MINISTÉRIO DA AERONÁUTICA
DEPARTAMENTO DE PESQUISA E DESENVOLVIMENTO
CENTRO TÉCNICO AEROESPACIAL

TYPE CERTIFICATE DATA SHEET Nº EA-8704

TYPE CERTIFICATE HOLDER:
CONSOLIDATED AERONAUTICS
P.O. Box 312
SANFORD, Maine 04073
U. S. A.

LAKE MODEL 250 (Normal Category), Approved May 19, 1987.

ENGINE

Lycoming model IO-540-C4B5.

FUEL

Aviation Gasoline minimum grade 100/130.

ENGINE LIMITS

Max takeoff power	250 HP
Max rpm	2575
Max Cylinder head temperature	260°C
Max Oil temperature	118°C

PROPELLER AND PROPELLER LIMITS

1) TRW Hartzell, hub HC-E3YR-1RLF, blades FL 7663D-2Q.
Diameter: 1930.4 mm (76 in) (no cutoff allowed)
Pitch setting at 762 mm (30 in) station
Low 10.5°
High 26.0°
36.6° optional

2) TRW Hartzell hydraulic governor F-2-6A, F-2-6AZ or V3-3; or Woodward N21068l.

AIRSPEED LIMITS (CAS)

Never exceed (VNE)	275 km/h (148 kt)
Maximum Structural (VC)	217 km/h (117 kt)
Maneuvering (VA)	217 km/h (117 kt)
Flaps extended(VFE)	202 km/h (109 kt)
Max. landing gear extended, operating (VLE, VLO)	202 km/h (109 kt)

CG RANGE:

TAKE OFF & FLIGHT

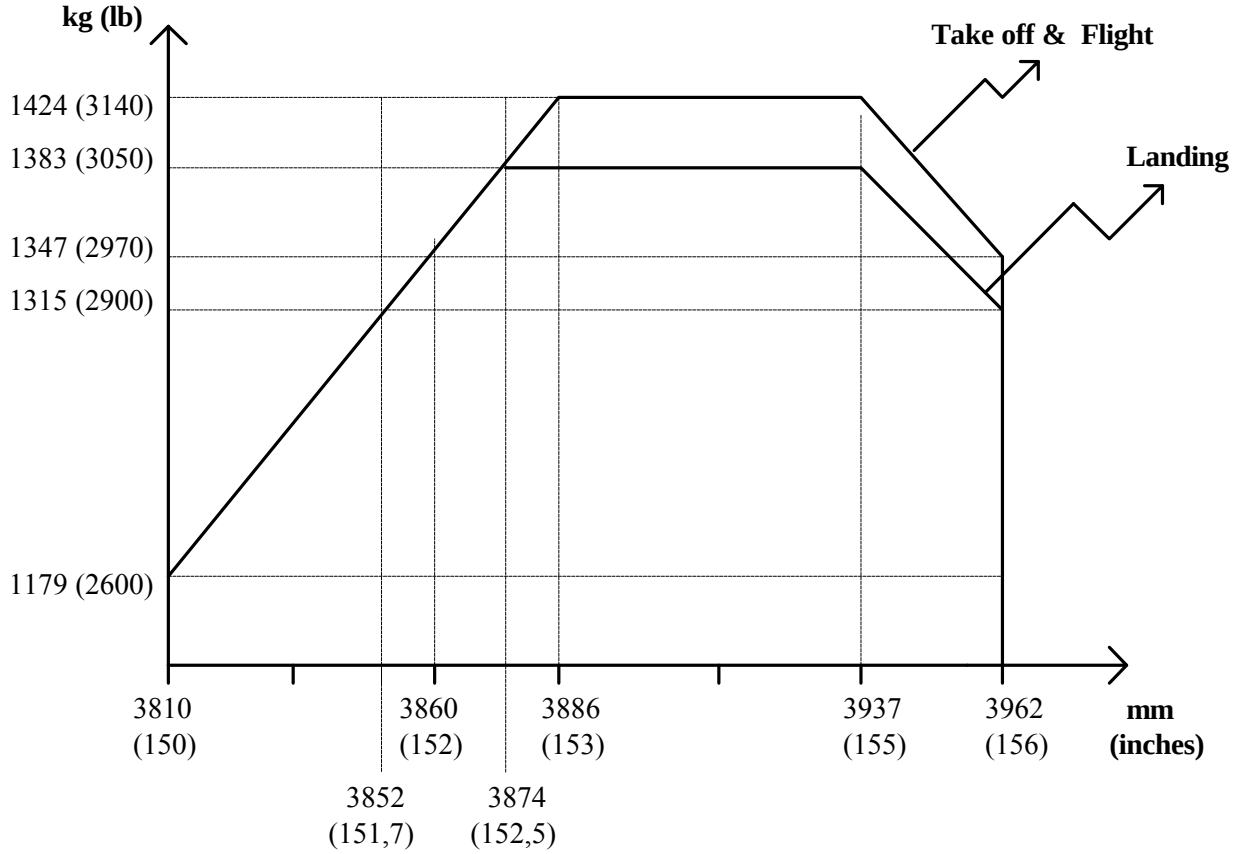
WEIGHT	C.G. RANGE
1179 kg (2600 lb) or less	from 3810 mm (l50 in) * to 3962 mm (156 in)
1347 kg (2970 lb) or less	from 3860 mm (l52 in) * to 3962 mm (156 in)
1424 kg (3140 lb)	from 3886 mm (l53 in) to 3937 mm (155 in)

LANDING

WEIGHT	C.G. RANGE
1179 kg (2600 lb) or less	from 3810 mm (l50 in) * to 3962 mm (156 in)
1315 kg (2900 lb) or less	from 3852 mm (l51,7 in) * to 3962 mm (156 in)
1383 kg (3050 lb)	from 3874 mm (l52,5 in) to 3937 mm (155 in)

Straight line variation between points shown

* See Note 3



DATUM Hull sta. 0 (Hull sta. 0 is 3575 mm (140.75 in) forward of the leading edge at the wing root).

LEVELING MEANS Tops of main longerons in the cabin area (Base of canopy, left or right side).

MAXIMUM WEIGHT 1424 kg (3140 lb) takeoff
1384 kg (3050 lb) landing

Nº OF SEATS 6 maximum; 2 at 2438 mm (96 in), 2 at 3200 mm (126 in), 2 at 3734 mm (147 in).

MINIMUM CREW one pilot.

MAXIMUM BAGGAGE 91 kg (200 lb) at 3200 mm (168 in)

FUEL CAPACITY

Main tank :
total: 153 ı (40.5 gal);
usable: 151 ı (40 gal) at 4267 mm (168 in);

Wing float tanks (optional) :
total: 55 ı (14.5 gal);
usable: 53 ı (14 gal) at 4267 mm (168 in);

Wing tanks (optional see Note 4) :
total: 139 ı (36.6 gal);
usable: 129 ı (34 gal) at 3835 mm (151 in).

OIL CAPACITY 11.3 ı (12 qt) at 4369 mm (172 in)

CONTROL SURFACE MOVEMENTS

Rudder	Right	29°	±1°	Left	20°	±1°
Rudder Trim Tab	L/R	33°	±3°			
Elevator	Up	25°	+1° -2°	Down	27°	±1°
Trim Surface	Up	36°	+2° -1°	Down	24°	+2° -1°
Flaps				Down	20°	±1°
Flaps up	½° min., 1° max. droop relative to bottom surface of wing at wing sta. 39 ¾					
Ailerons	Up	29°	+2° -1°	Down	15°	±1°
Ailerons Neutral:	Up. 5/8 in.±1/8 in. from aligment with fixed outboard portion of wing trailing edge.					

AILERON CABLE RIGGING TENSION 11.3 kg ±1,4 kg (25 lb ± 3 lb)

MANUFACTURE'S SERIAL NUMBERS 2 and up.

CERTIFICATION BASIS

TC nº 8704 issued May 19, 1987, with the following applicable requirements:

1) RBHA 23, equivalent to FAR Part 23 including amendments 23-1 through and including 23-23 subparts A, B, C, D, E, F and G.

2) CAR 03 dated December 14, 1946, amendments 3-1 and 3-2 as follows:

a. 03-2 (03.20 to and including 03.254) with exception that FAR Part 23.427 (c) is applicable for tail surfaces.

b. 03.02 Airplane Categories - Normal.

c. 03.3811 Emergency Provisions - Protection

3) FAR Part 36, Appendix F, December 18, 1984, amendments 36-1 to and including 36-10.

4) Brazilian Special Conditions established by the CTA in Report nº H.10-078-01 issued in May 19, 1987 and CTA letter 286/FDH/IFI/90 dated June 13, 1990.

IMPORT REQUIREMENTS

A Brazilian Airworthiness Certificate may be issued on the basis of the FAA Export Certificate of Airworthiness, signed by an FAA representative, stating the following: "The airplane covered by this Certificate has been examined and found to conform to the Brazilian approved type design under Type Certificate nº 8704, and to be in condition for safe operation".

EQUIPMENT

The basic equipment required as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane for certification. A Brazilian AFM approved by the CTA should be carried on the aircraft.

NOTE 1: Current weight and balance report, including list of equipment included in certificated empty weight, and loading instructions, must be in each aircraft at the time of original certification and at all times thereafter. The loading instructions are contained in the CTA approved AFM.

NOTE 2: The placards in Portuguese which should be installed in the aircraft in proper places, are listed in the paragraph 08 of CTA Report H.10-078-01 the remaining placards, in English, for use of pilots, and maintenance are listed in the CTA approved AFM.

NOTE 3: During the Brazilian Certification significative differences in CG determination were found as a function of the weighing procedure using jacking points or landing gear wheels.
Due to the fact that weighing procedure using jacking points is more accurate and reliable, this is the only CTA approved weighing procedure for the Lake model 250, consequently all references to weighing in wheels were removed in the CTA approved AFM. The Brazilian approved CG range is also different that in the FAA approved AFM, being the maximum aft value reduced from 4013 mm (158 in) to 3962 mm (156 in).

NOTE 4: Lake 250 modified in accordance with STC 264 NE approved May 23, 1984 and amended February 21, 1985, issued to Aerofab Incorporated, P. O. Box 312, Sanford, Maine 0473.

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