

Aircraft Weight and Balance Revision

Tail Number: 9513C			Date: 12/7/2022		
Prepared by: Marvin L. Campbell A&P 2808375			Work Order No: verbal		
			Type Certificate Data No:		
Aircraft Make: Piper	Model: PA28-181	Serial No: 28-7890418	Time: 4937.8		
Registered Owner: Agri-Business Aviation, Inc.		Address: 1800 N. Market St. Sparta, IL 62286			
Maximum Weight 2550		CG Range FWD 82.0 AFT 93.0			
As Received; Date of Previous Weight and Balance: 11/14/2022		Useful Load: 1001.15	EW: 1548.85	EWCG: 87.6724	Moment: 135791.5
Notes: Installation of Electronics International CGR-30 Combo Monitoring System					
			Weight	Arm	Moment
Removed VSI, All engine Instr., Fuel gauges, Amp Guage, Vac gauge, & assoc. w			-7.2	59.9	-431.28
Installed CGR-30P, CGR-30C, EDC, Vac. Transducer, & G-force Transducer.			3.9	59.9	233.61
			0.00	0.00	0.00
			0.00	0.00	0.00
			0.00	0.00	0.00
			0.00	0.00	0.00
			0.00	0.00	0.00
			0.00	0.00	0.00
			0.00	0.00	0.00
			0.00	0.00	0.00
			0.00	0.00	0.00
<input checked="" type="checkbox"/> As Calculated As Weighed		Moment <hr/> Weight	New Empty Weight CG 87.73		New Useful Load 1004.45
Signature					
Repair Agency or License No: 2808375 A&P					

6.7 WEIGHT AND BALANCE DETERMINATION FOR FLIGHT

- (a) Add the weight of all items to be loaded to the basic empty weight.
- (b) Use the Loading Graph (Figure 6-13) to determine the moment of all items to be carried in the airplane.
- (c) Add the moment of all items to be loaded to the basic empty weight moment.
- (d) Divide the total moment by the total weight to determine the C.G. location.
- (e) By using the figures of item (a) and item (d) (above), locate a point on the C.G. range and weight graph (Figure 6-15). If the point falls within the C.G. envelope, the loading meets the weight and balance requirements.

	Weight (Lbs)	Arm Aft Datum (Inches)	Moment (In-Lbs)
Basic Empty Weight			
Pilot and Front Passenger	340.0	80.5	27370
Passengers (Rear Seats)*	340.0	118.1	40154
Fuel (48 Gallon Maximum)		95.0	
Baggage*		142.8	
Total Loaded Airplane			

The center of gravity (C.G.) of this sample loading problem is at _____ inches aft of the datum line. Locate this point () on the C.G. range and weight graph. Since this point falls within the weight - C.G. envelope, this loading meets the weight and balance requirements.

IT IS THE RESPONSIBILITY OF THE PILOT AND AIRCRAFT OWNER TO INSURE THAT THE AIRPLANE IS LOADED PROPERLY.

*Utility Category Operation - No baggage or rear passengers allowed.

SAMPLE LOADING PROBLEM (NORMAL CATEGORY)

Figure 6-9

SECTION 6
WEIGHT AND BALANCE

PIPER AIRCRAFT CORPORATION
PA-28-181, CHEROKEE ARCHER II

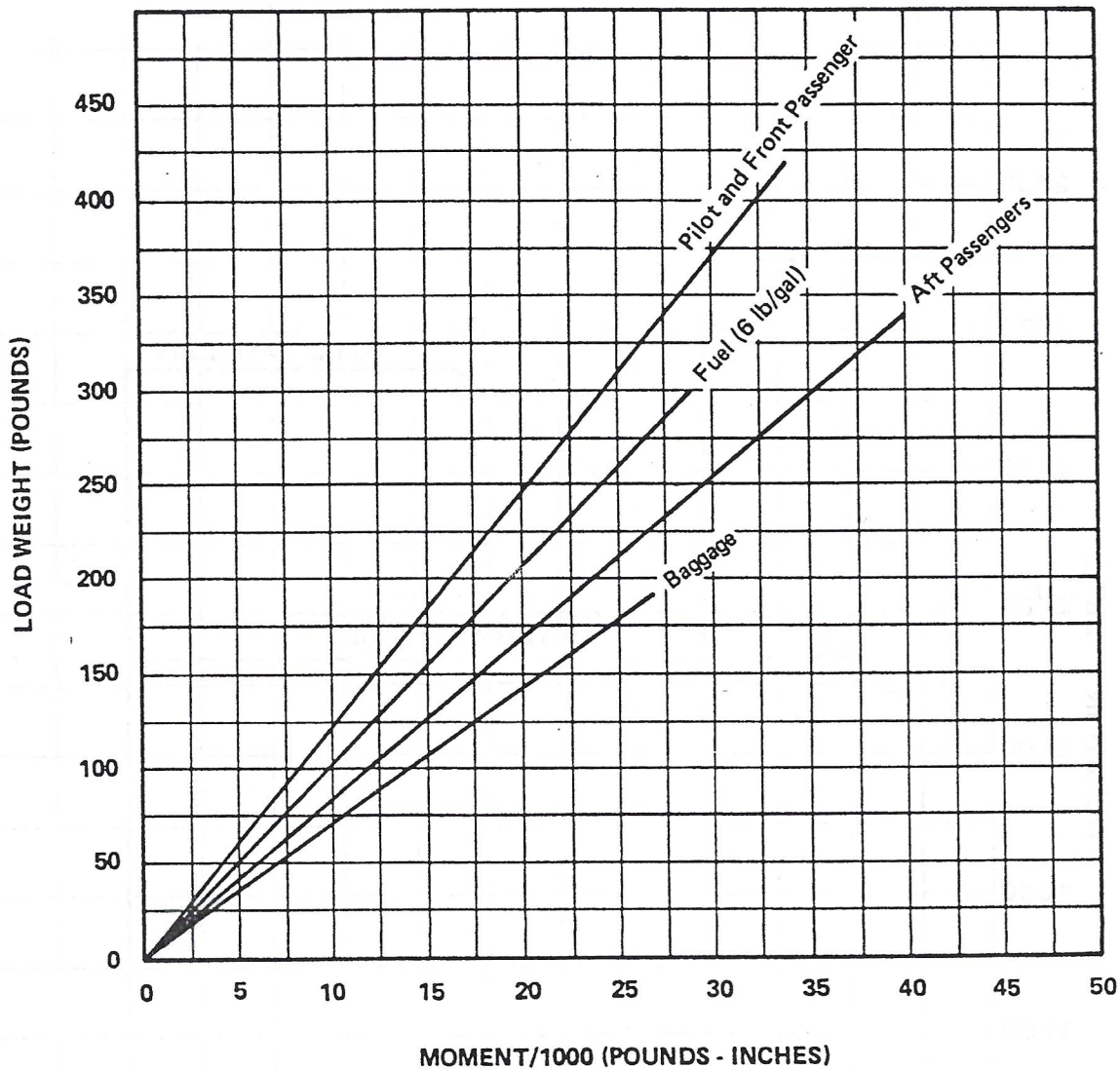
	Weight (Lbs)	Arm Aft Datum (Inches)	Moment (In-Lbs)
Basic Empty Weight			
Pilot and Front Passenger		80.5	
Passengers (Rear Seats)*		118.1	
Fuel (48 Gallon Maximum)		95.0	
Baggage*		142.8	
Total Loaded Airplane			

Totals must be within approved weight and C.G. limits. It is the responsibility of the airplane owner and the pilot to insure that the airplane is loaded properly. The Basic Empty Weight C.G. is noted on the Weight and Balance Data Form (Figure 6-5). If the airplane has been altered, refer to the Weight and Balance Record for this information.

*Utility Category Operation - No baggage or rear passengers allowed.

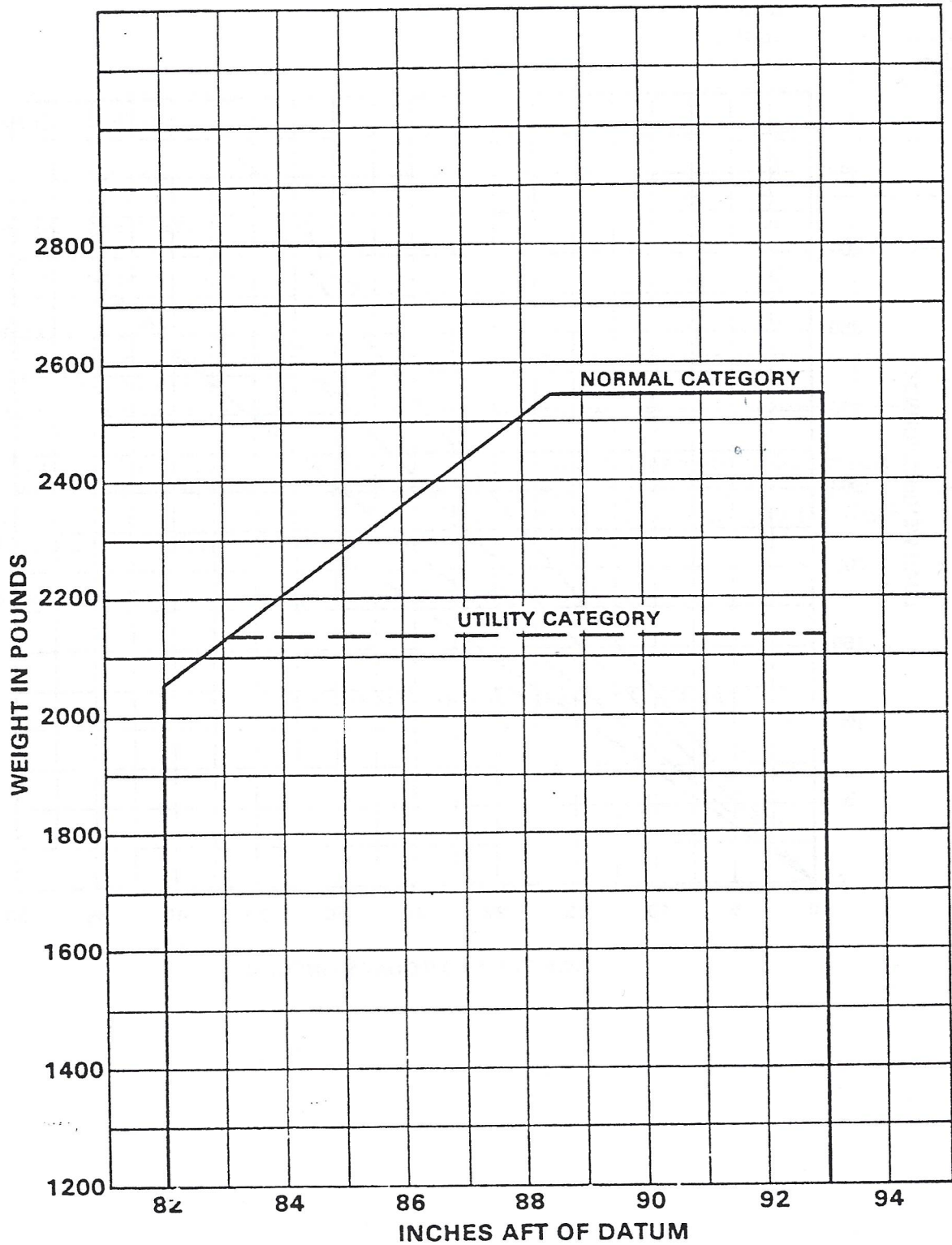
WEIGHT AND BALANCE LOADING FORM

Figure 6-11



LOADING GRAPH

Figure 6-13



C. G. RANGE AND WEIGHT

Figure 6-15