



Airworthiness Directive

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [59 FR 23150 NO. 86 05/05/94]

Docket No. 94-ANE-12; Amendment 39-8895; AD **94-06-09**

Airworthiness Directives; Teledyne Continental Motors (Formerly Bendix) Magnetos

PDF Copy (If Available):

▼ Preamble Information

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule, request for comments.

SUMMARY: This document publishes in the **Federal Register** an amendment adopting airworthiness directive (AD) **94-06-09** that was sent previously to all known U.S. owners and operators of Teledyne Continental Motors (TCM) (formerly Bendix) SC-20, SC-200, and S-1200 series magnetos by individual letters. This AD requires inspection to determine if capacitors that may have an intermittent open circuit condition are installed in magnetos, and replacement, if necessary, with serviceable capacitors. This amendment is prompted by reports that TCM produced and delivered magneto capacitors that have the potential for an intermittent open circuit condition that may exist between the internal through-lead and the p-lead stud terminal. The actions specified by this AD are intended to prevent possible injury or death to ground personnel due to a non-grounded magneto.

DATES: Effective May 20, 1994.

Effective May 20, 1994, to all persons except those persons to whom it was made immediately effective by priority letter AD **94-06-09**, issued on March 9, 1994, which contained the requirements of this amendment.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of May 20, 1994.

Comments for inclusion in the Rules Docket must be received on or before July 5, 1994.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Assistant Chief Counsel, Attention: Rules Docket No. 94-ANE-12, 12 New England Executive Park, Burlington, MA 01803-5299.

The applicable service information may be obtained from Teledyne Continental Motors, P.O. Box 90, Mobile, AL 36601; telephone (205) 438-3411. 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: Jerry Robinette, Aerospace Engineer, Atlanta Aircraft Certification Office, FAA, Small Airplane Directorate, 1669 Phoenix Parkway, Suite 210C, Atlanta, GA 30349; telephone (404) 991-3810, fax (404) 991-3606.

SUPPLEMENTARY INFORMATION:

On March 9, 1994, the Federal Aviation Administration (FAA) issued priority letter airworthiness directive (AD) **94-06-09**, applicable to Teledyne Continental Motors (TCM) (formerly Bendix) SC-20, SC-200, and S-1200 series magnetos, which requires inspection to determine if capacitors that may have an intermittent open circuit condition are installed in magnetos, and replacement, if necessary, with serviceable capacitors. That action was prompted by reports that TCM produced and delivered magneto capacitors, Part Number (P/N) 10-349276, which have the potential for an intermittent open circuit condition that may exist between the internal through-lead and the p-lead stud terminal. The potential open circuit condition was initially discovered during a production engine test run at TCM. Further investigation revealed this problem to be limited to two lot numbers, 93-40 and 93-42, approximately 500 capacitors total. To date 241 of the capacitors have been found and taken out of service. These parts were used in magnetos produced at TCM for company use, Textron Lycoming use, after market sales, and for individual capacitors sold as spares to the field after October 27, 1993. These individual replacement parts can be fitted into TCM or Bendix magnetos. A capacitor with the intermittent open circuit condition described can result in a "hot mag" (i.e. the magneto is not grounded when the ignition/magneto switch is placed in the off position). The magneto is therefore capable of producing ignition, and if the propeller is moved with some residual fuel left in the cylinders, the engine could start momentarily. This momentary engine start could turn the propeller with enough force to cause injury or

death to ground personnel struck by the turning propeller. Capacitors with an intermittent open circuit condition may show no revolutions per minute (RPM) drop-off during the magneto check prior to flight. This condition, if not corrected, could result in possible injury or death to ground personnel due to a non-grounded magneto.

The FAA has reviewed and approved the technical contents of TCM Critical Service Bulletin (CSB) 641, dated February 1, 1994, that describes procedures for determining if magnetos contain capacitors, P/N 10-349276, that may have an intermittent open circuit condition.

Since the unsafe condition described is likely to exist or develop on other products of the same type design, the FAA issued priority letter AD **94-06-09** to prevent possible injury or death to ground personnel due to a non-grounded magneto. The AD requires inspection within 10 hours time in service after the effective date of this AD to determine if affected capacitors are installed in magnetos, and replacement, if necessary, with serviceable capacitors. All affected magnetos must be metal stamped with the letter "E" to show compliance. The actions are required to be accomplished in accordance with the service bulletin described previously.

Since it was found that immediate corrective action was required, notice and opportunity for prior public comment thereon were impracticable and contrary to the public interest, and good cause existed to make the AD effective immediately by individual letters issued on March 9, 1994, to all known U.S. owners and operators of TCM (formerly Bendix) SC-20, SC-200, and S-1200 series magnetos installed on but not limited to reciprocating engine powered Beech, Cessna, Maule, Mooney, Piper, and Robinson aircraft. These conditions still exist, and the AD is hereby published in the **Federal Register** as an amendment to Section 39.13 of part 39 of the Federal Aviation Regulations (FAR) to make it effective to all persons.

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 94-ANE-12." 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 14 CFR part 39 of the Federal Aviation Regulations as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. App. 1354(a), 1421 and 1423; 49 U.S.C. 106(g); and 14 CFR 11.89.

§39.13 - [AMENDED]

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

▼ Regulatory Information

94-06-09 TELEDYNE CONTINENTAL MOTORS: Amendment 39-8895. Docket 94-ANE-12.

Applicability: Teledyne Continental Motors (TCM) (formerly Bendix) magnetos new and rebuilt TCM Model SC-20, Part Number (P/N) 10-500XXX-X series; Model SC-200, P/N 10-600XXX-X series; and Model S-1200, P/N 10-349XXX-X series, magnetos with Serial Numbers (S/N) J2793XXX(R) through J3193XXX(R), K0193XXX(R) through K3093XXX(R) and L0193XXX(R) through L2293XXX(R) inclusive, with capacitor, P/N 10-349276, with date code 93-40 or 93-42. In addition, all TCM Model SC-20, P/N 10-500XXX-X series; SC-200, P/N 10-600XXX-X series; and S-1200, P/N 10-349XXX-X series, magnetos that have capacitor, P/N 10-349276, identified with date code 93-40 or 93-42, installed

after October 27, 1993. Also, any TCM or Bendix magneto regardless of serial number that was fitted after October 27, 1993, with capacitors P/N 10-349276, sold as individual replacement parts with date code 93-40 or 93-42. These magnetos are installed on but not limited to reciprocating engine powered Beech, Cessna, Maule, Mooney, Piper, and Robinson aircraft. NOTE: The "X" represents numbers in the P/N and S/N that have no significance in determining applicability: only the first five digits are needed. The "(R)" at the end of the S/N indicates a rebuilt magneto. The absence of an "(R)" indicates a new magneto.

Compliance: Required as indicated, unless accomplished previously.

To prevent possible injury or death to ground personnel due to a non-grounded magneto, accomplish the following: NOTE: WARNING: Do not move propellers by hand on engines that may contain affected capacitors until the inspection procedures required by this airworthiness directive (AD) are completed. Ground personnel should avoid the propeller arc.

(a) Within the next 10 hours time in service after the effective date of this AD, inspect affected magnetos for the presence of capacitor P/N 10-349276, in accordance with the Detailed Instructions, paragraphs 1, 1.1, and 1.2 of TCM Critical Service Bulletin (CSB) 641, dated February 1, 1994, and, if necessary, replace with a serviceable part as follows:

(1) If the capacitor is marked with a date code other than 93-40 or 93-42, reinstall the capacitor in the magneto and metal stamp the letter "E" in accordance with the Identification paragraph of TCM CSB641, dated February 1, 1994, to show compliance with this AD. No further action is required.

(2) If the capacitor is marked with either date code 93-40 or 93-42, replace with a serviceable capacitor of the same P/N but with a date code other than 93-40 or 93-42, and metal stamp the letter "E" in accordance with the Identification paragraph of TCM CSB641, dated February 1, 1994, to show compliance with this AD.

(b) Prior to installation, inspect uninstalled capacitor, P/N 10-349276, and replace, if necessary, with a serviceable part, in accordance with the Detailed Instruction, paragraph 2.1 of TCM CSB641, dated February 1, 1994. NOTE: TCM Critical Service Bulletin CSB94-1 dated February 1, 1994, and Lycoming Service Bulletin 517 dated February 25, 1994, refers to this subject.

(c) 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, Atlanta 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, Atlanta Aircraft Certification Office. NOTE: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Atlanta Aircraft Certification Office.

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

(e) The inspections shall be done in accordance with the following service bulletin:

Document No.	Pages	Revision	Date
TCM CSB641	1-2	Original	February 1, 1994

Total pages: 2.

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 Teledyne Continental Motors, P.O. Box 90, Mobile, AL 36601; telephone (205) 438-3411. 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.

(f) This amendment becomes effective May 20, 1994, to all persons except those persons to whom it was made immediately effective by priority letter AD **94-06-09**, issued March 9, 1994, which contained the requirements of this amendment.

▼ Footer Information

▼ Comments