



Cessna 172S

Preflight, Normal, Abnormal, Emergency Procedures Checklists

DISCLAIMER

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

You assume all risk and liability that results from the use of this checklist. If you cannot accept these terms, do not use these checklists.

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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)
Internal / External 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 Strut, Wheel, Tire Assy	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/Static Head	CHECK CLEAR, PITOT HEAT OPERATION
Fuel Vent	CLEARED
Stall Warning Port	CHECK
Tie Down	REMOVED
Wing Tip and Lights	CHECK
Aileron and Flap	CHECK
Main Gear / Wheel / Brake Assy	CHECK
Fuel Sumps (Qty: 5)	CLEAN AND CORRECT

PREFLIGHT PROCEDURES END

PASSENGER BRIEFING ELEMENTS

Entry Door Operation	Fire Extinguisher
Use of Seatbelts	No Smoking
Location of 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 (IN)
Elevator Trim	SET TAKEOFF
Alternate Static Source	CLOSED
Mixture	CUTOFF
Throttle	CLOSED
Avionics Master Switch	OFF
Electrical Switches	OFF
Circuit Breakers	CHECK
Ignition Switch	OFF

STARTING ENGINE

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

AFTER START

Mixture	LEAN
Alternator Field Switch	ON
Ammeter	CHARGING, trending down
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 Clearance	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 drop / 50 diff)
Vacuum Gauge	CHECK
Engine Instruments	CHECK
Ammeter	CHECK
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 Field)
Mixture	RICH
Propeller	HIGH RPM
Throttle Friction Lock	SET
Flight Instruments	CHECK / SET
Personal Electronic Devices	OFF
Seats and Seat Belts	ADJUSTED and LOCKED SEAT BACKS UPRIGHT

AIRSPEEDS (KIAS)

Vr (Rotation)	55	Vcc (Cruise Climb)	80
Vx (Best Angle of Climb)	62	VI/d (Best Glide)	68
Vy (Best Rate of Climb)	74	Va (Maneuvering @ MGW)	105

TAKEOFF BRIEFING ELEMENTS

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

IN POSITION

Takeoff Briefing	COMPLETE
Cabin Doors and Windows	CLOSED AND LOCKED
Landing Light	ON
Strobe Lights	ON (as desired)
Transponder	AUTO

TAKEOFF

Brakes	APPLIED
Power	1800 RPM
Engine Instruments	CHECK
Brakes	RELEASED
Power	FULL THROTTLE
Rotation	55 KIAS
Climb	75 KIAS or AS REQUIRED

CLIMB

Power	FULL THROTTLE
Flaps	UP
Engine Instruments / Ammeter	CHECK

CRUISE

Power	SET
Landing Light	OFF
Engine Instruments / Ammeter	CHECK

IN RANGE / DESCENT

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

APPROACH BRIEFING ELEMENTS	
General (VFR or IFR)	IFR
Field Elevation	Approach Name / Type
Runway Length / Lighting	Final Approach Fix and Altitude
Pattern Altitude	Initial Rate of Descent
Obstacle / Terrain Review	Decision Height / Altitude / MDA
Taxi Route Review	Time to Missed Approach
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)

SHORT FIELD LANDING

Flaps	30 degrees
Airspeed	60 KIAS
Brakes	APPLY HEAVILY (do not skid!)
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 of obstacles)	UP
Airspeed	75 KIAS or as desired

AFTER LANDING

Flaps	UP
Mixture	LEAN
Transponder	STBY
Strobes	OFF
Landing Light	OFF (as required)
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

POSTFLIGHT

Aircraft Flight Log	CLOSE ENTRY
Control Locks	INSTALL
Windows	CLOSE
Sunscreens, Covers, Chocks	INSTALL
Fuel Selector	OFF
Doors	LOCK
Propeller Lock	INSTALL

NORMAL PROCEDURES END

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.	

AMMETER SHOWS DISCHARGE

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

ENGINE OVERHEAT

Mixture	ENRICHEN
Power	REDUCE
Airspeed	INCREASE if altitude permits

STATIC SYSTEM DIFFICULTY

Alternate Static Valve	PULL OPEN
<i>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.</i>	

ENGINE ROUGHNESS

Primer	LOCKED
Mixture	ADJUST
Fuel Pump	ON
Engine Instruments	CHECK
Ignition Switch	CHECK

SPIN RECOVERY

Throttle	CLOSE
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

ABNORMAL PROCEDURES END

ENGINE FIRE DURING START

CONTINUE CRANKING until engine starts, then run at 1800 RPM for 2-3 minutes before SECURING ENGINE using normal procedures. If engine fails to start:

Starter	CONTINUE CRANKING
Throttle	FULL OPEN
Mixture	CUTOFF
Fuel Selector	OFF
Boost Pump	OFF
Battery Master Switch	OFF
Ignition Switch	OFF
Parking Brake	RELEASE
Fire	EXTINGUISH

ENGINE POWER LOSS DURING TAKEOFF ROLL

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

ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF

Airspeed	70 KIAS (Flaps UP) 65 KIAS (Flaps DOWN)
Mixture	CUTOFF
Fuel Selector	OFF
Ignition Switch	OFF
Wing Flaps	AS REQUIRED
Battery Master Switch	OFF
Cabin Doors	UNLATCH
Land	STRAIGHT AHEAD

ENGINE FAILURE DURING FLIGHT (RESTART PROCEDURES)

Airspeed	68 KIAS
Boost Pump	ON
Fuel Selector	BOTH
Mixture	RICH
Ignition Switch	BOTH
Primer	LOCKED
If power is NOT restored, prepare for EMERGENCY LANDING WITHOUT ENGINE POWER	

EMERGENCY LANDING WITHOUT ENGINE POWER

Seats / Seat Belts	UPRIGHT AND SECURE
Airspeed	70 KIAS (flaps UP) 65 KIAS (flaps DOWN)
Mixture	CUTOFF
Fuel Selector Valve	OFF
Ignition Switch	OFF
All Switches EXCEPT Battery Master Switch	OFF
Wing Flaps	AS REQUIRED
Battery Master Switch	OFF when landing is assured
Doors	UNLATCH PRIOR TO TOUCHDOWN
Establish spiral pattern over field and position aircraft 1000Ft above terrain on downwind. When landing is assured, slow to 55 KIAS for shortest landing and touchdown slightly tail low.	

PRECAUTIONARY LANDING WITH ENGINE POWER

Seats / Seat Belts	UPRIGHT AND SECURE
Airspeed	70 KIAS
Wing Flaps	20 degrees
Selected Field	FLY OVER noting terrain and obstructions, then retract flaps upon reaching a safe altitude and airspeed
Avionics Master and Electrical Switches	OFF
Airspeed	60 KIAS
Wing Flaps	30 DEGREES on final approach
Doors	UNLATCH PRIOR TO TOUCHDOWN
Touchdown	SLIGHTLY TAIL LOW
Ignition Switch	OFF
Brakes	APPLY HEAVILY

PROPELLER OVERSPEED

Throttle	RETARD
Oil Pressure	CHECK
Prop Control	DECREASE / Set RPM if possible
Airspeed	REDUCE
Throttle	AS REQUIRED Maintain 2700 RPM or less
If no RPM control possible, SHUTDOWN ENGINE and execute EMERGENCY LANDING WITHOUT ENGINE POWER.	

EMERGENCY DESCENT

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

ELECTRICAL FIRE IN FLIGHT	
Battery Master Switch	OFF
Vents / Cabin Air / Heat	CLOSED
Fire Extinguisher	ACTIVATE
Avionics Master Switches	OFF
All Radio and Avionics Switches	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 IT
Battery 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.

ENGINE FIRE IN FLIGHT	
Mixture	CUTOFF
Fuel Selector Valve	OFF
Boost Pump	OFF
Battery 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 EMERGENCY LANDING WITHOUT ENGINE POWER	

WING FIRE

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

CABIN FIRE

Battery 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

EMERGENCY PROCEDURES END