

**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.....CLEAR  
 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  
 FREQ/ATIS/ALTIMETER.....SET  
 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.....DIFF <50  
 CARB HEAT.....RPM DROP  
 AMMETER/ALTERNATOR.....CHECK  
**LOAD ELECT 3-5 SECS; NORM-NEEDLE WIDTH OF 0**  
 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  
 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>.....60-70 MPH  
 V<sub>y</sub>.....80-90 MPH

**ENROUTE**

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

**PRE-DESCENT/LANDING**

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

**GO AROUND**

THROTTLE.....FULL OPEN  
 CARB HEAT.....COLD  
 FLAPS.....Retract to 20°  
 AIRSPEED.....65 MPH  
 FLAPS.....RETRACT IN INCREMENTS  
 CLIMB.....80-90 MPH

**OPERATING SPEEDS: MPH**

VNE NEV.EXCEED	174	VG GLIDE	80
VNO CRUISE	140	VSO STALL DIRTY	49
VA	122	VS1 STALL	57
VR ROTATE	60-70	VFE FLAPS EXT	100
VX BEST ANGLE	68	SHORT FLD APP	69
VY BEST RATE	75-85	XWIND	15
CLIMB ENROUTE	80-90		

**OPERATING SPEEDS: KTS**

VNE NEV.EXCEED	151	VG GLIDE	69
VNO CRUISE	121	VSO STALL DIRTY	42
VA	106	VS1 STALL	49
VR ROTATE	52-60	VFE FLAPS EXT	86
VX BEST ANGLE	59	SHORT FLD APP	60
VY BEST RATE	65-73	XWIND	13
CLIMB ENROUTE	69-78		

**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**

MAX GROSS: 2300		BAGGAGE: 120	
<b>FUEL: 100LL BLUE</b> CAPACITY P/TANK: 21 USEABLE P/TANK: 19		<b>ELECTRICAL: 14v DC</b> BATTERY: 12V ALTERNATOR: 60 AMP	
<b>OIL CAPACITY: 8 QTS</b> OIL WEIGHT: SAE 30 OR 50		<b>TIRE PRESSURE</b> NOSE: 31PSI MAINS: 21 PSI	
VACUUM: 4.5 - 5.4 in. Hg.		SERVICE CEILING: 13,100	

**EFFECTIVE 03-30-24**

**POWER LOSS IN FLIGHT / EMERGENCY LANDING**

A: AIRSPEED: 80 MPH / 69 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 (120 MPH).....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