

1 Preflight Checklist

1.1 Master Switch On

- ☐ Interior and exterior lights
- ☐ Stall warning horn
- ☐ Pitot heat

1.2 Walk Around

- ☐ Control surfaces and cables
- ☐ Drain fuel tank sumps
 - Remove all water and sediment; verify proper fuel.
- ☐ Drain fuel tank strainer
 - Move the selector to the off position, left, then right, while draining the strainer sump.
- ☐ Propeller
- ☐ Air inlets and alternator belt tension
- ☐ Oil level (10-12 quarts)
- ☐ No obvious oil or fuel leaks

1.3 Landing Gear

- ☐ Strut exposure ($\geq 4.0''$ for main, $\geq 2.60''$ for nose)
- ☐ Visual inspection of tires
- ☐ Visual inspection of brake blocks

Before Start

Walk around completed
 Seat belts fastened
 PIC established
 Passengers briefed

Before Taxi

Transponder set
 COM & NAV set
 Initial altitude set
 Initial heading set

Engine Start

Parking brake set
 Fuel desired tank
 Alternate air off
 Master switch on
 3-in-the-green check
 Fuel pump on
 Throttle $\frac{1}{4}$ "
 Mixture prime
 Clear/starter engage
 Throttle idle
 Mixture lean for taxi
 Oil pressure check
 Load meter check
 Fuel pump off
 Fuel pressure check

Taxi

Exterior lights set
 Brakes check
 Heading indicator $\pm 5^\circ$
 Attitude indicator check
 Turn coordinator check

Engine Run-Up

Mixture full rich
 Prop full forward
 Throttle 2000 RPM
 Mags check L & R
 (max drop 175; max Δ 50)
 Alternate air check
 Prop cycle
 (\downarrow rpm \uparrow mp \downarrow oil press.)
 Vacuum 4.9-5.1" Hg
 Load meter check
 Fuel pressure check
 Oil pressure & oil temp. . check
 Alternate static check
 Annunciator panel check
 Throttle idle
 Mixture lean for taxi

After Start

Avionics master on
 Circuit breakers check
 Garmin database check
 Garmin self-test check

 ATIS & clearance recieved

Before Take Off

Flight controls check
 Flight instruments check
 Alternate air off
 Flaps set
 Trim set

Take Off Briefing

Take off distance briefed
 Take off minimums briefed
 Departure procedure briefed
 Lost communications ... briefed

Entering Runway

Time off noted
 Doors & windows closed

Exterior lights set
 Fuel pump on
 Mixture full rich
 Prop full forward

After Take Off

Landing gear up
 Prop -100 RPM
 Fuel pump off
 Mixture constant EGT

Approach and Landing

Altimeter set
 DA or MDA (MSL) set

 Airspeed < 129 KIAS
 Landing gear down
 Throttle 17"
 Prop 2400 RPM
 Mixture constant EGT
 Airspeed 100 KIAS

Go Around

Fuel pump on
 Mixture full rich
 Prop full forward
 Throttle full power
 Landing gear up

V-Speeds

V_A 112-132 KIAS
 V_{LE} 129 KIAS
 V_{LO} 106 KIAS
 V_X 68 / 87 KIAS
 V_Y 87 / 92 KIAS
 V_{CC} 104 KIAS
 V_{REF} (Normal) 95 KIAS
 V_{REF} (Short Field) ... 75 KIAS

Electrical Fire (Smoke in Cabin)

- 1. Master switch off
- 2. Avionics master.....off
- 3. Electrical switches off
- 4. **If no smoke:**
 - (a) Circuit breakers note tripped
 - (b) Circuit breakers..... off
 - (c) Master switchon
 - (d) **If no smoke:**
 - i. Avionics master.....on

Alternator Failure

- 1. Verify failure.
- 2. Reduce electrical load as much as possible.
- 3. Alternator circuit breakers check
- 4. Alt switch off (for 1 second), then on
- 5. **If no output:**
 - (a) Alt switch off

Reduce electrical load and land as soon as practical.

If battery is fully discharged, the gear will have to be lowered using the emergency gear extension procedure. Position lights will not illuminate.

Emergency Landing Gear Extension

- 1. Master switch check on
- 2. Circuit breakers check
- 3. Radio lights off (in daytime)
- 4. **If landing gear does not check down and locked:**
 - (a) Airspeed below 87 KIAS
 - (b) Landing gear selector down
 - (c) **If landing gear still does not check down and locked:**
 - i. Emergency gear lever emergency down
(while fishtailing airplane)