THE

cherokee SIX 260

PILOT'S OPERATING MANUAL

BY

PIPER

This manual is incomplete without an APPROPRIATE FAA APPROVED AIRPLANE FLIGHT MANUAL and an APPROPRIATE WEIGHT AND BALANCE REPORT.

WARNING

EXTREME CARE MUST BE EXERCISED TO LIMIT THE USE OF THIS MANUAL TO APPLICABLE AIRCRAFT. THIS MANUAL REVISED AS INDICATED BELOW OR SUBSEQUENTLY REVISED IS VALID FOR USE WITH THE AIRPLANE IDENTIFIED BELOW WHEN APPROVED BY PIPER AIRCRAFT CORPORATION. SUBSEQUENT REVISIONS SUPPLIED BY PIPER AIRCRAFT CORPORATION MUST BE PROPERLY INSERTED.

MODEL PA-32-260

AIRCRAFT SERIAL NO. _____ REGISTRATION NO. _____

PILOT'S OPERATING MANUAL, PART NUMBER 761 558 REVISION _____

PIPER AIRCRAFT CORPORATION
APPROVAL SIGNATURE AND STAMP _____

Assurance that the airplane is in an airworthy condition is the responsibility of the owner. The pilot in command is responsible for determining that the airplane is safe for flight. The pilot is also responsible for remaining within the operating limitations outlined by the Airplane Flight Manual, instrument markings, and placards.

This Pilot's Operating Manual is not designed as a substitute for adequate and competent flight instruction, knowledge of the current airworthiness directives, applicable federal air regulations, or advisory circulars. It is not intended to be a guide for basic flight instruction or a training manual for transition from single to multi-engine flying.

If an inconsistency of information exists between the Pilot's Operating Manual and the Airplane Flight Manual approved by the FAA, the Airplane Flight Manual shall be the authority.

A complete or partial replacement of this manual, Part No. 761 558, may be obtained only from Piper Customer Services.

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APPLICABILITY

The aircraft serial number eligibility bracket for application of this manual is 32-7400001 through 32-7600024. The specific application of this manual is limited to the, Piper PA-32-260 model airplane designated by serial number and registration number on the back of the title page of this manual.

This manual cannot be used for operational purposes unless kept in a current status.

REVISIONS

The information compiled in the Pilot's Operating Manual will be kept current by revisions distributed to the airplane owners.

Revision material will consist of information necessary to update the text of the present manual and/or to add information to cover added airplane equipment.

I. Revisions

Revisions will be distributed whenever necessary as complete page replacements or additions and shall be inserted into the manual in accordance with the instructions given below:

1. Revision pages will replace only pages with the same page number.
2. Insert all additional pages in proper numerical order within each section.
3. Page numbers followed by a small letter shall be inserted in direct sequence with the same common numbered page.

II. Identification of Revised Material

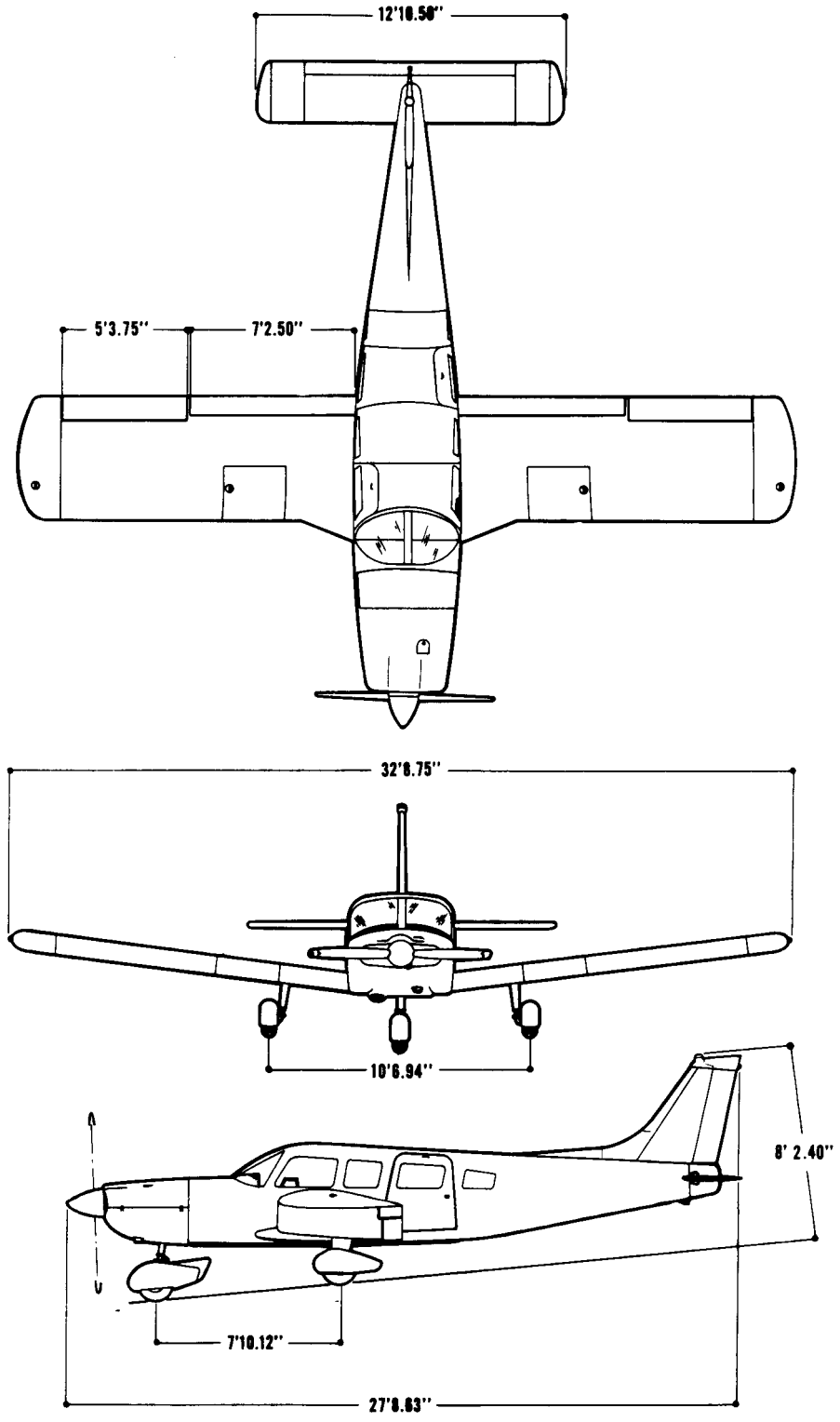
Revised text and illustrations shall be indicated by a black vertical line along the left hand margin of the page, opposite revised, added or deleted material. A line opposite the page number or section title and printing date, will indicate that the text or illustration was unchanged but material was relocated to a different page or that an entire page was added.

Black lines will indicate only current revisions with changes and additions to or deletions of existing text and illustrations. Changes in capitalization, spelling, punctuation or the physical location of material on a page will not be identified by symbols.

III. Original Pages Issued

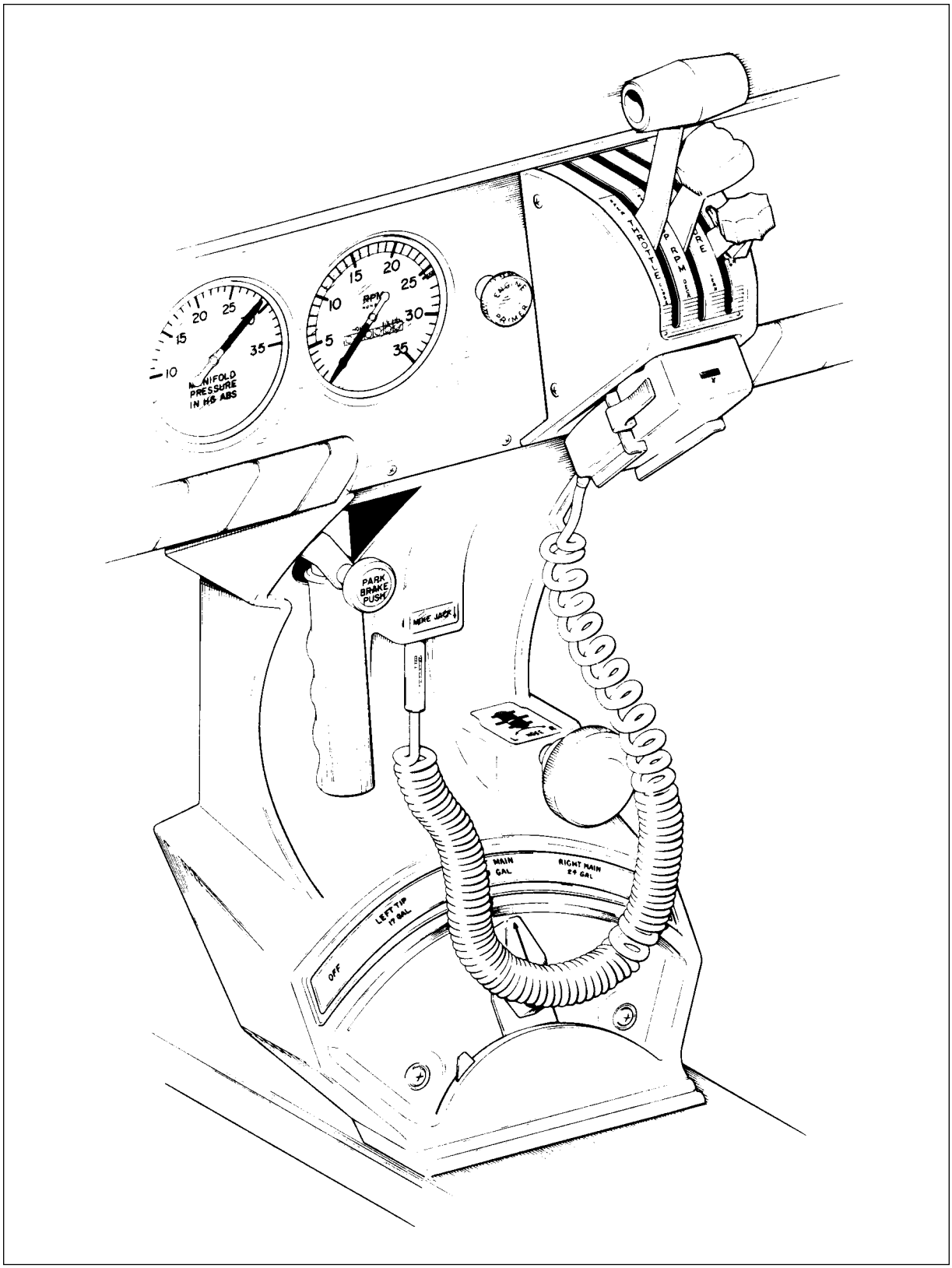
The original pages issued for this manual prior to revision are given below:

1-1 through 1-4, 2-1 through 2-28, 3-1 through 3-14, 4-1 through 4-7, 5-1 through 5-28, 7-1 through 7-10, 8-1 through 8-2, 9-1 through 9-12, 10-1 through 10-15.


12'10.50"
5'3.75"
7'2.50"
32'6.75"
10'6.94"
8' 2.40"
7'10.12"
27'8.63"

DESCRIPTION

AIRPLANE AND SYSTEMS



Throttle Quadrant and Console

FUEL SYSTEM

The total fuel capacity of the Cherokee Six is 84 gallons, all of which is usable except for approximately one pint in each of the four tanks. The **two main inboard tanks**, which hold 25 gallons each, are attached to the wing structure with screws and nut plates and can be removed easily for service or inspection. The **tip tanks** are constructed of resin-impregnated fiberglass and hold 17 gallons each.

When using less than the standard 84 gallon capacity of the tanks, fuel should be distributed equally between each side. The tip tanks should always be filled first, and fuel from the main tanks should be used first. All weight in excess of 3112 pounds must be in fuel weight only.

The **fuel selector control** is located below the center of the instrument panel on the sloping face of the control tunnel. It has five positions, one corresponding to each of the four tanks plus an OFF position.

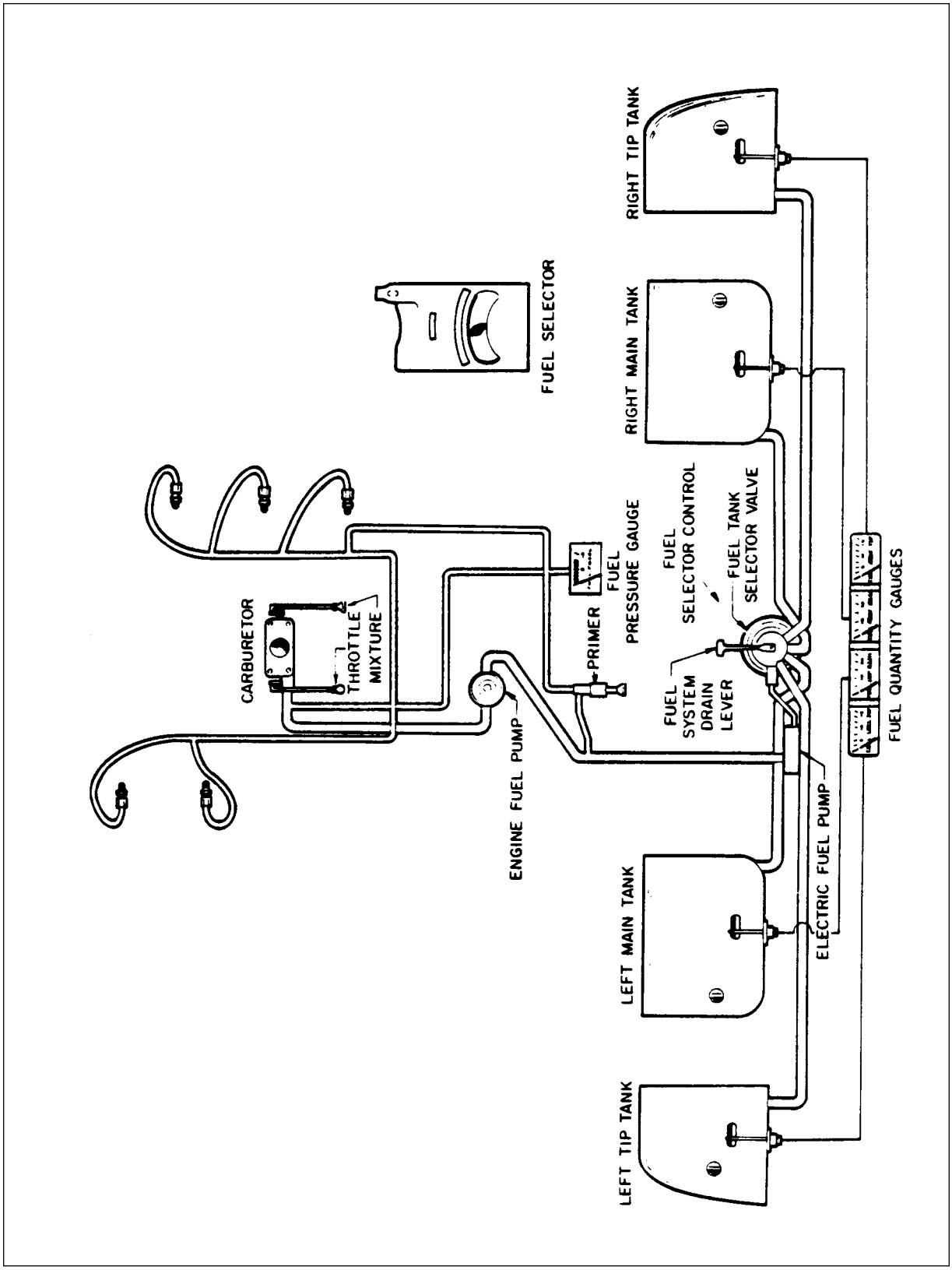
To avoid the accumulation of water and sediment, the fuel system should be drained daily prior to first flight and after refueling. Each tank is equipped with an **individual quick drain** located at the lower inboard rear comer of the tank. The **fuel strainer** and a **system quick drain valve** are located in the fuselage at the lowest point of the fuel system. It is important that the fuel system be drained in the following manner:

1. Drain each tank through its individual quick drain located at the lower inboard rear comer of the tank, making sure that enough fuel has flowed to ensure the removal of all water and sediment.
2. Place a container beneath the fuel sump drain outlet located under the fuselage. A special container is furnished for this operation.
3. Drain the fuel strainer by pressing down on the lever located on the right side of the cabin on the forward edge of the wing spar housing. Move the fuel selector through the following sequence: OFF position, left tip, left main, right main, and right tip while draining the strainer. Make sure that enough fuel has flowed to drain the fuel line between each tank outlet and the fuel strainer, as well as the strainer itself. With full fuel tanks, it will take approximately 11 seconds to drain all the fuel in one of the fuel lines from the tip tanks to the strainer, and approximately 6 seconds to drain all of the fuel from the line from either main tank to the fuel strainer. When the tanks are less than full, it will take a few seconds longer.
4. Examine the contents of the container placed under the fuel sump drain outlet. When the fuel flow is clear, close the drain and dispose of the contents of the container.

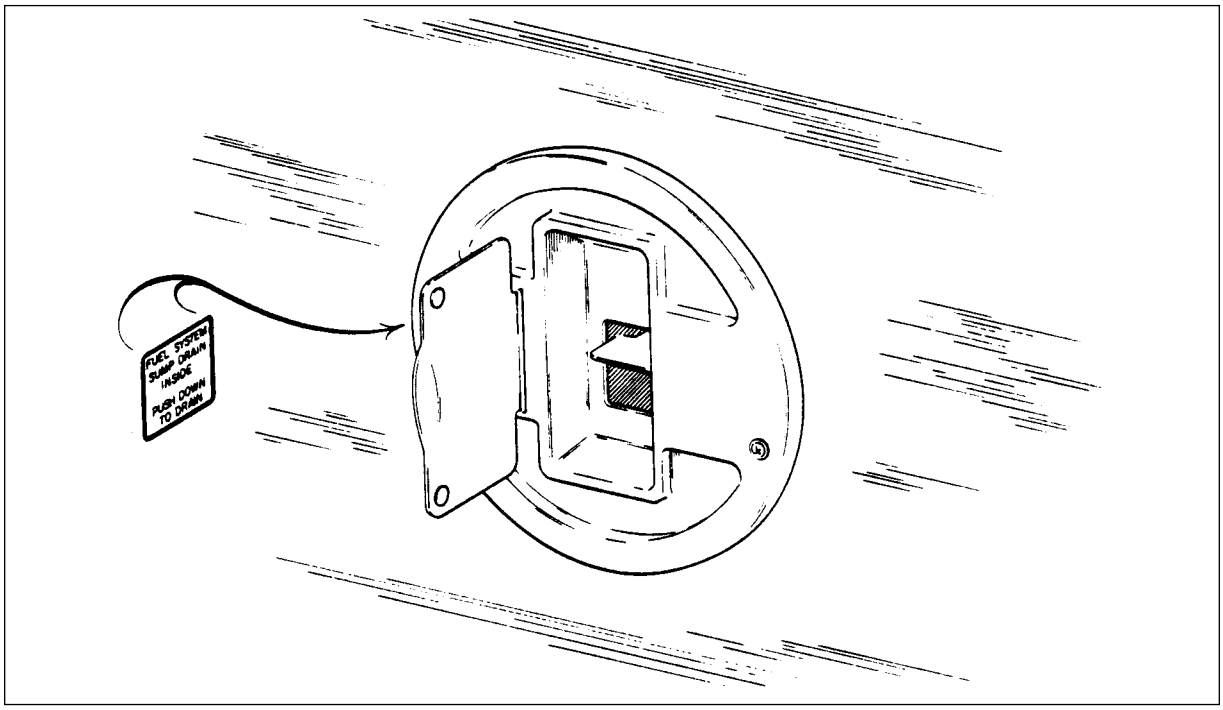
CAUTION

When draining fuel, care should be taken to ensure that no fire hazard exists before starting the engine.

After using the underseat quick drain, check from the outside to make sure that it has closed completely and is not leaking.



Fuel System Schematic



Fuel Drain Lever

Fuel quantity gauges for each of the four tanks are located in the engine gauge cluster on the left side of the instrument panel. A **fuel pressure indicator** is also incorporated in the engine gauge cluster.

An **electric fuel pump** is provided for use in case of failure of the engine driven pump. The electric pump operates from a single switch and independent circuit protector. It should be ON for all takeoffs and landings.

An optional **engine priming system** is available to facilitate starting. The primer pump is located to the immediate left of the throttle quadrant.

OPERATING INSTRUCTIONS

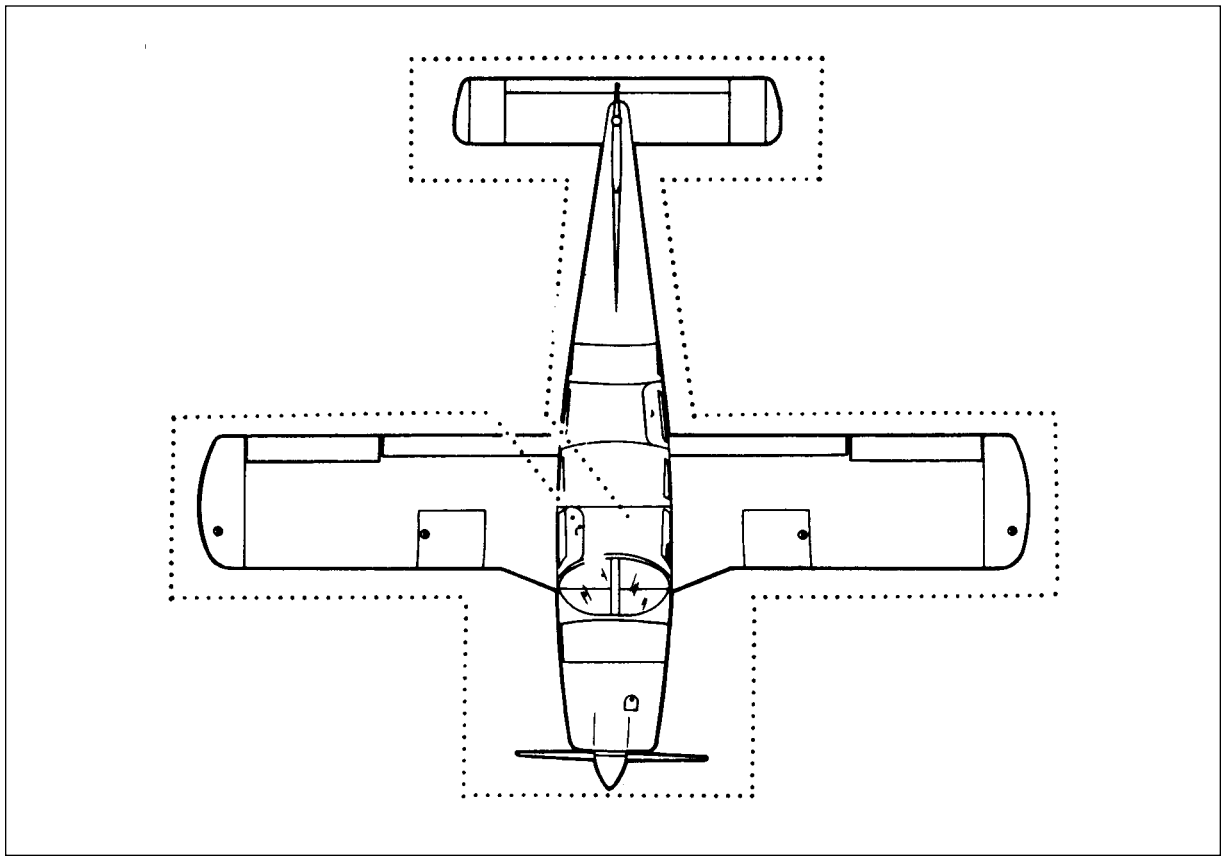
OPERATING INSTRUCTIONS

PREFLIGHT

The airplane should be given a thorough preflight and walk-around inspection prior to each flight. The preflight should include a check of the airplane's operational status, computation of weight and C.G. limits, takeoff distance, and in flight performance. A weather briefing should be obtained for the intended flight path, and any other factors relating to a safe flight should be checked before takeoff.

Walk-Around Inspection

1. a. Release seat belts securing the control wheel.
   b. Master switch ON.
   c. Check fuel quantity indicators (four tanks).
   d. Master switch and ignition OFF.
2. a. Check for external damage and operational interference of control surfaces or hinges.
   b. Insure that wings and control surfaces are free of snow, ice or frost.
3. a. Visually check wing tip tank fuel supply; secure caps.
   b. Drain wing tip tank sumps (See Description - Airplane and Systems Section for procedure).



c. Check navigation lights.
4. a. Visually check main fuel tank fuel supply; secure caps.
b. Drain main fuel tank sumps (See Description - Airplane and Systems Section for procedure).
c. Check that fuel system vents are open.
d. Check main gear shock struts for proper inflation (4-1/2 inches).
e. Check tires for cuts, wear, and proper inflation.
f. Check brake blocks and discs for wear and damage.
g. On left wing check pitot head. Remove cover if used; check that holes are clear.
5. a. Check windshield for cleanliness.
b. Check the propeller and the spinner for defects, dents, or nicks.
c. Check for obvious fuel or oil leaks.
d. Check oil level. (Insure dipstick is properly seated.)
e. Check cowling and inspection covers for security.
f. Check nose wheel tire for inflation, wear.
g. Check nose wheel shock strut for proper inflation (3-1/4 inches).
h. Check air inlets for foreign matter.
i. Check alternator belt tension.
6. a. Stow tow bar and control locks if used.
b. Check baggage for proper storage and security.
c. Close and secure the baggage compartment door.
d. Drain strainer sump (See Description - Airplane and Systems Section for procedure).
7. a. Upon entering the aircraft ascertain that all primary flight controls operate properly.
b. Close and secure the fore and aft cabin doors.
c. Check that required papers are in order and in the airplane.
d. Fasten seat belts and shoulder harness. Check function of inertia reel.

STARTING ENGINE

After completing the preflight inspection:
1. Set brakes ON.
2. Set the carburetor heat control in the full COLD position.
3. Select the desired tank with the fuel selector.
4. Set propeller control on full INCREASE RPM (constant speed propeller).

STARTING ENGINE WHEN COLD

1. Turn master switch ON.
2. Turn electric fuel pump ON.
3. Move mixture control to FULL RICH.
4. Pump throttle to full open and back to idle position for 2 or 3 strokes.
5. Open throttle approximately 1/4 travel.
6. Engage the starter by rotating the magneto switch clockwise and pressing in.
7. When the engine starts, adjust the throttle to the desired setting. If the engine does not start within five to ten seconds, disengage the starter and prime with one to three strokes of the priming pump. Repeat the starting procedure without pumping the throttle.

STARTING ENGINE WHEN HOT

1. Open the throttle approximately 1/2 inch.
2. Turn the master switch ON.
3. Turn the electric fuel pump ON.
4. Put the mixture control in full RICH.
5. Engage the starter by rotating the magneto switch clockwise and pressing in. When the engine fires, release the magneto switch and move the throttle to the desired setting.

STARTING ENGINE WHEN FLOODED

1. Open the throttle full.
2. Turn the master switch ON.
3. Turn the electric fuel pump OFF.
4. Put the mixture control in IDLE CUT-OFF.
5. Engage the starter by rotating the magneto switch clockwise and pressing in. When the engine fires, release the magneto switch, advance the mixture control, and retard the throttle.

When the engine is firing evenly, advance the throttle to 800 RPM. If oil pressure is not indicated within thirty seconds, stop the engine and determine the trouble. In cold weather it will take a few seconds longer to get an oil pressure indication. If the engine has failed to start, refer to the Lycoming Operating Handbook, Engine Troubles and Their Remedies.

Starter manufacturers recommend that cranking periods be limited to thirty seconds with a two minute rest between cranking periods. Longer cranking periods will shorten the life of the starter.

STARTING WITH EXTERNAL POWER SOURCE*

An optional feature called Piper External Power (PEP) allows the operator to use an external battery to crank the engine without having to gain access to the airplane's battery.

The procedure is as follows:

1. Turn the airplane master switch OFF.
2. Connect the RED lead of the PEP kit jumper cable to the POSITIVE (+) terminal of an external 12-volt battery and the BLACK lead to the NEGATIVE (-) terminal.
3. Insert the plug of the jumper cable into the socket located on the fuselage.
4. Turn the airplane master switch ON and proceed with normal engine starting technique.
5. After the engine has starter, turn the master switch OFF and disconnect the jumper cable from the airplane.
6. Turn the master switch ON and check the alternator ammeter for indication of output. DO NOT ATTEMPT FLIGHT IF THERE IS NO INDICATION OF ALTERNATOR OUTPUT.

*Optional equipment

WARM-UP

Warm-up the engine at 800 to 1200 RPM. Avoid prolonged idling at low RPM, as this practice may result in fouled spark plugs.

Takeoff may be made as soon as the ground check is completed, provided that the throttle may be opened fully without backfiring or skipping, and without a reduction in engine oil pressure.

Do not operate the engine at high RPM when running up or taxiing over ground containing loose stones, gravel, or any loose material that may cause damage to the propeller blades.

GROUND CHECK

The magnetos should be checked at 2000 RPM with the propeller set at high RPM on an airplane with a constant speed propeller. Drop off on either magneto should not exceed 175 RPM, and the difference between the magnetos should not exceed 50 RPM.

Check the vacuum gauge; the indicator should read 5.0” ± .1” Hg at 2000 RPM.

Check both oil temperature and oil pressure. The temperature may be low for some time if the engine is being run for the first time of the day, but as long as the pressure is within limits, the engine is ready for takeoff.

Check the annunciator panel lights with the press-to-test button*.

The propeller control should be moved through its complete range to check for proper operation, and then placed in full INCREASE RPM for takeoff. To obtain maximum RPM, push the pedestal mounted control fully forward on the instrument panel. Do not allow a drop of more than 500 RPM during this check. In cold weather the propeller control should be cycled from high to low RPM at least three times before takeoff to make sure that warm engine oil has circulated.

Check the operation of the engine driven fuel pump by observing the fuel pressure gauge with the electric fuel pump OFF.

Carburetor heat should be checked prior to takeoff to be sure that the control is operating properly and to clear any ice which may have formed during taxiing. When the carburetor heat is ON, the air is unfiltered, therefore avoid prolonged ground operation with carburetor heat ON.

*Serial nos. 7500001 and up

TAKEOFF

Just before takeoff the following items should be checked:

1. Fuel on proper tank
2. Electric fuel pump on
3. Engine gauges checked
4. Carburetor heat OFF
5. Mixture set
6. Propeller set
7. Seat backs erect
8. Fasten belts/harness
9. Empty seats - seat belts snugly fastened
10. Flaps 10° (1st notch)
11. Trim tab set
12. Controls free
13. Doors latched

The takeoff technique is conventional for the Cherokee Six. The tab should be set slightly aft of neutral, with the exact setting determined by the loading of the aircraft. Allow the airplane to accelerate to 65 to 70 MPH, then ease back on the wheel enough to let the airplane fly itself off the ground. Premature raising of the nose, or raising it to an excessive angle, will result in a delayed takeoff. After takeoff let the aircraft accelerate to the desired climb speed by lowering the nose slightly.

Takeoffs are normally made with flaps extended 10° (first notch). However, for short field takeoffs, and for takeoffs under difficult conditions, such as in deep grass or on a soft surface, distance can be reduced appreciably by lowering flaps to 25° (second notch).

Short Field, Obstacle Clearance:

Lower flaps to 25° (second notch), accelerate aircraft to 65-70 MPH and ease back on the wheel to rotate. After breaking ground, accelerate to best angle of climb speed, 95 MPH, and climb past obstacle. Continue climb and accelerate to best rate of climb speed, 105 MPH, and slowly retract the flaps.

Short Field, No Obstacle:

Lower flaps to 25° (second notch), accelerate aircraft to 65-70 MPH and ease back on the wheel to rotate. After breaking ground accelerate to best rate of climb speed, 105 MPH, and slowly retract the flaps while climbing out.

Soft Field, Obstacle Clearance:

Lower flaps to 25° (second notch), accelerate aircraft, pull nose gear off as soon as possible and lift off at lowest possible airspeed. Accelerate just above the ground to best angle of climb speed, 95 MPH, to climb past obstacle clearance height. Continue climb while accelerating to best rate of climb speed, 105 MPH, and slowly retract the flaps.

Soft Field, No Obstacle:

Lower flaps to 25° (second notch), accelerate aircraft, pull nose gear off as soon as possible and lift off at lowest possible airspeed. Accelerate just above the ground to best rate of climb speed, 105 MPH, and climb out while slowly retracting the flaps.

CLIMB

The best rate of climb at gross weight will be obtained at 105 MPH. The best angle of climb may be obtained at 95 MPH. At lighter than gross weight these speeds are reduced somewhat. For climbing en route, a speed of 115 MPH is recommended. This will produce better forward speed and increased visibility over the nose during the climb. Turn fuel pump off after climb-out.

STALLS

The stall characteristics of the Cherokee Six are conventional. Visual stall warning is provided by a red light located on the left side of the instrument panel which illuminates automatically between 5 and 10 MPH above the stall speed. The gross weight stalling speed of the Cherokee Six with power off and full flaps is 63 MPH. With the flaps up this speed is increased 8 MPH. Loss of altitude during stalls can be as great as 350 feet depending on configuration and power. The stall speed chart is at gross weight. Stall speeds at lower weights will be correspondingly less.

Intentional spins are prohibited in this airplane. In the event that an inadvertent spin occurs, standard recovery technique should be used immediately.

Stall speed in mph (Calibrated Airspeed):

Flaps Up - 71
Flaps 40° - 63

CRUISING

The cruising speed of the Cherokee Six is determined by many factors, including power setting, altitude, temperature, loading, and equipment installed on the airplane.

The normal maximum cruising power is 75% of the rated horsepower of the engine. True airspeeds, which can be obtained at various altitudes and power settings, can be determined from the Performance Charts Section.

When selecting cruising RPM below 2300, limiting manifold pressure for continuous operation, as specified by the appropriate “Avco-Lycoming Operator’s Manual,” should be observed.

Use of the mixture control in cruising flight reduces fuel consumption significantly, especially at higher altitudes. The mixture should be leaned during cruising operation above 5000 feet altitude and at pilot’s discretion at lower altitudes when 75% power or less is being used. If any doubt exists as to the amount of power being used, the mixture should be in the FULL RICH position for all operations under 5000 feet.

To lean the mixture, disengage lock* and pull the mixture control until the engine becomes rough, indicating that the lean mixture limit has been reached in the leaner cylinders. Then enrich the mixture by pushing the control towards the instrument panel until engine operation becomes smooth.

If the airplane is equipped with the optional exhaust gas temperature (EGT) gauge, a more accurate means of leaning is available to the pilot. For this procedure, refer to the "Avco-Lycoming Operator's Manual."

The continuous use of carburetor heat during cruising flight decreases engine efficiency. Unless icing conditions in the carburetor are severe, do not cruise with the heat on. Apply full carburetor heat slowly and only for a few seconds at intervals determined by icing severity.

In order to keep the airplane in best lateral trim during cruise flight, the fuel should be used alternately from each main tank, and when these are nearly exhausted, from each tip tank. It is recommended that one main tank be used for one hour after takeoff, the other main tank used until nearly exhausted, then return to the first main tank. When nearly exhausted, turn to one tip tank and alternate at one-half hour internals to maintain lateral trim.

The following listing contains a few recommended fuel operation procedures:

1. Fuel quantity should be visually checked in all fuel tanks before entering the aircraft.
2. After using the underseat quick drain, it should be checked from outside the aircraft to make sure it has closed completely, and is not leaking.
3. Takeoff should be made on the tank with the highest quantity of fuel to assure best fuel flow, and this tank selected before or immediately after starting in order to allow fuel flow to be adequately established before takeoff. The tank with the highest quantity of fuel should be selected for landing.
4. Fuel tank selection at low altitude is not recommended, since little recovery time is available in the event of an error in tank selection. When switching tanks, make sure that the selector drops into a detent, and is lined up with the desired tank.
5. The electric fuel pump should be turned on before switching tanks, and should be left on for a short period thereafter.
6. To preclude making a hasty selection, and to provide continuity of flow, the selector should be changed to another tank before fuel is exhausted from the tank in use.
7. Operation of the engine driven fuel pump should be checked while taxiing or during pretakeoff engine run up by switching off the electric fuel pump and observing fuel pressure.
8. During cruise, the electric fuel pump should be in the off position so that any malfunction of the engine driven fuel pump is immediately apparent.
9. If signs of fuel starvation should occur at any time during flight, fuel exhaustion should be suspected, at which time the fuel selector should be immediately positioned to a full tank and the electric fuel pump switched to the on position.
10. When the seventh seat is used, all weight in excess of 3112 pounds must be in fuel weight only. Fill tip tanks first and use fuel from main tanks first.

*Serial nos. 7500001 and up

TURBULENT AIR OPERATION

In keeping with good operating practice used in all aircraft, it is recommended that when turbulent air is encountered or expected, the airspeed be reduced to maneuvering speed to reduce the structural loads caused by gusts and to allow for inadvertent speed build-ups which may occur as a result of the turbulence or of distractions caused by the conditions.

MANEUVERS

Intentional spins are prohibited in this airplane. In the event that an inadvertent spin occurs, standard recovery technique should be used immediately.

Lazy eights and chandelles may be performed provided a 60° angle of bank or a 30° angle of pitch is not exceeded.

APPROACH AND LANDING

Before landing check list:

1. Seat backs erect
2. Fasten belts/harness
3. Fuel on proper tank
4. Carburetor heat OFF
5. Electric fuel pump on
6. Mixture rich
7. Propeller set
8. Flaps down (125 mph)

The airplane should be trimmed to an approach speed of about 90 MPH and flaps extended. The flaps can be lowered at speeds up to 125 MPH, if desired. The propeller should be set at full RPM or at a high cruising RPM to facilitate an emergency go-around if needed. Carburetor heat should not be applied unless there is an indication of carburetor icing, since the use of carburetor heat causes a reduction in power which may be critical in case of a go-around. Full throttle operation with heat on is likely to cause detonation.

The amount of flap used during landings and the speed of the aircraft at contact with the runway should be varied according to the landing surface and conditions of wind and aircraft loading. It is generally good practice to contact the ground at the minimum possible safe speed consistent with existing conditions.

Normally, the best technique for short and slow landings is to use full flap and enough power to maintain the desired airspeed and approach flight path. Mixture should be full rich, fuel on the fullest tank, carburetor heat off, and electric fuel pump on. Reduce the speed during the flareout and contact the ground close to the stalling speed (63 to 70 MPH). After ground contact hold the nose wheel off as long as possible. As the airplane slows down, drop the nose and apply the brakes. There will be less chance of skidding the tires if the flaps are retracted before applying the brakes. Braking is most effective when back pressure is applied to the control wheel, putting most of the aircraft weight on the main wheels. In high wind conditions, particularly in strong crosswinds it may be desirable to approach the ground at higher than normal speeds with partial or no flaps

STOPPING ENGINE

At the pilot's discretion, the flaps should be raised and the electric fuel pump turned off. After parking, the radios should be turned off, the propeller set in the full increase position, and the engine stopped by disengaging the mixture control lock* and pulling the mixture control out to idle cut-off. The throttle should be left full aft to avoid engine vibration while stopping. Then the magnetos and master switches must be turned off and the parking brake set.

AIRSPEED DATA

All airspeeds quoted in this manual are calibrated unless otherwise noted. Calibrated airspeed is indicated airspeed corrected for instrument and position errors. The following table gives the correlation between indicated airspeed and calibrated airspeed if zero instrument error is assumed. This calibration is valid only when flown at maximum gross weight in level flight.

AIRSPEED CORRECTION TABLE

Flaps 0°												
IAS - MPH	60	70	80	90	100	110	120	130	140	150	160	170
CAS - MPH	70	78	85	94	102	111	120	130	139	148	157	166

Flaps 40°							
IAS - MPH	60	70	80	90	100	110	120
CAS - MPH	68	76	84	93	101	110	119

MOORING

The Cherokee Six should be moved on the ground with the aid of the nose wheel tow bar provided with each plane and secured behind the rear seats. Tie downs can be secured to rings provided under each wing and to the tail skid. The aileron and stabilator controls should be secured by looping the safety belt through the control wheel and pulling it snug. The rudder is held in position by its connections to the nose wheel steering and normally does not have to be secured. The flaps are locked when in the full up position and should be left retracted.

WEIGHT AND BALANCE

It is the responsibility of the owner and pilot to determine that the airplane remains within the allowable weight vs. center of gravity envelope while in flight. For weight and balance data see the Airplane Flight Manual and Weight and Balance Sections.

*Serial nos. 7500001 and up

OPERATING TIPS

The following Operating Tips are of particular value in the operation of the Cherokee PA-32-260.

1. Learn to trim for takeoff so that only a very light back pressure on the wheel is required to lift the airplane off the ground.
2. The best speed for takeoff is about 70 MPH under normal conditions. Trying to pull the airplane off the ground at too low an airspeed decreases the controllability of the airplane in event of engine failure.
3. Flaps may be lowered at airspeeds up to 125 MPH. To reduce flap operating loads, it is desirable to have the airplane at a slower speed before extending the flaps.
4. Before attempting to reset any circuit breaker, allow a two to five minute cooling off period.
5. Before starting the engine, check that all radio switches, light switches and the pitot heat switch are in the off position so as not to create an overloaded condition when the starter is engaged.
6. The overvoltage relay is provided to protect the electronics equipment from a momentary overvoltage condition (approximately 16.5 volts and up), or a catastrophic regulator failure. In the event of a momentary condition, the relay will open and the ammeter will indicate “0” output from the alternator. The relay may be reset by switching the ALT switch to OFF for approximately one second and then returning the ALT switch to ON. If after recycling the ALT switch the condition persists, the flight should be terminated as soon as practical. Reduce the battery load to a minimum. The ALT light on the annunciator panels will illuminate if the alternator fails. Recycle the ALT switch and check the ALT FIELD circuit breaker. If the failure persists after this action, reduce electrical loads and land as soon as practical.
7. The vacuum gauge is provided to monitor the pressure available to assure the correct operating speed of the vacuum driven gyroscopic flight instruments. It also monitors the condition of the common air filter by measuring the flow of air through the filter.

   If the vacuum gauge does not register 5.0” ± .1 “ Hg at 2000 RPM, the following items should be checked before flight:

   a. Common air filter could be dirty or restricted.
   b. Vacuum lines could be collapsed or broken.
   c. Vacuum pump worn.
   d. Vacuum regulator, not adjusted correctly. The pressure, even though set correctly, can read lower under two conditions: (1) Very high altitude, above 12,000 feet, (2) Low engine RPM, usually on approach or during training maneuvers. This is normal and should not be considered a malfunction.

*Serial nos. 7500001 and up

8. The shape of the wing fuel tanks is such that in certain maneuvers the fuel may move away from the tank outlet. If the outlet is uncovered, the fuel flow will be interrupted and a temporary loss of power may result. Pilots can prevent inadvertent uncovering of the outlet by avoiding maneuvers which could result in uncovering the outlet.

   Extreme running turning takeoffs should be avoided as fuel flow interruption may occur.

   Prolonged slips or skids which result in excess of 2000 feet of altitude loss, or other radical or extreme maneuvers which could cause uncovering of the fuel outlet must be avoided as fuel flow interruption may occur when tank being used is not full.
9. Anti-collision lights should not be operating when flying through overcast and clouds since reflected light can produce spacial disorientation. Do not operate strobe lights when taxiing in the vicinity of other aircraft.
10. The rudder pedals are suspended from a torque tube which extends across the fuselage. The pilot should become familiar with the proper positioning of his feet on the rudder pedals so as to avoid interference with the torque tube when moving the rudder pedals or operating the toe brakes.
11. In an effort to avoid accidents, pilots should obtain and study the safety related information made available in FAA publications such as regulations, advisory circulars, Aviation News, AIM and safety aids.