BMW Z3 M52TU/M54 Intake System
Installation Instructions



Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

INSTALLATION NOTES

- **RH** refers to the ***passenger side*** of the vehicle.
- **LH** refers to the ***driver side*** of the vehicle.
- Always use the proper torque specifications.
- If applicable to this installation, torque specifications will be listed throughout the document and at the end as well.
- Please read all of these instructions and familiarize yourself with the complete process **BEFORE** you begin.

GENERAL PREPARATION AND SAFETY INFORMATION

Turner Motorsport cares about your health and safety, please read the following safety information. This information pertains to automotive service in general, and while it may not pertain to every job you do, please remember and share these important safety tips.

- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- **ALWAYS** wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.
- Whether lifting a vehicle using an automotive lift or a hydraulic jack, be sure and utilize the factory specified lift points.
- Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- **ALWAYS** support the vehicle with jack stands.
- **ALWAYS** read and follow all safety information and warnings for the equipment you are using.

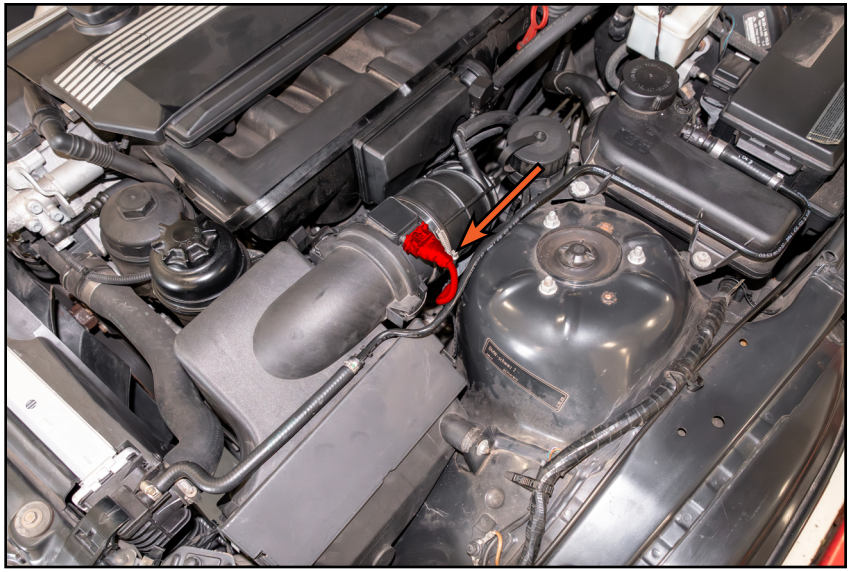


NEVER get underneath a vehicle that is supported only by a jack, and ALWAYS make sure that the vehicle is securely supported on jack stands.

REMOVING THE STOCK INTAKE SYSTEM

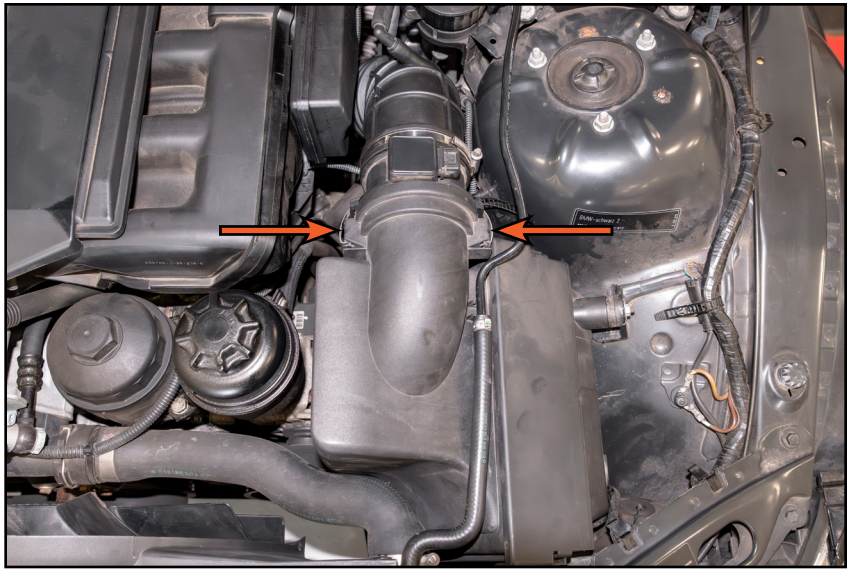
Step 1: 10mm Socket & Ratchet

Depress the retaining clip and disconnect the connector (highlighted in **RED**) from the MAF sensor.



Step 2: 6mm Socket & Ratchet

Open both the latches (arrows) that secure the MAF sensor to the airbox, then loosen the clamp that secures the MAF sensor to the intake hose.



REMOVING THE STOCK INTAKE SYSTEM

Step 3: 10mm Socket & Ratchet

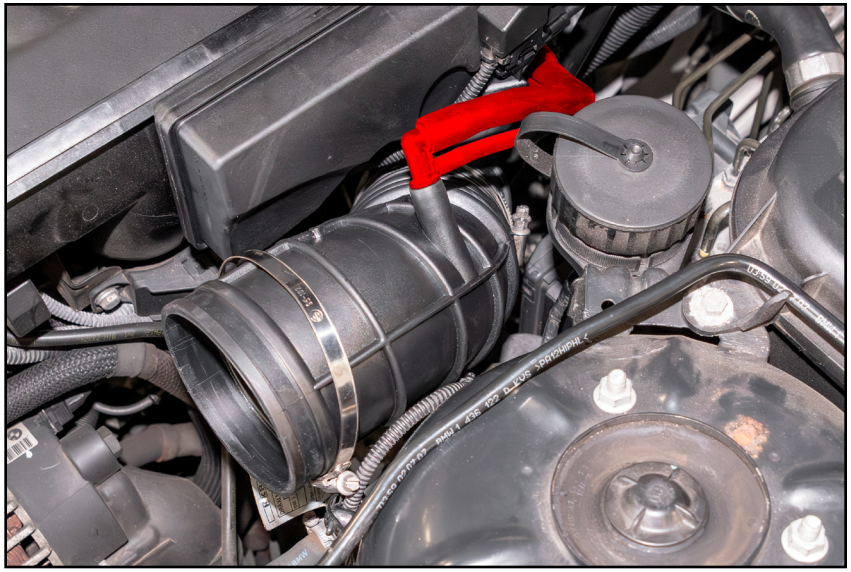
Remove the screw (arrow in **Photo #1**) that secures the airbox to the vehicle, then lift up to remove the airbox from the vehicle. Remove the rubber bumper (circled in **RED** in **Photo #2**) from the stud on the frame rail.





Step 4:

Pull the vacuum lines (highlighted in **RED**) free from the intake hose.

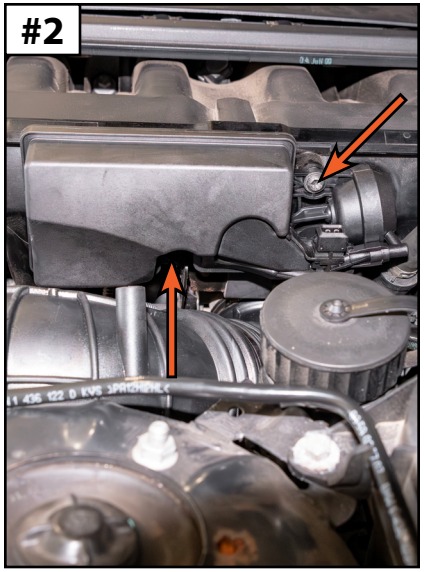


REMOVING THE STOCK INTAKE SYSTEM

Step 5: T30 Torx Socket & Ratchet

Disconnect the connector (highlighted in **RED** in **Photo #1**), then loosen the two screws (arrows in **Photo #2**) and remove the adjustment valve from the intake manifold.





Step 6: 6mm Socket & Ratchet

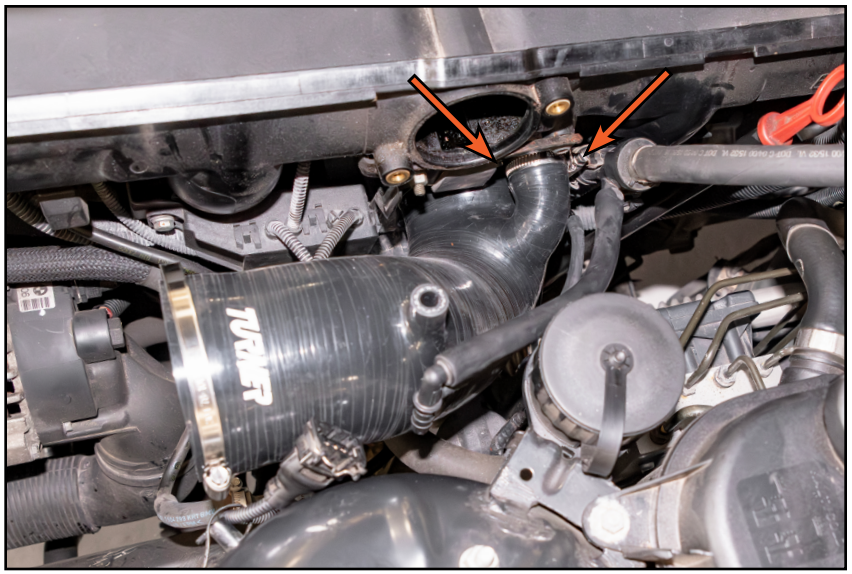
Loosen the two clamps (arrows) and remove the intake hose from the throttle body.



INSTALLING THE NEW INTAKE SYSTEM

Step 1: 7mm Socket & Ratchet

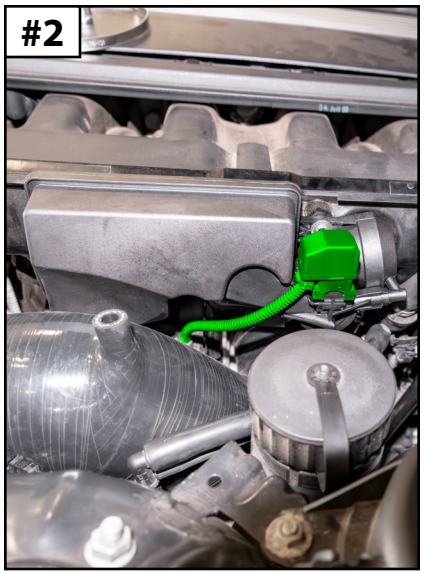
Slide the new intake hose onto the throttle body, ensuring both ports are fully seated before tightening the clamps (arrows) until snug.



Step 2: T30 Torx Socket & Torque Wrench

Reinstall the adjustment valve and tighten the screws (arrows in **Photo #1**) to 10 Nm (7 Ft-lbs), then reconnect the connector (highlighted in **GREEN** in **Photo #2**).





INSTALLING THE NEW INTAKE SYSTEM

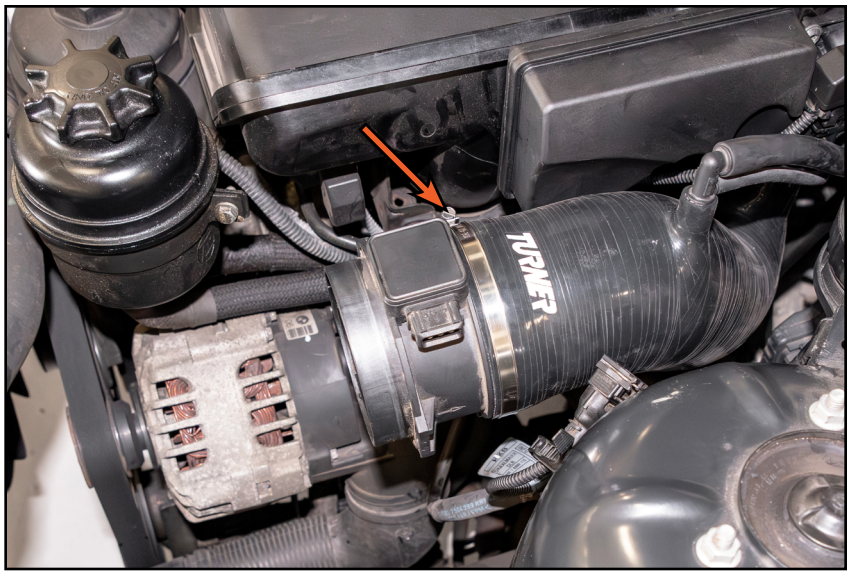
Step 3:

Install the vacuum lines (highlighted in **GREEN**) into the port on the top of the new intake hose.



Step 4: 7mm Socket & Ratchet

Slide the MAF sensor into the intake hose as shown and tighten the clamp (arrow) until snug.

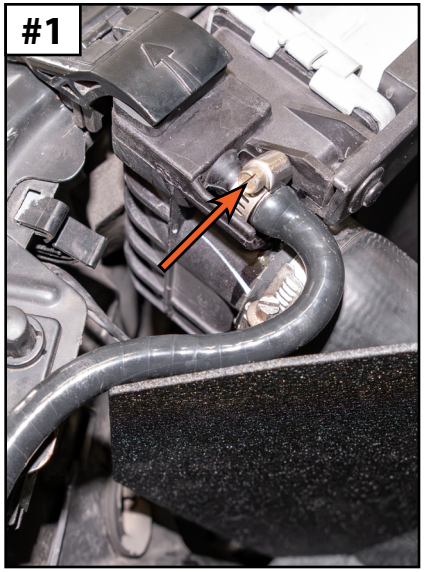


INSTALLING THE NEW INTAKE SYSTEM

Step 5: Cutting Pliers, 6mm Socket & Ratchet

Remove the OE expansion tank vent hose, leaving the fitting and rubber coupler (highlighted in **GREEN**) installed on the expansion tank. Install the new provided coolant hose onto the radiator and tighten the clamp (arrow in **Photo #1**) until snug. Route the coolant hose across the top of the core support and along the fender, up to the expansion tank. Cut away any excess length on the hose and connect it to the rubber coupler with the provided barbed fitting (arrow in **Photo #2**).

#1



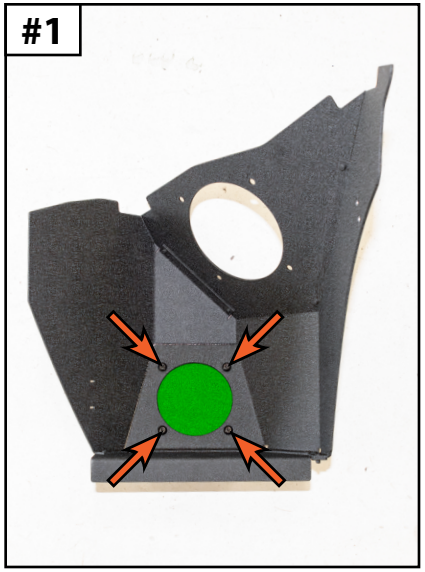
#2



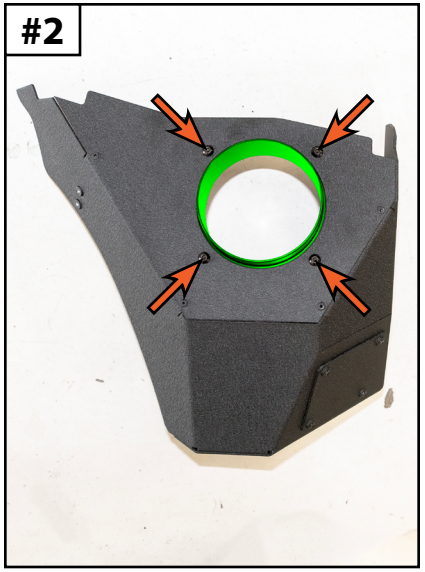
Step 6: 3mm Hex (Allen) Socket & Ratchet

Install the provided cover plate (highlighted in **GREEN** in **Photo #1**) into the opening in the bottom of the heat shield and secure it in place with the provided M5 x 8mm screws (arrows). Install the provided air filter adapter (highlighted in **GREEN** in **Photo #2**) into the opening in the top of the heat shield and secure it in place with the provided M5 x 8mm screws (arrows).

#1



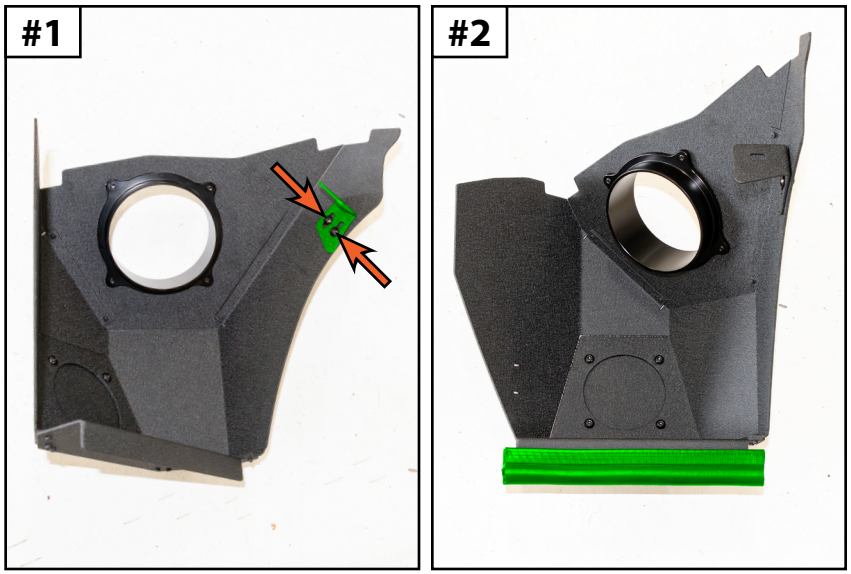
#2



INSTALLING THE NEW INTAKE SYSTEM

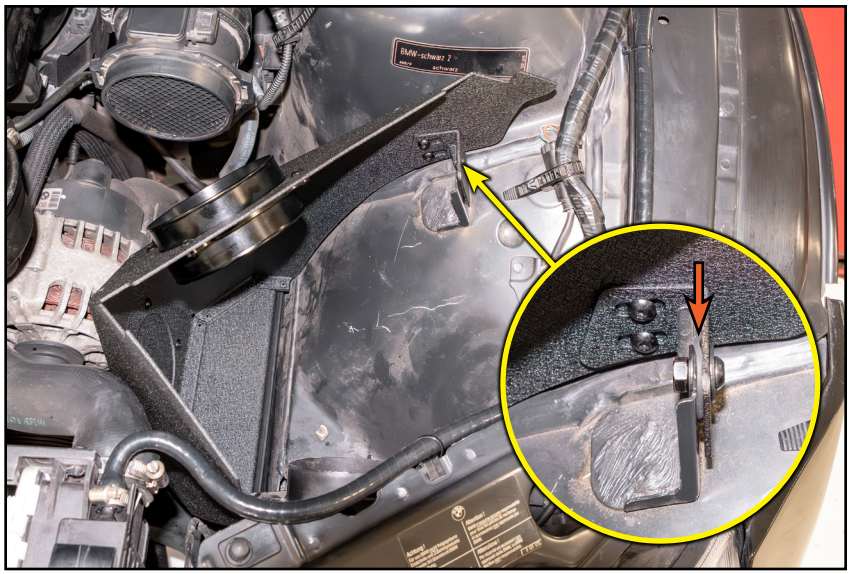
Step 7: 3mm Hex (Allen) Socket & Ratchet

Install the mounting bracket (highlighted in **GREEN** in **Photo #1**) onto the heat shield as shown and loosely secure it in place with the provided M5 x 8mm screws (arrows). Install the provided short bulb section (highlighted in **GREEN** in **Photo #2**) along the underside of the heat shield as shown.



Step 8: 4mm Hex (Allen), 10mm Socket & Ratchet

Carefully guide the heat shield into place, then secure it to the mounting tab on the strut tower with the provided M6 screw, washers, and nut, sandwiching the provided rubber washer (arrow in inset photo) between the bracket and mounting tab.

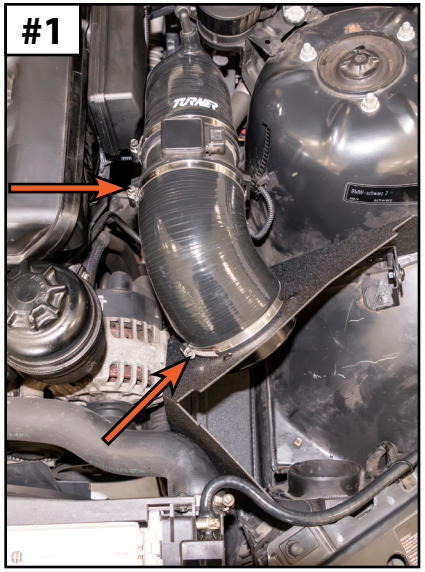


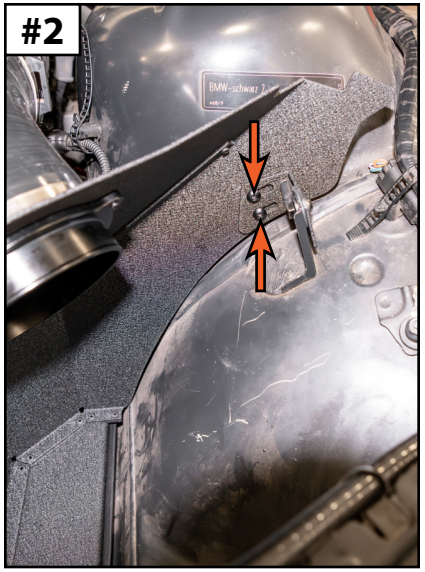
INSTALLING THE NEW INTAKE SYSTEM

Step 9: 3mm Hex (Allen), 7mm Socket & Ratchet

Install the provided intake coupler between the MAF sensor and air filter adapter and tighten the clamps (arrows in **Photo #1**) until snug. Tighten the bracket screws (arrows in **Photo #2**) until snug.

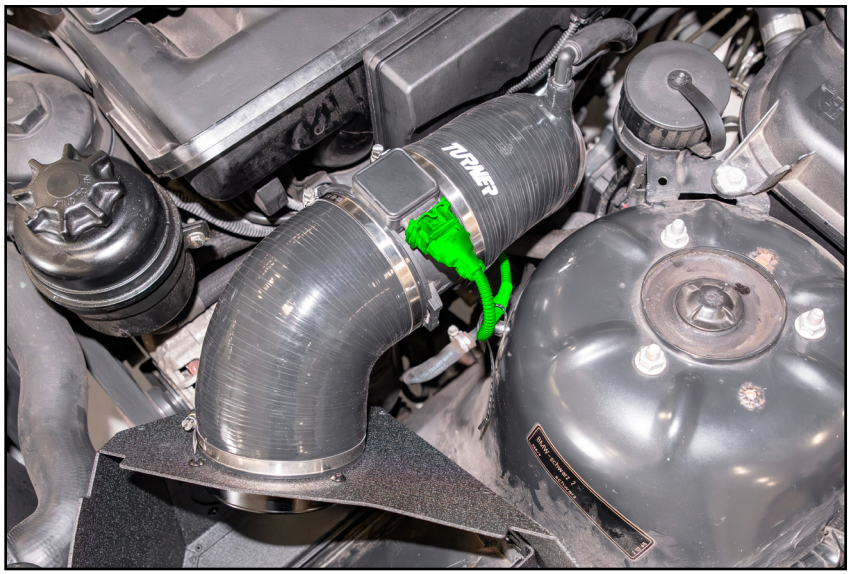
M52TU and M54 2.5L engines ONLY: Measure and mark 15 mm from the MAF end of the coupler, then cut off the excess material.





Step 10:

Reconnect the MAF sensor connector (highlighted in **GREEN**).



INSTALLING THE NEW INTAKE SYSTEM

Step 11: 8mm Socket & Ratchet

Slide the air filter onto the end of the air filter adapter and tighten the clamp (arrow) until fully snug.



Step 12: Cutting Pliers

Install the provided bulb seal (highlighted in **GREEN**) along the top of the heat shield as shown, trimming to length as needed.



Congratulations, Your installation is complete!

Your Intake System installation is complete!



These instructions are provided as a courtesy by Turner Motorsport

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