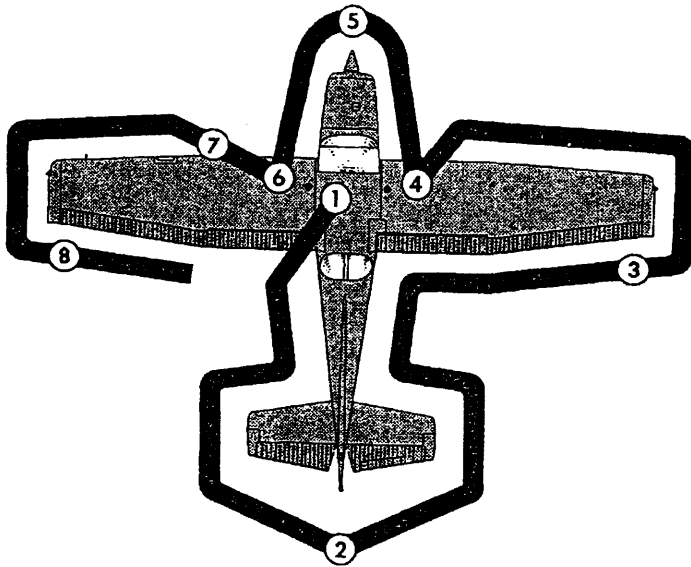


**CESSNA 172S
CHECKLIST**

NORMAL PROCEDURES

Airspeeds For Safe Operations

	<u>KNOTS</u>
Never Exceed	163
Maximum Structural Cruise	129
Design Maneuvering	
2550 lbs.	105
2200 lbs.	98
1900 lbs.	90
Maximum Flap Extended	
10° Flaps	110
10° to 30° Flaps	85
Normal Climb	75-85
Short Field Take-off, Flaps 10°, Speed at 50 ft.	56
Enroute Climb – Flaps Up	
Normal Climb-Sea Level	75-85
Normal Climb-10,000 ft.	70-80
Best Rate of Climb	
Sea Level	79
10,000 ft.	71
Best Angle of Climb	
Sea Level	60
10,000 ft.	65
Normal Approach, Flaps Up	55-75
Normal Approach, Flaps 30°	60-70
Shortfield Approach, Flaps 30°	62
Balked Landing, Max. Power-Flaps 20°	55
Max. Recommended Turbulent Air Penetration Speed	
2450 lbs.	99
2000 lbs.	92
1600 lbs.	81
Max. Demonstrated Crosswind Velocity	15



PREFLIGHT

① CABIN

1. Pitot Tube Cover -- REMOVE. Check for pitot stoppage.
2. Pilot's Operating Handbook -- AVAILABLE IN THE AIRPLANE.
3. Airplane Weight and Balance -- CHECKED.
4. Parking Brake -- SET.
5. Control Wheel Lock -- REMOVE.
6. Ignition Switch -- OFF.
7. Avionics Master Switch -- OFF.
8. Master Switch -- ON.
9. Fuel Quantity Indicators -- CHECK QUANTITY and ENSURE LOW FUEL ANNUNCIATORS (L LOW FUEL R) ARE EXTINGUISHED.
10. Avionics Master Switch -- ON.
11. Avionics Cooling Fan -- CHECK AUDIBLY FOR OPERATION.
12. Avionics Master Switch -- OFF.
13. Static Pressure Alternate Source Valve -- OFF.
14. Annunciator Panel Switch -- PLACE AND HOLD IN TST POSITION and ensure all amber and red annunciators illuminate.

15. Annunciator Panel Test Switch -- RELEASE. Check that appropriate annunciators remain on.
16. Fuel Selector Valve -- BOTH.
17. Fuel Shutoff Valve -- ON (Push Full In).
18. Flaps -- EXTEND.
19. Pitot Heat -- ON. (Carefully check that pitot tube is warm to touch within 30 seconds.)
20. Pitot Heat -- OFF.
21. Master Switch -- OFF.
22. Baggage Door -- CHECK, lock with key.

② EMPENNAGE

1. Rudder Gust Lock -- REMOVE.
2. Tail Tie-Down -- DISCONNECT.
3. Control Surfaces -- CHECK freedom of movement and security.
4. Trim Tab -- CHECK security.
5. Antennas -- CHECK for security of attachment and general condition.

③ RIGHT WING Trailing Edge

1. Aileron -- CHECK freedom of movement and security.
2. Flap -- CHECK for security and condition.

④ RIGHT WING

1. Wing Tie-Down -- DISCONNECT.
2. Main Wheel Tire -- CHECK for proper inflation and general condition (weather checks, tread depth and wear, etc...).
3. Fuel Tank Sump Quick Drain Valves -- DRAIN
4. Fuel Quantity -- CHECK VISUALLY for desired level.
5. Fuel Filler Cap -- SECURE and VENT UNOBSTRUCTED.

⑤ NOSE

1. Fuel Strainer Quick Drain Valve (Located on bottom of fuselage) -- DRAIN
2. Reservoir Quick Drain Valve and Fuel Selector Quick Drain Valve
3. Engine Oil Dipstick/Filler Cap -- CHECK oil level, then check dipstick/filler cap SECURE. Do not operate with less than five quarts. Fill to eight quarts for extended flight.
4. Engine Cooling Air Inlets -- CLEAR of obstructions.
5. Propeller and Spinner -- CHECK for nicks and security.

6. Air Filter -- CHECK for restrictions by dust or other foreign matter.
7. Nose Wheel Strut and Tire -- CHECK for proper inflation of strut and general condition (weather checks, tread depth and wear, etc...) of tire.
8. Left Static Source Opening -- CHECK for stoppage.

⑥ LEFT WING

1. Fuel Quantity -- CHECK VISUALLY for desired level.
2. Fuel Filler Cap -- SECURE and VENT UNOBSTRUCTED.
3. Fuel Tank Sump Quick Drain Valves -- DRAIN
4. Main Wheel Tire -- CHECK

⑦ LEFT WING Leading Edge

1. Fuel Tank Vent Opening -- CHECK for stoppage.
2. Stall Warning Opening -- CHECK for stoppage. To check the system, place a clean handkerchief over the vent opening and apply suction; a sound from the warning horn will confirm system operation.
3. Wing Tie-Down -- DISCONNECT.
4. Landing/Taxi Light(s) -- CHECK for condition and cleanliness of cover.

⑧ LEFT WING Trailing Edge

1. Aileron-- CHECK for freedom of movement and security.
2. Flap -- CHECK for security and condition.

BEFORE STARTING ENGINE

1. Preflight Inspection -- COMPLETE.
2. Passenger Briefing -- COMPLETE.
3. Seats and Seat Belts -- ADJUST and LOCK. Ensure inertia reel locking.
4. Brakes -- TEST and SET.
5. Circuit Breakers -- CHECK IN.
6. Electrical Equipment, Autopilot (if installed) -- OFF.
7. Avionics Master Switch -- OFF.
8. Fuel Selector Valve -- BOTH.
9. Fuel Shutoff Valve -- ON (push full in).
10. Avionics Circuit Breakers -- CHECK IN.

STARTING ENGINE (With Battery)

1. Throttle -- OPEN 1/4 INCH.
2. Mixture -- IDLE CUT OFF.
3. Propeller Area -- CLEAR.
4. Master Switch -- ON.
5. Auxiliary Fuel Pump Switch -- ON.
6. Mixture -- ADVANCE to obtain 3 to 5 GPH fuel flow, then return to IDLE CUT OFF position.
7. Ignition Switch -- START (release when engine starts).
8. Mixture -- ADVANCE smoothly to RICH when engine fires.
9. Oil Pressure -- CHECK.
10. Auxiliary Fuel Pump -- OFF.
11. Navigation Lights and Flashing Beacon -- ON as required.
12. Avionics Master Switch -- ON.
13. Radios -- ON.
14. Flaps -- RETRACT.

STARTING ENGINE (With External Power)

1. Throttle -- OPEN 1/4 INCH.
2. Mixture -- IDLE CUT OFF.
3. Propeller Area -- CLEAR.
4. External Power -- CONNECT to airplane receptacle.
5. Master Switch -- ON.
6. Auxiliary Fuel Pump Switch -- ON.
7. Mixture -- ADVANCE to obtain 3 to 5 GPH fuel flow, then return to IDLE CUT OFF position.
8. Ignition Switch -- START (release when engine starts).
9. Mixture -- ADVANCE smoothly to RICH when engine fires.
10. Oil Pressure -- CHECK.
11. Auxiliary Fuel Pump -- OFF.
12. External Power -- DISCONNECT from airplane receptacle.
13. Flashing Beacon and Navigation Lights -- ON as required.
14. Avionics Master Switch -- ON.
15. Radios -- ON.
16. Flaps -- RETRACT.

BEFORE TAKEOFF

1. Parking Brake -- SET.
2. Passenger Seat Backs -- MOST UPRIGHT POSITION
3. Seats and Seat Belts -- CHECK SECURE.
4. Cabin Doors -- CLOSED and LOCKED.
5. Flight Controls -- FREE and CORRECT.

6. Flight Instruments -- CHECK and SET.
7. Fuel Quantity -- CHECK.
8. Mixture -- RICH.
9. Fuel Selector Valve -- RECHECK BOTH.
10. Elevator Trim -- SET for takeoff.
11. Throttle -- 1800 RPM.
 - a. Magnetos -- CHECK (RPM drop should not exceed 150 RPM on either magneto or 50 RPM differential between magnetos).
 - b. Suction Gage -- CHECK.
 - c. Engine Instruments and Ammeter -- CHECK.
12. Annunciator Panel -- Ensure no annunciators are illuminated.
13. Throttle -- 1000 RPM or LESS.
14. Throttle Friction Lock -- ADJUST.
15. Strobe Lights -- AS DESIRED.
16. Radios and Avionics -- SET.
17. Autopilot (if installed) -- OFF.
18. Wing Flaps -- SET for takeoff (0°-10°).
19. Brakes -- RELEASE.

TAKEOFF

NORMAL TAKEOFF

1. Wing Flaps -- 0°-10°.
2. Throttle -- FULL OPEN.
3. Mixture -- RICH (above 3000 feet, LEAN to obtain maximum RPM).
4. Elevator Control -- LIFT NOSE WHEEL (at 55 KIAS).
5. Climb Speed -- 70-80 KIAS.

SHORT FIELD TAKEOFF

1. Wing Flaps -- 10°.
2. Brakes -- APPLY.
3. Throttle -- FULL OPEN.
4. Mixture -- RICH (above 3000 feet, LEAN to obtain maximum RPM).
5. Brakes -- RELEASE.
6. Elevator Control -- SLIGHTLY TAIL LOW.
7. Climb Speed -- 56 KIAS (until all obstacles are cleared).

ENROUTE CLIMB

1. Airspeed -- 70-85 KIAS.
2. Throttle -- FULL OPEN.
3. Mixture -- RICH (above 3000 feet, LEAN to obtain maximum RPM).

CRUISE

1. Power -- 2100-2700 RPM (No more than 75% is recommended).
2. Elevator Trim -- ADJUST.
3. Mixture -- LEAN.

DESCENT

1. Power -- AS DESIRED.
2. Mixture -- ADJUST for smooth operation (full rich for idle power).
3. Fuel Selector Valve -- BOTH.

BEFORE LANDING

1. Pilot and Passenger Seat Backs -- MOST UPRIGHT POSITION.
2. Seats and Seat Belts -- SECURED and LOCKED.
3. Fuel Selector Valve -- BOTH.
4. Mixture -- RICH.
5. Landing/Taxi Lights -- ON.
6. Autopilot (if installed) -- OFF.

LANDING

NORMAL LANDING

1. Airspeed -- 65-75 KIAS (flaps UP).
2. Wing Flaps -- AS DESIRED (0°-10° below 110 KIAS, 10°-30° below 85 KIAS).
3. Airspeed -- 60-70 KIAS (flaps DOWN).
4. Touchdown -- MAIN WHEELS FIRST.
5. Landing Roll -- LOWER NOSE WHEEL GENTLY.
6. Braking -- MINIMUM REQUIRED.

SHORT FIELD LANDING

1. Airspeed -- 65-75 KIAS (flaps UP).
2. Wing Flaps -- FULL DOWN (30°).
3. Airspeed -- 61 KIAS (until flare).
4. Power -- REDUCE to idle after clearing obstacle.
5. Touchdown -- MAIN WHEELS FIRST.
6. Brakes -- APPLY HEAVILY.
7. Wing Flaps -- RETRACT.

BALKED LANDING

1. Throttle -- FULL OPEN.
2. Wing Flaps -- RETRACT TO 20°.
3. Climb Speed -- 60 KIAS.
4. Wing Flaps -- 10° (until obstacles are cleared).
RETRACT (after reaching a safe altitude and 65 KIAS).

AFTER LANDING

1. Wing Flaps -- UP.

SECURING AIRPLANE

1. Parking Brake -- SET.
2. Avionics Master Switch, Electrical Equipment, Autopilot (if installed) -- OFF.
3. Mixture -- IDLE CUT OFF (pulled full out).
4. Ignition Switch -- OFF.
5. Master Switch -- OFF.
6. Control Lock -- INSTALL.
7. Fuel Selector Valve -- LEFT or RIGHT to prevent cross feeding.

EMERGENCY PROCEDURES

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 Valve -- OFF (Pull Full Out).
4. Ignition Switch -- OFF.
5. Wing Flaps -- AS REQUIRED.
6. Master Switch -- OFF.
7. Cabin Door -- UNLATCH.
8. Land -- STRAIGHT AHEAD.

ENGINE FAILURE DURING FLIGHT (Restart Procedures)

1. Airspeed -- 68 KIAS.
2. Fuel Shutoff Valve -- ON (push full in).
3. Fuel Selector Valve -- BOTH.
4. Auxiliary Fuel Pump Switch -- ON.
5. Mixture -- RICH (if restart has not occurred).
6. Ignition Switch -- BOTH (or START if propeller is stopped).

EMERGENCY LANDING WITHOUT ENGINE POWER

1. Passenger Seat Backs -- MOST UPRIGHT POSITION.
2. Seats and Seat Belts -- SECURE.
3. Airspeed -- 70 KIAS (flaps UP),
65 KIAS (flaps DOWN).
4. Mixture -- IDLE CUT OFF.
5. Fuel Shutoff Valve -- OFF (Pull Full Out).
6. Ignition Switch -- OFF.
7. Wing Flaps -- AS REQUIRED (30° recommended).
8. Master Switch -- OFF (when landing is assured).
9. Doors -- UNLATCH PRIOR TO TOUCHDOWN.
10. Touchdown -- SLIGHTLY TAIL LOW.
11. Brakes -- APPLY HEAVILY.

PRECAUTIONARY LANDING WITH ENGINE POWER

1. Passenger Seat Backs – MOST UPRIGHT POSITION.
2. Seats and Seat Belts -- SECURE.
3. Airspeed – 65 KIAS.
4. Wing Flaps –20°.
5. Selected Field – FLY OVER, noting terrain and obstructions, then retract flaps upon reaching a safe altitude and airspeed.
6. Avionics Master Switch and Electrical Switches – OFF.
7. Wing Flaps -- 30° (on final approach).
8. Airspeed – 65 KIAS.
9. Master Switch – OFF.
10. Doors – UNLATCH PRIOR TO TOUCHDOWN.
11. Touchdown – SLIGHTLY TAIL LOW.
12. Ignition Switch – OFF.
13. Brakes – APPLY HEAVILY.

DITCHING

1. Radio -- TRANSMIT MAYDAY on 121.5 MHz, giving location and intentions and SQUAWK 7700.
2. Heavy Objects (in baggage area) -- SECURE OR JETTISON (if possible).
3. Passenger Seat Backs – MOST UPRIGHT POSITION.
4. Seats and Seat Belts – SECURE.
5. Wing Flaps – 20° to 30°.
6. Power – ESTABLISH 300 FT/MIN DESCENT AT 55 KIAS.

NOTE

If no power is available, approach at 70 KIAS with flaps up or at 65 KIAS with 10° flaps.

7. Approach -- High Winds, Heavy Seas -- INTO THE WIND.
Light Winds, Heavy Swells -- PARALLEL TO SWELLS.
8. Cabin Doors – UNLATCH.
9. Touchdown – LEVEL ATTITUDE AT ESTABLISHED RATE OF DESCENT.
10. Face – CUSHION at touchdown with folded coat.
11. ELT – Activate.
12. Airplane – EVACUATE through cabin doors. If necessary, open window and flood cabin to equalize pressure so doors can be opened.
13. Life Vests and Raft -- INFLATE WHEN CLEAR OF AIRPLANE.

FIRES

DURING START ON GROUND

1. **Cranking – CONTINUE** to get a start which would suck the flames and accumulated fuel into the engine.

If engine starts:

2. **Power – 1800 RPM** for a few minutes.
3. **Engine – SHUTDOWN** and inspect for damage.

If engine fails to start:

4. **Throttle – FULL OPEN.**
5. **Mixture – IDLE CUT OFF.**
6. **Cranking – CONTINUE.**
7. **Fuel Shutoff Valve – OFF (Pull Full Out).**
8. **Auxiliary Fuel Pump – OFF.**
9. **Fire Extinguisher – ACTIVATE.**
10. **Engine – SECURE.**
 - a. **Master Switch – OFF.**
 - b. **Ignition Switch – OFF**
11. **Parking Brake – RELEASE.**
12. **Airplane – EVACUATE.**
13. **Fire – EXTINGUISH** using fire extinguisher, wool blanket, or dirt.
14. **Fire Damage – INSPECT**, repair damage or replace damaged components or wiring before conducting another flight.

ENGINE FIRE IN FLIGHT

1. **Mixture – IDLE CUT OFF.**
2. **Fuel Shutoff Valve – Pull Out (OFF).**
3. **Auxiliary Fuel Pump Switch – OFF.**
4. **Master Switch – OFF.**
5. **Cabin Heat and Air – OFF** (except overhead vents).
6. **Airspeed – 100 KIAS** (If fire is not extinguished, increase glide speed to find an airspeed - within airspeed limitations - which will provide an incombustible mixture).
7. **Forced Landing – EXECUTE** (as described in Emergency Landing Without Engine Power).

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 switch) – OFF.**

6. Vents/Cabin Air/Heat – OPEN when it is ascertained that fire is completely extinguished.

If fire has been extinguished and electrical power is necessary for continuance of flight to nearest suitable airport or landing area:

7. Master Switch – ON.
8. Circuit Breakers – CHECK for faulty circuit, do not reset.
9. Radio Switches – OFF.
10. Avionics Master Switch – ON.
11. Radio/Electrical Switches – ON one at a time, with delay after each until short circuit is localized.

CABIN FIRE

1. Master Switch – OFF.
2. Vents/Cabin Air/Heat – CLOSED (to avoid drafts).
3. Fire Extinguisher – ACTIVATE.

WING FIRE

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

STATIC SOURCE BLOCKAGE (Erroneous Instrument Reading Suspected)

1. Static Pressure Alternate Source Valve – PULL ON.
2. Airspeed – Consult appropriate calibration tables

LANDING WITH A FLAT MAIN TIRE

1. Approach – NORMAL.
2. Wing Flaps – 30°.
3. Touchdown – GOOD MAIN TIRE FIRST, hold airplane off flat tire as long as possible. with aileron control.
4. Directional Control -- Maintain using brake on good wheel as required.

LANDING WITH A FLAT NOSE TIRE

1. Approach – NORMAL.
2. Flaps – AS REQUIRED.
3. Touchdown – ON MAINS, hold nose wheel off the ground as long as possible.
4. When nose wheel touches down, maintain full up elevator as airplane slows to stop.

ELECTRICAL POWER SUPPLY SYSTEM MALFUNCTIONS

AMMETER SHOWS EXCESSIVE RATE OF CHARGE (Full Scale Deflection)

1. Alternator -- OFF.
2. Nonessential Electrical Equipment -- OFF.
3. Flight -- TERMINATE as soon as practical.

LOW VOLTAGE ANNUNCIATOR (VOLTS) ILLUMINATES DURING FLIGHT (Ammeter Indicates Discharge)

1. Avionics Master Switch -- OFF.
2. Alternator Circuit Breaker -- CHECK IN.
3. Master Switch -- OFF (both sides).
4. Master Switch -- ON.
5. Low Voltage Annunciator -- CHECK OFF.
6. Avionics Master Switch -- ON.

If low voltage light illuminates again:

7. Alternator-- OFF.
8. Nonessential Radio and Electrical Equipment -- OFF.
9. Flight -- TERMINATE as soon as practical.

VACUUM SYSTEM FAILURE

Left Vacuum or Right Vacuum Annunciator Light (L VAC R)
Illuminates.

1. **Suction Gage** -- CHECK to ensure vacuum within normal operating limits.