## PREFLIGHT INSPECTION

### CABIN
- Certificates/Documents: IN AIRCRAFT
- Airworthiness Certificate
- Registration
- Radio Operators/Station License (International Flights Only)
- Operating Limitations / Airplane Flight Manual
- Weight & Balance (current)
- Parking Brake: SET
- Control Wheel Lock: REMOVE
- Ignition Switch: OFF
- Master Switch: ON
- Fuel Quantity Indicators: CHECK QUANTITY
- Anti-collision / Strobe Lights: CHECK OPERATION
- Flaps: DOWN FOR INSPECTION
- For Night Operation: Lights: CHECK
- Master Switch: BOTH
- Fuel Filler Cap: SECURE
- Fuel Quantity: CHECK VISUALLY
- Fuel Tank Sump Quick-Drain Valve: DRAIN
- Main Wheel Tire: CHECK WEAR & INFLATION (29 psi)

### TAIL SECTION
- Tail Tie-Down / Rudder Gust Lock: REMOVE
- Elevator & Rudder: CHECK FREEDOM & SECURE
- Nav. Lights: UNBROKEN (WHITE)

### RIGHT WING
- Flap Tracks & Actuator Rod: CHECK
- Aileron: CHECK FREEDOM & SECURE
- Nav. Light: UNBROKEN (GREEN)
- Fuel Quantity: CHECK VISUALLY
- Fuel Filler Cap: SECURE
- Wing Tie-down: REMOVE
- Fuel Tank Sump Quick-Drain Valve: DRAIN
- Main Wheel Tire: CHECK WEAR & INFLATION (29 psi)

### NOSE
- Windshield: CHECK CLEAN
- Wheel Chocks: REMOVE
- Engine Oil Dipstick: CHECK (6-8 qt.)
- Engine Fuel Strainer: DRAIN 4 SECONDS
- Nose Wheel: CHECK WEAR & INFLATION (31 psi)
- Shock Strut: CHECK PROPER INFLATION (45 psi)
- Air Inlets: CHECK FREE OF FOREIGN MATTER
- Landing Light: CHECK
- Air Filter: CHECK
- Propeller & Spinner: CHECK
- Tow Bar: REMOVE
- Static Port: CHECK

### LEFT WING
- Main Wheel Tire: CHECK WEAR & INFLATION (29 psi)
- Fuel Tank Sump Quick-Drain Valve: DRAIN
- Wing Tie-down: REMOVE
- Fuel Quantity: CHECK VISUALLY
- Fuel Filler Cap: SECURE
- Pitot Tube / Cover: CHECK / REMOVE
- Fuel Tank Vent Opening: CHECK
- Stall Warning Vent: CHECK
- Nav. Light: UNBROKEN (RED)
- Aileron: CHECK FREEDOM & SECURE
- Flap Tracks & Actuator Rod: CHECK

### BEFORE STARTING ENGINE
- Chocks: REMOVE
- Preflight Inspection: COMPLETE
- Passenger Briefing: COMPLETE
- Seats, Seat Belts, Harness: ADJUST & LOCK
- Brakes: TEST & SET
- Circuit Breakers: CHECK IN
- Radios & Electrical Equipment: CHECK OFF
- Fuel Selector: BOTH
- Tow Bar: REMOVE

### STARTING ENGINE
- Mixture: RICH
- Carburetor Heat: COLD
- Prime: (2-6 strokes) AS REQUIRED
- Primer: IN & LOCKED
- Throttle: OPEN 1/8 inch
- Master Switch: ON
- Anti-collision / Strobe Lights: CHECK OPERATION
- Propeller Area: CLEAR
- Ignition Switch: START
- Oil Pressure: CHECK
- Engine Warm-up: THROTTLE 800-1200 RPM
- Fuel Pump: OFF
- Mixture: LEAN FOR TAXI

### BEFORE TAXI
- Lights & Strobes: AS REQUIRED
- Radios: ON-SET
- Transponder: STANDBY
- Flaps: UP
- Seats, Belts, Harnesses: CHECK SECURE
- Brakes: TEST

### BEFORE TAKEOFF
- Parking Brake: SET
- Seats, Belts, Harnesses: CHECK SECURE
- Cabin Doors & Windows: CLOSED & LOCKED
- Flight Controls: FREE & CORRECT
- Fuel Selector: BOTH
- Elevator Trim: SET for takeoff
- Fuel Quantity: CHECK
- Mixture: RICH
- Throttle: 1700 RPM
- Magneto: CHECK
- Carburetor Heat: CHECK
- Suction Gage: CHECK (4.6 to 5.4)
- Engine Instruments & Ammeter: CHECK
- Throttle: CHECK IDLE LIMITS (650 RPM)
- If holding for Takeoff IDLE at 1200 RPM
- Throttle Friction Lock: ADJUST
- Flight Instruments: CHECK & SET
- Radios: SET
- Transponder: ALTITUDE
- Wing Flaps: SET for takeoff
- Lights: AS DESIRED
- Brakes: RELEASE

### TAKEOFF

#### NORMAL TAKEOFF
- Wing Flaps: 0 Degrees
- Carburetor Heat: COLD
- Throttle: FULL OPEN
- Elevator Control: LIFT NOSE WHEEL (60 MPH)
- Climb Speed: 75- 85 MPH

#### ENROUTE CLIMB
- Airspeed: 80-90 MPH
- Throttle: FULL OPEN
- Mixture: RICH (until 3000 feet)

#### CRUSE
- Power: 2200 – 2700 RPM
- Elevator: ADJUST
- Mixture: LEAN for max rpm

#### DESCENT
- Fuel Selector: BOTH
- Mixture: BOTH
- Power: RICH
- Carburetor Heat: AS REQUIRED
Cessna 172 Skyhawk Checklist

BEFORE LANDING
Seats, Belts, Harnesses ........................................SECURE
Fuel Selector .......................................................BOTH
Mixture .............................................................RICH
Carburetor Heat ....................................................APPLY FULL HEAT
Wing Flaps ..........................................................AS DESIRED
Airspeed .........................................................70-80 MPH (flaps up), 65-75 MPH (flaps down)

BALKED LANDING (Go-Around)
Power ..............................................................FULL THROTTLE
Carburetor Heat .................................................COLD
Wing Flaps ........................................................RETRACT to 20°
Upon reaching an airspeed of approximately 65 MPH, retract flaps slowly.

LANDING
NORMAL LANDING
Airspeed ..............................................................70-80 MPH (flaps up)
Wing Flaps .........................................................AS DESIRED (below 100 MPH)
Airspeed .........................................................65-75 MPH (flaps down)
Touchdown .......................................................MAINS FIRST
Landing Roll ......................................................LOWER NOSE WHEEL GENTLY
Braking ...........................................................MINIMUM REQUIRED

AFTER LANDING
Wing Flaps ........................................................UP
Carburetor Heat .................................................COLD
Transponder .....................................................STANDBY
Lights .............................................................AS REQUIRED

*** (Note time of landing to compare against the Hobbs.)

SHUTDOWN
Parking Brake ......................................................SET
Radios & Electrical Equipment & Lights .........................OFF
Throttle ............................................................1000 RPM
Mixture .............................................................IDLE CUT-OFF
Ignition Switch ..................................................OFF
Master Switch ....................................................OFF
Control Lock ....................................................INSTALL
Hobbs & Tach ....................................................RECORD
Aircraft ............................................................SECURE

USEFUL INFORMATION

Aircraft V-Speeds:
Vr: (Rotation Speed) .................................60 MPH
Vx: (Best angle of climb) .........................68 MPH
Vy: (Best rate of climb) .........................91 MPH
Va: (Maneuvering Speed) .......................122 MPH
Vfe: (Max flap extended speed) ..........100 MPH
Vno: (Max structural cruising speed) ....145 MPH
Vne: (Never exceed speed) .....................182 MPH
Vs1: (Stall Speed (clean)) ......................57 MPH
Vs0: (Stall Speed (dirty)) .....................49 MPH
Glide: (clean) ..........................80 MPH

Note: All Speeds are for Gross Weight (2300 lbs) aircraft.

Weight & Balance:
Max Gross Weight: ........................................2300.00 lbs.
Basic Empty Weight: ........................................1430.6 lbs.
Useful Load: .......................................................869.6 lbs.
Payload: ...........................................................641.6 lbs.
Moment: ...........................................................55535.892
Center of Gravity: ........................................38.82 in.

Standard Fuel Loading:
42 Gallon Capacity ........................................252 lbs
38 Gallons Usable ...........................................228 lbs
4 Gallons Unusable Fuel .................................24 lbs

EMERGENCY PROCEDURES

ENGINE FIRE DURING START (results from over priming)
Starter ......................................CONTINUE TO CRANK ENGINE
Throttle .......................................................1700 RPM (if engine starts)
Mixture .........................................................IDLE CUT-OFF
Fuel Selector .................................................OFF
Aircraft .........................................................ABANDON IF FIRE CONTINUES

Make a thorough inspection of fire damage, and repair or replace damaged components before conducting flight.

ENGINE POWER LOSS DURING TAKE-OFF (Instructor Technique)
If sufficient runway remains for a normal landing land straight ahead.
If insufficient runway remains, maintain a safe airspeed and make only shallow turns to avoid obstructions.
If you have gained sufficient altitude to attempt a restart, proceed with next checklist.

ENGINE FAILURE DURING FLIGHT (restart) (Instructor Technique)
Airspeed .......................................................80 MPH
Fuel Selector ...................................................SWITCH TANKS*
Mixture ..........................................................RICH
Carburetor Heat .......................................ON
Engine Gauges .........................................CHECK FOR CAUSE
Primer ..........................................................IN & LOCKED
Ignition Switch ........................................"L" then "R" back to BOTH
Transponder ................................................7700
Radio .........................................................121.5 MAYDAY**

* If engine failure was caused by fuel exhaustion, power will not be regained after tanks are switched until empty fuel lines are filled, which may require up to ten seconds.
** When calling on 121.5 say your last known position number of people on board, how much fuel, and what kind of emergency. It is recorded and they will be able to find you and take care of you faster.

EMERGENCY LANDING WITHOUT ENGINE POWER
Airspeed .......................................................80 MPH
Mixture ..........................................................CUT—OFF
Fuel Selector ...................................................OFF
Ignition Switch ................................................OFF
Seat belt and harness ........................................TIGHT
Flaps .........................................................AS REQUIRED WITHIN GLIDING DIST OF FIELD
(Master Flaps Down) ....................................65-75 MPH
Master Switch ................................................OFF
Cabin Doors ........................................UNLACH PRIOR TO FINAL APPROACH
Touchdown ................................................SLIGHTLY TAIL LOW (min. speed)
Apply heavy braking while holding full elevator.

ELECTRICAL FIRE (smoke in cabin)
Master Switch..............................................OFF
All Electrical Switches (except ignition) ..................OFF
Vents / Windows .........................................OPEN TO VENT SMOKE
Cabin Heat ...................................................OFF
Land as soon as Practical

ENGINE FIRE IN FLIGHT
Mixture ..........................................................CUT—OFF
Fuel Selector ...................................................OFF
Master Switch ................................................OFF
Glide Establish .............................................120 MPH
Cabin Heat ...................................................OFF / CLOSED

If fire is not extinguished, increase glide speed in an attempt to find an airspeed that will provide incombustible mixture.
Magneto Switch ..............................................OFF
Proceed with EMERGENCY LANDING w/o POWER procedure.

N12874 Copies of MFC Aircraft Checklists can be found at www.mentoneflyingclub.org. Current as of January 2009