Cessna 172
Quick Reference Checklist

For simulation use only, not for real world flight

PREFLIGHT

Ignition Switch ..... OFF
Avionics Power Switch ..... OFF
Master Switch ..... ON
Fuel Quantity Indications ..... CHECK QUANTITY
Master Switch ..... OFF
Empennage Control Surfaces ..... CHECK
Ailerons ..... CHECK

BEFORE STARTING ENGINE

Preflight Inspection ..... COMPLETE
Fuel Selector ..... BOTH
Avionics, Autopilot, Electrical ..... OFF
Brakes ..... TEST and SET
Circuit Breakers ..... CHECK IN

STARTING ENGINE

Mixture ..... RICH
Carburetor Heat ..... COLD
Master Switch ..... ON
Prime ..... AS REQUIRED
Throttle ..... OPEN 1/8 INCH
Propeller Area ..... CLEAR
Ignition Switch ..... START
Oil Pressure ..... CHECK

BEFORE TAKEOFF

Parking Brake ..... SET
Flight Controls ..... FREE and CORRECT
Flight Instruments ..... SET
Fuel Selector ..... BOTH
Mixture ..... RICH (below 3000 feet)
Elevator Trim and Rudder Trim ..... TAKEOFF
Throttle ..... 1700 RPM
- Magnetos .... CHECK (RPM drop should not exceed 125 RPM on either magneto or 50 RPM differential between magnets).
- Carburetor Heat ..... CHECK (for RPM drop)
- Engine Instruments and Ammeter ..... CHECK
- Suction Gage ..... CHECK

Avionics Power Switch ..... CHECK
Radios ..... SET
Autopilot ..... OFF
Air Conditioner ..... OFF
Flashing Beacon, Navigation Lights, and/or Strobe Lights ..... ON as required
Brakes ..... Release

NORMAL TAKEOFF

Wing Flaps ..... UP
Carburetor Heat ..... COLD
Throttle ..... FULL OPEN
Elevator Control ..... LIFT NOSE WHEEL (at 55 KIAS)
Climb Speed ..... 70-80 KIAS

SHORT FIELD TAKEOFF

Wing Flaps ..... UP
Carburetor Heat ..... COLD
Brakes ..... APPLY
Throttle ..... FULL OPEN
Mixture .... RICH (above 3000 feet, LEAN to obtain maximum RPM)
Brakes ..... RELEASE
Elevator Control ..... SLIGHTLY TAIL LOW
Climb Speed ..... 59 KIAS (until all obstacles are cleared)

CLIMB

Airspeed ..... 70-85 KIAS
Throttle ..... FULL OPEN
Mixture .... RICH (above 3000 feet, LEAN to obtain maximum RPM)

CRUISE

Power ..... 2200-2700 RPM (no more than 75% is recommended)
Elevator and Rudder Trim ..... ADJUST
Mixture ..... LEAN

DESCENT

Mixture ..... ADJUST for smooth operation (full rich for idle power)
Power ..... AS DESIRED
Carburetor Heat ..... AS REQUIRED (to prevent carburetor icing)

PRE-LANDING

Fuel Selector Valve ..... BOTH
Mixture ..... RICH
Carburetor Heat ..... ON (apply full heat before closing throttle)
Autopilot ..... OFF
Air Conditioner ..... OFF

NORMAL LANDING

Airspeed ..... 60-70 KIAS (flaps UP)
Wing Flaps ..... AS DESIRED (below 85 KIAS)
Airspeed ..... 55-65 KIAS (flaps DOWN)
Touchdown ..... MAIN WHEELS FIRST
Landing Roll ..... LOWER NOSE WHEEL GENTLY
Braking ..... MINIMUM REQUIRED

SHORT FIELD LANDING

Airspeed ..... 60-70 KIAS (flaps UP)
Wing Flaps ..... FULL DOWN (40°)
Airspeed ..... 60 KIAS (until flare)
Touchdown ..... MAIN WHEELS FIRST
Braking ..... APPLY HEAVILY
Wing Flaps ..... RETRACT

BALKED LANDING

Throttle ..... FULL OPEN
Carburetor Heat ..... COLD
Wing Flaps ..... 20° (immediately)
Climb Speed ..... 55 KIAS
Wing Flaps ..... 10° (until all obstacles are cleared) RETRACT (after reaching a safe altitude and 60 KIAS)

AFTER LANDING

Wing Flaps ..... UP
Carburetor Heat ..... COLD

SECURING AIRPLANE

Parking Brake ..... SET
Avionics Power Switch, Electrical Equipment, Autopilot ..... OFF
Mixture ..... IDLE CUT-OFF (pulled full out)
Ignition Switch ..... OFF
Master Switch ..... OFF

Emergency Procedures Checklist

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ENGINE FAILURE DURING TAKEOFF

Throttle ..... IDLE
Brakes ..... APPLY
Wing Flaps ..... RETRACT
Mixture ..... IDLE CUT-OFF
Ignition Switch ..... OFF
Master Switch ..... OFF

ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF

Airspeed ..... 65 KIAS (flaps UP)
..... 60 KIAS (flaps DOWN)
Mixture ..... IDLE CUT-OFF
Ignition Switch ..... OFF
Wing Flaps ..... AS REQUIRED
Master Switch ..... OFF

ENGINE FAILURE DURING FLIGHT

Wing Flaps ..... 20°
Airspeed ..... 60 KIAS
Selected FieldFLY OVER, noting terrain and obstructions, then retract flaps upon reaching a safe altitude and airspeed
Avionics Power Switch and Electrical Switches ..... OFF
Wing Flaps ..... 40° (on final approach)
Airspeed ..... 60 KIAS
Master Switch ..... OFF
Touchdown ..... SLIGHTLY TAIL LOW
Ignition Switch ..... OFF
Brakes ..... APPLY HEAVILY

DITCHING

Radio ..... TRANSMIT MAYDAY on 121.5 MHz, giving location and intentions
Heavy Objects (in baggage area) ..... SECURE OR JETTISON
Approach ..... High Winds, Heavy Seas ..... INTO THE WIND
Light Winds, Heavy Swells ..... PARALLEL TO SWELLS
Wing Flaps ..... 20° - 40°
Power ..... ESTABLISH 300 FT/MIN DESCENT AT 55 KIAS.
NOTE: If no power is available, approach at 65 KIAS with flaps up or at 60 KIAS with 10° flaps
Touchdown ..... LEVEL ATTITUDE AT ESTABLISHED RATE OF DESCENT

FIRE DURING START ON GROUND

Cranking .. CONTINUE, to get a start which would suck the flams and accumulated fuel through the carburetor and into the engine

If engine starts:

Power ..... 1700 RPM for a minutes
Engine ..... SHUTDOWN and inspect for damage

If engine fails to start:

Throttle ..... FULL OPEN
Mixture ..... IDLE CUT-OFF
Cranking ..... CONTINUE
Engine ..... SECURE
Master Switch ..... OFF
Ignition Switch ..... OFF
Fuel Selector Valve ..... OFF
Fire ..... EXTINGUISH using fire extinguisher
Fire Damage ..... INSPECT, repair damage or replace damaged components or wiring before conducting another flight

ENGINE FIRE IN FLIGHT

Mixture ..... IDLE CUT-OFF
Fuel Selector Valve ..... OFF
Master Switch ..... OFF
Cabin Heat and Air ..... OFF (except overhead vents)
Airspeed . 100 KIAS (If fire is not extinguished, increase glide speed to find an airspeed which iwill provide an incombustible mixture)
Forced Landing ..... EXECUTE (as described in Emergency Landing Without Engine Power)

ELECTRICAL FIRE IN FLIGHT

Master Switch ..... OFF
Avionics Power Switch ..... OFF
All Other Switches (except ignition switch) ..... OFF
Vents/Cabin Air/Heat ..... CLOSED
Fire Extinguisher ..... ACTIVATE

WARNING

After discharging an extinguisher within a closed cabin, ventilate the cabin.

If fire appears out and electrical power is necessary for continuance of flight:

Master Switch ..... PM
Circuit Breakers ..... CHECK for faulty circuit, do not reset
Radio Switches ..... OFF
Avionics Power Switch ..... ON
Radio/Electrical SwitchesON one at a time, with delay after each until short circuit is localized
Vents/Cabin Air/Heat ..... OPEN when it is ascertained that fire is completely extinguished

CABIN FIRE

Master Switch ..... OFF
Vents/Cabin Air/Heat ..... CLOSED (to avoid drafts)
Fire Extinguisher ..... ACTIVATE (if available)

WARNING

After discharging an extinguisher within a closed cabin, ventilate the cabin.

Land the airplane as soon as possible to inspect for damage

WING FIRE

Navigation Light Switch ..... OFF
Pitot Heat Switch ..... OFF
Strobe Light Switch ..... OFF
NOTE: Perform a sideslip to keep the flames away from the fuel tank and cabin, and land as soon as possible using flaps only as required for final approach and touchdown

STATIC SOURCE BLOCKAGE

Alternate Static Source Valve ..... PULL ON

LANDING WITH A FLAT MAIN TIRE

Approach ..... NORMAL
Touchdown .. GOOD TIRE FIRST, hold airplane off flat tire as long as possible

OVER-VOLTAGE LIGHT ILLUMINATES

Avionics Power Switch ..... OFF
Master Switch ..... OFF (both sides)
Master Switch ..... ON
Over-Voltage Light ..... OFF
Avionics Power Switch ..... ON If over-voltage light illuminates again:
Flight ..... TERMINATE as soon as possible

AMMETER SHOWS DISCHARGE

Alternator ..... OFF
Nonessential Radio/Electrical Equipment ..... OFF
Flight ..... TERMINATE as soon as practical

Icing Checklist

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INADVERTENT ICING ENCOUNTER

Turn pitot heat switch ON.
Turn back or change altitude to obtain an outside air temperature that is less conducive to icing.
Pull cabin heat control full out and open defroster outlet to obtain maximum windshield defroster heat and airflow.
Open the throttle to increase engine speed and minimize ice buildup on propeller blades.
Watch for signs of carburetor air filter ice and apply carburetor as required. An unexplained loss in engine speed could be caused by carburetor ice or air intake filter ice. Lean the mixture for maximum RPM, if carburetor heat is used continuously.
Plan a landing at the nearest airport. With an extremely rapid ice build-up, select a suitable "off airport" landing site.
With an ice accumulation of 1/4 ionch or more on the wing leading edges, be prepared for significantly higher stall speed.
Leave wing flaps retracted. With a severe ice build-up on the horizontal tail, the change in wing wake airflow direction caused by wing flap extension could result in a loss of elevator effectiveness.
Open left window and, if practical, scrape ice from a portion of the windshield for visibility in the landing approach.
Perform a landing approach using a forward slip, if necessary, for improved visibility.
Apprach at 65 to 75 KIAS depending upon the amount of the accumulation.
Perform a landing in level attitude.