

April 22, 1949 (Revised January 20, 1960)

SUBJECT: Conversion of Model 7AC to Model 7BCM airplane using a carburetor type engine.

GENERAL: Before starting to convert a Model 7AC to a Model 7BCM airplane, it is very important that you refer to a copy of the latest revision of the Aircraft Specification W. A-759. A copy is on file at the General Safety District Office for reference.

DESCRIPTION OF CHANGES:

1. Engine Change

- (a) The Continental A-65-8F or A-65-8 engine is replaced with a Continental C-85-8F or C-85-8 carburetor type engine.

NEW PARTS REQUIRED

1-2696	Connector-Flex. Control	1
1-1776	Spring-Cylinder Head Baffle	1
1-3677	Nipple Assembly	1
2" x 12"	Flexible Alum. Tube	1
1-2755	Baffle-Side Crankcase	2
1-2913	Clamp	1
2-898	Elbow	1
3-629	Baffle Assembly-Engine Left Side	1
3-630	Baffle Assembly-Engine Right Side	1
3-631	Baffle-Cylinder Right Rear	1
4-673	Baffle Assembly-Engine Right Rear	1
4-674	Baffle Assembly-Engine Left Rear	1
4-737-3	Baffle Assembly-Engine Left Front	1
4-739	Baffle Assembly-Engine Right Front	1
4-740	Baffle Assembly-Crankcase Upper	1
4-741	Baffle-Crankcase Lower Left	1
4-742	Baffle-Crankcase Lower Right	1
7-572	Blueprint	1
7-797	Blueprint	1

(It is recommended that the #1-520-3B Gascolator Bowl be replaced with a #1-2991 quick-drain gascolator bowl which incorporates a 1/8" N.F.T. #C.C.A. 1550 drain valve.)

PARTS TO BE DISCARDED

ANS-0-4	Adapter - Hose	1
7-469	Baffle - Left Crankcase	1
7-470	Baffle - Right Crankcase	1
7-471	Baffle - Upper Crankcase	1
7-475	Baffle - Right Rear Cylinder	1
7-476	Baffle - Left Rear Cylinder	1
7-477	Baffle - Right Front Cylinder	1
7-478	Baffle - Left Front Cylinder	1

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- (b) Hanlon Wilson mufflers are required on the converted airplane. (If the airplane is equipped with these mufflers before converting, it is not necessary to obtain the following parts)

NEW PARTS REQUIRED

Kit 129	Muffler Installation Complete w/print	1
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PARTS TO BE DISCARDED

7-485	Exhaust Stack - Left	1
7-486	Exhaust Stack - Right	1
3-478	Muff Half	2
3-479	Muff Half	2

2. Fuel System Change  
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The present main fuel tank must be replaced with a modernized new type fuel tank. Not that a hole must be cut in the fuel tank support board to accommodate the sump in the bottom of the new tank.

NEW PARTS REQUIRED

7-778	Tank Assembly - Main Fuel	1
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3. Cowling Modification

Re-work nose bowl and cowling in accordance with Service Helps and hints #26, Alteration #1.

NEW PARTS REQUIRED

4-732	Lower Firewall Baffle	1
	Service Helps and hints #26	1

4. General Changes

- (a) Surface travel of the elevator control surface changes when the conversion is made. The new angular travel may be obtained from Aircraft Specification #A-759. (Angular travel is shown in degrees, for all surfaces, and is the angle that the chord line of the control surface makes with the chord line of the particular fixed surface is attached.)

- (1) The elevator can be adjusted by means of the two elevator stops on the elevator horn.

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- (b) The name plate in the airplane must be re-stamped with the proper model designation and the letter "CONV" indicating it has been converted.

Example: Model 75CM "CONV"

Note: Don't change airplane serial number

- (c) Any of the following propellers may be used on Model 75CM airplanes:

Sensenich Model 723H44

McCaughey Model CF7144

Sensenich Model 723H46

McCaughey Model CF7146

If the above listed or other make or pitch wood propellers are used, the propeller installed must meet the diameter and static RPM limits listed for the Model 75CM under "Propeller Limits," in the Specification (A-759). (See also Item 1 (c) Aircraft Specification A-759).

- (d) The baggage allowance is to be changed from 40 to 50 pounds. (Add Part No. 1-854-4 Baggage Placard.)
- (e) The operating limits of the tachometer is changed and should be re-marked as follows:

Red Line @ 2575 R.P.M.

- (f) The following placards must be installed in front of and within clear view of the pilot:

1-1786

Solo Flying Placard

1

1-2912

Maximum Airspeed Placard

1

NOTE:

- (a) We wish to call your attention to the fact that the gross weight allowance of the Model 75CM remains at 1220 pounds. This results in a reduce payload after conversion, due to the parts added.
- (b) Note also that the C.G. range for the converted airplane is (+10.4) to (+19.7). The C.G. values given are in inches aft of the wing leading edge.

All Champion parts and blueprints required to make the above conversion are now available and may be purchased from our parts Department.