



NOTE

Visually check airplane for general condition during walk-around inspection. In cold weather, remove even small accumulations of frost, ice or snow from wing, tail and control surfaces. Also, make sure that control surfaces contain no internal accumulations of ice or debris. If a night flight is planned, check operation of all lights, and make sure a flashlight is available.

Figure 4-1. Preflight Inspection

CHECKLIST PROCEDURES

PREFLIGHT INSPECTION

① CABIN

- (1) Control Wheel Lock -- REMOVE.
- (2) Ignition Switch -- OFF.
- (3) Master Switch -- ON.
- (4) Fuel Quantity Indicators -- CHECK QUANTITY.
- (5) Master Switch -- OFF.
- (6) Baggage Door -- CHECK, lock with key if child's seat is to be occupied.

② EMPENNAGE

- (1) Rudder Gust Lock -- REMOVE.
- (2) Tail Tie-Down -- DISCONNECT.
- (3) Control Surfaces -- CHECK freedom of movement and security.

③ RIGHT WING Trailing Edge

- (1) Aileron -- CHECK freedom of movement and security.

④ RIGHT WING

- (1) Wing Tie-Down -- DISCONNECT.
- (2) Main Wheel Tire --- CHECK for proper inflation.
- (3) Before first flight of the day and after each refueling, use sampler cup and drain small quantity of fuel from fuel tank sump quick-drain valve to check for water, sediment, and proper fuel grade (red).
- (4) Fuel Quantity -- CHECK VISUALLY for desired level.
- (5) Fuel Filler Cap -- SECURE.

⑤ NOSE

- (1) Engine Oil Level -- CHECK. Do not operate with less than six quarts. Fill to eight quarts for extended flight.
- (2) Before first flight of the day and after each refueling, pull out strainer drain knob for about four seconds to clear fuel strainer of possible water and sediment. Check strainer drain closed. If water is observed, the fuel system may contain additional water, and further draining of the system at the strainer, fuel tank sumps, and fuel

selector valve drain plug will be necessary.

- (3) Propeller and Spinner -- CHECK for nicks and security.
- (4) Landing Light(s) -- CHECK for condition and cleanliness.
- (5) Carburetor Air Filter -- CHECK for restrictions by dust or other foreign matter.
- (6) Nose Wheel Strut and Tire -- CHECK for proper inflation.
- (7) Nose Tie-Down -- DISCONNECT.
- (8) Flight Instrument Static Source Opening (left side of fuselage) -- CHECK for stoppage.

Ⓒ LEFT WING

- (1) Main Wheel Tire -- CHECK for proper inflation.
- (2) Before first flight of the day and after each refueling, use sampler cup and drain small quantity of fuel from fuel tank sump quick-drainvalve to check for water, sediment and proper fuel grade (red).
- (3) Fuel Quantity -- CHECK VISUALLY for desired level.
- (4) Fuel Filler Cap -- SECURE.

⒪ LEFT WING Leading Edge

- (1) Pitot Tube Cover -- REMOVE and check opening for stoppage.
- (2) Fuel Tank Vent Opening -- CHECK for stoppage.
- (3) Stall Warning Opening -- CHECK for stoppage. To check the system, place a clean handkerchief over the vent opening and apply suction; a sound from the warning horn will confirm system operation.
- (4) Wing Tie-Down -- DISCONNECT.

Ⓓ LEFT WING Trailing Edge

- (1) Aileron -- CHECK for freedom of movement and security.

BEFORE STARTING ENGINE

- (1) Preflight Inspection -- COMPLETE.
- (2) Seats, Belts, Shoulder Harnesses -- ADJUST and LOCK.
- (3) Fuel Selector Valve -- BOTH.
- (4) Radios, Autopilot, Electrical Equipment -- OFF.
- (5) Brakes -- TEST and SET.
- (6) Circuit Breakers -- CHECK IN.

STARTING ENGINE

- (1) Mixture -- RICH.

- (2) Carburetor Heat -- COLD.
- (3) Master Switch -- ON.
- (4) Prime -- AS REQUIRED (2 to 6 strokes; none if engine is warm).
- (5) Throttle -- OPEN 1/8 INCH.
- (6) Propeller Area -- CLEAR.
- (7) Ignition Switch -- START (release when engine starts).
- (8) Oil Pressure -- CHECK,

BEFORE TAKEOFF

- (1) Cabin Doors and Window(s) -- CLOSED and LOCKED.
- (2) Flight Controls -- FREE and CORRECT.
- (3) Elevator Trim -- TAKEOFF.
- (4) Flight Instruments -- SET.
- (5) Radios -- SET.
- (6) Autopilot (if installed) -- OFF.
- (7) Fuel Selector Valve -- BOTH.
- (8) Mixture -- RICH (below 3000 feet).
- (9) Parking Brake -- SET.
- (10) Throttle -- 1700 RPM.
 - a. Magnetos -- CHECK {RPM drop should not exceed 125 RPM on either magneto or 50 RPM differential between magnetos).
 - b. Carburetor Heat -- CHECK (for RPM drop).
 - c. Engine Instruments and Ammeter -- CHECK.
 - d. Suction Gage -- CHECK.
- (11) Flashing Beacon, Navigation Lights and/or Strobe Lights -- ON as required.
- (12) Throttle Friction Lock -- ADJUST.
- (13) Wing Flaps -- UP.

TAKEOFF

NORMAL TAKEOFF

- (1) Wing Flaps -- UP.
- (2) Carburetor Heat -- COLD.
- (3) Throttle -- FULL.
- (4) Elevator Control -- LIFT NOSE WHEEL (at 55 KIAS),
- (5) Climb Speed -- 70-80 KIAS.

MAXIMUM PERFORMANCE TAKEOFF

- (1) Wing Flaps -- UP.

- (2) Carburetor Heat -- COLD.
- (3) Brakes -- APPLY.
- (4) Throttle -- FULL OPEN.
- (5) Brakes -- RELEASE.
- (6) Elevator Control -- SLIGHTLY TAIL LOW.
- (7) Climb Speed -- 59 KIAS (until all obstacles are cleared).

ENROUTE CLIMB

- (1) Airspeed -- 70-90 KIAS.

NOTE

If a maximum performance climb is necessary, use speeds shown in the Rate Of Climb chart in Section 5.

- (2) Throttle -- FULL OPEN.
- (3) Mixture -- FULL RICH (mixture may be leaned above 3000 feet).

CRUISE

- (1) Power -- 2200-2700 RPM (no more than 75%).
- (2) Elevator Trim -- ADJUST.
- (3) Mixture -- LEAN.

DESCENT

- (1) Mixture -- RICH.
- (2) Power -- AS DESIRED.
- (3) Carburetor Heat -- AS REQUIRED (to prevent carburetor icing).

BEFORE LANDING

- (1) Fuel Selector Valve -- BOTH.
- (2) Mixture -- RICH.
- (3) Carburetor Heat -- ON (apply full heat before closing throttle).
- (4) Airspeed -- 60-70 KIAS (flaps UP).

- (5) Wing Flaps -- AS DESIRED.
- (6) Airspeed -- 55-65 KIAS (flaps DOWN).

BALKED LANDING

- (1) Throttle -- FULL OPEN.
- (2) Carburetor Heat -- COLD.
- (3) Wing Flaps -- 20°.
- (4) Airspeed -- 55 KIAS.
- (5) Wing Flaps -- RETRACT slowly.

NORMAL LANDING

- (1) Touchdown -- MAIN WHEELS FIRST.
- (2) Landing Roll -- LOWER NOSE WHEEL GENTLY.
- (3) Braking -- MINIMUM REQUIRED.

AFTER LANDING

- (1) Wing Flaps -- UP.
- (2) Carburetor Heat -- COLD.

SECURING AIRPLANE

- (1) Parking Brake -- SET.
- (2) Radios, Electrical Equipment, Autopilot -- OFF.
- (3) Mixture -- IDLE CUT-OFF (pulled full out).
- (4) Ignition Switch -- OFF.
- (5) Master Switch -- OFF.
- (6) Control Lock -- INSTALL.