

Weight & Balance Calculations

<u>Item</u>	<u>Weight</u>	<u>CG</u>	<u>Moment</u>
Old empty weight	874.22	+13.40	11721.60
Add BAS, Shoulder Harness System	+5.00	+36.00	+180.00
Remove Old Seat Belts	-2.5	+28.00	-70.00
TOTALS	+876.72		+11831.60

New CG = $11831.60 / 876.72 = +13.50$ This is within the empty CG limits of +12.3 to +13.7.
 New Empty Weight is 876.72 Lb. New useful load is 523.28 Lb. Maximum Weight is 1400 Lb.

Most Forward CG:

	<u>Wt.</u>	<u>CG</u>	<u>Moment</u>
Aircraft Empty Weight	876.72	+13.50	11831.60
Oil (6 Quarts)	11.20	-24.00	-268.80
Fuel (8.33 Gallons)	50.00	+20.00	1000.00
<u>Pilot</u>	<u>170.00</u>	+20.00	<u>3400.00</u>
TOTAL	1107.92		15962.80

CG = $15962.80 / 1107.92 = +14.4$ inches. OK, within the forward limit of +13.6 inches.

Most rearward CG:

	<u>Wt.</u>	<u>CG</u>	<u>Moment</u>
Aircraft Empty Weight	876.72	+13.50	11831.60
Oil (6 Quarts)	11.20	-24.00	-268.80
Fuel (16.6 Gallons)	97.10	+20.00	1942.00
Pilot and Passenger	340.00	+20.00	6800.00
<u>Baggage</u>	<u>75.00</u>	+40.00	<u>3000.00</u>
TOTAL	1400.00		23304.80

CG = $23304.80 / 1400 = +16.6$ inches. OK, within the rearward limit of +16.8 inches.

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