Cessna C-172 Checklist

Skyhawk

INTERIOR PREFLIGHT

Required Documents ..... On Board
Hobbs/Tach Time ..... Check
Fuel Selector ..... Cycle, then Both
Flight Controls ..... Free & Correct
Radio Master Switch ..... Off
Ignition Switch ..... Off
Master Switch ..... On
Fuel Quantity ..... Check
Flaps ..... Extend
Aircraft Lights/Pitot Heat ..... All On
Lights/Pitot Heat ..... Check
Lights/Pitot Heat ..... Off
Master Switch ..... Off

EXTERIOR PREFLIGHT

FUSELAGE/TAIL:

Baggage Door ..... Secure
Antennas ..... Check
Left Fuselage ..... Check
Left Elevator ..... Check
Rudder ..... Check
Right Elevator ..... Check
Trim Tab..... Check
Right Fuselage ..... Check

RIGHT WING:

Flap ..... Check
Aileron ..... Check
Wingtip/Lights ..... Check
Leading Edge ..... Check
Fresh Air Inlet ..... Check
Main Wheel/Brakes ..... Check
Fuel Sump ..... Sample
Fuel Quantity ..... Check

NOSE:

Windshield ..... Check/Clean
Oil ..... 6 to 8 Qts
Fuel Strainer ..... Drain (2 Secs.)
Cowling ..... Check Secure
Propeller/Spinner ..... Check
Alternator Belt ..... Check
Landing Light ..... Check
Carburetor Air Filter ..... Check
Nose Wheel/Strut ..... Check
Static Port (left side) ..... Check

EXTERIOR PREFLIGHT (CON'T)

LEFT WING:

Main Wheel/Brakes ..... Check
Fuel Sump ..... Sample
Fuel Quantity ..... Check
Fresh Air Inlet ..... Check
Pitot Head ..... Check
Fuel Tank Vent ..... Check
Stall Warning Vent ..... Check
Leading Edge ..... Check
Wingtip/Lights ..... Check
Aileron ..... Check
Flap ..... Check

BEFORE START

Preflight ..... Complete
Passenger Briefing ..... Complete
Belts/Seats ..... Secure
Fuel Selector Valve ..... Both
Carburetor Heat ..... Off
Radio Master Switch ..... Off
Circuit Breakers ..... Check/In

ENGINE START

Throttle ..... 1/8" Cold
1/4" Hot
Mixture ..... Rich
Prime ..... 3-4 Cold
1-2 Hot
Brakes ..... Hold
Master Switch ..... On
Aircraft Lights ..... As Required
Propeller Area ..... Clear
Starter ..... Engage
Throttle ..... 800-1,000 RPM
Oil Pressure ..... Check Positive

BEFORE TAXI

Ammeter ..... Check Positive
Flaps ..... Retract (0º)
Mixture ..... Lean
Fuel Selector ..... Switch, then Both
Radio Master ..... On
Avionics ..... Set
Transponder ..... Set Code/ALT
Weather ..... Check
Flight Instruments ..... Check
Landing Light ..... On, for Taxi
Brakes ..... Test

RUN UP

Parking Brake ..... Set
Flight Controls ..... Free & Correct
Circuit Breakers ..... Check
Mixture ..... Rich
Throttle ..... 1,800 RPM
Magnetos ..... Check
(Max drop 125 RPM, Max Diff 50 RPM)
Carburetor Heat ..... Check
Ammeter ..... Check Positive
Cylinder Head Temp ..... Check
Oil Temp ..... Check
Oil Pressure ..... Check
Suction Gauge ..... Check 4.6-5.4" Hg.
Throttle ..... Idle Check
Throttle ..... 800-1,000 RPM
Throttle Friction Lock ..... Adjust
Mixture ..... Re-Lean for Taxi
Magnetos ..... Both
Primer ..... In/Locked
Parking Brake ..... Release

BEFORE TAKEOFF

Trim ..... Set for Takeoff
Flaps ..... Set
Transponder ..... Set ALT
Mixture ..... Rich
Carburetor Heat ..... Off
Aircraft Lights ..... As Required
Flight Instruments ..... Set
Cabin Doors/Windows ..... Latched

NORMAL TAKEOFF

Heading ..... Check Correct Runway
Throttle ..... Full Open
Rotate ..... 58-68 MPH

CLIMB

Best Angle Vx ..... 75 MPH
Best Rate Vy ..... 85 MPH
Flaps ..... Retract (0º)

CRUISE

Throttle ..... Set for Cruise
Mixture ..... Lean for Cruise
Aircraft Lights ..... As Required
Pitot Heat ..... As Required

DESCENT

Instruments/Avionics ..... Set
Aircraft Lights ..... As Required
Pitot Heat ..... As Required
Weather ..... Check
Carburetor Heat ..... As Required
Throttle ..... Set for Descent
Mixture ..... Rich
Approach Briefing ..... Complete

BEFORE LANDING

Fuel Selector ..... Both
Aircraft Lights ..... As Required
Carburetor Heat ..... On
Mixture ..... Rich
Flaps ..... As Required
Approach Airspeed ..... 75 MPH

AFTER LANDING

Trim ..... Set for Takeoff
Aircraft Lights ..... As Required
Pitot Heat ..... Off
Carburetor Heat ..... Off
Mixture ..... Lean
Flaps ..... Retract (0º)

SHUTDOWN

Transponder ..... Off
Radio Master ..... Off
Magneto ..... Check
Throttle ..... Idle
Mixture ..... Idle Cut-Off
Aircraft Lights ..... Off
Magnetos ..... Off
All Switches ..... Off
Brakes ..... Released

Important speeds MPH

Vs0 ..... 54 MPH
Vs1 ..... 61 MPH
Vrotate ..... 58-68 MPH
Vx ..... 75 MPH
Vy ..... 85 MPH
Vfe ..... 100 MPH
Va (maneuvering) ..... 112-120 MPH
Vno ..... 145 MPH
Vne ..... 182 MPH
Normal Approach ..... 75 MPH
Best Glide ..... 80 MPH

C-172 Emergency Procedures

Engine Failure-*Takeoff*

Airspeed ..... Maintain Safe
Land ..... Straight Ahead
If Sufficient altitude has been gained attempt to restart:
Airspeed ..... 80 Best Glide
Fuel Selector ..... Switch Tanks
Mixture ..... Rich
Carburetor Heat ..... On
Magnetos ..... Both
Primer ..... In/Locked
*If power is **not** restored, proceed with*
POWER OFF LANDING

Engine Failure-*Flight*

Fuel Selector ..... Switch Tanks
Mixture ..... Rich
Carburetor Heat ..... On
Magnetos ..... Both
Primer ..... In/Locked
Engine Gauges ..... Check
*If power is **not** restored proceed with*
POWER OFF LANDING
If power is restored:
Carburetor Heat ..... Off
Land As Soon as Practical

Power Off Landing

Airspeed ..... 80 MPH
Place to Land ..... Locate
Passengers ..... Prepare
If time and altitude permit:
Transponder 7700
Radios ..... Transmit 121.5
ELT ..... On
When committed to landing:
Throttle ..... Idle
Mixture ..... Idle Cut-Off
Magnetos ..... Off
Master Switch ..... Off
Fuel Selector ..... Off
Belts/Shoulder Harness ..... Secure
Approach Speed ..... 74 MPH

Engine Fire-*Start*

Starter ..... Continue Cranking
If engine starts:
Power ..... 1,700 RPM
Engine .... Shutdown and Have Inspected
If engine does not start:
Starter ..... Continue Cranking
Mixture ..... Idle Cut-Off
Throttle ..... Full Open
Fuel Selector ..... Off
Magnetos ..... Off
Master Switch ..... Off

If fire continues;
***EVACUATE AIRCRAFT** and extinguish fire*

Engine Fire-*Flight*

Fuel Selector ..... Off
Throttle ..... Idle
Mixture ..... Idle Cut-Off
Heater/Defroster ..... Off
If fire continues, proceed with:
EMERGENCY DESCENT, Line 3

If fire appears out, proceed with:
POWER OFF LANDING

Electrical Fire

Batt/Alt Master Switch ..... Off
Radio Master ..... Off
Fresh Air Vents ..... Open
Heat/Defroster ..... Off
If fire appears out and electrical power is necessary:
Batt/Alt Master Switch ..... On
Circuit Breakers ..... DO NOT RESET
Radio/Electrical Equip---ON one at a time
Land As Soon as Practical

Emergency Descent

1. Throttle ..... Idle
2. **Mixture ..... Rich**
3. Bank ..... 30º – 45º
4. Rollout ..... At 130 MPH or at pattern altitude

*Proceed with **POWER OFF LANDING***

Carburetor Icing

Carburetor Heat ..... On
Mixture ..... Adjust for Smoothness

Engine Roughness

Carburetor Heat ..... On
If roughness continues after one min:
Carburetor Heat ..... Off
Mixture ..... Adjust for Smoothness
Fuel Selector ..... Switch Tanks
Engine Gauges ..... Check
Magneto Switch ....."L" then "R" then "BOTH"

If operation is satisfactory on either one, continue on that magneto, at reduced power and full "RICH" mixture, to nearest airport.

*Prepare for **POWER OFF LANDING***

Loss of Oil Pressure

Engine Power ..... Reduce
Oil Temp ..... Monitor
Land ..... As Soon as Practical
*Prepare for **POWER OFF LANDING***

High Oil Temperature

Mixture ..... Rich
Throttle ..... Reduce
Oil Pressure ..... Monitor
Oil Temp ..... Monitor
If temp does not go down, or continues to rise:
Land As Soon as Practical
*Prepare for **POWER OFF LANDING***

Electrical Failure

LOW VOLTAGE light illuminated:
Ammeter ..... Check Amps 0
ALT Switch ..... Off
Electrical Load ..... Reduce
ALT Circuit Breaker ..... Check/Reset
ALT Switch ..... On

Power not restored:
ALT Switch ..... Off
Electrical Load ..... Reduce Load
Land As Soon as Practical

Electrical Overload

BATT Master Switch ..... Off
ALT Switch ..... On

If Amps are reduced:
Electrical Load ..... Reduce
Land ..... As Soon As Practical
If Amps are not reduced:
ALT Switch ..... Off
BATT Switch ..... As Required
Land As Soon as Practical

Spin Recovery

Throttle ..... Idle
Ailerons ..... Neutral
Rudder ..... FULL OPPOSITE (to the direction of rotation)
Yoke ..... FULL FORWARD
Rudder ..... NEUTRAL (when rotation stops)
Yoke ..... AS REQUIRED
Throttle ..... AS REQUIRED

C-172 Maneuvers

Normal Takeoff

(Before Takeoff Checklist Complete)
Flaps …… 0°
Power …… Full
Engine Instruments …… Verify Green
Rotate …… 58-68 MPH
Climb Out …… Vx 75 MPH
Vy 85 MPH

Normal Landing

(Before Landing Checklist Complete)
Midfield Downwind …… BCGUMPS
Abeam Runway Threshold –
Throttle 1600 RPM
Flaps 10°
Airspeed 95 MPH
Base – Flaps 20°
Airspeed 85 MPH
Final – Flaps 40°
Airspeed 75 MPH
Threshold 70 MPH
Touchdown …… Just above stall speed

Short Field Takeoff

(Before Takeoff Checklist Complete)
Flaps …… 10°
Runway …… Use All Available
Brakes …… Hold
Throttle …… Full
Engine Instruments …… Verify Green
Brakes …… Release
Rotate …… 58-68
Climb Out …… Vx - 75
Clear of Obstacle Raise Flaps to 10°
Accelerate to …… Vy - 85
At Vy – 85 …… Raise Flaps Completely
Climb Out …… Vy - 85

Short Field Landing

(Before Landing Checklist Complete)
Midfield Downwind …… BCGUMPS
Approach (Obstacle) …… Steeper
Abeam Runway Threshold –
Throttle 1600 RPM
Flaps 10°
Airspeed 95 MPH
Base – Flaps 20°
Airspeed 85 MPH
Final – Flaps 40°
Airspeed 75 MPH
Threshold 70 MPH
Touchdown …… Just above stall speed
Braking ….. Apply Maximum Foot&Aero

Soft Field Takeoff

(Before Takeoff Checklist Complete)
Flaps …… 10°
Yoke …… Full Back
Engine Instruments …… Verify green
Throttle …… Full
Rotate …… Min. Airspeed
Yoke …… Slowly release to maintain nose up until liftoff
Ground Effect …… Remain in
Accelerate …… Vy 85 or End of Runway
At Vy 85 …… Normal Climb
Clear of Obstacles …… Raise Flaps to 0°

Soft Field Landing

(Before Landing Checklist Complete)
Midfield Downwind …… BCGUMPS
Abeam Runway Threshold –
Throttle 1500 RPM
Flaps 10°
Airspeed 95 MPH
Base – Flaps 20°
Airspeed 85 MPH
Final – Flaps 40°
Airspeed 75 MPH
Threshold 70 MPH
Touchdown …… Just above stall speed
Yoke …… Full Back
Wheel Brakes...Use Minimum Required

Go-Around

Throttle …… FULL Power
Carburetor Heat …… Off
Flight Controls …… Start Climbout
Flaps …… Retract to 10°
Airspeed …… Accelerate to Vx 75 or Vy 85
Flaps …… Raise to 0°

Steep Turns

Clearing Turns …… Complete
BCGUMPS …… Complete
Throttle …… 2000–2200 RPM
Airspeed …… 90 - 100 MPH
Bank …… 45° Private
60° Commercial
Roll Out …… Original Heading
Repeat …… Opposite Direction

Slow Flight

Clearing Turns …… Complete
BCGUMPS …… Complete
Throttle …… 1500 RPM
Flaps …… 40° when in white arc
Altitude ….. Maintain as Speed Decreases
Throttle ……Add power to Maintain 50-55 MPH
Banks …… Shallow
Recover …… Full Power, remove Flaps and Carb Heat, Maintain Altitude

Power Off Stall

Clearing Turns …… Complete
BCGUMPS …… Complete
Throttle …… 1500 RPM
Flaps …… 40° when in white arc
Airspeed ……Slow to70 MPH
Descent …… Initiate 500 FPM to simulate final approach
Throttle …… IDLE
Pitch …… Induce Stall
Stall Recovery:
Release back pressure, full power, and remove carb heat and one notch of flaps
As decent stops, remove 2nd notch of flaps and accelerate to Vy 85 and initiate climb.

Power On Stall

Clearing Turns …… Complete
BCGUMPS …… Complete
Throttle …… 1500 RPM
Airspeed …… Slow to 70 MPH
Throttle …… Full Power
Pitch …… Induce Stall
Stall Recovery:
Release back pressure, ensure full power and stop descent. Accelerate to Vy 85 and climb to a safe altitude

Rectangular Course

Clearing Turns …… Complete
BCGUMPS …… Complete
Throttle …… 2000 – 2200 RPM
Airspeed …… 90 – 100 MPH
Altitude …… 600 – 1000 ft AGL
Entry …… 45° to Downwind
Ground track …… Adjust for wind drift to maintain a ¼ -½ mi distance

Turns Around a Point

Clearing Turns …… Complete
BCGUMPS …… Complete
Throttle …… 2000 – 2200 RPM
Airspeed …… 90 – 100 MPH
Altitude …… 600 – 1000 ft AGL
Entry …… On Downwind
Ground track …… Adjust for wind drift to maintain a ¼ -½ mi radius

S-Turns Along a Road

Clearing Turns …… Complete
BCGUMPS …… Complete
Throttle …… 2000 – 2200 RPM
Airspeed …… 90 – 100 MPH
Altitude …… 600 – 1000 ft AGL
Entry …… On Downwind
Ground track …… Adjust for wind drift to maintain a ¼ -½ mi radius