Luftfartsdirektoratet
Godkendt d. 3 OKT 1978

OY-RPO

WEIGHT AND BALANCE

FOR

AZTEC "E"

WARNING

EXTREME CARE MUST BE EXERCISED TO LIMIT THE USE OF THIS REPORT TO APPLICABLE AIRCRAFT. THIS REPORT REVISED AS INDICATED BELOW OR SUBSEQUENTLY REVISED IS VALID FOR USE WITH THE AIRPLANE IDENTIFIED BELOW WHEN APPROVED BY PIPER AIRCRAFT CORPORATION. SUBSEQUENT REVISIONS SUPPLIED BY PIPER AIRCRAFT CORPORATION MUST BE PROPERLY INSERTED.

MODEL PA-23-250 (6)

AIRCRAFT SERIAL NO. 27-7554144 REGISTRATION NO. N54849

WEIGHT AND BALANCE, REPORT 1630 PART II

PIPER AIRCRAFT CORPORATION
APPROVAL SIGNATURE AND STAMP William Hallman

D.O.A. No. EA-1

Luftfartsdirektoratet

WEIGHT AND BALANCE

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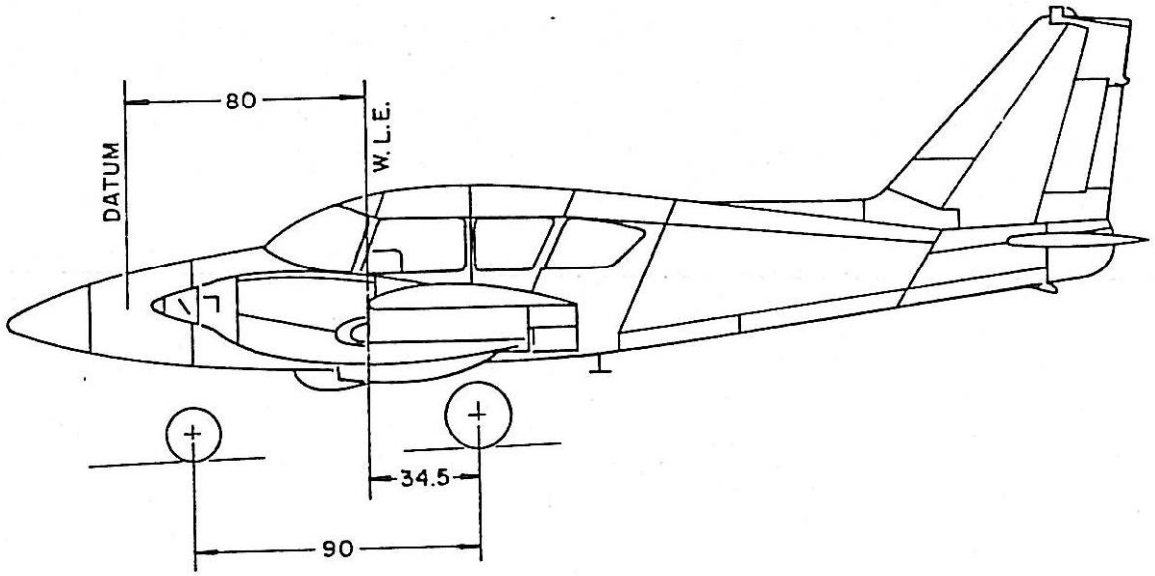
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WEIGHT AND BALANCE DATA

MODEL PA-23-250 (SIX PLACE)

SERIAL NO. 27--7554144 REGISTRATION NO. N54849 DATE: 5-15-75



Empty Weight as Weighed (Includes Items Checked on Equipment List)
(Corrected for Ballast Weight as Required)

Left Wheel	1154
Right Wheel	1165
Nose Wheel (N)	818
TOTAL (T)	3137

EMPTY WEIGHT C.G. AS WEIGHED (serial nos. 27-7554001 and up)

Empty Weight C.G. Forward Main Wheel C.L. is:

A. $\frac{(N)}{(T)} \times 90 =$ inches

Empty Weight C.G. Aft Wing Leading Edge is:

B. 34.5 - (A) = inches

Empty Weight C.G. Aft Datum is:

C. 80.0 + (B) = inches

EMPTY WEIGHT AND C.G. WITH UNUSABLE FUEL (serial nos. 27-7554001 and up)

Item	Weight	Arm	Moment
Empty Weight as Weighed			
Unusable Fuel (6.8 Gal.)	41	113	4633
TOTAL			

Empty Weight and C.G are lbs. at inches aft datum.

BASIC WEIGHT AND C.G. (serial nos. 27-7554001 and up)
(With unusable fuel and oil - for use with Visual Plotter, and Weight vs. C.G. Chart.)

The following calculation is performed here for simplicity to aid the pilot in his calculations. This weight will be referred to as "Basic Weight."

Item	Weight	Arm	Moment
Empty Weight			
Oil (6 Gal.)	45	55.0 =	2475
Unusable Fuel (6.8 Gal.)	41	113.0 =	4633
TOTAL			

Basic Weight and C.G. are lbs. at inches aft datum.

NOTES

1. The Empty and Basic Weights include 6.8 gallons of unusable fuel (at 6.0 lbs. per gal. = 41 lbs. total). This fuel should not be considered part of the disposable load which the pilot wishes to add to the airplane. However, any fuel beyond this amount which remains in the tanks from previous flights must be considered part of the disposable load.
2. Each engine has an oil capacity of 3 gallons (at 7.5 lbs. per gal. = 45 lbs. total).

GENERAL LOADING RECOMMENDATIONS: (serial nos. 27-7554001 and up)

Load Occupants From Front to Rear Progressively

Pilot Only
Load rear baggage compartment to capacity first.

2 Occupants - Pilot and passenger in front.
Load rear baggage compartment to capacity first. Baggage in nose limited by envelope with full fuel.

3 Occupants - 2 in front, 1 in middle.
Load rear baggage compartment to capacity first. Baggage in nose limited by envelope with full fuel.

4 Occupants - 2 in front, 2 in middle.
Load rear baggage compartment to capacity first. Baggage in nose limited by envelope with full fuel.

5 Occupants - 2 in front, 2 in middle, 1 in rear.
Forward and rearward baggage limited by envelope with full fuel. With 2 full tanks of fuel, load rear baggage compartment first.

5 Occupants - 1 in front, 2 in middle, 2 in rear.
Permitted only with special loading investigation.

6 Occupants - 2 in front, 2 in middle, 2 in rear.
6 occupants permitted only with limited fuel or baggage. Load forward baggage compartment to capacity first.

The preceding general loading recommendations are based on an airplane with the Narco Radio Package and a Piper Altimatic Pilot or their equivalent in ballast installed. These recommendations will indicate to the pilot the proper loading procedure. They will advise if a special loading check is required for his particular loading to assure its remaining in the weight vs. center of gravity envelope as given on Page 8b.

The Narco Radio Package consists of the following units: (Weights and arms may be found in the equipment lists in the following pages.)

Bendix ADF-T-12C
Two of Narco Mark 12 with VOA-8
PM-1 Marker Beacon

Special loading investigations are required for airplanes with other weight configurations.

NOTE

The special loading investigations may be made using the charts, graphs and instructions on the following pages.

PA-23-250 (SIX PLACE) AZTEC
WEIGHT AND BALANCE – VISUAL PLOTTER
(Serial nos. 27-7554001 and up)

The chart showing the approved Weight vs. Center of Gravity envelope and the Visual Plotter contained in the following pages will enable the pilot to graphically determine whether or not his proposed loading will fall within the allowable envelope. They will also allow him to easily determine the necessary adjustments to make if his first proposed loading is not within this envelope.

When plotting successive points, the pilot is graphically adding weights and corresponding moments. As the weight increases, through the addition of various items of disposable load, the pilot will see the shift in the center of gravity.

Going clockwise around the envelope, the heavy lines represent allowable weight at the forward C.G. limit (85.7 in.), the maximum allowable weight as the C.G. shifts rearward, the maximum weight with no fuel, the gross weight (5200 lbs.), and the maximum rearward C.G. limit (100.5 in.).

The sample problem which follows, will demonstrate the use of the Visual Plotter included with this manual. The pilot is not restricted to adding the items in the same succession as outlined, since the sample problem illustrates only one of many possible loadings. When plotting successive items of disposable load, the items most important to the mission under consideration (range or payload) may be added first.

Before arranging his load, the pilot should consult the General Loading Recommendations.

IT IS THE RESPONSIBILITY OF THE OWNER AND PILOT TO ASCERTAIN THAT THE AIRPLANE ALWAYS REMAINS WITHIN THE ALLOWABLE WEIGHT VS. CENTER OF GRAVITY ENVELOPE WHILE IN FLIGHT.

SAMPLE PROBLEM
(Serial nos. 27-7554001 and up)

Assume (for demonstration purposes only) a Basic Weight and C.G. of 3090 pounds at 90.4 inches. Assume the disposable load to consist of pilot and five 170 pound passengers, 290 pounds baggage and maximum allowable fuel. The General Loading Recommendations on Page 8 advise loading forward baggage compartment to capacity first (150 pounds).

1. On the Weight vs. C.G. Envelope opposite 3090 pounds locate the C.G. at 90.4 inches (Point 1). This point represents the Basic empty airplane with oil and 6.8 gallons of unusable fuel included.
2. Lay the transparent Visual Plotter over the envelope (always keep BASE LINES parallel to horizontal or Weight ordinates) and plot along the proper scale the combined weights of the front seat occupants (340 pounds - Point 2).
3. From Point 2, following the proper scale of the Visual Plotter, plot the combined weights of the middle seat occupants (340 pounds) and mark Point 3.
4. From Point 3, again following the proper scale of the Visual Plotter, plot the combined weights of the rear seat occupants (340 pounds) and mark Point 4.
5. From Point 4 plot in succession, the proper distances (use correct scale of Visual Plotter for each) which represent successive addition of forward and then rear baggage and finally fuel. (Points 5, 6, and 7.)

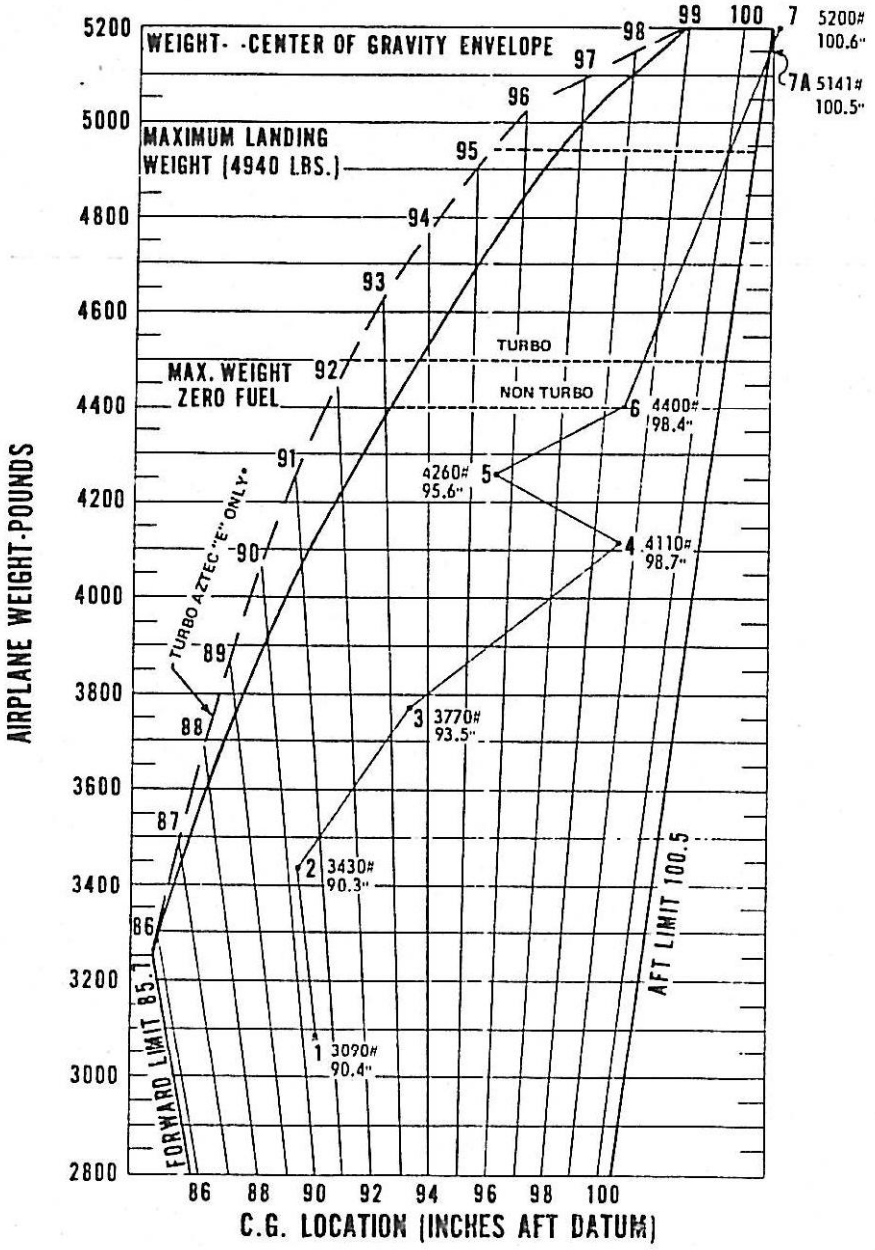
NOTE

The maximum zero fuel gross weight limitation of 4400 pounds restricts the rear baggage load to 140 pounds.

6. When the final step of adding fuel is plotted, the point falls within the envelope at 5141 pounds and 100.5 inches aft of datum. (The fuel graduations on the plotter run from 0 to 140 gallons. The tanks will always contain 6.8 gallons of unusable fuel, the usable fuel is 137.2 gallons for a total tank capacity of 144 gallons.)

NOTE

The addition of fuel to gross weight of 5200 pounds is restricted by the aft C.G. limitation of 100.5 inches. In this case fuel would be limited to approximately 133 gallons.



*DASHED FORWARD ENVELOPE APPLICABLE ONLY FOR TURBO AZTEC "E," S/N 27-4781 AND SUBSEQUENT, OR TURBO AZTEC "E" PRIOR TO S/N 27-4781 IF SERVICE KIT 760 587 HAS BEEN INSTALLED.

WEIGHT AND BALANCE
SUMMARY OF DISPOSABLE LOAD
(Serial nos. 27-7554001 and up)

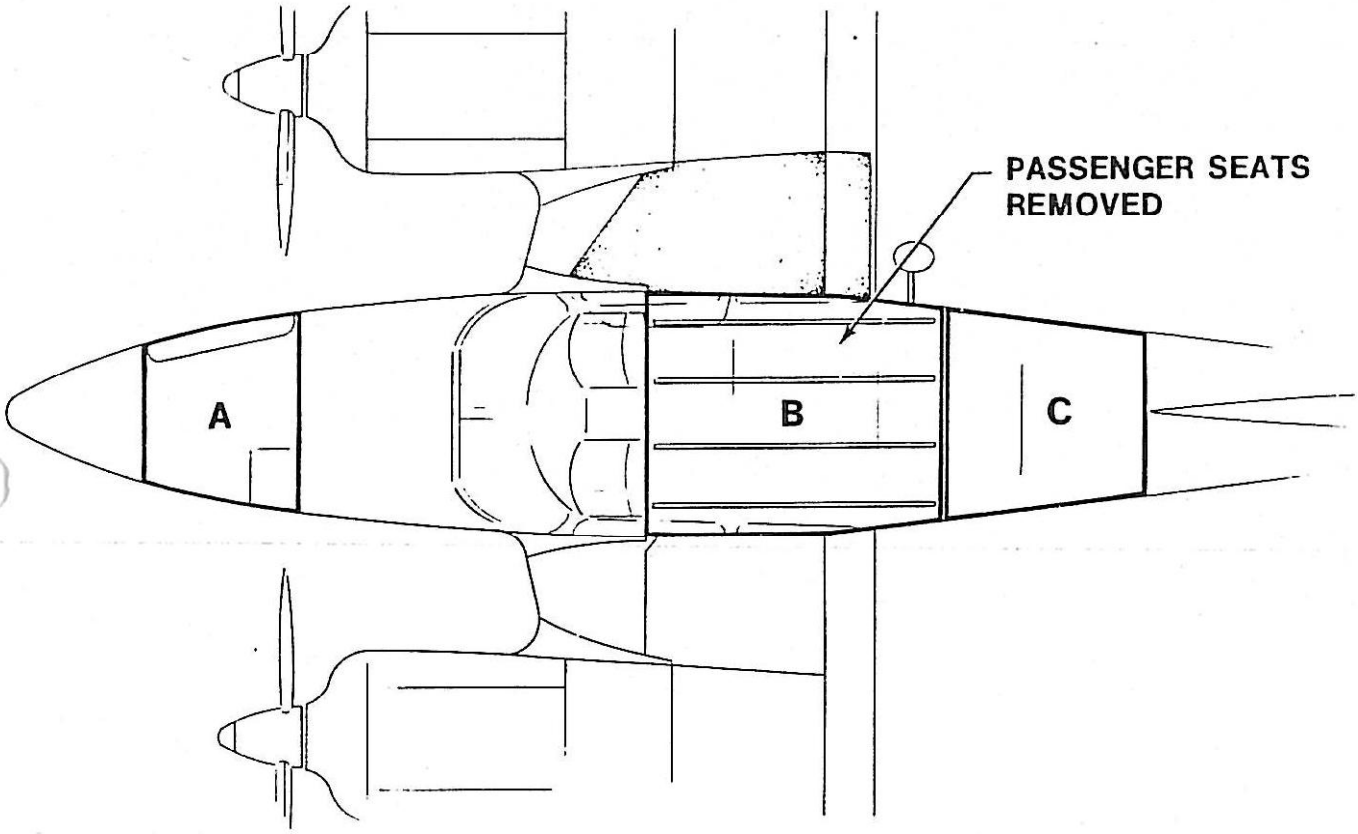
When seats are removed for cargo stowage, the Basic Weight and corresponding C.G. must be corrected prior to determination of the loading schedule. The weights and arms for these seats are:

Item	Weight	Arm	Moment
Copilot's Seat and Headrest	23	89	2047
Middle Seat & Headrest (each)	23	126	3024
Rear Seat (Total)	27.5	157	4161

The normal disposable load items and arms are:

Item	Weight	Arm	Moment
Front Occupants	Use Actual	89	–
Middle Occupants	Use Actual	126	–
Rear Occupants	Use Actual	157	–
Forward Baggage	(150 Max.)	10	–
Rear Baggage	(150 Max.)	183	–
Fuel (137 gal. total)*	823	113	92999

*6.8 gal. of unusable fuel is already included in Empty and Basic Weight and C.G. determinations. Total fuel capacity 144 gal. (36 gal. each tank)



MAXIMUM CAPACITY

AREA	FLOOR LOAD LBS/SQ. FT.	ALLOWABLE LBS
A	100	150
B	43	820
C	100	*150 (INCLUDING 20 LBS ON SHELF)

*105 LB. MAX. IF OXYGEN IS INSTALLED.

MAXIMUM TIE DOWN CAPACITY

PER TIE DOWN RING	95 LB
PER TRACK	190 LB
REAR SEAT BELT FITTINGS	85 LB PER FITTING

CARGO MUST BE LOADED WITHIN THE WEIGHT AND BALANCE LIMITS OF THIS AIRCRAFT.

Cargo Loading

EQUIPMENT LIST

The following is a list of equipment which may be installed in the PA-23-250 (Six Place). Items marked with an "X" are items installed when the airplane was delivered by the manufacturer and are included in the empty weight.

Item	Item	Weight Lbs.	Arm Aft Datum
	A. Propellers and Propeller Accessories		
	Two full feathering, constant speed, propeller installations:		
____	Hartzell HC-E2YR-2RBS with 8465-7R Blades Pitch Settings at 30 in. Sta.: Low 14.5° High 80° Feathered Diameter: Not over 77 in. Not under 76 in.	60.25 ea.	+24
____	Hartzell HC-E2YR-2RB with 8465-7R Blades Pitch Setting at 30 in. Sta.: Low 14.5° High 80° Feathered Diameter: Not over 77 in. Not under 76 in.	58.5 ea.	+24
X	Hartzell HC-E2YR-2RBSF with F8465-7R Blades Pitch Settings at 30 in. Sta.: Low 14.5° High 80° Feathered Diameter: Not over 77 in. Not under 76 in.	60.25 ea.	+24
____	Hartzell HC-E2YR-2RBF with F8465-7R Blades Pitch Setting at 30 in. Sta.: Low 14.5° High 80° Feathered Diameter: Not over 77 in. Not under 76 in.	58.5 ea.	+24

Item	Item	Weight Lbs.	Arm Aft Datum
	A. Propellers and Propeller Accessories (cont)		
____	Hartzell HC-E2YR-2RB with 8465-7R Blades Pitch Settings at 30 in. Sta.. Low 15.2° High 80° Feathered Diameter: Not over 77 in. Not under 76 in.	58.5 ea.	+24
____	Hartzell HC-E2YR-2RBS with 8465-7R Blades Pitch Settings at 30 in. Sta.: Low 15.2° High 80° Feathered Diameter: Not over 77 in. Not under 76 in.	60.25 ea.	+24
____	Hartzell HC-E2YR-2RBSF with F8465-7R Blades Pitch Settings at 30 in. Sta.: Low 15.2° High 80° Feathered Diameter: Not over 77 in. Not under 76 in.	60.25 ea.	+24
____	Hartzell HC-E2YR-2RBF with F8465-7R Blades Pitch Settings at 30 in. Sta.: Low 14.5° High 80° Feathered Diameter: Not over 77 in. Not under 76 in.	58.5 ea.	+24
	Two Hydraulic Governors:		
____	Hartzell Model F-6-5S	6.0 ea.	+37
____	Hartzell Model F-6-5A	6.0 ea.	+37
X	Hartzell Model F-6-28	6.0 ea.	+37
____	One Hartzell F-8-28 and One Hartzell F-6-28	6.0 ea.	+37
	Two Propeller Spinners:		
____	Piper Spinner 23818, Cap 23819 and Bulkhead Adapter	4.0 ea.	+24
X	Piper Spinner 23818, Cap 23819-4 and Bulkhead Adapter	4.0 ea.	+24

Item	Item	Weight Lbs.	Arm Aft Datum
	B. Engines and Engine Accessories - Fuel and Oil Systems		
	Two Fuel Pumps - Electric Auxiliary		
____	Piper No. 33127	3.0 ea.	+90
	Two Fuel Pumps - Electric Auxiliary		
____	Piper No. 32283	3.0 ea.	+90
	Two Fuel Pumps - Electric Auxiliary		
X	(28V) Piper No. 33327 or 33959-2	3.0 ea.	+90
	Two Fuel Pumps - Engine Driven		
X	A.C. No. 6440296	2.0 ea.	+66
____	Lear Siegler RG-17980	1.25 ea.	+66
	Two Oil Radiators		
____	Harrison Model AP13AU06-03	3.9 ea.	+70
X	Harrison Model AP09AU06-04	3.0 ea.	+66
	Two Vacuum Pumps		
____	Airborne Mechanisms Model 200CC	3.5 ea.	+66
____	Airborne Mechanisms Model 211CC	1.8 ea.	+66
____	Airborne Mechanisms Model 431CC7	5.7 ea.	+66.5
X	Airborne Mechanisms Model 441CC	2.9 ea.	+66.5
	Two Starters		
____	Delco-Remy Model 1109511 (14V)	18.0 ea.	+40
____	Prestolite Model MZ-4206 (14V)	17.0 ea.	+40
X	Prestolite Model MHB-4001 (28V)	18.0 ea.	+40
	One Hydraulic Pump		
____	Presco Model 012023-015	2.0	+68.5
	Eastern Industries Model 1235HBG,		
____	Type 263	2.0	+68.5
	Eastern Industries Model 1233HNG,		
X	Type 284	2.0	+68.5
	Two Induction Air Filters		
X	Piper P/N 32198	5.0 ea.	+74
____	Piper P/N 26874	1.0 ea.	+66
	Two Oil Filters		
X	AC Full Flow No. 5578941	1.77 ea.	+67

Item	Item	Weight Lbs.	Arm Aft Datum
	C. Landing Gear		
	Two Main Wheel Brake Assemblies, 6.00-6 Type III		
____	Cleveland Wheel Assembly Model 3080B, Brake Assembly Model 37-200	15.0 ea.	+114.5
____	Cleveland Wheel Assembly Model 3080C, Brake Assembly Model 37-200A	15.0 ea.	+114.5
X	Cleveland Wheel Assembly Model 3080D, Brake Assembly Model 37-200A	15.0 ea.	+114.5
____	Cleveland Wheel Assembly Model 3080B-1, Brake Assembly Model 37-200-2	15.0 ea.	+114.5
____	Cleveland Wheel Assembly Model 40-131 Brake Assembly Model 30-96	14.8 ea.	+114.5
X	Two Main 8-Ply Rating Nylon Tires, 7.00-6, Type III with Regular Tubes	13.0 ea.	+114.5
____	One Nose Wheel, 6.00-6 Type III Cleveland Wheel Assembly 38501	5.0	+ 24.5
X	Cleveland Wheel Assembly 40-76(B)	3.8 ea.	+ 24.5
X	One Nose Wheel 4-Ply Rating Tire, 6.00-6, Type III with Regular Tube	9.0	+ 24.5
____	One Nose Wheel 6-Ply Rating Tire, 6.00-6, Type III with Regular Tube	9.3	+ 24.5

Item	Item	Weight Lbs.	Arm Aft Datum
	D. Electrical Equipment		
	Landing Light		
____	G.E. Model 4522 (14V)	2.0	- 18.5
X	G.E. Model 4553 (28V)	2.0	- 18.5
	Alternators		
____	Two 70 Amp (14V) Alternators Prestolite with brackets, relays and filters	32.0	+ 37
X	Two 70 Amp (28V) Alternators Prestolite With brackets, relays and filters	32.0	+ 37
	Battery		
____	One 35 Amp Hour (12V)	27.0	+ 34
X	One 17 Amp Hour (24V)	28.0	+ 33
____	One Gill PS12-24, 25 Amp Hour, 24 Volt Battery	44.0	+ 34
	Rotating Beacon		
____	Grimes No. 7080A installed in accordance with Piper Drawing No. 32664	2.0	+310
____	Whelen WRM installed in accordance with Piper Drawing No. 32664	2.0	+310
____	Whelen WRM-24 installed in accordance with Piper Drawing No. 33320 (28V)	2.0	+310
____	Whelen Red Anti-Collision (Strobe) Light installed in accordance with Piper Drawing 32940 (14V) or 32940-2 (28V)	5.1	+237.6
X	Whelen White Anti-Collision (Strobe) Lights installed in accordance with Piper Drawing 32941 (14V) or 32941-2 (28V)	4.2	+ 92.9
X	28V Electrical System Installation Per Piper Drawing 33320 or 33650-2	Neglect Weight Change	
____	Emergency Locator System (PAL) Installed Per Piper Dwg. 33542	2.0	+258.0

Item	Item	Weight Lbs.	Arm Aft Datum
	E. Interior Equipment		
X	D.O.A. No. EA-1 Approved Airplane Flight Manual, Piper Report No. 1630, Dated January 21, 1970.		
X	D.O.A. No. EA-1 Approved Supplement 1. (Dated January 21, 1970), to Airplane Flight Manual, Piper Report No. 1630.		
____	D.O.A. No. EA-1 Approved Supplement 2. (Dated January 21, 1970), to Airplane Flight Manual, Piper Report No. 1630.		
____	D.O.A. No. EA-1 Approved Supplement 3. (Dated January 21, 1970), to Airplane Flight Manual, Piper Report No. 1630.		
____	D.O.A. No. EA-1 Approved Supplement 4. (Dated January 21, 1970), to Airplane Flight Manual, Piper Report No. 1630.		
____	D.O.A. No. EA-1 Approved Supplement 5. (Dated January 21, 1970), to Airplane Flight Manual, Piper Report No. 1630.		
X	D.O.A. No. EA-1 Approved Supplement 6. (Dated January 21, 1970), to Airplane Flight Manual, Piper Report No. 1630.		
____	D.O.A. No. EA-1 Approved Supplement 7. (Dated April 15, 1970), to Airplane Flight Manual, Piper Report No. 1630.		
____	D.O.A. No. EA-1 Approved Supplement 8. (Dated April 15, 1970), to Airplane Flight Manual, Piper Report No. 1630.		
____	D.O.A. No. EA-1 Approved Supplement 9. (Dated December 10, 1971), to Airplane Flight Manual, Piper Report No. 1630.		
____	D.O.A. No. EA-1 Approved Supplement 10. (Dated November 7, 1972), to Airplane Flight Manual, Piper Report No. 1630.		
____	D.O.A. No. EA-1 Approved Supplement 11. (Dated November 7, 1972), to Airplane Flight Manual, Piper Report No. 1630.		

Item	Item	Weight Lbs.	Arm Aft Datum
	E. Interior Equipment (cont)		
____	D.O.A. No. EA-1 Approved Supplement 12. (Dated October 1, 1974) to Airplane Flight Manual, Piper Report No. 1630.		
____	D.O.A. No. EA-1 Approved Supplement 13. (Dated October 1, 1974) to Airplane Flight Manual, Piper Report No. 1630.		
X	Curtain Instl. 32710	3.0	+120.0

Item	Item	Weight Lbs.	Arm Aft Datum
	F. Combustion Heater		
____	Modified Janitrol B3040 Per Piper Drawing 32770 (14V)	26.0	+ 29
X	Janitrol 43D65-1 (28V)	26.0	+ 29
X	Heater Kit Assy., Piper Dwg. 33639-3	26.0	+ 29

Item	Item	Weight Lbs.	Arm Aft Datum
	G. AutoPilot		
____	Piper AutoControl III installed in accordance with Piper Dwg. 32749 (14V) or 32749 (28V)	3.5	+ 77.5
____	Piper AltiMatic III, with Automatic Trim and AutoFlite, installed in accordance with Piper Dwg. 32719 (Does not include the wt. of gyros)	18.9	+ 89.2

Item	Item	Weight Lbs.	Arm Aft Datum
	G. AutoPilot (cont)		
_____	Piper AltiMatic IIIB, with Automatic Trim and AutoFlite, installed in accordance with Piper Dwg. 32862 (Does not include the wt. of gyros)	18.9	+ 89.2
X	Piper AltiMatic IIIC, with Automatic Trim and AutoFlite, installed in accordance with Piper Dwg. 15600-2 (Does not include the wt. of gyros)	28.4	+100.7
_____	Piper AltiMatic V F/D installed in accordance with Piper Dwg. 33100 (14V) or 33100-6 (28V)	42.2	+ 84.6
_____	Piper AltiMatic V installed in accordance with Piper Dwg. 33106 (14V) or 33106-3 (28V)	37.3	+ 91.4
_____	Piper AltiMatic IIIB-1 with Automatic Trim and AutoFlite, installed in accordance with Piper Dwg. 33233-2 (14V) or 33233-4 (28V) (Does not include the wt. of gyros)	15.0	+ 84.5
_____	Piper AltiMatic V F/D-1 installed in accordance with Piper Dwg. 33100 (14V) or 33100-6 (28V), 33100-8 (28V), 33100-17 (28V), 33100-19 (28V), 33100-22 (28V), 33100-23 (28V)	42.2	+ 84.6
_____	Piper AltiMatic V-1 installed in accordance with Piper Dwg. 33106 (14V) or 33106-3 (28V)	37.3	+ 91.4
_____	Piper AutoControl IIIB installed in accordance with Piper Dwg. 15710-2	13.53	+ 77.3

Item	Item	Weight Lbs.	Arm Aft Datum
	H. Instruments (Standard and Optional)		
X	Mitchell T & B Per Piper Dwg. 32737-5	1.5 ea.	+68.3
	Brittain T & B Per Piper Dwg. 41711	1.5 ea.	+67.8
X	Rate of Climb Per Piper Dwg. 41706	1.0 ea.	+68.8
	Dwg. 41706-2	1.0 ea.	+68.8
X	Altimeter Per PS50008-2	1.3 ea.	+68.6
X	Airspeed Indicator Per Piper Dwg. 17419-19 or 17419-27	.6 ea.	+69.6
X	Manifold Pressure Gauge Per Piper Dwg. 19697-3	1.0 ea.	+69.3
X	Ammeter Assy. Per Piper Dwg. 23857	.2 ea.	+69.8
	Dual Tachometer Assy. Per Piper Dwg. 25700-3	.7	+68.5
X	Fuel Gauge Assy. Per Piper Dwg. 32734	1.2 ea.	+69.3
X	Attitude Gyro Indicator Per Piper Dwg. 99002-2 or -3 or -4	2.0 ea.	+67.3
X	Directional Gyro Indicator Per Piper Dwg. 99003-2 or -3 or -4	2.9 ea.	+67.7
X	Fuel Flow Gauge (Dual) Per Piper Dwg. 32734	2.0	+80
	Dwg. 32858-2	1.5	+80
	Dwg. 33322	1.5	+80
	Dual Altimeters	1.5	+72
	Exhaust Gas Temperature Indicator Per Piper Dwg. 32649 or 33596-2	2.0	+80

Item	Item	Weight Lbs.	Arm Aft Datum
	H. Instruments (Standard and Optional) (cont)		
____	Mixture Monitor Per Piper Dwg. 32744	2.0	+80
X	Dual Tachometer Installation, Installed in accordance with Piper Dwg. 32727	.5	+62.9
X	Hobbs * M-15051-5 Hour Meter Instl. Installed Per Piper Dwg. 32727	0.6	+72.0
____	Copilot Attitude Gyro & Copilot Directional Gyro Instl. Per Piper Dwg. Nos. 33490-4 and 33500-2	6.1	+70.6
____	Copilot Turn/Bank Indicator	2.4	+68.3
____	Copilot Electric Directional Gyro	2.3	+68.3
____	Copilot Electric Attitude Gyro	2.2	+68.3
____	Copilot Air Driven Directional Gyro	3.4	+70.8
____	Aero Mechanism 8142-M3H0 Encoding Altimeter	3.2	+70.8

Item	Item	Weight Lbs.	Arm Aft Datum
	I. Deicing Equipment		
X	Heated Windshield Panel Installation Per Piper Dwg. No. 31640 (14V) or 31640-3 (28V)	2.5	+ 59
____	Pneumatic Deicing Equipment Installation Per Piper Dwg. No. 32735 (14V) or 32735-2 (28V)	45.41	+125.2
____	Pneumatic Deicing Equipment Installation Per Piper Dwg. No. 32302 (14V) or 32302-2 (28V)	42.54	+128.3
X	Electric Propeller Deicing Equipment Installation Per Piper Dwg. No. 32740 (14V) or 32740-2 (28V)	12.98	+ 42.66
____	Pneumatic Deicing Equipment Installed Per Piper Dwg. No. 33435-2 (14V) or 33435-3 (28V)	28.88	+125.84
____	Pneumatic Deicing Equipment Installed Per Piper Dwg. 33435-3 (Less Pumps)	22.4	+140.0
X	Pneumatic Deicing Equipment Installed Per Piper Dwg. 15695-2 (28V)	36.02	+125.84
____	Propeller Ice Shield Instl. Installed Per Piper Dwg. 33498	2.8 ea.	+ 24.35
X	Airborne/Goodyear pneumatic ice guard #701 per STC SA 667CE	36.02	+125.86

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Item	Item	Weight Lbs.	Arm Aft Datum
	J. Miscellaneous Equipment		
X	Heated Pitot Head Aero Instrument PST-305 (14V) or PST-305 (28V)	1.0	+129
X	Emergency Gear Extender (CO_2 Bottle)	2.0	+ 89
X	Taxi Light Installed in accordance with Piper Dwg. No. 30503 (14V) or 33320 (28V) or 33320 (28V) or 33650-2 (28V)	2.0	+ 25
X	Stall Warning Indicator Safe Flight Model C-52207 (14V) or C-52207-4 (28V)	Neglect Weight Change	
____	Piper Electric Trim Installed Per Piper Dwg. No. 32765 (14V) or 32765-2 (28V)	4.0	+176
____	Piper Radio Coupler Installed Per Piper Dwg. No. 32751	.5	+ 59
____	Piper Glide Slope Coupler Installed Per Piper Dwg. No. 32752	1.4	+ 58
____	Ballast Weight Installed Per Piper Dwg. No. 32330	-	+300

Item	Item	Weight Lbs.	Arm Aft Datum
	K. Optional Equipment		
	Flare	Use Actual Weight and Arm	
____	Fire Extinguisher Installed in accordance with Piper Dwg. 31986 and 33179	5.0	+ 89
____	Piper Dwg. 30944	8.0	+ 89
____	Dual Toe Brakes Installed in accordance with Piper Dwg. 30940	8.0	+ 49
____	Oxygen System Installed in accordance with Piper Dwg. 32388 or 33835-2	48.0	+161
____	Lycoming Turbocharger System Installation in accordance with Piper Dwg. 32330 (14V) or 32330-5 (28V)	Use Actual Weight and Arm	
X	External Power Receptacle Installation, Installed in accordance with Piper Dwg. 33021 (14V) or 33328-2 (28V)	7.0	+ 11
X	Alternate Static Source Installed in accordance with Piper Dwg. 32655-2	Neglect Weight Change	
____	Propeller Synchronizer Installed in accordance with Piper Dwg. 33006	7.75	+ 78
____	Propeller Synchrophaser Installed Per Piper Dwg. 33249 (14V) or 33249-2 (28V)	7.45	+ 61.9
X	Piper Automatic Locator Installed in accordance with Piper Dwg. 33313 (14V) or 33313-2 (28V)	2.0	+250.0
____	Radar Altimeter Installed in accordance with Piper Dwg. 33201	6.5	+175.7
____	Radome only Installed Per Piper Dwg. 33321, 33350, or 33350-2	.5	- 13.75

Item	Item	Weight Lbs.	Arm Aft Datum
	L. Shoulder Harness		
____	Crew Seats, Installed in accordance with Piper Drawing 32896-2.	1.2	+102
____	Passenger Seats, Installed in accordance with Piper Drawing 32896-3.	1.2	+136
_X_	Crew Seats (inertia reel), Installed in accordance with Piper Drawing 32896-4.	2.35	+102
____	Passenger Seats (inertia reel), Installed in accordance with Piper Drawing 32896-5.	2.35	+136
____	Rear Seats (inertia reel), Installed in accordance with Piper Drawing 33681-2	4.0	+158

Item	Item	Weight Lbs.	Arm Aft Datum
	M. Radio		
_____	Anti-Static Kit	2.0	+165.0
_____	Piper PM-1 Marker Beacon	2.5	+ 13.0
_____	Narco MBT-R-12 Marker Beacon	3.0	+ 28.0
_____	Bendix ADF-T12C	9.95	+114.0
_____	Bendix ADF-T-12D	10.35	+114.0
_____	Narco DME UD1-3	8.5	+ 60.0
_____	Narco DME UD1-4	9.12	+ 60.0
_____	Narco Mark 12B with Power Supply	10.75	+ 50.5
_____	Narco Mark 12B with Power Supply	10.75	+ 50.5
_____	Narco VOA-8 VOR/LOC Indicator	3.45	+ 66.5
_____	Narco VOA-8 VOR/LOC Indicator	3.45	+ 66.5
_____	Narco VOA-9 VOR/ILS Indicator	3.55	+ 66.5
_____	Narco VOA-40 VOR/LOC Indicator	1.6	+ 60.5
_____	Narco VOA-40 VOR/LOC Indicator	1.6	+ 60.5
_____	Narco VOA-50M VOR/ILS Indicator	1.6	+ 60.5
_____	Narco VOA-40M VOR/ILS Indicator	1.6	+ 60.5
_____	Narco UGR-2 Glide Slope Installation	3.7	+ 29.3
_____	Narco UAT-1 Transponder Installation (UTC-2 Head)	10.5	+ 31.1
_____	Narco AT6-A Transponder	8.4	+ 34.4
_____	Narco AT5 Transponder	8.4	+ 34.4
_____	Narco Mark 16	7.2	+ 58.0
_____	Narco Mark 16	7.2	+ 58.0
~~X~~ X	King KR-85 ADF Installation ~~Installed Per Piper Dwg. 33268-7~~ 8-4-75	8.3	+101.1

Item	Item	Weight Lbs.	Arm Aft Datum
	M. Radio (cont)		
_____	Narco Nav 11 VOR/LOC Installation	3.0	+103.5
_____	Narco Nav 11 VOR/LOC Installation	2.5	+ 64.0
_____	Narco Nav 12 VOR/ILS Installation	3.0	+103.5
_____	Narco Nav 12 VOR/ILS Installation	2.5	+ 64.0
_____	Narco Com 11A VHF Transceiver Instl.	3.55	+ 69.1
_____	Narco Com 11A VHF Transceiver Instl.	3.55	+ 73.6
_____	Narco AT-50 Transponder Installation	3.5	+ 59.1
_____	Narco AT-50A Transponder Installation Dwg. 33578-3	4.8	+ 48.2
_____	King KN60C DME Installation	8.2	+ 63.8
_____	Narco Nav 14 Receiver Installation	2.5	+ 64.0
_____	King KX-170A VHF Nav/Com	7.3	+ 65.3
_____	King KX-170A VHF Nav/Com	7.3	+ 65.3
_____	King KX-175B VHF Nav/Com	7.3	+ 65.3
_____	King KX-175B VHF Nav/Com	7.3	+ 65.3
_____	King KN-73 G/S Recr.	2.5	+ 36.0
_____	King KN-77 VOR/LOC Conv.	2.7	+ 36.0
_____	King KNI-520 VOR/ILS Indicator	2.8	+ 68.6
_____	King KI-201C VOR/LOC Conv. Ind.	2.5	+ 68.6
_____	King KI-211C VOR/ILS Conv. Ind. G/S Recr.	3.0	+ 68.5

Item	Item	Weight Lbs.	Arm Aft Datum
	M. Radio (cont)		
X	~~King KN 65 DME w/ KI-265 Ind. Mounted Installed Per Piper Dwg. 33598-3~~ King KN 65 DME w/ KI-265 IND 8-4-75	10.7	+ 42.6
____	~~Dwg. 33404-3~~	10.0	+ 40.9
____	~~Dwg. 33404-10~~	10.0	+ 40.9
____	King KT-75R Remote Transponder Inst.	8.1	+ 42.2
X	King KT-76 Transponder ~~Inst. Dwg. 33397-2~~ 8-4-75	3.6	+ 62.2
____	King KT-76 Transponder Inst. Dwg. 33397-3	3.7	+ 61.5
____	King KMA-20 MB Revr. & Audio Ampl. Dwg. 33383-3 or 33383-7	4.2	+ 50.5
____	RCA AVQ-47 Radar Inst.	32.5	+ 2.0
____	King KA-39 Voltage Converter	1.1	+ 27.6
____	Dual KR-85 ADF Installation Installed Per Piper Dwg. 33526-3	22.9	+ 74.6
____	King ADF *1 Instl. w/KDF-800, KFS-580 & Antenna Installed Per Piper Dwg. No. CA-30224	15.4	+ 53.5
____	King ADF *2 Instl. w/KDF-800, KFS-580, 551C & Antenna Installed Per Piper Dwg. CA-30224	16.6	+ 54.3
____	King Comm *1 Instl. w/KTR-900A, KFS-590 & Antenna Installed Per Piper Dwg. CA-30211	14.4	+151.9
____	King Comm *2 Instl. w/KTR-900A, KFS-590 & Antenna Installed Per Piper Dwg. CA-30211	14.1	+159.6
____	King Nav *1 Instl. w/KNR-600A, KNI-500L, KGM-691 & KA-23 Antenna Installed Per Piper Dwg. CA-30215	18.4	+136.4

Item	Item	Weight Lbs.	Arm Aft Datum
	M. Radio (cont)		
_____	King Nav #2 Instl. w/KNR-600A, & KNI-500 Installed Per Piper Dwg. CA-30215	14.1	+135.2
_____	Dual Bendix ADF-T-12C ADF Instl. w/(2) 551A Indicators Installed Per Piper Dwg. CA-30384	17.2	+ 95.0
_____	King KA-37/KAA-445 Audio Selector Amplifier Instl. Installed Per Piper Dwg. CA-30222	7.7	+ 38.6
_____	King KI-214 VOR/ILS Conv. Ind.	2.9	+ 68.0
X	King KN-74 RNAV (VFR Use Only) ~~Installed Per Piper Dwg. CA-30182~~ 8-11-75	4.1	+ 63.4
_____	Dual King KT-76 Transponder Instl. Installed Per Piper Dwg. CA-30304	7.0	+ 65.0
_____	Narco Com 111/Nav 112 Nav/Comm #1 Installation Installed Per Piper Dwg. No. 33582-2	13.3	+ 77.5
_____	Narco Com 111/Nav 111 Nav/Comm #2 Installation Installed Per Piper Dwg. No. 33581-2 or 33581-3	9.2	+ 71.0
_____	Narco AT-50A Transponder Installation Installed Per Piper Dwg. No. 33578-2	3.9	+ 58.3
_____	Dwg. No. 33578-3	4.8	+ 48.2
_____	Narco CP-125 Audio and M/B Installation Installed Per Piper Dwg. No. 33577-4 or 33577-3	3.5	+ 37.8
_____	Sunair ASB-125 H.F. Instl. Installed Per Piper Dwg. No. CA-30010 or CA-30196	20.7	+103.4
_____	Dual Bendix ADF-T-12C ADF Instl. Installed Per Piper Dwg. No. CA-30123	21.4	+ 79.1

Item	Item	Weight Lbs.	Arm Aft Datum
	M. Radio (cont)		
_____	Pantronics DX10-DA H.F. Instl. Installed Per Piper Dwg. CA-30266	21.3	+ 87.1
_____	Right Wing Heated Pitot Instl. w/Copilot Airspeed Indicator Per Piper Dwg. No. 32771-2 & Copilot Altimeter Per Piper Dwg. 25717-2	4.5	+ 90.9
_____	Right Wing Heated Pitot Instl. w/Copilot Airspeed Indicator, Copilot Altimeter & Rate of Climb Indicator	5.5	+ 86.8
_____	Second Alternate Static Source	Neglect Weight Change	
_____	Sunair ASB-130 H.F. Instl. Installed Per Piper Dwg. 33521 or 33521-4 or 15575-2	24.9	+ 85.0
_____	Copilot 100-T Microphone & Headset Installed Per Piper Dwg. 33589	1.2	+ 72.5
_____	Narco Copilot M-700A Microphone & Headset Installed Per Piper Dwg. 33593-2	1.2	+ 72.5
_____	Narco DME-190 Instl. Installed Per Piper Dwg. 33882-2	6.1	+ 63.7
_____	Narco Com 11A/Nav 12 Nav/Com *1 Installation Installed Per Piper Dwg. 33559-3	11.8	+ 52.7
_____	Narco Com 11B/Nav 12 Nav/Com *1 Installation Installed Per Piper Dwg. 33559-6	12.1	+ 53.4
X	Encoding Altimeter Instl. Installed ~~Per Piper Dwg. 15570-2 or 15570-3~~ 5-4-75	2.1	+ 67.7
_____	Encoding Altimeter Instl. (8141 Aero Mechanism) Installed Per Piper Dwg. 15564-2 or 15564-3	3.5	+ 67.0

Item	Item	Weight Lbs.	Arm Aft Datum
	M. Radio (cont)		
____	Boom Mike Instl. Installed Per Piper Dwg. 32946	1.6	+ 81.0
X	King KWX-40 Radar Instl. Installed ~~Per Piper Dwg. 15470-2~~ S-21-75	20.9	+ 8.7
X	VOR/LOC All Weather Antenna Instl. ~~Installed Per Piper Dwg. 33902-2~~ S-4-75	1.6	+296.8
____	King KT-226 RMI Instl. Installed Per Piper Dwg. 33620-5	7.3	+ 41.1
____	Narco ADF-140 Instl. Installed Per Piper Dwg. 33883-2	12.0	+ 88.6
	Circuit Protector Instl. Installed Per Piper		
____	~~Dwg. 33924-2~~	1.2	+ 70.3
X	~~Dwg. 33937-2~~ S-4-75	1.0	+ 70.3
____	~~Dwg. 33936-2~~	1.0	+ 70.3
____	~~Dwg. 15481-2 or 15481-4~~	1.3	+ 69.6
____	Pilot Microphone & Headset Instl. Installed Per Piper Dwg. 33911-2 or 33587	1.9	+ 81.3
	Anti-Static Equipment Instl. Installed Per Piper		
____	Dwg. 31628	2.0	+171.3
____	Dwg. 31628-2	2.4	+171.3
____	Narco Com 11B, Com #1 Instl. Installed Per Piper Dwg. 33912-3	5.2	+ 61.7
____	Narco Nav 14 Nav 1 Instl. Installed Per Piper Dwg. 33592-4	6.4	+ 83.7
____	Narco Nav 114 Nav 1 Instl. Installed Per Piper Dwg. 33593-4	6.4	+ 83.7
____	Narco DME-190 Instl. Installed Per Piper Dwg. 33882-2	6.1	+ 63.7

Item	Item	Weight Lbs.	Arm Aft Datum
	M. Radio (cont)		
_____	Narco CP-127 Audio Panel & Marker Beacon Instl. Installed Per Piper Dwg. 33864-3	10.8	+ 53.1
_____	Narco Dual ADF-140 Instl. Installed Per Piper Dwg. 33909-2	28.0	+ 67.1
_____	King KR-86 ADF Instl. Installed Per Piper Dwg. 15580-2	6.4	+108.6
_____	King KX-170B Nav/Com #2 Instl. Installed Per Piper Dwg. 33399-3	12.6	+ 63.5
_____	King KX-170B Nav/Com #1 Instl. Installed Per Piper Dwg. 33398-3	13.6	+ 74.5
_____	Pilot Microphone & Headset Installed Per Piper Dwg. 33587	1.9	+ 81.3
	King KX-175B Nav/Com 1 Instl. Installed Per Piper		
_____	Dwg. 33878-2	16.6	+ 62.3
_____	Dwg. 33878-3	16.6	+ 61.5
_____	King KX-175 Nav/Com 2 Instl. Installed Per Piper Dwg. 33401-3	16.8	+ 57.7
_____	Left Custom Instrument Panel Installed Per Piper Dwg. 15515-2	2.2	+ 70.8
_____	Narco Com 11A/Nav 11 Nav/Com #2 Installation Installed Per Piper Dwg. 33562-3	8.7	+ 62.1
_____	Narco Com 11B/Nav 11 Nav/Com #2 Installation Installed Per Piper Dwg. 33562-6	8.5	+ 63.2
_____	Narco Com 111B Com #1 Instl. Installed Per Piper Dwg. 33912-5	5.2	+ 61.7
_____	Narco Com 111B/Nav 112 Nav/Com #1 Instl. Installed Per Piper Dwg. 33582-3	14.3	+ 74.4

Item	Item	Weight Lbs.	Arm Aft Datum
	M. Radio (cont)		
	Narco Com 111B/Nav 111 Nav/Com # 2 Instl. Installed		
_____	Per Piper Dwg. 33581-6	8.5	+ 63.2
	King KN-74 R-Nav Instl. Per Piper Dwg. No.		
_____	15740-2	19.33	+ 65.59
_____	15740-3	17.02	+ 64.94
_____	15740-4	16.85	+ 65.29
_____	15740-5	16.32	+ 64.72
_____	15740-6	16.16	+ 65.08
	Narco CLC-60A R-Nav Instl.		
_____	Per Piper CA-23-3-012	5.9	+ 42.8
X	Collins VHF 251 Comm (dual, 2)	6.8	+59
X	Collins VIR 351 Nav (dual, 2)	3.4	+59
X	Collins AMP 350 Audio/Marker Panel	1.8	+62
X	Collins 351 Indicator (dual, 2)	3.0	+62.6
X	Collins GLS 350 Glideslope Receiver	2.0	+26.5
X	Collins PWC 150 Power Converter	1.5	+22.5
X	Collins PWC 150 Power Converter	1.5	+33.5
X	Telex Hand Mic	.5	+75
X	Shure Hand Mic	.75	+75
X	Antenna Development AD-9 Triplexer	.3	+53
X	Dorne and Margolin DMC 70-1 Comm Antenna	.8	+149
X	Dorne and Margolin DMC 70-1 Comm Antenna	.8	+200

(All of the above installed 8/4/75 by New Haven Airways, Inc.)

AIRCRAFT WEIGHT & BALANCE

Aircraft Registration	**OY-RPO**
Aircraft type:	**Piper PA 23-250**
Aircraft serial number:	**27-7554144**
Location	**EKRK**
Weighing date:	**29-04-2009**
Datum:	**80 " (203,2 cm) ahead of wing leading edge outboard of tapered sections**

	WEIGHT	ARM	MOMENT
NOSE WHEEL	417,5	62,2	25969
LEFT WHEEL	728,5	290,8	211848
RIGHT WHEEL	729,0	290,8	211993
TOTAL as WEIGHED	1875,0		449810
Weighed, but not part of Basic Empty Weight:			0
			0
			0
Useable fuel	373,4	287,0	107166
Not Weighed, but part of Basic Empty Weight:	0,0	0,0	0
BASIC EMPTY WEIGHT Kg.	**1501,6**	**228,2**	**342644**
BASIC EMPTY WEIGHT LBS.	*3310,5*	*89,8*	*297331*

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Weighed by:
Peter Højgaard