



AIRCRAFT WEIGHT AND C.G DETERMINATION

REPORT NO : 005/WB/II/2020

DATE : 18 FEBRUARY 2020

AIRCRAFT REGISTRATION : PK-SNP
 AIRCRAFT TYPE : CESSNA C208B CARAVAN EX
 AIRCRAFT SERIAL NUMBER : 208B5495
 PROPERTY OF : PT. SMART CAKRAWALA AVIATION
 PLACE OF WEIGHING : N/A
 REASON OF WEIGHING : RECALCULATION DUE TO **APE STOL** INSTALLATION
 CONFIGURATION : 12 PASSENGERS + CARGO POD
 PERFORMED BY : GUSRIL PANE
 SIGNED:  DATE: 18/02/2020
 CHECKED BY : ILHAM CHAIRI
 SIGNED:  DATE: 18/02/2020

RESULTS

EMPTY WEIGHT	: 5401.30 LBS
C.G ARM OF AIRPLANE	: 193.38 IN
CG PERCENT MAC %	: 23.81 (PERCENT MAC)
VALID UNTIL	: 19 APRIL 2024

WEIGHING EQUIPMENT

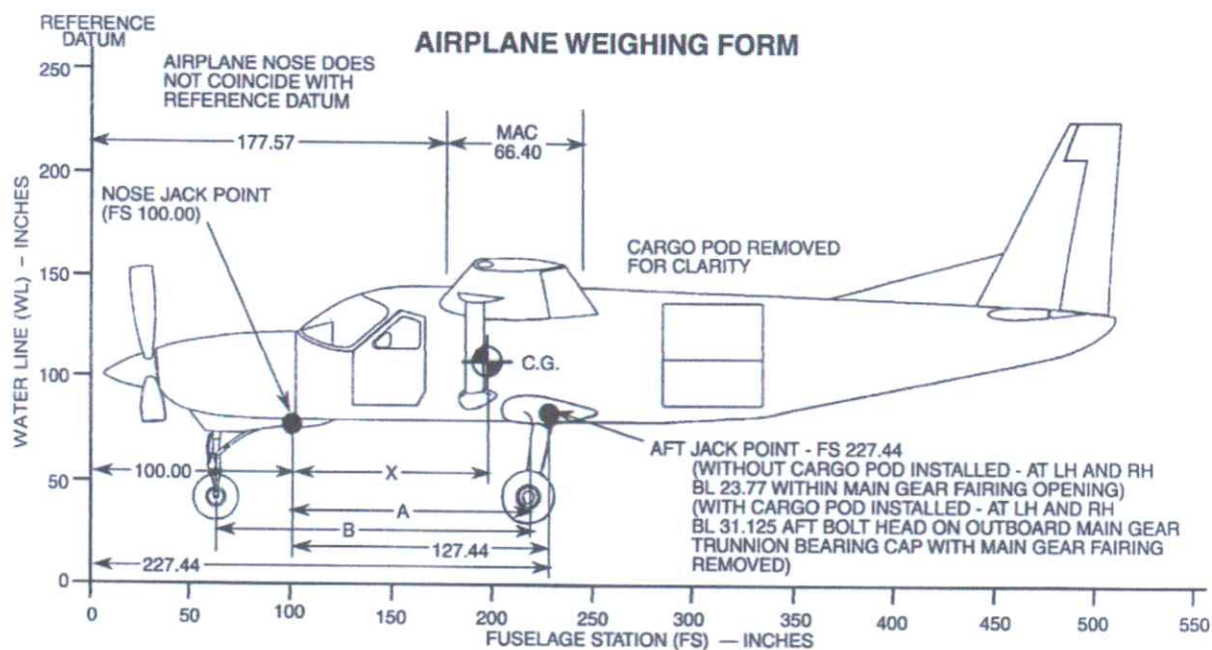
PART NUMBER	: HH2400-3-10KP
SERIAL NUMBER	: 16FF4DB1
VALIDATION	: 15 AUGUST 2019

APPROVED BY:



Ilham Chairi
Chief Inspector

AIRCRAFT WEIGHT & BALANCE



A = 116.75 Inches

B = 157.75 Inches

LOCATING CG WITH AIRPLANE ON LANDING GEAR

FORMULA for longitudinal CG

$$(X) = \frac{(A)}{116.75} \times \frac{(\text{Nose Gear Net Weight}) (821) \times (B) 157.75}{\text{Nose and Main Landing Gear Weight Totalled (5300)}} = (92.31) \text{ Inches}$$

CG Arm of Airplane = 100 + (X) = **(192.31) 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

$$\begin{aligned} \text{CG Percent MAC} &= \frac{\text{CG Arm of Airplane (193.38)} - 177.57}{0.6640} \\ &= \mathbf{23.81 \%} \end{aligned}$$

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

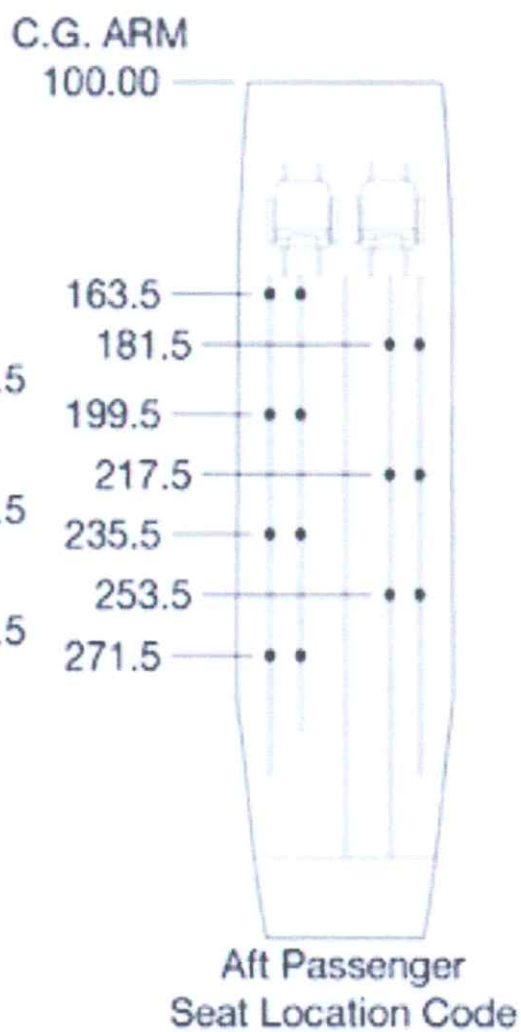
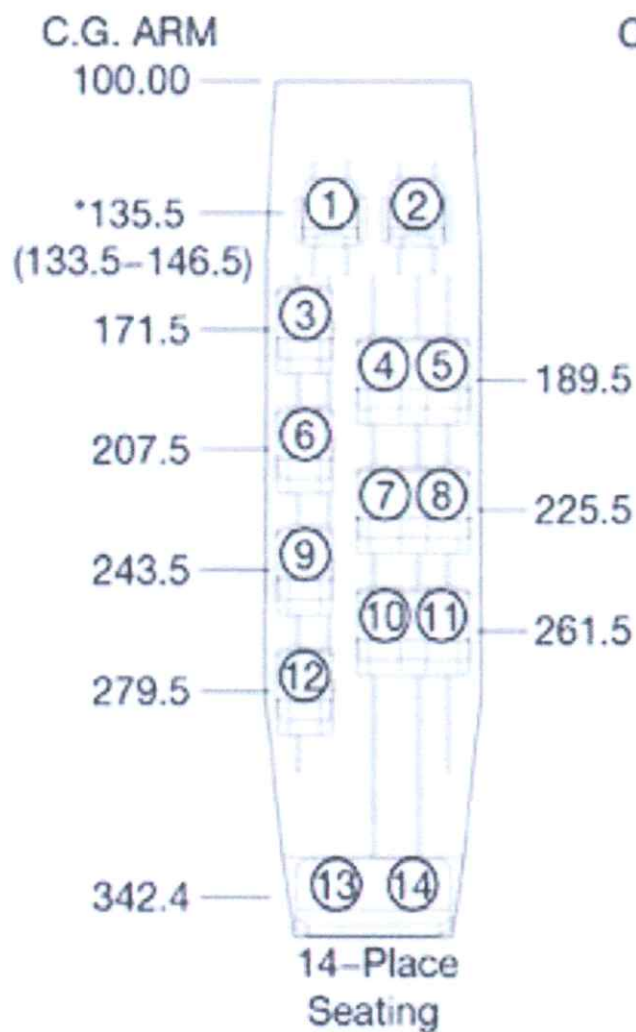
POSITION	SCALE READING	SCALE DRIFT	TARE	NET WEIGHT
LEFT SIDE	2237	-	-	2237
RIGHT SIDE	2242	-	-	2242
NOSE	821	-	-	821
AIRPLANE TOTAL AS WEIGHT				5300

SEATING POSITIONS

PILOT = ①

PASSENGERS = ② THRU ⑭

• Location of seat front leg plungers on seat rails.



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AIRCRAFT WEIGHT & BALANCE

TABLE 1

BASIC ITEMS NOT INCLUDED WHEN WEIGHING	WEIGHT (POUNDS)	CG ARM (INCHES)	MOMENT/1000 (INCH-POUNDS)
Single seat Assy	25.10	279.5	7.02
Bench Assy	46.30	261.5	12.12
Pay load Extender System	5.8	202	1.18
TOTAL	77.20	263.21	20.32

TABLE 2

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

TABLE 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)	5300	192.31	1019.24
WEIGHT FROM TABLE 1 (+)	77.20	263.21	20.32
SUB TOTAL	5377.20	193.33	1039.56
WEIGHT FROM TABLE 2 (-)			
TOTAL	5377.20	193.33	1039.56

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)	5377.20	193.33	1039.56
DRAINABLE UNUSABLE FUEL AT 6.75 POUNDS PER GALLON S/N 208B0090 And On	24.1	206.4	4.97
BASIC EMPTY WEIGHT	5401.30	193.38	1044.53

AIRCRAFT WEIGHT & BALANCE

PRIOR TO WEIGHT AND BALANCE CHECK				
AIRCRAFT TYPE : CESSNA C208B CARAVAN AIRCRAFT REGISTRATION : PK-SNP DATE OF WEIGHING : 18 February 2020				
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	-