After Takeoff (Out of 1000’ AGL)
AIRSPEED .................. V_{ref} / V_{_k} / 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) .......... CHECK
AIRSPEED ........................................... 90 KIAS

Before Landing Checklist
FUEL SELECTOR .................................. BOTH
MIXTURE .............................................. FWD
CARB HEAT .............................................. ON

Go Around / Missed Approach
THROTTLE .............................................. FULL
CARB HEAT .............................................. EST CLIMB
FLAPS .............................................. (If > 20°) RETRACT 20°
PITCH .............................................. V_{_k} / V_{ref} / 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

Preflight Inspection
BLOCK-OUT SMS .................. SENT & STATUS REC'D
WEATHER ........................................... CHECK
WEIGHT AND BALANCE .................. COMPUTE
FUEL (Full, unless limited by W&B) .............. AS REQ
OIL (6 qtr. Minimum) .................. CHECK
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
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 operate with less than 6 quarts.
Fill for extended flights.
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 UNOBSSTRUCTED
STALL HORN OPENING .................................... CHECK UNOBSSTRUCTED
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 ..................................................... (ATP 8 Second Max) START
IGNITION .......................................................... CLEAR

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.
NAV ............................................................... SET / COURSE
FLIGHT INSTRUMENTS (AI/TC/COMPASS & HI/VSI) .............. CHECK

Taxi

TAXI CLEARANCE .............................................. OBTAIN / BRIEF
TAXI AREA ...................................................... CLEAR
BRAKES ............................................................ CLEAR
FLIGHT INSTRUMENTS (AI/TC/Hi/VSI) .................. CHECK
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 .......................................................... OFF
FUEL SELECTOR ........................................ ROTATE TO OFF
Battery Master Switch .................................. OFF
IGNITION SWITCH ........................................ OFF
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

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) .................. COMPLETE
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
Seating 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
**Emergency Landing No Engine Power**

**LANDING AREA**

**SELECT & INSPECT**

**AIRSPEED**

**BEST GLIDE / 65-70 KIAS** (Flaps Up)

**Mixtures**

**CUTOFF**

**FUEL SELECTOR VALVE**

**OFF**

**IGNITION SWITCH**

**OFF**

**FLAPS**

**OFF**

**(40˚/60 KIAS Recommended) AS REQ**

**MASTER SWITCH**

**OFF**

**DOORS**

**OFF**

**Prior to touchdown**

**UNLATCH**

**BRAKES**

**OFF**

**APPLY HEAVILY**

**On Final Approach**

**FLAPS**

**30˚ Recommended**

**AS REQ**

**MASTER SWITCH**

**OFF**

**DOORS**

**Prior to touchdown**

**UNLATCH**

**IGNITION SWITCH**

**OFF**

**BRAKES**

**OFF**

**APPLY HEAVILY**

**Emergency Landing With Engine Power**

**LANDING AREA**

**SELECT & INSPECT**

**AIRSPEED**

**BEST GLIDE / 65-70 KIAS**

**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**

**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 | (≥ 15 KIAS) RETRACT 10˚ |
| AIRSPEED | V / V / AS REQ |

**At Safe Altitude & > 65 KIAS**

**FLAPS**

**UP**

**FLY ASIGNED/PUBLISHED HEADING & ALTITUDE**

**Top Flight Aviation**

**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**

**FLIGHT INSTRUMENTS**

**CHECK / SET**

**FUEL SELECTOR VALVE**

**OFF**

**FLAPS**

**UP**

**LANDING & TAXI LIGHTS**

**SILIGHTLY LEAN**

**TAXI CLEARANCE**

**OBTAIN & BRIEF**

**After Landing (Stopped)**

**TRIM**

**CENTERED**

**CARB HEAT**

**OFF**

**FLAPS**

**UP**

**LANDING & TAXI LIGHTS**

**AS REQ**

**MIXTURE**

**SILIGHTLY LEAN**

**TAXI CLEARANCE**

**OBTAIN & BRIEF**

**Before Takeoff**

**PRE-TAKEOFF BRIEF**

**COMPLETE**

**FLIGHT CONTROLS**

**FREE & CORRECT**

**FLIGHT INSTRUMENTS**

**CHECK & SET**

**AUTOPILOT**

**TEST & CHECK**

**FUEL SELECTOR**

**BOTH**

**TRIM**

**SET TO/2**

**FLAPS**

**SET**

**GPS**

**AS REQ for departure**

**HEADING INDICATOR**

**SET**

**DEPARTURE BRIEF**

**Initial Altitude & Heading**

**Brief Departure Point**

**COMPLETE**

**MIXTURE**

**FULL FWD** (Or set for altitude)

**ENGINE INSTRUMENTS**

**CHECK**

**SEAT BACKS**

**MOST UPRIGHT POSITION**

**SEAT BELT & SHOULDER HARNESS**

**FASTENED**

**DOORS & WINDOWS**

**CLOSED & LOCKED**

**LANDING LIGHT**

**ON**

**STROBE LIGHT**

**ON**

**TRANSponder**

**ALT**

**Top Flight Aviation**

**Engine Failure During Takeoff Roll**

**THROTTLE**

**CLOSE**

**BRAKES**

**APPLY**

**FLAPS**

**UP**

**MIXTURE**

**CUTOFF**

**IGNITION SWITCH**

**OFF**

**MASTER SWITCH**

**OFF**

**Cessna 172N & M**

**Emergency & Abnormal Checklist**

**Pattern Work**

**172 Pattern Work**
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

Engine Fire In Flight

MIXTURE..................................................IDLE CUT OFF
FUEL SELECTOR........................................OFF
MASTER SWITCH......................................OFF
CABIN HEAT & AIR (Except overhead vents) ..............OFF
AIRSPEED................................................OFF
........................................................................INCREASE AS REQ TO EXTINGUISH FIRE
REFER 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..............................................(30 revolutions)
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 ELECT. 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.................................OFF
OVER VOLTAGE LIGHT.........................CHECK OFF
IF OVER-VOLTAGE LIGHT ILLUMINATES AGAIN
LAND AS SOON AS POSSIBLE

Ammeter Shows Discharge
ALTERNATOR........................................OFF
NONESSENTIAL ELECT. EQUIPMENT..............OFF
LAND AS SOON AS POSSIBLE

Low Voltage Light During Flight
RADIOS, AVIONICS POWER SWITCH..............OFF
MASTER SWITCH......................................OFF
MASTER SWITCH......................................OFF
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