

# CESSNA 172 CHECKLIST

## N734RQ

### **PREFLIGHT INSPECTION**

#### ***PREPERATION***

1. Check online for squawks and maintenance
2. Weight and balance
3. Weather

#### ***CABIN***

1. Record Hobbs time in binder
2. Papers in Aircraft (AROW)
3. Control Wheel Lock - REMOVE
4. Ignition Switch -- OFF
5. Master Switch – ON (battery only)
6. Fuel Quantity Indicators - CHECK QUANTITY
7. Check lights (External and internal)
8. Check pitot tube (Turn on and observe Amp meter response and feel if warm)
9. Clear area, FLAPS DOWN
10. Master Switch -- OFF
11. Baggage compartment
  - 1) Check contents
  - 2) ELT -- ARMED
  - 3) Baggage Door -- CHECK, lock with key if child's seat is to be occupied

#### ***FLUIDS***

1. Engine Oil Level -- CHECK. Do not operate with less than five (5) quarts. Fill to six quarts for extended flight.
2. Fuel -- Before the first flight of the day and after each refueling, use sampler cup and drain small quantity of fuel from right and left-wing fuel tank sump quick-drain valve to check for water, sediment, and proper fuel grade. For engine sump after sampling check strainer drain closed. If water is observed, the fuel system may contain additional water, and further draining of the system at the strainer, fuel tank sumps, and fuel selector valve drain plug will be necessary.
3. Fuel Quantity – CHECK VISUALLY left and right tanks for desired level. 37gal normal quantity when fuel level is approximately 1 inch below top of tank.
4. Fuel Filler Caps - SECURE

#### ***EMPENNAGE***

1. Tail Tie-Down–DISCONNECT
2. Control Surfaces – CHECK freedom of movement and security
3. Tail skid – INSPECT tie down ring and skid for damage
4. Tail – INSPECT trim tab position

#### ***RIGHT WING***

1. Aileron – CHECK freedom of movement and security
2. Trim tab - CHECK position
3. Wing Tie-Down – DISCONNECT.
4. Main Wheel Tire – CHECK for proper inflation and wear.

# CESSNA 172 CHECKLIST

## N734RQ

### ***NOSE***

1. Propeller and Spinner -- CHECK for nicks and security
2. Land/Taxi Light(s) - - CHECK for condition and cleanliness
3. Carburetor Air Filter -- CHECK for restrictions by dust or other foreign matter
4. Nose Wheel Strut and Tire -- CHECK for proper inflation and wear
5. Static Source Opening (left side of fuselage) -- CHECK for stoppage

### ***LEFT WING***

1. Pitot Tube Cover – REMOVE and check opening for stoppage
2. Fuel Tank Vent Opening – CHECK for stoppage
3. Stall Warning Opening – CHECK for stoppage. To check the system, turn on master battery and place a clean handkerchief over the vent opening and apply suction; a sound from the warning horn will confirm system operation. Turn off master.
4. Wing Tie-Down--DISCONNECT
5. Aileron -- CHECK for freedom of movement and security
6. Main Wheel Tire – CHECK for proper inflation and wear

### ***AFTER MOVING PLANE TO START AREA***

1. Tow bar – CHECK REMOVAL
2. Final walk around

# CESSNA 172 CHECKLIST

## N734RQ

### BEFORE STARTING ENGINE

1. Preflight Inspection -- COMPLETE
2. Cockpit organized – CHECK
3. Passenger brief
4. Seats, Belts, Shoulder Harnesses -- ADJUST and LOCK
5. Circuit Breakers -- CHECK IN
6. Fuel Selector Valve -- BOTH
7. Alternate air – CHECK
8. Rudder and elevators trims -- SET.
9. Avionics switch and Electrical Equipment -- OFF
10. Turn on headset and link with iPad (if active model)

### STARTING ENGINE

1. Brakes - SET
2. Beacon – ON
3. Mixture – RICH
4. Carburetor Heat – COLD
5. Master Switch – ON
6. Prime – AS REQUIRED (3-4 strokes; 2-3 if engine is warm)
7. Throttle – OPEN 1/8 INCH
8. Propeller Area – CLEAR
9. Ignition Switch – START (release when engine starts)
10. Oil Pressure – CHECK
11. Mixture – SET FOR TAXI

### PRE-TAXI

1. Cockpit instrument/avionics lighting – ADJUST
2. External lights – SET as needed
3. Flaps - RETRACT
4. Avionics switch – ON
5. JPI EDM – SET FUEL LEVEL
6. iPad to Flightstream Mobile 210 – CHECK Bluetooth connection
7. GNS 430 – PROGRAM (send) flight plan
8. Headset – VOLUME ADJUSTED
9. COM/NAV – VOLUME/squelch ADJUSTED
10. Intercom – VOLUME ADJUSTED
11. JPI -- CHECK engine instrument readings
12. CO reading -- CHECK  
(Recommended that if >35 ppm in flight - open windows, turn off heat and land if not resolved.)  
(Note: Depending on conditions – night, high altitude, etc. – even very low CO levels can be dangerous.)
13. XPDR – SET to 1200 or other.
14. Heat/defrost vents -- SET
15. ATIS/AWOS - RECEIVE
16. Barometric pressure – SET (altimeter, G5s x 2)

# CESSNA 172 CHECKLIST

## N734RQ

### TAXI

17. Brakes -- TEST
18. Attitude indicator/Turn coordinator/Compass -- OBSERVE

### BEFORE TAKEOFF

#### RUN UP

1. Brake – SET
2. Flight Controls – FREE and CORRECT
3. Flight Instruments - SET
4. Fuel Selector Valve -- BOTH
5. Mixture – RICH (below 3000 feet)
6. Elevator Trim and Rudder Trim - SET
7. Throttle - 1700 RPM.
  - a) Magnetos - CHECK (RPM drop should not exceed 125 RPM on either magneto or 50 RPM differential between magnetos) (Left mag (electronic) may have a smaller drop.)
  - b) Magnetos - CHECK Ignition Switch returned to BOTH
  - c) Carburetor Heat - CHECK (for 100 RPM drop minimum)
  - d) Engine Instruments and Ammeter - CHECK
8. Idle – CHECK closed
9. Throttle Friction Lock - ADJUST

### PRETAKEOFF

1. GPS – VERIFY course/nav mode and HSI setting
2. Autopilot -- OFF
3. Flight manager -- ON/OFF as needed
4. Desired altitude/climb/horizontal nav mode – SET as needed
5. G5 system indications – VERIFY correct
6. Radios -- SET
7. Flaps -- SET
8. Mixture – BEST POWER
9. Carb heat -- OFF
10. Cabin Doors and Windows – CLOSED and LOCKED
11. Strobe Lights -- ON
12. Time -- NOTE
13. Runway and wind – CONFIRM
14. Abort Plan -- READY
15. Brakes - RELEASE.

### TAKEOFF

#### NORMAL TAKEOFF

1. Throttle -- FULL OPEN
2. Engine response (2280 RPM min) -- CONFIRM
3. Elevator Control - LIFT NOSE WHEEL (at 55 KIAS)
4. Climb Speed -- 70-80 KIAS

# CESSNA 172 CHECKLIST

## N734RQ

### SHORT FIELD TAKEOFF

1. Wing Flaps – 10 degrees
2. Brakes -- APPLY
3. Throttle -- FULL OPEN
4. Mixture -- RICH (above 3000 feet, LEAN to obtain maximum RPM)
5. Brakes -- RELEASE
6. Elevator Control -- SLIGHTLY TAIL LOW
7. Climb Speed -- 59 KIAS (until all obstacles are cleared)
8. Flaps -- UP

### ENROUTE CLIMB

1. Airspeed – 90 KIAS  
NOTE: If a maximum performance climb is necessary, use speeds shown in the Rate-of - Climb chart in Section 5.
2. Throttle -- FULL OPEN
3. Mixture -- RICH (Above 3000 feet LEAN to obtain maximum RPM.)
4. Auto pilot -- SET
5. Lights -- SET
6. Flight plan -- OPEN

### CRUISE

1. Power -- 2200-2700 RPM (no more than 75% is recommended).  
(See engine upgrade power chart and JPI power display)
2. Elevator and Rudder Trim -- ADJUST.
3. Mixture – LEAN with JPI. Alternate: Lean until rough and enrichen until smooth +1/4 turn.  
IMPORTANT: Maintain CHT < 425° F
4. Engine instruments and fuel -- MONITOR

### DESCENT

1. Mixture - ADJUST for smooth operation (full rich for idle power)
2. Power - AS DESIRED
3. Carb heat - AS REQUIRED to prevent carburetor icing
4. JPI – SET to CLD setting to monitor engine cooling.  
(Keep below -50° C/min to avoid shock cooling.)
5. ATIS/AWOS
6. Altimeter – SET

### BEFORE LANDING

1. Seats, Belts, Harnesses -- SECURE
2. Fuel Selector Valve – BOTH
3. Landing light – ON
4. Mixture – RICH
5. Carburetor Heat - ON (apply full beat before closing throttle)
6. Autopilot - OFF

# CESSNA 172 CHECKLIST

## N734RQ

### LANDING

#### NORMAL LANDING

1. Pattern Airspeeds -- 85 Downwind, 75 Base, 65 Final (KIAS)
2. Wing Flaps -- AS DESIRED (below 85 KIAS)
3. Touchdown Airspeed -- 60-70 KIAS (flaps UP), 55-65 KIAS (flaps DOWN)
4. Touchdown -- MAIN WHEELS FIRST
5. Landing Roll -- LOWER NOSE WHEEL GENTLY
6. Braking -- MINIMUM REQUIRED

#### SHORT FIELD LANDING

1. Airspeed -- 60-70 KIAS (flaps UP)
2. Wing Flaps -- FULL DOWN (30<sup>0</sup>)
3. Airspeed -- 60 KIAS (until flare)
4. Power - REDUCE to idle after clearing obstacle
5. Touchdown - MAIN WHEELS FIRST
6. Brakes -- APPLY HEAVILY
7. Wing Flaps -- RETRACT

#### BALKED LANDING

1. Throttle - FULL OPEN.
2. Carburetor Heat --COLD.
3. Wing Flaps --20° (immediately)
4. Climb Speed -- 55 KIAS.
5. Wing Flaps – 10<sup>0</sup> (until obstacles are cleared). RETRACT (after reaching a safe altitude and 60 KIAS)

#### AFTER LANDING

1. Wing flaps – UP
2. Carburetor Heat – COLD
3. Mixture – SET FOR TAXI
4. Strobes -- OFF after clearing runway, other lights as needed

#### AFTER FUELING

1. After fueling – RESET FUEL QUANTITY

#### SECURING AIRPLANE

1. Avionics switch, Electrical equipment – OFF
2. Check ignition switch ground wires – at normal idle momentarily to OFF
3. Mixture – IDLE CUT-OFF
4. Ignition switch – OFF
5. Master switch – OFF
6. Fuel – LEFT or RIGHT
7. Parking Brake - SET.
8. Control lock, Chocks and Tie downs – INSTALL
9. Flight plan -- CLOSE

# **CESSNA 172 CHECKLIST**

## **N734RQ**

### **POST FLIGHT**

1. Record Hobbs time in binder
2. Clean aircraft and inspect for damage or squawks
3. Post any squawks as needed online.

# CESSNA 172 CHECKLIST

## N734RQ

### EMERGENCY PROCEDURES

#### ENGINE FAILURES

##### ENGINE FAILURE DURING TAKEOFF RUN

- 1) Throttle --IDLE.
- 2) Brakes - - APPLY
- 3) Wing Flaps - RETRACT,
- 4) Mixture -- IDLE CUT-OFF
- 5) Ignition Switch --OFF
- 6) Master Switch --OFF.

##### ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF

- 1) Airspeed -- 65 KIAS (flaps UP)  
60 KIAS (flaps DOWN).
- 2) Mixture -- IDLE CUT-OFF.
- 3) Fuel Selector Valve - OFF.
- 4) Ignition Switch --OFF
- 5) Wing Flaps - AS REQUIRED.
- 6) Master Switch --OFF.

##### ENGINE FAILURE DURING FLIGHT

- 1) Airspeed --65 KIAS.
- 2) Carburetor Heat - ON.
- 3) Fuel Selector Valve -- BOTH.
- 4) Mixture --RICH.
- 5) Ignition Switch -- BOTH (or START if propeller is stopped).
- 6) Primer -- IN and LOCKED.

##### EMERGENCY LANDING WITHOUT ENGINE POWER

- 1) Airspeed --65 KIAS (flaps UP).  
60 KIAS (flaps DOWN).
- 2) Mixture -- IDLE CUT-OFF
- 3) Fuel Selector Valve --OFF.
- 4) Ignition Switch --OFF.
- 5) Wing Flaps -- AS REQUIRED (40° recommended),
- 6) Master Switch --OFF
- 7) Doors - UNLATCH PRIOR TO TOUCHDOWN
- 8) Touchdown - SLIGHTLY TAIL LOW.
- 9) Brakes - APPLY HEAVILY.



# CESSNA 172 CHECKLIST

## N734RQ

### PRECAUTIONARY LANDING WITH ENGINE POWER

- 1) Wing Flaps -- 20°
- 2) Airspeed --60 KIAS.
- 3) Selected Field - FLY OVER, noting terrain and obstructions, then retract flaps upon reaching a safe altitude and airspeed.
- 4) Radio and Electrical Switches - OFF.
- 5) Wing flaps --40° (on final approach).
- 6) Airspeed --60 KIAS.
- 7) Master Switch -- OFF
- 8) Doors- UNLATCH PRIOR TO TOUCHDOWN
- 9) Touchdown -- SLIGHTLY TAIL LOW
- 10) Ignition Switch -- OFF-
- 11) Brakes -- APPLY HEAVILY

### FIRE DURING START ON GROUND

- 1) Cranking -- CONTINUE, to get a start which would suck the flames and accumulated fuel through the carburetor and into the engine.

If engine starts:

- 2) Power --1700 RPM for a few minutes.
- 3) Engine – SHUTDOWN and inspect for damage.

If engine fails to start:

- 4) Throttle -- FULL OPEN,
- 5) Mixture - - IDLE CUT-OFF.
- 6) Cranking -- CONTINUE.
- 7) Fire Extinguisher -- OBTAIN (have ground attendants obtain if not installed).
- 8) Engine – SECURE
  - a) Master Switch – OFF.
  - b) Ignition Switch - OFF.
  - c) Fuel Selector Valve --OFF.
- 9) Fire - EXTINGUISH using fire extinguisher, wool blanket, or dirt.
- 10) Fire Damage - INSPECT, repair or replace damaged components or wiring before conducting another flight.

### ENGINE FIRE IN FLIGHT

- 1) Mixture -- IDLE CUT-OFF
- 2) Fuel Selector Valve --OFF.
- 3) Master Switch --OFF
- 4) Cabin Heat and Air - - OFF (except overhead vents).
- 5) Airspeed --100 KIAS (If fire is not extinguished, increase glide speed to find an airspeed which will provide an incombustible mixture).
- 6) Forced Landing -- EXECUTE (as described in Emergency Landing Without Engine Power).

# CESSNA 172 CHECKLIST

## N734RQ

### ELECTRICAL FIRE IN FLIGHT

- 1) Master Switch --OFF.
- 2) All Other Switches (except ignition switch) - OFF
- 3) Vents/Cabin Air/Heat --CLOSED.
- 4) Fire Extinguisher - ACTIVATE (If available).

#### WARNING:

After discharging an extinguisher within a closed cabin, ventilate the cabin.

If fire appears out and electrical power is necessary for continuance of flight:

- 5) Master Switch --ON.
- 6) Circuit Breakers -- CHECK for faulty circuit, do not reset
- 7) Radio/ Electrical Switches -- ON one at a time. with delay after each until short circuit is localized.
- 8) Vents/ Cabin Air/ Heat - OPEN when it is ascertained that fire is completely extinguished.

### CABIN FIRE

- 1) Master Switch --OFF.
- 2) Vents/Cabin Air/Heat -- CLOSED (to avoid drafts).
- 3) Fire Extinguisher - ACTIVATE (if available)

#### WARNING:

After discharging an extinguisher within a closed cabin, ventilate the cabin.

- 4) Land the airplane as soon as possible to inspect for damage.

### WING FIRE

- 1) Navigation Light Switch --OFF
- 2) Pitot Heat Switch (if installed) --OFF.
- 3) Strobe Light Switch (if installed) - OFF

#### NOTE:

Perform a sideslip to keep the flames away from the fuel tank and cabin, and land as soon as possible using flaps only as required for final approach and touchdown.

# CESSNA 172 CHECKLIST

## N734RQ

### INADVERTENT ICING ENCOUNTER

- 1) Turn pitot heat switch ON.
- 2) Turn back or change altitude to obtain an outside air temperature that is less conducive to icing
- 3) Pull cabin heat control full out and open defroster outlet to obtain maximum windshield defroster airflow. Adjust cabin air control to get maximum defroster heat and airflow.
- 4) Open the throttle to increase engine speed and minimize build-up on propeller blades.
- 5) Watch for signs of carburetor air filter ice and apply carburetor heat as required. An unexplained loss in engine speed could be caused by carburetor ice or air intake filter ice. Lean the mixture for maximum RPM if carburetor heat is used continuously.
- 6) Plan a landing at the nearest airport. With an extremely rapid ice build-up, select a suitable "off airport" landing site.
- 7) With an ice accumulation of 1/4 inch or more on the wing leading edges, be prepared for significantly higher stall speed.
- 8) Leave wing flaps retracted. With a severe ice build-up on the horizontal tail, the change in wing wake airflow direction caused by wing tap extension could result in a loss of elevator effectiveness.
- 9) Open left window and, if practical, scrape ice from a portion of the windshield for visibility in the landing approach.
- 10) Perform a landing approach using a forward slip, if necessary, for improved visibility.
- 11) Approach at 65 to 75 KIAS, depending upon the amount of the accumulation.
- 12) Perform a landing in level attitude.

### STATIC SOURCE BLOCKAGE

(Erroneous Instrument Reading Suspected)

- 1)- Alternator Static Source Valve - PULL ON.
- 2) Airspeed -- Consult appropriate calibration tables in Section 5 of POH.

### LANDING WITH A FLAT MAIN TIRE

- 1) Approach --NORMAL.
- 2)Touchdown -- GOOD TIRE FIRST, hold airplane off flat tire as long as possible

### OVER-VOLTAGE LIGHT ILLUMINATES

- 1) Master Switch -- OFF (both sides).
  - 2) Master Switch --ON.
  - 3) Over-Voltage Light -- OFF
- If over-voltage light illuminates again:
- 4) Flight -- TERMINATE as soon as possible,

# CESSNA 172 CHECKLIST

## N734RQ

### AMMETER SHOWS DISCHARGE

- 1) Alternator - OFF.
- 2) Nonessential Electrical Equipment --OFF
- 3) Flight - TERMINATE as soon as practical.