

Weight & Balance – Challenger II – Two Place

Aircraft N850RW

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Chart A Aircraft: N 850RW

	Weight	lbs.	x	Arm	"	=	Moment
Left Wheel:	<u>226.2</u>		x	90	"	=	<u>20394</u>
Right Wheel:	<u>215.4</u>		x	90	"	=	<u>19386</u>
Tail Wheel:	<u>53.6</u>		x	216	"	=	<u>11577</u>
Total Empty Weight:	<u>495.2</u>	lbs.					Total Moment (inch/lbs): <u>51357</u>
$\frac{\text{Total Moment (inch/lbs): } 51357}{\text{Total Empty Weight (lbs): } 495.2} = 103.7$							Arm (Empty airplane)

(Note: Below calculations correct above left wheel moment to 20,358, and arm to 103.6 in)

Weight & Balance calculation for accident flight:

	Weight (lbs)	x	Arm (in)	=	Moment
Empty airplane:	495.2		103.6		51,320
Sand bags: (22,22,22)	66		24		1,584
Front Seat (pilot)	186*		50		9,300
Rear Seat (student pilot)	150**		77		11,550
Fuel	<u>40***</u>		103		<u>4,120</u>
Total Gross Weight:	937.2	lbs	(137.2 lbs overweight)		77,874

Total Moment/Total Weight: 83.09" (within CG limits)

*based on FAA medical exam dated 4/16/2018

**based on autopsy

***estimated

Max. Allowable Gross Weight: 800 lbs
Center of Balance Range from 80" to 90" from datum.