

OWNER'S HANDBOOK

of OPERATION

for 65 HORSEPOWER

STANDARD and SPECIAL

Silvaires

Reprint of Owners Handbook by

Silvaire Aircraft

Fort Collins, Colorado

PRINTED IN U. S. A.

Dear Friend:

You are now the owner of one of the best lightplanes made by American industry. Behind the plane you have is nearly 15 years of experience in the engineering and production of several thousand all-metal lightplanes. Luscombe pioneered the all-metal lightplane field and has been the leader ever since. We believe that the years of experience behind your *SILVAIRE* are responsible for its high degree of strength, economy, durability, performance and safety.

At this time we should like to make a few suggestions which we believe will enable you to obtain the greatest satisfaction from your new *SILVAIRE*.

First, fly safely. The *SILVAIRE* is well-built and can take it, but it is only as safe as the pilot who flies it.

Second, take care of your *SILVAIRE*. With just reasonable and ordinary care it will give you many years of satisfactory service and enjoyable pleasure, and its all-metal construction gives it a resale or trade-in value which will remain high.

Third, remember that our Service Department stands ready to answer your requests for information and furnish you advice on parts, construction, maintenance and operation. Also there is a widely spread network of Luscombe *SILVAIRE* distributors and dealers whose maintenance and overhaul facilities are for your convenience and use.

Fourth, we want you to know we will appreciate any comments you send us about the *SILVAIRE*. We are trying continually to improve our product, and many features of our planes are the result of suggestions made by customers.

In closing I would like to state that the goal of all our efforts is to build for our customers a safe plane with high performance, good workmanship, and pleasing appearance at a low price that the average person can afford.

I hope that the following information in this book will give you valuable hints on your *SILVAIRE* and if you are in the vicinity of our plant, please visit us and let us show you how *SILVAIRES* are being built.

STANDARD and SPECIAL SILVAIRE MODEL 8-A

Specifications and Performance

	STANDARD	SPECIAL
Engine Rating.....	65 horsepower @ 2300 rpm.....	65 horsepower @ 2300 rpm.
Gross Weight.....	1260 pounds.....	1260 pounds
Empty Weight.....	750 pounds.....	776 pounds
Wing Span.....	35 feet.....	35 feet
Wing Chord.....	50 inches.....	50 inches
Overall Length.....	20 feet.....	20 feet
Overall Height.....	6 feet 3 inches.....	6 feet 3 inches
Propeller Diameter.....	76 inches.....	76 inches
Baggage Capacity.....	55 pounds.....	75 pounds
Power Loading.....	19.4 pounds per h.p.....	19.4 pounds per h.p.
Wing Loading.....	9 pounds per sq. ft.....	9 pounds per sq. ft.
Maximum Speed.....	115 mph.....	115 mph.
Cruising Speed.....	105 mph.....	105 mph.
Stalling Speed.....	45 mph (T.I.A.S.).....	45 mph (T.I.A.S.)
Take-off Run.....	625 feet (minimum).....	625 feet (minimum)
Landing Roll.....	500 feet (minimum).....	500 feet (minimum)
Rate of Climb.....	800 feet per min. (sea level).....	800 feet per min. (sea level)
Speed for Best Rate Climb.....	72 mph.....	72 mph.
Cruising Range.....	300 miles.....	500 miles
Service Ceiling.....	15,000 feet.....	15,000 feet
Fuel Consumption-Cruising.....	4.5 gals. per hour.....	4.5 gals. per hour
Fuel Capacity.....	14 gals. or 12.5 gals.....	25 gallons
Oil Capacity.....	4 quarts.....	4 quarts
Fuel Octane Rating.....	73 (minimum).....	73 (minimum)
Tire Pressure.....	18 pounds.....	18 pounds

DESCRIPTION

The Standard and Special *SILVAIRES* are completely all-metal two-place high wing monoplanes powered with Continental A65-8 four-cylinder horizontally-opposed air-cooled 65 horsepower engines. The wings of the *SILVAIRE* are all-metal, with stressed skin, and a single strut. The engine is carburetor-equipped with dual ignition and primer. A 2 blade wooden fixed pitch propeller is supplied as standard equipment.

Positive action mechanical brakes control each wheel separately. Brakes are operated by depressing either or both of the heel pedals beneath the rudder pedals. The parking brake control, operated by hand, is located under the left side of the instrument panel. The wide tread *SILVAIRE* landing gear, equipped with a hydraulic oleo and a coil steel spring provides for easy ground maneuvering. A steerable, full-swivel tail-wheel provides for additional ease while maneuvering on the ground. Dual stick-type controls are provided and the control stick on the right side is removable for passenger comfort.

Adequate ventilation has been arranged by providing cabin fresh air snap-vents and left-hand door window which may be opened. Cabin heat is also provided (see figure 1 for location of control). The throttle control, trim tab adjustment crank, fuel shut-off valve and electrical panel are centrally located so as to be easily accessible from either seat. The airplane is supplied with individual seat belts (each of which is approved for two persons), and a shock mounted instrument panel for engine and flight instruments. Engine and flight instruments include (see figure 1) oil pressure and temperature gauges, tachometer, air speed indicator, altimeter, and compass.

OPERATING PROCEDURES

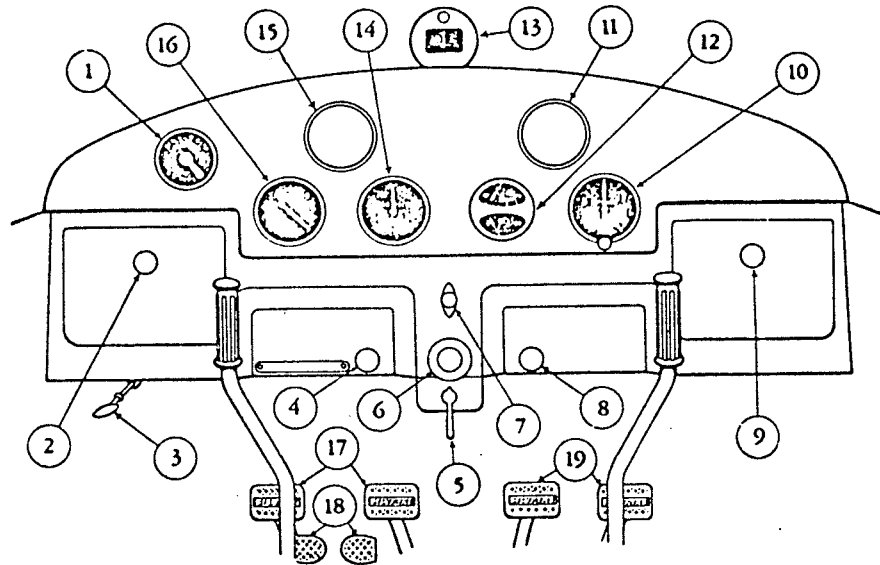
STARTING: (See figure 1 for location of controls)

1. Set fuel valve indicator to either **RIGHT TANK** or **LEFT TANK** for the Special and for the Standard set fuel valve to **ON**.
2. Close **THROTTLE**.
3. Set brakes.
4. Prime engine if it is cold. Two or three strokes of the **PRIMER** is usually sufficient.
5. Turn magneto switch to **BOTH**. Announce switch is on to assistant.
6. Have propeller pulled through by assistant.

CARBURETOR AIR HEATER:

1. Heat is off when the knob is in, and on when the knob is out (see figure 1).

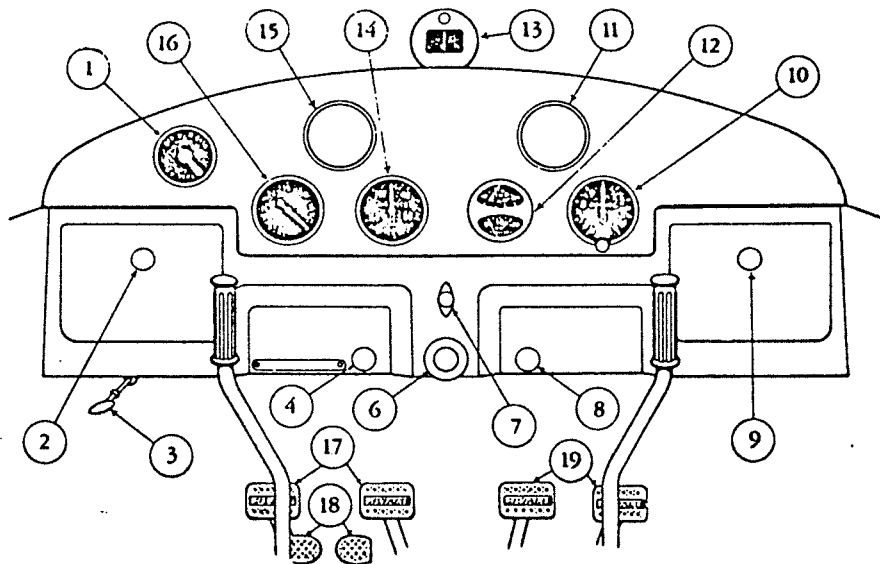
SPECIAL



1. Magneto Switch
2. Glove Compartment
3. Parking Brake
4. Carburetor Heat Control
5. Fuel Selector Control (Special only)
6. Throttle
7. Primer
8. Cabin Heat Control
9. Glove Compartment
10. Altimeter

11. Space for additional instrument
12. Oil Temp. and Pressure Gauges
13. Compass
14. Tachometer
15. Space for additional instrument
16. Air Speed Indicator
17. Left Side Rudder Pedals
18. Left and Right Brake Pedals
19. Right Side Rudder Pedals

STANDARD



2. Use carburetor heat full on during landing approach, during any closed throttle maneuvers, and when carburetor icing conditions exist. A slight drop in rpms and engine roughness generally denotes icing conditions.
3. Ice will form when humidity and temperature are favorable and since it takes but a short time for ice to form it is recommended that carburetor heat be always turned FULL ON when taking off or landing.

FUEL SYSTEM: (Standard)

1. The fuel selector valve located on the left kick panel (just under the instrument panel) must be turned to ON position during all operations.
2. Direct reading gas gauge for fuselage type fuel tank (14 gals.) is located on the back wall of the cabin just above seat back. For wing-type tank (12.5 gals.), the gauge is located in the cabin, above the right-hand door.

FUEL SYSTEM: (Special)

1. The fuel selector valve must be either RIGHT TANK or LEFT TANK during all operations. (*see figure 1 for location of fuel valve*).
2. Capacity of fuel tanks is marked on the selector valve placard and on the C.A.A. Operations Record form.
3. Direct reading fuel quantity gauges are located above the cabin doors.

CABIN HEAT:

1. Pull the knob out for HEAT ON; push in for HEAT OFF.

OIL CHECK:

1. Oil level is checked by noting level on the bayonet gauge attached to the oil filler cap.
2. Access to the oil filler cap is provided by opening right side of the engine cowl.
3. Capacity 4.5 qts. Minimum operating level 2.5 qts.
4. Use SAE 40-50 for summer operation; SAE 20-30 for winter operation.

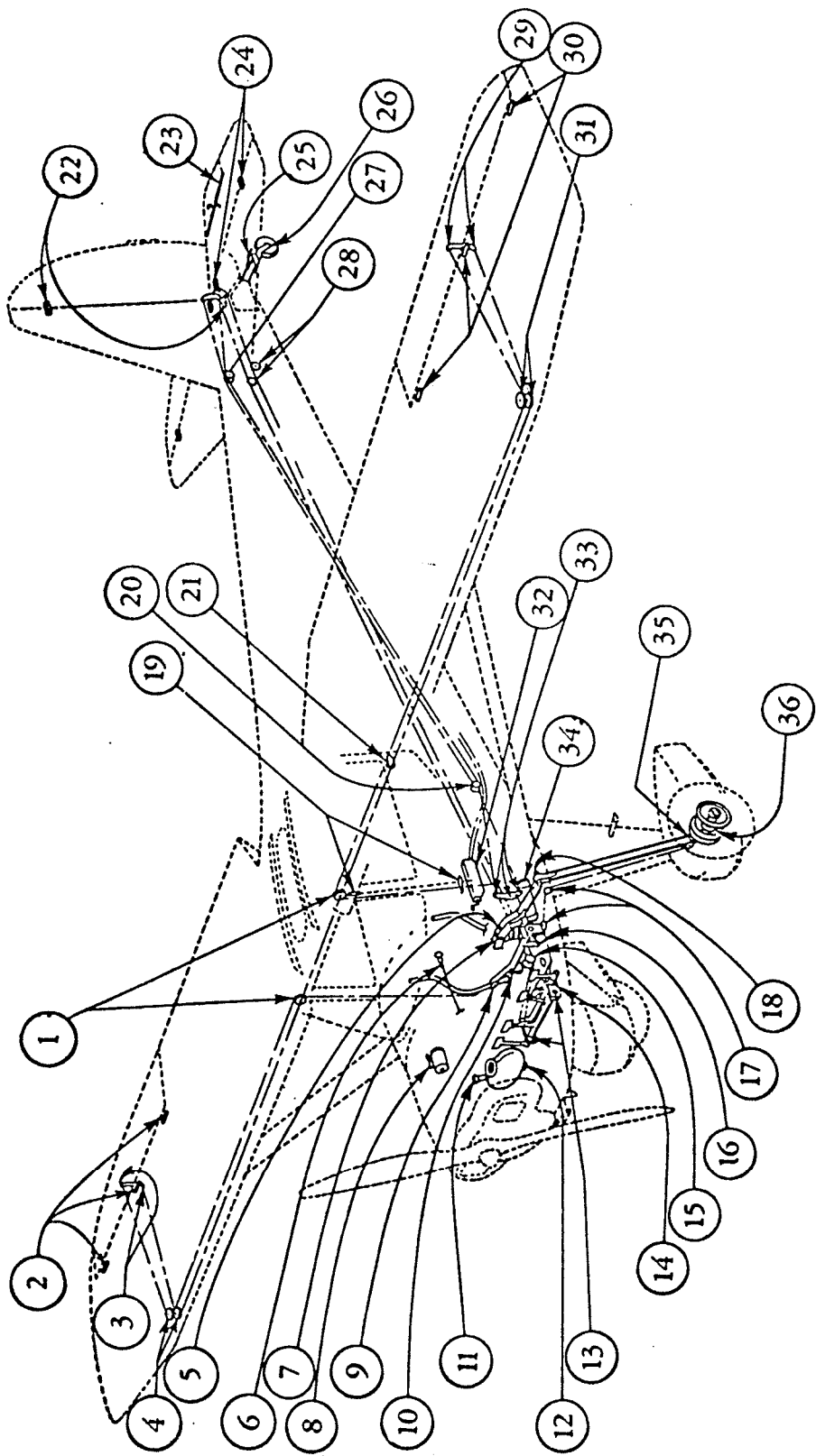
OPERATING RECOMMENDATIONS

TACHOMETER:

1. Maximum RPM — 2300 (Radial red line on instrument).
2. Cruising RPM — 2150.
3. Idle RPM — 550.

LUBRICATION CHART

LUSCOMBE SILVAIRE MODEL 8A



	Lubricant	Hrs.		Lubricant	Hrs.
1. Upper Aileron Cable Pulleys.....	AN-O-6	100	18. Landing Gear Hinge Pin, (1 Left, 1 Right)	AN-G-3	25
2. Aileron Hinge Bearings.....	AN-O-6	25	19. Door Hinges, (2 Left, 2 Right)	AN-O-6	25
3. Cable Clevis Pins.....	AN-O-6	25	20. Elevator Cable Pulleys.....	AN-O-6	100
4. Aileron Cable Pulleys.....	AN-O-6	100	21. Door Catch, (1 Left, 1 Right)	AN-O-6	25
5. Oleo Cylinder (See Note Below)	AN-O-6	100	22. Rudder Hinge Bearings.....	AN-O-6	25
6. Instrument Panel Controls.....	AN-O-6	25	23. Trim Tab Hinge.....	AN-O-6	25
7. Landing Gear Center Bolt.....	AN-O-6	25	24. Elevator Hinge Bearings, (2 Left, 2 Right)	AN-O-6	25
8. Starter Shift Arm (Model 8E only)	AN-O-6	25	25. Tail Wheel Swivel.....	AN-G-3	25
9. Control Stick Bearings, (Left and Right)	AN-O-6	25	26. Tail Wheel Bearing.....	AN-G-5	100
10. Control Stick Support Bearings, (Left and Right)	AN-O-6	25	27. Elevator Cable Pulleys.....	AN-O-6	100
11. Engine Oil Filler.....	AN-O-6	25	28. Rudder Cable Pulleys.....	AN-O-6	100
(Check before each Flight)	AN-O-8		29. Cable Clevis Pins.....	AN-O-6	25
(Drain & Refill every 25 hours).			30. Aileron Hinge Bearings.....	AN-O-6	25
(See chart for Grade).			31. Aileron Cable Pulleys.....	AN-O-6	100
12. Engine Oil Drain.....	AN-O-6	25	32. Tab Pulley and Mechanism.....	AN-O-6	100
13. Rudder Pedal Bearings, (2 Left, 2 Right)	AN-O-6	25	33. Elevator Bell Crank.....	AN-O-6	25
14. Brake Pedals.....	AN-O-6	25	34. Lower Aileron Cable Pulleys (1 Left, 1 Right)	AN-O-6	100
15. Rudder Cable Pulleys.....	AN-O-6	100	35. Brake Actuating Arms (1 Left, 1 Right)	AN-O-6	25
16. Elevator Push-Pull Tube.....	AN-O-6	25	36. Landing Gear Wheel Bearings, (Remove, Clean, Repack)	M AN-G-5	100
17. Brake Cable Pulleys (6).....	AN-O-6	100			

ENGINE OIL CHART			
Outside Air Temperature	Above 100 F.	100 to 70 F.	70 to 32 F. Below 32 F.
Grade of Oil.....	S.A.E. 50	S.A.E. 40	S.A.E. 30 S.A.E. 20

OLEO CYLINDER — To fill, remove plug in top of cylinder. With all wheels on ground fill unit to level marked on gauge with "Mobilube 90" or equivalent.

STARTER, GENERATOR, MAGNETOS — These have oil sealed bearings and are factory serviced.

FIXTURES, LINKAGE, "Etc." — Should be kept clean and oiled moderately with AN-O-6.

OIL PRESSURE:

1. Maximum Oil Pressure — 48 lbs. per sq. inch.
2. Normal Operating Pressure — 38 to 40 lbs. per sq. inch.
3. Minimum Operating Pressure — 25 lbs. per sq. inch.

OIL TEMPERATURE:

1. Maximum Oil Temperature — 220° F.
2. Normal Operating Temperature — 120° F. to 200° F.
3. Caution Operating Temperature — 40° F. to 120° F.

AIR SPEED:

1. Never exceed speed — 145 mph (T.I.A.S.) (red line).
2. Normal Operating Speeds — 45 to 105 mph (T.I.A.S.).

PERFORMANCE INFORMATION:

NOTE: True Indicated Airspeeds — Gross weight — sea level conditions are given.

1. Stalling Speed — 45 mph.
2. Take-Off Distance — 625 feet on a hard turf surface.
3. Landing Ground Roll — 500 feet hard turf surface.
4. Rate of Climb — 800 feet per minute at 72 miles per hour.
5. Due to reduced air density at higher altitudes wing lift and engine power are reduced with resulting performance reduction. Take-off and landing distances are increased and rate of climb reduced. For each 1,000 feet of increased altitude above sea level add 3% of Take-Off and Landing run.

Examples:

1. At 10,000 feet altitude add 3 x 10 or 30% to the sea level performance. Take-Off run, $30\% \times 625 = 107.5$, 625 plus 107.5 = 812.5. Landing distance, $30\% \times 500 = 150$, plus 150 = 650 feet.
2. At 5,000 feet altitude add 15% to the sea level performance. Take-Off run — $15\% \times 625 = 93.7$, 625 plus 93.7 = 718.7 distance — $15\% \times 500 = 75$, 500 plus 75 = 575.

The above figures are arbitrary for normal conditions.

SERVICE HINTS

ENGINE COWL:

By a simple arrangement of cowl fasteners, access may be easily made to the engine for routine servicing. To open the cowl, turn each fastener on the cowl a quarter turn counter-clockwise with a coin, key, knife, or screw driver.

To remove the cowl assembly for engine overhaul it is necessary to remove the propeller bolts, lift the propeller off, and then remove the screws around the back part of the cowl at the firewall bulkhead. To completely remove the cowl only about 20 minutes are required.

INSPECTION COVERS:

Inspection covers on wings and fuselage are held in place by the clamping action of a metal strip and two screws. To remove an inspection cover first loosen the two screws and then slide the cover in either direction parallel to the line of the screws. The opposite end will drop free and the cover can then be slid off. To replace the cover reverse the procedure.

WINDSHIELD AND WINDOWS:

Use good quality soap, clean water, and clean soft cloths to clean these areas. Patented cleaners should be used cautiously, because of their possible solvent action on the plastic material* used in the construction of these parts.

CARE OF ALUMINUM

The manufacturers of modern metal airplanes use a high tensile strength, aluminum alloy.

These alloys are protected from corrosion by a coating of pure aluminum. They are known as "Alclad" and "Pureclad."

The natural oxidation of pure aluminum produces a film which is dull and lifeless in appearance. The original brilliance may be restored by the use of various polishes.

It is important to remember that the polishes and waxes used should be non-corrosive, non-toxic, and only mildly abrasive.

"Klad Polish," manufactured by the R. M. Hollingshead Corporation, has been especially formulated, to clean and polish this material. "Klad Polish," with a minimum effort, cleans and polishes in a single operation. It will restore the original brilliant lustre and enhance the beauty of your plane.

It is recommended that a coating of "Klad Wax" be applied, to preserve the polished finish and to help retard further oxidation. Frequent polishing operations may be reduced by periodic applications of "Klad Wax."

(*methyl methacrylate. Also known by the trade names of Plexiglas and Lucite)

COST ANALYSIS

[illegible]

FEDERAL AVIATION ADMINISTRATION

A-694
Revision 22
LUSCOMBE
(LARSEN LUSCOMBE)
8 8D
8A 8E
8B 8F
8C T-8F

December 1, 1969

AIRCRAFT SPECIFICATION NO. A-694

Type Certificate Holder Luscombe Aircraft Corporation
101 Administration Building
Peachtree DeKalb Airport
Atlanta, Georgia 32341

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 wt. C.G. range	Forward limits (+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.
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)).
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 (+19.0). When bungee is replaced by elevator 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 (With item 204)	Seaplane (With item 212)	Fuel Tank Installation
	<u>Forward Limits</u>			
	(+11.6)	(+14.0)	(+14.0)	Item 105, or 101 and 105 or 105 and 106.
	(+12.3)	(+14.7)	(+14.7)	Item 102 or 112.
	(+12.2)	(+14.4)	(+14.4)	Item 115.
	<u>Rear Limits</u>			
	(+14.8)	(+15.1)	(+14.4)	Item 105
	(+13.7)	(+14.2)	(+14.4)	Item 101 and 105.
	(+14.5)	(+14.9)	(+14.0)	Item 105 and 106.
	(+17.0)	(+17.0)	(+17.5)	Item 102.
	(+17.3)		(+16.7)	Item 112.
	(+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 high-angle-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	Up	29°	Down 27°
	Rudder	Right	32°	Left 32°
	Aileron	Up	25°	Down 25°
	Elevator tab (required for seaplane with item 212)	Up	14°	Down 28°
Serial Nos. eligible	833 and up (see NOTE 3 for S/N 801 thru 833)			
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 PCIM (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.			
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 (+19.0). When bungee is replaced with elevator trim tab (dwg. 48589) following range must be used: (+13.6) to (+18.8)			
Empty wt. C.G. range	<u>Forward limits</u>			
	(+11.6) with item 105, or 101 and 105.			
	(+12.3) with item 102 or 101 and 102.			

Empty wt. C.G. range	<u>Rear limits</u> (+14.8) with item 105. (+13.7) with items 101 and 105. (+17.0) with item 102. (+15.9) 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 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.		
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 (+19.0). When bungee is replaced with elevator 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	<u>Landplane</u>	<u>Seaplane</u>	<u>Fuel Tank Installation</u>
	<u>Forward limits</u>		
	(+11.6)	(+14.0)	Item 105, or 101 and 105, or 105 and 106
	(+12.3)	(+14.7)	Item 102, or 101 and 102
	<u>Rear limits</u>		
	(+14.8)	(+14.0)	Item 105
	(+13.7)	(*)	Items 101 and 105
	(+14.5)	(*)	Items 105 and 106
	(+17.0)	(+16.1)	Item 102
	(+15.9)	(*)	Items 101 and 102
	(*each case must be checked when item 101 or 106 is installed)		
	When empty weight C.G. range 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 available)		
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.)

Propeller limits Static r.p.m. at maximum permissible throttle setting (no additional tolerance permitted).
(Landplane) not over 2450, not under 2060.
(Seaplane) not over 2325, not under 2225.

Airspeed limits 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.

C.G. range (Landplane) (+13.6) to (+19.0)
(Seaplane) (+14.5) to (+17.6)

Empty wt. C.G. range

Landplane	Seaplane	Fuel Tank Installation
<u>Forward limits</u>		
(+12.3)	(+13.5)	Item 102, or 101 and 102
(+11.3)	(+12.6)	Item 105, or 101 and 105
<u>Rear limits</u>		
(+17.2)	(+15.1)	Item 102
(+16.3)	(+14.2)	Items 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 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.
(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>
	<u>Forward limits</u>		
	(+12.3)	(+13.3)	Items 102, or 109, or 111, or 115
	<u>Rear limits</u>		
	(+13.7)	(+13.3)	Items 102, or 109, or 111
	(+13.1)	(+13.3)	Item 115
	When empty weight C.G. range 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	Up 10°	Down 33°
	Elevator tab (seaplane)	Up 7°	Down 41°
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	<u>Landplane</u>	<u>Seaplane</u>	<u>Fuel Tank Installation</u>
	<u>Forward limits</u>		
	(+12.2)	(+13.8)	Item 109, or 102
	(+12.3)	(+13.9)	Item 111 or 112
	<u>Rear limits</u>		
	(+13.2)	(+15.5)	Item 102 or 109
	(+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)			
Control surface movements	Elevators	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	7°	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 wt. 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:

- 1/ Item 6 was formerly item 101.
- 2/ Item 101 was formerly item 201.
- 3/ Item 102 was formerly item 203.
- 4/ Item 103 was formerly item 204.
- 5/ Item 125 was formerly item 208.

Special Note: (con.)

- 6/ Item 126 was formerly item 302.
- 7/ Item 127 was formerly item 307.
- 8/ Item 128 was formerly item 312.
- 9/ Item 129 was formerly item 313.
- 10/ Item 201 was formerly item 102.
- 11/ Item 203 was formerly item 103.
- 12/ Item 204 was formerly item 151.
- 13/ Item 205 was formerly item 301.
- 14/ Item 206 was formerly item 303.
- 15/ Item 207 was formerly item 308.
- 16/ Item 208 was formerly item 310.
- 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.
- 21/ Item 402 was formerly item 209.
- 22/ Item 403 was formerly item 304.
- 23/ Item 607 was formerly item 210.

Propeller and Propeller Accessories

1. 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 following limits: 21 lb. (- 45)
 - Static r.p.m. at max. 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 A-65-8J, -8FJ, -3J, -7J, -9J and -9FJ engines with the following limits: 21 lb. (- 45)
 - Static r.p.m. at max. 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 following limits: 21 lb. (- 45)
 - Static r.p.m. at max. 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 max. 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 other McCauley 1A90-CF propeller which meets the following limits: 21 lb. (- 45)
 - Static r.p.m. at max. permissible throttle setting: not over 2190, not under 2090
 - No additional tolerance permitted.
 - Diameter: not over 71 in., not under 69.5 in.

Propeller and Propeller Accessories (con.)

2. (f) For model 8A seaplane with item 212 floats. Any 1A90-CF propeller which meets the following limits: 21 1b. (- 45)
 Static r.p.m. at max. 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 which meets the following limits: 21 1b. (- 45)
 Static r.p.m. at max. 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) 18 1b. (- 45)
 Hub Model - HA-12UO or HA-12UF
 Blades - 7414 to 6814 or 7214M to 6814M
 Eligible at diameter and static 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 1b. (- 45)
 Static r.p.m. at max. 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 21 1b. (- 45)
 or any other 1B90-CM propeller which meets the following limits:
 (1) For model 8F seaplane
 Static r.p.m. at max. permissible throttle setting:
 not over 2210, not under 2110
 No additional tolerance permitted.
 (2) For model T-8F landplane
 Static r.p.m. at max. 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 21 1b. (- 45)
 or any other 1B90-CM propeller which meets the following limits:
 Static r.p.m. at max. 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 fixed pitch wood propeller which is eligible for the engine power and speed and meets the following limits: 13 1b. (- 45)
 Static r.p.m. at max. permissible throttle setting:
 not over 2125, not under 2025
 No additional tolerance permitted.
 Diameter: not over 72.5 in., not under 71 in.
 (Engine item 116 required with this installation)
- 1/ 6. Propeller - wood (fixed or adjustable pitch) 17 1b. (- 45)
 (Models 8A, 8B, 8C, 8D, 8E and 8F)

Engines and Engine Accessories - Fuel and Oil Systems

- 2/101. Five gal. auxiliary fuel tank installation 14 1b. (+ 40)
 Placard required on instrument panel: "Auxiliary fuel not to be used as reserve."

Engines and Engine Accessories - Fuel and Oil System (con.)

<u>3/</u> 102.	Two 11.5 gal. metal wing fuel tanks (+20) and revised fuel system replacing 14 gal. fuselage tank system (models 8, 8A, 8B, 8C, 8E and 8F)	+ 13 lb. (+ 14)
<u>4/</u> 103.	Exhaust mufflers	
	(a) Twin mufflers E.D.L. type A4 (models 8A, 8C, 8D only)	9 lb. (- 22)
	(b) Aero muffler type A3A (model 8B only)	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 system per Luscombe dwg. 086149 (models 8E, 8F, T-8F)	
	(e) Davis Silencer Co. model D-85-90-L for Luscombe 8E, 8F, T-8F, installed per Davis Silencer Co. dwg. D-65-90L.	3 lb. (- 20)
	(f) Davis Silencer Co. model D-65-75 for Luscombe 8, 8A, 8C, 8D, installed per Davis Silencer Co. dwg. D-65-90L.	2 lb. (- 20)
104.	Carburetor air heater (not applicable to Continental "J" engines)	
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 1/2 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 (models 8A, 8E, 8F, T-8F)	+ 2 lb. (+ 20)
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 wings - 8A, 8E, 8F, T-8F)	9 lb. (+ 18)
112.	One 15 gal. bladder type wing fuel cell in right wing (models with all metal wings - 8A, 8E, 8F)	5 lb. (+ 18)
113.	Modified engine cowl, Luscombe dwg. 58740	
114.	Carburetor air heater per Luscombe dwg. 09607, Rev. C. (models 8A, 8E, 8F, T-8F). Not required on Continental injector engines.	No weight change
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 (required with propeller items 4(c) and 5 and engine item 126.H.(2))	No weight change
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 (Luscombe dwg. 081411)	No weight change
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 Luscombe dwg. 581267 (models 8A, 8C, 8D, 8E, 8F, T-8F)	No weight change
124.	Pressure vent fuel cap (Luscombe dwg. 486021) required for fuselage 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.	No weight change
<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.

Engines and Engine Accessories - Fuel and Oil System (con.)

<u>6/</u> 126. A. (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 (- 32)
B. Model 8A (Continental, per Engine Spec. No. 205)	
(1) A-65-1J - engine limits same as for A-65-1	+ 10 lb.
(2) A-65-3 or A-65-3J (engine limits for all operations, 2300 r.p.m. 65 hp.)	+ 13 lb.
(3) A-65-6 or A-65-6J (engine limits same as (2))	No weight change
(4) A-65-7 or A-65-7J (engine limits same as (2))	+ 10 lb.
(5) A-65-8, A-65-8F, A-65-8J or A-65-8FJ (injector engines equipped with high model A injector) engine limits same as (2)	+ 13 lb.
(6) A-65-9, A-65-9F, A-65-9J or A-65-9FJ (injector engines equipped with high model A injector) engine limits same as (2)	(- 33)
C. Model 8B (Lycoming, per Engine Spec. No. 210)	+ 11 lb.
(1) O-145-B2	+ 14 lb.
(2) O-145-B3	(- 32)
D. Model 8C (Continental per Engine Spec. No. 213)	+ 3 lb.
(1) A-75-9J	+ 3 lb.
(2) A-75-9 (with item 102 or 107 only)	No weight change
(3) A-75-8 (with item 102 or 107 only)	+ 3 lb.
(4) A-75-6 (with item 102 or 107 only)	(- 32)
E. Model 8D (Continental per Engine Spec. No. 213)	No weight change
(1) A-75-8	+ 3 lb.
(2) A-75-9 or A-75-9J	
F. Model 8E (Continental per Engine Spec. No. 233)	No weight change
(1) C-85-12F	- 2 lb. (- 32)
(2) C-85-8F	
G. Model 8F (Continental per Engine Spec. No. 252)	- 4 lb. (- 32)
(1) C-90-8F	
H. Model T-8F (Continental per Engine Spec. No. 252)	No weight change
(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.	
3. Use left tank thereafter."	No weight change
<u>7/</u> 127. Engine mount per dwg. 48147 (for engines not incorporating integral rubber shocks)	12 lb. (+ 4)
<u>8/</u> 128. 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	18 lb. (- 22)
<u>9/</u> 129. Starter, Eclipse type 635 model 3	
<u>10/</u> 130. Model 8E and 8F. Lycoming O-320 or O-320-A1A engine; McCauley 1C172/MGM 7462 propeller; Prestolite ALK5001S4U0 alternator; and fuel filler cap with forward facing vent in accordance with STC SA344CE. STC SE5CE required to install alternator on engine. "Instructions for Installation of Lycoming O-320 Engine in Luscombe 8E and 8F Airplanes," all drawings listed therein, and wiring diagram for Prestolite 35 amp AC alternator required. Use actual weight change.	
<u>Landing Gear and Floats</u>	
<u>11/</u> 201. 3-in. wheels (Goodyear 31NBM) with 16 x 7-3 tires	21 lb. (+ 3)
<u>12/</u> 203. Tail skid	+109 lb. (+ 25)
<u>13/</u> 204. Float installation - Edo 60-1320, 170 lb. (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:	

Landing Gear and Floats (con.)

- (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."
- 14/ 205. Tail wheel assemblies
 - (a) Luscombe, 3 in. + 2 lb. (+179)
 - (b) Universal Alloy G-4 or GLD-4 or GLD-19 + 4 lb. (+181)
 - (c) Luscombe, 6 in. (dwg. 48338)
 - (d) Heath G1A, 6 in., steerable + 4 lb. (+181)
 - (e) Scott 3-24-B, 6 x 2.00, steerable 6 lb. (+183)
 - (f) Maule SFS-1-4 or SAFS-14 6 lb. (+183)
 - (g) Decker D-501, steerable. Installation requires modified rudder in accordance with either (1) or (2) of 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 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 (1) 16 x 7-3 tires (4-ply) Use act. wt. change
 - (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 tire casing and regular tube Use act. wt. change
 - Wheel assembly No. D48500
 - Brake assembly No. C7000
 - (d) 6.00-6 (Goodyear model L6MBD) with 6.00-6 4-ply rating tire casing and regular tube. Use act. wt. change
 - Wheel assembly No. 511413M
 - Brake assembly No. 511254A
 - (e) 6.00-6 (Goodrich, formerly Hayes model 600M) with 6.00-6 4-ply rating tire casing and regular tube. Use act. wt. change
 - Wheel assembly No. D-3-47MD
 - Brake assembly No. D-2-129
 - (f) 6.00-6 (Goodrich, formerly Hayes model 609M) with 6.00-4 4-ply rating tire casing and regular tube Use act. wt. change
 - Wheel assembly No. D3-584
 - Brake assembly No. D-2-129
 - (g) 6.00-6 (Goodrich model 610M) with 6.00-6 4-ply rating tire casing and regular tube Use act. wt. change
 - Wheel assembly No. D-3-604-M
 - Brake assembly No. D-2-129
 - (h) 6.00-6 (Goodyear model C16HEM) castering, with 6.00-6 4-ply rating tire casing and regular tube + 34 lb. (+ 1)
 - Wheel and brake assembly No. 266Ax36-15 & -16. Instln. must conform to Luscombe dwg. SK4206 and Goodyear dwg. 280Ax20.
- 16/ 207. Parking brake
- 17/ 208. Wheel streamlines (old gear) 10 lb. (+ 3)
- (with Silflex gear location) 10 lb. (+ 1)
- 18/ 209. Skis (eligible on any airplane of these models provided the 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) Use act. wt. change
 - (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.)

Landing Gear and Floats (con.)

209. (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
- 19/ 210. Decker wheel assy. P/N P1001 in kit form, 2 per airplane (old gear) 12 lb. (+ 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).
213. Luscombe Silflex cantilever landing gear assy. No. 083310. No weight change
- This 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.

Electrical Equipment

- 20/ 301. 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)
- 21/ 303. Generator, wind-driven
- (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
- (a) 6 v. 10 a. hr. (Exide 3-AC-7-1) 14 lb. (-15) or 11 lb. (+ 55)
- (b) 12 v. 10 a. hr. (Exide 6-AC-7-1) 19 lb. (+ 55)
- (c) 12 v. 24 a. hr. (5 hour rate) 24 lb. (+ 55)
- (d) 12 v. 14 a. hr. (5 hour rate) 17 lb. (+ 52)
- (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-driven
- (a) Delco-Remy model 1101876, P/N 40435 (models 8E, 8F, T-8F) 10 lb. (- 22)

Interior 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)
- 23/ 403. Cabin heater 2 lb. (- 22)

Miscellaneous (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. Use act. wt. change
All model 8 series 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. range 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 engine cooling baffles)	1375 lb.

C.G. range

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

Empty wt. C.G. range

Forward limits:

Landplane	Seaplane	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 wt. C.G. range 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

Level flight or climb 115 m.p.h., True Ind.

Glide or dive 145 m.p.h., True Ind.

Seaplane

Level flight or climb 109 m.p.h., True Ind.

Glide or dive 145 m.p.h., True Ind.

Engine limits - For all operations

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:

Elevators	Up	25°	Down	26°
Rudder	Right	28°	Left	30°
Ailerons	Up	25°	Down	25°
Elevator tab	Up	14°	Down	28°
or (optional)	Up	10°	Down	33°

NOTE 6. (con.)

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)

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.

... END ...

