

## Cessna 172N AIRCRAFT PERFORMANCE

N \_\_\_\_\_ Cessna 172\_\_ Year: \_\_\_\_\_ HP: \_\_\_\_\_

<b>Inspections</b>	<b>Weight Limits</b>
Annual _____ ELT Batt _____	Gross Wt. _____
100 Hr. _____ Xpndr _____	Useful Load _____
(tach) _____	Max Baggage _____
AD Cur yes / no Squawk go / nogo	

### Weight and Balance Calculation

ITEM	WEIGHT	ARM	MOMENT
EMPTY WEIGHT	_____	----.---	_____
Pilot & Co-Pilot	_____	37.0	_____
Rear Seat Passengers	_____	72.8	_____
Baggage Area 1 (120 lbs.)	_____	94.9	_____
Baggage Area 2 (50 lbs.)	_____	123.0	_____
Fuel (_____ gal usable)	_____	45.3	_____

Takeoff Weight (2300\* lbs.) \_\_\_\_\_

Takeoff C.G. (see chart) \_\_\_\_\_

Estimated Fuel Burn \_\_\_\_\_ 45.3 \_\_\_\_\_

Landing Weight \_\_\_\_\_

Landing C.G. (see chart) \_\_\_\_\_

### Performance Calculation

ATIS wind: \_\_\_\_\_ @ \_\_\_\_\_ ?C/dew: \_\_\_\_\_ / \_\_\_\_\_ Alt: \_\_\_\_\_ Rwy: \_\_\_\_\_

Press Alt: \_\_\_\_\_ Density Alt: \_\_\_\_\_ X-Wind: \_\_\_\_\_ H-Wind: \_\_\_\_\_

Takeoff Distance – Short Field (Ground Run) \_\_\_\_\_

Takeoff Distance – Short Field (50' Obstacle) \_\_\_\_\_

Landing Distance – Short Field (50' Obstacle) \_\_\_\_\_

**Headwind – decrease distance by 10% for each 9 kts**

**Tailwind – increase distance by 10% for each 2 kts**

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# CESSNA 172N PRE-FLIGHT CHECKLIST

180 HP

## FLIGHT PLANNING

Airplane ..... CHECK MAINTENANCE RECORDS  
Route & Navigation Planning ..... COMPLETE  
Weather ..... BRIEFING COMPLETE  
Baggage ..... WEIGHED  
Weight & Balance / CG ..... CALCULATED / WITHIN LIMITS  
Performance Planning ..... COMPLETE  
Flight Plan ..... FILED

## INSIDE CABIN

Aircraft Papers ..... ARROW  
Aircraft Hobbs & Tachometer ..... VERIFY  
Fire Extinguisher (if aboard) ..... CHECK  
Headset, Charts, Lapboard ..... ON BOARD  
Baggage ..... STOWED & SECURE  
Control Lock ..... REMOVE & STOW  
Ignition Switch ..... OFF  
Avionics Power Switch ..... OFF  
Circuit Breakers ..... IN  
Compass Deviation Card ..... CHECKED  
Master Switch ..... ON  
Fuel Quantity Indicators ..... CHECK QUANTITY  
Avionics Cooling Fan (if installed) ..... CHECK AUDIBLY FOR OPERATION  
Wing Flaps ..... DOWN  
External Lights / Pitot Heat ..... CHECKED  
Master Switch ..... OFF  
Alternate Static Valve (if installed) ..... CHECK OPERATION (then closed)

## EMPENNAGE –LEFT SIDE

Side and Rear Windows ..... CHECK / CLEAN  
Baggage Door ..... CHECK  
Empennage ..... CHECK FOR DAMAGE  
Horizontal Stabilizer – Leading Edge ..... CHECK  
Elevator – Left Side ..... CHECK MOVEMENT / COUNTER-WEIGHT  
Tail Tie Down / Rudder Gust Lock ..... REMOVE  
Rudder ..... CHECK MOVEMENT / COUNTER-WEIGHT

## EMPENNAGE –RIGHT SIDE

Elevator – Right Side ..... CHECK MOVEMENT / COUNTER-WEIGHT  
Elevator Trim Tab ..... CHECK  
Horizontal Stabilizer – Leading Edge ..... CHECK  
Empennage ..... CHECK FOR DAMAGE  
ELT Antenna ..... CHECK SECURITY  
Side and Rear Windows ..... CHECK / CLEAN

# CESSNA 172N PRE-FLIGHT CHECKLIST

180HP

## RIGHT WING –TRAILING EDGE

Wing Flap ..... CHECK SECURITY / FLAP TRACKS  
Aileron ..... CHECK MOVEMENT / COUNTER-WEIGHT  
Wing Tip and Lights ..... CHECK

## RIGHT WING –LEADING EDGE

Leading Edge ..... CHECK  
Wing Tie Down / Chocks ..... REMOVE  
Right Main Tire, Brakes, Hyd. Line ..... CHECK  
Fuel Drain ..... DRAIN / SAMPLE  
Air Inlets ..... CHECK  
Fuel Tank ..... CHECK QUANTITY / SECURE CAP (vented)

## NOSE

Windshield ..... CHECK / CLEAN  
Engine Oil Level ..... CHECK (5 - 8 quarts)  
Fuel Strainer Knob ..... PULL / DRAIN 4 sec / CHECK CLOSED  
Cowling ..... CHECK SECURE  
Propeller & Spinner ..... CHECK FOR NICKS & SECURITY  
Alternator Belt ..... CHECK TENSION  
Landing Light(s) ..... CHECK  
Carburetor Air Filter ..... CHECK CLEAR  
Nose Wheel Strut & Tire ..... CHECK  
Nose Wheel Damper ..... CHECK SECURE  
Exhaust ..... CHECK  
Static Source Opening (left side) ..... CHECK FOR STOPPAGE

## LEFT WING –LEADING EDGE

Air Inlets ..... CHECK  
Fuel Tank ..... CHECK QUANTITY / SECURE CAP  
Pitot Cover (if installed) ..... REMOVE / CHECK FOR STOPPAGE  
Fuel Tank Vent Opening ..... CHECK FOR STOPPAGE  
Stall Warning Opening ..... CHECK FOR STOPPAGE  
Leading Edge ..... CHECK  
Wing Tip and Lights ..... CHECK

## LEFT WING –TRAILING EDGE

Aileron ..... CHECK MOVEMENT / COUNTER-WEIGHTS  
Wing Flap ..... CHECK SECURITY / FLAP TRACKS  
Wing Tie Down / Chocks ..... REMOVE  
Left Main Tire, Brakes, Hyd. Line ..... CHECK  
Fuel Drain ..... DRAIN / SAMPLE

\*\*\* Push aircraft across **tie-down cable** if applicable \*\*\*

**CESSNA 172N 180 HP****Start / Takeoff / Cruise****BEFORE ENGINE START**

Preflight Inspection  
 Cell Phones OFF  
 Seat Belts & Harnesses  
 Passenger Briefing  
 Fuel Selector BOTH  
 Avionics Power OFF  
 Autopilot OFF  
 Circuit Breakers  
 Parking Brake SET  
 ATIS / SET ALTIMETER

**STARTING ENGINE**

Mixture FULL RICH  
 Throttle OPEN 1/8 INCH  
 Carburetor Heat COLD  
 Master Switch ON  
 Rotating Beacon / NAV Lights  
 Ignition Key IN  
 Prime AS REQ  
 Propeller Area "CLEAR"  
 Ignition Switch START  
 Mixture Adjust  
 Oil Pressure  
 Ammeter  
 Suction Gauge  
 Wing Flaps UP

**NAV/COMM**

Avionics Power ON  
 Intercom CHECK  
 Marker Beacon TEST  
 Com 1 SET  
 Com 2 SET  
 Nav 1 TEST / SET  
 Nav 2 TEST / SET  
 GPS SET  
 DME SET  
 ADF SET

**BEFORE TAXI**

Flight Instruments  
 Transponder 1200  
 Taxi Light ON  
 Parking Brake OFF  
 Permission to Taxi

**RUNUP CHECK**

Parking Brake SET  
 Flight Controls & Trim  
 Fuel Selector BOTH  
 Fuel Quantity  
 Fuel Primer LOCKED  
 Autopilot / Air Cond OFF  
 Throttle 1700  
 Mixture Adjust  
 Carburetor Heat  
 Magnetos  
 Oil Pressure  
 Oil Temperature  
 Ammeter  
 Suction Gauge  
 Throttle IDLE  
 Throttle 1000

Circuit Breakers  
 Flight Instruments  
 Radios  
 Transponder ALT  
 Landing Light / Strobes  
 Cabin Doors & Windows  
 Takeoff Briefing  
 Wing Flaps SET  
 Parking Brake OFF  
 Permission to Take Off

**NORMAL TAKEOFF**

Throttle FULL  
 Rotate 55 KIAS  
 Climb 80 KIAS

**CRUISE CLIMB**

Airspeed 75-85 KIAS  
 Throttle FULL  
 Mixture Adjust  
 Landing Light OFF

**CRUISE**

Throttle 2200-2700 RPM (< 75%)  
 Mixture Adjust  
 Elevator & Rudder Trim  
 Engine Instruments

**CESSNA 172N 180 HP****Descent / Landing / Shutdown****DESCENT**

Fuel Selector Valve BOTH  
 Power  
 Mixture  
 Carburetor Heat AS REQ

**APPROACH (Trim for 70 KIAS)**

Gas  
 Undercarriage  
 Mixture  
 Propeller  
 Safety  
 Landing Light ON  
 Carburetor Heat ON  
 Autopilot OFF

**BALKED LANDING**

Power FULL  
 Flaps 20°  
 Climb 60 KIAS  
 FLAPS 10° (Retract after safe  
 altitude and 60KIAS)

**AFTER LANDING CHECK**

Wing Flaps UP  
 Mixture Adjust  
 Carburetor Heat COLD  
 Landing Lights / Strobes  
 Transponder STANDBY

**SHUTDOWN**

Parking Brake SET  
 Throttle 1000 RPM  
 Magneto Safety Check  
 Throttle 1700 RPM  
 Mixture LEAN MAX RPM  
 Avionics Power Switch OFF  
 Electrical Equipment OFF  
 External Lights (except Beacon) OFF  
 Throttle 1200 RPM  
 Mixture IDLE CUTOFF  
 Ignition Switch OFF - remove key  
 Beacon Light OFF  
 Master Switch OFF  
 Fuel Selector RIGHT or LEFT  
 Parking Brake RELEASED

**SECURING AIRCRAFT**

Chocks & Tie-downs  
 Control Lock INSTALL  
 Aircraft Hobbs & Tachometer RECORD  
 Windows CLOSE  
 Electrical Switches OFF  
 Ignition Switch OFF  
 Master Switch OFF  
 Doors and Baggage Door LOCK  
 Post Flight Inspection  
 Pitot Cover - Install

**AIRSPEEDS FOR SAFE OPERATION****Takeoff – Flaps Up**

Rotation .....55 KIAS  
 Short Field ..... (Check POH)

**Enroute Climb – Flaps Up**

Normal Climbout ..... 75-85 KIAS  
 Best Rate (V<sub>y</sub>) ..... 72 KIAS  
 Best Angle (V<sub>x</sub>) ..... 65 KIAS

**Landing Approach**

Normal – Flaps Up .. 65-75 KIAS  
 Normal – Flaps 30° ... 60-70 KIAS  
 Short Field – Flaps 30° (Check POH)

**Balked Landing**

Max Pwr – Flaps 20° ..... 60 KIAS

**Maximum Maneuvering Speeds**

2300 lbs. .... 105 KIAS  
 1950 lbs. .... 95 KIAS  
 1600 lbs. .... 85 KIAS

**Best Glide**

Flaps UP ..... 70 KIAS  
 Flaps DOWN ..... 63 KIAS