

## OPERATING CHECK LIST

One of the first steps in obtaining the utmost performance, service, and flying enjoyment from your Cessna is to familiarize yourself with your airplane's equipment, systems, and controls. This can best be done by reviewing this equipment while sitting in the airplane. Those items whose function and operation are not obvious are covered in Section II.

Section I lists, in Pilot's Check List form, the steps necessary to operate your airplane efficiently and safely. It is not a check list in its true form as it is considerably longer, but it does cover briefly all of the points that you should know for a typical flight.

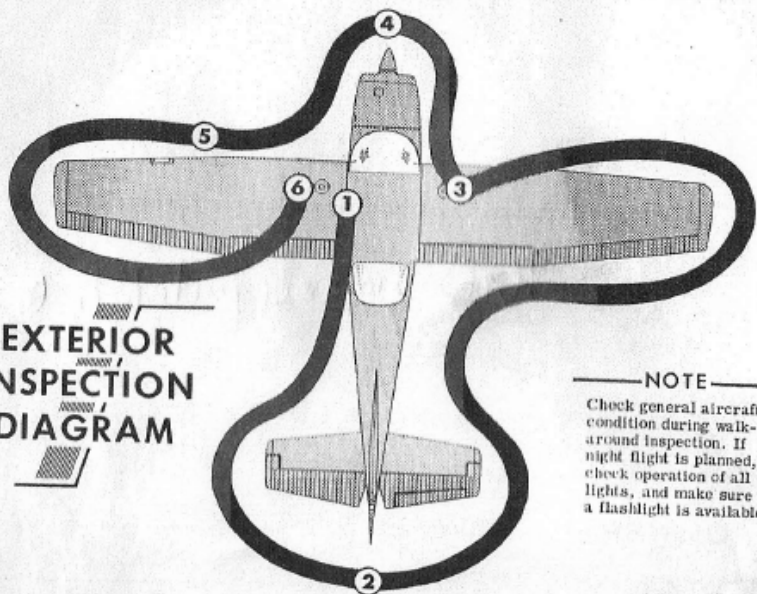
The flight and operational characteristics of your airplane are normal in all respects. There are no "unconventional" characteristics or operations that need to be mastered. All controls respond in the normal way within the entire range of operation. All airspeeds mentioned in Sections I and II are indicated airspeeds. Corresponding calibrated airspeeds may be obtained from the Airspeed Correction Table in Section V.

## BEFORE ENTERING THE AIRPLANE.

- (1) Make an exterior inspection in accordance with figure 1-1.

## BEFORE STARTING THE ENGINE.

- (1) Seats and Seat Belts -- Adjust and lock.
- (2) Flight Controls -- Check.
- (3) Brakes -- Test and set.
- (4) Master Switch -- "ON."
- (5) Cowl Flaps -- "OPEN." (Move lever out of locking hole to reposition.)
- (6) Elevator and Rudder Trim -- "TAKE-OFF" setting.
- (7) Fuel Selector Valve -- "BOTH."
- (8) Turn all radio switches "OFF."

EXTERIOR  
INSPECTION  
DIAGRAM

## NOTE

Check general aircraft condition during walk-around inspection. If night flight is planned, check operation of all lights, and make sure a flashlight is available.

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| <ol style="list-style-type: none"> <li>1 a. Turn on master switch and check fuel quantity indicators; then turn master switch "OFF."</li> <li>b. Check ignition switch "OFF."</li> <li>c. Check fuel tank selector valve handle on "BOTH."</li> <li>d. On first flight of day and after each refueling, pull out strainer drain knob for about four seconds, to clear fuel strainer of possible water and sediment.</li> <li>e. Remove control wheel lock.</li> <li>f. Check baggage door for security.</li> </ol> | <ol style="list-style-type: none"> <li>4 a. Check propeller and spinner for nicks and security, and propeller for oil leaks.</li> <li>b. Make visual check to insure that fuel strainer drain valve is closed after draining operation.</li> <li>c. Check nose wheel strut and tire for proper inflation.</li> <li>d. Disconnect nose tie-down.</li> <li>e. Check carburetor air filter for restrictions by dust or other foreign matter.</li> <li>f. Check oil level. Do not operate with less than nine quarts. Fill for extended flight.</li> </ol> |
| <ol style="list-style-type: none"> <li>2 a. Remove rudder gust lock, if installed.</li> <li>b. Disconnect tail tie-down.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                | <ol style="list-style-type: none"> <li>5 a. Remove pitot tube cover, if installed, and check pitot tube opening for stoppage.</li> <li>b. Check fuel tank vent opening for stoppage. Also, check fuel tank vent opening provided in right wing when optional long range fuel tanks are installed.</li> </ol>                                                                                                                                                                                                                                           |
| <ol style="list-style-type: none"> <li>3 a. Check main wheel tire for proper inflation.</li> <li>b. Inspect airspeed static source hole on side of fuselage for stoppage.</li> <li>c. Disconnect wing tie-down.</li> </ol>                                                                                                                                                                                                                                                                                         | <ol style="list-style-type: none"> <li>6 Same as 3.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

Figure 1-1.

## STARTING ENGINE.

- (1) Carburetor Heat -- Cold.
- (2) Mixture -- Rich.
- (3) Propeller -- High RPM.
- (4) Throttle -- Cracked (one-half inch).
- (5) Primer -- As required.
- (6) Ignition Switch -- "START." Hold until engine fires, but not longer than 30 seconds.
- (7) Ignition Switch -- Release to "BOTH" (immediately after engine fires).

8) Rotating Beacon <sup>ON</sup> NOTE

If engine has been overprimed, start with throttle open 1/4 to 1/2 full open. Reduce throttle to idle when engine fires.

### NOTE

After starting, check for oil pressure indication within 30 seconds in normal temperatures and 60 seconds in cold temperatures. If no indication appears, shut off engine and investigate.

## BEFORE TAKE-OFF.

- (1) Throttle Setting -- 1700 RPM.
- (2) Engine Instruments -- Check.
- (3) Carburetor Heat -- Check operation, then set to cold unless icing conditions prevail.
- (4) Ammeter -- Check.
- (5) Suction Gage -- Check (4.5 inches of mercury desired, 3.75 to 5.0 acceptable).
- (6) Magnetos -- Check (50 RPM maximum differential between magnetos).
- (7) Propeller -- Cycle from high to low RPM; return to high RPM (full in).
- (8) Flight Controls -- Recheck.
- (9) Wing Flaps -- Check operation and set 0° to 20°.
- (10) Cowl Flaps -- Full "OPEN."
- (11) Elevator and Rudder Trim -- Recheck "TAKE-OFF" setting.
- (12) Cabin Doors -- Closed and locked.
- (13) Flight Instruments and Radios -- Set.

## TAKE-OFF.

### NORMAL TAKE-OFF.

- (1) Wing Flaps -- Up.
- (2) Carburetor Heat -- Cold.
- (3) Power -- Full throttle and 2600 RPM.
- (4) Elevator Control -- Raise nosewheel at 60 MPH.
- (5) Climb Speed -- 90 MPH until all obstacles are cleared, then set up climb speed as shown in "NORMAL CLIMB" paragraph.

### MAXIMUM PERFORMANCE TAKE-OFF.

- (1) Wing Flaps -- 20°.
- (2) Carburetor Heat -- Cold.
- (3) Brakes -- Apply.
- (4) Power -- Full throttle and 2600 RPM.
- (5) Brakes -- Release.
- (6) Elevator Control -- Maintain slightly tail-low attitude.
- (7) Climb Speed -- 60 MPH until all obstacles are cleared, then set up climb speed as shown in "MAXIMUM PERFORMANCE CLIMB."
- (8) Wing Flaps -- Up after obstacles are cleared.

## CLIMB.

### NORMAL CLIMB.

- (1) Air Speed -- 100 to 120 MPH.
- (2) Power -- 23 inches and 2450 RPM.
- (3) Mixture -- Full rich (unless engine is rough due to excessively rich mixture).
- (4) Cowl Flaps -- Open as required.

### MAXIMUM PERFORMANCE CLIMB.

- (1) Air Speed -- 88 MPH (sea level) to 84 MPH (10,000 feet).
- (2) Power -- Full throttle and 2600 RPM.
- (3) Mixture -- Full rich (unless engine is rough).
- (4) Cowl Flaps -- Full "OPEN."

## CRUISING.

- (1) Engine Power -- 15 to 23 inches of manifold pressure and 2200 - 2450 RPM.
- (2) Cowl Flaps -- Open as required.
- (3) Elevator and Rudder Trim -- Adjust.
- (4) Mixture -- Lean.

## LET-DOWN.

- (1) Mixture -- Rich.
- (2) Power -- As desired.
- (3) Carburetor Heat -- Apply (if icing conditions exist).

## BEFORE LANDING.

- (1) Fuel Selector Valve -- "BOTH."
- (2) Mixture -- Rich.
- (3) Propeller -- High RPM.
- (4) Cowl Flaps -- Closed.
- (5) Carburetor Heat -- Apply before closing throttle.
- (6) Airspeed -- 80 to 90 MPH (flaps retracted).
- (7) Wing Flaps -- 0° to 40° (below 110 MPH).
- (8) Airspeed -- 70 to 80 MPH (flaps extended).
- (9) Elevator and Rudder Trim -- Adjust.

## NORMAL LANDING.

- (1) Landing Technique -- Conventional for all flap settings.

## AFTER LANDING.

- (1) Cowl Flaps -- "OPEN."
- (2) Wing Flaps -- Retract.
- (3) Carburetor Heat -- Cold.

## SECURE AIRCRAFT.

- (1) Mixture -- Idle cut-off (pulled full out).

### NOTE

Do not open throttle as engine stops since this actuates the accelerator pump.

- (2) All Switches -- Off.
- (3) Brakes -- Set.
- (4) Control Lock -- Installed.



## DESCRIPTION AND OPERATING DETAILS

The following paragraphs describe the systems and equipment whose function and operation is not obvious when sitting in the airplane. This section also covers in somewhat greater detail some of the items listed in Check List form in Section I that require further explanation.

## FUEL SYSTEM.

Fuel is supplied to the engine from two tanks, one in each wing. The total usable fuel, for all flight conditions, is 60 gallons for standard tanks and 79 gallons for optional long range tanks.

### NOTE

Unusable fuel is at a minimum due to the design of the fuel system. However, with 1/4 tank or less, prolonged uncoordinated flight such as slips or skids can uncover the fuel tank outlets, causing fuel starvation and engine stoppage when operating on a single tank. Therefore, to avoid this problem with low fuel reserves, the fuel selector should be set at "BOTH" position.

Fuel from each wing tank flows by gravity to a selector valve. Depending upon the setting of the selector valve, fuel from the left, right, or both tanks flows through a fuel strainer and carburetor to the engine induction system.

### NOTE

Take off with the fuel selector valve handle in the "BOTH" position to prevent inadvertent take-off on an empty tank. However, when the selector is in the "BOTH" position, unequal fuel flow from each tank may occur after extended flight if the wings are not maintained exactly level. Re-