

PREFLIGHT INSPECTION

CABIN

1. Parking Brake -- *RELEASED*
2. Avionics -- *OFF*
3. Magnetos -- *OFF*
4. Fuel Boost Pump Switch -- *OFF*
5. Landing Gear Handle -- *DOWN & LOCKED*
6. Master Switch -- *ON*
7. Fuel Quantities -- *CHECK*
8. Landing Gear Lights -- *CHECK GREEN*
9. Master Switch -- *OFF*
10. Circuit Breakers -- *CHECK IN*
11. Flaps -- *DOWN*

EXTERIOR

1. Baggage Compartment
 - a. Cargo -- *SECURED*
 - b. Baggage Door -- *LATCHED*
2. Right Wing
 - a. Control Surfaces -- *CHECK TRAVEL*
 - b. Navigation Lights -- *CHECK*
 - c. Tire & Brakes -- *CHECK*
 - d. Tie Down & Chocks -- *REMOVED*
 - e. Fuel Tank -- *CHECK QUANTITY*
 - f. Fuel Door -- *SECURE CAP & DOOR*
 - g. Fuel Sump -- *DRAIN*
3. Nose Section
 - a. Windshield -- *CLEAN*
 - b. Oil Quantity -- *CHECK; MIN 6 QTS*
 - c. Prop, Spinner, Belt -- *CHECK*
 - d. Tire -- *CHECK*
 - e. Landing Gear Door Linkages -- *CHECK*
 - f. Gascolator -- *DRAIN*
4. Left Wing
 - a. Fuel Sump -- *DRAIN*
 - b. Fuel Tank -- *CHECK QUANTITY*
 - c. Fuel Door -- *SECURE CAP & DOOR*
 - d. Stall Switch -- *CHECK HORN*
 - e. Pitot Tube -- *TEST HEAT & BLOCKAGE*
 - f. Tie Down & Chocks -- *REMOVED*
 - g. Tire & Brakes -- *CHECK*
 - h. Nav Light -- *CHECK*
 - i. Control Surfaces -- *CHECK TRAVEL*
5. Empennage
 - a. Antennas -- *CHECK TOP & BOTTOM*
 - b. Tail plane -- *CHECK BUSHINGS*
 - c. Elevator -- *CHECK TRAVEL*
 - d. Rudder -- *CHECK LIMITED TRAVEL*
 - e. Nav Light -- *CHECK*
 - f. Tie Down -- *REMOVED*

BEFORE STARTING ENGINE

1. Passenger Briefing -- *BREIFED*
2. Step -- *RETRACTED*
3. Seat Belts -- *SECURED*
4. Parking Brake -- *SET*
5. Flaps -- *UP*
6. Fuel Selector -- *FULLEST TANK*
7. Fuel Gauge -- ***SWITCH SET TO
SELECTED TANK (L or R)***
8. ADS-B iPad -- *SET and CONFIG'D*
9. Breakers -- *CHECKED*
10. Master Switch -- *ON*

STARTING ENGINE

1. Carburetor Heat -- *COLD/OFF*
2. Cowl Flaps -- *OPEN*
3. Propeller -- *FULL FORWARD*
4. Mixture -- *FULL RICH*
5. ***Fuel Boost Pump Switch -- ON***
6. Fuel Pressure Gauge -- *CHECK*
7. ***Fuel Boost Pump Switch -- OFF***
8. Throttle -- *PRIME 3x (HOT) 4x (COLD),
OPEN 1/4"*
9. Propeller Area -- *CLEAR*
10. Magneto Switch -- *START & PUSH*
11. Throttle -- *SET 1000 RPM*
12. Oil Pressure -- *CHECK (30 Sec)*
13. Fuel Gauge -- ***PROPER TANK FUEL
LEVEL***
15. Pitot Heat -- *AS REQ'D*

STARTING FLOODED ENGINE

1. Fuel Boost Pump Switch -- *OFF*
2. Throttle -- *FULL OPEN*
3. Mixture -- *IDLE CUTOFF*
4. Magneto Switch -- *START*
5. Mixture -- *ADVANCE*
6. Throttle -- ***BACK QUICKLY TO 1000
RPM***

AFTER ENGINE START

1. Mixture -- *LEAN*
2. Avionics -- *ON*
3. Engine Instruments -- *CHECK*
 - a. Suction Gauge -- *4.5 to 5.5*
 - b. Oil Pressure -- *CHECK*
 - c. Tachometer -- *CHECK*
 - d. Manifold Pressure -- *CHECK*
4. Navigation Instruments -- *SET*
5. Flight Instruments -- *CHECK*
 - a. Electrical System -- *CHECK*
 - b. Vacuum Instruments -- *CHECK*
6. Beacon -- *ON*
7. Pitot Heat -- *ON*

TAXI

1. Brakes -- *CHECK ON ROLL*
2. Gyro Instruments -- *CHECK OPS*
(Turn & Slip, Heading & Attitude)
3. Validate PC -- *OPPOSITE*

ENGINE RUN-UP

1. Parking Brake -- *SET*
2. Fuel Selector -- *FULLEST TANK*
3. Mixture -- *RICH*
4. Propeller -- *FULL FORWARD*
5. Throttle -- *1700 RPM*
6. Mixture -- *ADJUST FOR D.A.*
7. Magnetos -- *CHECK DROP*
(125 MAX / 50 DIFF)
8. Carb Heat -- *CHECK DROP*
(150 MAX)
9. Propeller -- *CYCLE X3 (MAX 500
RPM DROP) OP ↓, RPM ↓, MP ↑*
10. Engine Instruments -- *CHECK*
 - a. Suction Gauge -- *4.5 to 5.5*
 - b. Fuel Pressure -- *CHECK*
 - c. Oil Pressure -- *CHECK*
 - d. Oil Temperature -- *CHECK*
 - e. CHT & EGT -- *CHECK*
11. Throttle -- *RETARD IDLE*
12. Flight Instruments -- *SET*

BEFORE TAKEOFF

1. Mixture -- *FULL RICH*
2. Flight Controls -- *FREE*
3. Elevator Trim -- *SET T/O*
4. Pre-Takeoff Briefing:
 - a. Speeds/Distances
 - b. Engine Failure Procedures
5. Wing Flaps -- *SET 1st NOTCH T/O*
6. Engine Gauges -- *CHECKED*
7. Fuel Boost Pump Switch -- *ON*
8. Seat Belts -- ***SECURED and
CLEARED for
JOHNSON BAR***
9. Door -- *CLOSED/LATCHED*
(DON'T SLAM SHUT)
10. Transponder -- *ALTITUDE*
11. DG - *COMPAS*
12. Landing Lights -- *AS REQ'D*
13. Flight Plan -- *ACTIVATE PLAN*
(FOREFLIGHT)
14. Radio Call -- *TAKEOFF*

NORMAL TAKEOFF

1. DG - *RUNWAY HEADING*
2. Throttle -- *FULL OPEN*
3. Power -- *CHECK 2700 RPM*
4. Instruments -- *ALIVE*
5. ***46-49-52 MPH/50% -- DEC PT***
6. Rotate -- *65-70-75 MPH*
7. Brakes -- *TAP*
8. Pos Rate -- ***GEAR UP and LOCKED***
9. Climb Speed -- *96 (105) MPH*
10. Flaps -- *RETRACT 400' AGL*
11. 1000 AGL Fuel Boost Pump -- *OFF*

1961 Mooney M20B Master

N74562



CLIMB

- Speed For Desired Climb:
 - Best Angle -- 80 MPH
 - Best Rate -- (96) 105 MPH
 - En-Route -- 115-120 MPH
- Mixture -- *ADJUST AS REQ'D*
- Power -- 25" MP / 2500 RPM
- EGT -- *CHECK MAX 1400°F*

LEVEL OFF & CRUISE

- Engine Instruments -- *CHECK*
- Trim -- *AS NEEDED*
- Cowl Flaps -- *CLOSE*
- Power -- *REFER TO CRUISE*
- Mixture -- *ADJUST AS REQ'D*
- EGT -- 1350°F – 1400°F
(AVOID OPERATIONS BETWEEN 2000-2250 RPM)

DESCENT

- Altimeter -- *UPDATE*
- Carburetor Heat -- *AS REQ'D*
- Manifold Pressure -- *KEEP 15-20"*
- Propeller -- *CRUISE SETTING*
- Mixture -- *ENRICH ON DESCENT*
- Cowl Flaps -- *KEEP CLOSED*

APPROACH AND LANDING

- Seat Belts -- *FASTENED*
- Fuel Boost Pump Switch -- *ON*
- Fuel -- *FULLEST TANK*
- Mixture -- *FULL RICH*
- Carb Heat -- *AS REQ'D*
- Landing Gear -- *DOWN /LOCKED*
(<120 MPH)
- Propeller -- *FULL FORWARD*
- Approach Speed -- *100 MPH*
- Wing Flaps -- *AS REQ'D*
- Landing Light -- *AS REQ'D*

B-GUMPS-F

GO AROUND

- Throttle -- *FULL OPEN*
- Climb -- *80 MPH*
- Landing Gear -- ***JOHNSON BAR***
UP and LOCKED
- Wing Flaps -- *RETRACT SLOWLY*
- Climb -- *96 (105) MPH*
- Power -- 25" MP / 2500 RPM
- Fuel Boost Pump Switch -- *OFF*

AFTER LANDING

- Wing Flaps -- *RETRACT*
- Fuel Boost Pump Switch -- *OFF*
- Landing Lights -- *OFF*
- Transponder -- *STANDBY*

ENGINE SHUTDOWN

- Nav Lights -- *OFF*
- Beacon -- *OFF*
- Avionics -- *OFF*
- Intercom -- *OFF*
- Pitot Heat -- *OFF*
- Propeller -- *FULL FORWARD*
- Throttle -- *SET >1000 RPM*
- Mixture -- *CUTOFF*
- Magnetos -- *OFF*
- Parking Brakes -- *RELEASED*
- Master Switch -- *OFF*
- Storm Window -- *CLOSED*
- Step -- *EXTENDED*

FLIGHT PLAN CLOSED?

EMERGENCY PROCEDURES

ENGINE FIRE DURING START

- Mixture -- *CUTOFF*
- Throttle -- *OPEN*
- Starter -- *KEEP CRANKING*
- Fuel Selector -- *OFF*

POWER LOSS DURING T/O

- Maintain Safe Airspeed
- Fuel Boost Pump Switch -- *CHECK ON*
- Fuel Selector -- *SWITCH TANKS*
- Mixture -- *FULL RICH*
- No Restart -- **POWER OFF LANDING**

ENGINE POWER LOSS IN FLIGHT

- Fuel Selector Valve -- *SWITCH TANKS*
- Fuel Boost Pump Switch -- *ON*
- Mixture -- *FULL RICH*
- Engine Gauges -- *CHECK*
- No Fuel Pressure -- *SWITCH TANKS*

If power is restored:

- Fuel Boost Selector Switch -- *Off*
- Land As Soon As Practical, increase Final Approach Airspeed by 10 MPH

FIRE

- Electrical Fire (Smoke in Cabin)
 - Master Switch -- *OFF*
 - Vents -- *OPEN*
 - Cabin Heat -- *OFF*
 - Land As Soon As Practicable (SLIP)
- Engine Fire (In-flight)
 - Fuel Selector -- *OFF*
 - Throttle -- *CLOSE*
 - Mixture -- *CUTOFF*
 - Heater -- *OFF*
 - Land Using **POWER OFF LANDING**

POWER OFF LANDING

- Trim For Best Glide -- *105 MPH*
- Suitable Landing Site -- *LOCATED*
- Passenger Briefing -- *COMPLETED*
- Secure Engine
 - Mixture -- *CUTOFF*
 - Fuel Selector Valve -- *OFF*
 - Fuel Boost Pump Switch -- *OFF*
 - Magnetos -- *OFF*
 - Master Switch -- *OFF*

If surface permits:

- Landing Gear -- *EXTEND*
- Flaps -- *AS DESIRED*
- Cabin Door -- *UNLATCHED*
- Seat Belts -- *TIGHTEN*
- Touchdown at lowest airspeed

GEAR UP LANDING

- Landing Gear -- *CHECK UP*
- Secure Engine
 - Mixture -- *CUTOFF*
 - Fuel Selector Valve -- *OFF*
 - Fuel Boost Pump Switch -- *OFF*
 - Magnetos -- *OFF*
 - Master Switch -- *OFF*
- Flaps -- *AS DESIRED*
- Seat Belts -- *TIGHTEN*
- Touchdown at lowest airspeed

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