

AIRCRAFT WEIGHT AND C.G DETERMINATION**REPORT NO : 032/WB/X/2019****DATE : 05 October 2019**

AIRCRAFT REGISTRATION	:	PK-SNS
AIRCRAFT TYPE	:	CESSNA C208B GRAND CARAVAN
AIRCRAFT SERIAL NUMBER	:	208B2341
PROPERTY OF	:	PT. SMART CAKRAWALA AVIATION
PLACE OF WEIGHING	:	JAKARTA
REASON OF WEIGHING	:	RECALCULATION FOR CAMERA HOLE STC
CONFIGURATION	:	12 PASSENGERS WITH CARGOPOD
PERFORMED BY	:	FEBRI HERMAWAN
	SIGNED:	DATE: 05/10/2019
CHECKED BY	:	ILHAM CHAIRI
	SIGNED:	DATE: 05/10/2019

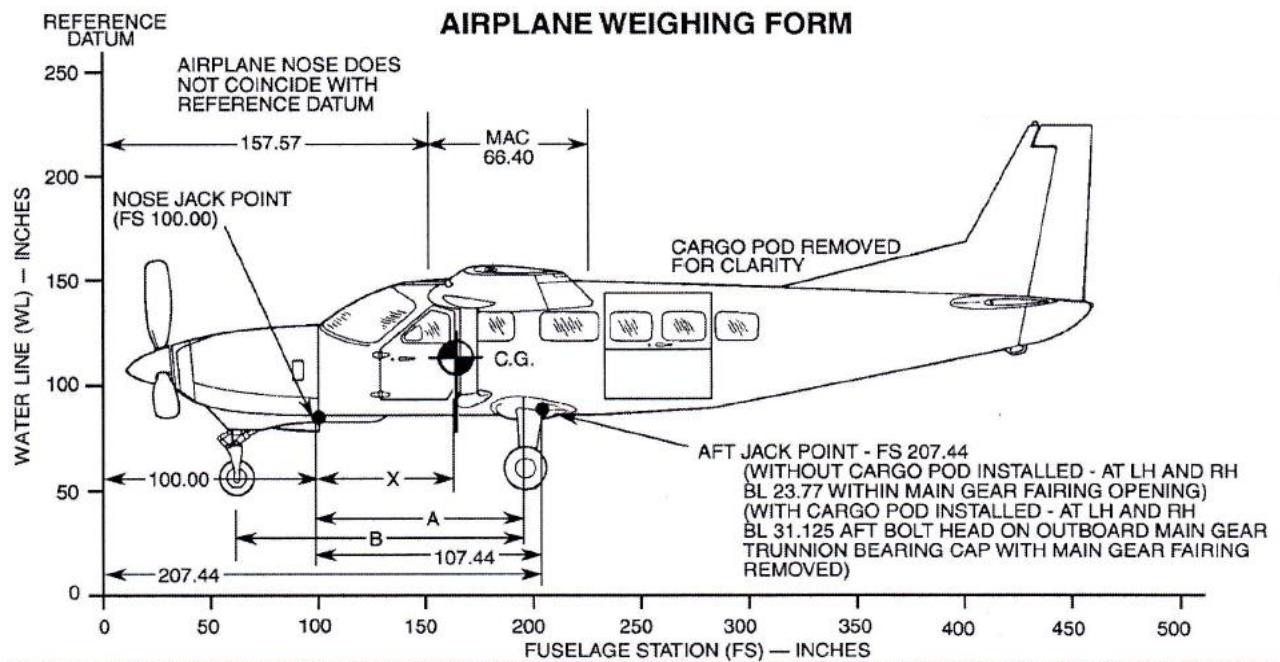
RESULTS

EMPTY WEIGHT	:	5209.70 LBS
C.G ARM OF AIRPLANE	:	192.15 INCH
CG PERCENT MAC %	:	21.96 (PERCENT MAC)
VALID UNTIL	:	05 OCTOBER 2024

WEIGHING EQUIPMENT

PART NUMBER	:	M2400-3-15KP
SERIAL NUMBER	:	17-FF3FFA
VALIDATION	:	03 AUGUST 2019

APPROVED BY:
Ilham Chairi
Chief Inspector



LOCATING CG WITH AIRPLANE ON LANDING GEAR

FORMULA for longitudinal CG

$$(X) = \frac{(A)}{116.75} - \frac{(\text{Nose Gear Net Weight}) (900) \times (B) 157.75}{\text{Nose and Main Landing Gear Weight Totaled} (6160)} = (93.70) \text{ Inches}$$

CG Arm of Airplane = 100 + (X) = 193.70 Inches Aft 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 PERCENT MAC

FORMULA for Percent MAC

$$\begin{aligned} \text{CG Percent MAC} &= \frac{\text{CG Arm of Airplane} (192.15) - 177.57}{0.6640} \\ &= 21.96 \% \end{aligned}$$

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	2893.00	-	-	2893.00
RIGHT SIDE	2367.00	-	-	2367.00
NOSE	900.00	-	-	900.00
AIRPLANE TOTAL AS WEIGHT				6160

TABLE 1

BASIC ITEMS NOT INCLUDED WHEN WEIGHING	WEIGHT (POUNDS)	CG ARM (INCHES)	MOMENT/1000 (INCH-POUNDS)
Skin Doubler	5.7	269.5	1.54
Cover Hole	2.1	269.5	0.57
Reinforcement Flange Skin	3.0	269.5	0.81
Camera Box	13.0	269.5	3.50
Flange Box	2.5	269.5	0.67
New Upper Covers	2.8	269.5	0.76
Center Seat Rail	1.7	269.5	0.46
TOTAL	30.8	269.81	8.31

TABEL 2

DESCRIPTION OF ACTION PERFORMED	WEIGHT (POUNDS)	CG ARM (INCHES)	MOMENT/1000 (INCH-POUNDS)
Fuel Onboard	1000	204.30	204.30
Outer Skin	0.5	269.5	0.11
Center Longeron	1.0	269.5	0.22
Lateral Longeron	0.8	269.5	0.18
Upper Cover	1.3	269.5	0.29
Center Seat Rail	1.6	269.5	0.35
TOTAL	1005.2	204.39	205.45

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)	6160.00	193.70	1193.19
WEIGHT FROM TABLE 1 (+)	30.8	269.81	8.31
SUB TOTAL	6190.8	194.08	1201.50
WEIGHT FROM TABLE 2 (-)	1005.2	204.39	205.45
TOTAL	5185.60	192.08	996.05

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)	5185.60	192.08	996.05
DRAINABLE UNUSABLE FUEL AT 6.75 POUNDS PER GALLON S/N 208B0001 Thru 208B0089 Modified With SK208-52 And S/N 208B0090 And On	24.1	206.4	5.0
BASIC EMPTY WEIGHT	5209.70	192.15	1001.05



AIRCRAFT WEIGHT & BALANCE

PRIOR TO WEIGHT AND BALANCE CHECK				
AIRCRAFT TYPE : CESSNA C208B CARAVAN				
AIRCRAFT REGISTRATION : PK-SNS				
DATE OF WEIGHING : 05 OCTOBER 2019				
NO.	DESCRIPTION	APPL	CHECK	REMARKS
A	STANDARD ITEMS			
1	All fuel tank EMPTY or recorded / FULL	√	1000 Lbs	Calculated
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	STANDARD EQUIPMENTS			
1	Technical supply or Flight Kits	x	N/A	-
2	Aircraft Books, Manuals and Papers	√	1 Bag	-
3	AXE	√	1 EA	-
4	Fire Extinguisher	√	1 EA	-
5	First Aid Kit	√	1 Box	-
6	Life Vests	√	14 EA	-
7	Life Raft	x	N/A	-
8	Survival Kit	x	N/A	-

SEATING POSITIONS
PILOT = ①
PASSENGERS = ② THRU ⑯

- Location of seat front leg plungers on seat rails.

