

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

[Docket No. FAA-2006-24010; Directorate Identifier 2006-CE-14-AD]

RIN 2120-AA64

**Airworthiness Directives; Cirrus Design Corporation Model SR20 and SR22 Airplanes**

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

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to adopt a new airworthiness directive (AD) for certain Cirrus Design Corporation (CDC) Model SR20 and SR22 airplanes. This proposed AD would require you to check the maintenance records to determine whether the brake caliper piston O-ring seals were replaced at the last annual or 100-hour inspection. If the O-rings were not replaced, this proposed AD would require you to replace the O-ring seals with new seals or replace brake calipers. This proposed AD would also require you to modify the main landing gear wheel fairings to add temperature indicator sticker inspection holes, trim the wheel fairings to prevent them from holding fluids, install temperature indicator stickers on the brake calipers, and insert Revision A6 (with revised preflight walk-around and taxi procedures) into the Pilot's Operating Handbook (POH). This proposed AD results from several reports of airplanes experiencing brake fires and two airplanes losing directional control. We are issuing this proposed AD to detect, correct, and prevent overheating damage to the brake caliper piston O-ring seals, which could result in leakage of brake hydraulic fluid. Consequently, this could lead to the loss of braking with loss of airplane directional control or brake fire.

**DATES:** We must receive comments on this proposed AD by July 10, 2006.

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

- *DOT Docket Web site:* Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.

- *Government-wide rulemaking Web site:* Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.

- *Mail:* Docket Management Facility; U.S. Department of Transportation, 400

Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-0001. Fax: (202) 493-2251.

- *Hand Delivery:* Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

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

You may examine the comments on this proposed AD in the AD docket on the Internet at <http://dms.dot.gov>.

**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:**

**Comments Invited**

We invite you to send any written relevant data, views, or arguments regarding this proposal. Send your comments to an address listed under **ADDRESSES**. Include the docket number, "FAA-2006-24010; Directorate Identifier 2006-CE-14-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://dms.dot.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this proposed rulemaking. Using the search function of the DOT docket Web site, anyone can find and read the comments received into any of our dockets, including the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.).

**Discussion**

The FAA recently received four reports of CDC Models SR20 and SR22 airplanes experiencing brake fires and one airplane losing directional control resulting in contact with a parked airplane. There was one prior report of loss of directional control in 2002.

Investigation has shown that with a free castering nose wheel, occasional

right braking during taxi is necessary due to helical propwash. Excessive brake use during taxi can result in overheating damage of the O-ring seals on the right brake caliper piston. Consequently, the overheating damage of the O-ring seals on the brake caliper piston results in leakage of brake hydraulic fluid.

In addition to excessive use of the right brake, data suggests that brake caliper piston O-ring seals have not typically been replaced at annual or 100-hour inspections as specified in the Aircraft Maintenance Manual (AMM).

To address this unsafe condition, CDC has developed the following:

- Modifications to the main landing gear (MLG) wheel fairings to add temperature indicator sticker inspection holes and trim the wheel fairings to ensure that any leaking hydraulic fluid runs onto the pavement where it may be seen rather than collecting in the wheel pants;

- Temperature indicator stickers to install on brake calipers; and

- Revision A6 for the POH (with revised preflight walk-around and taxi procedures).

This condition, if not corrected, could cause leakage of brake hydraulic fluid and lead to the loss of braking with loss of airplane directional control or brake fire.

**Relevant Service Information**

We have reviewed CDC Service Bulletins SB 2X-32-13, Issued: December 15, 2005; and SB 2X-32-14 R1, Issued: January 18, 2006, Revised: February 17, 2006.

The service information describes procedures for:

- A wheel conversion and brake upgrade; and

- Modifications of the MLG fairings to include inspection holes that facilitate monitoring (temperature indicator stickers) for brake assembly temperature and trimming of the MLG fairings to provide for additional clearance;

- Installation of temperature indicator stickers on the brake assemblies; and

- Incorporation of Revision A6 into the POH.

**FAA's Determination and Requirements of the Proposed AD**

We are proposing this AD to address an unsafe condition that we determined is likely to exist or develop on other products of this same type design. The proposed AD would require you to:

- Check the maintenance records to determine whether the brake caliper piston O-ring seals were replaced at the last annual or 100-hour inspection, and,

if not replaced, replace the O-ring seals with new seals or replace brake calipers;

- Modify the MLG wheel fairings to add a temperature indicator sticker inspection hole;
- Trim the wheel fairings to prevent them from holding fluids;
- Install temperature indicator stickers on the brake calipers; and
- Insert Revision A6 into the POH.

The proposed AD would require you to use the service information described previously to perform these actions.

#### Differences Between the Proposed AD and Service Information

The proposed AD would require you to check the maintenance records to determine whether the brake caliper piston O-ring seals were replaced at the last annual or 100-hour inspection, and, if not replaced, would require you to replace the O-ring seals with new seals or replace brake calipers. This step is not included in the service bulletin. We include it in the proposed AD to assure the O-ring seals are replaced or have been recently replaced. Replacement procedures for the brake caliper piston O-ring seals are in Section 32–42 of the

CDC Model SR20 or SR22 AMM. The requirements of the proposed AD, if adopted as a final rule, would take precedence over the provisions in the service information.

#### Costs of Compliance

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

We estimate the following costs to do this proposed check of maintenance records to determine whether the brake caliper piston O-ring seals were replaced at the last annual or 100-hour inspection:

Labor cost	Parts cost	Total cost per airplane	Total cost on U.S. operators
1 workhour × \$80 = \$80 .....	Not applicable .....	\$80	2,135 × \$80 = \$170,800.

We estimate the following costs to install any necessary O-ring seals that would be required based on the results

of this proposed check of maintenance records. We have no way of determining

the number of airplanes that may need this seal installation:

Labor cost	Parts cost	Total cost per airplane
4 work hours × \$80 = \$320 .....	\$8	\$328

We estimate the following costs to replace any brake calipers on Model SR20 airplanes, serial numbers (S/Ns)

1005 through 1194, that would be required based on the results of this proposed check of maintenance records.

We have no way of determining the number of these Model SR20 airplanes that may need to replace brake calipers:

Labor cost	Parts cost	Total cost per airplane
12 workhours × \$80 = \$960 .....	\$1,167	\$2,127

We estimate the following costs to replace any brake calipers on Model SR20 airplanes, S/Ns 1195 through

1600, that would be required based on the results of this proposed check of maintenance records. We have no way

of determining the number of these Model SR20 airplanes that may need to replace brake calipers:

Labor cost	Parts cost	Total cost per airplane
8 workhours × \$80 = \$640 .....	\$1,167	\$1,807

We estimate the following costs to replace any brake calipers on Model SR22 airplanes that would be required

based on the results of this proposed check of maintenance records. We have no way of determining the number of

Model SR22 airplanes that may need to replace brake calipers:

Labor cost	Parts cost	Total cost per airplane
5 workhours × \$80 = \$400 .....	\$845	\$1,245

We estimate the following costs to do the proposed modification of the MLG wheel fairings to add the temperature

indicator sticker inspection holes, trim the wheel fairings to prevent them from holding fluids, and install the

temperature indicator sticker on the brake calipers:

Labor cost	Parts cost	Total cost per airplane	Total cost on U.S. operators
2 workhours × \$80 = \$160 .....	\$2	\$162	2,135 × \$162 = \$345,870.

The CDC has indicated that CDC will provide warranty credit as stated in the service information for modifying the MLG wheel fairings by adding the temperature indicator sticker inspection

holes, trimming the wheel fairings to prevent them from holding fluids, and installing the temperature indicator sticker on the brake calipers.

We estimate the following costs to do the proposed insertion of Revision A6 into the POH:

Labor cost	Parts cost	Total cost per airplane	Total cost on U.S. operators
1 workhour × \$80 .....	Not applicable .....	\$80	\$170,800

### 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. See the **ADDRESSES** section for a location to examine the regulatory evaluation.

### Examining the Dockets

You may examine the docket that contains the proposal, any comments received and any final disposition on the Internet at <http://dms.dot.gov>, or in person at the DOT Docket Offices between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Office (telephone 1-800-647-5227) is located on the plaza level of the Department of Transportation Nassif Building at the street address stated in **ADDRESSES**. Comments will be available in the AD docket shortly after the Docket Management Facility receives them.

### List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

### The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration 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 adding the following new airworthiness directive:

**Cirrus Design Corporation:** Docket No. FAA-2006-24010; Directorate Identifier 2006-CE-14-AD.

### Comments Due Date

(a) We must receive comments on this airworthiness directive (AD) action by July 10, 2006.

### Affected ADs

(b) None.

### Applicability

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

- (1) *Group 1:* Model SR20 Airplanes, S/N 1005 through 1600.
- (2) *Group 2:* Model SR22 Airplanes, S/N 0002 through 1739.
- (3) *Group 3:* Model SR20 Airplanes, S/N 1005 through 1592.
- (4) *Group 4:* Model SR22 Airplanes, S/N 0002 through 1727.

### Unsafe Condition

(d) This AD results from several reports of airplanes that experienced brake fires and two airplanes that lost directional control. The actions specified in this AD are intended to detect, correct, and prevent overheating damage to the brake caliper piston O-ring seals, which could result in leakage of brake hydraulic fluid. Consequently, this could lead to the loss of braking with loss of airplane directional control or brake fire.

### Compliance

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

TABLE 1.—ACTIONS/COMPLIANCE/PROCEDURES

Actions	Compliance	Procedures
(1) <i>For Group 1 and Group 2 Airplanes:</i> Check the maintenance records to determine whether the brake caliper piston O-ring seals were replaced at the last annual or 100-hour inspection.	Within 50 hours time-in-service (TIS) after the effective date of this AD, unless already done.	No special procedures necessary to check the maintenance records. 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 make this check. You must make an entry into the airplane records that shows compliance with this portion of the AD in accordance with section 43.9 of the Federal Aviation Regulations (14 CFR 43.9).
(2) <i>For Group 1 and Group 2 Airplanes:</i> If you find as a result of the check required by paragraph (e)(1) of this AD that there is no record of the replacement of brake caliper piston O-ring seals at the last annual or 100-hour inspection, then do the following:	Before further flight after the check required by paragraph (e)(1) of this AD.	For the replacement, brake maintenance procedures are included in Section 32–42 of the SR20 or SR22 Aircraft Maintenance Manual. For the replacement of old brake calipers with new brake calipers, follow Cirrus Design Corporation Service Bulletin SB 2X–32–13, Issued: December 15, 2005.
(i) Replace the O-ring seals with new O-ring seals; or		
(ii) Replace old brake calipers with new brake calipers.		
(3) <i>For Group 3 and Group 4 Airplanes:</i>		
(i) Modify the main landing gear (MLG) wheel fairings to add temperature indicator sticker inspection holes and trim the wheel fairings to prevent them from holding fluids; and	Do the modification within 50 hours TIS after the effective date of this AD, unless already done. Do the temperature indicator sticker installation within 50 hours TIS after the effective date of this AD, unless already done, and thereafter before further flight anytime you have the o-ring seals replaced due to overheating of the brake assembly (temperature indicator sticker turned black).	Follow Cirrus Design Corporation Service Bulletin SB 2X–32–14 R1, Issued: January 18, 2006, Revised: February 17, 2006.
(ii) Install a temperature indicator sticker on the brake calipers.		
(4) <i>For all airplanes:</i> Insert the appropriate Revision A6 part number (P/N) into the Pilot's Operating Handbook (POH), as presented in TABLE 2.—REVISION A6 TO THE PILOT'S OPERATING HANDBOOK, in paragraph (f) of this AD..	Within 50 hours TIS after the effective date of this AD, unless already done.	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 insert the information into the POH as specified in paragraph (e)(4) of this AD. Make an entry into the airplane maintenance records showing compliance with this portion of the AD in accordance with section 43.9 of the Federal Aviation Regulations (14 CFR 43.9).
(5) <i>For Group 3 and Group 4 Airplanes:</i>		
(i) Do not install any MLG fairings without also doing the modifications required by paragraph (e)(3)(i) of this AD; and	As of the effective date of this AD .....	Follow Cirrus Design Corporation Service Bulletin SB 2X–32–14 R1, Issued: January 18, 2006, Revised: February 17, 2006.
(ii) Do not replace any brake calipers without also installing the temperature indicator sticker required by paragraph (e)(3)(ii) of this AD.		

(f) The following table specifies the POH Revision A6 part number as required in paragraph (e)(4) of this AD:

TABLE 2.—REVISION A6 TO THE PILOT'S OPERATING HANDBOOK

Affected airplanes	Model SR20 or SR22 airplane POH P/N	Date FAA-approved
(1) Model SR20, S/N 1148 through 1267 .....	11934–002	January 18, 2006.
(2) Model SR20, S/N 1005 through 1147 that have the 3,000-pound gross weight modification following Cirrus Design Corporation Service Bulletin SB 20–01–00, Issued: February 25, 2003.	11934–002	January 18, 2006.
(3) SR20, S/N 1268 through 1739 .....	11934–003	January 18, 2006.
(4) SR22, S/N 002 through 1739 .....	13772–001	January 18, 2006.

#### Alternative Methods of Compliance (AMOCs)

(g) The Manager, Chicago Aircraft Certification Office (ACO), ATTN: Wess Rouse, Aerospace Engineer, FAA, ACE–117C,

Chicago ACO, 2300 East Devon Avenue, Room 107, Des Plaines, Illinois 60018; telephone: (847) 294–8113; facsimile: (847) 294–7834, has the authority to approve alternative methods of compliance for this

AD, if requested using the procedures found in 14 CFR 39.19.

**Related Information**

(h) To get copies of the documents referenced 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, or on the Internet at <http://dms.dot.gov>. The docket number is Docket No. FAA-2006-24010; Directorate Identifier 2006-CE-14-AD.

Issued in Kansas City, Missouri, on May 1, 2006.

**Steven W. Thompson,**

*Acting Manager, Small Airplane Directorate, Aircraft Certification Service.*

[FR Doc. E6-6905 Filed 5-5-06; 8:45 am]

**BILLING CODE 4910-13-P**

**DEPARTMENT OF TRANSPORTATION****Federal Highway Administration****23 CFR Part 655**

[FHWA Docket No. FHWA-2003-15149]

RIN 2125-AE98

**National Standards for Traffic Control Devices; the Manual on Uniform Traffic Control Devices for Streets and Highways; Maintaining Traffic Sign Retroreflectivity**

**AGENCY:** Federal Highway Administration (FHWA), (DOT).

**ACTION:** Supplemental notice of proposed amendments (SNPA); request for comments.

**SUMMARY:** In an earlier notice of proposed amendments (NPA), the FHWA proposed to amend the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) to include methods to maintain traffic sign retroreflectivity. Based on the review and analysis of the numerous comments received in response to the NPA, the FHWA has decided to substantially revise the proposed amendments to the MUTCD and, as a result, is issuing this SNPA. With this SNPA, the FHWA proposes to amend the MUTCD to include a standard for minimum maintained levels of traffic sign retroreflectivity and methods to maintain traffic sign retroreflectivity at or above these levels.

**DATES:** Comments must be received on or before November 6, 2006.

**ADDRESSES:** Mail or hand deliver comments to the U.S. Department of Transportation, Dockets Management Facility, Room PL-401, 400 Seventh

Street, SW., Washington, DC 20590, or submit electronically at <http://dms.dot.gov> or fax comments to (202) 493-2251. Alternatively, comments may be submitted via the Federal eRulemaking Portal at <http://www.regulations.gov>. All comments should include the docket number that appears in the heading of this document. All comments received will be available for examination and copying at the above address from 9 a.m. to 5 p.m., e.t., Monday through Friday, except Federal holidays. Those desiring notification of receipt of comments must include a self-addressed, stamped postcard or may print the acknowledgment page that appears after submitting comments electronically. Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). Persons making comments may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70, Pages 19477-78) or may visit <http://dms.dot.gov>.

**FOR FURTHER INFORMATION CONTACT:** Ms. Debra Chappell, Office of Safety Design (202) 366-0087, or Raymond Cuprill, Office of the Chief Counsel (202) 366-0791, Federal Highway Administration, 400 Seventh Street, SW., Washington, DC 20590-0001. Office hours are from 7:45 a.m. to 4:15 p.m., e.t., Monday through Friday, except Federal holidays.

**SUPPLEMENTARY INFORMATION:****Electronic Access and Filing**

Interested parties may submit or retrieve comments online through the Document Management System (DMS) at <http://dms.dot.gov>. The DMS is available 24 hours each day, 365 days each year. Electronic submission, retrieval help, and guidelines are available under the help section of the Web site.

An electronic copy of this document may be downloaded using the Office of the Federal Register's home page at <http://www.archives.gov> and the Government Printing Office's Web page at <http://www.access.gpo.gov/nara>.

**Background**

On July 30, 2004, at 69 FR 45623, the FHWA published in the **Federal Register** an NPA to amend the MUTCD to include methods to maintain traffic sign retroreflectivity.<sup>1 2</sup> This NPA was

<sup>1</sup> The NPA published on July 30, 2004, at 69 FR 45623, describes the research and development and

in response to a Congressional directive in the Department of Transportation and Related Agencies Appropriations Act, 1993 (Pub. L. 102-388; October 6, 1992). Section 406 of this Act directed the Secretary of Transportation to revise the MUTCD to include a standard for minimum levels of retroreflectivity that must be maintained for traffic signs and pavement markings, which apply to all roads open to public travel. The FHWA is currently conducting research to develop a standard for minimum levels of pavement marking retroreflectivity. However, a NPA regarding minimum pavement marking retroreflectivity is not expected to be issued until the rulemaking for minimum traffic sign retroreflectivity is finalized.

The comment period for the NPA initially expired on October 28, 2004, but was extended to February 1, 2005 (69 FR 62007). As of June 1, 2005, the FHWA received 85 letters submitted to the docket containing 350 individual comments on the NPA. The FHWA received comments from the National Committee on Uniform Traffic Control Devices (NCUTCD), the American Association of State Highway and Transportation Officials (AASHTO), State Departments of Transportation (State DOTs), city and county governmental agencies, consulting firms, private industry, associations, other organizations, and individual private citizens. The FHWA has reviewed and analyzed the comments that were received as of June 1, 2005. Docket comments and summaries of the FHWA's analyses and determinations are discussed below. After considering and analyzing the comments, the FHWA has decided to issue this SNPA. The proposed changes would be designated as Revision No. 2 to the 2003 Edition of the MUTCD.<sup>3</sup>

The MUTCD is incorporated by reference in 23 CFR 655.601. It is available for inspection and copying as prescribed in 49 CFR part 7 and on the FHWA's Web site at <http://mutcd.fhwa.dot.gov>. Requirements for nighttime sign visibility have been included in every version of the

other efforts by the FHWA to implement this requirement. More information is available at the following Web address: <http://www.fhwa.dot.gov/retro>.

<sup>2</sup> The definition and measurement of retroreflectivity are described in the International Commission on Illumination's report, "Retroreflection: Definition and Measurement" CIE Publication 54.2-2001, CIE Central Bureau, Vienna, Austria. The document is available at the following Web address: <http://www.cie.co.at/framepublications.html>.

<sup>3</sup> The proposed changes to the MUTCD are available for review at the following Web address: [http://tcd.tamu.edu/Documents/MinRetro/2005-08-02\\_PROPOSED\\_Rev2.pdf](http://tcd.tamu.edu/Documents/MinRetro/2005-08-02_PROPOSED_Rev2.pdf).