

**BEFORE STARTING ENGINE**

1. PREFLIGHT (incl. documents) .....COMPLETE
2. FUEL QUANTITY..... ADEQUATE
3. SEATS AND BELTS.....ADJUST AND LOCK
4. RADIO MASTER..... OFF
5. ELECTRICAL EQUIPMENT.....OFF
6. CIRCUIT BREAKERS.....CHECK IN
7. BRAKES.....TEST AND SET
8. PASSENGER BRIEFING.....COMPLETE

**STARTING ENGINE**

1. MAGNETO KEY.....IN (mags off)
2. FUEL SELECTOR.....2<sup>nd</sup> TANK
3. THROTTLE.....OPEN 1/2 INCH
4. MIXTURE.....RICH
5. CARB HEAT.....OFF
6. MASTER SWITCH.....ON
7. ANNUNCIATOR LIGHTS.....3 ON
8. BEACON.....ON
9. FUEL PUMP.....ON
10. PRIME.....AS REQUIRED AND LOCKED
11. PROPELLER AREA.....CLEAR
12. IGNITION SWITCH.....START
13. THROTTLE.....1,000 RPM
14. OIL PRESSURE.....CHECK
15. FUEL PUMP.....OFF
16. ELECTRIC TRIM.....ON
17. RADIO MASTER.....ON
18. TRANSPONDER.....ALT
19. LIGHTS.....AS NEEDED
20. MIXTURE.....LEAN
20. PARKING BRAKE.....OFF
22. BEFORE TAXI.....CLEARANCE / PLAN
23. BRAKE AND STEERING.....UPON TAXI
24. IFR TAXI CHECKS.....UPON TAXI

**BEFORE TAKEOFF**

1. (IFR TAXI CHECKS.....COMPLETE)
2. FLIGHT CONTROLS.....FREE AND CORRECT
3. FLIGHT INSTRUMENTS.....SET
4. RADIOS.....SET (RNAV OFF)
5. FLAPS.....UP (OR AS DESIRED)
6. ELEVATOR TRIM.....SET FOR TAKEOFF
7. MIXTURE.....RICH
8. FUEL SELECTOR.....1<sup>ST</sup> TANK
9. THROTTLE .....2,000 RPM
  - A) MAGNETOS (175 MAX DROP).....CHECK
  - B) CARB HEAT.....CHECK (CYCLE/OFF)
  - C) ENGINE INSTRUMENTS.....CHECK
  - D) VACUUM GAUGE (5" ±1").....CHECK
  - E) AMMETER.....CHECK
  - F) CIRCUIT BREAKERS.....CHECK
  - G) THROTTLE .....1,000 RPM
10. ANNUNCIATOR LIGHTS.....OFF
11. AUTO PILOT.....OFF
12. DOOR & STORM WINDOW..... LATCHED
13. FUEL PUMP.....ON
14. LIGHTS AND STROBES.....AS DESIRED
15. PARKING BRAKEOFF.....OFF
16. DEPARTURE TIME.....NOTED

**NORMAL TAKEOFF**

1. FLAPS.....RETRACTED
2. ROTATE.....55 KIAS
3. INITIAL CLIMB SPEED......80 KIAS

**SHORT FIELD TAKEOFF**

1. FLAPS.....25°
2. BRAKES...HOLD UNTIL FULL POWER DEVELOPED
3. ROTATE.....52 KIAS
4. INITIAL CLIMB.....52 KIAS
5. AFTER OBSTACLE.....80 KIAS FLAPS UP

**SOFT FIELD TAKEOFF**

1. FLAPS.....25°
2. STABILATOR .....AFT (Hold Nose Up)
3. ACCELERATE.....IN GROUND EFFECT
4. CLIMB.....80 KIAS

NOTE: Hold nose up until liftoff. Accelerate in ground effect until normal climb speed achieved, then rotate to normal climb attitude and retract flaps.

**CLIMB**

1. BEST RATE (flaps up).....79 KIAS
2. BEST ANGLE (flaps up) .....63 KIAS
3. CRUISE CLIMB.....87 KIAS
4. FUEL PUMP.....OFF
5. SYSTEMS and ENGINE INSTRUMENTS.....CHECK

**CRUISE**

1. ACCELERATE.....TO CRUISE SPEED
2. THROTTLE.....2300-2500 RPM
3. TRIM.....LEVEL
4. MIXTURE.....LEAN (at all altitudes)
5. FUEL PUMP.....CONFIRM OFF
6. SYSTEMS & ENGINE INSTRUMENTS.....CHECK

**IN RANGE**

1. AWOS / ATIS / ADVISORIES.....RECEIVED
2. RADIO.....CTAF OR ATC
3. APPROACH OR PATTERN ENTRY.....BRIEFED

## NORMAL APPROACH & LANDING

1. SEATS & BELTS.....ADJUSTED AND LOCKED
2. FUEL.....ON DESIRED TANK
3. MIXTURE.....RICH
4. FUEL PUMP.....ON
5. CARB HEAT.....ON IF REQUIRED
6. FLAPS.....AS DESIRED
7. AIRSPEED.....70 KIAS (FLAPS 25)

## SHORT/SOFT FIELD LANDINGS

- 1 FLAPS.....40°
- 2 AIRSPEED .....63 KIAS
- 3a. SHORT - .....MINIMUM FORWARD SPEED
- 3b. SOFT - .....MINIMUM VERTICAL SPEED

## AFTER LANDING (clear of runway)

1. FLAPS.....RETRACTED
2. CARBURETOR HEAT.....OFF (cold)
3. SWITCHES AND LIGHTS.....AS REQUIRED
4. TRIM.....RESET FOR TAKEOFF
5. FUEL PUMP.....OFF
6. MIXTURE.....LEAN

## SHUTDOWN

1. THROTTLE.....1,000 RPM
2. RADIO & ELECTRICALS.....OFF
3. TRANSPONDER.....OFF
4. MIXTURE.....CUT OFF
5. THROTTLE.....CLOSED
6. MAGNETOS.....OFF (REMOVE KEY)
7. MASTER SWITCH.....OFF

## SECURE AIRCRAFT

1. RECORD HOBBS TIME
2. INSTALL CONTROL WHEEL HARNESS
3. FASTEN SEAT BELTS
4. REMOVE TRASH
5. TIE DOWN AIRCRAFT
6. SECURE COVER IF AVAILABLE
7. RETURN BINDER TO WCFC OFFICE
8. CLOSE FLIGHT PLAN / CANCEL IFR

NOTE: Abnormal and Emergency Procedures may be referenced in the Pilot's Operating Handbook. Critical items should be memorized.

### Student Limitations

(Currently reported @ TTA)

	Ceiling	Visibility
Traffic Pattern =	2000'	5 sm
Practice Area =	3000'	5 sm
Cross Country =	4000'	>6 sm*

(\* Current and predicted at all destinations)

Max Crosswind ≤ 6 knots  
Winds or Gusts ≤ 15 knots  
Or as endorsed by instructor

### CRITICAL SPEEDS

**V<sub>x</sub> = 63 KIAS**

**V<sub>y</sub> = 79 KIAS**

**V<sub>a</sub> (maneuvering speed) = 111 KIAS**

**Best glide speed = 73 KIAS**

**Max Demonstrated Crosswind = 17 knots**