

PIPER AIRCRAFT CORPORATION

LOCK HAVEN, PENNA.

REPORT 582a
PAGE 1
MODEL PA-14

THIS DOCUMENT MUST BE KEPT IN THE AIRPLANE AT ALL TIMES

CAA Approved
December 16, 1948

PIPER AIRCRAFT CORPORATION

LOCK HAVEN, PENNA.

PIPER PA-14
Normal and
Utility Categories

C.A.A. Identification No. _____

AIRPLANE FLIGHT MANUAL

1. Limitations

The following limitations must be observed in the operation of this airplane:

Engine	Lycoming O-235-C1
Engine Limits	Take-Off one (1) minute 2800 RPM (115 HP) Max. except take-off 2600 RPM (108 HP)
Fuel	80 Octane minimum aviation gasoline
Propellers	Fixed Pitch Wood 76" Maximum Diameter 72.5" Minimum Diameter
	Static Limits: Maximum 2480 RPM Minimum 2020 RPM
	Controllable (Sensenich C2FM4).
	74" Maximum Diameter
	72.5" Minimum Diameter
	Blade Angles: High Pitch 14.5° Low Pitch 11.5° Measured at 28.5" Sta.
	Automatic Variable (Aeromatic F-200/0074E).
	74" Maximum Diameter
	72.5" Minimum Diameter
	Blade Angles: High Pitch 21.0° Low Pitch 11.0° Measured at 24" Sta.

Installation and operation of counterweights and flight RPM must be accomplished in accordance with "Kopper's Installation Procedures and Operating Limitations" dated March 10, 1948.

PREPARED.....
CHECKED.....
APPROVED.....

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2. Procedures

All operating procedures are normal.
All performance is given for 1850 pounds weight, with no wind on level, paved runways, slowest turning fixed pitch wood propeller, no flaps, and in still air. "Performance for Kopper's Aeromatic and Sensenich two-position propellers has been demonstrated to equal or exceed that noted herein." In using the following data, allowance for actual conditions must be made.

ITEM	ALT.	OUTSIDE AIR TEMPERATURE					
		0°F	20°F	40°F	60°F	80°F	100°F
<u>Take-Off Distance (in Feet)</u>	Sea						
	Level	1450	1560	1660	1770	1880	2010
Distance required to take-off and climb 50 ft.	3000	2000	2140	2290	2470	2650	2870
Full Throttle	5000	2540	2760	2980	3220	3510	3780
65 MPH T.I.A.S.	7000	3370	3700	4040	4460	4870	5330
<u>Landing Distance (in Feet)</u>	Sea						
	Level	1350	1370	1390	1410	1430	1460
Distance required to land over 50 ft. obstacle and stop.	3000	1420	1430	1460	1480	1510	1530
Approach at 65 MPH T.I.A.S.	5000	1450	1480	1510	1530	1560	1580
	7000	1500	1530	1650	1590	1610	1640
<u>Normal Rate of Climb (Ft. per min.)</u>	Sea						
	Level	595	575	560	540	527	508
Airspeed 73.5 MPH T.I.A.S.	3000	478	460	442	425	410	395
	5000	402	377	365	350	332	318
	7000	324	305	290	273	257	242
Stalling Speeds vs. Angle of Bank	0	10	20	30	40	50	60
Power Off MPH T.I.A.S.	50	50.5	52	53.5	57	62	70.5

PREPARED.....
CHECKED.....
APPROVED.....

EQUIPMENT INSTALLED

ACTUAL WEIGHT AND BALANCE

ARM ABOUT
WING L.E.

MODEL PA-14

ITEM

WT.

Propeller-Wood Fixed Pitch

11

(-62)

Propeller-Sensenich C2FM4
Controllable

+ 17

(-62)

Propeller-Aeromatic
F200/00-74E Constant Speed

+ 14

(-62)

8.00 x 4 Wheels, Goodrich
(Hayes) 841A with tires and
expander tube brakes

31

(+ 1)

6 x 2.00 full swivel steerable
tail wheel (Scott Model 324B)

5

(+200)

Battery, 12 Volt, and Box

25

(+7)

Radio Receiver and Transmitter

15

(-14)

Antenna

Position Lights

3

(+65)

SERIAL NO. 14-

NC

Approved by

Weight and Balance Engineer

PIPER AIRCRAFT CORPORATION

LOCK HAVEN, PENNA.

DATE

EMPTY WEIGHT "As Weighed"

(Including items checked on last page)

Scale Reading

Net

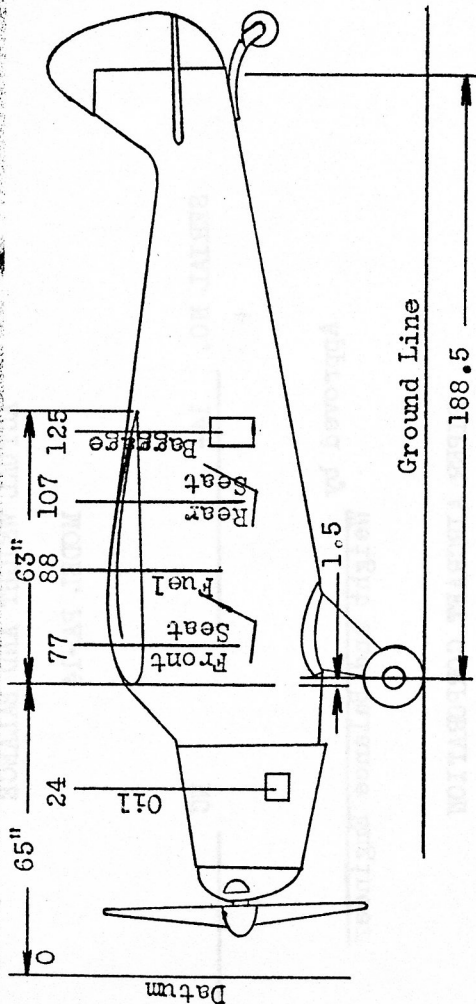
Left Wheel

Right Wheel

Tail Scale

Total

860 599

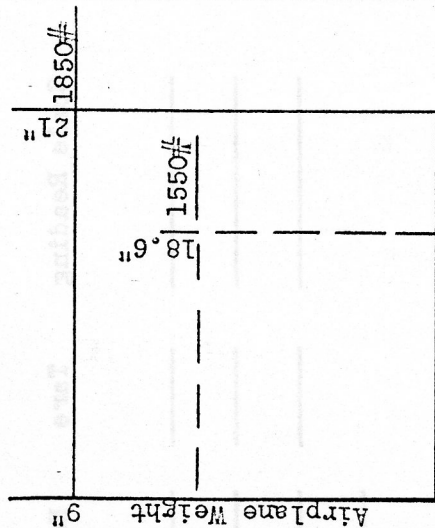


C.G. Empty "As Weighed" is aft of Wheel C.L. $188.5 \times$

Distance from datum to Wheel C.L. $= 65 + 1.5 = 66.5$

C.G. Empty "As Weighed" is aft of datum $= 66.5 +$

Approved C.G. Range Vs Weight



C.G. Range - Inches Aft W.L.E.

Normal Category

Utility Category

Actual C.G. Locations
(Inches aft Wing L.E.)

Utility Category

Most Forward "

Most Rearward "

Normal Category

Most Forward "

Most Rearward "

MOST FORWARD C.G. UTILITY AND NORMAL CATEGORIES				
ITEM	WT.	ARM	MOMENT	
Empty weight "As Weighed"				
Oil (6 qt.)	11	24		264
Fuel (9.0 gal.) Wing	54	88		4752
Pilot (Normal Cat. Critical)	170	77		13090
Total				

MOST REARWARD C.G. UTILITY CATEGORY				
ITEM	WT.	ARM	MOMENT	
Empty weight "As Weighed"				
Oil (6 qt.)	11	24		264
Fuel (35.0 gal.) Wing	210	88		18480
Pilot and Chute (Front)	190	77		14630
Total				

MOST REARWARD C.G. NORMAL CATEGORY				
ITEM	WT.	ARM	MOMENT	
Empty weight "As Weighed"				
Oil (6 qt.)	11	24		264
Fuel (35 gal.) Wing	210	88		18480
Pilot (Front)	170	77		13090
Passengers 2 (Rear)	340	107		36380
Baggage	80	125		10000
Total				