

| <u>RUNUP</u> | <u>NORMAL TAKEOFF</u> |
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| Parking Brake.....SET | Flaps.....0°-20° |
| Seats/Belts.....SECURE | Throttle.....Full OPEN |
| Doors/Windows.....CLOSED AND LOCKED | Engine Instruments.....CHECK |
| Controls.....FREE & CORRECT | Rotate Nosewheel.....50 KIAS |
| Fuel Quantity.....CHECK | Liftoff.....60-65 KIAS |
| Fuel Selector Valve.....BOTH | Climb (Flaps UP).....Vy |
| Mixture.....RICH | 80 KIAS @ sea level |
| Throttle.....1700 RPM | 73 KIAS @ 10,000 ft. |
| Mixture.....SET | Climb (Flaps 20°).....70 KIAS |
| Propeller.....CYCLE 3X | |
| 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 | |
| Instruments.....CHECK and SET | |
| Throttle Friction Lock...ADJUST | |
| Radios and Avionics.....SET | |
| Trim.....SET for TAKEOFF | |
| Brakes.....RELEASE | |
| | <u>MAX. PERFORMANCE TAKEOFF</u> |
| | Flaps.....20° |
| | Carburetor Heat.....COLD |
| | Brakes.....APPLY |
| | Throttle.....FULL OPEN |
| | Engine Instruments.....CHECK |
| | Brakes.....RELEASE |
| | Elevator.....slightly TAIL LOW |
| | Climb.....57 KIAS |
| | until clear of obstacle |
| | Flaps.....RETRACT |
| | after reaching 70 KIAS |
| | <u>SOFT FIELD TAKEOFF</u> |
| | Flaps.....20° |
| | Elevator.....FULL AFT |
| | Carburetor Heat.....COLD |
| | Throttle.....FULL OPEN |
| | Liftoff.....as soon as practical |
| | Accelerate.....in ground effect |
| | Flaps.....RETRACT |
| | after reaching 70 KIAS |
| | and clear of any obstacles |
| <u>PRE-TAKEOFF</u> | |
| Flaps (0°-20°).....SET | |
| Cowl Flaps.....OPEN | |
| Transponder.....ALT | |
| Landing Light.....ON (as reqd.) | |
| Strobe Lights.....ON (as reqd.) | |
| Carburetor Heat.....COLD | |
| Emerg. Procedures.....REVIEW | |
| <i>Strobe lights should not be used while taxiing in the vicinity of other aircraft</i> | |

| <u>CRUISE</u> | <u>GO-AROUND</u> |
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| Power.....15-23" Hg | Throttle.....FULL OPEN |
| Propeller.....2200-2450 RPM | Carburetor Heat.....COLD |
| Mixture.....ADJUST | Flaps.....RETRACT to 20° |
| Cowl Flaps.....CLOSED | Climb.....70 KIAS |
| Landing Light.....OFF | Flaps.....RETRACT SLOWLY |
| | Cowl Flaps.....OPEN |
| <u>DESCENT</u> | |
| Power.....AS DESIRED | |
| Carburetor Heat.....AS REQD | |
| Mixture.....ENRICHEN | |
| Cowl Flaps.....CLOSED | |
| | <u>AFTER LANDING</u> |
| | Flaps.....RETRACT |
| | Carburetor Heat.....COLD |
| | Transponder.....STBY |
| | Landing Light.....OFF |
| | Strobes.....OFF |
| | Mixture.....LEAN for taxi |
| | Cowl Flaps.....OPEN |
| | <u>SHUTDOWN</u> |
| | Throttle.....IDLE |
| | Propeller.....FULL FWD |
| | Electrical Equipment.....OFF |
| | Mixture.....IDLE cutoff |
| | Ignition.....OFF |
| | Master.....OFF |
| | Beacon.....OFF |
| | Fuel Selector.....LEFT or RIGHT |
| | *To prevent cross-feeding and ensure maximum quantity during fueling* |
| | Control Lock.....INSTALL |
| | Hobbs/Flight Ticket.....RECORD |
| | Trash.....REMOVE |
| | Doors/Windows.....LOCKED |
| | Tie-Downs.....SECURE |
| | Flight Plan.....CLOSE |
| <u>BEFORE LANDING</u> | |
| Seats/Belts.....SECURE | |
| Fuel Selector.....BOTH | |
| Propeller.....FULL FWD | |
| Landing Light.....AS REQUIRED | |
| Cowl Flaps.....CLOSED | |
| Carburetor Heat.....ON | |
| Airspeed.....70-80 (Flaps UP) | |
| Flaps.....0°-40° (below 95 KIAS) | |
| Airspeed.....60-70 (Flaps DN) | |
| Trim.....ADJUST | |
| | <u>SHORT FIELD LANDING</u> |
| Carburetor Heat.....ON | |
| Airspeed..70-80 KTS (Flaps UP) | |
| Flaps.....DOWN (40°) | |
| Airspeed.....60 KIAS | |
| Power.....IDLE | |
| Touchdown.....MAINS first | |
| Brakes.....APPLY | |
| Flaps.....RETRACT | |

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| <p>EMERGENCY PROCEDURES</p> <p><u>ENGINE FAILURE DURING TAKEOFF RUN</u></p> <p>Throttle.....IDLE Brakes.....APPLY Flaps.....RETRACT Mixture.....IDLE CUTOFF Ignition.....OFF Master Switch.....OFF</p> <p><u>ENGINE FAILURE AFTER TAKEOFF</u></p> <p>Airspeed.....70 KIAS (Flaps UP) 65 KIAS (Flaps DN) Mixture.....IDLE CUTOFF Fuel Selector Valve.....OFF Ignition.....OFF Flaps.....AS DESIRED 40° recommended Master Switch.....OFF Cabin Door.....UNLATCH Land.....STRAIGHT AHEAD</p> <p><u>ENGINE FAILURE DURING FLIGHT</u></p> <p>Airspeed.....70 KIAS Landing Site.....IDENTIFY Carburetor Heat.....ON Fuel Selector Valve.....BOTH Mixture.....RICH Ignition.....BOTH or START if propeller has stopped Primer.....IN and LOCKED</p> | <p>EMERGENCY PROCEDURES</p> <p><u>EMERGENCY LANDING WITHOUT POWER</u></p> <p>Seat Backs.....UPRIGHT Seats/Belts.....SECURE Airspeed.....70 KIAS (Flaps UP) 65 KIAS (Flaps DN) Mixture.....IDLE CUTOFF Fuel Selector Valve.....OFF Ignition.....OFF Flaps.....AS REQUIRED 40° recommended Master Switch.....OFF Doors.....UNLATCH Touchdown.....TAIL LOW Brakes.....APPLY HEAVILY</p> <p><u>DITCHING</u></p> <p>Radio.....MAYDAY 121.5 Transponder.....7700 Heavy Objects..... SECURE or JETTISON Seat Backs.....UPRIGHT Seats/Belts.....SECURE Flaps.....20° to 40° Power.....300 ft/min DESCENT 60 KIAS Approach..... High Winds/Seas...INTO WIND Light Winds/Seas...PARALLEL Touchdown...LEVEL ATTITUDE Face.....CUSHION ELT.....ACTIVATE Airplane.....EVACUATE</p> |
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| <p>EMERGENCY PROCEDURES</p> <p><u>ELECTRICAL FIRE</u></p> <p>Master Switch.....OFF Vents/Air/Heat.....CLOSED Fire Extinguisher.....ACTIVATE All other electrical.....OFF Vents.....OPEN when FIRE OUT</p> <p><i>If fire is out and electrical is necessary for flight</i></p> <p>Master Switch.....ON Circuit Breakers.....CHECK <i>Do not reset!</i> Radios/Electrical.....ON one at a time Vents/Air/Heat.....OPEN</p> <p><u>WING FIRE</u></p> <p>Navigation Lights.....OFF Strobe Lights (if installed)...OFF Pitot Heat.....OFF *Perform sideslip to keep flames away from fuel tank and cabin* Land.....ASAP</p> <p><u>CABIN FIRE</u></p> <p>Master Switch.....OFF Vents/Air/Heat.....CLOSED Fire Extinguisher.....ACTIVATE Cabin.....VENTILATE</p> | <p>EMERGENCY PROCEDURES</p> <p><u>FIRE DURING ENGINE START</u></p> <p>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 Selector.....OFF Fire Extinguisher.....OBTAIN Securing Engine: Master.....OFF Ignition.....OFF Parking Brake.....RELEASE Airplane.....EVACUATE Fire.....EXTINGUISH Inspect for Damage</p> <p><u>ENGINE FIRE IN FLIGHT</u></p> <p>Mixture.....IDLE CUTOFF Fuel Selector.....OFF Master Switch.....OFF Cabin Heat & Air.....OFF Airspeed.....100 KIAS Forced Landing.....EXECUTE Land.....ASAP</p> |
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| <p><u>EMERGENCY PROCEDURES</u></p> <p><u>PROPELLER OVERSPEED</u></p> <p>Throttle.....RETARD Oil Pressure.....CHECK Propeller.....FULL AFT Airspeed.....REDUCE Throttle.....REDUCE Flaps.....AS REQUIRED for slow flight Cowl Flaps.....OPEN</p> <p><u>LANDING WITH A FLAT TIRE</u></p> <p>Approach.....NORMAL Wing Flaps.....FULL DOWN Touchdown.....GOOD TIRE FIRST</p> <p><u>SPIN RECOVERY</u></p> <p>Throttle.....IDLE Ailerons.....NEUTRALIZE Rudder.....FULL OPPOSITE DIRECTION OF SPIN Yoke.....BRISK FORWARD Controls.....HOLD UNTIL ROTATION STOPS Recover.....AS ROTATION STOPS</p> | <p><u>EMERGENCY PROCEDURES</u></p> <p><u>OVERVOLTAGE LIGHT ILLUMINATES</u></p> <p>Master Switch.....OFF Master Switch.....ON Over-Voltage Light.....OFF</p> <p><i>If over-voltage light illuminates again:</i></p> <p>Flight.....TERMINATE ASAP</p> <p><u>AMMETER SHOWS DISCHARGE</u></p> <p>Alternator.....OFF Nonessential Elec. Equip....OFF Flight.....TERMINATE ASAP</p> <p><u>STATIC SOURCE BLOCKAGE</u></p> <p>Alternate Static Source.....ON Airspeed.....CONSULT POH climb and approach 5 KTS faster Altitude.....cruise 50 feet higher approach 50 feet higher</p> |
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