**PREFLIGHT**

 Medical, Biannual, IFR – Current

 Annual, Transponder, ELT – Current

 ARROW, VOR 30 day check – Current

 Parking brake - Set

 Mags - Off

 Elevator trim - Neutral

 Flight controls - Free

 Mixture - Cutoff

 Throttle - Idle

 Avionics master - Off

 Electrical switches - Off

 Master switch - On

 Flaps - Check

 Lights (beacon, nav, landing) - Checked

 Fuel quantity - Checked

 Pitot heat - Check as req

 Master switch - Off

**FUSELAGE/EMPENNAGE**

 Baggage door - Secured

 Belly, antennas - Checked

 Stabilizers - Checked

 Elevator/Trim tab - Checked

 Tie down - Removed

**RIGHT WING**

 Fuel sump - Drained

 Landing gear/brakes - Checked

 Flaps/Aileron - Checked

 Wing tip, leading edge - Checked

 Tie down - Removed

 Fuel quantity/ Caps - Check/Secure

**NOSE**

 Oil quantity (6-8 qts) - Checked

 Exhaust - Check for cracks

 Cowling - Secured

 Prop/Nose wheel/Alt belt - Checked

 Air filter - Clear

 Static port - Clear

**LEFT WING**

Fuel quantity/ Caps - Check/Secure

Pitot tube - Checked

Tie down - Removed

Stall horn - Checked/Clear

Fuel vent - Clear

Leading edge, wing tip - Checked

Flaps/Aileron - Checked

Landing gear/brakes - Checked

Fuel sump - Drained

**BEFORE ENGINE START**

Checkout Plane - Completed

Seatbelts - On

Brief passengers - Belts/Emergency

Organize cockpit (charts, etc) - Complete

Fuel selector - Both

Circuit breakers - In

Electric switches - Off

Doors/windows - Secured

**ENGINE START**

Fuel Selector - Both

Mixture - Rich

Throttle - 1/4” open

Carb heat - Off

Prime - as required

Master switch - On

Beacon and Taxi (lights as needed) - On

Brakes - Set

CLEAR PROP & Start.

Idle - 900-1000 rpm

Oil pressure/temp & ammeter - Checked

Flaps - Up

Avionics master - On

Transponder - Standby/VFR

DG & clock - Set

Mixture - Lean for taxi

Record - Time

ATIS/Radios - Set

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

**RUN UP**

Heading into the wind

Brakes - Set

Flight controls - Free & correct

Fuel Selector - Both

Mixture - Full Rich

Primer - In and Locked

Throttle - 1700 rpm

Mags (125/50) - Checked

Carb heat - Checked

Oil Pressure - Green

Oil Temp - Green

Amperage - Charging

Suction - Normal(4.6-5.4)

Throttle - Idle, then 1000 rpm

Mixture - Lean for taxi

**BEFORE TAKEOFF**

Fuel Selector - Both

Trim - Set

Flaps - As required

Mixture - Rich

Carb heat - Off

Altimeter - Set

DG - Set

Transponder - Code set, ALT

Radios/Navigation - Set

Doors - Locked

Windows - Closed

**TAKE OFF**

Vr **(63 MPH)**

Vx **(68 MPH)**

Vy **(90 MPH)**

**CLIMB**

Enroute climb **(80 MPH)**

Flaps - Up

Landing light - Off

**CRUISE**

 Throttle - Set

 Mixture - As needed

**BEFORE LANDING**

 Pattern - 2050rpm

 Carb heat - On midfield/Descent

 Altimeter - Set

 Mixture - As required

 Fuel selector - Both

 Primer - In and Locked

 Seat belts - On

 Landing Lights / strobes - As required

 **90 mph** downwind

 **80 mph** base

 **70-75 mph** final

 **65-70 mph** over the numbers

**CLEAR OF RUNWAY**

 Carb heat - Off

 Flaps - Up

 Trim - Neutral

 Landing lights - As required

 Mixture - Lean for taxi

**ENGINE SHUTDOWN**

 Throttle - 1000rpm

 Transponder - Standby/VFR

 Avionics master - Off

 Electric switches - Off

 Mixture - Cutoff

 Mags - Off

 Master switch - Off

 Check-in Plane - 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

**Cross Country Flights- RAWFAT**

Runway Lengths

Alternates

Weather

Fuel Requirements

ATC Delays

Takeoff/Landing distances

**Springfield Frequencies**

Clearance 121.7

ATIS 127.65

Ground 121.9

Tower 121.3

Departure/Approach 126.15

**Emergency Procedures- ABCDE**

Airspeed

Best field

Checklist

 Airpseed – 75 MPH

 Carb Heat – ON

 Fuel Selector – BOTH

 Mixture – RICH

Ignition Switch –Both (start) Cycle Mags

Primer – IN and LOCKED

Declare – 121.5 or current ATC frequency mayday mayday, location, squawk 7700

Execute – Mixture Cutoff

**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.

**Airspeeds**

Vne- 182 MPH

Vno- 145 MPH

Va- 112 MPH\* Changes with weight

Flaps- 54-100 MPH

Vs- 57 MPH

Vso- 49 MPH

Vr- 63 MPH

Vg- 75 MPH

**Squawks**

VFR 1200

Hijack 7500

Lost Comms 7600

Emergency 7700