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 -- UNOBSERVED.
   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.

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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.
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.