



---

AMERICAN CHAMPION AIRCRAFT  
CORPORATION

---

*"Dedicated to Preserving a Classic"*

FLIGHT  
OPERATIONS  
MANUAL  
FOR

MODEL  
7GCBC

**American Champion Aircraft Corp.**  
 Rochester, Wisconsin

**FAA Approved**

**Airplane Flight Manual**

**Citabria Explorer Model 7GCBC**

This manual is eligible only for 7GCBC aircraft, serial numbers 1240-98 and up.

Registration Number: ~~JA771E~~ N117CP

Serial Number: 1275-99

**This manual is part of the required equipment  
 and must remain in the airplane at all times.**

Approved: *Mark Anderson* Date: 3-4-98

For: Royace Prather  
 Manager, Chicago Aircraft Certification Office

**Revisions:**

Letter	By	Date	Revisions	Pages Affected
A	JKM	3/4/98	Rearranged Sections, Added Revision Table, Added IFR operation and Pitot Heat operation, Removed Battery Service operation Information	all

**American Champion Aircraft Corp.**  
Rochester, Wisconsin



This Flight Manual Supplement applies to 7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB, and 8GCBC models.

Registration Number: N117CP

Serial Number: 1275-99

**This manual is part of the required equipment  
and must remain in the airplane at all times.**

Approved: Joseph Mess Date: JUN 28 2010  
For: Charles Smalley  
Manager: Chicago Aircraft Certification Office

Revisions:

Letter	By	Date	Revisions	Pages Affected
Original	JJB	6-17-10	Add Lap Belt Normal Procedures	All

**NORMAL PROCEDURES**

Additional information has been added to the normal procedures requiring pilot inspection of the front seat lap belt prior to engine start and prior to flight.

**Pre-Start Check**

Seat belts - Adjust and secure

Lap belts must be taut; verify slack is not present in lap belts. Verify interference is not present between front lap belts and rear rudder pedals.

**Cockpit Pre-Flight**

*Flight controls - Check for freedom and operation*

Verify lap belts are taut. Verify interference is not present between front lap belts and rear rudder pedals.

**JUN 28 2010**



NOTE: Acro harness does not provide for forward restraint crash protection and therefore should always be used with primary lap belt and shoulder strap.

STANDARD HARNESS -  
(May also be double straps)

SUPPLEMENTAL ACRO HARNESS  
(Shoulder Straps must be on forward side of seat back)

Figure I  
AD 81-16-04

WEARING FRONT SEAT ACRO HARNESS

ACRO HARNESS ASSEMBLY INCLUDES:

- Double Shoulder Harness with retractor reel.
- Lap belt (L & R portions).
- Groin strap.
- Five point buckle.

Installation:

- Extend shoulder harness from reel.
- Adjust over shoulders and couple to buckle.
- Allow shoulder harness reel to retract and adjust harness placing the buckle above the waist but below the chest.
- Attach both lap belt portions to buckle and tighten.

CAUTION

DO NOT ALLOW SHOULDER HARNESS TO RUN UP BEHIND THE FRONT SEAT BACK WHERE IT MAY POSSIBLY INTERFERE WITH REAR STICK MOVEMENT.

Flight Operations

All 7GCBC models are approved in the Normal and Acrobatic Category. Day or night flight in VFR conditions only is approved providing the aircraft is equipped with the required equipment and is in operating condition as specified under Part 91 of the Federal Air Regulations. Normal Category Day or Night IFR operation is approved providing the aircraft is equipped per 7-1572. Flight into known icing condition is prohibited

<u>Airspeed Limitations</u>	<u>CAS (mph)</u>
Never Exceed (red line) .....	162
Caution Range (yellow arc).....	120 - 162
Maximum Structural Cruise .....	120
Normal Operating Range (green arc).....	50 - 120
Flap Operating Range (white arc).....	45 - 90
Maneuvering @ 1800.....	120
Stall Speed.....	Flaps Down.....47
	Flaps Up .....51
Best Rate of Climb Speed .....	78

CAS - Calibrated airspeed is indicated airspeed corrected for installation and instrument error

Weight and Balance Limits

Consult aircraft records for weight and balance data for this aircraft.

Aircraft Weight and Center of Gravity Range (inches)

<u>Weight</u>	<u>Normal Category</u>	<u>Acrobatic Category</u>
1800 lbs. maximum	14.2 - 19.2	14.2 - 16.3
1325 lbs. or less	10.5 - 19.2	10.5 - 16.3

All measurements are aft of the datum line which is the wing leading edge. Center of gravity limits have straight line variation between these points.

Flight Load Factors (1800 lbs. normal or acrobatic category)

Positive Load Factor .....	+ 5.0 g's maximum
Negative Load Factor .....	- 2.0 g's maximum

Do not exceed 135 mph IAS during negative g-load condition.  
Do not perform acrobatics in turbulent air.

Maneuvers**Landplane Approved For Only The Following Acrobatic Maneuvers**

Maneuver	Entry Speed IAS	
	MPH	Knots
Chandelle, Lazy Eight	120	104
Barrel or Slow Roll	120	104
Immelmann	145	126
Loop or Clover Leaf	140	122
Split S	80	70
Snap Roll	85	74
Hammerhead Turn	140	122
Cuban Eight	145	126
Spin	Slow Deceleration	

Do not exceed +5.0 or -2.0 g-load factor. Do not exceed 135 mph IAS during negative g-load condition. Do not perform acrobatics in turbulent air. Caution: negative g flight will cause loss of oil and oil pressure. Use of flaps during acrobatics is prohibited. To recover from spin use full opposite rudder and neutralize elevator.

Powerplant Limitations

Engine, Lycoming	O-320-B2B
Rated Horsepower (HP / RPM)	160 / 2700
Fuel, Aviation Grade, Min. Octane	91 / 96
Tachometer	
Normal Range (green arc - RPM)	1800 - 2700
Maximum (red line - RPM)	2700
Cylinder Head Temperature	
Maximum (red line - °F)	500
Oil Temperatures	
Normal Range (green arc - °F)	100 - 245
Maximum (red line - °F)	245
Oil Pressure	
Normal Range (green arc - psi)	60 - 100
Caution Range (yellow arc - psi)	25 - 60
Maximum (red line - psi)	100
Minimum (red line - psi)	25

Other Operating Information

Occupy front seat when flying solo.

Fuel 35 gal. useable, fuel 'on' when handle is down.

Maximum baggage - 100 lbs. Do not carry baggage during aerobatics.

Folding rear seat, seat back restrainer cable must be connected before flight unless rear control stick is removed.

Turn off strobe lights when taxiing in vicinity of other aircraft or during flight through clouds, fog, or haze. Standard position lights to be on for all night operations.

Emergency door hinge release - pull pin, pull lever

Left window may be used as an alternate emergency exit - force window outward past forward stop mechanism.

Do not open forward left side window above 130 mph, or above 90 mph if the window is full opening.

When Pitot Heat is "ON," magnetic compass may deviate as much as 30°. Use Pitot Heat only as required.

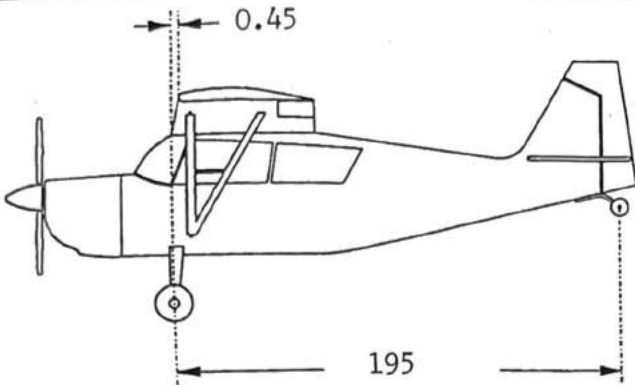
Noise Characteristics

The noise level for this airplane measured in accordance with FAR 36, Appendix G is 69.66 dB(A) at full throttle.

No determination has been made by the Federal Aviation Administration that the noise levels of this airplane are or should be acceptable or unacceptable for operation at, into, or out of, any airport.

AMERICAN CHAMPION AIRCRAFT CORPORATION  
ROCHESTER, WISCONSIN 53167

WEIGHT AND BALANCE WORKSHEET



MODEL NUMBER 7GCBC  
SERIAL NUMBER 1275-99  
IDENTIFICATION NUMBER JA771C  
DATE SEPTEMBER 17, 1999  
SIGNED *M. Reed*

Aircraft Leveling Means: Drop plumb line from wing leading edge so that it is 10.18 inches forward of front face fuselage wing strut fitting.

Weight Actual 1292.5

1. Left Wheel Weight: 606.5 lbs. Right Wheel Weight: 597.5 lbs.
2. Tail Wheel Weight 88.5 lbs.
3. Total Aircraft Weight (Full Oil): 1292.5 lbs.

$$\text{C.G.} = \frac{(\underline{195} \text{ in.}) \times (\underline{88.5} \text{ lbs.})}{(\underline{1292.5} \text{ lbs.})} - (\underline{0.45} \text{ in.}) = \underline{12.9} \text{ in. aft L.E.}$$

	WEIGHT (lbs.)	ARM (in.)	MOMENT (in. lbs.)
Aircraft Weight With Full Oil	1292.5	12.9	16673.25
Subtract Drainable Oil	-15	-36	+540
Add 1 Gallon Unuseable Fuel	+6	+15	+90
<b>TOTALS</b>	1283.5	XXXXXXXX	17303.25

Aircraft Empty C.G. 13.48 in. aft datum  
Useful Load 516.5 lbs.  
Datum: Wing Leading Edge

CENTER OF GRAVITY LIMITS: (+ 14.2 in.) To (+19.2 in.) At 1800 lbs.  
NORMAL CATEGORY (+ 10.5 in.) To (+19.2 in.) At 1325 lbs or less

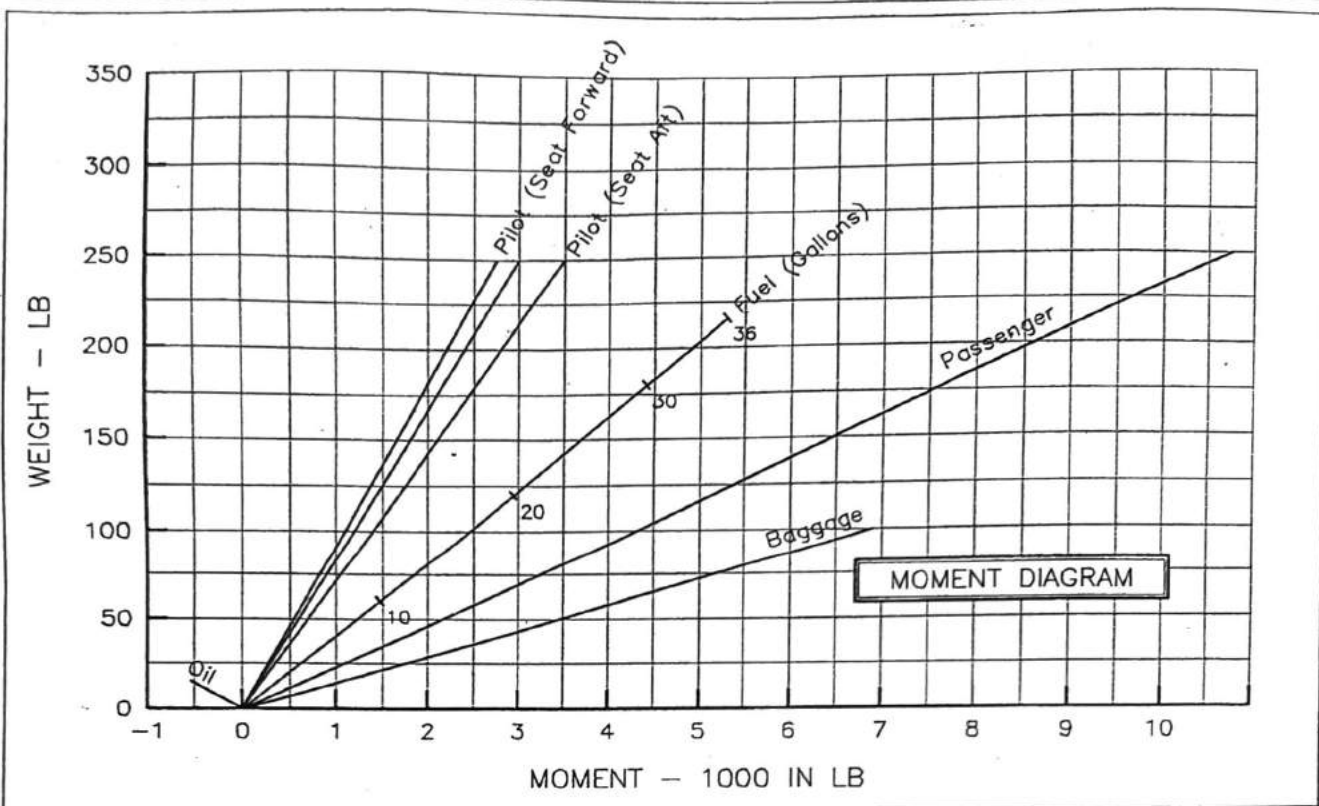
ACROBATIC CATEGORY (+ 14.2 in.) To (+16.3 in.) At 1800 lbs. or less  
(+ 10.5 in.) To (+16.3 in.) At 1325 lbs or less

Straight line variation between points given

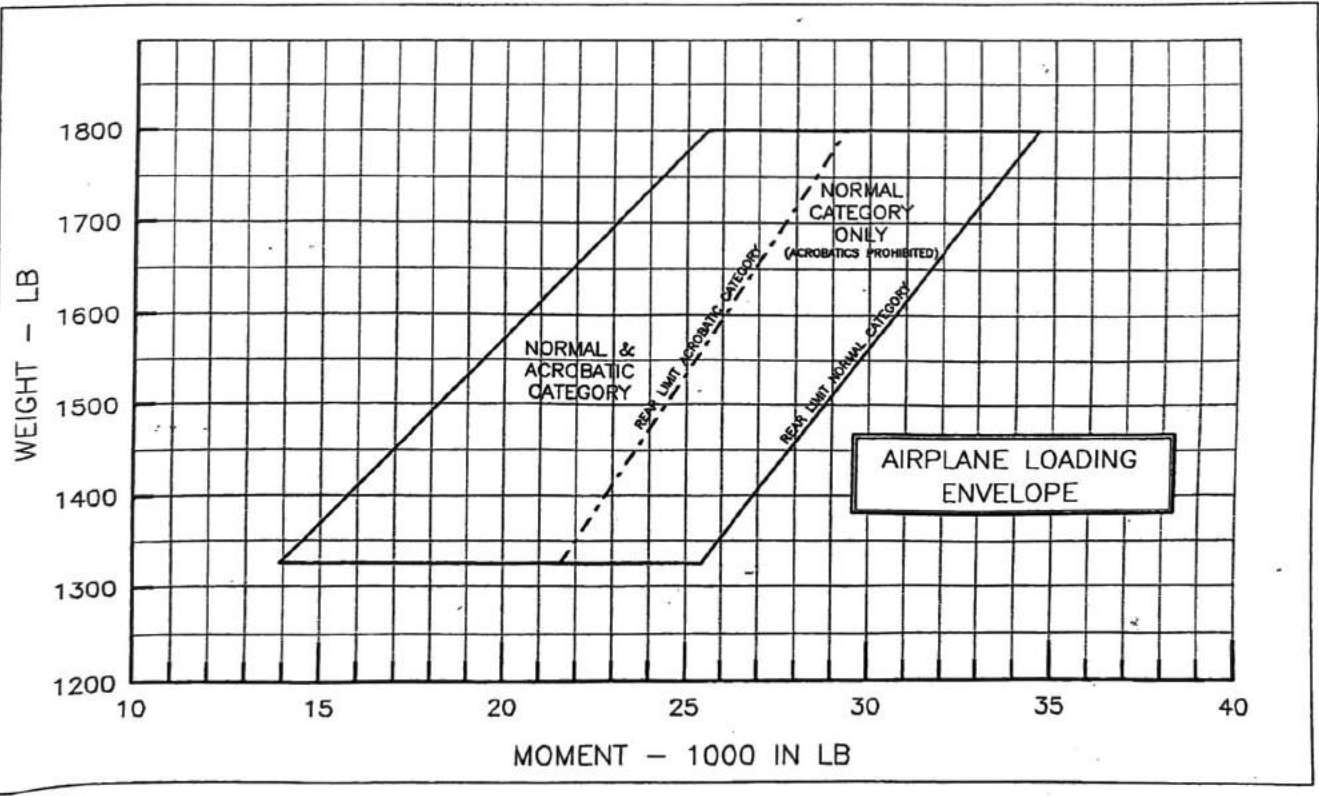


# LOADING SCHEDULE 7GCBC

REVISED: 2-26-96



Add weights and moments of items in MOMENT DIAGRAM to airplane empty weight and moment. (negative oil moment) Locate intersection of total weight and moment on AIRPLANE LOADING ENVELOPE. Any point falling within the envelope meets all balance requirements.



AMERICAN CHAMPION AIRCRAFT - MODEL 7GCBC

EQUIPMENT LIST

Serial Number: 1275-99

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 #	X	DESCRIPTION	WT. LB.	ARM IN.
1R		Engine, Lycoming O-320-A2B	292.44	-41.22
2O	X	Engine, Lycoming O-320-B2B	292.44	-41.22
3R	X	Propeller, Sensenich 74DM6S8-1-56	48.00	-58.58
4S	X	Spinner Installation	3.82	-60.61
5R	X	Oil Cooler	2.95	-29.16
6R	X	Filter - Carburetor Air	0.50	-45.00
7R	X	Tachometer - Recording	0.66	-5.40
8R	X	Gauge, Oil Temperature	0.57	-15.00
9R	X	Gauge, Oil Pressure	0.35	-5.80
10R	X	Gauge, Ammeter	0.26	-5.80
11A	X	Engine Hour Meter	0.80	-5.00
12A		Cylinder Head Temperature	1.29	-6.11
13A		Carburetor Air Temperature	0.80	-5.00
14A		Manifold Pressure	1.19	-8.69
15R	X	Altimeter - Sensitive	1.40	-5.30
16R	X	Airspeed Indicator	0.58	-5.00
17A	X	Rate of Climb	0.58	-5.00
18A		Turn & Bank	2.00	-5.00
19A	X	Turn Coordinator	2.00	-5.00
20A	X	Artificial Horizon Gyro	2.19	-5.00
21A	X	Directional Gyro	2.63	-5.00

AMERICAN CHAMPION AIRCRAFT - MODEL 7GCBC

EQUIPMENT LIST

ITEM #	X	DESCRIPTION	WT. LB.	ARM IN.
22A	X	Suction Gauge	0.22	-4.00
23A	X	Vacuum Pump Installation	2.81	-28.31
24A		Accelerometer	1.00	-5.00
25A	X	Quartz Clock	0.22	-4.00
26A		Mixture Monitor	0.80	-5.00
27A		Gauge, Outside Air Temperature	0.17	6.00
28R	X	Compass, Airpath	0.77	-4.00
29A		Remote Indicating Compass	7.60	0.55
30R	X	Stall Warning	0.85	-1.74
31A	X	Emergency Locator Transmitter, Ameriking AK-450	3.30	68.38
32A	X	Cabin Light	0.57	24.00
33R	X	Battery: RG 25 Concorde	30.81	86.00
34R	X	Tail Light	0.41	200.80
35O	X	Starter - Electro Systems	17.00	-46.44
36R	X	Alternator - Electro Systems	10.63	-50.36
37R	X	Voltage Regulator	0.65	-24.40
38R	X	Landing Light	0.47	-54.32
39R	X	Brake Cylinder Cleveland 10-54 (toe)	1.00	-21.38
40R	X	Wheel & Brake, Cleveland 40-28 30-19 (Both Sides)	25.78	-0.93
41R	X	Tire & Tube 600 x 6, Type III 4 or 6 Ply (Both Sides)	37.50	0.25
42R	X	Tailwheel, Scott 3200	8.25	195.50
43A	X	Glider Tow	4.00	111.00
44S		Landing Gear Step L/R	1.50	1.00
45R	X	Seat Inst. Front - Adjustable	15.63	16.00
46R		Seat Installation Rear	13.63	47.00

AMERICAN CHAMPION AIRCRAFT - MODEL 7GCBC

PAGE 3 OF 4

EQUIPMENT LIST

ITEM #	X	DESCRIPTION	WT. LB.	ARM IN.
47O	X	Seat Installation Rear Wide	18.44	47.00
48A	X	Fire Extinguisher	5.38	-5.30
49A	X	Rear Seat Heater	2.25	-9.00
50A	X	Hooker Harness Front	2.81	20.00
51R	X	Hooker Harness Rear	2.81	60.00
52S	X	Cargo Net	1.00	60.00
53A		Seaplane Corrosion Proofing	5.00	47.38
54O	X	Aileron Spade	2.25	46.00
55A	X	Wing Tip Strobe	4.25	-2.00
56A	X	King KT76A Transponder	3.25	-5.84
57A	X	Transponder Antenna	0.50	-3.00
58A	X	Antenna, Broad Band (Spike Type)	0.50	92.00
59A	X	Cabin Speaker	1.36	33.00
60A	X	Microphone Telex TEL-66T Front	0.38	9.00
61A		Microphone Telex TEL-66T Rear	0.38	43.00
62A		King KI 208 Indicator	1.00	-5.00
63A	X	King KI 209 Indicator	1.00	-5.00
64A		MD40-65L Course Deviation Indicator	0.50	-5.00
65A		MD41-724 GPS Annunciation Control	0.75	-5.00
66A		Narco AR 850 Blind Encoder	0.80	-5.00
67A		Garmin Transponder GTX 320	3.00	-5.00
68A		Garmin GPS Com GNC 250	5.00	-5.00
69A	X	Ameriking AK 350 Encoder	0.80	-5.00
70A		Flite Com 403 Intercom	1.90	-5.00
71A	X	Antenna, Nav Meriden OD-1	1.19	101.00

AMERICAN CHAMPION AIRCRAFT - MODEL 7GCBC

EQUIPMENT LIST

ITEM #	X	DESCRIPTION	WT. LB.	ARM IN.
72A		Antenna, GPS	0.50	7.50
73A	X	King KX 155 Nav Com	5.30	-5.00
74A		King KMA 24 Audio Panel	1.70	-5.00
75A		Artificial Horizon	2.50	-5.00
76A	X	Smartsan SR-8	1.20	-5.00
77A		II Morrow GPS with data base	2.75	-5.00
78A		Seaplane Package (Lift Rings & Vertical Fins)	7.88	123.10
79A		King KLX 135A GPS/Com	-5.00	-5.00
80A		Exhaust Gas Temp Gauge (only)	0.50	-5.00
81A		Trimble 2000a GPS	2.75	-5.00
82A		Compass, Vertical Card	0.77	-6.00
83A		F200 Icebox Multi-Purpose Cooling Fan	1.20	-24.40
84A	X	Wheel Pants (Cleveland Wheels)	10.00	2.00
85A	X	PS 6000 A Intercom	2.50	-5.00
86A		Garmin GTX 320 Transponder	3.25	-5.00
87A		ASC-5A Super Clock	1.00	-5.00
88A		Marker Beacon Antenna	0.50	-3.00

### Weight & Balance Change

CP Aviation, Inc.	<b>Make</b>	American Champion Aircraft
830 E. Santa Maria St. 301	<b>Model</b>	7GCBC
Santa Paula, Ca 93060	<b>S/N</b>	1275-99
	<b>Reg. #</b>	N117CP
	<b>W/O</b>	

#### EQUIPMENT CHANGE - WEIGHT & BALANCE

Items: (Description / P/N / S/N)	Weight Pounds	Arm Inches	Moments Inch/Pounds
<b>Previous Aircraft Empty Weight:</b>	1283.5	13.48	17303.25
Artificial Horizon Gyro	-2.19	-5	10.95
Directional Gyro	-2.63	-5	13.15
Suction Gauge	-0.22	-4	0.88
Vacuum Pump Installation	-2.81	-28.31	79.5511
Glider Tow	-4	111	-444
King KI209 Indicator	-1	-5	5
Antenna, Nav Mericen OD-1	-1.19	101	-120.19
King KX 155 Nav Com	-5.3	-5	26.5
Smartsan SR-8	-1.2	-5	6
PS 6000 A Intercom	-2.5	-5	12.5
IC-A200	2.4	-5	-12
PM3000 Intercom	0.75	-5	-3.75
			0
			0
			0
<b>Totals</b>	1263.61		16877.8411

A. Old Empty Weight	1283.5 Pounds
B. Old Empty CG	13.48 Inches
C. Old Empty Weight CG Moment	17303.25 Inch/Pounds
D. Max Gross Weight	1800 Pounds
E. Old Useful Load	516.5 Pounds

A. New Empty Weight	1263.61 Pounds
B. New Empty CG	13.35684 Inches
C. New Empty Weight CG Moment	16877.84 Inch/Pounds
D. Max Gross Weight	1800 Pounds
E. New Useful Load	536.39 Pounds

**This new weight & balance information supersedes all previous weight and balance data. For aircraft loading, see instructions in Weight & Balance Section of Aircraft Flight Manual.**

FAA Form 337 Completed?	Y   N
Equipment List Amended?	Y   N

[Signature]

14-19-13    ADP 3471325

<b>Authorized Signature</b>	<b>Date</b>	<b>Cert#</b>	<b>Title</b>
-----------------------------	-------------	--------------	--------------

**Notes:**