

N983PB WEIGHT BALANCE

02/14/2019

DATUM = 70 INCHES FORWARD OF WING LEADING EDGE

WING LEADING EDGE 23.375 INCHES AFT OF AFT SIDE OF UPPER FIREWALL

CG RANGE:	FWD LIMIT:	80.49	18%	MAX Gross Weight: 1320 lbs
	AFT LIMIT:	85.39	27%	

AIRCRAFT with ZERO FUEL & ZERO BALLAST

	<u>WEIGHT</u>	<u>ARM</u>	<u>MOMENT</u>
LEFT WHEEL	325	93.6875	30448.44
NOSE WHEEL	151	29.719	4487.569
RIGHT WHEEL	325	93.6875	30448.44
	801	81.62852	65384.44
		20.40 % chord	

MOMENT ARMS:

	full	half	minimum
FUEL	100.241	100.83	101.4
PASSENGER	78.85		
PILOT	78.85		
BAGGAGE	114.42		

SAMPLE LOADING PROBLEM: 110lb PILOT, FULL FUEL, 60lb BAGGAGE

	<u>WEIGHT</u>	<u>ARM</u>	<u>MOMENT</u>
AIRCRAFT	801	81.62852	65384.44
FUEL	120	100.241	12028.92
PASSENGER	0	78.85	0
PILOT	110	78.85	8673.5
BAGGAGE	60	114.42	6865.2
			92952.06

GROSS WEIGHT 1091 lb

CG LOCATION 85.20 inches 26.66 % chord

SAMPLE LOADING PROBLEM: TWO 199 lb PEOPLE, FULL FUEL, NO BAGGAGE

	<u>WEIGHT</u>	<u>ARM</u>	<u>MOMENT</u>
AIRCRAFT	801	81.62852	65384.44
FUEL	120	100.241	12028.92
PASSENGER	199	78.85	15691.15
PILOT	199	78.85	15691.15
BAGGAGE	0	114.42	0
			108.80

GROSS WEIGHT 1319 lb

CG LOCATION 82.48344503 inches 21.90 % chord

SAMPLE LOADING PROBLEM: TWO 199 lb PEOPLE, NO FUEL, NO BAGGAGE

	<u>WEIGHT</u>	<u>ARM</u>	<u>MOMENT</u>
AIRCRAFT	801	81.62852	65384.44
FUEL	0	101.4	0
PASSENGER	199	78.85	15691.15
PILOT	199	78.85	15691.15
BAGGAGE	0	114.42	0
			96.77

GROSS WEIGHT 1199 lb

CG LOCATION 80.71 inches 18.78 % chord

SAMPLE LOADING PROBLEM: TWO 165 lb PEOPLE, FULL FUEL, 65lb BAGGAGE

	<u>WEIGHT</u>	<u>ARM</u>	<u>MOMENT</u>
AIRCRAFT	801	81.62852	65384.44
FUEL	120	100.241	12028.92
PASSENGER	165	78.85	13010.25
PILOT	165	78.85	13010.25
BAGGAGE	65	114.42	7437.3

GROSS WEIGHT 1316 lb

CG LOCATION 84.25 inches 25.00 % chord

SAMPLE LOADING PROBLEM: TWO 250 lb PEOPLE, MINIMUM FUEL, 0lb BAGGAGE

	<u>WEIGHT</u>	<u>ARM</u>	<u>MOMENT</u>
AIRCRAFT	801	81.62852	65384.44
FUEL	18	101.4	1825.2
PASSENGER	250	78.85	19712.5
PILOT	250	78.85	19712.5
BAGGAGE	0	114.42	0

GROSS WEIGHT 1319 lb

CG LOCATION 80.85 inches 19.03 % chord