

[Federal Register: March 13, 2002 (Volume 67, Number 49)]  
[Rules and Regulations ]  
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[DOCID:fr13mr02-5]

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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. 2002-CE-06-AD; Amendment 39-12673; AD 2002-05-05]**

**RIN 2120-AA64**

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

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule; request for comments.

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**SUMMARY:** This amendment adopts a new airworthiness directive (AD) that applies to certain Cirrus Design Corporation (Cirrus) Models SR20 and SR22 airplanes. This AD requires you to incorporate temporary operating limitations into the Limitation Section of the airplane flight manual (AFM) for certain affected airplanes and install a cable clamp external to the cone adapter on the Cirrus Aircraft Parachute System (CAPS) activation cable for all affected airplanes. The operating limitations will reduce the need to use the CAPS system in a loss of aircraft control emergency situation. The installation will prevent the cable housing from going into the rocket cone and will allow the rocket to fire correctly. This AD is the result of a report from the manufacturer that certain CAPS may not activate in an emergency situation. The actions specified by this AD are intended to initially limit the chance of failure of the CAPS activation system in an emergency situation and eventually eliminate this potential failure. Failure of this system would result in occupant injury and/or loss of life and loss of aircraft.

**DATES:** This AD becomes effective on March 19, 2002.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulation as of March 19, 2002.

The Federal Aviation Administration (FAA) must receive any comments on this rule on or before April 26, 2002.

**ADDRESSES:** Submit comments to FAA, Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2002-CE-06-AD, 901 Locust, Room 506, Kansas City, Missouri 64106. You may view any comments at this location between 8 a.m. and 4 p.m., Monday through Friday, except Federal holidays. You may also send comments electronically to the following address: [9-ACE-7-Docket@faa.gov](mailto:9-ACE-7-Docket@faa.gov). Comments sent electronically must contain "Docket No. 2002-CE-06-AD" in the subject line. If you send comments electronically as attached electronic files, the files must be formatted in Microsoft Word 97 for Windows or ASCII text.

You may get the service information referenced in this AD from Cirrus Design Corporation, 4515 Taylor Circle, Duluth, MN 55811; telephone: (218) 727-2737; or electronically at the following address: [www.cirrusdesign.com/sb](http://www.cirrusdesign.com/sb). You may view this information at FAA, Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2002-CE-06-AD, 901 Locust, Room 506, Kansas City, Missouri 64106; or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Gregory J. Michalik, Aerospace Engineer, FAA, Chicago ACO, 2300 East Devon Avenue, Des Plaines, IL 60018; telephone: (847) 294-7135; facsimile: (847) 294-7834.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

#### *What Events Have Caused This AD?*

The FAA has received a report from the type certificate holder that a condition exists that could cause the Cirrus Airplane Parachute System (CAPS) installed on certain Cirrus Design Corporation (Cirrus) Model SR20 and SR22 airplanes not to activate in the event of an emergency. Ballistic Recovery Systems (BRS), the supplier of the CAPS, discovered the condition during a supplemental type certificate (STC) certification test of the same unit on another airplane.

Investigation revealed that the rocket cone could allow for variance in the internal diameter at the threaded end of the rocket cone. This variance could result in the retaining nut internal to the cone adapter not to be fully secured on the affected parachutes. When the igniter end of the cable housing is unsecured, the cable will not pull the igniter pin free to release the parachute.

This condition is prevalent on a manufacturing lot of 187 systems that BRS developed under a process change. The condition could exist on the other earlier systems that BRS developed.

Section 23.221 of the Federal Aviation Regulations (14 CFR 23.221) requires that single-engine, normal category airplanes demonstrate compliance with either the one-turn spin or the spin-resistant requirements. The airplane, for spin recovery compliance, must recover from a one-turn spin or a three-second spin, whichever takes longer, in not more than one additional turn after the controls have been applied for recovery. The Cirrus SR20/SR22 are not certificated to meet the spin requirements or spin resistant requirements of 14 CFR 23.221. Instead, Cirrus installed an Airplane Parachute System (CAPS) that was FAA-approved as part of the SR20/SR22 type design.

#### **What Are the Consequences if the Condition Is Not Corrected?**

Failure of the igniter end of the cable housing to release the igniter pin, if not corrected, could result in CAPS not activating in an emergency situation. This would result in occupant injury and/or loss of life and loss of aircraft.

#### *Is There Service Information That Applies to This Subject?*

Cirrus Design has issued Alert Service Bulletin SB A20-95-01, Issued: February 25, 2002, and Alert Service Bulletin A22-95-01, Issued: February 25, 2002. These service bulletins specify modifying the CAPS activation cable assembly in accordance with Ballistic Recovery Systems Inc. Service Bulletin SB 95-01, Issued: February 25, 2002. This service bulletin includes procedures for installing a cable clamp external to the cone adapter.

## **The FAA's Determination and an Explanation of the Provisions of This AD**

### *What Has FAA Decided?*

The FAA has reviewed all available information, including the service information referenced above; and determined that:

- The unsafe condition referenced in this document exists or could develop on other Cirrus Model SR20 and SR22 airplanes of the same type design;
- The actions specified in the previously-referenced service information (as specified in this AD) should be accomplished on the affected airplanes; and
- AD action should be taken in order to correct this unsafe condition.

### *What Does This AD Require?*

This AD requires you to:

- Incorporate temporary operating limitations into the Limitation Section of the airplane flight manual (AFM) for the airplanes with a CAPS that incorporates the process change. The operating limitations will reduce the need to use the CAPS system in a loss of aircraft control emergency situation. This action is accomplished by the pilot prior to further flight after the effective date of the AD; and
- Install a cable clamp external to the cone adapter on the Cirrus Aircraft Parachute System (CAPS) activation cable within 10 hours time-in-service (TIS) after the effective date of this AD for those airplanes with a CAPS that incorporates the process change and within 25 hours TIS after the effective date for all other airplanes. This installation will prevent the cable housing from going into the rocket cone and will allow the rocket to fire correctly.

In preparation of this rule, we contacted type clubs and aircraft operators to obtain technical information and information on operational and economic impacts. We have included, in the rulemaking docket, a discussion of information that may have influenced this action.

### *Will I Have the Opportunity To Comment Prior to the Issuance of the Rule?*

Because the unsafe condition described in this document could result in failure of the CAPS activation system in an emergency situation, we find that notice and opportunity for public prior comment are impracticable. Therefore, good cause exists for making this amendment effective in less than 30 days.

## **Comments Invited**

### *How Do I Comment on This AD?*

Although this action is in the form of a final rule and was not preceded by notice and opportunity for public comment, FAA invites your comments on the rule. You may submit whatever written data, views, or arguments you choose. You need to include the rule's docket number and submit your comments to the address specified under the caption ADDRESSES. We will consider all comments received on or before the closing date specified above. We may amend this rule in light of comments received. Factual information that supports your ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether we need to take additional rulemaking action.

*Are There Any Specific Portions of the AD I Should Pay Attention To?*

We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. You may view all comments we receive before and after the closing date of the rule in the Rules Docket. We will file a report in the Rules Docket that summarizes each FAA contact with the public that concerns the substantive parts of this AD.

*How Can I Be Sure FAA Receives My Comment?*

If you want us to acknowledge the receipt of your mailed comments, you must include a self-addressed, stamped postcard. On the postcard, write "Comments to Docket No. 2002-CE-06-AD." We will date stamp and mail the postcard back to you.

**Regulatory Impact**

*Does This AD Impact Various Entities?*

These regulations 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. Therefore, FAA has determined that this final rule does not have federalism implications under Executive Order 13132.

*Does This AD Involve a Significant Rule or Regulatory Action?*

We have 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 (otherwise, an evaluation is not required). A copy of it, if filed, may be obtained from the Rules Docket.

**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.

Sec. 39.13 [Amended]

2. FAA amends Sec. 39.13 by adding a new airworthiness directive (AD) to read as follows:

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

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

*We post ADs on the internet at "av-info.faa.gov"*

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).

## **2002-05-05 Cirrus Design Corporation:** Amendment 39-12673; Docket No. 2002-CE-06-AD.

(a) *What airplanes are affected by this AD?* This AD applies to the following airplane models and serial numbers that are certificated in any category:

Model	Serial Numbers
<b>(1) Group 1</b>	
SR20	1148 through 1178, except 1151
SR22	0029 through 0160, except 0159
<b>(2) Group 2</b>	
SR20	1005 through 1147
SR22	0002 through 0028

(b) *Who must comply with this AD?* Anyone who wishes to operate any of the airplanes identified in paragraph (a) of this AD must comply with this AD.

(c) *What problem does this AD address?* The actions specified by this AD are intended to initially limit the chance of failure of the CAPS activation system in an emergency situation and eventually eliminate this potential failure. Failure of this system would result in occupant injury and/or loss of life and loss of aircraft.

(d) *What must I do to address this problem?* To address this problem, you must perform the following actions, unless already accomplished:

Actions	Compliance	Procedures
(1) For Group 1 airplanes: in order to reduce the need to use the CAPS system in a loss of aircraft control emergency situation, incorporate the following into the Limitation Section of the airplane flight manual (AFM): "(i) Do not operate the airplane in instrument flight rules (IFR) conditions, only operate the airplane in visual flight rules (VFR) conditions; and. (ii) Operate the airplane during daytime hours only, do not operate at night.	Prior to further flight after March 19, 2002 (the effective date of this AD) until the installation required by paragraph (d)(2) of this AD is accomplished.	The owner/operator holding at least a private pilot certificate as authorized by section 43.7 of the Federal Aviation Regulations (14 CFR 43.7) may incorporate into the AFM the information specified in paragraphs (d)(1)(i) and (d)(1)(ii) of this AD. Make an entry into the aircraft records showing compliance with this portion of the AD in accordance with section 43.9 of the Federal Aviation Regulations (14 CFR 43.9).

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(2) For all affected airplanes: in order to prevent the cable housing from going into the rocket cone and in order to allow the rocket to fire correctly, install a cable clamp external to the cone adapter on the Cirrus Aircraft Parachute System (CAPS) activation cable.

For Group 1 airplanes: within the next 10 hours time-in-service (TIS) after March 19, 2002 (the effective date of this AD). The AFM Limitations requirement in paragraph (d)(1) of this AD is no longer required when this installation is accomplished. For Group 2 airplanes: within the next 25 hours TIS after March 19, 2002 (the effective date of this AD).

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In accordance with Ballistic Recovery Systems Inc. Service Bulletin SB 95-01, Issued: February 25, 2002, as specified in Cirrus Alert Service Bulletin SBA 20-95-01, Issued: February 25, 2002, and Alert Service Bulletin A22-95-01, Issued: February 25, 2002.

(e) *Can I comply with this AD in any other way?* You may use an alternative method of compliance or adjust the compliance time if:

- (1) Your alternative method of compliance provides an equivalent level of safety; and
- (2) The Manager, Chicago Aircraft Certification Office (ACO), approves your alternative.

Submit your request through an FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Chicago ACO.

**Note:** This AD applies to each airplane identified in paragraph (a) of this AD, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes 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 (e) 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 you have not eliminated the unsafe condition, specific actions you propose to address it.

(f) *Where can I get information about any already-approved alternative methods of compliance?* Contact Gregory J. Michalik, Aerospace Engineer, FAA, Chicago ACO, 2300 East Devon Avenue, Des Plaines, IL 60018; telephone: (847) 294-7135; facsimile: (847) 294-7834.

(g) *What if I need to fly the airplane to another location to comply with this AD?* The FAA can issue a special flight permit under sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate your airplane to a location where you can accomplish the requirements of this AD provided you comply with the following:

- (1) The aircraft is operated in Visual Flight Rules (VFR) conditions only; and
- (2) The aircraft is operated during daytime hours only.

(h) *Are any service bulletins incorporated into this AD by reference?* Actions required by this AD must be done in accordance with Ballistic Recovery Systems Inc. Service Bulletin SBA 95-01, Issued: February 25, 2002, as specified in Cirrus Alert Service Bulletin SBA 20-95-01, Issued: February 25, 2002, and Cirrus Alert Service Bulletin A22-95-01, Issued: February 25, 2002. The Director of the Federal Register approved this incorporation by reference under 5 U.S.C. 552(a) and 1 CFR part 51. You can get copies from Cirrus Design Corporation, 4515 Taylor Circle, Duluth, MN 55811; telephone: (218) 727-2737; or electronically at the following address:

[www.cirrusdesign.com/sb](http://www.cirrusdesign.com/sb). You may view this information at FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(i) *When does this amendment become effective?* This amendment becomes effective on March 19, 2002.

Issued in Kansas City, Missouri, on March 5, 2002.

James E. Jackson,  
Acting Manager, Small Airplane Directorate, Aircraft Certification Service.  
[FR Doc. 02-5703 Filed 3-12-02; 8:45 am]  
BILLING CODE 4910-13-U