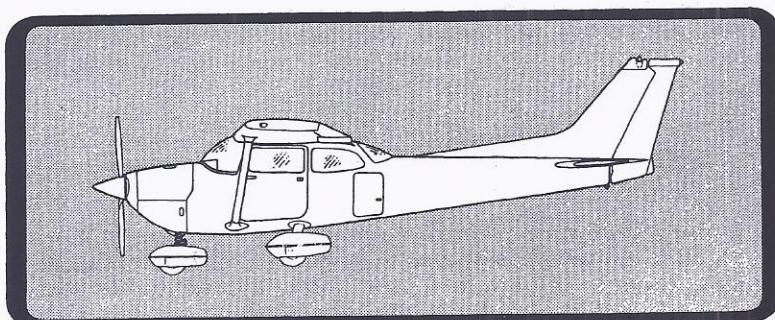


PILOT'S OPERATING HANDBOOK

Cessna.



HAWK XP

1977 MODEL R172K

Serial No. _____

Registration No. _____

THIS HANDBOOK INCLUDES THE MATERIAL
REQUIRED TO BE FURNISHED TO THE PILOT
BY CAR PART 3

CESSNA AIRCRAFT COMPANY
WICHITA, KANSAS, USA

SECTION 6
WEIGHT & BALANCE/
EQUIPMENT LIST

CESSNA
MODEL R172K

- (5) Using weights from (3) and measurements from (4) the airplane weight and C.G. can be determined.
- (6) Basic Empty Weight may be determined by completing Figure 6-1.

CESSNA
MODEL

Total
Center of
falls with

ARI

WEIGHT AND BALANCE

The following information will enable you to operate your Cessna within the prescribed weight and center of gravity limitations. To figure weight and balance, use the Sample Problem, Loading Graph, and Center of Gravity Moment Envelope as follows:

Take the basic empty weight and moment from appropriate weight and balance records carried in your airplane, and enter them in the column title YOUR AIRPLANE on the Sample Loading Problem.

NOTE

In addition to the basic empty weight and moment noted on these records, the c.g. arm (fuselage station) is also shown, but need not be used on the Sample Loading Problem. The moment which is shown must be divided by 1000 and this value used as the moment/1000 on the loading problem.

Use the Loading Graph to determine the moment/1000 for each additional item to be carried; then list these on the loading problem.

NOTE

Loading Graph information for the pilot, passengers, and baggage is based on seats positioned for average occupants and baggage loaded in the center of the baggage areas as shown on the Loading Arrangements diagram. For loadings which may differ from these, the Sample Loading Problem lists fuselage stations for these items to indicate their forward and aft c.g. range limitations (seat travel and baggage area limitation). Additional moment calculations, based on the actual weight and c.g. arm (fuselage station) of the item being loaded, must be made if the position of the load is different from that shown on the Loading Graph.

Total the weights and moments/1000 and plot these values on the Center of Gravity Moment Envelope to determine whether the point falls within the envelope, and if the loading is acceptable.

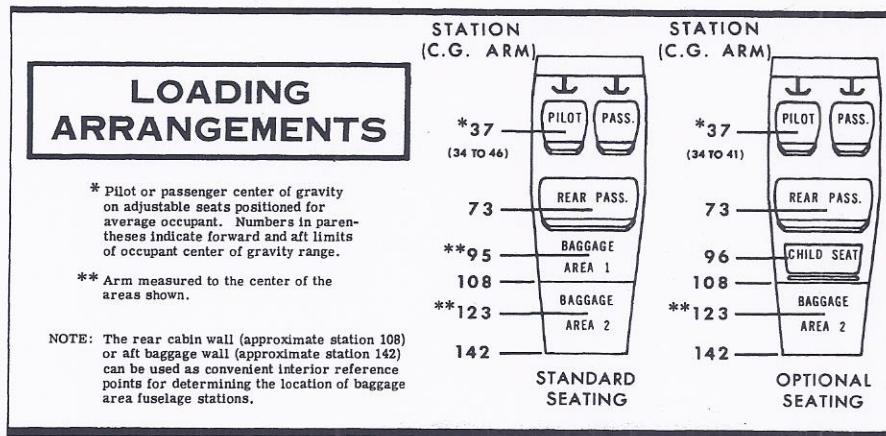
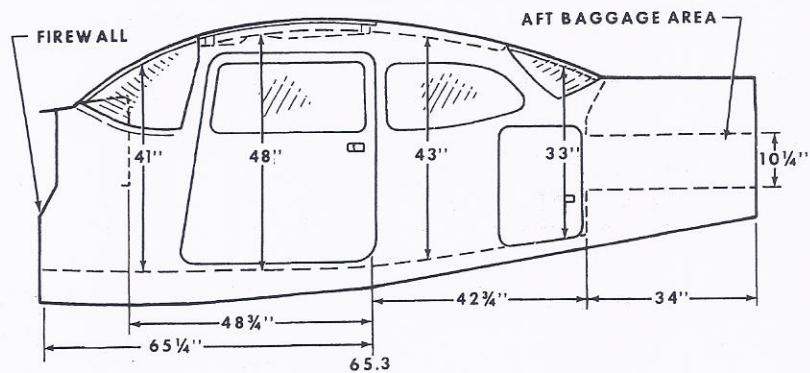


Figure 6-3. Loading Arrangements

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CABIN HEIGHT MEASUREMENTS



DOOR OPENING DIMENSIONS

	WIDTH (TOP)	WIDTH (BOTTOM)	HEIGHT (FRONT)	HEIGHT (REAR)
CABIN DOOR	32"	37"	40"	41"
BAGGAGE DOOR	15 1/4"	15 1/4"	22"	21"

— WIDTH —
● LWR WINDOW LINE
* CABIN FLOOR

CABIN WIDTH MEASUREMENTS

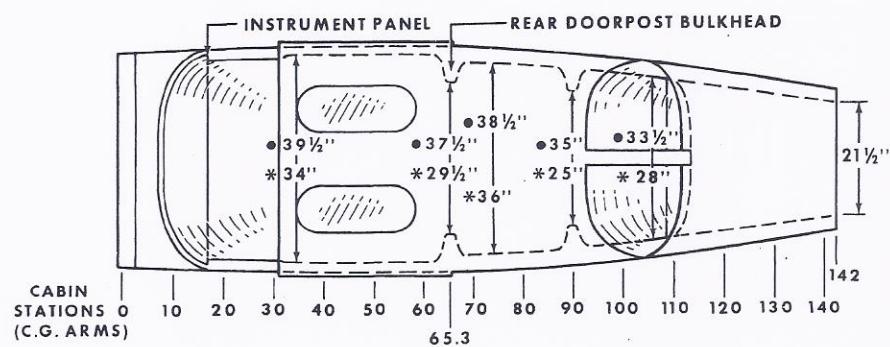


Figure 6-4. Internal Cabin Dimensions

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SAMPLE LOADING PROBLEM	SAMPLE AIRPLANE	YOUR AIRPLANE		
	Weight (lbs.)	Moment (lb.-ins. /1000)	Weight (lbs.)	Moment (lb.-ins. /1000)
1. Basic Empty Weight (Use the data pertaining to your airplane as it is presently equipped. Includes unusable fuel and full oil)	1592	56.7		
2. Usable Fuel (At 6 Lbs./Gal) Standard Tanks (49 Gal. Maximum)	294	14.1		
3. Pilot and Front Passenger (Station 34 to 46)	340	12.6		
4. Rear Passengers	170	12.4		
5. *Baggage Area 1 or Passenger on Child's Seat (Station 82 to 108, 200 Lbs. Max.)	154	14.6		
6. *Baggage Area 2 (Station 108 to 142, 50 Lbs. Max.)				
7. TOTAL WEIGHT AND MOMENT	2550	110.4		
8. Locate this point (2550 at 110.4) on the Center of Gravity Moment Envelope, and since this point falls within the envelope, the loading is acceptable.				

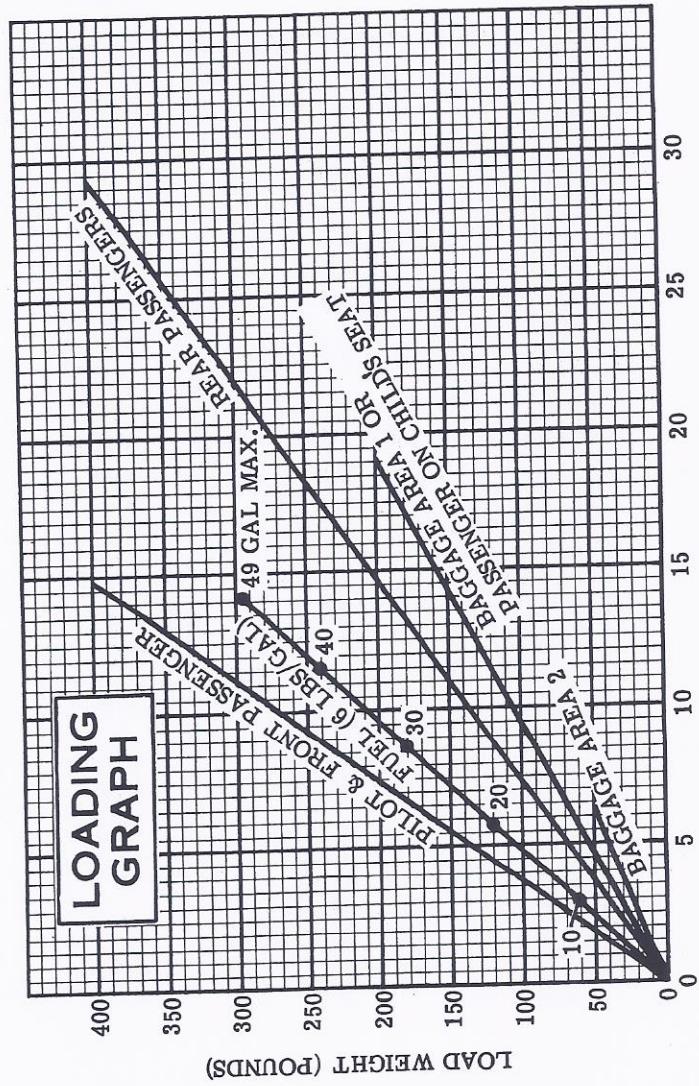
NOTE

* The maximum allowable combined weight capacity for baggage areas 1 and 2 is 200 lbs.

Figure 6-5. Sample Loading Problem

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NOTE: Line representing adjustable seats shows the pilot or passenger center of gravity on adjustable seats positioned for an average occupant. Refer to the loading arrangements diagram for forward and aft limits of occupant c.g. range.

Figure 6-6. Loading Graph

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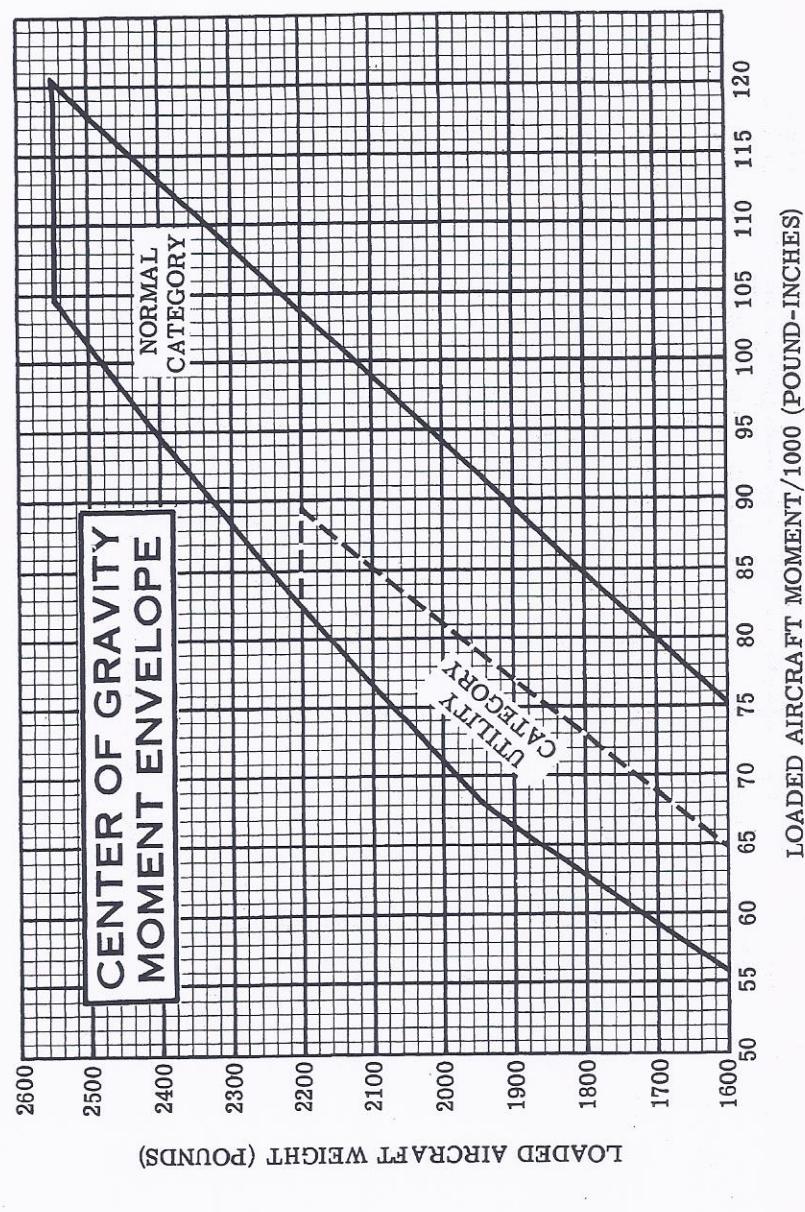


Figure 6-7. Center of Gravity Moment Envelope

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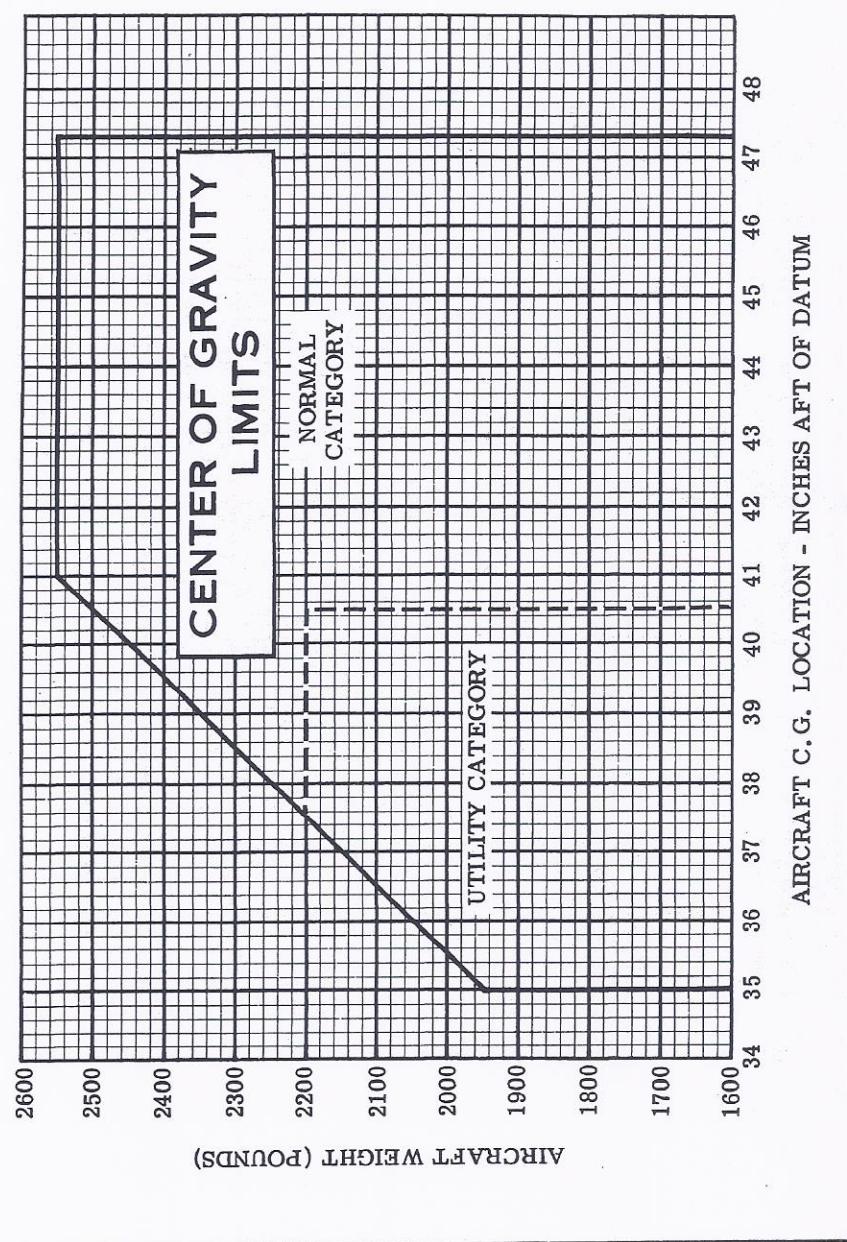


Figure 6-8. Center of Gravity Limits