



## BMW B58 Performance Module Installation Instructions

Introducing the Turner Performance Module! This tuning module plugs in ahead of the engine computer on the wiring harness. It's not the run-of-the-mill 'piggy-back' style upgrades you find for less. Inside our module is a sophisticated control unit that is designed to complement and work with the factory ECU. The maps and algorithms within the control unit have been optimized for the B58 engine, sending revised fuel and ignition parameters to the stock ECU to control boost depending on load, engine speed, and other factors. Our control unit integrates seamlessly to extract more power and torque without faults and errors - just smooth power and torque. The harness has factory-style weather-proof plugs to connect in-line with each boost pressure sensor on the engine. All of the factory safeguards remain in place, including overload protection and warm-up protocols to preserve longevity and factory drive-ability, and this type of system is unaffected by factory BMW updates and service.

If you're looking for a substantial bump in power output, with minimal downtime for installation, full serviceability, and can be easily reverted back to stock, then the Turner Performance Module is unbeatable!

**Installation time:** ½ hour



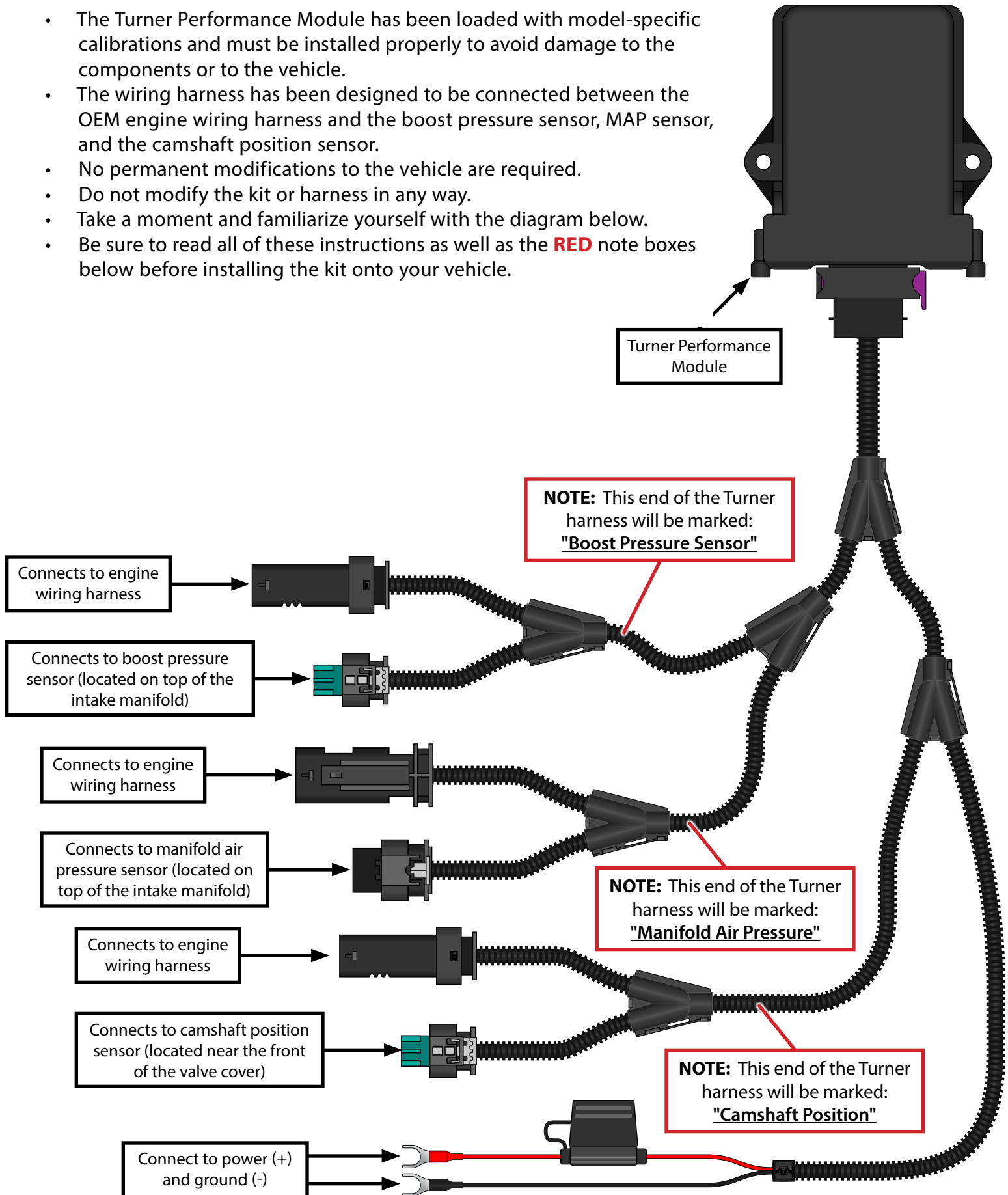
**These installation instructions have been broken up into several sections:**

- |                                     |                          |
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| <b>1) Introduction</b>              | <a href="#">(Page 2)</a> |
| <b>2) Installation Overview</b>     | <a href="#">(Page 3)</a> |
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| <b>4) Valet Connector Operation</b> | <a href="#">(Page 8)</a> |

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.

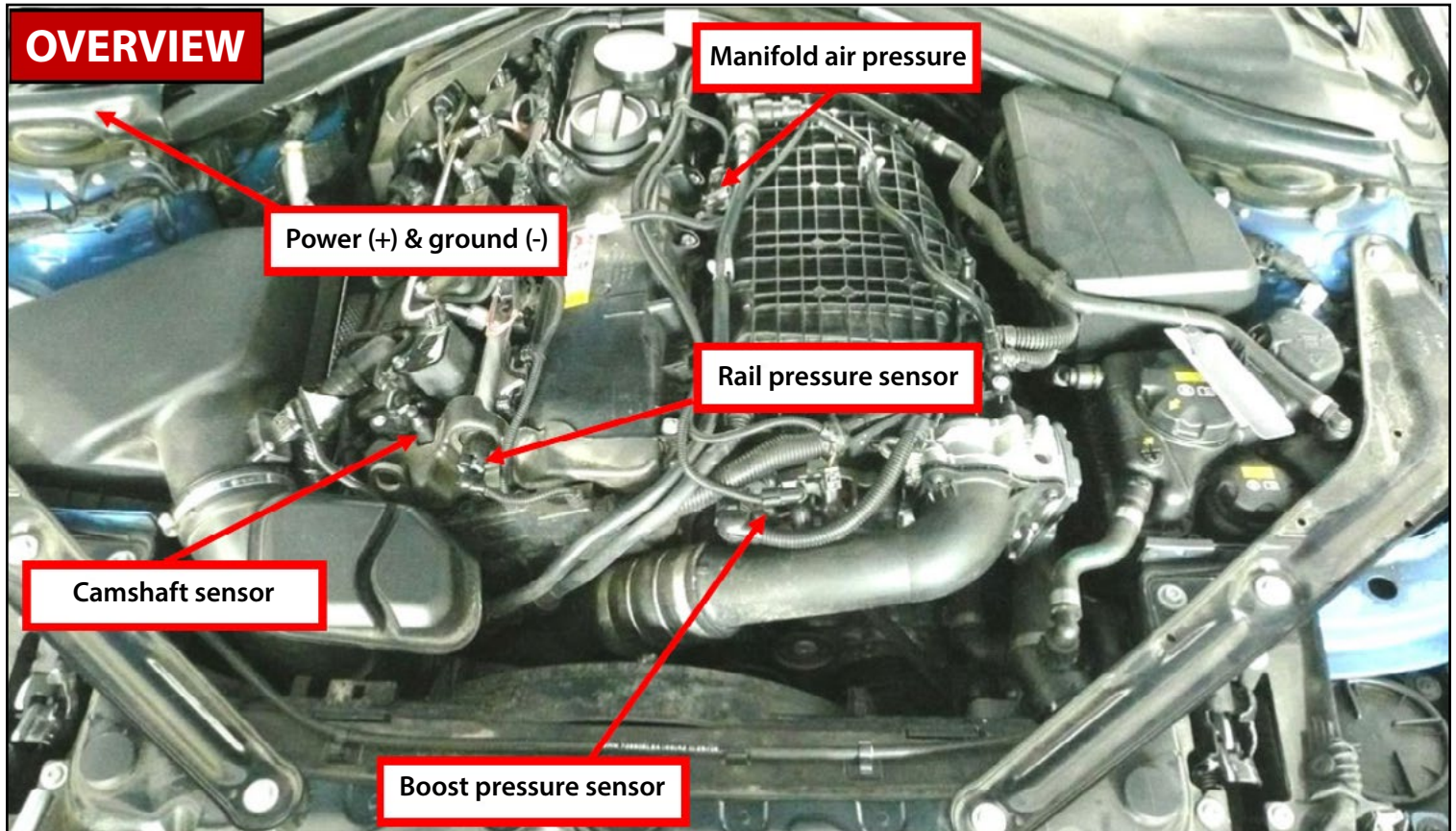
## Section 1: Introduction

- The Turner Performance Module has been loaded with model-specific calibrations and must be installed properly to avoid damage to the components or to the vehicle.
- The wiring harness has been designed to be connected between the OEM engine wiring harness and the boost pressure sensor, MAP sensor, and the camshaft position sensor.
- No permanent modifications to the vehicle are required.
- Do not modify the kit or harness in any way.
- Take a moment and familiarize yourself with the diagram below.
- Be sure to read all of these instructions as well as the **RED** note boxes below before installing the kit onto your vehicle.



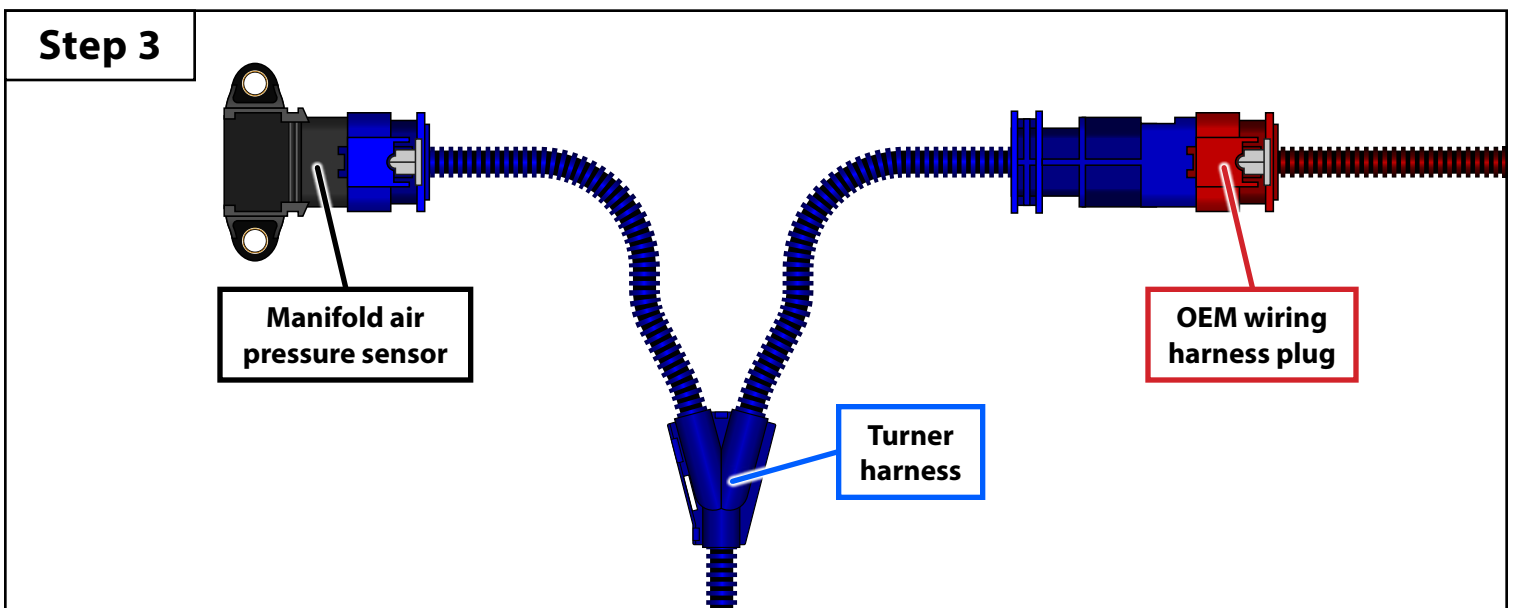
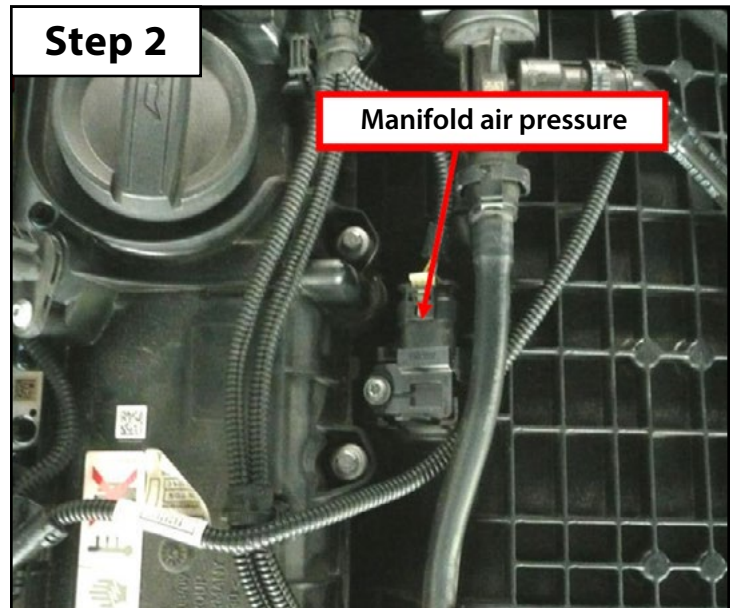
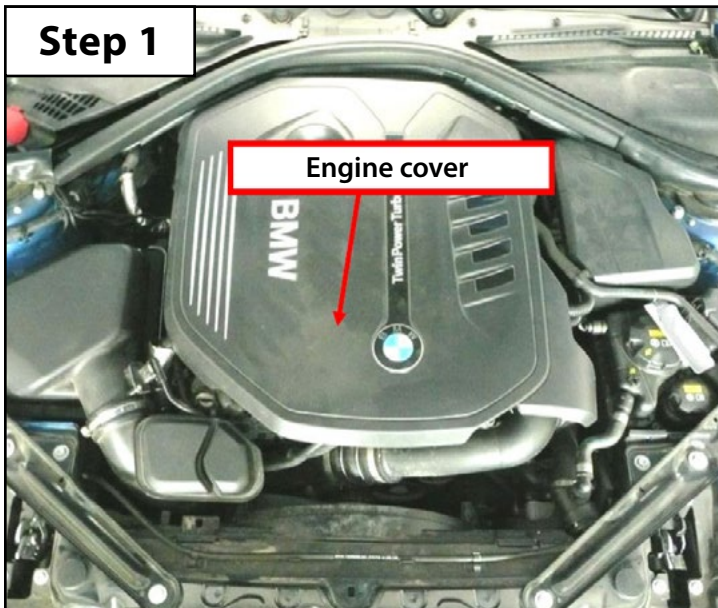
## Section 2: Installation Overview

- We will not be showing a specific mounting location for the Turner Performance Module in these instructions, you can choose any suitable location (one option would be in the empty space underneath the rain tray cover).
- When selecting a mounting location for the module, be sure that the answers to the following questions are **YES**:
  - Will the module be easily accessible if you want to install the valet plug and bypass the module? (more information on the valet plug can be found on Page 8).
  - Will the module be adequately protected from water, surrounding components, or anything else which could damage it?
  - Can the wiring harness be safely routed to this location without stretching it, or modifying it in any way?
- Reference the photo below for component locations, then proceed to the next page for installation instructions.



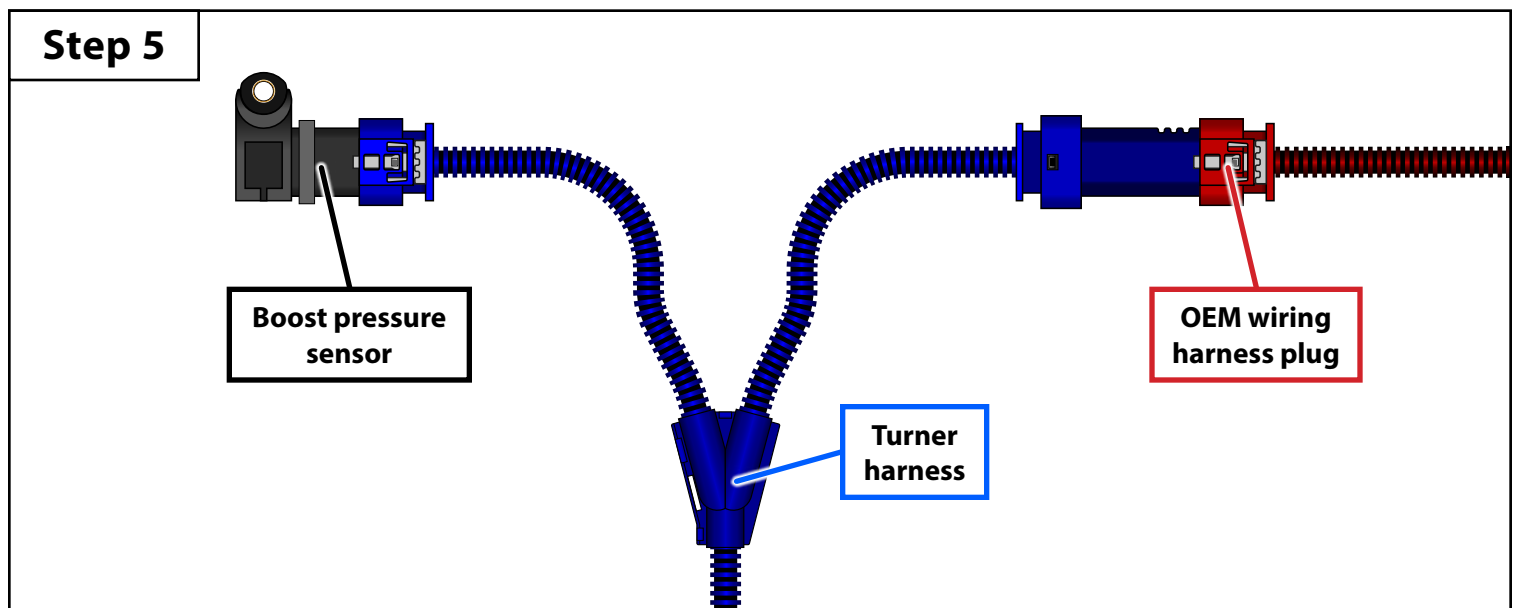
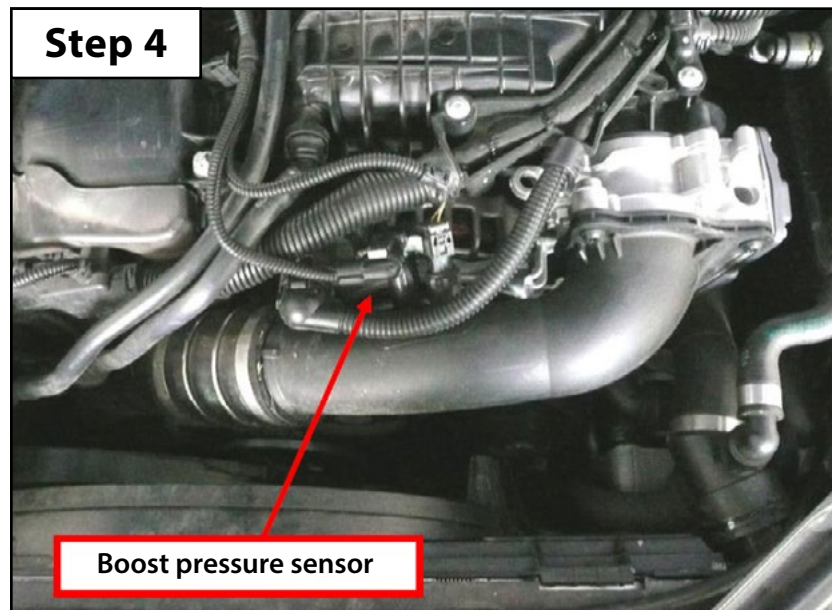
## Section 3: Installation Instructions

- Step 1**
- Turn the ignition off and remove the key from the dash.
  - Disconnect the negative (-) battery terminal.
  - Wait for the engine to cool down.
  - Select a mounting location for the Turner Performance Module.
  - Remove the engine cover.
- Step 2**
- Locate the manifold air pressure sensor on the top of the intake manifold near the oil fill cap.
- Step 3**
- Release and disconnect the OEM wiring harness plug from the manifold air pressure sensor.
  - Connect the OEM wiring harness plug (**RED**) to the Turner harness (**BLUE**).
    - Be sure to use the harness lead marked "manifold air pressure".
  - Connect the Turner harness (**BLUE**) to the manifold air pressure sensor.



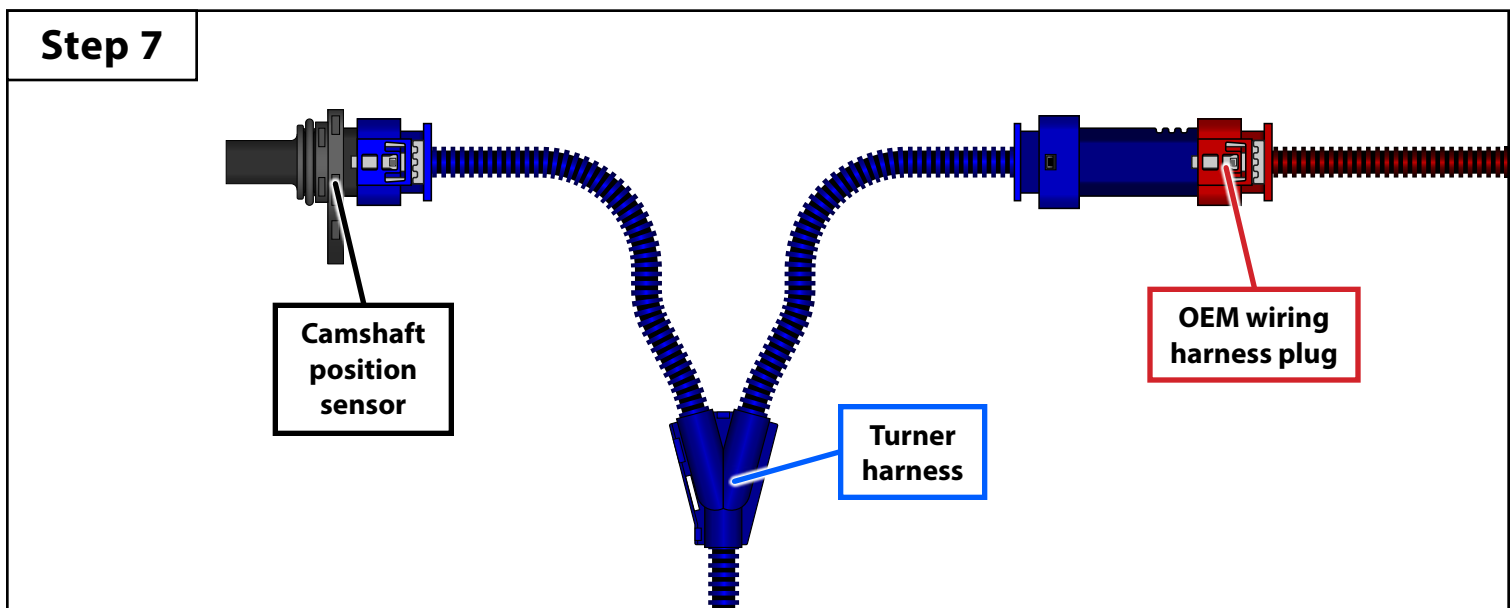
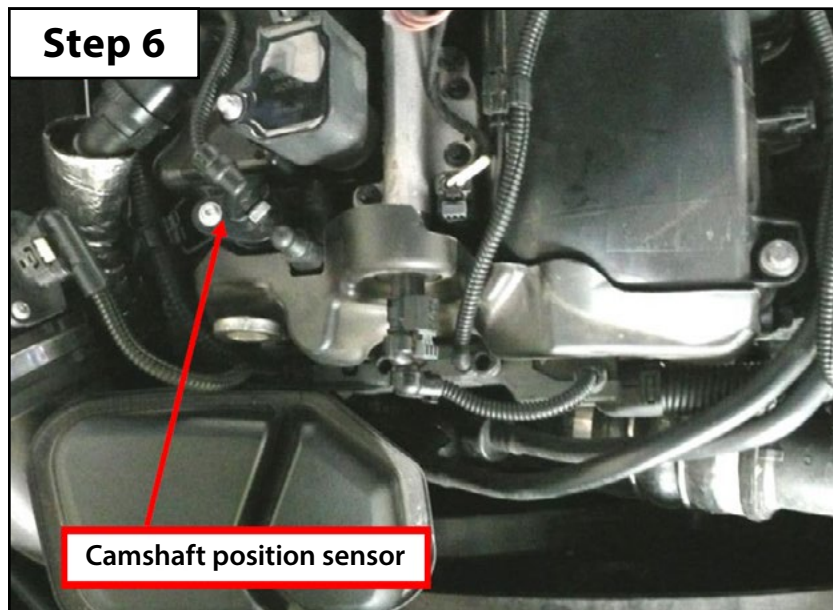
## Section 3: Installation Instructions

- Step 4**
- Locate the boost pressure sensor on the intake pipe in front of the engine.
- Step 5**
- Release and disconnect the OEM wiring harness plug from the boost pressure sensor.
  - Connect the OEM wiring harness plug (**RED**) to the Turner harness (**BLUE**).
    - Be sure to use the harness lead marked "boost pressure sensor".
  - Connect the Turner harness (**BLUE**) to the boost pressure sensor.



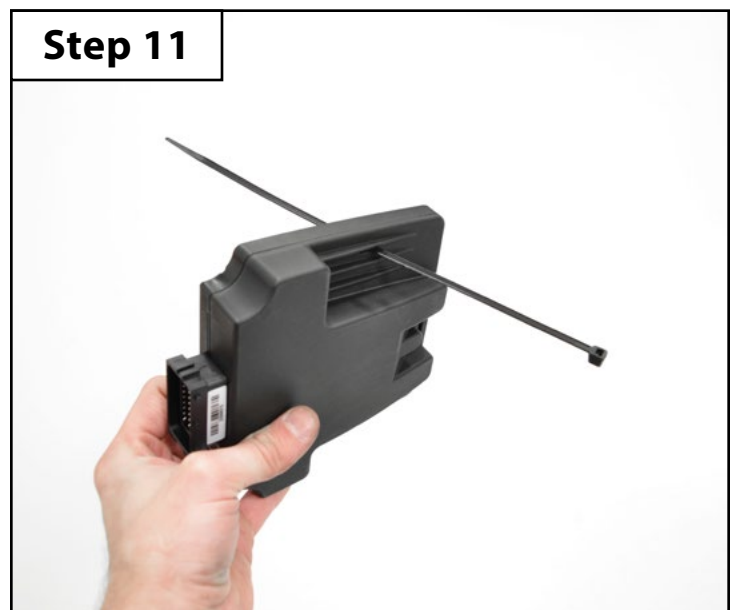
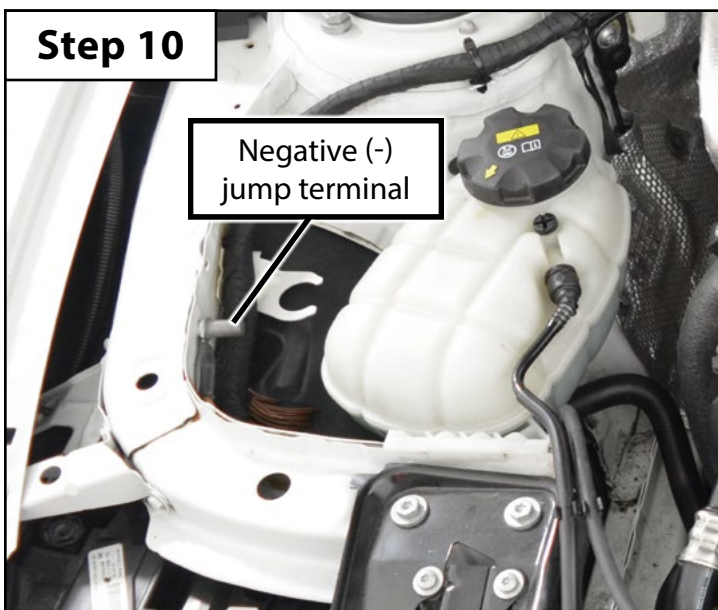
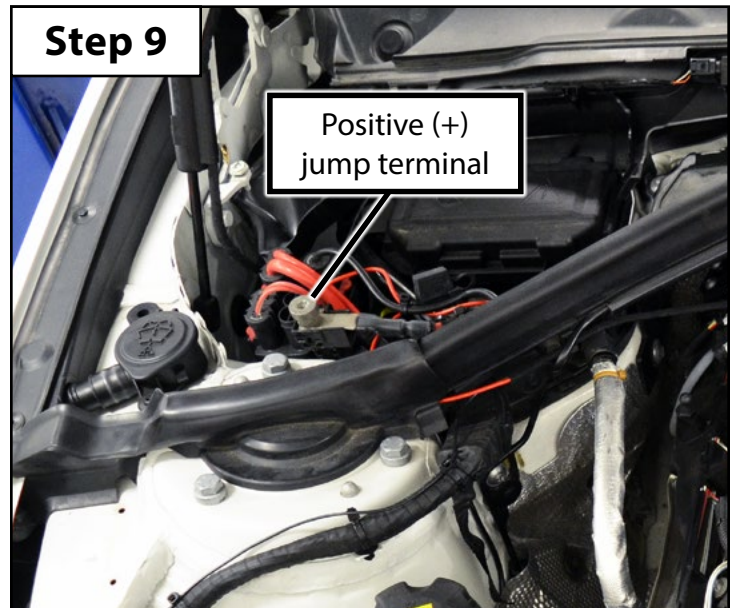
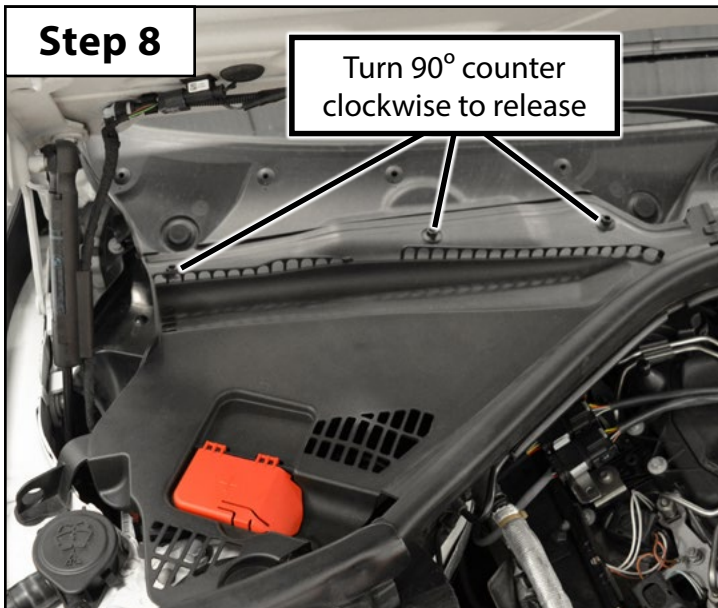
## Section 3: Installation Instructions

- Step 6**
- Locate the camshaft position sensor on top of the valve cover near the front.
- Step 7**
- Release and disconnect the OEM wiring harness plug from the camshaft position sensor.
  - Connect the OEM wiring harness plug (**RED**) to the Turner harness (**BLUE**).
    - Be sure to use the harness lead marked "camshaft position".
  - Connect the Turner harness (**BLUE**) to the camshaft position sensor.



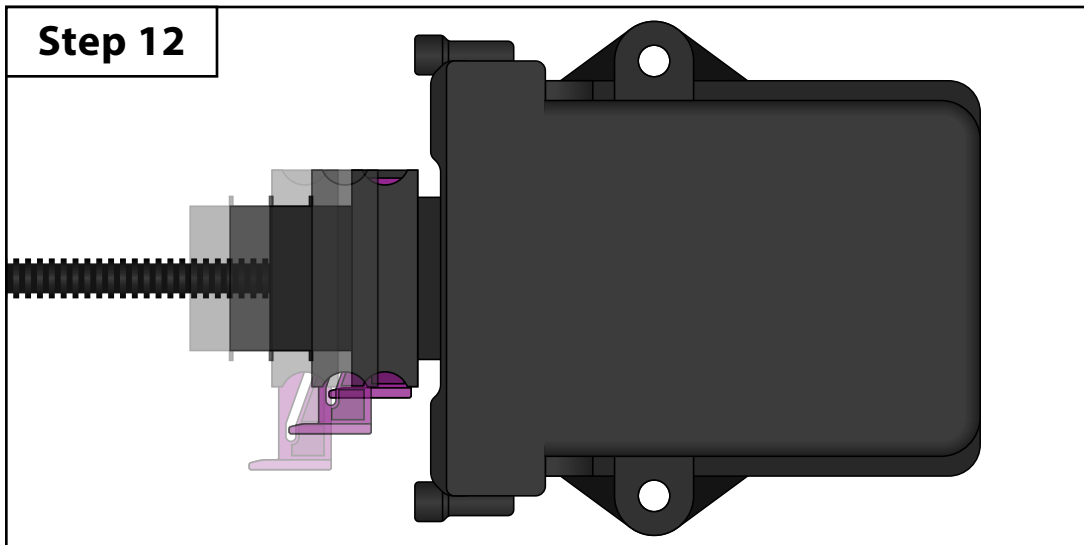
## Section 3: Installation Instructions

- Step 8**
- Working on the RH rain tray cover, turn the 10mm plastic nuts 90° counter clockwise to release them.
  - Lift the RH rain tray cover out and set it aside.
- Step 9**
- Route the power (+) wire up to the jump post located just behind the RH shock tower.
  - Install the power (+) wire underneath the jump terminal nut.
- Step 10**
- Route the negative (-) wire up to the jump post located next to the coolant reservoir.
  - Install the negative (-) wire underneath the jump terminal nut.
- Step 11**
- Route a zip tie through the slots in the Turner Performance Module and secure it into place in your selected location.
  - Route the Turner harness to the performance module. Use zip ties to secure it away from any moving or hot components.



## Section 3: Installation Instructions

- Step 12**
- Extend the purple sliding lock on the large plug of the Turner harness, then start to slide it into the Module (the connector will only go in one way).
  - Next, push on the purple lock to secure the plug to the Module. The connector should slide onto the Module as you push the purple lock inward. The connector and the purple lock should both fully seat at the same time.
  - Double check all of your connections.
  - Reinstall any components that you removed or loosened in the reverse order of removal.
  - Check that the harness is secured out of the way of any moving or hot components.
  - Enjoy your new power responsibly.



## Section 4: Valet Connector Operation

- Step 1**
- The Valet connector is used to bypass the tuning module and revert the tuning back to stock. With the Valet plug installed the ECU will use the stock maps instead of getting modified data from the Turner module.
    - To use the Valet connector, unplug the Turner module from the wiring harness by releasing the purple sliding lock, then plug in the Valet connector to the harness and secure with the sliding lock.

