

Mooney M20D Master Model Guide

The Mooney M20D Master is a four-seat, single-engine piston, retractable-gear airplane built 1963-1966. Its flight manual lists a Lycoming O-360 limited to 180 HP at 2700 RPM, 48 gal usable fuel and a 2575 lb maximum weight. The wider M20 family reaches up to 222 kt cruise, but that is a family-level maximum, not a figure for this variant.

KEY TAKEAWAYS

- Maximum weight is 2575 lb. Fuel is 48 gal usable (24 gal per tank). Baggage is limited to 120 lb, and seat position affects rearward CG.
- Never-exceed speed is 189 mph. Lower flaps below 100 mph and extend the gear below 120 mph (checklist).
- Normal category only: acrobatics and spins are prohibited. Maximum positive load factor is 3.8.
- Ask for proof of Service Bulletin M20-289A (aileron center link clearance). It covers M20D S/N 1 and on with retractable gear.

ENGINE, FUEL AND LIMITS

The manual lists a Lycoming O-360-A1D or O-360-A1A, limited to 2700 RPM and 180 HP. Do not run continuously between 2000 and 2250 RPM. Maximum cylinder head temperature is 500 F and maximum oil temperature is 245 F. Fuel is 91/96 octane. Oil capacity is 8 quarts. An auxiliary electric fuel pump is used for takeoff and landing.

LOADING AND CG

Maximum weight is 2575 lb. The most forward CG is 42 inches (15% MAC) at 2100 lb. At 2575 lb the CG range runs from 46.5 inches forward to 49.0 inches rear. The manual warns that front seat positions can adversely affect CG at the most rearward loading, so allowable baggage depends on seat positions. The baggage limit is 120 lb.

WHAT TO CHECK WHEN INSPECTING

The M20D Master checklist calls for oil between 6 and 8 quarts, fuel drained and checked, gear truss, doors, tires and brakes inspected, and a working green gear-down indicator. Before takeoff, mag drop should not exceed 125 RPM, with no more than 50 RPM difference between mags. Suction should read 5.0 inches Hg. Confirm that the aileron link service bulletin was done.

SPECIFICATIONS

Engine Power Hp	180
Max Takeoff Weight Lbs	2575
Usable Fuel Gal	48
Propeller Diameter Inches	74
Max Baggage Lbs	120

V-SPEEDS

Never Exceed Mph	189
Max Structural Cruise Mph	147
Max Maneuvering Mph	132
Max Flap Operating Mph	100
White Arc Bottom Mph	61

WEIGHT & BALANCE

Max Weight Lbs	2575
Most Forward Cg Inches	42
Most Forward Cg Weight Lbs	2100
Forward Gross Cg Inches	46.5
Rear Gross Cg Inches	49
Max Baggage Lbs	120

SAFETY NOTES

- Landings with a 90 degree crosswind component above 17 MPH are not recommended.
- The stall warning indicator does not work with the master switch off.
- In case of engine fire, turn the cabin heater OFF (placard).