United States of America

Department of Transportation—Federal Aviation Administration

Supplemental Type Certificate

Number **SA00165SE**

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 3 of the Civil Air Regulations.

Original Product—Type Certificate Number: See attached FAA Approved Model List (AML)

Make: No. SA00165SE for a list of the approved airplane

Model: models and applicable airworthiness regulations.

Description of the Type Design Change: Installation of 76 vortex generators and 2 small delta wings on the upper surface of the wings, in accordance with Aeronautical Testing Service (ATS) Drawing Lists No. ATS 180 & 185, Revision "B", dated November 29, 1994; or ATS-170A-207, dated April 19, 1995, or later FAA approved revisions.

NOTE: Two (2) modification options are provided. These may include changes to the airplane stall speeds. For specific information regarding each option, including Supplemental Pilot's Operating Handbook (SPOH) and Airplane Flight Manual Supplement (AFMS) information regarding each option, please refer to Continuation Sheet (page 3 of 3)

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 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 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 13, 1994

Date of issuance: January 12, 1995

Date reissued:

Date amended: June 21, 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.

FAA FORM 8110-2(10-68)

Supplemental Type Certificate

(Continuation Sheet)

Number SA00165SE

Description of Type Design Change (continued):

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

Option 1: 180J, 180K, and A185F; no change in air speeds, airspeed indicator markings, or placards; SPOH or AFMS not required.

Option 2: 180J, 180K, and A185F; reduced stall speeds; changes required for airspeed indicator markings; SPOH or AFMS required.

Limitations and Conditions continued:

Supplemental Pilot's Operating Handbook (SPOH) or Airplane Flight Manual Supplement (AFMS):

Aircraft modified per this STC must be operated in accordance with the following Aeronautical Testing Service, Inc. (ATS) SPOH or AFMS, each dated January 12, 1995, or later FAA approved revisions.

Option 1: SPOH or AFMS not required.

Option 2: ATS SPOH Report No. ATS-11a (180J, S/N 180-52285 through 180-52620, except 180-52490), ATS SPOH and AFMS Report No. ATS 94-11b (180J and 180K, S/N 180-52490, 180-52621 and on), ATS Report No. ATS 94-11c (A185F, S/N 185-02091 through 185-02838, except 185-02300), ATS Report No. ATS 94-11d (A185F, S/N 185-02300, 185-02839 through 185-03938), or ATS Report ATS 94-11e (A185F, S/N 185-03939 and on).

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

Option 1: A copy of this Certificate and FAA Approved Model List (AML) SA00165SE.

Option 2: A copy of this Certificate, AML No. SA00165SE, and the appropriate SPOH or AFMS.

Other Limitations: All Options.

The ATS modification consists of seventy-six (76) vortex generators and two (2) small delta wings mounted on the airplane's upper wing surface. If more than four (4) vortex generators are missing or damaged, the aircraft must be flown in accordance with the original markings, placards, and handbook/manual. If more than six (6) vortex generators or either delta wing are missing or damaged, the aircraft is not airworthy and must be repaired before flight.

Refer to the appropriate SPOH/AFMS for specified airspeed indicator markings for Option 2.

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

AERONAUTICAI ^STING SERVICE, INC.
FAA APPROVED MOI LIST (AML) NO. SA00165SE
FOR
SEVENTY-SIX VORTEX GENERATORS AND TWO SMALL DELTA WINGS ON AIRPLANES UPPER WING SURFACE

Original Issue: January 12, 1995

Item	AIRCRAFT	AIRCRAFT MODEL	ORIGINAL TYPE CERT. NO.	CERT. BASIS FOR ALTERATION	FAA SEALED DRAWING/ DRAWING LIST NO.	REVISION NO. AND DATE	FAA APPROVED INSTALLATION INSTRUCTIONS NO. & REV. DATE	AML AMENDMENT DATE
1	Cessna	18OJ, 180K	5A6	CAR 3, dated 11/01/49, as amended by 3-1 through 3/12. (See 5A6)	ATS-180 & 185; or ATS-170A-207	B N/C	IM 94-5, Rev. B	6/21/95
2	Cessna	A185F	3A24	CAR 3, dated 05/15/56, as amended by 3-1 through 3-5 (See 3A24)	ATS-180 & 185; or ATS-170A-207	B N/C	IM 94-5, Rev. B	6/21/95

FAA Approved: _____
Manager, Special Certification Branch, ANM-190S
Seattle Aircraft Certification Office

Revised: 6/21/95