Weight and Balance Spreadsheet

Serial Number — 12 Level Flight with 8qts of Oil and undrainable fuel

MTV 9 201-25 propeller

			FS Position	
Left Main	579	lb	72	41688
Right Main	567	lb	72	40824
Tail Wheel	28	lb	240	6720
				89232

Empty Weight	**1174**	**lb**
Empty CG	**76.01**	**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

			FS Position	
Pilot	210	lb	128	26880
PAX 1	0	lb	98	0
Fuel (Header)	102	lb	68	6936
Fuel (Wing)	0	lb	73	0
Smoke Oil (N/A SN12)	0		90	0
Baggage	0	lb	145	0
				33816

Flying Weight	**1486**	**lb**
Flying CG	**82.80**	**FS**
CG position on %MAC	18.26	%
Static Margin Power Off	16.08	in
Static Margin Power On	14.87	in
SM as % MAC Power Off	30.64	%
SM as % MAC Power On	28.33	%

Distance between Neutral Point and Center of Gravity

Maneuverability is inversely porportional 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