

STC Book

United States of America
Department of Transportation — Federal Aviation Administration
Supplemental Type Certificate

Number SA420NW

This certificate, issued to RENTON AVIATION, 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, Dated May 15, 1956, As Amended by 3-1 Through 3-5.

Original Product — Type Certificate Number: 3A24
Make: Cessna
Model: A185E and A185F

Description of Type Design Change: Installation of Cessna Cargo Pack (Reference Drawing Number 0700067) and Pee Kay Ventral Fin with Pee Kay Seaplane Floats in accordance with Renton Aviation Drawing No. 1. This installation also includes the elevator down spring changed from 6.3 to 5.3 inches and repositioning of the take off trim setting to 2 inches aft of the normal trim setting.

Limitations and Conditions: Approval of this change in type design applies basically 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 that the interrelationship between this change and any of those other previously approved modifications 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: March 7, 1977
Date of issuance: March 17, 1977

Date issued:
Date amended:



By direction of the Administrator
Charles C. Schroeder
(Signature)

Chief, Engineering and Manufacturing Branch
(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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Limitation and Conditions (continued): This approval is intended for installation in the above models with Pee Kay Model 2950 and 3000 floats and McCauley three-bladed D3A32C90/82NC-2 propeller in accordance with STC SA445CE and SA985EA respectively. A copy of this Certificate and Addendum SA420NW shall be maintained as part of the permanent records for the modified aircraft.

SUPPLEMENTAL TYPE CERTIFICATE ADDENDUM NO. SA420NW

The conditions and limitations of the original specifications apply except as follows:

This Addendum, which is part of Supplemental Type Certificate No. SA420NW, prescribes conditions and limitations under which the STC was issued and meets the airworthiness requirements of Civil Air Regulations Part 3. A copy of this Addendum shall be maintained as part of the modified aircraft permanent records.

SUPPLEMENTAL TYPE CERTIFICATE HOLDER: Renton Aviation, Inc.

I. CESSNA A185E & A185F, 6 PCL (SEAPLANE NORMAL CATEGORY) AS MODIFIED BY STC SA420NW

Engine: Continental IO-420-D (Same as Data Sheet 3A24)

Fuel: Same as Data Sheet 3A24

Engine Limits: Takeoff (5 min) @ 2850 rpm (300 HP)
Maximum continuous power - 2700 rpm (285 HP)
Same as Data Sheet 3A24

Propeller and
Propeller Limits: McCauley Constant Speed Installation

a. Two Bladed Installation (Same as Data Sheet 3A24)

| | |
|---|-------------|
| McCauley D2A34C58 hub with 90AT blades | 52 lb (-40) |
| Diameter: Max - 86"; Min - 84.5" | |
| Pitch Settings at 36" Station: | |
| Low - 8°; High - 25° | |
| Garwin Hydraulic Governor 34-828-01 | 3 lb (-32) |
| Cessna Spinner 0752004 or 0752040 | 4 lb (-40) |
| Woodward Hydraulic Governor A210462 | 4 lb (-32) |
| McCauley Hydraulic Governor C290D2/T9 or C290D3/T9 | |

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- b. Three Bladed Installation (Per STC SA985EA)
McCauley D3A32C90 hub with 82NC-2 blades

Airspeed Limits:

Normal Category:

- a. A185E and A185F through S/N 18502838, never exceed 206 mph (179 knots) CAS
On A185F, S/N 18502839 and up, never exceed 209 mph (182 knots) IAS

Mark airspeed indicator at above limits as follows:

RED RADIAL LINE ON AIRSPEED INSTRUMENT AND WHITE SLIPPAGE MARK IF THE RADIAL LINE IS ON THE GLASS RATHER THAN ON THE DIAL.

- b. A185E and A185F through S/N 18502838:
MAXIMUM MANEUVERING SPEED 135 MPH (117 KTS) CAS
On A185F, S/N 18502839 and up:
MAXIMUM MANEUVERING SPEED 118 KTS (136 MPH) IAS

NOTE: A185E and A185F may use the landplane maneuvering specified on the Data Sheet No. 3A24.

C.G. Range:

On A185E and A185F (equipped with Pee Kay Model 2950 floats)
MAXIMUM ALLOWABLE GROSS WEIGHT 3336 LBS.
(+41.8) TO (+46.5) AT 3336 LBS.
(+34.8) TO (+46.5) AT 2150 LBS. OR LESS
STRAIGHT LINE VARIATION BETWEEN POINTS GIVEN

On A185E and A185F (equipped with Pee Kay Model 3000 floats)
MAXIMUM ALLOWABLE GROSS WEIGHT 3350 LBS.
(+41.9) TO (+46.5) AT 3350 LBS.
(+34.8) TO (+46.5) AT 2150 LBS. OR LESS
STRAIGHT LINE VARIATION BETWEEN POINTS GIVEN

Placards:

A placard must be installed on the instrument panel in full view of the pilot as follows:

GROSS WEIGHT IS LIMITED TO 3336 LBS WHEN FLOAT MODEL PEE KAY 2950 OR 3350 LBS WHEN FLOAT MODEL PEE KAY 3000 FLOATS ARE INSTALLED. PILOT IS RESPONSIBLE FOR PROPER LOADING. (SEE WEIGHT AND BALANCE DATA).

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SUPPLEMENTAL TYPE CERTIFICATE ADDENDUM NO. SA420NW (CONTINUED)

II. PERFORMANCE

The climb performance of the airplane equipped with a cargo pack is approximately 40 ft/in less than that shown in the Rate of Climb Chart (figure 5-5) for the standard float plane.

To obtain speed performance for the airplane equipped with the cargo pack, the speed differentials shown in the table below should be subtracted from the KTAS figures shown in the Cruise Performance charts for the standard floatplane.

SPEED DIFFERENTIAL TABLE

| <u>% BHP</u> | <u>SPEED DIFFERENTIAL (KTS)</u> |
|--------------|---------------------------------|
| 75 | -6 |
| 65 | -7 |
| 55 | -8 |
| 45 | -8 |

- END -

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