Civil Air Patrol

Cessna: C172S (AoA ESP GI275)

CVD: 01 Dec 21 (G1000/GFC700/GI275)

Preflight Cabin

1. AIF…Review all & Inspect for Airworthiness
2. Pitot Tube Cover…Remove & Check Clear
3. POH & Garmin G1000™ Cockpit Ref. Guide ..... Accessible to Pilot
4. Documents ..... AROW in airplane
5. Parking Brake ..... Set
6. Control/Avionics Lock ..... Remove

WARNING
When the master switch is on, using an external power source, or manually rotating the propeller, treat the propeller as if the magnetos switch were on. Do not stand, nor allow anyone else to stand, within the arc of the propeller since a loose or broken wire, or a component malfunction could cause the engine to start.

7. MAGNETOS Switch .....Off
8. Avionics Switch (BUS 1&2) .....Off
9. MASTER Switch (ALT & BAT) ..On
10. Primary Flt Display…..……Verify On
11. Standby (GI275)……...Verify On
12. Hobbs & Tach Time.....Record
13. FUEL QTY (L&R) ..... Check
14. LOW FUEL Annunciators .....Off
15. OIL PRESS Annunciator .... Verify On
16. LOW VAC Annunciator….Verify On
17. AVIONICS Switch (BUS 1).....On
18. Forward Avionics Fan…Check On (Listen)
19. AVIONICS Switch (BUS 1).....Off
20. AVIONICS Switch (BUS 2).....On
21. Aft Avionics Fan…..Check On (Listen)
22. AVIONICS Switch (BUS 2).....Off
23. PITOT HEAT Switch .....On
24. Wing Flaps……..Extend
25. Exterior Lights .....On
26. PITOT HEAT/Exterior Lights... Check
27. PITOT HEAT/Exterior Lights.....Off
28. LOW VOLTS Annunciator …..Check On
29. MASTER Switch (ALT & BAT) .....Off
30. Elevator Trim Ctrl .....Takeoff position
31. FUEL SELECTOR Valve..... Both
32. ALT STATIC AIR Valve…..Off (Push In)
33. Fire Extinguisher ..... Check (Verify green)
34. Carbon Monoxide Detector..... Check

Preflight Empennage

1. Baggage Door……..Check (Secure)
2. Rudder Gust Lock .....Remove
3. Tail Tie-Down ..... Disconnect
4. Control Surfaces .....Check
5. Elev. Trim Tab ..... Check secure
6. Antennas ..... Check

Preflight Right Wing trailing edge

1. Flap .....Check Condition
2. Aileron ..... Check Movement
3. Wingtip/Lights .....Check Condition

Preflight Right Wing

1. Wing Tie Down ..... Disconnect
2. Land/Taxi light(s)….Check condition
3. AOA Transducer ... Check condition
4. Main Wheel Tire (42 PSI)..…Check
5. Brake……Check Visually
6. Chocks……..Remove & Stow
7. Fuel Tank Sumps (5)……..Drain

See Fuel Contamination Warning in the POH.

8. Fuel Quantity ……..Check Visually
9. Fuel Filler Cap…..Secure and Vent Clear

Nose

1. Fuel Strainer Valves (3)……..Drain

See Fuel Contamination Warning in the POH.

2. Engine Oil Dipstick .....Check oil level & secure **(5 qt min., 8 qt for extended flights)**
3. Engine Cooling Air Inlets… ..Check
4. Propeller & Spinner……...Check
5. Air Filter……...Check
6. Nosewheel Strut/Tire (45 PSI)….Check
7. Tow Bar/Chocks……Remove & Stow
8. Engine Cooling Outlets……...Clear
9. Static Source (Left)……Check

Preflight Left Wing Leading Edge

1. Fuel Tank Vent Opening ..... Check
2. Stall Warning Opening... ..... Check
3. Land/Taxi light(s)….Check condition
4. Wingtip/Lights……..Check Condition

Preflight Left Wing

1. Wing Tie Down……Disconnect
2. Left Fuel Quantity……Visually Check
3. Fuel Filler Cap……..Secure
4. Fuel Tank Sumps (5)……Drain

See Fuel Contamination Warning in the POH.

5. Main Wheel Tire (42 PSI)…….Check
6. Brake……..Check Visually
7. Chocks……..…Remove & Stow

Preflight Left Wing Trailing Edge

1. Left Aileron .....Check Movement
2. Left Flap..... .Check Condition
3. Baggage Door….Re-check (Secure)

Before Starting Engine

1. Preflight Inspection .....Complete

PASSENGER BRIEF

1. Seat Belts / Shoulder Harness
2. Personal Electronic Devices off
3. Air Vents / Comfort
4. Fire Extinguisher Location / Operation
5. Emergency Procedures & Exits

MISSION BRIEF

1. Mission Objective
2. Destination, WX, Route, Alt, ETE
3. NOTAMS
4. Crew Coordination & CRM
5. Sterile Cockpit Procedures
6. Cockpit Layout
7. Intercom & Radio Usage
8. Seats, Seatbelts, Doors
9. Emergency Actions & Equipment

2. Passenger Brief .....Complete
3. Sterile Cockpit……...Comply
4. Seats / Belts / Shoulder Harness…. Adjust and lock, check inertial reels
5. Brakes…….. ..... Test & Set
6. Circuit Breakers .....Check In
7. Electrical Equipment… ..... Off
8. Avionics Switch (Bus 1&2)……Off

Caution (See Complete Caution in POH) The avionics switch (Bus 1 and 2) must be off during engine start to prevent possible damage to avionics.

9. Fuel Selector Valve…… Both
10. Fuel Shutoff Valve……. (Push in)

Starting Engine (Using Battery)

1. Throttle Control..... Open ¼ Inch
2. Mixture Control .....Idle Cut Of
3. Stby Batt Switch..... Test and Arm
   Hold for 10 seconds, verify that green test lamp does not go out, then ARM and verify that PFD comes on
4. Engine Indicating System ...Check.
   (no red X's through ENGINE indicators)
5. E Bus Volts……24 volts min
6. M Bus Volts..…Verify 1.5 volts or less
7. Batt S Amps…….Discharge (neg)
8. Stby Batt Annunciator……On
9. Propeller Area……Clear
10. Master Switch (Alt and Bat)……..On
11. Beacon Light Switch……..…On

Note

If engine is warm, omit priming procedure of steps 12, 13 and 14 below.

12. Fuel Pump Switch……On
13. Mixture Control.…..Advance to Full Rich, wait until fuel flow indication is stable, and then return to IDLE CUTOFF position
14. Fuel Pump Switch……Off
15. Magnetos Switch……Start
16. Mixture Control…Advance smoothly to rich (when engine starts)

Note

If the engine floods, place the mixture control in the Idle Cut Off position, open the throttle control ½ to full, and engage the starter motor (Start). When the engine starts, advance the mixture control to the Full Rich position and retard the throttle control promptly.

17. Oil Pressure .....Check
18. Amps (M Batt & Batt S) .....Check charge (positive)
19. Low Volts Annunciator ....Verify Off
20. Nav Lights Switches.....On as req
21. Avionics Switch (Bus1&2) ..... On
22. Mission Master Switch...On if inst'd
23. Check MFD for correct A/C type and Navigation database expiration dates, then press ENT
24. Flight Data Logger-Status.....Check
25. ESP……Enabled/Disabled
26. Fuel Totalizer……Reset
27. ATIS / AWOS……..Copy
28. Altimeters:
    - PFD (Baro)..……Set
    - Standby (Baro)……Verify/Set
29. Clnc Del/Gnd Control……Contact

30. Transponder…...Code/Flight ID/ALT
31. Wing Flaps ……Retract
32. Flight Plan……...Enter
33. Parking Brake……Release

Taxi

1. Mixture…..…..Lean as desired for GND Ops
2. Brakes……Test
3. Heat / Vents / Defrost….As Required
4. Attitude Indicator.. Verify Proper Ops
5. Turn Coordinator.. Verify Proper Ops
6. HSI & Compass….Verify Proper Ops

Before Takeoff - Run-Up

1. Parking Brake……..Set
2. Pilot/Passenger Seat Backs…..Upright
3. Seats and Seat Belts……...Secure
4. Cabin Doors……Closed and Locked
5. Flight Controls…….Free & Correct
6. Flight Instruments…Check no red Xs
7. Altimeters Recheck:
   - PFD (Baro)...……Set
   - Standby (Baro)…….Verify/Set
8. G1000 Altitude Select (ALT SEL)…...Set
9. Standby (GI275)…..Check no red Xs
10. Fuel Quantity……Check

Note 1

Flight is not recommended when both fuel quantity indicators are in the yellow arc range.

11. Mixture……..Rich
12. Fuel Selector Valve…….... Both
13. Autopilot……...ENGAGE
14. Flight Controls……Verify can overpower in pitch and roll
15. A/P Trim DISC Button ..……..Press (verify aural alert and autopilot Off)
16. Flight Director……Off
17. Manual Electric Trim…….. Check
18. Elevator Trim……... Set for Takeoff
19. AOA Ref Marker……..Set for T/O
20. Throttle Control……1800 RPM
    - Magnetos Switch. Check (RPM drop 175 max or 50 differential between magnetos)
    - Engine Indicators..……...Check
    - Ammeters & Voltmeters..Check
21. Annunciators…...Check (none shown)
22. Throttle……...Check Idle
23. Throttle……..1000 RPM or less
24. Throttle Friction Lock……...Adjust
25. Com/ Nav Frequency(s)……...Set
26. FMS/GPS Flight Plan ...As Desired
    NOTE: Check GPS 1 & 2 status
27. Transponder.....Code/ALT
28. CDI Softkey.....Select NAV source.

WARNING
(See Full Warning in POH)
Interruption of NAV signal to the autopilot will cause autopilot to revert to ROL mode with NO warning chime or PFD annunciation.

Caution: (See Full Caution in POH)
The G1000 HSI does not provide a warning "Flag". The missing D-Bar is considered to be the warning flag.

29. Cabin Power 12V Switch ……...Off
30. Wing Flaps…… UP-10° (10º preferred)
31. Cabin Windows….Closed & Locked
32. Strobe/Pulse Lights Switch……..On
33. Parking Brake/Brakes……..Release

Takeoff

1. Flaps……UP - 10° (10º preferred)
   - Short Field T.O.……10° Flaps / 56 KIAS Until Clear
   - Soft Field T.O.……..10° Flaps/Ground Effect ASAP
2. Throttle Control……Full (push full in)
3. Mixture Control……...Rich (Above 3000ft PA, lean for max RPM)
4. Rotate……...55 KIAS
5. Normal Climb Speed……70-80 KIAS
6. Flaps……..…Retract at safe altitude (and above 60 KIAS)

After Takeoff and Climb

1. Airspeed……70-85 KIAS
2. Throttle……..... Full (push full in)
3. Mixture..……..Rich (Above 3000ft PA, lean for max RPM)
4. Sterile Cockpit..……..Terminate

Cruise

1. Power.....2100-2700 RPM (no more than 75% power recommended)
2. Elevator Trim Control……Adjust
3. Mixture…. Lean (for desired performance)
4. FMS/GPS……Review & Brief
5. Auto Pilot……..…..As desired

Descent

1. Power……..As Desired
2. Mixture…….. Adjust as necessary
3. Altimeters:
   - PFD (Baro)..……Set
   - Standby (Baro)……...Verify/Set
4. G1000 Alt Select (ALT SEL)…….Set
5. CDI Softkey……..Select NAV source
6. FMS/GPS ……Review & Brief

See Caution in Before Takeoff Run-up.

See Warning in Before Takeoff-Run-up.

7. Fuel Selector Valve……..Both
8. Wing Flaps……..As desired
   ..(Up-10° below 110 KIAS)
   ..(10°-Full below 85 KIAS)

Before Landing

1. Sterile Cockpit…..……Comply
2. Pilot/Passenger Seat Backs...Upright
3. Seats & Seat Belts…..…..Secured & Locked
4. Fuel Selector Valve…..…….... Both
5. Mixture Control……...Rich
6. Landing & Taxi Light Switch…..…...On
7. Autopilot……Off
8. Cabin 12V Power Switch…..……Off

Normal Landing

1. Airspeed…….65-75 KIAS (Flaps Up)
2. Wing Flaps……..As Desired
   (Up-10° below 110 KIAS)
   (10°-Full below 85 KIAS)
3. Airspeed……60-70 KIAS (Full Flaps)
4. Elevator Trim……..Adjust
5. Touchdown…….Main Wheels First
6. Landing Roll…….Gently Lower Nose
7. Braking……...Minimum Required

Short Field Landing

1. Airspeed…….65-75 KIAS (Flaps Up)
2. Wing Flaps……FULL
3. Airspeed……...61 KIAS (until flare)
4. Elevator Trim……..ADJUST
5. Power……REDUCE TO IDLE (as obstacle is cleared)
6. Touchdown ……Main Wheels First
7. Brakes……..APPLY HEAVILY
8. Wing Flaps……UP

Balked Landing

1. Throttle Control…..Full (push full in)
2. Go Around Button (if needed).Press
3. Wing Flaps…… RETRACT to 20°
4. Climb Speed……..60 KIAS
5. Flaps……10° as obstacle is cleared (UP-at safe altitude & above 65 KIAS)

After Landing (Clear of Runway)

1. Wing Flaps……Up
2. Exterior Lights……..As Required
3. Pitot Heat……Off
4. Mixture…..…...Lean as desired for GND Ops

Securing Aircraft

1. Parking Brake…… Set
2. Transponder ……1200/Flight ID
3. Throttle Control……Idle (pull full out)
4. Mission Master Switch…..Off if inst'd
5. Avionics Switch (Bus 1&2)……Off
6. Magnetos…… Check for Ground
7. Mixture……Idle Cut-Off
8. Sterile Cockpit…..……...…Terminate
9. Magnetos Switch…… Off
10. Master Switch (ALT/BAT)…….. Off
11. Hobbs, Tach and Fuel…..…..Record
12. Stby Batt Switch…….. Off
13. Exterior Lights……..Off
14. Control/Avionics Lock……... Install
15. Fuel Selector……..Left or Right
16. Chocks…..……..……Install
17. Parking Brake …… Off
18. Pitot Tube Cover……Install
19. Aircraft……Secured & Locked
20. Flight Plan & FRO……...Closed

Transponder Codes

- VFR Transponder……....1200
- Lost Comm……....7600
- Emergency……7700
- Hijack……7500

This checklist is a guide to coordinate Pilot Operating Handbook and STC data applicable to this particular aircraft only. The applicable Pilot Operating Handbook and STC installations remain the official documentation for this aircraft. The pilot in command is responsible for complying with all items in the Pilot Operating Handbook and applicable STCs.