

United Flight Systems



N494JB - C172S / NAV II 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
 THROTTLECLOSED
 MASTER (bat & alt) ON
 BEACON ON
 NAV LIGHTS..... AS REQ

ENGINE START

BRAKES.....SET / HOLD
 MIXTURE CUTOFF
 THROTTLE..... ¼ IN OPEN

COLD ENGINE

AUX FUEL PUMP..... ON
 MIXTURE FULL RICH
 STABLE FUEL FLOW 3-5 SECONDS
 MIXTURE CUTOFF
 AUX FUEL PUMP..... OFF
 PROP AREA..... CLEAR PROP
 STARTER..... (8-10 seconds max) ENGAGE
 MIXTURE ADVANCE SMOOTHLY

WHEN ENGING STARTS

MIXTURE RICH
 THROTTLE 1000 – 1200 RPM
 OIL PRESSURE CHECK
 MIXTURE LEAN

AFTER START

AVIONICS MASTERON
 HEATER / DEFROST..... AS REQ
 HEADSETS.....ON / CHECK
 AMPS OUTPUT CHECK
 GPS DATABASE CURRENCY CHECK / ENT
 GPS / OBS TEST CHECK / ENT
 COMSSET / ATIS
 ALTIMETERS SET
 CLEARANCE (If IFR)..... OBTAIN
 GPS..... ENTER WPT/FPL/APR AS REQ
 CDI KEY..... (as req. for departure) VLOC/GPS
 NAVSSET / COURSE
 FLIGHT INSTRUMENTS CHECK / SET
 TRANSPONDERSET 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 INSTRUMENTSCHECK

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 68
 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 1800 RPM
 MAGNETOS..... (150 max drop, max diff. 50) CHECK
 OIL TEMPERATURE & PRESSURE.....CHECK
 VACUUM.....CHECK
 AMPSCHECK
 THROTTLE IDLE / CHECK
 THROTTLE 1000 RPM
 MIXTURE LEAN
 FLIGHT CONTROLS FREE / CORRECT
 TRIMSET
 BRAKESRELEASE

BEFORE TAKEOFF

****TAKE OFF / EMERGENCY PLAN** BRIEF**
 FLAPSSET FOR TAKEOFF
 FLIGHT INSTRUMENTSCHECK
 DOORS CLOSE / LOCKED
 SEATBACKS SECURE
 SEATS & SEAT BELTS LOCKED / FASTENED

Final items when #1 for takeoff

L Flow – Left to Right

WINDOWSCLOSED / LOCKED
 ENGINE GAUGES.....CHECK
 MASTER (bat & alt) ON
 LANDING LIGHT ON
 STROBE AS REQ
 MIXTURESET
 TRANSPONDER VERIFY ALT / SET
 FLAPS VERIFY SET
 TRIMSET
 FUEL SELECTOR..... BOTH

TAKE OFF

THROTTLE..... FULL
 ROTATE 55 KTS
 YOKE..... APPLY BACK PRESSURE / ESTABLISH CLIMB
 CLIMB 70 - 80 KTS
 V_X - 62 KTS / V_Y - 74 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 _R55	Ground..... 121.8
V _Y74	Tower..... 118.4
V _X62	Unicom 122.95
V _{FE}85	West Practice.. 123.5
V _A 90-105	ATIS..... 128.375
V _{NO}129	Hou App NW ... 119.7
V _{NE}163	Hou App SW.... 123.8
V _G68	Max Demo Xwind 15

DESCENT

For XC use

ATIS / AWOSCHECK
 APPROACH BRIEFINGCOMPLETE
 ALTIMETER.....SET
 CARB HEAT AS REQ
 THROTTLE AS REQ
 MIXTURE SLIGHTLY ENRICH

APPROACH (15NM FROM AIRPORT)

ATIS / AWOSCHECK
 APPROACH BRIEFINGCOMPLETE
 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
 MIXTURESET FOR ALT / FULL RICH
 POWER..... AS REQ
 SEAT BELTS / SWITCHES.....CHECK
 FLAPS (V_{FE} 85) AS REQ

GO AROUND / MISSED APPROACH

"Cram, Climb, Clean, Click, Call"

THROTTLE FULL
 FLAPS 20 IMMEDIATELY
 PITCH 60 KTS / PITCH FOR CLIMB
 FLAPS 10 POS RATE, OBST CLEARED, 65 KTS
 FLAPS UP... AFTER REACHING SAFE ALT, 70 KTS
 Fly assigned or published heading & altitude

AFTER LANDING

When aircraft is stopped

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

SHUTDOWN

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

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

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

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C172S / NAV II - PREFLIGHT

CABIN

Walk up to aircraftINSPECT FOR DAMAGE
Oil Level..... CHECK
Pitot Tube Cover REMOVE
HOBBS.....RECORD
POHIN-AIRCRAFT
UFS clip board and keysIN-AIRCRAFT
Check ListIN-AIRCRAFT
Air Worthiness Certificate.....IN-AIRCRAFT
Registration.....IN-AIRCRAFT
GPS Reference GuideIN-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
Fuel Annunciators L & R..... CHECK OFF
Avionics..... ON
Avionics Fan (If Installed) VERIFY ON
GPS data base VERIFY CURRENT
Avionics Switch OFF
Flaps (Extend One Notch at a Time)..... VERIFY
Annunciator Panel..... TEST
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
Fuel Shut Off ON
Alternate Static Air Valve ON / OFF
Autopilot Static SourceCHECK
Fire ExtinguisherCHECK

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 SurfaceCHECK
Counterbalance Weight..... SECURE
Static Wicks (If Installed)..... SECURE

RUDDER

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

RIGHT ELEVATOR

Control SurfaceCHECK
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

FlapCHECK
AileronCHECK
Wing Tip.....CHECK
Leading Edge.....CHECK
Wing Support Strut SECURE
Fuel Tank Vent (if Installed) CHECK POSITION
Tiedown REMOVE
Fuel QuantityCHECK 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
Engine Cooling Air Inlets..... CLEAR
Prop and SpinnerCHECK
Air FilterCHECK
Nosewheel Strut and TireCHECK
Static SourceCHECK
Windscreen..... CHECK (CLEAN)

LEFT WING

Leading Edge.....CHECK
Wing Support Strut SECURE
Pitot TubeCHECK
Fuel QuantityCHECK VISUALLY
Fuel Filler Cap SECURE
Fuel Tank Vent CHECK POSITION
Tiedown REMOVE
Wing Tip.....CHECK
AileronCHECK
FlapCHECK
Fuel Drain Sumps..... DRAIN

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EMERGENCY PROCEDURES

ENGINE FIRE DURING START ON GROUND

Cranking.....CONTINUE

IF ENGINE STARTS

Power 1800 RPM (for a few mins)
Engine..... SHUTDOWN (inspect for damage)

IF ENGINE FAILS TO START

Throttle..... FULL
Mixture..... IDLE CUTOFF
Magnetos..... START
Fuel Selector..... OFF (pull out)
Fuel Pump..... OFF
Engine..... SECURE
Master..... OFF
Magnetos..... OFF
Parking Brake..... RELEASE
Airplane..... EVACUATE
Fire..... EXTINGUISH
Fire Damage..... INSPECT

ENGINE POWER LOSS DURING TAKEOFF RUN

Throttle..... IDLE
Brakes..... APPLY

ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF

Airspeed Flaps Up..... 68 KIAS
Airspeed Flaps Down..... 61 KIAS
Mixture..... IDLE CUTOFF
Fuel Selector Valve..... OFF
Magnetos..... OFF
Flaps..... AS REQ (full recommended)
Master Switch..... OFF
Cabin Door..... UNLATCH
Land..... STRAIGHT AHEAD

ENGINE FAILURE DURING FLIGHT

RESTART

Airspeed..... 68 KIAS
Select Field..... FLY TO IT
Fuel Shutoff..... ON / PUSH IN
Fuel Selector Valve..... BOTH
Fuel Pump..... ON
Mixture..... RICH
Magnetos (prop windmilling)..... BOTH
Magnetos (prop stopped)..... START
Fuel Pump..... OFF

FORCED LANDING WITHOUT POWER

Seat Backs..... MOST UPRIGHT POSITION
Seats and Seat Belts..... SECURE
Airspeed Flaps Up..... 68 KIAS
Airspeed Flaps Down..... 61 KIAS
Mixture..... IDLE CUTOFF
Fuel Shutoff Value..... OFF (pull out)
Magnetos..... OFF
Flaps..... AS REQ (full recommended)
Master..... OFF (when landing is assured)
Doors..... UNLATCH PRIOR TO TOUCHDOWN
Touchdown..... SLIGHTLY TAIL LOW
Brakes..... APPLY HEAVILY

ENGINE FIRE IN FLIGHT

Mixture..... IDLE CUTOFF
Fuel Shutoff Valve..... OFF
Auxiliary Fuel Pump..... OFF
Master..... OFF
Cabin HT and Cabin AIR..... OFF (push in)
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.

EXCESSIVE FUEL VAPOR

Fuel Pump..... ON
Mixture..... ADJUST
Fuel Selector..... SELECT OPPOSITE TANK
Fuel Pump..... OFF
(after fuel flow has stabilized)

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