

NORMAL PROCEDURES

DA-20 C1 KATANA - 09.11.2023

SP-KWH SP-KWI

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.....HECK 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)

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.....ABOVE 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

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

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 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

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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