

MICROSOFT FLIGHT SIMULATOR 2002 CHECKLIST

MOONEY BRAVO

SPECIFICATIONS

Maximum Speed	220 kts, 253 mph, 407 kmh
Cruise Speed	195 kts, 224 mph, 361 kmh
Engine	Textron Lycoming TIO-540-AF1B 270 hp
Propeller	McCauley three-bladed constant speed
Maximum Range	1,050 nm, 1,204 sm, 1,945 km
Service Ceiling	25,000 ft, 7,620 m
Fuel Capacity	89 U.S. gal, 337 L
Empty Weight	2,268 lb, 1,029 kg
Max. Gross Weight	3,368 lb, 1,528 kg
Length	26.75 ft, 8.15 m
Wingspan	36 ft, 11 m
Height	8.33 ft, 2.5 m
Seating	Up to 4
Useful Load	1,100 lb, 500 kg



REFERENCE INFORMATION

FS Full Fuel Weight: 3,326 lbs

VA	127 KIAS (3,368 lbs)
	123 KIAS (3,200 lbs)
	117 KIAS (2,900 lbs)
	111 KIAS (2,600 lbs)
VFE	110 KIAS (flaps full)
VLE	165 KIAS
VLO	140 KIAS (extension)
	106 KIAS (retraction)
VNO	174 KIAS
VNE	195 KIAS
VS	66 KIAS
VSO	59 KIAS
VX	85 KIAS
VY	105 KIAS

Best Glide Speed:

93.5 KIAS (3,368 lbs)
89 KIAS (3,200 lbs)
84.5 KIAS (2,900 lbs)
80 KIAS (2,600 lbs)

LEGENDA

VA - Maneuvering Speed
VFE - Maximum Flaps Extended Speed
VLE - Maximum Landing Gear Extension Speed
VLO - Maximum Gear Operating Speed
VNO - Maximum Structural Cruising Speed
VNE - Never Exceed Speed
VS - Stalling Speed (max. weight)
VSO - Stalling Speed in the Landing Configuration (max. weight, flaps 30)
VX - Best Angle-of-Climb
VY - Best Rate-of-Climb

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BEFORE STARTING ENGINE

- Magneto/Starter Switch -- OFF
- Master Switch -- OFF
- Fuel Boost Pump Switch -- OFF
- Throttle -- CLOSED
- Propeller -- HIGH RPM
- Mixture -- IDLE CUT-OFF
- Parking Brakes -- SET
- Master Switch -- ON
- Cowl Flaps -- OPEN
- Flaps -- UP
- Master Switch -- OFF
- Landing Gear Switch -- DOWN

ENGINE START

- Throttle -- OPEN 1/4 INCH
- Propeller -- HIGH RPM
- Mixture -- RICH
- Master Switch -- ON
- Fuel Boost Pump Switch -- ON for 0-40 sec.
- Fuel Boost Pump Switch -- OFF
- Propeller Area -- CLEAR
- Magneto/Starter Switch -- START (release when engine starts)
- Throttle -- IDLE (700-750 RPM)

Then:

- Oil Pressure -- CHECK
- Ammeter -- CHECK
- Engine Instruments -- CHECK

BEFORE TAXI

- Avionics Master Switch -- ON
- Heading Indicator -- SET
- Instruments -- NORMAL OPERATION
- Radios and Avionics -- CHECKED and SET
- Altimeter -- SET
- Fuel Selector -- SWITCH TANKS (verify engine operation on both)
- Cowl Flaps -- FULL OPEN

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TAXI

- Rudder Trim -- AS DESIRED
- Parking Brake -- RELEASE
- Brakes -- CHECK during taxi
- Directional Gyro -- PROPER INDICATION during turns
- Turn Coordinator -- PROPER INDICATION during turns
- Artificial Horizon -- ERECT during turns
- Throttle -- MINIMUM POWER
- Cowl Flaps -- OPEN
- Propeller -- HIGH RPM

BEFORE TAKEOFF

- Parking Brake -- SET
- Fuel Selector Valve -- FULLEST TANK
- Throttle -- 1000 RPM
- Cowl Flaps -- OPEN
- Propeller -- HIGH RPM
- Mixture -- RICH
- Alternator Switch -- VERIFY ON
- Throttle -- 2000 RPM
- Magnetos -- CHECK <150 RPM drop on each, <50 RPM drop between
- Propeller -- CYCLE high RPM/low RPM/high RPM
- Ammeter -- CHECK Positive charge indication
- Throttle -- 1000 RPM
- Fuel Boost Pump Switch -- ON (verify annunciator lit)
- Elevator Trim -- SET for takeoff
- Rudder Trim -- SET for takeoff
- Flaps -- CHECK and SET for takeoff (10 degrees)
- Flight Controls -- FREE AND CORRECT
- Radios and Avionics -- SET
- Annunciator Lights -- CHECK
- Strobe Lights/Beacon -- ON
- Oil Temperature -- CHECK
- Cylinder Head Temperature -- CHECK
- Parking Brake -- RELEASE

TAKEOFF

- Throttle -- FULL
- Annunciator Lights -- CHECK
- Lights -- AS DESIRED
- Engine Instruments -- CHECK
- Liftoff Speed -- 60 KIAS
- Climb Speed -- 85 KIAS
- Landing Gear -- RETRACT IN CLIMB after clearing obstacles
- Flaps -- UP
- Fuel Boost Pump Switch -- OFF

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BEST RATE CLIMB

- Throttle -- FULL
- Propeller -- 2575 RPM
- Mixture -- RICH
- Cowl Flaps -- FULL OPEN
- Rudder Trim -- AS DESIRED
- Airspeed -- 105 KIAS

BEST ANGLE CLIMB

- Throttle -- FULL
- Propeller -- 2575 RPM
- Mixture -- RICH
- Cowl Flaps -- FULL OPEN
- Rudder Trim -- AS DESIRED
- Airspeed -- 85 KIAS

CRUISE CLIMB

- Throttle -- 34" MP
- Propeller -- 2400 RPM
- Mixture -- RICH
- Cowl Flaps -- FULL OPEN or as required
- Rudder Trim -- AS DESIRED
- Airspeed -- 120 KIAS

CRUISE

- Airspeed -- ACCELERATE to cruise airspeed
- Throttle -- AS DESIRED
- Propeller -- AS DESIRED
- Mixture -- LEAN TO PEAK TIT (<1750)
- Engine Instruments -- CHECK
- Cowl Flaps -- AS REQUIRED (to maintain normal Cylinder Head and Oil temperatures)
- Engine Temperatures -- STABILIZE at cruise condition
- Rudder Trim -- AS DESIRED

FUEL TANK SELECTION

- Fuel Boost Pump Switch -- ON
- Fuel Selector -- OPPOSITE TANK
- Fuel Boost Pump Switch -- OFF

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MOONEY BRAVO

DESCENT

- Flaps -- UP
- Landing Gear -- CHECK UP
- Throttle -- ABOVE 15" MP (keep CHT in green)
- Propeller -- 2400 RPM
- Mixture -- PEAK TIT
- Cowl Flaps -- CLOSED
- Cylinder Head Temperature (CHT) -- MONITOR
- Airspeed -- AS DESIRED (195 KIAS max.)
- Rudder Trim -- AS DESIRED

APPROACH FOR LANDING

- Lights -- AS DESIRED
- Landing Gear -- EXTEND (below 140 KIAS) and CHECK DN
- Mixture -- RICH (on final)
- Propeller -- HIGH RPM (on final)
- Fuel Boost Pump -- ON
- Fuel Selector -- FULLEST TANK
- Flaps -- FULL DOWN (below 110 KIAS)
- Elevator Trim -- AS DESIRED
- Rudder Trim -- CENTERED OR AS DESIRED
- Parking Brake -- VERIFY OFF

LANDING

- Airspeed -- 75 KIAS
- Touchdown -- MAIN WHEELS FIRST
- Landing Roll -- LOWER NOSE WHEEL GENTLY
- Brakes -- MINIMUM REQUIRED

TAXI AFTER LANDING

- Throttle -- AS REQUIRED
- Fuel Boost Pump -- OFF
- Cowl Flaps -- OPEN
- Flaps -- RETRACT
- Elevator Trim -- TAKEOFF SETTING
- Avionics/Radios -- AS REQUIRED
- Lights -- AS DESIRED

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SHUTDOWN

- Parking Brake -- SET
- Throttle -- IDLE
- Avionics Switch, Electrical Equipment -- OFF
- Lights -- OFF
- Pitot Heat -- OFF
- Mixture -- IDLE CUT-OFF (pulled fully out)
- Master Switch -- OFF
- Magneto/Starter Switch -- OFF

SECURING AIRCRAFT

- Magneto/Starter Switch -- Verify OFF
- Master Switch -- Verify OFF
- Avionics Switch -- Verify OFF
- Electrical Switches -- Verify OFF

PILOT'S NOTES
