

Cessna 172SP: 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 quantity indicators.....Check
Turn coordinator gyro Listen for
Annunciators Test
Flaps..... Lower
Exterior lights & Pitot heat..... On
..... Walk around and check
Exterior lights & Pitot heat..... Off
Master switch Off

Left Side

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

Rear

Horizontal stabilizerCheck secure
Access ports (if any)...Check secure
Elevator..... Check 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

Right Side

Access ports (if any)..... Check secure
ELT antenna Check secure
Wing bottom..... Check access ports
Main tire Check inflation and tread
..... Check brakes, fairing
Flap.....Check security
..... Check actuator arm
Aileron.....Check movement
..... Check hinges, actuator arm
..... Check anti-flutter weights
Wing tip..... Check
Wing leading edge Check
Wing tiedown Remove
Wing strut..... Check secure
Wing air vent Check for blockage
Door hinges Check

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

Fluids

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

All tiresRoll and check
Baggage door..... Closed and locked

Cessna 172SP: Engine 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
Avionics master..... Off
Circuit breakers Check in
Brakes Test and hold
Parking brake Set

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 (anti-collision light) ... On
Brakes Hold tight
Propeller area Check & yell

Ignition switch..... Start
Mixture..... Advance to rich
Throttle..... Adjust to 1000 RPM
Oil pressure Check

Flaps..... Up
Transponder Standby
Avionics master..... On
Lights As required
Radios Get ATIS
Altimeter Set
Heading indicator Set

(Contact ground for taxi instructions)

→ Execute taxi checklist ←
→ during taxi ←

Taxi

Pilot brakes Test
Copilot brakes..... Test
Attitude indicator.. Level during turns
..... No dip during acceleration
Heading indicator Turns
Turn coordinator..... Banks
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
Mixture Rich (below 3000 feet)
Throttle 1800 RPM
Magnetos Check
(Max 150 RPM drop, 50 RPM diff)
Oil temp & pressure..... Check
Suction gauge Check
Ammeter Check
Annunciators Check
Throttle Full idle, check smooth
Throttle 1000 RPM
Mixture Lean as appropriate

→ Go to takeoff checklist ←

Cessna 172SP: Takeoff through Shutdown

Takeoff (EVERY ONE!)

Flight instruments Check & Set
Radios Check & Set
Transponder Appropriate code
Fuel selector valve Both
Takeoff technique Choose
Flaps Up (10° for short/soft)
Elevator trim Set
Mags Both
Seat belts & harnesses Adjust
Doors and windows Latched
Speeds & emergency plans Review
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
Transponder Altitude
Mixture Rich (below 3000 feet)

Cruise

Power 2200-2700 RPM
Mixture Lean as appropriate
Lights As required
Heading indicator Set

Before Landing

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

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

Best glide..... 68 KIAS

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

Flaps Up
Transponder Standby
Mixture Lean as appropriate
Elevator trim Set
Lights As required
Radios Contact ground if applicable

Shutdown and Securing

Avionics master 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

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

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

Cessna 172SP: In-Flight 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 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 Off
Ignition switch..... Off

Engine Fire in Flight

Fuel shutoff valve Out
Mixture Idle cut-off
Fuel pump..... Off
Ignition switch..... Off
Master switch 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 Off
Avionics master Off
All switches (except ignition)..... Off
Vents, cabin air, heat Closed
Fire extinguisher Activate
Airplane Land ASAP

Cabin Fire

Master switch 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 Light

Ammeter Verify discharge
Avionics master Off
Alternator circuit breaker..... In
Master switch Off (both sides)
Master switch On (both sides)
Low-voltage light Check off
Avionics master On

If low-voltage light illuminates again:

Alternator Off
Nonessential electrical equip Off
Flight Terminate ASAP