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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2009-1186; Directorate Identifier 2009-CE-065-AD; Amendment 39-16588; AD 2011-03-04]**

**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), DOT.

**ACTION:** Final rule.

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**SUMMARY:** We are superseding an existing airworthiness directive (AD) for the products listed above. 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. This new AD retains the inspection requirements of AD 2009-09-09, adds airplanes to the Applicability section, and adds a terminating action for the repetitive inspection requirements. This AD resulted from the manufacturer developing a modification that terminates the repetitive inspections and from the manufacture adding airplane serial numbers into the Applicability section. We are issuing 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:** This AD is effective March 14, 2011.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of March 14, 2011.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of May 11, 2009 (74 FR 19873, April 30, 2009).

**ADDRESSES:** For service information identified 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>. You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

## **Examining the AD Docket**

You may examine the AD docket 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 AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operati

Inspecting the rudder hinges and rudder hinge brackets for damage without rudder removed (affects 570 airplanes)	.5 work-hour X \$85 per hour = \$42.50 per inspection cycle	Not applicable	\$42.50 per inspection cycle	\$24,225 per inspection cycle
Incorporating the modification kit for Models LC40-550FG and LC42-550FG airplanes (affects 247 airplanes)	1 work-hour X \$85 per hour = \$85	\$739	\$824	\$203,528
Incorporating the modification kit for Model LC41-550FG airplanes (affects 523 airplanes)	1 work-hour X \$85 per hour = \$85	\$848	\$933	\$487,959
Inspecting the rudder hinge and the rudder brackets attachment hardware for correct thread engagement (affects 20 airplanes)	.5 work-hour X \$85 per hour = \$42.50	Not applicable	\$42.50	\$850
Inspecting the rudder travel (affects 20 airplanes)	1 work-hour X \$85 per hour = \$85	Not applicable	\$85	\$1,700

We estimate the following costs to do any necessary repairs that will be required based on the results of the inspection of the rudder hinge and the rudder brackets attachment hardware for correct thread engagement and the rudder travel. We have no way of determining the number of aircraft that might need these repairs:

**On-condition costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>
Repair the rudder hinge and the rudder brackets attachment hardware thread engagement (could affect 20 airplanes)	.5 work-hour X \$85 per hour = \$42.50	\$14	\$56.50
Repair the rudder travel (could affect 20 airplanes)	.5 work-hour X \$85 per hour = \$42.50	\$14	\$56.50

**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 AD will not have federalism implications under Executive Order 13132. This AD will 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 this AD:

- (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),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) 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.

## **List of Subjects in 14 CFR Part 39**

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

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 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:



**2011-03-04 Cessna Aircraft Company (Type Certificate Previously Held by Columbia Aircraft Manufacturing (Previously The Lancair Company)):** Amendment 39-16588; Docket No. FAA-2009-1186; Directorate Identifier 2009-CE-065-AD.

**Effective Date**

(a) This airworthiness directive (AD) is effective March 14, 2011.

**Affected ADs**

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

**Applicability**

(c) This AD applies to the following Cessna Aircraft Company (type certificate previously held by Columbia Aircraft Manufacturing (previously The Lancair Company)) airplane models and serial numbers that are certificated in any category:

**Group 1 Airplanes**

Model	Serial Nos.
LC40-550FG (300)	40001, 40002, and 40004 through 40079.
LC41-550FG (400)	41001 through 41569, 41571 through 41800, 411001 through 411087, 411089 through 411110, 411112 through 411138, 411140, 411142, and 411147.
LC42-550FG (350)	42001 through 42009, 42011 through 42558, 42560 through 42569, 421001 through 421013, 421015 through 421017, and 421019.

**Group 2 Airplanes**

Model	Serial Nos.
LC41-550FG (400)	41570, 411088, 411111, 411139, 411141, 411143 through 411146, and 411148 through 411153.
LC42-550FG (350)	42010, 42559, 421014, 421018, and 421020.

**Subject**

(d) Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America 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, unless already done:

(1) For Group 1 airplanes specified in paragraph (c) of this AD: Using the compliance times specified in table 1 of this AD, inspect the rudder hinges and rudder hinge brackets for damage, i.e., cracking, deformation, and discoloration. Do the inspections following Cessna Single Engine Service Bulletin SB09-27-01, dated April 13, 2009; Cessna Single Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009; or Cessna Single Engine Service Bulletin SB09-27-01, Revision 3, dated July 20, 2010.

**Table 1—Inspection Compliance Times**

Condition	Initially inspect...	Repetitively inspect...
(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):	<p>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:</p> <p>(A) Within the next 10 hours TIS after May 11, 2009 (the effective date of AD 2009-09-09); or</p> <p>(B) Within the next 30 days after May 11, 2009 (the effective date of AD 009-09-09).</p>	<p>Thereafter inspect as follows until the modification required in paragraph (f)(5) of this AD is done:</p> <p>(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</p> <p>(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.</p>
(ii) For airplanes with less than 25 hours TIS as of May 11, 2009 (the effective date of AD 2009-09-09):	<p>Without removing the rudder, visually inspect all three rudder hinges and rudder hinge brackets, at whichever of the following occurs later:</p> <p>(A) Upon accumulating 25 hours TIS; or</p> <p>(B) Within the next 10 hours TIS after May 11, 2009 (the effective date of AD 2009-09-09).</p>	<p>Thereafter inspect as follows until the modification required in paragraph (f)(5) of this AD is done:</p> <p>(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</p> <p>(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.</p>

(2) For Group 1 airplanes specified in paragraph (c) of this AD: Before further flight after any inspection required in paragraphs (f)(1)(i) or (f)(1)(ii) of this AD in which damage is found on any of the rudder hinges and/or rudder hinge brackets, incorporate Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009; or Cessna Single Engine Modification Kit MK400-27-01A

dated July 20, 2010, as specified in Cessna Single Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009; and Cessna Single Engine Service Bulletin SB09-27-01, Revision 3, dated July 20, 2010. Incorporating either Modification Kit MK400-27-01 or Modification Kit MK400-27-01A, terminates the repetitive inspections required in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD.

(3) For Group 1 airplanes specified in paragraph (c) of this AD: 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) For Group 1 airplanes specified in paragraph (c) of this AD: Within the next 24 months after March 14, 2011 (the effective date of this AD), incorporate Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009; or Cessna Single Engine Modification Kit MK400-27-01A, dated July 20, 2010, as specified in Cessna Single Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009; and Cessna Single Engine Service Bulletin SB09-27-01, Revision 3, dated July 20, 2010, unless already done as specified in paragraph (f)(2) of this AD. Incorporating either Modification Kit MK400-27-01 or Modification Kit MK400-27-01A, terminates the repetitive inspections required in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD.

(5) For Group 1 airplanes specified in paragraph (c) of this AD: At any time after the initial inspections required in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD, as long as no damage is found, and no later than the compliance time specified in paragraph (f)(4) of this AD, you may incorporate Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009; or Cessna Single Engine Modification Kit MK400-27-01A, dated July 20, 2010, as specified in Cessna Single Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009; and Cessna Single Engine Service Bulletin SB09-27-01, Revision 3, dated July 20, 2010, to terminate the repetitive inspections required in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD.

(6) For any Group 1 airplane with Cessna Single Engine Service Bulletin SB09-27-01, Revision 1, dated August 31, 2009, already incorporated and for all Group 2 airplanes: Within the next 30 days after March 14, 2011 (the effective date of this AD), inspect for proper rudder hinge and rudder bracket hardware thread engagement and inspect the rudder travel. Do these inspections following the Accomplishment Instructions in Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009; or the Accomplishment Instructions in Cessna Single Engine Modification Kit MK400-27-01A, dated July 20, 2010.

(i) Before further flight after the inspection required in paragraph (f)(6) of this AD, if any discrepancies are found in the rudder hinge or rudder bracket hardware, replace the affected hardware. Do the replacements following the Accomplishment Instructions in Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009; or the Accomplishment Instructions in Cessna Single Engine Modification Kit MK400-27-01A, dated July 20, 2010.

(ii) Before further flight after the inspection required in paragraph (f)(6) 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; or the Accomplishment Instructions in Cessna Single Engine Modification Kit MK400-27-01A, dated July 20, 2010, reinstall the rudder following the Accomplishment Instructions in either Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009; or Cessna Single Engine Modification Kit MK400-27-01A, dated July 20, 2010.

(iii) After the inspection and any necessary corrective actions required in paragraphs (f)(6), (f)(6)(i), and (f)(6)(ii) of this AD, no further action is required.

### **Credit for Actions Accomplished in Accordance With Previous Service Information**

(g) For all airplanes specified in paragraph (c) of this AD: As of March 14, 2011 (the effective date of this AD), if Cessna Single Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009, has already been incorporated, no further action is required.

## **Alternative Methods of Compliance (AMOCs)**

(h)(1) 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. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD.

(2) Before using any approved AMOC, notify your Principal Maintenance Inspector or Principal Avionics Inspector, as appropriate, or lacking a principal inspector, your local Flight Standards District Office.

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

## **Related Information**

(i) For more information about this AD, contact Gary Park, Aerospace Engineer, Wichita ACO, FAA, 1801 Airport Road, Room 100, Wichita, Kansas 67209; telephone: (316) 946-4123; fax: (316) 946-4107; e-mail: gary.park@faa.gov.

## **Material Incorporated by Reference**

(j) You must use Cessna Single Engine Service Bulletin SB09-27-01, dated April 13, 2009; Cessna Single Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009; Cessna Single Engine Service Bulletin SB09-27-01, Revision 3, dated July 20, 2010; Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009; and Cessna Single Engine Modification Kit MK400-27-01A, dated July 20, 2010, to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of Cessna Single Engine Service Bulletin SB09-27-01, Revision 2, dated November 23, 2009; and Cessna Single Engine Service Bulletin SB09-27-01, Revision 3, dated July 20, 2010; Cessna Single Engine Modification Kit MK400-27-01, dated November 23, 2009; and Cessna Single Engine Modification Kit MK400-27-01A, dated July 20, 2010, under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) The Director of the Federal Register previously approved the incorporation by reference of Cessna Single Engine Service Bulletin SB09-27-01, dated April 13, 2009, on May 11, 2009 (74 FR 19873, April 30, 2009).

(3) For service information identified 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>.

(4) You may review copies of the service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call 816-329-4148.

(5) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, call 202-741-6030, or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Kansas City, Missouri, on January 25, 2011.

John Colomy,  
Acting Manager, Small Airplane Directorate,  
Aircraft Certification Service.