# DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

A-768 Revision 35 Textron Aviation Inc. 120 140 July 29, 2015

#### **TYPE CERTIFICATE DATA SHEET NO. A-768**

This data sheet which is part of Type Certificate No. A-768 prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder Textron Aviation Inc.

One Cessna Boulevard Wichita, Kansas 67215

Type Certificate Holder Record Cessna Aircraft Company transferred to

Textron Aviation Inc. on July 29, 2015

#### I. Model 140, 2 PCL-SM, Approved March 21, 1946 (See NOTE 5 for 1948 version)

Engine Continental C-85-12 or C-85-12F (See Items 105, 107 and 109 for optional engines)

Fuel 73 min. octane aviation gasoline

Engine Limits For all operations, 2575 rpm (85 hp)

Seaplane:

Airspeed Limits Landplane: Level flight or climb 115 mph (100 knots) True Ind.

Glide or dive 140 mph (122 knots) True Ind. Flaps extended 82 mph (71 knots) True Ind. Level flight or climb 105 mph (91 knots) True Ind.

Glide or dive 140 mph (122 knots) True Ind. Flaps extended 82 mph (71 knots) True Ind.

C.G. Range Landplane: (+13.5) to (+17.7)

Seaplane: (+13.7) to (+17.5)

Empty Weight C.G. Range Landplane: (+12.3) to (+14.7) Item 402 not installed.

(+12.3) to (+14.1) when Item 402 is installed.

Seaplane: (+12.7) to (+14.7) Item 402 not installed.

(+12.7) to (+14.2) when Item 402 is installed.

Ranges are not valid when Item 606, C.G. shifter, is installed or for any non-standard arrangement except as noted. When empty weight C.G. falls within the proper range, computation of critical fore and aft C.G. positions

is unnecessary.

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#### Model 140 (cont'd) ı.

Maximum Weight Landplane or skiplane: 1450 lbs.

Seaplane (with item 206a): 1556 lbs.

No. Seats 2 (+19.5) See Item 402 for jump seat.

Maximum Baggage 80 lbs. (+37.5)

Fuel Capacity 25 gals. (Two 12.5 gal. tanks) (+23)

Oil Capacity 4.5 or 5 qts. (-31.5)

Control Surface Movements Up 20° Down 20° Elevator

Elevator tab Up 6° Down 33° Rudder Left 16° Right 16° Aileron Up  $22^{\circ}$ Down 14° Down 40° Flaps

Stabilizer Fixed

Serial Nos. Eligible 8001 and up

In addition to the pertinent required basic equipment specified in CAR 4a, the following Required Equipment

items of equipment must be installed:

(Landplane): Items 1, 201(a), 202(a), 403, 601 (Seaplane): Items 2, 206(a), 403, 601 (Skiplane) : Items 1, 202, 204, 403, 601

### II. Model 120, 2 PCL-SM, Approved March 28, 1946 (See NOTE 5 for 1948 version)

(Same as Model 140 except for equipment installation; wing flaps not installed)

Continental C-85-12 or C-85-12F (See Items 105, 107, and 109 for optional engines) Engine

Fuel 73 octane aviation gasoline

**Engine Limits** For all operations, 2575 rpm (85 hp)

Level flight or climb 115 mph (100 knots) True Ind. Airspeed Limits Landplane

> Glide or dive 140 mph (122 knots) True Ind.

Level flight or climb 105 mph (91 knots) True Ind. Seaplane

Glide or dive 140 mph (122 knots) True Ind.

C.G. Range Landplane: (+13.5) to (+17.7)

> Seaplane: (+13.7) to (+17.5)

Empty Weight C.G. Range (+12.3) to (+14.7) Item 402 not installed. Landplane:

(+12.3) to (+14.1) when Item 402 is installed.

(+12.7) to (+14.7) Item 402 not installed. Seaplane: (+12.7) to (+14.2) when Item 402 is installed.

> Ranges are not valid when Item 606, C.G. shifter, is installed or for any non-standard arrangement except as noted. When Empty weight C.G. falls within the proper range, computation of critical fore and aft positions

is unnecessary.

Maximum Weight Landplane or skiplane: 1450 lbs.

Seaplane (With item 206a): 1556 lbs.

## II. Model 120 (cont'd)

No. Seats 2 (+19.5) See Item 402 for jump seat.

Maximum Baggage 80 lbs. (+37.5)

Fuel Capacity 25 gals. (Two 12.5 gal. tanks) (+23)

Oil Capacity 4.5 or 5 qts. (-31.5)

Control Surface Movements Elevator Up  $20^{\circ}$  Down  $20^{\circ}$ 

Elevator tab Up 6° Down 33° Rudder Left 16° Right 16° Aileron Up 22° Down 14°

Stabilizer Fixed

Serial Nos. Eligible 8003 and up

Required Equipment In addition to the pertinent required basic equipment specified in CAR 4a, the following

items of equipment must be installed: (Landplane): Items 1, 201(a), 202(a), 403 (Seaplane): Items 2, 206(a), 403

(Seaplane): Items 2, 206(a), 403 (Skiplane): Items 1, 202, 204, 403

#### **Specifications Pertinent to all Models**

Datum Leading edge of wing

Leveling Means Top edge of sheet along fuselage side aft of doors

**Certification Basis:** 

Type Certificate No. 768 (CAR 4a)

**Production Basis:** 

Production Certificate No. 4

Export Eligibility Eligible for export to all countries subject to the provisions of MOP 2-4 except as

follows:

(a) Canada - Landplane, seaplane and skiplane eligible

#### **Equipment:**

A plus (+) or minus (-) sign preceding the weight of an item indicates net weight change when that item is installed.

Approval for the installation of all items of equipment listed herein has been obtained by the aircraft manufacturer except those items preoceded by an asterisk (\*). The asterisk denotes that approval has been obtained by other than the aircraft manufacturer. An item marked with an asterisk may not have been manufactured under a CAA monitored or approved quality control system, and therefore attention should be paid to workmanship and conformity with pertinent data called for in this specification.

Diameter: Not over 76 in., not under 74.5 in.

# Propellers and Propeller Accessories

Propeller	s and Propeller Accessories	
F C 05		
	Engine Installation  P. H. G. TAFO 47, 74FO 40, 74FV 47, 74FV 40, 11	11 11 (50)
1.	Propeller - Sensenich 74FC-47, 74FC-49, 74FK-47 or 74FK-49 or any other	11 lbs. (-50)
	approved fixed pitch wood propeller which is eligible for the engine power	
	speed and which meets the following limits:	
	Static rpm at max. permissible throttle setting:	
	Not over 2160, not under 1885.  No additional tolerance permitted.	
	•	
	Diameter: Not over 74 in., not under 72 in.	
2	Not eligible on seaplane models.  Propeller - fixed pitch metal - McCauley 1A90-CF, 1A90-CH or 1B90-CM	22 lbs. (-50)
۷.	Static rpm at max. permissible throttle setting:	22 lbs. (-30)
	(a) Landplane: Not over 2300 not under 2100.	
	(a) Landplane. Not over 2500 not under 2700. (b) Seaplane: Not over 2225 not under 2200.	
	No additional tolerance permitted.	
	Diameter: Not over 71 in., not under 69.5 in.	
2		20 lbs ( 50)
3.	Propeller - Controllable - Beech R002-101 or R003-100 hub with R003-201-75 to -72; R003-225-75 to -72; R003-231-75 to -72; or	30 lbs. (-50)
	R003-232-75 to -72, R003-223-75 to -72, R003-231-75 to -72, or	
	(Eligible on landplane only)	
	Static rpm at max. permissible throttle setting:	
	Not over 2325, not under 2250.	
	No additional tolerance permitted.	
	Pitch settings at 27 in. sta.: Low 13°, High 19°.	
	Includes Beech mechanical propeller pitch control.	
	When this item is installed on 1947 version (See NOTE 3 for description),	
	trailing edge of engine cowling must be flared and metal roll attached to	
	bottom portion of firewall per Cessna Dwg. 0450103 or equivalent.	
*4	Propeller-ground adjustable-Hartzell HA-12U with 7414, 7214, or 7214M	18 lbs. (-50)
••	blades. Static rpm and diameter limits same as for fixed pitch wood propeller.	10 105. ( 50)
*5.	Propeller-automatic-Koppers Aeromatic F200 with 00-73E or 00-73F blades	30 lbs. (-50)
٥.	(Eligible on landplane only)	20 100. (20)
	Parts List Assembly No. 4312. Low pitch setting 11° measured at 24 in. sta.	
	Static rpm at max. permissible throttle setting:	
	Not over 2575, not under 2475.	
	No additional tolerance permitted.	
	Diameter: Not over 73 in., not under 71.5 in.	
	When this item is installed, installation and operation must be accomplished in	
	accordance with Koppers' "Installation Procedure and Operating Limitations" No. 2B.	
	Cooling flap, Koppers' Dwg. No. 3323 or equivalent, must be installed on	
	1947 version 120 and 140 airplanes when this item is installed.	
*6.	Propeller - fixed pitch metal - Sensenich M76AK-2	23 lbs. (-50)
	Static rpm at max. permissible throttle setting: Not over 2290, not	
	under 2190. No additional tolerance permitted.	
	Diameter: Not over 74 in., not under 72.5 in.	
*7.	Propeller - fixed pitch metal - Sensenich M74CK-2	21 lbs. (-50)
	(Eligible on landplane only.)	
	Static rpm at max. permissible throttle setting: Not over 2250, not	
	under 2150. No additional tolerance permitted.	
	Diameter: Not over 72 in., not under 70.5 in.	
*8.	Propeller - Sensenich Hydraulic Controllable C2FB1 with PC-276A7 blades	27 lbs. (-50)
	Pitch settings at 27 in. sta.: Low 8.5°, High 14.5°	
	Diameter: Not over 76 in not under 74.5 in	

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For C	2-90 Engine Installation:	
	11. Propeller - Sensenich 72RK-56, 74FK-51 or any other fixed pitch wood	11 lbs. (-50)
	propeller which is eligible for the engine power and speed and which	()
	meets the following limits:	
	Static rpm at max. permissible throttle setting:	
	Not over 2160, not under 1835.	
	No additional tolerance permitted.	
	Diameter: Not over 74 in., not under 70.5 in.	
	(Eligible on landplane only)	
	12. Propeller - fixed pitch metal - McCauley 1A90-CF, 1A90-CH or 1B90-CM	21 lbs. (-50)
	Static rpm at max. permissible throttle setting:	
	(a) Landplane: Not over 2350, not under 2050.	
	(b) Seaplane: Not over 2350, not under 2150.	
	No additional tolerance permitted.	
	Diameter:	
	Landplane: Not over 71 in., not under 69.5 in.	
	Seaplane: Not over 73 in., not under 69.5 in.	
:	*13. Propeller - automatic - Koppers Aeromatic F200 with 00-73E blades.	30 lbs. (-50)
	Parts List Assembly No. 4340. Low pitch setting 12.5 degrees at 24 in. sta.	
	Static rpm at max. permissible throttle setting:	
	Not over 2475, not under 2425.	
	No additional tolerance permitted.	
	Diameter: Not over 73 in., not under 71.5 in.	
	When this item is installed, installation and operation must be accomplished in accordance	
	with Koppers "Installation Procedure and Operating Limitations" No. 32.	
	(Eligible on landplane only).  *14. Propeller - Flottorp-Beech controllable metal hub R003-100 with	20 lbs ( 50)
	R003-232-72T blades (For interchangeable blade models see Propeller	30 lbs. (-50)
	Specification No. P-804 (NOTE 6))	
	Static rpm at max. permissible throttle setting:	
	Not over 2400, not under 2300.	
	No additional tolerance permitted.	
	Pitch settings at 27 in. sta.: Low 13°, High 19°.	
	Diameter: Not over 72 in., Not under 70.5 in.	
	(Eligible on landplane only).	
	With this installation the following engine limits are applicable:	
	Maximum continuous, 2475 rpm (90 hp)	
	Take-off (Five minutes), 2625 rpm (95 hp)	
For e	ither C-85 or C-90 Engine Installation:	
	*15. Propeller spinner, Aviaid Metal Products Model 100140 (Eligible with	2 lbs. (-50)
	Items 2 or 12)	2 103. ( 50)
Engir	ne and Engine Accessories - Fuel and Oil System	
	Starter (Delco-Remy 1109656)	16 lbs. (-25)
	Carburetor air cleaner	3 lbs. (-45)
	Winterization equipment	2 lbs. (-35)
	Continental C-90-12F or -14F engine	Use actual weight
	See NOTE 5 for limits and installation data	
<sup>k</sup> 106.	Oil filter - Fram PB-5 installed in accordance with Fram Corp.	4 lbs. (-21.5)
	Dwg. 61528. Eligible on only those aircraft equipped with exhaust	,
	manifolds incorporating muffler assemblies.	
107.	Continental C-85-14F engine	Use actual weight
	Limits same as for C-85-12F engine	
	New engine mount, Cessna Dwg. 0451111, necessary when this engine installed.	

Брес	incations I of thich to an violets (cont d)	
Engi	ne and Engine Accessories - Fuel and Oil System (cont'd)	
	Controllable cowl flaps	2 lbs. (-24)
	(a) SerVair Accessories, Model SAC-100, installed in accordance with	,
	installation instructions dated November 8, 1950, supplied by SerVair	
	Accessories, P.O. Box 557, Williston, North Dakota. Eligible on Serial	
	Nos. 11843 through 14364 unless Item 3, 5, or 105 installed.	
	(b) SerVair Accessories, Model SAC-100A installed in accordance with installation	
	instructions dated November 8, 1950, Amendment No. 1 dated January 24, 1951,	
	supplied by SerVair Accessories, P.O. Box 557, Williston, North Dakota. Eligible	
	on Serial No. 14365 and up unless Item 3 or 5 installed.	
*109	Lycoming O-235-C1 engine	Use actual weight
107.	Eligible on Model 120 and 140 landplanes with the following limits:	ose actual weight
	Fuel 80 min. octane aviation gasoline	
	Engine limits For all operations, 2600 rpm (108 hp)	
	Propeller Sensenich M76AM-2 with the following limits:	
	Static rpm at max. permissible throttle setting:	
	Not over 2340, not under 2240	
	No additional tolerance permitted	
	Diameter: Not over 74 in., not under 72.5 in.	
	Oil capacity 6 quarts (-29.5)	
	Installation must be accomplished in accordance with McKenzie Aircraft Repair,	
	1300 North 27th, Springfield, Oregon Installation Instructions and Drawing L149-0600-244,	
	Sheet 2, dated September 10, 1955; utilizing components listed in Parts List dated	
	September 10, 1955. CAA Approved Airplane Flight Manual Supplement dated	
	October 18, 1955 for Cessna 120-140 landplane required when this engine is installed.	
Land	ing Gear	
201.	Two main wheel-brake assemblies, 6.00-6, Type III: (See NOTE 4 re variation in arms	(+2)
	(a) Goodyear Model L6HBD	
	Wheel Assembly No. 511413-M	
	Brake assembly No. 9520292	
	(1) with 6.00-6 4 ply rating tires & tubes	34 lbs.
	(2) with 7.00-6 4 ply rating tires & tubes	36 lbs.
	(3) with 8.00-6 4 ply rating tires & tubes	44 lbs.
	(b) Goodyear Model LF6HBD	
	Wheel Assembly No. 511960-M	
	Brake assembly No. 9520517	
	(1) with 6.00-6 4 ply rating tires & tubes	31 lbs.
	(2) with 7.00-6 4 ply rating tires & tubes	33 lbs.
	(3) with 8.00-6 4 ply rating tires & tubes	41 lbs.
	(d) Goodyear Model CL6HBM (Castering)	
	(Wheel Brake Assembly No. 9540234 and 5)	
	Wheel Assembly No. 9530242 and 3	
	Brake assembly No. 9530368 and 9	
	Installed in accordance with Cessna Dwg. No. 0441150	
	(1)with 6.00-6 4 ply rating tires & tubes	48 lbs.
	(2) with 7.00-6 4 ply rating tires & tubes	50 lbs.
	(3) with 8.00-6 4 ply rating tires & tubes	58 lbs.
202.	Tail wheel and tire	
	(a) Scott 3-24B	5 lbs. (+201)
	(b) Scott non-steerable, full swiveling	4 lbs. (+201)
	*(c) Lang (formerly Decker) D-501 steerable	7 lbs. (+201)
	(Pacific Coast Aircraft Dwg. A-550)	
	*(d) Scott 3200, steerable, swiveling	8 lbs. (+201)
	(Installed in accordance with Scott Bulletin No. I-168)	
	*(e) Maule SFS-1-2-P87 lbs. (+201)	
	(f) Goodyear Model 95-0843 8-inch wheel with pneumatic tire in	6 lbs. (+201)
202	accordance with Cessna Dwg. No. 0542110	
203.	Tail wheel and tire, Maule SFS-1-2	6 lbs. (+201)

Landing Gear (cont'd)		
204. Two skis (See NOTE 4 re variation of arms)		
(a) Federal A-1500 according to Cessna Dwg. 0441102 or Federal		32 lbs. (-1)
Instal. Dwg. 11R245		
*(b) Woychik R-1 according to Woychik Aircraft Equipment (Middleton,		42 lbs. (-1.5)
Wisc.) Dwg. 1, 2, 3 (22 psi tire pressure required.)		
*(c) Federal A-1500A, Federal A-1500A, Federal Instl. Dwg. 11R245		Use actual wt. change
*(d) Federal A-1850, Federal Instl. Dwg. 11R245	Use actual wt. change	
*(e) Federal A-2000, Federal Instl. Dwg. 11R245	Use actual wt. change	
*(f) Federal A-2000A, Federal Instl. Dwg. 11R245		Use actual wt. change
*(g) Federal CA1850-6, Federal Instl. Dwg. 11R245		Use actual wt. change
*(h) Federal AWA-1500 Wheel-Ski, Federal Instl. Dwg. 11R395		+35 lbs.
Eligible with mechanical conversion on ground only.		Retracted Extended
Not eligible with Item 201(a)(3) or 201(b)(3) installed.		(0) $(+3.5)$
Note: Weight and balance of aircraft shall be checked with		
ski in retracted and extended position.		
*(i) Call S2, S6 or S7 according to Call Dwgs. 1004 and 1014		Use actual wt. change
*(j) Federal AWB-1500 Wheel-ski, Federal Instl. Dwg. 11R549		76 lbs.
Eligible with hydraulic conversion on ground and in flight.		Retracted Extended
Not eligible with Item 201(a)(3) or 201(b)(3) installed.		(-4.5) (-2)
Note: Weight and balance of aircraft shall be checked with		
ski in retracted and extended position.		
Placard required: "Do Not Extend or Retract Skis While in Motion of	on the Ground."	0.4.11
*(k) Federal AWB-1500A Wheel-ski, Federal Instl. Dwg. 11R896.		84 lbs.
Eligible with hydraulic conversion on ground and in flight.		Retracted Extended
Not eligible with Item 201(a)(3) or 201(a)(3) installed.		(-4.5) (-2)
Note: Weight and balance of aircraft shall be checked with		
ski in retracted and extended position.		
Placard required: "Do Not Extend or Retract Skis While in Motion on the Ground."		
*(1) Woychik R-1A, Woychik Dwgs. 1 through 5 (32 psi tire pressure req	mirad)	58 lbs. (-3)
*(m)Federal AWB-2100 Wheel-ski, Federal Instl. Dwg. 11R1100.	(uneu)	93 lbs.
Eligible with hydraulic conversion on ground and in flight,		Retracted Extended
Not eligible with Item 201(a)(3), 201(b)(3) or 201(d)(3) installed.		(-5) (-1.5)
Note: Weight and balance of aircraft shall be checked with		(-3) (-1.3)
ski in retracted and extended positions.		
Placard required: "DO NOT EXTEND OR RETRACT SKIS WHILI	E.IN	
MOTION ON THE GROUND."		
*(n) Wesco Skis, Western Aircraft Equipment Co. Dwgs. 11 and 148.		
(1) A-15		46 lbs. (-4)
(2) A-20		48 lbs. (-4)
(3) A-25		69 lbs. (-5)
(4) AS-2		50 lbs. (-4)
(5) AS-2A		62 lbs. (-5)
(6) AS-2B		64 lbs. (-5)
205. Tail ski, Federal AT-1500		3 lbs. (+198)
206. Float installation		
(a) Two Edo 88-1650 according to Cessna Dwg. No. 0440111		208 lbs. (+13)
*(b) Two Edo 92-1400 according to Edo Dwgs. 06704 and 06822		174 lbs. (+14)
This item eligible for approval for a maximum weight of 1474 lbs.		
only and with propeller Item 12 and engine Item 105 only.		
207. Two main wheel streamlines per Cessna Dwg. 0441143		6 lbs. (+2)
(Kit No. 52-3-102). See NOTE 4 re eligibility and arms.		
208. Landing gear adaptor plate, Cessna Parts 0441147, 52-3-115 or 52-3-116	).	5 lbs. (+1.5)
See NOTE 4 re eligibility and arms.		0.11 (, 2)
*209. Two Decker C-200 wheel pants per Decker installation instructions and		9 lbs. (+3)
Dwg. 2A. See NOTE 4 re eligibility and arms.		

	ing Gear (cont'd) Two Consolidoir model 16 wheel fonders per Consolidoir Dwg. No. 0026		9 lbg (+2)
. 210.	Two Consolidair model 16 wheel fenders per Consolidair Dwg. No. 0026. See NOTE 4 re eligibility and arms.		8 lbs. (+2)
*212.	Geisse Safety Gear installed according to St. Louis Machine Co. Dwgs.	1	2 lbs. (0)
	1 and 2 and instructions dated May 5, 1953 (revised October 8, 1953.)		. ,
	With 1948 landing gear spring, Cessna Dwg. 0441149, arm is (-3).		
	This item not eligible with items 201(d), 204, 205, 206, 207, 208, 209, or 210 installed.		
*213.	Two "no drag" wheel fenders per Liquid Tool Co., Box 299, Morrow, Ohio, Dwg. 105.		8 lbs. (+3)
Elect	rical Equipment		
	rical Equipment Generator (Delco-Remy 1101876)	1	0 lbs. (-25)
	Battery - 12 Volt 24 amp. hr.		4 lbs. (+56)
	Landing light - Grimes G-3602 and installation		6 lbs. (+15)
	Omitted.		,
	or Equipment		
	Cabin heater		3 lbs. (-26)
402.	Jump seat installation, Cessna Dwg. 0413202  When this item is installed the compositment must be placeded for the weight of		6 lbs. (+44)
	When this item is installed, the compartment must be placarded for the weight of passenger or baggage as determined by weight and balance computations except that the		
	total weight shall not exceed 80 lbs. C.G. of passenger in jump seat is at (+44)		
403.	CAA Approved Airplane Flight Manual (optional nomenclature:		
	"Approved Operating Limitations") and pertinent revisions applicable to the particular		
	model and serial number. Tentatively approved Airplane Flight Manuals in use up to		
	and including the 1947 version aircraft are acceptable without replacement.		
404.	Blind flight cover, Cessna Dwg. 0413267		4 lbs. (+5)
N.C.			
	<u>ellaneous (Not listed above)</u> Wing flaps (Model 140 only)		6 lbs. (+55)
	International flares, 3 Mark I - 1 1/2 minute		8 lbs. (+48)
	Airspeed static outlet installation on fuselage	1	0 105. (1 10)
	Auxiliary seaplane fin, Cessna Dwg. 0431144	3	3 lbs.(+107)
	Omitted		
*606.	Weight shifter, Aircraft Devices model CGS-7 per Campbell Dwg.	FWD.	AFT
	Nos. 4042, 355 and 356	19 lbs. (+57.1)	(+144.5)
	Rear C.G. limit with weight shifter in aft position is (+18.4) and with weight shifter		
	in fwd. position is (+17.7). Maximum allowable baggage** is limited for each aircraft as		
	determined by weight and balance check with the weight shifter in either the fwd. or aft position whichever is critical. The following placards shall be installed:		
	(1) "Maximum Baggage ** lbs" (on baggage compartment).		
	(2) "Intentional Spins Prohibited with Shifter Weight in Rear Position		
	as Indicated by Red Cable." (In full view of pilot)		
*607.	Y-1 sprayer installed in accordance with Yingling Aircraft Inc.,	82	2 lbs. (+10)
	Wichita, Kansas, Dwg. No. Y-1 and installation instructions.		
*608.	Installation of dorsal fin in accordance with Consolidated	2	lbs. (+149)
	Aircraft Repair, Inc., Ft. Wayne, Indiana, drawing entitled		
	"Dorsal Fin, Increased Effective Area of Fin is 0.61 Sq. Ft., Aircraft Modification to Improve Directional Stability."		
*609	Blister windows are eligible when in conformance to the Don L. Meyers Company,	Use actual weig	ht change
00).	P.O. Box 993, San Mateo, California, installation instructions and either Drawing	Ose actual weig	in change
	No. 70-10-50 or No. 122953.		
*610.	Woychik retractable lifting handles, Woychik Aircraft Equipment,	13	ozs. (+118)
	Middleton, Wisc., Dwgs. 50 & 50A.		
*611.	Metal Plating of Wings	Use actual weig	ht change
	Models 120 and 140 are eligible for certification when wings are covered		
	with metal skin per Technical Instruction Report No. 1401 by Birtcraft		
	Engineering Co., 11836 Cherry Ave., Inglewood, California.		

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#### Specifications Pertinent to all Models (cont'd)

Miscellaneous (Not listed above) (cont'd)

\*612. Metal wing skin installed in accordance with Ruleto Industries, Inc.,
4823 Rosecrans Avenue, Hawthrone, California, Dwgs., Nos. R-1013, R-1014 and R-1015
and Installation Instructions CKW-1 and CKW-2.

\*613. Metal Skin installed in accordance with Met-Co-Aire, Fullerton, California, Drawing No. 6108. Use actual weight change

- NOTE 1. Current weight and balance report including list of equipment included in certificated weight empty, and loading instructions, when necessary, must be in each aircraft at the time of original certification and at all times thereafter (except in the case of air carrier operators having an approved weight control system).
- NOTE 2. The following placards must be displayed in full view of the pilot:
  - (a) Model 140 "Intentional Spins with Flaps Extended Prohibited."
  - (b) Seaplane if Item 604 is installed "Intentional Spins Prohibited."
  - (c) "This Airplane to Be Operated in Accordance with the Flight Limitations of the Operations Manual." (Refers to Item 403, Airplane Flight Manual.")
  - (d) For aircraft with Item 204(j) or (k) installed "Do Not Extend or Retract Skis While in Motion on the Ground."
- NOTE 3. The 1947 Version (Model 140 Serial Nos. 11843 through 14364; Model 120 Serial Nos. 11843 and up) has revised cowling; instrument panel, exhaust manifold which incorporates silencer, relocated engine primer and primer lines. When Beech controllable propeller (Item 3) is installed on the 1947 version, the trailing edge of engine cowling must be flared and a metal roll attached to the bottom portion of the firewall. The flared cowling trailing edge and roll on firewall are optional with fixed pitch wood and metal propellers.
- NOTE 4. When Item 208 or 1948 version landing gear spring, Cessna Dwg. 0441149, is installed, the main wheels are moved 3 inches forward, changing the arms of Items 201, 207 and 210 from (+2) to (-1); the arm of Item 204(a) from (-1) to (-4); the arm of Item 204(b) from (-1.5) to (-4.5); the arm of Item 204(h) from (0) to (-3) for retracted position and from (+3.5) to (+0.5) for extended position; the arms of 204(j) and (k) from (-4.5) to (-7.5) for the retracted position and from (-2) to (-5) for the extended position; the arm of Items 209 and 213 from (+3) to (0).

Item 207, 209 or 210 is not eligible when Item 201(a)(2) or (3), 201(b)(2) or (3), or 208 is installed. Item 204(h), (j) or (k) is not eligible when Item 201(a)(3) or 201(b)(3) is installed. Item 201(d) is not eligible with Item 204(either), 207, 208, 209 or 210. Item 208 is not eligible with Item 204(either) or with revised landing gear spring, Cessna Dwg. 0441149.

NOTE 5. The C-90-12F or C-90-14F engine is eligible for installation on the Models 120 and 140 landplanes and seaplanes with the following special limitations which are standard for the 1948 version:

Engine Continental C-90-12F or C-90-14F (Item 105)

Fuel 80 min. octane aviation gasoline Engine limits For all operations, 2475 rpm (90 hp) Oil capacity 5 or 6 quarts (Integral) (-31.5)

Required equipment

(Landplane) Items 11, 201, 202(a), 403, 601 (Model 140 only) (Seaplane) Items 12, 206, 403, 601 (Model 140 only)

When the Continental C-90-12F engine is installed, it is necessary for Cessna 0450240 blast tube assembly and Cessna 0452183 lower cowl assembly with Cessna 0452208 lower cowl bottom doubler or the equivalent to be installed. In addition, when the C-90-14F engine is installed, new engine mount, Cessna Dwg. 0451111, is required.

NOTE 6.

**WARNING:** Use of alcohol-based fuels can cause serious performance degradation and fuel system component damage, and is therefore prohibited on Cessna airplanes.