DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A-751
Revision 4
AERONCA
O-58A (Army L-3A)
O-58B (Army L-3B, L-3C)
SO-58B

March 7, 2005

AIRCRAFT SPECIFICATION NO. A-751

Type Certificate Holder: National Aeronca Association
806 Lockport Road
P.O. Box 2219
Terre Haute, IN 47802

Name change from Aeronca to National Aeronca Association March 7, 2005.

I - Model O-58B (Army L-3B, L-3C), 2 PCLM, Approved Sept. 4, 1942

(See NOTE 2 for required modifications for civil certification)

Engine	Continental A-65-8		
Fuel	73 min. octane aviation gasoline		
Engine limits	For all operations, 2300 rpm (65 hp)		
Airspeed limits	Level flight or climb	95 mph True Ind.	
	Glide or dive	129 mph True Ind.	
Propeller limits	Static rpm at maximum permissible throttle setting - not over 2200 not under 2010. No additional tolerance permitted.		
	Diameter - not over 72 in., not under 70 in.		
C.G. range	(+10.9) to (+17.8)		
Empty weight C.G. range	(+12.1) to (+15.9). 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.		
Maximum weight	1260 lbs.		
No. seats	2 (+8 and +38)		
Maximum baggage	10 lbs. (+60)		
Fuel capacity	12 gals. (one 2 gal. tank at -17, one 10 gal. tank at +21).		
Oil capacity	1 gal. (-38)		
Control surface movements	Elevator trim tab	33 degrees up	12 degrees down
	Elevator	19 degrees up	25 degrees down
	Aileron	27 degrees up	15.5 degrees down
	Rudder	30 degrees right	32.5 degrees left
	Stabilizer	Fixed	
Serial Nos. eligible	C-3172TA to C-4012TA, inclusive, 058B1012 and up		
Required equipment	Items 101, 102, 103 and 104		

II - Model SO-58B, 2 PCSM, Approved November 23, 1942

(Same as Model O-58B except for propeller and landing gear)

Engine	Continental A-65-8	
Fuel	73 min. octane aviation gasoline	
Engine limits	For all operations, 2300 rpm (65 hp)	
Airspeed limits	Level flight or climb	95 mph True Ind.
	Glide or dive	129 mph True Ind.
Propeller limits	Static rpm at maximum permissible throttle setting - not over 2210, not under 2110. No additional tolerance permitted.	
	Diameter - not over 76 in., not under 70 in.	
C.G. range	(+12.2) to (+18.1)	

Empty weight C.G. range	(+13.5) to (+16.5). When empty weight C.G. falls within this range, computation of critical fore and aft C.G. positions is unnecessary. Range not valid for non-standard arrangements.		
Maximum weight	1350 lbs.		
No. seats	2 (+8 and +38)		
Maximum baggage	10 lbs. (+60)		
Fuel capacity	12 gals. (one 2 gal. tank at -17, one 10 gal. tank at +21)		
Oil capacity	1 gal. (-38)		
Control surface movements	Elevator trim tab	33 degrees up	12 degrees down
	Elevator	19 degrees up	25 degrees down
	Aileron	27 degrees up	15.5 degrees down
	Rudder	30 degrees right	32.5 degrees left
	Stabilizer	Fixed	
Serial Nos. eligible	O-58B1012 and up		
Required equipment	Items 101, 104, 105 and 151		

III - Model O-58-A (Army L-3A), 2 PCLM, Approved March 13, 1945

Engine	Continental A-65-8		
Fuel	73 min. octane aviation gasoline		
Engine limits	For all operations, 2300 rpm (65 hp)		
Airspeed limits	Level flight or climb	95 mph True Ind.	
	Glide or dive	129 mph True Ind.	
Propeller limits	Static rpm at maximum permissible throttle setting - not over 2200 not under 2010. No additional tolerance permitted.		
	Diameter - not over 72 in., not under 70 in.		
C.G. range	(+10.9) to (+17.8)		
Empty weight C.G. range	(+12.1) to (+15.9). When Empty weight C.G. falls within this range, computation of critical fore and aft C.G. positions is unnecessary. Range not valid for non-standard arrangements.		
Maximum weight	1260 lbs.		
No. seats	2 (+8 and +38)		
Maximum baggage	10 lbs. (+60)		
Fuel capacity	12 gals. (one 2 gal. tank at -17, one 10 gal. tank at +21).		
Oil capacity	1 gal. (-38)		
Control surface movements	Elevator trim tab	33 degrees up	12 degrees down
	Elevator	19 degrees up	25 degrees down
	Aileron	27 degrees up	15.5 degrees down
	Rudder	30 degrees right	32.5 degrees left
	Stabilizer	Fixed	
Serial Nos. eligible	7793 to 7812, inclusive, corresponding to AAF Nos. 42-7793 to 42- 7812, inclusive.		
Required equipment	Items 101, 102, 103 and 104		

Specifications Pertinent to All Models

Datum	Wing leading edge
Leveling means	For O-58B and SO-58B: Plumb line dropped from cotter pin (located about 1-3/4 in. forward of rear spar and 2 in. outboard of wing hinge line) to a 1/8 in. pin projection at lower fuselage longeron. Airplanes having serial Nos. O58B1012 and up are similar to those having serial Nos. C-3172TA to C-4012TA inclusive, except for reinforced wing, fuselage structure and leveling means. The leveling means for aircraft with serial Nos. 058B1012 and up is as shown above whereas the floorboard is used for leveling on aircraft with serial Nos. C-3172TA to C-4012TA inclusive. For O-58A: Cabin floor.
Certification basis	Type Certificate No. 751 (CAR 4a)

Production basis	None. Prior to original certification for each aircraft manufactured subsequent to August 24, 1949, a CAA Manufacturing inspector 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 MOP 2-4, except as follows: Canada - Landplane - eligible Skiplane - not eligible

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

	Propellers and Propeller Accessories	
1.	Propeller - McCauley 1A90 (Models O-58B and SO-58B) with following limits: Static rpm at maximum permissible throttle setting: Not over 2250, not under 2100. No additional tolerance permitted. Diameter: Not over 74 in., not under 72.5 in.	26 lbs. (-57)
2.	Propeller - Hartzell ground adjustable, hub HA-12U, blades 7414 to 6814 or 7214M to 6814M. Eligible at diameter and static rpm limits shown for fixed pitch wood propellers.	18 lbs. (-57)
3.	Propeller - Sensenich M74CK, fixed pitch metal Static rpm at maximum permissible throttle setting: Not over 2250, not under 2100. No additional tolerance permitted. Diameter: Not over 74 in., not under 72 in.	21 lbs. (-57)
101.	Propeller - wood (fixed pitch)	13 lbs. (-57)
	Engines and Engine Accessories - Fuel and Oil System	
104.	Carburetor air heater	1 lb. (-41)
105.	Oil radiator (Continental)	5 lbs. (-49)
106.	Carburetor air intake and filter (Continental A-5810)	+2 lbs. (-49)
	Landing Gear	
102.	6.00-6 wheels with brakes (Shinn 6C5HB) and tires	28 lbs. (-4)
103.	6x2.00 tail wheel, full swiveling	8 lbs. (+188)
151.	Heath floats model 1460-A (175 lbs.)	+100 lbs. (+14)
201.	Skis (Eligible on any airplane of these models provided the propeller installation meets the minimum 9 in. 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 actual weight change
	(a) Heath 725A (Maximum 1450 lbs.)	
	(b) Federal SC-1 (Maximum 1400 lbs.)	
	(c) Heath 725 (Maximum 1450 lbs.)	
	(d) Federal SC-2 (Maximum 1650 lbs.)	
	(e) Marston MFS-1600 (Maximum 1600 lbs.)	
202.	Tail wheel - steerable (Heath 42-T-10)	+1 lb. (+188)
301.	6.00-6 brake type wheels	
	(a) (Cleveland Aircraft Products 6.00 MBA)	+2 lbs. (-4)
	(b) (Goodyear L6MBM)	Neglect weight increase
	(c) (Cleveland Aircraft Products 6.00 DMB-2)	+2 lbs. (-4)
303.	Tail wheel, steerable (Universal)	+1 lb. (+188)
306.	Dual brake system	2 lbs. (+3)

Electrical Equipment

302.	Battery (Reading 333LD)	15 lbs (+41)
304.	Generator (General Armature AG-40)	8 lbs. (-4)
307.	Battery (Reading 324-L or 333-LD)	15 lbs. (-24)
308.	Generator (General Armature). Mounted on left wing strut	11 lbs. (-3)

NOTE 1. The following placard must be displayed on instrument panel: "Occupy front seat when flying solo."

NOTE 2. Prior to certification of any O-58B (Army L-3B, L-3C) aircraft, the following modifications shall be accomplished:

(a) Remove the front back of the rear seat and permanently install the rear back of the rear seat as follows: Remove rear back of rear seat and drill an 11/64 in. hole through both sides of the fork at the bottom of the vertical support one inch from the inside rounded end of the fork. Reinstall seat, sliding above-mentioned fork over the horizontal fuselage cross tube, insert an No. 8-32 x 1 1/4 steel machine screw and fasten with an acceptable No. 8-32 self-locking nut, or plain nut peening end of screw.

(b) Remove the 1/4 in. bolt from the top of the rear control stick socket. Insert the control stick, and drill through both the socket and control stick with an "F" (.257) drill, 90 degrees from the original location of the bolt. Remove the spring clip and install the 1/4 in. bolt through the new hole, and fasten with an acceptable self-locking nut or a castle nut with a cotter pin.

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