

Kelly Aerospace  
Willoughby, OH  
NC-14-023, Rev. A

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**AIR CONDITIONING SYSTEM  
CIRRUS SR20, SR22 & SR22T**

**LOG OF REVISIONS**

**FAA APPROVED  
AIRPLANE FLIGHT MANUAL SUPPLEMENT  
FOR  
CIRRUS DESIGN CORPORATION SR20, SR22 & SR22T  
AIR CONDITIONING SYSTEM**

Aircraft SN: \_\_\_\_\_

Aircraft Registration Number: \_\_\_\_\_

This supplement must be attached to the FAA approved flight manual when the Kelly Aerospace Air Conditioning system is installed in accordance with STC SA04037CH. The information contained in this document supplements or supersedes the basic manual only in those areas listed. For limitations, procedures, performance, and loading information not contained in this supplement, consult the basic FAA Airplane Flight Manual.

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FAA-Approved

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SECTION 1  
GENERAL

This supplement supplies information necessary for the operation of the airplane when the optional Air Conditioning System is installed in accordance with FAA Approved Data, either STC or Original Equipment.

SECTION 2  
LIMITATIONS

After the Air Conditioning System is installed, the "DISTRIBUTED FLOOR LIMIT" of the baggage compartment must be reduced from 130 Lbs. to 110 Lbs. The following placard is to be installed in place of the existing placard on the baggage compartment door.

DISTRIBUTED FLOOR LIMIT 110 LBS.

BAGGAGE STRAP CAPACITY IS 35 LBS. EACH MAXIMUM

SEE AIRPLANE FLIGHT MANUAL FOR BAGGAGE TIE-DOWN  
AND WEIGHT AND BALANCE INFORMATION

AC0114

SECTION 3  
EMERGENCY PROCEDURES

In the Event of an Alternator or other Electrical Failure:

- 1) Turn Air Conditioner off by pulling 60 Amp circuit breaker Labeled AIR COND MAIN.
- 2) Inspect and perform required maintenance after the flight.

SECTION 4  
NORMAL PROCEDURES



CB-2 Climate Controller

AIR CONDITIONING SYSTEM NORMAL CHECKLIST CB-2 CONTROLLER

**Prior to Engine Start**

- 1) Ensure Air Conditioning is OFF by verifying that there is nothing displayed on the CB-2 climate controller LCD screen.
- 2) Follow normal procedures for engine start-up.

**Air Conditioning AC Mode**

- 1) Press the lower right button on the CB-2 Climate Controller, the display will first show the logo and software version; then it will show temperature set point, fan speed bar graph, and mode display.
- 2) Press the bottom left button and toggle between modes with the middle right button.
- 3) After selecting AC mode, either press the bottom right button to enter or wait 3 seconds and the display will return to the main screen. The snowflake symbol in the bottom center of the display will indicate Air Conditioning mode.

**Air Conditioning Fan Only Mode**

- 1) Press the bottom left button and toggle between modes with the middle right button.
- 2) After selecting fan mode, either press the bottom right button to enter or wait 3 seconds and the display will return to the main screen.

**To Control Fan Speed**

- 1) Press the middle left button to bring up the fan speed screen.
- 2) Toggle the fan speed up or down using the middle and upper right buttons. Speed Range is 1 to 3.
- 3) After selecting desired fan speed press the bottom right button to enter or wait 3 seconds and the display will return to the main screen. The fan speed bar graph on the right side of the screen will show selected fan speed. Fan speed can be controlled in both AC and Fan Only modes.

**Changing Temperature Set Point**

- 1) Press the top or middle right buttons to adjust the temperature set point up or down.
- 2) The set point temperature will be displayed with an SP indication. The CB-2 display will default to the temperature set point.

**To display cabin temperature**

- 1) Press and release the bottom right button, the cabin temperature will be displayed with a TEMP indication. After a few seconds the temperature set point will be displayed again.

**To turn air conditioning system off**

- 1) Press and hold lower right button.



CB-1 Climate Controller

AIR CONDITIONING SYSTEM NORMAL CHECKLIST CB-1 CONTROLLER

**Prior to Engine Start**

- 1) Ensure Air Conditioning is OFF by verifying that there is no temperature displayed on the CB-1 climate controller.
- 2) Follow normal procedures for engine start-up.

**Air Conditioning AC Mode**

- 1) Press the upper left button on the CB-1 Climate Controller, the display will first show fan speed, then will show temperature set point.
- 2) Press the Upper or Lower right button to adjust temperature set point low enough to cause AC to run.

**Air Conditioning Fan Only Mode**

- 1) Press the upper or lower right button to adjust temperature set point high enough to cause AC to shut off.

**To Control Fan Speed**

- 1) Use the left hand selector arrows on the CB-1 Climate Controller to increase or decrease fan speed.

- 2) Speed Range is 1 to 3.

**To Display Cabin Temperature**

- 1) Press and release the upper left button, the cabin temperature will be displayed with a dot in the lower right hand corner indicating that cabin temperature is being displayed. After a few seconds the temperature set point will be displayed again.

**To Turn Air Conditioning System Off**

- 1) Press and hold upper left button.

**SECTION 5  
PERFORMANCE**

No changes.

**SECTION 6  
LOADING INFORMATION**

The addition of the Air Conditioning System has been accounted for/included in the aircraft's basic empty weight and center of gravity. The Standard Aircraft Loading and CG envelope remain unchanged. Proper weight and balance calculations must be performed prior to flight to insure aircraft is properly loaded and within operating limitations.

**SECTION 7  
DESCRIPTION AND OPERATION OF THE  
AIR CONDITIONING SYSTEM**

**Description**

The Air Conditioning system ducts cool dry air through an evaporator mounted in the aft baggage area. The condenser and compressor for the system are mounted in the tail cone. A climate controller is located on the co-pilots side of the instrument panel or in the center console. The climate controller is used to set fan speed and desired air temperature. Power is supplied to the system through an auxiliary bus off the primary alternator mounted on the right side of the engine.

The electrical wiring for the air conditioning system is protected by 4 circuit breakers. A 60 amp circuit breaker labeled AIR COND MAIN is located in or near the main circuit breaker panel next to the pilot; this circuit breaker will disable the entire system. A 3 amp circuit breaker labeled AIR COND is located in the main circuit breaker panel next to the pilot; this circuit breaker controls power to the climate controller and will also disable the entire system. A 7.5 amp circuit breaker and a 10 amp circuit breaker are located in the rear of the aircraft and are not resettable in flight. These circuit breakers control the evaporator and condenser fans.

**Operation**

The Air Conditioning system should be turned off during engine startup. The system can then be turned on when the aircraft is brought up to idle. Operating the AC system with the engine at idle for extended periods of time may cause buss voltage to drop below 24 VDC. Maintain appropriate engine RPM to avoid prolonged discharge of battery while air conditioning is in use. The system is turned on when the master switch is in the on position and the upper left on/off switch is activated on the CB1 climate controller or the lower right switch is activated on the CB2 climate controller. Desired cabin temperature is set in the climate controller.