

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

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| A00008DE Revision 3 LIBERTY XL-2 January 15, 2008 |
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TYPE CERTIFICATE DATA SHEET NO. A00008DE

This data sheet which is part of Type Certificate No. A00008DE prescribes conditions and limitations under which the product for which the type certificate was issued meets the Airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Liberty Aerospace Incorporated
100 Aerospace Drive
Melbourne, FL 32901

I. Model XL-2, 2PCLM (Normal Category), Approved February 19, 2004

Engine Teledyne Continental IOF-240-B, Type Certificate Data Sheet (TCDS) E7SO. Engines controlled by Full Authority Digital Electronic Control (FADEC).

Fuel 100/100LL minimum grade aviation gasoline
RH95/130 (China)

Engine Limits For all operations:
Maximum engine speed 2800 RPM (125 hp)
Minimum engine speed 825 RPM

Propeller and Propeller Limits Sensenich Corp W69EK7-63G, TCDS P00001NY
Diameter: 69 inches
Number of blades: 2

MT Propeller MT175R127-2Ca, TCDS P19BO
Diameter: 175 centimeters
Number of blades: 2

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| Airspeed Limits | VNE | Never Exceed Speed | 162 KIAS |
| | VNO | Maximum Structural Cruising Speed | 125 KIAS |
| | VA | (1653 lbs) Maneuvering Speed | 100 KIAS |
| | VFE | Maximum Flap Extension Speed | 80 KIAS |

C.G. Range Forward limits: 82.20 inches aft of datum up to 1554 lbs with a straight line taper to 83.48 inches at 1653 lbs.

Aft Limits: 86.75 inches aft of datum up to 1653 lbs.

Datum Station 0 (STN 0) is located 70.75 inches forward of vertical rollover hoop (forward face of opening). Water line 0 (WL 0) located 50.0 inches below airplane centerline through nose cone.

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| Empty wt. C.G. Range | None. | | |
| Leveling Means | Door sill as defined in AFM | | |
| Maximum Weight | 1653 lbs | | |
| No. of Seats | 2 at 79.78 inches aft of datum | | |
| Maximum baggage | 100 lb. at 118 inches aft of datum | | |
| Fuel Capacity | 29.5 US gallons at 101.80 inches aft of datum 28 US gallons usable. (See NOTE 1) | | |
| Oil Capacity | 6 quarts at 34.5 inches aft of datum | | |
| Maximum Operating Altitude | 12,500 feet | | |
| Control Surface Movements | Stabilator | Leading edge Up $5^{\circ} \pm 0.5^{\circ}$ | Leading edge Down $13^{\circ} \pm 0.5^{\circ}$ |
| | Ailerons | Up $24^{\circ} \pm 1.0^{\circ}$ | Down $19^{\circ} \pm 1.0^{\circ}$ |
| | Rudder | Left $30^{\circ} + 0.5^{\circ}/-1.5^{\circ}$ | Right $30^{\circ} + 0.5^{\circ}/-1.5^{\circ}$ |
| | Flaps | Up 0° | Down $29^{\circ} \pm 1.0^{\circ}$ |
| Additional Limitations: | See NOTE 3 | | |
| | FADEC Limitations: Flight is prohibited if any FADEC Health Status Annunciator (HSA) channel lamps (cylinder icons) or annunciators are illuminated. | | |
| Design Data: | The airplane shall be manufactured in accordance with the latest FAA approved revision of Liberty Aerospace, Inc. Master Drawing List:, Document Number 135A-900-005, or other FAA approved data. | | |
| Serial Nos. Eligible | 0007, 0009 and subsequent | | |
| Certification Basis | Part 23 of the Federal Aviation Regulations effective February 1, 1965, as amended by 23-1 thru 23-55 (Normal Category) and FAR 36 as amended thru 36-24, FAR 21 amended thru 21-57 | | |
| | Special Condition (23-119-SC) for Installation of Full Authority Digital Engine Control (FADEC) and the protection of the system from the effects of High Intensity Radiated Fields (HIRF). See NOTE 6. | | |
| | Findings of Equivalent Levels of Safety as follows: ACE-02-06, 14 CFR Part 23.777(d) and 23.781(b), Single Power Lever ACE-03-03, 14 CFR Part 23.1143(g) and 23.1147(b), Throttle and mixture cable failures | | |
| | Exemptions: Exemption number 7865 granted for 14 CFR Part 23.562, Emergency landing dynamic condition | | |
| | Type Certificate Number A00008DE issued February 19, 2004 | | |
| | Application for Type Certificate dated October 26, 2000 | | |

