

**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.

CHECKED BY

SIGNED:

DATE: 3/16/2020

: YINLING AIRCRAFT, INC.

SIGNED:

DATE: 3/16/2020

**RESULTS****EMPTY WEIGHT** : 4892.23**EMPTY C.G FROM DATTUM LINE** : 187.72**INDEX MAC %** : 15.28 %**VALID UNTIL** : 16 MARCH 2025**WEIGHING EQUIPMENT**

PART NUMBER	:	UNK
SERIAL NUMBER	:	UNK
VALIDATION	:	UNK

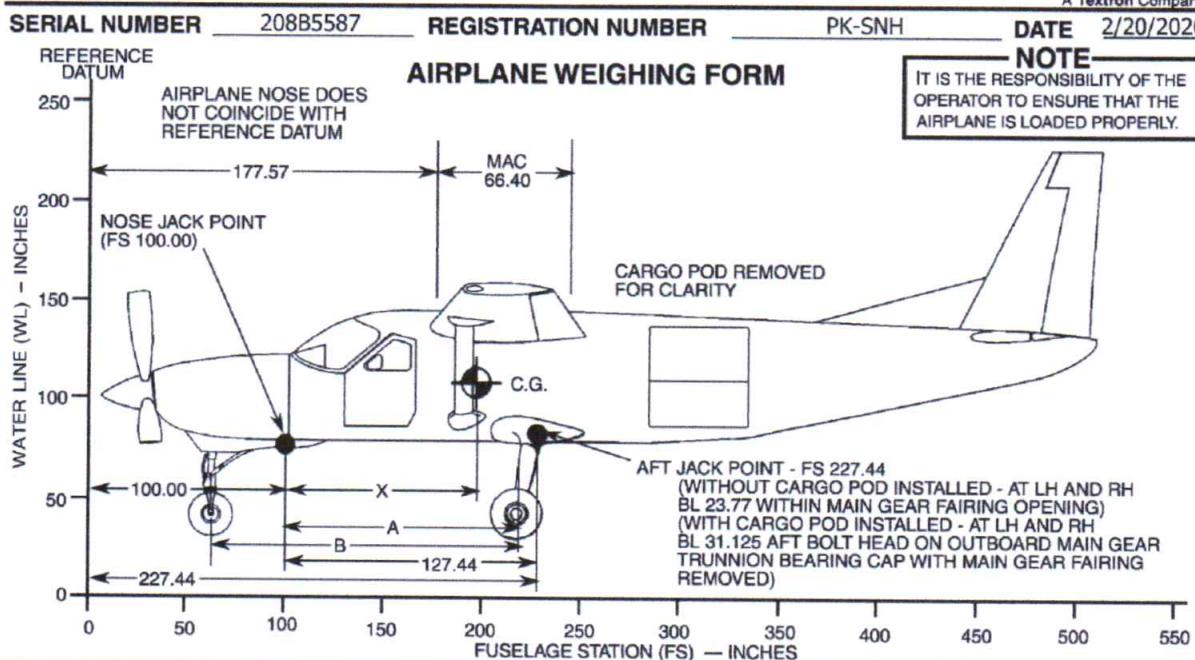
APPROVED BY:

**YANUAR ABDUL FATAH  
CHIEF INSPECTOR**

# AIRCRAFT WEIGHT & BALANCE

## MODEL 208B CARAVAN I

## WEIGHT AND BALANCE DATA



### LOCATING CG WITH AIRPLANE ON LANDING GEAR

FORMULA for Longitudinal CG

$$(X) = (A) - \frac{(Nose\ Gear\ Net\ Weight)(873) + (B)(157.75)}{116.75\ Nose\ and\ Main\ Landing\ Gear\ Weight\ Totaled(5258)} = (90.56) \text{ Inches}$$

CG Arm of Airplane = 100 + (X) = (190.56) 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

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

### LEVELING PROVISIONS

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

### 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 208B0088 Not Modified With SK208-52 S/N 208B0001 Thru 208B0099 Modified With SK208-52 And S/N 208B0090 And On	20.1	205.7	4.97
	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 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 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
TOTAL	77.2	268.63	20.73

**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>RD</sup> ROW-LH REMOVED	25.10	213.55	5.36
SINGLE SEAT ASSY 4 <sup>TH</sup> ROW-LH REMOVED	25.10	249.55	6.26
SINGLE SEAT ASSY 5 <sup>TH</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>RD</sup> ROW-RH REMOVED	46.30	231.69	10.72
BENCH ASSY 4 <sup>TH</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
TOTAL	467.07	233.87	109.23

**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
SUB TOTAL	5335.2	191.68	1022.70
WEIGHT FROM TABLE 2 (-)	467.07	233.87	109.23
TOTAL	4868.13	187.63	913.41



## 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 GALLON 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

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

$$= \frac{187.72 - 177.57}{0.6640}$$

$$= 15.28 \%$$



## AIRCRAFT WEIGHT & BALANCE

<b>PRIOR TO WEIGHT AND BALANCE CHECK</b>				
<b>AIRCRAFT TYPE : CESSNA C208B EX CARAVAN</b>				
<b>AIRCRAFT REGISTRATION : PK-SNH</b>				
<b>AIRCRAFT SERIAL NUMBER : 208B-5587</b>				
<b>DATE OF WEIGHING : 16 MARCH 2020</b>				
NO.	DESCRIPTION	APPL	CHECK	REMARKS
<b>A 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 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	-