



CESSNA 172 Checklist

*FLIGHT PLAN DESIGNATION IS "C172," Comm equipment is "**SBGRY**", Surveillance is "**EB2**" and Other information is "**PBN/C2D202S1***

EMERGENCY CONTACTS

The following are Chesapeake Sport Pilot's emergency contact telephone numbers. We ask that you call the numbers in the order listed. In addition, please continue down the phone list until you reach someone. Please do not assume a voice message left on one of the numbers will be immediately received.

Helen Woods (240) 620-8926
CSP Maintenance (410) 490-0802
Hannah Lagno (410) 490-0354
Dan Wroe (410) 991-5514
Bay Bridge Airport (410) 643-4364
Linda Steiner (410) 212-2951
Ted Bryant (CGE) (443) 521-4281

FUEL AND OIL INFO:

Fuel Type: Avgas 100LL

N5264K Tanks – two tanks, 27.0 gal (25.0 useable) ea.
N3HQ Tanks – two tanks, 21.5 gal (20.0 useable) ea.

Oil Type:

Phillips X/C Aviation 20W50
Quantity – 6.0 qts minimum

V-Speeds and PERFORMANCE:

Note: All speeds in KIAS

Vr – 55 KIAS
Vx – 62 KIAS (flaps up)
57 KIAS (10° flaps)
Vy – 73 KIAS

Best Glide – 68 KIAS, Glide Ratio 9:1

Vne – 158 KIAS
Vno – 127 KIAS
Va – 105 KIAS
Vfe – 110 KIAS (flaps 10°)
85 KIAS (flaps > 10° to 30°, or 40° for N3HQ)
Vs₁ – 50 KIAS
Vso – 40 KIAS

Max cross wind – 15 kts

Maneuvers:

Steep turns – 60° max – entering speed - 95 KIAS
Lazy 8's – 105 KIAS
Chandelles – 105 KIAS

Dual Instruction/Flight Briefing

Pilot in Command

During flights with two rated pilots, the pilots will decide before the flight as to which pilot will act as Pilot In Command for the flight.

Passenger Briefing

An appropriate passenger briefing will be given before the flight that covers the items in the STARTING area of the checklist.

Positive Transfer of Controls

During each flight, one person will be controlling the plane at all times. It is critical that we know who this person is at all times. As such, when we transfer control of the plane we use a three-way call back such as:

Person 1: "You have the controls"
Person 2: "I have the controls"
Person 1: " You have the controls"

Aborted Takeoff

If we should lose directional control of the plane, or if there is a problem with the engine, or if anything else unusual should happen, we will abort the takeoff roll by simultaneously retarding the throttle and applying full brakes.

In-Flight Emergency

During and in-flight emergency, the instructor will take control of the aircraft. Unless specified otherwise, the student will set the radio to 121.5 and the transponder to 7700. The student will also secure any loose equipment in the cockpit and his seatbelt prior to landing.

Engine Failure Immediately After Takeoff

If we should we lose the engine immediately after take-off the instructor will pitch DOWN for 70 KIAS, make shallow turns right or left. The student should (as directed by the instructor):

Fuel Selector Valve: Off

Mixture: Idle Cut-Off

Ignition: Off

Flaps: As directed

Master Switch: Off

Off runway 29 - prepare for ditching

Do NOT attempt to return to runway unless you have successfully practiced return to landing

Ditching

If we should have to ditch, instructor will fly the plane.

Student should prop open his door with headset

Student will set radio and transponder 121.5 and 7700 , remove his glasses, and tighten his seatbelt. Be prepared to open the doors after hitting the water!

Line Up and Wait (formerly Position and Hold)

Holding in the takeoff position on the runway at an uncontrolled field is not authorized.

Go-Arounds

A go around will be initiated if the approach is not stable, the landing is in any way questionable, or the plane will land beyond the first 1/3 of the runway.

Propeller Safety

At no time will anyone enter or exit the aircraft while the engine is running. Before starting the engine, the student will call "**CLEAR**" and both the student and instructor will look for people in the way. The key will be removed from the starter after the flight and during the pre-starting checks if people should approach the plane.

USEFUL FREQUENCIES:

Emergency	121.5
Flight Service ("Leesburg Radio")	
(Open / Close Flight Plans)	122.2
SFRA (PALEO Gate)	132.775
"Potomac Approach"	
(for Flight Following)	124.55, 119.7

PREFLIGHT INSPECTION:

CAUTION:

Cabin Doors are large. Hinges and door stops can be damaged in strong winds.

- Preparation: remove control lock, tie down ropes, pitot tube cover, other plane protection items/covers
- Roll plane, back and forth to check all tires

Cabin:

- Hobbs:

RECORD

- AROW (Airworthiness/Registration **DATE/**

Operating limitations/Weight and balance):

ONBOARD

- Weight and Balance: CHECK
- Control Lock: RELEASE
- Flight Controls: CHECK

Check for freedom of movement and proper direction

- Trim - Elevator (and Rudder N3HQ): Takeoff
- Fire Extinguisher: Green Band & SECURE
- Fuel Selector Valve: BOTH
- Parking Brake: SET
- Ignition Switch: OFF
- Avionics Master N5264K OFF
(Com/Nav 2, N3HQ): OFF
- Circuit Breakers CHECK IN
- Battery Half of Master Switch: ON
- Low Voltage Light N5264K: ON
- Flaps: DOWN
Visually check that flaps extend and position indication is correct.
- Landing Light, Taxi Light, Nav Lights, Beacon Light, (Strobe Lights N5264K):
Check ON, then OFF (except for Beacon)
- Fuel Tank Levels: CHECK
- Battery Switch: OFF

WARNING

Fuel level indicated by the fuel quantity indicators (on the instrument panel) is only indicative. For flight safety, pilot should verify actual fuel quantity visually in tanks before takeoff.

Left Wing

- Left Fuel Tank: CHECK with dip stick visually to verify fuel level and secure cap.
- Left Tank Drain: Check
- Left leading edge, wing skin: CHECK
- Pitot Tube: Unobstructed
- Stall Warning Opening: Unobstructed
- Fuel tank vent: CHECK for obstructions
- Left aileron: CHECK for damage, freedom of movement (Do not touch trim tab)
- Left flap and hinges: CHECK security
- Left main landing gear: CHECK inflation 38 PSI, tire condition (roll plane to see all the tire), brake condition, hydraulic leaks, and wheel bearing for damage.

Fuselage

- Baggage Door: CLOSED
- Antennas: CHECK
- Static Ports (N5264K, L & R): CHECK

Tail:

- Horizontal Stabilizer, Elevator and Elevator Trim Tab: CHECK for damage, freedom of movement, side-to-side wiggle
- Vertical Stabilizer and Rudder: CHECK for damage, freedom of movement

Right Wing:

- Right flap and hinges: CHECK security
- Right aileron: CHECK for damage, freedom of movement
- Right leading edge, wing skin: CHECK
- Right main landing gear: CHECK inflation 38 PSI, tire condition (roll plane to see all the tire, brake condition, hydraulic leaks, and wheel bearing for damage).
- Right Tank Drain: Check
- Right Fuel Tank: CHECK visually with dipstick for desired fuel level and secure cap.

Nose:

- Oil Quantity (6 qts min): CHECK
- Fuel Strainer Drain: CHECK
- Exhaust Pipe: SECURE
- Engine Cowling and Screws: SECURE
- Nose wheel strut and tire: CHECK
inflation 45 PSI, tire condition (roll plane to see all the tire), strut for extension, and wheel bearing for damage.
- Propeller and spinner condition: CHECK
Check prop for nicks and spinner for security
- Cooling Air Inlets: CHECK
- Air Filter: Unobstructed
- Alternator Belt: Tension and Condition
- Static Port: CHECK
- Foreign Objects or Leaks (oil, fuel): CHECK
- Tow bar, chocks if any: REMOVE

STARTING:

- Seat po
- Position and safety belts: ADJUST / TIGHT
Ensure Seat is locked into track and will not slide aft.
- Parking brake: SET
- Passenger Briefing
 - Seat Belt use
 - Door Release
 - Emergency Equipment
 - Motion Sickness
 - Sterile Cockpit
 - Propeller Safety
 - Cockpit Resource Management Briefing (CRM)
- Beacon light: ON
- Fuel selector: BOTH
- Master Switch: ON
- Fuel quantity: CHECK

NOTE

Compare the fuel levels read by the fuel quantity indicators with the quantity present in the tanks.

- Mixture: RICH
- Throttle: ¼ Inch Open
- Friction lock: ADJUST
- Carb Heat: OFF
- Prime: 2-6 strokes for cold engine; no prime for warm engine; PRIMER LOCKED
- Propeller area: "CLEAR"
- Ignition Switch: START
- Engine RPM: 1000 RPM
- Oil pressure: CHECK

WARNING

If oil pressure doesn't rise within 10 seconds, shut down engine.

- Avionics Master N5264K ON
(Com/Nav 2, N3HQ): ON
- Flaps: UP
- Circuit Breakers: CHECK
- Mixture: Lean for taxi

PRE-TAXI:

- Transponder (Check Code) ALT
- AWOS / ASOS / ATIS: OBTAIN
- Altimeter: SET
- Attitude Indicator: CHECK
- Directional Gyro: SET
- GPS: SET
- Radio: CHECK WITH UNICOM

TAXI:

- Parking Brake: OFF
- Brakes: CHECK
- Turn Coordinator / Ball,
Directional Gyro, Mag Compass,
and Attitude Indicator CHECK

BEFORE TAKEOFF:

- Parking Brake: ON
- Mixture: RICH
- Throttle: 1700 RPM
- Engine instruments:
 - Ammeter: Positive Charge
 - Oil pressure: 60-90 psi
 - Oil temperature: <245 °F
- Vacuum gauge: 4.5 - 5.4
- Test ignition systems (Left, Both, Right, Both):
 - *Maximum RPM drop with only one ignition: 125 rpm*
 - *Max difference between LEFT and RIGHT: 50 rpm*
- Carb Heat: CHECK OPERATION
- Throttle: IDLE (check for roughness)
- Throttle: 1000 RPM
- Flight controls: CHECK
- Seat belts: FASTENED

HOLD SHORT LINE

- Flaps: UP Normal T/O, 10° Short T/O
- Trim: Elevator-T/O (Rudder-T/O N3HQ)
- Takeoff Brief: Complete**
- Strobe, Landing, Taxi, Nav Lights: ON
- Transponder: ALT
- Doors & Windows CLOSED
- Pattern: CHECK
- Radio: CALL
- Parking brake: OFF

TAKE OFF:

- Taxi to line-up, Mag Compass/DG: CHECK
- Throttle: FULL
- Engine instruments: CHECK RPM, Oil Press.
Airspeed indicator alive / RPM's up - if not abort
- Vr (Rotation speed): ~ 55 KIAS

NOTE

Rotate to takeoff attitude and accelerate to a climb speed of 73 KIAS (Flaps Up). 57 KIAS (10° flaps.)

CLIMB:

- Flaps: UP
- Establish Vy clean: 73 KIAS
- Trim: ADJUST
- Cruise climb: 75-85 KIAS

CRUISE:

- Power: SET 75% Power or less
- Mixture: Lean
- DG: SET
- Engine instruments: CHECK
 - Ammeter: Positive Charge
 - Oil pressure: 60-90 psi
 - Oil temperature: <245 °F

CAUTION

Normal position of the fuel selector is both. Check fuel balance. If necessary for fuel balance, Left or Right tank may be selected.

PRE-MANEUVERS LIST:

- Clearing Turns
- Select emergency landing area
- Va – 105 KIAS

DESCENT:

- DG: SET
- Mixture: RICH
- Power: AS REQUIRED
- Carb Heat: AS REQUIRED,

LANDING:

check safety belts tight

- Landing Light: ON
- Brakes: Check Pressure, Parking Brake Off

- Fuel Selector Valve: BOTH
- Carb Heat: ON
- Mixture: RICH
- Flaps: AS DESIRED
- Approach Speed:
 - 75 KIAS Flaps Up
 - 70 KIAS 10° Flaps
 - 65 KIAS 20° Flaps
 - 65 KIAS 30° Flaps

GO-AROUND:

- Throttle: FULL POWER
- Carb Heat: OFF
- Pitch: Climb Attitude
- Flaps: Retract to 10 degrees: 60 KIAS
Then, above 400 feet:
- Flaps: Up, Climb Speed: 73 KIAS
- Trim: Adjust
- Stay to right of runway

AFTER LANDING:

- Clear Runway: RADIO CALL
- Landing, Taxi & Strobe Lts: OFF
- Carb Heat: OFF
- Flaps: UP

- Trim: T/O
- Mixture: Lean for taxi
-

PARKING:

CAUTION:

Cabin Doors are large. Hinges and doorstops can be damaged in strong winds.

- Parking Brake: ON
- All Lights except Beacon: OFF
- Flaps: UP
- Avionics Master N5264K OFF
(Com/Nav 2, N3HQ): OFF
- Mixture: IDLE CUT-OFF
- Ignition Switch: OFF
- Master Switch: OFF
- Fuel Selector Valve: LEFT or RIGHT

USE TOW BAR to Re-Position Airplane.

Get Assistance to move airplane into tie-down spot or hangar, if necessary.

- Hobbs and Tach Times- Record
- Trash – Remove
- Chocks : INSTALL
- Parking brake: OFF (for extended parking)**
- Pitot tube cover: INSTALL
- Inlet Covers: INSTALL
- Control lock: INSTALL
- Aircraft: TIED DOWN
- Checklist in airplane
- Doors & Windows: CLOSED
- Key Returned to Box.

CLOSED PATTERN OPS CHECK LISTS

HOLD SHORT LINE

- Engine Instruments: CHECK
- Fuel Quantity CHECK
- Mixture RICH
- Flaps: As Required
- Trim: Centered
- Fuel Valve: BOTH
- Doors/windows CLOSED
- Takeoff Brief: REVIEW
- Pattern: CHECK
- Radio: CALL

CLIMB:

- Rotate 55 KIAS
- Accelerate 73 KIAS
- Flaps: RETRACT as necessary
- Establish V_y clean: 73 KIAS
- Trim: ADJUST

LANDING:

check safety belts tight

- Landing light: ON
- Fuel Selector Valve: BOTH
- Carb Heat: ON
- Mixture: RICH
- Flaps: AS DESIRED

AFTER LANDING:

- Clear Runway: RADIO CALL
- Carb Heat: OFF
- Flaps: UP
- Trim: CENTERED

EMERGENCY PROCEDURES:

ENGINE FIRE DURING START ON GROUND

- Cranking: CONTINUE
- Power (**If engine starts**): 1700 RPM for a few minutes
- Throttle: IDLE
- Mixture: IDLE CUT-OFF
- Ignition Switch: OFF
- Master switch: OFF

If Engine Does Not Start:

- Throttle: FULL OPEN
- Mixture: IDLE CUT-OFF
- Cranking: CONTINUE
- Ignition: OFF
- Master: OFF
- Fuel Selector Valve: OFF
- Parking brake: SET
- Escape rapidly from the aircraft

ENGINE FAILURE DURING TAKEOFF RUN

- Throttle: IDLE
- Brakes: APPLY AS NEEDED
- Flaps: UP
- Mixture: IDLE CUT-OFF
- Ignition Switch: OFF
- Master switch: OFF

ENGINE FIRE DURING TAKEOFF RUN

- Throttle: IDLE
- Brakes: AS NEEDED
- Fuel Selector Valve: OFF
- Cabin heating: OFF
- Mixture: IDLE CUT-OFF
- Ignition Switch: OFF
- Master switch: OFF
- Parking brake: SET
- Escape rapidly from the aircraft

ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF

- NOSE DOWN!**
- Airspeed: 70 KIAS
- Find a suitable place on the ground to land safely.
The landing should be planned straight ahead with only small changes in direction not exceeding 45° to the left or 45° to the right
- Mixture: IDLE CUT-OFF
- Fuel Selector Valve: OFF
- Ignition Switch: OFF
- Wing Flaps: AS DESIRED
- Master switch: OFF

ENGINE FAILURE IN FLIGHT

- Airspeed: 68 KIAS

NOTE

Glide ratio is 9:1 therefore with 1000 ft of altitude; it is possible to cover 1.5 nautical miles in zero wind conditions.

- Best Field: SELECT

IN-FLIGHT ENGINE RESTART

-IF TIME PERMITS-

- Fuel Selector BOTH
- Carb heat: ON
- Mixture RICH
- Ignition: BOTH
- Primer: LOCKED
- Throttle: MIDDLE POSITION
- Master Switch: ON
- If Prop Stopped, Ignition: START, then BOTH
- If the restart fails: Procedure for a Forced Landing Without Engine Power: APPLY
- If engine starts: Land as soon as possible.

FORCED LANDING WITHOUT ENGINE POWER

- Airspeed:** 68 KIAS
- Locate suitable terrain, land into wind**
- Radio / Transponder: 121.5 / 7700
- Mixture: IDLE CUT-OFF
- Fuel Selector Valve: OFF
- Ignition Switch: OFF
- Flaps: AS REQUIRED
- Master switch: OFF
- Safety belts: TIGHTEN
- Doors: UNLATCHED / PROP OPEN
- ELT: Activate near ground

DITCHING

- Seats belts: TIGHTEN
- MAYDAY 121.5 / 7700
- With Power**
- Approach: High Winds: Into Wind
Light Winds, heavy swells: Parallel to Swells
- Flaps: 20° - 30°
- Power: 300 ft/min descent at 55 KIAS
- Without Power**
- 70 KIAS Flaps Up or 65 KIAS Flaps 10°
- Mixture: IDLE CUT-OFF
- Ignition: OFF
- Master switch: OFF
- Doors: PROP OPEN
- Ditch with nose high attitude

ENGINE FIRE IN-FLIGHT

- Mixture: IDLE CUT-OFF
- Fuel Selector Valve: OFF
- Master Switch: OFF
- Cabin Heat & Air: OFF
- Airspeed: 100 KIAS or Higher to Extinguish Fire
- Employ slip to keep flames away from firewall

Do not attempt an in-flight restart

Procedure for a Forced Landing Without Engine

ELECTRICAL FIRE IN CABIN IN FLIGHT

- Master switch: OFF
- Cabin vents: OPEN
- Fire Extinguisher: ACTIVATE
- Avionics Master N5264K OFF
- (Com/Nav 2, N3HQ): OFF
- All Other Switches, except Ignition: OFF
- Emergency descent and Procedure for a Power-On Forced Landing.
- If flaps needed, Master switch: ON
- Flaps: AS REQUIRED
- Master switch: OFF
- If fire appears out and electrical power is necessary for continued flight:
- Master Switch: ON
- Circuit Breakers: CHECK for faulty circuit, do not reset
- Radio Switches: OFF
- Avionics Master N5264K: ON
- Radio / Electrical Switches: ON, one at a time with delay after each until short circuit is localized
- Vents / Cabin Air / Heat OPEN, if fire completely extinguished

CABIN FIRE DURING FLIGHT

- Master Switch: OFF
- Vents / Cabin Air / Heat CLOSED
- Fire Extinguisher: ACTIVATE
- Emergency descent and Procedure for a Power-On Forced Landing.
- If flaps needed, Master switch: ON
- Flaps: AS REQUIRED
- Master switch: OFF

PRECAUTIONARY LANDING WITH ENGINE POWER

- Landing Area: SELECT
Flyover at 70 KIAS with 20° Flaps, noting terrain and obstructions
- Safety belts: TIGHTEN
- Landing assured:**
- Flaps: 30°
- Airspeed: 65 KIAS
- Doors: UNLATCH
- Touchdown: Slightly Tail Low
- Brakes: APPLY
- Mixture: IDLE CUT-OFF
- Ignition Switch: OFF
- Master Switch: OFF

IRREGULAR ENGINE RPM

- Throttle: CHECK
- Mixture: ADJUST
- Carb Heat: ON
- Engine gauges: CHECK
- Fuel quantity indicators: CHECK
- Fuel Selector Valve: BOTH

If the engine continues to run irregularly, land as soon as possible.

LOW OIL PRESSURE

- Oil temperature: CHECK
- If oil temperature is stable within the green arc: LAND as soon as possible
- If oil temp. increasing: LAND as soon as possible and be alert for impending engine failure

AMMETER SHOWS EXCESSIVE RATE OF CHARGE (Full Scale Deflection)

- Alternator Half of Master Switch: OFF
- Alternator Circuit Breaker: PULL
- Non-Essential Elec. Equip: OFF
- Land: As soon as practical,
all electrical equipment powered only by battery

LOW VOLTAGE LIGHT ON (N5264K) (Ammeter Indicates Discharge)

- Avionics Master Switch: OFF
- Alternator Circuit Breaker: CHECK IN
- Master Switch (both sides): OFF
- Low Voltage Light: CHECK OFF
- Avionics Master Switch: ON

If Low Voltage Light illuminates again:

- Alternator: OFF
- Non-essential Radio and Elec Equip: OFF
- Land as soon as practical
- Battery life is limited

HI VOLTAGE LIGHT ON (N3HQ)

- Master Switch: OFF, then ON
- If light goes out, continue flight.
- If light comes back on, turn off all unnecessary electrical equipment, and land as soon as practical.
- Battery life is limited.

LANDING WITH A FLAT MAIN TIRE

- Make radio call to UNICOM and inbound traffic about closed runway
- Approach: NORMAL
- Touchdown on good tire first, hold airplane off flat tire as long as possible
- Push plane off runway

UNINTENTIONAL FLIGHT INTO ICING CONDITIONS

- Get away from icing conditions by changing altitude or direction of flight in order to reach an area with warmer external temperature.
- Pitot Heat: ON
- Carb Heat: ON
- Increase Power to avoid ice formation on propeller blades.
- Cabin Heat and Defrost: ON
- Land as soon as practical
- Do NOT use flaps

WARNING

In case of ice formation on wing leading edge, stall speed may increase.

NOTE

It may be necessary to slip the plane on landing to see out.

RECOVERY FROM UNINTENTIONAL SPIN

- Reduce the power to idle
- Position the ailerons to neutral
- Apply full opposite rudder opposite to the direction of rotation.
- After one-fourth turn, move the control wheel forward of neutral in a brisk motion
- After spin rotation stops, neutralize the rudder.
- As rotation stops, neutralize rudder, and make a smooth recovery from the resulting dive.

LOST PROCEDURES

- Climb and Circle to better see prominent landmarks
- Conserve fuel
- Communicate with ATC (121.5)
- Comply with ATC instructions