



**Aircraft Weight & Balance Limitations
N293CM**

Velocity Standard-FG

Date: January 17, 2006

Allowable CG Range 120.75<->115 inches

Maximum GW = 2250-pounds

<u>Item</u>	<u>Weight (Pounds)</u>	<u>Arm (Inches)</u>	<u>Moment (Inch-Pounds)</u>
Empty Aircraft	1392	124.28	173004.00
Pilot and Copilot	0	78.40	0.00
Rear Passengers	0	119.13	0.00
Fuel (6# per gallon)	0	122.25	0.00
Baggage (strakes)	0	105.00	0.00
Totals >>>	1392	124.28	173004.00

* Numbers rounded to 2-decimal places

* Minimum Pilot Weight for Solo Operations = 119-pounds with 10-gallons of fuel

* Empty Weight and CG include 6-gallons (36#) of fuel in the rear sump tank.

* Fuel Capacity is 60-gallons (360-pounds)

* Allowable Weight with Full Fuel = 498-pounds

N293CM**Calculate Minimum Pilot Weight for Solo Operations with 10-gallons of Fuel**

<u>Item</u>	<u>Weight (Pounds)</u>	<u>Arm (Inches)</u>	<u>Moment (Inch-Pounds)</u>
Empty Aircraft	1392	124.28	173004.00
Pilot and Copilot	119	78.40	9329.60
Rear Passengers	0	119.13	0.00
Fuel (6# per gallon)	60	122.25	7335.00
Baggage (strakes)	0	105.00	0.00
Totals >>>	1571	120.73	189668.60

Aircraft Weight = 1571 Okay

Aircraft CG = 120.73 (Most Rearward CG)

Sample Loading: 424-Pounds Pilot and CoPilot with Full Fuel

<u>Item</u>	<u>Weight (Pounds)</u>	<u>Arm (Inches)</u>	<u>Moment (Inch-Pounds)</u>
Empty Aircraft	1392	124.28	173004.00
Pilot and Copilot	424	78.40	33241.60
Rear Passengers	0	119.13	0.00
Fuel (6# per gallon)	360	122.25	44010.00
Baggage (strakes)	0	105.00	0.00
Totals >>>	2176	115.01	250255.60

Aircraft Weight = 2176 Okay

Aircraft CG = 115.01" Okay
(Most Forward CG)

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Calculate Empty Aircraft Weight and CG

January 17, 2006

<u>Data</u>	<u>Weight (Pounds)</u>	<u>Arm (Inches)</u>	<u>Moment (Inch-Pounds)</u>
Front Wheel Weight	138	28.00	3864.00
Left Main Wheel Weight	820	132.50	108650.00
Right Main Wheel Weight	770	132.50	102025.00
Less Sump Fuel	-36	135.00	-4860.00
Less Main Fuel	-300	122.25	-36675.00
Totals >>>	1392	124.28	173004.00