**CABIN**

1. Required Documents A.R.O.W.
2. Control Wheel Lock REMOVE
3. Ignition Switch OFF / KEY ON DASH
4. Master Switch ON
5. Fuel Quantity Indicators CHECK
6. Avionics Cooling Fan AUDIBLE
7. Flaps FULL DOWN
8. All Exterior Lights ON
9. Pitot Cover REMOVED
10. Pitot Heat .ON
11. Check Operation of:

 Nav/Strobe, Beacon, and Landing Light

1. Stall Warning CHECKED
2. Pitot Tube CLEAR / WARM
3. Exterior Lights All OFF, BEACON ON
4. Pitot Heat OFF
5. Master Switch OFF
6. Fuel Shutoff Valve ON
7. Elevator Trim SET for takeoff

**EMPENNAGE**

1. Rudder Gust Lock REMOVE
2. Tail Tie-Down DISCONNECT
3. Elevator CHECK
4. Rudder CHECK
5. Trim Tab CHECK
6. Airplane Antennas CHECK

**RIGHT WING**

1. Flap and Aileron CHECK
2. Wing Tip CHECK
3. Leading Edge CHECK
4. Wing Tie-Down REMOVE
5. Main Wheel Tire / Brake CHECK
6. Fuel Quick Drain Valve CHECK
7. Fuel Quantity CHECK VISUALLY
8. Fuel Filler Cap vent unobstructed SECURE

**NOSE**

1. Fuel Strainer Drain CHECK
2. Engine Oil/Filler Cap CHECK (4-6 qts)
3. Engine Cooling Air Inlets CLEAR
4. Propeller and Spinner CHECK
5. Carburetor Air Filter CHECK
6. Nose Wheel Strut and Tire CHECK
7. Left Static Source Opening CHECK

**LEFT WING**

1. Fuel Quick Drain Valve CHECK
2. Fuel Quantity CHECK VISUALLY
3. Fuel Filler Cap *vent unobstructed* SECURE
4. Leading Edge CHECK
5. Pitot Tube Cover REMOVE
6. Fuel Tank Vent Opening CHECK
7. Stall Warning Opening CHECK
8. Wing Tie-Down REMOVE
9. Landing Light CHECK
10. Wing Tip CHECK
11. Aileron and Flap CHECK
12. Main Wheel Tire / Brake CHECK

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**Phone Numbers**

Paine (KPAE) Tower 425-923-1400

Renton (KRNT) Tower 206-764-6632

BEFA 425-271-2332

**BEFORE STARTING ENGINE**

1. Preflight Inspection COMPLETE
2. Passenger Briefing COMPLETE
3. Seats/Seat Belts ADJUST, LOCK
4. Fuel Shutoff Valve ON
5. Avionics Switch (“RADIO LT”) OFF
6. Brakes TEST; SET/HOLD
7. Circuit Breakers CHECK IN

**STARTING ENGINE**

1. Mixture FULL RICH
2. Throttle OPEN 1/4"
3. Carburetor Heat COLD
4. Beacon ON
5. Prime As REQ’d
6. Propeller area CLEAR
7. Master switch ON
8. Ignition switch START
9. Oil pressure CHECK
10. Throttle 1000 RPM or LESS
11. Avionics Switch (“RADIO LT”) ON
12. Nav lights (thus ADS-B) ON
13. Strobe lights ON, as REQ’d
14. Intercom and Radio ON
15. Transponder ALT
16. Flaps RETRACT
17. ATIS / Altimeter SET
18. Heading Indicator SET

**RUNUP**

1. Brakes SET or HOLD
2. Seat & Seat Belts CHECK SECURE
3. Doors & Windows CLOSED/LOCKED
4. Flight controls FREE and CORRECT
5. Flight Instruments CHECK & SET

*(Heading & Altimeter)*

1. Elevator Trim SET for takeoff
2. Fuel Quantity CHECK
3. Fuel Shutoff Valve ON
4. Mixture RICH
5. Throttle 1700 RPM
	1. Magnetos CHECK BOTH (150/75)
	2. Carburetor Heat CHECK then COLD
	3. Engine instruments CHECK
	4. Suction Gage CHECK (4.6 – 5.4)
	5. Alternator CHECK
6. Throttle CHECK IDLE
7. Throttle 1000 RPM or LESS
8. Throttle friction lock ADJUST
9. Radios SET
10. Wing Flaps as REQ’D

**BEFORE TAKEOFF**

1. Doors & Windows CLOSED/LOCKED
2. Fuel Quantity CHECK
3. Heading Indicator SET
4. Fuel Shutoff Valve ON
5. Elevator Trim SET for takeoff
6. Wing flaps as REQ'D
7. Mixture RICH (LEAN max RPM > 5000’)
8. Lights (strobe, taxi, landing) as REQ’D
9. Primer LOCKED

**INFLIGHT CHECKS**

**CONTINUED ON SECOND CARD**

**SECURING AIRPLANE**

1. Parking Brake SET or HOLD
2. Throttle 1500 RPM
3. Mixture LEANED, 20 seconds
4. Avionics CHECK 121.5
5. Throttle REDUCE as REQ'd
6. Parking Brake RELEASED
7. All lights As REQ’d
8. Throttle IDLE
9. Electrical Equipment OFF
10. Exterior, Interior & Panel Lights OFF
11. Beacon Light ON
12. Avionics Switch (“RADIO LT”) OFF
13. Magneto Ground CHECK
14. Mixture IDLE CUT OFF
15. Ignition Switch OFF
16. Aircraft Keys ON DASH
17. Master Switch OFF
18. Gust Lock INSTALLED
19. Pitot Cover INSTALLED
20. Wheel Chocks INSTALLED
21. Tie Downs INSTALLED
22. Tires and Aircraft INSPECTED
23. Shade/Canopy Cover INSTALLED

**FIRE DURING START**

1. Cranking **CONTINUE**

**If engine starts:**

1. Power **1,700 RPM for a few minutes**
2. Engine **SHUTDOWN**

**If engine fails to start:**

1. Cranking **CONTINUE**
2. Master Switch **OFF**
3. Ignition Switch **OFF**
4. Fuel Shutoff Valve **OFF**
5. Fire Extinguisher **ACTIVATE**
6. Airplane **EVACUATE**

**NORMAL TAKEOFF**

1. *Doors & Windows CLOSED/LOCKED*
2. *Fuel Quantity CHECK*
3. *Fuel Shutoff Valve ON*
4. *Elevator Trim SET for takeoff*
5. *Lights as REQ’D*
6. Wing Flaps 0°
7. Carburetor heat COLD
8. Mixture RICH (LEAN max RPM > 5000')
9. Throttle FULL OPEN
10. Rotate **50 MPH**
11. Climb Speed **73 MPH**

**SHORT FIELD TAKEOFF**

1. Steps 1-5 of Normal Takeoff
2. Wing Flaps 0° or 10o
3. Carburetor Heat COLD
4. Brakes APPLY
5. Mixture RICH (LEAN max RPM > 3000')
6. Throttle FULL OPEN
7. Brakes RELEASE
8. Elevator Control SLIGHTLY TAIL LOW
9. Climb Speed **64 MPH** until over obstacles

**ENROUTE CLIMB**

1. Airspeed **75-85 MPH**
2. Throttle FULL OPEN
3. Mixture RICH (LEAN to smooth > 5000')

**CRUISE**

1. Power 2000-2500 RPM (75% max)
2. Elevator trim ADJUST
3. Mixture LEAN to peak RPM
4. Heading Indicator SET

**DESCENT**

1. Power as REQ'd
2. Mixture ENRICHEN, as REQ'd
3. Carburetor Heat ON, as REQ’d
4. ATIS/Altimeter SET

**BEFORE LANDING**

1. Seats/SeatBelt ADJUST, LOCK
2. Fuel Shutoff Valve ON
3. Mixture RICH (or as REQ'd)
4. Carburetor Heat ON, as REQ’d
5. Landing/Taxi Lights ON
6. Wing Flaps AS DESIRED

**NORMAL LANDING**

1. Wing flaps as DESIRED (< 100 MPH)
2. Airspeed **65 – 75 MPH (flaps UP)**
3. Airspeed **60 – 70 MPH (flaps DOWN)**
4. Touchdown MAIN WHEELS FIRST
5. Landing Roll LOWER NOSE WHEEL
6. Braking MINIMUM REQUIRED

**SHORT-FIELD LANDING**

1. Airspeed 65 – 75 MPH (flaps UP)
2. Wing Flaps FULL DOWN 40°
3. Airspeed **58 MPH**
4. Touchdown MAIN WHEELS FIRST
5. Brakes APPLY HEAVILY–don’t lock brakes
6. Wing flaps RETRACT

**BALKED LANDING**

1. Throttle FULL OPEN
2. Carburetor Heat COLD
3. Wing Flaps RETRACT TO 20°
4. Climb speed **64 MPH**
5. Wing Flaps 10° (until over obstacles)
6. Wing Flaps **RETRACT after 73 MPH**

**AFTER LANDING**

1. Wing Flaps UP
2. Carburetor Heat COLD
3. Taxi & Landing Light ON as REQ'd

 **V-SPEEDS (MPH) INFO**

|  |  |  |  |
| --- | --- | --- | --- |
| **Vs0** | **48** | **Oil** (full/min) | **6 / 4** |
| **Vs1** | **55** | **Fuel** [use] | **26[22.5]** |
| **VR** | **50** | **Weight TO** | **1600#** |
| **VX** | **64** | **Weight Lnd** | **1600#** |
| **VY** | **73** |
| **VG** | **65** | **App FL DN** | **60 – 70** |
| **VFE** | **100** | **App FL UP** | **65 – 75** |
| **VA** | **94 – 109** |  |  |
| **VNO** | **120** |  |  |
| **VNE** | **162** |  |  |

**ENGINE FAILURE DURING FLIGHT**

1. Airspeed **65 MPH**
2. Landing area SELECT
3. Fuel Shutoff Valve ON
4. Mixture RICH
5. Carburetor Heat ON
6. Ignition Switch BOTH or START
7. Primer IN and LOCKED
8. Transponder 7700; Mayday call

**ENGINE FIRE IN FLIGHT**

1. Mixture IDLE CUT OFF
2. Fuel Shutoff Valve OFF
3. Master Switch OFF
4. Cabin Heat/Air OFF (except overhead vents)
5. Airspeed 100 MPH (to extinguish fire)
6. Forced Landing EXECUTE

**EMERGENCY LANDING NO POWER**

1. Seats and Seat Belts SECURE
2. Airspeed 75 MPH (flaps UP)

 63 MPH (flaps DOWN)

1. Fuel Shutoff Valve OFF
2. Mixture IDLE CUT OFF
3. Ignition Switch OFF
4. Wing Flaps AS REQ’D (40° recommended)
5. Doors UNLATCH prior to touchdown
6. Master Switch OFF (landing assured)
7. Touchdown SLIGHTLY TAIL LOW
8. Brakes APPLY HEAVILY

**DITCHING**

1. Radio TRANSMIT MAYDAY (location)
2. Transponder SQUAWK 7700
3. ELT ACTIVATE
4. Heavy objects SECURE or JETTISON
5. Seats and Seat Belts SECURE
6. Wing Flaps 40°
7. Power 300 fpm descent @ 63 MPH
8. Approach:

High winds, heavy seas INTO THE WIND

Light winds, heavy swells PARALLEL TO SWELLS

1. Cabin doors UNLATCH
2. Touchdown LEVEL @ 300 fpm
3. Face CUSHION at touchdown
4. Airplane Evacuate by door

(open window 1st)

1. Life Vests/Raft CLEAR of A/C INFLATE

**ELECTRICAL FIRE IN FLIGHT**

1. Master Switch OFF
2. Radios OFF
3. All Other Switches (except ignition) OFF
4. Vents/Cabin Air/Heat CLOSED
5. Fire Extinguisher ACTIVATE

*If fire is out & elec. power is necessary:*

1. Master Switch ON
2. Circuit Breakers CHECK (Don’t reset)
3. Radio/Electrical Switches ON (1 at time)
4. Vents/Cabin Air/Heat OPEN (if fire is out)

**CABIN FIRE**

1. Master Switch OFF
2. Vents/Cabin Air/Heat CLOSED (avoids draft)
3. Fire Extinguisher ACTIVATE

If Fire is CONFIRMED OUT Ventilate Cabin

1. Vents/Cabin Air/Heat OPEN (if fire is out)
2. Land the airplane as soon as possible

**WING FIRE**

1. Navigation Light Switch OFF
2. Pitot Heat Switch OFF
3. Strobe Light Switch OFF
4. Sideslip NOSE TO SIDE WITH FIRE

**EXCESSIVE DISCHARGE**

1. Alternator -- OFF
2. Nonessential Electrical Equip -- OFF
3. Flight -- TERMINATE as soon as practical.