

**BEFORE STARTING ENGINE**

1. Preflight (incl. documents)..... COMPLETE
2. Fuel Quantity ..... ADEQUATE
3. Seats and Belts ..... ADJUST AND LOCK
4. Avionics/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 ..... 2nd TANK
3. Throttle ..... OPEN 1/2 INCH
4. Mixture ..... RICH
5. Carb Heat ..... OFF
6. BAT & ALT Masters..... ON
7. E-Mag Light ..... OFF
8. E-Mag Light ..... PUSH TO TEST
9. Annunciator Lights..... 2 ON
10. Beacon ..... ON
11. Fuel Pump ..... ON
12. Prime ..... AS REQUIRED AND LOCKED
13. Propeller Area ..... CLEAR
14. Ignition Switch ..... START
15. Throttle ..... 1,000 RPM
16. Oil Pressure..... CHECK
17. Fuel Pump ..... OFF
18. Avionics/Radio Master..... ON
19. Transponder ..... ALT
20. Lights ..... AS NEEDED
21. Mixture..... LEAN
22. Parking Brake..... OFF
23. Before Taxi..... CLEARANCE / PLAN
24. Brake and Steering..... UPON TAXI
25. IFR Taxi Checks..... UPON TAXI

**GROUND CHECK**

1. (IFR Taxi Checks..... COMPLETE)
2. Flight Controls ..... FREE AND CORRECT
3. Flight Instruments..... SET
4. G5 ESP Mode ..... CHECK(OFF if desired)
5. Radios ..... SET
6. Flaps..... UP
7. Electric Trim ..... TEST
8. Auto Pilot..... TEST and OFF
9. Mixture..... RICH
10. Fuel Selector ..... 1st tank
11. Throttle ..... 2,000 RPM
  - a) Magnetos (175 max drop) ..... CHECK
  - b) Carb Heat ..... CHECK (CYCLE/OFF)
  - c) Engine Instruments ..... CHECK
  - d) Ammeter ..... CHECK
  - e) Throttle ..... 1,000 RPM
12. Circuit Breakers..... CHECK
13. Annunciator Lights..... OFF
14. Mixture ..... LEAN for TAXI

**BEFORE TAKEOFF**

1. Auto Pilot ..... OFF
2. Door & Storm Window ..... LATCHED
3. Elevator Trim ..... SET FOR TAKEOFF
4. Mixture..... RICH
5. Fuel Pump ..... ON
6. Lights and Strobes ..... AS DESIRED
7. Parking Brake..... OFF
8. Departure Time ..... NOTED
9. Pilot Briefing ..... NORMAL AND EMERGENCY

**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, depart ground effect, 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
  - a) Short.....MINIMUM FORWARD SPEED
  - b) 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. Avionics/Radio Master.....OFF
3. Mixture..... CUT OFF
4. Throttle ..... CLOSED
5. Magnetos..... OFF (REMOVE KEY)
6. Lights & Electricals .....OFF
7. E-Mag Light .....OFF
8. 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**

<i>(Currently reported @ TTA)</i>	<u>Ceiling</u>	<u>Visibility</u>
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**

**Vx = 63 KIAS**

**Vy = 79 KIAS**

**Va (maneuvering speed) = 111 KIAS**

**Best glide speed = 73 KIAS**

**Max Demonstrated Crosswind = 17 knots**