

<u>V SPEEDS (KIAS)</u>	<u>EXTERIOR INSPECTION</u>	<u>EXTERIOR INSPECTION (CONT.)</u>	<u>TAXI</u>
Vso.....35 Vs.....40 Vr.....50 Vx.....55 Vy (sea level).....67 Vy (10,000 ft.).....61 Vfe.....85 Vno.....111 Vne.....149 Va (1670 lbs).....104 Va (1500 lbs).....98 Va (1350 lbs).....93 Best Glide (flaps UP).....65 Best Glide (flaps DN).....60 Max. Demon. X-Wind.....12 Approach (Flaps UP).....60-70 Approach (Flaps DN).....55-65 Enroute Climb.....70-80	<u>Aft Fuselage</u> Baggage Door.....LOCKED Fuselage.....CHECK <u>Empennage</u> Horiz. Stabilizer.....CHECK Elevator.....CHECK Tail Tie-Down.....REMOVE Trim Tab.....CHECK Rudder.....CHECK Antennas.....CHECK Horiz. Stabilizer.....CHECK <u>Right Wing</u> Flap.....CHECK Aileron.....CHECK Tie Down.....REMOVE Leading Edge.....CHECK Fuel Sump.....CHECK Main Wheel.....CHECK Fuel Quantity.....CHECK Fuel Filler Cap.....SECURE <u>Nose</u> Fuel Strainer.....CHECK Oil Quantity (4-6 qts).....CHECK Cooling Inlets.....CHECK Prop. & Spinner.....CHECK Carburetor Air Filter.....CHECK Alternator Belt.....SECURE Nose Wheel Strut/Tire.....CHECK Static Source.....CHECK <u>Left Wing</u> Fuel Quantity.....CHECK Fuel Filler Cap.....SECURE Fuel Sump.....CHECK Main Wheel.....CHECK Pitot Tube.....CHECK Fuel Tank Vent.....CHECK Stall Warning.....CLEAR	<u>PRE-ENGINE START</u> Preflight Inspection..COMPLETE Passenger Briefing..COMPLETE Seats and Belts.....SECURE Parking Brake.....SET Circuit Breakers.....CHECK IN Electrical Equipment.....OFF Fuel Shutoff Valve.....ON  <u>ENGINE START</u> Throttle.....OPEN 1/2 INCH Mixture.....RICH Carburetor Heat.....COLD Prime.....AS NECESSARY Master.....ON Beacon.....ON Propeller Area.....CLEAR Ignition.....START Throttle.....1000 RPM Oil Pressure.....CHECK Mixture.....LEAN for TAXI Lights (as required).....ON	<u>RUNUP</u> Parking Brake.....SET Seats/Belts.....SECURE Doors/Windows.....CLOSED AND LOCKED Controls.....FREE & CORRECT Flight Instruments.....SET Fuel Shutoff Valve.....ON Fuel Quantity.....CHECK Mixture.....RICH Throttle.....1700 RPM Mixture.....SET Magnetos.....CHECK Max drop 125 RPM Max differential 50 RPM Carburetor Heat.....CHECK Vacuum Gauge.....CHECK Engine Instruments.....CHECK Ammeter.....CHECK Throttle.....IDLE then 1000 RPM Throttle Friction Lock.....ADJUST Radios and Avionics.....SET Trim.....SET for TAKEOFF Brakes.....RELEASE
<u>PREFLIGHT</u>			
Weather..... CHECK Weight & Balance.... COMPLETE Documents (AROW).....CHECK Inspection/AD status.....CHECK Fire Extinguisher.....CHARGED Hobbs/Tach.....CHECK Control Lock.....REMOVE Ignition.....OFF Master.....ON Fuel Quantity.....CHECK Turn Coordinator.....AUDIBLE Flaps.....EXTEND Lights.....ON/INSPECT Fuel Shutoff Valve.....ON Master.....OFF			

**PRE-TAKEOFF**

Flaps (as required).....SET  
 Transponder.....ALT  
 Lights.....AS REQUIRED  
 Carburetor Heat.....COLD  
 Emergency Procedures.....  
 REVIEW

**NORMAL TAKEOFF**

Throttle.....Full OPEN  
 Engine Instruments.....CHECK  
 Rotate.....50 KIAS  
 Climb.....Vy  
 67 KIAS @ sea level  
 61 KIAS @ 10,000 ft.

**SHORT-FIELD TAKEOFF**

Flaps.....10°  
 Carburetor Heat.....COLD  
 Brakes.....APPLY  
 Throttle.....Full OPEN  
 Engine Instruments.....CHECK  
 Brakes.....RELEASE  
 Rotate.....50 KIAS  
 Climb.....54 KIAS  
 (until clear of obstacle)  
 Climb.....Vy  
 67 KIAS @ sea level  
 61 KIAS @ 10,000 ft.  
 Flaps.....RETRACT

**SOFT-FIELD TAKEOFF**

Flaps.....10°  
 Carburetor Heat.....COLD  
 Elevator.....Full AFT  
 Rotate.....50 KIAS  
 Accelerate.....54 KIAS  
 Climb.....Vy  
 Flaps.....RETRACT

**CRUISE**

Power.....1900-2550 RPM  
 Mixture.....ADJUST  
 Landing Light.....OFF

**BEFORE LANDING**

Seats/Belts.....SECURE  
 Mixture.....ENRICH  
 Landing Light.....AS REQUIRED

**NORMAL LANDING**

Carburetor Heat.....ON  
 Flaps.....AS DESIRED  
 Airspeed.....55-65 (Flaps DN)

**SHORT FIELD LANDING**

Carburetor Heat.....ON  
 Airspeed.....65 (Flaps UP)  
 Flaps.....30°  
 Airspeed.....54 KIAS  
 Power.....IDLE  
 Touchdown.....MAINS first  
 Brakes.....APPLY  
 Flaps.....RETRACT

**GO-AROUND**

Throttle.....FULL OPEN  
 Carburetor Heat.....COLD  
 Flaps.....RETRACT to 20°  
 Climb.....55 KIAS  
 Flaps.....RETRACT

**AFTER LANDING**

Flaps.....RETRACT  
 Carburetor Heat.....COLD  
 Transponder.....STBY  
 Landing Light.....OFF  
 Mixture.....LEAN for taxi

**SHUTDOWN**

Radios/Avionics.....OFF  
 Mixture.....IDLE cutoff  
 Ignition.....OFF  
 Master.....OFF  
 Beacon.....OFF  
 Control Lock.....INSTALL  
 Hobbs/Flight Ticket.....RECORD  
 Trash.....REMOVE  
 Doors/Windows.....LOCKED  
 Tie-Downs.....SECURE  
 Flight Plan.....CLOSE

**FLOODED START**

Master.....ON  
 Throttle.....FULL OPEN  
 Mixture.....IDLE CUT OFF  
 Ignition.....ENGAGE

\*When engine fires advance  
 mixture, retard throttle\*

**EMERGENCY PROCEDURES****ENGINE FAILURE DURING TAKEOFF**

Throttle.....IDLE  
 Brakes.....APPLY  
 Flaps.....RETRACT  
 Mixture.....IDLE CUTOFF  
 Ignition.....OFF  
 Master.....OFF

**ENGINE FAILURE AFTER TAKEOFF**

Airspeed.....60 KIAS  
 Mixture.....IDLE CUTOFF  
 Fuel Shutoff Valve.....OFF  
 Ignition.....OFF  
 Flaps.....AS REQUIRED  
 Master.....OFF  
 Cabin Door.....UNLATCH  
 Land.....STRAIGHT AHEAD

**ENGINE FAILURE DURING FLIGHT**

Airspeed.....60 KIAS  
 Carburetor Heat.....ON  
 Fuel Shutoff Valve.....ON  
 Mixture.....RICH  
 Ignition.....BOTH or START  
 if propeller has stopped  
 Primer.....IN and LOCKED

**EMERGENCY PROCEDURES****EMERGENCY LANDING  
WITHOUT POWER**

Seats/Belts.....SECURE  
 Airspeed.....65 KIAS (Flaps UP)  
                   60 KIAS (Flaps DN)  
 Mixture.....IDLE CUTOFF  
 Fuel Shutoff Valve.....OFF  
 Ignition.....OFF  
 Flaps.....AS REQUIRED  
 Master.....OFF  
 Doors.....UNLATCH  
 Touchdown.....TAIL LOW  
 Brakes.....APPLY HEAVILY

**DITCHING**

Radio.....MAYDAY 121.5  
 Transponder.....7700  
 Heavy Objects.....  
                   SECURE or JETTISON  
 Seats/Belts.....SECURE  
 Flaps.....30°  
 Power...300 ft/min DESCENT at  
                   55 KIAS  
 Cabin Doors.....UNLATCH  
 Approach.....  
   High Winds/Seas...INTO WIND  
   Light Winds/Seas...PARALLEL  
 Touchdown...LEVEL ATTITUDE  
 Face.....CUSHION  
 ELT.....ACTIVATE  
 Airplane.....EVACUATE

**EMERGENCY PROCEDURES****CARBURETOR ICING**

Throttle.....FULL OPEN  
 Carburetor Heat.....ON  
 Mixture.....ADJUST

**SPIN RECOVERY**

Throttle.....IDLE  
 Ailerons.....NEUTRALIZE  
 Rudder.....FULL OPPOSITE  
                   DIRECTION OF SPIN  
 Yoke.....BRISK FORWARD  
 Controls.....HOLD  
                   UNTIL ROTATION STOPS  
 Recover.....  
                   AS ROTATION STOPS

**LANDING WITH FLAT MAIN**

Flaps.....AS DESIRED  
 Approach.....NORMAL  
 Touchdown...GOOD TIRE FIRST  
 hold airplane off flat tire as long as  
 possible with aileron control

**ENGINE FIRE IN FLIGHT**

Mixture.....IDLE CUTOFF  
 Fuel Shutoff Valve.....OFF  
 Master.....OFF  
 Cabin Heat & Air.....OFF  
 Airspeed.....85 KIAS  
 Forced Landing.....EXECUTE

**EMERGENCY PROCEDURES****FIRE DURING ENGINE  
START**

Cranking.....CONTINUE  
 If Engine Starts:  
   Power.....1700 RPM  
   Engine.....SHUTDOWN  
   Inspect for Damage  
 If Engine Fails to Start:  
   Throttle.....FULL OPEN  
   Mixture.....IDLE CUTOFF  
   Cranking.....CONTINUE  
   Fuel Shutoff Valve.....OFF  
   Fire Extinguisher.....OBTAIN  
 Securing Engine:  
   Master.....OFF  
   Ignition.....OFF  
   Parking Brake.....RELEASE  
   Airplane.....EVACUATE  
   Fire.....EXTINGUISH  
   Inspect for Damage

**CABIN FIRE**

Master.....OFF  
 Vents/Air/Heat.....CLOSED  
 Fire Extinguisher.....ACTIVATE  
 Cabin.....VENTILATE  
 Land.....ASAP

**WING FIRE**

Navigation Light Switch.....OFF  
 Strobe Light Switch.....OFF  
 Pitot Heat Switch.....OFF  
 \*perform side slip to keep flames  
 away from the fuel tank and  
 cabin\*  
 Land.....ASAP w/ NO FLAPS

**EMERGENCY PROCEDURES****ELECTRICAL FIRE**

Master.....OFF  
 All Other Switches.....OFF  
 Vents/Air/Heat.....CLOSED  
 Fire Extinguisher.....ACTIVATE  
 Vents...OPEN when FIRE OUT

*If fire is out and electrical is  
 necessary for flight*

Master.....ON  
 Circuit Breakers.....CHECK  
                   *Do not reset!*  
 Radios.....OFF  
 Radios/Electrical.....ON, one at a  
                   time  
 Vents/Air/Heat.....OPEN

**OVER-VOLTAGE LIGHT**

Master.....OFF  
 Master.....ON  
   *If over-voltage light illuminates  
 again*  
 Flight.....TERMINATE  
                   As soon as practical

**AMMETER DISCHARGE**

Alternator.....OFF  
 Non-Essential Electrical.....OFF  
 Flight.....TERMINATE  
                   As soon as practical