

Cessna 172SP G1000: Preflight

WX & personal minimums ..Checked
Weight and balance.....Checked
Airplane squawks/obsChecked
Fuel quantity Check visually
Pitot tube coverRemove

Cockpit

Control wheel lock.....Remove
Ignition switch..... Off
Avionics master..... Off
All lights (exterior & interior)..... Off
Fuel shutoff valve..... In
Hobbs time.....Check and record
AROW documents Check present
Master switch.....On
Fuel quantityCheck
Annunciators..... Test
Flaps..... Lower
Exterior lights & Pitot heat..... On
..... Walk around and check
Exterior lights & Pitot heat..... Off
Avionics 1On/Off (Check fan)
Avionics 2On/Off (Check fan)
Master switch..... Off

Each Wing

Wing air vent.....Check for blockage
Door hinges.....Check
Wing strut.....Check secure
Wing tiedown.....Remove
Fuel vent (left wing).....Check
Pitot tube (left wing).....Check
Stall warning (left swing).....Check
Wing leading edgeCheck
Wing tipCheck
Wing bottomCheck access ports
Aileron Check movement
..... Check hinges
.....Check actuator arm
..... Check anti-flutter weights
Flap Check security
.....Check actuator arm
Main tire....Check inflation and tread
.....Check brakes, fairing

Rear

Horizontal stabilizer Check secure
Access ports (if any).. Check secure
ElevatorCheck movement
..... Check secure
.....Check hinges
..... Check elevator trim tab
Rudder.....Remove gust lock
.....Check movement
..... Check control cables
.....Check rudder trim tab
Rear tiedown..... Remove
Under fuselage..... Check
Top of fuselage & wings Check
Access ports (if any)..... Check secure
ELT antenna Check secure

Front

Cowl Check secure
Oil.....Check (> 6 quarts)
Propeller.. Check for nicks & damage
Spinner Check for damage
Cowl openings..... Check
Alternator belt..... Check tight
Landing light Check condition
Air filter..... Check for blockage
Nose wheel strutCheck inflation
Nose tire Check inflation and tread
Static port Check for blockage
Windows..... Clean

Fluids

Wing fuel sumps (10) . Drain & check
Nose fuel sumps (3).... Drain & check
Fuel quantity (2)Check visually
Fuel filler caps (2)Secure

Final Check

All tires.....Roll and check
Baggage door..... Closed and locked
Area Clear
Tie-downs..... Removed
Chocks..... Removed

Cessna 172SP G1000: Start, Taxi, and Runup

Engine Start

Passengers briefed
..... Seats, belts and harnesses
..... Door operation
..... Headset
..... Emergency procedures
..... Emergency supplies
..... Sterile cockpit
..... Looking for traffic
Cell phones..... Off
Seats..... Adjust and lock
Seat belts & harnesses..... Adjust
Fuel selector valve..... Both
Fuel shutoff valve..... In
Alternate static..... Off
Avionics master..... Off
Circuit breakers..... Check in
Brakes..... Test and hold
Parking brake..... Set

Standby battery switch..... Test
(20 seconds, verify green lamp)
..... Arm
Engine instruments..... No red Xs
Essential bus V..... > 24 V
Main bus V..... < 1.5 V
Standby battery ammeter.... Discharge
Annunciators..... OIL PRESS,
..... STBY BATT, LOW VAC

Mixture..... Idle cut-off
Throttle open..... 1/4 inch
Master switch..... On
Fuel pump..... On
Mixture..... Advance until fuel flow
..... starts, then return to idle cut-off
Fuel pump..... Off
Tail beacon..... On
Brakes..... Hold tight
Propeller area..... Check & yell
Ignition switch..... Start
Mixture..... Advance to rich
Throttle..... Adjust to 1000 RPM
Oil pressure..... Check

Both battery ammeters..... Charge
Low volts annunciator..... Off
Mixture..... Lean as required

Pre-Taxi

Flaps..... Up
Avionics master (both)..... On
MFD..... Check database expiration
MFD AUX page 6..... No red Xs
MFD AUX page 4..... CDI (AUTO)
PFD..... No red Xs
Engine fuel quantity..... Set
Lights..... As required
Radios..... Get ATIS
Altimeters (G1000, standby, autopilot)
Parking brake..... Off

Taxi

Pilot brakes..... Test
Copilot brakes..... Test
Standby AI..... Level during turns
..... No dip during acceleration
Compass..... Moves freely

Engine Runup

Parking brake..... Set
Cabin doors..... Closed and latched
Flight controls..... Free and correct
Ailerons, elevator, rudder,
elevator trim
Electric trim..... Test
Autopilot..... Test
Elevator trim..... Set for takeoff
Fuel selector valve..... Both
MFD lean page..... Select
Mixture..... Rich (below 3000 feet)
Throttle..... 1800 RPM
Magnetos..... Check
(Max 150 RPM drop, 50 RPM diff)
MFD lean page..... Exit
Oil temp & pressure..... Check
Vacuum gauge..... Check
Ammeters and voltmeters..... Check
Annunciators..... Check all off
Throttle..... Full idle, check smooth
Throttle..... 1000 RPM
Mixture..... Lean as appropriate

**➔ Go to avionics setup
checklist ←**

Cessna 172SP G1000: Takeoff through Landing

Avionics Setup

VOR check..... Perform if necessary
GPS flight plan..... Loaded
Appropriate GPS leg Activated
Comm freqs.....Set
VOR freqsSet
Inset map..... Set (Terrain)
CDI.....Set
HSI OBS Set (if needed)
Bearing pointersSet
Transponder codeSet
MFD map.....Set
(Topo, Declutter, Airway, TRK UP)
Heading bugSet
Altitude preselect Set (Bug, A/P)
Marker beacon.....Set
Timer.....Set

Takeoff (EVERY ONE!)

Flight instruments (G1000 and stdby)
..... Check & Set
Fuel selector valve Both
Takeoff technique Choose
Flaps..... Up (10° for short/soft)
Elevator trimSet
Mags..... Both
Seat belts & harnesses..... Adjust
Doors and windows..... Latched
Reversionary modeSet
Speeds & emergency plansReview
Abort point/speed Choose
Minimum static RPM..... 2300
Rotate at 55 KIAS
Climb at..... 74 KIAS
..(56 KIAS short field until clear)

Parking brake Off
Radios Contact tower/CTAF

When cleared onto the runway:
Takeoff time Record
Lights All on
Mixture..... Rich (below 3000 feet)

After climb established:
Reversionary mode..... Off

Cruise

Power..... 2200-2700 RPM
Mixture Lean as appropriate
Lights..... As required

Before Landing

(L) Lights.....On
(C) Carburetor heat.....N/A
(G) Fuel selector valveBoth
(U) Brakes Test, heels on floor
(M) Mixture..... Rich (< 3000 feet)
(P) PropellerN/A
(S) Seats, belts, and harnesses
..... Adjust and lock

Final approach speed 60-70 KIAS
..... (61 KIAS short field)

Go-Around

Throttle Full
Flaps Retract to 20°
Airspeed 60 KIAS
Flaps 10° until obstacles cleared,
Then UP after 65 KIAS and safe alt

After Landing

FlapsUp
Mixture Lean as appropriate
Elevator trim..... Set
Lights..... As required
Radios... Contact ground if applicable

Important Airspeeds

Vx..... 62 KIAS
Vy..... 74 KIAS
Vne 163 KIAS
Vno 129 KIAS
Va 90-105 KIAS
Vfe (10°)..... 110 KIAS
Vfe (> 10°) 85 KIAS
Max window open 163 KIAS

Best glide 68 KIAS

Cessna 172SP G1000: Shutdown and Securing

Shutdown and Securing

Avionics masters	Off
Throttle.....	Idle
Mags.....	Check briefly in off position, then both
Throttle.....	1000 RPM
Mixture.....	Idle cut-off
Ignition switch.....	Off and remove key
Master switch	Off
Lights (exterior and interior)	Off
Engine time	Record
Standby battery	Off

In tie-down spot:

Tiedown ropes	Tie
Hobbs time	Record
Fuel selector valve	Left/right tank
Control lock	Install
Pitot tube cover	Install
Door	Lock
Baggage door	Lock

Cessna 172SP G1000: Emergency Procedures

Engine Failure During Flight

Airspeed 68 KIAS (flaps up)
Turn toward preselected field

If time permits, try to restart:

Fuel selector valve Both
Fuel shutoff valve..... In
Mixture..... Rich
Throttle..... Full
Fuel pump On
Ignition switch..... Both
.....Start (if propeller stopped)

If time permits, call for help:

Transponder 7700
Radio Last frequency or 121.5
... Announce MAYDAY and position

Seat belts Tight
Passengers Brief
(Door operation, seat belts,
seat/crash position, exiting airplane)

When committed to landing:

Fuel shutoff valve..... Out
Mixture..... Idle cut-off
Fuel pump Off
Ignition switch..... Off
Flaps..... As required [30°]
Master switch and STBY batt Off
Standby battery Off
Doors Unlatch

Engine Fire During Start

Starter Continue cranking

If engine starts:

RPM 1800 for a few minutes
Engine Shutdown

If engine fails to start:

Throttle..... Open
Mixture..... Idle cut-off
Starter..... Continue cranking
Fuel shutoff valve..... Out
Fuel pump Off
Fire extinguisher Activate
Master switch and STBY batt ... Off
Ignition switch..... Off

Engine Fire in Flight

Fuel shutoff valve Out
Mixture Idle cut-off
Fuel pump..... Off
Ignition switch..... Off
Master switch and STBY batt..... Off
Cabin heat and air..... Off
Wing vents..... Open
Airspeed .. 100 KIAS (incr. if needed)
Seat belts Tight
Passengers Brief
(Door operation, seat belts,
seat/crash position, exiting airplane)
Doors Unlatch

Electrical Fire in Flight

Master switch and STBY batt..... Off
Avionics master Off
All switches (except ignition)..... Off
Vents, cabin air, heat Closed
Fire extinguisher Activate
Airplane Land ASAP

Cabin Fire

Master switch and STBY batt..... Off
Vents, cabin air, heat Closed
Fire extinguisher Activate
Cabin Ventilate
Airplane Land ASAP

Excessive Rate of Charge

Alternator Off
Nonessential electrical equip Off
Airplane Land ASAP

Low-Voltage Annunciator

Ammeter..... Verify discharge
Avionics masters Off
Alternator circuit breaker..... In
Master switch Off (both sides)
Master switch On (both sides)
Low-voltage annunciator.... Check off
Avionics masters On
If low-voltage ann. illuminates again:
Alternator Off
Nonessential electrical equip Off
Flight Terminate ASAP