United States of America

Department of Transportation — Federal Aviation Administration

Supplemental Type Certificate

Number SA647CE

This certificate issued to Barbara or Bob Williams
Box 431, 213 N. Clark
Udall, KS 67146

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* effective November 1, 1949, as amended by 3-1 through 3-12.

Original Product—Type Certificate Number: 3A12
Make: Cessna
Model: 172I and 172K (landplanes and seaplanes)
Edo 89-2000 (floats only)
172L, M and N (landplanes) (12 volt only)

Description of Type Design Change:
Installation of Lycoming O-360-A1A 180 h.p. engine and constant speed propeller. Data Required: (1) Drawing List SA647CE dated August 26, 1974 or MASA Drawing List dated January 10, 1978, or later FAA approved revisions. (2) A copy of this certificate including continuation sheets.

Limitations and Conditions: The limitations and conditions of Aircraft Type Certificate Data Sheet 3A12 apply except as outlined on pages 2 through 5 of this STC. A copy of this STC and continuation sheets must be included in the permanent records of each airplane modified in accordance with this STC. This approval should not be extended to other specific airplanes 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 the airplane.

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: January 15, 1969
Date of issuance: March 19, 1969
Date issued: July 1, 1975; September 26, 1974; September 5, 1979
Date amended: April 30, 1976; January 10, 1978

FEDERAL AVIATION ADMINISTRATION

By direction of the Administrator
Lawrence A. Hanson
(Signature)
for BARRY D. CLEMENTS
Chief, Wichita Eng. & Mfg. District 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)

United States of America
Department of Transportation—Federal Aviation Administration

Supplemental Type Certificate

(Continuation Sheet)

Number SA647CE

I. Landplanes

Engine: Lycoming O-360-A1A

Fuel: 91/96 minimum grade aviation gasoline

Engine Limits: For all operations 2700 r.p.m. (180 h.p.)

Propeller and Propeller Limits:

(1) Propeller

(a) Hartzell HC-C2YK-1BF/F7666-2 or F7666A-2
Diameter: Not over 74 in., not under 72.5 in., no additional cut-off permitted
Pitch setting at 30 in. station
Low: 14° High: 29°

(b) Spinner: Hartzell 835-21P or 835-33

(c) Governor: Hartzell F-3-1 or F-3-1A

(2) Propeller

(a) Hartzell HC-C2YK-1B/7666-2 or 7666A-2
Diameter: Not over 74 in., not under 72.5 in., no additional cut-off permitted
Pitch setting at 30 in. station
Low: 14° High: 29°

(b) Spinner: Hartzell 835-21P or 835-33

(c) Governor: Hartzell F-3-1 or F-3-1A

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(Continuation Sheet)

Number SA647CE

Powerplant Instrument Markings:

Tachometer: 2700 r.p.m. (red radial)
2000-2250 (red arc)
2600 r.p.m. (end of green arc 172N only)

Manifold Pressure Gage: 26" h.g. (end of green arc 172N only)

Oil Temperature Gage: 245°F (red radial)
Oil Pressure Gage: Minimum - 25 p.s.i. (red radial)
Maximum - 100 p.s.i. (red radial)
Normal - 60 p.s.i. to 90 p.s.i. (green arc)

Fuel Pressure Gage: Minimum - .5 p.s.i. (red radial)
Maximum - 8 p.s.i. (red radial)
Normal - 3 p.s.i. to 6 p.s.i. (green arc)

Serial Numbers eligible: 17256513 through 17269309 (12 volt only)

II. Seaplanes

Engine: Lycoming O-360-A1A

Fuel: 91/96 minimum grade aviation gasoline

Engine Limits: For all operations 2700 r.p.m. (180 h.p.)

Propeller and Propeller Limits: (1) Propeller

(a) Hartzell HC-C2YK-1BF/F7666 or F7666A
Diameter: Not over 76 in., not under 74.5 in., no additional cut-off permitted

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Supplemental Type Certificate

(Continuation Sheet)

Number SA647CE

Pitch setting at 30 in. station
Low: 14° High: 29°

(b) Spinner: Hartzell 835-21P or 835-33

(c) Governor: Hartzell F-3-1 or F-3-1A

(2) Propeller

(a) Hartzell HC-C2YK-1B/7666 or 7666A
Diameter: Not over 76 in., not under 74.5 in., no additional cut-off permitted
Pitch setting at 30 in. station
Low: 14° High: 29°

(b) Spinner: Hartzell 835-21P or 835-33

(c) Governor: Hartzell F-3-1 or F-3-1A

Powerplant Instrument Markings:

Tachometer: 2700 r.p.m. (red radial)
2000-2250 (red arc)

Oil Temperature Gage: 245°F (red radial)
Oil Pressure Gage: Minimum - 25 p.s.i. (red radial)
Maximum - 100 p.s.i. (red radial)
Normal - 60 p.s.i. to 90 p.s.i. (green arc)

Fuel Pressure Gage: Minimum - .5 p.s.i. (red radial)
Maximum - 8 p.s.i. (red radial)
Normal - 3 p.s.i. to 6 p.s.i. (green arc)

Serial Numbers eligible: 17256513 through and including 17259223.

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

FAA FORM 8110-2-1 (10-69)

This certificate may be transferred in accordance with FAR 21.47.

September 5, 1979

C FAA AC 73-2651

United States of America

Department of Transportation—Federal Aviation Administration

Supplemental Type Certificate

(Continuation Sheet)

Number SA647CE

The following placards must be displayed as indicated:
(Note: Delete Utility Category on all Models and delete Seaplane on 172L, M & N)

Adjacent to tachometer on Models 172I, K, L, M and N -

"Avoid continuous operation between 2000 and 2250 r.p.m."

Adjacent to propeller control -

"Prop - Push to Increase"

Above fuel pump switch -

"Fuel Pump - Pull On" - Models 172I and 172K

"Fuel Pump" - Models 172L, 172M and 172N

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

FAA FORM 8110-2-1 (10-69)

This certificate may be transferred in accordance with FAR 21.47.

September 5, 1979

C FAA AC 73-2351