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[Page 16027-16029]  
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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2005-23023; Directorate Identifier 2005-CE-49-AD; Amendment 39-14533; AD 2006-07-06]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Cirrus Design Corporation Models SR20 and SR22 Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

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**SUMMARY:** The FAA adopts a new airworthiness directive (AD) for certain Cirrus Design Corporation (CDC) Models SR20 and SR22 airplanes. This AD requires you to inspect the fuel line and wire bundles for any chafing damage; replace any damaged fuel line and repair any damaged wires or sheathing of the wire harness if any chafing damage is found; and install (to prevent any chafing damage to the fuel line and wire bundles) the forward loop clamp, fuel line shield, aft loop clamp, and anti-chafe tubing. This AD results from reports of fuel line leaks resulting from wire chafing on the fuel lines. We are issuing this AD to detect, correct, and prevent damage to the fuel line and wire bundles, which could result in fuel leaks. This failure could lead to unsafe fuel vapor within the cockpit and possible fire.

**DATES:** This AD becomes effective on May 11, 2006.

As of May 11, 2006, the Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulation.

**ADDRESSES:** To get the service information identified in this AD, contact Cirrus Design Corporation, 4515 Taylor Circle, Duluth, Minnesota 55811; telephone: (218) 727-2737, or on the Internet at <http://www.cirrusdesign.com>.

To view the AD docket, go to the Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-001 or on the Internet at <http://dms.dot.gov>. The docket number is FAA-2005-23023; Directorate Identifier 2005-CE-49-AD.

**FOR FURTHER INFORMATION CONTACT:** Wess Rouse, Aerospace Engineer, ACE-117C, Chicago Aircraft Certification Office, 2300 East Devon Avenue, Room 107, Des Plaines, Illinois 60018; telephone: (847) 294-8113; facsimile: (847) 294-7834.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

The FAA has received two reports of fuel line leaks within a compartment in the center console of Model SR22 airplanes. This compartment is drained to the belly of the aircraft. Investigation found that the leaks resulted from wire chafing on the fuel lines.

This condition, if not corrected, could result in unsafe fuel vapor within the cockpit and possible fire.

We issued a proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to certain Cirrus Design Corporation (CDC) Models SR20 and SR22 airplanes. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on December 8, 2005 (70 FR 72945). The NPRM proposed to require you to inspect the fuel line and wire bundles for any chafing damage; replace any damaged fuel line and repair any damaged wires or sheathing of the wire harness if any chafing damage is found; and install the forward loop clamp, fuel line shield, aft loop clamp, and anti-chafe tubing.

### **Comments**

We provided the public the opportunity to participate in developing this AD. The following presents the comment received on the proposal and FAA's response to the comment:

#### **Comment Issue: Revision Date for Cirrus Design Corporation Service Bulletin**

The commenter notes that throughout the NPRM the date of Service Bulletin SB 2X-28-04 R1, Issued: November 1, 2005, Revised: November 8, 2005, should read, "Revised: November 14, 2005."

The FAA agrees with the commenter. We will change the final rule to include the correct revised date for the service bulletin.

### **Conclusion**

We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed except for minor editorial corrections. We have determined that these minor corrections:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

#### **Changes to 14 CFR Part 39—Effect on the AD**

How does the revision to 14 CFR part 39 affect this AD? On July 10, 2002, the FAA published a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs the FAA's AD system. This regulation now includes material that relates to altered products, special flight permits, and alternative methods of compliance. This material previously was included in each individual AD. Since this material is included in 14 CFR part 39, we will not include it in future AD actions.

## Costs of Compliance

We estimate that this AD affects 2,135 airplanes in the U.S. registry.

We estimate the following costs to do the inspection of the fuel line and wire harness for any chafing damage:

<b>Labor cost</b>	<b>Parts cost</b>	<b>Total cost per airplane</b>	<b>Total cost on U.S. operators</b>
1 work hour × \$80 = \$80	Not Applicable	\$80	2,135 × \$80 = \$170,800

We estimate the following costs to do necessary replacements of any damaged fuel line or repair any damaged wires or sheathing of the wire harness that would be required based on the results of this inspection. We have no way of determining the number of airplanes that may need these repairs or replacements:

<b>Labor cost</b>	<b>Parts cost</b>	<b>Total cost per airplane</b>
6 work hours × \$80 = \$480	\$67	\$547

We estimate the following costs to do the installation of the forward loop clamp, fuel line shield, aft loop clamp, and anti-chafe tubing:

<b>Labor cost</b>	<b>Parts cost</b>	<b>Total cost per airplane</b>	<b>Total cost on U.S. operators</b>
1 work hour × \$80 = \$80	\$146	\$226	2,135 × \$246 = \$482,510

Warranty credit for parts and labor costs is referenced in the service bulletin.

## 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 AD.

## 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 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 summary of the costs to comply with this AD (and other information as included in the Regulatory Evaluation) and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "Docket No. FAA-2005-23023; Directorate Identifier 2005-CE-49-AD" in your request.

### **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 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 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

2. FAA amends § 39.13 by adding a new AD to read as follows:

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

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

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) 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).

**2006-07-06 Cirrus Design Corporation:** Amendment 39-14533; Docket No. FAA-2005-23023; Directorate Identifier 2005-CE-49-AD.

## Effective Date

- (a) This AD becomes effective on May 11, 2006.

## Affected ADs

- (b) None.

## Applicability

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

Model	Serial Nos.
SR20	1005 through 1581.
SR22	0002 through 1643 and 1645 through 1662.

## Unsafe Condition

- (d) This AD is the result of reports of fuel line leaks resulting from wire chafing on the fuel lines. The actions specified in this AD are intended to detect, correct, and prevent damage to the fuel line and wire bundles, which could result in fuel leaks. This failure could lead to unsafe fuel vapor within the cockpit and possible fire.

## Compliance

- (e) To address this problem, you must do the following:

<b>Actions</b>	<b>Compliance</b>	<b>Procedures</b>
(1) Inspect the fuel line and wire harness for any chafing damage.	Within the next 50 hours time-in-service (TIS) after May 11, 2006 (the effective date of this AD).	Follow Cirrus Design Corporation Service Bulletin SB 2X-28-04 R1, Issued: November 1, 2005, Revised: November 14, 2005.
(2) If any chafing damage is found as a result of the inspection required by paragraph (e)(1) of this AD: (i) Replace any damaged fuel line; and (ii) Repair any damaged wires or sheathing of the wire harness	Before further flight after the inspection required by paragraph (e)(1) of this AD.	Follow Cirrus Design Corporation Service Bulletin SB 2X-28-04 R1, Issued: November 1, 2005, Revised: November 14, 2005.
(3) Install the following: (i) Forward loop clamp; (ii) Fuel line shield; (iii) Aft loop clamp; and (iv) Anti-chafe tubing	Within the next 50 hours time-in-service (TIS) after May 11, 2006 (the effective date of this AD).	Follow Cirrus Design Corporation Service Bulletin SB 2X-28-04 R1, Issued: November 1, 2005, Revised: November 14, 2005.

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

(f) The Manager, Chicago Aircraft Certification Office (ACO), FAA, ATTN: Wess Rouse, Aerospace Engineer, ACE-117C, Chicago Aircraft Certification Office, 2300 East Devon Avenue, Room 107, Des Plaines, Illinois 60018; telephone: (847) 294-8113; fax: (847) 294-7834, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

### **Material Incorporated by Reference**

(g) You must do the actions required by this AD following the instructions in Cirrus Design Corporation Service Bulletin SB 2X-28-04 R1, Issued: November 1, 2005, Revised: November 14, 2005. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To get a copy of this service information, contact Cirrus Design Corporation, 4515 Taylor Circle, Duluth, Minnesota 55811; telephone: (218) 727-2737 or on the Internet at <http://www.cirrusdesign.com>. To review copies of this service information, go to the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, 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) or call (202) 741-6030. To view the AD docket, go to the Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-001 or on the Internet at <http://dms.dot.gov>. The docket number is FAA-2005-23023; Directorate Identifier 2005-CE-49-AD.

Issued in Kansas City, Missouri, on March 20, 2006.

Kim Smith,  
 Manager, Small Airplane Directorate, Aircraft Certification Service.  
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