



## WEIGHT AND BALANCE PA34-200 SENECA

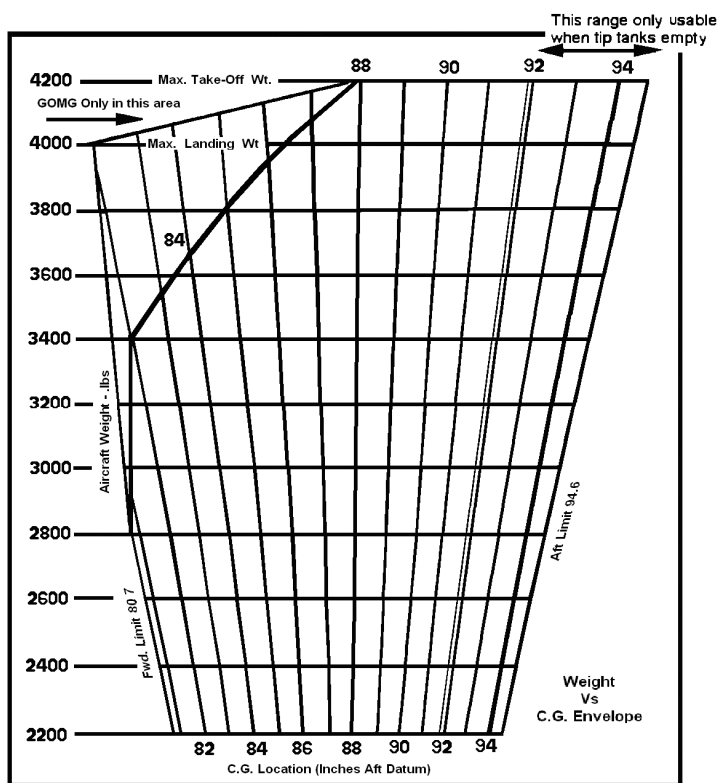
ITEM	WEIGHT (LBS)	ARM (IN. AFT)	MOMENT (IN LBS)
Standard Empty Weight			
Quarts ____ (16 quarts max) <i>Weight: 1.875 lbs/quart</i>		49.0	
Unusable Fuel (5 gal)	30	103.0	3090
Pilot and Front Passenger		85.5	
Passengers (Centre Seats)		118.1	
Passengers (Rear Seats)		155.7	
Baggage (Forward 100 lbs max)		22.5	
Baggage (Aft 100lbs max)		178.7	
Zero fuel weight (4000 lbs max)			
Total Fuel (mains 93 total) (tips 34 total) (Gals _____ x 6 lbs)		93.6	
Fuel for start, taxi & run up (2.5 gals)	-15	93.6	-1404
Take off Weight (4200 The max)			
Trip fuel burn (Gals _____ x 6 lbs)		93.6	
Totals at Landing (4000 lbs max)			
IAS	Vref @ Landing Weight	Hr	Air time flown to get Landing Weight

### Vref Calculation

<i>V<sub>so</sub></i>	<i>FFEA</i>	<i>GOMG</i>	
0 Flap	76	76	$V_{so} \times 1.3 = A$ _____
40 Flap	69	66	
Landing Wt			
Square Root√	$\sqrt{\frac{\text{Landing Wt.}}{\text{Gross Wt.}}} = B$ _____		
Gross Wt			
0 Flap			
IAS	70	80	90
CAS	72	82	92
40 Flap			
IAS	70	80	90
CAS	70	80	90
A x B = Vref CAS _____			

### ACTUAL WEIGHTS SHOULD BE USED

Summer (Mar 15 - Dec 14)	Winter (Dec 15-Mar 14)	
200 lbs	Males (>12 yrs)	206 lbs
165 lbs	Females (>12 yrs)	171 lbs
75 lbs	Child (2-11 yrs)	75 lbs
30 lbs	* Child (<2 yrs)	30 lbs
* Add in where child exceeds 10% of adult		
Reduce wt by 13 lbs with no carry on baggage		



Moment change due to retracting Landing Gear = - 32 in-lbs

		GROSS W				FUEL LOAD			FUEL REQ'D			ROUTING:		ATC FREQ						
FROM		T.TAKEOFF WT.				TIME OFF			TIME ON											
		C of G																		
TO	FREQ	VIA	(NM) DIST	(°M) TK	ALT	(°M) WV	(kt) TAS	E G/S A G/S	ETE	ETA ATA	Clearances:									
											ATIS									
																<b>Apr Speed</b>				
											TO DESTINATION					<b>IFR</b>	130			
											TO ALTERNATE					<b>VFR</b>	105			
											RESERVE					<b>Final (Ref+5)</b>				
											TOTAL					<b>Vref</b>				
											FUEL ON BOARD					