United States of America

Department of Transportation—Federal Aviation Administration

Supplemental Type Certificate

Number **SA00109SE**

This certificate, issued to **AERONAUTICAL TESTING SERVICE, INC.**

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 23 of the Federal Aviation Regulations.

Original Product—Type Certificate Number: A7SO

Make: Piper

Model: PA-34-200T, PA-34-220T

Description of Type Design Change: Installation of vortex generators on the wing and vertical stabilizer, and "split flaps," mounted on the lower trailing edge of the flaps, in accordance with an FAA approved copy of Aeronautical Testing Service, Inc. Drawing List No. ATS-SENECA, Revision "A", dated July 15, 1994, or later FAA approved revision.

NOTE: Several modification options are provided. These may include changes to the airplane stall speed, minimum control speed, maximum zero fuel weight, and flap and aileron control system rigging tolerances. For specific information regarding each option, including Airplane Flight Manual Supplement (AFMS), or Pilot's Operating Handbook Supplement (POHS) information regarding each option, 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 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. (See Continuation Sheet page 3 of 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: April 7, 1994

Date reissued:

Date of issuance: August 3, 1994

Date amended: August 12, 1994

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 Type Design Change: (continued)

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

Option 1: Both models; no change in air speeds, airspeed indicator makings or placards; AFMS/POHS not required.
Option 2: PA-34-200T (Seneca II); reduced V_{MCA} speed; changes required for airspeed indicator markings and placards; AFMS/POHS required.
Option 3: PA-34-220T (Seneca III and IV); reduced V_{MCA} and stall speeds; changes required for airspeed indicator markings and placards; POHS required.

Limitations and Conditions: (continued)

The following aircraft limitations apply to the various options:

Option 1: No change
Option 2: Reduced V_{MCA} speeds; increased zero fuel weight.

MAXIMUM ZERO FUEL WEIGHT

The new Zero Fuel Weight envelope is:

CG Position (inches)	Weight (lbs.)
94.60	4168
86.41 to 94.60	4000
82.00 to 94.60	3400

Straight line variation between the points above.

Option 3: Reduced V_{MCA} speeds and stall speeds.

Airplane Flight Manual Supplements (AFMS), or Pilot's Operating Handbook Supplements (POHS)
Aircraft modified per this STC must be operated in accordance with the following Aeronautical Testing Service, Inc. (ATS) AFMS/POHS, or later FAA approved revisions:

Option 1: AFMS/POHS not required.

Option 2: ATS AFMS Report No. 94-04a (PA-34-200T, S/N's 34-7570001 through 34-7670393) or POHS Report No. 94-04b (PA-34-200T, S/N's 34-7770001 through 34-8170092), each dated August 3, 1994.
Option 3: ATS POHS Report Nos. 94-04c (PA-34-220T, Seneca III) or 94-04d (PA-34-220T, Seneca IV), each dated August 3, 1994

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Limitations and Conditions: (continued)

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 and 3: A copy of this certificate and the appropriate FAA approved AFMS/POHS.

Other Limitations: All Options:

The ATS modification consists of fifty (50) vortex generators mounted on the wings and vertical fin, and a split flap mounted on the lower trailing edge of the flap. 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, the aircraft is not airworthy and must be repaired before flight.

Refer to the appropriate AFMS/POHS for specified Operating Limits placard language and airspeed indicator markings for Options 2 and 3.

-END-

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