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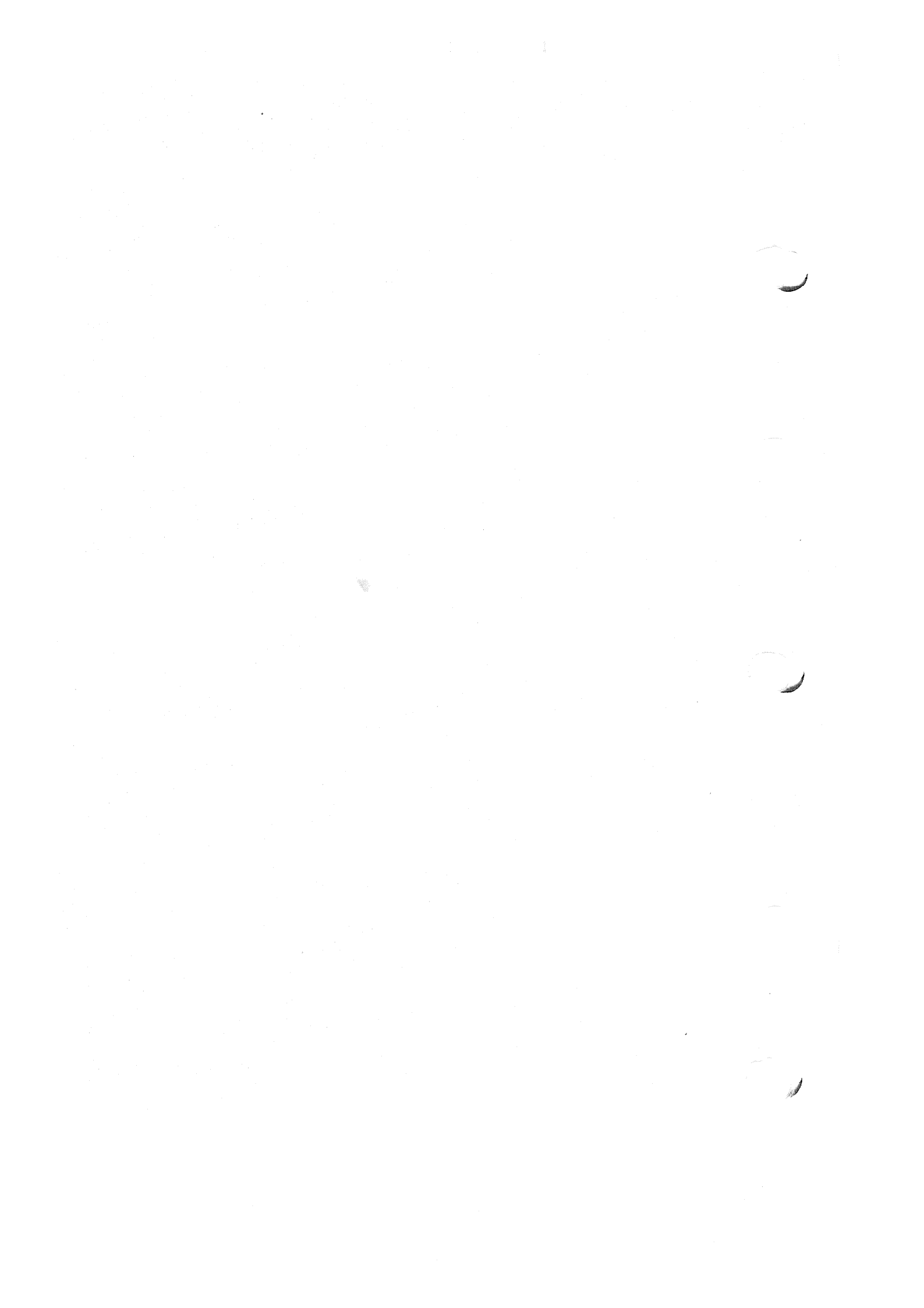
WEIGHT AND BALANCE

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**Equipment List (Form 240 0017) ENCLOSED WITH THIS HANDBOOK

*For 1982 and preceding models only.

**For 1983 and subsequent models only.



**SECTION 6
WEIGHT AND BALANCE**

6.1 GENERAL

In order to achieve the performance and flying characteristics which are designed into the airplane, it must be flown with the weight and center of gravity (C.G.) position within the approved operating range (envelope). Although the airplane offers flexibility of loading it cannot be flown with the maximum number of adult passengers, full fuel tanks and maximum baggage. With the flexibility comes responsibility. The pilot must insure that the airplane is loaded within the loading envelope before a takeoff.

Misloading carries consequences for any aircraft. An overloaded airplane will not take off, climb or cruise as well as a properly loaded one. The heavier the airplane is loaded, the less climb performance it will have.

Center of gravity is a determining factor in flight characteristics. If the C.G. is too far forward in any airplane, it may be difficult to rotate for takeoff or landing. If the C.G. is too far aft, the airplane may rotate prematurely on takeoff or tend to pitch up during climb. Longitudinal stability will be reduced. This can lead to inadvertent stalls and even spins; and spin recovery becomes more difficult as the center of gravity moves aft of the approved limit.

A properly loaded airplane, however, will perform as intended. Before the airplane is licensed, it is weighed, and a basic empty weight and C.G. location is computed (basic empty weight consists of the standard empty weight of the airplane plus the optional equipment). Using the basic empty weight and C.G. location, the pilot can easily determine the weight and C.G. position for the loaded airplane by computing the total weight and moment and then determining whether they are within the approved envelope.

The basic empty weight and C.G. location are recorded in the Weight and Balance Data Form (Figure 6-5) and the Weight and Balance Record (Figure 6-7). The current values should always be used. Whenever new equipment is added or any modification work is done, the mechanic responsible for the work is required to compute a new basic empty weight and C.G. position and to write these in the Aircraft Log Book and the Weight and Balance Record. The owner should make sure that it is done.

A weight and balance calculation is necessary in determining how much fuel or baggage can be boarded so as to keep the C.G. within allowable limits. Check calculations prior to adding fuel to insure against improper loading.

The following pages are forms used in weighing an airplane in production and in computing basic empty weight, C.G. position, and useful load. Note that the useful load includes usable fuel, baggage, cargo and passengers. Following this is the method for computing takeoff weight and C.G.

6.3 AIRPLANE WEIGHING PROCEDURES

At the time of licensing, Piper Aircraft Corporation provides each airplane with the basic empty weight and center of gravity location. This data is supplied by Figure 6-5.

The removal or addition of equipment or airplane modifications can affect the basic empty weight and center of gravity. The following is a weighing procedure to determine this basic empty weight and center of gravity location:

(a) Preparation

- (1) Be certain that all items checked in the airplane equipment list are installed in the proper location in the airplane.
- (2) Remove excessive dirt, grease, moisture, foreign items such as rags and tools from the airplane before weighing.
- (3) Defuel airplane. Then open all fuel drains until all remaining fuel is drained. Operate each engine until all undrainable fuel is used and engine stops. Then add the unusable fuel (5.0 gallons total, 2.5 gallons each wing).

- (4) Fill with oil to full capacity.
- (5) Place pilot and copilot seats in fourth (4th) notch, aft of forward position. Put flaps in the fully retracted position and all control surfaces in the neutral position. Tow bar should be in the proper location and all entrance and baggage doors closed.
- (6) Weigh the airplane inside a closed building to prevent errors in scale readings due to wind.

(b) Leveling

- (1) With airplane on scales, block main gear oleo pistons in the fully extended position.
- (2) Level airplane (refer to Figure 6-3) deflating nose wheel tire, to center bubble on level.

(c) Weighing - Airplane Basic Empty Weight

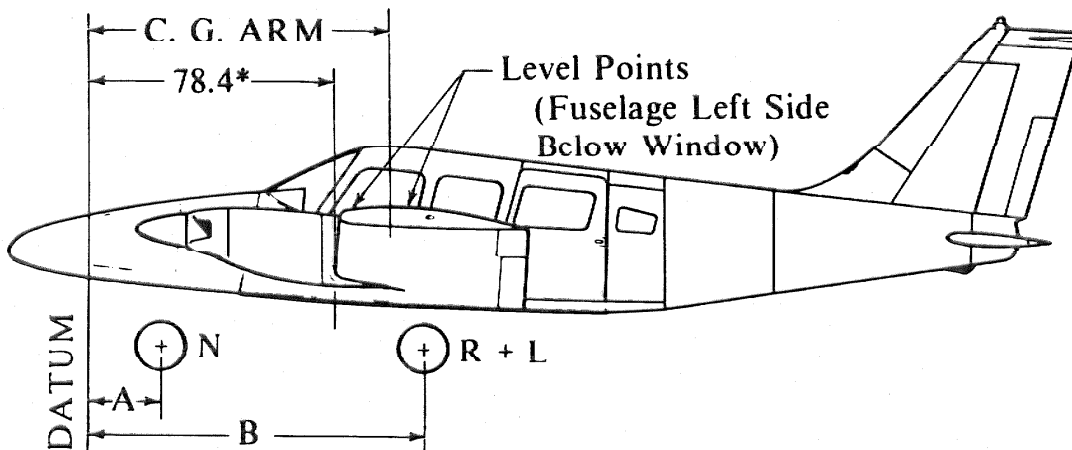
- (1) With the airplane level and the brakes released, record the weight shown on each scale. Deduct the tare, if any, from each reading.

Scale Position and Symbol	Scale Reading	Tare	Net Weight
Nose Wheel	(N)		
Right Main Wheel	(R)		
Left Main Wheel	(L)		
Basic Empty Weight, as Weighed	(T)		

WEIGHING FORM
Figure 6-1

(d) Basic Empty Weight Center of Gravity

- (1) The following geometry applies to the PA-34-220T airplane when it is level. Refer to Leveling paragraph 6.3 (b).



A = 25.3
B = 109.8

*The datum is 78.4 inches ahead of the wing leading edge at the inboard edge of the inboard fuel tank.

LEVELING DIAGRAM

Figure 6-3

- (2) The basic empty weight center of gravity (as weighed including optional equipment, full oil and unusable fuel) can be determined by the following formula:

$$\text{C.G. Arm} = \frac{N (A) + (R + L) (B)}{T} \quad \text{inches}$$

Where: $T = N + R + L$

6.5 WEIGHT AND BALANCE DATA AND RECORD

The Basic Empty Weight, Center of Gravity Location and Useful Load listed in Figure 6-5 are for the airplane as delivered from the factory. These figures apply only to the specific airplane serial number and registration number shown.

The basic empty weight of the airplane as delivered from the factory has been entered in the Weight and Balance Record (Figure 6-7). This form is provided to present the current status of the airplane basic empty weight and a complete history of previous modifications. Any change to the permanently installed equipment or modification which affects weight or moment must be entered in the Weight and Balance Record.

**SECTION 6
WEIGHT AND BALANCE**

**PIPER AIRCRAFT CORPORATION
PA-34-220T, SENECA III**

Übertrag aus Flight-Manual Report Nr. VB-1110
MODEL PA-34-220T SENECA III

Airplane Serial Number 34-8133066

Registration Number N 8372B OE-FEE

Date 3-24-81

AIRPLANE BASIC EMPTY WEIGHT

Item	C.G. Arm		
	Weight x (Lbs.)	(Inches Aft of Datum)	= Moment (In-Lbs.)
Standard Empty Weight*	XXXXXX Actual 2855.5	86.1	245776
Optional Equipment	359.5	100.0	35962
Basic Empty Weight	3215.0	87.6	281738

*The standard empty weight includes full oil capacity and 5.0 gallons of unusable fuel.

AIRPLANE USEFUL LOAD - NORMAL CATEGORY OPERATION

(Gross Weight) - (Basic Empty Weight) = Useful Load

(4407 lbs.) - (3215.0 lbs.) = 1192.0 lbs.

THIS BASIC EMPTY WEIGHT, C.G. AND USEFUL LOAD ARE FOR THE AIRPLANE AS DELIVERED FROM THE FACTORY. REFER TO THE APPROPRIATE AIRCRAFT RECORD WHEN ALTERATIONS HAVE BEEN MADE.

**WEIGHT AND BALANCE DATA FORM
Figure 6-5**

PA-34-220T		Serial Number	34-8133066		Registration Number	OE-FEE		Page Number	
Date	Item No.	Description of Article or Modification	Added (+)	Removed (-)	Weight Change			Running Basic Empty Weight	
					Wt. (Lb.)	Arm (In.)	Moment 100	Wt. (Lb.)	Moment 100
3/24	81							3215.0	281738
6.11.81	1	OPTIONAL EQUIPMENT	-		359.5	100.0	35962		
6.11.81	2	NEW OPT. EQUIPMENT	+		396.5	96.0	38064	3252.0	283848
10.6.95	3	GPS 100-inst, ARS w/o 119,916	+		3.4	68.26	2.3207	3255.4	284074
22.11.90	/	/	/		/	/	/	3255.4	284074
28.10.98	4	GPS 155 XL inst, ARS Uien c/o 985562	+					3259.09	28439482
18.12.98	/	As Weighed (weather radar removed)	/		/	/	/	3242.43	28088363

WEIGHT AND BALANCE RECORD

Figure 6-7

**SECTION 6
WEIGHT AND BALANCE**

**PIPER AIRCRAFT CORPORATION
PA-34-220T, SENECA III**

PA-34-220T	Serial Number	Description of Article or Modification	Added (+) Removed (-)	Registration Number			Page Number	
				Wt. (Lb.)	Arm (In.)	Moment 100	Running Basic Empty Weight	Moment 100

WEIGHT AND BALANCE RECORD (cont)
Figure 6-7 (cont)

6.7 GENERAL LOADING RECOMMENDATIONS

The following general loading recommendation is intended only as a guide. The charts, graphs, instructions and plotter should be checked to assure the airplane is within the allowable weight vs. center of gravity envelope.

- (a) **Pilot Only**
Load rear baggage compartment to capacity first. Without aft baggage, fuel load may be limited by forward envelope for some combinations of optional equipment.
- (b) **2 Occupants - Pilot and Passenger in Front**
Load rear baggage compartment to capacity first. Without aft baggage, fuel load may be limited by forward envelope for some combinations of optional equipment.
- (c) **3 Occupants - 2 in front, 1 in middle**
Load rear baggage compartment to capacity first. Baggage in nose may be limited by forward envelope. Without aft baggage, fuel may be limited by forward envelope for some combinations of optional equipment.
- (d) **4 Occupants - 2 in front, 2 in middle**
Load rear baggage compartment to capacity first. Baggage in nose may be limited by forward envelope. Without aft baggage, fuel may be limited by forward envelope for some combinations of optional equipment.
- (e) **5 Occupants - 2 in front, 2 in middle, 1 in rear**
Investigation is required to determine optimum location for baggage.
- (f) **5 Occupants - 1 in front, 2 in middle, 2 in rear**
Load forward baggage to capacity first. Rear baggage and/or fuel load may be limited by aft envelope.
- (g) **6 Occupants - 2 in front, 2 in middle, 2 in rear**
With six occupants fuel and/or baggage may be limited by envelope load forward baggage compartment to capacity first.

- (h) 7 Occupants - 2 in front, 3 in middle, 2 in rear
With seven occupants fuel and/or baggage may be limited by envelope.

For all airplane configurations, it is the responsibility of the pilot in command to make sure that the airplane always remains within the allowable weight vs. center of gravity envelope while in flight.

6.9 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.

NOTES

Actual fuel allowance for start-up, taxi and run-up (23 lbs. max.) should be determined based on local operating condition.

Moment due to gear retraction does not significantly affect C.G. location.

**PIPER AIRCRAFT CORPORATION
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**SECTION 6
WEIGHT AND BALANCE**

	Weight (Lbs.)	Arm Aft Datum (Inches)	Moment (In-Lbs)
Basic Empty Weight	3212	88.5	284262
Pilot and Front Passenger	340.00	85.5	29070
Passengers (Center Seats) (Forward Facing)		118.1	
Passengers (Center Seats) (Aft Facing) (Optional)		119.1	
Passengers (Rear Seats)	340.0	157.6	53585
Passenger (Jump Seat) (Optional)		118.1	
Baggage (Forward) (100 Lbs. Max.)	35	22.5	788
Baggage (Aft) (100 Lbs. Max.)		178.7	
Fuel (93 Gal. Max.) - Std. (123 Gal. Max.) - Opt.	480	93.6	44928
Takeoff Weight (4407 Lbs. Max.) (1999 Kg.)	4407	93.6	412633

The center of gravity (C.G.) of this sample loading problem is at 93.6 inches aft of the datum line. Locate this point (93.6) 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.

Takeoff Weight (4407 Lbs. Max.) (1999 Kg.)	4407	93.6	412633
Minus Estimated Fuel Burnoff	-360	93.6	-33696
Landing Weight (4047 Lbs. Max.) (1999 Kg.)	4047	93.6	378937

Locate the center of gravity for the landing weight on the C.G. range and weight graph. If this point falls within the weight C.G. envelope, the loading may be assumed acceptable for landing.

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

**SAMPLE LOADING PROBLEM
Figure 6-9**

**ISSUED: FEBRUARY 20, 1981
REVISED: OCTOBER 31, 1986**

**REPORT: VB-1150
6-11**

**SECTION 6
WEIGHT AND BALANCE**

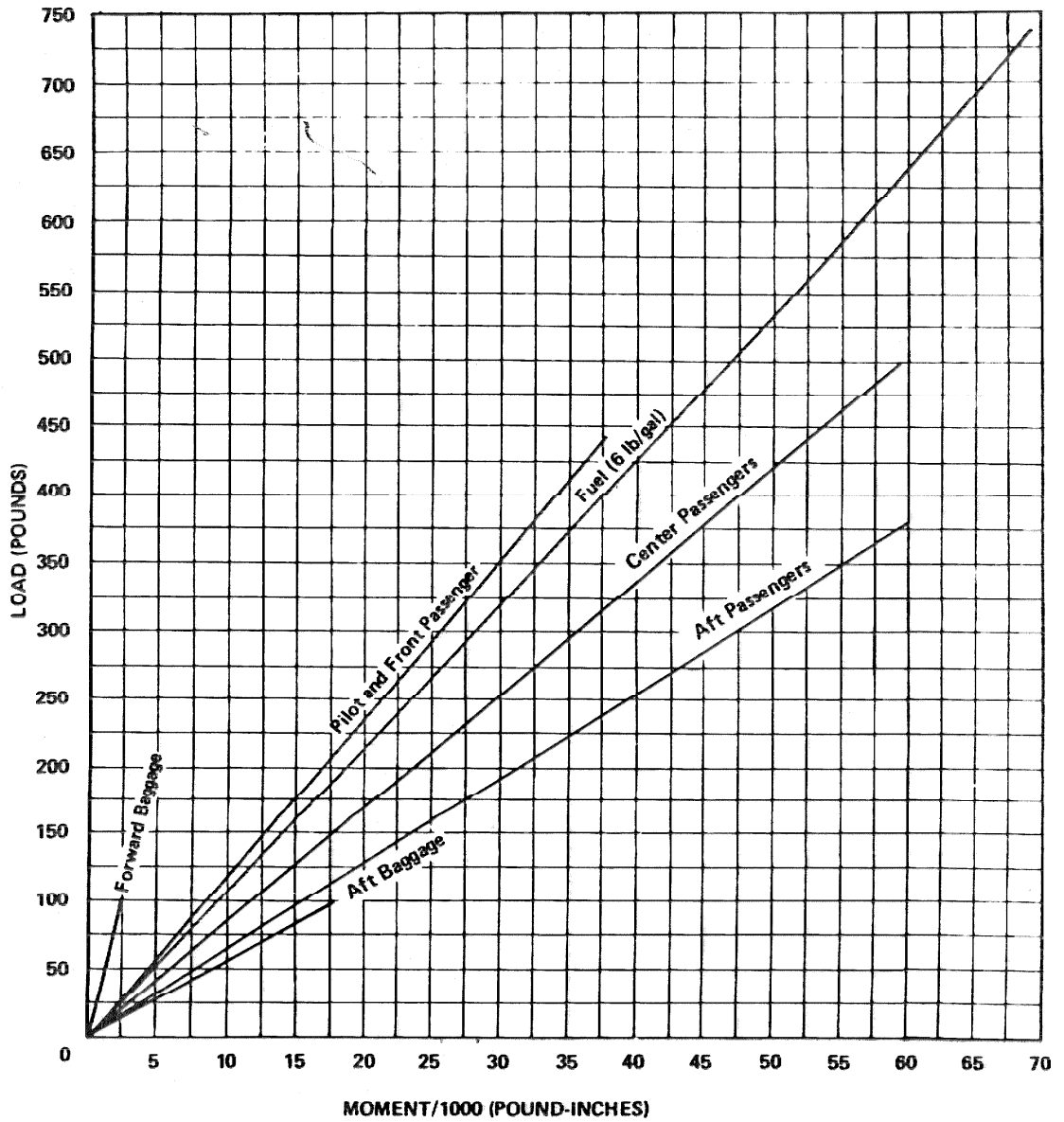
**PIPER AIRCRAFT CORPORATION
PA-34-220T, SENECA III**

	Weight (Lbs.)	Arm Aft Datum (Inches)	Moment (In-Lbs)
Basic Empty Weight			
Pilot and Front Passenger		85.5	
Passengers (Center Seats) (Forward Facing)		118.1	
Passengers (Center Seats) (Aft Facing) (Optional)		119.1	
Passengers (Rear Seats)		157.6	
Passenger (Jump Seat) (Optional)		118.1	
Baggage (Forward) (100 Lbs. Max.)		22.5	
Baggage (Aft) (100 Lbs. Max.)		178.7	
Fuel (93 Gal. Max.) - Std. (123 Gal. Max.) - Opt.		93.6	
Takeoff Weight (4407 Lbs. Max.) (1999 Kg.)			
The center of gravity (C.G.) for the takeoff weight of the actual loading problem is at inches aft of the datum line. Locate this point () on the C.G. range and weight graph. If this point falls within the weight - C.G. envelope, this loading meets the weight and balance requirements.			
Takeoff Weight (4407 Lbs. Max.) (1999 Kg.)			
Minus Estimated Fuel Burnoff		93.6	
Landing Weight (4407 Lbs. Max.) (1999 Kg.)			

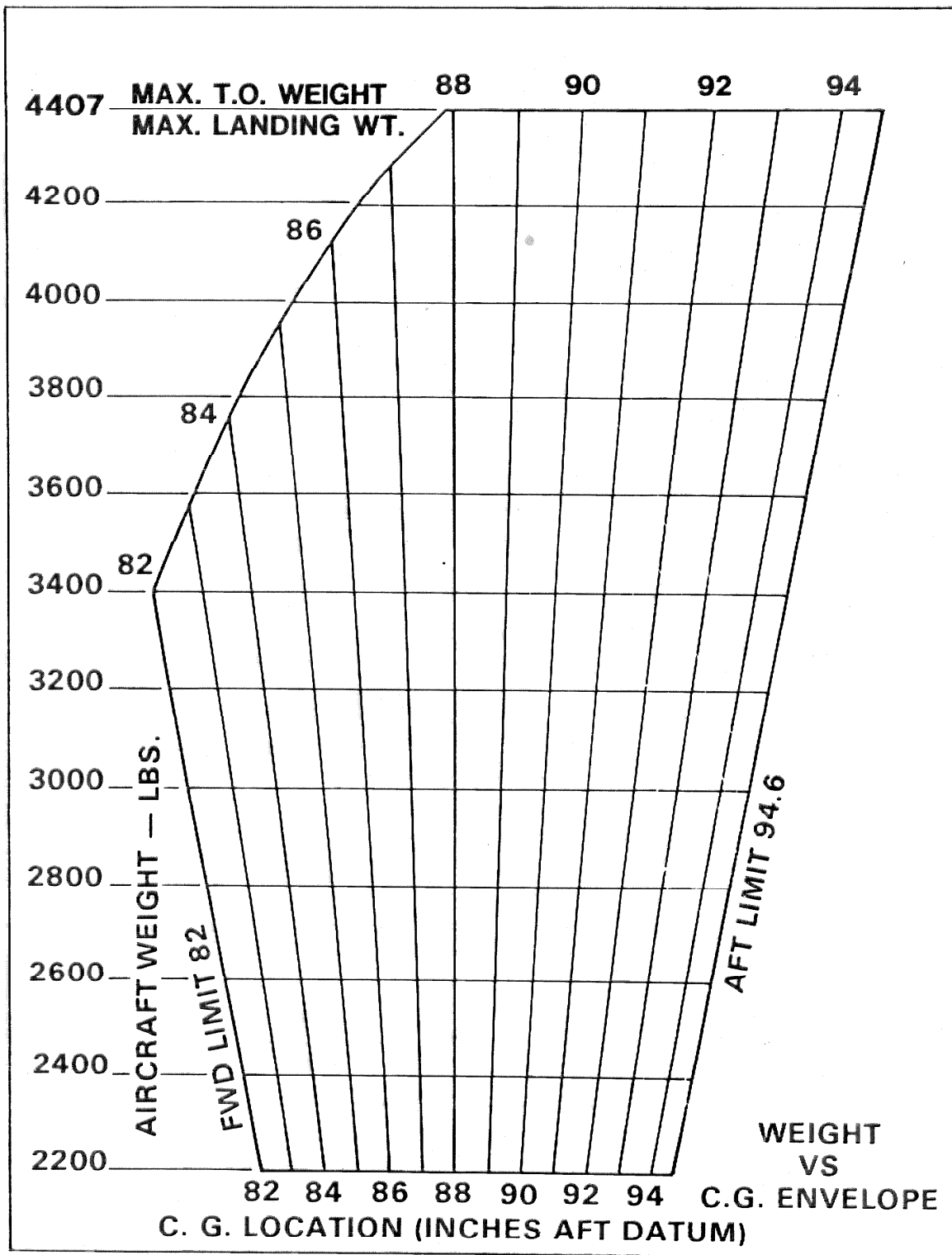
Locate the center of gravity for the landing weight on the C.G. range and weight graph. If this point falls within the weight C.G. envelope, the loading may be assumed acceptable for landing.

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

**WEIGHT AND BALANCE LOADING FORM
Figure 6-11**



LOADING GRAPH
Figure 6-13



Moment change due to retracting Landing Gear = -32 in. - lbs.

C.G. RANGE AND WEIGHT
Figure 6-15

6.11 INSTRUCTIONS FOR USING THE WEIGHT AND BALANCE PLOTTER

This plotter is provided to enable the pilot quickly and conveniently to:

- (a) Determine the total weight and C.G. position.
- (b) Decide how to change his load if his first loading is not within the allowable envelope.

Heat can warp or ruin the plotter if it is left in the sunlight. Replacement plotters may be purchased from Piper dealers and distributors.

The "Basic Empty Weight and Center of Gravity" location is taken from the Weight and Balance Form (Figure 6-5), the Weight and Balance Record (Figure 6-7) or the latest FAA major repair or alteration form.

The plotter enables the user to add weights and corresponding moments graphically. The effect of adding or disposing of useful load can easily be seen. The plotter does not cover the situation where cargo is loaded in locations other than on the seats or in the baggage compartments.

Brief instructions are given on the plotter itself. To use it, first plot a point on the grid to locate the basic weight and C.G. location. This can be put on more or less permanently because it will not change until the airplane is modified. Next, position the zero weight end of one of the six slots over this point. Using a pencil, draw a line along the slot to the weight which will be carried in that location. Then position the zero weight end of the next slot over the end of this line and draw another line representing the weight which will be located in this second position. When all the loads have been drawn in this manner, the final end of the segmented line locates the total load and the C.G. position of the airplane for takeoff. If this point is not within the allowable envelope it will be necessary to remove fuel, baggage, or passengers and/or to rearrange baggage and passengers to get the final point to fall within the envelope.

Fuel burn-off and gear movement do not significantly affect the center of gravity.

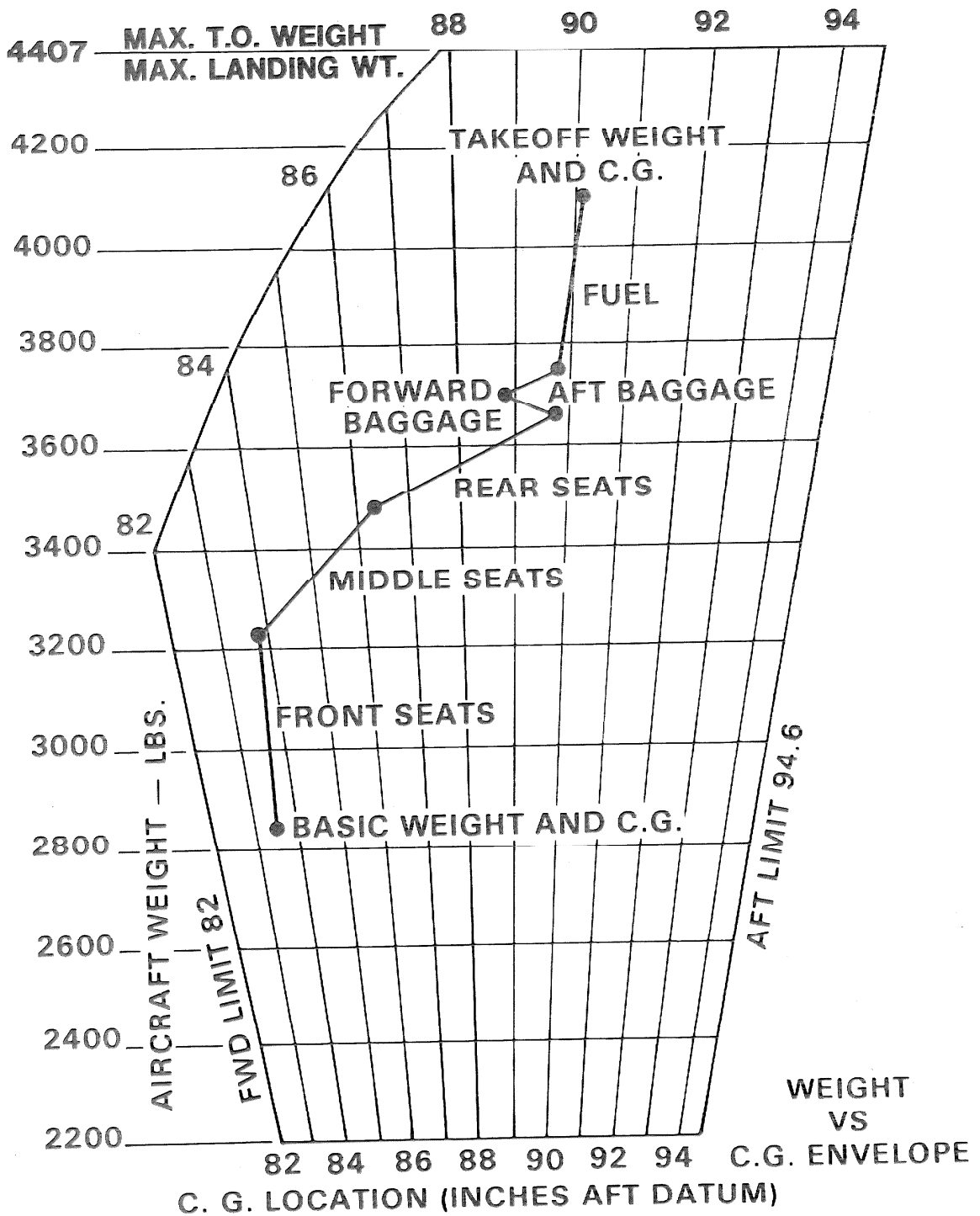
SAMPLE PROBLEM

A sample problem will demonstrate the use of the weight and balance plotter.

Assume a basic weight and C.G. location of 2850 pounds at 83.5 inches respectively. We wish to carry a pilot and 5 passengers. Two men weighing 180 and 200 pounds will occupy the front seats, two women weighing 115 and 135 pounds will occupy the middle seats and two children weighing 80 and 100 pounds will ride in the rear. Two 25 pound suitcases will be tied down in the front baggage compartment and two suitcases weighing 25 pounds and 20 pounds respectively, will be carried in the rear compartment. We wish to carry 60 gallons of fuel. Will we be within the safe envelope?

- (a) Place a dot on the plotter grid at 2850 pounds and 83.5 inches to represent the basic airplane. (See illustration.)
- (b) Slide the slotted plastic into position so that the dot is under the slot for the forward seats, at zero weight.
- (c) Draw a line up the slot to the 380 pounds position ($180 + 200$) and put a dot.
- (d) Move the slotted plastic again to get the zero end of the middle seat slot over this dot.
- (e) Draw a line up this slot to the 250 pound position ($115 + 135$) and place the 3rd dot.
- (f) Continue moving the plastic and plotting points to account for weight in the rear seats ($80 + 100$), forward baggage compartment (50), rear baggage compartment (45), and fuel tanks (360).
- (g) As can be seen from the illustration, the final dot shows the total weight to be 4115 pounds with the C.G. at 90.1. This is well within the envelope.
- (h) There will be room for more fuel.

As fuel is burned off, the weight and C.G. will follow down the fuel line and stay within the envelope for landing.



Moment change due to retracting Landing Gear = -32 in. -lbs.

SAMPLE PROBLEM

Figure 6-17

**SECTION 6
WEIGHT AND BALANCE**

**PIPER AIRCRAFT CORPORATION
PA-34-220T, SENECA III**

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6.13 EQUIPMENT LIST

The following is a list of equipment which may be installed in the PA-34-220T. It consists of those items used for defining the configuration of an airplane when the basic empty weight is established at the time of licensing. Only those standard items which are alternate standard items and those required to be listed by the certifying authority (FAA) are presented. Items marked with an "X" are those items which were installed on the airplane described below as licensed by the manufacturer.

Where the letter "A," "B," or "C" precedes an item; "A" denotes an item which is required equipment that must be installed in the aircraft; "B" denotes an item which is required equipment that must be installed in the aircraft unless replaced by an optional equivalent item; "C" denotes an optional item which replaces a required item of standard equipment. Where no letter precedes an item, that item is not required equipment.

Unless otherwise indicated, the installation certification basis for the equipment included in this list is the aircraft's approved type design.

PIPER AIRCRAFT CORPORATION

PA-34-220T, SENECA III

SERIAL NO _____ REGISTRATION NO. _____ DATE _____

**SECTION 6
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**PIPER AIRCRAFT CORPORATION
PA-34-220T, SENECA III**

Item No.	Propeller and Propeller Accessories	Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
1	B	Two Propellers Hartzell Model BHC-C2YF-2CKUF/ FC8459-8R (Left Wing)	—	55.0	20.3	1117
		Hartzell Model BHC-C2YF-2CLKUF/ FJC8459-8R (Right Wing)	—	55.0	20.3	1117
3	B	Two Hydraulic Governors Cert. Basis - TC P920 Hartzell Governor, Piper Dwg. 37845-10 (Left Wing)	—	3.9	28.1	110
		Hartzell Governor, Piper Dwg. 37845-11 (Right Wing)	—	3.9	28.1	110

(b) Engine and Engine Accessories

Item No.	Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (L.b.-In.)
11	Two Engines Cert. Basis - TC E9CE Teledyne Continental Model TSIO-360-KB Fuel Injected Turbocharged (Left Wing) Teledyne Continental Model LTSIO-360-KB Fuel Injected Turbocharged (Right Wing)		411.0	38.8	15947
			411.0	38.8	15947

**SECTION 6
WEIGHT AND BALANCE**

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Item No.	Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb.-In.)
(c)	Landing Gear and Brakes				
31	B Two Main Wheel Assemblies a. Cleveland Aircraft Products Wheel Assy. No. 40-90 Brake Assy. No. 30-65 Cert. Basis - TSO C26a b. 6.00-6 Type III 8 Ply Rating Tires with Regular Tubes Cert. Basis - TSO C62	—	34.4	109.8	3777
33	A Nose Wheel Assembly a. Cleveland Aircraft Products Wheel Assy. No. 40-76F Cert. Basis - TSO C26a b. McCauley Industrial Corp. Wheel Assy. No. D-30625 Cert. Basis - TSO C26b c. 6.00-6 Type III 6 Ply Rating Tire with Regular Tubes Cert. Basis - TSO C62	—	3.8	25.3	96
		—	5.5	25.3	139
		—	9.0	25.3	228

PIPER AIRCRAFT CORPORATION
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SECTION 6
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Item No.	Electrical Equipment Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
51	Wing Nav Light (Right) (Whelen A675-PG-14) Piper Dwg. 36789-25 Cert. Basis - TSO C30b	—	0.4	105.0	42
53	Wing Nav Light (Left) (Whelen A675-PR-14) Piper Dwg. 36789-25 Cert. Basis - TSO C30b	—	0.4	105.0	42
55	Fin Strobe (Tail) (Whelen A470-D-R-5 [3C3]) Piper Dwg. 36789-25	—	0.3	289.0	87
57	Power Supply (Whelen A412A-HS-DF-14) Piper Dwg. 36789-25	—	1.2	231.0	277

**SECTION 6
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**PIPER AIRCRAFT CORPORATION
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Item No.	Electrical Equipment (cont) Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
59 A	Landing Lights (2) (G.E. P/N 4509) Piper Dwg. 96240-0		1.6	*27.0	43
61 A	Battery 12V 35 A.H. Rebat R35		28.4	-6.2	-176
63 A	Voltage Regulator (2) Piper Dwg. 68804-3		1.0	51.7	52
65 A	Overvoltage Relay (2) (Prestolite "Wico Div." P/N FOC-4002B) Piper PS50034-1		1.0	51.4	51

*With nose gear in extended position.

Item No.	Electrical Equipment (cor.t) Item	Mark if Inst.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
67 A	Battery Relay Piper Dwg. 63880		1.1	-6.2	-7
69 A	Starter Relay (2) (RBM Control P/N 111-111) Piper Dwg. 99130-2		1.0	42.8	43
71 A	Alternator (2) (TCM P/N 641669 Prestolite*)		—	—	—
73 B	Stall Warning Detector (Safe Flight 186-2) Piper Dwg. 78978-6, -7		0.4	80.2	32
75 A	Stall Warning Horn (Safe Flight 35214) Piper Dwg. 78978-6, -7		0.2	64.6	13

*Included in basic engine dry weight.

**SECTION 6
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Item No.	Instruments Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
85 B	Altimeter - Piper PS50008-4 or -5 Cert. Basis - TSO C10b	—	1.1	65.9	73
87 B	Airspeed Indicator - Piper PS50049-585 Cert. Basis - TSO C2b	—	0.6	66.8	40
89 A	Compass - Piper Dwg. 67462-7 Cert. Basis - TSO C7c		0.9	70.0	63
91 A	Manifold Pressure (Dual) Piper Dwg. 37554 Cert. Basis - TSO C45		1.2	66.2	79
93 A	Fuel Flow Gauge (Dual) Piper Dwg. 37341-2 Cert. Basis - TSO C47		1.2	66.2	79

Item No.	Instruments Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
95	A Exhaust Gas Temperature Gauge (Dual) Piper Dwg. 87231-2		0.4	67.2	27
97	A Tachometer (Dual) Piper Dwg. 39648-3 or 39569-2		1.4	65.9	92
99	A Tach Generator Assy (2) Piper Dwg. 87706-2 or 87706-3		1.2	56.8	68
101	A Cluster Assembly (2) Piper Dwg. 96898-4		1.9	67.3	128
103	A Engine Hour Meter Piper Dwg. 37731-0		0.3	62.9	19

**SECTION 6
WEIGHT AND BALANCE**

**PIPER AIRCRAFT CORPORATION
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Item No.	Miscellaneous Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
113 A	Front Seat Belts (2) Piper PS50039-4-2 Cert. Basis - TSO C22f		1.8	86.9	156
115 A	Center Seat Belts (2) Piper PS50039-4-3 Cert. Basis - TSO C22f		1.6	123.0	197
117 A	Aft Seat Belts (2) Piper PS50039-4-4 Cert. Basis - TSO C22f		1.6	163.0	261
119 B	Shoulder Harness - Fixed (Front) (2) Piper PS50039-4-24	_____	1.1	120.1	132

(g) Propeller and Propeller Accessories
(Optional Equipment)

Item No.	Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
125 C	Two Propellers McCauley Model 3AF32C508/ 82NFA-6 (Left Wing) McCauley Model 3AF32C509/ L82NFA-6 (Right Wing) Cert. Basis - P57GL	_____	*35.2	20.3	715
127	Synchrophasers a. Piper Dwg. 36890-2 b. Piper Dwg. 87719-2 (When heated props are not installed.) c. Piper Dwg. 87719-2 (When heated props are installed.)	_____	5.9	61.3	362
		_____	5.5	49.5	272
		_____	5.0	50.0	250
129	Propeller Unfeathering Systems Piper Dwg. 39815	_____	27.6	63.3	1747

*Weight and moment difference between standard and optional equipment.

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(h)	Engine and Engine Accessories (Optional Equipment)	Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
131	Optional Engine Primer System Piper Dwg. 37865-4		—	3.1	38.5	119

Item No.	Landing Gear and Brakes (Optional Equipment)	Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
135	C	Heavy Duty Group No. 1 a. Cleveland Aircraft Products 40-120C Wheel Assy. (2) 30-83 Brake Assy. (2) Cert. Basis - TSO C26a Goodrich 6.00 x 6 Ribbed Type III 8 Ply Rating Tire with Tube (2) Cert. Basis - TSO C62		*2.9	109.8	318
		b. Goodrich 6.00 x 6 Ribbed Type III 8 Ply Rating Tire with Tube Cert. Basis - TSO C62				(Same as standard equipment)

*Weight and moment difference between standard and optional equipment.

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(j)	Electrical Equipment (Optional Equipment)	Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
143	Reading Lights					
	a. (2) Grimes #10-0154-1		_____	0.5	149.3	75
	b. (2) Grimes #10-0154-1		_____	0.5	115.0	58
145	Wing/Tail Nav and White Strobe Light (Right)	Whelen A600-PG-D-M-14	_____	0.5	105.0	53
147	Wing/Tail Nav and White Strobe Light (Left)	Whelen A600-PR-D-M-14	_____	0.5	105.0	53
149	Wing/Tail Nav and Red Strobe Light (Right)	Whelen A600-PG-D-M-R-14	_____	0.5	105.0	53
151	Wing/Tail Nav and Red Strobe Light (Left)	Whelen A600-PR-D-M-R-14	_____	0.5	105.0	53

Item No.	Electrical Equipment (Optional Equipment) (cont) Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
153	Power Supply Whelen A413-A-HDA-DF-14 (Used with wingtip and fin strobe lights.)	_____	*1.8	231.0	416
154	Wing Tip/Recognition Lights, Piper Dwg. 87744	_____	1.0	83.0	83
155	Auxiliary Power Receptacle Piper Dwg. 68815	_____	2.6	-7.8	-20
157	External Power Cable Piper Dwg. 62355-2	_____	4.6	33.0	152
159	Lighter #200462, 12 Volt Universal	_____	0.2	67.9	14

*Weight and moment difference between standard and optional equipment.

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Item No.	(k) Instruments (Optional Equipment)	Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
171	Vacuum System Installation a. Two Vacuum Pumps Piper Dwg. 79399-0 & -2 b. Two Vacuum Pumps Piper Dwg. 36535-2 (Edo-Aire P/N IUI28A)		_____	2.2	67.3	148
173	Attitude Gyro, Piper Dwg. 99002-2, -3, -4 or -8 Cert. Basis - TSO C4c		_____	4.4	54.3	239
			_____	2.2	64.4	142

(k)	Instruments (Optional Equipment) (cont)	Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
175	Directional Gyro, Piper Dwg. 99003-2, -3, -4 or -7 Cert. Basis - TSO C5c	_____	2.6	64.7	168	
177	Horizontal Situation Indicator (HSI) (Mitchell P/N NSD-360A) Cert. Basis - TSO C6c, C9c, C52a	_____	4.9	63.9	313	
178	Horizontal Situation Indicator (HSI) (Mitchell P/N NSD-360A-Slaved) Cert. Basis - TSO C6c, C9c, C52a	_____	7.7	116.6	898	
179 C	Tru-Speed Indicator Piper PS50049-58T Cert. Basis - TSO C2b	_____	(Same as standard equipment)			

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Item No.	Instruments (Optional Equipment) (cont)	Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
181 C	Encoding Altimeter Piper PS50008-6 or -7 Cert. Basis - TSO C10b, C88		—	*0.9	65.9	59
183	Altitude Digitizer (United Instruments P/N 5125-P3) Cert. Basis - TSO C88		—	1.0	56.2	56
185	Narco AR-500 Altitude Encoder Cert. Basis - TSO C88		—	1.0	57.5	58
187	Vertical Speed a. Piper Dwg. 99010-2, -4 or -5 b. Piper Dwg. 99010-3 Cert. Basis - TSO C8b		— — —	1.0 .5	65.9 67.2	66 34

*Weight and moment difference between standard and optional equipment.

(k)	Instruments (Optional Equipment) (cont)	Item	Mark if Ins'l.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-in.)
189	Turn and Slip Indicator Piper PS50030-2 or -3 Cert. Basis - TSO C3b		—	2.6	64.7	168
191	MK 10 Radar Altimeter Piper Dwg. 37693-2		—	5.4	181.3	979
193	King KRA-10 Radio Altimeter		—	4.3	202.0	869
195	Clock		—	0.4	67.4	27
197	Digital Clock Piper Dwg. 37754-4		—	0.3	76.6	23
199	Air Temperature Gauge Piper Dwg. 79316		—	.2	77.6	16

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(k)	Instruments (Optional Equipment) (cont)	Item No.	Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb.-In.)
Copilot's Advanced Instrumentation:							
201	Attitude Gyro, Piper Dwg. 99002-2, -3, -4 or -8 Cert. Basis - TSO C4c			—	2.2	64.4	142
203	Directional Gyro, Piper Dwg. 99003-2-3, -4 or -7 Cert. Basis - TSO C5c			—	2.6	64.7	168
205 C	Tru-Speed Indicator Piper PS50049-58T Cert. Basis - TSO C2b			—	0.6	66.8	40

Item No.	(k) Instruments (Optional Equipment) (cont)	Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb.-In.)
207	Vertical Speed a. Piper Dwg. 99010-2, -4 or -5 b. Piper Dwg. 99010-3 Cert. Basis - TSO C8b		— —	1.0 0.5	65.9 67.2	66 34
209	Altimeter, Piper PS50008-4 or -5 Cert. Basis - TSO C10b		—	1.0	65.9	66
211	Turn and Slip Indicator Piper PS50030-2 or -3 Cert. Basis - TSO C3b		—	2.6	64.7	168
213	Clock		—	0.4	67.4	27

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(1) Item No.	Autopilots (Optional Equipment) Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb.-In.)
217	King KFC-200 Flight Control System, KI-256 Flight Director and 3" Gyros Cert. Basis - STC SA1147CE	_____	49.4	145.0	7163
219	King KFC-200 Flight Control System, KG-258 Attitude Horizon Indicator and 3" Gyros Cert. Basis - STC SA1147CE	_____	49.4	145.0	7163
221	Autopilot Century 21 Piper Dwg. 39796 Cert. Basis - STC SA3384SW-D	_____	12.	76.4	917
223	Autopilot Century 41 a. Horizon Ind. 52D267 b. Steering Horizon 52D177 c. Steering Horizon 52C77 d. Directional Gyro 52D254 Piper Dwg. 39795 Cert. Basis - STC SA3371SW-D	_____ _____ _____ _____ _____	24.2 2.8 3.3 3.7 3.3	146.1 64.3 64.1 63.8 64.4	3536 180 212 236 213

Item No.	Radio Equipment (Optional Equipment) Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb.-In.)
225	Bendix 2011 Dual Comm/Nav Cert. Basis - TSO C34c, C35d, C36c, C37b, C40a	—	16.8	66.8	1122
227	Bendix IU 2014B Indicator a. Single b. Dual Cert. Basis - TSO C34c, C36c, C40a, C66c	— — —	1.9 3.8	63.4 63.4	120 241
229	Bendix TR-2060 Transponder Cert. Basis - TSO C74c	—	*2.8	63.6	178

*Weight includes antenna and cable.

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(m) Item No.	Radio Equipment (Optional Equipment) (cont) Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
231	Bendix - ADF 2070 w 2073 Antenna a. Single b. Dual Cert. Basis - TSO C41c, C2a	— —	*6.0 **10.6	118.1 125.0	709 1325
233	Bendix DME 2030 Cert. Basis - TSO C66a	—	*10.3	22.9	236
235	Bendix NCP-2040 Nav Programmer	—	5.4	64.2	347
237	Bendix IU 2016A Interface Cert. Basis - TS DOT-160, C2a	—	4.9	27.2	133
239	Bendix Blower 14 VDC	—	1.1	58.6	64

* Weight includes antenna and cable.

** Weight includes dual antenna and cable.

Item No.	Radio Equipment (Optional Equipment) (cont) Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (L.b-In.)
241	Collins VHF-250 or VHF-251 Comm Transceiver	_____	4.0	61.9	248
	a. Single	_____	8.1	61.9	501
	b. Dual Cert. Basis - TSO C37b, C38b	_____			
243	Collins VIR-350 or VIR-351 Nav Receiver	_____	3.9	62.4	243
	a. Single	_____	7.9	62.4	493
	b. Dual Cert. Basis - TSO C40a, C36c	_____			
245	Collins IND-350 () VOR/LOC Indicator	_____	1.0	65.2	65
	a. Single	_____	2.0	65.2	130
	b. Dual Cert. Basis - TSO C40a, C36c	_____			

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Item No.	Radio Equipment (Optional Equipment) (cont) Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
247	Collins IND-351 () VOR/LOC/GS Indicator Cert. Basis - TSO C40a, C36c	—	1.3	65.2	85
249	Collins GLS-350 Glide Slope Receiver Cert. Basis - TSO C34c	—	*3.6	86.8	312
251	Collins ANS 351 R-NAV Cert. Basis - TSO C36c	—	3.8	63.2	240
253	Collins DCE 400 Distance Computing Equipment Cert. Basis - TSO C40a	—	2.1	63.9	134
255	Collins DME-451 with Ind. 450/451 Cert. Basis - TSO C66a	—	8.8	26.3	231

*Weight includes antenna and cable.

(m) Item No.	Radio Equipment (Optional Equipment) (cont) Item	Mark if Insl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
257	Collins RCR-650 ADF Receiver and Antenna and IND-650 Indicator Cert. Basis - TSO C41c	—	7.0	122.1	855
259	Collins RCR-650A ADF Receiver and Antennas and IND-650A Indicator Cert. Basis - TSO C41c	—	7.7	116.7	899
261	Collins AMR-350 Audio/ Marker Panel Cert. Basis -TSO C35d, C50b	—	*3.3	123.9	409
263	Collins TDR-950 Transponder Cert. Basis - TSO C74c	—	*2.8	62.5	175

*Weight includes antenna and cable.

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Item No.	Radio Equipment (Optional Equipment) (cont)	Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
264	King KX 155 VHF Comm/Nav Receiver					
	a. With Audio Amplifier			5.0	63.1	316
	b. Glide Slope Receiver			5.3	63.1	334
	c. Without Glide Slope Receiver			4.8	63.1	303
	Cert. Basis - TSO C37b, C38b, C40a, C36a					
265	King KX 165 VHF Comm/Nav Receiver					
	a. With Glide Slope Receiver			5.7	63.0	359
	b. Without Glide Slope Receiver			5.1	63.1	322
	Cert. Basis - TSO C37b, C38b, C40a, C36a					
266	King KX 170 () (VHF Comm/Nav)					
	a. Transceiver, Single			7.5	61.6	462
	b. Transceiver, Dual			15.0	61.6	924
267	King KR-21 Marker Beacon			*2.2	128.3	282

*Weight includes antenna and cable.

Item No.	Radio Equipment (Optional Equipment) (cont) Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
269	King KNS-80 R-Nav a. King KA-20 14 VDC Blower	—	7.0 0.9	62.3 52.4	436 47
271	King KNS-81 Area Nav Includes KN-63 DME, KDI-572 Indicator and KA-60 Antenna and Cable, Piper Dwg. 39810 Cert. Basis - TSO C34c, C36c, C40a	—	10.4	52.9	550
272	King KI 202 VOR/LOC Indicator Cert. Basis - TSO C40a, C36c	—	1.3	65.9	86
273	King KI-206 R-Nav Indicator Cert. Basis - TSO C34c, C36c, C40a	—	1.3	61.6	80
275	King KN-62A DME	—	3.3	63.3	209

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(m) Item No.	Radio Equipment (Optional Equipment) (cont) Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb.-In.)
277	King KT 76 () Transponder Cert. Basis - TSO C746	_____	*3.1	63.1	196
279	King KMA-24 Audio Control Panel	_____	1.7	65.3	111
281	King KN-53 Nav Receiver with GS Receiver a. Single b. Dual Cert. Basis - TSO C40a, C34c, C36c	_____ _____ _____	3.2 6.4	63.0 63.0	202 403
283	King KN-53 Nav Receiver Cert. Basis - TSO C40a, C34c, C36c	_____	2.8	63.0	176
284	King KR-86 with KA-42B Loop and Sense Antenna	_____	7.6	104.3	793

*Weight includes antenna and cable.

Item No.	Radio Equipment (Optional Equipment) (cont) Item	Mark if Insl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb.-In.)
285	King KR-87 ADF Receiver and Ind.	_____			
	a. Single	_____	4.0	64.0	256
	b. Dual	_____	7.4	63.7	471
	c. KA 44B Antenna	_____			
	(1) Single	_____	*3.6	179.1	645
	(2) Dual	_____	*7.2	194.5	1400
	d. Audio Amp. without KMA 24 Cert. Basis - TSO C41c	_____	0.8	54.1	43
287	King KX 175 () VHF a. Transceiver	_____			
	b. King KN 72 VOR/LOC Converter	_____	7.5	61.6	462
	c. King KN 75 Glide Slope Receiver	_____	1.3	12.0	16
	d. King KI-204 VOR/ILS Indicator	_____	1.6	12.7	20
	Cert. Basis - TSO C36c, C37b, C38b, C40a	_____	2.8	65.5	183

*Weight includes antenna and cable.

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Item No.	(m) Radio Equipment (Optional Equipment) (cont)	Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
289	King KX 175 () VHF Transceiver (2nd) a. King KN 72 VOR/LOC Converter b. King KI-203 VOR/LOC Indicator c. King KI-203 VOR/LOC Indicator Cert. Basis - TSO C36c, C37b, C38b, C40a	King KX 175 () VHF Transceiver (2nd)	—	7.5	61.6	462
		King KN 72 VOR/LOC Converter	—	1.3	12.0	16
		King KI-203 VOR/LOC Indicator	—	1.6	65.5	105
291	King KY-196E Transceiver W/RB 125 Power Booster a. Single b. Dual Cert. Basis - TSO C37b, C38b	King KY-196E Transceiver W/RB 125 Power Booster	—	5.7	80.7	460
		a. Single	—	11.4	80.7	920
293	King KY-197 Transceiver a. Single b. Dual Cert. Basis - TSO C37b, C38b	King KY-197 Transceiver	—	4.2	63.7	268
		a. Single	—	8.4	63.7	535
		b. Dual	—			

Item No.	Radio Equipment (Optional Equipment) (cont) Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb.-In.)
295	King KI-208 VOR/LOC Indicator Cert. Basis - TSO C34c, C36c, C40a	—	1.0	64.9	65
297	King KI-209 VOR/LOC/GS Indicator Cert. Basis - TSO C34c, C36c, C40a	—	1.2	64.9	78
299	Antenna and Cable a. Nav Receiving VRP 37 or AV-12PPR b. #1 VHF Comm PS5004C-18 c. #2 VHF Comm PS50040-18	— — —	1.4 1.4 1.5	209.4 146.3 181.1	293 205 272
301	Anti Static Antenna and Cable a. #1 VHF Comm b. #2 VHF Comm c. Single ADF Sense	— — —	1.5 1.6 0.6	162.7 192.5 160.0	244 308 96

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Item No.	(m) Radio Equipment (Optional Equipment) (cont)	Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
302	Marker Beacon Antenna Comant C1 102 Piper Dwg. 39737-6		_____	*1.2	199.0	239
303	Emergency Locator Transmitter (Narco Model ELT-10) a. Antenna and Coax b. Shelf and Access Hole Cert. Basis - TSO C91		_____	3.5	267.2	935
			_____	0.3	255.4	77
			_____	0.5	266.4	133
305	Microphone Telex Acoustics Model 100T/NH a. Single - Piper Dwg. 79036-3 b. Dual - Piper Dwg. 79036-4 Narco Model M700B c. Single - Piper Dwg. 79036-5 d. Dual - Piper Dwg. 79036-6		_____	0.3	70.8	21
			_____	0.6	70.8	42
			_____	0.6	69.9	42
			_____	1.2	69.9	84

*Weight includes antenna coax wire to Marker Beacon Receiver.

(m) Radio Equipment
(Optional Equipment) (cont)

Item No.	Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
307	Boom Microphone - Headset Piper Dwg. 37921-3 or -9 Telex 5 x 5 Mark II (P, N 62629-00) a. Single b. Dual	— — — — —	0.3 0.6	85.5 85.5	26 51
309	Cabin Speaker, Piper Dwg. 99820	—	1.1	97.5	107
311	Headset, Piper Dwg. 68856-10	—	0.5	65.0	33
313	Bendix Radar Piper Dwg. 37916-2 Cert. Basis - TSO C63b	—	19.5	12.4	242

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Item No.	(m) Radio Equipment (Optional Equipment) (cont)	Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
315	Bendix Radar Piper Dwg. 37916-9 or 37916-10 Cert. Basis - TSO C63b		_____	23.5	21.2	498
317	Radio Shelf, Piper Dwg. 69977-2		_____	0.9	229.0	206
319	RCA - WeatherScout II Color Radar, Piper Dwg. 37916-7 Cert. Basis - TSO C63b		_____	25.0	24.3	608
321	RCA - WeatherScout II Monochrome Radar Piper Dwg. 37916-5 Cert. Basis - TSO C63b		_____	15.7	9.2	144

(n)	Miscellaneous (Optional Equipment)	Item No.	Item	Mark if Insti.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
		381	Zinc Chromate Finish	—	6.0	172.0	1032
		383	Stainless Steel Control Cables	—	(Same as standard equipment)		

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Item No.	Miscellaneous (Optional Equipment) (cont) Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
385	Ice Protection System Installation Piper Dwg. 37700				
	a. Windshield Heating Unit Piper Dwg. 37700-12		2.6	59.6	155
	b. Heated Pitot Head Piper Dwg. 39563-4 or -6		0.4	100.0	40
	c. Ice Light Kit Piper Dwg. 87291-3		0.4	72.0	29
	d. Electrothermal Hartzell Propeller Deicing System Piper Dwg. 37700-10		11.6	39.2	455
	e. Electrothermal McCauley Propeller Deicing System Piper Dwg. 37700-11		10.2	28.0	286
	f. Pneumatic Deicing System Including Vacuum Pumps Piper Dwg. 37700-9		34.3	111.9	3838
C	g. Heated Stall Warning Piper Dwg. 87291-2		0.2	79.8	16

(n)	Miscellaneous (Optional Equipment) (cont)	Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb.-in.)
387	Fuel Cells, Piper Dwg. 37077-3 Cert. Basis - TSO C80		—	6.2	93.6	580
389	Air Conditioning Installation		—	53.1	108.6	5767
391	Ground Ventilating Blower Piper Dwg. 79273-5		—	8.1	207.3	1679
393	Super Cabin Sound Proofing Piper Dwg. 78480		—	24.2	107.2	2594

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(n) Item No.	Miscellaneous (Optional Equipment) Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
395	Adjustable Front Seat (Left) Piper Dwg. 79592-0/79592-2	—	*4.6	84.7	390
397	Adjustable Front Seat (Right) Piper Dwg. 79592-1/79592-3	—	*4.6	84.1	387
399	Jump Seat (with seat belts) Piper Dwg. 78108-9	—	9.2	122.3	1125
401	Club Seating (with Headrests) Piper Dwg. 37825-3	—	*13.2	90.4	1193
403	Inboard Armrest - Aft Seats	—	2.6	152.0	395
405	Headrests (2) Front Piper Dwg. 79337-18	—	2.0	99.5	199

*Weight and moment difference between standard and optional equipment.

Item No.	Miscellaneous (Optional Equipment) (cont) Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
407	Headrests (2) Center Piper Dwg. 79337-18	—	2.0	132.1	264
409	Headrests (2) Rear Piper Dwg. 79337-18	—	2.0	171.5	343
411 C	Shoulder Harness - Inertia (Front) (2) Piper PS50039-4-21	—	*0.2	120.1	24
413	Shoulder Harness - Fixed (Center) (2) Piper PS50039-4-22	—	1.1	133.9	147
415	Shoulder Harness - Inertia (Center) (2) Piper PS50039-4-19	—	1.3	133.9	174

*Weight and moment difference between standard and optional equipment.

SECTION 6
WEIGHT AND BALANCE

PIPER AIRCRAFT CORPORATION
PA-34-220T, SENECA III

Item No.	(n) Miscellaneous (Optional Equipment) (cont) Item	Mark if Inst.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
417	Shoulder Harness - Fixed (Rear) (2) Piper PS50039-4-22	—	1.1	181.5	200
419	Shoulder Harness - Inertia (Rear) (2) Piper PS50039-4-19	—	1.3	181.5	236
421	Assist Straps, Piper Dwg. 79455	—	0.3	120.0	36
423	Curtain and Rod Installation Piper Dwg. 39760-3	—	5.2	143.6	747
425	Refreshment Console	—	7.0	118.5	830
427	Executive Writing Table Piper Dwg. 36800-2	—	3.9	**185.6	724
429	Deluxe Carpeting	—	*-3.4	120.0	-408

*Weight and moment difference between standard and optional equipment.

**Stowed position.

PIPER AIRCRAFT CORPORATION
PA-34-220T, SENECA III

SECTION 6
WEIGHT AND BALANCE

(n) Item No.	Miscellaneous (Optional Equipment) (cont) Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (L.b-In.)
431	Luxurious Interior Piper Dwg. 67954-3	—	25.0	120.0	3000
433	Fire Extinguisher Piper Dwg. 87269-2 (Graviner HA1014-01)	—	5.6	62.8	352
435	Tow Bar, Piper Dwg. 96331-0	—	4.4	8.0	35
437	Oxygen System - Scott Aviation MK III (Incl. (1) Mike Mask) a. Piper Dwg. 37684 (Forward Facing Seating Arrangement) Scott 802180-00 b. Piper Dwg. 37825-4 (Club Seating Arrangement) Scott 802180-01	—	41.0	112.9	4629
		—	41.6	112.9	4697

SECTION 6
WEIGHT AND BALANCE

PIPER AIRCRAFT CORPORATION
PA-34-220T, SENECA III

(n) Item No.	Miscellaneous (Optional Equipment) (cont) Item	Mark if Instl.	Weight (Pounds)	Arm (In.) Aft Datum	Moment (Lb-In.)
439	Fixed Oxygen System - Scott Aviation, Ambassador MK III System, Piper Dwg. 36960-3 a. Charged b. Uncharged	_____ _____ _____	45.5 40.2	201.3 200.1	9159 8044
441	Locking Fuel Cap Piper Dwg. 39824-2	_____	*0.1	94.1	9
*Weight and moment difference between standard and optional equipment.					
TOTAL OPTIONAL EQUIPMENT _____					



EXTERIOR FINISH

Base Color _____ Registration No. Color _____
Trim Color _____ Type Finish _____
Accent Color _____