

PREPARED	PIPER AIRCRAFT CORP. DEVELOPMENT CENTER, VERO BEACH, FLA.	Weight and Balance Data Model PA 32-260
CHECKED		
APPROVED		PAGE 10 Section 1

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

C. G. RANGE AND WEIGHT INSTRUCTIONS

1. Add the weight of all items to be loaded to the licensed empty weight.
2. Use the loading graph to determine the moment of all items to be carried in the airplane.
3. Add the moment of all items to be loaded to the licensed empty weight moment.
4. Divide the total weight moment by the total weight to determine the C. G. location.
5. By using the figures of item 1 and item 4, locate a point on the C. G. range and weight graph. If the point falls within the C. G. envelope, the loading meets all weight and balance requirements.

SAMPLE LOADING PROBLEM (NORMAL CATEGORY)

	<u>WEIGHT (LBS.)</u>	<u>ARM AFT DATUM (INCHES)</u>	<u>MOMENT (POUND-INCHES)</u>
LICENSED EMPTY WEIGHT	1770.5	80.1	141804
OIL (3 GAL.) <i>7.542</i>	22.5	34.1	767
PILOT & PASSENGER	_____	85.5	_____
FUEL 84 GAL.	504	95.0	47880
PASSENGERS			
(CENTER SEATS)	_____	120.2	_____
(REAR SEATS)	_____	155.7	_____
BAGGAGE			
(FORWARD)	_____	42.0	_____
(AFT)	_____	178.7	_____
TOTAL LOADED AIRPLANE	3400		316813

$$\frac{316813}{3400} = 93.2 \text{ INCHES (ARM AFT DATUM)}$$

LOCATE THIS POINT (93.2) ON THE C. G. RANGE AND WEIGHT GRAPH. SINCE THIS POINT FALLS WITHIN THE C. G. ENVELOPE THE LOADING MEETS ALL WEIGHT AND BALANCE REQUIREMENTS.

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CHECKED		
APPROVED		PAGE <u>12</u> Section <u>1</u>

CENTER OF GRAVITY ENVELOPE

