

Weight and Balance Calculation for N2520P, S/N 41076

Accident Location: Kernville, CA Accident Date: August 31, 2007

Reported Passenger Weights (lbs)

Name	Data Source			Weight Used for WB Calculation
	Attorney	Ming Sun	Coroner	
Adam Pasori	160	150	142*	150
David Vichi	155	148	146*	150
Sibel Gurbuz	135	125	90*	110
Sipan Hamzan	135	135	134*	140
Meryem Kaygusuz	< 50	25	23*	25
Nesrin Kaygusuz	< 50	10	16*	16

* = coroner weights were as weighed. Actual is 5-10 lbs more per adult, less per child.

Aircraft Weight and Balance Information

A/C Registration No.					
N2520P					
			Wt. (Lbs.)	Arm (Inches)	Moments
		Right Wheel Weight	1236.00	98.25	121437.00
A/C Serial No.		Left Wheel Weight	1207.66	98.25	118652.60
41076		Tail Support Weight	101.33	263	26649.79
		Oxygen Installed	0.00	133	0.00
			2544.99		266739.39
Date of W&B		Sandbag Adjustment	0.00	267.05	0.00
April 16, 2005		Total Emty. Wt. & Mnt.	2544.99		266739.39
Weighed By		Empty Center of Gravity			104.81
Bill Tinney					
Calculated By					
Francie Mills					
Empty CG					
		Airplane Empty Weight	2544.99		266739.385
		Pilot	0.00	110	0
		Passenger	0.00	141.4	0
		Baggage	0.00	166.6	0
		Fuel	0.00	118	0
		Gross Weight	2544.99		266739.385
		Load Center of Gravity	104.81		
		Fuel Quantity (Gallons)	0.00		

Known:

- N2520P's fuel tanks were topped off (98 gallons usable) at Santa Ynez (KIZA) the day before the accident (8/30/07).
- Direct distance KIZA to Santa Monica (KSMO) is 88 nm.
- 25 pounds of baggage (at least this much was removed from the wreckage).
- Flight from KSMO to L05 was 1 hr 25 minutes long. Direct distance is 103 nm.
- Pasori routinely flew lean of peak (~17 gph at cruise)

Assumptions:

- Pasori flew N2520P directly from Santa Ynez to Santa Monica after fueling, and did not make any other flights prior to the accident flight.
- Flight from KIZA to KSMO was 45 minutes long, cruising at 5,500 feet MSL.
- Cruised at 10,500 feet MSL on flight from KSMO to L05.

Calculations:

- Fuel burn from KIZA to KSMO: 13.83 gallons (2.1 gal & 3.6 minutes for climb, 41.4 min cruise @ 17gph = 11.73 gal)
- Fuel burn from KSMO to L05: 26.46 gallons (4.5 gal & 7.5 minutes for climb, 1hr17.5min cruise @17 gph = 21.96 gal)

Note: These fuel burn calculations are slightly conservative – the reduction in fuel burn that would have occurred during descent was not factored in. The actual fuel burn may have been several gallons less than the 14 and 27 gallons that were used in the weight and balance calculation, which would have resulted in even higher takeoff and landing weights.

	Weight	Arm	Mom/K
Basic Empty	2544.99	104.81	266.7404
Fuel (gal)	84		
Fuel (weight)	504	118	59.472
Pilot/ Pass	300	110	33
3rd/4th Seat	291	141.4	41.1474
Baggage	25	166.6	4.165
Rear Shelf	0	199.8	0
T/O Weight	3664.99		404.5248
T/O CG	110.375		

Fuel Used	27		
Wgt Fuel Used	162	118	19.116
Landing Weight	3502.99		385.4088
Landing CG	110.023		

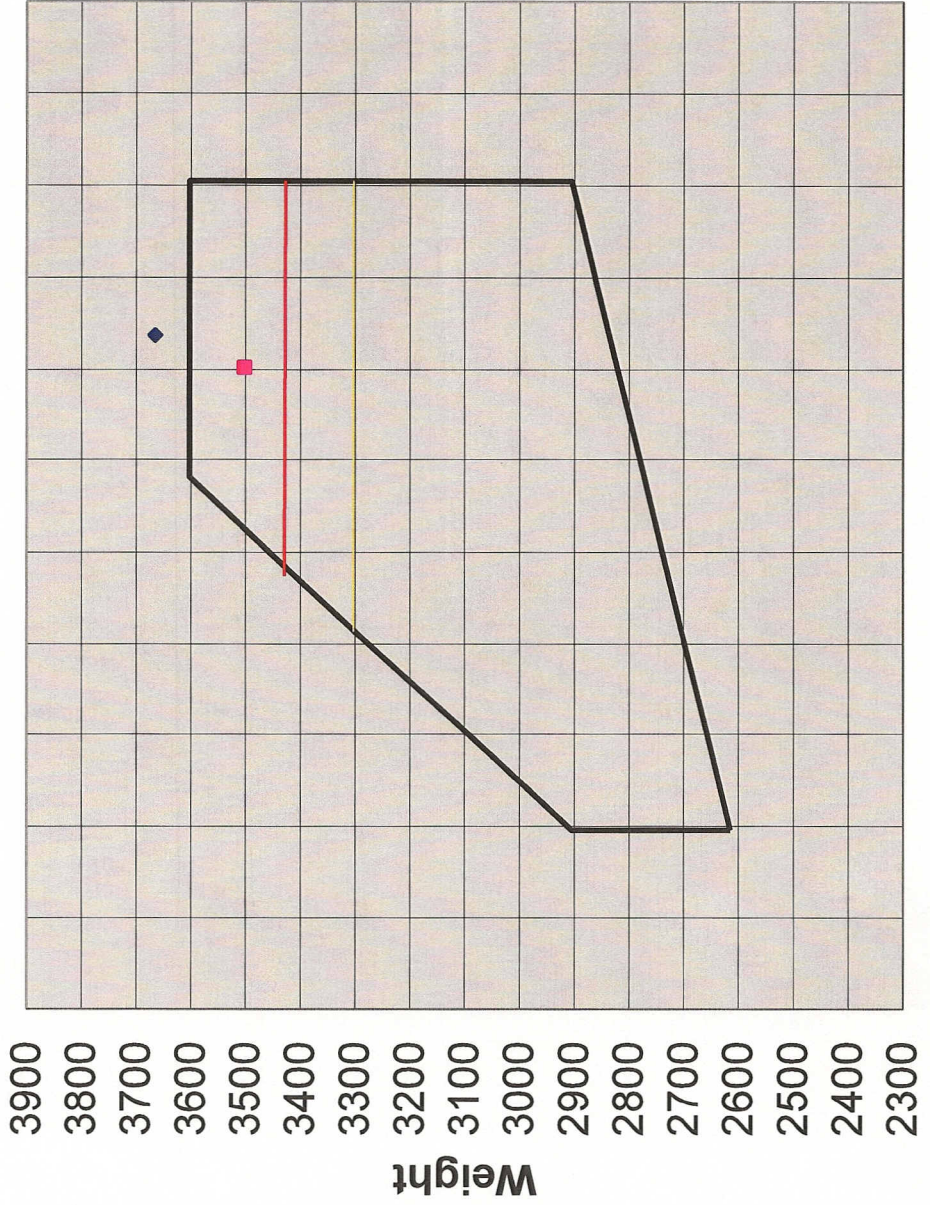
Max Takeoff Weight = 3600 lbs

Max Landing Weight = 3420 lbs

Max Zero Fuel Weight = 3300 lbs

Diamond = Takeoff Weight/CG

Square = Landing Weight/CG



CG 103 104 105 106 107 108 109 110 111 112 113 114