



RISK MANAGEMENT

Pilot	Recent Experience Recent Skill Level Illness Medication Stress Alcohol Fatigue Eating
Aircraft	Airworthiness (AROW) Instrument and Equipment Status Engine Performance, Takeoff and Landing Gross Weight, Weight and Balance
enVironment	1-800-WX-BRIEF Deteriorating weather Ceiling Visibility Winds Precipitation Icing Turbulence Density Altitude Darkness Terrain Flight Plan NOTAMs TFRs
External	Passenger Pressures Organizational Pressure External Distractions

VELOCITY SPEEDS

Vs ⁰	33 KIAS	Vs ¹	44 KIAS
Vr	55 KIAS	Vg	65 KIAS
Vx	60 KIAS	Vy	79 KIAS
Va	99 KIAS (2450 lbs)	Va	98 KIAS (2200 lbs)



PREFLIGHT INSPECTION

CABIN

- Hobbs and Tach Time..... RECORD ON SHEET
- Airworthiness.....Airworthy Cert, Registration, Op Limits, W&B
- Pitot Tube Cover REMOVE, CHECK OPENING
- Control Wheel Lock..... REMOVE
- Ignition Switch (key on glare shield) OFF
- Avionics Master Switch (double white rocker switch)..... OFF
- Master Switch (double red rocker switch)..... ON
- Fuel Quantity Indicators (gas gauge) CHECK
- Avionics Master Switch ON
- Avionics Cooling Fan CHECK AUDIBLY FOR OPERATION
- Avionics Master Switch OFF
- Static Pressure Alternate Source Valve..... OFF
- Annunciator Panel Switch PLACE and HOLD in TST, RELEASE
- Fuel Selector Valve BOTH
- Fuel Shutoff Valve ON (Push full in)
- Flaps EXTEND
- Interior and Exterior Lights CHECK (working condition)
- Pitot Heat (IFR only) TEST (heat within 30 seconds)
- Master Switch OFF
- Baggage Door CHECK (closed and locked)
- Autopilot Static Source Opening..... CHECK for blockage

EMPENNAGE

- Rudder Gust Lock REMOVE
- Tail Tie Down..... DISCONNECT
- Control Surfaces..... CHECK (hinges, balance)
- Trim Tab CHECK security
- Antennas CHECK for security of attachment and general condition

RIGHT WING TRAILING EDGE

- Flaps SECURE (light tug)
- Aileron..... CHECK (freedom of movement, balance)



NORMAL PROCEDURES CHECKLIST - C 172R

RIGHT WING

1. Wing Tie DownDISCONNECT
2. Main Wheel TireCHECK (inflation – **28 PSI**, wear, cracks)
3. Chocks.....REMOVE
4. Fuel Sump FIVE DRAINS (check for contaminants)
5. Fuel QuantityMEASURE gallons
6. Fuel Filler Cap SECURE (aligned with longitudinal axis)

NOSE

1. Fuel Sumps THREE DRAINS (check for contaminants)
2. Engine Oil Level CHECK (8 max, 5 min)
3. Engine Cooling Inlets CLEAR of obstructions
4. Alternator BeltCHECK (present, looseness)
5. Propeller and Spinner CHECK (nicks, cracks)
6. Carburetor Air Filter CHECK (clean)
7. Exhaust PipeSECURE (light tug)
8. Nose Wheel Strut and TireCHECK (inflation – **34 PSI**, wear, cracks)
9. Static Source Opening CHECK (clear)

LEFT WING

1. Main Wheel TireCHECK (inflation – **28 PSI**, wear, cracks),
2. Chocks.....REMOVE
3. Fuel Sump FIVE DRAINS (check for contaminants)
4. Fuel QuantityMEASURE gallons
5. Fuel Filler Cap SECURE (aligned with longitudinal axis)

LEFT WING LEADING EDGE

1. Fuel Tank Vent Opening CHECK (clear)
2. Stall Warning Opening..... CHECK (apply light suction)
3. Landing/Taxi Light CHECK (filament)
4. Wing Tie DownDISCONNECT

LEFT WING TRAILING EDGE

1. AileronCHECK (freedom of movement, hinges)
2. FlapSECURE (light tug)



NORMAL PROCEDURES CHECKLIST - C 172R

PASSENGER BRIEFING

1. Seat, seatbelts and harnessesTAXI, TAKEOFF, LANDING
2. Door operation and exiting aircraft USE
3. Emergency equipment (fire extinguisher)LOCATION
4. Looking for Traffic POINT OUT
5. Sterile CockpitTAXI, TAKEOFF, LANDING
6. Feeling ill TELL ME

BEFORE ENGINE START

1. Preflight inspection.....COMPLETE
2. Seat, belts shoulder harnessesADJUST and LOCK
3. Seat Track and BackLOCKED
4. Brakes..... TEST and SET
5. Fuel Selector Valve..... BOTH
6. Fuel Shutoff Valve ON (push full in)
7. Alternate Static (IFR only) CHECK (slight dip in altimeter, then rise)
8. Avionics/Radios... OFF
9. Electrical Equipment (switches)..... OFF
10. Circuit Breakers... CHECK IN
11. Avionics Circuit Breakers..... CHECK IN



ENGINE START

1. BeaconON
2. Throttle (silver knob) CRACKED (1/4 inch finger method)
3. Mixture (red knob) IDLE CUT-OFF
4. Prop SHOUT CLEAR PROP, WAIT, LOOK
5. Master Switch (double red rocker switch)ON
Cold Start Only
6. Auxiliary Fuel PumpON
7. Mixture FULL RICH until stable fuel flow (3-5 seconds)
8. Mixture IDLE CUT-OFF
9. Auxiliary Fuel PumpOFF
All Starts
10. BrakesHOLD
11. Right HandON MIXTURE
12. Ignition..... START then BOTH
13. Mixture ADVANCE to RICH when engine starts
14. Oil Pressure.....CHECK (green arc within 30 seconds)
15. Lights..... At night (navigation, taxiway) ON
16. Mixture LEAN to rough, then slightly rich to smooth

BEFORE TAXI CHECK

1. Seat Belts and HarnessON
2. Flaps.....RAISE
3. Avionics/Radios ON and SET (123.05 CTAF and 118.325 AWOS)
4. ATIS/AWOS/CLEARANCE OBTAIN
5. TransponderALT and SET SQUAWK (VFR - 1200)
6. Altimeter.....SET to current baro
7. Radio TEST (pull vol knob to check vol)
8. Taxi Light..... AS REQUIRED
9. Parking Brake..... RELEASE

ANNOUNCEMENT: *Cameron Traffic, Skyhawk 212CF, taxiing from the ramp to runway 31, Cameron*



TAXI CHECK

1. Brakes.....TEST (pilot and co-pilot)
2. Attitude Indicator..... TEST (level during turns)
3. Turn Coordinator.....TEST (indicates turns)
4. Heading Indicator.....TEST (indicates turns)

ENGINE RUNUP

1. Brakes.....SET and HOLD
2. Fuel Selector Valve..... BOTH
3. Elevator Trim.....SET FOR TAKEOFF
4. Flight Controls.....FREE and CORRECT
5. Flight Instruments CHECK and SET (six pack)
6. Fuel Quantity.....CHECK
1. Mixture..... BEST POWER if above 3000 DA, otherwise FULL RICH
2. Throttle 1800 RPM
3. Magnetos TEST (Max 150 drop each, 50 diff)
4. Vacuum GaugeGREEN ARC (4.5 – 5.5 in)
5. Ammeter 0 (slightly above OK)
6. Oil PressureGREEN ARC
7. Oil Temperature.....GREEN ARC
8. Annunciator Panel..... NONE ILLUMINATED
9. Idle CHECK CLOSED (engine still runs)
10. Throttle 1000 RPM
11. Throttle FrictionADJUST (if too loose or tight)

BEFORE TAKEOFF CHECK

1. Flaps0 (Normal), 10 (Soft and Short)
2. Mixture..... BEST POWER
3. Heading Indicator..... ALIGN TO COMPASS
4. Landing Light..... ON
5. Strobe..... ON
6. Radios and Navigation Equipment.....SET

- Transmitter Selector COMM 1
- Intercom Receiver Selector.....COMM 1 and COMM 2
- GPS Flight Plan entered
- Comm 1 Volume.....PULL and CHECK



NORMAL PROCEDURES CHECKLIST - C 172R

Comm 1 Active..... 123.05 (CTAF)
 Comm 1 Standby 127.4 (NorCal Approach)
 Comm 2 Active.....121.5 (Guard)
 Comm 2 Standby ATIS\AWOS Destination
 Nav 1 Active..... 155.5 (HNW) and IDENTIFY MORSE
 Nav 1 Standby..... Next Navaid
 Nav 2 Active..... 155.5 (HNW) and IDENTIFY MORSE
 Nav 2 Standby..... Next Navaid
 NAV/GPS Switch SET to appropriate NAV source
 OBS 1 Planned Radial, verify no flag
 OBS 2 Planned Radial, verify no flag

7. Autopilot.....OFF
8. Autopilot Alert Altitude SET to CRUISING ALTITUDE
9. Manual Electric Trim..... CHECK OPERATION
10. Elevator Trim SET FOR TAKEOFF
11. Passenger Seat Backs..... MOST UPRIGHT POSITION
12. Seat and Seat Belts CHECK SECURE
13. Doors and Windows CLOSED AND LOCKED



NORMAL PROCEDURES CHECKLIST - C 172R

TAKEOFF BRIEFING

- Who is performing takeoff
- Type of takeoff (Normal, rolling, soft field, short field)
- Runway you are departing, length, ground roll, abort point
- Wind direction, intensity, crosswind component and crosswind control input required
- Takeoff procedure (flap setting, mixture, power, rotation speed)
- Vx (60), Vy (79) and Best Glide (65) airspeeds
- Departure instructions or plan, noise abatement procedures
- Procedure for engine loss during takeoff roll, 100 ft, 500 ft, TPA

BEFORE ENTERING RUNWAY

1. Heading BUG SET (on course)
2. Altitude.....CRUISING ALTITUDE (recall)
3. Lights (Landing, beacon, strobes) ON
4. Camera (Transponder) ALT and SQUAWK (check)
5. Action (Fuel selector, mixture, mags) BOTH, SET, BOTH
6. Time off RECORD (on nav log)
7. BrakesRELEASE

ANNOUNCEMENT: *Cameron Traffic, Skyhawk 212CF, departing runway 31, <straight out, northwest, left downwind departure>, Cameron*

TAKEOFF

1. Aircraft ALIGNED WITH CENTERLINE
2. Heading Indicator..... CHECK ALIGNMENT TO RUNWAY
3. Brakes..... HOLD
4. Timer START
5. Throttle 1800 (Check engine instruments)
6. Brakes.....RELEASE
7. Throttle FULL (2150 RPM)
8. Rotate..... 55 KIAS
9. Climb Vy 79 KIAS
10. Flaps RETRACT (positive rate achieved)
11. Noise Abatement Procedure.....COMPLY
12. Heading ON COURSE



1,000 AGL

1. Climb.....70-85 KIAS
2. Power..... SET
3. MixtureSET (leaned above 3000 DA)
4. Engine Instruments..... CHECK
5. Landing Light.....OFF
6. Flight Plan OPEN
7. Flight Following OBTAIN

COMM: *Rancho Radio, Skyhawk 212CF listening on the Hangtown VOR*

COMM: *Skyhawk 212CF, Activate my VFR flight plan to <destination>. Time off < >,*

COMM: *Norcal Approach, Skyhawk 212CF, VFR request*

COMM: *NorCal Approach, Skyhawk 212CF, Cessna 172/G, 5 miles SW of Cameron Park at 4000, VFR to <destination>*

CRUISE

1. Power..... SET (planned RPM)
2. Mixture LEAN (using EGT, tachometer, engine roughness)
3. Engine Instruments..... CHECK (green arcs)
4. Heading indicator ALIGN TO COMPASS

DESCENT

1. Mixture ENRICHEN (slowly)
2. Power..... 2000
3. ATIS/AWOS OBTAIN
4. Altimeter..... SET
5. Heading Indicator ALIGN TO COMPASS



APPROACH BRIEFING

- Type of Approach & Landing (Visual, Instrument, Short, Soft)
- Pattern Entry flight path
- Landing Runway, length, distance required
- Field Elevation
- Traffic Pattern Altitude
- Winds (left or right crosswind? tailwind on downwind or base?)
- Final Approach Speed
- Aiming Point
- Touchdown Point

ANNOUNCEMENT: *Cameron Traffic, Skyhawk 212CF, 10 miles to the southwest, 2500, for landing, Cameron*

ANNOUNCEMENT: *Cameron Traffic, Skyhawk 212CF, 5 miles to the southwest, 2500, for landing, Cameron*

ANNOUNCEMENT: *Cameron Traffic, Skyhawk 212CF, entering 45 for left traffic, runway 31, Cameron*

BEFORE LANDING

1. Autopilot OFF
2. Landing Light ON
3. Gas - Fuel Selector Valve..... BOTH
4. Undercarriage DOWN and LOCKED
5. Mixture..... SET for destination density altitude
6. Power 2000 RPM
7. Seat belts and harness ON
8. Airspeed 80-85 KIAS

ANNOUNCEMENT: *Cameron Traffic, Skyhawk 212CF, left downwind, runway 31, Cameron*



DOWNWIND - ABEAM TOUCHDOWN POINT

1. Power..... 1500 RPM
2. Pitch..... DOWN
3. Flaps..... EXTEND 10
4. Pitch..... 75 KIAS

BASE

1. Flaps..... EXTEND 20
2. Airspeed..... 70 KIAS

ANNOUNCEMENT: *Cameron Traffic, Skyhawk 212CF, left base, runway 31, Cameron*

FINAL

1. Flaps..... EXTEND 30 (landing assured)
2. Pitch..... 65 KIAS (trimmed)

ANNOUNCEMENT: *Cameron Traffic, Skyhawk 212CF, final, runway 31, Cameron*

STABILIZED APPROACH CHECK

- Checklist..... COMPLETE
- Flight path FIXED, no vertical or lateral drift
- Landing configuration CORRECT
- Airspeed PROPER, STABLE, TRIMMED
- Power SET for descent
- Sink rate NOT ABNORMAL (approx. -500 fpm)

GO AROUND

1. Power..... FULL
2. Flaps..... RAISE 20
3. Airspeed..... 55 KIAS
4. Positive Rate Climb..... ESTABLISH
5. Flaps..... RAISE to 10° UNTIL CLEAR OF OBSTACLES



AFTER LANDING

1. Flaps..... RETRACT
2. Trim..... TAKEOFF
3. Mixture LEAN to rough, then slightly rich to smooth
4. Strobes OFF
5. Landing Light OFF
6. Taxi Light AS REQUIRED
7. Pitot Heat OFF

ANNOUNCEMENT: *Cameron Traffic, Skyhawk 212CF, clear of runway 31, taxiing to ramp, Cameron*

SECURING AIRPLANE (SHUTDOWN)

1. Throttle 1000 RPM
2. Transponder..... SQUAWK 1200
3. Avionics Master Switch OFF
4. Electrical Equipment OFF
5. Interior and Exterior Lights OFF
6. Magnetos CHECK LEFT and RIGHT for broken P-lead
7. Mixture..... IDLE CUTOFF
8. Ignition OFF
9. Master Switch OFF

POST-FLIGHT

1. Flight Plan..... CLOSE
2. Fuel Selector Valve..... LEFT or RIGHT to prevent crossfeed
3. Hobbs and Tach Time..... RECORD
4. Control Wheel Lock..... INSTALL
5. Chocks INSTALL
6. Tie Downs..... HOOK UP
7. Walk around aircraft..... DAMAGE CHECK
8. Pitot Cover INSTALL
9. Leading Edges..... DEBUG
10. Windshield CLEAN
11. Doors..... CLOSED and LOCKED



ABNORMAL PROCEDURES CHECKLIST - C 172R

ENGINE FAILURE DURING TAKEOFF ROLL

1. Throttle IDLE
2. Brakes APPLY
3. Wing Flaps RETRACT
4. Mixture IDLE CUT-OFF
5. Ignition Switch OFF
6. Master Switch OFF

ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF

1. Airspeed 65 KIAS (Flaps up) 60 KIAS (Flaps down)
2. Mixture IDLE CUT-OFF
3. Fuel Shutoff PULL FULL OFF
4. Ignition Switch OFF
5. Wing Flaps AS REQUIRED
6. Master Switch OFF
7. Cabin Door UNLATCH PRIOR TO TOUCHDOWN
8. Land STRAIGHT AHEAD

ENGINE FAILURE IN FLIGHT

1. Airspeed 65 KIAS
2. Fuel Shutoff Valve ON (Push Full In)
3. Fuel Selector Valve BOTH
4. Auxiliary Fuel Pump ON
5. Mixture RICH
6. Ignition Switch LEFT, RIGHT, BOTH, START (if prop stopped)
7. Auxiliary Fuel Pump OFF

EMERGENCY LANDING WITHOUT ENGINE POWER

1. Airspeed 65 KIAS (flaps up) 60 KIAS (flaps down)
2. Mixture IDLE CUT-OFF
3. Fuel Shutoff Valve PULL FULL OFF
4. Ignition Switch OFF
5. Wing Flaps AS REQUIRED (30 recommended)
6. Master Switch OFF
7. Doors UNLATCH PRIOR TO TOUCHDOWN
8. Touchdown SLIGHTLY TAIL LOW
9. Brakes APPLY HEAVILY



ABNORMAL PROCEDURES CHECKLIST - C 172R

ENGINE FIRE DURING START ON GROUND

1. Cranking CONTINUE
If engine starts:
2. Throttle 1800 RPM
3. Engine SHUTDOWN and inspect for damage
If engine fails to start:
4. Throttle FULL OPEN
5. Mixture IDLE CUT-OFF
6. Cranking CONTINUE for two minutes
7. Fuel Shutoff Valve PULL FULL OFF
8. Fire Extinguisher OBTAIN
9. Master Switch OFF
10. Ignition Switch OFF
11. Aircraft EVACUATE
12. Fire EXTINGUISH
13. Fire Damage INSPECT

ENGINE FIRE IN FLIGHT

1. Mixture IDLE CUT-OFF
2. Fuel Shutoff Valve PULL FULL OFF
3. Auxiliary Fuel Pump OFF
4. Master Switch OFF
5. Cabin Heat and Air OFF (except overhead vents)
6. Airspeed 100 KIAS
7. Forced Landing EXECUTE

ELECTRICAL FIRE IN FLIGHT

1. Master Switch OFF
2. Vents/Cabin Air/Heat CLOSED
3. Fire Extinguisher ACTIVATE
4. Avionics Master Switch OFF
5. All other switches (except ignition) OFF
6. Vents/Cabin Air/Heat OPEN
If fire is out, and electrical power is necessary for flight:
7. Master Switch ON
8. Circuit Breakers CHECK (do not reset)
9. Radio/Electrical Equipment ON (one at a time, until short is ID'd)



BEFORE MANEUVER CHECK (HASEL)

1. Height 3000 AGL OR BETTER
2. Area CLEAR OF TERRAIN, FORCED LANDING SITE ID'D
3. Security SEAT BELTS, ITEMS SECURE, FLAPS UP
4. Engine FLOW (Fuel selector, mixture, carb heat, gauges)
5. Lookout CLEARING TRUNS (two 90 degree turns)

STEEP TURNS

1. HASEL PERFORM
2. Throttle 2100 RPM
3. Airspeed 98 KIAS (trimmed)
4. Heading NOTE and BUG
5. Wing CLEAR
6. Turn ROLL into 45° bank
7. Altitude and Airspeed MAINTAIN (back pressure, +100 RPM)
8. Rollout 23 degrees prior to entry heading
9. Altitude REDUCE back pressure
10. Throttle 2100 RPM

SLOW FLIGHT

1. HASEL PERFORM
 2. Throttle 1500 RPM
 3. Altitude Maintain
 4. Flaps INCREMENTALLY to FULL
 5. Airspeed 40 KIAS (horn on)
 6. Throttle AS REQUIRED to maintain altitude
- Recovery*
7. Throttle FULL OPEN
 8. Flaps RAISE to 20°
 9. Airspeed 60 KIAS (Vx)
 10. Flaps RAISE INCREMENTALLY
 11. Altitude MAINTAIN



POWER-OFF STALL

1. HASEL PERFORM
2. Throttle 1500 RPM
3. Altitude Maintain
4. Flaps INCREMENTALLY to FULL
5. Airspeed 60 KIAS
6. Throttle SLOWLY to IDLE
7. Descend 60 KIAS (trimmed)
8. Pitch SLOWLY to LANDING ATTITUDE
9. Back Pressure HOLD to maintain landing attitude
10. At Stall Recognition .. REDUCE ANGLE OF ATTACK, ADD FULL POWER
11. Wings LEVEL using rudder (aileron if turning)
12. Flaps RAISE to 20°
13. Airspeed 60 KIAS (Vx)
14. Flaps RAISE INCREMENTALLY
15. Altitude RECOVER lost altitude

POWER-ON STALL

1. HASEL PERFORM
2. Throttle 1500 RPM
3. Altitude Maintain
4. Pitch and Trim for departure attitude 60 KIAS
5. Throttle FULL OPEN
6. Pitch SLOWLY INCREASE (approx. 15° nose up)
7. At Stall Recognition REDUCE ANGLE OF ATTACK to horizon
8. Airspeed 79 KIAS (Vy)
9. Altitude RECOVER lost altitude
10. Throttle AS REQUIRED