

## AIRCRAFT WEIGHT AND C.G DETERMINATION

REPORT NO : 01/WB/III/2021

DATE : 08 MARCH 2021

AIRCRAFT REGISTRATION	: PK-SNG		
AIRCRAFT TYPE	: C208B EX		
AIRCRAFT SERIAL NUMBER	: 208B-5543		
PROPERTY OF	: PT. SMART CAKRWALA AVIATION		
PLACE OF WEIGHING	: WICHITA		
REASON OF WEIGHING	: APE STOL MODIFICATION		
CONFIGURATION	: <b>PAX</b>		
PERFORMED BY	: YINLING AIRCRAFT, INC.		
	SIGNED:	DATE: 11/14/2019	
CHECKED BY	: YINLING AIRCRAFT, INC.		
	SIGNED:	DATE: 11/14/2019	

## RESULTS

<b>EMPTY WEIGHT</b>	<b>: 5387.3</b>
<b>EMPTY C.G FROM DATTUM LINE</b>	<b>: 191.97</b>
<b>INDEX MAC %</b>	<b>: 21.68 %</b>
<b>VALID UNTIL</b>	<b>: NOVEMBER 2024</b>

## WEIGHING EQUIPMENT

PART NUMBER	: UNK
SERIAL NUMBER	: UNK
VALIDATION	: UNK

APPROVED BY:


**YANUAR ABDUL FATAH**  
**CHIEF INSPECTOR**

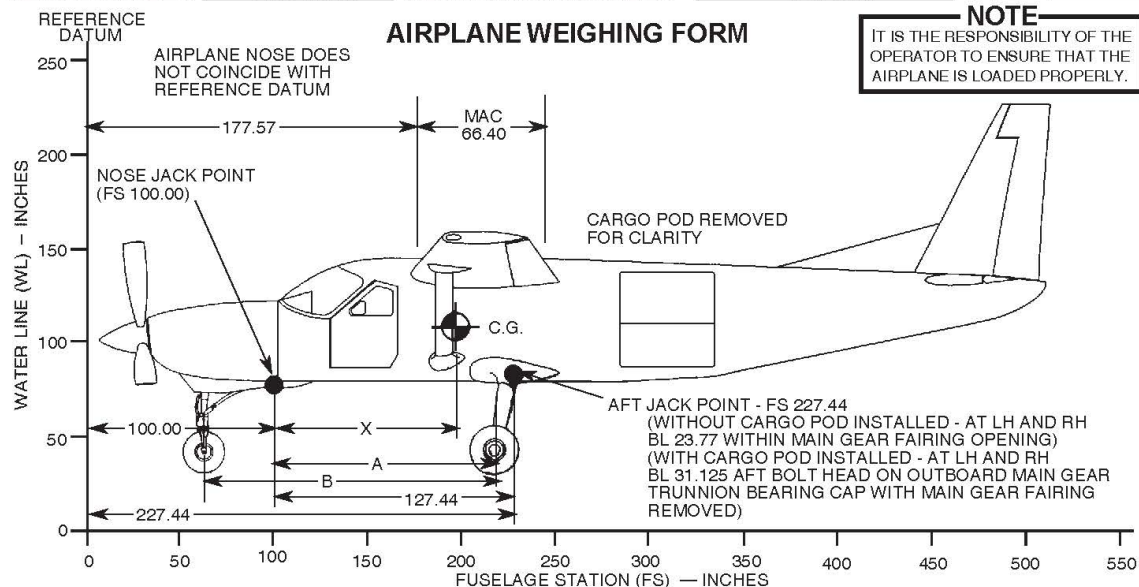
# AIRCRAFT WEIGHT & BALANCE

**MODEL 208B  
CARAVAN I**

**WEIGHT AND  
BALANCE DATA**



**SERIAL NUMBER** 208B5543 **REGISTRATION NUMBER** PK-SNG **DATE** 11/14/2019



## LOCATING CG WITH AIRPLANE ON LANDING GEAR

FORMULA for Longitudinal CG

$$(X) = (A) \frac{(\text{Nose Gear Net Weight})(870)}{116.75 \text{ Nose and Main Landing Gear Weight Total}(5286)} = (90.79) \text{ Inches}$$

CG Arm of Airplane = 100 + (X) = (190.79) Inches Aft of Datum

## MEASURING A AND B

MEASURE A AND B PER PILOT'S OPERATING HANDBOOK INSTRUCTIONS TO ASSIST IN LOCATING CG WITH AIRPLANE WEIGHED ON LANDING GEAR

## LOCATING CG WITH AIRPLANE ON JACK PADS

FORMULA for Longitudinal CG

$$\text{CG Arm of Airplane} = 227.44 - \frac{127.44 X (\text{Nose Jack Point Net Weight})}{\text{Nose and Aft Jack Point Weight Total}} = (\text{Inches Aft of Datum})$$

## LEVELING PROVISIONS

LONGITUDINAL – LEFT SIDE OF FUSELAGE AT FS 239.00 & 272.00  
LATERAL – SEAT RAILS AFT OF PILOT AND FRONT PASSENGER SEATS

## LOCATING PERCENT MAC

FORMULA for Percent MAC

$$\text{CG Percent MAC} = \frac{(\text{CG Arm of Airplane}) - 177.57}{0.6640}$$

## AIRCRAFT AS WEIGHED TABLE

POSITION	SCALE READING	SCALE DRIFT	TARE	NET WEIGHT
LEFT SIDE	2176.00	0	0	2176.00
RIGHT SIDE	2240.00	0	0	2240.00
NOSE	870.00	0	0	870.00
AIRPLANE TOTAL AS WEIGHED				5286.00

## BASIC EMPTY WEIGHT AND CENTER-OF-GRAVITY TABLE

ITEM	WEIGHT (POUNDS)	CG ARM (INCHES)	MOMENT/1000 (INCH-POUNDS)
AIRPLANE (CALCULATED OR AS WEIGHED) (INCLUDES ALL UNDRAINABLE FLUIDS AND FULL OIL)	5286.00	190.79	1008.52
DRAINABLE UNUSABLE FUEL AT 6.75 POUNDS PER GALLON S/N 208B0001 Thru 208B0009 Not Modified With SK208-52 S/N 208B0001 Thru 208B0009 Modified With SK208-52 And S/N 208B0090 And On	20.1 24.1	-205.7 206.4	4.97
BASIC EMPTY WEIGHT	5310.10	190.86	1013.49

CESSNA AIRCRAFT COMPANY, AIRCRAFT DIVISION, P.O. BOX 7704, WICHITA, KANSAS 67277

FORM NUMBER 1692-2, 15 July 1986  
REVISED 22 January 2002



## AIRCRAFT WEIGHT & BALANCE

**TABEL1**

BASIC ITEM NOT INCLUDED WHEN WEIGHING	WEIGHT (POUNDS)	CG ARM (INCHES)	MOMENT/1000 INCH POUNDS
APE STOL KIT STC #: SAO1805SE	5.80	203.00	1.17
BENCH ASSY	46.30	267.69	12.39
SINGLE SEAT ASSY	25.10	285.55	7.16
<b>TOTAL</b>	<b>77.2</b>	<b>268.63</b>	<b>20.73</b>

**TABEL 2**

DESCRIPTION OF ACTION PERFORMED	WEIGHT (POUNDS)	CG ARM (INCHES)	MOMENT/1000 INCH POUNDS
<b>TOTAL</b>			

**TABEL 3**

AIRCRAFT WEIGHING REPORT	WEIGHT (POUNDS)	CG ARM (INCHES)	MOMENT/1000 INCH POUNDS
AIRPLANE (CALCULATED OR AS WEIGHED) (INCLUDES ALL UNDRAINABLE FLUIDS AND FULL OIL)	<b>5310.10</b>	<b>190.86</b>	<b>1013.49</b>
WEIGHT FROM TABLE 1 (+)	<b>77.2</b>	<b>268.63</b>	<b>20.73</b>
<b>TOTAL</b>	<b>5387.3</b>	<b>191.97</b>	<b>1034.22</b>

### BASIC EMPTY WEIGHT AND CENTER OF GRAVITY TABLE

ITEM	WEIGHT (POUNDS)	CG ARM (INCHES)	MOMENT/1000 INCH POUNDS
AIRPLANE (CALCULATED OR AS WEIGHED) (INCLUDES ALL UNDRAINABLE FLUIDS AND FULL OIL)	<b>5387.3</b>	<b>191.97</b>	<b>1034.22</b>
<b>BASIC EMPTY WEIGHT</b>	<b>5387.3</b>	<b>191.97</b>	<b>1034.22</b>



## AIRCRAFT WEIGHT & BALANCE

### LOCATING PERCENT MAC

$$\begin{aligned}\text{CG Percent MAC} &= \frac{(\text{CG Arm of Airplane}) - 177.57}{0.6640} \\ &= \frac{191.97 - 177.57}{0.6640} \\ &= 21.68 \%\end{aligned}$$

## AIRCRAFT WEIGHT & BALANCE

<b>PRIOR TO WEIGHT AND BALANCE CHECK</b>				
<b>AIRCRAFT TYPE</b> : CESSNA C208B EX CARAVAN <b>AIRCRAFT REGISTRATION</b> : PK-SNG <b>AIRCRAFT SERIAL NUMBER</b> : 208B-5543 <b>DATE OF WEIGHING</b> : 14 NOVEMBER 2019				
NO.	DESCRIPTION	APPL	CHECK	REMARKS
<b>A</b>	<b>STANDARD ITEMS</b>			
1	All fuel tank EMPTY or recorded / FULL	√	Empty	-
2	All engine oil tanks EMPTY or recorded / FULL	√	Full	-
3	All others oil tanks FULL (included Propeller, Starters, Gearbox and Air Cycle)	√	Full	-
4	Hydraulic tanks FULL	√	Full	-
<b>B</b>	<b>STANDARD EQUIPMENTS</b>			
1	Technical supply or Flight Kits	x	N/A	-
2	Aircraft Books, Manuals and Papers	x	1 Bag	-
3	AXE	x	1 EA	-
4	Fire Extinguisher	√	1 EA	-
5	First Aid Kit	x	1 Box	-
6	Life Vests	x	11 EA	-
7	Life Raft	x	N/A	-
8	Survival Kit	x	N/A	-