

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [62 FR 16064 NO. 65 04/04/97]

[Docket No. 97-ANE-06; Amendment 39-9973, AD 97-06-16]

RIN 2120-AA64

Airworthiness Directives; McCauley Propeller Systems 1A103/TCM Series Propellers

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to McCauley Propeller Systems 1A103/TCM series propellers. This action supersedes priority letter AD 95-21-01 that currently requires visual inspections for cracks in the propeller hub of certain propellers using a 10X power magnifying-glass. This action requires an initial inspection for cracks in the propeller hub in accordance with a dye penetrant inspection procedure, replacement of propellers with cracks that do not meet acceptable limits, rework of propellers with cracks that meet acceptable limits, and repetitive inspections of all affected propellers. This amendment is prompted by development of a dye penetrant inspection and rework procedures. The actions specified by this AD are intended to prevent propeller separation due to hub fatigue cracking, which can result in loss of control of the aircraft.

DATES: Effective April 24, 1997.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Assistant Chief Counsel, Attention: Rules Docket No. 97-ANE-06, 12 New England Executive Park, Burlington, MA 01803-5299. Comments may also be sent via the Internet using the following address: "9-ad-engineprop@faa.dot.gov". Comments sent via the Internet must contain the docket number in the subject line. The service information referenced in this AD may be obtained from McCauley Propeller Systems, 3535 McCauley Drive, P.O. Drawer 5053, Vandalia, OH 45377-5053; telephone (937) 890-5246, fax (937) 890-6001. This information may be examined at the FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Carrie Sumner, Aerospace Engineer, Chicago Aircraft Certification Office, FAA, Small Airplane Directorate, 2300 East Devon Ave., Room 323, Des Plaines, IL 60018; telephone (847) 294-7132, fax (847) 294-7834.

SUPPLEMENTARY INFORMATION:

On September 29, 1995, the Federal Aviation Administration (FAA) issued priority letter airworthiness directive (AD) 95-21-01, applicable to McCauley Propeller Systems 1A103/TCM series propellers, which requires visual inspections for cracks in the propeller hub of certain propellers using a 10X power magnifying-glass. That action was prompted by reports of hub cracking on the front hub face near the attachment bolt holes on certain propellers. That condition,

if not corrected, could result in propeller separation due to hub fatigue cracking, which can result in loss of control of the aircraft.

Since the issuance of that priority letter AD, the manufacturer has developed a dye penetrant inspection procedure that will more accurately discover cracking. In addition, the manufacturer has developed rework procedures for propellers that do not exhibit severe cracking.

The FAA has reviewed and approved the technical contents of McCauley Propeller Systems Alert Service Bulletin (ASB) No. 221B, dated December 16, 1996, that describes procedures for dye penetrant inspections and rework of affected propellers.

Since an unsafe condition has been identified that is likely to exist or develop on other propellers of this same type design, this AD supersedes priority letter AD 95-21-01 to require an initial inspection for cracks in the propeller hub in accordance with a dye penetrant inspection procedure, replacement of propellers with cracks that do not meet acceptable limits, rework of propellers with cracks that meet acceptable limits, and repetitive inspections of all affected propellers. The actions are required to be accomplished in accordance with the ASB described previously.

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.

#### 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 notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 97-ANE-06." The postcard will be date stamped and returned to the commenter.

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 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, Incorporation by reference, 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 USC 106(g), 40113, 44701. § 39.13 - [AMENDED]

2. Section 39.13 is amended by adding the following new airworthiness directive:

# AIRWORTHINESS DIRECTIVE

Aircraft Certification Service  
Washington, DC



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, Part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**97-06-16 McCauley Propeller Systems:** Amendment 39-9973. Docket No. 97-ANE-06. Supersedes Priority Letter AD 95-21-01.

**Applicability:** McCauley Propeller Systems 1A103/TCM series propellers with numeric serial number 770001 through 777390; and propellers with alpha-numeric serial number BC001 up to, but not including KC001; installed on but not limited to Cessna 152, Cessna A152, Reims F152, and Reims FA152 series aircraft. All alpha-numeric serial number propellers beginning with the letters "B" through "J" are affected by this AD.

**Note 1:** This airworthiness directive (AD) applies to each propeller 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 propellers 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 (b) 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 propeller separation due to hub fatigue cracking, which can result in loss of control of the aircraft, accomplish the following:

(a) Inspect propellers, and rework or replace with a serviceable part, as necessary, in accordance with Sections II and III of McCauley Propeller Systems Alert Service Bulletin (ASB) No. 221B, dated December 16, 1996, as follows:

(1) For propellers with 3,000 or more hours time-in-service (TIS), or unknown TIS, on the effective date of this AD, as follows:

(i) Perform an initial dye penetrant inspection in accordance with Section II of the ASB within 50 hours TIS since last visual inspection performed in accordance with priority letter AD 95-21-01.

(ii) Thereafter, perform repetitive dye penetrant inspections in accordance

with Section II of the ASB at intervals not to exceed 800 hours TIS, or 12 calendar months since last dye penetrant inspection, whichever occurs first.

(iii) If cracks are discovered that are not within the rework limits described in Section III of the ASB, prior to further flight remove the propeller from service and replace with a serviceable part.

(iv) If cracks are discovered that are within the rework limits described in Section III of the ASB, prior to further flight rework the propeller in accordance with Section III of the SB, and resume inspecting repetitively in accordance with paragraph (a)(1)(ii) of this AD.

(2) For propellers with less than 3,000 hours TIS on the effective date of this AD, upon accumulating 3,000 hours TIS perform the steps required by paragraph (a)(1)(i) through (a)(1)(iv) of this AD.

(b) 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, Chicago Aircraft Certification Office. The request should be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Chicago Aircraft Certification Office.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Chicago Aircraft Certification Office.

(c) 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 aircraft to a location where the inspection requirements of this AD can be accomplished.

(d) The actions required by this AD shall be accomplished in accordance with the following McCauley Propeller Systems ASB:

Document No.	Page	Date
221B	1-22	December 16, 1996
Total Pages: 22.		

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from McCauley Propeller Systems, 3535 McCauley Drive, P.O. Drawer 5053, Vandalia, OH 45377-5053; telephone (513) 890-5246, fax (513) 890-6001. Copies may be inspected at the FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(e) This amendment supersedes priority letter AD 95-21-01, issued September 29, 1995.

(f) This amendment becomes effective on April 24, 1997.