# Cessna 172L/M Pilot's Checklist
## with VFR GPS

**WARNING**

Do not operate this aircraft unless you have read and understood the *Owner's Manual* for this model & all applicable supplements.

This checklist is not a substitute for *Owner's Manual* knowledge.

# Normal Procedures

Further procedure details are in the *Owner's Manual* section II.

## Preflight Cockpit

### Cockpit Area

1. Pitot Cover and Control Wheel Lock .....Removed
2. Aircraft Log Pre-Flight Entry .....Completed
3. Airworthiness and Registration Certificates .....Displayed
4. Owner's Manual .....Available

### Lower Panel

5. Magnetos .....Off
6. Master (Alt/Bat) .....On
7. Circuit Breakers (Upper & Lower Rows) .....Checked in
8. Nav, Beacon, Strobe, Landing Lights .....Tested
9. Pitot Heat .....Tested
10. Electrical Switches .....Off
11. Avionics Master .....On
12. Flaps .....Extended Full
13. Alt Static Air .....Off

### Pedestal

14. Fuel Selector .....Both

### Avionics Stack

15. GPS Self-test & Database Dates .....Checked & Acknowledged
16. Transponder Code .....VFR

### Instruments

17. Fuel Qty .....[Check]







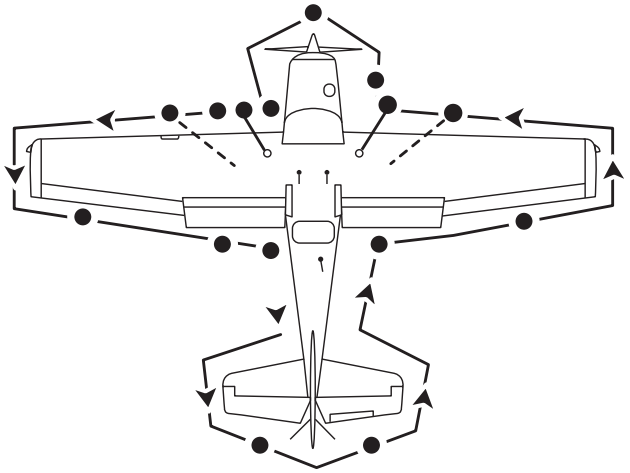
18. Clock .....[Set]

### Lower Panel (again)

19. Avionics Master .....Off
20. Master (Alt/Bat) .....Off

*"Preflight Cockpit check complete"*

## Preflight Exterior



### Empennage

1. Antennas .....Securely attached and in good condition
2. Elevator .....Moves freely and securely attached
3. Rudder .....Moves freely and securely attached
4. Rudder Gust Lock (if installed) .....Removed
5. Tail Tie-Down .....Disconnected
6. Elevator Trim Tab .....Securely attached

### Right Wing Trailing Edge

7. Flap .....Securely attached and in good condition
8. Aileron .....Moves freely and securely attached

### Right Wing Leading Edge

9. Wing Tie-Down .....Disconnected
10. Fuel Tank Sump Quick Drain Valve .....Sampled & checked fuel
11. Main Wheel Tire .....Inflated and in good condition
12. Fuel Quantity .....Checked visually
13. Fuel Filler Cap .....Vent unobstructed and cap secure

### Nose

14. Engine Oil Level.....[6–8 qt]
    ⚠ (Avoid used engine oil—possible carcinogen. Wash off with soap.)
15. Engine Oil Dipstick/Filler Cap.....Secure
16. Fuel Strainer Drain Valve.....Drained (4 seconds)
17. Engine Cooling Air Inlets.....Clear of obstructions
18. Propeller & Spinner.....Free of nicks and securely attached
19. Landing Light.....Cover in good condition and clean
20. Air Filter.....Clean
21. Nose Wheel Strut.....Inflated
22. Nose Wheel Tire.....Inflated and in good condition
23. Left Static Source Opening.....No blockage

### Left Wing Leading Edge

24. Fuel Quantity.....Checked visually
25. Fuel Filler Cap.....Vent unobstructed and cap secure
26. Pitot Tube, Stall Warning, & Fuel Tank Vent.....No blockage
27. Wing Tie-Down.....Disconnected
28. Fuel Tank Sump Quick Drain Valve.....Sampled & checked fuel
29. Main Wheel Tire.....Inflated and in good condition

### Left Wing Trailing Edge

30. Aileron.....Moves freely and securely attached
31. Flap.....Securely attached and in good condition

### Baggage Area

32. Baggage Door.....Latched

*"Preflight Exterior check complete"*







Before Start

## Before Start

1. Tie-downs, Chocks, and Tow Bar.....Removed
2. Seats & Seat Belts.....Adjusted & locked
3. Master (Alt/Bat).....On
4. Beacon.....On
5. Avionics Master.....Off
6. Carburetor Heat.....Off
7. Fuel Selector.....Both

*"Before Start check complete"*

## Start

See *Owner's Manual* section II for start procedures.

| Start type: | Normal | Hot | Flooded |
|---|---|---|---|
| Prime | Yes | No | No |
| Mixture | Full Rich | Full Rich | Cut-Off |
| Throttle | 1/8 inch | 1/8 inch | Full open |

**Priming:** If engine is not warm: 2–6 strokes. Weak/intermittent ignition indicates over-priming (flooding). No ignition indicates under-priming.

As engine starts, **immediately** throttle to 1000 rpm.

**Starter cycle limits:** crank 10 sec — cool 20 sec — crank 10 sec — cool 20 sec — crank 10 sec — cool **10 min** — repeat once, then get assistance.

After Start

## After Start

1. Oil Press.....Checked
   (Shutdown engine if oil pressure not normal within 30 seconds of start.)
2. Ammeter.....Positive (charging)
3. (sunset–sunrise) Nav Lights.....On
4. Avionics Master.....On
5. Flaps.....Up
6. Mixture.....Leaned for ground operations
   (Set throttle to 1200 rpm. Lean for max rpm. Reset throttle to 1000 rpm.)
7. GPS Startup Pages.....Acknowledged
8. Transponder.....ALT mode / [Code set]
9. Instruments.....[Set]

*"After Start check complete"*

## Run-Up

Run-Up

1. Seats, Seat Backs & Seat Belts ..... Secure & upright
2. Cabin Doors ..... Closed & locked
3. Flight Controls ..... Free & correct
4. Mixture ..... Full Rich
5. Checked at 1700 rpm:
   - 5.a. Magneto Check ..... Complete
     (Check drop less than 125 rpm. Less than 50 rpm difference between magnetos.)
   - 5.b. Carburetor Heat ..... Checked
   - 5.c. Oil Temp & Press ..... Checked
   - 5.d. Suction ..... Checked
   - 5.e. Alternator Check ..... Completed
   - 5.f. Voltmeter ..... [13.6–14.5 V]
6. Throttle Friction Lock ..... Set
7. Mixture ..... Leaned for ground operations
8. Elevator Trim ..... Take-off position
9. Fuel Selector ..... Both
10. Nav ..... Set
11. Transponder ..... ALT mode / [Code set]
12. Instruments ..... [Set]
13. Fuel Qty ..... [Checked]

*"Run-up check complete"*







## Brief Takeoff *(ready for TO)*

**Threats:** What are our threats this takeoff?
**Plan:** • Runway • Type (speeds, flaps) • Abort pt & proc • Climb speeds, power • Initial heading & altitude • Return • Route (ODP, SID) • Nav setup
**Countermeasures:** Extra actions or considerations to manage threats.

Normal Takeoff: **flaps up**
- Rotation ..... **60 mi/h**
- Takeoff (to 50 ft) ..... **80 mi/h**

Short Field Takeoff: **flaps 10°**
- Rotation ..... **55 mi/h**
- Takeoff (to clear obs.) ..... **65 mi/h**
- Flaps up when clear, > 70 mi/h

Soft Field Takeoff: **flaps 10°**
- Rotation ..... **ASAP**
- Takeoff (to clear obs.) ..... **65 mi/h**
- Takeoff (no obstacles) ..... **80 mi/h**
- Flaps up when clear, > 70 mi/h

Initial climb (50–1000 ft) ... **80 mi/h**
En route climb ..... **80–90 mi/h**

Before Takeoff

## Before Takeoff *(entering runway)*

1. Flaps ..... [Up or 10°]
2. Mixture ..... (at or below 3000 density alt.) Full Rich
   (above 3000 density alt.) Leaned (for max rpm at full throttle)
3. Carburetor Heat ..... Off
4. Landing & Strobe Lights ..... On

*"Before Takeoff check complete"*

After Takeoff

## After Takeoff *(roughly 200 ft AGL)*

1. Flaps ..... Check up
2. (above 3000 density alt.) Mixture ..... Leaned
3. Landing Light ..... Off

*"After Takeoff check complete"*

Cruise

## Cruise *(after level-off)*

1. Landing Light ..... Off (Leave on in high traffic areas)
2. Throttle ..... [Cruise power]
3. Mixture ..... Leaned
4. Fuel Qty ..... [Checked]

*"Cruise check complete"*

APICC

## Pre-Maneuver Check (APICC) *(before a training maneuver)*

**A**ltitude, **P**osition, **I**nstruments, **C**learing turns, **C**onfigure

## Descent *(before leaving cruise)*

Descent

1. Landing Light ..... On
2. Carburetor Heat ..... [As required]
3. Nav & Comm ..... Set
4. Instruments ..... [Set]
5. Fuel Qty ..... [Checked]
6. Seats, Seat Backs & Seat Belts ..... Secure & upright

*"Descent check complete"*

## Brief Approach / Landing *(after ATIS and set up)*

**Threats:** What are our threats this approach / landing?
**Plan:** • Runway • Pattern direction, altitude, & entry • Type (speeds, flaps) • Lighting • Go-around • Radios
**Countermeasures:** Extra actions or considerations to manage threats.

| | |
|---|---|
| Pattern (downwind) ..... **95 mi/h** | (172L) Final (short field) ..... **69 mi/h** |
| | (172M) Final (short field) ... **70 mi/h** |
| Final (normal) ..... **70 mi/h** | |
| Final (no flaps) ..... **75 mi/h** | Go-around (initially) ..... **65 mi/h** |

## Before Landing *(abeam touchdown point)*

Before Landing

1. Flaps ..... 10°
2. Mixture ..... Full Rich
3. Carburetor Heat ..... On
4. Fuel Selector ..... Both

*"Before Landing check complete"*

## After Landing *(clear of runway)*

After Landing

1. Carburetor Heat ..... Off
2. Flaps ..... Up
3. Mixture ..... Leaned for ground operations
4. Landing & Strobe Lights ..... Off

*"After Landing check complete"*





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## Shutdown

Shutdown

1. Transponder Code ..... VFR
2. (VFR, if activated) Flight Plan ..... Closed
3. Avionics Master ..... Off
4. Mixture ..... Cut-Off
5. Throttle ..... Closed
6. Magnetos ..... Off
7. Electrical Switches ..... Off
8. Master (Alt/Bat) ..... Off
9. Fuel Selector ..... Left or Right
10. Control Wheel Lock ..... Installed

*"Shutdown check complete"*

## Securing

Securing

1. Aircraft Log ..... Completed
2. Equipment Discrepancies ..... Reported & logged
3. Panel, Radio, & Map Lights ..... Full dim
4. Master (Alt/Bat) ..... Off
5. Chocks/tie-downs, Pitot cover, and Sunshades ..... Installed
6. Parking brake ..... Released (after chocks/tie-downs installed)
7. Cockpit and cabin ..... Clean and free of trash

*"Securing check complete"*

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# Abnormal Procedures

Further procedure details are in the *Owner's Manual* section III.

## Static Source Blockage (Erroneous Instrument Reading Suspected)

**1. ALT STATIC AIR Valve .....PULL ON**
2. CABIN HT and CABIN AIR Knobs .....PULL ON
3. Vents .....CLOSED

Static Source

## Landing with Flat Main Tire

1. Approach .....NORMAL
2. Wing Flaps .....FULL
3. Touchdown .....GOOD MAIN TIRE FIRST
   (Hold airplane off flat tire as long as possible with aileron control)
4. Directional Control .....MAINTAIN
   (Using brake on good wheel as required)

## Landing with Flat Nose Tire

1. Approach .....NORMAL
2. Wing Flaps .....AS REQUIRED
3. Touchdown .....ON MAINS
   (Hold nose wheel off the ground as long as possible)
4. Elevator (when nose wheel touches down) ...Maintain FULL UP until stop

Flat Tire

## Ammeter Shows Excessive Rate of Charge (Full Scale)

1. Alternator (ALT side only of MASTER Switch) .....OFF

**CAUTION**

With the alternator side of the master switch off,
compass deviations of as much as 25 degrees may occur.

2. Nonessential Electrical Equipment .....OFF
3. Flight .....TERMINATE as soon as practical

Ammeter Full Scale





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## Over or Low Voltage Light On / Ammeter Shows Discharge

1. Avionics Master Switch .....OFF
2. Alternator Field Circuit Breaker (ALT FLD) .....CHECK IN
3. Master Switch .....OFF (both sides)
4. Master Switch .....ON
5. Ammeter .....CHECK CHARGING (POSITIVE)
6. Over/Low Voltage light .....CHECK OFF
7. Avionics Master Switch .....ON

If Over/Low Voltage light illuminates or ammeter shows discharge again:

8. Alternator (ALT side only of MASTER Switch) .....OFF

**CAUTION**

With the alternator side of the master switch off,
compass deviations of as much as 25 degrees may occur.

9. Nonessential Electrical Equipment .....OFF
10. Flight .....TERMINATE as soon as practical

Voltage Light / Ammeter Discharge

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# Emergency Procedures

Further procedure details are in the *Owner's Manual* section III.
Items in **boldface** are immediate action items which should be memorized.

## Engine Failure During Takeoff Roll

**1. Throttle .....IDLE**
**2. Brakes .....APPLY**
3. Wing Flaps .....RETRACT
4. Mixture .....IDLE CUTOFF
5. Magnetos Switch.....OFF
6. Master Switch .....OFF

## Engine Failure Immediately After Takeoff

**1. Airspeed .....75 mi/h (flaps UP) / 70 mi/h (flaps DOWN)**
2. Mixture .....IDLE CUTOFF
3. Fuel Selector Valve.....Push down and rotate to OFF
4. Magnetos Switch.....OFF
5. Wing Flaps .....AS REQUIRED
6. Master Switch .....OFF
7. Cabin Door.....UNLATCH
8. Land.....STRAIGHT AHEAD

## Engine Failure In Flight (Restart Procedures)

**1. Airspeed .....80 mi/h**
**2. Carburetor Heat.....ON**
**3. Fuel Selector Valve .....BOTH**
**4. Mixture .....RICH (if restart has not occurred)**
5. Magnetos Switch .....BOTH (or START if propeller is stopped)

**NOTE**

If the propeller is windmilling, the engine will restart automatically within a few seconds. If the propeller has stopped (possible at low speeds), turn the Magnetos switch to START, advance the throttle slowly from idle and lean the mixture from full rich as required for smooth operation.

6. Primer.....IN and LOCKED








## Emergency Landing without Engine Power

1. Pilot and Passenger Seat Backs .....MOST UPRIGHT POSITION
2. Seats and Seat Belts .....SECURE
3. Airspeed.....75 mi/h (flaps UP) / 70 mi/h (flaps DOWN)
4. Mixture .....IDLE CUTOFF
5. Fuel Selector Valve.....Push down and rotate to OFF
6. Magnetos Switch.....OFF
7. ELT .....ACTIVATE (if rescue needed)
8. Wing Flaps .....AS REQUIRED (Full recommended)
9. Master Switch .....OFF (when landing is assured)
10. Doors.....UNLATCH PRIOR TO TOUCHDOWN
11. Touchdown.....SLIGHTLY TAIL LOW
12. Brakes.....APPLY HEAVILY

## Precautionary Landing with Engine Power

1. Pilot and Passenger Seat Backs .....MOST UPRIGHT POSITION
2. Seats and Seat Belts .....SECURE
3. Airspeed.....70 mi/h
4. Wing Flaps.....20°
5. Selected Field.....FLY OVER, noting terrain and obstructions, then retract flaps upon reaching a safe altitude and airspeed
6. Avionics Master Switch and Electrical Switches .....OFF
7. ELT .....ACTIVATE (if rescue needed)
8. Wing Flaps .....Full (on final approach)
9. Airspeed.....70 mi/h
10. Master Switch .....OFF
11. Doors.....UNLATCH PRIOR TO TOUCHDOWN
12. Touchdown.....SLIGHTLY TAIL LOW
13. Magnetos Switch.....OFF
14. Brakes.....APPLY HEAVILY
15. Mixture .....IDLE CUTOFF

## Ditching

1. Radio.....TRANSMIT MAYDAY on 121.5 MHz, giving location and intentions and SQUAWK 7700
2. Heavy Objects (in baggage area) .....SECURE or JETTISON (if possible)
3. Pilot and Passenger Seat Backs .....MOST UPRIGHT POSITION
4. Seats and Seat Belts .....SECURE
5. Wing Flaps .....20°–Full
6. Power .....ESTABLISH 300 FT/MIN DESCENT AT 70 mi/h

**NOTE**

If no power is available, approach at 75 mi/h with flaps up or at 70 mi/h with 10° flaps.

7. Approach.....High Winds, Heavy Seas—INTO THE WIND
   Light Winds, Heavy Swells—PARALLEL TO SWELLS
8. ELT .....ACTIVATE
9. Cabin Doors .....UNLATCH
10. Face .....CUSHION at touchdown with folded coat
11. Touchdown .....LEVEL ATTITUDE AT ESTABLISHED RATE OF DESCENT
12. Airplane.....EVACUATE through cabin doors. If necessary, open window and flood cabin to equalize pressure so doors can be opened.
13. Life Vests and Raft.....INFLATE WHEN CLEAR OF AIRPLANE







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## Engine Fire During Start

1. **Magnetos Switch...START, continue cranking to get a start which would suck the flames and accumulated fuel 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 CUTOFF**
6. **Cranking.....CONTINUE**
7. **Fuel Selector Valve.....Push down and rotate to OFF**
8. Fire Extinguisher.....OBTAIN
9. Master Switch .....OFF
10. Magnetos Switch.....OFF
11. Parking Brake.....RELEASE
12. Airplane.....EVACUATE
13. Fire .....EXTINGUISH using fire extinguisher, wool blanket, or dirt
14. Fire Damage .....INSPECT, REPAIR or REPLACE

## Engine Fire In Flight

1. **Mixture.....IDLE CUTOFF**
2. **Fuel Selector Valve.....Push down and rotate to OFF**
3. **Master Switch.....OFF**
4. Cabin Heat and Air.....OFF (except overhead vents)
5. Airspeed.....120 mi/h
   (If fire is not extinguished, increase glide speed to find an airspeed—within airspeed limitations—which provides an incombustible mixture).
6. Emergency Landing Without Engine Power checklist.....EXECUTE

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## Electrical Fire In Flight

1. **Master Switch.....OFF**
2. **Vents, Cabin Air, Heat.....CLOSED**
3. Avionics Master Switch.....OFF
4. All Other Switches (except Magnetos switch).....OFF

**WARNING**

After ascertaining that fire has been extinguished, ventilate the cabin.

5. Vents/Cabin Air/Heat.....OPEN when it is ascertained that fire is completely extinguished

If fire has been extinguished and electrical power is necessary for continuance of flight to nearest suitable airport or landing area:

6. Master Switch.....ON
7. Circuit Breakers.....CHECK for faulty circuit, do not reset
8. Radio Switches.....OFF
9. Avionics Master Switch.....ON
10. Radio/Electrical Switches.....ON one at a time until short circuit is found

## Cabin Fire In Flight

1. **Master Switch.....OFF**
2. **Vents/Cabin Air/Heat.....CLOSED (to avoid drafts)**

**WARNING**

After ascertaining that fire has been extinguished, ventilate the cabin.

3. Vents/Cabin Air/Heat.....OPEN when it is ascertained that fire is extinguished
4. Flight.....Land the airplane as soon as possible to inspect for damage

## Wing Fire In Flight

1. **Navigation Light Switch.....OFF**
2. **Strobe Light Switch.....OFF**
3. **Pitot Heat Switch.....OFF**

**NOTE**

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







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## Inadvertent Icing Encounter

1. **Pitot Heat Switch.....ON**
2. **180 degree turn.....INITIATE**
3. **Cabin Heat.....MAXIMUM**
4. **Windshield Defrost.....MAXIMUM**
5. Cabin Air Control.....AS REQUIRED for max defrost
6. Throttle.....INCREASE
7. Carburetor Heat.....AS REQUIRED
8. Air Intake Filter Ice.....MONITOR for SIGNS
9. Throttle & Mixture.....MAXIMUM RPM
10. Flight.....Land at NEAREST AIRPORT or suitable off airport landing site
11. Wing Flaps.....LEAVE RETRACTED
12. Windshield on Approach.....SCRAPE if practical
13. Approach Speed.....75–85 mi/h
14. Landing.....Perform in LEVEL ATTITUDE

**NOTE**

Open the throttle to increase engine speed and minimize ice build-up on propeller blades. An unexplained loss in engine speed could be caused by ice blocking the air intake filter. Plan a landing at the nearest airport. With an extremely rapid ice build-up, select a suitable off airport landing site. With an ice accumulation of 1/4 inch or more on the wing leading edges, be prepared for significantly higher stall speed

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