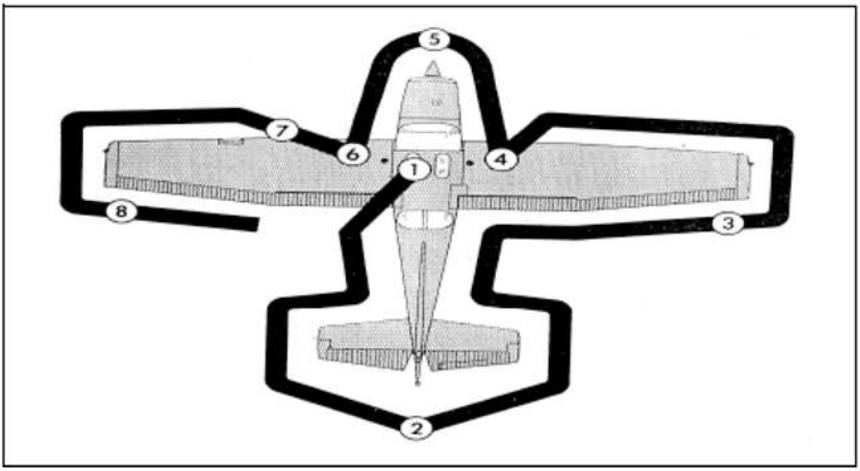


## INTERIOR

| | |
|---|---|
| Aircraft Documents | AROW |
| Master Switch | ON |
| Fuel Qty Indications | CHECK |
| All Lights | CHECK |
| Pitot Heat (if IFR) | CHECK |
| Master Switch | OFF |
| Ignition Switch | OFF |
| Fuel Tank Selector | BOTH |
| Control Lock | REMOVE |
| FLAPS | EXTEND |

## EXTERIOR – EMPENNAGE

| | |
|---|---|
| Radio Antennas | SECURE |
| Windows | CLEAR |
| Baggage Door | SECURE |

| | |
|---|---|
| Horizontal Stab | CHECK |
| Elevator | -FREE MOVEMENT<br>-Inspect Tail Surface Hinges and hinge bolts<br>-Apply a moderate force to each elevator, in opposite directions, checking for looseness at the attachment of the elevators to the torque tube adapter |
| Trim Tab | CHECK for Security |
| Tie Down | DISCONNECT |
| Rudder | FREE MOVEMENT |
| Cover Plates | SECURE |

## RIGHT WING

| | |
|---|---|
| Fuel Sump | DRAIN (2 oz sample, water/contmnt) |
| Flap | CHECK, hinges |
| Aileron | CHECK, hinges & weights |
| Lights | Free of Damage |
| Wing | FREE OF ICE, FROST |
| Fuel Tank/Qty/Cap | CHECK |
| Air Inlet | CLEAR |
| RIGHT Main Wheel | INSPECT (cuts, bruises, inflation) |
| Brake Assembly | INSPECT |
| Tie Down | DISCONNECT |

## NOSE

| | |
|---|---|
| Windshield | CLEAN |
| Oil Level | CHECK (Do not operate with less than SIX quarts), Fill for extended Flight. |

| | |
|---|---|
| Fuel Strainer | DRAIN (4 seconds) |
| Cowl | INSPECT access door(s) for security x2 |
| Air Inlet | CLEAR |
| Alternator Belt | SECURE |
| Propeller | CHECK CONDITION (nicks, security) |
| Spinner | CHECK CONDITION (nicks, security) |
| Nosewheel Strut | PROPERLY INFLATED |
| Nose wheel Tire | INSPECT (cuts, bruises, inflation) |
| Static Port | CLEAR |
| Carburetor Air Filter | CHECK (restrictions by dust or foreign matter) |

## LEFT WING

| | |
|---|---|
| Air Inlet | CLEAR |
| Fuel Tank/Qty/Cap | CHECK |
| Pitot Tube Cover | REMOVE |
| Pitot Tube | INSPECT Opening for Stoppage |
| Fuel Tank Vent | CHECK, CLEAR |
| Stall Warning | CHECK, Tab Freedom of Operation |
| Lights | Free of Damage |
| Aileron | CHECK, hinges & weights |
| Flap | CHECK, hinges |
| Fuel Sump | DRAIN (2 oz sample, water/contmnt) |
| LEFT Main Wheel | INSPECT (cuts, bruises, inflation) |
| Brake Assembly | INSPECT |
| Tie Down | DISCONNECT |

# OPERATING CHECK LIST

This section lists, in Pilot's Check List form, the steps necessary to operate your Cessna 172 efficiently and safety. It is not a check list in its true form as it in considerably longer, but it does cover briefly all of the points that you would want to or should know concerning the information you need for a typical flight.

The flight and operational characteristics of the Cessna 172 are normal in all respects. There are no "unconventional" characteristics or operations that need to be mastered. All controls respond in the normal way within the entire range of operation of the airplane. All airspeeds mentioned in Sections II and III are indicated airspeeds. Corresponding true indicated airspeeds may be obtained from the Airspeed Correction Table in Section VI in the Owner's Manual.

## V-Speeds

| | |
|---|---|
| **Vr……60 mph** | **53 kts** |
| **Vy……75-78 mph** | **68 kts** |
| **Vx……56-67 mph** | **48-58 kts** |
| **Vso……55 mph** | **48 kts** |
| **Vs1……60 mph** | **52 kts** |
| **Vfe……100 mph** | **87 kts** |
| **Vne……160 mph** | **139 kts** |
| **Vno……140 mph** | **121 kts** |
| **Va……115 mph** | **100 kts** |

## BEFORE ENTERING THE AIRPLANE

1. Make an exterior inspection in accordance with Figure 1-1

## BEFORE STARTING THE ENGINE

1. Passenger Brief – Complete
2. Seats and Seat Belts/Shoulder Harnesses – Adjust and lock.
3. Fuel Selector - Both
4. Flight Controls – Check
5. Brakes – Test and Set
6. Trim Tab – Set for Take Off
7. Circuit Breakers – Check In
8. Electrical Equipment – Off
9. Beacon – On
10. Avionics Master – Off
11. Aux Fuel Pump - OFF

## STARTING ENGINE

1. Carburetor Heat – Cold
2. Mixture – Rich
3. Prop – High RPM
4. Primer – As Required
5. Master Switch – On
6. Fuel Aux Pump On – till fuel pressure in green
7. Fuel Aux Pump - Off

8. Ignition Switch – Both
9. Throttle – Open 1/8" (to idle position)
10. Prop Area – CLEAR
11. Starter – Engage
12. RPM – 800 to 1000
13. OIL Pressure – Check
14. Ammeter – Check
15. Aux Fuel Pump – OFF
16. Flaps – 0 Degrees
17. Mixture – Set for Taxi
18. Avionics Power – On
19. Transponder – STBY
20. Lights – As Required

**TAXI**

1. Brakes – Check
2. Controls – Free & Correct
3. Flight Instruments – Check

**BEFORE TAKE-OFF**

1. Parking Break – SET
2. Alt Static Air – Check
3. Engine Instruments – Check
4. Throttle – 1700 RPM
5. Mixture – Set
6. Propeller – Cycle 3 Times
7. Magnetos – 150 Max RPM Drop
   Max Difference 50 RPM

8. Ammeter – Check
9. Engine Instrument – Check
10. Suction – 5.0 +/- .5”
11. Flight Instruments – Check & Set
12. Throttle – 1000 RPM
13. Fuel Selector – Both
14. Elevator Trim – Set for Take Off
15. Comm/Nav – Set
16. Transponder – ALT
17. Wing Flaps – 0 or 10 degrees
18. Flight Controls and Seat Latching – ReCheck
19. Cabin Doors/Windows – Closed and Locked
20. Parking Brake – Release

**TAKE-OFF**

1. Take-Off Time: Record
2. Wind - Check
3. Fuel Pump – ON
4. Flaps – 0 Degrees
5. Carburetor Heat- Cold
6. Power – Full Throttle
7. Elevator Control – Lift nosewheel at 60 mph
8. Climb Speed – 80 mph

## MAXIMUM PERFORMANCE TAKE-OFF

1. Fuel Pump – ON
2. Flaps – 10 Degrees
3. Carb Heat – Cold
4. Brakes - APPLY
5. Power – Full Throttle
6. Brakes – RELEASE
7. Elevator Control – Slightly tail low
8. Rotate – 55 mph
9. Flaps – Retract Slowly (after clear obstacles)
10. Climb Speed – 60 mph

## NORMAL CLIMB

1. Airspeed – 80 to 90 mph
2. Flaps – 0 Degrees
3. Power – Full Throttle (25 Inches HG)
4. Propeller – 2500 RPM
5. Aux Fuel Pump – OFF
6. Mixture – Full Rich (unless engine is rough)

## MAXIMUM PERFORMANCE CLIMB

1. Airspeed – 78 mph at sea level to
   75 mph at 10,000 ft
2. Power – Full Throttle (25 Inches HG)
3. Propeller – 2500 RPM
4. Aux Fuel Pump – OFF
5. Mixture – Full Rich (unless engine is rough)

## CRUISE

### **Service Ceiling**: 19,500 Feet

1. **Power**: 2250-2700 RPM; See Fuel and Power Chart Below
2. Pitch – Level
3. Elevator Trim – Set
4. Mixture: Lean to Peak EGT Plus 50-75°
5. Fuel Pump: Off, Unless Required to Maintain Pressure

**AVCON FUEL AND POWER CHART—LYCOMING 0-360**

| P/Alt. | Std. Temp. | 100HP/55% @ 7.8 GPH | 117HP/65% @ 9.0 GPH | 135HP/75% @10.6 GPH |
|---|---|---|---|---|
| Sea Lvl. | 59 F | 2300/19.8"<br>2400/19.3" | 2300/22.1"<br>2400/21.5" | 2300/24.5"<br>2400/23.9" |
| 2000 Ft. | 52 F | 2300/19.3"<br>2400/18.8" | 2300/21.6"<br>2400/21.0" | 2300/24.0"<br>2400/23.4" |
| 4000 Ft. | 45 F | 2300/18.9"<br>2400/18.4" | 2300/21.1"<br>2400/20.6" | 2300/23.5"<br>2400/22.9" |
| 6000 Ft | 38 F | 2300/18.4"<br>2400/18.0" | 2300/20.6"<br>2400/20.1" | 2300/23.0"<br>2400/22.5" |
| 8000 Ft | 31 F | 2300/18.0"<br>2400/17.6" | 2300/20.2"<br>2400/19.7" | 2400 RPM &<br>Full Throttle |
| 10k Ft | 23 F | 2300/17.6"<br>2400/17.2" | 2300/19.8"<br>2400/19.3" | |
| 12k Ft. | 16 F | 2300/17.2"<br>2400/16.8" | 2400 RPM &<br>Full Throttle | |

To maintain constant power, correct manifold pressure (MP) approx. 0.17" Hg for each 10° F Variation in carburetor air temperature from standard altitude temperature. Add MP for air temperatures above standard; subtract for temperatures below standard.

**DESCENT APPCH**

1. Fuel Selector – Both
2. Power – Reduce Manifold Pressure 1” Per 3 Minute(s)
3. Approach – Review
4. Radios/Nav – Set
5. Lights – As Required
6. Mixture – Enrich as Required

**BEFORE LANDING**

1. Fuel Selector – Both
2. Mixture – Rich
3. Airspeed – 70 to 80 mph (flaps up)
4. Aux Fuel Pump - ON
5. Carb Heat – COLD (If Icing Conditions are suspected, the “Full HEAT” Should be applied. Under these conditions, for an Aborted landing, the carb heat should be returned to “FULL COLD”)
6. Flaps – As Desired (below 100 mph)
7. Airspeed – 65 to 75 (flaps down)
8. Elevator Trim – Adjust

**NORMAL LANDING**

1. Touchdown – Main wheels first
2. Landing Roll – Lower nosewheel gently
3. Flaps - UP
4. Braking – Minimum Required
5. Taxi free of runway when safely able
6. Transponder – STBY

**SHUT DOWN/SECURE**

1. Brakes – APPLY
2. Taxi Lights – Off
3. Avionics Master – Off
4. Throttle – 800 to 1000 RPM
5. Propeller – High RPM
6. Mixture – Full Lean (idle cut-off)
7. Ignition Switch – OFF
8. Master Switch – OFF
9. Outside Air Temperature (OAT) Gauge - OFF
10. Time – RECORD
11. Insert Control Lock, Pitot Tube Cover and Attach Aircraft Tie-Downs

# EMERGENCY PROCEDURES

Modified FUEL Management - Power Recovery Techniques

1. OPERATION ON A SINGLE TANK

   Should power irregularities occur when operating on a single tank, power can be restored immediately by switching to the opposite tank. In addition, the vapor accumulation in the tank on which the power irregularity occurred will rapidly dissipate itself such that the tank will also be available for normal operation after it has been unused for approximately one (1) minute

2. OPERATION ON BOTH TANKS

   Should power irregularities occur with the fuel selector on both tanks, the following steps are to be taken to restore power:

   a. Switch to a single tank for a period of 60 seconds
   b. Then Switch to the opposite tank and power will be restored

**ENGINE FIRE DURING START**

a. Starter – Continue Cranking (try for start, if you get a start run at 1700 rpm for a couple minutes, shut down, inspect)
b. Mixture – Idle Cutoff
c. Throttle – OPEN
d. Aux Fuel Pump – OFF
e. Evacuate

**ENGINE FAILURE DURING TAKE-OFF (climb)**

a. Airspeed – 70 mph
b. Aux Fuel Pump – ON (if power isn't restored after a few Seconds, Pump OFF)
c. Fuel Selector – OFF
d. Flaps – As Required
e. Mixture – IDLE CUTOFF
f. Ignition Switch – OFF
g. Master Switch – OFF
h. Land – FLY THE PLANE!

**ENGINE FAILURE INFLIGHT**

a. Airspeed – 70 mph
b. Fuel Selector – BOTH
c. Mixture – RICH
d. Throttle – FULL
e. Aux Fuel Pump – ON
f. Engine Gauges – CHECK

g. Ignition Switch – CYCLE
h. Primer – LOCKED

**POWER OFF LANDING**

a. Airspeed – 70 mph
b. Locate Suitable Field - Check
c. SQUAWK – 7700
d. Transmit MAYDAY- 121.5 or nearby ATC Facility
e. Mixture – Idle Cutoff
f. Ignition Switch – OFF
g. Aux Fuel Pump – OFF
h. Fuel Selector – OFF
i. Passengers – BRIEF
j. Belts & Harnesses - SECURE
k. Doors – OPEN
l. Flaps – As Required (Committed to Landing)
m. Master Switch – OFF

**FUEL PRESSURE LOSS**

a. Fuel Selector – BOTH
b. Mixture – RICH
c. Aux Fuel Pump – On
d. Throttle – Full

**LOSS OF OIL PRESSURE**

a. Power – Reduce
b. Mixture – RICH
c. Land as soon as Practical (Prepare for Power Off Landing)

**HIGH CHT/OIL TEMP**

a. Power – Reduce
b. Mixture – RICH
c. Airspeed – INCREASE
d. OIL Pressure – CHECK
e. IF Oil Temp Continues Rising – Land as Soon as Practical

**ENGINE ROUGHNESS**

a. Fuel Selector – BOTH
b. Mixture – ADJUST
c. Ignition Switch – CYCLE
d. Primer – LOCKED
e. Aux Fuel Pump – ON
f. Throttle – FULL
g. Engine Gauges – CHECK
h. If Roughness Continues – Prepare for Power Off Landing

**ELECTRICAL FAILURE**

a. Ammeter – Check (if shows negative)
b. ALT Switch – OFF
c. Electrical Equipment – Reduce Load
d. ALT Circuit Breaker – CHECK
e. ALT Switch – ON (if power is not restored)
f. ALT Switch – OFF
g. Land as Soon as Practical

**WING FIRE**

a. Nav Lights – OFF
b. Pitot Heat – OFF
c. Strobe Lights – OFF
d. ALL Wing Lights – OFF
e. Perform Side Slip to keep flames away from fuel tank
f. Land as Soon as Practical

**CABIN FIRE INFLIGHT**

a. Vents – CLOSED
b. Extinguish as Necessary
c. Vents – OPEN (Clear Cabin)
d. Land as Soon as Possible