



## BMW F-Chassis N55 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

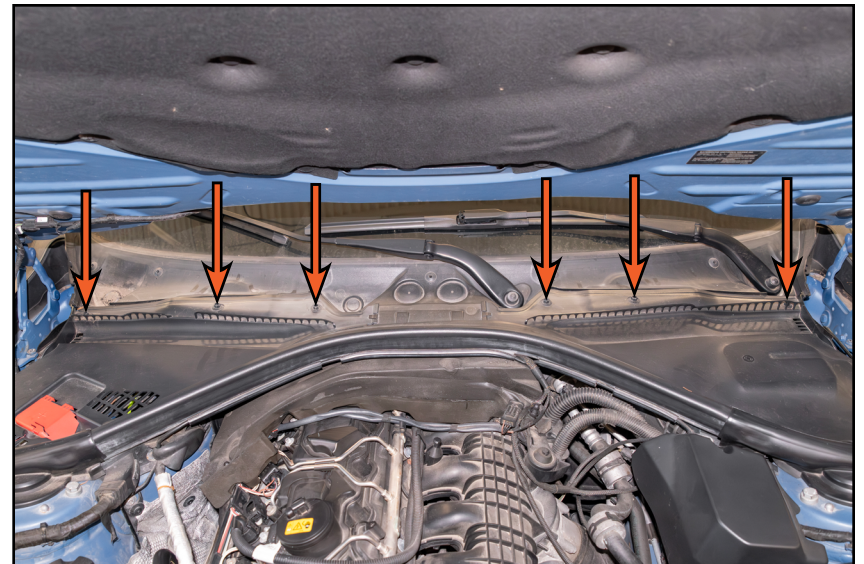
### Step 1:

Lift up to pop the engine cover free from its mounting grommets and remove it from the vehicle.



### Step 2: 10mm Socket & Ratchet

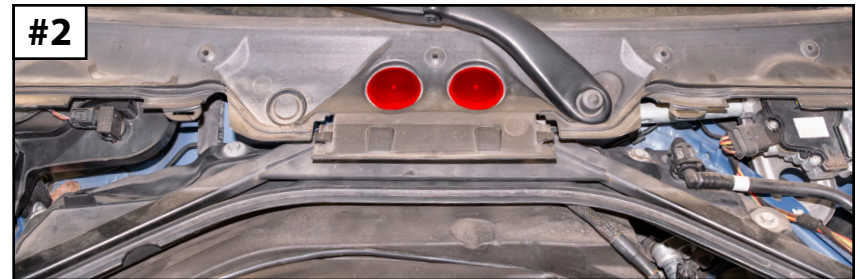
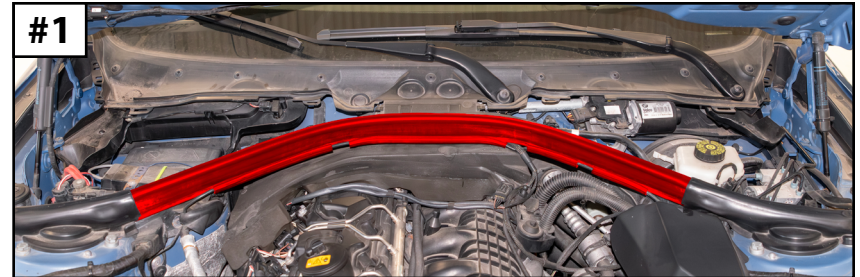
Rotate the latches (arrows) to the unlocked position and remove the rain tray side panels.



## REMOVING THE ORIGINAL IGNITION COILS

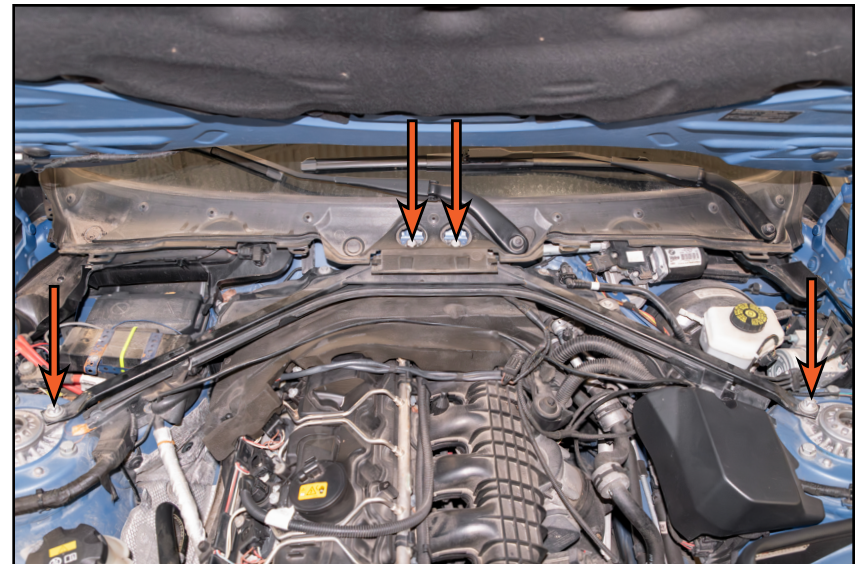
Step 3: Pick Tool, 10mm Socket & Ratchet

Free up the wires from the bulb seal (highlighted in **RED** in **Photo #1**) then remove it. Pry the two covers (highlighted in **RED** in **Photo #2**) free from the upper rain tray.



Step 4: E18 Torx Socket & Ratchet

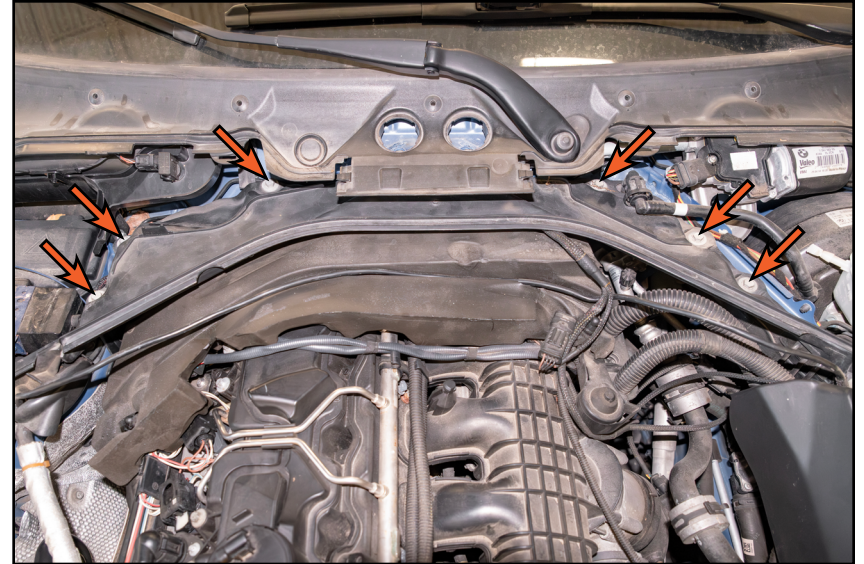
Remove the four screws (arrows) that secures the strut brace to the vehicle and remove it.



## REMOVING THE ORIGINAL IGNITION COILS

### Step 5: 10mm Socket & Ratchet

Remove the six screws (arrows) and remove the center bulkhead cover.



### Step 6:

Remove the foam rear ignition coil cover from the engine.



## REMOVING THE ORIGINAL IGNITION COILS

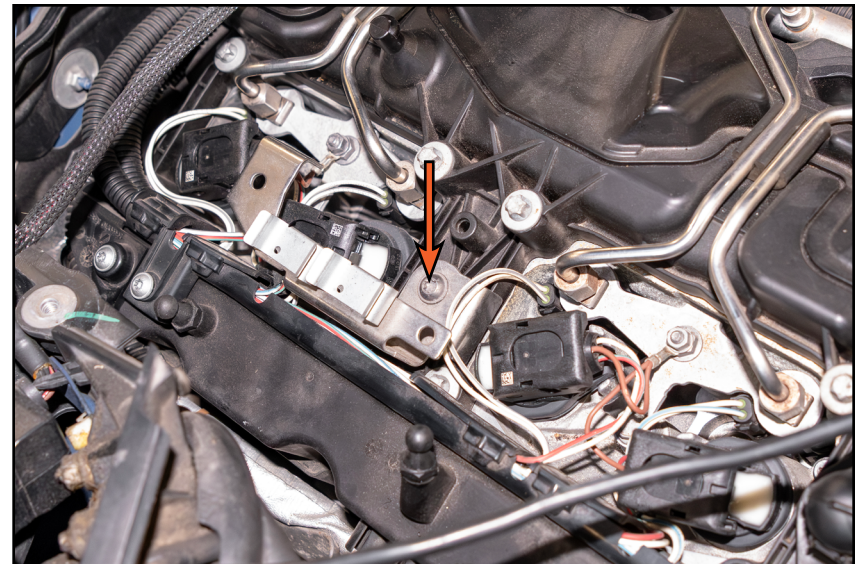
### Step 7:

Disconnect the oxygen sensor connectors (highlighted in **RED**) and move the harnesses out of the way.



### Step 8: T30 Torx Socket & Ratchet

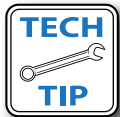
Remove the screw (arrow) and remove the oxygen sensor connector bracket from the vehicle.



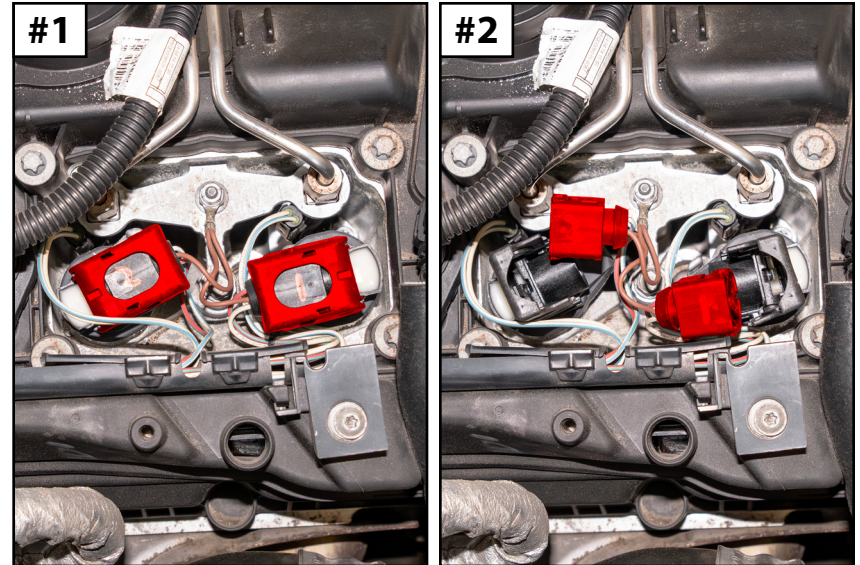
## REMOVING THE ORIGINAL IGNITION COILS

### Step 9:

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.

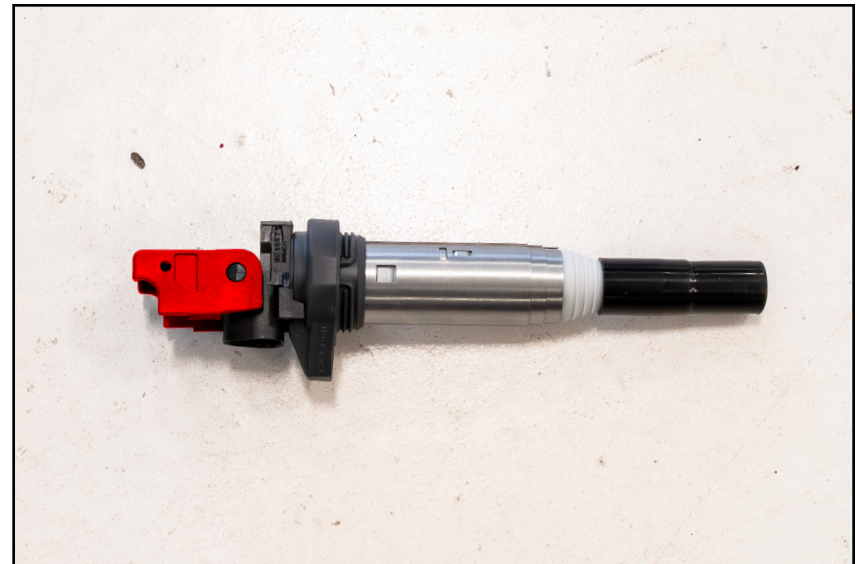


Mark each ignition coil connector with the corresponding cylinder number (1-6) to aid in reassembly.



### Step 10:

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.



## INSTALLING THE CONVERSION KIT

Step 1: 14mm 12-Point Socket & Torque Wrench

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



Step 2: 10mm Socket & Torque Wrench

Remove the screw (arrow) and slide the new ignition coil adapter brackets into place as shown and reinstall the screw. Adjust each bracket until the openings are centered over the spark plug holes, then torque the screws to 8 Nm (6 Ft-lbs).



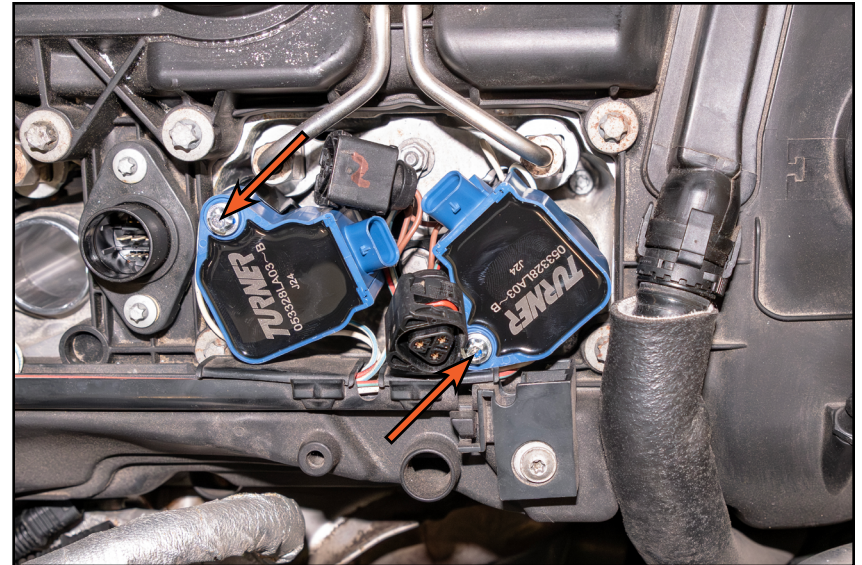
## INSTALLING THE CONVERSION KIT

### Step 3: 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.



### Step 4:

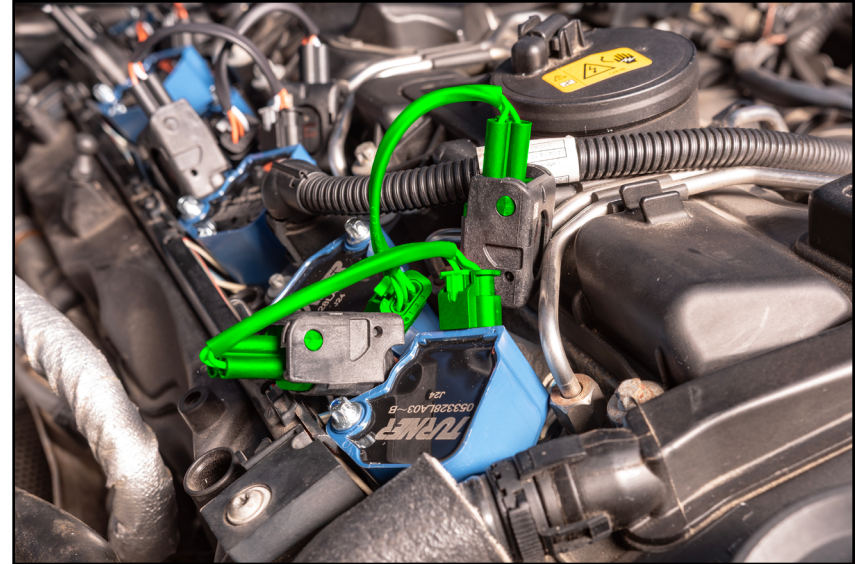
Install the provided adapter harness into each of the OE coil plugs as shown and install the OE ignition coil latch (highlighted in **GREEN**) over each of the new connectors to retain them in place.



## INSTALLING THE CONVERSION KIT

### Step 5:

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

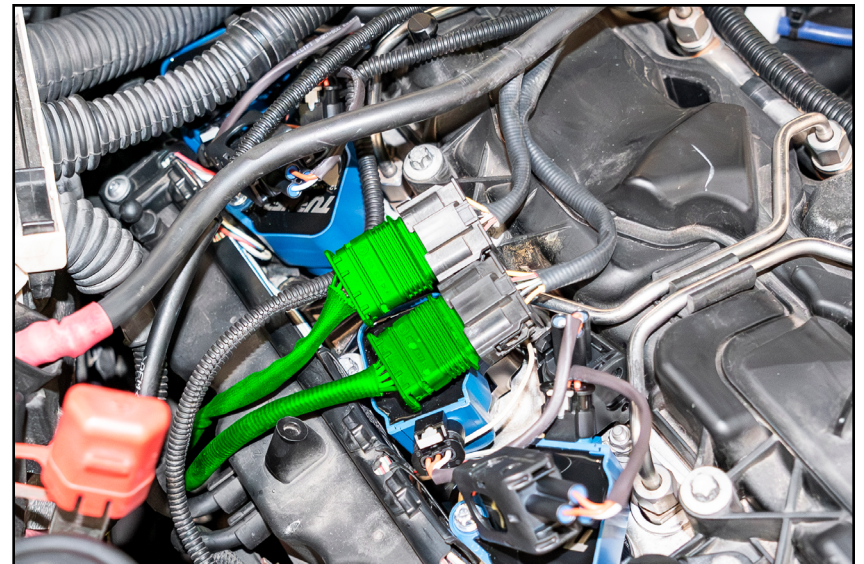


### Step 6:

Reconnect the oxygen sensor connectors (highlighted in **GREEN**).



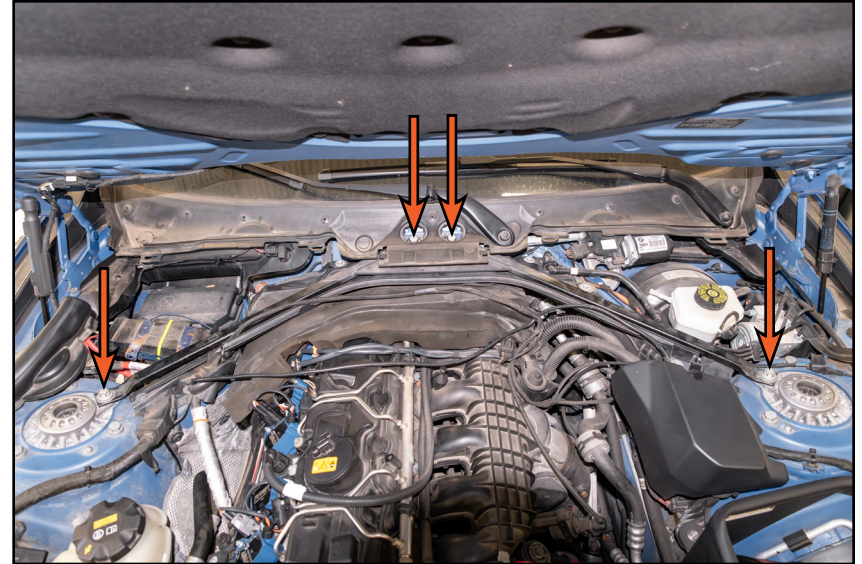
The oxygen sensor connector bracket cannot be reinstalled with our B58 ignition coil conversion kit.



## INSTALLING THE CONVERSION KIT

### Step 7: E18 Torx Socket & Torque Wrench

Reinstall the foam rear ignition coil cover and center bulkhead cover, then reinstall the strut brace and torque the screws (arrows) to 56 Nm (41 Ft-lbs) + 90 degrees.



### Step 8:

Reinstall the bulb seal, rain tray side panels, strut brace screw covers, and engine cover.



## Your B58 ignition coil conversion kit installation is complete!



### **These instructions are provided as a courtesy by Turner Motorsport**

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