Book

Department of Transportation—Federal Aviation Administration

Supplemental Type Certificate

Number SA00074SE

This certificate, issued to **Aeronautical Testing Service**
P.O. Box 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: 421B

Description of the Type Design Change: Installation of vortex generator system on the wing and vertical stabilizer of these aircraft, in accordance with an FAA approved copy of Aeronautical Testing Service Drawing List No. ATS-421B, dated March 30, 1994, or later FAA approved revision, and Installation Manual No. IM93-2, dated November 22, 1993, or later FAA approved revision.

NOTE: Several modification options are provided. These may include changes to the airplane stall speed, minimum control speed, increased rudder deflection angle, and maximum gross weight. For specific information regarding each option, including Supplemental Airplane Flight Manual (SAFM) requirements, please refer to Continuation Sheet (page 3 and 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 these models 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 pages 3 and 4).

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.

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: August 11, 1993 *Date reissued:*
Date of issuance: April 7, 1997 *Date amended:* March 26, 1998

FEDERAL AVIATION ADMINISTRATION

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)

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Description of the Type Design Change (continued):

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

Option 1: S/N's 421B0001 and up; no change in airspeeds, airspeed indicator markings or placards; SAFM not required.

Option 2: S/N's 421B0201 and up; reduced V_{MAC} and stall speeds; increased gross weight, increased rudder travel (S/N 421B0201 through 421B0800), changes required for airspeed indicator markings and placards; SAFM required.

Limitations and Conditions (continued):

The following aircraft limitations apply to the various options:

Option 1: No change.

Option 2: S/N's 421B0201 and up:

Weight Limits:

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

C.G. Range (landing gear extended - retract moment change + 889 in. lbs.)

Golden Eagle

(+153.13) to (+156.44) at 7579 lbs.
---------- (+156.7) at 7050 lbs., or less
(+147.1) ---------- at 6100 lbs., or less
straight line variation between points given

Executive Commuter

(+153.13) to (+157.74) at 7579 lbs.
---------- (+158.0) at 7050 lbs., or less
(+147.1) ---------- at 6100 lbs., or less
straight line variation between points given

Control Surface Movements (S/N's 421B0201 through 421B0800)

Rudder Right 32°, + 1°, -0°
Left 32°, + 1°, -0°

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Limitations and Conditions (continued):

Supplemental Airplane Flight Manual (SAFM): Aircraft modified per this STC must be operated in accordance with the following Aeronautical Testing Service, Inc. SAFM's or later FAA revision.

Option 1: SAFM not required.

Option 2: ATS SAFM Report Nos. ATS 93-15a (S/N's 421B0201 through 421B0500), or ATS 93-15b (S/N's 421B0501 and up), each dated April 7, 1994; or ATS 93-15c (all S/N's), dated March 26, 1998.

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 appropriate FAA approved SAFM.

Other Limitation: All Options:

The ATS modification consists of one hundred (100) 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 appropriate SAFM for specified Operating Limits, placard language, and airspeed indicator markings for Option 2.

- END -

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