



AIRCRAFT WEIGHT & BALANCE

AIRCRAFT WEIGHT AND C.G DETERMINATION

REPORT NO : 038/WB/XIV/2019

DATE : 22 DECEMBER 2019

AIRCRAFT REGISTRATION : PK-SNN
AIRCRAFT TYPE : CESSNA C208 CARAVAN
AIRCRAFT SERIAL NUMBER : 20800556
PROPERTY OF : PT. SMART CAKRAWALA AVIATION
PLACE OF WEIGHING : JAKARTA
REASON OF WEIGHING : RECALCULATION STC CAMERA HOLE
CONFIGURATION : 9 PASSENGERS WITHOUT CORPOD
PERFORMED BY : FEBRI HERMAWAN
SIGNED: DATE: 22/12/2019
CHECKED BY : ILHAM CHAIRI
SIGNED: DATE: 22/12/2019

RESULTS

EMPTY WEIGHT	: 4868.80 LBS
C.G ARM OF AIRPLANE	: 173.39 INCH
CG PERCENT MAC %	: 23.83 (PERCENT MAC)
VALID UNTIL	: 22 DECEMBER 2024

WEIGHING EQUIPMENT

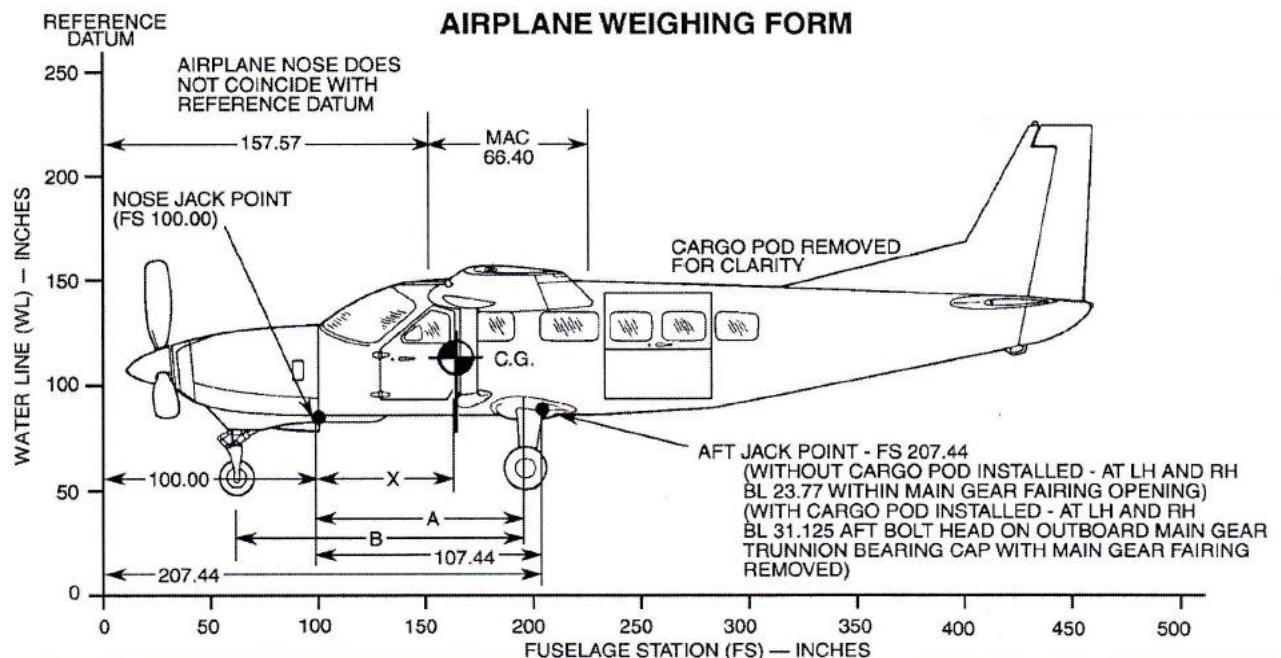
PART NUMBER	: M2000-3-10KP
SERIAL NUMBER	: 14-10138
VALIDATION	: 18 FEB 2020

APPROVED BY:

Ilham Chairi
Chief Inspector



AIRCRAFT WEIGHT & BALANCE



A = 96.75 Inches

B = 137.75 Inches

LOCATING CG WITH AIRPLANE ON LANDING GEAR

FORMULA for longitudinal CG

$$(X) = \frac{(A) \quad — \quad \frac{(\text{Nose Gear Net Weight}) (828) X (B) 137.75}{\text{Nose and Main Landing Gear Weight Totaled (4820)}}}{96.75} = (73.09) \text{ Inches}$$

CG Arm of Airplane = 100 + (X) = **(173.09)** 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

$$\begin{aligned} \text{CG Percent MAC} &= \frac{\text{CG Arm of Airplane (173.39)} - 157.57}{0.6640} \\ &= \mathbf{23.83\%} \end{aligned}$$

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	1976	-	-	1976
RIGHT SIDE	2016	-	-	2016
NOSE	828	-	-	828
AIRPLANE TOTAL AS WEIGHT				4820



AIRCRAFT WEIGHT & BALANCE

TABLE 1

BASIC ITEMS NOT INCLUDED WHEN WEIGHING	WEIGHT (POUNDS)	CG ARM (INCHES)	MOMENT/1000 (INCH-POUNDS)
Skin Doubler	5.1	221	1.13
Cover Hole	2.1	221	0.46
Reinforcement Flange Skin	3.0	221	0.66
Camera Box	13.0	221	2.87
Flange Box	2.5	221	0.55
New Upper Covers	2.6	221	0.57
Center Seat Rail	1.6	221	0.35
TOTAL	29.9	220.40	6.59

TABEL 2

DESCRIPTION OF ACTION PERFORMED	WEIGHT (POUNDS)	CG ARM (INCHES)	MOMENT/1000 (INCH-POUNDS)
Outer Skin	0.5	221	0.11
Center Longeron	1.0	221	0.22
Lateral Longeron	0.8	221	0.18
Upper Cover	1.3	221	0.29
Center Seat Rail	1.6	221	0.35
TOTAL	5.2	221.15	1.15

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)	4820	173.09	834.29
WEIGHT FROM TABLE 1 (+)	29.9	220.40	6.59
SUB TOTAL	4849.90	173.38	840.88
WEIGHT FROM TABLE 2 (-)	5.2	221.15	1.15
TOTAL	4844.70	173.33	839.73

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)	4844.70	173.33	839.73
DRAINABLE UNUSABLE FUEL AT 6.75 POUNDS PER GALLON S/N 208B0090 And On	24.1	186.4	4.49
BASIC EMPTY WEIGHT	4868.80	173.39	844.22



AIRCRAFT WEIGHT & BALANCE

PRIOR TO WEIGHT AND BALANCE CHECK				
AIRCRAFT TYPE : CESSNA C208 CARAVAN				
AIRCRAFT REGISTRATION : PK-SNN				
DATE OF WEIGHING : 4 APRIL 2019				
NO.	DESCRIPTION	APPL	CHECK	REMARKS
A	STANDARD ITEMS			
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	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	✓	11 EA	-
7	Life Raft	x	N/A	-
8	Survival Kit	x	N/A	-