**PREFLIGHT**

Medical, Biannual, IFR – Current

Annual, Transponder, ELT – Current

ARROW, VOR 30 day check – Current

Parking brake - Set

Mags - Off

Elevator/Rudder trim - Neutral

Flaps - Check

Flight controls - Free

Mixture - Cutoff

Throttle - Idle

Avionics master - Off

Electrical switches - Off

Master switch - On

Lights/Stall Horn - Checked

Fuel quantity - Checked

Master switch - Off

**RIGHT WING**

Flaps/Aileron - Checked

Wing tip, leading edge - Checked

Fuel quantity/ Caps - Check/Secure

Tie down - Removed

Fuel sump - Drained

Landing gear/brakes - Checked

**NOSE**

Oil quantity (6-8 qts) - Checked

Cowling - Secured

Prop/Nose wheel/Alt belt - Checked

Fuel sump - Drained

**LEFT WING**

Fuel sump - Drained

Landing gear/brakes - Checked

Tie down - Removed

Pitot-static/drain - Checked

Fuel quantity/ Caps - Check/Secure

Stall warning tab - Checked

Leading edge, wing tip - Checked

Flaps/Aileron - Checked

**EMPENNAGE**

Left/Right Stabilator Bolt - Checked

Stabilator/Trim tab - Checked

Tie down - Removed

**RIGHT FUSELAGE**

External Power Door - Closed

Baggage Door - Closed/locked

**BEFORE ENGINE START**

Seatbelts - On

Brief passengers - Complete

Organize cockpit (charts, etc) - Complete

Fuel selector - Fullest tank

Circuit breakers - In

Electric switches - Off

Flaps - Up

**ENGINE START**

Checkout Plane - Completed

Mixture - Rich

Carb heat - Off

Master switch - On

Fuel pump - On/Pressure

Prime - as required

Beacon (lights as needed) - On

Brakes - Set

Throttle - ½” open

CLEAR PROP & Start

Idle - 1000 rpm

Oil pressure/temp & ammeter – Checked

Electric Fuel pump - Off

Mixture - Lean for taxi

Avionics master - On

Transponder - Set/standby

DG & clock - Set

Altimeter/Trim/Radios - Set

Check brakes, DG, T&B, AI, compass during taxi.

**RUN UP**

Brakes - Set

Flight controls - Free & correct

Mixture - Full Rich

Throttle - 2000 rpm

Mags (125/50) - Checked

Carb heat - Checked

Suction - Normal (4.6-5.4)

Engine instruments - Checked

Throttle - 900-1000 rpm

Mixture - Lean for taxi

**BEFORE TAKEOFF**

Fuel - Fullest tank

Trim - Set

Flaps - As required

Mixture - Rich

Carb heat - Off

Altimeter - Set

DG - Set

Transponder - Squawk in, Alt

Electric Fuel pump - On

Landing Light - On

Autopilot - Off

Door - Locked

Window - Closed

Strobes - As needed

**TAKE OFF/CLIMB**

Vr 55 knots

Vx 64 knots

Vy 76 knots

Enroute climb 90 knots

Flaps - Up

**CRUISE**

Electric Fuel Pump/Landing Light - Off

Mixture - Leaned

Navs/Radios/Charts - Set

**BEFORE LANDING**

Pattern – 2000 rpm

Carb Heat - On, midfield or Descent

Altimeter - Set

Mixture - As required

Fuel pump - On

Autopilot - Off

Fuel selector - Fullest tank

Seat belts - On

Landing Lights / Strobes - On

**Under 100 Knots** downwind

**80 Knots** base

**75 Knots** final

**66 Knots** over the numbers

**CLEAR OF RUNWAY**

Flaps - Up

Trim - Neutral

Fuel pump - Off

Transponder - Standby

Mixture - Lean for taxi

Landing lights - On

**ENGINE SHUTDOWN**

Throttle - 1000rpm

Avionics master - Off

Electric switches - Off

Mixture - Cutoff

Mags - Off

Master switch - Off

Record Tach/Hobbs time - Completed

**CLOSE FLIGHT PLAN! De-bug**

**Position Report**

Who you are?

Where are you?

What do you want to do?

**Plane Requirements**

**VFR- TOMATOFLAMES**

Tachometer

Oil Pressure

Manifold Pressure

Altimeter

Temperature Sensor (Liquid Cooled)

Oil Temperature (Air Cooled)

Fuel Gauge

Landing gear indicator

Airspeed indicator

Magnetic Compass

ELT

Seat Belts

**Night VFR- FLAPS**

Fuses or Circuit Breakers

Landing Light (if for hire)

Anti-collision lights

Position Lights

Source of Electricity

**IFR- GRABCARD**

Generator

Radios

Attitude indicator

Ball

Clock

Adjustable Altimeter

Rate of turn indicator

Directional gyro

**Cross Country Flights- RAWFAT**

Runway Lengths

Alternates

Weather

Fuel Requirements

ATC Delays

Takeoff/Landing distances

**Emergency Procedures- ABCDE**

Airspeed

Best field

Checklist

Airpseed -- 76 Knots

Carb Heat – ON

Fuel Selector – BOTH

Mixture – RICH

Ignition Switch –Both (start)

Primer – IN and LOCKED

Declare/Squawk 121.5/7700

Execute

**Squawks**

Hijack 7500

Lost Comms 7600

Emergency 7700

**Airspeeds**

Vne – 154 Knots

Vno – 125 Knots

Va – 113 Knots 2550lbs; 89 Knots 1634lbs

Flaps – 49-102 Knots

Vs- 55 Knots

Vso – 49 Knots

DMMS- 78 Knots

**Light Gun Signals**

-Steady Green: on the ground, Cleared for Takeoff. In Flight, Cleared to Land.

-Flashing Green, On the Ground, clear to taxi, in flight, return to land.

-Steady red, on the ground, stop. In flight, give way to other aircraft.

-Flashing red, taxi clear of runway, in flight, airport unsafe, do not land.

-Flashing white tells you return to your starting point and it only applies on the ground. -Alternating red and green means exercise extreme caution, both on the ground and in flight.