



# Mooney M20C Preflight Check:

1. Ignition Switch -- OFF.  
Master Switch -- ON to check outside lights, then OFF.  
Fuel Selector Drain -- Selector handle on R; pull ring and hold for 5 seconds.  
Repeat procedure with selector handle on L.
2. Instrument Static Port -- UNOBSTRUCTED.  
Tail tie down -- REMOVE.
3. Empennage -- CHECK.  
Remove ice, snow, or frost.
4. Tail Cone Access Door -- SECURE.  
Instrument Static Ports -- UNOBSTRUCTED.  
Static Drain System -- CHECK.
5. Wing Skins -- CHECK.  
Flap and Attach Points -- CHECK.  
Aileron and Attach Points -- CHECK.  
Wing Tip and Navigation Light -- CHECK.  
Remove ice, snow, or frost.
6. Left Wing Leading Edge -- CHECK.  
Pitot Tube and Stall Switch Vane -- UNOBSTRUCTED.  
Fuel Tank -- CHECK QUANTITY; SECURE CAP.  
Chock and Tie down -- REMOVE.  
Left Main Gear Shock Discs and Tire -- CHECK.  
Fuel Tank Sump Drain --SAMPLE. Try not to use plastic probes. Pieces can get lodged in the small fuel door and cause it to lose its seal.  
Pitot System Drain -- CHECK.  
Tank Vent -- UNOBSTRUCTED.

Fuel Selector Drain Valve -- CLOSED. Don't rely on the spring. Push the plunger downward with your finger.

Windshields -- CLEAN.

Left Side Engine Cowl Fasteners -- SECURE.

7. Propeller -- CHECK for nicks and cracks.

Forward Engine Components -- CHECK Starter, alternator belt, etc.

Induction Air Filter -- CHECK clean and sealed. E, F, and J models check the seal around the ram air door.

Landing Light -- CHECK.

Nose Gear -- CHECK Tire; check for towing damage to truss.

Shock Discs -- CHECK.

8. Right Side Engine Cowl Fasteners -- SECURE.

Engine Oil Level -- CHECK (Full for Extended Flight) do not over-tighten oil dipstick.

Windshield -- CLEAN.

Fuel Tank Sump Drain -- SAMPLE. Use up and down plunging action.

Tank Vent -- UNOBSTRUCTED.

Chock and Tie down -- REMOVE.

Right Main Gear Shock Discs and Tire -- CHECK.

Fuel Tank -- CHECK QUANTITY; SECURE CAP.

9. Right Wing Leading Edge -- CHECK.

Wing Skins -- CHECK.

Wing Tip and Navigation Light -- CHECK.

Aileron and Attach Points -- CHECK. Be sure to check the aileron actuator rod that there is a cotter pin installed.

Flap and Attach Points -- CHECK.

Remove ice, snow, or frost.

10. Baggage Door -- SECURE. Do not fly with this unlocked.

## **BEFORE STARTING:**

1. Fuel Selector Handle -- SET for fuller tank.
2. Parking Brake -- PULL ON.
3. Ignition and Master Switches -- OFF.
4. Carburetor Heat -- OFF.
5. Landing Gear Switch -- DOWN.
6. Mixture Control -- IDLE CUTOFF.
7. Propeller -- HIGH RPM.
8. Throttle -- CLOSE.
9. Boost Pump -- OFF.
10. Anti-collision Light -- OFF.
11. Navigation Lights -- OFF.
12. Landing Light -- OFF.
13. Radios -- ALL OFF.
14. Cabin Heat -- OFF

15. Main Circuit Breaker Panel -- CHECK.
16. Auxiliary Circuit Breaker Panel -- CHECK.

## **STARTING CHECK:**

1. Master Switch -- ON.
2. Fuel Selector Indicators -- CHECK for conformity to observed quantity.
3. Annunciator Lights -- PRESS to TEST.
4. Landing GEAR DN Light -- GREEN.
5. Electric Fuel Pump -- ON.
6. Mixture Control -- OPEN to FULL RICH.
7. Throttle -- PUMP TWICE to prime engine; then open approximately one-quarter inch.
8. Ignition-Starter Switch -- turn to START and PRESS forward. When engine fires, release to BOTH.
9. Throttle -- Set for 1000 to 1200 RPM. Lean until you see about 100 rpm increase for taxi
10. Oil Pressure Gage -- 25 PSI MIN.
11. Carburetor Heat -- ON momentarily to check operation.
12. Fuel Pressure Gage -- GREEN ARC.
13. Lights -- As required.
14. Anti collision Light -- ON.
15. Pitot Heat -- CHECK and note ammeter deflection.
16. Radios -- ON and CHECK
17. Stabilizer Trim Indicator -- TAKEOFF.
18. Fuel Selector Handle -- CHECK right and left.

## **FLOODED ENGINE CLEARING**

1. Throttle -- FULL OPEN.
2. Mixture Control -- IDLE CUTOFF.
3. Electric Fuel Pump -- on for 3 seconds and then OFF. This will pressurize the system for when you richen the mixture.
4. Ignition Starter Switch -- turn to START and PRESS forward.
5. Throttle -- RETARD when engine starts.
6. Mixture Control -- OPEN slowly to FULL RICH and then lean for taxi.

# COLD WEATHER STARTING

## HAND CRANKING

see Owners Manual p. 3-6

## BEFORE-TAKEOFF CHECK:

1. Flight Controls -- FREE AND CORRECT.
2. Fuel Selector Handle -- SET to fuller tank. (should not be done just before take off)
3. Altimeter -- SET to field elevation or field altimeter setting.
4. Directional Gyro -- SET to magnetic compass.
5. Flight Instruments -- CHECK.
6. Engine Instruments -- CHECK.
7. Clock -- SET and wind as needed.
8. Stabilizer Trim -- SET for TAKEOFF.
9. Propeller -- CYCLE and CHECK at 1700-2000 RPM.
10. Magnetos -- CHECK at 1700 RPM.
11. Wing Flaps -- SET for TAKEOFF or as desired. Just above take off mark for best results.
12. Seats -- LOCKED.
13. Seat Belts -- FASTENED.
14. Door and Pilot Window -- LATCHED CLOSED. Push on upper door to insure top latch is connected.

## UPON TAKING RUNWAY:

15. Fuel Pump -- ON.
16. Transponder -- ALT 1200 or as assigned.
17. Mixture -- LEANED for Best Power (Higher altitudes only)
18. Propeller -- FULL INCREASE.
19. Flaps -- TAKEOFF or as desired.
20. Fuel Selector Handle -- FULLER TANK.

WARNING: Do not change fuel tanks immediately before takeoff.

## TAKEOFF:

1. At 65-75 MPH increase back pressure, then relax slightly after A/C breaks ground to keep nose on the horizon. For crosswind takeoff, hold A/C on the ground to a higher speed, then pull up abruptly and make a coordinated turn into wind to correct for drift when clear of ground.
2. Tap Brakes briefly and then Retract landing gear as soon as safely airborne and in good control.

3. Retract Flaps upon clearing obstacles and IAS of 80 to 90 MPH.
4. Reduce Throttle to 25 "MP w/i 2 minutes.
5. Turn off Fuel Pump at a safe altitude and then check fuel pressure.
6. Climb at 115-120 for visibility and cooling. Best rate of climb speed is 100 MPH at sea level, decreasing approx. 1 MPH per 1000 feet of altitude. Maximum Angle of climb is about 80 MPH gear and flaps up.

### **IN FLIGHT RESTARTING:**

1. Propeller -- HIGH RPM.
2. Fuel Selector -- Fuller Tank.
3. Mixture Control -- IDLE CUTOFF.
4. Boost Pump -- ON.
5. Throttle -- OPEN 1/4 travel.
6. Ignition Switch -- BOTH.
7. Mixture Control -- Move slowly and smoothly to FULL RICH.
8. Re-establish cruise power and RPM, then lean mixture.

### **DESCENT PRIOR TO LANDING:**

1. Reduce Power gradually to avoid rapid engine cooling Try reducing Prop RPM as a means to slow down without shock cooling. 19.5 squared works well in this model.
2. Plan descent early.
3. GEAR and FLAP SPEED -- 120 MPH. DO NOT EXCEED!! Earlier models have a lower Flap speed so take heed and do not exceed flap speeds.

### **BEFORE LANDING CHECK:**

1. Seat Belts -- FASTENED.
2. Fuel Selector Handle -- SET to fuller tank.
3. Electric Fuel Pump -- ON.
4. Mixture Control -- FULL RICH.
5. Carburetor Heat -- FULL ON if needed.
6. Airspeed -- REDUCE to 120 MPH.
7. Propeller -- FULL INCREASE.
8. Landing Gear -- DOWN and LOCKED; green annunciator light ON and verify at window between the seats.
9. Flaps -- As required.
10. Trim -- As required.

### **AFTER LANDING AND TAXI CHECK:**

1. Electric Fuel Pump -- OFF.

2. Carburetor Heat -- OFF.
3. Wing Flaps -- RETRACT.
4. Transponder -- STANDBY.
5. Stabilizer Trim -- TAKEOFF.
6. Throttle -- 1000 to 1200 RPM.
7. Lean for taxi.

## **SHUTDOWN CHECK:**

1. Throttle -- IDLE at 1000 to 1200 RPM until CHT starts to drop.
2. Radios -- OFF.
3. Electrical Switches -- OFF.
4. Mixture Control -- IDLE CUTOFF.
5. Throttle -- RETARD as engine stops firing.
6. Ignition Starter Switch -- OFF when propeller stops.
7. Trim -- TAKEOFF.
8. Flaps -- RETRACTED.
9. Master Switch -- OFF.
10. Overhead Air Scoop -- CLOSED.
11. Seat belts and equipment -- STOWED.
12. Wheel Chocks and Tie down -- As required.