After Takeoff (Out of 1000' AGL)

AIRSPEED ..... V_Y / V_X / AS REQ
(If a maximum performance climb is necessary, use speeds in rate-of-climb data charts in section 5 of the POH/AFM.)
FLAPS ..... UP
THROTTLE ..... FULL
MIXTURE ..... FULL RICH BELOW 3000' MSL

Cruise

POWER ..... (≤ 75% Power per POH/AFM) SET
ENGINE INSTRUMENTS ..... CHECK
LANDING LIGHT .....
..... ON (for local training) / OFF (for XC cruise)
MIXTURE ..... LEAN AS REQUIRED
MAG COMPASS / HI ..... CHECK / SET

In-Range / Descent
(For Cross-Country, ACPP Only)

ATIS / AWOS (As early as possible) ..... CHECK
ALTIMETER ..... SET
PRELIMINARY APPROACH BRIEF
- Type of Approach
- Runway length / Lighting
- Field Elevation / Sector Altitude
- Highest Obstacle / Terrain Review
- NAV / Course / Minimums / Missed
- Crosswind Component ..... COMPLETE

AIRPORT DIAGRAM (Keep available) ..... CHECK
SEAT BELTS ..... FASTENED
MIXTURE ..... SLIGHTLY ENRICH
CARB HEAT ..... AS REQ

Approach (Approx 15 NM from Airport)

ATIS/AWOS ..... CHECK
APPROACH BRIEFING ..... COMPLETE
ALTIMETER ..... SET
HEADING INDICATOR TO COMPASS ..... SET
FUEL SELECTOR ..... BOTH
PARKING BRAKE ..... CHECK RELEASED
LANDING LIGHT ..... ON

WHEN DIRECT TO IAF OR VECTORED

FLIGHT & NAV INSTRUMENTS ..... SET/IDENT
GPS (As Required for Approach) ..... SET
AIRSPEED ..... 90 KIAS

Before Landing Checklist

FUEL SELECTOR ..... BOTH
MIXTURE ..... FWD
CARB HEAT ..... ON

Go Around / Missed Approach

THROTTLE ..... FULL
CARB HEAT ..... OFF
FLAPS ..... (If > 20°) RETRACT 20°
PITCH ..... EST CLIMB
FLAPS ..... (> 55 KIAS) RETRACT 10°
AIRSPEED ..... V_Y / V_X / AS REQ

AT SAFE ALTITUDE & > 65 KIAS

FLAPS ..... UP
FLY ASSIGNED/PUBLISHED HEADING & ALTITUDE

After Landing (Stopped)

TRIM ..... CENTERED
CARB HEAT ..... OFF
FLAPS ..... UP
LANDING & TAXI LIGHTS ..... AS REQ
MIXTURE ..... SLIGHTLY LEAN
TAXI CLEARANCE ..... OBTAIN & BRIEF

Shutdown/Terminate

AVIONICS MASTER ..... OFF
THROTTLE ..... 1000 RPM
MIXTURE ..... CUTOFF
IGNITION SWITCH ..... OFF
MASTER SWITCH ..... OFF
ELECTRICAL SWITCHES ..... OFF
FLIGHT TRACKER & MX REPORT SMS ..... SENT & ACK'D
FLIGHT CONTROLS ..... SECURE
SUNSCREENS ..... INSTALL
TIEDOWN / CHOCK ..... SECURE
WALKAROUND ..... COMPLETE

Avoid Slips with Flaps Extended

CESSNA 172 N
Normal Checklist

Top Flight Aviation

Preflight Inspection

FLIGHT SCHEDULE PRO ..... CHECK OUT/TIMES CHECKED

WEATHER ..... CHECK
WEIGHT AND BALANCE ..... COMPUTE
PITOT HEAT ..... (If IFR) CHECK

INTERIOR

FIRE EXTINGUISHER ..... CHECK
AIRCRAFT DOCUMENTS ..... CHECK
CONTROL WHEEL LOCK ..... REMOVE
POH/AFM ..... CHECK
IGNITION SWITCH ..... OFF
MASTER SWITCH ..... ON

FUEL QUANTITY ..... CHECK
ALTERNATE STATIC SOURCE ..... OFF
BEACON/ANTICOLLISION LT,
NAV, & LANDING LIGHTS ..... CHECK
FLAPS ..... FULLY EXTEND
MASTER SWITCH ..... OFF
FUEL SELECTOR VALVE ..... BOTH
BAGGAGE AND LOOSE ITEMS ..... STOWED

EMPENNAGE

BAGGAGE DOOR ..... CHECK
RUDDER GUST LOCK ..... (If installed) REMOVE
CONTROL SURFACES ..... (Freedom & security) CHECK
TRIM TAB ..... CHECK
ANTENNAS ..... CHECK

RIGHT WING TRAILING EDGE

FLAP ..... (Security) CHECK
AILERON ..... (Freedom & security) CHECK

RIGHT WING & LEADING EDGE

FUEL QUANTITY ..... CHECK VISUALLY
FUEL FILLER CAP ..... SECURE
FUEL TANK SUMP ..... CHECK
Check for water and sediment.
MAIN WHEEL TIRE, BRAKE DISC & PADS ..... CHECK
Check for wear and proper inflation.

Continued...

Preflight Inspection (Continued)

NOSE

WINDSHIELD ..... CHECK FOR CLEANLINESS
FUEL STRAINER ..... TAKE SAMPLE
Check for water & sediment.
OIL LEVEL ..... CHECK
Do not add oil if more than 4 quarts.

OIL ACCESS DOOR ..... SECURE
ENGINE COOLING AIR INLETS ..... CHECK
PROPELLER & SPINNER ..... CHECK
LANDING & TAXI LIGHT(S) (if applicable) ..... CHECK
ENGINE AIR FILTER ..... CHECK
NOSE WHEEL STRUT (Approx. 3" Extension) ..... CHECK
NOSE WHEEL TIRE ..... CHECK
STATIC SOURCE OPENING ..... CHECK

LEFT WING

FUEL QUANTITY ..... CHECK VISUALLY
FUEL FILLER CAP ..... SECURE
PITOT TUBE COVER ..... REMOVE
PITOT TUBE ..... CHECK UNOBSTRUCTED
STALL HORN OPENING ..... CHECK UNOBSTRUCTED
FUEL TANK VENT ..... CHECK
FUEL TANK SUMP ..... CHECK

LEFT WING TRAILING EDGE

AILERON ..... (Freedom & security) CHECK
FLAP ..... (Security) CHECK
MAIN WHEEL TIRE, BRAKE DISC & PADS ..... CHECK

Before Starting Engine

PREFLIGHT INSPECTION ..... COMPLETE
WT&BAL, DOCS, PERFORMANCE ..... CHECK
PASSENGER BRIEF ..... COMPLETE
Doors, Seats & Seatbelts (Positive Latch),
Fire Extinguisher, No Smoking, PIC Authority
SEAT & SEAT BELTS ..... ADJUST AND LOCK
CIRCUIT BREAKERS ..... CHECK IN
ELECTRICAL SWITCHES ..... OFF
IGNITION SWITCH ..... OFF
AVIONICS MASTER SWITCH ..... OFF
ALTERNATE STATIC SOURCE ..... OFF
FUEL SELECTOR VALVE ..... BOTH
CARB HEAT ..... COLD
PRIMER ..... 3 STROKES & LOCK (COLD DAYS ONLY)
MASTER SWITCH ..... ON
BEACON ..... ON
NAV LIGHTS ..... ON

Engine Start

MIXTURE ..... RICH
THROTTLE ..... ¼" OPEN
BRAKES ..... HOLD
PROP AREA ..... CLEAR
IGNITION ..... (ATP 8 Second Max) START

IF ENGINE DOES NOT START

WAIT 30 SECONDS
THROTTLE ..... CYCLE 2 STROKES & CLOSE
IGNITION ..... (ATP 8 Second Max) START
(Do not attempt another start by cycling throttle.
Use primer only.)

WHEN ENGINE STARTS

THROTTLE ..... 1000 RPM
OIL PRESSURE ..... (In 15 seconds) CHECK GREEN
MIXTURE ..... LEAN FOR RPM RISE
THROTTLE ..... 1000 RPM
FLAPS ..... UP

After Start

HEADSETS ..... ON
AVIONICS MASTER SWITCH ..... ON
COMS ..... ATIS/AWOS/CLEARANCE IF REQ
ALTIMETER ..... SET
GPS ..... ENTER WPT / FPL / APR AS REQ.
NAVS ..... SET / COURSE
FLIGHT INSTRUMENTS
(AI/TC/COMPASS & HI/VSI) ..... CHECK

Taxi

TAXI CLEARANCE ..... OBTAIN / BRIEF
TAXI AREA ..... CLEAR
BRAKES ..... CHECK
FLIGHT INSTRUMENTS (AI/TC/HI/VSI) ..... CK
Check in turns.
STERILE COCKPIT .....
..... NO NON-ESSENTIAL CONVERSATION

Run Up

MIXTURE ..... FULL FWD
THROTTLE ..... 1800 RPM
MAGNETOS ..... CHECK
(Drop should not exceed 150 RPM on either magneto
or a difference of 50 RPM between the two.)
ENGINE INSTRUMENTS & AMMETER ..... CHECK
SUCTION GAUGE ..... CHECK
CARB HEAT ..... ON / CHECK FOR RPM DROP
THROTTLE ..... IDLE / CHECK 600-800 RPM
CARB HEAT ..... OFF
THROTTLE ..... 1000 RPM
MIXTURE ..... SLIGHTLY LEAN

Pre-Takeoff Brief

Engine failure or abnormality during takeoff roll:
IMMEDIATELY CLOSE THROTTLE, STOP STRAIGHT AHEAD & AVOID OBSTACLES
If not enough runway remains to stop:
MIXTURE ..... CUTOFF
FUEL SELECTOR ..... ROTATE TO OFF
BATTERY MASTER SWITCH ..... OFF
IGNITION SWITCH ..... OFF
AVOID OBSTACLES
Engine failure immediately after takeoff:
LAND ON REMAINING RUNWAY / WITHIN 30° OF CENTERLINE.
AVOID OBSTACLES. DO NOT ATTEMPT 180° TURN.
AIRSPEED ..... LOWER NOSE & ESTABLISH PITCH FOR BEST GLIDE
FLAPS ..... AS NECESSARY
POWER ..... AS AVAILABLE
TIME PERMITTING ..... DECLARE AN EMERGENCY
MIXTURE ..... CUTOFF
FUEL SELECTOR ..... ROTATE TO OFF
IGNITION ..... OFF
BATTERY MASTER ..... OFF

Before Takeoff

PRE-TAKEOFF BRIEF ..... COMPLETE
FLIGHT CONTROLS ..... FREE & CORRECT
FLIGHT INSTRUMENTS ..... CHECK & SET
AUTOPILOT (If Installed) ..... OFF
FUEL GAUGE / QTY ..... CHECK / SUFFICIENT
FUEL SELECTOR ..... BOTH
TRIM ..... SET T/O
FLAPS ..... SET
GPS ..... (As req. for departure) SET
HEADING INDICATOR ..... SET
DEPARTURE BRIEF
Initial Altitude & Heading
Brief Departure Procedure ..... COMPLETE

Complete after 360 degree traffic turn at uncontrolled airport

MIXTURE ..... FULL FWD (Or set for altitude)
ENGINE INSTRUMENTS ..... CHECK
SEAT BACKS ..... MOST UPRIGHT POSITION
SEAT BELT & SHOULDER HARNESS ..... FASTENED

FINAL ITEMS WHEN #1 FOR TAKEOFF

DOORS & WINDOWS ..... CLOSED & LOCKED
LANDING LIGHT ..... ON
STROBE LIGHT ..... (If installed) ON
TRANSPONDER ..... ALT

Engine Failure During Flight

AIRSPEED ..... BEST GLIDE / 65-70 KIAS
NOTE WIND DIRECTION AND SPEED
PICK & FLY TOWARDS LANDING SITE
CARB HEAT ..... ON
MIXTURE ..... RICH
FUEL SELECTOR VALVE ..... BOTH
PRIMER ..... IN & LOCKED
MAGNETOS ..... CHECK ALL

IF PROP NOT WINDMILLING

IGNITION SWITCH ..... START
MAGNETOS ..... CHECK ALL

Precautionary Landing with Engine Power

LANDING AREA ..... SELECT & INSPECT
RADIO & ELECTRICAL SWITCHES ..... OFF

ON FINAL APPROACH

FLAPS ..... (30˚ Recommended) AS REQ
MASTER SWITCH ..... OFF
DOORS ..... (Prior to touchdown) UNLATCH
IGNITION SWITCH ..... OFF
BRAKES ..... APPLY HEAVILY

Emergency Landing No Engine Power

LANDING AREA ..... SELECT & INSPECT
AIRSPEED ..... BEST GLIDE / 65-70 KIAS (Flaps Up)
MIXTURE ..... CUTOFF
FUEL SELECTOR VALVE ..... OFF
IGNITION SWITCH ..... OFF
FLAPS ..... (40˚/60 KIAS Recommended) AS REQ
MASTER SWITCH ..... OFF
DOORS ..... (Prior to touchdown) UNLATCH
BRAKES ..... APPLY HEAVILY

Pattern Work

(Touch & Go's Prohibited Except With Instructor)

Before Landing Checklist

FUEL SELECTOR ..... BOTH
MIXTURE ..... FWD
CARB HEAT ..... ON

Go Around / Missed Approach

THROTTLE ..... FULL
CARB HEAT ..... OFF
FLAPS ..... (If > 20°) RETRACT 20°
PITCH ..... EST CLIMB
FLAPS ..... (> 55 KIAS) RETRACT 10°
AIRSPEED ..... V_Y / V_X / AS REQ

AT SAFE ALTITUDE & > 65 KIAS

FLAPS ..... UP
FLY ASSIGNED/PUBLISHED HEADING & ALTITUDE

Touch and Go

MAINTAIN CENTERLINE
FLAPS ..... UP
CARB HEAT ..... OFF
THROTTLE ..... FULL

Standardized Speeds

80 KIAS ..... FLAPS 10° - 1500 RPM
70 KIAS ..... FLAPS 20° - TURNING BASE
SHORT FINAL UNTIL
65 KIAS ..... 10 to 20' ABOVE RUNWAY
When landing assured.
SOFT FIELD ..... 65 KIAS - FLAPS 30°
SHORT FIELD ..... 60 KIAS - FLAPS 30°

After Landing (Stopped)

TRIM ..... CENTERED
CARB HEAT ..... OFF
FLAPS ..... UP
LANDING & TAXI LIGHTS ..... AS REQ
MIXTURE ..... SLIGHTLY LEAN
TAXI CLEARANCE ..... OBTAIN & BRIEF

Before Takeoff

PRE-TAKEOFF BRIEF ..... COMPLETE
FLIGHT CONTROLS ..... FREE & CORRECT
FLIGHT INSTRUMENTS ..... CHECK & SET
AUTOPILOT (If Installed) ..... OFF
FUEL GAUGE / QTY ..... CHECK / SUFFICIENT
FUEL SELECTOR ..... BOTH
TRIM ..... SET T/O
FLAPS ..... SET
GPS ..... (As req. for departure) SET
HEADING INDICATOR ..... SET
DEPARTURE BRIEF
Initial Altitude & Heading
Brief Departure Procedure ..... COMPLETE
MIXTURE ..... FULL FWD (Or set for altitude)
ENGINE INSTRUMENTS ..... CHECK
SEAT BACKS ..... MOST UPRIGHT POSITION
SEAT BELT & SHOULDER HARNESS ..... FASTENED

FINAL ITEMS WHEN #1 FOR TAKEOFF

DOORS & WINDOWS ..... CLOSED & LOCKED
LANDING LIGHT ..... ON
STROBE LIGHT ..... (If Installed) ON
TRANSPONDER ..... ALT

CESSNA 172N&M

Emergency & Abnormal Checklist

Top Flight Aviation

Engine Failure During Takeoff Roll

THROTTLE ..... CLOSE
BRAKES ..... APPLY
FLAPS ..... UP
MIXTURE ..... CUTOFF
IGNITION SWITCH ..... OFF
MASTER SWITCH ..... OFF

Engine Failure During Takeoff

MAINTAIN AIRCRAFT CONTROL
LAND ON REMAINING RUNWAY OR
WITHIN 30˚ OF CENTERLINE. AVOID OBSTACLES.
DO NOT ATTEMPT 180˚ TURN.
AIRSPEED ..... BEST GLIDE / 65-70 KIAS (Flaps Up)
FLAPS ..... AS REQ.
POWER ..... AS AVAILABLE
TIME PERMITTING ..... DECLARE EMERGENCY
MIXTURE ..... CUTOFF
FUEL SELECTOR VALVE ..... OFF
IGNITION SWITCH ..... OFF
FLAPS ..... (40˚/60 KIAS Recommended) AS REQ
MASTER SWITCH ..... OFF
DOORS ..... UNLATCH

Spin Recovery

In the event the aircraft enters an unintentional spin, proceed as follows.

THROTTLE..... IMMEDIATELY CLOSED
AILERONS .....NEUTRALIZE
RUDDER ..... FULL, OPPOSITE ROTATION
ELEVATOR CONTROL .....
..... BRISKLY FORWARD PAST CENTER

ONCE ROTATION STOPS

RUDDER .....NEUTRALIZE
SLOWLY RECOVER FROM DIVE

WHEN STRAIGHT AND LEVEL

THROTTLE.....FULL

Cabin Fire

MASTER SWITCH .....OFF
VENTS, CABIN HEAT & AIR.....CLOSED
FIRE EXTINGUISHER .....ACTIVATE

WHEN FIRE IS OUT

CABIN.....VENTILATE
LAND AS SOON AS POSSIBLE

Wing Fire

LANDING/TAXI LIGHT SWITCHES .....OFF
NAV LIGHT SWITCH.....OFF
STROBE LIGHT SWITCH.....OFF
PITOT HEAT SWITCH.....OFF

Perform a sideslip to keep the flames away from the fuel tank and cabin. Land as soon as possible using flaps only as required for final approach and touchdown.

Electrical Fire

MASTER SWITCH .....OFF
ALL ELECTRICAL SWITCHES
(Except ignition switch) .....OFF
VENTS, CABIN HEAT & AIR.....CLOSED
FIRE EXTINGUISHER .....ACTIVATE

WHEN FIRE IS OUT

CABIN.....VENTILATE

IF FIRE APPEARS OUT & ELECTRICAL POWER REQ'D

MASTER SWITCH ..... ON
CIRCUIT BREAKERS..... (Do not reset) CHECK
MASTER AVIONICS SWITCH..... ON
RADIOS..... (One at a time with a delay after each) ON
LAND AS SOON AS POSSIBLE

Engine Fire In Flight

MIXTURE .....IDLE CUT OFF
FUEL SELECTOR.....OFF
MASTER SWITCH .....OFF
CABIN HEAT & AIR (Except overhead vents) .....OFF
AIRSPEED.....
.....INCREASE AS REQ TO EXTINGUISH FIRE
REEFER TO "EMERGENCY LANDING NO ENGINE POWER" CHECKLIST

Engine Fire During Start

Continue cranking in an attempt to get the engine started which would suck the flames and accumulated fuel through the carburetor and into the engine.

IF ENGINE STARTS

THROTTLE..... (For 2 minutes) 1700 RPM
MIXTURE .....CUTOFF

IF ENGINE DOES NOT START

MIXTURE .....CUTOFF
THROTTLE.....FULL
CONTINUE CRANKING FOR A FEW SECONDS
FUEL SELECTOR.....OFF
MASTER SWITCH .....OFF
IGNITION SWITCH.....OFF
EVACUATE AIRCRAFT, OBTAIN FIRE EXTINGUISHER & EXTINGUISH FIRE IF PRACTICAL

Cleaning Fouled Spark Plugs

(CAUTION: Hold brakes securely and remain vigilant for aircraft movement; only perform runup on surface free from gravel/dirt.)

THROTTLE..... 2000 RPM
MIXTURE .....LEAN FOR SLIGHT RPM DROP
MAINTAIN FOR 60 SECONDS
MIXTURE .....FULL FORWARD
THROTTLE..... 1800 RPM
PERFORM MAGNETO CHECK

Note:
While performing the above checklist, do not allow oil temperature to reach redline and be vigilant of oil pressure.

Ammeter: Excessive Rate of Charge

for Ammeter Full-Scale Deflection

ALTERNATOR .....OFF
NON-ESSENTIAL ELEC. EQUIPMENT.....OFF
LAND AS SOON AS POSSIBLE

Compass may be off as much as 25˚.

Over-Voltage Light Illuminates

MASTER SWITCH .....OFF (Both sides)
MASTER SWITCH ..... ON
OVER VOLTAGE LIGHT ..... CHECK OFF

IF OVER-VOLTAGE LIGHT ILLUMINATES AGAIN

LAND AS SOON AS POSSIBLE

Ammeter Shows Discharge

ALTERNATOR .....OFF
NONESSENTIAL ELEC. EQUIPMENT .....OFF
LAND AS SOON AS POSSIBLE

Low Voltage Light During Flight

RADIOS, AVIONICS POWER SWITCH.....OFF
MASTER SWITCH .....OFF
MASTER SWITCH ..... ON
LOW VOLTAGE LIGHT..... CHECK OFF
RADIOS, AVIONICS POWER SWITCH..... ON

IF LOW VOLTAGE LIGHT RE-ILLUMINATES

ALTERNATOR .....OFF
NON-ESSENTIAL ELECT. EQUIPMENT .....OFF
LAND AS SOON AS POSSIBLE

Static Source Blockage

ALTERNATE STATIC SOURCE VALVE .....
..... PULL ON
AIRSPEED.....
.....CONSULT TABLES IN POH/AFM SECTION 5