

**AIRPLANE FLIGHT MANUAL SUPPLEMENT**

**FOR**

**SOCATA TB 20**

**S/N: \_\_\_\_\_**

**REG: .**

**WITH**

**KEITH PRODUCTS, INC. AIR CONDITIONING SYSTEM**

This supplement shall be attached to the applicable FAA approved flight manual when a Keith Products refrigerant R134a air conditioning system is installed in accordance with STC SA 08991AC.

The information contained herein supplements the basic manual only in those areas listed herein. For limitations, procedures, performance, and weight and balance information not contained in this supplement, consult the basic flight manual.

APPROVED BY:

*for*



MS. MICHELE OWSLEY  
Manager, Airplane Certification Office  
Federal Aviation Administration  
Fort Worth, Texas 76193-0150

FAA APPROVED: DEC 23 1994

REVISION: ORIG

LOG OF REVISIONS

Original

<u>Page</u>	<u>Revision No.</u>	<u>Description</u>
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REVISION: ORIG

FAA APPROVED  
AIRPLANE FLIGHT MANUAL SUPPLEMENT  
TO  
SOCATA TB 20SECTION 1

## GENERAL

**GENERAL**

This supplement contains 6 sections, and includes the material required by FAR Part 23 to be furnished to the pilot for operation of the Keith Products, Inc. vapor cycle air conditioning system as installed in the Socata Model TB 20 airplane.

This section provides information of general interest on the air conditioning system and provides basic airplane data that has been changed because of the air conditioning system installation.

**DESCRIPTIVE DATA**

The air conditioning system is electrically powered and consists of the following components:

- An engine driven compressor.
- A condenser assembly mounted in the baggage compartment area.
- An evaporator assembly mounted in the baggage compartment area

**MAXIMUM CERTIFIED WEIGHTS**

Weight in Baggage Compartment: 88 lbs (39.9 Kg)

**BAGGAGE SPACE AND ENTRY DIMENSIONS**

Minimum Compartment Width: 2.16 ft (0.66m)  
Minimum Compartment Length: 1.66 ft (0.51 m)

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## SECTION 2

## LIMITATIONS

### GENERAL

This section of the Airplane Flight Manual Supplement presents operating limitations and basic placards that have changed, or have been added, as a result of the installation of the Keith Products, Inc. air conditioning system on the Socata TB 20 airplane.

### WEIGHT LIMITS

Maximum Weight in Baggage Compartment: 88 lbs (39.9 Kg)

### PLACARDS

(1) On Baggage Door

39.9 KG _ 88 LBS
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### SECTION 3

### EMERGENCY PROCEDURES

#### GENERAL

This section provides the pilot with emergency procedures that have been revised or added as a result of the installation of the Keith Products, Inc air conditioning system on the Socata TB 20 airplane.

#### ENGINE FAILURES

##### Engine Failure Immediately After Take-off

Air Conditioning OFF

##### Engine Failure In Flight

Air Conditioning

#### FIRES

##### Engine Fire In Flight

Air Conditioning OFF

##### Electrical Fire In Flight

Air Conditioning

##### Cabin Fire

Air Conditioning

#### ICING

Air Conditioning

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**AIR CONDITIONING**

In the event of an air conditioning/fan system failure or malfunction, the system should be de-activated as follows:

- 1) AIR CONDITION selector switch      OFF

**NOTE:**

The compressor, condenser and evaporator motor(s) may be de-activated by pulling the "AIR COND" circuit breaker. When air conditioning mode is de-activated, check that the blue advisory annunciation light is not illuminated.

**SECTION 4****NORMAL PROCEDURES****GENERAL**

This section provides procedures for normal operation of the Keith Products, Inc air conditioning system as installed on the Socata TB 20 airplane.

**AIR CONDITIONING**

Air conditioning may be operated with the engine operating and the aircraft electrical system is providing 28 vDC to the main buss. To operate the system proceed as follows:

- 1) Turn ON air conditioning with switch located on right side of instrument panel.
- 2) For maximum cooling, select fan switch to high and close door.
- 3) Turn OFF air conditioning with switch.

**NOTE:**

The air conditioning system is inhibited during the following conditions. Inhibit logic is controlled by the landing gear full retract switch and the full throttle position switch:

- 1) Take-off; aircraft on the ground, landing gear fully extended, full throttle.
- 2) Initial climb; aircraft in flight, landing gear fully extended, full throttle.
- 3) Missed Approach; aircraft in flight, landing gear fully extended, full throttle.

Once the air conditioning system is inhibited, it must be reset by cycling the air conditioning switch to OFF and then back to ON.



SOCATA  
MODEL TB 20

SECTION 5

PERFORMANCE

The installation and operation of the Keith Products, Inc. air conditioning system does not change the performance of the TB 20 airplane.

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REVISION: ORIG

Page 8 of 9



SECTION 6

## WEIGHT AND BALANCE

**GENERAL**

For the weight and balance of the Keith Products, Inc air conditioning system on this aircraft, see the Aircraft Weight and Balance Data, located in the Airplane Flight Manual. It includes the air conditioning system and new empty weight, CG and moment.

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REVISION: ORIG

Page 9 of 9