

**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.....5-8 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**

MASTER.....ON  
 BEACON.....ON  
 THROTTLE.....OPEN ¼ INCH  
 MIXTURE.....CUT OFF  
 PRIME.....AS REQUIRED  
 • WARM: SKIP  
 • COLD: PUMP ON > MIX RICH 3-5 SECS >  
 ○ MIX CUTOFF & AUX PUMP OFF  
 PROP.....CLEAR  
 IGNITION SWITCH.....START  
 ENGINE ENGAGES.....MIXTURE ADVANCE SMOOTHLY  
 OIL PRESSURE.....IN THE GREEN  
 TIME.....NOTED

**PRE-TAXI / TAXI**

FLAPS.....RETRACTED  
 MIXTURE.....LEAN  
 RADIO/AVIONICS/TRANSPONDER.....ON/ALT  
 FREQ/ATIS/ALTIMETER (PRIMARY & STBY).....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  
 AUTO PILOT.....ON / CHECK / DISENGAGE  
 TRIM.....TAKE OFF  
 FLIGHT CONTROLS.....FREE & CORRECT  
 MIXTURE.....RICH  
 THROTTLE.....1800 RPM  
 MAGS TEST.....DROP <150.....DIFF <50  
 AMMETER.....POSITIVE  
 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 65 KTS, best spot 30° of nose, communicate, shut down, emg. landing  
 AFTER ROTATION >1000: Vg 65 KTS, 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.....0-10°  
 THROTTLE.....(2065-2165 RPM).....FULL OPEN  
 INSTRUMENTS.....GREEN  
 AIRSPEED.....ALIVE  
 V<sub>R</sub>.....55 KTS  
 CLIMB SPEED.....70-80 KTS

**ENROUTE**

CLIMB.....70-85 KTS  
 CRUISE.....POWER 2000 to 2400 RPM (< 80%)  
 ELEVATOR TRIM.....ADJUST  
 MIXTURE.....LEAN

**PRE-DESCENT / LANDING**

WX.....OBTAINED  
 ALTIMETER.....SET  
 RADIOS.....SET  
 NAVI/GPS.....TUNE  
 SEAT BELTS/DOORS/WINDOWS.....SECURE  
 SELECTOR.....BOTH  
 MIXTURE.....RICH  
 LIGHTS.....AS REQUIRED  
 FLAPS EXT.....(0-10°) < 110 KTS...(10°-30°) < 85 KTS  
 NORMAL LANDING: FLAPS UP.....60-75 KTS  
 FLAPS DN.....60-70 KTS

**GO AROUND**

THROTTLE.....FULL OPEN  
 FLAPS.....Retract to 20°  
 CLIMB AIRSPEED.....55 KTS  
 FLAPS.....10° UNTIL OBSTACLES CLEARED  
 RETRACT AFTER SAFE ALTITUDE AND 60 KTS  
 TRIM.....AS REQUIRED

**OPERATING SPEEDS: KTS**

VNE NEV.EXCEED	163	VG GLIDE	65
VNO CRUISE	129	VSO STALL DIRTY	33
VA MANEUVER	99	VS1 STALL CLEAN	44
VR ROTATE	55	VFE FLAPS EXT 10°	110
VX BEST ANGLE	57	VFE FLAPS EXT 10°-30°	85
VY BEST RATE	70-80	SH FIELD LDG 10°	65-75
SHORT FLD CLIMB	57	SH FIELD LDG 30°	62
CLIMB ENROUTE	70-85	NORM.LDG FL.DN	60-70
MAX WINDOW OPEN	163	GO AROUND	55
		XWIND	15

**OPERATING SPEEDS: MPH**

VNE NEV.EXCEED	187	VG GLIDE	75
VNO CRUISE	148	VSO STALL DIRTY	38
VA MANEUVER	114	VS1 STALL CLEAN	50
VR ROTATE	63	VFE FLAPS EXT 10°	126
VX BEST ANGLE	65	VFE FLAPS EXT 10°-30°	97
VY BEST RATE	80-92	SH FIELD LDG 10°	75-86
SHORT FLD CLIMB	65	SH FIELD LDG 30°	71
CLIMB ENROUTE	70-85	NORM.LDG FL.DN	69-80
MAX WINDOW OPEN	187	GO AROUND	63
		XWIND	17

**CLEAR RUNWAY**

LIGHTS.....AS REQUIRED  
 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: 2450	BAGGAGE: 120
FUEL: 100LL BLUE	ELECTRICAL: 14v DC
CAPACITY P/TANK: 28	BATTERY: 12V
USEABLE P/TANK: 26.5	ALTERNATOR: 60 AMP
OIL CAPACITY: 8 QTS	TIRE PRESSURE
OIL WEIGHT: SAE 20W-50	NOSE: 34PSI
	MAINS: 28 PSI
VACUUM: 4.5 - 5.5 in. Hg.	SERVICE CLG: 13,500

**EFFECTIVE 03-30-24**

**POWER LOSS IN FLIGHT / EMERGENCY LANDING**

A: AIRSPEED: Vg 65 KTS / 75 MPH  
 B: BEST SPOT TO LAND WIND DIR/VELOCITY  
 C: CHECK ENGINE  
 • 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  
 FUEL PUMP.....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