUCTIVE INSPECTION PROCEDURE**

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**TASK: EDDY CURRENT (ET) INSPECTION OF MAST THREADS FOR CRACKS**

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**1.0 AREA OF INSPECTION**

1.1 The inboard inside diameter machined threads (reference Figure 1).

**2.0 EQUIPMENT**

2.1 Zetec Miz-20/22, Phasec 2200 or equivalent piece of equipment.

2.2 Match molded ET probe SPC-193 (100kHz) or equivalent. (See Figure 3.)

2.3 Reference standard EC-010-021, or equivalent. (See Figures 4 and 5.)

2.4 Light oil.

**3.0 PERSONNEL REQUIREMENTS**

3.1 Personnel performing the ET inspection must be minimally qualified to a Level II in ET inspection, certified in accordance with an industry accepted standard (such as ATA-105, NAS-410, or MIL-STD-410) or an FAA accepted company procedure.

**4.0 STANDARDIZATION**

4.1 Connect probe to flaw detector and turn power on.

4.2 Adjust the Phasec 2000 as shown in Table 1. Adjust all other equipment as necessary.

4.3 Adjust the V:H gain ratio to 1.5:1 - 2:1.

4.4 Monitor the crack response when moving the probe in one direction only across each EDM notch of the standard. Adjust the coarse gain for a crack response of 2 - 3 units from the smallest (0.04") notch. Record the number units of displacement and noise level for each of the EDM notches.

**5.0 PRE INSPECTION**

5.1 The part shall be clean and free of loose debris.

5.2 A thin coating of clean oil may be applied to the teeth to help the ET probe slide easily.

**6.0 INSPECTION**

6.1 Place the probe into the threaded area and slide it in the same direction as was done on the standard while monitoring the screen for root cracks. Moving the probe in the same direction produces a repeatable display that allows for more accurate flaw size determination. Scan the probe along each individual thread until all the threads are inspected. (See Figures 2 and 3.)

## NONDESTRUCTIVE INSPECTION PROCEDURE (CONT.)

### 7.0 EVALUATION

7.1 Repeat standardization and rescan any areas where there is a vertical crack-like deflection.

7.2 If indication persists, mark the location on the part. Record the number units of displacement, phase orientation, and noise level.

### 8.0 ACCEPT/REJECT CRITERIA

8.1 All repeatable crack-like indications above the noise level detected shall be cause for rejection.

#### Zetec M12 - 20/22, Phasec 2200 Settings

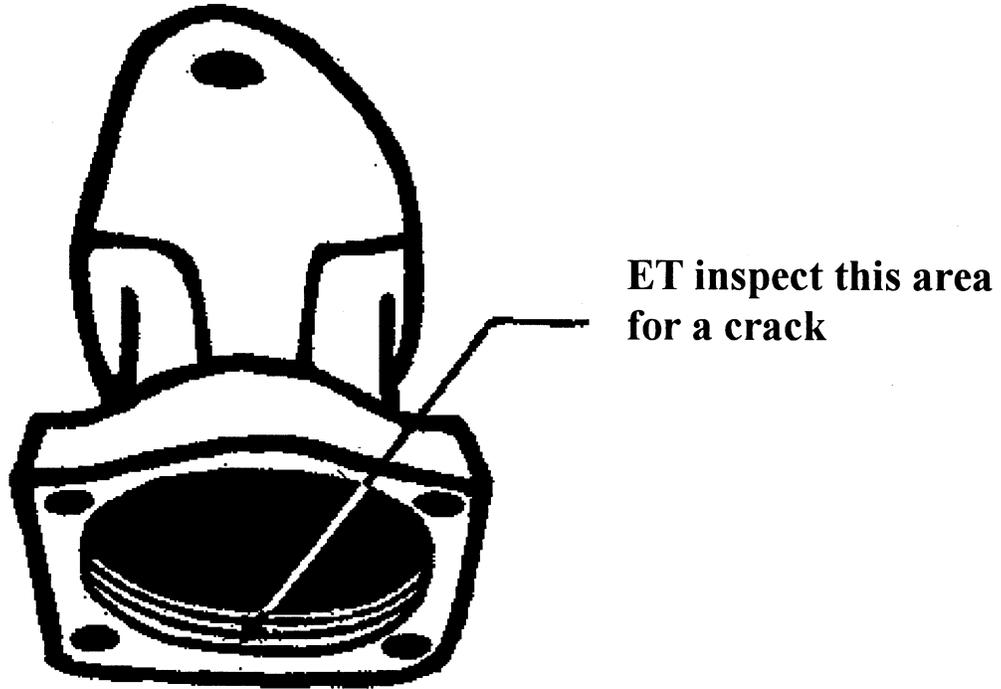
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Printer: HP PCL	Alarm Shape: Off	Drive: +10dB 6.3V
◀Bright Bal▶ Low Split	Apply to: Trace 1	Analogue 1:Out Off
Graticule: Rect. A	◀Alarm action▶ Run Silent	Analogue 2: Out Off

Ser'l Conf. Alarm I/O Time Batt.

Hi-pass: DC	CH1 Freq: 100KHz	◀ Mode: Diff 1Ch
Lo-pass: 20 Hz	CH1 PHASE: 193.0°	Display: XY
Inp. Gain: +20dB	CH1 GAIN: 46.0Db	View: Ch1
Optimize: ◀ + ▶	CH1 X:Y: X -3.0dB	Persist: Permn't

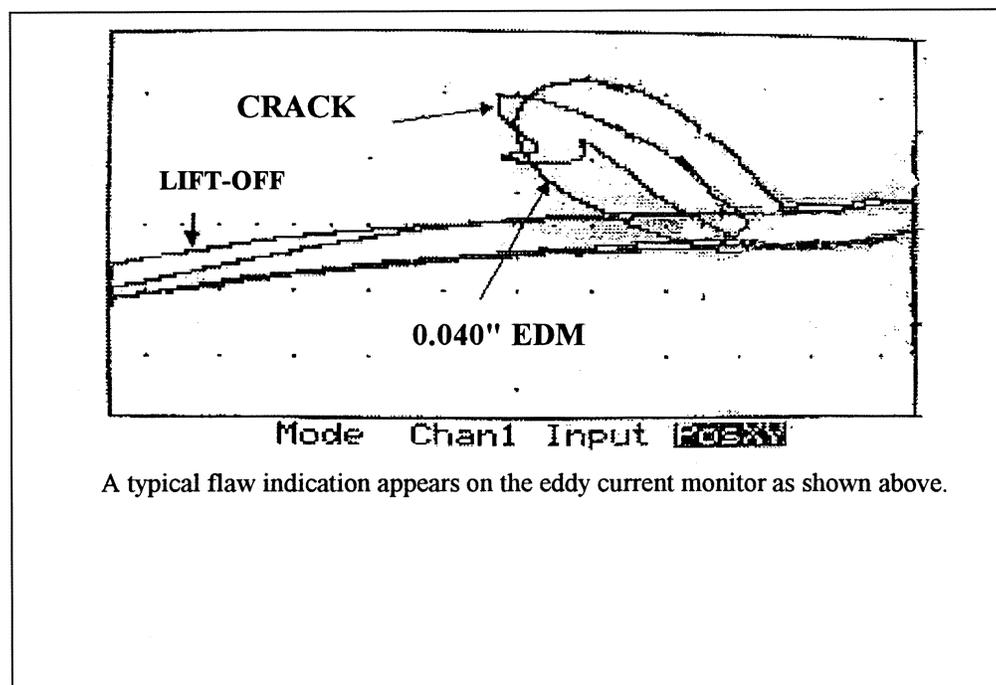
**Table 1, Appendix 1**

**NONDESTRUCTIVE INSPECTION PROCEDURE (CONT.)**



**Figure 1, Appendix 1**

**NONDESTRUCTIVE INSPECTION PROCEDURE (CONT.)**



**Figure 2, Appendix 1**

NONDESTRUCTIVE INSPECTION PROCEDURE (CONT.)

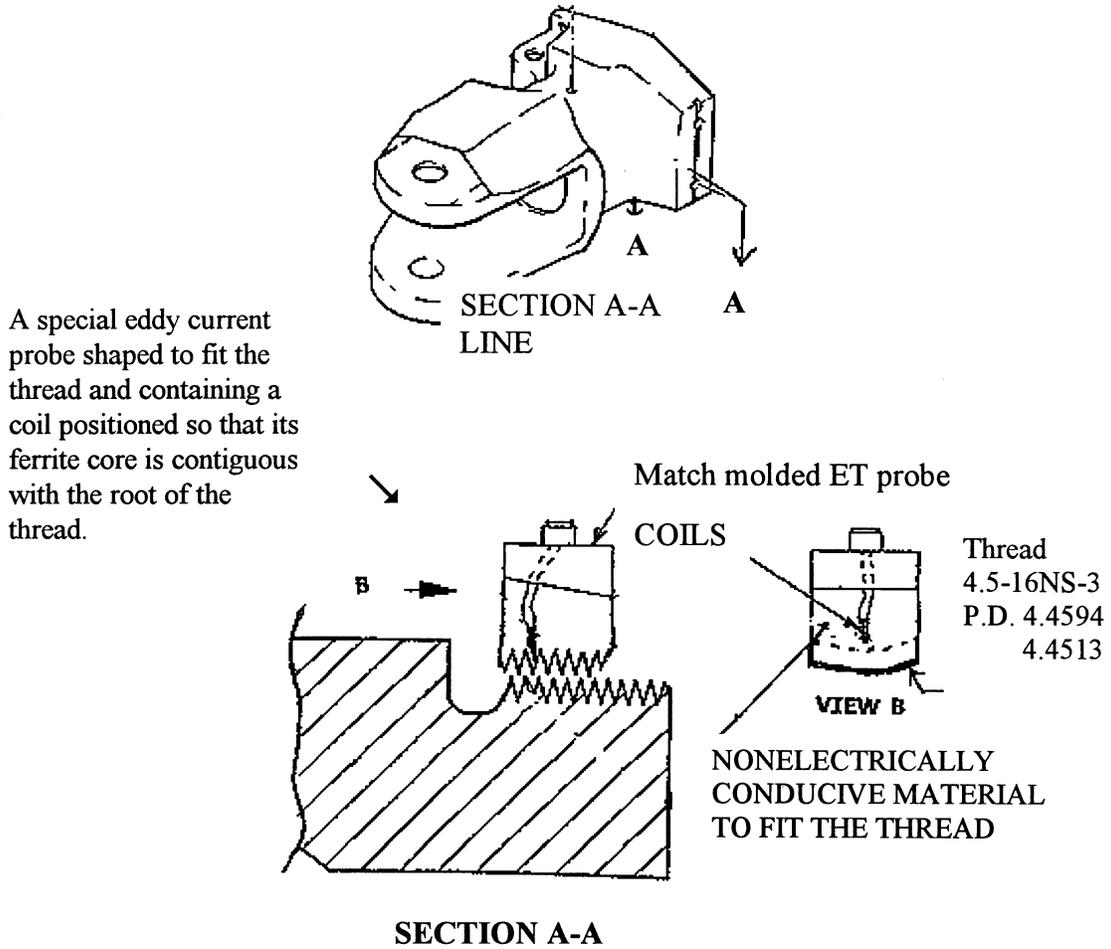
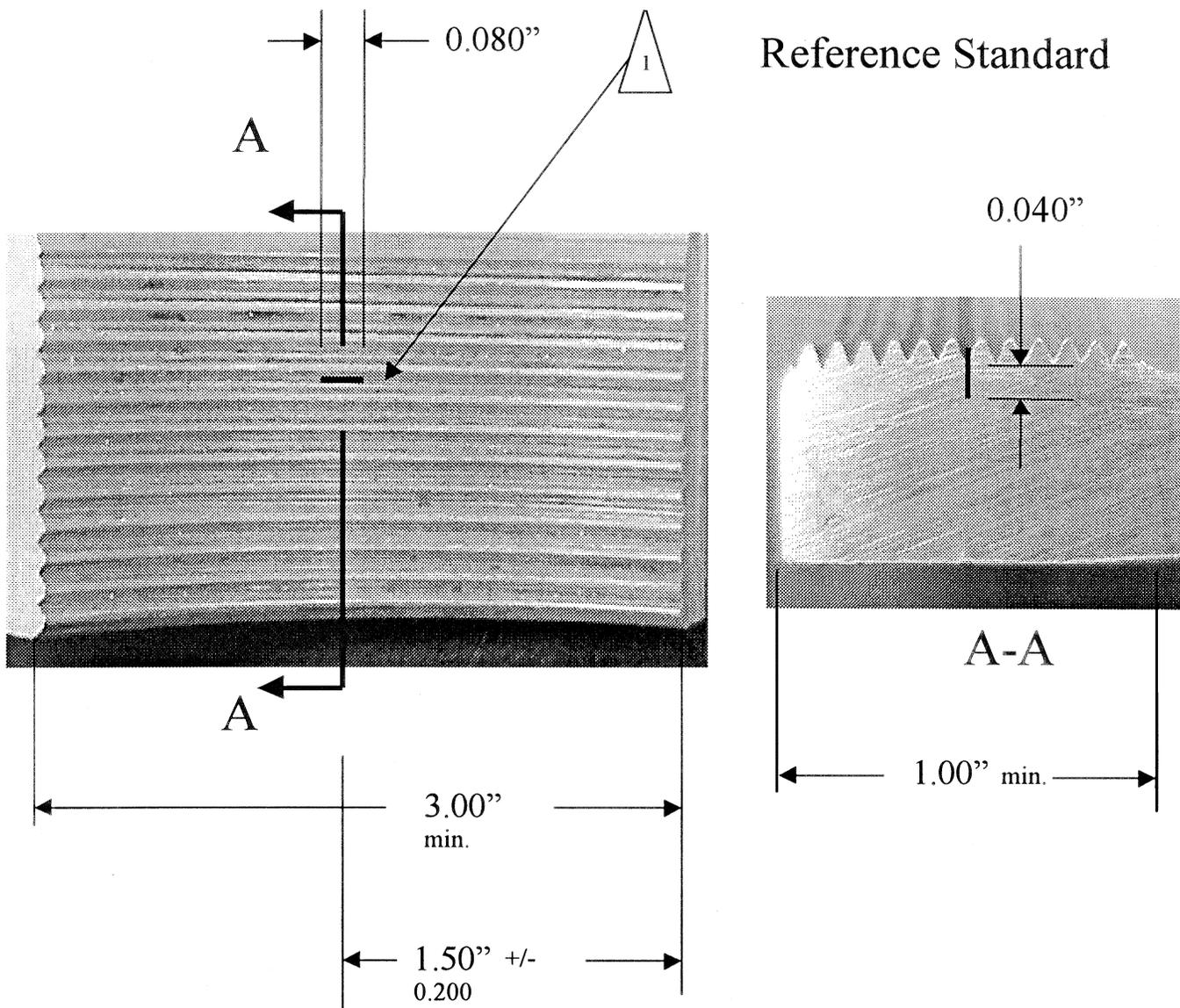


Figure 3, Appendix 1

**NONDESTRUCTIVE TESTING PROCEDURE (CONT.)**



EDM 1 place only in thread root.  
 Notch width shall be 0.004 max.  
 All other dimensions to be +/- 0.004 from indicated.

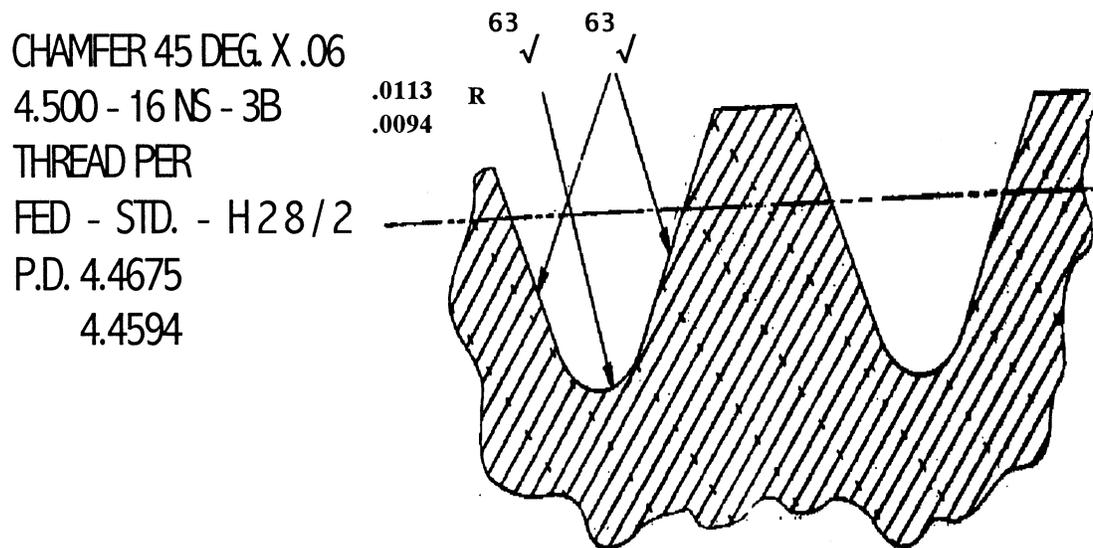
**Figure 4, Appendix 1**

**NONDESTRUCTIVE INSPECTION PROCEDURE (CONT.)**

## Reference Standard

**MACHINING NOTES:**

1. Standard may be machined from aluminum tube stock.
2. The standard shall contain a minimum of four teeth per the tooth dimensions specified.
3. The EDM notch shall be placed in the center most tooth root as measured across the width of the standards. There shall be no less than two teeth and one root on either side of the EDM notch.

**Figure 5, Appendix 1**

**Appendix 2****Partial List of Nondestructive Inspection Testing Facilities Identified by Operators and FAA**

Met Chem Testing Laboratories Inc., 369 W. Gregson Ave. (3085 S.), Salt Lake City, Utah 84115-3440, Phone: (801) 487-0801, Fax: (801) 466-8790, [www.metchemtesting.com](http://www.metchemtesting.com).

Galactic NDT Services, 10728 D. South Pipeline RD, Hurst, Texas 76053, Phone: (800) 458-6387.

Global Testing Technologies, 1173 North Service Rd. Unit D3, Oakville Toronto Canada, Phone: (905) 847-9300, Fax: (905) 847-9330.

Paragon Services, Inc., 1015 S. West St., Wichita, KS 67213, Phone: (316) 945-5285, Fax: (316) 945-0629.

NOE Services, 8775 E. Orchard Rd. #809, Englewood, CO, Phone: (303) 741-0518, Fax: (303) 741-0519.

Applied Technical Services, Inc., 1190 Atlanta Industrial Drive, Marietta, GA 30066, Phone: (770) 423-1400, Fax: (770) 514-3299.

Rotorcraft Support, Van Nuys CA 91406, Phone: (818) 997-7667, Fax: (818) 997-1513.

Other FAA Approved repair facilities may be used.

**Appendix 3****AD Compliance Inspection Report (Sample Format) Model OH-13 Main Rotor Blade Grip**

Provide the following information and mail or fax it to: Manager, Rotorcraft Certification Office, Federal Aviation Administration, Fort Worth, Texas, 76193-0170, USA, Fax: 817-222-5783.

*Aircraft Registration No:*

*Helicopter Model:*

*Helicopter Serial Number:*

*Owner and Operator of the Helicopter:*

Grip #1    Grip #2

*Part Number:*

*Serial Number:*

*Hours TIS on the part at Inspection:*

Crack Found (Y/N)

If yes, describe below.

*Description of Findings*

Who performed the inspections?

If a crack was found, describe the crack size, location, and orientation (provide a sketch or pictures with the grip part and serial number).

Provide any other comments.

Issued in Fort Worth, Texas, on October 11, 2001.

**Eric Bries,**

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

[FR Doc. 01-26966 Filed 10-26-01; 8:45 am]

**BILLING CODE 4910-13-U**

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

[Docket No. 2000-NE-14-AD]

RIN 2120-AA64

**Airworthiness Directives; Honeywell International Inc. LTS101 Series Turboshaft Engines and LTP101 Series Turboprop Engines**

**AGENCY:** Federal Aviation Administration, DOT.

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

**SUMMARY:** The Federal Aviation Administration (FAA) proposes to adopt a new airworthiness directive (AD) that is applicable to Honeywell International Inc. (formerly AlliedSignal Inc.) LTS101 series turboshaft engines; and LTP101 series turboprop engines. This proposal would require a one-time visual inspection for surface finish and a one-time fluorescent penetrant inspection for cracks of certain impellers installed on LTS101 series turboshaft and LTP101 series turboprop engines. This proposal is prompted by a report of a machining discrepancy that may have occurred during manufacture of the affected impellers. The actions specified by the proposed AD are intended to prevent impeller failure from cracks in the impeller back face area, which could result in an uncontained engine failure.

**DATES:** Comments must be received by December 28, 2001.

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2000-NE-14-AD, 12 New England Executive Park, Burlington, MA 01803-5299. Comments may be inspected, by appointment, at this location between 8:00 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays. Comments may also be sent via the Internet using the following address: [9-ane-adcomment@faa.gov](mailto:9-ane-adcomment@faa.gov). Comments sent via the Internet must contain the docket number in the subject line. The service information referenced in the proposed rule may be obtained from Honeywell International Inc. (formerly AlliedSignal) Aerospace Services Attn.: Data Distribution, M/S 64-3/2101-201, PO Box 29003, Phoenix, AZ 85038-9003; telephone (602) 365-2493, fax (602) 365-5577. This information may be examined, by appointment, at the FAA, New England Region, Office of the

Regional Counsel, 12 New England Executive Park, Burlington, MA.

**FOR FURTHER INFORMATION CONTACT:**

Robert Baitoo, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, Transport Airplane Directorate, 3960 Paramount Blvd., Lakewood, CA 90712-4137; telephone (562) 627-5245, fax (562) 627-5210.

**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 action 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 proposal must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2000-NE-14-AD." The postcard will be date stamped and returned to the commenter.

**Availability of NPRM's**

Any person may obtain a copy of this NPRM by submitting a request to the FAA, New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2000-NE-14-AD, 12 New England Executive Park, Burlington, MA 01803-5299.

**Discussion**

The FAA has received a report of two impellers that failed while being tested by the manufacturer. It is believed that the failures are a result of a machining discrepancy that may have occurred during manufacture of the affected impellers. This condition, if not corrected, could result in the development of cracks in the impeller