

# CIVIL AERONAUTICS ADMINISTRATION

A-591

REARWIN  
8500  
DeLuxe 8500  
9000-L  
Deluxe 9000-L  
9000-KR  
Deluxe 9000-KR

January 3, 1949

## AIRCRAFT SPECIFICATION NO. A-591

Holder of Type Certificate

Commonwealth Aircraft, Inc.  
Valley Stream, Long Island, N.Y.

### I - Model 8500, DeLuxe 8500, 9000-L, DeLuxe 9000-L, 900-KR and DeLuxe 9000-KR; 2 PCL-SM.

(Model 9000-L same as 8500 except engine. Certain serial numbers equipped with 90 hp engines were certificated as model 8500 with engine limits of 2125 rpm (85 hp). These serial numbers are also eligible with 9000-L nameplates and engine limits of 2250 rpm (90 hp). Model 9000-KR same as models 8500 and 9000-L except for full NACA cowl, modified forward fuselage fairing and modified windshield contour. Weight empty of 9000-KR is approximately 40 lbs. more than 9000-L. DeLuxe models have ball bearing control system, hinged rear seat and baggage box installation under rear seat (item 208b) replacing aluminum compartment in cabin.)

Engine	8500: Rearwin LeBlond 85, 5F or 5DF 9000-L and 9000-KR: Rearwin LeBlond 90, 5F or 5G
Engine limits	8500: For all operations, 2125 rpm (85 hp) 9000-L and 9000-KR: For all operations, 2250 rpm (90 hp)
Airspeed limits	Landplane: Level flight or climb 105 mph Ind. Glide or dive 142 mph Ind. Seaplane: Level flight or climb 100 mph Ind. Glide or dive 135 mph Ind.
Propeller Limits	Not available
C.G. range	8500 Landplane: (+7.8) to (+18.4) Seaplane : (+10.7) to (+18.2) 9000-L, 9000-KR Landplane: (+7.8) to (+17.9) Seaplane: (+10.7) to (+18.2)
Empty weight C.G. range	8500 Landplane: (+7.6) to (+13.4) when item 208 not installed (+7.6) to (+11.8) when item 208 is installed Seaplane: (+11.1) to (+13.8) when item 208 not installed (+11.1) to (+12.2) when item 208 is installed 9000-L, 9000-KR Landplane: (+7.6) to (+12.9) when item 208 not installed (+7.6) to (+11.3) when item 208 is installed Seaplane: (+11.1) to (+13.8) when item 208 not installed (+11.1) to (+12.2) when item 208 is installed (NOTE - If empty weight C.G. for a particular airplane falls within range given, it is unnecessary to check critical forward and aft C.G. positions. These ranges are not valid for non-standard arrangements.)

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Maximum weights	8500	Landplane:	1460 lbs. (See NOTE 1)
		Seaplane :	1615 lbs.
	9000-L, 9000-KR	Landplane	1480 lbs.
		Seaplane	1615 lbs.
No. seats	2 (+8 and +40)		
Maximum baggage	20 lbs. (+73) (See item 208)		
Fuel capacity	24 gals. (-23) (Two 12 gal. tanks in wings)		
Oil capacity	2 gals. (-26) (See Item 230)		
Serial Nos. eligible	427, 436 and up (See NOTE A and NOTE 1)		
Required equipment	Landplane: Items 101, 102, 103 and 104		
	Seaplane : Items 101, 104, 151, 152		

#### Specifications Pertinent to all Models

Datum	Wing leading edge
Leveling means	Not available
Certification basis	Approved Type Certificate No. 591 (Aero Bulletin 7-A)
Export eligibility	Eligible for export as follows, subject to provisions of MOP 2-4
	(a) Canada - Landplane and seaplane - eligible
	- Skiplane - not eligible. However structure complies with Canadian requirements for ski installation with maximum ski height of 13-5/8 inches
	(b) All other countries except New Zealand.

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

#### Propellers and Propeller Accessories

104. Propeller-wood (includes hub at 8 lbs.) 24 lbs. (-53)

#### Engine and Engine Accessories - Fuel and Oil System

101. Exhaust collector ring	7 lbs. (-40)
201. Engine ring cowl	10 lbs. (-46)
203. Carburetor air heater	2 lbs. (-46)
211. Starter (Eclipse) (16 lbs.) plus wiring	22 lbs. (-26)
212. Cabin heater	3 lbs. (-25)
216. Air cleaner (Air Maze No. 562)	2 lbs. (-46)
217. Lagged oil tank and lines	2 lbs. (-22)
222. Oil cooler	8 lbs. (-28)
229. Vacuum pump (engine driven)	
(a) Pump - Pesco 207 D	5 lbs. (-32)
(b) Vacuum pump adaptor	1 lb. (-37)
(c) Vacuum lines and fittings	11 lbs. (-11)
230. 1-3/4 gal. oil tank (Dwg. S-107) (replaces 2 gal. tank)	no weight change

#### Landing Gear and Floats

102. 7.00-4 wheels (Warner) and 4-ply tires	21 lbs. (-6)
103. Tail skid	6 lbs. (+186)
151. Edo H-1525 or 46-1620 floats	
204. 18x8-3 wheels (Goodyear) with 4-ply tires	+8 lbs. (-6)
205. 18 inch streamline wheels (Bendix) with brakes	+13 lbs. (-6)
206. 18x8-3 wheels (Goodyear) with brakes	+20 lbs. (-6)
207. Tail wheels	
(a) Castor installation on skid spring No. 315	+2 lbs. (+192)
(b) Aero Activities steerable on skid spring No. 315	+3 lbs. (+192)
(c) Aircraft Associates steerable on skid spring No. 315	+3 lbs. (+192)
(d) Bungee type assembly with 6x2.00	
(1) pneumatic tire	7 lbs. (+171)
(2) solid rubber tire	8 lbs. (+171)

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|---|-----------------------|
| 218. Parking brake (Dwg. 712-010 or 712-011)                | 1 lb. (-13)           |
| 219. Rear seat brakes (Dwg. 712-016)                        | 1 lb. (+10)           |
| 220. 6.00-6 wheels (Shinn) with hyd. brakes and 4-ply tires | +15 lbs. ( -6)        |
| 224. Skis   | use actual wt. change |
| (a) Washington Aircraft 1625                                |                       |
| (b) Federal SA-3  |                       |

#### Electrical Equipment

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| 202. Battery and box                                       | (-24)         |
| (a) Reading 6ARL-9 or 6-ARL-11                             | 33 lbs.       |
| (b) Exide 3TS-13-1 or 6-AC-7-1                             | 23 lbs.       |
| (c) Reading 3-BRL-9  | 10 lbs.       |
| (d) Exide 6-TS-7-1   | 31 lbs.       |
| (e) Exide 6-TS-13-1  | 41 lbs.       |
| (f) Exide 3-AC-7-1   | 13 lbs.       |
| (g) 12 volt - Willard SYR-7-6 20 lbs.                      |               |
| 214. Landing lights (Grimes ST-250)                        | 8 lbs. (+12)  |
| 215. Generator   |               |
| (a) Engine driven (Hodges H-12-V)                          | 9 lbs. (-26)  |
| (b) Wind driven (Hodges H-12-V)                            | 9 lbs. ( -4)  |
| (c) 12 volt wind driven (Lear 1030A and voltage regulator) | 11 lbs. ( -6) |

#### Interior Equipment

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| 208. Baggage Compartments  |               |
| (a) 30 lbs. aux. (aluminum) for std. models. Total baggage capacity becomes 50 lbs.  | 4 lbs. (+63)  |
| (b) 30 lbs. aux. (wooden) for DeLuxe models. Total baggage capacity becomes 50 lbs.  | 4 lbs. (+52)  |
| 213. Protective covering (silver foil on longerons, exposed metal parts and control system cadmium plated, extra dope, priming and finish) | 5 lbs. (+100) |
| 227. Rear instrument panel and truss   | 5 lbs. (+25)  |

#### Miscellaneous

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| 152. Seaplane type fin, rudder and aux. fin. | +16 lbs. (+185) |
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NOTE A. Prior to original certification, each aircraft must satisfactorily pass:

- (a) An inspection for workmanship, materials, and conformity before any covering, metal priming or final finish is applied. All woodwork may be varnished.
- (b) A final inspection of the completed aircraft.
- (c) A check of the flight characteristics.

NOTE 1. Serial Nos. 414 thru 426 and 428 thru 435 are

- (a) eligible as landplanes at standard weight of 1365 lbs.
- (b) not approved with auxiliary baggage compartment (item 208);
- (c) eligible at standard weight of 1410 lbs. and with item 208 provided that stabilizer up travel is increased 1/4 in. (Mfr's. affidavit must accompany inspection report.)

NOTE 2. Eligible also with modified tail surface bracing including brace wire fittings bolted to the fin and stabilizer spars replacing the welded lugs. Rearwin Dwg. No. 418 together with bushings, lugs and bolts forwarded to all owners.

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