DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

A-694
Revision 23
LUSCOMBE
8 8D
8A 8E
8B 8F
8C T-8F

July 8, 1993

AIRCRAFT SPECIFICATION NO. A-694

Type Certificate Holder The Don Luscombe Aviation History Foundation, Inc.

P.O. Box 63581

Phoenix, Arizona 85082

I - Model 8, 2 PCLM (Normal Category), Approved August 11, 1938

Engine Continental A-50-1 (see item 126A for optional engines).

Not eligible for original certification with single ignition engine

Fuel 73 minimum octane aviation gasoline Engine limits For all operations, 1900 r.p.m. (50 hp.) Propeller limits Maximum permissible diameter, 79 in.

Airspeed limits Level flight or climb 115 m.p.h. (100 knots) True Ind.

Glide or dive 145 m.p.h. (126 knots) True Ind.

C.G. range (+13.6) to (+18.4)

Empty weight C.G. range <u>Forward limits</u>

(+11.6) with item 105; or items 101 and 105, or items 105 and 106.

(+12.3) with item 102, or items 101 and 102.

Rear limits

(+13.8) with item 105.

(+13.4) with items 105 and 106. (+12.7) with items 101 and 105.

(+15.9) with item 102.

(+14.8) with items 101 and 102.

When empty weight C.G. falls within pertinent range, computation of critical fore and aft C.G. positions is unnecessary. Ranges are not valid for non-standard arrangements except

as noted.

Maximum weight 1200 lb.
No. of seats 2 (+20)
Maximum baggage 55 lb. (+40)

Fuel capacity 14 gal. (+40). See items 101, 102 and 106 for optional tanks.

Oil capacity 4 qt. (-24)

Control surface movements Elevators Up 29° Down 27°

Rudder Right 32° Left 32°

Ailerons (not available)

Serial Nos. eligible 833 and up (see NOTE 3 for S/N 801 thru 833)

Required equipment Items 6, 104, 201 and 203.

II - Model 8A, 2 PCL-SM (Normal Category), Approved March 27, 1939

Same as model 8 except engine installation. Also eligible with all metal wings, with either .016 or .020 aluminum alloy skin covering and .016 skin covering for ailerons per Luscombe dwg. 082201. For .016 skin, no weight increase is necessary. For .020 skin the weight is increased 15 lb. at (+20).

Engine Continental A-65-1 (see item 126.B for optional engines).

Not eligible for original certification with single ignition engine.

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Fuel 73 minimum octane aviation gasoline 80 minimum octane required for seaplane (with item 212 installed) Engine limits For all operations, 2350 r.p.m. (65 hp.) Propeller limits Maximum permissible diameter: (Landplane) 79 in. (Seaplane with item 204) 85 in. (Seaplane with item 212, see propeller item 2(f)). (Landplane) Level flight or climb 115 m.p.h. (100 knots) True Ind. Airspeed limits Glide or dive 145 m.p.h. (126 knots) True Ind. (Seaplane) Level flight or climb 109 m.p.h. (95 knots) True ind. Glide or dive 145 m.p.h. (126 knots) True Ind. (Landplane) (+13.6) to (+19.0). When bungee is replaced by elevator C.G. range trim tab (dwg. 48589) following range must be used: (+13.6) to (+18.8)(Seaplane) (+15.4) to (+18.3) Empty wt. C.G. range Landplane Seaplane Seaplane Fuel Tank (With item 204) (With item 212) Installation Forward limits Item 105, or 101 (+11.6)(+14.0)(+14.0)and 105 or 105 and 106. (+12.3)(+14.7)(+14.7)Item 102 or 112. (+12.2)(+14.4)(+14.4)Item 115. Rear limits (+14.8)(+14.4)Item 105. (+15.1)(+13.7)(+14.2)(+14.4)Item 101 and 105. (+14.5)(+14.9)(+14.0)Item 105 and 106. (+17.5)Item 102. (+17.0)(+17.0)(+17.3)Item 112. (+16.7)(+16.9)(+16.7)(+15.7)Item 115. When empty weight C.G. falls within the pertinent range, computation of critical fore and aft C.G. position is unnecessary. Ranges are not valid for non-standard arrangements except as noted. Maximum weight (Landplane) 1200 lb. See NOTE 6 for 1260 lb. (Seaplane with item 204) 1260 lb. (Seaplane with item 212) 1350 lb. No. of seats 2(+20)Maximum baggage 75 lb. (+40) Fuel capacity 14 gal. (+40). Placard required: "Full carburetor air heat required for takeoff and landing." The reason for this placard is that during takeoff acceleration and initial highangle-of-attack climb, the fuel flow may not be adequate for proper operation. Application of full carburetor heat in this case helps overcome the possible deficiency of fuel flow during takeoff. Carburetor ice is not a basic consideration in requiring this placard. (See also items 101, 102, 106, 109, 111, 112 and 115 for optional tanks). Oil capacity 4 qt. (-24) Control surface movements Elevator 29° Down 27° Up Rudder Right 32° Left 32° Aileron Up 25° Down 25° Elevator tab (required for Up Down 28° seaplane with item 212) 833 and up (see NOTE 3 for S/N 801 thru 833) Serial Nos. eligible Required equipment (Landplane) Items 6, 104, 124, 201, 203 (Seaplane with item 204) Items: 6, 104, 122, 124, 204, 605, 606 (Seaplane with item 212) Items: 2(f), 104, 113, 124, 212, 605, 606

III - Model 8B, 2 PCLM (Normal Category), Approved March 18, 1940

Same as model 8 except engine installation

Engine Lycoming O-145-B1 (see item 126.C. for optional engines)

Not eligible for original certification with single ignition engine.

Fuel 73 minimum octane aviation gasoline Engine limits For all operations, 2550 r.p.m. (65 hp.)

Propeller limits Static r.p.m. at maximum permissible throttle setting: not over

2500, not under 2060. No additional tolerance permitted.

Diameter: Not over 79 in., not under 68 in.

Level flight or climb 115 m.p.h. (100 knots) True Ind. Airspeed limits

Glide or dive 145 m.p.h. (126 knots) True Ind.

(+13.6) to (+19.0). When bungee is replaced with elevator trim tab (dwg. 48589) C.G. range

following range must be used: (+13.6) to (+18.8)

Empty wt. C.G. range Forward limits

(+11.6) with item 105, or 101 and 105. (+12.3) with item 102, or 101 and 102.

Empty wt. C.G. range Rear limits

(+14.8) with item 105.

(+13.7) with items 101 and 105.

(+17.0) with items 102.

(+15.9) with item 101 and 102.

When empty weight C.G. falls within pertinent range, computation of critical fore and aft C.G. positions is unnecessary. Ranges are not valid for non-standard arrangements

except as noted.

1200 lb. Maximum weight No. of seats 2(+20)Maximum baggage 55 lb. (+40)

Fuel capacity 14 gal. (+40). (see items 101 and 102 for optional tanks).

Oil capacity 5 qt. (-24)

Control surface movements Elevators Up 29° Down 27°

Rudder Right 32° Left 32°

Ailerons (not available)

Serial Nos. eligible 833 and up (see NOTE 3 for S/N 801 thru 832)

Required equipment Items 6, 104, 201, 203.

IV - Model 8C, 2 PCL-SM (Normal Category), Approved June 17, 1940

Same as model 8 except engine installation.

Engine Continental A-75-8J (see item 126.D. for optional engines).

Fuel 73 minimum octane aviation gasoline Engine limits For all operations, 2600 r.p.m. (75 hp.)

Propeller limits Static r.p.m. at maximum permissible throttle setting (no additional

tolerance permitted):

(Landplane) not over 2450, not under 1950. (Seaplane) not over 2450, not under 2060.

Diameter:

(Landplane) not over 79 in., not under 68 in. (Seaplane) not over 85 in., not under 68 in.

(Landplane) Level flight or climb 115 m.p.h. (100 knots) True Ind. Airspeed limits

Glide or dive 145 m.p.h. (126 knots) True Ind. (Seaplane) Level flight or climb 109 m.p.h. (95 knots) True ind.

Glide or dive 145 m.p.h. (126 knots) True Ind.

(Landplane) (+13.6) to (+19.0). When bungee is replaced by elevator C.G. range

trim tab (dwg. 48589) following range must be used: (+13.6) to (+18.8)

(Seaplane) (+15.4) to (+18.3)

Empty wt. C.G. range	Landplane	Seaplane	Fuel Tank Installation				
	Forward limits						
	(+11.6)	(+14.0)	Item 105, or 101 and 105, or				
			105 and 106				
	(+12.3)	(+14.7)	Item 102, or 101 and 102				
	Rear limits						
	(+14.8)	(+14.0)	Item 105				
	(+13.7)	(*)	Item 101 and 105				
	(+14.5)	(*)	Item 105 and 106				
	(+17.0)	(+16.1)	Item 102				
	(+15.9)	(*)	Item 101 and 102				
	(*each case must be checked when item 101 or 106 is installed)						
	When empty weight C.G. falls within pertinent range, computation of critical fore and aft						
	C.G. positions is unnecessary. Ranges are not valid for non-standard arrangements						
	except as noted.						
Maximum weight	(Landplane) 1200 lb. See NOTE 4 regarding higher weights).						
	(Seaplane) 1260 lb).					
No. of seats	2 (+20)						
Maximum baggage	55 lb. (+40)						
Fuel capacity	14 gal. (+40). See	items 101, 102 and	106 for optional tanks.				
Oil capacity	4 qt. (-24)						
Control surface movements	Elevators	Up 29°	Down 27°				
	Rudder	Right 32°	Left 32°				
	Ailerons (not availa	able)					
Serial Nos. eligible	833 and up (see NOTE 3 for S/N 801 thru 832)						
Required equipment	(Landplane) Items 6, 104, 201 and 203						
	(Seaplane)	Items: 6, 104, 122, 204, 605 and 606					

V - Model 8D, 2 PCL-SM (Normal Category), Approved October 24, 1941

Same as Model 8C except for increased maximum weight, wing covering with intermediate or "Grade A" fabric, revised fuel system and addition of elevator trim tab replacing bungee. The seaplane model has special engine cooling baffles.

Engine Continental A-75-8J (see item 126.E. for optional engines)

Fuel 73 minimum octane aviation gasoline Engine limits For all operations, 2600 r.p.m. (75 hp.)

Airspeed limits

C.G. range

Static r.p.m. at maximum permissible throttle setting (no additional Propeller limits

tolerance permitted).

(Landplane) not over 2450, not under 2060. (Seaplane) not over 2325, not under 2225.

Diameter: (landplane and seaplane) maximum 72 in., minimum 70 in. (Landplane) Level flight or climb 115 m.p.h. (100 knots) True Ind.

Glide or dive 145 m.p.h. (126 knots) True Ind. (Seaplane) Level flight or climb 109 m.p.h. (95 knots) True ind. Glide or dive 145 m.p.h. (126 knots) True Ind.

(Landplane) (+13.6) to (+19.0).

(Seaplane) (+14.5 to (+17.6) Empty wt. C.G. range

	, ,	
<u>Landplane</u>	<u>Seaplane</u>	Fuel Tank Installation
Forward limits		
(+12.3)	(+13.5)	Item 102, or 101 and 102
(+11.3)	(+12.6)	Item 105, or 101 and 105
Rear limits		
(+17.2)	(+15.1)	Item 102
(+16.3)	(+14.2)	Item 101 and 102
(+14.5)	(+12.6)	Item 105
(+13.5)	(*)	Item 101 and 105

(*each case must be checked separately when items 101 and 105 are

installed in the seaplane).

When the empty weight C.G. falls within the pertinent range, computation of the critical fore and aft C.G. positions is unnecessary. Ranges are not valid for non-standard arrangements except as noted.

Maximum weight (Landplane) 1310 lb.

(Seaplane) 1375 lb.

No. of seats 2 (+20) Maximum baggage 55 lb. (+40)

Fuel capacity 23 gal. (two 11-1/2 gal. tanks in wings at +20). (see items 101 and 105 for optional

tanks).

Oil capacity 4 qt. (-24)

Control surface movements Elevators Up 29° Down 27° Rudder Right 32° Left 32°

Ailerons (not available)

Serial Nos. eligible (Landplane) 1807 and up

(seaplane) 1885 and up

Required equipment (Landplane) Items 6, 104, 201 and 203

(Seaplane) Items 6, 104, 122, 204, 605 and 606

VI - Model 8E, 2 PCLM (Normal Category), Approved December 11, 1946; 2 PCSM (Normal Category), Approved May 13, 1948

Similar to model 8D except for increased maximum weight, increased horsepower and minor structural changes. Model 8E was formerly designated as Model 8E Optional. It will not be necessary to revise the aircraft operation record to indicate this change in model.

Engine Continental C-85-12 (see item 126.F. for optional engines)

Fuel 73 minimum octane aviation gasoline, except

80 minimum octane required for seaplane with item 204 or 212

Engine limits For all operations, 2575 r.p.m. (85 hp.)

Propeller limits (Landplane) Static r.p.m. at maximum permissible throttle setting,

not over 2255, not under 1970. No additional tolerance permitted. (Seaplane) See item 2(e) under "Propeller and Propeller Accessories"

Airspeed limits (Landplane) Level flight or climb 115 m.p.h. (100 knots) True Ind.

Glide or dive 145 m.p.h. (126 knots) True Ind. Level flight or climb 109 m.p.h. (95 knots) True ind.

(Seaplane) Level flight or climb 109 m.p.h. (95 knots) True ind. Glide or dive 145 m.p.h. (126 knots) True Ind.

C.G. range (Landplane) (+13.6) to (+16.8)

(Seaplane) (+14.6) to (+16.7) (with item 204 or 212)

Empty wt. C.G. range <u>Landplane</u> <u>Seaplane</u> <u>Fuel Tank Installation</u>

Forward limits

(+12.3) (+13.3) Item 102, or 109, or 111, or

115

Rear limits

(+13.7) (+13.3) Items 102, or 109, or 111

(+13.1) (+13.3) Item 115

When empty weight C.G. falls within the pertinent range, computation of critical fore and aft C.G. positions is unnecessary. Ranges are not valid for non-standard arrangements

except as noted.

Maximum weight (Landplane) 1400 lb.

(Seaplane with item 204) 1375 lb. (Seaplane with item 212) 1470 lb.

No. of seats 2 (+20) Maximum baggage 75 lb. (+40)

Fuel capacity 25 gal. (two 12-1/2 gal. tanks in wings at +20) (see also items 102, 111, 112, and 115 for

optional tanks).

Oil capacity 5 qt. (-24)

Control surface movements Elevators Up 28° Down 29.5° Rudder Right 28° Left 28°

Aileron Up 25° Down 25° Elevator tab (landplane) Up 14° Down 25° Optional 10° Down 33° Up Down 41° Elevator tab (seaplane) 7° Up

Serial Nos. eligible 833 and up when converted in accordance with pertinent provisions of Luscombe Service

Department Letter of August 4, 1947.

Required equipment (Landplane) Items 6, 104, 205 and 206

(Seaplane with item 204) Items 2(e), 104, 113, 204, 605 and 606 (Seaplane with item 212) Items 2(e), 104, 113, 212 and 605

VII - Model 8F, 2 PCLM (Normal Category), Approved May 25, 1948; 2 PCSM (Normal Category),

Approved July 26, 1948

Same as model 8E except engine installation. For conversion of model 8E to 8F airplanes, in addition to changes noted below,

cowling modification per Luscombe E.O. No. 2167 against dwg. 086085 is required.

Engine Continental C-90-12F (see item 126.G. for optional engines)

Fuel 80 minimum octane aviation gasoline Engine limits For all operations, 2475 r.p.m. (90 hp.) Propeller limits (Landplane) See items 4(a) and 5.

(Seaplane) See item 4(b).

Airspeed limits (Landplane) Level flight or climb 115 m.p.h. (100 knots) True Ind.

Glide or dive 145 m.p.h. (126 knots) True Ind. (Seaplane) Level flight or climb 109 m.p.h. (95 knots) True ind.

Glide or dive 145 m.p.h. (126 knots) True Ind.

C.G. range (Landplane) (+13.6) to (+16.8)

(Seaplane with item 204 or 212) (+14.6) to (+16.7)

Empty wt. C.G. range Landplane Seaplane Fuel Tank Installation Forward limits (+12.2)(+13.8)Item 109 or 102 (+12.3)(+13.9)Item 111 or 112 Rear limits Item 102 or 109 (+13.2)(+15.5)(+13.4)(+15.8)Item 111

> (+13.3) (+15.8) Item 112 When empty weight C.G. falls within the pertinent range, computation of critical fore and aft C.G. positions is unnecessary. Ranges are not valid for non-standard arrangements

except as noted.

Maximum weight (Landplane) 1400 lb.

(Seaplane with item 204) 1375 lb. (Seaplane with item 212) 1470 lb.

No. of seats 2 (+20) Maximum baggage 75 lb. (+40)

Fuel capacity 25 gal. (see also items 102, 111 and 112 for optional tanks)

Oil capacity 5 qt. (-24)

Elevators Control surface movements Up 28° Down 29.5° Rudder Right 28° Left 28° Aileron Up 25° Down 25° Elevator tab (landplane) Up 10° Down 33° Elevator tab (seaplane) Up Down 41°

Serial Nos. eligible 1925 thru 6800, S-1 and up

Required equipment (Landplane) Items 4(a), 114, 205 and 206 (size 6.00-6 only)

(Seaplane with item 204) Items 4(b), 113, 114, 204, 605 and 606 (Seaplane with item 212) Items 4(b), 113, 114, 212 and 605

VIII - Model T-8F, 2 PCLM (Restricted and Standard Categories), Approved June 14, 1948

Same as model 8F except tandem seats, tandem controls, cabin fuselage structure and canopy, landing gear axle moved two inches forward, minor changes in electrical system and fuel system, battery relocated, hydraulic brakes, dorsal fin.

Engine Continental C-90-12F (see item 126 for optional engines)

Fuel 80 minimum octane aviation gasoline Engine limits For all operations, 2475 r.p.m. (90 hp.)

Propeller limits See item 4(a) or (b)

Airspeed limits Level flight or climb 115 m.p.h. True Ind.
Glide or dive 145 m.p.h. True Ind.

C.G. range (+12.1) to (+18.1)

Empty weight C.G. range When empty weight C.G. falls within this range, computation of critical fore and aft C.G.

positions is unnecessary. Range is not valid for non-standard arrangements except as

indicated.

Installation of fixed ballast per Luscombe dwg. 481364 not to exceed 30 lb. is approved

at (+63) and is placarded: "Removal requires weight and balance check."

Maximum weight 1400 lb. (for crop sprayer, see NOTE 8)

No. of seats 2 (1+15, 1+47). Placard required: "Solo from front seat only."

Maximum baggage None

Fuel capacity 30 gal. (see items 109 and 111 for optional tanks)

Oil capacity 5 qt. min. (-24)

Control surface movements Elevators Up 24° Down 23°

Elevator control tab Up 10° Down 41° Rudder Right 18° Left 18° Aileron Up 13° Down 14°

Serial Nos. eligible 6058 thru 6800, ST-1 and up

Required equipment Items 4(a) or (b), 114, 205, 206(g) and 213

Specifications Pertinent to All Models

Datum Wing leading edge

Leveling means Top of horizontal splice plate on side of fuselage

Certification basis Part 4a of the Civil Air Regulations

Type Certificate No. 694 issued August 11, 1938

Production basis None. Prior to original certification of any aircraft manufactured after

January 2, 1951, an FAA representative must perform a detailed inspection for workmanship, materials and conformity with the approved technical data,

and a check of the flight characteristics.

Export eligibility Eligible for export to all countries subject to the provisions of Advisory

Circular 21-2 effective July 16, 1965, 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.

Special Note: So that all equipment items might be in their proper categories, the following items were renumbered as follows:

 $\frac{10}{11}$ Item 203 was formerly item 103.

 $\underline{12}$ / Item 204 was formerly item 151. 13/ Item 205 was formerly item 301.

15/ Item 203 was formerly item 303. 15/ Item 207 was formerly item 308.

 $\underline{16}$ / Item 208 was formerly item 310. $\underline{17}$ / Item 209 was formerly item 311.

18/ Item 210 was formerly item 315.

19/ Item 301 was formerly item 205.

20/ Item 303 was formerly item 206.

 $\frac{21}{2}$ Item 402 was formerly item 209. $\frac{22}{1}$ Item 403 was formerly item 304.

23/ Item 607 was formerly item 210.

Propeller and Propeller Accessories

Propeller - Beech controllable R002 or R003 for Models 8A, 8C and 8D landplanes only. (a) Hub R002-101 or R003-100 +12 lb. (-48) Blades R002-205-72 or R003-235-72 (Model 8C) Blades R003-201-72T or R003-231-72T (Models 8A and 8D) Diameter: not over 72 in., not under 70.5 in. Pitch settings at 27 in. sta.: high 19°, low 13° (Model 8A) high 19.5°, low 13.5° (Model 8C) high 18.5°, low 12.0° (Model 8D) (b) Control mechanism 1 lb. (-24) 2. Propeller - McCauley 1A90 (a) For Model 8C (landplane and seaplane) with A-75-8J engine with 21 lb. (-45) following limits: Static r.p.m. at maximum permissible throttle setting: not over 2330, not under 2110 No additional tolerance permitted. Diameter: not over 71 in., not under 69.5 in. (b) For Model 8A (landplane and seaplane with item 204 floats) with 21 lb. (-45) A-65-8J, -8FJ, -3J, -7J, -9J and -9FJ engines with the following Static r.p.m. at maximum permissible throttle setting: not over 2145, not under 1940 No additional tolerance permitted. Diameter: not over 74 in., not under 72.5 in. (c) For Model 8A with A-65-8, -8F, -3, -7, -9 and -9F engines with the 21 lb. (-45) following limits: Static r.p.m. at maximum permissible throttle setting: not over 2145, not under 2045 (with fuselage tank) not over 2145, not under 1940 (with wing tank). No additional tolerance permitted. Diameter: not over 74 in., not under 72.5 in. (d) For Model 8D with the following limits (landplane only) 21 lb. (-45) Static r.p.m. at maximum permissible throttle setting: not over 2330, not under 2110 No additional tolerance permitted. Diameter: not over 71 in., not under 69.5 in. (e) For model 8E seaplane with item 212 floats - 1A90-CF-7144 or any 21 lb. (-45) other McCauley 1A90-CF propeller which meets the following limits: Static r.p.m. at maximum permissible throttle setting: not over 2190, not under 2090 No additional tolerance permitted. Diameter: not over 71 in., not under 69.5 in. (f) For model 8A seaplane with item 212 floats. Any 1A90-CF propeller 21 lb. (-45) which meets the following limits: Static r.p.m. at maximum permissible throttle setting: not over 2170, not under 2070 No additional tolerance permitted. Diameter: not over 74 in., not under 72.5 in. (This propeller change dictated by undesirable vibrations in the static r.p.m. range with the model 1A90-CF-7142. McCauley Service Bulletin No. 12, dated June 2, 1949, covers the same subject). (g) For model 8E landplane - 1A90-CF-7144 or any other 1A90-CF propeller 21 lb. (-45) which meets the following limits: Static r.p.m. at maximum permissible throttle setting: not over 2255, not under 2000 No additional tolerance permitted.

Diameter: not over 71 in., not under 69.5 in.

3.	Propeller - Hartzell ground adjustable HA-12U (for 8B, 8C, 8D and 8E only) Hub Model - HA-12UO or HA-12UF Blades - 7414 to 6814 or 7214M to 6814M	18 lb. (-45)
	Eligible at diameter and station r.p.m. limits shown for fixed pitch wood models (item 6).	
4.	Propeller - McCauley 1B90	
	(a) For models 8F and T-8F landplanes - 1B90-CM-7154 or any other 1B90-CM propeller which meets the following limits:	21 lb. (-45)
	Static r.p.m. at maximum permissible throttle setting: not over 2100, not under 2000 No additional tolerance permitted.	
	Diameter: not over 71 in., not under 69.5 in.	
	(b) For models 8F seaplane and T-8F landplane - 1B90-CM-7347 or	21 lb. (-45)
	any other 1B90-CM propeller which meets the following limits: (1) For model 8F seaplane	
	Static r.p.m. at maximum permissible throttle setting:	
	not over 2210, not under 2110 No additional tolerance permitted.	
	(2) For model T-8F landplane	
	Static r.p.m. at maximum permissible throttle setting:	
	not over 2350, not under 2250 No additional tolerance permitted.	
	Diameter: not over 73 in., not under 70 in.	
	(c) For model T-8F landplane with C-90-12FJ engine - 1B90-CM-7345 or any	21 lb. (-45)
	other 1B90-CM propeller which meets the following limits:	
	Static r.p.m. at maximum permissible throttle setting:	
	not over 2370, not under 2270 No additional tolerance permitted.	
	Diameter: not over 72.5 in., not under 71.5 in.	
	(Engine item 116 required with this installation)	
5.	For model 8F landplane - Lewis propeller model L66CK-47 or any other	13 lb. (-45)
	fixed pitch wood propeller which is eligible for the engine power and	
	speed and meets the following limits: Static r.p.m. at maximum permissible throttle setting:	
	not over 2125, not under 2025	
	No additional tolerance permitted.	
	Diameter: not over 72.5 in., not under 71 in.	
1/6 Pr	(Engine item 116 required with this installation) opeller - wood (fixed or adjustable pitch)	17 lb. (-45)
	lodels 8A, 8B, 8C, 8D, 8E and 8F)	17 10. (-43)
(2)	00.1, 02, 00, 02, 02 mid 01)	
	and Engine Accessories - Fuel and Oil Systems	1411 (.40)
<u>Z</u> /101.	Five gal. auxiliary fuel tank installation Placard required on instrument panel: "Auxiliary fuel not to be used as reserve."	14 lb. (+40)
3/102.	Two 11.5 gal. metal wing fuel tanks (+20) and revised fuel system	+13 lb. (+14)
_	replacing 14 gal. fuselage tank system (models 8, 8A, 8B, 8C, 8E and 8F)	,
<u>4</u> /103.	Exhaust mufflers (a) Train mufflers F.D.L. time A4 (models 84, 96, 9D color)	0.11- (.22)
	(a) Twin mufflers E.D.L. type A4 (models 8A, 8C, 8D only)(b) Aero muffler type A3A (model 8B only)	9 lb. (-22) 5 lb. (-22)
	(c) Kay muffler - heater exhaust system per Luscombe dwg. 086142	,
	(models 8E, 8F, T-8F). A 5 qt. oil tank only can be used with	
	this item due to clearance considerations.	
	(d) Hanlon-Wilson model 207 muffler-heater exhaust system per Luscombe dwg. 086149 (models 8A, 8E, 8F, T-8F)	
	(e) Davis Silencer Co. model D-85-90-L for Luscombe 8E, 8F, T-8F,	3 lb. (-20)
	installed per Davis Silencer Co. dwg. D-65-90L.	
	(f) Davis Silencer Co. model D-65-75 for Luscombe 8, 8A 8C, 8D, installed	2 lb. (-20)
104.	per Davis Silencer Co. dwg. D-65-90L. Carburetor air heater (not applicable to Continental "J" engines)	
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105.	14 gal. fuselage fuel tank system (model 8D with this change requires installation of injector type engine unless item 107 is installed.	17 lb. (+36)
106.	Two 4.5 gal. Timm auxiliary wing fuel tanks, Timm dwgs. 2 and 18 or Aero Services dwgs. 102 and 103 (models 8, 8A, 8C)	11 lb. (+19)
107.	Engine-driven fuel pump and hand-operated Chevrolet wobble pump	+ 7 lb. (-21)
108.	Starter, Delco-Remy EX-30012 (model 8E only)	16 lb. (-22)
109.	Two 12.5 gal. wing fuel tanks replacing 11.5 gal. wing tanks	+ 2 lb. (+20)
	(models 8A, 8E, 8F, T-8F)	. = (. = -)
110.	Starter, Righter engine ring model A-1 (Righter instln. dwg. 10600) (models 8, 8A, 8C, 8D only)	7 lb. (-35)
111.	Two 15 gal. bladder type wing fuel cells (models with all metal	9 lb. (+18)
111.	wings - 8A, 8E, 8F, T-8F)	<i>y</i> 10. (110)
112.	One 15 gal bladder type wing fuel cell in right wing (models with all	5 lb. (+18)
	metal wings - 8A, 8E, 8F)	
113.	Modified engine cowling, Luscombe dwg. 58740	
114.	Carburetor air heater per Luscombe dwg. 09607, Rev. C.	No weight change
	(models 8A, 8E, 8F, T-8F). Not required on Continental injector engines.	
115.	One 12.5 gal. metal wing tank (models with all metal wings, 8A, 8E)	10 lb. (+20)
116.	Center baffle cowl in accordance with Luscombe dwg. 58739-4	No weight change
	(required with propeller items 4(c) and 5 and engine item 126.H.(2)	
117.	Starter, Delco-Remy 1109656 (models 8E, 8F, T-8F)	16 lb. (-22)
118.	Fram oil filter, Fram instln. sheet No. 61517 (models 8A, 8E)	5 lb. (0)
119.	Blast tube instln. (Luscombe dwg. 481415)	No weight change
120.	Cowl assembly for model T-8F with Continental C-90-12FJ engine	No weight change
	(Luscombe dwg. 081411)	
121.	Injector fuel system instln. (model T-8F only)	No weight change
	(a) Luscombe dwg. 081413	
	(b) Luscombe dwg. 081425	
122.	Modified engine cowl, dwg. 48720)	
123.	Swing-over engine mount per Luscombe dwg. 581268, installed per	No weight change
	Luscombe dwg. 581267 (models 8A, 8C, 8D, 8E, 8F, T-8F)	
124.	Pressure vent fuel cap (Luscombe dwg. 486021) required for fuselage	No weight change
	tank. Model 8A airplanes with Wally Timm wing fuel tanks must also have	
	Luscombe pressure cap on both main and wing tanks unless equipped with	
	injector engines.	
<u>5</u> /125.	Engine shielding	2 lb. (-34)
<u>6</u> /126.	Engines (not eligible for original certification with single ignition engines)	
	A. Model 8 (Continental, per Engine Spec. No. 190)	(-32)
	(1) A-50-2	+ 6 lb.
	(2) A-50-3 or A-50-8	+10 lb.
	(3) A-50-4	+ 3 lb. (-32)
	(4) A-50-5 or A-50-9	+13 lb.
	(5) A-50-6	+16 lb.
	(6) A-50-7	No weight change
	B. Model 8A (Continental, per Engine Spec. No. 205)	(-32)
	(1) A-65-1J - engine limits same as for A-65-1	
	(2) A-65-3 or A-65-3J (engine limits for all operations,	+10 lb.
	2300 r.p.m. 65 hp.)	
	(3) A-65-6 or A-65-6J (engine limits same as (2)	+13 lb.
	(4) A-65-7 or A-65-7J (engine limits same as (2)	No weight change
	(5) A-65-8, A-65-8F, A-65-8J or A-65-8FJ (injector engines equipped	+10 lb.
	with high model A injector) engine limits same as (2)	
	(6) A-65-9, A-65-9F, A-65-9J or A-65-9FJ (injector engines equipped	+13 lb.
	with high model A injector) engine limits same as (2)	• •
	C. <u>Model 8B</u> (Lycoming, per Engine Spec. No. 210) (-33)	
	(1) O-145-B2	+11 lb.
	(2) O-145-B3	+14 lb.
	(-) = 2	

	D. Model 8C (Continental per Engine Spec. No. 213) (1) A-75-9J (2) A-75-9 (with item 102 or 107 only) (3) A-75-8 (with item 102 or 107 only) (4) A-75-6 (with item 102 or 107 only)	(-32) + 3 lb. + 3 lb. No weight change + 3 lb.
	E. <u>Model 8D</u> (Continental per Engine Spec. No. 213) (1) A-75-8 (2) A-75-9 or A-75-9J	(-32) No weight change + 3 lb.
	 F. Model 8E (Continental per Engine Spec. No. 233) (1) C-85-12F (2) C-85-8F G. Model 8F (Continental per Engine Spec. No. 252) 	No weight change - 2 lb. (-32)
	(1) C-90-8F	- 4 lb. (-32)
	H. Model T-8F (Continental per Engine Spec. No. 252) (1) C-90-8F	
	 (2) C-90-12FJ (items 4(c), 119, 120, 121 required) When this engine and two tanks are installed, placard panel: "1. Use left tank for takeoff and until at least three-fourths fuel is expended. 2. Use right tank until expended. 	No weight change
<u>7</u> /127.	3. Use left tank thereafter." Engine mount per dwg. 48147 (for engines not incorporating integral	No weight change
<u>8</u> /128.	rubber shocks) Hummer starter, model X (models 8A, 8B, 8C, 8D only) Engine mount tubes from upper engine attach points to lower firewall attach point must be 5/8 x .035	12 lb. (+ 4)
<u>9</u> /129. <u>10</u> /130.	Starter, Eclipse type 635 model 3	18 lb. (-22)
	Gear and Floats 3-in. wheels (Goodyear 3LNBM) with 16 x 7-3 tires	21 lb. (+ 3)
<u>12</u> /203.	Tail skid Float installation - Edo 60-1320, 170 lb.	+109 lb. (+25)
<u>13</u> /204.	(Including water rudder and auxiliary fin). Installation in accordance with Luscombe dwg. 08732C for 8A, 8E, 8F, and dwg. 58725 for 8C, 8D. Following is applicable to this installation: (a) Rear strut float attachment fittings and fuselage frame reinforcements at fuselage station 4 must conform to Luscombe dwg. 58730C (b) Placard required: (1) On fuselage skin over hoisting lugs: "Spreader-bar must be used during hoisting."	+109 10. (+23)
<u>14</u> /205.	Tail wheel assemblies (a) Luscombe, 3 in. (b) Universal Alloy G-4 or GLD-4 or GLD-19	+ 2 lb. (+179) + 4 lb. (+181)
	 (c) Luscombe, 6 in. (dwg. 48338) (d) Heath G1A, 6 in., steerable (e) Scott 3-24-B, 6 x 2.00, steerable (f) Maule SFS-1-4 or SAFS-14 	+ 4 lb. (+181) 6 lb. (+183) 6 lb. (+183)
	(g) Decker D-501, steerable. Installation requires modified rudder in accordance with either (1) or (2) or NOTE 7.	6 lb. (+183)
	(h) Maule SFS-1-4-P8	7 lb. (+183)

15/206. Wheels (Silflex cantilever landing gear instln. moves the location (+3)of the main wheels 2 in. forward resulting in a location from datum of +1. See item 213 for Silflex landing gear). (a) 3 in. with brakes (Goodyear 3LMBM) and Use act. wt. change (1) 16 x 7-3 tires (4-ply) (2) 18 x 8-3 tires (4-ply) (b) 6.00-6 with brakes (Shinn 6C5B) and 4-ply tires Use act. wt. change (c) 6.00-6 (Cleveland model 6.00 DMB) with 6.00-6 4-ply rating Use act. wt. change tire casing and regular tube Wheel assembly No. D48500 Brake assembly No. C7000 (d) 6.00-6 (Goodyear model L6MBD) with 6.00-6 4-ply rating tire Use act. wt. change casing and regular tube. Wheel assembly No. 511413M Brake assembly No. 511254A (e) 6.00-6 (Goodrich, formerly Hayes model 600M) with Use act. wt. change 6.00-6 4-ply rating tire casing and regular tube. Wheel assembly No. D-3-47MD Brake assembly No. D-2-129 (f) 6.00-6 (Goodrich, formerly Hayes model 609M) with Use act. wt. change 6.00-4 4-ply rating tire casing and regular tube Wheel assembly No. D3-584 Brake assembly No. D-2-129 (g) 6.00-6 (Goodrich, model 610M) with 6.00-6 4-ply Use act. wt. change rating tire casing and regular tube Wheel assembly No. D-3-604-M Brake assembly No. D-2-129 (h) 6.00-6 (Goodyear model C16HBM) castering, with +34 lb. (+ 1) 6.00-6 4-ply rating tire casing and regular tube Wheel and brake assembly No. 266Ax36-15 & -16. Instln. must conform to Luscombe dwg. SK4206 and Goodyear dwg. 280Ax20. <u>16</u>/207. Parking brake Wheel streamlines (old gear) 17/208. 10 lb. (+ 3) (with Silflex gear location) 10 lb. (+ 1) 18/209. Skis (eligible on any airplane of these models provided the Use act. wt. change propeller installation meets the minimum ground clearance. The maximum weight for the skiplane will be the same as for the corresponding landplane or that shown in parenthesis after each ski model, whichever is less) (a) Marston MFS-1600 (max. 1600 lb.) (b) Jacobsen (or Escanaba) EAS-100 (max. 1200 lb.) (c) Heath 655 (max. 1310 lb.) (d) Air Transport 1220-480 (max. 1220 lb.) (e) Air Transport 1460-580 (max. 1460 lb.) (f) Federal 8A-1 (max. 1200 lb.) (g) Federal 8C-1 (max. 1400 lb.) (h) Marston MFS-1200 (max. 1200 lb.) (i) Federal SA-2 (max. 1400 lb.) (j) Federal SC-2 (max. 1650 lb.) (k) Heath 725 (max. 1450 lb.) (l) Richards 1-B (max. 2220 lb.) (m)Call S2, S6 or S7 installed per Call Aircraft Co. dwg. 1006, Change A, and 1014, Change A. (S2 max. wt. 1800 lb., S6 max. wt. 1450 lb., S7 max. wt. 1850 lb.) (n) Federal A1500, instln. dwg. 11G169 (o) Federal A1500A, instln. dwg. 11G169 (p) Federal A1850, instln. dwg. 11G169 (q) Federal A2000, instln. dwg. 11G169 (r) Federal A2000A, instln. dwg. 11G169 (s) Federal CA1850-6, instln. dwg. 11G169

<u>19</u> /210.	Decker wheel assy. P/N P1001 in kit form, 2 per airplane	12 lb.
	(old gear)	(+3)
	with Silflex gear location	(+1)
211.	Brake pedal, R.H. instln. (Luscombe dwg. 485069)	1 lb. (-12)
212.	Float instln., Edo 92-1400 water rudder and auxiliary fin.	178 lb. (+20)
	Instln. shall conform to Luscombe dwg. 08732 for model 8A,	
	dwg. 08731 for model 8E and dwg. 08741 for model 8F. The following	
	is applicable to this instln.:	
	(a) Rear strut float attachment fittings and fuselage frame	
	reinforcements at fuselage station 4 must conform to	
	Luscombe dwg. 58730-C.	
	(b) Placards and markings required:	
	(1) Red radial line to be inscribed on oil temperature gauge	
	at 220°F. (model 8E only).	
	(2) On fuselage skin near hoisting lugs add placard:	
	"Spreader-bar must be used during hoisting."	
	(c) Fixed elevator tab 58401-6, item 606, must be added to	
	right-hand elevator and bent down 30°; (model 8A only).	
212		No weight shapes
213	Luscombe Silflex cantilever landing gear assy. No. 083310. This	No weight change
	installation moves the location of the main landing gear wheels 2 in.	
	forward resulting in a location from datum of (+1). This landing	
	gear is not interchangeable with the original landing gear but may be	
	used on all Luscombe model 8 airplanes S/N 5920 and up.	
Electrica	<u>l Equipment</u>	
	Landing lights	
_	(a) One Grimes ST-750 (item 303(b) or (c) with item 305(b) required)	5 lb. (+12)
	(b) Two G.E. lamps No. 4509 (on all metal wing only)	4 lb. (+ 4)
	(item 314 with 305(b), (c) or (d) required)	,
<u>21</u> /303.	Generator, wind-driven	
<u>21</u> /303.	(a) 6 v. Air-Lite	8 lb. (+ 3)
	(b) 12 v. Air-Lite	11 lb. (+ 3)
	(c) 12 v. Air Associates	8 lb. (+ 3)
305.	Battery installation	0 10. (+ 3)
303.	(a) 6 v. 10 a. hr. (Exide 3-AC-7-1)	14 lb. (-15) or 11 lb. (+55)
	(a) 6 V. 10 a. III. (Exide 5-AC-7-1) (b) 12 v. 10 a. hr. (Exide 6-AC-7-1)	19 lb. (+55)
	(c) 12 v. 10 a. in. (Exide 6-AC-7-1)	
	(d) 12 v. 14 a. hr. (5 hour rate)	24 lb. (+55)
		17 lb. (+52)
200	(e) 12 v. 25 a. hr. (Willard AW 12-25)	21 lb. (-20)
309.	Lear two-way radio instln. per dwg. 48167 and 28157	20 lb.
314.	Generator, engine-drive	10 lb (22)
	(a) Delco-Remy model 1101876, P/N 40435 (models 8E, 8F, T-8F)	10 lb. (-22)
Interior I	Equipment .	
401.	Luscombe FAA Approved Airplane Flight Manual relative to the	
	model T-8F crop sprayer (restricted) and model T-8F (standard)	
	(required with item 602 in the restricted category - see NOTE 8)	
22/402.	Soundproofing	8 lb. (+27)
<u>23</u> /403.	Cabin heater	2 lb. (-22)
		` '
Miscella	neous (not listed above)	
601.	Weight shifter device, model CGS-2B, manufactured by	
	Aircraft Devices Co., Wings Field, Ambler, Pa.	

(models 8, 8A, 8B, 8C, 8D)

The following is applicable to this item:

- (a) Install per Aircraft Devices Co., dwg. 7025 and placard in accordance with dwg. 355B.
- (b) If fuselage fuel tank is installed, modify tank per dwg. 3048, placard per dwg. 367 and change fuel filler cap capacity markings from 14 gal. to 12 gal.

(c) The weight of the instln. is 20 lb.; with weight in forward position arm is (+52) and with weight in aft position arm is (+126).

602. Crop spraying equipment per Luscombe dwg. 088200 Use act. wt. change

(see NOTE 8 for restrictions)

603. Flap, Luscombe dwg. 082300, Change A

Use act. wt. change

(model T-8F, metal wing only)

604. Flap in accordance with Luscombe instln. Dwg. 082301, Change A, or Luscombe kit instln. dwg 582302, Change A. All model 8 series Use act. wt. change

with metal wings eligible. Add placard to instrument panel: "Do not lower flaps above 90 m.p.h. TIAS."

605. Corrosion proofing (Luscombe Report 915)

606. Elevator tab, dwg. 58700, Change F

(deflection 30° downward except when indicated otherwise)

24/607. Goodrich abrasion shoes - stabilizer

5 lb. (+153)

- NOTE 1. Current weight and balance report together with list of equipment included in certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification.
- NOTE 2. The following placards must be installed on the instrument panel or other location as noted below:
 - (a) When item 101 is installed: "Auxiliary fuel not to be used as reserve."
 - (b) For model T-8F: "Solo from front seat only."
 - (c) When item 126.H.(1) and two tanks are installed:
 - "1. Use left tank for take-off and until at least three-fourths fuel is expended.
 - 2. Use right tank until expended.
 - 3. Use left tank thereafter."
 - (d) Deleted.
 - (e) When item 204 or 212 is installed, following placard on fuselage skin near hoisting lugs: "Spreader-bar must be used during hoisting."
 - (f) When item 604 is installed: "Do not lower flaps above 90 m.p.h. TIAS."
- NOTE 3. Serial Nos. 801 thru 832, model 8, 8A, 8B or 8C, eligible as above except as follows:

Baggage 40 lb.
Maximum weight 1130 lb.

C.G. range (+13.6) to (+17.9)

Empty wt. C.G. range (+11.1) to (+13.1) (with item 105 fuel tank) When empty weight C.G. falls within pertinent range, computation of critical fore and aft C.G. positions is unnecessary. Ranges are not valid for non-standard arrangements except as noted.

These serial numbers also eligible at increased maximum weight, baggage capacity, C.G. range, as for Nos. 833 and up when reinforcement at front spar strut point extended as indicated on dwg. 28212, Change B, and dwg. 08203, Change C, and when 3/16 in. rivets are used as part 18030. Permanent trailing edge tab on elevator required per dwg. 58401, Change A.

NOTE 4. Model 8C, S/N 1804 and up, eligible for increased maximum weight with following limitations:

Wing covering should be either intermediate or grade "A" fabric.

Maximum weight

Landplane 1310 lb. Seaplane (when equipped with special 1375 lb.

engine cooling baffles)

C.G. range

Landplane (+13.6) to (+19.0) Seaplane (+14.5) to (+17.6)

Empty wt. C.G. range Forward limits:

I of ward minus.		
<u>Landplane</u>	<u>Seaplane</u>	Fuel Tanks Installed
(+12.3)	(+13.5)	Item 102, or 101 and 102
(+11.3)	(+12.6)	Item 105, or 101 and 105
Rear limits:		
Landplane	Seaplane	Fuel Tanks Installed
(+17.2)	(+15.1)	Item 102
(+16.3)	(+14.2)	Item 101 and 102
(+14.5)	(+12.6)	Item 105
(+13.5)	(*)	Items 101 and 105

(*each case must be checked separately when items 101 and 105 are installed in the seaplane).

When empty weight C.G. falls within pertinent range, computation of critical fore and aft

C.G. positions is unnecessary. Ranges are not valid for non-standard arrangements except as noted.

Propeller limits (a) Static r.p.m.

Landplane - maximum 2450, minimum 2060 Seaplane - Maximum 2325, minimum 2225 No additional tolerance permitted.

(b) Diameter - not over 72 in., not under 70 in.

Airspeed limits Landplane

Engine limits

Level flight or climb
Glide or dive

Seaplane
Level flight or climb
Glide or dive

Level flight or climb
Glide or dive

For all operations

115 m.p.h., True Ind.
145 m.p.h., True Ind.
145 m.p.h., True Ind.
2600 r.p.m. (75 hp.)

Model 8C, S/N 1803 and below, also eligible at the increased maximum weight contingent upon compliance with the following provisions:

- (a) Limitations as shown above for propeller, engine, C.G. and airspeeds.
- (b) Addition of reinforcement part 481022 ahead of tail tray, as shown on dwg. 08043, Change P.
- (c) Change oleo fluid to Univis 90, SAE 20W, Mobilube 90 or equivalent and include the following placard on the arm of the landing gear adjacent to the oleo: "Fill oleo strut with SAE 20W, Univis 90 or Mobilube 90 oil."
- (d) Installation of landing gear shackle hinge pin heat treated to 125,000 lb. per sq. in.
- (e) Wing covering should be with intermediate or grade "A" fabric.
- NOTE 5. Elevator trim tab, dwg. 48589, may replace bungee with the following C.G. range for models 8A (1200 lb. max. wt. see NOTE 6), 8B, 8C: (+13.6) to (+18.75) (weight change negligible).
- NOTE 6. Model 8A aircraft are also eligible at 1260 lb. max. wt. with control surface travel and C.G. range limited as follows:

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Elevators
                              25°
                                                     26°
                       Up
                                          Down
Rudder
                       Right 28°
                                          Left
                                                     30^{\circ}
Ailerons
                       Up
                              25°
                                          Down
                                                     25°
Elevator tab
                              14°
                                          Down
                                                     28°
                       Up
                              10°
  or (optional)
                                          Down
                                                     33°
                       Up
C.G. range
                       (+13.6) to (+18.8)
Empty wt. C.G. range
   Forward limits
                      (+10.0) (with item 105, or 101 and 105, or 105 and 106)
                      (+12.3) (with item 102 or 112)
                       (+12.2) (with item 115)
   Rear limits
                       (+15.3) (with item 105)
                       (+14.2) (with item 101 or 105)
                       (+15.0) (with item 105 or 106)
                      (+17.5) (with item 102)
                      (+16.7) (with item 112)
                       (+16.4) (with item 115)
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When empty wt. C.G. falls within the pertinent range, computation of critical fore and aft C.G. positions is unnecessary. Ranges are not valid for non-standard arrangements except as noted.

NOTE 7. The following rudders are also approved for models 8 thru 8E, landplane or seaplane:

- (1) The original rudder assembly, dwg. 08403) modified in accordance with Luscombe dwg. SK-5170.
- (2) The "square" rudder assembly in accordance with Luscombe dwg. 08492.

NOTE 8. Model T-8F aircraft approved for a maximum weight of 1470 lb. In the restricted category prior to October 11, 1950, as a sprayer and converted in accordance with Luscombe dwg. 088200 may continue to be operated at that weight. Such aircraft must be operated and converted in accordance with item 401 (Luscombe FAA Approved Flight Manual). Required equipment in this configuration: items 4(b), 113, 114, 205, 206(g), 401 and 602. All original certification in the restricted category after October 11, 1950, must be in accordance with Part 8 of the Civil Air Regulations effective October 11, 1950.