Book

United States of America

Department of Transportation—Federal Aviation Administration

Supplemental Type Certificate

Number SA00015SE

This certificate, issued to **Aeronautical Testing Service, Inc.**
18820 59th Drive NE
Arlington, WA 98223

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 3 *of the* Civil Air *Regulations.*

Original Product—Type Certificate Number: A7CE

Make: Cessna

Model: 421C

Description of the Type Design Change: Installation of vortex generators mounted on the wings and vertical tail in accordance with an FAA approved copy of Aeronautical Testing Service Drawing List No. ATS-421C, Revision "A", and Installation Manual No. IM92-6, Revision "A", each dated May 2, 1994, or later FAA approved Revision.

NOTE: Two modification options are provided. Option 2 includes changes to the airplane stall and minimum control speeds and gross weight. For specific information regarding each option, including Airplane Flight Manual Supplement (AFMS) requirements, please refer to Continuation Sheet (page 3 of 4).

Limitations and Conditions: Approval of this change in type design applies to the above model aircraft only. This approval should not be extended to other aircraft of this model on which other previously approved modifications are incorporated unless it is determined by the installer that the relationship between this change and any of those other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of that aircraft. A copy of this Certificate must be maintained as part of the permanent records for the modified aircraft. **(See Continuation Sheet, Page 3)**

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: September 26, 1992

Date of issuance: August 26, 1993

Date reissued:

Date amended: August 13, 1997

By direction of the Administrator

(Signature)

Acting Manager, Seattle Aircraft Certification Office

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding $1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.

FAA FORM 8110-2(10-68)

Supplemental Type Certificate
(Continuation Sheet)

Number **SA00015SE**

Description of Type Design Change: (cont'd)

Description of Modification Options: Each of these options incorporate the vortex generator kit.

Option 1: No change in airspeeds, airspeed indicator markings or placards, or airplane gross weight; AFMS not required.

Option 2: Reduced V_{mca} and stall speeds, changes required for airspeed indicator markings and placards, and increased airplane gross weight; AFMS required.

Limitations and Conditions: (cont'd)

Limitations: The following aircraft limitations apply to the various options:

Option 1: No change

Option 2: Reduced V_{mca} and stall speeds; increased gross weight.

Weight Limits:

Maximum Ramp Weight 7630 lb.
Maximum Takeoff Weight 7579 lb.
Maximum Landing Weight 7200 lb.

C.G. Range (landing gear extended)

(+153.11) to (+157.95) at 7579 lb.
(+147.14) to (+157.95) at 6100 lb.
Straight line variation between points given.
Landing gear retraction moment change
+917 in-lbs. (S/N 421C0001 through 421C0800)
+1318 in-lbs. (S/N 421C0801 and up)

Airplane Flight Manual Supplement (AFMS): Aircraft modified per this STC must be operated in accordance with the following Aeronautical Testing Service, Inc. (ATS) AFMS, or later FAA approved revisions:

Option 1: AFMS not required.

Option 2: ATS AFMS Report No. ATS 93-02a, dated August 26, 1993.

Any alteration of this certificate is punishable by a fine of not exceeding $1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.

FAA FORM 8110-2(10-68)

Supplemental Type Certificate
(Continuation Sheet)

Number **SA00015SE**

Limitations and Conditions: (cont'd)

Records: The following must be maintained as part of the permanent records for the modified aircraft:

Option 1: A copy of this Certificate.

Option 2: A copy of this Certificate and the FAA approved AFMS.

Other Limitations: All Options:

The ATS modification consists of one hundred and four (104) vortex generators mounted on the wings and vertical tail. If more than four vortex generators are missing or damaged, the aircraft must be flown in accordance with the original markings, placards and manual. If more than six vortex generators are missing or damaged, the aircraft is not airworthy and must be repaired before flight.

Refer to the AFMS for specified Operating Limits placard language and airspeed indicator markings for Option 2.

If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

- END -

Any alteration of this certificate is punishable by a fine of not exceeding $1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.