

**PREFLIGHT**

WX/WEIGHT/FP/AROW.....COMPLETE  
 TIES, LOCKS, CHOCKS.....REMOVED  
 PARKING BRAKE.....SET  
 IGNITION SWITCH.....OFF  
 MASTER.....ON  
 • FUEL GAUGES.....CHECK  
 • FLAPS.....EXTEND  
 • PITOT HEAT SWITCH.....ON/CHECK (IFR)  
 • STROBES/NAVS/LANDING.....ON/CHECK  
 PITOT/LIGHTS/MASTER.....OFF  
 TRIM.....TAKE OFF  
 FIRE EXTINGUISHER.....SECURE/GREEN  
 FUSELAGE / ANTENNAS.....CHECK  
 EMPENNAGE.....MOVEMENT & SECURITY  
 FLAPS: HINGES,PINS,NUTS.....SECURED  
 AILERONS: HINGES/MOVEMENT.....CHECK  
 WING SURFACES/LEADING EDGE.....CHECK  
 TIRES, LINES, BRAKES, STRUT.....CHECK  
 FUEL.....SUPPLY, SUMP, STRAIN  
 OIL.....6-8 QUARTS

**8 IF LONG FLIGHT IS PLANNED**

PROP CLEAN FROM NICKS & CUTS.....CHECK  
 ENGINE COMPARTMENT.....CLEAR  
 AIR FILTER.....CLEAN  
 STATIC/PITOT/DRAIN.....CLEAR  
 STALL WARNING VENT.....CLEAR  
 STORAGE.....LOCKED  
 HOBBS.....LOGGED

**PASSENGER BRIEF: SAFEST**

Seatbelts, Air vents, Fire extinguisher  
 Exits, Sick, Talking

**PRE-START**

SEAT BACK, TRACK & BELTS.....LOCK / ON  
 FUEL SELECTOR/VALVE.....ON/BOTH  
 LIGHTS/ELECTRICAL/RADIOS.....OFF  
 PARKING BRAKES.....TEST/SET  
 CIRCUIT BREAKERS.....IN

**ENGINE START**

MIXTURE.....RICH  
 CARB HEAT.....COLD (IN)  
 PRIME.....AS REQUIRED  
 THROTTLE.....OPEN 1/4 INCH  
 PROP.....CLEAR  
 MASTER.....ON  
 BEACON.....ON  
 IGNITION SWITCH.....START  
 ENGINE ENGAGES.....THROTTLE TO 1000 RPM  
 OIL PRESSURE.....IN THE GREEN  
 TIME.....NOTED

**PRE-TAXI / TAXI**

FLAPS.....RETRACTED  
 MIXTURE.....LEAN  
 RADIO/AVIONICS/TRANSPONDER.....ON/ALT  
 ATIS / ALTIMETER.....WITHIN 75'  
 LIGHTS.....AS REQUIRED  
 TAXI CALL.....RADIO TEST  
 BRAKES.....TEST  
 INSTRUMENTS.....CHECK

**RUN UP**

BRAKES.....SET/HOLD  
 LIGHTS.....AS REQ'D  
 CABIN DOORS.....LATCHED  
 INSTRUMENTS.....SET  
 FLIGHT CONTROLS.....FREE & CORRECT  
 TRIM.....TAKE OFF  
 MIXTURE.....RICH  
 THROTTLE.....1700 RPM  
 MAGS TEST.....DROP <125  
 • Difference in drop between mags: < 50  
 CARB HEAT.....RPM DROP  
 AMMETER.....POSITIVE  
 SUCTION.....4.6-5.4 in. Hg  
 OIL PRESS/TEMP.....CHECK  
 FUEL TANKS.....CHECK  
 THROTTLE/LOCK.....IDLE CK / 1000

**ABORT PLAN READY**

**ROLL BEFORE ROTATION:** Any Anomaly  
 • Throttle Idle, Brake, Exit RWY  
**AFTER ROTATION W/USABLE:** Engine Fail/Fire  
 • Throttle Idle, Land straight ahead  
**AFTER ROTATION, W/O USABLE, <1000:** Vg 80 MPH, best spot 30° of nose, communicate, shut down, emg. landing  
**AFTER ROTATION >1000:** Vg 80 MPH, standard rate turn back to the field

**PRE-TAKE OFF**

LIGHTS.....AS REQUIRED  
 INSTRUMENTS.....SET  
 TRANSPONDER.....ALT  
 TIME.....NOTED  
 TRIM.....SET FOR T/O  
 SEAT BELTS, DOORS, WINDOWS.....SECURED  
 BRAKE.....RELEASE

**TAKE OFF**

FLAPS.....UP  
 CARB HEAT.....COLD (IN)  
 THROTTLE.....(2260-2360 RPM).....FULL OPEN  
 INSTRUMENTS.....GREEN  
 AIRSPEED.....ALIVE  
 V<sub>R</sub>.....60 MPH  
 V<sub>L</sub>.....85 MPH

**ENROUTE**

CLIMB.....80-90 MPH  
 CRUISE.....POWER 2200 to 2700 RPM (< 75%)  
 ELEVATOR TRIM.....ADJUST  
 MIXTURE.....LEAN

**PRE-DESCENT / LANDING**

WX.....OBTAINED  
 ALTIMETER.....SET  
 RADIOS.....SET  
 NAV/GPS.....TUNE  
 SEATBELTS/DOORS/WINDOWS.....SECURE  
 MIXTURE.....RICH  
 DESCENT AIRSPEED (FLAPS UP).....70-80 MPH  
 DESCENT AIRSPEED (FLAPS DOWN).....65-75 MPH

**GO AROUND**

THROTTLE.....FULL OPEN  
 CARB HEAT.....COLD  
 FLAPS.....Retract to 20°  
 AIRSPEED.....68 MPH  
 FLAPS.....RETRACT INCREMENTS.....85 & POS. RATE  
 TRIM.....AS REQUIRED

**OPERATING SPEEDS: MPH**

VNE NEV.EXCEED	174	VG GLIDE	80
VNO CRUISE	140	VSO STALL DIRTY	49
VA	122	VS1 STALL CLEAN	57
VR ROTATE	60	VFE FLAPS EXT	100
VX BEST ANGLE	65	APP: FLAPS UP	70-80
VY BEST RATE	85	APP: FLAPS DN	65-75
CLIMB ENROUTE	80-90	SHORT FLD LDG: 40°	69
XWIND	15	GO AROUND	65

**OPERATING SPEEDS: KTS**

VNE NEV.EXCEED	64	VG GLIDE	69
VNO CRUISE	121	VSO STALL DIRTY	42
VA	106	VS1 STALL CLEAN	49
VR ROTATE	52	VFE FLAPS EXT	86
VX BEST ANGLE	56	APP: FLAPS UP	61-69
VY BEST RATE	74	APP: FLAPS DN	56-65
CLIMB ENROUTE	69-78	SHORT FLD LDG: 40°	60
XWIND	13	GO AROUND	56

**CLEAR RUNWAY**

LIGHTS.....AS REQUIRED  
 CARB HEAT.....COLD  
 MIXTURE.....LEAN FOR TAXI  
 FLAPS.....RETRACTED  
 TRANSPONDER.....ALTITUDE  
 TRIM.....SET FOR T/O

**SHUTDOWN**

**LIGHTS ~ CAMERA ~ ACTION**

LIGHTS (EXCEPT BEACON).....OFF  
 AVIONICS.....OFF  
 MIXTURE, MAGS, MASTER, BEACON.....OFF

**POST FLIGHT CHECK**

HOBBS/TACH.....LOGGED  
 SQUAWKS.....LOGGED  
 WINDOWS.....CLEAN  
 CONTROL LOCK/BELTS.....SET  
 SHADE.....SET  
 TRASH/ITEMS.....REMOVED  
 TIES, LOCKS, CHALKS.....SECURE  
 DOORS.....LOCKED

**A/C INFORMATION**

<b>MAX GROSS: 2300</b>		<b>BAGGAGE: 120</b>	
<b>FUEL: 100LL BLUE</b>	<b>CAPACITY P/TANK: 21</b>	<b>ELECTRICAL: 14v DC</b>	<b>BATTERY: 12V</b>
<b>USEABLE P/TANK: 19</b>		<b>ALTERNATOR: 60 AMP</b>	
<b>OIL CAPACITY: 8 QTS</b>	<b>OIL WEIGHT: SAE 30 OR 50</b>	<b>TIRE PRESSURE</b>	<b>NOSE: 26PSI</b>
		<b>MAINS: 24 PSI</b>	
<b>VACUUM: 4.5 - 5.4 in. Hg.</b>		<b>SERVICE CEILING: 13,100</b>	

**EFFECTIVE 03-30-24**

**POWER LOSS IN FLIGHT / EMERGENCY LANDING**

**A: AIRSPEED: 80 MPH / 70 KTS**  
**B: BEST SPOT TO LAND WIND DIR/VELOCITY**  
**C: CHECK ENGINE**

- CARB HEAT.....ON
- FUEL SELECTOR.....BOTH
- MIXTURE.....RICH
- PRIMER.....IN/LOCKED
- MAGS.....CHECK

**D: DECLARE EMERGENCY**

- TWR, APP, Unicom.....121.5
- SQUAWK.....7700
- E.L.T.....ON

**E: ENGINE SECURE**

- FUEL SELECTOR.....OFF
- MIXTURE.....FULL CUT-OFF
- THROTTLE.....IDLE CUT-OFF
- FULL FLAPS.....WHEN FIELD ASSURED
- AVIONICS, MASTER, MAGS.....OFF
- SEAT BELTS/HARNES.....SECURE
- DOORS.....UNLATCH/PROP
- FORCE LAND.....PROTECT BODY

**ENGINE FIRE: START UP**

**NOT STARTED**

THROTTLE.....OPEN  
 MIXTURE / FUEL / SELECTOR.....OFF  
 MAGS.....TURN 5 SECONDS & SHUTDOWN

**STARTED**

RUN A FEW MINUTES @ 1700 RPM  
 • DRAW FLAMES IN CYLINDER  
 MIXTURE / FUEL / SELECTOR.....OFF  
 EXTERNAL EXTINGUISHER

**ENGINE FIRE: IN FLIGHT**

MIXTURE.....CUTOFF  
 FUEL SELECTOR.....OFF  
 SLIP OR EMERGENCY DESCENT.....EXT.FLAMES  
 MASTER/MAGS/ELECTRICAL.....OFF  
 CABIN HEAT/AIR.....OFF  
 IF FIRE NOT EXTINGUISHED.....INCREASE SPEED  
 FORCED LANDING (W/O POWER).....EXECUTE

**ELECTRICAL**

MASTER/ELECTRICAL.....OFF  
 CABIN HEAT/AIR.....OFF  
 DEFROSTER.....OFF  
 LAND AS SOON AS PRACTICAL

**IF FIRE OUT, TEST EACH ELECT. DEVICE ONE AT A TIME**

**IF FIRE EXTINGUISHED, VENTILATE CABIN IF NOT EXTINGUISHED: USE EXTINGUISHER, VENTILATE, EMERGENCY LANDING**

**ENGINE**

FUEL SELECTOR.....OFF  
 THROTTLE/MIXTURE.....IDLE/CUT-OFF  
 VENTS.....CLOSE  
 HEATER.....OFF

**RADIO FAILURE**

AUDIO PANEL.....ON  
 CIRCUIT BREAKERS.....IN  
 VOLUME.....CHECK  
 ALT. SWITCH.....RECYCLE