

NORMAL PROCEDURES

PREFLIGHT

Aircraft DocumentsON BOARD
Fire Extinguisher.....CHARGED & SECURE
Structural Temperature Indicator.....CHECK
Tie DownsREMOVED / ON-BOARD
Flight Control Lock.....REMOVE
Rudder Pedals.....ADJUSTED & LOCKED
Parking BrakeON
Magnetos.....OFF
Avionics Master Switch & Electrics OFF
GEN/BAT Master Switch.....ON
Fuel Quantity.....CHECK
Flaps.....LDG
Warning LightsON
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 SurfacesCHECK

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
BaggageSTOWED & 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 SwitchON
Avionics Master Switch & RadioON
ATIS/ATC Clearance RECEIVED
Altimeters.....SET QNH
Avionics Master Switch & Radio OFF
Generator Warning Light.....ILUMINATE
Canopy Warn. Light OFF (PRESS TO CHECK)

DA-20 C1 KATANA - 30.01.2025

ENGINE START

Strobe/Position Lights ON
Throttle.....IDLE
Mixture.....FULL RICH
Brakes.....HOLD
Fuel Pump.....ON
Fuel Prime.....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
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 DefrostAS REQUIRED
Flaps.....CHECK/ CRUISE
Transponder.....STBY
Radios/NAV/GPS.....SET
Fuel PumpON
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 Temp.....MAX. RPM > 100 °F
Oil Pressure.....BELOW 70 PSI
Alternator Load (Ammeter)CHECK
Mixture Lean Function.....CHECK
MagnetosCHECK (MAX.DROP 150, DIFF.50)
Alternate Air.....ON/OFF (NO RPM DROP)
Engine instruments..... CHECK
Warning Lights.....NO ILUMINATE
Throttle.....MAX / IDLE THEN 1000 RPM
Take-Off Briefing COMPLETED

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

SP-KWH SP-KWI SP-OEM

BEFORE LINE UP

Trim Indicator.....NEUTRAL
Magnetos BOTH
Fuel Pump..... ON
Flaps.....T/O
Mixture.....FULL RICH

LINE UP

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

TAKE-OFF

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

CLIMB

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

CRUISE

Cruise Power.....SET
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 Speed65 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 & AvionicsOFF
Avionics Master SwitchOFF
Throttle.....IDLE
Fuel Pump OFF
Engine.....COOLING
Mixture.....CUT OFF
Strobe/Position Lights.....OFF
MagnetosOFF
GEN/BAT Master Switch.....OFF
Tie DownsAS REQUIRED

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.....60 KIAS
Throttle.....FULL
Mixture.....FULL RICH
Alternate Air.....OPEN
Fuel Shut-off Valve.....OPEN
Magnetos.....BOTH
Fuel Pump.....ON

SHORTLY BEFORE LANDING

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

ENGINE FAILURE DURING FLIGHT

ENGINE RUNNING ROUGHLY

Mixture.....FULL RICH
Alternate Air.....OPEN
Fuel Shut-off Valve.....OPEN
Fuel Pump.....ON
Magnetos.....L-BOTH-R-BOTH
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
Magnetos.....BOTH
Fuel Pump.....ON
Fuel Prime.....ON
Throttle.....3/4 INCH FORWARD

AFTER SUCCESSFUL RE-START

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

RESTARTING THE ENGINE WITH PROPELLER AT FULL STOP

Airspeed.....73 KIAS
Electrical Equipment.....OFF
GEN/BAT Master Switch.....ON
Mixture.....FULL RICH
Fuel Shut-off Valve.....OPEN
Fuel Pump.....ON
Fuel Prime.....ON
Throttle.....3/4 INCH FORWARD
Magnetos.....BOTH
Starter.....ENGAGE

DA20-C1 KATANA

AFTER SUCCESSFUL RE-START

Oil Pressure.....CHECK
Oil Temp.....CHECK
Fuel Prime.....OFF
Electrical 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
Magnetos.....BOTH
Safety Belts.....SECURED
Radio.....TRANSMIT
Flaps.....AS REQUIRED
GEN/BAT Master Switch.....OFF

ENGINE FIRE DURING ENGINE-START-UP ON THE GROUND

Fuel Shut-off Valve.....CLOSED
Cabin Heat.....CLOSED
Mixture.....IDLE CUT-OFF
GEN/BAT Master Switch.....OFF
Magnetos.....OFF
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 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
GEN/BAT Master Switch.....ON BAT ½ 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 MEMORAZIED

SP-KWH SP-KWI SP-OEM

ELECTRICAL FIRE INCLUDING SMOKE ON THE GROUND

GEN/BAT Master Switch.....OFF
IF ENGINE RUNNING
Throttle.....IDLE
Mixture.....CUT OFF
Fuel Shut-off Valve.....CLOSED
Magnetos.....OFF
Canopy.....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_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

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