



BMW N20 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. This unit intercepts the signals from the boost pressure sensors to alter the ECU perception of load. The ECU then adjusts parameters such as fueling, ignition, and others to reach the desired load levels, resulting in more horsepower and torque. The harness has factory-style weather-proof plugs to connect in-line with each sensor. 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 easy conversion back to stock, then the Turner Performance Module is unbeatable!

Installation time: 1 hour



These installation instructions have been broken up into several sections:

1) Introduction

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2) Overview

[\(Page 3\)](#)

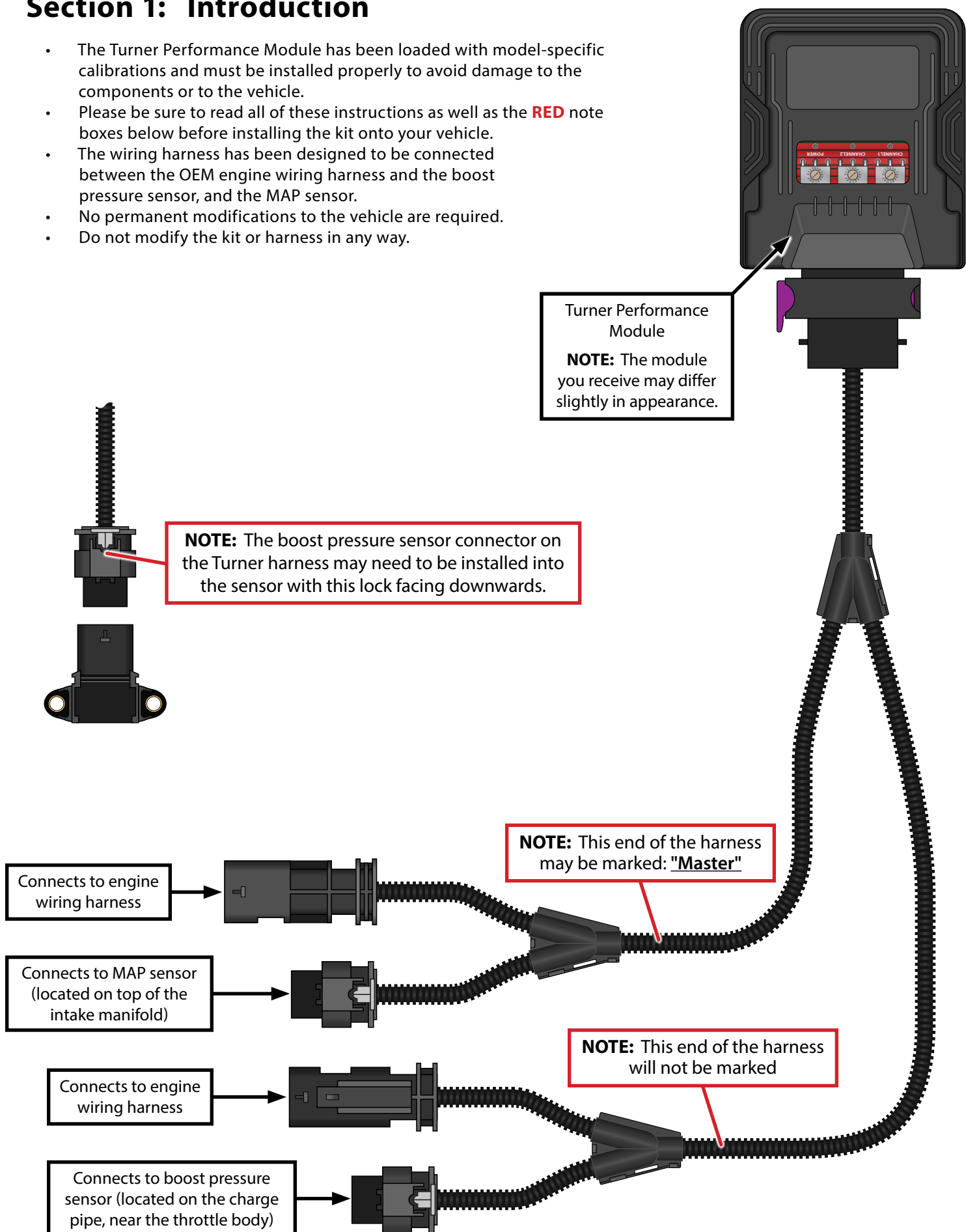
3) Installation Instructions

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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.

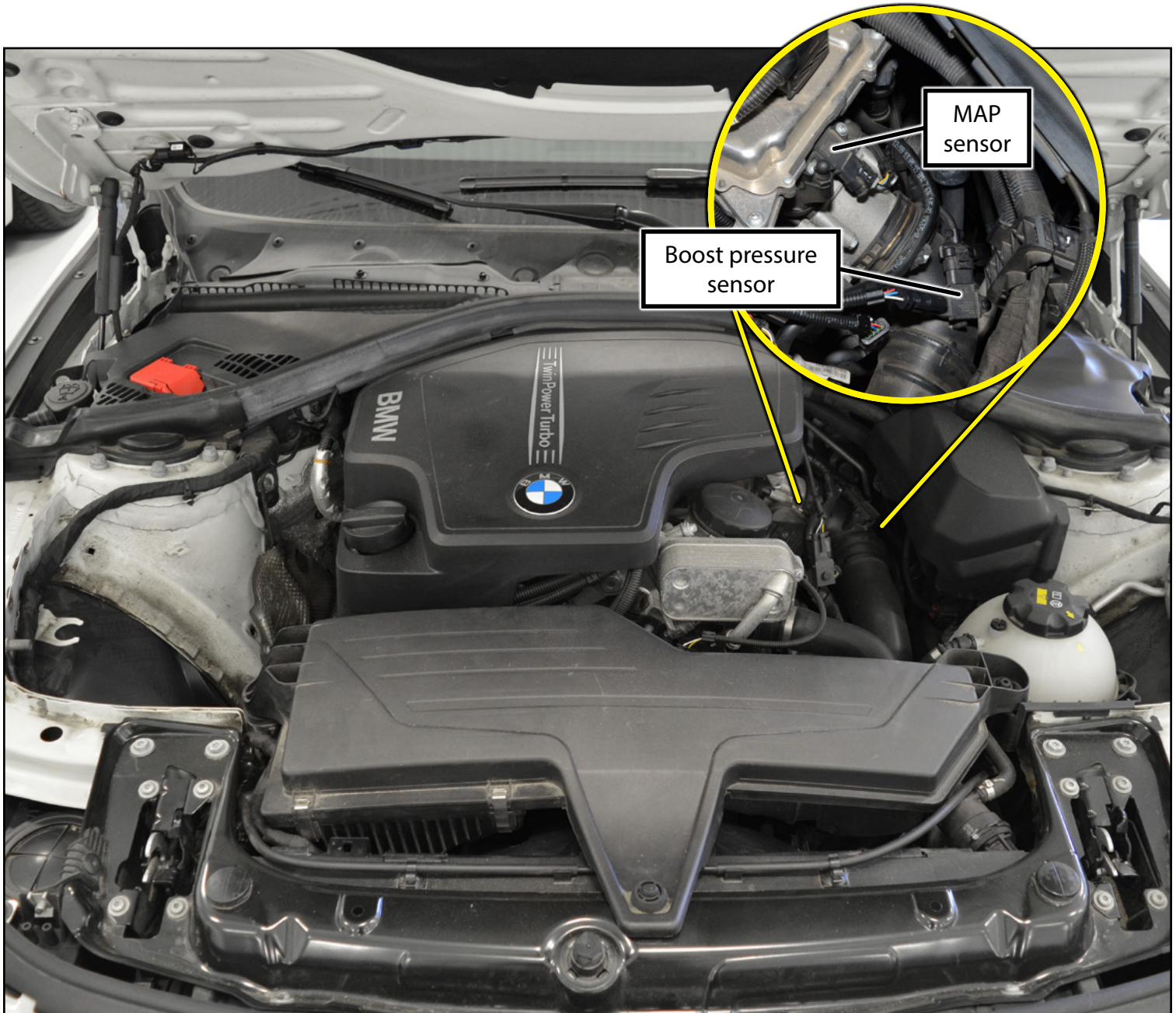
Section 1: Introduction

- 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.
- Please be sure to read all of these instructions as well as the **RED** note boxes below before installing the kit onto your vehicle.
- The wiring harness has been designed to be connected between the OEM engine wiring harness and the boost pressure sensor, and the MAP sensor.
- No permanent modifications to the vehicle are required.
- Do not modify the kit or harness in any way.



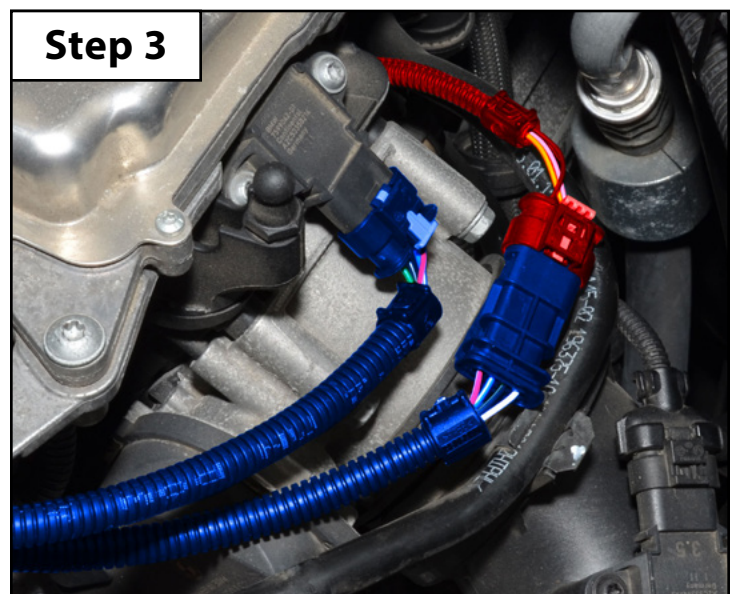
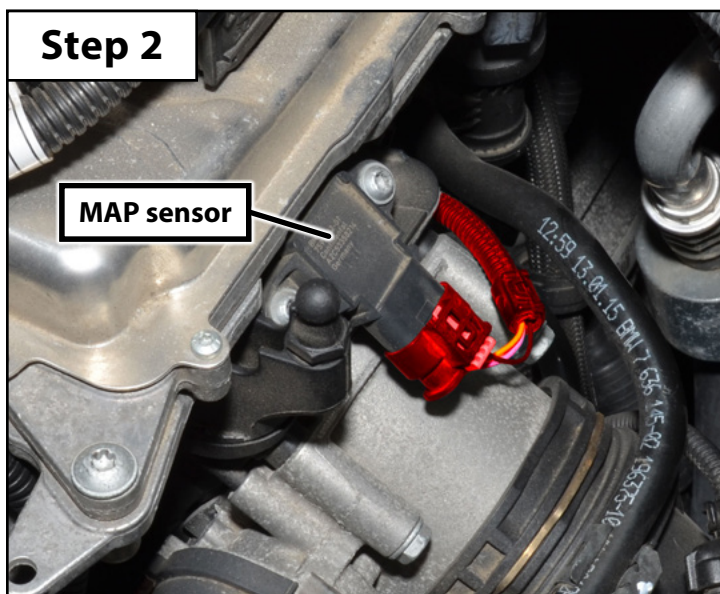
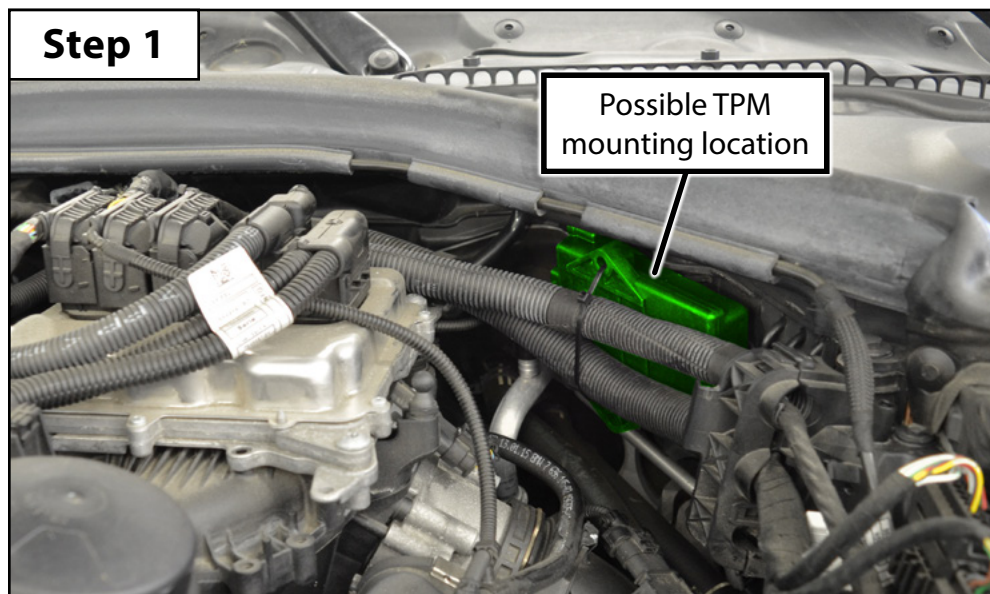
Section 2: Overview

- 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 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, then remove the engine cover.
 - Discharge any static electricity by grounding yourself on a large metal object (tool chest, engine lift, etc.) **BEFORE** handling the Turner Performance Module.
 - Select a mounting location for the Turner Performance Module (highlighted in **GREEN**).
 - The **Step 1** photo below shows the module mounted to the wiring harness near the LH shock tower, but you can mount the module anywhere in the engine compartment or wiper cowl as long as the wire leads will reach their respective connections.
- Step 2**
- Locate the MAP sensor on the intake manifold, just above the throttle body.
 - Release and disconnect the OEM wiring harness plug (highlighted in **RED**) from the MAP sensor.
- Step 3**
- Connect the OEM wiring harness plug (**RED**) to the female lead on the Turner harness (**BLUE**).
 - Connect the male lead on the Turner harness (**BLUE**) to the MAP sensor.
 - Slide the gray locking tabs forward on both of the male connectors to secure them in place.



Section 3: Installation Instructions

- Step 4**
- Locate the boost pressure sensor on the intake charge pipe just before the throttle body.
 - Release and disconnect the OEM wiring harness plug (highlighted in **RED**) from the boost pressure sensor.
- Step 5**
- Connect the OEM wiring harness plug (**RED**) to the female lead on the Turner harness (**BLUE**).
 - Connect the male lead on the Turner harness (**BLUE**) to the boost pressure sensor.
 - Slide the gray locking tabs forward on both of the male connectors to secure them in place.
- Step 6**
- Route a zip tie around 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.
 - Connect the harness to the performance module (the connector will only go in one way).
 - Next, push on the purple lock to secure the plug to the Module, once fully seated the plug should be secure (test this by gently tugging on the black connector).
 - Reinstall any components that you removed or loosened in the reverse order of removal.
 - Double check all of your connections. Enjoy your new power responsibly.

