

**PREFLIGHT**

Aircraft Documents .....ON BOARD  
 Fire Extinguisher.....CHARGED & SECURE  
 Tie Downs .....REMOVED / ON-BOARD  
 Flight Control Lock.....REMOVE  
 Seats.....ADJUSTED & LOCKED  
 Parking Brake .....ON  
 Magnetos.....OFF  
 Avionics Master Switch & Electrics ..... OFF  
 BAT Master Switch.....ON  
 Fuel Quantity.....CHECK  
 Flaps..... LDG  
 Warning Lights .....TEST  
 Lights, Pitot Heat, Stall warning.....CHECK  
 BAT Master Switch.....OFF

**EXTERIOR INSPECTION**

**LEFT FUSELAGE SIDE**  
 Baggage .....STOWED & CLOSED  
 Static Port.....CHECK  
 Antennas.....VISUAL INSPECTION

**TAIL**

Stabilizers and Control Surfaces .....CHECK

**LEFT FUSELAGE SIDE**

Static Port.....CHECK

**RIGHT WING**

Aileron, Wing Flap.....VISUAL CHECK  
 Lights.....VISUAL CHECK  
 Right Fuel Tank.....VISUAL CHECK  
 Right Fuel Drain.....DRAIN  
 Right Main Landing Gear.....CHECK

**NOSE**

Oil.....CHECK LEVEL (6-8 QUARTS)  
 Cowling.....VISUAL INSPECTION  
 Air Intakes.....CLEAR  
 Propeller.....CLEARANCE MIN 25 CM  
 Propeller Blades.....CHECK  
 Spinner.....VISUAL INSPECTION  
 Nose Gear.....CHECK  
 Exhaust Pipe.....CHECK  
 Filter Drain.....DRAIN

**LEFT WING**

Left Main Landing Gear.....CHECK  
 Left Fuel Drain.....DRAIN  
 Left Tank.....VISUAL CHECK  
 Pitot Probe.....CLEAN, HOLE - OPEN  
 Lights.....VISUAL CHECK  
 Aileron, Wing Flap.....VISUAL CHECK

**BEFORE STARTING ENGINE**

Parking Brake.....ON  
 Brake Pressure.....CHECK  
 Seatbelts.....FASTENED & ADJUSTED  
 Flight Controls.....FREE & CORRECT  
 Doors.....CLOSED & SECURE  
 Circuit Breakers.....CHECK  
 Fuel Valve.....LOWEST TANK  
 Throttle.....FREE/IDLE  
 Propeller.....FULL FORWARD  
 Carb Heat.....OFF  
 BAT Master Switch .....ON  
 Avionics Master Switch & Radio .....ON  
 ATIS/ATC Clearance ..... RECEIVED

Altimeters.....SET QNH  
 Avionics Master Switch & Radio ..... OFF

**ENGINE START**

Strobe/Position Lights ..... ON  
 Throttle.....IDLE  
 Propeller.....FULL FORWARD  
 Mixture.....FULL RICH  
 Brakes.....HOLD  
**Fuel Pump.....ON**  
 Throttle.....INJECTION, THEN IDLE ¼ INCH  
 Propeller Area.....CLEAR  
 Starter.....ENGAGE ( MAX 10 SEC)  
 Throttle.....1000 - 1200 RPM  
 Oil Pressure.....GREEN  
 Fuel Pump.....OFF  
 Generator ..... ON  
 Avionics Master Switch ..... ON  
 Engine instruments..... CHECK

**FLOODED START**

Strobe/Position Lights ..... ON  
 Mixture.....CUT OFF  
 Brakes.....HOLD  
**Fuel Pump.....OFF**  
 Throttle.....FULL OPEN  
 Propeller Area.....CLEAR  
 Starter.....ENGAGE (MAX 10 SEC)

**RESUME TO ENGINE START (NO INJECTION!)**

**AFTER STARTING ENGINE**

Electrical Power GEN/BAT 24V .....CHECK  
 Cabin Heat and Defrost .....AS REQUIRED  
 Flaps.....CHECK/ CRUISE  
 Turn Indicator.....ON  
 Transponder.....STBY  
 Radios/NAV/GPS/FLARM.....SET  
 Engine Instruments.....CHECK  
 Trim Indicator ..... T/O  
 Taxi Clearance.....RECEIVED

**TAXI**

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

**RUN UP POSITION**

Parking Brake/Taxi light.....ON/OFF  
 Fuel Selector.....FULLEST TANK  
 Carb Heat.....OFF  
 Propeller.....FULL FORWARD  
 Mixture.....FULL RICH  
 Oil Temp.....GREEN  
 Throttle.....2000 RPM  
 Oil Pressure.....GREEN  
 Alternator Load (Ammeter) .....GREEN  
 Mixture Lean Function.....EGT CHECK  
 Propeller.....CYCLE TWICE (MAX.DROP 500)  
 Magnetos .....CHECK (MAX.DROP 175, DIFF.50)  
 Carb Heat.....ON/OFF ( MAP. DROP)  
 Engine instruments.....GREEN  
 Warning Lights.....NO ILLUMINATE  
 Throttle.....2700 RPM / IDLE THEN 1000 RPM  
 Take-Off Briefing ..... COMPLETED

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

**BEFORE LINE UP**

Trim Indicator.....T/O  
 Magnetos.....BOTH  
 Carb Heat .....OFF  
 Mixture.....FULL RICH  
 Flaps.....T/O  
 Fuel Pump.....ON

**LINE UP**

Parking Brake/Taxi/LDG Light..... OFF/ON  
 Transponder.....ALT  
 Gyro.....RWY HDG

**TAKE-OFF**

Take-off power.....SET  
 RPM.....2700  
 Engine Gauges ..... CHECK  
 Rotation.....63 KIAS  
 Climb speed.....70 KIAS

**CLIMB**

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

**CRUISE**

Cruise Power/Propeller.....SET  
 Fuel Pump ..... OFF  
 Altimeters.....SET/ CROSS CHECKED  
 Mixture.....ADJUST  
 Carb Heat.....AS REQUIRED  
 Fuel Tank.....30 MIN, MAX 13 GAL DIFF.

**DESCENT**

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

**FINAL**

Mixture.....FULL RICH  
 Propeller.....FULL FORWARD  
 Carb Heat.....AS REQUIRED  
 Flaps.....LDG  
 Fuel Pump.....ON  
 Landing/Taxi Light.....ON  
 Approach Speed .....73-78 KIAS

**GO AROUND**

Carb Heat.....OFF  
 Throttle.....FULL POWER  
 Flaps.....T/O  
 Airspeed.....73 KIAS

**RUNWAY VACATED**

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

**SHUT DOWN POSITION**

Parking Brake/Taxi light.....ON/OFF  
 Electrics & Avionics .....OFF  
 Avionics Master Switch .....OFF  
 Throttle.....IDLE  
 Magnetos Cut - Off .....TEST  
 Engine.....COOLING  
 Mixture.....CUT OFF  
 Strobe/Position Lights.....OFF  
 Magnetos .....OFF  
 GEN/BAT Master Switch.....OFF  
 Fuel Selector .....OFF

## EMERGENCY PROCEDURES

### ENGINE FAILURE DURING TAKE-OFF RUN

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

### ENGINE FAILURE AFTER TAKE-OFF

#### INSUFFICIENT ENGINE POWER

Airspeed.....70 KIAS  
Throttle.....FULL  
Mixture.....FULL RICH  
Fuel Valve.....OPPOSITE  
Magnetos.....BOTH  
Fuel Pump.....ON

#### SHORTLY BEFORE LANDING

Mixture.....CUT OFF  
Fuel Valve.....CLOSED  
Magnetos.....OFF  
Flaps.....AS REQUIRED  
GEN/BAT Master Switch.....OFF

### ENGINE FAILURE DURING FLIGHT

#### ENGINE RUNNING ROUGHLY

Mixture.....FULL RICH  
Fuel Pump.....ON  
Fuel Valve.....OPPOSITE  
Throttle.....1/2 OPEN  
Magnetos.....L-BOTH-R-BOTH  
Starter.....IF NO WINDMILLING START  
No Improvement.....LAND ASAP

### RESTARTING THE ENGINE WITH PROPELLER WINDMILLING

Airspeed.....86 KIAS  
Fuel Pump.....ON  
Mixture.....CUT OFF  
Fuel Valve.....OPPOSITE  
Throttle.....1/2 OPEN  
Mixture.....SLOWLY ENRICH

#### AFTER SUCCESSFUL RE-START

Oil Pressure.....CHECK  
Oil Temp.....CHECK  
Fuel Pump.....ON  
Electrical Equipment.....ON IF REQUIRED

### RESTARTING THE ENGINE WITH PROPELLER AT FULL STOP

Airspeed.....86 KIAS  
Fuel Pump.....ON  
Mixture.....CUT OFF  
Fuel Valve.....OPPOSITE  
Throttle.....1/2 OPEN  
Starter.....10 SEC  
Mixture.....ENRICH DURING START

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### AFTER SUCCESSFUL RE-START

Oil Pressure.....CHECK  
Oil Temp.....CHECK  
Fuel Pump.....ON  
Electrical Equipment.....ON IF REQUIRED

### GLIDING

Flaps.....CRUISE  
Airspeed.....86 KIAS  
Glide ratio.....6:1

### EMERGENCY LANDING

#### INSUFFICIENT ENGINE POWER

Airspeed Glide.....86 KIAS  
Airspeed ( Flaps LDG ).....65-70 KIAS  
Fuel Valve.....CLOSED  
Mixture.....IDLE CUT-OFF  
Magnetos.....OFF  
Safety Belts.....SECURED  
Radio.....TRANSMIT  
Flaps.....AS REQUIRED  
GEN/BAT Master Switch.....OFF

### ENGINE FIRE DURING ENGINE-START-UP ON THE GROUND

Fuel Valve.....CLOSED  
Cabin Heat.....CLOSED  
Mixture.....IDLE CUT-OFF  
GEN/BAT Master Switch.....OFF  
Magnetos.....OFF  
Evacuation.....IMMEDIATELY

### ENGINE FIRE DURING FLIGHT

Fuel Valve.....CLOSED  
Cabin Heat.....CLOSED  
Airspeed.....86 KIAS  
Fuel Pump.....OFF  
Emergency Landing.....PERFORM

### ELECTRICAL FIRE INCLUDING SMOKE DURING FLIGHT

GEN/BAT Master Switch.....OFF  
Cabin Air.....OPEN  
Fire Extinguisher.....USE IF SMOKE CONTINUES  
Avionics Master Switch.....OFF  
Electrical Equipment.....OFF  
Circuit Breakers.....PULL ALL  
Circuit Breaker.....PUSH BATTERY  
BAT Master Switch.....ON BAT 1/2 ONLY  
Circuit Breaker.....PUSH GEN  
Circuit Breaker.....PUSH GEN CONTROL  
GEN/BAT Master Switch.....ON  
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 MEMORIZED

## G-BHDE

### ELECTRICAL FIRE INCLUDING SMOKE ON THE GROUND

GEN/BAT Master Switch.....OFF  
**IF ENGINE RUNNING**  
Throttle.....IDLE  
Mixture.....CUT OFF  
Fuel Valve.....CLOSED  
Magnetos.....OFF  
Doors.....OPEN  
Fire Extinguisher.....USE IF REQUIRED

### CABIN FIRE DURING FLIGHT

GEN/BAT Master Switch.....OFF  
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  
Magnetos.....OFF

#### MAINTENANCE ACTION IS REQUIRED

### ELECTRICAL POWER FAILURE

Circuit Breaker.....RESET  
GEN/BAT Master Switch.....ON  
**IF POWER NOT RESTORED**  
GEN/BAT Master Switch.....OFF  
**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<sub>y</sub>) CRUISE.....78 KIAS  
Best Angle-of-Climb Sp (V<sub>x</sub>) CRUISE.....65 KIAS  
Best Rate-of-Climb Speed (V<sub>y</sub>) T/O.....74 KIAS  
Best Angle-of-Climb Speed (V<sub>x</sub>) T/O.....63 KIAS  
Max Flaps Extended T/O Sp (V<sub>FE T/O</sub>).....95 KIAS  
Max Flaps Extended LDG Sp (V<sub>FE LDG</sub>).....95 KIAS  
Normal Operating Speed (V<sub>NO</sub>).....128 KIAS  
Landing Final App Speed LDG.....73 KIAS  
Best Glide Angle Speed.....86 KIAS  
Maneuvering Speed (V<sub>A</sub>).....122 KIAS  
Max Demo Crosswind.....25 KIAS