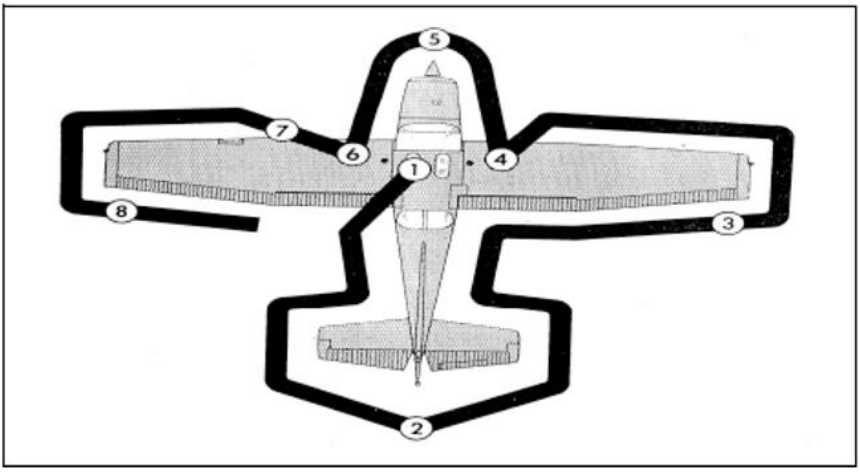

INTERIOR

Aircraft Documents	ARROW
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 -Inspect Tail Surface Hinges and hinge bolts -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 FIVE 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)
Nose wheel 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.

V-Speeds

Vr	**65 mph**	**57 kts**
Vx	**68 mph**	**59 kts**
Vy	**84 mph**	**73 kts**
Vso	**47 mph**	**41 kts**
Vs1	**54 mph**	**47 kts**
Vfe	**97 mph**	**84 kts**
Vne	**184 mph**	**160 kts**
Vno	**147 mph**	**127 kts**
Va	**111 mph**	**97kts**
Best Glide	**75 mph**	**65 kts**
Demonstrated X-Wind		**15 kts**

BEFORE ENTERING THE AIRPLANE

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

BEFORE START

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

STARTING ENGINE

1. Carburetor Heat – Cold
2. Mixture – Rich
3. Primer – As Required (3 when cold, 1 when hot)
4. Master/Alternator Switch – On
5. Throttle – Open 1/8" (to idle position)
6. Prop Area – Clear
7. Ignition Switch – START (release when engine starts)

AFTER START

1. RPM – 800 to 1000
2. Oil Pressure – Check
3. Magnetos – Both
4. Avionics Master – On
5. Ammeter – Check positive
6. Flaps – UP - 0 Degrees
7. Mixture – Set for Taxi
8. Transponder – STBY
9. Lights – As Required
10. ATIS – Obtain

TAXI

1. Taxi Clearance – Obtain
2. Brakes – Check
3. Flight Instruments – Check

RUNUP

1. Brakes – Hold
2. Cabin Doors/Windows – Closed and Locked
3. Flight Controls and Seat Latching – Check
4. Fuel Selector – Both
5. Engine Instruments – Check
6. Throttle – 1700 RPM
7. Mixture – Set
8. Magnetos – 125 Max RPM Drop Max Diff 50 RPM
9. Carb heat – Verify drop of RPM
10. Ammeter – Check (+14v/+Amps)
11. Suction – 5.0" +/- .5"
12. Throttle – 1000 RPM
13. Elevator Trim – Set for Take Off
14. Com/Nav – Set
15. Transponder – ALT
16. Wing Flaps – 0 or 10 degrees
17. Brakes – Release

BEFORE TAKE-OFF

1. Pitot Heat – As Required
2. Carb Heat – Cold
3. Mixture – Set (Lean for peak RPM when DA over 3000MSL)
4. Flaps – Set
5. Take- Off Clearance – Obtain

TAKE-OFF

1. Take-Off Time: Record
2. Power – Full Throttle
3. Elevator Control – Lift nose wheel at 60 mph
4. Climb Speed – 80 mph

MAXIMUM PERFORMANCE TAKE-OFF

1. Flaps – 10 Degrees
2. Carb Heat – Cold
3. Brakes - Apply
4. Power – Full Throttle
5. Brakes – Release
6. Elevator Control – Slightly tail low
7. Rotate – 65 mph
8. Climb Speed – 68 mph

NORMAL CLIMB

1. Airspeed – 84 mph
2. Flaps – 0 Degrees (When clear of obstacles)
3. Power – Full Throttle
4. Nav Lights - On
5. Mixture – Full Rich (unless engine is rough)

MAXIMUM PERFORMANCE CLIMB

1. Airspeed – 82 mph at sea level
   79 mph at 10,000 MSL
2. Flaps – Retract Slowly (after clear of obstacles)
3. Power – Full Throttle
4. Mixture – Full Rich (unless engine is rough)

CRUISE

Service Ceiling: 13,100 Feet

1. **Power**: 2200-2700 RPM; See Fuel and Power Chart Below
2. Pitch – Level
3. Elevator Trim – Set
4. Mixture: Lean to Peak EGT Plus 50-75°

CRUISE & RANGE PERFORMANCE

SKYHAWK

Gross Weight- 2300 Lbs.
Standard Conditions
Zero Wind Lean Mixture

NOTE: Maximum cruise is normally limited to 75% power. Cruise speed for the standard Model 172 is approximately one MPH less than shown below for the Skyhawk configuration.

					38 GAL (NO RESERVE)		48 GAL (NO RESERVE	
ALT.	RPM	% BHP	TAS MPH	GAL / HOUR	ENDR. HOURS	RANGE MILES	ENDR. HOURS	RANGE MILES
2500	2700	86	134	9.7	3.9	525	4.9	660
	2600	79	129	8.6	4.4	570	5.6	720
	2500	72	123	7.8	4.9	600	6.2	760
	2400	65	117	7.2	5.3	620	6.7	780
	2300	58	111	6.7	5.7	630	7.2	795
	2200	52	103	6.3	6.1	625	7.7	790
5000	2700	82	134	9.0	4.2	565	5.3	710
	2600	75	128	8.1	4.7	600	5.9	760
	2500	68	122	7.4	5.1	625	6.4	790
	2400	61	116	6.9	5.5	635	6.9	805
	2300	55	108	6.5	5.9	635	7.4	805
	2200	49	100	6.0	6.3	630	7.9	795
7500	2700	78	133	8.4	4.5	600	5.7	755
	2600	71	127	7.7	4.9	625	6.2	790
	2500	64	121	7.1	5.3	645	6.7	810
	2400	58	113	6.7	5.7	645	7.2	820
	2300	52	105	6.2	6.1	640	7.7	810
10,000	2650	70	129	7.6	5.0	640	6.3	810
	2600	67	125	7.3	5.2	650	6.5	820
	2500	61	118	6.9	5.5	655	7.0	830
	2400	55	110	6.4	5.9	650	7.5	825
	2300	49	100	6.0	6.3	635	8.0	800
12,500	2600	63	123	7.0	5.4	665	6.8	840
	2500	57	115	6.6	5.8	665	7.3	835
	2400	51	105	6.2	6.1	645	7.8	815

DESCENT

1. Fuel Selector – Both
2. Mixture – Enrichen
3. Carb Heat – As Required
4. ATIS – Obtain
5. Altimeter – Set
6. Heading Indicator – Set
7. Power – As Required
8. Clearance – Obtain

APPROACH

1. Com/Nav – Set
2. Heading Bug – Set
3. GPS – Load Approach
4. Approach – Brief

BEFORE LANDING

1. Fuel Selector – Both
2. Mixture – Rich
3. Airspeed – 70 to 80 mph (flaps up)
4. Lights – Landing On
5. Carb Heat – As Required
6. Flaps – As Required
7. Elevator Trim – As Required
8. Seats/Seatbelts – Secure

NORMAL LANDING

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

SHUT DOWN/SECURE

1. Brakes – APPLY
2. Taxi Lights – Off
3. Avionics Master – Off
4. Throttle – 800 to 1000 RPM
5. Mixture – Full Lean (idle cut-off)
6. Magneto/Ignition Switch – OFF
7. Keys – Place On Dash
8. Master/Alternator Switch – OFF
9. All Electrical Switches - OFF
10. Time – RECORD in LOG
11. SQUAWKS – RECORD in LOG
12. Insert Control Lock, Pitot Tube Cover, Apply Wheel Chocks and Attach Aircraft Tie-Downs

EMERGENCY PROCEDURES

Modified FUEL Management - Power Recovery Techniques

a) 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

b) 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

FIRES AND EMERGENCY DESCENT

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. Evacuate

ENGINE FIRE IN FLIGHT

a. Mixture – IDLE CUTOFF
b. Fuel shutoff – OFF
c. Master Switch – OFF
d. Cabin Heat and Air vents – CLOSED
e. Airspeed – 110 KIAS (If fire is not extinguished, increase speed within limitations)
f. Forced landing – EXECUTE

ELECTRICAL FIRE IN FLIGHT

g. Master Switch – OFF
h. All Vents – Closed
i. Fire Extinguisher – Activate
j. ALL Switches – OFF

WING FIRE

a. Nav Lights – OFF
b. Pitot Heat – OFF
c. Landing Light – OFF
d. Perform Emergency decent (top green arc)
e. Land as Soon as Practical

CABIN FIRE INFLIGHT

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

EMERGENCY DECENT

a. Throttle – Idle
b. Mixture – Rich
c. Flaps – Fully Extend
d. Bank – 30-45
e. Airspeed – DO NOT EXCEED VFE

ENGINE FAILURES

ENGINE FAILURE DURING TAKEOFF (ROLL)

a. Throttle – IDLE
b. Brakes – AS REQUIRED
c. ATC - NOTIFY

ENGINE FAILURE DURING TAKE-OFF (CLIMB)

a. Airspeed – 75 MPH
b. Fuel Selector – OFF
c. Flaps – As Required
d. Mixture – IDLE CUTOFF
e. Ignition Switch – OFF
f. Master Switch – OFF
g. Cabin Door – UNLATCH
h. Land – STRAIGHT AHEAD

ENGINE FAILURE INFLIGHT

a. Airspeed – 75 MPH
b. Fuel Selector – BOTH
c. Mixture – RICH
d. Throttle – FULL
e. Engine Gauges – CHECK
f. Ignition Switch – CYCLE
g. Starter – ENGAGE (if propeller is stopped)
h. Primer – LOCKED

If power is not restored, transition to the power off landing checklist

POWER OFF LANDING

a. Airspeed – 75 MPH
b. Suitable place to land – IDENTIFY
c. SQUAWK – 7700
d. Transmit MAYDAY- 121.5 or nearby ATC Facility
e. Mixture – Idle Cutoff
f. Ignition Switch – OFF
g. Fuel Selector – OFF
h. Passengers – BRIEF
i. Belts & Harnesses - SECURE
j. Doors – OPEN
k. Flaps – As Required (Committed to Landing)
l. Master Switch – OFF

MISC.

FUEL PRESSURE LOSS

a. Fuel Selector – BOTH
b. Mixture – RICH
c. 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. Throttle – FULL
f. Engine Gauges – CHECK
g. 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