

PREFLIGHT

Aircraft Documents ON BOARD
 Fire Extinguisher..... CHARGED & SECURE
 Structural Temperature Indicator..... CHECK
 Tie Downs REMOVED / ON-BOARD
 Flight Control Lock..... REMOVE
 Rudder Pedals..... ADJUSTED & LOCKED
 Parking Brake ON
 Magneto OFF
 EIS OFF
 Avionics Master Switch & Electrics OFF
 GEN/BAT Master Switch..... ON
 Fuel Quantity..... CHECK
 Flaps..... LDG
 Warning Lights ON
 GEN/BAT Master Switch..... OFF

EXTERIOR INSPECTION

LEFT WING
 Left Main Landing Gear..... CHECK
 Stall Warning..... CHECK
 Pitot-Static Probe..... CLEAN, HOLES-OPEN
 Lights..... VISUAL CHECK
 Aileron, Wing Flap..... VISUAL CHECK

FUSELAGE
 Fuel Tank Vent..... CHECK
 Fuel Drains..... DRAIN WATER
 Maintenance Fuel Drains..... NO LEAKS
 Fuel Quantity..... VISUAL INSPECTION
 Antennas..... VISUAL INSPECTION

TAIL
 Stabilizers and Control Surfaces CHECK

RIGHT WING
 Aileron, Wing Flap..... VISUAL CHECK
 Lights..... VISUAL CHECK
 Right Main Landing Gear..... CHECK

NOSE
 Oil..... CHECK LEVEL (6-4 QUARTS)
 Cowling..... VISUAL INSPECTION
 Air Intakes..... CLEAR
 Propeller..... CLEARANCE MIN 25 CM
 Propeller Blades..... CHECK
 Spinner..... VISUAL INSPECTION
 Nose Gear..... CHECK

BEFORE STARTING ENGINE

Parking Brake ON
 Brake Pressure..... CHECK
 Baggage STOWED & SECURED
 Seatbelts..... FASTENED & ADJUSTED
 Flight Controls..... FREE & CORRECT
 Canopy..... CLOSED & SECURE
 Circuit Breakers..... CHECK
 Fuel Shut-off Valve..... ON (PUSH IN & LOCK)
 Throttle..... FREE/IDLE
 Throttle Friction..... CHECK
 Alternate Air..... OFF
 GEN/BAT Master Switch ON
 Avionics Master Switch & Radio ON
 ATC Clearance RECEIVED
 Avionics Master Switch & Radio OFF
 Generator Warning Light..... ILLUMINATE
 Canopy Warn. Light.... OFF (PRESS TO CHECK)

ENGINE START

Strobe/Position Lights ON
 Throttle..... IDLE
 Mixture..... FULL RICH
 Brakes..... HOLD
 Fuel Pump..... ON
 Fuel Prime..... ON
 Magneto..... ON
 EIS ON
 Throttle..... FULL (3-7 SEC) THEN IDLE ¼ INCH
 Propeller Area..... CLEAR
 Starter..... ENGAGE (MAX 10 SEC)
 Throttle..... 800 - 1000 RPM
 Oil Pressure..... CHECK
 Fuel Prime..... OFF
 Avionics Master Switch ON
 Engine instruments..... CHECK

FLOODED START

Strobe/Position Lights ON
 Mixture..... FULL RICH
 Brakes..... HOLD
 Fuel Pump..... OFF
 Fuel Prime..... OFF
 Throttle..... HALF OPEN
 Magneto..... ON
 EIS ON
 Propeller Area..... CLEAR
 Starter..... ENGAGE
 Throttle..... ADJUST 1000 RPM
 Oil Pressure..... CHECK
 Avionics Master Switch ON
 Engine instruments..... CHECK

AFTER STARTING ENGINE

Cabin Heat and Defrost AS REQUIRED
 Flaps..... CHECK/ CRUISE
 Transponder..... STBY
 Radios/NAV/GPS..... SET
 Altimeter..... BOTH SET QNH
 Fuel Pump ON
 Fuel Pressure..... CHECK > 3.5 PSI
 Engine Instruments..... CHECK
 Trim Indicator NEUTRAL
 Taxi Clearance..... RECEIVED

TAXI

Parking Brake/Taxi light..... OFF/ON
 Flight Instruments/Brakes CHECK

RUN UP POSITION

Parking Brake/Taxi light..... ON/OFF
 Mixture..... FULL RICH
 Throttle..... 1700 RPM
 Oil Pressure..... BELOW 70 PSI
 Alternator Load (Ammeter) CHECK
 Mixture Lean Function..... CHECK
 Magneto CHECK (max 150 RPM drop)
 EIS CHECK (max 40 RPM drop)
 Alternate Air..... ON/OFF (NO RPM DROP)
 Engine instruments..... CHECK
 Warning Lights..... NO ILLUMINATE
 Throttle..... MAX / IDLE THEN 1000 PRM
 Take-Off Briefing COMPLETED

CHECK LISTS MARKED WITH THE THICK VERTICAL LINE ON THE LEFT SHOULD BE MEMORIZED

LINE UP

Parking Brake/Taxi/LDG Light..... OFF/ON
 Gyro..... RWY HDG
 Trim Indicator..... NEUTRAL
 Fuel Pump..... ON
 Magneto / EIS BOTH ON
 Transponder..... ALT
 Flaps..... T/O
 Mixture..... FULL RICH
 Oil Temperature ABOVE 100°F

TAKE-OFF

Take-off power..... SET
 RPM..... MIN 2000
 Engine Gauges CHECK
 Rotation..... 44 KIAS
 Climb speed..... 58 KIAS

CLIMB

Throttle..... FULL
 Landing/Taxi Light..... OFF
 Flaps..... UP

CRUISE

Cruise Power..... SET (2200 RPM)
 Fuel Pump OFF
 Altimeters..... SET/ CROSS CHECKED
 Mixture..... ADJUST

DESCENT

Mixture..... FULL RICH
 Fuel Pump..... ON
 Throttle..... AS REQUIRED

FINAL

Mixture..... FULL RICH
 Flaps..... LDG
 Fuel Pump..... ON
 Landing/Taxi Light..... ON
 Approach Speed 65 KIAS

GO AROUND

Throttle..... FULL POWER
 Flaps..... T/O
 Airspeed..... 58 KIAS

RUNWAY VACATED

Landing Light..... OFF
 Flaps..... CRUISE
 Transponder..... STBY

SHUT DOWN POSITION

Parking Brake/Taxi light..... ON/OFF
 Electrics & Avionics OFF
 Avionics Master Switch OFF
 Throttle..... IDLE
 Fuel Pump OFF
 Engine..... COOLING
 Mixture..... CUT OFF
 Strobe Lights..... OFF
 Magneto OFF
 EIS OFF
 GEN/BAT Master Switch..... OFF
 Tie Downs AS REQUIRED

ENGINE FAILURE DURING TAKE-OFF RUN

Throttle.....IDLE
 Brakes.....AS REQUIRED
 Flaps CRUISE
 Mixture.....CUT OFF
 Magneto / EIS.....OFF
 GEN/BAT Master Switch.....OFF

ENGINE FAILURE AFTER TAKE-OFF**INSUFFICIENT ENGINE POWER**

Airspeed.....60 KIAS
 Throttle.....FULL
 Mixture.....FULL RICH
 Alternate Air.....OPEN
 Fuel Shut-off Valve.....OPEN
 Magneto / EISON
 Fuel Pump.....ON

SHORTLY BEFORE LANDING

Mixture.....CUT OFF
 Fuel Shut-off Valve.....CLOSED
 Magneto / EISOFF
 Flaps.....AS REQUIRED
 GEN/BAT Master SwitchOFF

ENGINE FAILURE DURING FLIGHT**ENGINE RUNNING ROUGHLY**

Mixture.....FULL RICH
 Alternate Air.....OPEN
 Fuel Shut-off Valve.....OPEN
 Fuel Pump.....ON
 MagnetoOFF / ON
 Throttle.....PRESENT POSITION
 No improvement....RED. THROTTLE LAND ASAP

RESTARTING THE ENGINE WITH PROPELLER WINDMILLING

Airspeed.....73 KIAS
 Mixture.....FULL RICH
 Fuel Shut-off Valve.....OPEN
 Magneto / EIS.....ON
 Fuel Pump.....ON
 Fuel Prime.....ON
 Throttle.....3/4 INCH FORWARD

AFTER SUCCESSFUL RE-START

Oil Pressure.....CHECK
 Oil Temp.....CHECK
 Fuel Prime.....OFF
 Electrically Equipment.....ON IF REQUIRED

RESTARTING THE ENGINE WITH PROPELLER AT FULL STOP

Airspeed.....73 KIAS
 Electrically Equipment.....OFF
 GEN/BAT Master SwitchON
 Mixture.....FULL RICH
 Fuel Shut-off Valve.....OPEN
 Fuel Pump.....ON
 Fuel Prime.....ON
 Throttle.....3/4 INCH FORWARD
 Magneto / EISON
 StarterENGAGE

AFTER SUCCESSFUL RE-START

Oil Pressure.....CHECK
 Oil Temp.....CHECK
 Fuel Prime.....OFF
 Electrically Equipment.....ON IF REQUIRED

GLIDING

Flaps.....CRUISE
 Airspeed.....73 KIAS
 Glide ratio.....11:1

EMERGENCY LANDING**INSUFFICIENT ENGINE POWER**

Airspeed (Flaps CRUISE)64 KIAS
 Airspeed (Flaps T/O)60 KIAS
 Airspeed (Flaps LDG)55 KIAS
 Fuel Shut-off Valve.....CLOSED
 Mixture.....IDLE CUT-OFF
 Magneto / EISOFF
 Safety Belts.....SECURED
 Radio.....TRANSMIT
 Flaps.....AS REQUIRED
 GEN/BAT Master SwitchOFF

ENGINE FIRE DURING ENGINE-START-UP ON THE GROUND

Fuel Shut-off Valve.....CLOSED
 Cabin Heat.....CLOSED
 Mixture.....IDLE CUT-OFF
 GEN/BAT Master SwitchOFF
 Magneto / EISOFF
 Evacuation.....IMMEDIATELY

ENGINE FIRE DURING FLIGHT

Fuel Shut-off Valve.....CLOSED
 Cabin Heat.....CLOSED
 Airspeed.....73 KIAS
 Fuel Pump.....OFF
 Emergency Landing.....PERFORM

ELECTRICAL FIRE INCLUDING SMOKE DURING FLIGHT

GEN/BAT Master SwitchOFF
 Cabin Air.....OPEN
 Fire Extinguisher...USE IF SMOKE CONTINUES
 Avionics Master Switch.....OFF
 Electrically Equipment.....OFF
 Circuit Breakers.....PULL ALL
 Circuit Breaker.....PUSH BATTERY
 GEN/BAT Master SwitchON BAT ½ ONLY
 Circuit Breaker.....PUSH GEN
 Circuit Breaker.....PUSH GEN CONTROL
 GEN/BAT Master SwitchON
 Circuit Breaker.....PUSH AVIONICS
 Circuit Breaker.....PUSH AVIONICS MASTER
 Avionics Master Switch.....ON
 Circuit Breaker.....PUSH REQUIRED SYSTEMS
 Radio.....ON

LAND AS SOON AS POSSIBLE

CHECK LISTS MARKED WITH THE THICK VERTICAL LINE ON THE LEFT SHOULD BE MEMORAZIED

ELECTRICAL FIRE INCLUDING SMOKE ON THE GROUND

GEN/BAT Master SwitchOFF
IF ENGINE RUNNING
 Throttle.....IDLE
 Mixture.....CUT OFF
 Fuel Shut-off Valve.....CLOSED
 Magneto / EISON
 Canopy.....OPEN
 Fire Extinguisher.....USE IF REQUIRED

CABIN FIRE DURING FLIGHT

GEN/BAT Master SwitchOFF
 Cabin Air.....OPEN
 Cabin Heat.....CLOSED
 Fire Extinguisher.....USE IF REQUIRED

LAND AS SOON AS POSSIBLE**STARTER RELAY FAILURE****STARTER LIGHT REMAINS ILLUMINATED**

Throttle.....IDLE
 Mixture.....CUT OFF
 Magneto / EISON

MAINTENANCE ACTION IS REQUIRED**ELECTRICAL POWER FAILURE**

Circuit Breaker.....RESET RESET
 GEN/BAT Master SwitchON

IF POWER NOT RESTORED

GEN/BAT Master SwitchOFF
LAND AT NEAREST SUITABLE AIRPORT

GENERATOR FAILURE**GENERATOR LIGHT ILLUMINATED**

GEN Master Switch.....OFF-ON
 Circuit Breaker.....GEN RESET
 Circuit Breaker.....GEN CONTROL RESET
IF UNSUCCESSFUL
 Electrical load.....REDUCE
LAND AT NEAREST SUITABLE AIRPORT

AIRSPEED FOR SAFE OPERATION

Best Rate-of-Climb Sp (V_y) CRUISE.....75 KIAS
 Best Angle-of-Climb Sp (V_x) CRUISE.....60 KIAS
 Best Rate-of-Climb Speed (V_y) T/O.....68 KIAS
 Best Angle-of-Climb Speed (V_x) T/O.....57 KIAS
 Max Flaps Extended T/O Sp (V_{FE T/O}).....100 KIAS
 Max Flaps Extended LDG Sp (V_{FE LDG}).....78 KIAS
 Normal Operating Speed (V_{No}).....118 KIAS
 Landing Final App Speed LDG.....55 KIAS
 Best Glide Angle Speed.....73 KIAS
 Maneuvering Speed (V_A).....106 KIAS
 Max Demo Crosswind.....20 KIAS