



Cessna 172S

Preflight, Normal, Abnormal, Emergency Procedures Checklists

DISCLAIMER

This checklist is not identical to official Cessna documentation and may contain errors or omissions. All procedures and data should be verified against official sources before use.

PREFLIGHT PLANNING ELEMENTS

Weather Data	Fuel Requirements
Runway Conditions	Performance Data
Weight and Balance	Alternates

AIRCRAFT ACCEPTANCE

Preflight Planning	COMPLETE
Aircraft Documents	CHECK
Flight Log Entry	OPENED

CABIN

Control Wheel Lock	REMOVED
Parking Brake	SET
Fuel Selector	BOTH
Fuel Shutoff	ON (IN)
Elevator Trim	SET
Alternate Static Valve	ACTUATE / OFF
Mixture	IDLE CUT OFF
Throttle	CLOSED
Interior Dimmers	OFF
Avionics Master Switch	OFF
Electrical Switches	OFF
Ignition Switch	OFF
Battery Master Switch	ON
Avionics Master Switch	ON TO CHECK FAN THEN OFF
Fuel Quantity Indicators	CHECK QUANTITY
Annunciator Panel	TEST
Flaps	30 DEGREES
Turn Coordinator	CHECK (NO FLAG)
Lighting	CHECK (AS REQUIRED)
Pitot Heat	CHECK (AS REQUIRED)
Battery Master Switch	OFF
Clock	CHECK / SET

EMPENNAGE

Baggage Door	CLOSED / UNLOCKED
Autopilot Static Port	CLEAR
All Ice, Snow, Frost	REMOVED
Rudder Gust Lock	REMOVED
Tail Tie Down	REMOVED
Control Surfaces and Trim Tab	CHECK
Antennas	CHECK

RIGHT WING

All Ice, Snow, Frost	REMOVED
Fuel Sumps (Qty: 5)	CLEAN AND CORRECT
Main Gear / Wheel / Brake Assy	CHECK
Chock	REMOVED
Flap and Aileron	CHECK
Wing Tip and Lights	CHECK
Leading Edge	CHECK
Tie Down	REMOVED
Fuel Tank Quantity	CHECK
Fresh Air Inlet	CHECK

NOSE

Windshield	CLEAN and INTACT
Belly Skin Condition	CHECK
Belly Fuel Sumps (Qty: 3)	CLEAN AND CORRECT
Engine Oil Level	CHECK (8 MAX, 5 MIN)
Oil Inspection Door	CLOSED
Right Side Cowling Fasteners	SECURED
Nose Gear Assembly	CHECK
Chock	REMOVED
Exhaust Stack	CHECK
Air Filter and Airbox	CLEAR and SECURE
Alternator Belt	CHECK
Propeller / Spinner	CHECK
Engine Cooling Air Inlets	CLEAR
Cowling Inspection Door	CLOSED
Left Side Cowling Fasteners	SECURED
Static Port	CHECK

LEFT WING

ALL Ice, Snow, Frost	REMOVED
Fresh Air Inlet	CHECK
Fuel Tank Quantity	CHECK
Leading Edge	CHECK
Pitot Tube	CHECK CLEAR
Fuel Vent	CLEARED
Stall Warning Port	CHECK
Tie Down	REMOVED
Wing Tip and Lights	CHECK
Aileron and Flap	CHECK
Main Gear Assy	CHECK
Fuel Sumps (Qty: 5)	CLEAN AND CORRECT

PASSENGER BRIEFING ELEMENTS

Entry Door Operation	Fire Extinguisher
Use of Seatbelts	No Smoking
Survival Equipment	PIC Authority
Personal Electronic Devices	Questions

BEFORE STARTING ENGINE

Preflight	COMPLETE
Passenger Briefing	COMPLETE
Seats and Seat Belts	ADJUSTED and LOCKED
Fuel Quantity and Quality	CHECK
Fuel Selector	BOTH
Fuel Shutoff Valve	ON
Elevator Trim	SET TAKEOFF
Alternate Static Source	CLOSED
Mixture	IDLE CUT OFF
Throttle	CLOSED
Avionics Master Switch	OFF
Electrical Switches	OFF
Circuit Breakers	CHECK
Ignition Switch	OFF

STARTING ENGINE

Throttle	1/4 INCH OPEN
External Power	CONNECT (as required)
Master Switch	ON
Beacon	ON
Aux Fuel Pump	ON
Mixture	ADVANCE to 3-5 GPH, THEN IDLE CUT OFF
Brakes	HOLD
Propeller Area	CLEAR
Ignition Switch	START
Mixture	ADVANCE SMOOTHLY TO RICH WHEN ENGINE FIRES
Oil Pressure	CHECK
Aux Fuel Pump	OFF
Throttle	1000 RPM
External Power	DISCONNECT

AFTER START

Mixture	LEAN
Ammeter	CHARGING
Avionics Master Switch	ON
Lights	ON
Flaps	UP

BEFORE TAXI

Communications	SET
ATIS / Weather	RECEIVED
Altimeter	SET
IFR Clearance	RECEIVED
Transponder	CODE SET
Navigation	SET
Taxi Route	OBTAINED and BRIEFED
Parking Brake	RELEASED

TAXI

Brakes	CHECK
Steering	CHECK
Flight Instruments	CHECK

GROUND CHECK

Mixture	RICH
Throttle	1800 RPM
Magnetos	CHECK (150 max / 50 diff)
Vacuum Gauge	CHECK
Engine Instruments	CHECK
Ammeter	CHECK
Annunciator Panel	CLEAR
Throttle	1000 RPM
Mixture	LEAN

BEFORE TAKEOFF

Flight Controls	CHECK
Elevator Trim	SET TAKEOFF
Engine Instruments	CHECK
Fuel Quantity	CHECK
Fuel Selector	BOTH
Flaps	UP (Normal) / 10 degrees (Short)
Mixture	RICH (Lean above 3000 feet)
Throttle Friction Lock	SET
Flight Instruments	CHECK / SET
Personal Electronic Devices	OFF
Seats and Seat Belts	ADJUSTED and LOCKED
Takeoff Briefing	COMPLETE

AIRSPEDS (KIAS)

Vr	Normal	55	Vx	Sea Level	62
	Short	51		10000 Feet	67
Va	2550 Lbs (MGW)	105	Vy	Sea Level	74
	2200 Lbs	98		10000 Feet	72
	1900 Lbs	90	Vfe Flaps 10		110

TAKEOFF BRIEFING ELEMENTS

Runway Characteristics	Takeoff Performance
Airspeeds and Power Settings	Departure Procedures
Abnormal / Emergency Procedures	Expected Crewmember Actions

IN POSITION

Cabin Doors and Windows	CLOSED AND LOCKED
Landing Light	ON
Strobe Lights	ON (as desired)
Transponder	ALT

NORMAL TAKEOFF

Power	1800 RPM
Engine Instruments	CHECK
Power	FULL THROTTLE
Rotation	55 KIAS
Climb	74 KIAS or AS REQUIRED

SHORT FIELD TAKEOFF

Brakes	APPLIED
Power	FULL THROTTLE
Engine Instruments	CHECK
Brakes	RELEASED
Elevator	TAIL LOW
Rotation	51 KIAS
Climb	56 KIAS until clear of obstacles

AFTER TAKEOFF / CLIMB

Power	FULL THROTTLE
Flaps	UP
Engine Instruments / Ammeter	CHECK
Airspeed	74 KIAS

CRUISE

Power	SET
Landing Light	OFF
Engine Instruments / Ammeter	CHECK

IN RANGE / DESCENT

ATIS / Weather	RECEIVED
Altimeter	SET
Seats and Seat Belts	ADJUSTED and LOCKED
Fuel Selector	BOTH
Power	AS REQUIRED

APPROACH BRIEFING ELEMENTS

General (VFR or IFR)	IFR
Field Elevation	Approach Name / Type
Runway Length / Lighting	FAF / Altitude
Pattern Altitude	Initial Rate of Descent
Obstacle / Terrain Review	DH / MDA
Taxi Route Review	Missed Approach Time
Crosswind Component	Missed Approach Procedure

APPROACH

Approach Briefing	COMPLETE
Landing Light	ON

LANDING BRIEFING ELEMENTS

Airport	Aircraft
Meteorological Conditions	Power Setting
Runway Length / Lighting	Flap Setting
Touchdown Point	Approach Airspeeds
Taxi Route Review	Landing Distance

BEFORE LANDING

Landing Briefing	COMPLETE
Fuel Selector	BOTH
Mixture	RICH
Autopilot	OFF

NORMAL LANDING

Flaps	AS DESIRED
Airspeed	60 KIAS (Flaps Down) 70 KIAS (Flaps Up)
Brakes	MINIMUM REQUIRED

SHORT FIELD LANDING

Flaps	30 degrees
Airspeed	61 KIAS
Brakes	APPLY HEAVILY
Wing Flaps	RETRACT

BALKED LANDING / MISSED APPROACH

Mixture	RICH
Throttle	FULL OPEN
Flaps	20 degrees
Airspeed	60 KIAS
Flaps	10 degrees
Airspeed	65 KIAS
Flaps (when clear obstacles)	UP
Airspeed	74 KIAS

AFTER LANDING

Flaps	UP
Mixture	LEAN
Transponder	STBY
Strobes	OFF
Landing Light	OFF
Pitot Heat	OFF

SHUTDOWN

Throttle	1000 RPM
Avionics Master Switches	OFF
Lights (Except Beacon)	OFF
Mixture	IDLE CUT OFF
Ignition Switch	OFF
Master Switch	OFF
Parking Brake	SET (as required)
Aircraft Flight Log	CLOSE ENTRY

POSTFLIGHT

Control Locks	INSTALL
Windows	CLOSE
Covers / Chocks	INSTALL
Fuel Selector	LEFT or RIGHT
Doors	LOCK

AMMETER SHOWS EXCESSIVE RATE OF CHARGE

Alternator	OFF
Non-Essential Electrical Equipment	OFF
Flight	TERMINATE as soon as practical
Warning Compass errors up to 25 degrees may occur with alternator disabled.	

LOW VOLTAGE ANNUNCIATOR DURING FLIGHT

Avionics Master Switches	OFF
Alternator Circuit Breaker	CHECK IN
Master Switch	CYCLE
Low Voltage Annunciator	CHECK OFF
Avionics Master Switch	ON
<i>If condition persists:</i>	
Alternator	OFF
Non-Essential Radio and Electrical Equipment	OFF
Flight	TERMINATE as soon as practical

ENGINE OVERHEAT

Mixture	RICHEN as required
Power	REDUCE
Airspeed	INCREASE if altitude permits

STATIC SYSTEM DIFFICULTY

Alternate Static Valve	PULL OPEN
Note Expect approximately 2 KIAS airspeed error and 50 foot altimeter error while valve is opened. If conditions permit, close the valve to return to normal operation.	

ENGINE ROUGHNESS

Mixture	ADJUST
Aux Fuel Pump	ON
Engine Instruments	CHECK
Ignition Switch	CHECK
<i>If condition persists:</i>	
Flight	TERMINATE as soon as practical

SPIN RECOVERY

Throttle	IDLE
Ailerons	NEUTRAL
Rudder	APPLY AND HOLD OPPOSITE TO DIRECTION OF ROTATION
Elevator	BRISKY FORWARD TO BREAK STALL
<i>WHEN ROTATION STOPS...</i>	
Controls	Recover from dive with smooth inputs

INADVERTENT ICING ENCOUNTER

Pitot Heat Switch	ON
Attitude	CHANGE Attempt to achieve OAT and moisture conditions less conducive to icing
Propeller	VARY or INCREASE Attempt to shed ice from propeller blades
Landing	PLAN Use longest runway at nearest airport with best braking action conditions possible
Wing Flaps	UP Leave retracted for landing
Forward Slip	EXECUTE ON FINAL APPROACH If required for improved visibility
Approach Airspeed	65-75 KIAS MINIMUM
Landing Technique	LEVEL ATTITUDE With little or no flare

ENGINE FIRE DURING START

CONTINUE CRANKING until engine starts, then run at 1800 RPM for two minutes before securing engine using normal procedures.

If engine fails to start:

Starter	CONTINUE CRANKING
Throttle	FULL OPEN
Mixture	IDLE CUT OFF
Fuel Shutoff Valve	OFF
Aux Fuel Pump	OFF
Master Switch	OFF
Ignition Switch	OFF
Parking Brake	RELEASE
Aircraft	EVACUATE
Fire	EXTINGUISH

ENGINE FAILURE DURING TAKEOFF ROLL

Throttle	IDLE
Brakes	APPLY
Wing Flaps	RETRACT
Mixture	IDLE CUT OFF
Ignition Switch	OFF
Master Switch	OFF

ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF

Airspeed	70 KIAS (Flaps UP) 65 KIAS (Flaps DOWN)
Mixture	IDLE CUT OFF
Fuel Shutoff Valve	OFF
Ignition Switch	OFF
Wing Flaps	AS REQUIRED
Master Switch	OFF
Cabin Doors	UNLATCH
Land	STRAIGHT AHEAD

ENGINE FAILURE DURING FLIGHT (RESTART PROCEDURE)

Airspeed	68 KIAS (Best Glide)
Fuel Shutoff Valve	ON (IN)
Fuel Selector Valve	BOTH
Aux Fuel Pump	ON
Mixture	RICH
Ignition Switch	BOTH (START if engine stopped)

If power is NOT restored, prepare for
EMERGENCY LANDING WITHOUT ENGINE POWER

EMERGENCY LANDING WITHOUT ENGINE POWER

Seats	UPRIGHT
Seat Belts	SECURE
Airspeed	70 KIAS (flaps UP) 65 KIAS (flaps DOWN)
Mixture	IDLE CUT OFF
Fuel Shutoff Valve	OFF (OUT)
Ignition Switch	OFF
Wing Flaps	AS REQUIRED
Master Switch	OFF (when landing is assured)
Doors	UNLATCH (prior to touchdown)
Touchdown	SLIGHTLY TAIL LOW
Brakes	APPLY HEAVILY

PRECAUTIONARY LANDING WITH ENGINE POWER

Seats	UPRIGHT
Seat Belts	SECURE
Airspeed	65 KIAS
Wing Flaps	20 degrees
Selected Field	FLY OVER noting terrain and obstructions, then retract flaps upon reaching a safe altitude and airspeed
Airspeed	65 KIAS
Wing Flaps	30 DEGREES (on final approach)
Master Switch	OFF
Doors	UNLATCH (prior to touchdown)
Touchdown	SLIGHTLY TAIL LOW
Ignition Switch	OFF
Brakes	APPLY HEAVILY

EMERGENCY DESCENT

<i>Notify ATC if time permits</i>	
Throttle	CLOSED
Airspeed	AS REQUIRED FOR MAXIMUM SAFE RATE OF DESCENT
Mixture	CHECK

ELECTRICAL FIRE IN FLIGHT

Master Switch	OFF
Vents / Cabin Air / Heat	CLOSED
Fire Extinguisher	ACTIVATE
Avionics Master Switches	OFF
All Other Switches Except Ignition	OFF
<i>If fire has been extinguished:</i>	
Vents / Cabin Air / Heat	OPEN
<i>If electrical power is required for continuance of flight:</i>	
Circuit Breakers	CHECK FOR FAULTY CIRCUIT BUT DO NOT RESET
Master Switch	ON
Avionics Master Switch	ON
Individual Radio / Electrical Switches	ON ONE AT A TIME with short delay in between until all systems except those affected by the short circuit have been returned to service.
Flight	TERMINATE as soon as practical

ENGINE FIRE IN FLIGHT

Mixture	IDLE CUT OFF
Fuel Selector Valve	OFF
Aux Fuel Pump	OFF
Master Switch	OFF
Cabin Heat / Air	OFF (except overhead vents)
Airspeed	100 KIAS; if this does not extinguish fire, increase speed as necessary, without exceeding Vne, to find incombustible mixture
Execute procedure: EMERGENCY LANDING WITHOUT ENGINE POWER	

CABIN FIRE

Master Switch	OFF
Vents / Cabin Air / Heat	CLOSED
Fire Extinguisher	ACTIVATE
Vents / Cabin Air / Heat	OPEN when fire has been extinguished
Land	AS SOON AS PRACTICAL

WING FIRE

All External Lights	OFF
Pitot Heat	OFF
Sideslip	PERFORM TO KEEP FLAMES AWAY FROM FUEL TANKS & CABIN
Flaps	USE ONLY AS REQUIRED

DITCHING

Radio	TRANSMIT MAYDAY on 121.5
Heavy Objects in Baggage Area	SECURE or JETTISON
Seats	UPRIGHT
Seat Belts	SECURE
Flaps	20 to 30 degrees
Power	ESTABLISH 300 FPM DESCENT
Airspeed	70 KIAS (Flaps Up) 65 KIAS (Flaps Down)
Cabin Doors	UNLATCH
Touchdown	LEVEL ATTITUDE
ELT	ACTIVATE
Face	CUSHION with folded coat
Airplane	EVACUATE
Life Vests and Raft	INFLATE (when clear of airplane)