

Situation 1: Max Gross Weight CG

	Weight	Arm	Moment
Aircraft	Gallons 1117	80.84	90,294
Fuel	41 246	80.00	19,680
Pilot	170	97.48	16,572
Passenger	167	97.48	16,279
Baggage	100	126.78	12,678
Total	1800	86.39	155,502
Gross Wt Limit	1800 lbs	78.70	Min allowed
		86.82	Max allowed
Nose wheel load	248	362 lbs	Max allowed

	Weight	Arm	Moment
Aircraft	Gallons 1117	80.84	90,294
Fuel	41 246	80.00	19,680
Pilot	170	97.48	16,572
Passenger	170	97.48	16,572
Baggage	97	126.78	12,298
Total	1800	86.34	155,414
Gross Wt Limit	1800 lbs	78.70	Min allowed
		86.82	Max allowed
Nose wheel load	250	362 lbs	Max allowed

Situation 2a: Most aft CG (Gross weight, min fuel)

	Weight	Arm	Moment
Aircraft	Gallons 1117	80.84	90,294
Fuel	5 30	80.00	2,400
Pilot	170	97.48	16,572
Passenger	170	97.48	16,572
Baggage	97	126.78	12,298
Total	1584	87.21	138,134
Gross Wt Limit	1800 lbs	78.70	Min allowed
		86.82	Max allowed
Nose wheel load	195	362 lbs	Max allowed

Situation 2b: Most aft CG (Gross weight, min fuel)

	Weight	Arm	Moment
Aircraft	Gallons 1117	80.84	90,294
Fuel	5 30	80.00	2,400
Pilot	170	97.48	16,572
Passenger	170	97.48	16,572
Baggage	81.75	126.78	10,364
Total	1568.75	86.82	136,201
Gross Wt Limit	1800 lbs	78.70	Min allowed
		86.82	Max allowed
Nose wheel load	204	362 lbs	Max allowed

Situation 3: Most fwd CG (standard pilot weight)

	Weight	Arm	Moment
Aircraft	Gallons 1117	80.84	90,294
Fuel	41 246	80.00	19,680
Pilot	170	97.48	16,572
Passenger	0	97.48	-
Baggage	0	126.78	-
Total	1533	82.55	126,545
Gross Wt Limit	1800 lbs	78.70	Min allowed
		86.82	Max allowed
Nose wheel load	318	362 lbs	Max allowed

Situation 4: Most fwd CG (min. pilot weight)

	Weight	Arm	Moment
Aircraft	Gallons 1117	80.84	90,294
Fuel	41 246	80.00	19,680
Pilot	100	97.48	9,748
Passenger	0	97.48	-
Baggage	0	126.78	-
Total	1463	81.83	119,722
Gross Wt Limit	1800 lbs	78.70	Min allowed
		86.82	Max allowed
Nose wheel load	322	362 lbs	Max allowed

Situation 5a: Gross weight (heavy pilot & bags, reduced fuel)

	Weight	Arm	Moment
Aircraft	Gallons 1117	80.84	90,294
Fuel	23 138	80.00	11,040
Pilot	228.5	97.48	22,274
Passenger	228.5	97.48	22,274
Baggage	88	126.78	11,157
Total	1800	87.24	157,039
Gross Wt Limit	1800 lbs	78.70	Min allowed
		86.82	Max allowed
Nose wheel load	220	362 lbs	Max allowed

Situation 5b: Gross weight (heavy pilot & bags, reduced fuel)

	Weight	Arm	Moment
Aircraft	Gallons 1117	80.84	90,294
Fuel	23 138	80.00	11,040
Pilot	228.5	97.48	22,274
Passenger	228.5	97.48	22,274
Baggage	69	126.78	8,748
Total	1781	86.82	154,630
Gross Wt Limit	1800 lbs	78.70	Min allowed
		86.82	Max allowed
Nose wheel load	231	362 lbs	Max allowed

Situation 6a: Same as 5 with min fuel

	Weight	Arm	Moment
Aircraft	Gallons 1117	80.84	90,294
Fuel	5 30	80.00	2,400
Pilot	228.5	97.48	22,274
Passenger	228.5	97.48	22,274
Baggage	88	126.78	11,157
Total	1692	87.71	148,399
Gross Wt Limit	1800 lbs	78.70	Min allowed
		86.82	Max allowed
Nose wheel load	193	362 lbs	Max allowed

Situation 6b: Same as 5 with min fuel

	Weight	Arm	Moment
Aircraft	Gallons 1117	80.84	90,294
Fuel	5 30	80.00	2,400
Pilot	228.5	97.48	22,274
Passenger	228.5	97.48	22,274
Baggage	50.5	126.78	6,402
Total	1654.5	86.82	143,644
Gross Wt Limit	1800 lbs	78.70	Min allowed
		86.82	Max allowed
Nose wheel load	215	362 lbs	Max allowed

RV-7A N783RV

Weigh Balance

3/15/2014

	Weight	Arm	Moment
Right Main	532	94.00	48,974
Left Main	518	94.00	48,692
Nose Wheel	30	38.75	12,788
Fuel On Board	252	80.00	(20,160)
Total	1117	80.84	90,294

Datum

70" forward of leading edge

Design limits of CG range

Forward limit 5% 78.70

Aft limit 25% 86.82

Amount over design weight 32 lbs

Original constructed weight 1,106 lbs

Paint added 11 lbs

Steven Hasley
Builder