

DA20-C1 AIRCRAFT PERFORMANCE

N	Katana DA20-C1	Year:	HP:
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Inspections Annual _____ ELT Batt _____ 100 Hr. _____ Xpndr _____ (tach) _____ AD Cur yes / no Squawk go / nogo	Weight Limits Gross Wt. _____ Useful Load _____ Max Baggage _____
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Weight and Balance Calculation			
ITEM	WEIGHT	ARM	MOMENT
EMPTY WEIGHT	_____	----	_____
Pilot & Co-Pilot	_____	5.63	_____
Baggage Area (44 lbs.)	_____	32.44	_____
Fuel (_____ gal usable)	_____	32.44	_____
Takeoff Weight (1720 lbs.)	_____		_____
Takeoff C.G. (8.03-12.24)	_____		_____
Estimated Fuel Burn	_____	32.44	_____
Landing Weight	_____		_____
Landing C.G. (8.03-12.24)	_____		_____

Performance Calculation	
ATIS wind: _____ @ _____ ?C/dew: ____/____	Alt: _____ Rwy: _____
Press Alt: _____ Density Alt: _____ X-Wind: _____ H-Wind: _____	
Takeoff Distance – Short Field (Ground Run)	_____
Takeoff Distance – Short Field (50' Obstacle)	_____
Landing Distance – Short Field (50' Obstacle)	_____
Headwind – decrease distance by 10% for each 9 kts	
Tailwind – increase distance by 10% for each 2 kts	

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KATANA DA20-C1 PRE-FLIGHT CHECKLIST

FLIGHT PLANNING

Airplane CHECK MAINTENANCE RECORDS
Route & Navigation Planning COMPLETE
Weather BRIEFING COMPLETE
Baggage WEIGHED
Weight & Balance / CG CALCULATED / WITHIN LIMITS
Performance Planning COMPLETE
Flight Plan FILED

INSIDE CABIN

Aircraft Papers ARROW
Aircraft Hobbs & Tachometer VERIFY
Headset, Charts, Lapboard ON BOARD
Baggage STOWED & SECURE
Structural Temperature Indicator LESS THAN 131° F / 54.5° C
Flight Control Lock REMOVED
Ignition Switch OFF
Avionics Master Switch OFF
Circuit Breakers IN
Compass Deviation Card CHECKED
Cabin Heat OFF
Parking Brake OFF
Throttle IDLE
Mixture IDLE CUTOFF
GEN/BAT Switch ON
Warning Lights ILLUMINATED
Fuel Quantity Indicators CHECK QUANTITY
Engine Gauges CHECK
Map Light OPERATIONAL
Instrument Lights OPERATIONAL and DIMMABLE
Trim NEUTRAL
Wing Flaps EXTEND and RETRACT FULLY
Trim and Flap Indicator Lights OPERATIONAL
Landing Light / All Other Lights CHECK OPERATION
GEN/BAT Switch OFF
Emergency Locator Transmitter ARM
Fire Extinguisher CHECK
Rescue Hammer CHECK
Canopy CLEAN and UNDAMAGED

KATANA DA20-C1 PRE-FLIGHT CHECKLIST

LEFT WING

Stall Warning CHECK, SUCK ON OPENING
Pitot Static Probe CLEAN, HOLES OPEN
Tie Down / Chocks REMOVE
Left Main Gear (33 psi) CHECK
Taxi and Landing Lights CHECK
Wing Tip, Position Lights, Strobe CHECK
Aileron Balancing Weight CHECK
Aileron Including Inspection Panel CHECK
Wing Flap Including Inspection Panel CHECK

FUSELAGE

Skin CHECK
Fuel Tank Vent CHECK
Fuel Drains (tank sump and filter bowl) DRAIN / SAMPLE
Fuel Quantity VISUAL (use pipette)
Antennas CHECK

EMPENNAGE

Stabilizers and Control Surfaces CHECK
Tie Down REMOVE
Fixed Tab on Rudder CHECK

RIGHT WING

Wing Flap Including Inspection Panel CHECK
Aileron Balancing Weight CHECK
Aileron Including Inspection Panel CHECK
Wing Tip, Position Lights, Strobe CHECK
Tie Down / Chocks REMOVE
Right Main Gear (33 psi) CHECK

NOSE

Engine Oil Level CHECK (4 – 6 quarts)
Cowling CHECK SECURE
Air Intakes CLEAR
Propeller & Spinner CHECK FOR NICKS & SECURITY
Alternator Belt CHECK
Nose Gear (26 psi) CHECK
Wheel Chocks REMOVE

*** Push aircraft across **tie-down cable** if applicable ***

KATANA DA20-C1**Engine Start / Ramp Operations****BEFORE ENGINE START**

Preflight InspectionCOMPLETE
 Cell Phones and Pagers OFF
 Rudder Pedals ADJUST & LOCK
 Seats, Belts, and Shoulder Harnesses ADJUST & LOCK
 Passenger BriefingCOMPLETE

Flight Plan – Seat Belts – Door & Window Operation – Exit to Rear – Meet at Tail

Parking Brake SET, PEDALS PUMPED FOR PRESSURE
 Flight Controls FREE
 Fuel Shut-off Valve OPEN
 Avionics Master Switch OFF
 GEN/BAT Switch ON
 Generator Warning Light ILLUMINATED
 Nav Lights / Strobes ON
 Instrument Panel Lighting AS REQUIRED
 Canopy CLOSE and SECURE
 Canopy Unlock Warning Light OFF
 ATIS OBTAIN / SET ALTIMETER

READY FOR ENGINE START**STARTING ENGINE**

Mixture FULL RICH
 Throttle IDLE
 Brakes HOLD
 Propeller Area SHOUT "CLEAR"
 Ignition Key IN
 Fuel Pump ON
 Fuel Prime ON
 Throttle FULL for 3 to 5 SECONDS
 Ignition Switch START (release when engine starts)
 Throttle 800 – 1000 RPM
 Fuel Prime OFF
 Oil Pressure GREEN
 Fuel Pressure CHECK
 Mixture FULL RICH
 Voltmeter CHECK
 Warning Lights, Gen, Canopy, Start PUSH TO TEST
 Starter Warning Light OFF
 Wing Flaps CRUISE

ENGINE START COMPLETE**KATANA DA20-C1****Before Taxi Checklist****FLIGHT INSTRUMENTS**

Avionics Master Switch ON
 Intercom CHECK
 Magnetic Compass (MC) CHECK
 Airspeed Indicator (ASI) CHECK
 Attitude Indicator (AI) CHECK
 Turn Coordinator (TC) CHECK
 Heading Indicator (HI) CHECK
 Vertical Speed Indicator (VSI) CHECK
 Clock CHECK

FLIGHT INSTRUMENT CHECK COMPLETE**NAV / COMM RADIO**

Com 1 TOWER / CTAF
 Com 2 GRND / FSS
 Nav 1 SET VOT / VOR & ID
 Nav 2 SET VOT / VOR & ID
 HSI / OBS COMPARE
 Sensitivity (5? = ½ scale) EACH WAY
 Ambiguity (tune reciprocal & check sensitivity) EACH WAY

NAV / COMM CHECK COMPLETE**GPS / COMM RADIO**

Power ON
 Self Test OK? ENT
 Initialization (date, time, Ref) OK? ENT
 Database (North American) Acknowledge? ENT
 Waypoint Page CURR AIRPORT
 Comm Freq Set LEFT KNOBS
 NAV 2 Page (Present Position) RIGHT KNOBS
 Direct To INITIATE
 Enter Waypoint Identifier RIGHT KNOBS
 Display Waypoint Page ENT
 Approve Waypoint Page ENT
 NAV 1 Page (

GPS CHECK COMPLETE

Transponder SET 1200 / TEST / STANDBY
 Taxi Light ON
 Parking Brake RELEASED

*** Obtain Permission to Taxi ***

KATANA DA20-C1**Before Takeoff / Runup****RUNUP CHECK**

Parking Brake SET, PEDALS PUMPED FOR PRESSURE
 Canopy CLOSED and LOCKED
 Canopy Unlock Warning Light OFF
 Flight Controls FREE & CORRECT
 Elevator Trim NEUTRAL
 Fuel Shutoff Valve OPEN
 Fuel Quantity CHECK
 Fuel Pressure CHECK
 Fuel Prime OFF
 Fuel Pump ON

Throttle 1700 RPM
 Mixture FULL RICH
 Magnetos CHECK
 Oil Pressure CHECK
 Oil Temperature 75° min
 Alternator Load CHECK
 Vacuum Gauge CHECK
 Throttle IDLE (engine does not falter)
 Throttle 1000 RPM

Circuit Breakers CHECK PUSHED IN
 Flight Instruments CHECK & SET
 Radios SET
 Transponder ON ALTITUDE
 Landing Light ON
 Wing Flaps TAKEOFF
 Takeoff Briefing COMPLETE

Rotation Speed: _____ KIAS

Takeoff Distance: _____ feet

Runway Length: _____ feet

Parking Brake RELEASED

***** Obtain Permission to Take Off *****

KATANA DA20-C1**Normal Flight Checklist****NORMAL TAKEOFF**

Wing Flaps TAKEOFF
 Throttle FULL OPEN
 Rotate 44 KIAS
 Climb Speed 70 KIAS

CLIMB

Flaps (400 ft AGL) CRUISE
 Airspeed 70-80 KIAS
 Throttle FULL OPEN
 Mixture FULL RICH
 Elevator Trim ADJUST
 Landing Light OFF (or as required)

CRUISE

Fuel Pump OFF
 Throttle (no more than 75% recommended)
 Mixture LEAN TO 25 deg F RICH OF PEAK
 Elevator Trim ADJUST
 Engine Instruments CHECK

DESCENT

Fuel Pump ON
 Mixture FULL RICH
 Power AS DESIRED
 CHT (240 deg F min – not below 300°F for more than 5 min) MONITOR

APPROACH

Gas (fuel pump) ON
 Undercarriage CHECK
 Mixture FULL RICH
 Propeller CHECK
 Safety (seats, belts, and shoulder harnesses) SECURE
 Landing Light ON

Katana DA20-C1

Airspeeds for Safe Operation

Takeoff – Flaps Takeoff

Rotation 44 KIAS
 Short Field, Flaps Up, Clear 50 feet 52 KIAS

Enroute Climb – Flaps Cruise

Normal Climbout 70-80 KIAS
 Best Rate of Climb 70 KIAS
 Best Angle of Climb 60 KIAS

Landing Approach

Downwind – Flaps CRUISE 70 KIAS
 Base – Flaps T/O 60 KIAS
 Final – Flaps LDG 55 KIAS

Balked Landing

Maximum Power – Flaps T/O 58 KIAS
 Maximum Power – Flaps LDG 53 KIAS

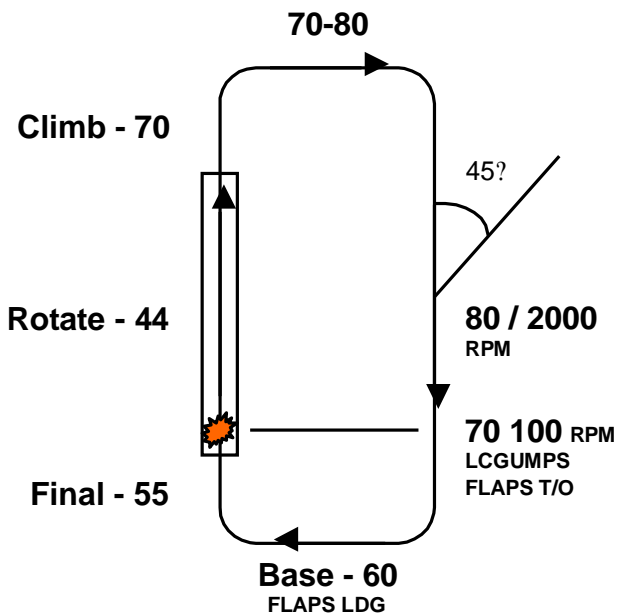
Maximum Speed in Turbulent Conditions

1720 lbs. 106 KIAS

Best Glide

Flaps CRUISE 70 KIAS
 Flaps T/O 60 KIAS
 Flaps LDG 53 KIAS

Maximum Demonstrated Crosswind Velocity 15 Knots



Katana DA20-C1

After Landing Checklist

AFTER LANDING CHECK

Wing Flaps CRUISE
 Mixture FULL RICH
 Landing Lights / Strobes AS REQUIRED
 Transponder STANDBY

AFTER LANDING CHECK COMPLETE

SHUTDOWN

Parking Brake SET, PEDALS PUMPED FOR PRESSURE
 Throttle 1000 RPM
 Ignition Switch PERFORM MAGNETO SAFETY CHECK
 Throttle 1700 RPM
 Mixture LEAN FOR MAXIMUM RPM
 Fuel Pump OFF
 Avionics Master Switch OFF
 Electrical Equipment, Autopilot (if installed) OFF
 Taxi / Landing Lights OFF
 Throttle 1000 RPM
 Mixture IDLE CUTOFF
 Ignition Switch OFF, KEY OUT OF IGNITION
 GEN/BAT Switch OFF
 Parking Brake RELEASED

SHUTDOWN COMPLETE

SECURING AIRCRAFT

Chocks & Tie-downs SPECIFIC TO FACILITY
 Control Lock INSTALL
 Aircraft Hobbs & Tachometer RECORD
 Windows CLOSE
 Electrical Switches VERIFY OFF
 Ignition Switch VERIFY OFF
 GEN/BAT Switch VERIFY OFF
 Canopy LOCK
 Post Flight Inspection COMPLETE

AIRCRAFT SECURED