CESSNA AIRCRAFT COMPANY
WICHITA, KANSAS

MODEL 182G
1964

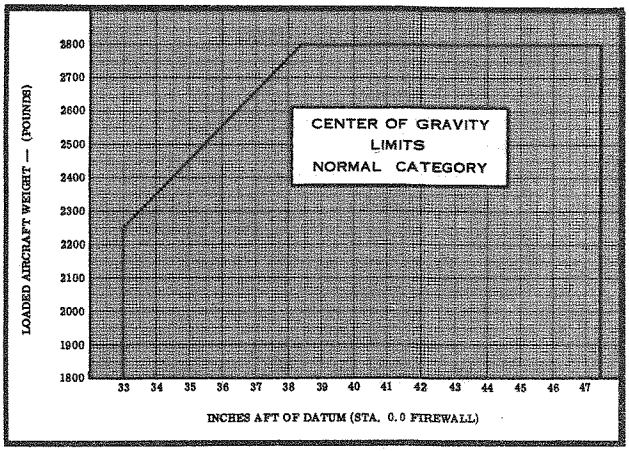
Weight & Balance Data

Aircraft Serial No. F.A.A. Registration No. Date:

ITEM		Weight (lbs.)	X C.G. Arm (inches)	= Moment (lb. ins.)
Standard Airplane (Empty, Dry & Unpainted)	Actual / Computed	1646.0	33.489	55122.89
Optional Equipment		--		
Special Installations (DMCR Approved)		--		
Paint Std. Stripes Over-All		included		
Unusable Fuel (5.0 Gal)		30.0	46.0	1380.
Licensed Empty Weight = Total of Items Above		1676.0	33.713	56502.89

(GROSS WT.) - (LICENSED EMPTY WT.) = USEFUL LOAD
2800 LBS) - (1676.0 LBS) = 1124.0 LBS

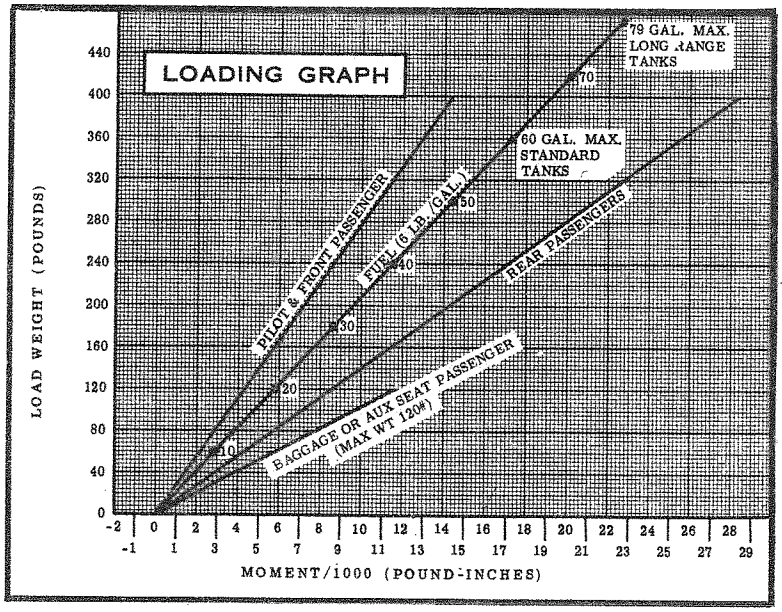
IT IS THE RESPONSIBILITY OF THE PILOT AND AIRPLANE OWNER TO INSURE THAT THE AIRPLANE IS LOADED PROPERLY. THE EMPTY WEIGHT C.G. & USEFUL LOAD ARE FOR THE AIRPLANE AS DELIVERED FROM THE FACTORY. REFER TO FORM FAA-337 WHEN ALTERATIONS HAVE BEEN MADE.



SAMPLE LOADING PROBLEM

	Weight (lbs)	C.G. Arm (Inches)	Moment (lb-ins/1000)
Licensed Empty Wt.			
Oil (12 Qts.)	22	-15.0	-0.3
Pilot & Front Passenger	340	36.0	12.2
Fuel		48.0	
Rear Seat Passengers	340	71.0	24.1
Baggage		97.0	
Total Loaded Airplane =	2800		

Locate this point (2800;) on the C.G. Moment Envelope. Since the point falls within the envelope the loading meets all balance requirements.

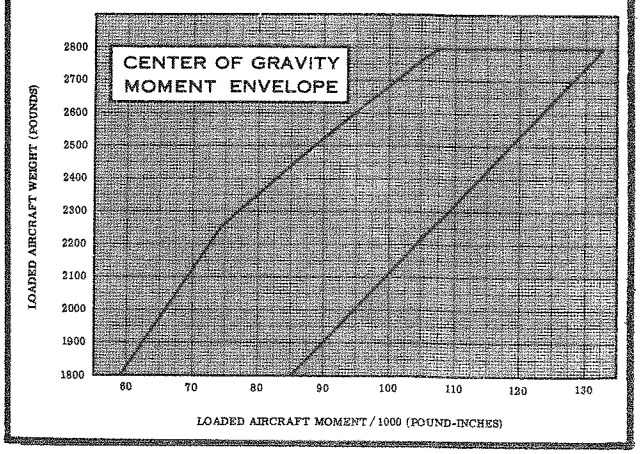


C.G. MOMENT ENVELOPE INSTRUCTIONS

I To the licensed empty weight add weight of all items to be carried.

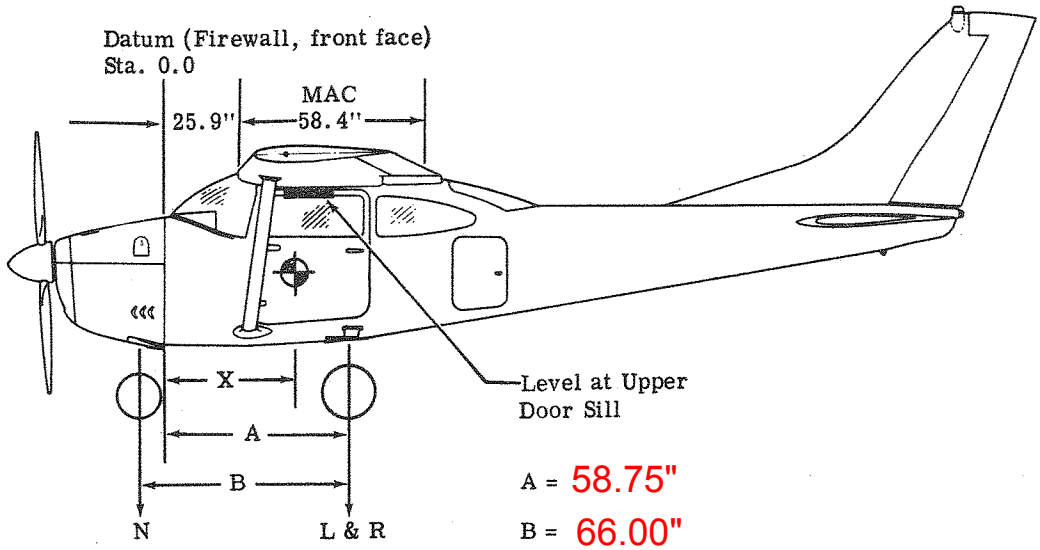
II To licensed empty weight moment add moment of all items to be carried.

III Locate point determined by I & II and if it falls within the C. G. moment envelope the loading is satisfactory.



Form Issue Date: 19 September 1963

WEIGHT & BALANCE DATA



Scale Position	Scale Reading	Tare	Symbol	Net Weight
Left Wheel	514.0	0.0	L	514.0
Right Wheel	502.0	0.0	R	502.0
Nose Wheel	630.0	0.0	N	630.0
Aircraft Empty Weight (As Weighed)			W	1646.0

$$X = ARM = (A) - \frac{(N) \times (B)}{W}$$

$$X = ARM = (\ 58.75"\ ) - \frac{(\ 630.0\ lbs\ ) \times (\ 66.0"\ )}{(\ 1646.0\ lbs\ )} = (\ 33.489\ )\ \text{inches}$$

WEIGHING PROCEDURE

1. Preparation:
   a. Inflate tires to recommended operating pressures.
   b. Remove all wing tank drain plugs to remove all fuel.
   c. Remove oil sump drain plug to drain all oil.
   d. Move all sliding seats to the most forward position. All seat backs should be in the most nearly vertical position.
   e. Put flaps in the fully retracted position.
   f. Place all control surfaces in neutral position.
2. Leveling:
   a. Place scales under each wheel (1000# minimum capacity for scales).
   b. Deflate nose tire to center bubble on level (See Diagram).
3. Weighing:
   a. With the airplane level and brakes released, record the weight shown on each scale. Deduct the tare, if any, from each reading.
4. Measuring:
   a. Obtain measurement "A" by measuring horizontally (along the airplane center line) from a line stretched between the main wheel centers to a plumb bob dropped from the firewall.
   b. Obtain measurement "B" by measuring horizontally and parallel to the airplane center line, from center of nosewheel axle, left side, to a plumb bob dropped from the line between the main wheel centers. Repeat on right side and average the measurements.
5. Completing the Form:
   a. Using weights from (3) and measurements from (4) the airplane weight and C. G. can be determined.
   b. Obtain licensed empty weight by adding weight and moment of unusable fuel (see other side) to airplane empty weight and moment.