

PIPER AIRCRAFT CORPORATION

LOCK HAVEN, PENNA.

REPORT 834

PAGE PA-18 "150"

MODEL PA-18A "150"

DUPLICATE

PIPER AIRCRAFT CORPORATION

LOCK HAVEN, PENNA.

MODEL PA-18 "150"

MODEL PA-18A "150"

REPORT NO. 834

AIRPLANE FLIGHT MANUAL - PIPER MODEL PA-18 "150"  
AND PA-18A "150" (1750 POUNDS GROSS WEIGHT)

DATE: OCTOBER 1, 1954.

Prepared by:

*C. R. Smith*  
C. R. Smith  
Engineering Dept.

PREPARED.....

CHECKED.....

APPROVED.....

# PIPER AIRCRAFT CORPORATION

LOCK HAVEN, PENNA.

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PA-18"150"  
MODEL PA-18A"150"

PIPER AIRCRAFT CORPORATION

LOCK HAVEN, PENNSYLVANIA

MODEL PA-18"150"

Model PA-18A"150"

REPORT NO. 834

AIRPLANE FLIGHT MANUAL - PIPER MODEL  
PA-18"150" AND PA-18A"150" (1750  
POUNDS GROSS WEIGHT)

DATE: October 1, 1954

REV: August 20, 1976

REV: April 20, 1959

September 17, 1976

October 24, 1963

September 28, 1976

April 9, 1964

December 21, 1976

September 30, 1974

# PIPER AIRCRAFT CORPORATION

LOCK HAVEN, PENNA.

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MODEL PA-18A"150  
PA-18A"150

PIPER AIRCRAFT CORPORATION  
LOCK HAVEN, PENNA.

THIS DOCUMENT MUST BE KEPT IN THE AIRPLANE AT ALL TIMES

C.A.A. Approved  
Approval Basis CAR 3 and 410  
October 1, 1954  
PA-18"150"  
PA-18A"150"  
Normal and Utility Category

F.A.A. Identification No. \_\_\_\_\_

## AIRPLANE FLIGHT MANUAL

### 1. Limitations

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

Engine	Lycoming O-320 Series
Engine Limits	For all operations 2700 RPM
Fuel	80/87 Octane Minimum Aviation Gasoline
Propeller	Sensenich M74DM or 74DM6 Fixed Pitch Metal 74.0" Maximum Diameter 72.5" Minimum Diameter
	Static Limits: Maximum 2450 Minimum 2350 (Not over 2550, not under 2450 when operating as a Glider or Banner Tow.)
Power Instruments	Oil Temperature-Unsafe if indicator exceeds Red Line (245 degrees F) or is below the Red Line (40 degrees F Min.) Yellow Arc: Caution (40 degrees to 120 degrees F). Green Arc: Normal Operating Range (120 degrees F to 245 degrees F). Oil Pressure-Unsafe if indicator exceeds Red Line (100 lbs.) or is below the Red Line (25 lbs. minimum) Yellow Arc: Caution (85 lbs. to 100 lbs.) and (25 lbs. to 60 lbs.) Green Arc: Normal Operating Range (60 lbs. to 85 lbs.) Tachometer-Red Line: Rated Engine Speed Green Arc: 500 RPM to 2700 RPM Normal Operating Range

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## Normal Category

Airspeed Limits (True Ind. Airspeed)	
Maneuvering	96 MPH 83 Knots
Max. Cruising Speed	121 MPH 106 Knots
Never Exceed	153 MPH 133 Knots
Flaps Extended	85 MPH 74 Knots
Flight Load Factors	
Max. Positive	3.8
Max. Negative	(No inverted maneuvers approved)
Airplane Loading	
Max. Wt. (Take-Off and Landing)	1750 Pounds
C.G. Range	Normal Category, Aft Wing Leading Edge (+14.0) to (+20.0) at 1750 pounds (+10.5) to (+20.0) at 1300 pounds or less
	Utility Category (+12.3) to (+19.0) at 1500 pounds (+10.5) to (+19.0) at 1300 pounds or less
	Straight line variation between points given.
Datum	Leading Edge of Wing
Max. Baggage Allowed	50 Pounds

NOTE: It is the responsibility of the airplane owner and the pilot to insure that the airplane is properly loaded (See Weight and Balance).

### Placards:

The following placards must be displayed:

- (a) On the instrument panel in full view of the pilot:
  - (1) "Operate in Normal or Utility Category in compliance with Approved Flight Manual. Airplane marked for Normal Category. Acrobatics (including spins) prohibited in Normal Category."
  - (2) "No Smoking"
- (b) On the baggage compartment:
  - (1) "Capacity - 50 Lbs."

### Maneuvers:

- a. Stalls (except whip stalls), lazy eights, chandelles, and steep turns, in which the angle of bank is not more than 60°, are classified as nonacrobatic maneuvers and are permitted for Normal Category operation.
- b. Spins, lazy eights, chandelles, and steep turns, where the angle of bank is more than 60 degrees, and all of the maneuvers listed in a. above, are approved for operation in the utility category. Recommended entry speeds are shown:

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## Maneuvers: (Cont'd.)

<u>Maneuver</u>	<u>Entry Speed T.I.A.S.</u>
Chandelles	100 MPH
Lazy Eights	100 MPH
Steep Turns	90 MPH
Spins	Stall
Stalls (except whip stalls)	Stall

c. Inverted flight and intentional spinning with flaps down are prohibited.

Airspeed	(a) Radial Red line marks the never exceed speed which is the maximum safe airspeed 153 MPH. (133 Knots).
Instrument	(b) Yellow Arc on indicator denotes range of speed in which operations should be conducted with caution and only in smooth air at 121 MPH to 153 MPH (106 Knots to 133 Knots)
Markings and	(c) Green Arc denotes normal operating speed range 47 MPH - 121 MPH (38 Knots to 106 Knots)
Their Significance	(d) White Arc denotes normal operating speed range with flaps extended 43 MPH-85 MPH (35 Knots to 74 Knots)

## Noise Level:

The corrected noise level of this aircraft is 65.9 dB(a) determined at the maximum operating power of 2700 RPM. This data applies only to the Lycoming O-320 engine installation equipped with a Sensenich 74-DM-56 Propeller.

No determination has been made by the Federal Aviation Administration that the noise levels of this airplane are or should be acceptable or unacceptable for operation at, into or out of, any airport.

The above statement notwithstanding, the noise level stated above verified by and approved by the Federal Aviation Administration in noise level test flights conducted in accordance with FAR 36 Appendix "F" Amendment #10, "Noise Standards: Aircraft Type and Airworthiness Certification." The aircraft noise is in compliance with all FAR 36 noise standards applicable to this type.

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MODEL PA-18A"150"

## II. PROCEDURES

- (a) Except as noted above, all operating procedures for this airplane are conventional.

Approved:

*Paul E. Everly*

Paul E. Everly  
D.O.A. Coordinator  
D.O.A. EA-1

Date: August 31, 1979

# PIPER AIRCRAFT CORPORATION

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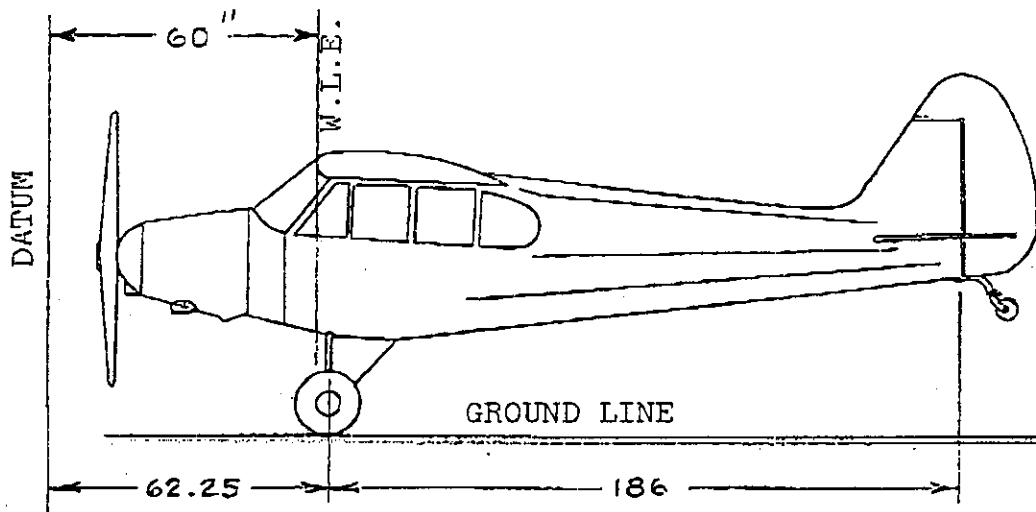
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PA-18"150"  
MODEL PA-18A"150"

PIPER AIRCRAFT CORPORATION  
LOCK HAVEN, PENNSYLVANIA  
ACTUAL WEIGHT AND BALANCE  
MODEL PA-18"150", MODEL PA-18A"150"

SERIAL NO. 18-

CERTIFICATE NO. N

DATE



AIRPLANE WEIGHING DIAGRAM

Empty Weight as Weighed (Includes items checked on Pages 7, 8, & 9.)

	<u>Scale Reading</u>	<u>Tare</u>	<u>Net</u>
Left Wheel	_____	_____	_____
Right Wheel	_____	_____	_____
Tail Scale (N)	_____	_____	_____
Total (T)	_____	_____	_____

Revised: June 21, 1960.  
November 15, 1960  
August 23, 1963  
August 28, 1963

580 820

PREPARED \_\_\_\_\_  
CHECKED \_\_\_\_\_  
APPROVED \_\_\_\_\_

August 12, 1974

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Empty Weight C.G. Aft Main Wheel Centerline is:

A.  $\frac{186 \times (N)}{(T)} = \underline{\hspace{2cm}}$  In.

Empty Weight C.G. Aft of Datum is:

B.  $62.25 + A \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$  In.

MOST FORWARD C.G. (NORMAL CATEGORY AND UTILITY CATEGORY)

Item	Weight	Arm	Moment
Empty Weight			
Oil (8 Qts.)	15	24	360
Fuel (12.5 Gal.) Wing	75	84	6300
Pilot and Chute (Front Seat)	<u>190</u>	<u>71</u>	<u>13490</u>

TOTAL

MOST FORWARD C.G. IS                      IN. AFT OF WING L.E.

MOST REARWARD C.G. UTILITY CATEGORY

Item	Weight	Arm	Moment
Empty Weight			
Oil (8 Qts.)	15	24	360
Fuel (            ) Wing		84	
Pilot and Chute (Front Seat)	190	71	13490
Passenger and Chute (rear Seat)	<u>190</u>	<u>97</u>	<u>18430</u>

TOTAL 1500

MOST REARWARD C.G. IS                      IN. AFT OF WING L.E.

580 820

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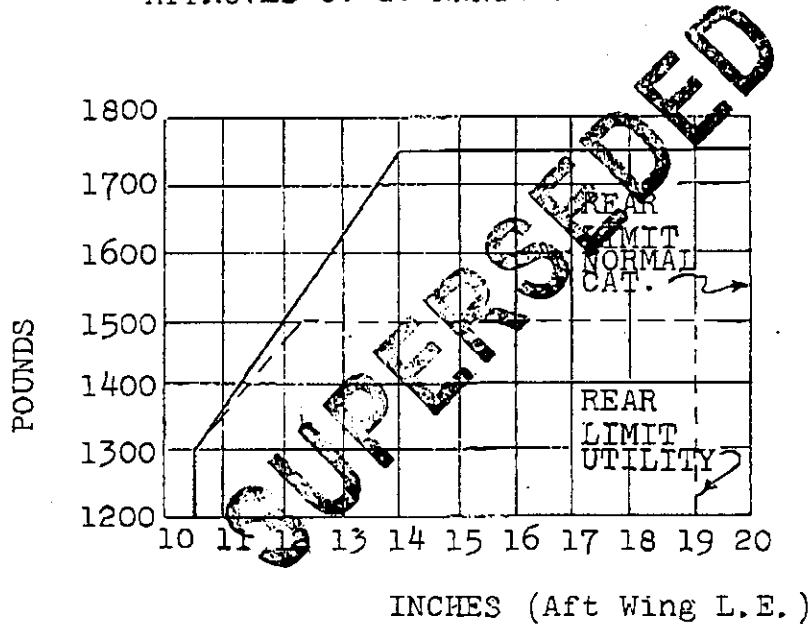
## MOST REARWARD C. G. NORMAL CATEGORY

Item	Weight	Arm	Moment
Empty Weight			
Oil (8 Qts.)	15	24	360
Fuel (36 Gal.) Wing	216	84	18144
Pilot (Rear Seat)	170	97	16490
Baggage	50	117	5850

TOTAL

MOST REARWARD C. G. IS \_\_\_\_\_ IN. AFT WING L.E.

## APPROVED C. G. RANGE VS. WEIGHT



Normal Category \_\_\_\_\_

Utility Category -----

PREPARED \_\_\_\_\_  
CHECKED \_\_\_\_\_  
APPROVED \_\_\_\_\_

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## LOG OF REVISIONS

<u>Rev.</u>	<u>Page</u>	<u>Change</u>	<u>Date</u>	<u>Approval</u>
A	8	Alcor Alternator Added	9/30/74	<u>Paul E. Everly</u> Paul E. Everly DOA Coordinator December 21, 1976 DOA EA-1
B	7	Cleveland Model 20-119 Wheel-Brake Assembly, 6.00 x 6, 7.00 x 6 and 8.00 x 6 Tires Added	8/20/76	<u>Paul E. Everly</u> Paul E. Everly DOA Coordinator December 21, 1976 DOA EA-1
	8	Retyped and Rearranged		
C	7	Changed Weight of Cleveland Model 20-119 Wheel-Brake Assembly from 12.6 lbs. to 17.4 lbs.	9/17/76	<u>Paul E. Everly</u> Paul E. Everly DOA Coordinator December 21, 1976 DOA EA-1
D	1	Revise Static Limits	9/28/76	<u>Paul E. Everly</u> Paul E. Everly DOA Coordinator December 21, 1976 DOA EA-1
E	Cover	Revision Dates Added	12/21/76	<u>Paul E. Everly</u> Paul E. Everly DOA Coordinator December 21, 1976 DOA EA-1
	i	Table of Contents Added		
	ii	Authorized Signatures Added		
F	9	Tow Hook Added	10/5/77	<u>PE Everly</u> Paul E. Everly DOA Coordinator October 5, 1977 DOA EA-1

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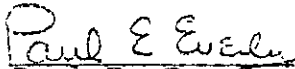



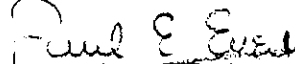
<u>Rev.</u>	<u>Page</u>	<u>Change</u>	<u>Date</u>	<u>Approval</u>
G	7	Vacuum Pump - Airborne Mechanisms 211CC Added under Engine and Engine Accessories		
	9	KS-2-SC Avionics Group Instl. per PAC Dwg. 09060 Added		
	10	NC-1-SC Avionics Group Instl. per PAC Dwg. 09062 and KS-1-SC Avionics Group Instl. per PAC Dwg. 09066 Added	10/14/77	<del>Paul E. Everly</del> Paul E. Everly DOA Coordinator October 14, 1977 DOA EA-1
H	10	KS-2-SC Avionics Group Instl. (with KT-78A Transponder) per PAC Dwg. 09060-2 Added  R.C. Allen A2475-2 Electric Turn and Bank Added	11/15/77	<del>Paul E. Everly</del> Paul E. Everly DOA Coordinator November 15, 1977 DOA EA-1
I	10	KS-1-SC Avionics Group Instl. (with KT-78A Transponder) per PAC Dwg. 09066-2 Added.	2/17/77	<del>Paul E. Everly</del> Paul E. Everly DOA Coordinator February 17, 1978 DOA EA-1
J	10	Emergency Locator Installation per PAC Dwg. 66081-2 Added.	10/10/78	<del>Paul E. Everly</del> Paul E. Everly DOA Coordinator October 10, 1978 DOA EA-1

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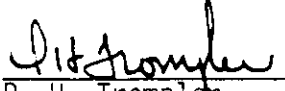
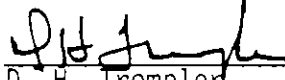
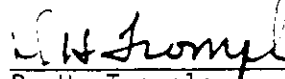
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## LOG OF REVISIONS

<u>Rev.</u>	<u>Page</u>	<u>Change</u>	<u>Date</u>	<u>Approval</u>
K	10	Added: Artificial Horizon, Outside Air Temp. Gauge, Eight Day Clock, Vertical Speed Indicator, Electric Fuel Gauge, Control Stick Lock and Dome Light	3/27/79	 <del>Paul E. Everly</del> DOA Coordinator March 27, 1979 DOA EA-1
L	10	Added: CTM-1-SC Avionics Group Instl. per PAC Dwg. 09370; KS-2-SC Avionics Group Instl. per PAC Dwg. 09353-2; KS-2-SC Avionics Group Instl. (with trans- ponder) per PAC Dwg. 09353-3	6/5/79	 <del>Paul E. Everly</del> DOA Coordinator June 5, 1979 DOA EA-1
M	2,3	Revised Maneuvers Permitted for Normal and Utility Category Operations	6/25/79	 <del>Paul E. Everly</del> DOA Coordinator June 25, 1979
N	3	Noise Level Data and Statement Added	8/30/79	
	3a	Section II. Procedures Added Moved From Pg. 3 to New Pg. 3a	8/30/79	 <del>Paul E. Everly</del> DOA Coordinator August 31, 1979 DOA EA-1
P	2	Baggage Compartment - Capacity - 50 Lbs. was Maximum baggage - 50 Lbs.	7/15/82	 <del>Paul E. Everly</del> DOA Coordinator July 15, 1982

PREPARED	PIPER AIRCRAFT CORP.	Airplane Flight Manual Model PA-18 "150" PA-18A "150"
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<u>Rev.</u>	<u>Page</u>	<u>Change</u>	<u>Date</u>	<u>Approval</u>
Q	11	Added: NTC-1-18 Avionics Group Instl. per PAC Dwg. 06170-2; King KTS-1-18 Avionics Group Instl. per PAC Dwg. 06180-2; Narco Escort IIA Radio per PAC Dwg. 06192; King KY-97A Communications Transceiver per PAC Dwg. 06193-2; King KT-76A Transponder per PAC Dwg. 06194-2; Narco AT-150 Transponder per PAC Dwg. 06195-2; Narco AR-850 Altitude Reporter per PAC Dwg. 06179-2; Sigtronics Intercom Syst per CA Dwg. 18-3-071; Northstar Loran M1 per CA Dwg. 18-2-095	9/15/88	 D. H. Trompler DOA Coordinator September 15, 1988 DOA SO-1
R	1	Changed C.A.A. Identification No. to read F.A.A. Identification No.	10/7/88	 D. H. Trompler DOA Coordinator October 7, 1988 DOA SO-1
S	1	Deleted Flap Position Limitation	12/1/88	 D. H. Trompler DOA Coordinator December 1, 1983 DOA SO-1