

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

A-804  
Revision 22  
W.Z.D. Enterprises Inc.  
11A  
11E  
June 5, 2018

**AIRCRAFT SPECIFICATION NO. A-804**

**Type Certificate Holder**

W.Z.D. Enterprises Inc.  
501 Hungerford Dr.  
Suite 436  
Rockville, MD 20850

JGS Properties, LLC transferred to W.Z.D. Enterprises Inc. on December 27, 2017.

Quartz Mountain Aerospace, Inc. name changed to JGS Properties, LLC on November 22, 2011.

Luscombe Aircraft Corporation name change to Quartz Mountain Aerospace, Inc. on March 13, 2006.

Land-Air & Leasing, Inc. transferred to Luscombe Aircraft Corporation on August 10, 1995.

Richard S. Kettles transferred to Land-Air & Leasing, Inc. on April 8, 1992.  
Luscombe Aircraft re-issued to Richard S. Kettles.

**I. Model 11A, 4 PCL (Normal Category), approved October 4, 1948**

Engine	Continental E165-2 (see Item 106 for optional engines)	
Fuel	80 min. octane aviation gasoline	
Engine Limits	For all operations, 2050 rpm (165 hp)	
Propeller Limits	Static rpm at maximum permissible throttle setting, not over 1825, not under 1725. No additional tolerance permitted. Diameter, not over 80 in., not under 78.5	
Airspeed Limits	Maneuvering	114 mph ( 99 knots) True Ind.
	Maximum structural cruising	145 mph (126 knots) True Ind
	Never exceed	180 mph (157 knots) True Ind.
	Flaps extended	100 mph ( 87 knots) True Ind.

Page No.	1	2	3	4	5	6	7
Rev. No.	22	12	9	16	21	21	20

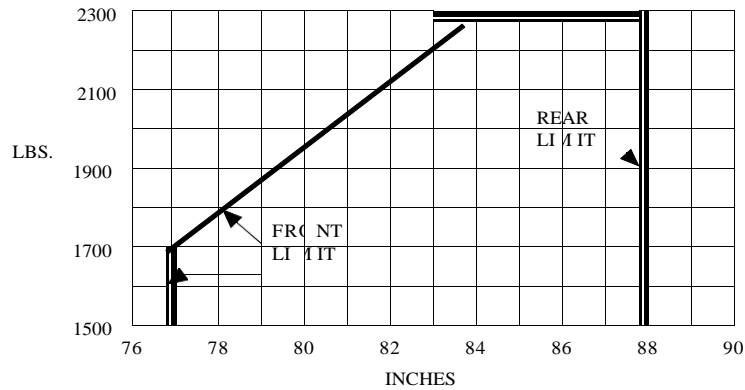
Rev 22 Changes TC holder transferred to W.Z.D. Enterprises Inc.

**I.****Model 11A, 4 PCL (Normal Category) Cont.**

C.G. Range

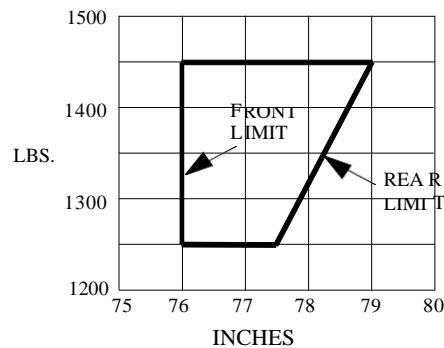
(+83.7) to (+87.9) at 2280 lbs.  
 (+76.9) to (+87.9) at 1700 lbs. or less

Straight line variation between points given.



Empty Weight C.G. Range

(+76.0) to (+79.0) at 1450 lbs. empty weight  
 (+76.0) to (+77.5) at 1250 lbs. empty weight  
 Straight line variation between points given.  
 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 nonstandard arrangements.



Maximum Weight

2280 lbs.

No. of Seats

2 (+86) and 2 (+122)

Maximum Baggage

100 lbs. (+123)

Fuel Capacity

40 gal. (Two 20 gal. tanks in wings) (+86)

Oil Capacity

2.5 gal. (+35)

Control Surface Movements

Ailerons	Up	15 ± 1	Down	9 ± 1
Elevators	Up	29 ± 1	Down	13 ± 1
Rudder	Right	15 ± 0	Left	15 ± 0
		- 1		- 1
Wing Flaps			Down	35 ± 1
Elevator Tabs	Up	12 ± 1	Down	40 ± 1

The airplane control system must be rigged and maintained in accordance with the Rigging Instructions of Luscombe Model 11A Flight Manual, Section II.

**I. Model 11A, 4 PCL (Normal Category Cont.**

Serial Nos. eligible	11-104 and up manufactured prior to October 29, 1956.
Required equipment	In addition to the pertinent required basic equipment specified in CAR 3, the following items of equipment must be installed: 1, 102, 103, 104, 105, 201(a), 202(a), 204(a), 402(a) For night flying, cabin dome light and instrument lights or equivalent to provide illumination of all placards and instruments are required in addition to equipment required by Part 43.

**Specifications**

Datum	100 in. forward of vertical bulkhead forming the rear frame of main door.
Leveling means	Floor at front seat attaching angles.
Certification basis	Type Certificate No. 804 (CAR 3, Normal Category)
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. Approval for the installation of all items of equipment listed herein has been obtained by the aircraft manufacturer except those items preceded by an asterisk (*). The asterisk denotes that approval has been obtained by someone other than the aircraft manufacturer. An item marked with an asterisk may not have been manufactured under a CAA monitored or approved quality control system, and therefore attention should be paid to workmanship and conformity with pertinent data called for in this specification.

**Propellers and Propeller Accessories**

1. Propeller - Sensenich Model 80EY80 or any other fixed pitch wood propeller rated for required hp and rpm and meeting the propeller limits under Section 1. 22 lbs. (+5)
2. Propeller - Hartzell automatic two-position, Hub Model HC-42XF-2, blades model 8428-1  
Diameter: Not over 83 in., not under 81.5 in.  
Blade angle at 30" station: Low 15, high 22.2  
Propeller to be installed and operated in accordance with the above limitations and approved Hartzell service instructions. CAA Approved Flight Manual Revision pages 1.1 and 6.1, dated April 21, 1949, must be inserted in Item 402(a) when this propeller is installed. 59 lbs. (+5)
3. Spinner - Hartzell Propeller (Luscombe Dwg. 11-6402) 2 lbs. (+5)
4. Propeller - Hartzell automatic two-position, Hub Model HC-42XF-2, Blades 8433-1  
(Eligible only on E-185-2 engine with dampered crankshaft identified by the letter "D" after the engine serial number.)  
Diameter: Not more than 83 in., not less than 81.5 in.  
Blade angle at 30" station: Low 17; high 24.  
Counterweight length 3.490".  
Low rpm (high pitch) to high rpm (low pitch) latch operation - not less than 1550 rpm  
Item 402(b) required when this propeller is installed. 59 lbs. (+5)

**I. Model 11A, 4 PCL (Normal Category) Cont.****Engine and Engine Accessories - Fuel and Oil System**

- |  |               |
|--|---------------|
| 101. Starter (Delco-Remy #1109660) Solenoid type   | 21 lbs. (+42) |
| 102. Oil radiator - (Harrison #7434)   | 7 lbs. (+43)  |
| 103. Carburetor air heater   | 1 lb. (+23)   |
| 104. Kay exhaust muffler system  | 12 lbs. (+30) |
| 105. Carburetor air filter   | 1 lb. (+18)   |
| 106. Continental E185-2 engine   | No change     |
| Fuel: 80 Octane minimum  |               |
| Engine limits: For all operations 2300 rpm (185 hp). When the E185-2 engine is installed, the airplane fuel system and oil cooling system must comply with Luscombe Dwg. 11-6601C (Arrangement 2), 11-1702C, and 11-6701C. |               |

**Landing Gear**

- |  |               |
|--|---------------|
| 201. 2 Main wheel-brake assemblies, 6.00-6 Type III                            | 14 lbs. (+65) |
| (a) Goodyear Model L6HBD   |               |
| Wheel Assembly #511413-M   |               |
| Brake Assembly #9520292  |               |
| 202. (a) 2 Main Wheel 4-ply-rating tires, 7.00-6 Type III (with regular tubes) | 19 lbs. (+65) |
| 204. Tail Wheel Assembly   |               |
| (a) Maule, Model SFS-12, steerable   | 5 lbs. (+266) |
| Tire size 6.00 X 2.50  |               |
| *(b) Scott, Model 3200, steerable  | 8 lbs. (+266) |
| Tire size 8.50 X 2.50  |               |

**Electrical Equipment**

- |   |                |
|---|----------------|
| 301. Generator, 12 volt (Delco-Remy #1101879)                       | 14 lbs. (+42)  |
| 302. Battery - Willard Manifold Venti Type AW-12-25                 |                |
| 12 volt 25 amph. hr.  |                |
| (a) With Item 1 installed   | 22 lbs. (+46)  |
| (b) With Item 2 installed   | 22 lbs. (+152) |
| 303. Voltage regulator (Delco-Remy #1118200)                        | 2 lbs. (+49)   |
| 304. Battery Solenoid - Cutler Hammer (#6042-H109A)                 | 1 lb. (+49)    |
| 305. 2 Landing lights - Luscombe Dwg. #11-8105 with G.E. Lamp #4509 | 2 lbs. (+13)   |

**Interior Equipment**

- |  |              |
|--|--------------|
| 401. Cabin heater Luscombe Dwg. 11-8602  | 2 lbs. (+49) |
| 402. (a) FAA Approved Airplane Flight Manual dated May 26, 1948  |              |
| *(b) Airplane Operation Limitations Supplement to Item 402(a) for Hartzell Snap-O-Matic propeller on Luscombe 11A, dated October 10, 1949. |              |

**II. Model 11E, 4 PCL (Normal Category) Approved December 17, 2002:**

Changes to the Model 11A include engine change, electrical system changed to a 24 volt system, landing gear configuration changed from conventional to tricycle, installation of a composite cowl, installation of a modified windshield, change from hydraulically driven flaps to electrically driven, installation of electrically driven elevator trim in lieu of the mechanical trim, installation of a new interior including three point seat belts.

Engine	One, Teledyne Continental IO-360-ES, TCDS E1CE
Fuel	100/100LL minimum grade aviation gasoline
Engine Limits	For all operations, 2550 RPM (185 HP)
Propeller	1. McCauley Model 1B235/EFC7667

**II. Model 11E, 4 PCL (Normal) Cont.**

Spinner	2. Sensenich Model 76EC-8-0-66 1, McCauley Model D4245 (McCauley propeller) 2, Sensenich C-2347 (Sensenich propeller)				
Propeller Limits	1. McCauley: Static RPM at full throttle: Not more than 2200 rpm, not less than 2100 rpm. Max rpm of 2250 rpm is permissible when airfield pressure altitude is above 5000 ft. Diameter: Not over 76 inches; not under 74 inches  2. Sensenich: Static RPM at full throttle: Not more than 2250 rpm, not less than 2150 rpm. Avoid continuous static operations (over 5 minutes) above 2100 rpm. Diameter: Not over 76 inches; not under 74 inches				
Airspeed Limits	Maneuvering	114 mph ( 99 knots) Calibrated			
	Maximum structural cruising	150 mph (130 knots) Calibrated			
	Never Exceed	180 mph (157 knots) Calibrated			
	Flaps Extended	100 mph ( 87 knots) Calibrated			
C.G. Range	Forward Limits	Linear variation from 83.7 inches aft of Reference datum at 2280 lbs to 78.3 inches aft of datum at 1819 lbs; 78.3 inches aft of datum at 1817 lbs or less.			
	Aft Limit	87.9 inches aft of datum			
Empty Weight C.G. Range	None				
Reference Datum	100 in. forward of vertical bulkhead forming the rear frame of main door.				
Leveling Means	Two leveling screw heads which protrude at same waterline on right side of fuselage located directly below right rear cabin window.				
Maximum Weight	2280 lbs.				
No. of Seats	4 (2 at 86 inches aft of datum and 2 at 122 inches aft of datum)				
Maximum Baggage	100 lbs. at 128 inches aft of datum				
Fuel Capacity	42 gallons total; 40 gallons useable (Two 21 gallon tanks in wings at +86.8 inches aft of datum) See NOTE 1 for data on weight and balance.				
Oil Capacity	2.0 gallons total; 1.25 gallons useable (+25 inches aft of datum) See NOTE 1 for data on weight and balance.				
Control Surface Movements	Ailerons	Up	15° ± 1°	Down	9° ± 1°
	Elevators	Up	29° ± 1°	Down	13° ± 1°
	Rudder	Right	15° ± 1°	Left	15° ± 1°
	Wing Flaps			Down	25° ± 1°
	Elevator Tab	Up	12 °± 1°	Down	40° ± 1°
	The airplane control system must be rigged and maintained in accordance with the rigging instructions of Quartz Mountain Aerospace Maintenance Manual P/N AMN-11E-1 for Model 11E..				
Serial Nos. Eligible	1001 to 1004, 1006 to 1013, and 1016. Serial numbers 00995 and 00996 are not eligible for Standard Airworthiness Certificates. Serial numbers 1005, 1014, 1015, 1017 and subsequent are not eligible for Standard				

**II. Model 11E, 4 PCL (Normal) Cont.**

Airworthiness Certificates unless conformity to type design data is determined by the FAA (contact the Fort Worth Manufacturing Inspection Office at 817-222-5180). An applicant for a Standard Airworthiness Certificate must provide type design data and evidence of Type Certificate holder permission to use the type design data.

**Certification Basis**

CAR 3 dated December 15, 1946, as amended by 3-1 through 3-4 and the following sections of Part 23 effective February 1, 1965:

Section 23.75, 23.867, and 23.954 as amended through Amendment 23-7.

Section 23.561(b)(2) as amended through Amendment 23-36.

Section 23.853 as amended through Amendment 23-34

Section 23.1143 as amended through Amendment 23-29.

Section 23.1147 as amended through Amendment 23-33.

Section 23.1307 as amended through Amendment 23-23.

Section 23.1309 as amended through Amendment 23-41.

Section 23.1359 as amended through Amendment 23-49.

Sections 23.1, 23.2, 23.3, 23.21, 23.33, 23.51, 23.65, , 23.77, 23.671, 23.673, 23.683, 23.685, 23.689, 23.697, 23.699, 23.781, 23.905, 23.907, 23.925, 23.951, 23.959 23.961, 23.963, 23.969, 23.971, 23.973, 23.975, 23.977, 23.991, 23.993, 23.995, 23.997, 23.999, 23.1011, 23.1017, 23.1019, 23.1021, 23.1023, 23.1041, 23.1043 23.1047, 23.1091, 23.1105, 23.1121, 23.1123, 23.1125, 23.1141, 23.1145, 23.1149, 23.1163, 23.1165, 23.1183, 23.1191, 23.1193, 23.1301, 23.1327, , 23.1357, 23.1367, 23.1381, 23.1385, 23.1387, 23.1389, 23.1391, 23.1393, 23.1395, 23.1397, 23.1413, 23.1529, 23.1547, 23.1549, and 23.1589 as amended through 23-46.

Sections 23.901, 23.903, 23.943, 23.955, 23.965, 23.967, 23.1093, 23.1103, 23.1303, 23.1305, 23.1311, 23.1321, 23.1322, 23.1323, 23.1325, 23.1337, 23.1351, 23.1353, 23.1361, 23.1365, 23.1383, 23.1401, 23.1431, 23.1543, 23.1545, 23.1555, 23.1581, 23.1583, 23.1585, and 23.1587 as amended through 23-54.

Part 36 of the Federal Aviation Regulations effective December 1, 1969, plus any amendments in effect at the time of certification.

**Equivalent Level of Safety Findings**

ELOS #ACE-02-09 Rev. A dated December 5, 2002 – CAR 03.135-N Spins

ELOS #ACE-07-16, Dated January 16, 2007 – 14 CFR Part 23 §23.1326 (b)(1), Amendment 23-49, Pitot Heat Indication Systems.

ELOS #ACE-07-17, Dated January 17, 2007 – 14 CFR Part 23 §23.1353(h), Amendment 23-49, Storage Battery Design and Installation.

**Application Date:** Application for Amended Type Certificate for the Luscombe 11E was August 12, 1994. Type Certificate No. A-804 was provisionally amended July 25, 2002 for the Luscombe 11E, final Amended Type Certification adding the Model 11E was completed December 17, 2002.

**Production Basis** None. Prior to original certification of each aircraft, an FAA representative must perform a detailed inspection for workmanship, materials, conformity with the approved technical data, and a check of the flight characteristics.

**Equipment** The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.  
In addition to the above required equipment, the following equipment is also required:  
1. The latest FAA approved revision on Airplane Flight Manual Part No. AFM-LAC-1 for Model 11E.

**Design Data** The airplane shall be manufactured in accordance with the latest FAA approved revision of Quartz Mountain Aerospace Master Drawing List, Document No. 11E-MDL

- NOTE 1. A 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. The certificated empty weight and corresponding center of gravity location must include unusable fuel of 12 lbs. at 86.8 inches aft of datum and full oil of 16.7 lbs. at 25 inches aft of datum.
- NOTE 2. The placards specified in the latest revision of the "FAA Approved Flight Manual for the Quartz Mountain Aerospace 11E," Document No. AFM-LAC-1, must be displayed.
- NOTE 3. In accordance with FAR 23.1529, Instructions for Continued Airworthiness acceptable to the Administrator must be available at delivery of first aircraft or issuance of a standard certificate of airworthiness which ever occurs later.

...END...