

PREFLIGHT START & CABIN

1. Fuel Quantity Left and Right Wing.....CHECK VISUALLY
2. Oil.....6 Quarts (ADD 1 QT IF AT 5¹/₂ NO PARTIAL QTS)
3. Chocks, Chains, Cover.....REMOVE
4. Windshield.....CLEAN AS NECESSARY
5. Seat Belts if Securing Control Wheel.....REMOVE
6. Ignition Switch.....OFF AND KEYS OUT
7. AROW Documents.....CHECK
8. POH and Garmin Supplements.....AVAILABLE IN AIRCRAFT
9. Flaps.....DOWN
10. Master Switch.....ON
11. Fuel Quantity Indicators.....CHECK
12. Exterior Lights/Pitot Heat (LL, Wingtip, Nav, Beacon).....CHECK
13. Stall Warning Horn, Pitot Heat.....CHECK
14. Master, Lights, Pitot Heat Switches.....OFF

Exterior

15. Sump Right Wing.....BLUE/CLEAR/NO WATER
16. Right Fuel Tank Vent.....NO OBSTRUCTION
17. Right Strut & Tire.....STRUT 4.5", PROPER INFLATION, NO CORD
18. Right Wheel Fairing.....CONDITION & SECURE
19. Nose Strut & Tire.....STRUT 3.25", PROPER INFLATION, NO CORD
20. Nose Fairing.....CONDITION & SECURE
21. Propeller & Spinner.....ALL FASTENERS, NO NICKS >1/16th"
22. Engine & Cabin Air Inlets.....NO BLOCKAGE
23. Alternator Belt.....CORRECT TENSION
24. Cowling.....FASTENERS SECURE
25. Exhaust Pipe.....SECURE
26. Sump Gascolator (Both Left & Right Tank) BLUE/CLEAR/NO WATER
27. Sump Left Wing.....CHECK BLUE/CLEAR/NO WATER
28. Left Fuel Tank Vent.....NO OBSTRUCTION
29. Left Strut & Tire.....STRUT 4.5" PROPER INFLATION, NO CORD
30. Left Wheel Fairing.....CONDITION & SECURE
31. Pitot, Static, Drain Hole.....CHECK FOR BLOCKAGE
32. Left Aileron & Flap.....FREE TRAVEL/SECURE HINGES/SAFETY WIRE
33. Stabilator.....FREE TRAVEL/SECURE HINGES/SAFETY WIRE
34. Anti-Servo Tab.....FREE MOVEMENT/PROPER DEFLECTION

- 35. Vertical Stabilizer.....CHECK CONDITION
- 36. Rudder.....CHECK HINGES
- 37. Right Aileron & Flap...FREE TRAVEL/SECURE HINGES/SAFETY WIRE
- 38. Tow Bar & Baggage.....STOWED, BAGGAGE DOOR SECURE

Final Walk Around

- 39. Chocks.....REMOVE
- 40. Examine All Surfaces.....DAMAGE/ICE FREE
- 41. Inspection Covers, Fasteners, Static Wicks, Fuel Caps.....SECURE
- 42. Antennas.....SECURE

MAX FUEL QUANTITY: 48 GAL USABLE

RECOMMENDED OIL LEVEL: 5¹/₂ TO 6¹/₂ QTS

**TIRE PRESSURES:
NOSE GEAR: 18 PSI
MAIN GEAR: 24 PSI**

BEFORE STARTING ENGINE

1. Preflight.....COMPLETE
2. Flaps.....UP
3. Seats.....ADJUST PILOT SEAT HEIGHT/SEAT POSITIONS
4. Seat Belts & Shoulder Harness.....ON
5. Fuel Selector.....BEST TANK
6. Brakes/Parking Brake.....TEST & SET
7. Carburetor Heat.....COLD
8. Avionics Master.....OFF
9. Circuit Breakers.....CHECK
10. Passenger Brief.....S-A-F-E-T-Y

STARTING ENGINE

1. Master.....ON
2. Fuel Pump.....ON
3. Beacon (Fin).....ON
4. Mixture.....RICH
5. Throttle.....OPEN ¼"
6. CLEAR - START 1,000 RPM
7. If no START, pump throttle fast one time while cranking. If no start after that, prime two strokes then START
8. After START Oil Pressure.....CHECK
9. Amps.....POSITIVE
10. Mixture.....Maximum LEAN
11. Fuel Pump.....OFF & FUEL PRESURE CHECK
12. Avionics Master.....ON
13. Fuel Totalizer.....SET
14. GTN 650.....VERIFY DATABASE/FUEL/TESTS
15. Trim.....SET
16. ATIS/BARO.....SET
17. Transponder.....SET/ALT
18. Nav/Strobe/Wingtip Lights.....ON
19. Fuel Selector.....SWITCH TANKS
20. Ground.....TAXI CLEARANCE
21. Parking Brake Off, BrakesTEST

BEFORE TAKEOFF / RUN UP

1. Parking Brake Set & Cabin Doors/Windows.....LATCHED
2. Flight Controls.....FREE & CORRECT
3. Trim.....SET NEUTRAL
4. Brakes.....HOLD
5. Mixture.....RICH(BELOW 3000')
6. Throttle.....2000 RPM
 - a. Magnetos.....CHECK (max 175 rpm drop or 50 rpm differential)
 - b. Carburetor Heat.....ON/OFF CHECK FOR RPM DROP
 - c. Engine Instruments (Oil Temp/Oil & Fuel Pressure.....3 GREEN
 - d. Alternate Static.....CLOSED10 O'CLOCK POSITION
 - e. Primer.....LOCKED
 - f. Annunciator Panel.....PRESS TO TEST
7. Throttle.....1000 RPM/LEAN
8. Flight Instruments.....CHECK
9. Fuel Selector Valve.....PROPER TANK
10. Radios (GTN/Com/NAV/TOGA/Flightstream.....SET
11. ESP.....ON or OFF
12. Autopilot.....OFF
13. Fuel Pump.....ON
14. Take Off.....EMERGENCY BRIEF
15. Takeoff Clearance.....Brake Off, Mixture Rich, Landing Light On

CRUISE

1. Lean Above 3,000 Feet.....75°F RICH OF PEAK
2. Fuel.....CHECK QUANTITY AND SELECTOR
3. Fuel Pump.....OFF
4. Engine Instruments...Oil Temp/Oil & Fuel Pressure/CHT.....CHECK
5. Autopilot.....AS DESIRED

BEFORE LANDING

1. Mixture.....RICH (Below 3000')
2. Fuel Pump.....VERIFY ON
3. Landing Light.....ON
4. Carburetor Heat.....ON/IF REQUIRED

AFTER LANDING

1. Trim.....SET
2. Landing LightOFF IF NO RUNWAY CROSSING
3. Carburetor Heat.....OFF
4. Mixture.....MAXIMUM LEAN
5. Fuel Pump.....OFF
6. Flaps.....UP
7. Contact Ground.....TAXI CLEARANCE

SHUTDOWN

1. Avionics Switch.....OFF
2. Throttle/Mixture.....CLOSED/IDLE CUT OFF
3. Ignition Switch.....OFF
4. Master Switch.....OFF

NORMAL TAKEOFF

1. Flaps.....UP
2. Carburetor Heat.....COLD
3. Autopilot.....OFF
4. Throttle.....FULL OPEN
5. Rotate.....52-65
6. Climb Speed.....76 UNTIL OBSTACLES CLEAR THEN 87

SHORT FIELD TAKEOFF

1. Wing Flaps.....25°
2. Carburetor Heat.....COLD
3. Brakes.....APPLY
4. Throttle.....FULL OPEN
5. Mixture.....RICH (above 3,000 feet, LEAN to obtain maximum RPM)
6. Brakes.....RELEASE
7. Rotate (41-49 See Below)
8. Then Accelerate to Obstacle Clearance Speed (45-54 See Below)
9. Retract flaps after obstacle then 76

Foreflight Weight Adjusted POH Speeds

Weight	Rotation Speed	Speed at Obstacle
2550	49 KIAS	54 KIAS
2400	46 KIAS	50 KIAS
2200	42 KIAS	48 KIAS

SOFT FIELD TAKEOFF

1. Wing Flaps.....25°
2. Carburetor Heat.....COLD
3. Throttle.....FULL OPEN
4. Mixture.....RICH (above 3,000 feet, LEAN to obtain maximum RPM)
5. Control Wheel.....FULL BACK (then release after rotation)
6. If obstacle accelerate to 45-54 (See Below)
7. Retract flaps after obstacle then 76
8. If no obstacle accelerate to 76 then retract flaps

Foreflight Weight Adjusted POH Speeds

Weight	Speed at Obstacle
2550	54 KIAS
2400	50 KIAS
2200	48 KIAS

SPEEDS FOR NORMAL OPERATION

Unless otherwise noted, the following speeds are based on a maximum weight of 2550 pounds and may be used for any lesser weight.

Takeoff

Normal Climb Out (after obstacles clear).....	76
Cruise Climb Out.....	87

Enroute Climb, Flaps Up

Best Rate of Climb, Sea Level.....	76
Best Angle of Climb, Sea Level.....	64

Landing Approach

Normal Approach, Flaps Up.....	76
Normal Approach, Flaps 40°.....	66
Short Field Approach, Flaps 40°.....	66

Balked Landing

Maximum Power, Flaps 25°, climb at 45-54 (See Foreflight Weight Adjusted Speeds) until obstacles clear then flaps up, then 76

Maximum Recommended Turbulent Air Penetration Speed

2550 Lbs.....	113
1634 Lbs.....	89

Speeds (Supplement) at Maximum Gross Weight

V _{S0} - Stall speed in landing configuration	49
V _{S1} - Stall speed in clean configuration	55
V _X - Best angle of climb speed	64
V _G - Best glide speed	76
V _Y - Best rate of climb speed	76
Cruise Climb	87
V _{FE} - Maximum flaps fully extended speed	102
V _A - Maneuvering speed	113
V _{NO} - Max Structural Cruise Speed	125
V _{NE} - Never exceed speed (All Operations)	154

ELECTRICAL FIRE IN FLIGHT

1. Master Switch.....OFF
2. Air Vents.....OPEN
3. Cabin Heat.....OFF
4. Fire Extinguisher.....ACTIVATE

If Fire Not Extinguished.....

5. Execute Engine Fire in Flight Checklist Followed by Emergency Landing Without Power Checklist

Fire Appears Out & Electrical Power Needed

6. Master Switch.....ON
7. Air Vents.....OPEN
8. Proceed to the Nearest Airport

ENGINE FIRE IN FLIGHT

1. Fuel Selector Valve.....OFF
2. Throttle.....CLOSE
3. Mixture.....IDLE/CUT OFF
4. Fuel Pump.....OFF
5. Radio Transmit Mayday.....121.5
6. Transponder.....7700
7. Cabin Heat and Defrost.....OFF
8. Master Switch.....OFF
9. Airspeed.....125 KTS, 30°/45° BANK
AND SELECT SUITABLE FIELD
10. Execute Emergency Landing Without Power Checklist

ENGINE ROUGHNESS

Usually due to carburetor ice or induction icing/blockage. Apply full carburetor heat and wait for RPM to decrease followed by RPM increase. If no change in 1 minute, turn carburetor heat off, turn fuel pump on and adjust mixture for maximum smoothness. If continued roughness, switch fuel tanks and check fuel pressure. If roughness continues, select magneto switch to Left then Right then back to Both. If engine operation is satisfactory on either magneto, proceed on that magneto at reduced power with mixture full rich to the nearest airport. If roughness still continues prepare for a precautionary landing at pilot's discretion and execute the Emergency Landing Without Power Checklist if engine fails.

ENGINE FAILURE IN FLIGHT

1. Airspeed.....76 KTS
2. Suitable Landing Area (Key Point).....SELECT
3. Fuel Pump.....ON
4. Mixture.....RICH
5. Carburetor Heat.....ON
6. Fuel Selector.....SWITCH TANKS
7. Primer.....LOCKED
8. Ignition Switch.....LEFT/RIGHT/BOTH
9. Engine Gauges (Oil Temp/Oil Pressure, Fuel Pressure/Fuel Quantity, EGT/CHT)
- 10.Throttle/Mixture Settings.....VARY

11.If Power is Restored

FUEL PUMP & CARBUREATOR HEAT OFF AND PROCEED TO NEAREST AIRPORT

If Engine Fails to Restart:

EMERGENCY LANDING WITHOUT POWER

1. Airspeed.....76 KTS FLAPS UP
2. Fuel Selector Valve.....OFF
3. Ignition Switch.....OFF
4. Mixture.....IDLE CUT-OFF
5. Radio Transmit Mayday.....121.5
6. Transponder.....7700
7. Master Switch.....OFF
8. Door.....UNLATCHED
9. Seat Belts.....TIGHTEN
- 10.When Landing Assured.....66 KTS, FULL FLAPS
- 11.Before Touchdown.....MASTER OFF
- 12.Touchdown.....SLOWEST POSSIBLE AIRSPEED