United States of America

Department of Transportation—Federal Aviation Administration

Supplemental Type Certificate

Number **SA5672NM**

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: 414A

Description of the Type Design Change: Installation of vortex generators on the wings and vertical tail and strakes on either side of each engine nacelle, together with a 5% increase in maximum take-off weight, in accordance with Aeronautical Testing Service (ATS) Installation Instructions Document No. IM91-3, Revision "A", dated June 18, 1992, or later FAA approved revision.

NOTE: Five (5) modification options are provided. These may include changes to the airplane stall speeds, zero fuel weight, maximum take-off weight, etc. For specific information regarding each option, including Airplane Flight Manual Supplements (AFMS) information, please refer to Continuation Sheet (page 3 of 4)

Limitations and Conditions: Approval of this change in type design applies to Cessna Model 414A 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 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. (See Continuation Sheet pages 3 and 4).

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: November 20, 1991
Date of issuance: February 4, 1992

Date reissued:
Date amended: November 4, 1992; January 12, 1995
March 14, 1995; November 9, 1995

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.

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(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: No change in airspeeds; no changes to certificated weights; AFMS not required.

Option 2: Reduced V_{MCA} and stall speeds; 5% increase in takeoff weight; elimination of zero fuel weight restriction; AFMS required.

Option 3: For airplanes incorporating STC SA4546SW (325 HP engines); reduced V_{MCA} and stall speeds, 5% increase in takeoff weight; elimination of zero fuel weight restriction; AFMS required.

Option 4: Reduced V_{MCA} and stall speeds; 5% increase in takeoff weight; no change to zero fuel weight restriction; AFMS required.

Option 5: For airplanes incorporating STC SA4546SW (325 HP engines): reduced V_{MCA} and stall speeds, 5% increase in takeoff weight; no change to zero fuel weight restriction; AFMS required.

Option 6: For airplanes incorporating STC SA892NM (Fowler flaps); reduced V_{MCA} and stall speeds, 5% increase in takeoff weight; elimination of zero fuel weight restrictions; AFMS required.

Option 7: For airplanes incorporating STC SA892NM (Fowler flaps): reduced V_{MCA} and stall speeds, 5% increase in takeoff weight; no change to zero fuel weight restrictions; AFMS required.

Limitations and Conditions continued:

Airplane Flight Manual Supplements (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, dated November 4, 1992.

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Limitations and Conditions continued:

Option 3: ATS AFMS, dated November 4, 1992.

Option 4: ATS AFMS No. ATS 91-09d, dated January 12, 1995.

Option 5: ATS AFMS No. ATS 91-09e, dated January 12, 1995.

Options 6 and 7: ATS AFMS No. ATS 91-09F dated November 9, 1995, that is appropriate to 414A airplanes modified by STC SA892NM.

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

Option 1: A copy of this Certificate

Options 2, 3, 4, 5, 6, and 7: A copy of this Certificate and the appropriate FAA approved AFMS.

Other Limitations: All Options.

The ATS modification consists of 118 vortex generators mounted on the wings and vertical tail and a strake mounted on either side of each engine nacelle. If more than four (4) vortex generators are missing or damaged, the aircraft must be flown in accordance with the original markings, placards, and manual. If more than six (6) vortex generators are missing or damaged, or if any strake is missing or damaged, the aircraft is not airworthy and must be repaired before flight.

Refer to the appropriate AFMS for specified airspeed indicator markings for Options 2, 3, 4, 5, 6, and 7.

END

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