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	68 KIAS
Vx	62 KIAS	Vy	74 KIAS
Va	105 KIAS (25500 lbs)	Va	98 KIAS (2200 lbs)

CFI DUSTIN NORMAL PROCEDURES CHECKLIST - C 172S

PREFLIGHT INSPECTION

CABIN

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

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, balance)

RIGHT WING

1. Wing Tie Down ..... DISCONNECT

2. Main Wheel Tire ....CHECK (inflation, wear, cracks), REMOVE CHOCK
3. Fuel Sump ..... FIVE DRAINS (check for contaminants)
4. Fuel Quantity .....MEASURE gallons
5. 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 Belt.....CHECK (present, looseness)
5. Propeller and Spinner.....CHECK (nicks, cracks)
6. Carburetor Air Filter ..... CHECK (clean)
7. Exhaust Pipe .....SECURE (light tug)
8. Nose Wheel Strut and Tire ..... CHECK (inflation, wear, cracks)
9. Static Source Opening ..... CHECK (clear)

LEFT WING

1. Main Wheel Tire .....CHECK (inflation, wear, cracks), REMOVE CHOCK
2. Fuel Sump ..... FIVE DRAINS (check for contaminants)
3. Fuel Quantity .....MEASURE gallons
4. 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 Down .....DISCONNECT

LEFT WING TRAILING EDGE

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

CFI DUSTIN NORMAL PROCEDURES CHECKLIST - C 172S

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
3. Seat Track and Back .....LOCKED
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

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

ENGINE START

1. Beacon ..... ON
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 Pump ..... ON
7. Mixture ..... FULL RICH until stable fuel flow (3-5 seconds)
8. Mixture ..... IDLE CUT-OFF
9. Auxiliary Fuel Pump ..... OFF

   All Starts
10. Brakes ..... HOLD
11. Right Hand ..... ON 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 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 172S**

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. Elevator Trim ..... SET FOR TAKEOFF
4. Flight Controls ..... FREE and CORRECT
5. Flight Instruments ..... CHECK and SET (six pack)
6. Fuel Quantity ..... CHECK
7. Mixture ..... BEST POWER (lean at full throttle)
8. Throttle ..... 1800 RPM
9. Magnetos ..... TEST (Max 150 drop each, 50 diff)
10. Vacuum Gauge ..... GREEN ARC (4.5 – 5.5 in)
11. Ammeter ..... 0 (slightly above OK)
12. Oil Pressure ..... GREEN ARC
13. Oil Temperature ..... GREEN ARC
14. Annunciator Panel ..... NONE ILLUMINATED
15. Idle ..... CHECK CLOSED (engine still runs)
16. Throttle ..... 1000 RPM
17. Throttle Friction ..... ADJUST (if too loose or tight)

BEFORE TAKEOFF CHECK

1. Flaps ..... 0 (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
   GPS ..... Flight Plan entered
   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
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

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 (62), Vy (74) and Best Glide (68) airspeeds
- Departure instructions or plan, noise abatement procedures
- Procedure for engine loss during takeoff roll, 50 ft, 500 ft, above

CFI DUSTIN NORMAL PROCEDURES CHECKLIST - C 172S

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 74 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 procedure will be used in the event of engine failure without adequate runway remaining. Best glide is 68 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 951MC, 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

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 ..... 74 KIAS
9. Flaps .....RETRACT (positive rate achieved)
10. Noise Abatement Procedure.....COMPLY

11. Heading.....ON COURSE

1,000 AGL

1. Climb.....70-85 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 951MC listening on the Hangtown VOR*

COMM: *Skyhawk 951MC, Activate my VFR flight plan to <destination>. Time off < >,*

COMM: *Norcal Approach, Skyhawk 951MC, VFR request*

COMM: *NorCal Approach, Skyhawk 951MC, Cessna 172/U, 5 miles SW HNW, 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.....2200
3. ATIS/AWOS.....OBTAIN
4. Altimeter.....SET
5. Heading Indicator.....ALIGN TO COMPASS

CFI DUSTIN NORMAL PROCEDURES CHECKLIST - C 172S

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 number, touchdown spot is the second stripe.

ANNOUNCEMENT: *Placerville Traffic, Skyhawk 951MC, 10 miles to the southwest, 4500, for landing, Placerville*

ANNOUNCEMENT: *Placerville Traffic, Skyhawk 951MC, 5 miles to the southwest, 4000, for landing, Placerville*

BEFORE LANDING

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

ANNOUNCEMENT: *Placerville Traffic, Skyhawk 951MC, entering 45 for left traffic, runway 23, Placerville*

DOWNWIND - ABEAM TOUCHDOWN POINT

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

ANNOUNCEMENT: *Placerville Traffic, Skyhawk 951MC, left downwind, runway 23, Placerville*

BASE

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

ANNOUNCEMENT: *Placerville Traffic, Skyhawk 951MC, left base, runway 23, Placerville*

FINAL

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

ANNOUNCEMENT: *Placerville Traffic, Skyhawk 951MC, final, runway 23, Placerville*

GO AROUND

1. Power..... FULL
2. Flaps.....RAISE 20
3. Airspeed.....60 KIAS
4. Positive Rate Climb.....ESTABLISH
5. Flaps..... RAISE SLOWLY

ANNOUNCEMENT: *Placerville Traffic, Skyhawk 951MC, upwind for left traffic, runway 23, Placerville*

CFI DUSTIN NORMAL PROCEDURES CHECKLIST - C 172S

AFTER LANDING

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

ANNOUNCEMENT: *Placerville Traffic, Skyhawk 951MC, clear of runway 23, taxiing to ramp, Placerville*

SECURING AIRPLANE (SHUTDOWN)

1. Throttle .....1000 RPM
2. Electrical Equipment ..... OFF
3. Interior and Exterior Lights ..... OFF
4. Avionics Master Switch ..... OFF
5. Magnetos ..... CHECK LEFT and RIGHT for broken P-lead
6. Mixture.....IDLE CUTOFF
7. Ignition ..... OFF
8. Master Switch ..... OFF
9. Fuel Selector Valve..... LEFT or RIGHT to prevent crossfeed
10. Hobbs and Tach Time.....RECORD
11. Control Wheel Lock..... INSTALL
12. Chocks ..... INSTALL
13. Tie Downs.....HOOK UP
14. Pitot Cover ..... INSTALL
15. Doors.....CLOSED and LOCKED
16. 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 ..... 70 KIAS (Flaps up) 65 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 ..... 68 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 ..... 70 KIAS (flaps up) 65 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

CFI DUSTIN ABNORMAL PROCEDURES CHECKLIST - C 172S

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)

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

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 ..... 62 KIAS (Vx)
10. Flaps ..... RAISE INCREMENTALLY
11. Altitude ..... MAINTAIN

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

POWER-OFF STALL

1. HASEL ..... PERFORM
2. Throttle ..... 1500 RPM
3. Altitude ..... Maintain
4. Flaps ..... INCREMENTALLY to FULL
5. Airspeed ..... 65 KIAS
6. Throttle ..... SLOWLY to IDLE
7. Descend ..... 65 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 ..... 62 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. Airspeed ..... 62 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 ..... 74 KIAS (Vy)
9. Altitude ..... RECOVER lost altitude
10. Throttle ..... AS REQUIRED