

# Normal Procedures

# Cessna 172S (G1000) Checklist

Challenge	Response
<b>AIRCRAFT ACCEPTANCE</b>	
Pilot Tube Cover	REMOVE
Maintenance Status / Tachometer	CHECKED
Magnetos	CHECK OFF
Control Lock	REMOVE
Master Switch	ON
Avionics Switch (Bus 1 & Bus 2)	OFF
Primary Flight Display	VERIFY ON
Fuel Quantity	CHECK (reset used)
Low Fuel Annunciator	VERIFY OFF
Oil Pressure Annunciator	VERIFY ON
Low Volts Annunciator	VERIFY ON
Low Vacuum Annunciator	VERIFY ON
Avionics Switch (Bus 1)	ON
Forward Avionics Fan	CHECK OPERATION
Avionics Switch (Bus 1)	OFF
Avionics Switch (Bus 2)	ON
Aft. Avionics Fan	CHECK OPERATION
Avionics Switch (Bus 2)	OFF
Pilot Heat	CHECKED
Master Switch	OFF
Alternate Static Air	OFF
Trim Controls	TAKEOFF POSITION
Fuel Shutoff Valve	ON
Fuel Selector Valve	BOTH
Fire Extinguisher	CHECKED
Hobbs	RECORDED
AR(R)OW	CHECKED
G1000 Reference Guide	ACCESSIBLE
<b>BEFORE STARTING ENGINE</b>	
Preflight Inspection	COMPLETE
Seat Belts / Harnesses	ON
Doors	CLOSED AND LATCHED
Passenger Briefing	COMPLETE
Circuit Breakers	CHECKED IN
Electrical Equipment	OFF
Avionics Switch	OFF
Fuel Selector	BOTH
Brakes	SET
<b>STARTING ENGINE</b>	
Throttle	OPEN ¼ INCH
Mixture Control	IDLE CUT-OFF
Standby Battery Switch	TEST then ARM
Engine Indication System	CHECKED
Bus E Volts	VERIFY 24 VOLTS MIN.
M Bus Bolts	VERIFY ≤ 1.5 VOLTS
Battery S Amps	VERIFY DISCHARGE
Standby Battery Annunciator	VERIFY ON
Propeller Area	CLEAR
Master Switch	ON
Beacon	ON
Fuel Pump	AS REQUIRED
Mixture Control	IF REQUIRED ADVANCE to FULL RICH/PRIME
Mixture Control	IDLE CUT-OFF
Fuel Pump	OFF
Magneto Switch	START
Mixture Control	ADVANCE AFTER START
Oil Pressure	CHECK
Throttle	1000 RPM

Challenge	Response
AMPS	CHECK POSITIVE CHARGE
Low Volts Annunciator	VERIFY OFF
Avionics Switch (Bus 1 & Bus 2)	ON
Lights	AS REQUIRED
Mixture	AS REQUIRED
<b>TAXI</b>	
Seat / Seat Belts	SECURE
Brakes / Steering	CHECKED
Instruments	CHECKED
<b>BEFORE TAKEOFF</b>	
Parking Brake	SET
Pilot and Passenger Seat Backs	MOST UPRIGHT POSITION
Seats and Seat Belts	CHECK SECURE
Cabin Doors	CLOSED and LOCKED
Flight Controls	FREE and CHECKED
Flight Instruments (PFD)	CHECK (no red X's)
Altimeters:	
PFD (BRAARO)	SET
Standby Altimeter	SET
ALT SEL	SET
Standby Flight Instruments	CHECK
Fuel Quantity	CHECK (verify level is correct)
<b>NOTE</b> - Flight is not recommended when both fuel quantity indicators are in the yellow band range.	
Mixture Control	RICH
FUEL SELECTOR Valve	SET BOTH
Autopilot	CHECK (if applicable)
Electric Trim Control	SET FOR TAKEOFF
Throttle Control	1800 RPM
MAGNETOS Switch	CHECK (Max. 150 rpm/ 50 diff)
VAC Indicator	CHECK
Engine Indicators	CHECK
Ammeters and Voltmeters	CHECK
Annunciators	CHECK (verify none shown)
Throttle Control	CHECK IDLE
Throttle Control	1000 RPM or LESS
Throttle Control Friction Lock	ADJUST
COM Frequency(s)	SET
NAV Frequency(s)	SET
FMS/GPS Flight Plan	AS DESIRED
XPDR	SET
CDI Soft Key	SELECT NAV SOURCE
CABIN PWR 12V Switch	OFF
Wing Flaps	UP - 10° (10° preferred)
Cabin Windows	CLOSED and LOCKED
STROBE Light Switch	ON
Brakes	RELEASE
<b>LINE UP</b>	
Flaps and Trim	SET
Exterior Lights	ON
Pitot Heat	AS REQUIRED

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Challenge	Response
<b>CLIMB</b>	
Flaps .....	UP
Mixture .....	AS REQUIRED
Engine Gauges .....	CHECKED
Airspeed .....	V <sub>Y</sub> (74) until 1000' then 75-85 KIAS
Trim .....	SET
<b>CRUISE</b>	
Power .....	SET
Trim .....	SET
Mixture .....	AS REQUIRED
Landing Light .....	OFF
Flight Instruments .....	CHECKED
<b>DESCENT</b>	
Weather .....	CHECKED
Power .....	AS REQUIRED
Mixture .....	AS REQUIRED
Trim .....	SET
Altimeters .....	SET
CDI Soft Key .....	SELECT NAV SOURCE
Exterior Lights .....	AS REQUIRED
Approach Briefing .....	COMPLETE
<b>BEFORE LANDING</b>	
Passenger Briefing .....	COMPLETE
Seat Belts / Harnesses .....	ON
Fuel Selector .....	BOTH
Mixture .....	AS REQUIRED
Airspeed .....	65-75 FLAPS UP / 60-70 FULL FLAPS
Flaps .....	SET
Landing Light .....	ON
Autopilot .....	OFF
<b>AFTER LANDING</b>	
Exterior Lights .....	OFF
Trim .....	RESET
Mixture .....	AS REQUIRED
Flaps .....	UP
Pitot Heat .....	OFF
<b>SECURING</b>	
Brakes .....	SET
Throttle .....	IDLE
Avionics Switch (Bus 1 & Bus 2) .....	OFF
Magnetos .....	GROUND CHECK
Mixture .....	IDLE CUT-OFF
Magnetos / Keys .....	OFF & OUT
Electrical Equipment .....	OFF
Master Switch .....	OFF
Standby Battery Switch .....	OFF
Fuel Selector .....	LEFT or RIGHT
Hobbs .....	RECORD
Chocks / Control Lock & Tie Down .....	IN & SECURE

# Emergency Procedures

# Cessna 172S (G1000) Checklist

## Challenge Response

### ENGINE FAILURE DURING TAKEOFF ROLL

Throttle	.....	<b>IDLE</b>
Brakes	.....	<b>APPLY</b>
Wing Flaps	.....	<b>RETRACT</b>
Mixture	.....	<b>IDLE CUT-OFF</b>
Fuel Shutoff Valve	.....	<b>PULL OFF</b>
Magneto Switch	.....	<b>OFF</b>
Standby Battery Switch	.....	<b>OFF</b>
Master Switch	.....	<b>OFF</b>

### ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF

Airspeed	.....	<b>(flaps up) 70 KIAS</b>
Mixture	.....	<b>IDLE CUT-OFF</b>
Fuel Shutoff Valve	.....	<b>PULL OFF</b>
Magnetos	.....	<b>OFF</b>
Wing Flaps	.....	<b>AS REQUIRED</b>
Standby Battery Switch	.....	<b>OFF</b>
Master Switch	.....	<b>OFF</b>
Door	.....	<b>UNLATCH</b>

### ENGINE FAILURE IN FLIGHT

Trim for Best Glide	.....	<b>68 KIAS</b>
Pick Suitable Landing Site	.....	
Fly Toward Landing Site	.....	
Fuel Shutoff Valve	.....	<b>ON</b>
Fuel Selector	.....	<b>BOTH</b>
Fuel Pump	.....	<b>ON</b>
Mixture	.....	<b>RICH</b>
Magnetos	.....	<b>ON / BOTH</b>
IF NO RESTART OR AN OFF AIRPORT LANDING IS NECESSARY:		
Squawk Code: 7700 (121.5)	.....	
Passenger Briefing	.....	<b>COMPLETE</b>
Mix, Mags, Fuel Shutoff Valve, Fuel Pump	.....	<b>OFF</b>
Flaps	.....	<b>AS REQUIRED</b>
Standby Battery Switch	.....	<b>OFF</b>
Master Switch	.....	<b>OFF</b>
Seats / Seat Belts	.....	<b>SECURE</b>
Loose Objects	.....	<b>STOW</b>
Doors	.....	<b>AJAR</b>

### ENGINE FIRE DURING START UP

Cranking	.....	<b>CONTINUE</b>
IF ENGINE STARTS:		
Throttle	.....	<b>1800 RPM</b>
Engine	.....	<b>SHUTDOWN</b>
Engine	.....	<b>INSPECT</b>
IF ENGINE FAILS TO START:		
Throttle	.....	<b>FULL OPEN</b>
Mixture	.....	<b>IDLE CUT-OFF</b>
Cranking	.....	<b>CONTINUE</b>
Fuel Shutoff Valve	.....	<b>PULL OFF</b>
Fuel Pump	.....	<b>OFF</b>
Magnetos	.....	<b>OFF</b>
Standby Battery Switch	.....	<b>OFF</b>
Master Switch	.....	<b>OFF</b>

## Challenge Response

Fire Extinguisher	.....	<b>OBTAIN / ARM</b>
Engine	.....	<b>SECURE</b>
Airplane	.....	<b>EVACUATE</b>
Engine	.....	<b>INSPECT</b>

### ENGINE FIRE IN FLIGHT

Mixture	.....	<b>IDLE CUT-OFF</b>
Fuel Shutoff Valve	.....	<b>OFF / PULL OUT</b>
Fuel Pump	.....	<b>OFF</b>
Standby Battery Switch	.....	<b>OFF</b>
Master Switch	.....	<b>OFF</b>
Vents Heat / Air	.....	<b>CLOSED</b>
(except overhead vents)		
Airspeed	.....	<b>100 KIAS</b>
(If fire is not extinguished, increase glide speed to find an airspeed which will provide an incombustible mixture.)		
Forced Landing	.....	<b>EXECUTE</b>
SEE ENGINE FAILURE IN FLIGHT: NO RESTART CHECKLIST		

### ELECTRICAL FIRE IN FLIGHT

Standby Battery Switch	.....	<b>OFF</b>
Master Switch	.....	<b>OFF</b>
All Other Switches Except Ignition	.....	<b>OFF</b>
Vents Heat / Air	.....	<b>CLOSED</b>
Fire Extinguisher	.....	<b>ACTIVATE</b>

WARNING: AFTER DISCHARGING FIRE EXTINGUISHER WITHIN CLOSED CABIN, VENTILATE CABIN

IF FIRE APPEARS OUT AND ELECTRICAL POWER IS NECESSARY FOR CONTINUANCE OF FLIGHT

Circuit Breakers	.....	check for faulty circuit, do not reset
Master Switch	.....	<b>ON</b>
Avionics Switch (Bus 1)	.....	<b>ON</b>
Avionics Switch (Bus 2)	.....	<b>ON</b>

### AMMETER SHOWS EXCESSIVE RATE OF CHARGE

Master	.....	<b>OFF</b>
Non-Essential Electrical Equip.	.....	<b>OFF</b>
Avionics Switch (Bus 1 & 2)	.....	<b>OFF</b>
Flight	.....	<b>LAND AS SOON AS PRACTICAL</b>

### LOW VOLTAGE LIGHT ILLUMINATES IN FLIGHT

Avionics Switch (Bus 1 & 2)	.....	<b>OFF</b>
Alternator Circuit Breaker	.....	<b>CHECK IN</b>
Master Switch	.....	<b>OFF</b>
Master Switch	.....	<b>ON</b>
Low Voltage Light	.....	<b>CHECK OFF</b>
Avionics Switch (Bus 1 & 2)	.....	<b>ON</b>

IF LOW VOLTAGE LIGHT ILLUMINATES AGAIN

Alternator	.....	<b>OFF</b>
Non-Essential Radio / Electrical Equip.	.....	<b>OFF</b>
Flight	.....	<b>LAND AS SOON AS PRACTICAL</b>

*Highlighted Items Should be Committed to Memory*

Challenge	Response
<b>AIR DATA SYSTEM FAILURE</b>	
<b>RED X-PFD AIRSPEED INDICATOR</b>	
ADC/AHRS Circuit Breakers	<b>CHECK IN</b>
If open, reset circuit breaker. If circuit breaker opens again, do not reset.	
Standby Airspeed Indicator	<b>USE</b>
<b>RED X-PFD ALTITUDE INDICATOR</b>	
ADC/AHRS Circuit Breakers	<b>CHECK IN</b>
If open, reset circuit breaker. If circuit breaker opens again, do not reset.	
Standby Altimeter	<b>USE</b>
<b>AHRS FAILURE</b>	
<b>RED X-PFD ATTITUDE INDICATOR</b>	
ADC/AHRS Circuit Breakers	<b>CHECK IN</b>
If open, reset circuit breaker. If circuit breaker opens again, do not reset.	
Standby Attitude Indicator	<b>USE</b>
<b>RED X-PFD HORIZONTAL SITUATION INDICATOR</b>	
ADC/AHRS Circuit Breakers	<b>CHECK IN</b>
If open, reset circuit breaker. If circuit breaker opens again, do not reset.	
Magnetic Compass	<b>USE</b>