



# Aircraft Checklist

## Cessna 172S

This is an abbreviated checklist. Most explanatory items, notes cautions and warnings have been omitted for brevity. Procedures in red/bold text of this checklist should be committed to memory. All performance speeds should be computed prior to flight using the Aircraft Owner's Manual. This checklist is for training purposes only; users must be familiar with and operate in accordance with the official Aircraft Owner's Manual.

## Cessna 172S Preflight Checklist

### Cabin Preflight Inspection

#### REMOVE GUST LOCKS & PITOT COVER IF INSTALLED

1. Fuel Quantities ..... CHECK
2. Inspections ..... CHECK DATES and TIMES
3. Weight and CG ..... WITHIN LIMITS
4. Documents ..... CHECK
5. Control Wheel Lock..... REMOVE
6. Ignition Switch..... OFF
7. Avionics Switch..... OFF
8. Master Switch ..... ON
9. Avionics Switch..... ON
10. Avionics Cooling Fan ..... CHECK ON
11. Avionics Switch..... OFF
12. Fuel Quantity Indicators ..... CHECK
13. Flaps..... EXTEND
14. Interior and Exterior Lights ..... CHECK
15. Pitot Heat ..... CHECK THEN OFF
16. Master Switch ..... OFF
17. Fuel Shutoff Valve..... ON
18. Fire Extinguisher..... CHECK CHARGE

## EXTERIOR PREFLIGHT INSPECTION

### Empennage

1. Antennas ..... CHECK
2. Baggage Door ..... LOCKED
3. Autopilot Static Port ..... CHECK
4. Left Side of Fuselage ..... CHECK
5. Control Surfaces..... CHECK
6. Tail Tie-down.....REMOVE
7. Beacon/Position Light..... CHECK
8. Right Side of Fuselage ..... CHECK

### Right Wing

1. Flap and Aileron ..... CHECK
2. Position Light..... CHECK
3. Strobe ..... CHECK
4. Wing..... CHECK
5. Wing Tie-down .....REMOVE
6. Wing Root Vents..... CHECK
7. Wheel Assembly ..... CHECK
8. Fuel Tank Sumps ..... (5) DRAIN and CHECK
9. Fuel Quantity ..... CHECK/ CAP SECURE

## Nose

1. Fuel Sumps.....(3) DRAIN and CHECK
2. Oil Quantity ..... (5-8 quarts) CHECK
3. Oil Cooler..... CHECK
4. Cowling, Propeller and Spinner..... CHECK
5. Air Inlets ..... CLEAR
6. Alternator Belt ..... CHECK
7. Air Filter..... CHECK
8. Nose Wheel Assembly..... CHECK
9. Static Port..... CHECK
10. Windshield ..... CLEAN and CHECK

## Left Wing

1. Fuel Tank Sumps ..... (5) DRAIN and CHECK
2. Fuel Quantity ..... CHECK / CAP SECURE
3. Wing Root Vents..... CHECK
4. Pitot Tube..... CHECK
5. Stall Warning Opening .....CHECK for BLOCKAGE
6. Wing Tie-down .....REMOVE
7. Fuel Tank Vent .....CHECK for BLOCKAGE
8. Wing..... CHECK
9. Position Light..... CHECK
10. Strobe ..... CHECK
11. Flap and Aileron ..... CHECK
12. Wheel Assembly ..... CHECK

## Before Starting Engine

1. Preflight Inspection..... COMPLETE
2. Passenger Briefing ..... COMPLETE
3. Seat Belts/ Shoulder Harness ..... ADJUSTED/ SECURE
4. Fuel Shutoff Valve..... ON
5. Fuel Selector Valve..... BOTH
6. Circuit Breakers ..... CHECK IN
7. Avionics Master Switch..... OFF
8. Brakes ..... TEST and SET

## V Speeds

V <sub>so</sub> .....	40 KIAS
V <sub>s</sub> .....	48 KIAS
V <sub>r</sub> .....	55 KIAS
V <sub>x</sub> .....Sea Level.....	62 KIAS
10,000.....	67 KIAS
V <sub>y</sub> .....Sea Level.....	74 KIAS
10,000.....	72 KIAS
V <sub>fe</sub> ..... 10° .....	110 KIAS
Full .....	85 KIAS
V <sub>a</sub> .....2550Lbs.....	105 KIAS
2200Lbs.....	98 KIAS
1900Lbs.....	90 KIAS
V <sub>no</sub> .....	129 KIAS
V <sub>ne</sub> .....	163 KIAS

## Starting Engine

1. Mixture..... IDLE CUT-OFF
2. Throttle..... OPEN ¼ to ½ INCH
3. Beacon..... ON
4. Master Switch (Battery Only)..... ON
5. Aux. Fuel Pump ..... ON
6. Mixture..... FULL RICH  
UNTIL FUEL PRESSURE RISES
7. Mixture..... IDLE CUT-OFF
8. Aux. Fuel Pump ..... OFF
9. Propeller Area ..... CLEAR
10. Ignition..... ENGAGE

***Do not crank more than 10 seconds/Allow 20 seconds to cool\****

11. Mixture..... WHEN ENGINE STARTS FULL RICH
12. Throttle..... 1000 RPM
13. Oil Pressure..... INDICATING GREEN
14. Mixture..... LEAN for TAXI
15. Alternator ..... ON
16. Ammeter ..... CHECK
17. Flaps ..... RETRACT
18. Navigation Lights..... AS REQUIRED
19. Avionics Master Switch..... ON
20. Transponder .....STANDBY/1200
21. Heading Indicator..... SET
22. ASOS/ATIS ..... OBTAIN
23. Altimeter ..... SET
24. Advisory/Departure & Taxi Clearance .....CONTACT

***\*Refer to POH if engine does not start after 3 attempts***

## Taxi

1. Brakes ..... CHECK
2. Instrument Cross-Check..... CHECK

## Before Takeoff

1. Nose Wheel..... STRAIGHT
2. Brakes ..... SET and HOLD
3. Flight Controls ..... FREE and CORRECT
4. Fuel Shutoff Valve ..... ON
5. Mixture..... RICH
6. Throttle.....1800 RPM
7. Mixture.....SET for DENSITY ALTITUDE
8. Magnetos.....(125 max drop, 50 diff.) CHECK
9. Engine Gauges and Ammeter ..... CHECK
10. Vacuum ..... GREEN ARC
11. Annunciator Panel..... CHECK
12. Throttle..... CHECK IDLE
13. Throttle.....1000 RPM
14. Throttle Friction Lock..... ADJUST
15. Communication/Navigation Radios ..... SET
16. NAV/GPS Switch ..... SET
17. Flight Instruments ..... SET and CHECKED
18. Fuel Quantities ..... CHECKED
19. Trim ..... TEST/SET for TAKEOFF
20. Autopilot ..... TEST/OFF
21. Flaps..... SET for TAKEOFF
22. Cabin Doors & Windows..... CLOSED and LATCHED
23. Seats .....ADJUSTED/ LOCKED
24. Departure Briefing .....CLEARANCE / EMERG. PLAN
25. Advisory/ Tower ..... CONTACT

## Cleared For Takeoff

1. Lights ..... AS REQUIRED
2. Transponder ..... ALTITUDE
3. Brakes ..... RELEASE
4. Traffic ..... CHECK

## Normal Takeoff

1. Wing Flaps ..... 0°-10°
2. Throttle..... FULL OPEN
3. Elevator Control..... LIFT NOSE AT 55 KIAS
4. Climb Speed..... 70-80 KIAS
5. Wing Flaps .....RETRACT IF APPLICABLE

## Short Field Takeoff

1. Wing Flaps ..... 10°
2. Brakes ..... HOLD
3. Throttle..... FULL OPEN
4. Engine Gauges ..... GREEN
5. Brakes ..... RELEASE
6. Elevator Control.....SLIGHTLY TAIL LOW
7. Obstacle Clearance Speed..... 56 KIAS

### *After Clearing Obstacle:*

8. Airspeed .....ACCELERATE FOR NORMAL CLIMB
9. Wing Flaps ..... RETRACT





## **Soft Field Takeoff**

1. Wing Flaps ..... 10°
2. Elevator Control..... TAIL LOW
3. Throttle..... FULL OPEN
4. Accelerate ..... WHILE IN GROUND EFFECT
5. Climb Speed..... 65 KIAS
6. Wing Flaps ..... RETRACT

## **Enroute Climb**

1. Airspeed ..... 85-100 KIAS
2. Throttle..... FULL OPEN
3. Mixture..... AS REQUIRED

## **Cruise**

1. Power .....SET for CRUISE
2. Trim..... AS REQUIRED
3. Mixture..... LEAN for CRUISE
4. Landing Light..... AS REQUIRED
5. Heading Indicator..... CROSS-CHECK



## **Descent**

1. ASOS/ATIS ..... OBTAIN
2. Altimeter ..... SET
3. Arrival/Passenger Briefing..... COMPLETE
4. Mixture..... ADJUST AS REQUIRED
5. Power ..... AS REQUIRED
6. Landing Light..... ON
7. Wing Flaps ..... AS REQUIRED
8. Fuel Selector Valve..... BOTH

## **Before Landing**

1. Seats, Belts and Shoulder Harnesses .... ADJUST/LOCKED
2. Mixture..... AS REQUIRED
3. Autopilot ..... OFF

## **Normal Landing**

1. Power ..... AS REQUIRED
2. Airspeed .....(Flaps UP) 70 KIAS
3. Wing Flaps ..... AS REQUIRED
4. Airspeed ..... (Flaps DOWN) 65 KIAS
5. Touchdown .....MAIN WHEELS FIRST
6. Brakes ..... APPLY AS NECESSARY

## **Short Field Landing**

1. Power ..... AS REQUIRED
2. Wing Flaps ..... 30°
3. Airspeed ..... 61 KIAS
4. Touchdown ..... MAIN WHEELS FIRST
5. Wing Flaps ..... RETRACT
6. Brakes ..... APPLY AS NECESSARY

## **Soft Field Landing**

1. Power ..... AS REQUIRED
2. Wing Flaps ..... 30°
3. Airspeed ..... 65 KIAS
4. Touchdown ..... MAIN WHEELS FIRST
5. Landing Roll ..... TAIL LOW

## **Go Around (Balked Landing)**

1. Throttle..... FULL OPEN
2. Wing Flaps ..... RETRACT TO 20°
3. Climb Speed..... 60 KIAS
4. Wing Flaps ..... 10°
5. Wing Flaps .....(after clearing obstacles) RETRACT

## **AFTER LANDING / CLEAR OF RUNWAY**

1. Flaps ..... UP
2. Mixture.....LEAN for TAXI
3. Landing Light..... OFF
4. Strobes..... OFF
5. Transponder .....STANDBY
6. Taxi Clearance / Advisory .....CONTACT

## **Securing Airplane**

1. Avionics Master Switch..... OFF
2. Throttle..... IDLE
3. Magnetos.....CHECK GROUNDING
4. Throttle..... 1000 RPM
5. Mixture..... IDLE CUT-OFF
6. Ignition..... OFF
7. Master Switch ..... OFF
8. Beacon..... OFF
9. Fuel Selector .....LEFT/RIGHT
10. Control Lock .....INSTALL
11. Flight Information..... RECORD
12. Pitot Tube Cover .....INSTALL
13. Wheel Chocks & Tie Downs ..... SECURE
14. Post Flight Walk-Around..... COMPLETE
15. Doors..... LOCKED

## **ABNORMAL PROCEDURES**

### **Flooded Start**

1. Mixture..... IDLE CUT-OFF
2. Throttle.....FULL OPEN
3. Beacon ..... ON
4. Battery Switch ..... ON
5. Aux. Fuel Pump .....OFF

**Proceed with Item 9 from “Starting Engine” checklist page 6**

### **Ammeter Shows Excessive Rate Of Charge**

1. Alternator .....OFF
2. Nonessential Electrical Equipment .....OFF
3. Flight.....LAND AS SOON AS PRACTICAL

### **Low Voltage Annunciator (Volts) Illuminates In Flight**

1. Avionics Master Switch .....OFF
2. Alternator Circuit Breaker ..... CHECK IN
3. Master Switch (Both Sides) ..... OFF then ON
4. Low Voltage Light..... CHECK OFF
5. Avionics Master Switch ..... ON

#### ***If Low Voltage Annunciator Illuminates Again:***

6. Alternator .....OFF
7. Nonessential Electrical Equipment .....OFF
8. Flight..... TERMINATE

## Landing With A Flat Main Tire

1. Flaps..... AS REQUIRED
2. Approach..... NORMAL
3. Touchdown ..... GOOD TIRE FIRST
4. Directional Control ..... MAINTAIN  
(Using brake on good tire)

## Landing With a Flat Nose Tire

1. Approach..... NORMAL
2. Flaps..... AS REQUIRED
3. Touchdown ..... ON MAINS
4. Elevator ..... AS NECESSARY TO DELAY  
NOSE GEAR CONTACT

**Maintain full aft elevator deflection during ground roll**

# EMERGENCY CHECKLIST

This is an operational checklist. Procedures in red/bod text in this section should be committed to memory. The official aircraft AFM contains additional procedures and expanded procedures not listed in this checklist. Users should be familiar with all procedures

## Airspeeds For Emergency Operation

- Engine Failure After Takeoff..... (Flaps DOWN) ... 65 KIAS
- Maximum Glide ..... 68 KIAS

### **Landing Without Engine Power:**

- Flaps Up ..... 65 KIAS
- Flaps Down ..... 60 KIAS

## Engine Failure Immediately After Takeoff

1. **Airspeed .....(Flaps UP) .....70 KIAS  
(Flaps DOWN).....65 KIAS**
2. **Mixture..... IDLE CUT-OFF**
3. **Fuel Shutoff Valve.....OFF**
4. **Ignition Switch .....OFF**
5. **Flaps .....AS REQUIRED**
6. **Master Switch.....OFF**
7. **Cabin Door .....UNLATCH**
8. **Land .....STRAIGHT AHEAD**

## Engine Failure / Power Loss During Flight

1. **Airspeed .....68 KIAS**
2. **Fuel Shutoff Valve.....ON**
3. **Fuel Selector Valve ..... BOTH**
4. **Aux Fuel Pump.....ON**
5. **Mixture..... RICH**
6. **Magnetos..... CHECK BOTH**

### *If Power Is Restored*

7. Aux Fuel Pump ..... OFF
8. Fuel Flow ..... MONITOR

## Emergency Landing Without Engine Power

1. **Airspeed .....68 KIAS**
2. **Landing Site..... DETERMINE**
3. Seats, Seatbelts, Shoulder Harnesses ..... SECURE
4. Mixture..... IDLE CUT-OFF
5. Fuel Shutoff Valve ..... OFF
6. Ignition Switch..... OFF
7. Flaps ..... AS REQUIRED (30° Recommended)
8. Master Switch ..... OFF
9. Doors ..... UNLATCH
10. Touchdown ..... SLIGHTLY TAIL LOW
11. Brakes ..... APPLY AS NECESSARY



## Precautionary Landing With Engine Power

1. Seats, Seatbelts, Shoulder Harness ..... SECURE
2. Airspeed ..... 65 KIAS
3. Wing Flaps ..... 20°
4. Selected Field..... FLY OVER
5. Avionics Master Switch..... OFF
6. Flaps..... AS REQUIRED (30° Recommended)
7. Airspeed ..... 65 KIAS
8. Master Switch ..... OFF
9. Doors..... UNLATCH
10. Touchdown ..... SLIGHTLY TAIL LOW
11. Ignition Switch..... OFF
12. Brakes ..... APPLY AS NECESSARY

## Fire During Engine Start

- 1. Cranking ..... CONTINUE**

### *If Engine Starts:*

2. Power ..... 1800 RPM
3. Engine ..... SHUTDOWN

### *If Engine Fails to Start:*

- 2. Throttle ..... FULL OPEN**
- 3. Mixture..... IDLE CUT-OFF**
- 4. Cranking..... CONTINUE**
- 5. Fuel Shutoff Valve..... OFF**
- 6. Aux Fuel Pump..... OFF**
- 7. Master Switch..... OFF**
- 8. Ignition Switch ..... OFF**
- 9. Fire Extinguisher ..... OBTAIN**

## Engine Fire In Flight

1. Mixture..... **IDLE CUT-OFF**
2. Fuel Shutoff Valve..... **OFF**
3. Aux Fuel Pump..... **OFF**
4. Master Switch..... **OFF**
5. Cabin Heat and Air..... **CLOSED**
6. Wing Root Vents..... **OPEN**
7. Airspeed ..... **100+ KIAS**
8. Forced Landing ..... **EXECUTE**

**Refer to “Emergency Landing Without Engine Power” checklist if time permits**

## Electrical Fire In Flight

1. Master Switch..... **OFF**
2. Vents, Cabin Heat and Air ..... **CLOSED**
3. Fire Extinguisher ..... **ACTIVATE**
4. Avionics Master Switch ..... **OFF**
5. All Electrical Switches (except ignition) ..... **OFF**

### *If Fire Appears Out*

6. Vents/Cabin Air/Heat..... **OPEN**
7. Master Switch ..... **ON**
8. Circuit Breakers ..... **CHECK (do not reset)**
9. Radio Switches..... **OFF**
10. Avionics Master Switch. .... **ON**
11. Radio and Electrical Switches ..... **(one at a time) ON**

## Cabin Fire

1. Master Switch.....OFF
2. Vents, Cabin Heat and Air..... CLOSED
3. Fire Extinguisher (if available)..... ACTIVATE
4. Forced Landing..... EXECUTE

Refer to “Emergency Landing Without Engine Power” checklist if time permits

## Wing Fire

1. Landing/Taxi Light Switch .....OFF
2. Navigation Light Switch.....OFF
3. Strobe Light Switch .....OFF
4. Pitot Heat Switch.....OFF

Perform A Side Slip To Keep The Flames Away From The Fuel Tank And Cabin, And Land As Soon As Possible With Flaps Retracted.

Should any mechanical difficulty, accident, incident or delay occur, please contact a Leading Edge Aviation representative before continuing any flight. **DO NOT FLY** any aircraft that may have been damaged, until it has been inspected and certified airworthy by a certified mechanic. Call Leading Edge Aviation 435-752-5955

## Passenger/Crew Briefing Checklist

### Before Engine Start:

1. Normal and emergency exit procedures
2. Seatbelt operations
3. Fire extinguisher location & operations
4. Identify PIC for the flight
5. Positive exchange of flight controls process

### Before Take-Off:

1. Verify runway in use
2. Type of take-off
3. Direction of departure (VFR)
4. Departure clearance (IFR)
5. Emergency plan
  - a. Emergency on runway
  - b. Emergency after liftoff
  - c. Emergency at altitude
  - d. Flying/non-flying pilot roles during emergency operations

### Approach:

1. Verify runway in use
2. Type of landing
3. Expected crosswind direction/intensity
4. Traffic pattern (VFR)
5. Instrument approach briefing (IFR)

### Emergency Transponder Codes:

Air Piracy: .....7500  
Lost Communication: ..... 7600  
General Emergency: .....7700

### Emergency 2-Way Communication Frequency:

Guard Frequency:..... 121.5