

FEDERAL AVIATION AGENCY

4A16  
Revision 2  
AEROCAR  
I  
February 20, 1962

AIRCRAFT SPECIFICATION NO. 4A16

TYPE CERTIFICATE HOLDER    AEROCAR, Incorporated  
Longview Airport  
Longview, Washington

I - Model I (AEROCAR), 2 PCLM (Normal Category), Approved December 13, 1956

Engine	Lycoming O-320 (Modified per Aerocar, Inc., Dwg. No. R16000 and with carburetor adaptor Dwg. No. E1-61040) (See Item 104 for alternate engines)		
Fuel	80/87 minimum grade aviation gasoline		
Engine Limits	#For all operations, 2700 rpm (143 hp)		
Airspeed limits	#Maneuvering	106 mph ( 92 knots) True Ind.	
	#Maximum structural cruising	110 mph ( 96 knots) True Ind.	
	#Never exceed	139 mph (121 knots) True Ind.	
C.G. range	(+83.6) to (+87.9)		
Empty weight C.G. range	None		
Maximum weight	2050 lbs. (See Item 104 for 2100 lbs.)		
No. seats	2 (+55)		
Maximum baggage	60 lbs. (+90)		
Fuel capacity	23.5 gals. Total, 21.2 gals. usable (+72) with Lycoming O-320 engine and 22.1 gals. usable (+72) with Lycoming O-360-D2B engine. See NOTE 1 for unusable fuel.		
Oil capacity	2 gals. (+90)		
Control surface movements	Elevators	Up    25 degrees      Down    10 degrees	
	Ailerons	Up    20 degrees      Down    6 degrees	
	Rudder	Left   25 degrees      Right   25 degrees	
	Trim tab	Up    18 degrees      Down   23 degrees	
Serial Nos. eligible	2 and up		
Required equipment	In addition to the pertinent required basic equipment specified in CAR 3, the following items of equipment must be installed: 1, 101, 102, 103, 201, 202, 203, 204, 205, 301, 302, 303, 401		

Specifications Pertinent to All Models

Datum	16 in. fwd. centerline front gear
Leveling means	Floor under seat
Certification basis	Type Certificate No. 4A16 (CAR 3, Nov. 1, 1949, and Amendments 3-1 to 3-12)
Production basis	None. Prior to original certification of each aircraft a FAA representative must perform a detailed inspection for workmanship, materials, and conformity with the approved technical data and a check of the flight characteristics.

Equipment:

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Propellers and Propeller Accessories

1. Hartzell ground adjustable propeller, hub HA12UF, blades L8032-4 22 lbs. (+248)  
Pitch setting at 27 in. sta.: 13.5 degrees  
Static rpm at maximum permissible throttle setting:  
Not over 2300, not under 2200 (Lycoming O-320 engine)  
Not over 2420, not under 2320 (Lycoming O-340-B1A engine)  
No additional tolerance permitted.  
Diameter: Not over 76 in., not under 74.5 in.
2. Hartzell ground adjustable propeller, hub HA12UF, blades L8032-8  
(With Lycoming O-360-D2B engine)  
Pitch setting at 30 in. sta.: 13 degrees  
Static rpm at maximum permissible throttle setting:  
Not over 2500, not under 2400.  
No additional tolerance permitted  
Diameter: Not over 72 in., not under 70.5 in.

Engine and Engine Accessories - Fuel and Oil System

101. Starter, Delco x-11424 - 12 volt 18 lbs. (+102.5)
102. Oil cooler, Harrison AP07AU06-02 3 lbs. (+85)
103. Carburetor air filter, AIRMAZE 5 x 5.5 1 lb. (+85)
104. Alternate engines
  - (a) Lycoming O-340-B1A  
(Modified per Aerocar, Inc. Dwg. R1-61000 and with carburetor adapter  
Dwg. No. E1-61040) 247 lbs. (+94)  
Engine limits: For all operations, 2700 rpm (154 hp)  
Maximum weight: 2100 lbs.  
NOTE: Carburetor air box Aerocar Dwg. E1-61022-M required with this installation.
  - (b) Lycoming O-360-D2B 281 lbs. (+94)  
(Modified per Aerocar, Inc. Dwg. R1-61000, Change B, and including the following  
installation components:  
Carburetor air box assembly E1-61622-2-3 Revision A, motor mount R1-61021M (Sheets  
1 and 2) Revision B, engine door E1-70013-2, Revision A, carburetor adapter  
E1-61040-2, Revision 13 and cabin and carburetor heat system R1-70014 Revision C)  
Engine limits: For all operations, 2700 rpm (160 hp)  
Maximum weight: 2100 lbs.

Landing Gear

201. Two rear wheel assemblies, 4.50x12, AEROCAR Dwg. E1-51025 11 lbs. (+96)
202. Two rear wheel brake assemblies, Goodrich 7x1 1/2 E.T. 8 lbs. (+96)
203. Two rear wheel tires, 4 ply, Goodrich 4.50x12 (automotive) with regular  
automotive tubes 28 lbs. (+96)
204. Two front wheel assemblies, 4.50x12, AEROCAR Dwg. E1-51025 11 lbs. (+16)
205. Two front wheel tires, 4 ply, Goodrich 4.50x12 (automotive) with regular  
automotive tubes 28 lbs. (+16)

Electrical Equipment

301. Battery, Sonotone 10-10M-220 Nic-Cad. 11 lbs. (+85)
302. Generator, Delco X-1612 20 lbs. (+102)
303. Voltage Regulator, Delco 1118365 - 12 volt neg. gnd. 2 lbs. (+79)

Interior Equipment

401. Auto to Airplane Conversion Checklist

NOTE 1. Current weight and balance report including 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 and at all times thereafter. The certificated empty weight and corresponding center of gravity must include unusable fuel of 14 lbs. at (+72) with the Lycoming O-320 engine installation and unusable fuel of 8 lbs. (+72) with the Lycoming O-360-D2B engine installation. With the Lycoming O-340-B1A engine installation there is no unusable fuel.

NOTE 2: The following placards must be displayed:

(a) In full view of the pilot:

- (1) "This airplane must be operated as a Normal Category airplane in compliance with the operating limitations stated in the form of placards and instrument markings.

ALL ACROBATIC MANEUVERS INCLUDING SPINS PROHIBITED.

- (2) Operation Limits:

Max. Weight (takeoff and land) 2050 pounds.

(For aircraft with engine installed per item 104):

Maximum Weight (takeoff and land) 2100 pounds.

C.G. Range 83.6" to 87.9" (See current weight and balance data)

Significance of Instrument markings.

Red Radial Line - Max. or min. allowed

Yellow Arc - Caution Range

Green Arc - Normal Operation

Red Arc - Avoid Operation

Procedures.

Check Flight Component Attach Points and Controls before Takeoff.

(Safety Light and Steering Control Lock OFF)

Carburetor Heat SHALL be used during All Ground Operations.

Gear Shift must be in NEUTRAL before Takeoff or Landing.

Total Fuel Capacity 23.5 gallons. Unusable Fuel 2.33 gallons.

Minimum Fuel Octane 80/87 Aviation Fuel.

Caution.

Avoid Engine overspeeding during auto operation. Avoid continuous engine operation between 950-1050 and 1900-2050 RPM (As aircraft)."

- (b) At fuel gage, "Capacity 23.5 gallons."
- (c) Above headlight switch, "Use Low Beam For Landing."
- (d) At baggage compartment, "Max. Baggage 60 pounds."
- (e) In addition to the above placards, the prescribed operating limitations indicated by "#" markings under Section I must be displayed by permanent placards, instrument markings or reports (Weight and Balance Report.)

NOTE 3. Conversion from Auto to Airplane to be accomplished in accordance with Item 401 check list.

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