

# United Flight Systems



## N5310D - C172N NORMAL OPERATIONS

### BEFORE START ENGINE

HOBBS ..... RECORD  
 PREFLIGHT INSPECTION..... COMPLETE  
 A.R.R.O.W..... CHECK  
 AIRPORT DIAGRAM ..... AVAILABLE  
 PASSENGER BRIEF..... S.A.F.E.T.Y.  
 Seat & Seat Belts, Air, Fire, Exit/Emergencies,  
 Traffic & Talking, Your Questions?  
 SEATS & SEAT BELTS ..... LOCKED / FASTENED  
 MASTER (bat & alt) ..... OFF  
 AVIONICS MASTER..... OFF  
 FUEL SELECTOR..... BOTH  
 CIRCUIT BREAKERS ..... CHECK  
 CARB HEAT ..... OFF  
 THROTTLE ..... CLOSED  
 MASTER (bat & alt) ..... ON  
 BEACON ..... ON  
 NAV LIGHTS ..... AS REQ

### ENGINE START

BRAKES ..... SET / HOLD  
 MIXTURE..... RICH / FULL FWD  
 COLD ENGINE ....(max 6 pumps) PRIME AS REQ  
 THROTTLE ..... CLOSED / 1/8 IN  
 PROP AREA ..... CLEAR PROP  
 STARTER ..... (8-10 seconds max) ENGAGE  
**\*\*WHEN ENGING STARTS\*\***  
 THROTTLE ..... 1000 – 1200 RPM  
 OIL PRESSURE ..... CHECK  
 MIXTURE..... LEAN

### AFTER START

AVIONICS MASTER ..... ON  
 HEATER / DEFROST ..... AS REQ  
 HEADSETS ..... ON / CHECK  
 AMPS OUTPUT ..... CHECK  
 GPS DATABASE CURRENCY..... CHECK / ENT  
 GPS / OBS TEST..... CHECK / ENT  
 COMS ..... SET / ATIS  
 ALTIMETERS ..... SET  
 CLEARANCE (if IFR) ..... OBTAIN  
 GPS ..... ENTER WPT/FPL/APR AS REQ  
 CDI KEY .....(as req. for departure) VLOC/GPS  
 NAVS..... SET / COURSE  
 FLIGHT INSTRUMENTS..... CHECK / SET  
 TRANSPONDER ..... SET CODE / ALT MODE  
 FLAPS..... CHECK / UP

### TAXI

Do Not Ride Brakes  
 AIRPORT DIAGRAM ..... AVAILABLE  
 TAXI CLEARANCE ..... OBTAIN / BRIEF  
 TAXI AREA..... (left & right) CLEAR  
 BRAKES ..... RELEASE / CHECK  
 FLIGHT INSTRUMENTS..... CHECK  
 Check in turns.  
 STERILE COCKPIT ..... NO NONESSENTIAL TALKING

### **\*\*Pre-Takeoff Emergency Brief\*\***

Engine Failure on runway  
 THROTTLE ..... IDLE  
 BRAKES ..... APPLY  
 STOP STRAIGHT AHEAD  
 Engine Failure After Rotation  
 THROTTLE ..... IDLE  
 PITCH FOR BEST GLIDE ..... 65  
 CONTINUE STRAIGHT AHEAD  
 At or above 1000ft AGL – Turn around point  
 TURN TO AIRPORT

### RUN UP

BRAKES..... SET / HOLD  
 DOORS..... CLOSE / LOCKED  
 FUEL GAUGES / QTY..... CHECK  
 FUEL SELECTOR ..... BOTH  
 MIXTURE .....(below 3000' MSL) FULL FWD  
 THROTTLE..... 1700 RPM  
 MAGNETOS ..... (125 max drop, mas diff. 50) CHECK  
 OIL TEMPERATURE & PRESSURE ..... CHECK  
 SUCTION..... CHECK  
 AMPS..... CHECK  
 CARB HEAT ..... ON / VERIFY DROP  
 THROTTLE..... IDLE  
 CARB HEAT ..... OFF  
 THROTTLE..... 1000 RPM  
 MIXTURE ..... LEAN  
 FLIGHT CONTROLS ..... FREE / CORRECT  
 TRIM..... SET  
 BRAKES..... RELEASE

### BEFORE TAKEOFF

**\*\*TAKE OFF / EMERGENCY PLAN\*\*** ..... **BRIEF**  
 FLAPS..... SET FOR TAKEOFF  
 FLIGHT INSTRUMENTS ..... CHECK  
 DOORS..... CLOSE / LOCKED  
 SEATBACKS..... SECURE  
 SEATS & SEAT BELTS ..... LOCKED / FASTENED  
 Final items when #1 for takeoff

*L Flow – Left to Right*

WINDOWS..... CLOSED / LOCKED  
 ENGINE GAUGES ..... CHECK  
 PRIMER ..... LOCKED  
 MASTER (bat & alt) ..... ON  
 LANDING LIGHT ..... ON  
 STROBE..... AS REQ  
 CARB HEAT ..... OFF  
 MIXTURE ..... SET  
 TRANSPONDER..... VERIFY ALT / SET  
 FLAPS..... VERIFY SET  
 TRIM..... SET  
 FUEL SELECTOR ..... BOTH

## TAKE OFF

THROTTLE ..... FULL  
 ROTATE ..... 55 KTS  
 YOKE ..... APPLY BACK PRESSURE / ESTABLISH CLIMB  
 CLIMB ..... 70 - 80 KTS  
 V<sub>X</sub> - 59 KTS / V<sub>Y</sub> - 73 KTS

## AFTER TAKEOFF

Above 1000 AGL

CRUISE CLIMB ..... 70 - 85 KTS  
 THROTTLE ..... FULL  
 FLAPS UP ..... CHECK  
 MIXTURE ..... LEAN ABOVE 3000' MSL

## CRUISE

THROTTLE ..... SET  
 2300-2400 RPM LOCAL / 75% BHP FOR XC  
 ENGINE / SYSTEM INSTRUMENTS ..... CHECK  
 LANDING LIGHT ..... OFF  
 MIXTURE ..... LEAN

V Speeds	KDWH Frequencies
V <sub>R</sub> ..... 55	Ground ..... 121.8
V <sub>Y</sub> ..... 73	Tower ..... 118.4
V <sub>X</sub> ..... 59	Unicom ..... 122.95
V <sub>FE</sub> ..... 85	West Practice .. 123.5
V <sub>A</sub> ..... 80-97	ATIS ..... 128.375
V <sub>NO</sub> ..... 127	Hou App NW ... 119.7
V <sub>NE</sub> ..... 158	Hou App SW .... 123.8
V <sub>G</sub> ..... 65	Max Demo Xwind .15

## DESCENT

For XC use

ATIS / AWOS ..... CHECK  
 APPROACH BRIEFING ..... COMPLETE  
 ALTIMETER ..... SET  
 CARB HEAT ..... AS REQ  
 THROTTLE ..... AS REQ  
 MIXTURE ..... SLIGHTLY ENRICH

## APPROACH (15NM FROM AIRPORT)

ATIS / AWOS ..... CHECK  
 APPROACH BRIEFING ..... COMPLETE  
 ALTIMETER ..... CHECK  
 FUEL SELECTOR ..... BOTH  
 MIXTURE ..... SLIGHTLY ENRICH  
 PARKING BRAKE ..... OFF  
 LANDING LIGHT ..... ON

When direct to IAF or Vectored

FLIGHT & NAV Instruments ..... SET / IDENT  
 CDI KEY ..... VLOC / GPS  
 AIRSPEED ..... 90 KTS

## BEFORE LANDING CHECKLIST

*G.U.M.P.S.*

FUEL SELECTOR ..... BOTH  
 MIXTURE ..... SET FOR ALT / FULL RICH  
 CARB HEAT ..... ON  
 POWER ..... AS REQ  
 SEAT BELTS / SWITCHES ..... CHECK  
 FLAPS ..... (V<sub>FE</sub> 85) AS REQ

## GO AROUND / MISSED APPROACH

*"Cram, Climb, Clean, Click, Call"*

THROTTLE ..... FULL  
 CARB HEAT ..... OFF  
 FLAPS 20 ..... IMMEDIATELY  
 PITCH ..... 60 KTS / PITCH FOR CLIMB  
 FLAPS 10 ..... POS RATE, OBST CLEARED, 60 KTS  
 FLAPS UP .... AFTER REACHING SAFE ALT 65 KTS  
 Fly assigned or published heading & altitude

## AFTER LANDING

When aircraft is stopped

GROUND OR ASSIGNED FREQ ..... CHECK  
 FLAPS ..... UP  
 CARB HEAT ..... OFF  
 MIXTURE ..... LEAN  
 TAXI CLEARANCE ..... OBTAIN / BRIEF

## SHUTDOWN

CALL FOR FUEL @ KDWH ..... 122.95  
 TRANSPONDER ..... 1200 / VFR  
 AVIONICS MASTER ..... OFF  
 THROTTLE ..... 1000 RPM  
 MIXTURE ..... CUTOFF

*When Propeller stops*

MAGNETOS ..... OFF  
 MASTER SWITCH ..... OFF  
 ELECTRICAL SWITCHES ..... OFF  
 FUEL SELECTOR ..... LEFT or RIGHT  
 HOBBS / TACH ..... RECORD

Secure aircraft, tiedown and walk around.

Note and record squawks

Revised 06-28-2022

This checklist is for reference. It is not intended to replace the POH / AFM.

# United Flight Systems



## C172N - PREFLIGHT

### CABIN

Walk up to aircraft ..... INSPECT FOR DAMAGE  
Oil Level ..... CHECK  
Pitot Tube Cover ..... REMOVE  
HOBBS ..... RECORD  
POH ..... IN-AIRCRAFT  
UFS clip board and keys ..... IN-AIRCRAFT  
Check List ..... IN-AIRCRAFT  
Air Worthiness Certificate ..... IN-AIRCRAFT  
Registration ..... IN-AIRCRAFT  
GPS Reference Guide ..... IN-AIRCRAFT  
Weight and Balance ..... CHECKED  
Parking Brake ..... SET  
Control Lock ..... REMOVE  
Magneto Switch ..... OFF  
Avionics Switch ..... OFF  
Circuit Breakers ..... IN

### POWER

Master Switch (Batt) ..... ON  
Fuel Qty (R & L) ..... CHECK  
Avionics ..... ON  
Avionics Fan (If Installed) ..... VERIFY ON  
GPS data base ..... VERIFY CURRENT  
Avionics Switch ..... OFF  
Flaps (Extend One Notch at a Time) ..... VERIFY  
Beacon ..... ON  
Navigation Lights ..... ON  
Taxi/Landing Lights ..... ON  
Pitot Heat ..... ON

**VERIFY LIGHTS, PITOT HEAT, STALL WARNING**

### POWER - CONTINUED

Navigation Lights ..... OFF  
Taxi/Landing Lights ..... OFF  
Pitot Heat ..... OFF  
Master Switch ..... OFF  
Elevator Trim Control ..... TAKEOFF  
Fuel Selector Valve ..... BOTH  
Alternate Static Air Valve ..... ON / OFF  
Fire Extinguisher ..... CHECK

### LEFT Fuselage

Left Tire ..... CHECK  
Left Brake ..... SECURE/WEAR INDICATOR  
Left Brake Line ..... NO LEAKS  
Left Main Gear Strut ..... SECURE  
Baggage Door ..... CLOSED  
Antennas ..... SECURE  
Body ..... STRAIGHT

### LEFT ELEVATOR

Control Surface ..... CHECK  
Counterbalance Weight ..... SECURE  
Static Wicks (If Installed) ..... SECURE

### RUDDER

Tail Tiedown ..... REMOVE  
Antennas ..... SECURE  
Static Wicks (If Installed) ..... SECURE

### RIGHT ELEVATOR

Control Surface ..... CHECK  
Elevator Trim Tab ..... CHECK  
Static Wicks (If Installed) ..... SECURE  
Counterbalance Weight ..... SECURE

### Right Fuselage

Body ..... STRAIGHT  
Right Main Gear Strut ..... SECURE  
Right Tire ..... CHECK  
Right Brake ..... SECURE/WEAR INDICATOR  
Right Brake Line ..... NO LEAKS

### RIGHT WING

Flap ..... CHECK  
Aileron ..... CHECK  
Wing Tip ..... CHECK  
Leading Edge ..... CHECK  
Wing Support Strut ..... SECURE  
Fuel Tank Vent (if Installed) ..... CHECK POSITION  
Tiedown ..... REMOVE  
Fuel Quantity ..... CHECK VISUALLY  
Fuel Filler Cap ..... SECURE  
Fuel Drain Sumps ..... DRAIN

### NOSE

Sump Fuel Selector (belly) ..... DRAIN  
Static Source (If Installed) ..... CHECK  
Engine Oil Dipstick/Filler Cap ..... CHECK  
Fuel Strainer ..... DRAIN  
Engine Cooling Air Inlets ..... CLEAR  
Prop and Spinner ..... CHECK  
Air Filter ..... CHECK  
Nosewheel Strut and Tire ..... CHECK  
Static Source ..... CHECK  
Windscreen ..... CHECK (CLEAN)

### LEFT WING

Leading Edge ..... CHECK  
Wing Support Strut ..... SECURE  
Pitot Tube ..... CHECK  
Fuel Quantity ..... CHECK VISUALLY  
Fuel Filler Cap ..... SECURE  
Fuel Tank Vent ..... CHECK POSITION  
Tiedown ..... REMOVE  
Wing Tip ..... CHECK  
Aileron ..... CHECK  
Flap ..... CHECK  
Fuel Drain Sumps ..... DRAIN

# N5310D - C172N

## EMERGENCY PROCEDURES

### ENGINE FIRE DURING START ON GROUND

Cranking..... CONTINUE

#### IF ENGINE STARTS

Power..... 1700 RPM (for a few mins)

Engine.....SHUTDOWN (inspect for damage)

#### IF ENGINE FAILS TO START

Throttle..... FULL

Mixture..... IDLE CUTOFF

Cranking..... CONTINUE

Fire Extinguisher..... OBTAIN

Engine..... SECURE

Master..... OFF

Ignition..... OFF

Fuel Selector Valve..... OFF

Fire..... EXTINGUISH

Fire Damage..... INSPECT

### ENGINE POWER LOSS DURING TAKEOFF RUN

Throttle.....IDLE

Brakes.....APPLY

Flaps..... RETARACT

Mixture..... IDLE CUTOFF

Ignition..... OFF

Master..... OFF

### ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF

Airspeed Flaps Up.....65 KIAS

Airspeed Flaps Down.....60 KIAS

Mixture..... IDLE CUTOFF

Fuel Selector Valve..... OFF

Ignition..... OFF

Flaps..... AS REQ

Master Switch..... OFF

### ENGINE FAILURE DURING FLIGHT

#### RESTART

Airspeed.....65 KIAS

Carb Heat.....ON

Fuel Selector Valve.....BOTH

Mixture..... RICH

Ignition.....BOTH

Primer..... IN AND LOCKED

### FORCED LANDING WITHOUT POWER

Airspeed Flaps Up.....65 KIAS

Airspeed Flaps Down.....60 KIAS

Mixture..... IDLE CUTOFF

Fuel Selector Valve.....OFF

Ignition Switch.....OFF

Flaps..... AS REQ (full recommended)

Master Switch.....OFF

Doors..... UNLATCH PRIOR TO TOUCHDOWN

Touchdown..... SLIGHTLY TAIL LOW

Brakes..... APPLY HEAVILY

### ENGINE FIRE IN FLIGHT

Mixture..... IDLE CUTOFF

Fuel Selector Valve.....OFF

Master.....OFF

Cabin HT and Cabin AIR.....OFF

Airspeed.....100 KIAS

*(if fire is not extinguished, increase glide speed to find an airspeed within airspeed limitations, which will provide an incombustible mixture)*

Forced Landing..... EXECUTE

*(refer to power off landing)*

### LOSS OF OIL PRESSURE/HIGH OIL TEMP

Land as soon as possible and investigate the cause. Prepare for power off landing.

### AMMETER SHOWS EXCESSIVE RATE OF CHARGE

Alternator..... OFF

Alternator Circuit Breaker.....PULL

Nonessential Electrical Equipment..... OFF

Flight..... TERMINATE

*(as soon as practical)*

### LOW VOLTS ANNUNCIATOR

Avionics..... OFF

Alternator Circuit Breaker..... CHECK IN

Master..... OFF (BOTH SIDES)

Master..... ON (BOTH SIDES)

Low Voltage Lights.....CHECK OFF

Avionics..... ON

### LOW VOLTS ANNUNCIATOR REMAINS ON

Alternator..... OFF

Nonessential Radio & Electrical Equipment

..... OFF

Flight..... TERMINATE

*(as soon as practical)*

### SPIN RECOVERY

Throttle.....IDLE

Ailerons..... NEUTRAL

Rudder..... FULL OPPOSITE

to direction of rotation

Control Wheel..... BRISKLY FORWARD

(to break stall)

Recover..... NEUTRALIZE RUDDER,

RECOVER FROM DIVE