

MacAvionics

863.646.8790 CRS# UM4R575M

3482 Airfield Dr. W
Lakeland Linder Regional Airport
Lakeland, FL 33811

DATE: 27-Feb-2019

Reg. No.	MAKE & MODEL:	S/N
N33121	PIPER PA-28-180	28-7505124

IN	OUT	ITEM	WEIGHT	ARM	MOMENT
		AIRCRAFT - OLD AS EQUIPPED:	1527.7	87.01	132921.65
X		AERITALIA 36101C AIR GYRO	(2.00)	59.00	(118.00)
X		EDO AIRE 4000C AIR DG	(2.50)	59.00	(147.50)
X		GARMIN GI106A NAV INDICATOR	(1.50)	60.00	(90.00)
X		VACUUM GAGE	(0.80)	65.00	(52.00)
X		STEC ST-901 GPSS COMPUTER P/N 03976	(1.00)	6.00	(6.00)
X		STEC ST901 SWITCH P/N 03975	(0.80)	65.00	(52.00)
X		VACUUM PUMP	(2.30)	40.00	(92.00)
X		SVS BACKUP VACUUM SYSTEM	(2.40)	40.00	(96.00)
X		Garmin GAD29B	0.4	61.00	24.40
X		Garmin G5	1.21	63.00	76.23
X		Garmin G5	1.21	63.00	76.23
X		Garmin GMU11 magnetometer	0.35	115.00	40.25
			<u>1517.57</u>	<u>87.30</u>	<u>132485.26</u>

GROSS WEIGHT	2450.00
EMPTY WEIGHT	1517.57
USEFUL LOAD	932.43
EMPTY MOMENT	132485.26
EMPTY C.G.	87.30

The installation was performed in accordance with manufacturers specifications and is approved for return to service.

Signature: Don Ruhl

Chief Inspector

THIS WEIGHT & BALANCE SUPERSEDES WEIGHT & BALANCE DATED: 2-27-2019

23-Jun-2015

Certified Repair Station No. UM4R575M

****NOTE - This weight and balance re-calculation is accurate only to the extent of the accuracy of the data obtained from the previous weight and balance figures provided by the aircraft owner.**

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 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 the weight and balance requirements.

SAMPLE LOADING PROBLEM (Normal Category)

	Weight (Lbs)	Arm Aft Datum (Inches)	Moment (In-Lbs)
Licensed Empty Weight	1490.3	87.5	130353
Oil (8 quarts)	15	27.5	413
Pilot and Front Passenger	340	80.5	27370
Passengers, Aft* (Rear Seat)	340	118.1	40154
Fuel (48 Gal. Maximum)	264.7	95.0	25146
Baggage*		142.8	
Total Loaded Airplane	2450.0	91.2	223436

The center of gravity (C.G.) of this sample loading problem is at 91.2 inches aft of the datum line. Locate this point (91.2) 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 aft passengers allowed.