

## BEFORE STARTING THE ENGINE.

- (1) Seats, Seat Belts and Shoulder Harnesses -- Adjust and lock.
- (2) Fuel Selector Valve -- BOTH.
- (3) Brakes -- Test and set.
- (4) Radios and Electrical Equipment -- OFF.

## STARTING THE ENGINE.

- (1) Mixture -- Rich.
- (2) Carburetor Heat -- Cold.
- (3) Primer -- 2 - 6 strokes as required (none if engine is warm).  
Close and lock primer.
- (4) Throttle -- Open 1/8".
- (5) Master Switch -- ON.
- (6) Propeller Area -- Clear.
- (7) Ignition Switch -- START (release when engine starts).
- (8) Oil Pressure -- Check.

## BEFORE TAKE-OFF.

- (1) Parking Brake -- Set.
- (2) Flight Controls -- Check for free and correct movement.
- (3) Fuel Selector Valve -- BOTH.
- (4) Elevator Trim Control Wheel -- TAKE-OFF setting.
- (5) Throttle Setting -- 1700 RPM.
- (6) Engine Instruments and Ammeter -- Check.
- (7) Suction Gage -- Check (4.6 to 5.4 inches of mercury).
- (8) Magnetos -- Check (RPM drop should not exceed 125 RPM on either magneto or 50 RPM differential between magnetos).
- (9) Carburetor Heat -- Check operation.
- (10) Flight Instruments and Radios -- Set.
- (11) Optional Autopilot or Wing Leveler -- Off.
- (12) Cabin Doors and Window -- Closed and locked.

## TAKE-OFF.

### NORMAL TAKE-OFF.

- (1) Wing Flaps -- 0°.
- (2) Carburetor Heat -- Cold.

- (3) Power -- Full throttle.
- (4) Elevator Control -- Lift nose wheel at 60 MPH.
- (5) Climb Speed -- 75 to 85 MPH.

## MAXIMUM PERFORMANCE TAKE-OFF.

- (1) Wing Flaps -- 0°.
- (2) Carburetor Heat -- Cold.
- (3) Brakes -- Apply.
- (4) Power -- Full throttle.
- (5) Brakes -- Release.
- (6) Airplane Attitude -- Slightly tail low.
- (7) Climb Speed -- 68 MPH until all obstacles are cleared.

## CLIMB.

- (1) Airspeed -- 80 to 90 MPH.

### NOTE

If a maximum performance climb is necessary, use speeds shown in the Maximum Rate-Of-Climb Data chart in Section VI.

- (2) Power -- Full throttle.
- (3) Mixture -- Full rich (mixture may be leaned above 3000 feet).

## CRUISING.

- (1) Power -- 2200 to 2700 RPM.

### NOTE

Maximum cruise RPM varies with altitude. For details, refer to Section IV.

- (2) Elevator Trim Control Wheel -- Adjust.
- (3) Mixture -- Lean for maximum RPM.