CESSNA 172SP QUICK REFERENCE v3.1: Dec2024

QRH	E-QRH/MISC.	Abnormal Operations
PREFLIGHT INTERIOR	EMERGENCY LANDING	ENGINE START – FLOODED ENGINE
PREFLIGHT EXTERIOR	ENGINE FAILURE IN FLIGHT	ENGINE START – USING EXTERNAL POWER
BEFORE START	ENGINE FIRE IN FLIGHT/DURING START	CO LVL HIGH
START	ELECTRICAL FIRE IN FLIGHT/WING FIRE	FUEL VAPOR PROCEDURES
BEFORE TAXI	ALTR FAIL	HIGH VOLTS ANNUNCIATOR
RUN UP	LOST COMMUNICATION	PFD/MFD COOLING ANNUNCIATORS
BEFORE TAKEOFF	FLIGHT INSTRUMENT FAILURE/PFD FAILURE	DUAL GPS FAILURE
AFTER TAKEOFF & CLIMB	**BRIEFINGS**	
CRUISE	BEFORE TAXI BRIEF	
PRE MANEUVER	DEPARTURE BRIEF	
DESCENT	**MISC.**	
BEFORE LANDING	COLD WEATHER OPERATIONS – OAT <35F	
AFTER LANDING	LEANING PROCEDURES	
SECURING	PIVOTAL ALTITUDE	

EMERGENCY LANDING | ENGINE FIRE IN FLIGHT | ENGINE FAILURE IN FLIGHT | ALTR FAIL | HOME

CESSNA 172SP QUICK REFERENCE v3.1: Dec2024

PREFLIGHT

PREFLIGHT INTERIOR	
AIRWORTHINESS	VERIFY
CONTROL LOCK	REMOVE
MAGNETOS	OFF
AVIONICS (BOTH)	OFF
MASTER ALT & BAT	ON
EXT LIGHTS	ON-CHECK-OFF
PITOT HEAT	ON-CHECK-OFF
PFD	VERIFY ON
FUEL SELECTOR	BOTH
FUEL SHUTOFF	FULL IN
OIL PRESS ANNUNCIATOR	SHOWN
VAC ANNUNCIATOR (IF EUIPPED)	SHOWN
AVIONICS BUS 1 FAN	ON-CHECK-OFF
AVIONICS BUS 2 FAN	ON-CHECK-OFF
LOW VOLTS ANNUNCIATOR	SHOWN
FLAPS	DOWN
MASTER ALT & BAT	OFF
ELEVATOR TRIM	TAKEOFF
ALT STATIC AIR VALVE	OFF (PUSH FULL IN)

PREFLIGHT EXTERIOR	
CABIN DOOR	CLOSED
BAGGAGE DOOR	LOCKED
FUSELAGE	CHECK
TAIL TIEDOWN	DISCONNECT
RUDDER/ELEVATOR	CHECK
ELEVATOR TRIM TAB	CHECK
ATTENAS	CHECK
R WING AILERON/FLAP	CHECK
R WING TIEDOWN	DISCONNECT
R MAIN WHEEL TIRE	CHECK
R WING FUEL	DRAIN
NOSE FUEL SUMP	DRAIN
ENGINE OIL	6QTS (5 MIN)
ENGINE COOLING INLETS	CHECK
PROPELLER & SPINNER	CHECK
AIR FILTER	CHECK
NOSE TIRE & STRUT	CHECK
STATIC PORT	CHECK
STALL WARNING	CHECK
L WING TIEDOWN	DISCONNECT
L WING FUEL	CHECK
L MAIN WHEEL TIRE	CHECK
L WING AILERON/FLAP	CHECK

EMERGENCY LANDING | ENGINE FIRE IN FLIGHT | ENGINE FAILURE IN FLIGHT | ALTR FAIL | HOME

CESSNA 172SP QUICK REFERENCE v3.1: Dec2024

BEFORE START	
PREFLIGHT	COMPLETE
SEATS & SEATBELTS	ADJUST & LOCK
BRAKES	HOLD
CIRCUIT BREAKERS	CHECK IN
BEACON LIGHT	ON
ALL OTHER SWITCHES	OFF
STBY BATT	TEST 10 SECS – ARM
THROTTLE	OPEN ¼ INCH
BUS E	23.3 VOLTS MIN
MASTER ALT & BAT	ON
PROP AREA	CLEAR

START	
READ FIRST THEN EXECUTE	
FUEL PUMP	ON
MIXTURE	RICH (3-5 SECONDS)
MIXTURE	CUTOFF
FUEL PUMP	OFF
STARTER	ENGAGE
AT FIRST SIGN OF START	RELEASE STARTER – MIXTURE RICH
OIL PRESSURE	GREEN
THROTTLE	1000 RPM

EMERGENCY LANDING | ENGINE FIRE IN FLIGHT | ENGINE FAILURE IN FLIGHT | ALTR FAIL | HOME

CESSNA 172SP QUICK REFERENCE v3.1: Dec2024

BEFORE TAXI	
FLAPS	UP
AVIONICS MASTER	ON
NAV LIGHT	ON
TAXI/RECOG LIGHT	ON
PFD	AHRS ALIGNED
BRAKES	VERIFY PRESSURE
COM FREQUENCIES	SET
TAXI OUT OF ALLEY	
BEFORE TAXI BRIEF	
GPS	VERIFY DATABASE
MFD FUEL LEVEL	ADJUST
MAP ORIENTATION	TRACK UP
XPNDR	VFR
COM FREQUENCIES	SET
WEATHER	OBTAIN
INSTRUMENTS	CHECK
FMS/NAV/CDI	SET & ACTIVATE
TAXI DIAGRAM	AVAILABLE
FLIGHT CONTROLS	FREE & CORRECT
TAXI ROUTE/HOTSPOTS	OBTAIN AND BRIEF
TAXI	1000 RPM OR LESS
MIXTURE	LEAN

EMERGENCY LANDING | ENGINE FIRE IN FLIGHT | ENGINE FAILURE IN FLIGHT | ALTR FAIL | HOME

CESSNA 172SP QUICK REFERENCE v3.1: Dec2024

RUN UP	
COM FREQUENCIES	SET
LANDING LIGHT	OFF
MIXTURE	RICH
BRAKES	HOLD
THROTTLE	1800 RPM
MAGNETOS (150ea/50diff)	CHECK
NO RED INDICATIONS	EIS
	AMPS & VOLTS
ANNUNCIATORS	CONSIDER
THROTTLE	IDLE THEN 1000 RPM
THROTTLE FRICTION	ADJUST

BEFORE TAKEOFF	
SEATS	UPRIGHT
SEATBELTS	SECURE
DOORS & WINDOWS	LOCKED
FMS	BRIEF
MESSAGES	CONSIDER
FUEL SELECTOR	BOTH
FUEL QTY	STATE
FLAPS	0 OR 10 DEGREES
TRIM	TAKEOFF
DEPARTURE BRIEF	
WHEN ENTERING RUNWAY	
EXTERIOR LIGHTS	ALL UP
MIXTURE	RICH

AFTER TAKEOFF & CLIMB (1000’ AGL)	
FLAPS	RETRACTED
CRUISE CLIMB	70-85KTS

EMERGENCY LANDING | ENGINE FIRE IN FLIGHT | ENGINE FAILURE IN FLIGHT | ALTR FAIL | HOME

CESSNA 172SP QUICK REFERENCE v3.1: Dec2024

CRUISE	
THROTTLE	AS REQD
RECOG LIGHTS	ON
FMS	BRIEF
MIXTURE	LEAN

PRE MANEUVER	
RECOG LIGHTS	ON
AIR CON	AS REQD
MIXTURE	SET
FUEL QTY	STATE
FUEL SELECTOR VALVE	BOTH
ESP	OFF
AREA	CLEAR
ESP OFF INSTRUCTION	
MFD AUX PAGE > SMALL FMS KNOB TO “SYSTEM SETUP” > SOFTKEY TO “SETUP 2” > PRESS FMS KNOB > “DISABLE”	

EMERGENCY LANDING | ENGINE FIRE IN FLIGHT | ENGINE FAILURE IN FLIGHT | ALTR FAIL | HOME

DESCENT & BEFORE LANDING	
5NM FROM THE AIRPORT	
WEATHER	OBTAIN
EXTERIOR LIGHTS	ALL UP
MIXTURE	RICH
MINIMUMS	SET
IN THE PATTERN	
FUEL QTY	STATE
FUEL SELECTOR VALVE	BOTH
SEATS & SEATBELTS	UPRIGHT & SECURE
FLAPS	AS REQD
STABILITY CALL (200' AGL)	GO AROUND/CONTINUE
AUTOPILOT (200' AGL)	OFF
AIR CON	OFF
APPROACH	HEELS ON FLOOR

AFTER LANDING	
RUN AS FLOW, CONFIRM AT NEXT STOP	
FLAPS	UP
TRIM	TAKEOFF
STROBES	OFF

EMERGENCY LANDING | ENGINE FIRE IN FLIGHT | ENGINE FAILURE IN FLIGHT | ALTR FAIL | HOME

SECURING	
XPNDR	VFR
NAV & RECOG LIGHTS	OFF
INTERIOR LIGHTS	OFF
AVIONICS (BOTH)	OFF
MIXTURE	CUTOFF
MAGNETOS (AFTER STOP)	OFF
ENGINE TIMES	RECORD
MASTER ALT & BAT	OFF
STBY BATT	OFF
CONTROL LOCK	INSTALL
FUEL SELECTOR VALVE	LEFT OR RIGHT
AIRCRAFT	SECURED
POST-FLIGHT INSPECTION	COMPLETE

CESSNA 172SP QUICK REFERENCE v3.1: Dec2024

BOLD ITEMS ARE TO BE MEMORIZED AS A FLOW

ENGINE FIRE IN FLIGHT	
MIXTURE	**CUTOFF**
FUEL SHUTOFF VALVE	**OFF**
FUEL PUMP	**OFF**
MASTER ALT & BAT	**OFF**
CABIN VENTS	OPEN
CABIN HEAT/AIR	OFF
AIRSPEED	PITCH FOR Vno
IF FIRE EXTINGUISHED	
EMERGENCY LANDING	EXECUTE

BOLD ITEMS ARE TO BE MEMORIZED AS A FLOW

ENGINE FIRE DURING START	
MAGNETOS SWITCH	**START (CONTINUE CRANKING)**
IF ENGINE STARTS	
THROTTLE	**1800 RPM**
ENGINE	**SHUTDOWN**
IF ENGINE FAILS TO START	
THROTTLE	**FULL**
MIXTURE	**IDLE**
MAGNETOS	**START**
FUEL SHUTOFF VALVE	**OFF**
FUEL PUMP	**OFF**
MAGNETOS	**OFF**
STDBY BATT	**OFF**
MASTER ALT & BAT	**OFF**
ENGINE	SECURE
FIRE EXTINGUISHER	OBTAIN
AIRPLANE	EVACUATE
FIRE	EXTINGUISH

EMERGENCY LANDING | ENGINE FIRE IN FLIGHT | ENGINE FAILURE IN FLIGHT | ALTR FAIL | HOME

EMERGENCY LANDING	
IF ABOVE 1500 AGL	
SQUAWK	7700
DECLARE	121.5
ALL ALTITUDES	
SEATS & SEATBELTS	UPRIGHT & SECURE
MIXTURE	CUTOFF
FUEL SHUTOFF VALVE	OFF
MAGNETOS	OFF
LANDING ASSURED	
FLAPS	AS REQD
STBY BATT	OFF
MASTER ALT & BAT	OFF
DOOR	UNLATCH

BOLD ITEMS ARE TO BE MEMORIZED AS A FLOW

ENGINE FAILURE IN FLIGHT	
AIRSPEED	**68**
BEST PLACE TO LAND	**SELECT**
FUEL SHUTOFF VALVE	**ON (PUSH IN)**
FUEL SELECTOR VALVE	**BOTH**
FUEL PUMP	**ON**
MIXTURE	**RICH**
MAGNETOS	**BOTH (OR START)**
IF POWER NOT RESTORED	
EMERGENCY LANDING	EXECUTE
IF POWER RESTORED	
FUEL PUMP	OFF (MONITOR FLOW)
CRUISE CHECKLIST	COMPLETE

BOLD ITEMS ARE TO BE MEMORIZED AS A FLOW

ENGINE FAILURE AFTER TAKEOFF	
AIRSPEED	**70**
MIXTURE	**CUTOFF**
MAGNETOS	**OFF**
FLAPS	**AS REQD**
STBY BATT	**OFF**
MASTER ALT & BAT	**OFF**
CABIN DOOR	UNLATCH
LAND	STRAIGHT AHEAD

CESSNA 172SP QUICK REFERENCE v3.1: Dec2024

BOLD ITEMS ARE TO BE MEMORIZED AS A FLOW

ELECTRICAL FIRE IN FLIGHT	
STBY BATT	**OFF**
MASTER ALT & BAT	**OFF**
VENTS	**OPEN**
CABIN HEAT/AIR	**OFF**
FIRE	**EXTINGUISH**
ALL SWITCHES	OFF (EXCEPT MAGS)
IF FIRE CONTINUES	
EMERGENCY DESCENT	EXECUTE
LAND	ASAP
AFTER FIRE IS EXTINGUISHED	
CABIN VENTS	OPEN
CABIN HEAT/AIR	OPEN
IF POWER NECESSARY FOR CONTINUED FLIGHT	
CIRCUIT BREAKERS	DO NOT RESET
MASTER ALT & BAT	ON
STBY BATT	ARM
AVIONICS BUS 1&2	ON

WING FIRE	
EXTERIOR LIGHTS	ALL OF
PITOT HEAT	OFF
SIDE SLIP TO KEEP FLAMES AWAY FROM FUEL TANK	

EMERGENCY LANDING | ENGINE FIRE IN FLIGHT | ENGINE FAILURE IN FLIGHT | ALTR FAIL | HOME

ALTR FAIL	
ALTERNATOR	OFF
ALT FIELD BREAKER	IN/RESET
ALTERNATOR	ON
IF ALTERNATOR STILL FAILED	
ALTERNATOR	OFF
AVIONICS BUS 1	OFF
PITOT HEAT	OFF
ALL EXTERIOR LIGHTS	OFF
CABIN PWR 12V	OFF
COM1 AND NAV1	SELECT ACTIVE FREQ
AVIONICS BUS 2	OFF (UNLESS IN IMC)
LAND	WHEN PRACTICAL

LOST COMMUNICATION	
RADIO	VERIFY FREQ
VOLUME/SQUELCH	ADJUST
PUSH TO TALK	VERIFY TX
COMMS	CYCLE COM/FREQ
IF COMMS NOT RE-ESTABLISHED	
SQUAWK	7600
LAND	WHEN PRACTICAL
RECALL LIGHT GUN SIGNALS	

Color and Type of Signal	Movement of Vehicles, Equipment and Personnel	Aircraft on the Ground	Aircraft in Flight
Steady green	Cleared to cross, proceed or go	Cleared for takeoff	Cleared to land
Flashing green	Not applicable	Cleared for taxi	Return for landing (to be followed by steady green at the proper time)
Steady red	Stop	Stop	Give way to other aircraft and continue circling
Flashing red	Clear the taxiway/runway	Taxi clear of the runway in use	Airport unsafe, do not land
Flashing white	Return to starting point on airport	Return to starting point on airport	Not applicable
Alternating red and green	Exercise extreme caution!!!!	Exercise extreme caution!!!!	Exercise extreme caution!!!!

FLIGHT INSTRUMENT FAILURE	
IF AFTER FAF & VMC	
LAND	WHEN PRACTICAL
IF AFTER FAF & IMC	
MISSED APPROACH	CONSIDER
CALL OUT	CONTINUE/GOING MISSED
IF EXECUTING MISSED OR PRIOR TO FAF	
CIRCUIT BREAKERS	CHECK IN
VAC PRESSURE (IF INSTALLED)	CHECK
INSTRUMENT CHECK	COMPLETE
IF FUNCTION NOT RESTORED	
ASSISSTANCE	CONSIDER
ATC	NOTIFY
APPROACH	CONSIDER

PFD FAILURE	
REVERSIONARY MODE	PRESS
CIRCUIT BREAKERS	CHECK IN
IF FUNCTION NOT RESTORED	
ASSISSTANCE	CONSIDER
ATC	NOTIFY

CESSNA 172SP QUICK REFERENCE v3.1: Dec2024

BEFORE TAXI BRIEF	
SAFETY	
SEATBELTS	LOCATION, FUNCTION & WHEN TO WEAR
AIR VENTS	LOCATION, FUNCTION, MOTION SICKNESS
FIRE	FIRE EXTINGUISHER LOCATION & USE
EMERGENCY	FOLLOW MY INSTRUCTIONS. EXIT PROCEDURES
TALKING	STERILE COCKPIT & EXCHANGE OF CONTROLS
YOUR QUESTIONS?	

DEPARTURE BRIEF
ABORTED TAKE OFF
ABORT TAKEOFF FOR ANY FIRES, RED ANNUNCIATORS, OR LOSS OF DIRECTIONAL CONTROL
ENGINE FAILURE BELOW 1000 AGL
PITCH FOR Vg AND LAND ON REMAINING RUNWAY OR WITHIN 30 DEGREES OF HEADING
ENGINE FAILURE ABOVE 1000 AGL OR TURNED CROSSWIND
PITCH FOR Vg AND RETURN TO LAND OR RUNWAY, TAXIWAY, OR SUITABLE OFF-FIELD SITE

BEFORE TAXI	BEFORE TAKEOFF

EMERGENCY LANDING	ENGINE FIRE IN FLIGHT	ENGINE FAILURE IN FLIGHT	ALTR FAIL	HOME

ENGINE START – FLOODED ENGINE	
FUEL PUMP	OFF
THROTTLE	½ - FULL OPEN
MIXTURE	IDLE
MAGNETOS	START
MIXTURE (UPON START)	SMOOTHLY ADVANCE
THROTTLE	REDUCE
CAS MESSAGES	CONSIDER
PFD ANNUNCIATIONS	CONSIDER
OIL PRESSURE	CHECK

CO LVL HIGH	
CABIN HEAT	OFF (FULL IN)
CABIN AIR	ON (FULL OUT)
CABIN VENTS	OPEN
CABIN WINDOWS	OPEN (163 KIAS MAX)
LAND AS SOON AS PRACTICAL	

ENGINE START – USING EXTERNAL POWER	
THROTTLE	OPEN ¼ INCH
MIXTURE	IDLE
STBY BATT	TEST – ARM
EIS	NO RED X'S
BUS E VOLTS	24V MINIMUM
M BUS VOLTS	1.5V OR LESS
BATT S AMPS	VERIFY DISCHARGE
STBY BATT ANNUNCIATOR	CHECK
AVIONICS BUS 1&2	OFF
MASTER ALT & BAT	OFF
PROP AREA	CLEAR
EXTERNAL POWER	CONNECT
MASTER ALT & BAT	ON
BEACON	ON
BUS M VOLTS	CHECK (~28V)
FUEL PUMP	ON
MIXTURE	RICH (3-5SEC) – IDLE
FUEL PUMP	OFF
MAGNETOS	START
MIXTURE	SMOOTHLY RICH

FUEL VAPOR PROCEDURES	
MIXTURE	FULL RICH
THROTTLE	1800-2000 RPM;1-2 MINS
	REDUCE TO 1200RPM
	LEAN
FUEL PUMP	CONSIDER USE
WHEN THE ENGINE IS OPERATED ABOVE 1800 RPM, THE INCREASED FUEL FLOW AND RESULTING LOWER TEMPERATURE MINIMIZES VAPOR FORMATION.	

PFD/MFD COOLING ANNUNCIATORS	
CABIN HT	PUSH IN
FORWARD AVIONICS FAN	CHECK AIRFLOW FROM SCREENON GLARESHIELD
IF FORWARD AVIONICS FAN HAS FAILED	
STBY BATT	OFF
IF ANNUNCIATOR DOES NOT CLEAR WITHIN 3 MINS	
LAND AS SOON AS PRACTICAL	

DUAL GPS FAILURE	
NAVIGATION	USE ALTERNATE SOURCE (ILS, LOC, VOR, DME, ADF)
IF ALTERNATE SOURCES OF NAVIGATION ARE NOT AVAILABLE	
NAVIGATION	USE DEAD RECKONING MODE
WARNING	
INFORMATION FROM GPS TURNS AMBER AND BECOME INACCURATE OVER TIME. AMBER CDI DISAPPEARS AFTER 20 MINS & TERRAIN AWARNESS AND WARINGIN SYSTEM (TAWS) IS INOP	

HIGH VOLTS ANNUNCIATOR (M BATT AMPS >40)	
ALT MASTER	OFF
ELECTRICAL LOAD	SHED
	AVIONICS (BUS 1) – OFF
	PITOT HEAT – OFF
	BEACON – OFF
	LANDING LIGHT – OFF
	TAXI LIGHT – OFF
	NAV LIGHT – OFF
	STROBE LIGHT – OFF
	CABIN 12V SWITCH – OFF
COM1 & NAV1	TUNE & ACTIVATE
AVIONICS BUS 2	OFF (IF NOT IN IMC)
WHEN AVIONICS BUS 2 IS OFFTHE FOLLOWING EQUIPEMENT WILL BE INOP:	
AUTO PILOT	*COMM 2*
TRANSPONDER	*AUDIO PANEL*
NAV 2	*MFD*

*THIS DOCUMENT **DOES NOT** COVER EVERY OPERATION OR EMERGENCY PROCEDURE. FOR A MORE EXHAUSTIVE LIST OF PROCEDURES REFER TO SECTIONS 3 & 4 OF THE CESSNA 172SP POH & THE G1000 REFERENCE GUIDE.*

EMERGENCY LANDING | ENGINE FIRE IN FLIGHT | ENGINE FAILURE IN FLIGHT | ALTR FAIL | HOME

COLD WEATHER OPERATIONS – OAT <35F

Do not leave the master on for extended periods while preflighting and if temperature is below 20 degrees omit dropping flaps and checking lights before start.

Preflight:

- Pull the Propeller through 20 times to circulate oil. CHECK MAGNETOS OFF/KEYS OUT (Cessna)
- Do not extend flaps until after the aircraft starts (Cessna)

Starting:

- If an airplane is very cold or has not started in a few days...
    - Increase Prime-time
        - Priming and then pulling the prop through a few Full rotations also helps get the oil moving before using the starter.
- Use minimal RPMs to start the engine (LESS THAN 1000RPM) and limit yourself to low RPM settings (~1400RPMS for Lycoming/Continental or 2500RPMS for CRUZ) on ground.

In-flight:

- No power idle descents.
- Use higher RPM descents.
- If power idle descents are necessary...clear the engine with short gentle bursts of power periodically during the descent and keep the length of time you spend at idle to a minimum (practice it from 3,000ft instead of 5,000ft etc).

LEANING PROCEDURES

BEFORE TAXI

Taxi:

- Set throttle to 1200 RPM
- Lean mixture for max RPM
- Reduce throttle to 1000 RPM

Cruise

- As a general rule of thumb, lean the mixture less than but close to a temperature of 1425 EGT.
- If engine roughness occurs before peak EGT, the EGT corresponding to the onset of engine roughness should be used as the peak reference value.
    - Enrich ~100 degrees cooler from this value to operate rich-of-peak.
- If you need to climb, enrich the mixture before adding power if at or above 75% power (~2500 RPM or greater), then lean again at your new altitude.

Maneuvers: Set the mixture to full rich for maneuvering per the pre-maneuver checklist unless operating at about 4000 feet density altitude.

PIVOTAL ALTITUDE

Groundspeed		Approximate Pivotal Altitude
Knots	MPH	
87	100	670
91	105	735
96	110	810
100	115	885
104	120	960
109	125	1050
113	130	1130

Pivotal altitude (AGL) = groundspeed in knots²/11.3

REVISIONS

V3.1 December 2024

- Descent & Before Landing Checklist
  - *Instruction to not complete until within 5nm of airport has been added.*
- After Takeoff & Climb Checklist
  - Edited to be executed once reaching 1000’ AGL, instruction has been added to transition to a “Cruise Climb” (Enroute Climb)