



BMW N54 B58 Ignition Coil Conversion Kit 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 ORIGINAL IGNITION COILS

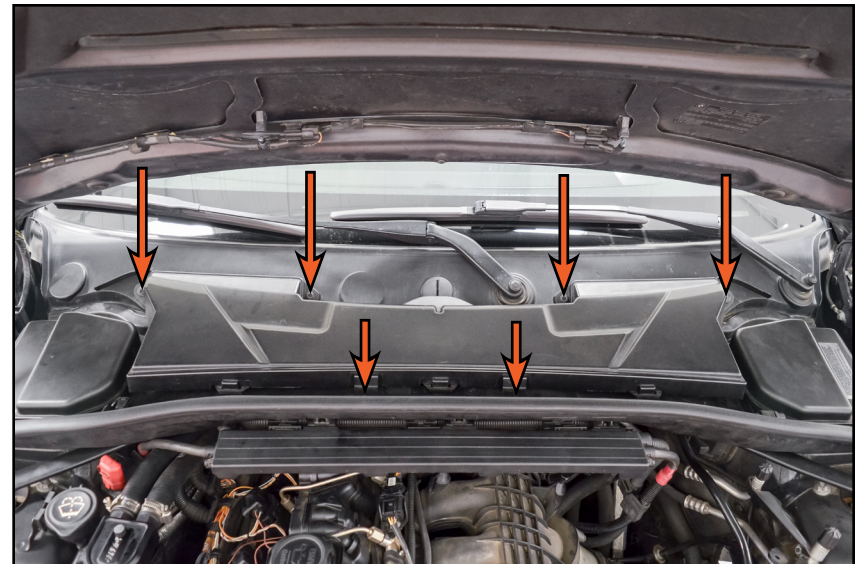
Step 1:

Remove the factory intake airbox.



Step 2: 8mm Socket & Ratchet

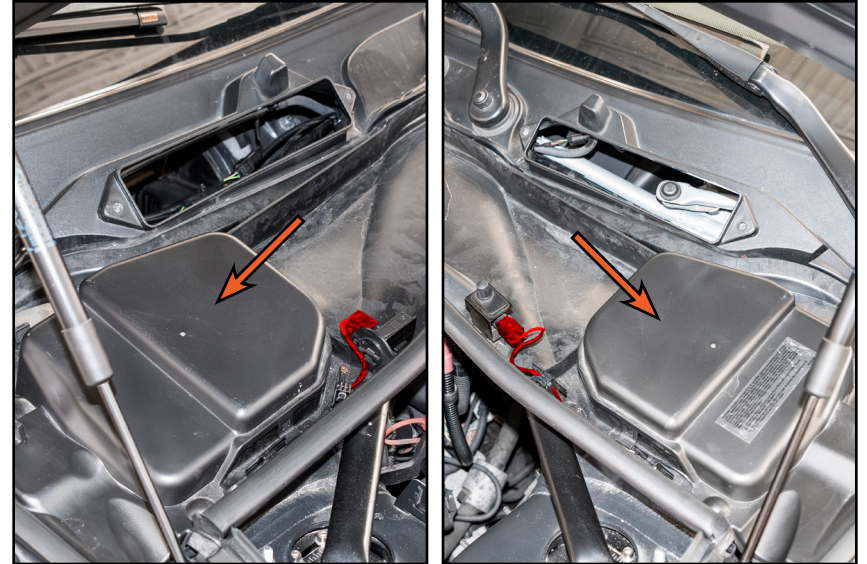
Remove the screws (arrows) and remove the cabin air filter housing from the vehicle.



REMOVING THE ORIGINAL IGNITION COILS

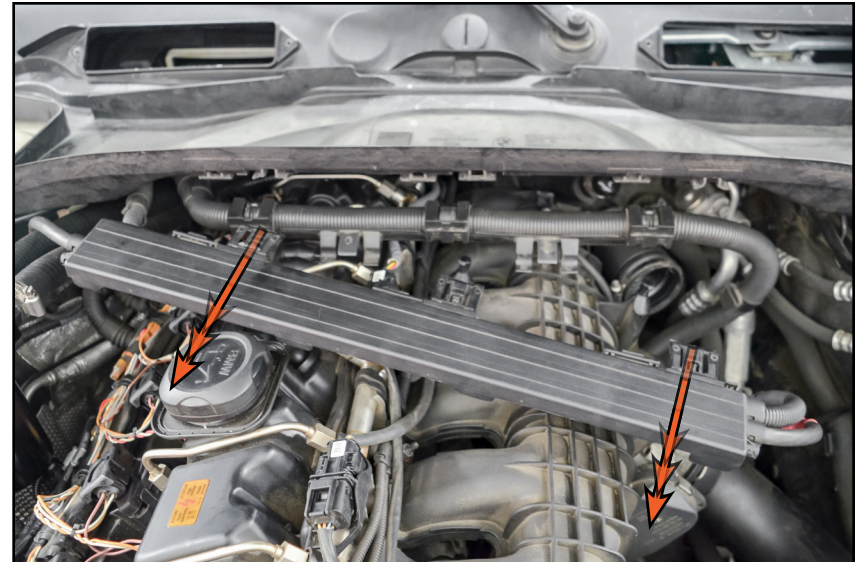
Step 3:

Disconnect the connectors (highlighted in **RED**) from the sensors on the cowl cover, then remove both side covers (arrows).



Step 4:

Depress the retaining tabs, then pull the wiring harness channel off of the cowl cover.



REMOVING THE ORIGINAL IGNITION COILS

Step 5: 8mm Socket & Ratchet

Remove the screw (arrow) that secures each side of the cowl cover, then slide it forward and remove it from the vehicle.



Step 6: E14, E18 Torx Socket & Ratchet

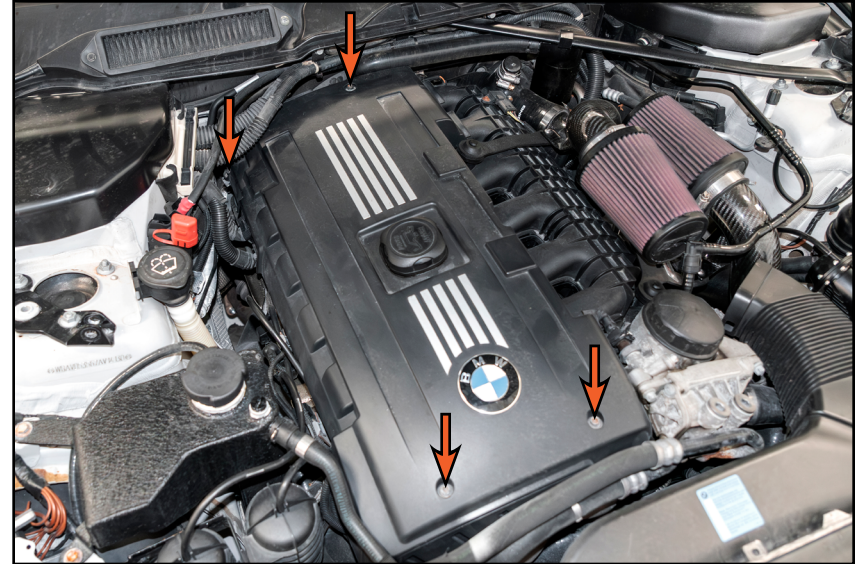
Loosen the inner bolt (arrow), then remove the outer bolt (circled in **RED**) and slide the RH brace free from the vehicle.



REMOVING THE ORIGINAL IGNITION COILS

Step 7: 4mm Hex (Allen) Socket & Ratchet

Remove the four screws (arrows) then remove the engine cover.

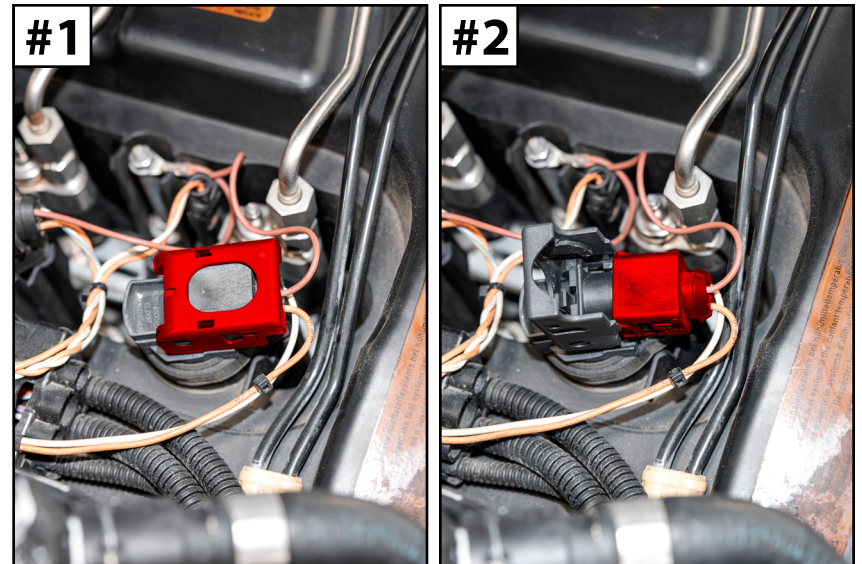


Step 8:

Lift up on each ignition coil latch (highlighted in **RED** in **Photo #1**) then slide each connector (highlighted in **RED** in **Photo #2**) free from the ignition coil.



Mark each ignition coil connector with the corresponding cylinder number (1-6) to aid in reassembly.



REMOVING THE ORIGINAL IGNITION COILS

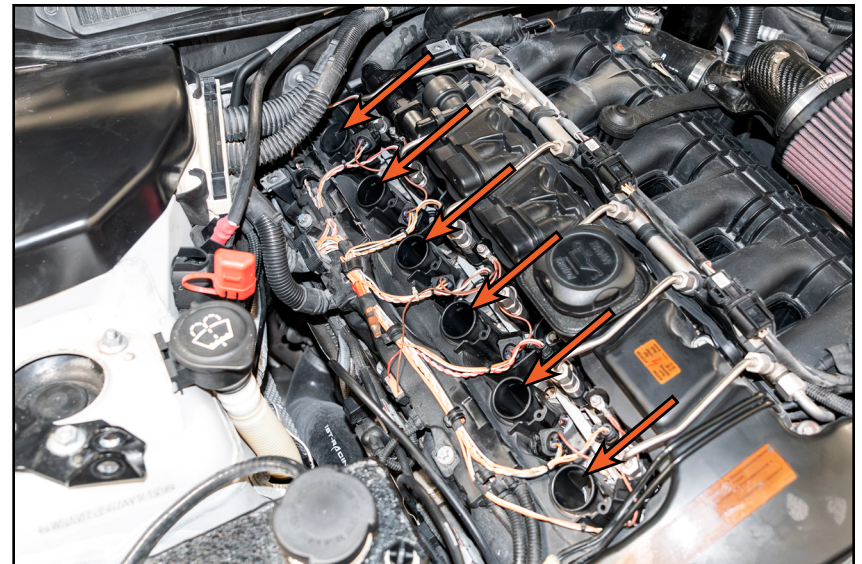
Step 9:

Pull up to remove each ignition coil from the vehicle, then carefully remove the latch (highlighted in **RED**) and set them aside, we will be reusing them later.



Step 10: 14mm 12-Point Socket & Torque Wrench

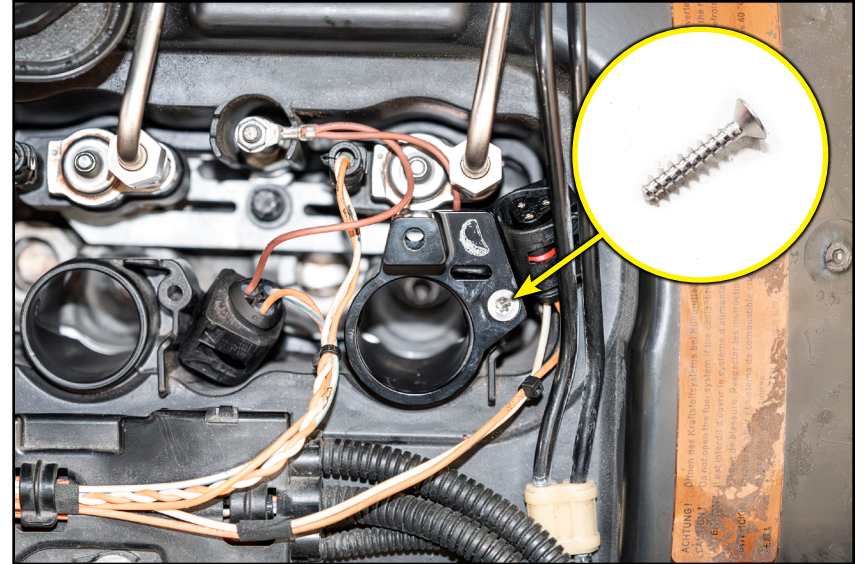
Optional: Replace the spark plugs (arrows) with new ones, torquing them to 23 Nm (18 Ft-lbs).



INSTALLING THE CONVERSION KIT

Step 1: T20 Torx Socket & Torque Wrench

Slide the new ignition coil adapter brackets into place as shown and secure it with the provided screw (inset photo). Adjust each bracket until the openings are centered over the spark plug holes, then tighten the screws until snug.



Step 2: E8 Torx Socket & Torque Wrench

Install the new ignition coils onto the spark plugs, pushing down to ensure a proper connection, then thread the screws (arrows) into the brackets and torque them to 8 Nm (6 Ft-lbs).



CAUTION: Ensure the ignition coil connector wires do not get pinched between the coils and the brackets.



INSTALLING THE CONVERSION KIT

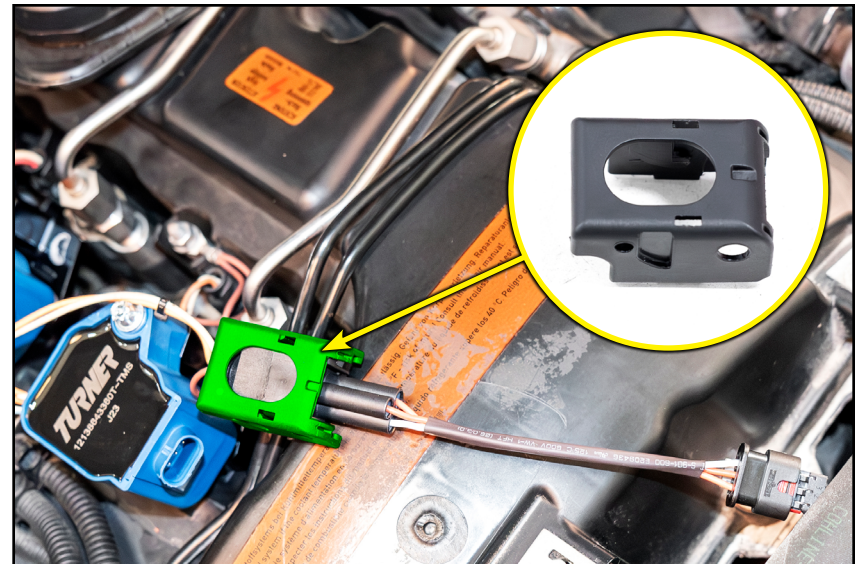
Step 3:

Install the provided adapter harness (highlighted in **GREEN**) into each of the OE coil plugs as shown.



Step 4:

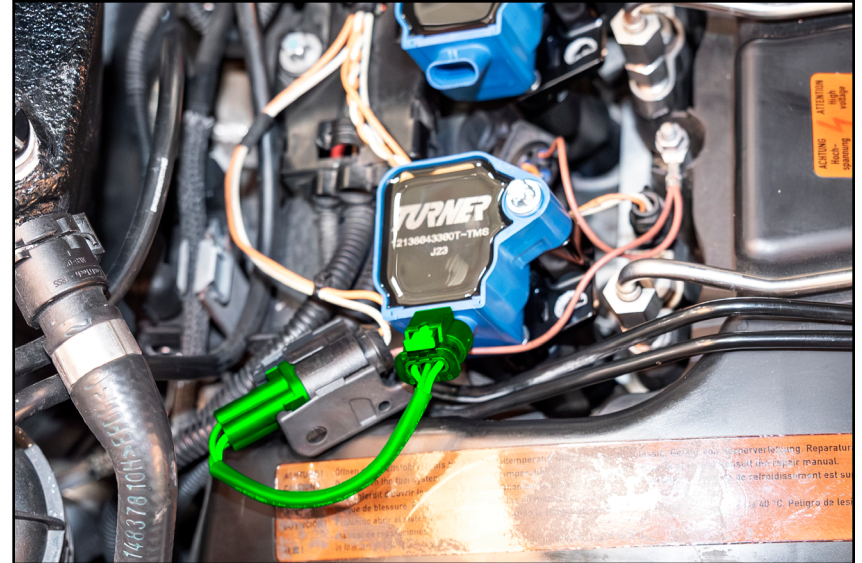
Install the OE ignition coil latch (highlighted in **GREEN**) over each of the new connectors to retain them in place.



INSTALLING THE CONVERSION KIT

Step 5:

Connect the new harness (highlighted in **GREEN**) to each ignition coil as shown, then carefully tuck the connector and harness out of the way.



Step 6: E14, E18 Torx Socket & Torque Wrench

Reinstall the engine cover then reinstall the RH brace and torque the bolts to:

M10 Outer Bolt: 40 Nm (30 Ft-lbs) + 60 degrees

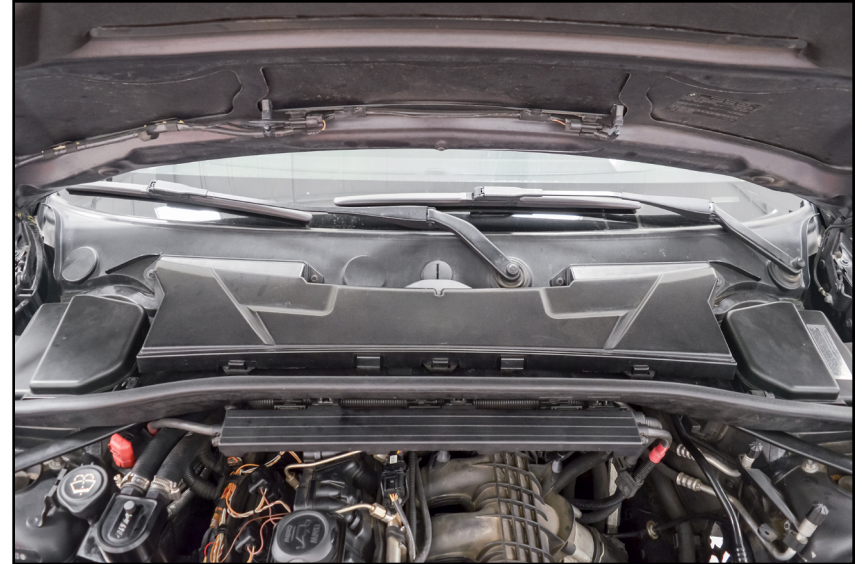
M12 Inner Bolt: 100 Nm (74 Ft-lbs) + 100 degrees



INSTALLING THE CONVERSION KIT

Step 7: 8mm Socket & Ratchet

Reinstall the cowl cover, side covers, and cabin air filter housing in the reverse order of removal.



Step 8:

Reinstall the Intake system.



Congratulations, your installation is complete!

Your B58 ignition coil conversion kit installation is complete!



These instructions are provided as a courtesy by Turner Motorsport

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