

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

[Docket No. FAA-2009-1186; Directorate Identifier 2009-CE-065-AD]

RIN 2120-AA64

Airworthiness Directives; Cessna Aircraft Company (Type Certificate Previously Held by Columbia Aircraft Manufacturing (Previously The Lancair Company)) Models LC40-550FG, LC41-550FG, and LC42-550FG Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede Airworthiness Directive (AD) 2009-09-09, which applies to certain Cessna Aircraft Company (Cessna) (type certificate previously held by Columbia Aircraft Manufacturing (previously The Lancair Company)) Models LC40-550FG, LC41-550FG, and LC42-550FG airplanes. AD 2009-09-09 currently requires repetitive inspections of the rudder hinges and the rudder hinge brackets for damage, i.e., cracking, deformation, and discoloration. If damage is found during any inspection, AD 2009-09-09 also requires replacing the damaged rudder hinge and/or rudder hinge bracket. Since we issued AD 2009-09-09, Cessna has developed a modification that, when incorporated, would terminate the repetitive inspections required by AD 2009-09-09. The FAA has determined that long-term continued operational safety will be better assured by design changes that removed the source of the problem, rather than by repetitive inspections or other special procedures. Consequently, this proposed AD would retain the inspection requirements of AD 2009-09-09 and add a terminating action for the inspection requirements. We are proposing this AD to detect and correct damage in the rudder hinges and the rudder hinge brackets, which could result in failure of the rudder. This failure could lead to loss of control.

DATES: We must receive comments on this proposed AD by February 1, 2010.

ADDRESSES: Use one of the following addresses to comment on this proposed AD:

- *Federal eRulemaking Portal:* Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
 - *Fax:* (202) 493-2251.
 - *Mail:* U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
 - *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- For service information identified in this proposed AD, contact Cessna Aircraft Company, Product Support, P.O. Box 7706; Wichita, Kansas 67277; *telephone:* (316) 517-5800; *fax:* (316) 942-9006; *Internet:* www.cessna.com.

FOR FURTHER INFORMATION CONTACT: Gary Park, Aerospace Engineer, Wichita Aircraft Certification Office (ACO), 1801 Airport Road, Room 100, Wichita, Kansas 67209; *telephone:* (316) 946-4123; *fax:* (316) 946-4107; *e-mail:* gary.park@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments regarding this proposed AD. Send your comments to an address listed under the **ADDRESSES** section. Include the docket number, "FAA-2009-1186; Directorate Identifier 2009-CE-065-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the proposed AD. We will consider all comments received by the closing date and may amend the proposed AD in light of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive concerning this proposed AD.

Discussion

We received reports of a cracked lower rudder hinge bracket on two Cessna Model LC41-550FG airplanes that caused us to issue AD 2009-09-09,

Amendment 39-15895 (74 FR 19873, April 30, 2009). AD 2009-09-09 currently requires the following on certain Cessna Models LC40-550FG, LC41-550FG, and LC42-550FG airplanes:

- Repetitively inspecting the rudder hinges and the rudder hinge brackets for damage; and
- Replacing the rudder hinge and/or rudder hinge bracket if damage is found.

Cessna developed a modification that, when incorporated, would eliminate the need for the repetitive inspections required by AD 2009-09-09. The FAA has determined that long-term continued operational safety will be better assured by design changes that removed the source of the problem, rather than by repetitive inspections or other special procedures.

This condition, if not corrected, could result in failure of the rudder. This failure could lead to loss of control.

Relevant Service Information

We have reviewed Cessna Single Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009.

The service information describes procedures for repetitively inspecting the rudder hinges and the rudder hinge brackets for damage, i.e., cracking, deformation, and discoloration. The service information also describes procedures for incorporating a modification kit that will terminate the repetitive inspections.

FAA's Determination and Requirements of the Proposed AD

We are proposing this AD because we evaluated all information and determined the unsafe condition described previously is likely to exist or develop on other products of the same type design. This proposed AD would supersede AD 2009-09-09 with a new AD that would retain the inspection requirements of AD 2009-09-09 and add a terminating action for the inspection requirements. This proposed AD would require you to use the service information described previously to perform these actions.

Costs of Compliance

We estimate that this proposed AD would affect 535 airplanes in the U.S. registry.

We estimate the following costs to do the proposed inspections:

Labor cost	Parts cost	Total cost per airplane	Total cost on U.S. operators
Inspection with rudder removed: 1.2 work-hours × \$80 per hour = \$96	Not applicable	\$96	\$51,360

Labor cost	Parts cost	Total cost per airplane	Total cost on U.S. operators
<i>Inspection without rudder removed:</i> .5 work-hour $\times$ \$80 per hour = \$40	Not applicable	40	21,400

We estimate the following costs to do the proposed modification:

Labor cost	Parts cost	Total cost per airplane
<i>For Models LC40–550FG and LC42–550FG airplanes:</i> 1 work-hour $\times$ \$80 per hour = \$80	\$743	\$823
<i>For Model LC41–550FG airplanes:</i> 1 work-hour $\times$ \$80 per hour = \$80	803	883

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in subtitle VII, part A, subpart III, section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD 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.

For the reasons discussed above, I certify that the 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. 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.

We prepared a regulatory evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

Examining the AD Docket

You may examine the AD docket that contains the proposed AD, the regulatory evaluation, any comments received, and other information on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Office (telephone (800) 647–5527) is located at the street address stated in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2009–09–09, Amendment 39–15895 (74 FR 19873, April 30, 2009), and adding the following new AD:

Cessna Aircraft Company (Type Certificate Previously Held by Columbia Aircraft Manufacturing (Previously The Lancair Company)): Docket No. FAA–2009–1186; Directorate Identifier 2009–CE–065–AD.

Comments Due Date

- (a) We must receive comments on this airworthiness directive (AD) action by February 1, 2010.

Affected ADs

- (b) This AD supersedes AD 2009–09–09, Amendment 39–15895.

Applicability

- (c) This AD applies to the following airplane models and serial numbers that are certificated in any category:

Model	Serial Nos.
LC40–550FG	4001, 4002, and 40004 through 40079.
LC41–550FG	41001 through 41569, 41571 through 41800, 411001 through 411087, 411089 through 411110, 411112 through 411138, 411140, 411142, and 411147.
LC42–550FG	42001 through 42009, 42011 through 42558, 42560 through 42569, 421001 through 421013, 421015 through 421017, and 421019.

Subject

(d) Air Transport Association of America (ATA) Code 55: Stabilizers.

Unsafe Condition

(e) This AD is the result of reports received of a cracked lower rudder hinge bracket on

two of the affected airplanes. We are issuing this AD to detect and correct damage, i.e., cracking, deformation, and discoloration, in the rudder hinges and the rudder hinge brackets, which could result in failure of the rudder. This failure could lead to loss of control.

Compliance

(f) To address this problem, you must do the following actions, unless already done:

- (1) Inspect the rudder hinges and rudder hinge brackets for damage, i.e., cracking, deformation, and discoloration, following Cessna Aircraft Company Single Engine

Service Bulletin SB09-27-01, dated April 13, 2009, or Cessna Aircraft Company Single

Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009. Use

the compliance times specified in the following table:

Condition	Initial inspection	Repetitive inspection
(i) For airplanes with 25 hours time-in-service (TIS) or more as of May 11, 2009 (the effective date of AD 2009-09-09):	With the rudder removed and using 10X visual magnification, inspect all three rudder hinges and rudder hinge brackets at whichever of the following occurs first: (A) Within the next 10 hours TIS after May 11, 2009 (the effective date of AD 2009-09-09); or (B) Within the next 30 days after May 11, 2009 (the effective date of AD 2009-09-09).	Thereafter inspect as follows until the modification required in paragraph (f)(5) of this AD is done: (A) Every 25 hours TIS or 3 months, whichever occurs first, without removing the rudder, visually inspect all three rudder hinges and rudder hinge brackets; and (B) Every 50 hours TIS or 6 months, whichever occurs first, with the rudder removed and using 10X visual magnification, inspect all three rudder hinges and rudder hinge brackets.
(ii) For airplanes with less than 25 hours TIS as of May 11, 2009 (the effective date of AD 2009-09-09):	Without removing the rudder, visually inspect all three rudder hinges and rudder hinge brackets, at whichever of the following occurs later: (A) Upon accumulating 25 hours TIS; or (B) Within the next 10 hours TIS after May 11, 2009 (the effective date of AD 2009-09-09).	Thereafter inspect as follows until the modification required in paragraph (f)(5) of this AD is done: (A) Every 25 hours TIS or 3 months, whichever occurs first, without removing the rudder, visually inspect all three rudder hinges and rudder hinge brackets; and (B) Every 50 hours TIS or 6 months, whichever occurs first, with the rudder removed and using 10X visual magnification, inspect all three rudder hinges and rudder hinge brackets.

(2) If damage is found on any of the rudder hinges and/or rudder hinge brackets during any inspection required in paragraphs (f)(1)(i) or (f)(1)(ii) of this AD, before further flight, incorporate Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009, as specified in Cessna Aircraft Company Single Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009. Incorporating Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009, terminates the repetitive inspections required in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD.

(3) If the repetitive inspections required in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD become due at the same time, credit for both inspections will be given by doing the rudder removal and 10X visual inspection.

(4) Within the next 24 months after the effective date of this AD, incorporate Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009, as specified in Cessna Aircraft Company Single Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009.

(i) Incorporating Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009, terminates the repetitive inspections required in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD.

(ii) At any time after the initial inspections required in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD, you may incorporate Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009, to terminate the repetitive inspections required in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD.

(5) For any affected airplane that has Cessna Aircraft Company Single Engine Service Bulletin SB09-27-01, Revision 1, dated August 31, 2009, incorporated, within the next 30 days after the effective date of

this AD, inspect for proper rudder hinge and rudder bracket hardware thread engagement and inspect the rudder travel. Follow the Accomplishment Instructions in Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009, as specified in Cessna Aircraft Company Single Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009.

(i) During the inspection required in paragraph (f)(5) of this AD, if any discrepancies are found in the rudder hinge or rudder bracket hardware, before further flight replace the affected hardware. Do the replacement following the Accomplishment Instructions in Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009.

(ii) During the inspection required in paragraph (f)(5) of this AD, if the rudder travel is outside the limits specified in the Accomplishment Instructions in Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009, before further flight remove the rudder and reinstall it following the Accomplishment Instructions in Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009.

(iii) After the inspection and any necessary corrective actions required in paragraphs (f)(5), (f)(5)(i), and (f)(5)(ii) of this AD, incorporation of Cessna Aircraft Company Single Engine Service Bulletin SB09-27-01, Revision 1, dated August 31, 2009, terminates the repetitive inspections required in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD.

Alternative Methods of Compliance (AMOCs)

(g) The Manager, Wichita Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14

CFR 39.19. Send information to ATTN: Gary Park, Aerospace Engineer, ACE-118W, Wichita Aircraft Certification Office (ACO), 1801 Airport Road, Room 100, Wichita, Kansas 67209; *telephone*: (316) 946-4123; *fax*: (316) 946-4107; *e-mail*: gary.park@faa.gov. Before using any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(h) AMOCs approved for AD 2009-09-09 are approved for this AD.

Related Information

(i) To get copies of the service information referenced in this AD, contact Cessna Aircraft Company, Product Support, P.O. Box 7706; Wichita, Kansas 67277; *telephone*: (316) 517-5800; *fax*: (316) 942-9006; *Internet*: <http://www.cessna.com>. To view the AD docket, go to U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, or on the Internet at <http://www.regulations.gov>.

Issued in Kansas City, Missouri, on December 10, 2009.

Margaret Kline,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

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