

## Cessna 172SP

**MAXIMUM TAKEOFF WEIGHT** ..... 2550 LBS  
**MAXIMUM BAGGAGE WEIGHT** ..... 120 LBS

### STALL SPEED

V<sub>SO</sub> ..... 40 KIAS  
 V<sub>S1</sub> ..... 48 KIAS

### MANEUVERING SPEED

V<sub>A</sub> 2550 lbs ..... 105 KIAS  
 V<sub>A</sub> 2200 lbs ..... 98 KIAS  
 V<sub>A</sub> 1900 lbs ..... 90 KIAS

### TAKEOFF & CLIMB

V<sub>Y</sub> ..... 74 KIAS  
 V<sub>X</sub> ..... 62 KIAS  
 V<sub>R</sub> ..... 55 KIAS  
 ENROUTE CLIMB SPEED ..... 75 - 85 KIAS

### OPERATING SPEEDS

V<sub>NE</sub> NEVER EXCEED SPEED ..... 163 KIAS  
 V<sub>NO</sub> MAXIMUM STRUCTURAL CRUISING SPEED ..... 129 KIAS  
 V<sub>FE</sub> FLAP EXTENDED SPEED(10/30 degrees) ..... 110/85 KIAS  
 FLAP OPERATING RANGE ..... 40 - 85 KIAS  
 NORMAL OPERATING RANGE ..... 48 - 129 KIAS  
 CAUTION RANGE ..... 129 - 163 KIAS  
 CRUISE ..... 2100-2700 RPM  
 MAX. DEMONSTRATED CROSSWIND COMPONENT ..... 15 KTS

### DESCENT SPEEDS

NORMAL APPROACH (FLAPS UP) ..... 65 – 75 KIAS  
 NORMAL APPROACH (FLAPS 30°) ..... 65 – 75 KIAS  
 SHORT FINAL (Short Field Approach) ..... 61 KIAS  
 V<sub>GLIDE</sub> (Flaps Up) ..... 68 KIAS  
 GO AROUND ..... MAX POWER, FLAPS 20° ...60 KIAS

### FUEL CAPACITY

Each Tank ..... 28.0 gal  
 Unusable fuel (Each tank) ..... 1.5 gal

## PREFLIGHT INSPECTION

### CABIN

Pitot Tube Cover ..... REMOVE  
 Pilot's Operating Handbook ..... AVAILABLE IN THE AIRPLANE  
 Airworthiness Cert./Registration ..... CHECKED  
 Airplane Weight and Balance ..... CHECKED  
 Parking Brake ..... SET  
 Control Wheel Lock ..... REMOVE  
 Ignition Switch ..... OFF  
 Avionics Master Switch ..... OFF  
 Master Switch ..... ON  
 Fuel Quantity Indicators ..... CHECK QUANTITY  
 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 POSITION  
 Annunciator Panel Test Switch ..... RELEASE  
 Fuel Selector Valve ..... BOTH  
 Fuel Shutoff Valve ..... ON (Push Full In)  
 Flaps ..... EXTEND  
 Pitot Heat ..... ON (Carefully check that pitot tube is warm)  
 Pitot Heat ..... OFF  
 Master Switch ..... OFF  
 Elevator Trim ..... SET for TAKEOFF  
 Baggage Door ..... CHECK, lock with key  
 Autopilot Static Source Opening ..... CHECK for blockage

### EMPENNAGE

Rudder Gust Lock ..... REMOVE  
 Tail Tie-Down ..... DISCONNECT  
 Control Surfaces ..... CHECK freedom of movement and security  
 Trim Tab ..... CHECK security  
 Antennas ..... CHECK

### RIGHT WING TRAILING EDGE

Flap ..... CHECKED  
 Aileron ..... CHECKED  
 Wing Tip ..... CONDITION/SECURITY

**RIGHT WING LEADING EDGE**

Wing Tie-Down..... DISCONNECT  
 Main Wheel Tire (38.0 PSI)..... CHECK  
 Fuel Sump Quick Drain Valves (5)..... DRAIN  
 Fuel Quantity..... CHECK VISUALLY  
 Fuel Filler Cap..... SECURE & VENT UNOBSTRUCTED

**NOSE;**

Windshield..... CHECKED  
 Engine Oil (Min. 5 qts)..... CHECKED  
 Cowling..... SECURED  
 Fuel Sump Quick Drain Valves (3)..... CHECKED  
 Nose Gear Strut..... CHECKED  
 Nose Wheel & Tire (45.0 PSI)..... CHECKED  
 Air Filter..... CLEAR  
 Propeller..... CHECKED  
 Spinner..... CHECKED  
 Alternator Belt..... CHECKED  
 Air Intakes..... CHECKED  
 Left Static Source/Right Static Source..... CHECKED

**LEFT WING LEADING EDGE**

Fuel Quantity..... CHECK VISUALLY  
 Fuel Cap..... SECURED  
 Pitot Tube..... CHECKED  
 Stall Warning..... CHECKED  
 Fuel Vent..... CHECKED  
 Tie Down..... REMOVED  
 Leading Edge..... CHECKED

**LEFT WING TRAILING EDGE**

Wing Tip..... CHECKED  
 Aileron..... CHECKED  
 Flap..... CHECKED  
 Fuel Sump Quick Drain Valves (5)..... CHECKED  
 Landing Gear Strut..... CHECKED  
 Wheel, Tire, & Brakes (38.0 PSI)..... CHECKED

**BEFORE STARTING ENGINE**

Preflight Inspection..... COMPLETE  
 Passenger Briefing..... COMPLETE  
 Seats/Seat Belts..... ADJUSTED & LOCKED  
 Brakes..... TEST AND SET  
 Fuel Selector Valve..... BOTH  
 Fuel Shut-Off Valve..... ON  
 Mixture..... IDLE/CUT OFF  
 Throttle..... SET  
 Avionics Switch..... OFF  
 Circuit Breakers..... CHECKED  
 Beacon..... ON

**STARTING ENGINE**

Throttle..... OPEN ¼ INCH  
 Mixture..... IDLE/CUT OFF  
 Propeller Area..... CLEAR  
 Master Switch..... ON

Cold Start

Fuel Pump..... ON  
 Mixture..... RICH  
 Fuel Flow..... SMALL RISE  
 Mixture..... IDLE/CUT OFF  
 Fuel Pump..... OFF

Warm Start

(Skip Cold Start Procedures)

Propeller Area..... CLEAR  
 Starter..... ENGAGED  
 Mixture..... RICH  
 Throttle (800 – 1000)..... SET  
 Oil Pressure..... CHECKED  
 Throttle Friction Lock..... ADJUSTED  
 Mixture..... LEAN

**BEFORE TAXI**

Lights ..... AS REQUIRED  
 Avionics Switch ..... ON  
 Flaps ..... UP  
 Auto Pilot ..... CHECKED  
 Transponder ..... STBY & TESTED  
 Radios ..... SET & CHECKED  
 Flight Instruments ..... SET  
 Taxi Area ..... CLEAR  
 Parking Brake ..... RELEASED

**TAXI CHECK**

Brakes & Steering ..... CHECKED  
 Flight Instruments ..... CHECKED

**BEFORE TAKEOFF**

Parking Brake ..... SET  
 Seats & Belts ..... SECURE  
 Doors ..... CLOSED & LATCHED  
 Flight Controls ..... FREE & CORRECT  
 Flight Instruments ..... CHECK & SET  
 Fuel Quantity ..... CHECK  
 Mixture ..... RICH  
 Fuel Selector Valve ..... BOTH  
 Throttle ..... 1800 RPM  
     Magnetos ..... CHECK (RPM drop shouldn't exceed 150)  
     Vacuum Gage ..... CHECK  
     Engine Instruments & Ammeter ..... CHECK  
 Annunciator Panel ..... ENSURE NO LIGHTS ILLUMINATED  
 Throttle ..... CHECK IDLE  
 Throttle ..... 1000 RPM or LESS  
 Throttle Friction Lock ..... ADJUST  
 Strobe Lights ..... AS DESIRED  
 Radios & Avionics ..... SET  
 NAV/GPS Switch ..... SET  
 Autopilot ..... OFF  
 Electric Trim ..... CHECK  
 Manual Elevator Trim ..... SET for TAKEOFF  
 Flaps ..... SET for TAKEOFF (0° - 10°)  
 Brakes ..... RELEASE

**NORMAL TAKEOFF**

Flaps ..... 0° - 10°  
 Throttle ..... FULL OPEN  
 Mixture ..... RICH (Below 3000ft)  
 Elevator Control ..... LIFT NOSE WHEEL (at 55 KIAS)  
 Climb Airspeed ..... 70-80 KIAS  
 Flaps ..... RETRACT

**SHORT FIELD TAKEOFF**

Flaps ..... 10°  
 Brakes ..... APPLY  
 Throttle ..... FULL OPEN  
 Mixture ..... RICH (Below 3000ft)  
 Brakes ..... RELEASE  
 Elevator Control ..... SLIGHTLY TAIL LOW  
 Climb Speed ..... 56 KIAS (until all obstacles are cleared)  
 Flaps ..... RETRACT

**CLIMB**

Flaps ..... UP  
 Engine Instruments ..... CHECKED  
 Airspeed ..... 80 - 85 KIAS

**ENROUTE CLIMB**

Airspeed ..... 70-85 KIAS  
 Throttle ..... FULL OPEN  
 Mixture (Above 3000 MSL lean for Max RPM) ..... LEAN

**CRUISE**

Power (No more than 75% recommended) ..... 2100 - 2700 RPM  
 Trim ..... ADJUST  
 Mixture ..... LEAN

**DESCENT**

Power ..... AS REQUIRED  
 Mixture (full rich for idle power) ..... ADJUST  
 Altimeter ..... SET  
 NAV/GPS Switch ..... BOTH  
 Flaps (0° - 10° below 110 KIAS, 10° - 30° below 85 KIAS).. AS DESIRED

**BEFORE LANDING CHECK**

Seats, Seat Belts, Shoulder Harness ..... SECURE  
 Fuel Selector Valve ..... BOTH  
 Mixture ..... RICH  
 Landing/Taxi Lights ..... ON  
 Autopilot ..... OFF

**NORMAL LANDING**

Airspeed (Flaps Up)..... 65 - 75 KIAS  
 Flaps (0° - 10° below 110 KIAS, 10° - 30° below 85 KIAS).. AS DESIRED  
 Airspeed (Flaps Down) ..... 60 – 70 KIAS  
 Touchdown ..... MAIN WHEELS FIRST  
 Landing Roll..... LOWER NOSE WHEEL GENTLY  
 Brakes ..... MINIMUM REQUIRED

**SHORT FIELD LANDING**

Airspeed (Flaps Up)..... 65 - 75 KIAS  
 Flaps ..... FULL DOWN (30°)  
 Airspeed ..... 61 KIAS (Until flare)  
 Power ..... REDUCE AFTER CLEARING OBSTACLE  
 Touchdown ..... MAIN WHEELS FIRST  
 Brakes ..... APPLY HEAVILY  
 Flaps ..... RETRACT

**GO-AROUND**

Throttle ..... FULL OPEN  
 Flaps ..... RETRACT TO 20°  
 Climb Speed ..... 60 KIAS  
 Flaps ..... 10° Until Obstacle Cleared  
 After reaching safe altitude ..... RETRACT FLAPS

**AFTER LANDING**

Flaps ..... RETRACT  
 Transponder ..... STBY  
 Strobe Lights ..... OFF

**SHUTDOWN AND SECURING AIRCRAFT**

Parking Brake ..... SET  
 Electrical Equipment, Autopilot ..... OFF  
 Avionics Master Switch ..... OFF  
 Mixture ..... IDLE CUTOFF  
 Ignition Switch ..... OFF  
 Master Switch ..... OFF  
 Control Lock ..... INSTALL  
 Fuel Selector Valve ..... LEFT or RIGHT (to prevent cross feeding)  
 Aircraft ..... TIE DOWN

**CROSS COUNTRY FLIGHT PROCEDURE**

- Park and tie down aircraft when possible.
- Order fuel.
- Call FSS and cancel flight plan, update weather, file new flight plan.
- Return to aircraft and check fuel/oil. Pay for fuel and get receipt.

***DID YOU LOCK THE AIRPLANE?  
 CLOSED FLIGHT PLANS?***