

PREFLIGHT INSPECTION

1. CABIN

- 1) Aircraft Key.....IN HAND
- 2) Engine tach time.....CHECK
- 3) Documentation.....ARROW
- 4) Charts.....CHECK
- 5) Control Lock.....REMOVE
- 6) Ignition Switch.....OFF
- 7) Avionics.....OFF
- 8) Circuit Breakers.....IN
- 9) Master Switch.....ON
- 10) Fuel Quantity.....CHECK
- 11) Flaps.....DOWN
- 12) Lights / Turn Coor.....CHECK
- 13) Gear Switch Down...3 GREEN
- 14) Master Switch.....OFF
- 15) Cowl Flaps.....OPEN
- 16) Fuel Selector.....CHECK

2. EMPENNAGE

- 1) Static Source (2)....CHECK
- 2) Tail Tie-Down.....UNHOOK
- 3) Control Surfaces.....CHECK
.....freedom of movement and security
- 4) Tail and Strobe.....CHECK
- 5) Cabin Air Intake.....CHECK
- 6) Antennas.....CHECK

3. LEFTWING

- 1) Flap.....CHECK
- 2) Aileron.....CHECK
.....freedom of movement and security
- 3) Nav and Strobe.....CHECK
- 4) Stall Warning.....CHECK
- 5) Pitot Tube Cover...REMOVE and check for blockage
- 6) Fuel Quantity.....CHECK
- 7) Fuel Filler Cap.....SECURE
- 8) Wing Tie-Down.....UNHOOK
- 9) Wheel Well.....EMPTY
- 10) Tire/Brake/Strut....CHECK
.....(33-40 psi)
- 11) Left Wing Tank.....SUMP
- 12) Fuel Vent.....CHECK
- 13) Fuel Selector.....SUMP/COVER

4. NOSE

- 1) Left Cowl Flap.....CHECK
- 2) Nose/heel Well.....EMPTY
- 3) Nose/heel/Strut.....40 PSI
- 4) Engine Condition....CHECK
- 5) Engine Oil.....9-12 QTS
- 6) Oil Cap.....SECURE
- 7) Left Cowl.....SECURE
- 8) Propeller/Governor...CHECK for nicks and security
- 9) Air Intake.....CLEAR
- 10) Landing Light.....CHECK
- 11) Right Cowl.....SECURE
- 12) Right Cowl Flap.....CHECK

5. RIGHT WING

- 1) Fuel Vent.....CHECK
- 2) Right Wing Tank.....SUMP
- 3) Tire/Brake/Strut.....CHECK
.....(33-40 psi)
- 4) Wheel Well.....EMPTY
- 5) Wing Tie Down.....UNHOOK
- 6) Fuel Quantity.....CHECK
- 7) Fuel Filler Cap.....SECURE
- 8) Nav and Strobe.....CHECK
- 9) Aileron.....CHECK
.....freedom of movement and security
- 10) Flap.....CHECK

6. BAGGAGE / PASSENGERS

- 13) Seatbelts/Seats.....SECURE
- 14) Airvents.....LOCATION
- 15) FIRE Extinguisher...LOCATION
- 16) Emergency Egress...BRIEF
- 17) Talking.....WHEN
- 18) Questions.....?

EMERGENCY PROCEDURES

ELECTRIC/ALTERNATOR FAILURE

1. Circuit Breaker.....CHECK
2. Master Switch.....OFF / ON
3. Ammeter (discharge?)...CHECK

IF ALTERNATOR IS STILL OFF-LINE:

4. Battery.....ON
5. Electrical Switches.....OFF
6. Avionics (as required)...ON
7. Electrical (as required)...ON
8. Flight.....LAND

ENGINE FAILURES

ENGINE FAILURE (RESTART)

1. Airspeed.....110 KIAS
2. Landing Site.....SELECT
3. Master Switch.....ON
4. Boost Pump.....ON
5. Fuel Selector.....SWITCH
.....TANKS
6. Mixture.....RICH
7. Ignition Switch.....CHECK (R/L)
8. Alternate Air.....PULL
9. Transponder.....7700
10. Radio.....121.5

ENGINE FAILURE (SECURING)

1. Airspeed.....110 KIAS
2. Propeller.....LOW RPM
3. Mixture.....CUT-OFF
4. Fuel Selector Valve...OFF
5. Ignition Switch.....OFF
6. Wing Flaps.....AS
.....REQUIRED
7. Master Switch.....OFF
8. Doors.....UNLATCH
9. Seat Belts.....SECURE
10. Final Approach.....81 KIAS

LOST COMMUNICATIONS

1. Freq. Volume, Squelch.CHECK
2. Transponder.....7600

ROUGH ENGINE

1. Mixture.....RICH
2. Ignition.....R / L
3. Alternate Air.....PULL

AIRCRAFT FIRES

DURING START ON GROUND

1. Cranking.....CONTINUE
If engine starts:
 2. Power.....1700 RPM (2min)
 3. Engine.....SHUTDOWN
- If engine fails to start:
4. Throttle.....FULL OPEN
 5. Mixture.....IDLE CUT-OFF
 6. Cranking.....CONTINUE
 7. Fire Extinguisher...OBTAIN
 8. Engine.....SECURE

ENGINE FIRE IN FLIGHT

1. Firewall Air Control...CLOSE
2. Mixture.....CUT-OFF
3. Fuel Selector Valve...OFF
4. Ignition Off.....OFF
5. Master Switch.....OFF

ELECTRICAL/WING FIRE IN FLIGHT

1. Firewall Air Control...CLOSE
2. Master Switch.....OFF
3. Avionics.....OFF
4. All Electrical/Lights...OFF
5. Fire Extinguisher.....ACTIVATE

CABIN FIRE

1. Firewall Air Control...CLOSE
2. Master Switch.....OFF
3. Fire Extinguisher.....ACTIVATE

EMERGENCY DESCENT

1. Throttle.....CLOSE
2. Propeller.....FULL RPM
3. Gear Down.....< 153 KIAS
4. Airspeed.....153 KIAS
5. Landing Site.....SELECT

MANUAL GEAR EXTENSION

1. Circuit Breaker.....PULL OUT
 2. Airspeed Below.....153 KIAS
 3. Landing Gear.....DOWN
 4. Hand Crank.....50 TURNS*
 5. Gear Lights.....3 GREEN
 6. Handcrank.....STOW
- * Hand crank counterclockwise
**Do not retract gear manually

BEFORE STARTING ENGINE

- 1) Preflight.....COMPLETE
- 2) Seat Belts.....SECURE
- 3) Avionics/Electrical...OFF
- 4) Circuit Breakers.....CHECK IN
- 5) Landing Gear.....DOWN
- 6) Fuel Selector.....FULL TANK
- 7) Battery Master.....ON
- 8) Nav & Strobe.....ON
- 9) Fuel Quantity.....CHECK
- 10) Handcrank.....STOWED

STARTING ENGINE (COLD)

- 1) Mixture.....FULL RICH
- 2) Prop.....HIGH RPM
- 3) Throttle.....HALF OPEN
- 4) Fuel Boost Pump.....ON - HI (peak flow) / OFF
- 5) Throttle.....1/4 " OPEN
- 6) Propeller Area.....CLEAR
- 7) Ignition SwitchSTART

OVER-PRIME CONDITION

- Mixture.....IDLE/ CUT
 Throttle.....OPEN
 Ignition Switch...START
 Throttle.....IDLE
 Mixture.....RICH

- 8) Throttle.....1000 RPM
- 9) Oil Pressure.....CHECK
- 10) Mixture.....LEAN
- 11) Alternator Master.....ON
- 12) Avionics.....ON
- 13) Flaps.....UP

STARTING ENGINE (WARM)

- 1) Mixture.....IDLE CUT
- 2) Prop.....HIGH RPM
- 3) Throttle.....FULL OPEN
- 4) Fuel Boost Pump.....ON - HI (30-60 SEC)
 Fuel Boost Pump...OFF
- 5) Fuel Boost Pump...OFF
- 6) Mixture.....RICH
- 7) Fuel Boost Pump.....ON - HI (peak flow) / OFF
- 8) Throttle.....1/4 " OPEN
- 9) Propeller Area.....CLEAR
- 10) Ignition SwitchSTART
- 11) Oil Pressure.....CHECK

- 12) Mixture.....LEAN
- 13) Alternator Master.....ON
- 14) Avionics.....ON
- 15) Flaps.....UP

TAXI

- 1) Brakes.....TEST
- 2) Turn Instruments.....CHECK

BEFORE TAKEOFF

- 1) Brakes.....SET
 - 2) Seat Belts.....ON
 - 3) Panel Lights.....TEST/OFF
 - 4) Flight Controls.....FREE and CORRECT
 - 5) Flight Instruments.....SET
- Airspeed.....ZERO
 Art Horiz...ALIGNED/SET
 Altimeter...CORRECT BARO
 Turn Coor...NO FLAG
 Dir Gyro...CHECK HEADING
 VSI.....ZERO
 Autopilot...ON/ DISCONNECT
 GPS.....ON

- 6) Fuel Selector Valve.....SELECT
- 7) Mixture.....SET / RICH
- 8) Fuel Boost Pump.....OFF
- 9) Cowl Flaps.....OPEN
- 10) Throttle.....1700 RPM

- a. Magnetos...CHECK (150 max diff. max)
- b. Prop.....EXERCISE
- c. Engine Inst...CHECK
- d. Fuel Gauge...CHECK
- e. Ammeter...CHECK
- f. Vacuum...CHECK
- g. Throttle.....IDLE

- 11) Trim.....3 - 6 deg UP
- 12) Flaps.....UP
- 13) Doors / Windows.....SECURE
- 14) Radios/GPS/Departure...SET
- 15) Lights.....ON
- 16) Transponder.....ALT
- 17) Mixture.....SET/RICH
- 18) Time Off.....RECORD

NORMAL TAKEOFF

- 1) Wing Flaps.....UP
- 2) Prop.....HIGH RPM
- 3) Mixture.....SET
- 4) Throttle.....FULL OPEN
- 5) Rotate (Vr).....70 KIAS
- 6) Climb Speed (Vy).....96 KIAS
- 7) Gear.....UP

SHORT FIELD TAKEOFF

- 1) Wing Flaps.....UP
- 2) Prop.....HIGH RPM
- 3) Mixture.....SET
- 4) Brakes.....APPLY
- 5) Throttle.....FULL OPEN
- 6) Brakes.....RELEASE
- 7) Rotate (Vr).....70 KIAS
- 8) Obstacle 50' (Vx).....78 KIAS
- 9) Climb Speed (Vy).....96 KIAS
- 10) Gear.....UP

ENROUTE CLIMB

- 1) Throttle.....FULL OPEN
- 2) Prop.....2500 RPM
- 3) Engine Temp.....MONITOR
- 4) Airspeed.....110 KIAS
- 5) Mixture.....LEAN
above 5000'

CRUISE

- 1) Throttle.....23 in Hg
- 2) Prop.....2300 RPM
- 3) Cowl Flaps.....CLOSED
- 4) Lights.....OFF
- 5) Mixture.....LEAN (100 deg ROP)
- 6) Fuel Load.....MANAGE

DESCENT

- 1) Throttle/Prop.....SET
- 2) Cowl Flaps.....CLOSED
- 3) Mixture.....RICHEN
- 4) Fuel Selector.....FULLEST
- 5) Lights.....ON
- 6) Seat Belts.....ON

LANDING

- 1) Cowl Flaps.....OPEN
- 2) Fuel Selector.....FULLEST
- 3) Landing Gear (Vlo).....DOWN
(153 KIAS)
- 4) Mixture.....RICH
- 5) Prop control.....FULL
- 6) Flaps (Vfe).....SET
(123 KIAS)
- 7) Final Approach.....76 KIAS

GO AROUND

- 1) Throttle / Prop.....FULL
- 2) Gear.....UP
- 3) Flaps.....RETRACT
- 4) Pitch (Vy).....96 KIAS
- 5) Cowl Flaps.....OPEN

AFTER LANDING

- 1) Mixture.....LEAN
- 2) Cowl Flaps.....OPEN
- 3) Wing Flaps.....UP
- 4) Transponder.....ALT
- 5) Trim.....3 deg UP
- 6) Lights.....OFF
- 7) Radio.....GROUND

ENGINE SHUTDOWN

- 1) Throttle.....IDLE
- 2) Electrical.....OFF
- 3) Avionics.....OFF
- 4) Ignition.....CHECK
- 5) Mixture.....CUT-OFF
- 6) Ignition.....OFF
- 7) Master.....OFF

SECURING AIRCRAFT

- 1) Wheels.....CHOCKED
- 2) Ignition Key.....REMOVE
- 3) Switches.....OFF
- 4) Magnetos.....OFF
- 5) Controls.....SECURE
- 6) Fuel/Paperwork.....FINISH