

ACAC – Addendum
Model 8KCAB with
Lycoming Engine AEIO-360-H1B (180 HP)

Record of Revisions

LET	By	Description	Date	Pages Affected
A	JJB	Retyped Addendum, Updated for 1950 lbs Gross Weight	10-23-03	All

3.0 PERFORMANCE INFORMATION

3.1 CLIMB SPEEDS

Best Rate-of-Climb Speed at Sea Level: 82 MPH (71 Knots) CAS

Best Angle-of-Climb Speed at Sea Level: 58 MPH (50 Knots) CAS

Best Rate-of-Climb Speed Decreases 1 MPH per 2000ft Gain of Pressure Altitude.

Best Angle of Climb Speed Increases 1 MPH per 1500ft Gain of Pressure Altitude.

3.2 SERVICE CEILING

Service Ceiling: 16000 ft

3.3 AIRSPEED SYSTEM CALIBRATION

Indicated airspeed (IAS) is identical to calibrated airspeed (CAS) from stall up to 140 MPH. From this speed the following calibration exists.

<u>IAS (MPH)</u>	<u>CAS (MPH)</u>
140	139
150	148
160	158
170	167
180	185
200	194

4.0 LOADING INFORMATION

Weight and balance data is prepared individually for each airplane. Procedures used in this section have been approved by the FAA.

ACAC Addendum Page 3 shows the moment and loading envelope diagrams applicable to the 8KCAB. A weight and balance report containing the airplane empty weight, moment, and the approved equipment list is attached to this manual. These items are explained below.

4.1 MOMENT AND LOADING

The loading envelope shows the allowable limits of the total airplane moment from the minimum weight to the maximum gross weight. The moment diagram gives the moment contribution of the pilot, passenger, fuel, oil, and baggage. To find the moment contribution of a 100lb passenger, move vertically upward along the weight scale to 100lbs., move horizontally to the passenger line, the moment contribution is read vertically downward from this point, i.e. 4500 lbs.

To determine if a particular weight configuration is acceptable, find the total weight and the total moment by summing the contributions of each component, including the empty airplane (oil moment is negative and must be subtracted). On the loading diagram, locate the intersection to the horizontal total weight line and the vertical total moment line. If this intersection lies within the envelope, the configuration is acceptable. (ACAC Addendum Page 4)

Note the distinction of normal and acrobatic category areas. Acrobatic category operations are prohibited outside of the acrobatic category envelope and at total weights above 1800 lbs. Reference section 1.2 of the aircraft flight manual for aerobatic category limitation.

4.2 WEIGHT AND BALANCE

The weight and balance report give the official aircraft empty weight, empty moment, empty CG, and useful load. The empty weight includes unusable fuel and undrainable oil. (ACAC Addendum Page 3)

4.3 EQUIPMENT

Each item installed on the airplane at the time of weighting is marked with an X on the equipment list. The weight and moment of each item are also shown. The accelerometer is required for acrobatic category operation only. (ACAC Addendum Pages 5-9)

4.6 EQUIPMENT LIST

Suffix Letters on Item Numbers:

R: Required for FAA Certification

S: Standard Equipment

A: Optional Equipment Not Required

O: Optional Equipment Replacing Standard or Required Item

ITEM NO.	X	DESCRIPTION	DRAWING	WT, LB	ARM, IN
1R	X	Engine, Lycoming AEIO-360-H1B	7-1502	301.00	-38.36
2O		Propeller, Hartzell HC-C2YR-4CFFC7666A-2	4-2010-1	62.00	-57.50
3O	X	Propeller, MT 2-Blade MTV-15-B-C/C188-34 (w/Spinner)	4-2010-4	52.00	-57.50
4O		Propeller, MT 3-Blade MTV-9-B-C/C188-18b (w/Spinner)	4-2010-5	66.00	-57.50
5S		Spinner, Hartzell 836-52	4-2010	4.63	-58.83
6R	X	Propeller Governor	4-2010	2.50	-22.00
7R	X	Control, Propeller Governor	4-2010	2.50	-5.00
8R	X	Pump, Emergency Fuel	7-1502	2.00	-23.40
9R	X	Oil Cooler	7-1502	2.95	-27.18
10R	X	Filter, Injector Air	7-1517	0.50	-43.00
11R	X	Tachometer, Reading	7-1524	0.66	-3.40
12R	X	Gauge, Combination Manifold/Fuel Pressure	7-1524	1.19	-6.69
13R	X	Altimeter—Sensitive	7-1524	0.50	-3.30
14R	X	Indicator, Airspeed	7-1524	0.50	-3.00
15A	X	Rate of Climb	7-1524	0.50	-3.00
16A		Turn & Bank	7-1524	2.00	-3.00
17A	X	Turn Coordinator	7-1524	1.00	-3.00
18A		Artificial Horizon	7-1125	2.19	-3.00
19A		Directional Gyro	7-1125	2.63	-3.00
20A		Suction Gauge	7-1125	.022	-3.00
21A		Vacuum Pump	7-1125	2.81	-3.00

AIRPLANE FLIGHT MANUAL
 AMERICAN CHAMPION AIRCRAFT MODEL 8KCAB (180 HP)

ACAC ADDENDUM
 ISSUED: 04-07-77

PAGE 6 OF 9

ITEM #	X	DESCRIPTION	DWG	WT, LB	ARM, IN
22R	X	Accelerometer	7-1524	0.50	-3.00
23R		Gauge, Oil Temperature	7-1524	0.57	-13.00
24R		Gauge, Oil Pressure	7-1524	0.35	-2.80
25R		Gauge, Ammeter	7-1524	0.26	-3.00
26A		Engine Hour Meter	3-1354	0.80	-3.00
27A		Clock, Davtron	7-1524	0.25	-3.00
28A		Outside Air Temperature Gauge	7-1415	0.17	-8.00
29R	X	Compass, Airpath	4-1736	0.77	-4.00
30O		Compass, Vertical Card	4-1736	0.77	-4.00
31A		Cylinder Head Temperature Gauge	CI-1	1.29	-3.00
32A		Carburetor Air Temperature Gauge	CI-1	1.29	-3.00
33A		Exhaust Gas Temperature Gauge	CI-1	0.50	-5.00
34A		Electronics International Smartscan SR-8	CI-1	2.00	-5.00
35A	X	Electronics International EAC-1 CHT/EGT/OAT	CI-1	1.00	-5.00
36R	X	Stall Warning	4-1401	0.85	-1.74
37O	X	Starter, Skytech	7-1502	8.00	-44.44
38R	X	Alternator	7-1502	10.63	-48.36
39R	X	Voltage Regulator	7-1502	0.50	-22.40
40R	X	Battery Installation —RG25 Concorde	4-1782	27.50	86.00
41A	X	Cabin Light	7-1524	0.57	24.00
42R	X	Tail Light	7-1487	0.41	202.80
43R	X	Landing Light	7-1517	0.47	-52.32
44R	X	Wing Tip Strobe	3-1517	2.5	17.62
45R	X	Position Lights--Wing	3-1512	0.50	17.62
46R	X	Brake Cylinder, Cleveland 10-54 (toe)	4-1624	1.00	-19.63
47A	X	Wheel Pants (Cleveland Wheels)	4-1474	10.00	2.00
48R	X	Wheel & Brake, Cleveland 40-28, 30-19a (both sides)	7-1307	13.94	2.44

AIRPLANE FLIGHT MANUAL
 AMERICAN CHAMPION AIRCRAFT MODEL 8KCAB (180 HP)

ACAC ADDENDUM
 ISSUED: 04-07-77

PAGE 7 OF 9

ITEM #	X	DESCRIPTION	DWG	WT, LB	ARM, IN
49R	X	Tire & Tube, 6.00x6x4 Ply Type III (both sides)	7-1307	18.50	2.44
50R		Tailwheel—Scott 3200	4-1080	7.80	193.33
51O	X	Tailwheel – Alaskan Bushwheel 3200A	4-1080	8.00	193.33
52R	X	Seat Installation, Front Adjustable	7-1499	15.63	17.25
53R	X	Seat Installation, Rear	4-1708	13.63	48.63
54O		Seat Installation, Wide Rear	4-1709	18.44	48.63
55A		Rear Heat	7-1478	2.25	-6.55
56R		Hooker Harness, Front (Standard belt)	7-1499	2.50	18.25
57R		Hooker Harness, Rear (Standard belt)	4-1708	2.50	47.63
58O	X	Hooker Harness, Front (Competition)	3-1660	7.50	18.25
59O	X	Hooker Harness, Rear (Competition)	3-1660	7.00	47.63
60R	X	Cargo Net	3-1475	0.50	62.00
61A		Cabin Speaker	7-1415	1.36	35.00
62A	X	Microphone Telex Tel-66T Front	2-2078	0.38	11.00
63A		Glider Tow	7-1143	4.00	111.00
64A		Landing Gear Steps L/R	3-1559	1.50	2.00
65A		Fire Extinguisher	7-1415	5.38	-5.30
66A		Seaplane Corrosion Proofing	CFP-2	5.00	92.00
67A	X	Remote Oil Filter--Airwolf	4-2026	4.00	-24.00
68A	X	Aileron Spades	3-1669	2.25	46.00
69A	X	Speed Fairings	4-2025	1.00	12.18
70A		External Battery Charger	3-1694	0.25	23.40
71A		Power Receptical	4-2043	0.25	-5.00
72A		Tanis Heater	7-1502	1.60	-41.22
73A	X	Antenna, Transponder		0.50	-3.00
74A	X	Antenna, Broad Band (Com #1 / GPS)	4-1631	1.00	92.00
75A		Antenna, Broad Band (Com #1)	4-1631	0.50	92.00

AIRPLANE FLIGHT MANUAL
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ACAC ADDENDUM
ISSUED: 04-07-77

PAGE 8 OF 9

ITEM #	X	DESCRIPTION	DWG	WT, LB	ARM, IN
76A		Antenna, Broad Band (2 nd Com)		0.50	64.00
77A		Antenna, Nav Meridan OD-1	3-1542	1.50	101.00
78A		Antenna, GPS		0.50	9.50
79A		Antenna, Marker Beacon		0.50	-3.00
80A	X	Encoder—Sandia SAE5-35	4-2036	0.70	-5.00
81A		ELT—ACK E-01	3-1689	3.30	68.38
82A	X	ELT – AmeriKing	3-1689	3.00	68.38
83A		Flitecom 403 Intercom	7-1524	1.00	-5.00
84A	X	PSE PM3000 Intercom	7-1524	1.00	-5.00
85A		Intervox Nat Intercom	7-1524	1.90	-5.00
86A		PSE PM 6000 Audio Panel	4-2036	1.90	-5.00
87A		King KX155 Nav/Com	4-2036	5.30	-5.00
88A		King KY 97A Com	4-2036	2.82	-5.00
89A		King KT 76A Transponder	4-2036	2.00	-5.00
90A		King KLX 135A GPS/Comm	4-2036	5.00	-5.00
91A		King KI 208 Nav Head	4-2036	1.00	-5.00
92A		King KI 209 Nav Head	4-2036	1.00	-5.00
93A		King KMD 150 GPS	4-2036		-5.00
94A	X	Garmin GNC 250XL GPS/Comm	4-2036	3.18	-5.00
95A		Garmin GNS 430 GPS/Comm/Nav	4-2036	4.00	-5.00
96A		Garmin GI 106A Nav Head	4-2036	1.00	-5.00
97A		Garmin GMA 340 Audio Panel	4-2036	1.50	-5.00
98A		Garmin GTX 330 Transponder	4-2036	3.00	-5.00
99A		Garmin SL40 VHF Comm	4-2036	2.10	-5.00
100A	X	Garmin GTX 327 Transponder	4-2036	3.00	-5.00
101A	X	Electronics International FP-5 Fuel Flow / Pressure	CI-1	1.30	-5.00

