

# C172N - Long Island Flying

(revised 04/11/2023)

(training purposes only - see appropriate POH for official procedures)

## PASSENGER BRIEFING

- 1 Seats & Seat Belts
- 2 Head Sets
- 3 Doors & Evacuation
- 4 Traffic - Vents - Motion Sickness

## PRE-START

- 1 Pre-Flight ----- DONE
- 2 Seats & Belts ----- as required
- 3 Doors / Windows ---- SECURE
- 4 Controls ----- Free/Correct
- 5 Avionics ----- OFF
- 6 Circuit Breakers ----- IN
- 7 Alternate Static ----- OFF
- 8 Fuel Selector ----- BOTH

## STARTING ENGINE

- 1 Carb heat ----- OFF
- 2 Mixture ----- RICH
- 3 Primer (clockwise) ----- 2x or 1x (if warm)
- 4 Battery Master ----- ON
- 5 Beacon & Stobes ---- ON
- 6 Propeller Area ----- CLEAR
- 7 Toe Brakes ----- HOLD
- 8 Throttle ----- OPEN 1/8th
  
- 9 Ignition ----- START
- 10 Throttle ----- 1000 rpm
- 11 Oil Pressure ----- CHECK
- 12 Ammeter ----- CHECK

## PRE-TAXI & TAXI

- 1 Flaps ----- UP
- 2 Mixture ----- as required
- 3 Nav Lights (ADSB?) -- as required
- 4 Other Lights ----- as required
- 5 Avionics ----- ON
- 6 ATIS ----- RECORDED
- 7 Instruments ----- SET
- 8 Clearance ----- RECORDED
- 9 X-ponder ----- as required
- 10 Brakes ----- CHECK
- 11 Flight Instruments ---- CHECK

## PRE-TAKEOFF RUN-UP

- 1 Brakes ----- as required
- 2 Doors / Windows ----- SECURE
- 3 Controls ----- FREE
- 4 Primer ----- LOCKED
- 5 Fuel Quantity ----- NOTE
- 6 Mixture ----- RICH
- 7 Elevator Trim ----- T/O
- 8 Fuel Selector ----- BOTH
- 9 Throttle ----- 1700 rpm
- 10 Engine Gauges ----- CHECK
- 11 Ammeter ----- CHECK
- 12 Suction Gauge ----- CHECK
- 13 Mag CHECK ----- <125 & 50
- 14 Carb heat ----- ON (drop)
- 15 Throttle ----- IDLE
- 16 Carb heat ----- OFF
- 17 Throttle ----- 1000 rpm
- 18 Throttle Friction ----- ADJUST

## TAKEOFF BRIEFING (TYPE-WINDS-RNWDY)

- V-speeds (V<sub>R</sub> - 55, V<sub>Y</sub> - 73, V<sub>X</sub> - 59)
- Emergencies - Best Glide 65

## HOLDING SHORT

- 1 Radios (coms, nav, gps) ----- SET
- 2 Flight Instruments ----- CHECK
- 3 Seat, belts, doors ----- SECURE
- 4 Primer ----- LOCKED
- 5 Key ----- BOTH
- 6 Lights ----- as required
- 7 Carb heat ----- OFF
- 8 Mixture ----- as required
- 9 Flaps ----- as required
- 10 Transponder ----- as required
- 11 Final approach ----- CLEAR

## CLEARING MAGNETOS (if needed)

- 1 Key ----- Both
- 2 Throttle (hold brakes) ----- 2200
- 3 Mixture-Lean (30 Sec) -> Rich
- 4 Throttle ----- 1700
- 5 Magnetos ----- CHECK

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## 500' CHECK

- 1 Engine Gauges ----- GREEN
- 2 Flaps ----- VERIFY UP
- 3 Clear Area ----- CHECK

## 1000' CHECK

- 1 Landing Light ----- OFF
- 2 Cruise Climb ----- 70-85

## CRUISE CHECK

- 1 Power ----- 2300 RPM
- 2 Trim ----- as required
- 3 Lights ----- as required
- 4 Fuel Selector ----- as required
- 5 Mixture (lean) ----- >3000' only

## DESCENT

- 1 ATIS ----- RECORD
- 2 Inst & avionics ----- ADJUST
- 3 Throttle ----- as required
- 4 Mixture ----- as required
- 5 Carb heat ----- as required

## PRE-LANDING

- 1 Fuel Selector ----- ON
- 2 Mixture ----- RICH
- 3 Carb heat ----- ON
- 4 Ignition ----- BOTH
- 5 Primer ----- IN & LOCKED
- 6 Seat Belts ----- SECURE
- 7 Lights ----- as required

## BALKED LANDING

- POWER UP & carb heat off
- PITCH UP (55kts initially)
- CLEAN UP - flaps 20\* & 55kts

## TALK UP

- Verify Aircraft is Cleaned up
- ? Sidestep runway for visibility

## AFTER LANDING

- 1 Carb heat ----- OFF
- 2 Transponder ----- STANDBY
- 3 Flaps ----- UP
- 4 Lights (ldg / taxi) ----- as required

## ENGINE SHUT DOWN

- 1 Avionics ----- OFF
- 2 Magnetos ----- CHECK
- 3 Throttle ----- IDLE
- 4 Mixture ----- ICO
- 5 Ignition Key ----- OFF / OUT
- 6 Lights ----- as required
- 7 Battery Master ----- OFF

## BEFORE YOU GO HOME

- 1 Hobbs & Tach ----- NOTE
- 2 Battery Master ----- OFF
- 3 Avionics or Radios ----- OFF
- 4 Control Lock ----- Right Side
- 5 Seat Belts ----- Secured
- 6 Belongings ----- Remove
- 7 Cowl Plugs ----- Inserted
- 8 Doors & Baggage ----- Locked
- 9 Tie downs/Chocks ----- Secured
- 10 Rudder Lock ----- Below Wicks
- 11 Ladders ----- Secured

## V-SPEEDS

- V<sub>NE</sub> - 160, V<sub>NO</sub> - 128
- V<sub>A</sub> (2300lbs) - 97
- V<sub>FE</sub> (Flaps 10) - 110
- V<sub>FE</sub> (Flaps 10-40) - 85
- V<sub>s</sub> - 47
- V<sub>so</sub> - 41
- V<sub>X</sub> (Flaps 10\*+) - 55
- V<sub>X</sub> (Flaps up) - 59
- V<sub>Y</sub> - 73
- V<sub>R</sub> - 55

Best Glide (no flaps) - 65

Approach - 60-70

X-wind component - 15

Useable Fuel (100LL) - 40 of 43

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## ENGINE FAILURE

**SPEED** --- BEST GLIDE / TRIM

**SPOT** --- LANDING AREA

**SPEC** ---

Primer ----- In & LOCKED

Ignition ----- VERIFY BOTH

Carb heat ----- ON

Mixture ----- RICH

Fuel-shutoff ----- VERIFY ON

Ignition ----- CYCLE MAGS

**If restart successful:**

Oil pressure ----- CHECK

Oil temp ----- CHECK

Electrical equip ----- as required

**If restart NOT successful:**

## FORCED LANDING

Distress call - 121.5

- Who, Where, # on board

- "Committed to landing"

Transponder ----- 7700

Seat belt/harness ----- Tight

## ENGINE SECURING

Fuel shut-off ----- OFF

Mixture ----- ICO

Ignition ----- OFF

Prior to impact

Flaps ----- as required

Battery Master ----- OFF

Door latches ----- as required

## LOSS OF OIL PRESSURE

X-CHECK Oil Temp

If **NORMAL** - Land ASAP

If **RISING**- Reduce throttle to

minimum required - Land ASAP

Prepare for engine failure

## STATIC SOURCE BLOCKED

Alternate Static-ON (if equipped)

Else - Break VSI

Airspeed - see table in Sec 5

## ENGINE FIRE - IN FLIGHT

Mixture -----

Fuel Shut-off -----

Battery Master -----

Cabin Heat -----

Airspeed -----

**Prepare for Forced Landing**

Emergency Descent -----

## FIRE - ELECTRICAL

Battery Master -----

Avionics -----

All switches -----

Vents, Air, & Heat -----

Fire Extinguisher -----

Emergency Descent -----

**If extinguished & power is needed**

Vents (open when fire is out)

Battery Master -----

Circuit Breakers -----

Radio Switches -----

Avionics -----

Radio switches -----

Land as soon as possible

## FIRE - IN CABIN

Battery Master -----

Cabin Air -----

Cabin Heat -----

Fire Extinguisher -----

Land ASAP

## ICING

Leave area (turn, climb, descend)

Pitot Heat -----

Carb heat -----

Cabin heat -----

Move control surfaces

Increase Throttle (propeller icing)

(Sacrifice altitude for airspeed)

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## OVER-VOLTAGE LIGHT

(Cross-check Ammeter)

Avionics Master ----- OFF

Battery Mstr (both) --- OFF

Battery Master ----- ON

Over-Voltage Light --- OFF ?

Avionics Master ----- ON

If light re-illuminates, **Land ASAP**

**Ammeter Shows Discharge**

Alternator ----- OFF

Backup Radio/Elec --- OFF

Land ASAP -

## SPIN RECOVERY

Power ----- IDLE

Aileron ----- NEUTRAL

Rudder ----- Fully Opposite

Elevator ----- Briskly Forward

**After rotation has stopped**

Rudder - NEUTRALIZE

Elevator - EASE BACK

## ENGINE FIRE - START UP

Continue to crank engine

**If engine starts:**

Throttle - 1700 rpm

Shutdown - Inspect for damage

**If engine fails to start:**

Throttle FULL

Mixture ICO

Fuel Shut-off CLOSED

**Continue to crank engine**

Battery Master OFF

Ignition Switch OFF

Evacuate Airplane Immediately

## LOST COMMS

Radio ON; Volume Set;

Correct frequency / alternates;

Circuit Breakers; alternator;

Mike / headset plugs

Range location;

**Last ATC Alternate radio;**

Cell Phone

**If still not working -**

Transponder - 7600

Maintain VFR - land ASAP

DAY - rock wings if receiving

NIGHT - flash lights if receiving

## LIGHT GUN SIGNALS

	Ground	Air
Stdy Green	- Clrd takeoff	- Clrd to land
Flash Green	- Clrd to taxi	- Clrd for app
Stead Red	- Stop	- Give way-cir
Flash Red	- Clr rwy	- Don't Land
Red / grn	- Caution	- Caution
Flsh White	- Return	

## DIVERT to ALTERNATE

A - Alternate airport

B - Best guess heading

C - Change Altitude

D - Distance

E - Estimate time & fuel

F - Flight Plan & ATC

G - Ground (close flight plan)

## LOST PROCEDURES

Confess (to yourself)

Control / Circle (last known...)

Climb

Cross Radials

Communicate to ATC

Comply

Conserve (fuel)