



MANIFOLD INSTALLATION INSTRUCTIONS FOR THE BMW E36 328 & M3

Notice: Installation instructions are provided for informational purposes only. The installation of the M50 manifold kit should be performed by a qualified mechanic. Failure to do so may result in personal injury, engine damage, or worse. If you or your mechanic have any questions please contact us at 770-904-5121 or email us at info@trmtuning.com

Recommended Tools:

- ¼ drive ratchet
- ¼ drive deep sockets in 4mm, 6mm, 10mm, 11mm, and 13mm
- ¼ drive shallow socket in 10mm
- 3/8 drive ratchet
- 3/8 drive extension set
- 3/8 drive deep sockets in 10mm, 11mm, and 13mm
- Screw driver set
- Pliers set
- Torque wrench

Recommended Supplies:

Options:

- Threaded OBD2 IAT
- OBD2 ASC delete throttle body (no crankcase vent attachment)
- OBD1 ASC delete throttle body (crankcase vent attachment)

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Removing The Stock Manifold:

Unplug fuel pump fuse.

Crank engine and let it die. (This will bleed off the pressure in the fuel system.)

Disconnect negative cable on the battery in the trunk.

Loosen the hose clamp at the junction of the MAF and the throttle body boot.

Disconnect the MAF plug.

Loosen 6mm nuts on the airbox / cruise control.

Lift cruise control assembly off of studs and set aside.

Lift airbox and remove from vehicle.

Loosen the hose clamp on the alternator duct at the alternator.

Remove alternator duct.

Loosen the crimp clamp on the brake booster hose at the intake manifold.

Pull brake booster hose off of the intake manifold.

Using a small slotted screwdriver, remove the fuel rail cover fastener covers.

Using a 10mm socket and ratchet, remove the two 10mm bolts.

Remove the fuel rail cover.

Unclip both oxygen sensor connectors from their clips and unplug them.

Remove both oxygen sensor clips from the fuel rail.

Using large pliers, bend the rear O2 clip mount up until the tab touches the pipe.

Disconnect crankcase vent pipe at valve cover. (release connector by pinching the connector clip.)

Unplug air pump solenoid.

Unplug crankshaft sensor at front of fuel rail.

Unscrew throttle body elbow hose clamp.

Disconnect ICV hose at throttle body elbow and remove throttle body elbow.

If the car has an ASC Throttle body:

Using a 10mm socket and ratchet, remove the ASC Throttle body.

Unplug the ASC Throttle body position sensor.

Remove the ASC Throttle body gasket from the throttle body.

Unplug the TPS.

Using a 10mm deep socket and ratchet, remove the throttle body.

Using a 10mm deep socket and ratchet, remove the three bolts securing the dipstick tube and ICV.

Remove the ICV from the intake manifold.

Unplug the ICV electrical connection.

Unplug the IAT sensor.

Using a 10mm deep socket and ratchet, remove the three bolts securing the oil separator.

Disconnect/remove the oil separator by pushing it towards the passenger side of the car.

Disconnect the fuel lines from the bottom of the manifold.

Disconnect the three vacuum lines from the intake manifold.

Using a 10mm deep socket and ratchet, remove the two bolts securing the intake manifold to the support brackets.

Using a 10mm deep socket and ratchet, remove the two bolts securing the ICV and CCV bracket.

Using a 10mm deep socket and ratchet, remove the two nuts securing the brackets to the engine block.

Remove both support brackets from the engine bay.

Disconnect the fuel injector wiring harness by pulling it away from the fuel injectors.

Using an 11mm socket, extensions, and ratchet, remove the 7 nuts that secure the intake manifold to the head.

Using a 10mm socket and ratchet, remove the two bolts securing the fuel rail to the manifold.
Slide the air pump solenoid bracket through the gap in the manifold.
Remove the intake manifold from the engine.
Disconnect the fuel lines.
Remove fuel rail from intake manifold.
Remove Cyclone Separator.
Plug dipstick tube hole with provided cap.

Installing The M50 Manifold:

Test fit fuel rail to manifold with provided brackets. Some trimming may be required on the mounting bosses.
Carefully bend the fuel lines if they touch the manifold.
Install new intake runner gaskets into M50 manifold.
Install intake manifold.
Using an 11mm socket and ratchet, torque all seven nuts to 11 ft/lb (15Nm).
Install the fuel rail on the manifold.
Using a 10mm socket and ratchet, tighten all fasteners securing the fuel rail to the manifold.
Install the injector wiring harness.
Plug in the injectors, oxygen sensor connectors (make sure to match them), and SAP solenoid.
Zip tie O2 sensor plugs and wires to the fuel rail harness.
If not connecting to stock obd1 valve cover vent, plug the ICV connector with the provided cap.
Plug in ICV connector and turkey neck to intake manifold.
Install the intake manifold support brackets between the intake manifold and engine block.
Install o-rings in the intake manifold and throttle body. Sandwich sealing plate between the intake manifold and throttle body.
Plug in the TPS.
Insert ICV hose into throttle body elbow.
Connect throttle body elbow to throttle body and tighten hose clamp.
Install MAF / air box and tighten hose camp.
Plug in the MAF.
Install fuel pump fuse.

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