Cessna 172 Skyhawk Checklist

PREFLIGHT INSPECTION

CABIN

Certificates/Documents ……..……IN AIRCRAFT
- Airworthiness Certificate
- Registration
- Radio Operators/Station License **(International Flights Only)**
- Operating Limitations / Airplane Flight Manual
- Weight & Balance (current)

Parking Brake ……..……SET
Control Wheel Lock……..…REMOVE
Ignition Switch ……..……OFF
Master Switch ……..……ON
Fuel Quantity Indicators ……CHECK QUANTITY
Anti-collision / Strobe Lights…….……CHECK OPERATION
Flaps ……DOWN FOR INSPECTION
**For Night Operation: Lights ……..……CHECK
Master Switch ……..……OFF
Fuel Selector ……..……BOTH
Baggage Door ……CHECK SECURE

TAIL SECTION

Tail Tie-Down / Rudder Gust Lock……REMOVE
Elevator & Rudder ……CHECK FREEDOM & SECURE
Nav. Lights ……..……UNBROKEN (WHITE)

RIGHT WING

Flap Tracks & Actuator Rod……..……CHECK
Aileron ……CHECK FREEDOM & SECURE
Nav.Light ……..……UNBROKEN (GREEN)
Fuel Quantity ……..……CHECK VISUALLY
Fuel Filler Cap ……..……SECURE
Wing Tie-down ……..……REMOVE
Fuel Tank Sump Quick-Drain Valve ……..DRAIN
Main Wheel Tire……..CHECK WEAR & INFLATION (29 psi)

NOSE

Windshield ……..……CHECK CLEAN
Wheel Chocks ……..……REMOVE
Engine Oil Dipstick……CHECK (6-8 qt.)
Engine Fuel Strainer……..DRAIN 4 SECONDS
Nose Wheel ……CHECK WEAR & INFLATION (31 psi)
Shock Strut ……..CHECK PROPER INFLATION (45 psi)
Approx. 3.25 inches showing
Air Inlets……CHECK FREE OF FOREIGN MATTER
Landing Light ……..……CHECK
Air Filter……..……CHECK
Propeller & Spinner ……..……CHECK
Tow Bar ……..……REMOVE
Static Port……..……CHECK

LEFT WING

Main Wheel Tire ……..CHECK WEAR & INFLATION (29 psi)
Fuel Tank Sump Quick-Drain Valve ……..DRAIN
Wing Tie-down ……..……REMOVE
Fuel Quantity ……..……CHECK VISUALLY
Fuel Filler Cap ……..……SECURE
Pitot Tube / Cover……..……CHECK / REMOVE
Fuel Tank Vent Opening ……..……CHECK
Stall Warning Vent……..……CHECK
Nav. Light ……..……UNBROKEN (RED)
Aileron ……CHECK FREEDOM & SECURE
Flap Tracks & Actuator Rod……..……CHECK

BEFORE STARTING ENGINE

Chocks ……..……REMOVE
Preflight Inspection ……..……COMPLETE
Passenger Briefing ……..……COMPLETE
Seats, Seat Belts, Harness ……..……ADJUST & LOCK
Brakes ……..……TEST & SET
Circuit Breakers ……..……CHECK IN
Radios & Electrical Equipment……..……OFF
Fuel Selector……..……BOTH
Tow Bar……..……REMOVE

STARTING ENGINE

Mixture ……..……RICH
Carburetor Heat ……..……COLD
Prime ……..……(2-6 strokes) AS REQUIRED
Primer……..……IN & LOCKED
Throttle ……..……OPEN 1/8 inch
Master Switch ……..……ON
Anti-collision / Strobe Lights……..……CHECK OPERATION
Propeller Area ……..……CLEAR
Ignition Switch ……..……START
Oil Pressure ……..……CHECK
Engine Warm-up……..……THROTTLE 800-1200 RPM
Fuel Pump ……..……OFF
Mixture ……..……LEAN FOR TAXI

BEFORE TAXI

Lights & Strobes ……..……AS REQUIRED
Radios ……..……ON-SET
Transponder ……..……STANDBY
Flaps ……..……UP
Seats, Belts, Harnesses ……..……CHECK SECURE
Brakes ……..……TEST

BEFORE TAKEOFF

Parking Brake ……..……SET
Seats, Belts, Harnesses ……..……CHECK SECURE
Cabin Doors & Windows……..……CLOSED & LOCKED
Flight Controls ……..……FREE & CORRECT
Fuel Selector ……..……BOTH
Elevator Trim ……..……SET for takeoff
Fuel Quantity ……..……CHECK
Mixture ……..……RICH
Throttle ……..……1700 RPM
Magnetos ……..……CHECK
(125 max drop / 50 max diff.)
Carburetor Heat ……..……CHECK
Suction Gage ……..……CHECK (4.6 to 5.4)
Engine Instruments & Ammeter ……..……CHECK
Throttle ……..……CHECK IDLE LIMITS (650 RPM)
If holding for Takeoff IDLE at 1200 RPM
Throttle Friction Lock ……..……ADJUST
Flight Instruments ……..……CHECK & SET
Radios ……..……SET
Transponder ……..……ALTITUDE
Wing Flaps ……..……SET for takeoff
Lights ……..……AS DESIRED
Brakes ……..……RELEASE

*** (Note time of departure for fuel purposes.)

TAKE OFF

NORMAL TAKEOFF

Wing Flaps ……..……0 Degrees
Carburetor Heat ……..……COLD
Throttle……..……FULL OPEN
Elevator Control ……..……LIFT NOSE WHEEL (60 MPH)
Climb Speed ……..……75- 85 MPH

ENROUTE CLIMB

Airspeed ……..……80-90 MPH
Throttle ……..……FULL OPEN
Mixture ……..……RICH (until 3000 feet)

CRUSE

Power ……..……2200 – 2700 RPM
Elevator ……..……ADJUST
Mixture ……..……LEAN for max rpm

DESCENT

Fuel Selector……..……BOTH
Mixture ……..……RICH
Power ……..……AS DESIRED
Carburetor Heat ……..……AS REQUIRED

Cessna 172 Skyhawk Checklist

BEFORE LANDING

Seats, Belts, Harnesses ……..SECURE
Fuel Selector……..BOTH
Mixture ……..RICH
Carburetor Heat ……APPLY FULL HEAT
Wing Flaps……..AS DESIRED
Airspeed……..70-80 MPH(flaps up), 65-75 MPH(flaps down)

BALKED LANDING (Go-Around)

Power……..FULL THROTTLE
Carburetor Heat……COLD
Wing Flaps……RETRACT to 20º
Upon reaching an airspeed of approximately 65 MPH, retract flaps slowly.

LANDING

NORMAL LANDING

Airspeed ……..70-80 MPH (flaps up)
Wing Flaps……..AS DESIRED (below 100 MPH)
Airspeed ……..65-75 MPH (flaps down)
Touchdown ……..MAINS FIRST
Landing Roll ……..LOWER NOSE WHEEL GENTLY
Braking ……..MINIMUM REQUIRED

AFTER LANDING

Wing Flaps ……..UP
Carburetor Heat ……..COLD
Transponder ……..STANDBY
Lights ……..AS REQUIRED

*** (Note time of landing to compare against the Hobbs.)

SHUTDOWN

Parking Brake ……SET
Radios & Electrical Equipment & Lights ……OFF
Throttle ……..1000 RPM
Mixture ……..IDLE CUT-OFF
Ignition Switch ……OFF
Master ……OFF
Control Lock ……INSTALL
Hobbs & Tach ……RECORD
Aircraft ……SECURE

USEFUL INFORMATION

Aircraft V-Speeds:

Vr:	(Rotation Speed)	60 MPH
Vx:	(Best angle of climb)	68 MPH
Vy:	(Best rate of climb)	91 MPH
Va:	(Maneuvering Speed)	112 MPH
Vfe:	(Max flap extended speed)	100 MPH
Vno:	(Max structural cruising speed)	145 MPH
Vne:	(Never exceed speed)	182 MPH
Vs1:	(Stall Speed (clean))	57 MPH
Vso:	(Stall Speed (dirty))	49 MPH
Glide:	(clean)	**80 MPH**

Note: All Speeds are for Gross Weight (2300 lbs) aircraft.

Weight & Balance:

Max Gross Weight:	2300.00 lbs.
Basic Empty Weight:	1430.6 lbs.
Useful Load:	869.6 lbs.
Payload:	641.6 lbs.
Moment:	55535.892
Center of Gravity:	38.82 in.

Standard Fuel Loading:

42 Gallon Capacity	252 lbs
38 Gallons Usable	228 lbs
4 Gallons Unusable Fuel	24 lbs

EMERGENCY PROCEDURES

ENGINE FIRE DURING START (results from over priming)

Starter……..CONTINUTE TO CRANK ENGINE
Throttle ……..1700 RPM (if engine starts)
If engine start is unsuccessful, continue cranking for 2 or 3 minutes with throttle full open.
Mixture ……IDLE CUT-OFF
Fuel Selector……OFF
Aircraft…….. ABANDON IF FIRE CONTINUES

Smother flames with fire extinguisher, seat cushion, blanket, or loose dirt. If practical, remove carburetor air filter if it's ablaze.

Make a thorough inspection of fire damage, and repair or replace damaged components before conducting flight.

ENGINE POWER LOSS DURING TAKE-OFF (Instructor Technique)

If sufficient runway remains for a normal landing land straight ahead.
If insufficient runway remains, maintain a safe airspeed and make only shallow turns to avoid obstructions.
If you have gained sufficient altitude to attempt a restart, proceed with next checklist.

ENGINE FAILURE DURING FLIGHT (restart) (Instructor Technique)

Airspeed ……..**80 MPH**
Fuel Selector ……..SWITCH TANKS*
Mixture ……..RICH
Carburetor Heat……..ON
Engine Gauges……..CHECK FOR CAUSE
Primer ……IN & LOCKED
Ignition Switch ……"L" then "R" back to BOTH
Transponder ……..**7700**
Radio ……**121.5** MAYDAY**

* If engine failure was caused by fuel exhaustion, power will not be regained after tanks are switched until empty fuel lines are filled, which may require up to ten seconds.

** When calling on 121.5 say your last known position number of people on board, how much fuel, and what kind of emergency. It's recorded and they will be able to find you and take care of you faster

EMERGENCY LANDING WITHOUT ENGINE POWER

Airspeed ……..**80 MPH**
Mixture ……..CUT—OFF
Fuel Selector……..OFF
Ignition Switch ……..OFF
Seat belt and harness……..TIGHT
Flaps……AS REQUIRED WITHIN GLIDING DIST OF FIELD
(Full Flaps Down)……**65-75 MPH**
Master Switch ……..OFF
Cabin Doors……UNLACH PRIOR TO FINAL APPROACH
Touchdown ……..SLIGHTLY TAIL LOW(min. speed)
Apply heavy braking while holding full up elevator.

ELECTRICAL FIRE (smoke in cabin)

Master Switch……..OFF
All Electrical Switches (except ignition)……OFF
Vents / Windows……..OPEN TO VENT SMOKE
Cabin Heat……..OFF
Land as soon as Practical

ENGINE FIRE IN FLIGHT

Mixture ……..CUT—OFF
Fuel Selector……..OFF
Master Switch ……..OFF
Glide Establish……..**120 MPH**
Cabin Heat……..OFF / CLOSED

If fire is not extinguished, increase glide speed in an attempt to find an airspeed that will provide incombustible mixture.

Magneto Switch ……..OFF

Proceed with **EMERGENCY LANDING w/o POWER** procedure.