
AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Cirrus Design SR20 and SR22 Series Aeroplanes**AD/CIRRUS/6****Brake Caliper Piston O-Ring Seals****13/2006**

Applicability: Cirrus Design Corporation Model SR20 and SR 22 aeroplanes in the following groups:

Group 1: Model SR20 Aeroplanes, S/N 1005 through 1600.

Group 2: Model SR22 Aeroplanes, S/N 0002 through 1739.

Group 3: Model SR20 Aeroplanes, S/N 1005 through 1592.

Group 4: Model SR22 Aeroplanes, S/N 0002 through 1727.

Requirement: 1. For Group 1 and Group 2 aeroplanes:

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

2. For Group 1 and Group 2 aeroplanes:

As a result of the check required by Requirement 1 of this AD, if it is found 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:

- a. Replace the O-ring seals with new O-ring seals; or
- b. Replace old brake calipers with new brake callipers in accordance with Cirrus Design Corporation Service Bulletin SB 2X-32-13R1 dated 16 May 2006 or later FAA approved revision.

3. For Group 3 and Group 4 aeroplanes:

- a. 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
- b. Install a temperature indicator sticker on the brake calipers.
- c. Do not install any MLG fairings without also doing the modifications required by Requirement 3a of this AD; and

Cirrus Design SR20 and SR22 Series Aeroplanes

AD/CIRRUS/6 (continued)

- d. Do not replace any brake calipers without also installing the temperature indicator sticker required by Requirement 3b of this AD.

Follow Cirrus Design Corporation Service Bulletin SB 2X-32-14R1 dated 17 February 2006 or later FAA approved revision.

4. For all aeroplanes:

Insert the appropriate Revision A6 part number (P/N) into the Pilot's Operating Handbook (POH), as presented in Table 1 of this AD.

Table 1

Affected aeroplanes	Model SR20 or SR22 aeroplane POH P/N	Date FAA-approved
(1) Model SR20, S/N 1148 through 1267	11934-002	18 January 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: 25 February 2003.	11934-002	18 January 2006.
(3) SR20, S/N 1268 through 1739	11934-003	18 January 2006.
(4) SR22, S/N 002 through 1739	13772-001	18 January 2006.

Note: FAA AD 2006-21-03 Amdt 39-14787 refers.

- Compliance:
1. Within 50 hours time-in-service (TIS) after the effective date of this AD, unless already done.
 2. Before further flight after the check required by requirement 1 of this AD.
 3.
 - a. Within 50 hours TIS after the effective date of this AD, unless already done.
 - b. Within 50 hours TIS after the effective date of this AD, unless already done, and thereafter before further flight anytime the O-ring seals are replaced due to overheating of the brake assembly (temperature indicator sticker turned black).
 - c. From the effective date of this AD.
 - d. From the effective date of this AD.
 4. Within 50 hours TIS after the effective date of this AD, unless already done.

Cirrus Design SR20 and SR22 Series Aeroplanes

AD/CIRRUS/6 (continued)

This Airworthiness Directive becomes effective on 21 December 2006.

Background: This AD results from several reports of aeroplanes that experienced brake fires and two aeroplanes 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 aeroplane directional control or brake fire.



James Coyne
Delegate of the Civil Aviation Safety Authority

25 October 2006