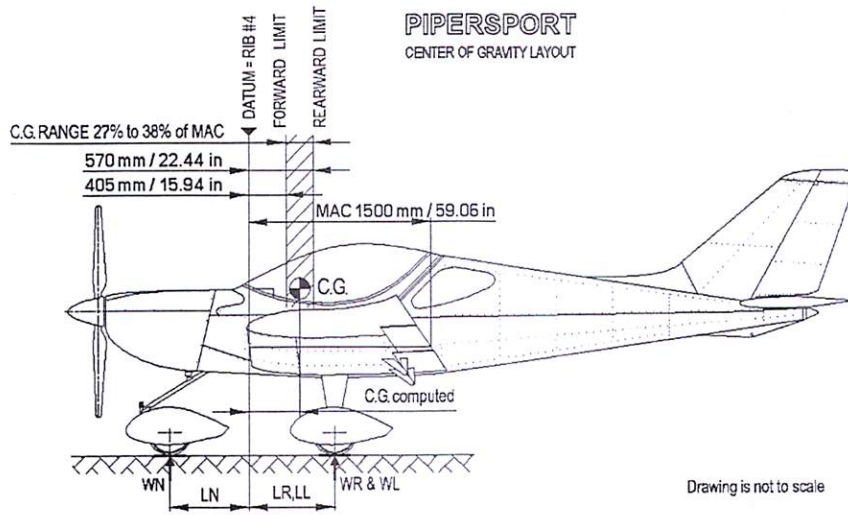


WEIGHT & BALANCE RECORD
C.G. Layout



Drawing is not to scale

WEIGHT & BALANCE RECORD
Empty Weight C.G. Check
of PiperSport aircraft s/n : P1001019

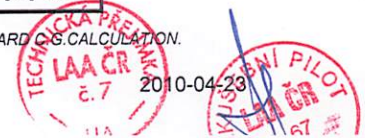
AIRCRAFT EMPTY C.G.	ITEM	WEIGHT [lb]	ARM [in]	MOMENT (WEIGHT x ARM)
	RIGHT MAIN WHEEL	$W_R = 325.60$	$L_R = 31.69$	10,318.26
	LEFT MAIN WHEEL	$W_L = 322.96$	$L_L = 31.26$	10,095.73
	NOSE WHEEL	$W_N = 207.24$	$L_N = -27.80$ negative arm	- 5,761.27
	COMPUTED C.G. EMPTY	Empty weight: $W_E = 855.80$ [lb]	C.G. = 17.12 [in] 29.0 [%] MAC	Aircraft moment: $M_E = 14,652.72$

NOTE: EMPTY WEIGHT INCLUDING OIL, COOLANT AND HYDRAULIC FLUID.

WEIGHT & BALANCE RECORD
Forward C.G. Check
of PiperSport aircraft s/n : P1001019

FORWARD C.G.	WEIGHT [lb]	ARM [in]	MOMENT (WEIGHT x ARM)
EMPTY AIRCRAFT	855.80	-----	14,652.72
PILOT	94.60	27.56	2,607.18
PASSENGER	0.0	27.56	0.0
BAGGAGE COMPARTMENT - A	0.0	51.58	0.0
BAGGAGE COMPARTMENT - B	0.0	70.87	0.0
WING LOCKERS	0.0	23.62	0.0
FUEL TANKS	180.62	7.09	1,280.60
TOTAL	$W_T = 1,131.02$ [lb]		$M_T = 18,540.49$
TAKEOFF WEIGHT	1,131.02 [lb]		C.G. = 16.39 [in] 27.8 [%] MAC

NOTE: MAXIMUM FUEL QUANTITY IN WING TANKS (180.62LB = 30.1US GAL) IS USED FOR MOST FORWARD C.G. CALCULATION.



WEIGHT & BALANCE RECORD
Rearward C.G. Check
of PiperSport aircraft s/n : P1001019

REARWARD C.G.	WEIGHT [lb]	ARM [in]	MOMENT (WEIGHT x ARM)
EMPTY AIRCRAFT	855.80	-----	14,652.72
PILOT	190.08	27.56	5,238.60
PASSENGER	190.08	27.56	5,238.60
BAGGAGE COMPARTMENT - A	33.00	51.58	1,702.14
BAGGAGE COMPARTMENT - B	6.60	70.87	467.74
WING LOCKERS	22.22	23.62	524.84
FUEL TANKS	0.0	7.09	0.0
TOTAL	W_T=1,297.78 [lb]		M_T= 27,824.65
TAKEOFF WEIGHT	1,297.78 [lb]		CG= 21.44 [in] 36.3 [%] MAC

NOTE: MINIMUM FUEL QUANTITY IN WING TANKS FOR 30MINUTE FLIGHT (22.2LB=3.7US GAL) IS SUBTRACTED FROM MTOW (1,320LB). MOST REARWARD C.G. CALCULATION IS DONE WITH ZERO FUEL QUANTITY (AFTER FUEL DEPLETION).

Max. takeoff weight : 1,320 [lb]

Max. weight in baggage compartment A+B : 40 [lb]

Max. weight in wing lockers together : 88 [lb]

Empty weight C.G. range : 16.54 to 18.90 [in] / 28 to 32 [%] of MAC

Operating C.G. range : 15.94 to 22.44 [in] / 27 to 38 [%] of MAC

Maximum useful weight:

$$W_{Max\ Useful} = W_{Max\ TakeOff} - W_E$$

$$W_{Max\ Useful} = 1,320 [lb] - 855.8 [lb] = \underline{464.2 [lb]}$$

This useful weight must be never exceeded!

NOTE: MAXIMUM USEFUL WEIGHT INCLUDING PILOT, PASSENGER, BAGGAGE AND FUEL.

$$\text{Aircraft C.G.} = \frac{M_T}{W_T} [in] \times \frac{100}{MAC} [%]$$

Serial No.:	P1001019
Date:	2010-04-23
By:	Otakar Hrabinec



Permitted payload range table

PiperSport			Serial No. : P1001019				
FUEL	gauges together		for 30 min flight	1 / 4	1 / 2	3 / 4	1
	volume	US gal	3.7	7.5	15.1	22.6	30.1
		litre	14	28.5	57	85.5	114
	weight	lb	22.2	45.1	90.3	135.4	180.6
kg		10.1	20.5	41	61.6	82.1	
			Permitted crew weight				
BAGGAGE	No baggage	lb	442	419	374	329	284
		kg	201	191	170	149	129
	½ rear (A) 20 [lb] (9 [kg])	lb	422	399	354	309	264
		kg	192	181	161	140	120
	rear (A) 40 [lb] (18 [kg])	lb	402	379	334	289	244
		kg	183	172	152	131	111
	½ wing lockers 44 [lb] (20 [kg])	lb	398	375	330	285	240
		kg	181	171	150	129	109
	½ rear (A) + ½ wing lockers 64 [lb] (29 [kg])	lb	378	355	310	265	220
		kg	172	161	141	120	100
	rear (A) + ½ wing lockers 84 [lb] (38 [kg])	lb	358	335	290	245	200
		kg	163	152	132	111	91
wing lockers 88 [lb] (40 [kg])	lb	354	331	286	241	196	
	kg	161	151	130	109	89	
½ rear (A) + wing lockers 108 [lb] (49 [kg])	lb	334	311	266	221	176	
	kg	152	141	121	100	80	
rear (A) + wing lockers 128 [lb] (58 [kg])	lb	314	291	246	201	156	
	kg	143	132	112	91	71	
Crew weight = Max. Takeoff weight - Empty weight - Baggage weight - Fuel weight							

Crew weight values must be determine with regard on rearward C.G. limit.
Max. takeoff weight : 1,320 [lb] (600 [kg])

