

**PREFLIGHT (CABIN)**

Inspections ..... CURRENT  
 AROW documents..... ON BOARD  
 Compass corr. card ..... LEGIBLE  
 Hobbs ..... RECORD  
 Parking brake ..... SET  
 Magneto switches ..... OFF  
 Mixture ..... IDLE CUT-OFF  
 Avionics/electrical switches .OFF  
 Circuit breakers ..... IN  
 Pitot-static system ..... DRAIN  
 Windows ..... CLEAN  
 Flight controlsFREE & CORRECT  
 Battery master switch ..... ON  
 Fuel quantity gauges ..... CHECK  
 Electric fuel pump ..... CHECK  
 External lights ..... CHECK  
 Stall warning ..... CHECK  
 Pitot heat ..... CHECK  
 Battery master switch ..... OFF  
 Flaps ..... 40°

**PREFLIGHT (EXTERIOR)**

Right flap, aileron, wing .. CHECK  
 Tie-down & chocks ..... REMOVE  
 Fuel vent ..... CHECK  
 Fuel sump(s) ..... DRAIN  
 Fuel quantity ..... CHECK  
 Right main tire ..... 24psi CHECK  
 Right main gear strut infl. .... 4.5"  
Right air inlet ..... CLEAR  
 Oil level ..... 6-8 QTS.  
 Propeller & spinner ..... CHECK  
 Induction air inlet ..... CHECK  
 Alternator belt ..... CHECK  
 Nose wheel tire ..... 18psi CHECK  
 Nose gear strut inflation ..... 3.25"  
Fuel strainer ..... DRAIN  
 Left air inlet ..... CHECK  
 Fuel sump(s) ..... DRAIN  
 Fuel quantity ..... CHECK  
 Left main tire ..... 24psi CHECK  
 Left main gear strut infl. .... 4.5"  
 Fuel vent ..... CHECK  
 Pitot head ..... CHECK  
 Tie-down & chocks ..... REMOVE  
Left flap, aileron, wing ..... CHECK  
 Left side of fuselage ..... CHECK  
 Antennae ..... SECURE  
 Empennage ..... CHECK  
 Tail tie-down ..... REMOVE  
 Right side of fuselage ..... CHECK  
 Baggage ..... SECURE  
 Baggage door ..... LOCKED  
 General inspectionWALK AROUND

**BEFORE ENGINE START**

Flaps ..... RETRACT  
 Crew & passengers ..... BRIEF  
 Seats ..... ADJUST & LOCK  
 Seat belts & harnesses...FASTEN  
 Parking brake ..... SET  
 Avionics ..... OFF  
 Carburetor heat ..... OFF  
 Alternate static source ..... OFF  
 Fuel selector ..... DESIRED TANK

**STARTING ENGINE**

Throttle ..... 1/4" OPEN  
 Battery Master switch ..... ON  
 Alternator switch ..... ON  
 LEFT Magneto switch ..... ON  
 Electric fuel pump ..... ON  
 Mixture ..... RICH  
 Propeller area ..... CLEAR  
 Starter ..... ENGAGE  
 If doesn't start Prime and Repeat

**STARTING ENGINE HOT**

Throttle ..... 1/2" OPEN  
 Battery Master switch ..... ON  
 Alternator switch ..... ON  
 LEFT Magneto switch ..... ON  
 Electric fuel pump ..... ON  
 Mixture ..... RICH  
 Propeller area ..... CLEAR  
 Starter ..... ENGAGE

**STARTING ENGINE FLOODED**

Throttle ..... FULL OPEN  
 Battery Master switch ..... ON  
 Alternator switch ..... ON  
 LEFT Magneto switch ..... ON  
 Electric fuel pump ..... OFF  
 Mixture ..... IDLE  
 Propeller area ..... CLEAR  
 Starter ..... ENGAGE  
 Mixture ..... RICH

**AFTER ENGINE START**

Throttle ..... 1000 RPM  
 RIGHT Magneto switch ..... ON  
 Oil pressure ..... CHECK  
 Fuel pump ..... OFF  
 Fuel pressure ..... CHECK  
 Mixture ..... AS REQUIRED  
 Avionics master/radios ..... ON  
 GNS 430 Check:  
 Database Date ..... CHECK  
 LCDI, LFLG, VCDI, VFLG . CHECK  
 To/From, RMI, OBS, DTK . CHECK

ATIS/Clearance ..... RECORD  
 Flight instruments .... SET/CHECK

**TAXIING**

Parking brake ..... RELEASE  
 Brakes/flight instruments CHECK

**ENGINE RUNUP**

Parking brake ..... SET  
 Check area ..... CLEAR  
 Mixture ..... RICH  
 Fuel selector ..... SWITCH TANK  
 Throttle ..... 2000 RPM  
 Magnetos ..... max 175 drop/50 diff.  
 Vacuum ..... 4.8-5.2"  
 Engine gauges ..... CHECK  
 Ammeter ..... CHECK  
 Carb. heat ON ..... CHECK DROP  
 Throttle idle .. SMOOTH RUNNING  
 Carb. heat OFF... RPM INCREASE  
 Throttle ..... 1000 RPM

**BEFORE TAKEOFF**

Battery Master switch ..... ON  
 Alternator switch ..... ON  
 Magnetos ..... ON  
 Seat backs ..... ERECT  
 Seat belts & harnesses .. FASTEN  
 Trim ..... SET  
 Flaps ..... SET  
 Carburetor heat ..... OFF  
 Mixture ..... SET  
 Fuel selector ..... PROPER TANK  
 Window ..... CLOSED  
 Flight controlsFREE & CORRECT  
 Engine gauges ..... CHECK  
 Flight instruments ..... CHECK  
 Annunciator ..... PRESS TO TEST  
 Avionics / Transponder ..... SET  
 Circuit breakers ..... IN  
 Cabin door ..... LATCHED  
 Takeoff briefing ..... GIVEN

**HOLDING SHORT / LINEUP**

Flaps ..... SET  
 Window / Door ..... CLOSED  
 Takeoff Time ..... NOTED  
 Air conditioner ..... OFF  
 Mixture ..... SET  
 Fuel pump ..... ON  
 Landing light ..... ON  
 Transponder ..... ALT

**AFTER TAKEOFF / CLIMB**

Flaps ..... UP  
 Engine gauges ..... CHECK

Fuel pump ..... OFF  
 Fuel pressure ..... CHECK  
 Cruise climb ..... 87 KIAS

**CRUISE CHECK**

Power ..... SET  
 Mixture ..... ADJUST  
 Landing light ..... OFF

**PRE-MANEUVER CHECK**

Altitude ..... CHECK  
 Landing light ..... ON  
 Fuel pump ..... ON  
 Mixture ..... RICH  
 Magnetos ..... BOTH  
 Fuel selector ..... PROPER TANK  
 Seat belts & harnesses .. FASTEN  
 Cockpit area ..... SECURED  
 Clearing turns ..... EXECUTE

**POST-MANEUVER CHECK**

Landing light ..... OFF  
 Fuel pump ..... OFF  
 Mixture ..... SET

**APPROACH & LANDING**

ATIS ..... RECORD  
 Approach briefing ..... GIVEN  
 Mixture ..... SET  
 Landing light ..... ON  
 Fuel pump ..... ON  
 Fuel selector ..... PROPER TANK  
 Seat backs ..... ERECT  
 Seat belts & harnesses .. FASTEN  
 Air conditioner ..... OFF

**AFTER LANDING**

Flaps ..... RETRACT  
 Fuel pump ..... OFF  
 Landing light ..... OFF  
 Transponder ..... STANDBY/OFF

**ENGINE SHUTDOWN**

Air conditioner ..... OFF  
 Avionics master/radios ..... OFF  
 Electrical switches ..... OFF  
 Throttle ..... CLOSED  
 Mixture ..... IDLE CUT-OFF  
 Magnetos ..... OFF  
 Alternator switch ..... ON  
 Battery Master switch ..... OFF

**PARKING**

Hobbs ..... RECORD  
 Control wheel ..... SECURED  
 Window ..... CLOSED

Door ..... LOCKED  
 Tie-downs/chocks ..... SECURE

**ENGINE FIRE DURING START**

Starter ..... CRANK ENGINE  
 Mixture ..... IDLE CUT-OFF  
 Throttle ..... OPEN  
 Fuel pump ..... OFF  
 Fuel selector ..... OFF

**ENGINE POWER LOSS IN FLIGHT**

Fuel selector ..... SWITCH TANKS  
 Fuel pump ..... ON  
 Mixture ..... RICH  
 Carburetor heat ..... ON  
 Engine gauges .CHECK for cause  
 Magnetos ..... L, R, BOTH

When power is restored:

Carburetor heat ..... OFF  
 Fuel pump ..... OFF  
 If power is not restored, proceed  
 with power off landing

**POWER OFF LANDING**

Flaps ..... 40°  
 Final approach speed ..... 66 KIAS  
 Throttle ..... CLOSE  
 Mixture ..... IDLE CUT-OFF  
 Magnetos ..... OFF  
 Batt. Master switch ..... OFF  
 ALTR switch ..... OFF  
 Fuel selector ..... OFF  
 Seat belts & harnesses ..... TIGHT  
 Door ..... WEDGE OPEN

**ENGINE ROUGHNESS**

Carburetor heat ..... ON  
 If roughness continues after 1 min:  
 Carburetor heat ..... OFF  
 Mixture ..... Adjust for max.  
 smoothness  
 Fuel pump ..... ON  
 Fuel selector ..... SWITCH TANKS  
 Engine gauges ..... CHECK  
 Magnetos ..... L, R, BOTH  
 If operation is satisfactory on  
 either one, continue on that  
 magneto at reduced power and  
 FULL RICH Mixture.  
 Prepare for power off landing.

**LOSS OF FUEL PRESSURE**

Fuel Pump ..... ON  
 Fuel Selector ..... PROPER TANK

**ELECTRICAL FIRE**

Batt. Master switch ..... OFF  
 ALTR switch ..... OFF  
 Vents ..... OPEN  
 Cabin heat & defroster ..... OFF  
 Land as soon as possible.

**ENGINE FIRE**

Fuel selector ..... OFF  
 Throttle ..... CLOSED  
 Mixture ..... IDLE CUT-OFF  
 Fuel pump ..... CHECK OFF  
 Heater & defroster ..... OFF  
 Proceed with POWER OFF  
 LANDING procedure.

**ELECTRICAL FAILURES**

ALT Annunciator light illuminated:  
 Ammeter . Verify inop. alternator.

If ammeter shows zero:

ALT switch ..... OFF

Reduce electrical load to  
 minimum:

ALT circuit breaker ... CHECK and  
 ..... reset as required  
 ALT switch ..... ON

If power not restored

ALT Switch ..... OFF  
 Land as soon as practicable.  
 Anticipate complete electrical  
 failure

**ELECTRICAL OVERLOAD**

(Alt. 20 amps above known load)  
 ALT Switch ..... ON  
 BAT switch ..... OFF  
 If alternator loads are reduced:  
 Electrical load ..... REDUCE  
 If alternator loads are not reduced:  
 ALT Switch ..... OFF  
 BAT switch ..... as required  
 Land as soon as practicable.  
 Anticipate complete electrical  
 failure.

**OPEN DOOR**

Airspeed ..... 87 KIAS or less  
 Cabin vents ..... CLOSE  
 Storm window ..... OPEN  
 If upper latch is open ..... LATCH

If side latch is open, pull on arm  
 rest while moving latch handle to  
 latched position

If both latches are open, latch  
 side latch then top latc

|                     |                                  |                                     |                                     |                                           |
|---------------------|----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------------|
| Airspeeds<br>(KIAS) | V <sub>BEST GLIDE</sub> ..... 76 | V <sub>R,SH.FLD</sub> ..... 41-49   | V <sub>A</sub> (2,550lbs) ..... 113 | V <sub>NE</sub> ..... 154                 |
|                     | V <sub>S0</sub> ..... 45         | V <sub>X</sub> ..... 64             | V <sub>A</sub> (1,634lbs) ..... 89  | V <sub>I,APP</sub> ..... 75               |
|                     | V <sub>S1</sub> ..... 50         | V <sub>Y</sub> ..... 76             | V <sub>FE</sub> ..... 102           | V <sub>F,APP (NORM&amp;SH.FIELD)</sub> 66 |
|                     | V <sub>R,NORM</sub> ..... 52-65  | V <sub>ENROUTE CLIMB</sub> ..... 87 | V <sub>NO</sub> ..... 125           |                                           |
|                     |                                  |                                     |                                     |                                           |

|                                 |
|---------------------------------|
| Usable Fuel:                    |
| Full tanks: 2 x 24 gal = 48 gal |
| To filler neck indicator tab:   |
| 2 x 17 gal = 34 gal             |

|                              |
|------------------------------|
| Max. weight: 2550 lbs        |
| Max. baggage weight: 200 lbs |
| Max crosswind: 17 kts        |