



Normal Checklist

Diamond DA 20-C1

Airspeeds for normal operation

Unless stated otherwise, following are the applicable airspeeds for maximum take-off and landing weight. The airspeeds may also be used for lower flight weights. (All speeds at sea level)

Takeoff	KIAS
Climb over 50 ft obstacle.....	58
Best Rate-of-Climb (VY); Flaps: T/O.....	68
Best Rate-of-Climb (VY); Flaps: Cruise.....	75
Best Angle-of-Climb (VX); Flaps: T/O.....	57
Best Angle-of-Climb (VX); Flaps: Cruise.....	60
 Landing	
Recommended Approach; Flaps: LDG.....	60
Minimum Approach Speed; Flaps: LDG.....	52
Balked Landing Climb Speed; Flaps: LDG.....	52
 Max demonstrated X-wind speed, T/O & LDG.....	20
 Cruise	
Maximum rough-air speed (VNO).....	118
Maximum full control-surface deflection (VA)....	106
Max LDG Flaps Extended Speed (VFE LDG).....	78
Max T/O Flaps Extended Speed (VFE TO).....	100

Preparation

Navigation.....Planned
Performance & Range.....Computed & Safe
Weight & Balance.....Within Limits
Weather.....Suitable
Airplane Documents.....Airworthy, onboard
Baggage.....Weighed & Stowed
Charts & Nav. Equipment.....Onboard

Preflight Inspection Cabin Checks

Windshield..... clean
Flight Control Lock.....Remove
Ignition Switch.....Off
Mixture.....Idle Cutoff
Master Switch.....On
Warning Lights.....On
Fuel Quantity.....Check
Circuit Breakers.....Check
Flaps.....Extend to LDG
Lights.....Check
Lights.....Off
Master Switch.....Off
Fire Extinguisher.....Charged & Secure
First Aid Kit.....On Board

Left Wing

Main Gear.....Inspect
Entire Wing.....Inspect
Stall Warning.....Inspect
Pitot-Static Probe.....Inspect
Taxi & Landing Lights.....Inspect
Wing Tip.....Inspect
Position Lights & Strobe.....Inspect
Aileron Balancing Weight.....Inspect
Aileron including inspection panel.....Inspect
Wing Flap.....Inspect
Main Gear.....Inspect from aft

Fuselage & Empennage

Fuel Quantity.....Dip tank min. ½
Skin.....Inspect
Fuel Tank Vent.....Inspect
Fuel Drain.....Drain
Maintenance Fuel Drains.....Inspect
Antennae.....Inspect
Stabilizer.....Inspect
Rudder.....Inspect

Right Wing

Main Gear.....Inspect from aft
Wing Flap.....Inspect
Aileron, including inspection panel.....Inspect
Aileron Balancing Weight.....Inspect
Position Lights & Strobe.....Inspect
Wing Tip.....Inspect
Main Gear.....Inspect
Entire Wing.....Inspect

Nose

Right Step.....Inspect
Temperature Probe.....Check
Air Intake (right).....Clear
Oil Quantity.....Check
(Min. 4qt; Max 6qt)
Cowling.....Inspect
Nose Gear.....Inspect
Propeller & Spinner.....Inspect
Engine Cowling Air Inlets.....Clear
Engine Air/Cabin Heat Vents.....Inspect
Air Intake (left).....Clear
Left StepInspect

Before Starting Engine

Preflight inspection.....Complete
Aircraft Documents.....On board
Baggage.....Stowed & Secured
Hobbs Time.....Record
Passenger briefing.....Complete

* Canopy *Emergency Exit *Seatbelt *Emergency Procedure
*Fire Extinguisher *First Aid Kit *ELT *Flight Controls
* Radio * Traffic

Flight Controls.....Free & Correct (Visual Check)
Canopy.....Closed & Secure
Rudder Pedals.....Adjusted & Locked
Seatbelts.....Fastened & adjusted
Circuit Breakers.....Check
Parking Brake.....Set
Brake PressureCheck
Fuel Shutoff Valve.....On (Push In & Lock)
Throttle.....Free & Idle Position
Throttle Friction.....Check
Alternate Air.....Off
Avionics Master Switch & Electrics.....Off
Cockpit Check.....Keys In Ignition
Master Switch (Battery side ONLY).....On
Generator Warning Light.....On
Canopy Warning LightOff (press to check)
Trim Indicator.....Neutral
Taxi Light.....On
Position Lights (night).....On
Instrument Lighting (night).....As required

Oil TempLess than 100°F follow Cold Start
Oil Temp...Greater than 100°F follow Warm Start

Starting Engine

Cold Start

Brakes.....Hold
Propeller Area.....Clear (call“Clear”)
Mixture.....Full Rich
Fuel Pump.....On
Fuel Prime.....On
Throttle.....Fully Open for 5 to 10 sec & Idle
Ignition Switch.....Star (Max.10sec)
Throttle.....1000 RPM
Starter Warning Light.....Extinguished
Oil Pressure.....Check (Green 30-60psi)
Fuel Prime.....OFF
Fuel Pump.....OFF
Generator side.....On (Check Charging)

Warm Start

**IF Oil Temp Greater than 100° F
DO NOT ADVANCE THROTTLE**

BrakesHold
Propeller Area.....Clear (call "Clear")
Mixture.....Full Rich
Fuel Pump.....ON
Fuel Prime.....ON
ThrottleFully Open for 1 to 3sec & 1" open
Ignition Switch..... Start (Max.10sec)
Throttle.....1000 RPM
Starter Warning Light.....Extinguished
Oil Pressure.....Check(Green 30-60psi)
Fuel Prime.....Off
Fuel Pump.....Off
Generator side.....On (Check Charging)

Flooded Start

Excessive priming can result in a flooded engine. During the flooded start the engine should start for a short period & then stop. Excess fuel has then been cleared & engine start from item 1 can be performed.

Mixture.....	Full Rich
Brakes.....	Hold
Fuel Pump.....	OFF
Fuel Prime.....	OFF
Throttle.....	Half-open
Propeller Area.....	Clear (call "Clear")
Ignition Switch.....	Start
Throttle.....	1000 RPM
Starter Warning Light.....	Extinguished
Oil Pressure.....	Check (Green 30-60psi)
Fuel Prime.....	OFF
Fuel Pump.....	OFF
Mixture.....	Full Rich
Generator side.....	On (Check Charging)

EPU Start

Master SwitchOff (before EPU attached)
Avionics Master Switch.....Off
EPU Light.....On
EPU Switch.....On
Voltmeter.....Check 12 to 14 volts
Master Switch.....On

Starting Procedure..... As per one of the
above procedures

After start

EPU Switch.....Off
Signal ground crew EPU out.....EPU Light Off
Master Switch (GEN).....Off
Battery VoltageCheck apprx. 12V
Master Switch (GEN).....On, check apprx. 14V
GEN warning light.....Check off
Generator side.....On (Check Charging)

Pre-Taxi

Cabin Heat and Defrost.....As Required
Flaps.....Check and Retract in Stages
Dead Mag Check.....Both - Left - Right – Both
Avionics Master Switch.....On
Transponder.....Standby
ATIS.....Copy
Radios/Nav/GPS.....Set
Taxi Clearance.....Obtain
Warning Lights.....Push to test
Flight Instruments.....AI Set / HI Set
Fuel Prime.....Check Off
Fuel Pump.....Check Off
Fuel Pressure.....Check(>3.5psi)
Engine Gauges.....Check
Parking Brakes.....Off
Flight Instruments & Brake.....Check while rolling

Use Rudder First and Brakes Sparingly For Turning

Run-up

AircraftInto Wind (nose wheel straight)
Area Behind A/C.....Clear
Parking Brake.....On
BrakesHold
Fuel Shutoff Valve.....On (Push In)
Throttle.....1700 RPM
MixtureCheck lean function for max power
Generator Load (Ammeter).....Check
Vacuum Gauge.....Check Green
Magnetos Check.....(Both- Left- Both- Right Both)

(Max drop: 150 RPM; Max difference: 50 RPM)

Alternate Air.....On **(No RPM Drop)** Off
Throttle.....Idle, then 1000 RPM
Mixture..... full rich

Pre-Takeoff

Safety Belts.....Fastened
Canopy.....Verify Latched
Canopy Warning Light.....Off (push to Check)
Master Switch.....On (Both Sides)
Ignition Switch.....Both
Flaps.....T/O
Flight Instruments.....Set & Check
Fuel Quantity.....Check sufficient
Oil Temp.....75°F minimum
Oil Pressure.....Normal (30-60psi)
Voltmeter.....Green
Circuit Breakers.....IN
Warning Lights.....Push to Test
Trim.....Neutral
Controls.....Free
CrewTake Off Safety Briefing
Mixture.....Rich/Set
**Lean Mixture for Best Power on T/O
from field at or above 3000ft AGL**
Avionics.....Check & Set as Required
Fuel Pump.....On
Parking Brake.....Off

Crew Take Off Briefing

This will be a Normal/Soft Field/Short Field Take Off

- **If the Engine Fails On the runway I will close the Throttle and Stop Right Ahead**
- **If the Engine Fails After Take Off with *Sufficient runway remaining* I will close the Throttle and Land Straight Ahead**
- **If the Engine Fails After Take Off with *Insufficient runway remaining* I will Lower the Nose (60KIAS) pick a Landing place within 45° either side of the nose**

If altitude permits I will attempt to rectify the problem

Hold Short/Runway Checks

T/O Time.....Record
T/ O Clearance.....Obtain
Lights.....As required
Mixture.....Rich/Set
Heading Indicator.....Agrees with Rwy Heading

Lean Mixture for Best Power on T/O from field at or above 3000ft AGL

TachometerMin 2000RPM on Full Throttle
Engine Gauges.....Green & Normal
Airspeed.....Alive

After Takeoff /Climb Checks

Power.....Normal
Oil Temp & Pressure.....Normal
Flaps (400ft).....Up (cruise config)
Fuel Pump.....Off
Transponder.....check ALT

En-route Check

Fuel.....Sufficient
Oil Temp.....Within limit
Oil Pressure.....Green
Mixture.....Lean for best power
Radio.....Set
Engine Power.....Set for cruise
Heading Indicator.....Set
Altimeter.....Set
TimeSet

Pre Landing Checks

Parking Brakes.....Off
Brakes.....Check pressure
Mixture.....Rich
Fuel Pump.....On
Master Switch.....On (Both On)
Magnetos.....Both
Engine Gauges.....Check
Fuel Quantity.....Check
Circuit Breakers.....Check in
Flight Instruments.....Set (HDG & ALT)
Seatbelts.....Fastened
BaggageSecure
Passenger Safety Review.....Complete

***Crew Briefing on Airport Elevation, Runway, Circuit Ht,
Approach Landing & Go Around Procedures***

***Warm up Engine Every 500 ft on a Power Off
Decent by bringing the Power to 1500-1700RPM***

Approach

Airspeed.....60 KIAS (T/O Flaps)
Airspeed.....57-52 KIAS(LDG Flaps)

Go Around

Power.....Full
Mixture.....Full Rich
Flaps.....T/O
Airspeed....Best Angle(Vx).....58KIAS (T/O Flaps)
 Best Rate(Vy).....68KIAS (T/O Flaps)
Positive Climb.....Check VLT&VSI
Flaps.....Cruise
Airspeed...Best Rate(Vy)75KIAS (Cruise Flaps)

After Landing

ThrottleAs required
Mixture.....Keep Full Rich
Fuel Pump.....Off
Taxi Clearance.....Obtain
Transponder.....Standby
Flaps.....Up(Cruise)
Landing/Taxi Lights.....As required
Strobe Lights.....Off
Landing Time.....Record

Shut Down

Throttle.....1200 RPM
Radio.....Check ELT(121.50)
Avionics Master Switch.....Off
Electrics & Fuel Pump.....Off
Live Magneto CheckBoth-Off-Both
Throttle.....Idle
Mixture.....Idle Cutoff
Ignition Switch.....Off
Master Switch.....Off
Hobbs Time.....Record
Flight Control Lock.....Install
AircraftChocked & Secure
Flight Plan.....Closed

