

# Weight and Balance Spreadsheet

Serial Number **12 Level Flight with Oil and undrainable fuel**

	Weight (lb)	FS Position	Weight (lb)
Left Main	566	72	40752
Right Main	552	72	39744
Tail Wheel	33	240	7920
			88416

**Empty Weight 1151 lb**  
**Empty CG 76.82 FS**

MAC Wing	52.47 in
1/4 Chord MAC	86.34 FS
NP Power Off	98.88
NP Power On	97.67

Values shown here are from the Preliminary Design Review. Neutral Point takes into account, wing, tail, fuselage, thrust, and prop location.

## Flying Weights

	Weight (lb)	FS Position	Weight (lb)
Pilot	210	128	26880
PAX 1	0	98	0
Fuel (Header)	108	68	7344
Fuel (Wing)	0	73	0
Smoke Oil (N/A SN12)	0	90	0
Baggage	0	145	0
			34224

**Flying Weight 1469 lb**  
**Flying CG 83.49 FS**

CG position on %MAC 19.56 %

Static Margin Power Off	15.39 in
Static Margin Power On	14.18 in

Distance between Neutral Point and Center of Gravity

SM as % MAC Power Off	29.34 %
SM as % MAC Power On	27.03 %

Maneuverability is inversely proportional to the SM.

The smaller the static margin, the more maneuverable the airplane will feel....up to where the SM approaches 0, then the plane becomes unstable.

PDR Preliminary Design Review ?

MAC Mean Aerodynamic Cord

NP Neutral Point

CG Center of Gravity

SM Static Margin