

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 Clrnce	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 (0⁰-10⁰)
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	Complete
Taxi	Max runway
Brakes	Set and hold
Flaps	10°
Throttle	Full
Brakes	Release
Climb	57 KIAS
Flaps	Retract when clear
Airspeed	67 KIAS

Short field landing

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

Soft field take-off

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

Soft field landing

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

Go-around

Throttle	Full
Carb Heat	Cold (In)
Flaps	20°
Climb	55 KIAS
Flaps	10°
Climb	60 KIAS
Flaps	Up
Climb	>60 KIAS

Emergency

Engine failure

TAKEOFF

Throttle	Idle
Brakes	Apply
Flaps	Retract
Mixture	IDLE cut-off
Ignition	Off
Master switch	Off

AFTER TAKEOFF

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

DURING FLIGHT

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

Carburetor Icing

Throttle	Full
Carb Heat	On (Out)
Mixture	Adjust

Engine Roughness

Magnetos	Check
Mixture	Lean as necessary

Emergency

Engine Fire during start

Crank	Continue
Power	1700 RPM (2 min)
Engine	Shut down and inspect

Engine Fire during flight

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

Electrical failure

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

Electrical overload

Master Switch	Off
Master Switch	On
Over-voltage light	Off
or TERMINATE flight ASAP	

Spin Recovery

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

Light Signals:

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

Reference

V-Speeds (KIAS)

Rotate	V _r	55
Normal Climb Out	V _{climb}	70-85
Max angle (Sea Level)	V _x	60
Max angle (10,000 ft)	V _x	65
Climb rate (Sea Level)	V _y	79
Climb rate (10,000 ft)	V _y	71
Maneuver	V _a	82-99
Flaps	V _{fe}	85
Normal max	V _{no}	127
Never exceed	V _{ne}	158
Stall (clean)	V _s	44
Stall (land)	V _{so}	33
Final Approach	Flaps	60-70
	No flaps	65-75
Max Glide		60

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