RISK MANAGEMENT

Pilot	Recent Experience Recent Skill Level Illness Medication Stress Alcohol Fatigue Eating
Aircraft	Airworthiness (AROW) 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

Vr	55 KIAS	Vg	65 KIAS
Vx	64 KIAS	Vy	78 KIAS
Va	97 KIAS (2300 lbs)	Va	89 KIAS (1950 lbs)

CFI DUSTIN NORMAL PROCEDURES CHECKLIST - C 172M

PREFLIGHT INSPECTION

CABIN

1. Hobbs and Tach Time.....RECORD ON SHEET
2. Airworthiness.....Airworthy Cert, Registration, Op Limits, W&B
3. Control Wheel Lock..... REMOVE
4. Ignition Switch (key on glare shield) ..... OFF
5. Radio/Avionics Master Switch ..... OFF
6. Master Switch (double red rocker switch)..... ON
7. Fuel Quantity Indicators (gas gauge) .....CHECK
8. Flaps .....EXTEND
9. Interior and Exterior Lights ..... CHECK (working condition)
10. Pitot Heat (IFR only) ..... TEST (heat within 30 seconds)
11. Master Switch ..... OFF
12. Baggage Door.....CHECK (closed and locked)

EMPENNAGE

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

RIGHT WING TRAILING EDGE

1. Flaps ..... SECURE (light tug)
2. Aileron..... CHECK (freedom of movement, hinges)

RIGHT WING

1. Wing Tie Down..... DISCONNECT
2. Main Wheel Tire..... CHECK (inflation, wear, cracks), REMOVE CHOCK
3. Fuel Sump.....DRAIN (check for contaminants)
4. Fuel Quantity.....MEASURE gallons
5. Fuel Filler Cap.....SECURE (aligned with longitudinal axis)

NOSE

1. Engine Oil Level.....CHECK (8 max, 6 min)
2. Fuel Strainer Knob..... PULL 4 SECONDS, smells of fuel

3. Engine Cooling Inlets ..... CLEAR of obstructions
4. Alternator Belt .....CHECK (present, looseness)
5. Propeller and Spinner .....CHECK (nicks, cracks)
6. Landing Light..... CHECK (filament)
7. Carburetor Air Filter ..... CHECK (clean)
8. Exhaust Pipe .....SECURE (light tug)
9. Nose Wheel Strut and Tire ..... CHECK (inflation, wear, cracks)
10. Static Source Opening .....CHECK (clear)

LEFT WING

1. Main Wheel Tire .....CHECK (inflation, wear, cracks), REMOVE CHOCK
2. Fuel Sump ..... DRAIN (check for contaminants)
3. Fuel Quantity .....MEASURE gallons
4. Fuel Filler Cap ..... SECURE (aligned with longitudinal axis)

LEFT WING LEADING EDGE

1. Pitot Tube Cover .....REMOVE, CHECK OPENING
2. Fuel Tank Vent Opening ..... CHECK (clear)
3. Stall Warning Opening..... CHECK (apply light suction)
4. Wing Tie Down .....DISCONNECT

LEFT WING TRAILING EDGE

1. Aileron .....CHECK (freedom of movement, hinges)
2. Flap .....SECURE (light tug)

PASSENGER BRIEFING

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

BEFORE ENGINE START

1. Preflight inspection..... COMPLETE
2. Seat, belts shoulder harnesses..... ADJUST and LOCK

CFI DUSTIN NORMAL PROCEDURES CHECKLIST - C 172M

3. Seat Track and Back .....LOCKED
4. Fuel Selector Valve..... BOTH
5. Avionics/Radios… ..... OFF
6. Electrical Equipment (switches)..... OFF
7. Brakes..... TEST and SET
8. Circuit Breakers… ..... CHECK IN
9. Alternate Static (IFR only) ....CHECK (slight dip in altimeter, then rise)

ENGINE START

1. Beacon..... ON
2. Carb heat (black knob) ..... OFF (pushed in)
3. Mixture (red knob)..... FULL RICH (pushed in)
4. Throttle (silver knob) .....CRACKED (1/8 inch finger method)
5. Prime .....Cold engine – 3 SHOTS, Warm engine – 1 SHOT
6. Brakes..... HOLD
7. Prop..... SHOUT CLEAR PROP, WAIT, LOOK
8. Master Switch (double red rocker switch)..... ON
9. Right Hand.....ON THROTTLE, ready to pull it back
10. Ignition .....START then BOTH
11. Oil Pressure ..... CHECK (green arc within 30 seconds)
12. Lights .....At night (navigation, taxiway) ON
13. Mixture.....LEAN 1” inch

BEFORE TAXI CHECK

1. Seat Belts and Harness..... ON
2. Flaps ..... RAISE
3. Avionics/Radios.....ON and SET (122.8 CTAF and 128.125 AWOS)
4. ATIS/AWOS/CLEARANCE.....OBTAIN
5. Transponder..... ALT 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: *Placerville Traffic, Skyhawk 951MC, taxiing from the ramp to runway 23, Placerville*

CFI DUSTIN **NORMAL PROCEDURES CHECKLIST - C 172M**

TAXI CHECK

1. Brakes ..... TEST (pilot and co-piot)
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. Trim..... TAKEOFF setting
4. Flight Controls ..... FREE and CORRECT
5. Flight Instruments .....CHECK and SET (six pack)
6. Fuel Quantity ..... CHECK
7. Primer .....IN & LOCKED
8. Mixture ..... BEST POWER (lean at full throttle)
9. Throttle ..... 1700 RPM
10. Magnetos.....TEST (Max 125 drop each, 50 diff)
11. Carb Heat.....TEST (RPM drop, no rise)
12. Vacuum Gauge ..... GREEN ARC (4.5 – 5.5 in)
13. Ammeter.....0 (slightly above OK)
14. Oil Pressure..... GREEN ARC
15. Oil Temperature ..... GREEN ARC
16. Throttle.....CHECK CLOSED (engine still runs)
17. Throttle..... 1,000 RPM
18. Throttle Friction..... ADJUST (if too loose or tight)

CFI DUSTIN **NORMAL PROCEDURES CHECKLIST - C 172M**

BEFORE TAKEOFF CHECK

1. Flaps .....0 (Normal, Short), 10 (Soft)
2. Mixture..... BEST POWER
3. Carb Heat ..... OFF
4. Heading Indicator.....ALIGN TO COMPASS
5. Landing Light ..... ON
6. Strobe..... ON
7. Radios and Navigation Equipment.....SET

   Transmitter Selector .....COMM 1
   Intercom Receiver Selector..... COMM 1 to Headphones
   Comm 1 Volume.....PULL and CHECK
   Comm 1 Active .....122.8 (CTAF)
   Comm 1 Standby..... 127.4 (NorCal Approach)
   Comm 2 Active .....122.1 (Rancho Radio)
   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
   OBS 1.....Planned Radial, verify no flag
   OBS 2.....Planned Radial, verify no flag

8. Passenger Seat Backs ..... MOST UPRIGHT POSITION
9. Seat and Seat Belts..... CHECK SECURE
10. Doors and Windows.....CLOSED AND LOCKED

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 (64), Vy (78) and Best Glide (65) airspeeds
- Departure instructions or plan, noise abatement procedures
- Procedure for engine loss during takeoff roll, 50 ft, 500 ft, above

I will be performing this normal takeoff. We will depart on runway 23, which is 3910 ft long, our ground roll will be 1270 ft long, I will abort the takeoff if not airborne by the highspeed taxiway. The wind is from 180 at 8 knots, which is a 6 knots crosswind component; I'll hold full left aileron at the start of the roll. Flaps will be at 0, mixture leaned for density altitude, full power, rotate at 55 knots and climbout at Vy 78 knots. After takeoff, we'll make 10 degree left turn for noise abatement, then a further left turn to heading 210 and up to 4500.

If we have any problems before rotation or with adequate runway remaining after liftoff, we will abort. Standard emergency procedures will be used in the event of engine failure without adequate runway remaining. Best glide is 65 KIAS. We won't even think about returning to this airport unless we are at 1,000 AGL. Any questions or comments?

BEFORE ENTERING RUNWAY

ANNOUNCEMENT: *Placerville Traffic, Skyhawk 80168, departing runway 23, <straight out, northwest, left downwind departure, closed traffic>, Placerville*

1. Heading.....BUG SET (on course)
2. Altitude..... CRUISING ALTITUDE (recall)
3. Transponder .....ALT and SQUAWK (check)
4. Time off ..... RECORD (on nav log)
5. Brakes ..... RELEASE

CFI DUSTIN NORMAL PROCEDURES CHECKLIST - C 172M

TAKEOFF

1. Aircraft ..... ALIGNED WITH CENTERLINE
2. Timer ..... START
3. Heading Indicator..... CHECK ALIGNMENT TO RUNWAY
4. Throttle .....FULL (four seconds)
5. RPM..... 2300 (CHECK)
6. Oil Pressure/Temperature .....GREEN ARC
7. Rotate..... 55 KIAS
8. Climb Vy ..... 78 KIAS
9. Flaps .....RETRACT (positive rate achieved)
10. Noise Abatement Procedure.....COMPLY
11. Heading .....ON COURSE

1,000 AGL

1. Climb .....70-90 KIAS
2. Power .....SET
3. Mixture.....SET (leaned above 3000 DA)
4. Engine Instruments .....CHECK
5. Landing Light ..... OFF
6. Flight Plan..... OPEN
7. Flight Following .....OBTAIN

COMM: *Rancho Radio, Skyhawk 80168 listening on the Hangtown VOR*

COMM: *Skyhawk 80168, Activate my VFR flight plan to <destination>. Time off < >,*

COMM: *Norcal Approach, Skyhawk 80168, VFR request*

COMM: *NorCal Approach, Skyhawk 80168, Cessna 172/U, 5 miles SW HNW, VFR to <destination>*

CRUISE

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

DESCENT

1. Mixture ..... ENRICHEN (slowly)
2. Power 2200
3. ATIS/AWOS ..... OBTAIN
4. Altimeter ..... SET
5. Heading Indicator ..... ALIGN TO COMPASS

APPROACH BRIEFING

- Type of Approach & Landing (Visual, Instrument, Short, Soft)
- 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

I will be performing a normal landing at Placerville. We'll be landing runway 23, which is 3910 ft long, and we'll need approximately 1400 ft. The field elevation is 2585, the pattern altitude is 3385 (800 ft pattern). The winds are from 180 at 8 knots, right crosswind on downwind, tailwind on base, left crosswind on final. Final approach speed is 60 knots, aim point is first stripe after the numbers, touchdown spot is the second stripe.

ANNOUNCEMENT: *Placerville Traffic, Skyhawk 80168, 10 miles to the southwest, 4500, for landing, Placerville*

ANNOUNCEMENT: *Placerville Traffic, Skyhawk 80168, 5 miles to the southwest, 4000, for landing, Placerville*

BEFORE LANDING

1. Seat and Seatbacks ..... MOST UPRIGHT POSITION
2. Seat belts and harness ..... ON
3. Fuel Selector Valve ..... BOTH
4. Mixture ..... SET for destination density altitude
5. Autopilot ..... OFF

CFI DUSTIN NORMAL PROCEDURES CHECKLIST - C 172M

6. Carburetor Heat ..... ON
7. Power ..... 2000 RPM
8. Airspeed ..... 80-85 KIAS

ANNOUNCEMENT: *Placerville Traffic, Skyhawk 80168, entering 45 for left traffic, runway 23, Placerville*

DOWNWIND - ABEAM TOUCHDOWN POINT

1. Power ..... 1500 RPM
2. Flaps ..... EXTEND 10
3. Airspeed ..... 75 KIAS

ANNOUNCEMENT: *Placerville Traffic, Skyhawk 80168, left downwind, runway 23, Placerville*

BASE

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

ANNOUNCEMENT: *Placerville Traffic, Skyhawk 80168, left base, runway 23, Placerville*

FINAL

1. Flaps ..... EXTEND 30 (landing assured)
2. Pitch ..... 60 KIAS (trimmed)

ANNOUNCEMENT: *Placerville Traffic, Skyhawk 80168, final, runway 23, Placerville*

GO AROUND

1. Power ..... FULL
2. Flaps ..... RAISE 20
3. Airspeed ..... 55 KIAS
4. Positive Rate Climb ..... ESTABLISH
5. Flaps ..... RAISE SLOWLY

ANNOUNCEMENT: *Placerville Traffic, Skyhawk 80168, upwind for left traffic, runway 23, Placerville*

CFI DUSTIN **NORMAL PROCEDURES CHECKLIST - C 172M**

AFTER LANDING

1. **Flaps.....RETRACT**
2. **Carb Heat .....OFF**
3. **Trim.....TAKEOFF**
4. Strobes.....OFF
5. Landing Light.....OFF
6. Taxi Light..... AS REQUIRED
7. Pitot Heat.....OFF

ANNOUNCEMENT: *Placerville Traffic, Skyhawk 80168, clear of runway 23, taxiing to ramp, Placerville*

SECURING AIRPLANE (SHUTDOWN)

1. Throttle..... 1000 RPM
2. Interior and Exterior Lights.....OFF
3. Radios/Avionics .....OFF
4. Magnetos.....CHECK LEFT and RIGHT for broken P-lead
5. Mixture ..... IDLE CUTOFF
6. Ignition.....OFF
7. Master Switch.....OFF
8. Fuel Selector Valve ..... LEFT or RIGHT
9. Hobbs and Tach Time ..... RECORD
10. Control Wheel Lock ..... INSTALL
11. Chocks..... INSTALL
12. Tie Downs .....HOOK UP
13. Pitot Cover..... INSTALL
14. Doors ..... CLOSED and LOCKED
15. Flight Plan .....CLOSE

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 Selector Valve ..... 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. Carburetor Heat ..... ON
3. Fuel Selector Valve ..... BOTH
4. Mixture ..... RICH
5. Ignition Switch ..... LEFT, RIGHT, BOTH, START (if prop stopped)
6. Primer ..... IN and LOCKED

EMERGENCY LANDING WITHOUT ENGINE POWER

1. Airspeed ..... 65 KIAS (flaps up) 60 KIAS (flaps down)
2. Mixture ..... IDLE CUT-OFF
3. Fuel Selector Valve ..... OFF
4. Ignition Switch ..... OFF
5. Wing Flaps ..... AS REQUIRED (40 recommended)
6. Master Switch ..... OFF
7. Doors ..... UNLATCH PRIOR TO TOUCHDOWN
8. Touchdown ..... SLIGHTLY TAIL LOW
9. Brakes ..... APPLY HEAVILY

CFI DUSTIN ABNORMAL PROCEDURES CHECKLIST - C 172M

ENGINE FIRE DURING START ON GROUND

1. Cranking ..... CONTINUE

If engine starts:

2. Throttle ..... 1700 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. Fire Extinguisher ..... OBTAIN
8. Master Switch ..... OFF
9. Ignition Switch ..... OFF
10. Fuel Selector Valve ..... OFF
11. Aircraft ..... EVACUATE
12. Fire ..... EXTINGUISH
13. Fire Damage ..... INSPECT

ENGINE FIRE IN FLIGHT

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

ELECTRICAL FIRE IN FLIGHT

1. Master Switch ..... OFF
2. All other switches (except ignition) ..... OFF
3. Vents/Cabin Air/Heat ..... CLOSED
4. Fire Extinguisher ..... ACTIVATE

If fire is out, and electrical power is necessary for flight:

5. Master Switch ..... ON
6. Circuit Breakers ..... CHECK (do not reset)
7. Radio/Electrical Equipment ..... ON (one at a time, until short is ID'd)
8. Vents/Cabin Air/Heat ..... OPEN
9. Land ..... AS SOON AS PRACTICAL

CFI DUSTIN **MANEUVERS CHECKLIST - C 172M**

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 ..... 89 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. Carb Heat ..... ON
4. Altitude ..... Maintain
5. Flaps ..... INCREMENTALLY to FULL
6. Airspeed ..... 40 KIAS (horn on)
7. Throttle ..... AS REQUIRED to maintain altitude

Recovery

8. Throttle ..... FULL OPEN
9. Carb Heat ..... OFF
10. Flaps ..... RAISE to 20°
11. Airspeed ..... 64 KIAS (Vx)
12. Flaps ..... RAISE INCREMENTALLY
13. Altitude ..... MAINTAIN

CFI DUSTIN **MANEUVERS CHECKLIST - C 172M**

POWER-OFF STALL

1. HASEL ..... PERFORM
2. Throttle ..... 1500 RPM
3. Carb Heat ..... ON
4. Altitude ..... Maintain
5. Flaps ..... INCREMENTALLY to FULL
6. Airspeed ..... 60 KIAS
7. Throttle ..... SLOWLY to IDLE
8. Descend ..... 60 KIAS (trimmed)
9. Pitch ..... SLOWLY to LANDING ATTITUDE
10. Back Pressure ..... HOLD to maintain landing attitude
11. At Stall Recognition .. REDUCE ANGLE OF ATTACK, ADD FULL POWER
12. Carb Heat ..... OFF
13. Wings ..... LEVEL using rudder (aileron if turning)
14. Flaps ..... RAISE to 20°
15. Airspeed ..... 64 KIAS (Vx)
16. Flaps ..... RAISE INCREMENTALLY
17. Altitude ..... RECOVER lost altitude

POWER-ON STALL

1. HASEL ..... PERFORM
2. Throttle ..... 1500 RPM
3. Carb Heat ..... ON
4. Altitude ..... Maintain
5. Airspeed ..... 64 KIAS
6. Throttle ..... FULL OPEN
7. Carb Heat ..... OFF
8. Pitch ..... SLOWLY INCREASE (approx. 15° nose up)
9. At Stall Recognition ..... REDUCE ANGLE OF ATTACK to horizon
10. Airspeed ..... 78 KIAS (Vy)
11. Altitude ..... RECOVER lost altitude
12. Throttle ..... AS REQUIRED