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Jan 15, 1982

FAA APPROVED

THIS DOCUMENT MUST BE KEPT IN AIRPLANE AT ALL TIMES

JAN 13 1982

SERIAL NO. 28-10378

FAA IDENTIFICATION NO. N8831W

MODEL PA 28-235

AIRPLANE FLIGHT MANUAL

Log of Revisions

Piper Model PA-28-235
Normal Category Only

Lycoming 0-540-B2B5 or 0-540-B1B5 or
For all operations, 2575 rpm, 235 hp.
80 Minimum octane aviation fuel.

Fuel pressure: GREEN arc (normal operating range) . 5 to 6 psi; RED line (minimum) . 5 psi; RED line (maximum) 6 psi.

197	Never exceed	
156	Maximum structural cruise	
138	Maneuvering	
115	Flaps extended	
3.8	Maximum positive load factor	
No	Maximum negative load factor	

2960 lbs.

Maximum Weight

Power Instruments

Engine
Engine Limits
Fuel
Propeller

Propeller

Fuel

Engine Lin

Engine

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PAGE

C. G. Range

The datum used is 78.4 inches ahead of the wing leading edge at the intersection of the straight and tapered section.

Weight	Forward Limit	Rearward Limit
(Pounds)	(In. aft of datum)	(In. aft of datum)
2900	91.5	93.5
2100	81.5	93.5

Straight line variation between points given.

Note: It is the responsibility of the airplane owner and the pilot to insure that the airplane is properly loaded. See weight and balance section for proper loading instructions.

Maneuvers

No Acrobatic Maneuvers including spins approved.

Placards

1. On the instrument panel in full view of the pilot:
"THIS AIRPLANE MUST BE OPERATED AS A NORMAL CATEGORY AIRPLANE IN COMPLIANCE WITH THE OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS AND MANUALS. NO AEROBATIC MANEUVERS, INCLUDING SPINS, APPROVED."

2. Adjacent to upper door latch: "ENGAGE LATCH BEFORE FLIGHT".

3. On the inside of the baggage compartment door:
"MAXIMUM BAGGAGE 200 LBS."

4. On the instrument panel in full view of the pilot:
"ROUGH AIR OR MANEUVERING SPEED 138 M.P.H."

5. Adjacent to the throttle for autopilot installation:
"AUTOCONTROL LIMITATIONS".

1. Automatic Pilot to be off during takeoff and landing.
2. Automatic Pilot use prohibited above 175 M.P.H.

C.A.S.

PREPARED	PIPER AIRCRAFT CORP. DEVELOPMENT CENTER, VERO BEACH, FLA	Model PA-28-235
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Limitation Section (Cont'd)

Airspeed Instrument Markings	RED radial line	Never Exceed	197 mph (171 knots)
	YELLOW arc	Caution Range (Smooth Air Only)	156 to 197 mph (136 to 171 knots)
	GREEN arc	Normal Operating Range	70 to 156 mph (61 to 136 knots)
	WHITE arc	Flap Down Range	61 to 115 mph (53 to 100 knots)

2. Procedures Section.

1. The stall-warning system is inoperative with the master switch off.
2. Electric fuel pump must be on for both landing and takeoff.
3. Except as noted above, all operating procedures for this airplane are normal.
4. (Automatic Pilot Installation Only)
The following emergency information applies in case of automatic pilot malfunction:
 - a. In case of malfunction, disengage Automatic Pilot controls.
 - b. In emergency, Automatic Pilot may be overpowered manually.
 - c. In cruise configuration, malfunction results in 55 degree bank and 100 Ft. altitude loss. In approach configuration malfunction results in 18 degree bank and 40 Ft. altitude loss.

3. Performance Section.

All performance is given for a weight of 2900 pounds.

Loss of altitude during stalls can be as great as 350 feet depending on configuration and power.

Stalling speed, in mph, (Calibrated Airspeed):

Flaps up	70
Flaps down	60

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DATE July 15, 1963

WEIGHT AND BALANCE
DATA
MODEL PA-28-235

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ACTUAL WEIGHT AND BALANCE

EQUIPMENT LIST

MODEL PA-28-235

N8831W
28-10378

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	WEIGHT and Balance Data	
PAGE 1 Section 1		

Check if	Installed	Engine Accessories	ITEM	WEIGHT (LBS.)	ARM AFT DATUM
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Engine - Lycoming Model 0-540-B1B5 395.0 28.4

Engine - Lycoming Model 0-540-B2B5 395.0 28.4

Engine - Lycoming Model 0-540-B4B5 395.0 28.4

Fuel Pump, Electric Auxiliary, Bendix 480531 (2) 3.6 112.6

Fuel Pump, Engine Driven, Lycoming Dwg. 74082 1.6 44.8

Oil Cooler, Piper Dwg. 18622 2.6 38.4

Oil Cooler, Stewart Warner Model No. 8406-A 2.6 38.4

Filter, Fram Model CA-161PL or AC No. A48C .9 20.1

Vacuum Pump, Airborne Mechanisms Model No. 10-113A1 or 113A5 (Opt.) 3.6 36.3

Alternator, 35 amp., Chrysler No. 2098615 12.5 19.0

Propeller and Propeller Accessories

Spinner PAC 65435 and Attachment Plates 2.0 8.0

Governor, Hartzell F-4-3 6.0 16.7

(Required on Constant Speed Prop. Installation)

Propeller, McCauley 1P235PFA80 39.5 9.1

Propeller, Hartzell Hc-C2YK-1/8468A-4 47.0 7.7

(Required on Constant Speed Prop. Installation)

Used with 0-540-B4B5 Engine Only

Spinner PAC 65209 and Attachment Plates 2.0 8.0

Spinner - Composite

1.6

PIPER AIRCRAFT CORP.	DEVELOPMENT CENTER, VERO BEACH, FLA.	Weight and Balance Data
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Check if Installed	WEIGHT (LBS.)	ARM AFT DATUM
X	33.6	109.6
Two Main Wheel Assemblies, 6.00 - 6		
(a) Cleveland Aircraft Products		
Wheel Assembly No. 40-58		
Brake Assembly No. 30-34		
(b) Two Main 6 Ply Rating Tires 6.00 - 6		
With Regular Tubes		
X	14.0	34.3
One Nose Wheel 6.00 - 6		
(a) Cleveland Aircraft Products		
Wheel Assembly No. 38501 (less brake drum)		
(b) One Nose Wheel 4-Ply Rating Tire 6.00 x 6		
With Regular Tube		
Electrical Equipment		
X	21.5	160.9
Battery 12V., 25 A.H. Reading S-25		
	27.0	160.9
Battery 12., 35 A.H., Reading R-35 (Opt.)		
X	2.0	263.4
Rotating Beacon, Grimes Model D7080 (Opt.)		
X		
Stall Warning Device - Safe Flight Inst. Corp.		
No. C52207-4		
X	.2	80.2
Landing Light, G.E. Model 4509 (Opt.)		
	2.8	60.0
Roll Servo Mitchell IX221B-CH-1 (Opt.)		
	1.8	66.6
Console Amplifier and Cables, Mitchell IX214E (Opt.)		
X	.4	106.6
Navigation Lights (2), Grimes Model A1285		
Red and Green (Opt.)		
Navigation Light (rear) (1), Grimes Model 2064		
X	.1	280.9
(White) (Opt.)		
Voltage Regulator, Chrysler No. 2098613		
X	.5	57.8
Auxiliary Power Receptacle PAC 62225		
	2.6	163.5
External Power Cable PAC 62355-2		
	4.6	142.8
Instruments		
X	.9	66.6
Compass - Airpath No. C2350-L41		
	.6	
Airspeed Indicator - PAC 63205-3		

PIPER AIRCRAFT CORP. DEVELOPMENT CENTER, VERO BEACH, FLA. MODEL PA 28-235	PREPARED	PAGE 3 Section 1
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Check If	ITEM	WEIGHT (LBS.)	ARM AFT DATUM
Installed	Instruments (Cont'd. from Page 2) Turn and Bank, Pioneer A-5 (Opt.)	1.5	66.4
X	Tachometer AC 6411110	.8	67.7
	Suction Gauge, AN571-11 (Opt.)	.4	68.1
X	Suction Gauge, U.S. Gauge AW1821AF03	.4	68.1
	Altimeter - Aero Marine No. 532	1.4	66.8
X	Altimeter AN 5760-2 (C-12 or C-13) (Opt.)	1.4	66.8
X	Rate of Climb, Pioneer C-7 (Opt.)	1.4	66.8
X	Directional Gyro, Vacuum AN5735-1A (Opt.) <i>Sigma-Tek s/n T-41266</i> <i>8.8. Jumbo 226703370 KRP</i>	2.5	66.6
X	Artificial Horizon, Vacuum AN5736-1A (Opt.)	2.7	66.1
X	Air Temperature Gauge, Rochester Manufacturing Co., No. 1592-C2 (Opt.)	.2	82.6
X	Clock, 8-Day (Opt.)	.4	68.3
	Directional Gyro, Vacuum (Autopilot) Mitchell 52B15E	4.3	66.6
	Artificial Horizon, Vacuum (Autopilot) Mitchell 52B9 (Opt.)	4.5	65.2
X	Engine Cluster, Steward Warner 436320	1.3	68.8
X	Tru-Speed Indicator, PAC 62143-3 (Opt.)	.6	67.7
	Manifold Pressure Gauge PAC 21962	.9	67.7
	(Required on Constant Speed Propeller Installation)		
	Radio		
	Piper Radio Compass PRC-3 (Opt.)	4.5	64.4
	Piper VHF Transceiver PTR-1 (Opt.)	5.0	64.8
	Piper Omni Converter O-1 (Opt.)	2.5	65.3
	King KX150 A (Opt.)	9.1	62.8

PIPER AIRCRAFT CORP. DEVELOPMENT CENTER, VERO BEACH, FLA. Model PA-28-235	PREPARED
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Check if	ITEM	WEIGHT (LBS.)	ARM AFT DATUM
Installed	Radio (Cont'd. from Page 3)		
X	Omni Antenna (Opt.)	.4	266.2
X	Whip Antenna (Opt.)	.6	157.8
X	Low Frequency Antenna (Opt.)	.5	167.0
	Loop Antenna (PRC-3) (Opt.)	.3	.54.5
X	Narco Mark 12 VHF Transceiver (Opt.)	9.0	59.4
	Narco VOA-6 Omni Converter (Opt.)	1.8	65.3
	Narco VOA-5 Omni Converter (Opt.)	2.9	65.3
X	Narco VOA-4 Omni Converter (Opt.)	2.9	65.3
X	Narco ADF-30A (Opt.)	9.9	107.9
	Narco Omnigator VTR-2A (Opt.) Installation (Less Ant.)	14.0	58.0
	Piper Radio Compass PRC-4 (Opt.)	4.9	64.4
X	Loop Antenna (PRC-4) (Opt.)	.4	112.6
Miscellaneous			
X	Tow Bar Assembly	1.5	132.0
X	Fwd. Seat Belts	1.0	86.9
X	Aft Seat Belts	.8	123.0
X	Nose Wheel Fairing	3.3	34.3
X	Main Wheel Fairings	8.0	109.6
	Fire Extinguisher (Opt.)	7.5	93.0
X	Flight Manual		

PIPER AIRCRAFT CORP. DEVELOPMENT CENTER, VERO BEACH, FLA. Weight and Balance Data Model PA-28-235	PREPARED	
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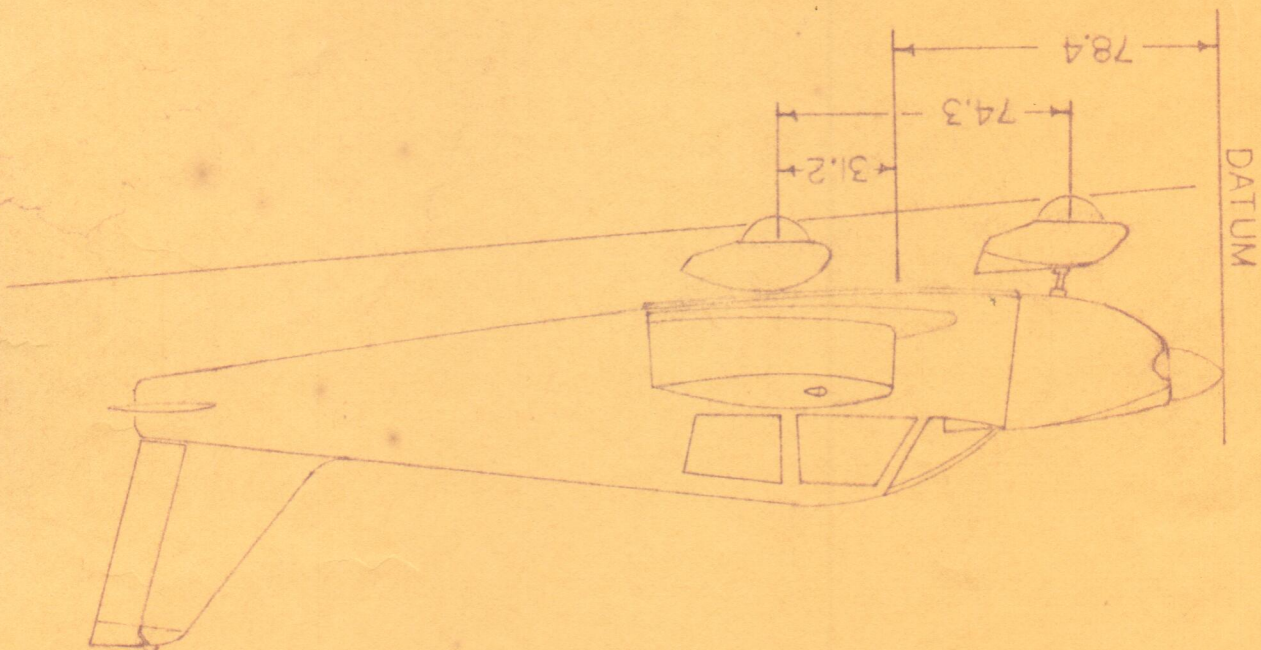
ACTUAL WEIGHT AND BALANCE

Model PA-28-235

SERIAL NUMBER 28-10378

CERTIFICATE NUMBER N8831W

DATE May 6, 1964



Computed
Empty weight as ~~xxxxxxx~~ (includes items checked on Equipment List):

Left Wheel 475

Right Wheel 477

Nose Wheel 515

Total 1467

Wayland R. Medlin
 Wayland R. Medlin
 Chief Inspector

MOST FORWARD C. G. (ALTERNATE) IS 85.8 INCHES AFT DATUM

Item	Weight	Arm	Moment
Empty Weight	1467	83.5	122495
Oil (3 Gal.)	23	34.1	785
Fuel (84 Gal.)	504	95.0	47880
Pilot	170	85.5	14535
Passenger (Front Seat)	170	85.5	14535
Total	2334	85.8	200230

MOST FORWARD C. G. (ALTERNATE)

MOST FORWARD C. G. IS 83.5 INCHES AFT DATUM

Item	Weight	Arm	Moment
Fuel (11 Gal.)	66	95.0	6270
Pilot	170	85.5	14535
Total	1726	83.5	144098

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	Weight and Balance Data Model PA-28-235	
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Empty weight C. G. forward main wheel centerline is:

A. (N) $\frac{26.1}{74.3} \times (T)$ inches

Empty weight C. G. aft wing leading edge (at intersection of straight and tapered sections):

B. $31.2 - (A)$ inches

Empty weight C. G. aft datum is:

C. $78.4 + (B)$ inches

MOST FORWARD C. G. (REDUCED WEIGHT)

Weight Arm Moment

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	PAGE 3 Section 2		

MOST REARWARD C. G. (GROSS WEIGHT)

Item	Weight	Arm	Moment
Empty Weight (Dry)	1467	83.5	122495
Oil (3 Gal.)	23	34.1	785
Fuel (84 Gal.)	504	95.0	47880
Pilot & Passenger (Front Seat)	340	85.5	29070
Passengers (Rear Seat)	340	118.1	40154
Baggage	198	142.8	28274
Total	2872	93.5	268658

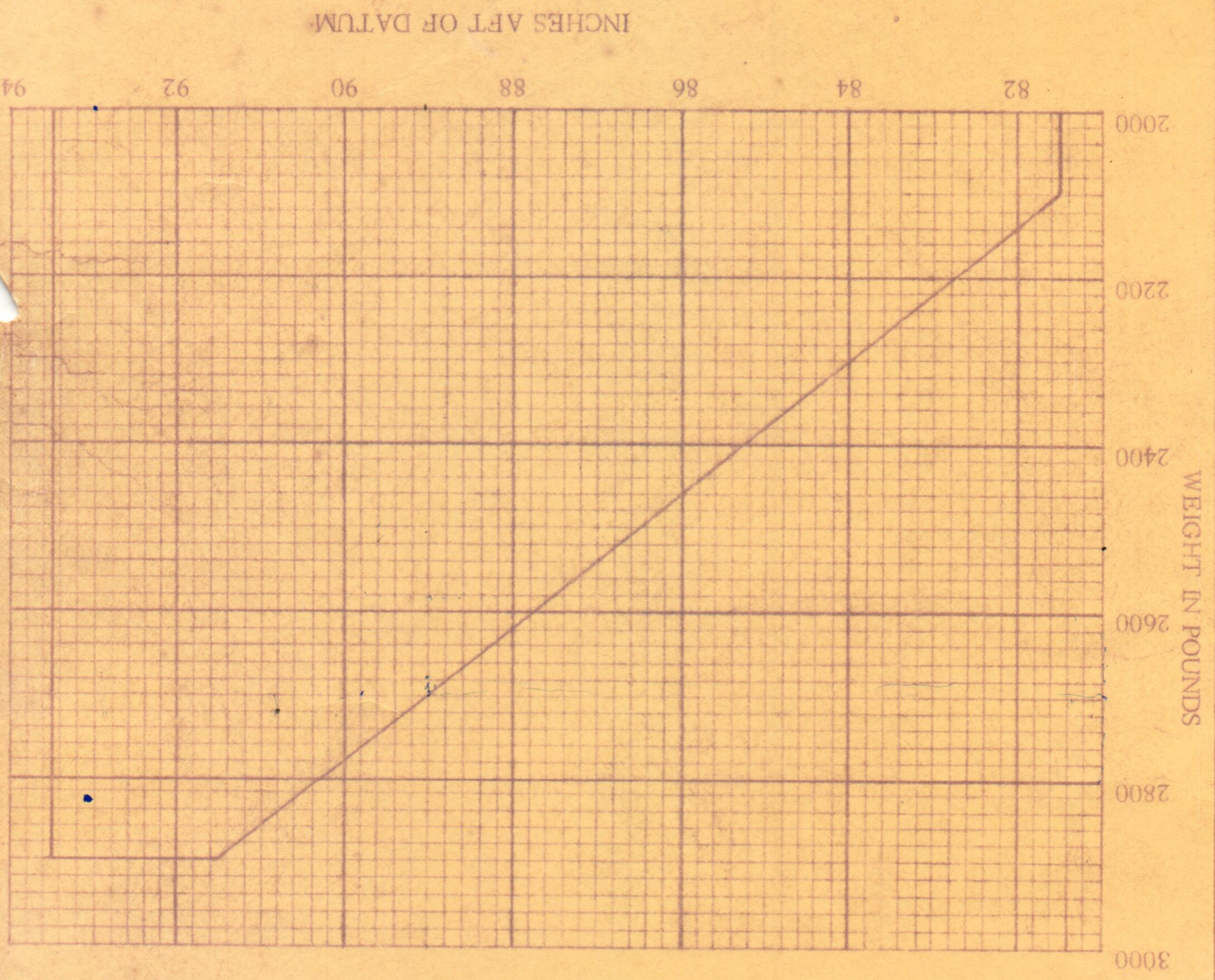
MOST REARWARD C. G. (GROSS WEIGHT) IS 93.5 INCHES AFT DATUM

MOST REARWARD C. G. (ALTERNATE)

Item	Weight	Arm	Moment
Empty Weight (Dry)	1467	83.5	122495
Oil (3 Gal.)	23	34.1	785
Fuel (84 Gal.)	504	95.0	47880
Pilot (Front Seat)	170	85.5	14585
Passengers (Rear Seat)	340	118.1	40154
Baggage	168	142.8	23990
Total	2672	93.5	249889

MOST REARWARD C. G. (ALTERNATE) IS 93.5 INCHES AFT DATUM

2900
1487
1483



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Petersen Aviation, Inc.
Route 1, Box 18
Mindem, NE 68959

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AIRPLANE FLIGHT MANUAL SUPPLEMENT

FOR

Piper Model PA-28-235 Cherokee

Registration Number N8831W

Serial Number 28-10378

This Supplement must be attached to the FAA Approved Airplane Flight Manual applicable to that particular airplane when the airplane has been modified in accordance with STC SA1964CE. The information contained herein supplements or supersedes the basic manual only in those areas listed herein. For limitations, procedures and performance information not contained in this supplement, consult the basic Airplane Flight Manual.

LIMITATIONS:

Fuel:

The use of unleaded automotive gasoline, 87 minimum antiknock index and leaded automotive gasoline, 88 minimum antiknock index (RON + MON)/2 per ASTM Specification D-439 is approved. Intermixing with aviation gasoline is also approved.

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for
Manager, Wichita Aircraft Certification Office
Central Region
Wichita, Kansas

Date March 23, 1984