**AFTER LANDING**

Flaps…………………………..……..………….UP

Carb Heat………………….…..….……….….Cold

Trim…………………….……..…...…...…..Neutral

Mixture…………...……………………..….....Lean

Strobe Lights…………………...…….……….OFF

Taxi Clearance………………..…Obtain/ Brief

**Shutdown Terminate**

XPDR……....Set 1200/ALT Mode**(NOT within SFRA)**

Avionics Master…………………………….OFF

Heater/Defrost……………………...………OFF

Throttle…………………..………..…..800 RPM

Mixture……………………………….….....Cutoff

Magnetos………………………..…..….…...OFF

Switches……………………….…...…ALL OFF

Battery Master & Alternator……..……....OFF

Window…………..………………..…..…Closed

Hobbs & Tachometer……………........Record

Flight Controls……………….………....Secure

TieDown/Chocks..………………...……Secure

Clean Aircraft…………………………………

Covers…………….………………………..Install

Walkaround…………….……….....…Complete

**V-Speeds**

***Vs0- 52 MPH--------Stall speed in a Landing Configuration***

***Vs- 58 MPH—-------Stall Speed in a Clean Configuration***

***Vr- 60 MPH-----------Rotation Speed***

***Vx- 60 MPH----------Best Angle of Climb***

***Vy- 75 MPH----------Best Rate of Climb***

***Vg- 75 MPH(Flaps UP)/70 MPH(Flaps Down) —---Best Glide***

***Vfe- 100 MPH--------Maximum Flap Extension Speed***

***Va- 107/115 MPH—---Maneuvering Speed***

***Vno- 140 MPH—-----Maximum Structural Cruising Speed***

***Vne- 160 MPH--------Never Exceed Speed***

***Maximum Demonstrated Crosswind—-15 MPH***

***PATTERN WORK***

**BEFORE LANDING CHECKLIST**

Carb Heat…………………………………...….ON

POWER…………………….……..………As REQ

Flaps..………………………....(<100 MPH)AS REQ

Mixture……………..……………………..Full Rich

Trim………………………………………….…..Set

**GO AROUND / MISSED APPROACH**

Throttle…………………...…………...…Full FWD

Carb Heat………………...…………………...Cold

Flaps……………………………..…...…………20’

Pitch…………….…..…..….Up for Climb(60 MPH)

Flaps…………….....10’(until Obstacles are cleared)

Pitch………………………………….……75 MPH

**STANDARDIZED SPEEDS**

100 MPH…………………………...…...….….Downwind

90 MPH……………………...………Abeam, 1500 RPM

85 MPH………………….……………………….…..Base

80 MPH..…...…………………………….……...On Final

70 MPH…………..…………....…Performance Landing

60 MPH………….…..…………Short/Soft field Landing

**AFTER LANDING**

Flaps……………….……..……………….…….UP

Carb Heat……………………….…….………Cold

Trim………………….………..….…………Neutral

Mixture……….…….…………………...…….Lean

Strobe Lights……...……………………….….OFF

Taxi Clearance………..……………...Obtain/Brief

**BEFORE TAKEOFF**

Flaps……………………………….…..….As REQ

Carb Heat……………………….…….………Cold

Engine Instruments…………………...……Check

**—--------------------------Final Items—-----------------------------**

Door & Window……………………...….…Secure

Lights, Camera, Action……….….XPDR, MIX, PUMP

Traffic…………………………..….………...Check

**AFTER TAKEOFF**

**At Traffic Pattern Altitude**

Airspeed……………………...…....……100 MPH

Flaps……………………….……..……………..UP



CE-172

**BEFORE ENGINE START**

Nose-Tip-Tail-Chocks Area……...…..…Clear

Preflight Inspection………………....Complete

WT&Bal, Docs, Performance………...Check

Passenger Brief…..……………………………

Door,Emergency Exit, seats & seat Belts, Fire Extinguisher, no smoking, PIC Authority, Positive Exchange of Controls.

Seats & seat belts………...Locked/Fastened

Fuel Selector………………………….……Both

Avionics Master…………………….………OFF

Alternate Static Source………..….OFF/FWD

Circuit Breakers………………...……….Check

Switches……………………….………ALL OFF

Battery Master/Alternator…..…..…………ON

Beacon…………………………..…………….ON

Nav Lights( Night Only).......................As REQ

**ENGINE START**

Rested Engine………..…...Prime 2-4 Pumps

Carb Heat…………………….…….…….…Cold

Throttle.………………………………...⅛” Open

Mixture………………...………...….….Full Rich

Brakes……………………..…………………Hold

Magnetos…………………….……………….ON

Prop Area………………………....”Clear Prop”

Starter…………………..………………..EngageIf the engine does not start, reference Cold Weather Operations in POH

Throttle…………..…...…….…Rest@800 RPM

Oil Pressure……………………………...Check

Mixture…………………………………..…..Lean

Primer……………..…………………….….Locked

**AFTER START**

Avionics Master………………...……………...ON

Heater/Defrost………………………….....As Req

Headsets………………………………………..On

GPS Database Currency…….…..Checked/ENT

Alternator Output…………………………...Check

Coms…………………………...….……..Set/ATIS

Altimeters….……………………..…….………Se

GPS……………………………………..………Set

CDI Softkey…………….….……….Set VLOC/GPS

Flight Instruments…………...……….…….Check

Transponder…….....Set Code**/***or receive from tower*

**TAXI**

**Do Not Ride Brakes**

Sterile Cockpit……..No Non-essential Conversation

Airport Diagram………..………….…….Available

Landing Light……….………...…….………….ON

Taxi Clearance…………………….....Obtain/Brief

Taxi Area…………..…….Clear Left/Right/Center

Brakes…………………….…..…………….Check

Flight Instruments………………..Check in Turns

**RUN UP**

May Be Completed at any Point between After Start and Before Takeoff Checklists.

Oil Pressure…….....Check Normal(30-40Ibs./sq.in.)

Fuel Gauges/ QTY……….…….…..……...Check

Mixture…………………….…………..….Full Rich

Fuel Selector…………………...…...……..…Both

Throttle………………………………....1600 RPM

Magnetos…..….....Max drop 100 RPM/Max diff. 50 RPM

Carb Heat…………………...…...(RPM Drop)Check

Suction Gage…………………………….…Check

Engine Instruments & Ammeter……….….Check

Throttle…………………………..……....800 RPM

Mixture……………………….….......Lean for Taxi

Flight Controls………………………………Check

Trim………………………….…...…….Neutral/set

*Engine is Warm for Takeoff when Throttle can be opened without Engine Faltering*

**PRE-TAKEOFF BRIEF**

**In the event of an Engine Failure or abnormality with enough runway remaining-**

* *Throttle…………………….….Immediately Closed*
* *Land………………………..…………..Immediately*
* *Brake………………………….…...……….As REQ*
* *Stop Straight Ahead*

**If Not enough Runway remains to Stop-**

* *Throttle………………….…………….Immediately Closed*
* *Brake…………………………….…………….……As REQ*
* *Flaps…………………………….…………….……..Retract*
* *Mixture……………………………………….…..Idle Cutoff*
* *Magnetos…………………………………….…………OFF*
* *Battery Master & Alternator…………………….…….OFF*

*Avoid Obstacles*

**Engine Failure After Rotation with no Runway Remaining-**

* *Airspeed…...…………….……..……...75 MPH(Flaps Up)*

*70 MPH(Flaps Down)*

* *Mixture………………………………….…….….Idle Cutoff*
* *Fuel Selector…………….…………….……Rotate to OFF*
* *Magnetos………………………………….……………OFF*
* *Flaps………………………………………………..As REQ*
* *Battery Master & Alternator……………….………….OFF*

*Land at Lowest Possible Airspeed & Avoid obstacles as Best as possible*

**Before Takeoff**

Engine Instruments………………..…...….Check

Flaps…………………………………........As REQ

Carburetor Heat……………….…….…..…...Cold

GPS/CDI……………………..………..….…….Set

HI/DI………………………………..…….……..Set

Departure Brief + Initial Altitude & Heading Seat Belts & Shoulder Harness……..…....Check

 **-----------------------Final Items—---------------------**

**Door & Window**……….……...……....**Secure**

**Traffic**…………………………….…...….**Check**

**Lights/Camera/Action**

Ldg-Strobe-Beacon………………………………..ON

Transponder…………………………….…………..ON

Mixture………………………………………...Full Rich

**AFTER TAKEOFF** Out of 1000’ AGL

Flaps UP……………………….….………Check

Cruise Climb………….. 80-90 MPH/As REQ

Throttle…………………….………………….Full

Mixture…………….…….RICH(Lean Above 3000)

*Climb at 80-90 MPH for better visibility and cooling, Unless Vy is needed for climb rate.*

**CRUISE**

Throttle……………………....…...2450 RPM/Set

Mixture……………………………Lean as REQ

Engine Instruments……..……………...Check

*Maintain Situational Awareness, Monitor Frequencies, and Get ahead of the Airplane.*

 **APPROACH**

**Approx. 15 NM from Airport**

ATIS/AWOS……………………….……...Check

Altimeter…………………….……………..….Set

Approach briefing…………..……....Complete Fuel Selector………………………….……Both

Mixture………………………..…Slightly Enrich

Landing Light……………………….…….….ON

Airport Diagram……………….…Check/Ready

**WHEN DIRECT TO IAF OR VECTORED**

Flight & NAV Instruments………....Set/Ident.

CDI Softkey……………….....VOR/LOC/GPS

**BEFORE LANDING CHECKLIST**

Fuel Selector……………………………….…Both

Mixture…………....................................Full Rich

Carb Heat…………………………………...….ON

Power………………….……..…………...As REQ

Flaps……………………..…………..…....As REQ

Trim………………………………….…..….....SET

**GO AROUND/MISSED APPROACH**

Throttle……………..……………..……..Full FWD

Carb Heat…………………………….…….…Cold

Flaps……………………………………..…...…20’

Pitch……………….……....UP for Climb(60 MPH)

Flaps………………….……10’ (Until Positive Rate)

Pitch……………………………………….75 MPH

 Fly Assigned or Published Heading & Altitude