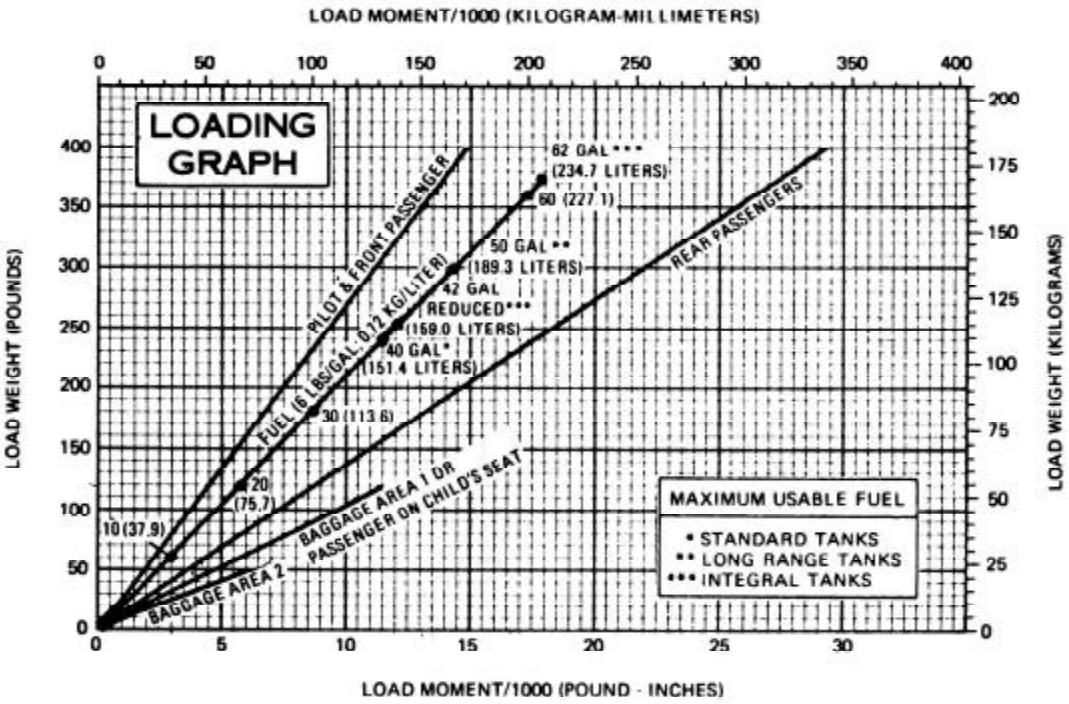


NOTE: Line representing adjustable seats shows the pilot or passenger center of gravity on adjustable seats positioned for an average occupant. Refer to the Loading Arrangements diagram for forward and aft limits of occupant C.G. range.

Figure 6-6. Loading Graph

LOADING ARRANGEMENTS

*Pilot or passenger center of gravity on adjustable seats positioned for average occupant. Numbers in parentheses indicate forward and aft limits of occupant center of gravity range.

**Arm measured to the center of the areas shown.

NOTES:

1. The usable fuel C.G. arm for standard, long range and integral tanks is located at station 48.0.
2. The rear cabin wall (approximate station 108) or aft baggage wall (approximate station 142) can be used as convenient interior reference points for determining the location of baggage area fuselage stations.

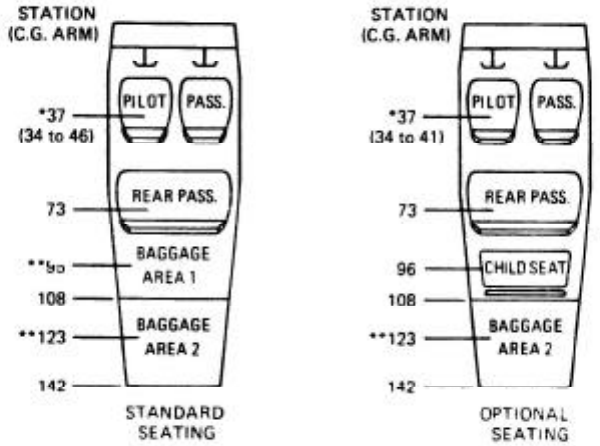


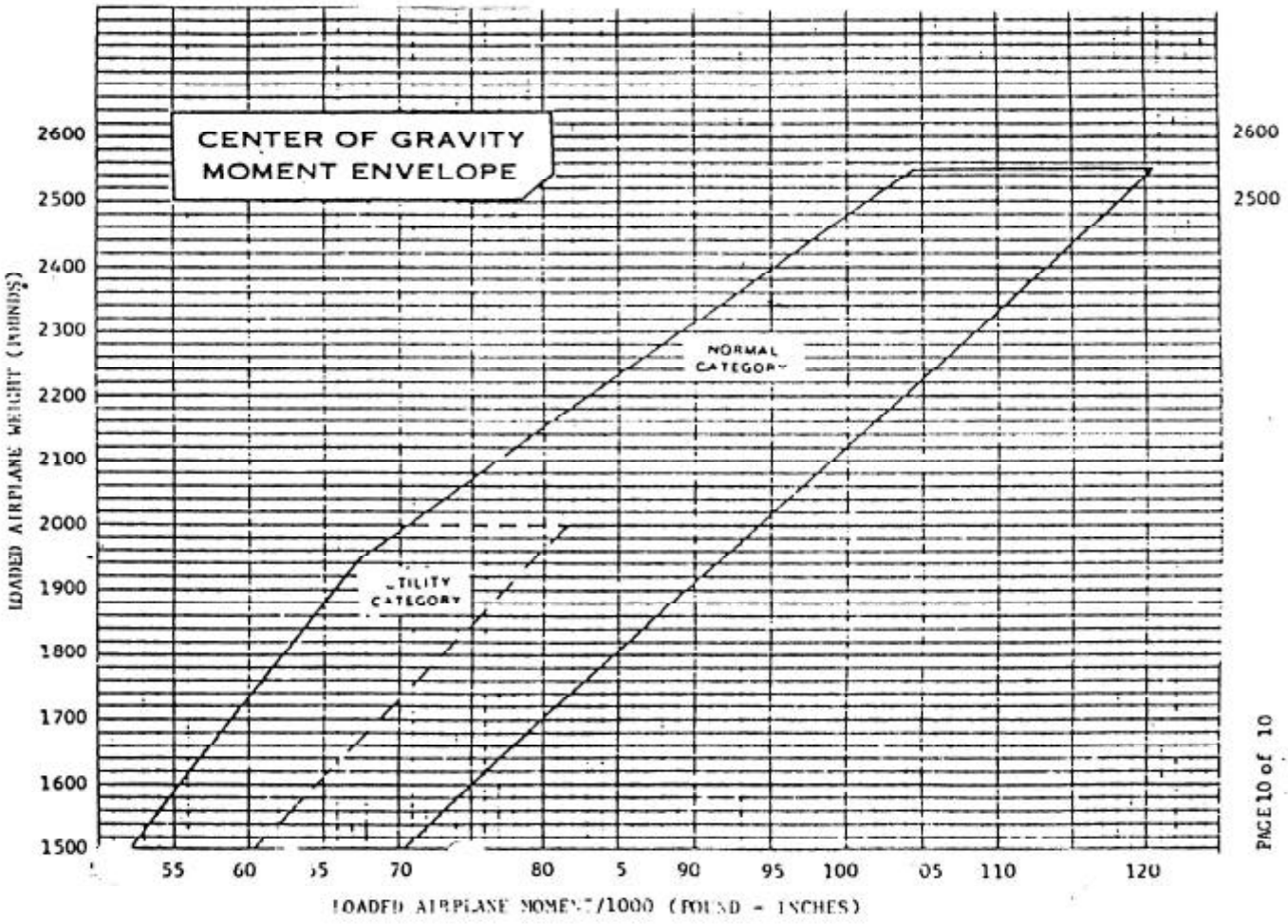
Figure 6-3. Loading Arrangements

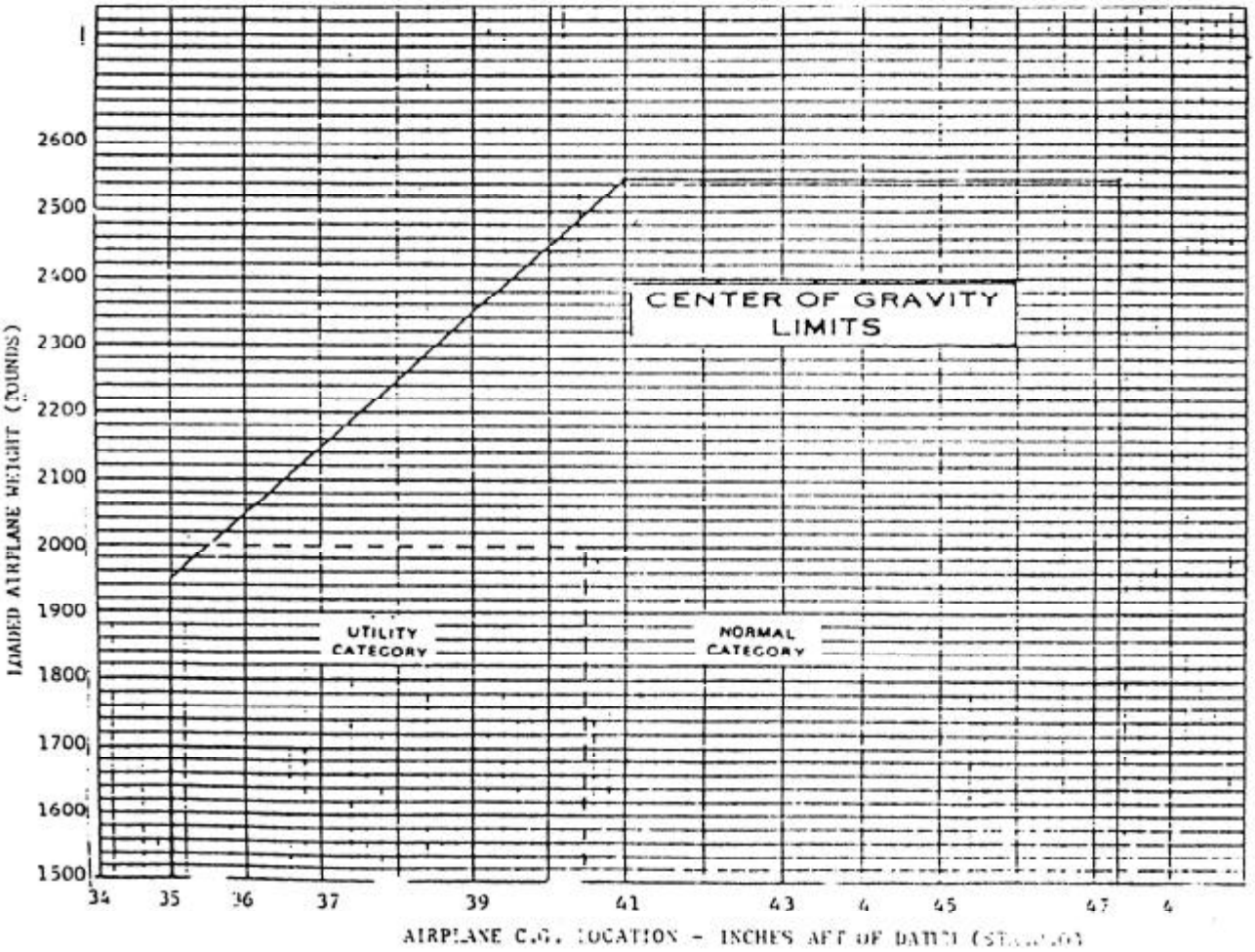
SAMPLE LOADING PROBLEM	SAMPLE AIRPLANE		YOUR AIRPLANE	
	Weight (lbs.)	Moment (lb.-ins. /1000)	Weight (lbs.)	Moment (lb.-ins. /1000)
1. Basic Empty Weight (Use the data pertaining to your airplane as it is presently equipped. Includes unusable fuel and full oil)	1467	57.3		
2. Usable Fuel (At 6 Lbs./Gal.) Standard Tanks (40 Gal. Maximum)	240	11.5		
Long Range Tanks (50 Gal. Maximum) . . .				
Integral Tanks (62 Gal. Maximum)				
Integral Reduced Fuel (42 Gal.)				
3. Pilot and Front Passenger (Station 34 to 46) . .	340	12.6		
4. Rear Passengers	340	24.8		
5. * Baggage Area 1 or Passenger on Child's Seat (Station 82 to 108, 120 Lbs. Max.)	20	1.9		
6. * Baggage Area 2 (Station 108 to 142, 50 Lbs. Max.)				
7. RAMP WEIGHT AND MOMENT	2407	108.1		
8. Fuel allowance for engine start, taxi, and runup	-7	-.3		
9. TAKEOFF WEIGHT AND MOMENT (Subtract Step 8 from Step 7)	2400	107.8		

10. Locate this point (2400 at 107.8) on the Center of Gravity Moment Envelope, and since this point falls within the envelope, the loading is acceptable.

* The maximum allowable combined weight capacity for baggage areas 1 and 2 is 120 pounds.

Figure 6-5. Sample Loading Problem (Sheet 1 of 2)


CENTER OF GRAVITY
MOMENT ENVELOPE
NORMAL
CATEGORY
UTILITY
CATEGORY
LOADED AIRPLANE WEIGHT (POUNDS)
2600
2500
2400
2300
2200
2100
2000
1900
1800
1700
1600
1500
55
60
70
80
90
95
100
110
120
LOADED AIRPLANE MOMENT/1000 (POUND - INCHES)


CENTER OF GRAVITY LIMITS
UTILITY CATEGORY
NORMAL CATEGORY
LOADED AIRPLANE WEIGHT (POUNDS)
2600
2500
2400
2300
2200
2100
2000
1900
1800
1700
1600
1500
34
35
36
37
39
41
43
45
47
AIRPLANE C.G. LOCATION - INCHES AFT OF DATUM