

Cessna 172S AIRCRAFT PERFORMANCE

N _____ Cessna 172S Year: _____ HP: _____

Inspections	Weight Limits
Annual _____ ELT Batt _____	Gross Wt. _____
100 Hr. _____ Xpndr _____	Useful Load _____
(tach) _____	Max Baggage _____
AD Cur yes / no Squawk go / nogo	

Weight and Balance Calculation

ITEM	WEIGHT	ARM	MOMENT
EMPTY WEIGHT	_____	----.---	_____
Pilot & Co-Pilot	_____	37.0	_____
Rear Seat Passengers	_____	73.0	_____
Baggage Area 1 (120 lbs.)	_____	95.0	_____
Baggage Area 2 (50 lbs.)	_____	123.0	_____
Fuel (53 gal usable)	_____	48.0	_____

Takeoff Weight (2550 lbs.) _____

Takeoff C.G. (see chart) _____

Estimated Fuel Burn _____ 45.3 _____

Landing Weight _____

Landing C.G. (see chart) _____

Performance Calculation

ATIS wind: _____ @ _____ ?C/dew: _____ / _____ Alt: _____ Rwy: _____

Press Alt: _____ Density Alt: _____ X-Wind: _____ H-Wind: _____

Takeoff Distance – Short Field (Ground Run) _____

Takeoff Distance – Short Field (50' Obstacle) _____

Landing Distance – Short Field (50' Obstacle) _____

Headwind – decrease distance by 10% for each 9 kts

Tailwind – increase distance by 10% for each 2 kts

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CESSNA 172S PRE-FLIGHT CHECKLIST

FLIGHT PLANNING

Airplane CHECK MAINTENANCE RECORDS
Route & Navigation Planning COMPLETE
Weather BRIEFING COMPLETE
Baggage WEIGHED
Weight & Balance / CG CALCULATED / WITHIN LIMITS
Performance Planning COMPLETE
Flight Plan FILED

INSIDE CABIN

Aircraft Papers ARROW
Aircraft Hobbs & Tachometer VERIFY
Fire Extinguisher (if aboard) CHECK
Headset, Charts, Lapboard ON BOARD
Baggage STOWED & SECURE
Control Lock REMOVE & STOW
Ignition Switch OFF
Avionics Power Switch OFF
Circuit Breakers IN
Compass Deviation Card CHECKED
Master Switch ON
Fuel Quantity Indicators CHECK QUANTITY (low fuel annunciators OFF)
Avionics Cooling Fan AVIONICS PWR ON – CHECK FAN – PWR OFF
Wing Flaps DOWN
External Lights / Pitot Heat CHECKED
Annunciator Panel Test TEST then RELEASE
Master Switch OFF
Alternate Static Valve CHECK OPERATION (then closed)

EMPENNAGE – LEFT SIDE

Side and Rear Windows CHECK / CLEAN
Baggage Door CHECK
Empennage CHECK FOR DAMAGE
Horizontal Stabilizer – Leading Edge CHECK
Elevator – Left Side CHECK MOVEMENT / COUNTER-WEIGHT
Tail Tie Down / Rudder Gust Lock REMOVE
Rudder CHECK MOVEMENT / COUNTER-WEIGHT

EMPENNAGE – RIGHT SIDE

Elevator – Right Side CHECK MOVEMENT / COUNTER-WEIGHT
Elevator Trim Tab CHECK
Horizontal Stabilizer – Leading Edge CHECK
Empennage CHECK FOR DAMAGE
ELT Antenna CHECK SECURITY
Side and Rear Windows CHECK / CLEAN

CESSNA 172S PRE-FLIGHT CHECKLIST

RIGHT WING – TRAILING EDGE

Wing Flap CHECK SECURITY / FLAP TRACKS
Aileron CHECK MOVEMENT / COUNTER-WEIGHT
Wing Tip and Lights CHECK

RIGHT WING – LEADING EDGE

Leading Edge CHECK
Wing Tie Down / Chocks REMOVE
Right Main Tire, Brakes, Hyd. Line CHECK
Fuel Drain (5 Sumps) DRAIN / SAMPLE
Air Inlets CHECK
Fuel Tank CHECK QUANTITY / SECURE CAP (vented)

NOSE

Windshield CHECK / CLEAN
Engine Oil Level CHECK (5 - 8 quarts)
Fuel Drain (3 Sumps) DRAIN / SAMPLE
Cowling CHECK SECURE
Propeller & Spinner CHECK FOR NICKS & SECURITY
Alternator Belt CHECK TENSION
Landing Light(s) CHECK
Carburetor Air Filter CHECK CLEAR
Nose Wheel Strut & Tire CHECK
Nose Wheel Damper CHECK SECURE
Exhaust CHECK
Static Source Opening (left side) CHECK FOR STOPPAGE

LEFT WING – LEADING EDGE

Air Inlets CHECK
Fuel Tank CHECK QUANTITY / SECURE CAP
Pitot Cover (if installed) REMOVE / CHECK FOR STOPPAGE
Fuel Tank Vent Opening CHECK FOR STOPPAGE
Stall Warning Opening CHECK FOR STOPPAGE
Leading Edge CHECK
Wing Tip and Lights CHECK

LEFT WING – TRAILING EDGE

Aileron CHECK MOVEMENT / COUNTER-WEIGHTS
Wing Flap CHECK SECURITY / FLAP TRACKS
Wing Tie Down / Chocks REMOVE
Left Main Tire, Brakes, Hyd. Line CHECK
Fuel Drain (5 Sumps) DRAIN / SAMPLE

*** Push aircraft across **tie-down cable** if applicable ***

CESSNA 172S**Start / Takeoff / Cruise****BEFORE ENGINE START**

Preflight Inspection
 Cell Phones OFF
 Seat Belts & Harnesses
 Passenger Briefing
 Fuel Selector BOTH
 Fuel Shutoff ON
 Avionics Power OFF
 Autopilot OFF
 Circuit Breakers
 Parking Brake SET
 ATIS / SET ALTIMETER

STARTING ENGINE

Mixture IDLE CUTOFF
 Throttle OPEN 1/4 INCH
 Master Switch ON
 Rotating Beacon / NAV Lights
 Ignition Key IN
 Propeller Area "CLEAR"
 Aux Fuel Pump ON
 Mixture Adv 3-5 sec then IDLE CUTOFF
 Aux Fuel Pump OFF
 Ignition Switch START
 Mixture Adv to RICH then LEAN as req.
 Oil Pressure
 Ammeter
 Suction Gauge
 Wing Flaps UP

NAV/COMM

Avionics Power ON
 Intercom CHECK
 Marker Beacon TEST
 Com 1 SET
 Com 2 SET
 Nav 1 TEST / SET
 Nav 2 TEST / SET
 GPS SET
 DME SET
 ADF SET

BEFORE TAXI

Flight Instruments
 Transponder 1200
 Taxi Light ON
 Parking Brake OFF
 Permission to Taxi

RUNUP CHECK

Parking Brake SET
 Flight Controls & Trim
 Fuel Selector BOTH
 Fuel Shutoff ON
 Fuel Quantity
 Autopilot / Air Cond OFF
 Throttle 1800
 Mixture Adjust
 Magnetos
 Oil Pressure
 Oil Temperature
 Ammeter
 Suction Gauge
 Annunciator Panel
 Throttle IDLE
 Throttle 1000

Circuit Breakers
 Flight Instruments
 Radios
 Transponder ALT
 Landing Light / Strobes
 Cabin Doors & Windows
 Takeoff Briefing
 Wing Flaps SET
 Parking Brake OFF
 Permission to Take Off

NORMAL TAKEOFF

Throttle FULL
 Rotate 50 KIAS
 Climb 70 KIAS

CRUISE CLIMB

Airspeed 70-80 KIAS
 Throttle FULL
 Mixture Adjust
 Landing Light OFF

CRUISE

Throttle 2200-2700 RPM (< 75%)
 Mixture Adjust
 Elevator & Rudder Trim
 Engine Instruments

CESSNA 172S**Descent / Landing / Shutdown****DESCENT**

Fuel Selector Valve BOTH
 Power
 Mixture

APPROACH (Trim for 70 KIAS)

Gas
 Undercarriage
 Mixture
 Propeller
 Safety
 Landing Light ON
 Autopilot OFF

BALKED LANDING

Power FULL
 Flaps 20°
 Climb 60 KIAS
 Flaps 10° (retract after safe
 altitude and 65 KIAS)

AFTER LANDING CHECK

Wing Flaps UP
 Mixture Adjust
 Landing Lights / Strobes
 Transponder STANDBY

SHUTDOWN

Parking Brake SET
 Throttle 1000 RPM
 Magneto Safety Check
 Throttle 1700 RPM
 Mixture LEAN MAX RPM
 Avionics Power Switch OFF
 Electrical Equipment OFF
 External Lights (except Beacon) OFF
 Throttle 1200 RPM
 Mixture IDLE CUTOFF
 Ignition Switch OFF - remove key
 Beacon Light OFF
 Master Switch OFF
 Fuel Selector RIGHT or LEFT
 Parking Brake RELEASED

SECURING AIRCRAFT

Chocks & Tie-downs
 Control Lock INSTALL
 Aircraft Hobbs & Tachometer RECORD
 Windows CLOSE
 Electrical Switches OFF
 Ignition Switch OFF
 Master Switch OFF
 Doors and Baggage Door LOCK
 Post Flight Inspection
 Pitot Cover - Install

AIRSPEEDS FOR SAFE OPERATION**Takeoff – Flaps Up**

Rotation55 KIAS
 Short Field 59 KIAS

Enroute Climb – Flaps Up

Normal Climbout 70-80 KIAS
 Best Rate (V_y) 70 KIAS
 Best Angle (V_x) 65 KIAS

Landing Approach

Normal – Flaps Up 65 KIAS
 Normal – Flaps 30° 60 KIAS
 Short Field – Flaps 30°60 KIAS

Balked Landing

Max Pwr – Flaps 20° 60 KIAS

Maximum Maneuvering Speeds

2550 lbs.105 KIAS
 2200 lbs. 98 KIAS
 1900 lbs. 90 KIAS

Best Glide

Flaps UP 70 KIAS
 Flaps DOWN 65 KIAS