

BEFORE ENGINE START

- 1) Hobbs Time NOTED
- 2) Preflight..... COMPLETE
- 3) Fuel quantity..... ADEQUATE
- 4) Documentation (including IFR)..... CHECK
- 5) Seats & Seat Belts ADJUSTED & LATCHED
- 6) Brakes TEST (SET)
- 7) Magneto switch KEY IN - SWITCH OFF
- 8) Master switch OFF
- 9) Radio master switch OFF
- 10) Alternate static OFF
- 11) Lights and electrical equipment..... OFF
- 12) Auxiliary fuel pump OFF
- 13) Fuel selector..... BOTH
- 14) Fuel shutoff valve..... ON (in)
- 15) Circuit breaker panel..... CHECK
- 16) Passengers..... BRIEFED (normal & emergency)

STARTING ENGINE

- 1) Mixture CUT OFF
- 2) Throttle..... OPEN ¼ inch
- 3) Master switch ON
- 4) Beacon and/or Navigation lights ON
Prime only for cold start
 - o Auxiliary fuel pump..... ON
 - o Mixture RICH 3-5 seconds then cutoff
 - o Auxiliary fuel pump..... OFF
- 5) Propeller area..... CLEAR
- 6) Magnetos..... START (10 seconds max)
- 7) Mixture RICH
- 8) Oil pressure NORMAL (within 30 seconds)
- 9) Mixture LEAN for smooth idle

AFTER START

- 1) Radio Master ON
- 2) Lights AS REQUIRED
- 3) Flaps..... RETRACT
- 4) Parking brake RELEASED
- 5) Brake and steering check..... ON TAXI
- 6) IFR taxi checks ON TAXI

BEFORE TAKEOFF

- 1) Parking brake SET
- 2) IFR taxi check COMPLETE
- 3) Flight controls..... FREE & CORRECT
- 4) Flight instruments..... SET
- 5) Radios Comm & Nav SET
- 6) NAV/GPS switch SET
- 7) Annunciator panel TEST & CHECK
- 8) Auto pilot..... TEST and OFF
- 9) Elevator Trim..... SET for TAKEOFF
- 10) Flaps..... SET for TAKEOFF
- 11) Fuel selector valve..... BOTH
- 12) Mixture RICH
 - a) Throttle 1800 RPM
 - b) Magnetos .. CHECK (150 max drop)
 - c) Oil pressure NORMAL RANGE
 - d) Ammeter CHARGE
 - e) Vacuum gauge CHECK
 - f) Throttle 1000 RPM
- 13) Door LOCKED
- 14) Lights & strobes AS REQUIRED
- 15) Transponder..... ALT
- 16) Time of departure NOTED
- 17) Pilot briefing NORMAL & EMERGENCY

TAKEOFF & CLIMB

- 1) Normal takeoff Flaps 0-10 degrees
- 2) Rotate 55 KIAS
- 3) Climb 70-85 KIAS
 - SHORT FIELD Flaps 10 degrees
 - Climb..... 56 KIAS
 - SOFT FIELD..... Flaps 10 degrees
- 4) Flaps..... RETRACT
- 5) Mixture.... LEAN to 50 rich of peak above 3000 ft
(50 rich of peak or 14 gph)
- 6) Cylinder temperatures MONITOR

CRUISE

- 1) Level at altitude ACCELERATE
- 2) Throttle..... SET DESIRED POWER (2100-2600)
- 3) Trim for LEVEL FLIGHT
- 4) Mixture..... LEAN (50 rich of peak)
- 5) Engine temperatures MONITOR
- 6) Systems CHECK

DESCENT

- 1) Throttle..... (as necessary)
- 2) Mixture..... Richen only as necessary

IN RANGE

- 1) Fuel selector valve BOTH
- 2) Seats & belts..... SECURE & LOCKED
- 3) ATIS – AWOS – Advisories NOTED
- 4) Altimeter..... SET
- 5) Approach & missed approach..... BRIEFED
- 6) Radios SET
- 7) NAV/GPS switch SET
- 8) Lights..... AS REQUIRED
- 9) Initial approach speed TRIMMED

BEFORE LANDING

- 1) Mixture..... RICH
- 2) Flaps..... SET (below 110/85 KIAS)
- 3) NORMAL LANDING . Flaps 20 degrees – 65 KIAS
- 4) SHORT FIELD..... Flaps 30 degrees – 61 KIAS

MISSED APPROACH / GO AROUND

- 1) Throttle..... FORWARD
- 2) Speed 65 to 80 KIAS
- 3) Flaps..... 20°
- 4) Flaps..... RETRACT at 65 KIAS

AFTER LANDING

- 1) Transponder STANDBY
- 2) Mixture..... LEAN
- 3) Strobes OFF (at night)
- 4) Lights..... AS REQUIRED
- 5) Flaps..... UP
- 6) Trim TAKEOFF SETTING

ENGINE SHUTDOWN

- 1) Throttle.....1000 rpm (stabilize CHT)
- 2) Radio masterOFF
- 3) Electrical equipment.....OFF
- 4) Mixture CUT OFF
- 5) Throttle..... CLOSED
- 6) Magnetos..... OFF (remove key)
- 7) LightsOFF
- 8) Master switchOFF
- 9) Parking brakeOFF
- 10) Fuel selector valve .LEFT or RIGHT for Refueling
- 11) Aircraft interior & exterior SECURE

FLOODED START

- 1) Auxiliary fuel pumpOFF
- 2) Mixture Idle cutoff
- 3) Throttle..... Open ½ to full open
- 4) Magnetos..... START (10 seconds max)
- 5) Mixture RICH
- 6) Throttle..... Retard to idle
- 7) Oil pressureNORMAL (within 30 seconds)
- 8) Mixture LEAN for smooth idle

C172SP CRUISE POWER SETTINGS

Derived – with some interpolation – from Figure 5-8 Cruise Performance Cessna 172S POH and AFM

*2550 lbs gross weight, standard temperature, recommended leaning per POH (50 degrees rich of peak)

Operation at less than 75% power in cruise is permitted at peak EGT, which achieves approximately 4% range increase and reduces TAS approximately 3 knots. Operation lean of peak is prohibited by the POH.

55% POWER CRUISE SETTINGS

Altitude	RPM	KTAS	GPH
2000	2250	100	7.7
4000	2300	102	7.7
6000	2350	104	7.7
8000	2400	106	7.7
10,000	2450	108	7.7
12,000	2500	110	7.7

65% POWER CRUISE SETTINGS

Altitude	RPM	KTAS	GPH
2000	2400	110	9.0
4000	2450	112	9.0
6000	2500	114	9.0
8000	2550	115	9.0
10,000	2600	117	9.0
12,000	2650	119	9.0

73% POWER CRUISE SETTINGS

Altitude	RPM	KTAS	GPH
2000	2500	115	9.9
4000	2550	117	9.9
6000	2600	119	9.9
8000	2650	122	9.9
10,000	2700	123	9.8
12,000	not available, see 65% schedule		

WCFC recommended C172 SP SPEEDS TO FLY

- Vx 62 KIAS
- Vy 74 KIAS
- Best glide speed (clean) 68 KIAS
- Va 105 KIAS @2550 pounds
- 98 KIAS @ 2200 pounds
- 90 KIAS @ 1900 pounds
- Initial climb 80 KIAS
- Cruise climb 90 KIAS
- Normal landing with flaps 20 65 KiAS
- approach
- Short field landing with flaps 30 61 KIAS