Piper Model PA-32-260
Normal Category Only

DUPLICATE

AIRPLANE FLIGHT MANUAL

1. Limitations Section — The following limitations must be observed in the operation of this airplane:

Engine	Lycoming 0-540-E4B5
Engine Limits	For all operations, 2700 rpm, 260 hp.
Fuel	100/130 minimum aviation grade fuel
Propeller	McCauley 1P235PFA82, blade pitch 60 through 66. Maximum diameter 82 inches, minimum diameter 80.5 inches. Hartzell HC-C2YK-1/8477-2, low pitch stop 12.0° ± .2°, high pitch stop 32° ± 2°, maximum diameter 82 inches, minimum diameter 80.5 inches.
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 90 psi; YELLOW arc (caution range) 25 psi to 60 psi; RED line (minimum) 25 psi when installed or 60 psi when installed; RED line (maximum) 90 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	212
	Maximum structural cruise	168
	Maneuvering	149
	Flaps extended	125
	Maximum positive load factor	3.8
	Maximum negative load factor	No inverted maneuvers approved.

Maximum Weight — 3400 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)
3400	91.4	95.5
3300	90.2	96.2
2600	81.4	96.2
2060	78.0	96.2

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. In full view of the pilot:

   "THIS AIRPLANE MUST 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."

   "THIS AIRCRAFT APPROVED FOR NIGHT IFR NON-ICING FLIGHT WHEN EQUIPPED IN ACCORDANCE WITH FAR 91 OR FAR 135."

2. On the instrument panel in full view of the pilot:

   "ROUGH AIR OR MANEUVERING SPEED 149 MPH."

3. On the instrument panel in full view of the pilot:

   "DEMONSTRATED CROSS WIND COMPONENT 20 MPH."

4. (For operation with the rear door removed)

   In full view of the pilot:

   "FOR FLIGHT WITH THE DOOR REMOVED, SEE THE LIMITATIONS AND PROCEDURES SECTIONS OF THE AIRPLANE FLIGHT MANUAL."

5. On the instrument panel in full view of the pilot when the autoflite is installed:

   "FOR HEADING CHANGES: PRESS DISENGAGE SWITCH ON CONTROL WHEEL. CHANGE HEADING. RELEASE DISENGAGE SWITCH."

Placards (Cont'd)

6. On the fuel selector valve cover: "ALL WEIGHT IN EXCESS OF 3112 POUNDS MUST BE FUEL WEIGHT ONLY, FILL TIP TANKS FIRST, USE MAIN TANKS FIRST."

Airspeed Instrument

RED radial line	Never Exceed	212 mph (184 knots)
YELLOW arc	Caution Range (Smooth Air Only)	168 to 212 mph (146 to 184 knots)
GREEN arc	Normal Operating Range	71 to 168 mph (62 to 146 knots)
WHITE arc	Flap Down Range	63 to 125 mph (55 to 109 knots)

Rear Cabin Door or Rear Cabin Door and Cargo Door Removal Limitations

The following limitations must be observed in the operation of this airplane with the rear cabin door or rear cabin door and cargo door removed:

1. The airplane may be flown with the rear cabin door or rear cabin door and cargo door removed. Flight with the front door removed is not approved.
2. Maximum speed - 165 mph.
3. No smoking.
4. All loose articles must be tied down and stowed.
5. Jumper's static lines must be kept free of pilot's controls and control surfaces.
6. Operation approved VFR flight conditions only.

Loading Limitations

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

* 1. Fill tip tanks first; use main tanks first.
2. This airplane must not be operated at gross weights in excess of 3112 pounds unless the weight over 3112 pounds is fuel weight only.
* 3. Remove fuel from the main tanks first when required for proper weight and balance.

*Note: See the last page of this pdf file.

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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. Except as noted above, all operating procedures for this airplane are normal.

4. When operating with the rear cabin door removed, it is recommended that all occupants wear parachutes.

5. (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 over-powered manually.

   c. In cruise configuration, malfunction results in 55-degree bank and 50 ft. altitude loss. In approach configuration and malfunction results in 30-degree bank and 50 ft. altitude loss.

6. (Electric Pitch Trim Installation Only)

   The following emergency information applies in case of electric pitch 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 over-powered using manual pitch trim.

   c. In cruise configuration, malfunction results in 10^{o} pitch change and 50 ft. altitude variation.

7. (Autoflite Installation Only)

The following emergency information applies in case of autoflite malfunction:

a. In case of malfunction, PRESS disconnect switch on pilot's control wheel.

b. Rocker switch on instrument panel - OFF.

c. Unit may be overpowered manually.

d. In cruise configuration malfunction, 3 seconds delay results in 32° bank and 40 ft. altitude loss.

e. In approach configuration malfunction, 1 second delay results in 6° bank and 0 ft. altitude loss.

8. (AutoControl III Installation Only)

I. Limitations:
Automatic Pilot off during take off and landing.

II. Procedures:
a. Normal operation
Refers to Manufacturer's Operation Manual.
b. Emergency
1. In case of malfunction, disengage manual controls.
2. In emergency, automatic pilot may be overpowered manually.
3. In cruise configuration malfunction, 3 second delay results in 32° bank and 40 ft. altitude loss.
4. In approach configuration malfunction, 1 second delay results in 6° bank and 0 ft. altitude loss.

9. (Altimatic III Installation Only)

1. Limitations:
Automatic Pilot off during take off and landing.

II. Procedures:
a. Normal operation
Refer to Manufacturer's Operation Manual.
b. Emergency
1. In case of malfunction, disengage manual controls.

2. In emergency automatic pilot may be overpowered manually.
3. In cruise configuration malfunction, 3 second delay results in 35° bank and 400 ft. altitude loss.
4. In approach configuration malfunction, 1 second delay results in 20° bank and 180 ft. altitude loss.

3. Performance Section. All performance is given for a weight of 3400 pounds.

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

Stall speed, in mph, (Calibrated Airspeed):

Flaps up 71
Flaps down. . . 63

Flap deflection versus handle position is:

1st notch . . . . 10 degrees
2nd notch. . . . 25 degrees
3rd notch. . . . 40 degrees

Piper
THE NEW PIPER AIRCRAFT, INC.

October 26, 1995

[redacted]

Re: 1966 PA32-260 S/N 32-720

Dear [redacted]

I thank you for the opportunity to meet and speak with you at the AOPA meeting.

In regards to your inquiry on fuel burn and filling of the wing and tip tanks, we have enclosed an excerpt from the AFM for your 1966 PA32-260. This is from the current Aircraft Flight Manual for your aircraft with a revision level of 12 dated 11/30/78. As you can see the method of operation is to fill tip tanks first; burn mains first. As the manufacturer of the aircraft, we recommend operation of the aircraft per the most current Aircraft Flight Manual.

We have also enclosed an explanation on the reasoning behind burning mains first.

Best regards,
THE NEW PIPER AIRCRAFT, INC.

Dallas Wehner
Tech Support

DW/laa

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Why does the pilot's operating handbook call for filling the tip tanks of a Cherokee Six first, but then burning fuel from the inboard main tanks first in flight?

The reason is wing bending loads. Fuel weight at the tips relieves the wing bending loads in flight. Imagine hitting a bump in flight that forces the wing up. The weight of the fuselage in the center of the wing resists the upward movement bending the wing at the root. If fuel weight is concentrated at the tip, it too resists the upward acceleration and thus spreads bending loads across the wing instead of leaving them concentrated at the root. The tip tanks are filled first so that if you take off with only partial fuel, the weight of the fuel remains concentrated in the wing tips.