



BMS F1X M5/M6 S63TU Stage1 Install Guide

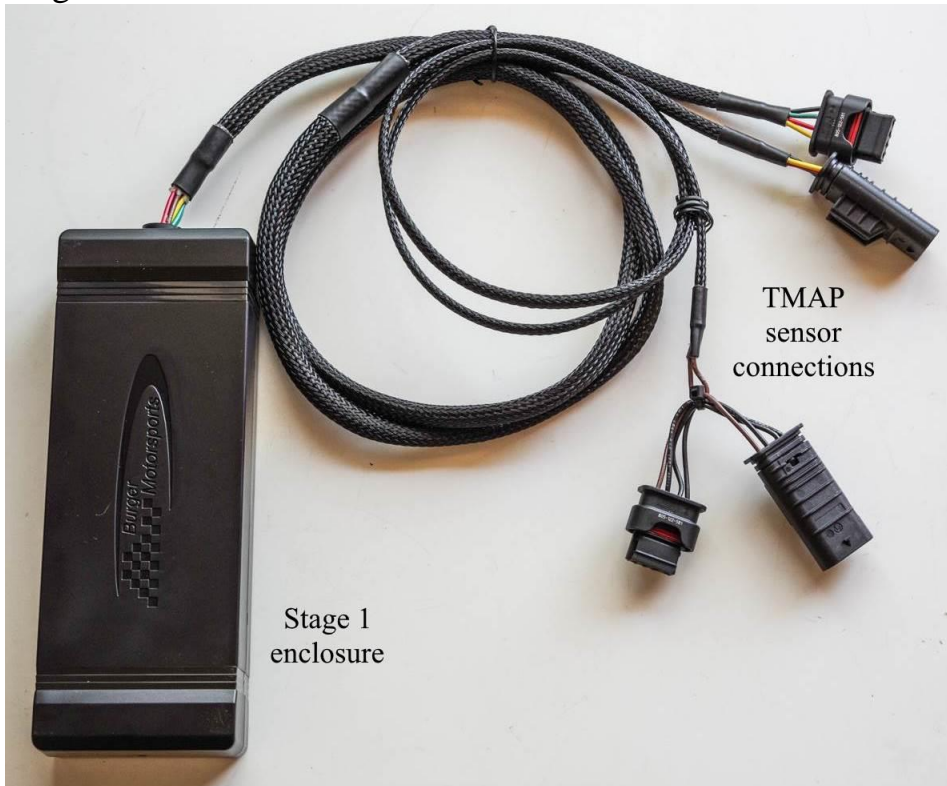
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Stage 1



Photos are M5 specific, there may be slight differences in M6 models, but the general layout and location of the items is the same on both vehicles.

You will need the following tools, at minimum, to complete the install:

6mm, 10mm sockets and ratchet plus extensions (3"/75mm and 6"/150mm recommended)

T30 Torx sockets or drivers

Flat head screwdrivers

Helpful but not required tools:

Trim removal tool

Flashlight

Rags

Gloves

Fender protectors

The Stage 1 install consists of two pairs of TMAP sensor connectors.

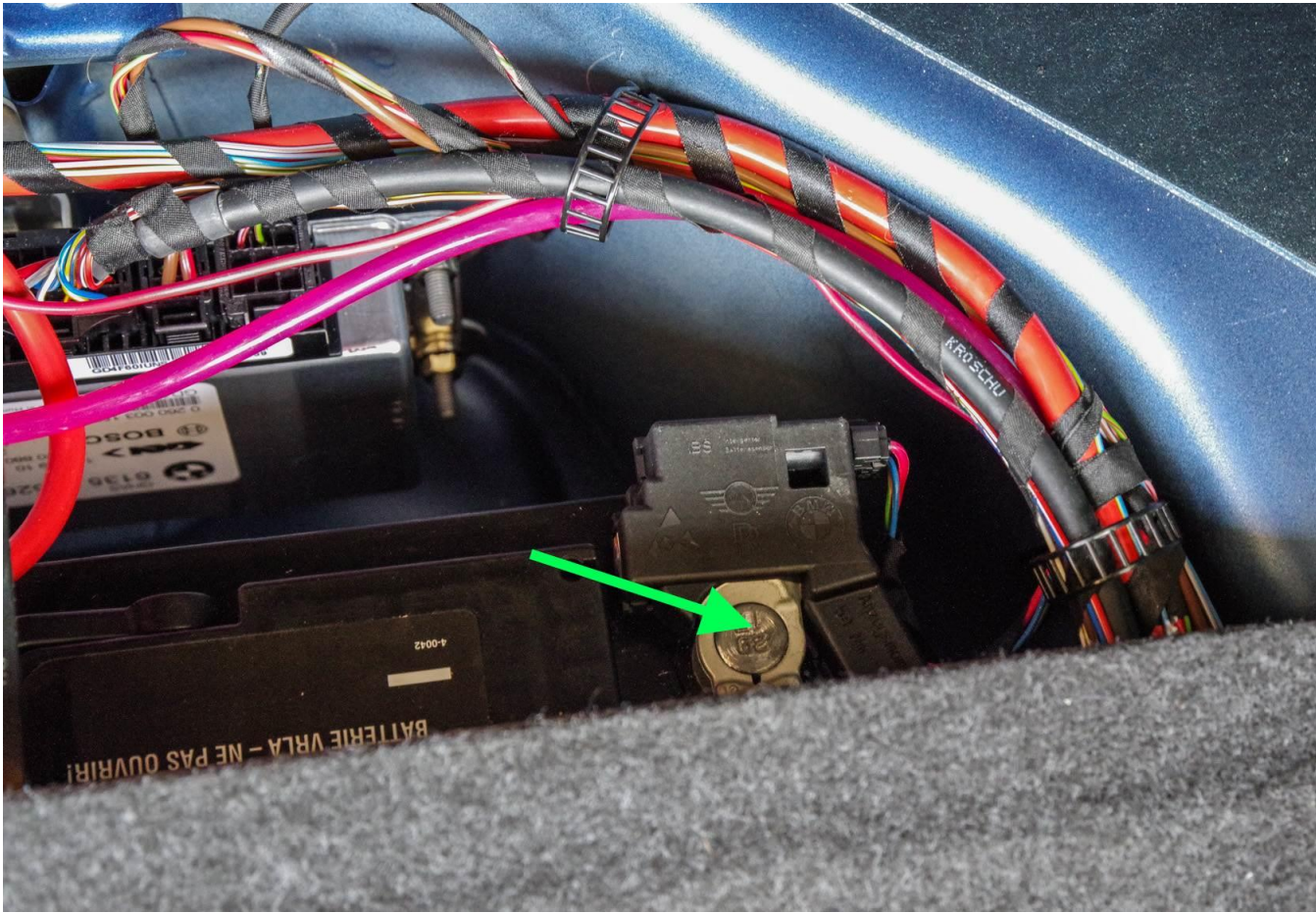
Throughout this guide, references will be made to the various connector pairs by their wire colors and by their gender. Note that electrical connector gender is defined by the pins contained within and not by the housing itself.

Step 1: Disconnect the battery's negative terminal in the trunk

Unlock the vehicle and open the trunk and hood. Make sure to leave the doors unlocked. Raise the flap at the rear of the trunk to expose the two plastic nuts (10mm) in the below photo.



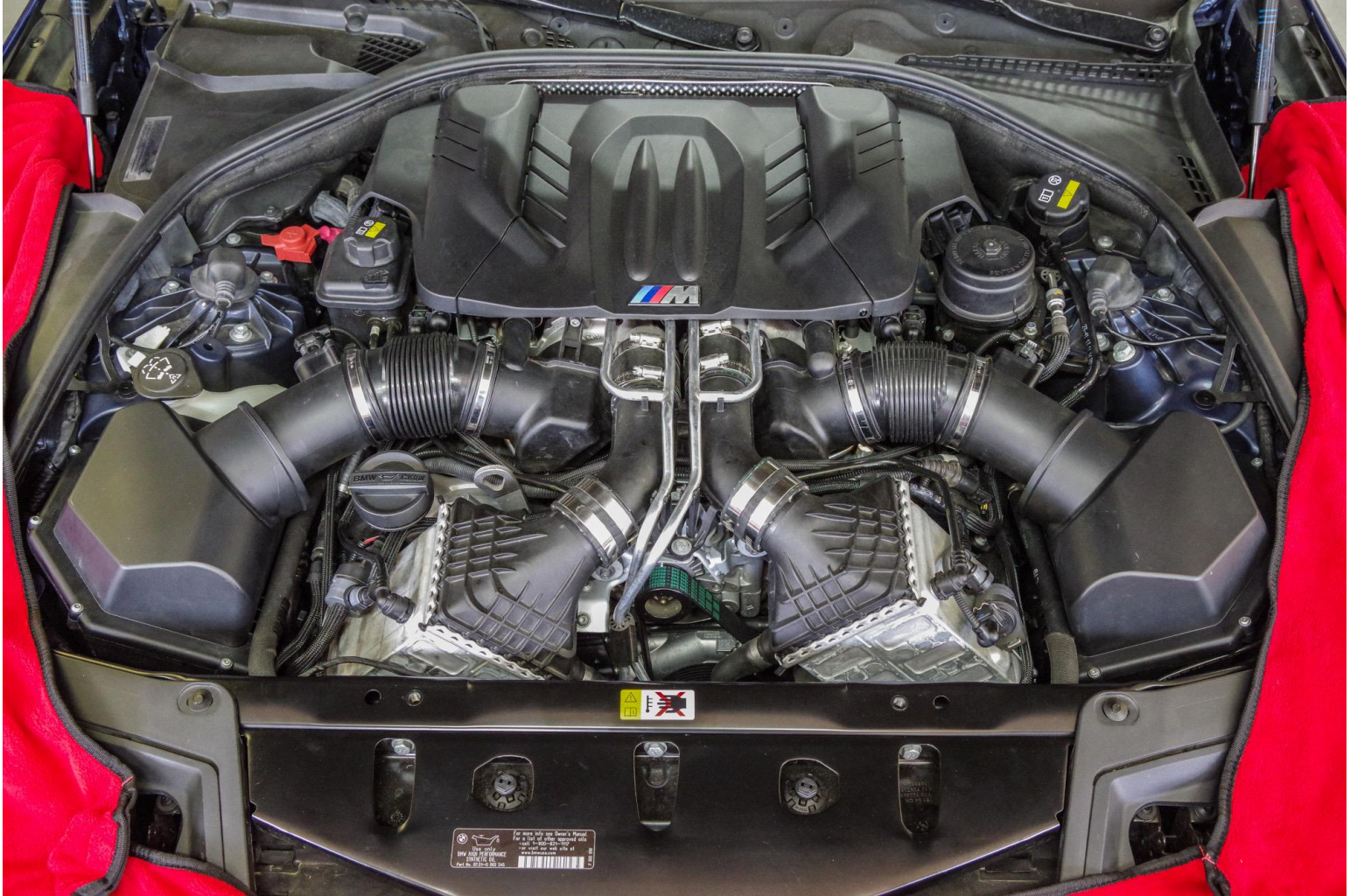
Remove these nuts and set aside, raise the trunk floor panel, and loosen and detach the negative terminal on the battery, now partially exposed, using a 10mm socket and ratchet.



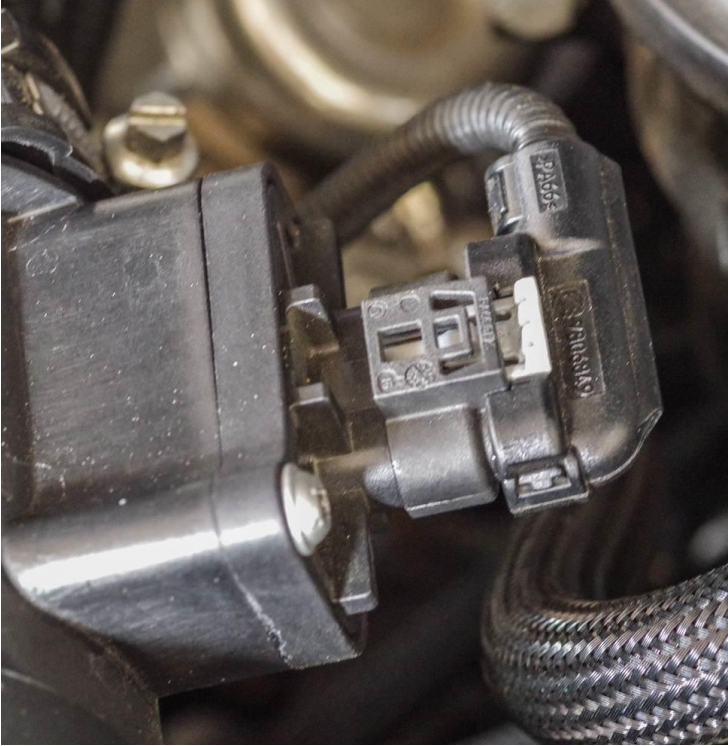
The battery is now disconnected. Do not close the trunk until after you have reconnected the battery or you will not be able to reopen it.

Step 2: Airbox removal

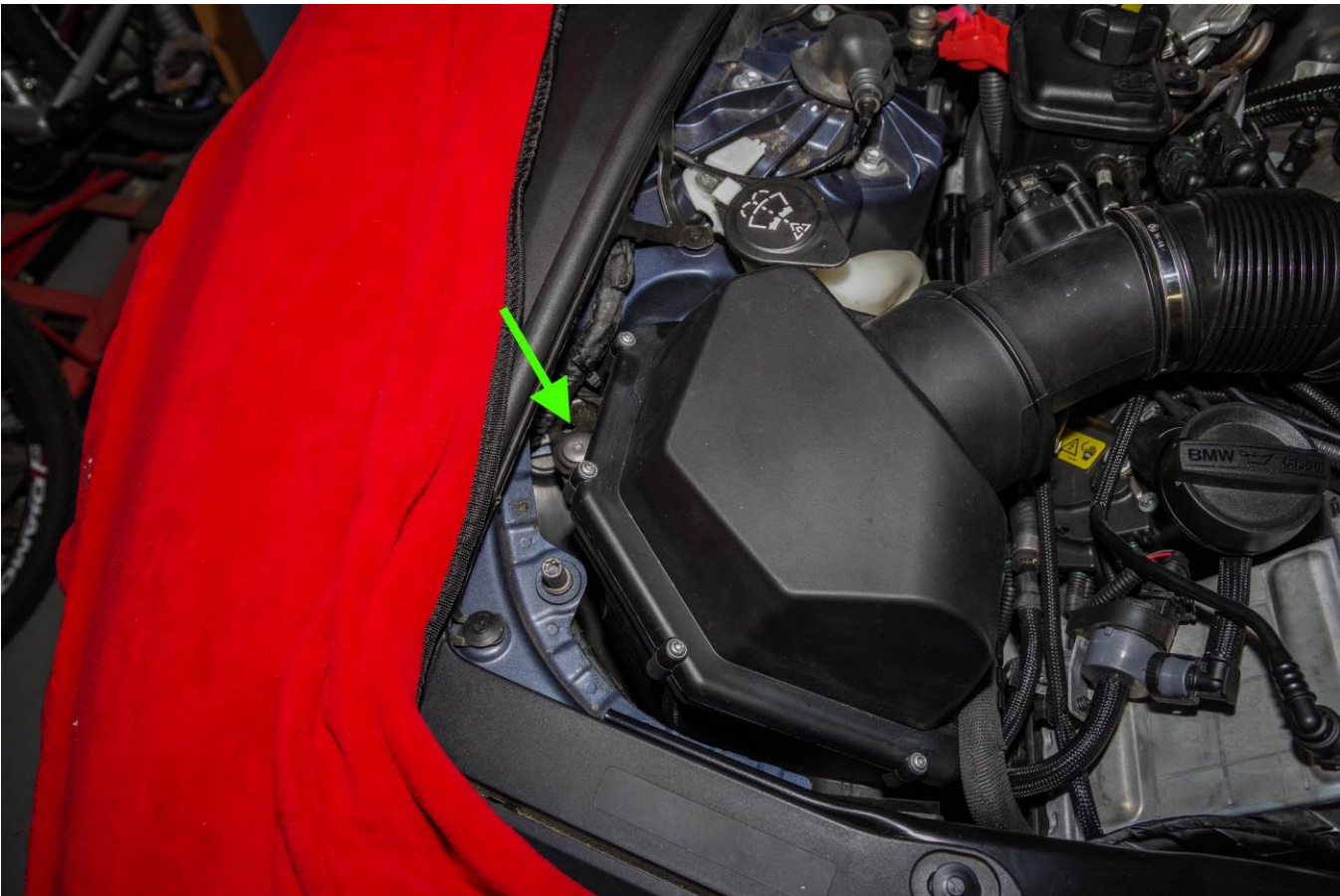
The stage 1 will attach at the TMAP sensors which are found on the intercoolers at the front of the engine compartment. In order to access the sensors, you must remove the air filter housings (airboxes) from the vehicle. Making sure the vehicle is cooled off first, start by removing the engine cover, by pulling up at the front corners. After loosening the front two, do the same at the rear. There are four rubber inserts holding the cover onto plastic ball studs. Set the cover aside.



Disconnect the MAF sensor connections by moving the gray clip to the unlocked position (shown below – the clip has been moved slightly to the right in the photo) then squeezing the clip against the housing while simultaneously detaching the connector housing off of the sensor.



Do not pull from the wires. If the clip fails to release, you can apply slight pressure with a pry tool, or insert a small screwdriver to try to raise the retention tab as needed. Repeat for both MAF sensors (one on each intake). Remove the T30 Torx fastener shown in the attached photo.



Now loosen the clamp nearest the turbocharger inlet housing using a 6mm socket and ratchet or a screwdriver. Loosen the intake hose from the housing that connects it to the front of the turbocharger, where you loosened the clamp, by pulling the accordion section back from the housing.

With the fastener removed and the intake loose at the turbo inlet housing, remove the airbox as a whole unit. Unclip any hoses that are clipped into the airbox, and note the rubber coupling toward the back of the airbox that holds it onto the vehicle. By firmly pulling up, the airbox will come off of the ball stud that holds it in place. At the front of the airbox you will find a plastic flap that connects the airbox housing to the air intake source at the front of the vehicle. This will need to be disconnected as you raise the airbox to remove it. Press the flap toward the airbox while lifting to release the unit, then remove the whole airbox. Repeat for both sides.

With the airboxes removed, you now have access to attach the tuner's TMAP sensor connections.

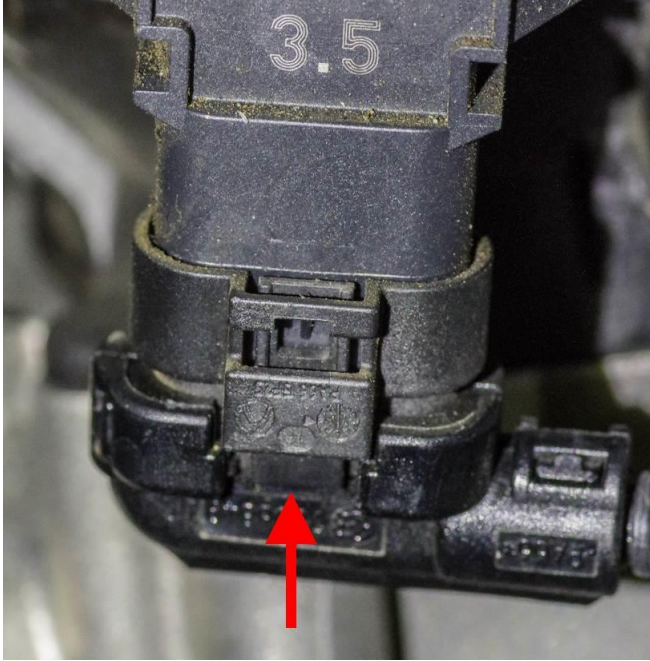
Step 3: Attach the harness connections

Locate the TMAP sensors at the outboard edge of each intercooler. You will be disconnecting the factory wiring, connect one half of the tuner's connector pair, then connecting the factory wiring to the other half of the tuner's connector pair.

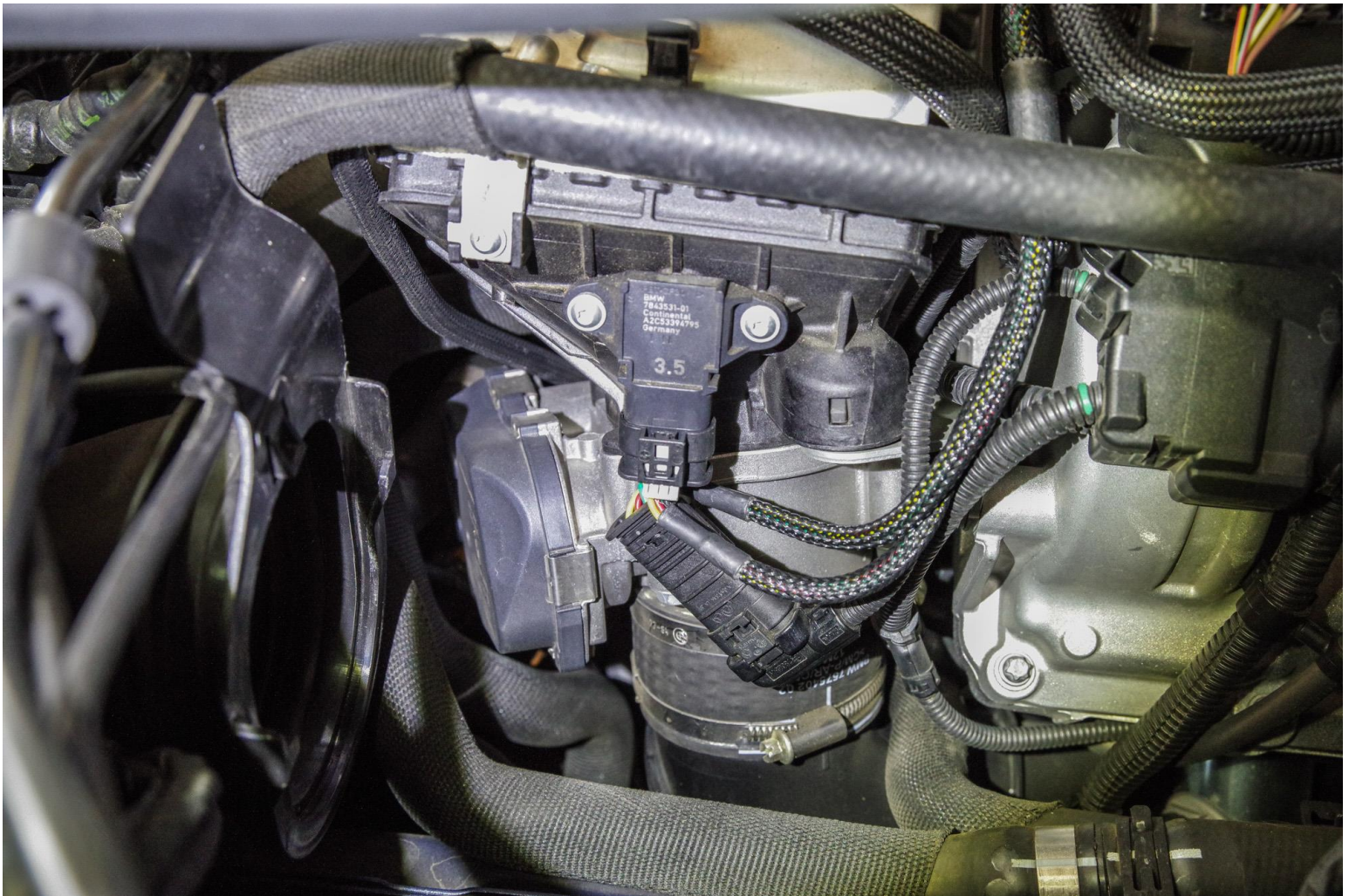
Route the tuner harness to place the brown connector pair on the passenger side of the vehicle. The rainbow connector pair will go on the driver's side. Remove the factory connector at the passenger side exactly as you did with the MAF sensor earlier. Place the tuner's brown female connector onto the sensor and attach the factory connector you removed to the tuner's brown male connector. It only goes on in one direction. Make sure it is snapped in place.



On the driver's side, find the TMAP sensor. Note that the factory connector on this side is a different style. It does not have a locking mechanism and is removed by pressing on the small squared off section shown in the below photo. Press at this section and remove the factory connector.



Now attach the tuner's rainbow female connector at the sensor and attach the factory connector you removed to the tuner's rainbow male connector, as shown.



Route the harness and tuner's circuit board toward the driver's side of the vehicle. You will be placing the control box outside of the engine compartment under the cover.

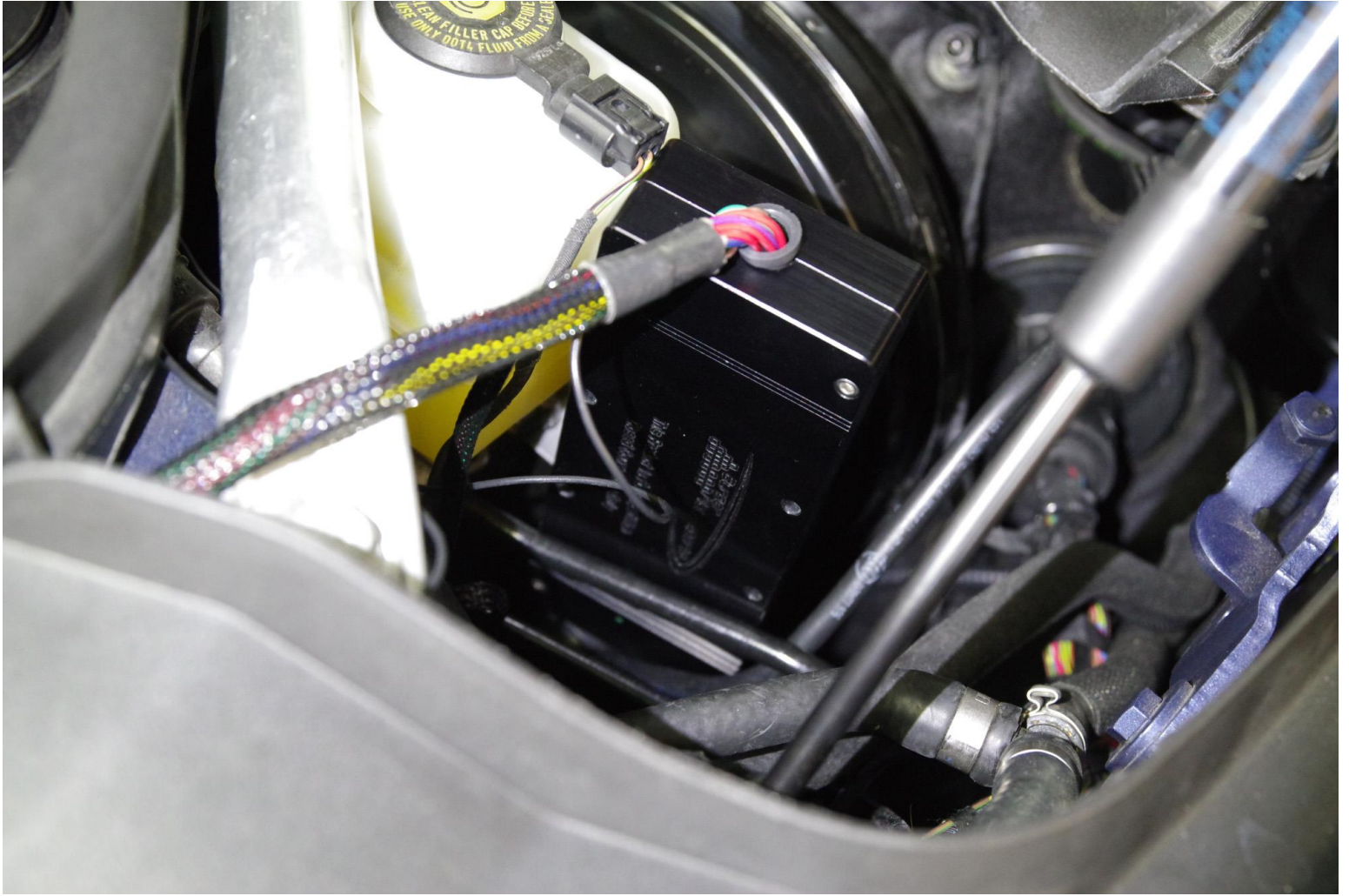
Step 4: Placement of the harness and control box

First, remove the driver's side cowl cover at the rear of the engine compartment. Using a trim removal tool or flathead screwdriver, release the 3 expanding rivets by raising the center section, then removing the rivets.



Pull up on the plastic cover to release it. Then pull the rubber hood seal away from the plastic to allow room to pass the control box and harness through to the corner compartment from the engine compartment, near the shock tower. A rubber cover allows clearance to pass the harness through.

Insert the control box near the brake booster as shown.



Step 5: Replace the airboxes

Reversing the removal procedure, replace the airboxes you removed from the vehicle in step 2. Slide the front of the airbox into the air inlet slot, pop the airbox back onto the ball stud, connect the hose to the turbo inlet housing, tighten the clamp, replace the airbox fastener, and reattach the hoses.

Step 6: Final installation steps

Making sure to properly place the control box under the covered area, replace the trim panel in the corner, replacing the plastic rivets. Make sure the rubber hood seal is refastened. Reconnect the battery's negative terminal, refasten the plastic nuts on the trunk floor liner.

Step 7: Completing the install

Start the vehicle, and drive around normally until it reaches operating temperature. Then with progressively heavier throttle applications, make sure you allow the vehicle to adapt to the new power.

Installation is complete!