

**AIRCRAFT WEIGHT AND C.G DETERMINATION**

REPORT NO : 03/WB/VI/2020

DATE : 19 JUNE 2020

AIRCRAFT REGISTRATION : PK-SNH  
AIRCRAFT TYPE : C208B EX  
AIRCRAFT SERIAL NUMBER : 208B-5587  
PROPERTY OF : PT. SMART CAKRWALA AVIATION  
PLACE OF WEIGHING : WICHITA  
REASON OF WEIGHING : APE STOL MODIFICATION  
CONFIGURATION : **CARGO WITHOUT CARGO POD**  
PERFORMED BY : YINLING AIRCRAFT, INC.  
SIGNED: DATE: 3/16/2020  
CHECKED BY : YINLING AIRCRAFT, INC.  
SIGNED: DATE: 3/16/2020


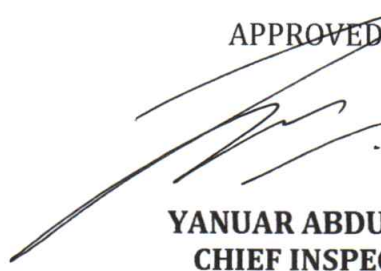
**RESULTS**

<b>EMPTY WEIGHT</b>	<b>: 4892.23</b>
<b>EMPTY C.G FROM DATTUM LINE</b>	<b>: 187.72</b>
<b>INDEX MAC %</b>	<b>: 15.28 %</b>
<b>VALID UNTIL</b>	<b>: 16 MARCH 2025</b>

**WEIGHING EQUIPMENT**

PART NUMBER	: UNK
SERIAL NUMBER	: UNK
VALIDATION	: UNK

APPROVED BY:



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

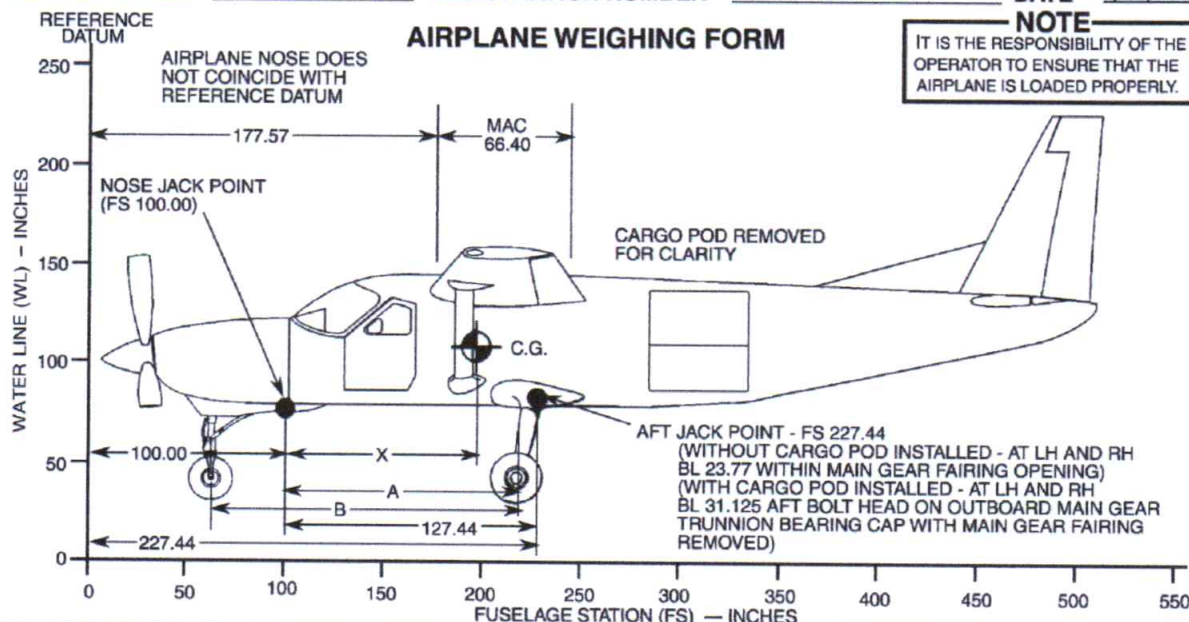
# AIRCRAFT WEIGHT & BALANCE

**MODEL 208B  
CARAVAN I**

## WEIGHT AND BALANCE DATA



**SERIAL NUMBER** 208B5587 **REGISTRATION NUMBER** PK-SNH **DATE** 2/20/2020



### LOCATING CG WITH AIRPLANE ON LANDING GEAR

FORMULA for Longitudinal CG

$$(X) = \frac{(A) \times (\text{Nose Gear Net Weight})}{(\text{Nose and Main Landing Gear Weight Total})} = \frac{(873) \times (157.75)}{116.75} = (90.56) \text{ Inches}$$

$$\text{CG Arm of Airplane} = 100 + (X) = (190.56) \text{ Inches Aft of Datum}$$

### 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

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

### 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

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

### AIRPLANE AS WEIGHED TABLE

POSITION	SCALE READING	SCALE DRIFT	TARE	NET WEIGHT
LEFT SIDE	2152			2152
RIGHT SIDE	2233			2233
NOSE	873			873
AIRPLANE TOTAL AS WEIGHED				5258

### 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)	5258	190.56	1001.96
DRAINABLE UNUSABLE FUEL AT 6.75 POUNDS PER GALLON S/N 208B0001 Thru 208B0099 Not Modified With SK208-52	20.1	205.7	4.97
S/N 208B0001 Thru 208B0099 Modified With SK208-52 And S/N 208B0090 And On	24.1	206.4	
BASIC EMPTY WEIGHT	5282.1	190.63	1006.93

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

FORM NUMBER 1892-2, 15 July 1986  
REVISED 22 January 2002



## AIRCRAFT WEIGHT & BALANCE

**TABEL 1**

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 4 <sup>ND</sup> ROW-RH	46.30	267.69	12.39
SINGLE SEAT ASSY 5 <sup>ND</sup> ROW-LH	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
SINGLE SEAT ASSY 2 <sup>ND</sup> ROW-LH REMOVED	25.10	177.55	4.45
SINGLE SEAT ASSY 3 <sup>ND</sup> ROW-LH REMOVED	25.10	213.55	5.36
SINGLE SEAT ASSY 4 <sup>ND</sup> ROW-LH REMOVED	25.10	249.55	6.26
SINGLE SEAT ASSY 5 <sup>ND</sup> ROW-LH REMOVED	25.10	285.55	7.16
BENCH ASSY 2 <sup>ND</sup> ROW-RH REMOVED	46.30	195.69	9.06
BENCH ASSY 3 <sup>ND</sup> ROW-RH REMOVED	46.30	231.69	10.72
BENCH ASSY 4 <sup>ND</sup> ROW-RH REMOVED	46.30	267.69	12.39
AFT COUCH, 2 PL REMOVED	34.89	347.14	12.11
CARGO POD ASSY REMOVED	192.55	216.53	41.69
<b>TOTAL</b>	<b>467.07</b>	<b>233.87</b>	<b>109.23</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)	5258	190.56	1001.96
WEIGHT FROM TABLE 1 (+)	77.2	268.63	20.73
<b>SUB TOTAL</b>	<b>5335.2</b>	<b>191.68</b>	<b>1022.70</b>
WEIGHT FROM TABLE 2 (-)	467.07	233.87	109.23
<b>TOTAL</b>	<b>4868.13</b>	<b>187.63</b>	<b>913.41</b>



## AIRCRAFT WEIGHT & BALANCE

### 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)	4868.13	187.63	913.41
DRAINABLE UNUSABLE FUEL AT 6.75 POUNDS PER GALON S/N 208B0090 And On	24.1	206.4	4.97
<b>BASIC EMPTY WEIGHT</b>	<b>4892.23</b>	<b>187.72</b>	<b>918.39</b>

### LOCATING PERCENT MAC

$$\begin{aligned}\text{CG Percent MAC} &= \frac{(\text{CG Arm of Airplane}) - 177.57}{0.6640} \\ &= \frac{187.72 - 177.57}{0.6640} \\ &= 15.28 \%\end{aligned}$$

## AIRCRAFT WEIGHT & BALANCE

### PRIOR TO WEIGHT AND BALANCE CHECK

**AIRCRAFT TYPE** : CESSNA C208B EX CARAVAN

**AIRCRAFT REGISTRATION** : PK-SNH

**AIRCRAFT SERIAL NUMBER** : 208B-5587

**DATE OF WEIGHING** : 16 MARCH 2020

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	-