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AIRPLANE FLIGHT MANUAL

MODEL PA-28-180

FAA IDENTIFICATION NO. N8380W

SERIAL NO. 28-2582

THIS DOCUMENT MUST BE KEPT IN AIRPLANE AT ALL TIMES.

FAA APPROVED: Original signed by Walter R. Haldeman *
 Walter R. Haldeman
 Chief, Engineering & Manufacturing Branch
 Southern Region - - - Atlanta, Georgia

DATE: August 3, 1962

* FAA APPROVED: Gene Dearing For Retype Only.
 Gene Dearing
 Aerospace Engineer

DATE: August 12, 1964

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Log of Revisions

REVISION NO.	PAGE	DESCRIPTION	APPROVED	DATE
1	1	Deleted Propeller Pitch Information. Added Static R.P.M. Information	<i>H. E. Waterman</i> H. E. Waterman Supervisor SO-EMDO-42	5/25/64
2	2	Placards Section: Added Placard No. 5	<i>H. E. Waterman</i> H. E. Waterman Supervisor SO-EMDO-42	7/8/64
3	2	Added to Placard No. 3: read: "BAGGAGE, MAX. 200 LBS., SEE WEIGHT AND BALANCE DATA FOR BAGGAGE LOADINGS BETWEEN 150 LBS. AND 200 LBS."	<i>H. C. Faller</i> H. C. Faller Supervisor SO-EMDO-43	8/5/64
	1	Added Sensenich M76EMMS		
4	3	Item 5 added to Procedures Section.	<i>H. C. Faller</i> H. C. Faller Supervisor SO-EMDO-43	10/20/64
5	1	Limitations Section: Revised Oil Temperature and Fuel Pressure Range	<i>H. C. Faller</i> H. C. Faller Supervisor, SO-EMDO-43	6/23/65

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Piper Model PA 28-180
Normal Category Only

AIRPLANE FLIGHT MANUAL

1. Limitations Section.

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

Engine	Lycoming O-360-A3A
Engine Limits	Maximum permissible RPM for takeoff, 2475. For all other operations, 2700 rpm, 180 hp.
Fuel	91/96 minimum octane aviation fuel
Propeller	Sensenich M76EMM (S/N 671 to 1760A) Sensenich M76EMMS (S/N 1761 and Up) Maximum diameter 76 inches, minimum diameter 76 inches. Static RPM at maximum permissible throttle setting: Not over 2450, not under 2275. No additional tolerance permitted.
Power Instruments	Oil temperature: GREEN arc (normal operating range) 75° F. to 245° F.; RED line (maximum) 245° F. Oil pressure: GREEN arc (normal operating range) 60 psi to 85 psi; YELLOW arc (caution range) 25 psi to 60 psi; RED line (minimum) 60 psi; RED line (maximum) 85 psi. Fuel pressure: GREEN arc (normal operating range) .5 to 8 psi; RED line (minimum) .5 psi; RED line (maximum) 8 psi. Tachometer: GREEN arc (normal operating range) 500 to 2700 rpm; RED line (maximum continuous power) 2700 rpm.
Airspeed Limits (Calibrated Airspeed) (Miles per hour)	Never exceed 171 Maximum structural cruise 140 Maneuvering 129 Flaps extended 115 Maximum positive load factor 3.8 Maximum negative load factor No inverted maneuvers approved.
Maximum Weight	2400 Lbs.

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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 (Pounds)	Forward Limit (In. aft of datum)	Rearward Limit (In. aft of datum)
2400	92.1	94.5
2200		95.9
1850	85.1	95.9

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

- 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 ACROBATIC MANEUVERS, INCLUDING SPINS, APPROVED.
- Adjacent to upper door latch: "ENGAGE LATCH BEFORE FLIGHT".
- On the inside of the baggage compartment door:
"MAXIMUM BAGGAGE 125 LBS." (S/N 671 to 1760A)
"BAGGAGE, MAX. 200 LBS., SEE WEIGHT AND BALANCE DATA FOR BAGGAGE LOADINGS BETWEEN 150 LBS. AND 200 LBS." (S/N 1761 and Up)
- On the instrument panel in full view of the pilot:
"ROUGH AIR OR MANEUVERING SPEED 129 MPH".
- On the instrument panel in full view of the pilot:
"OIL COOLER WINTERIZATION PLATE TO BE REMOVED WHEN AMBIENT TEMPERATURE EXCEEDS 50° F."

Airspeed Instrument Markings

RED radial line	Never exceed	171 mph (148 knots)
YELLOW arc	Caution Range (Smooth Air Only)	140 to 171 mph (121 to 148 knots)
GREEN arc	Normal Operating Range	67 to 140 mph (58 to 121 knots)
WHITE arc	Flap Down Range	57 to 115 mph (50 to 100 knots)

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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. The PA 28-180 airplane is approved under FAA Regulation CAR3 which prohibits intentional spins. The following information is noteworthy:
 - a. The stall characteristics of the PA 28-180 are normal with the nose pitching down moderately following the stall, occasionally with a moderate roll which can be corrected by normal use of ailerons and rudder against the roll.
 - b. Prolonged use of full rudder during stall practice may result in a rapid roll followed by a spin and should be avoided. Recovery from an incipient spin may be effected in less than one additional turn by use of opposite rudder followed by full forward control wheel.
 - c. In the event that a fully developed spin is inadvertently experienced, recovery is best made by using full opposite rudder followed by full forward wheel and full opposite aileron. The control positions against the spin should be maintained during the entire recovery, which may require several turns and a substantial loss of altitude if the airplane is located heavily with a rearward center of gravity.
4. Except as noted above, all operating procedures for this airplane are normal.
5. (Electric Pitch Trim installation only)
The following emergency information applies in case of electric pitch trim malfunction:
 - a. In case of malfunction, disengage electric pitch trim by pulling out circuit breaker on instrument panel.
 - b. In emergency, electric pitch trim may be overpowered using manual pitch trim.
 - c. In cruise configuration, malfunction results in 10° pitch change and 30 Ft. altitude variation.

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3. Performance Section.

The following performance figures were obtained during FAA type tests and may be realized under conditions indicated with the airplane and engine in good condition and with average piloting technique. All performance is given for 2400 pounds.

Loss of altitude during stalls varied from 125 to 200 feet, depending on configuration and power.

Stalling speeds, in mph, power off, versus angle of bank (Calibrated Airspeed):

Angle of bank	0	20	40	50	60
Flaps up	67	69	76	83	94
Flaps down	57	--	--	--	--