

# Cessna 172

## Preflight Inspection Cockpit

Aircraft docs (ARROW)	Check
Weight & Balance	Check
Parking Brake	Set
Control wheel lock	Remove
Hobbs/Tach	Check/Remove
Ignition	Off
Avionics Power Switch	Off
Master Switch	On
Fuel quantity indicators	Check
Pitot Heat	On
Avionics Master Switch	On
Avionics Cooling Fan	Audible
Avionics Master Switch	Off
Static Pressure Alt Src Valve	Off
Annunciator Panel Switch	Test
Annunciator's Illuminate	Check
Annunciator Panel Switch	Off
Flaps	Extend
Pitot Heat	Off
Master Switch	Off
Pitot Tube	Test for Heat
Fuel shutoff valve	On (In)

## Fuselage and Empenage

Baggage Door	Closed & Locked
Rivets	Check
Rudder Gust Lock	Remove
Tail Tie-Down	Disconnect
Control surfaces	Free & Secure
Trim Tab	Check Security
Antennas	Check Security

## Right wing

Wing tie-down	Disconnect
Aileron	Free and Secure
Flaps	Secure
Main wheel tire	Inflated/Cond
Brakes	Not Leaking
Fuel tank sump	Sample
Fuel Quantity	Check
Fuel Filler cap	Secure

## Nose

Engine oil level	Check
Fuel strainer	Sample
Propeller and spinner	Check

# Preflight

Alternator belt	Check
Air intake	Check
Carburetor air filter	Check
Landing lights	Check
Nose wheel strut & tire	Check
Nose-Tie down	Disconnect
Static source opening	Check

## Left Wing

Wing tie-down	Disconnect
Aileron	Free and Secure
Flaps	Secure
Main wheel tire	Inflated/Cond
Brakes	Not Leaking
Fuel tank vent open	Check
Fuel tank sump	Sample
Fuel Quantity	Check
Fuel Filler cap	Secure
Pitot tube	Uncover and Check
Stall warning	Check
Landing/Taxi Light(s)	Clean/Cond

## Before starting engine

Preflight inspection	Complete
Passenger Briefing	Complete
Seats, belts	Adjust & Lock
Doors	Closed & Locked
Brakes	Test & Set
Circuit breakers	Check In
Electrical Equip/Autopilot	Off
Avionics Power Switch	Off
Fuel Selector Valve	Both
Fuel shutoff valve	On (In)

## Starting Engine

Throttle	Open 1/4 inch
Mixture	Rich (IN)
Carb heat	Cold (IN)
Prime	As required; locked
Aux Fuel Pump	On
Propeller area	Clear
Master Switch	On
Beacon	On
Ignition	Start
Throttle	Adjust 1000 rpm
Oil Pressure	Check normal
Aux Fuel Pump	Off
Avionics Master Switch	On
Radios	On

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Transponder	Standby
Flaps	Up
Ammeter	Check
Heading Indicator	Set
ATIS/AWOS/ASOS	Obtain
Altimeter	Set
Autopilot	Engage
Flight Controls	Move Against AP
Autopilot	Disconnect (Sound)
Departure & Taxi Clearance	Contact

## Before Takeoff

Parking brake	Set
Cabin doors	Closed & Locked
Seats, belts	Adjust & Lock
Flight controls	Free & Correct
Instruments (4)	Set
Fuel Quantity	Check
Fuel Shutoff Valve	On
Mixture	Rich (IN)
Fuel Selector Valve	Both
Elevator Trim	Set for TAKEOFF
Throttle	1800 rpm
Magnetos	Check
Suction gage	Check
Engine Instruments	Check
Ammeter	Check
Mixture	Set for Density Alt
Carb heat	On
Annunciator Panel	Clear
Throttle	1000 rpm
Throttle Friction Lock	Adjust
Strobe Lights	On
Radios/Avionics	Set
Autopilot	Off
Flaps	Set for Takeoff (0°-10°)
Parking Brake	Release
Windows	Closed

## Takeoff

Flaps	Up
Carb heat	Cold (In)
Transponder	Altitude
Trim	set for TAKEOFF
Throttle	Full
Tach, oil, airspeed	Check
Elevator	Lift at 55 KIAS
Climb	70-80 KIAS

# In Flight

## Cruise

Pitch	Set
Throttle	As required
Trim	Set
Mixture	Adjust

## Pre-landing checklist

Fuel selector	On
Mixture	Rich
Carb Heat	On
Seatbelts	Fastened

## Approach

Flight instruments	Ckd & Set
Radios	Checked
ATIS	Checked
Carb Heat	On (Out)
Mixture	Rich
Landing light	On
Airspeed	65-75 KIAS (Flaps Up) 60-70 KIAS (Flaps Dn)

## After landing

Flaps	Up
Carb Heat	Cold (In)
Transponder	Standby
Landing light	Off

## Parking

Avionics	Off
Electrical	Off
Throttle	1000 RPM
Mixture	Cut-off
Ignition switch	Off
Master switch	Off

## Securing the aircraft

Control Lock	Install
Hobbs/Tach	Record
Door/Window	Secure
Tie-downs	Secure

## Comm Freq

ATIS	
Ground	
Tower	
Club	
Fuel	

# Procedures

## Short field take-off

Take-off checklist	<b>Complete</b>
Taxi	<b>Max runway</b>
Brakes	<b>Set and hold</b>
Flaps	<b>10°</b>
Throttle	<b>Full</b>
Brakes	<b>Release</b>
Climb	<b>57 KIAS</b>
Flaps	<b>Retract when clear</b>
Airspeed	<b>67 KIAS</b>

## Short field landing

Pre-landing check	<b>Complete</b>
Approach	<b>62 KIAS</b>
Flaps	<b>30°</b>
Throttle	<b>Maintain glide</b>
Touchdown	<b>Power Off</b>
Flaps	<b>Up</b>
Elevator	<b>Full up</b>
Braking	<b>Heavy as required</b>

## Soft field take-off

Take-off checklist	<b>Complete</b>
Flaps	<b>10°</b>
Taxi	<b>keep rolling</b>
Climb	<b>54 KIAS</b>
Flaps	<b>retract</b>
Airspeed	<b>67 KIAS</b>

## Soft field landing

Pre-landing check	<b>Complete</b>
Throttle	<b>1500 RPM</b>
Flaps	<b>10°</b>
Airspeed	<b>60 KIAS</b>
Touchdown	<b>Main first, softly</b>
Landing roll	<b>Nose wheel up</b>
Elevator	<b>Up</b>
Braking	<b>As required</b>

## Go-around

Throttle	<b>Full</b>
Carb Heat	<b>Cold (In)</b>
Flaps	<b>20°</b>
Climb	<b>55 KIAS</b>
Flaps	<b>10°</b>
Climb	<b>60 KIAS</b>
Flaps	<b>Up</b>
Climb	<b>&gt;60 KIAS</b>

# Emergency

## Engine failure

### TAKEOFF

Throttle	<b>Idle</b>
Brakes	<b>Apply</b>
Flaps	<b>Retract</b>
Mixture	<b>IDLE cut-off</b>
Ignition	<b>Off</b>
Master switch	<b>Off</b>

### AFTER TAKEOFF

Airspeed	<b>65 KIAS (flaps UP)</b>
	<b>60 KIAS (flaps DN)</b>
Mixture	<b>Idle Cut-off</b>
Fuel shutoff valve	<b>Off (Out)</b>
Ignition	<b>Off</b>
Flaps	<b>As Required</b>
Master switch	<b>Off</b>
Cabin Doors	<b>Unlatch</b>
Land	<b>Straight Ahead</b>

### DURING FLIGHT

Airspeed	<b>65 KIAS</b>
	<b>LOOK FOR A FIELD</b>
Fuel shutoff valve	<b>On (In)</b>
Fuel selector valve	<b>Both</b>
Aux Fuel Pump Switch	<b>On</b>
Primer	<b>In &amp; Locked</b>
Mixture	<b>Rich</b>
Ignition	<b>BOTH (or START)</b>
Airspeed	<b>65 KIAS (flaps UP)</b>
	<b>60 KIAS (flaps DN)</b>
Mixture	<b>Idle Cut-off</b>
Fuel shutoff valve	<b>Off (Out)</b>
Ignition	<b>Off</b>
Flaps	<b>As Required</b>
Mayday	<b>Transmit 121.5</b>
Mayday	<b>Squawk 7700</b>
Master switch	<b>Off</b>
Cabin Doors	<b>Unlatch</b>
Touchdown	<b>Tail Low</b>

## Carburetor Icing

Throttle	<b>Full</b>
Carb Heat	<b>On (Out)</b>
Mixture	<b>Adjust</b>

## Engine Roughness

Magnetos	<b>Check</b>
Mixture	<b>Lean as necessary</b>

# Emergency

## Engine Fire during start

Crank	<b>Continue</b>
Power	<b>1700 RPM (2 min)</b>
Engine	<b>Shut down and inspect</b>

## Engine Fire during flight

Mixture	<b>Idle Cut-off</b>
Fuel shutoff valve	<b>Off (Out)</b>
Master Switch	<b>Off</b>
Boost Pump	<b>Off</b>
Cabin Heat/Air	<b>Off</b>
Airspeed	<b>100 KIAS</b>

## Electrical failure

Load meter	<b>Verify</b>
Alternator	<b>Off</b>
	<b>Reduce load to minimum</b>
Breaker/alt	<b>Check &amp; Rest</b>
Alternator	<b>On</b>
	<b>If still no power:</b>
Alternator	<b>Off</b>
	<b>Reduce load and land</b>

## Electrical overload

Master Switch	<b>Off</b>
Master Switch	<b>On</b>
Over-voltage light	<b>Off</b>
	<b>or TERMINATE flight ASAP</b>

## Spin Recovery

Ailerons	<b>NEUTRAL</b>
Throttle	<b>IDLE</b>
Rudder	<b>Full opposite</b>
Control wheel	<b>Full forward</b>
Rudder control/wheel	<b>Neutral</b>
Pitch	<b>Level</b>

## Light Signals:

Signal	On Ground	In Flight
Steady <b>Green</b>	Takeoff	Land
Flashing <b>Green</b>	Taxi	Return to land
Steady <b>Red</b>	Stop	Give way
Flashing <b>Red</b>	Clear runway	Do not land
Flashing <b>white</b>	Return to ramp	--
<b>Red/Green</b> alternating	WARNING – USE CAUTION	

# Reference

## V-Speeds (KIAS)

Rotate	V <sub>r</sub>	55
Normal Climb Out	V <sub>clmb</sub>	70-85
Max angle (Sea Level)	V <sub>x</sub>	60
Max angle (10,000 ft)	V <sub>x</sub>	65
Climb rate (Sea Level)	V <sub>y</sub>	79
Climb rate (10,000 ft)	V <sub>y</sub>	71
Maneuver	V <sub>a</sub>	82-99
Flaps	V <sub>fe</sub>	85
Normal max	V <sub>no</sub>	127
Never exceed	V <sub>ne</sub>	158
Stall (clean)	V <sub>s</sub>	44
Stall (land)	V <sub>so</sub>	33
Final Approach	Flaps	60-70
	No flaps	65-75
<b>Max Glide</b>		<b>60</b>

Alpha  
Bravo  
Charlie  
Delta  
Echo  
Foxtrot  
Golf  
Hotel  
India  
Juliet  
Kilo  
Lima  
Mike  
November  
Oscar  
Papa  
Quebec  
Romeo  
Sierra  
Tango  
Uniform  
Victor  
Whiskey  
Xray  
Yankee  
Zulu