

# Cessna 172N/P Pilot's Checklist with GPS

## WARNING

Do not operate this aircraft unless you have read and understood the *Pilot's Operating Handbook* for this model & all applicable supplements.  
This checklist is not a substitute for *POH* knowledge.

## Normal Procedures

Further procedure details are in the *Pilot's Operating Handbook* section 4.

### 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. Pilot's Operating Handbook and GPS Quick Reference.....Available

#### Lower Panel

5. Magnetos .....Off
6. Master (Alt/Bat).....On
7. Circuit breakers (Upper & Lower Rows) .....Checked in
8. Nav, Beacon, Strobe, Taxi, 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. (172P) Avionics Cooling Fan.....Checked (audible)
16. GPS Self-test & Database Dates .....Checked & Acknowledged
17. Transponder Code.....VFR

Preflight Cockpit

### Pilot's Side

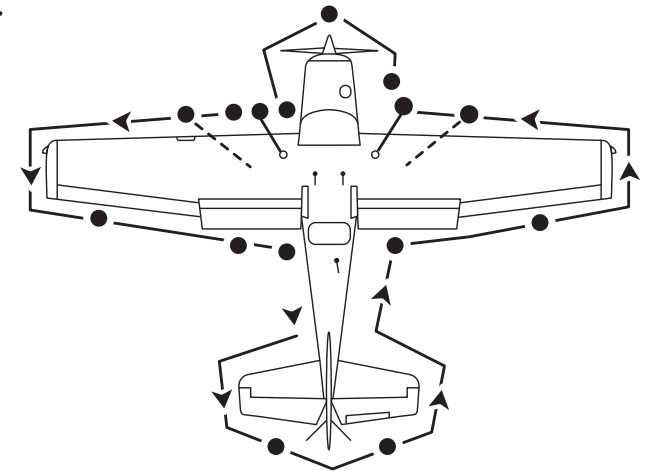
18. Fuel Qty .....[Check]
19. Clock.....[Set]

### Lower Panel (again)

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

"Preflight Cockpit check complete"

### Preflight Exterior



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 .....[4–6 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 *POH* section 4, Amplified Procedures subsection, 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. (if skyBeacon-equipped or sunset–sunrise) Nav Lights .....On  
 If skyBeacon-equipped, nav lights must be on (day & night) for ADS-B out.
- 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 .....(172N 1977) [13.6–14.5 V] (all others) [27.5–28.8 V]
6. Throttle Friction Lock .....Set
7. Mixture .....Leaned for ground operations
8. (if skyBeacon-equipped or sunset–sunrise) Nav Lights .....On
9. Elevator Trim .....Take-off position
10. Fuel Selector .....Both
11. Nav .....Set
12. CDI Navigation Source .....[GPS/VLOC]
13. Transponder .....ALT mode / [Code set]
14. Instruments .....[Set]
15. 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 .....**55 KIAS**

Takeoff (to 50 ft).....**75 KIAS**

Short Field Takeoff: **flaps 10°**

Rotation .....**50 KIAS**

Takeoff (to clear obs.).....**55 KIAS**

Flaps up when clear, > 60 KIAS

Soft Field Takeoff: **flaps 10°**

Rotation .....**ASAP**

Takeoff (to clear obs.) .....**56 KIAS**

Takeoff (no obstacles).....**75 KIAS**

Flaps up when clear, > 60 KIAS

Initial climb (50–1000 ft).....**75 KIAS**

En route climb.....**77–80 KIAS**

**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. Taxi 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)*

**Altitude, Position, Instruments, Clearing turns, Configure**

**Descent** (before leaving cruise)

1. Taxi Light.....On
2. Carburetor Heat .....[As required]
3. Nav & Comm.....Set
4. CDI Navigation Source .....[GPS/VLOC]
5. Instruments.....[Set]
6. Fuel Qty .....[Checked]
7. Seats, Seat Backs & Seat Belts .....Secure & upright

"Descent check complete"

**(IFR) Approach** (setting up approach)

1. Landing & Taxi Lights .....On
2. Fuel Selector .....Both
3. Approach Procedure (in GPS).....Loaded
4. CDI Navigation Source .....[GPS/VLOC]
5. Instruments.....[Set]
6. Timer .....Ready

"Approach check complete"

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

**Threats:** What are our threats this approach / landing?

**Plan-Instrument approach:** • Proc title & rev • NoPT?, No FAF?, Straight-in/Sidestep/Circle? • FAF alt, step downs, DH/MDA • Lighting • MAP • Radios

**Plan-VFR landing:** • Runway • Pattern direction, altitude, & entry • Type (speeds, flaps) • Lighting • Go-around • Radios

**Countermeasures:** Extra actions or considerations to manage threats.

Instrument approach ..... <b>90 KIAS</b>	Final (normal).... <b>flaps 30°: 65 KIAS</b>
Pattern (downwind) ..... <b>85 KIAS</b>	Final (no flaps) ..... <b>(172N) 65 KIAS</b>
	Final (short field) ..... <b>(172P) 70 KIAS</b>
	Go-around (initially)..... <b>55 KIAS</b>

At each waypoint in an instrument approach, do the 5 Ts, as applicable:

Turn (course)–Time (start timer)–Twist (OBS)–Throttle (descend)–Talk (radio)

**Before Landing** (abeam touchdown point/at FAF)

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

"Before Landing check complete"

**After Landing** (clear of runway)

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

"After Landing check complete"

**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**

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"

# Abnormal Procedures

Further procedure details are in the *Pilot's Operating Handbook* section 3.

## 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
4. Airspeed.....Refer to POH Section 5, Figure 5-1 (Sheet 2)  
"Airspeed Calibration, Alternate Static Source" correction chart

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)

Flat Tire

## 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

## 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.

Ammeter Full Scale

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

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

### NOTE

(172N 1979 and later, 172P) Illumination of Low Voltage light may occur during low RPM conditions with an electrical load on the system such as during a low RPM taxi. Under these conditions, the annunciator will go out at higher RPM. The master switch need not be recycled since an over-voltage condition has not occurred to deactivate the alternator system.

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 Radio and Electrical Equipment .....OFF
10. Flight.....TERMINATE as soon as practical

## GPS Loss of Signal ("DR" or "LOI" Indicated)

1. Navigation source .....Use alternative means of navigation, if available  
If no other navigation source available and "DR" is displayed, use GPS temporarily en route. No terminal or approach procedures will be available.
2. (If in IMC) Route .....Toward visual meteorological conditions (VMC)

Voltage Light / Ammeter Discharge

GPS DR/LOI

# Emergency Procedures

Further procedure details are in the *Pilot's Operating Handbook* section 3. 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**.....**65 KIAS (flaps UP) / 60 KIAS (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** .....**65 KIAS**
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.....65 KIAS (flaps UP) / 60 KIAS (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 .....65 KIAS
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 .....60 KIAS
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 55 KIAS

**NOTE**

If no power is available, approach at 65 KIAS with flaps up or at 60 KIAS 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



### 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 .....100 KIAS  
(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

### Electrical Fire In Flight

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

#### WARNING

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

6. 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:

7. Master Switch.....ON
8. Circuit Breakers.....CHECK for faulty circuit, do not reset
9. Radio Switches .....OFF
10. Avionics Master Switch.....ON
11. 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)
3. Fire Extinguisher .....ACTIVATE

#### WARNING

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

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

### 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.....65-75 KIAS
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.

