

ECS TUNING

Volkswagen MK7 Golf/GTI/R ECS Vent Pod and Boost Gauge 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.

INTRODUCTION

ECS Volkswagen MK7 Golf/GTI/R Vent Pod and Boost Gauge Kits

ECS Tuning Vent Pod and Boost Gauge kits offer the following features and benefits:

- Fits any 52mm (2 1/16") Gauge
- Gauge position is angled towards the driver
- In house designed by ECS Tuning
- Allows functional use of the air vent
- ECS Tuning boost gauge matches your factory gauge color and font
- Easy installation
- All installation hardware included

ECS Difficulty Gauge



1 - Easy Pro - 4
2 - Moderate Advanced - 3

Looking to add style and function to your dash? Look no further. ECS Tuning has designed a Vent Pod and Boost Gauge kit that will seamlessly integrate into the dash of your MK7 Golf or GTI for a factory appearance. In addition to great looks you also get great performance with our ECS Tuning boost gauge. Quick response, backlighting, and an angled position towards the driver allows you to monitor your boost levels without taking your eyes off the road - or the track. Thank you for purchasing our ECS Tuning vent pod and boost gauge kit. We appreciate your business!

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KIT CONTENTS

ECS Tuning Boost Gauge



ECS Tuning Vent Pod

Boost Sensor and Mounting
Screws

In-line Filter

Spade Connectors (4)
T-Taps (4)

Power Harness



Vacuum Tee



Vacuum Hose

REQUIRED TOOLS

Note: The tools required for each step will be listed by the step number throughout these instructions.

Standard Automotive Tools

Required For This Install

Available On Our Website

- Protecta-Sockets (for lug nuts)..... [ES#2221243](#)
- **3/8" Drive Ratchet** [ES#2765902](#)
- 3/8" Drive Torque Wrench..... [ES#2221245](#)
- **3/8" Drive Deep and Shallow Sockets**..... [ES#2763772](#)
- **3/8" Drive Extensions**..... [ES#2804822](#)
- Hydraulic Floor Jack [ES#240941](#)
- **Torx Drivers and Sockets** [ES#11417/8](#)
- 1/2" Drive Deep and Shallow Sockets [ES#2839106](#)
- 1/2" Drive Ratchet
- 1/2" Drive Extensions
- 1/2" Drive Torque Wrench [ES#2221244](#)
- 1/2" Drive Breaker Bar [ES#2776653](#)
- File Set
- Air Nozzle/Blow Gun
- Bench Mounted Vise
- Crows Foot Wrenches
- **Hook and Pick Tool Set**..... [ES#2778980](#)

- **1/4" Drive Ratchet**..... [ES#2823235](#)
- **1/4" Drive Deep and Shallow Sockets**..... [ES#2823235](#)
- 1/4" Drive Extensions [ES#2823235](#)
- 1/4" Drive Torque Wrench
- **Plier and Cutter Set**..... [ES#2804496](#)
- **Flat and Phillips Screwdrivers** [ES#2225921](#)
- Jack Stands [ES#2763355](#)
- Ball Pein Hammers
- Pry Bar Set..... [ES#1899378](#)
- **Electric/Cordless Drill**
- **Wire Strippers/Crimpers**
- Adjustable (Crescent) Type Wrenches
- **Drill Bits**
- Punch and Chisel Set
- Hex Bit (Allen) Wrenches and Sockets [ES#11420](#)
- Thread Repair Tools [ES#1306824](#)
- Open/Boxed End Wrench Set [ES#2765907](#)

Specialty Tools

- **Non-Marring Trim Tool Set**..... [ES#517779](#)

SHOP SUPPLIES AND MATERIALS

Standard Shop Supply Recommendations: We recommend that you have a standard inventory of automotive shop supplies before beginning this or any automotive repair procedure. The following list outlines the basic shop supplies that we like to keep on hand. Shop supplies with a hyperlink are available on our website.

- Hand Cleaner/Degreaser - [Click Here](#)
- Pig Mats - for protecting your garage floor and work area from spills and stains - [Click Here](#)
- Spray detailer - for rapid cleaning of anything that comes into contact with your paint such as brake fluid - [Click Here](#)
- Micro Fiber Towels - for cleaning the paint on your car - [Click Here](#)
- Latex Gloves - for the extra oily and dirty jobs - [Click Here](#)
- Medium and High Strength Loctite Thread lock compound - to prevent bolts from backing out - [Click Here](#)
- Anti-Seize Compound - to prevent seizing, galling, and corrosion of fasteners - [Click Here](#)
- Aerosol Brake/Parts Cleaner - for cleaning and degreasing parts
- Shop Rags - used for wiping hands, tools, and parts
- Penetrating oil - for helping to free rusted or stuck bolts and nuts
- Mechanics wire - for securing components out of the way
- Silicone spray lube - for rubber components such as exhaust hangers
- Paint Marker - for marking installation positions or bolts during a torquing sequence
- Plastic Wire Ties/Zip Ties - for routing and securing wiring harnesses or vacuum hoses
- Electrical tape - for wrapping wiring harnesses or temporary securing of small components

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

ECS Tuning 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.
- If using an automotive lift, be sure and utilize the factory specified lift points. Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- When lifting a vehicle using a jack, always 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. Always make sure that the vehicle is securely supported on jack stands.

INSTALLING THE VENT POD AND BOOST GAUGE

Step 1: Non-Marring Trim Tool

Remove the end cover on the LH side of the dash by first prying it out at the front edge, then continue to pull outward by hand to release the remaining clips.



Step 2:

Open the storage bin on the LH side. Release the catches using the following method:

- 1: Squeeze the sides together at the locations shown.
- 2: Pull the bin forward until the catches are past the dash panel.



INSTALLING THE VENT POD AND BOOST GAUGE

Step 3:

With the storage bin fully open, pull straight out to release it from the hinges and remove it.



Step 4:

Release the headlight switch retaining tabs using the following procedure:

1. Push in firmly on the center of the knob until it depresses slightly inward.
2. Rotate the knob to the park lamp position.



INSTALLING THE VENT POD AND BOOST GAUGE

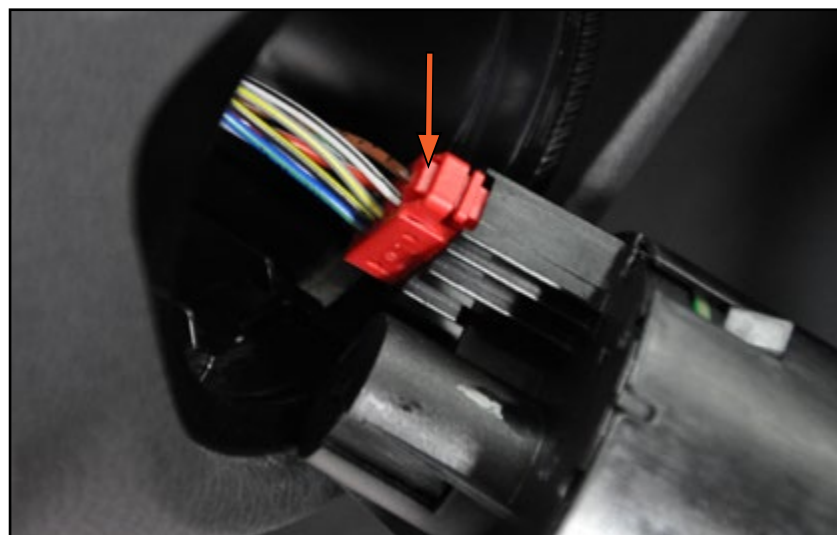
Step 5:

Pull the headlight switch out of the dash.



Step 6:

Disconnect the headlight switch by pressing in on the connector release tab (arrow) and pulling the connector out.



INSTALLING THE VENT POD AND BOOST GAUGE

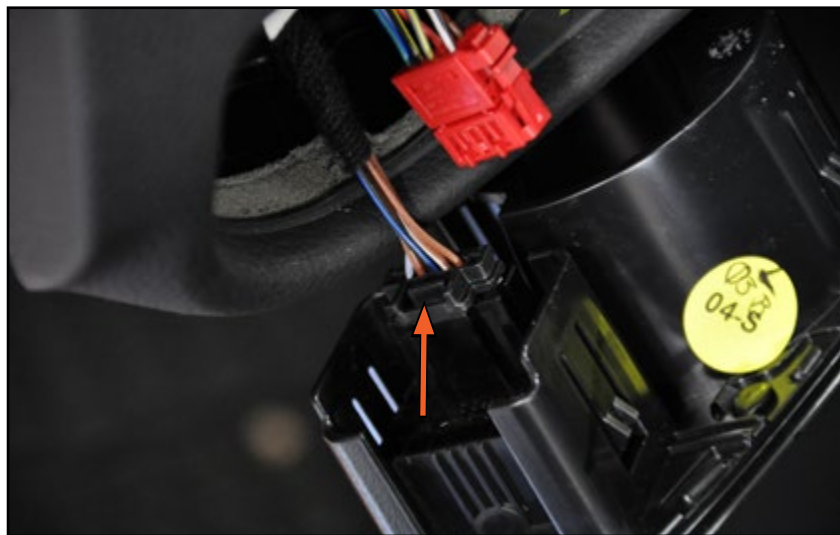
Step 7: T20 Torx Driver

Remove the headlight switch bezel retaining screw.



Step 8:

Pull out the headlight switch bezel and disconnect the dash light rheostat by pressing in on the connector release tab and pulling the connector out.



INSTALLING THE VENT POD AND BOOST GAUGE

Step 9:

The next step is to remove the LH vent housing. This will be the trickiest part of the job. Begin by looking through the side of the dash to locate the lower LH corner of the vent housing.



Step 10:

Reach through the side of the dash with your finger and push out on the lower LH corner of the vent housing until it begins to protrude from the dash.

CAUTION

Be very careful during these steps. The soft dash material is easy to damage.



INSTALLING THE VENT POD AND BOOST GAUGE

Step 11: Non-Marring Trim Tool

Using a rag or towel for additional protection, insert a wide trim tool underneath the edge of the vent trim as shown. Using a wide tool will distribute the pressure along the edge of the trim and the dash panel, preventing damage to either one.

NOTE

The vent housing is held in by four spring clips. It is difficult to remove because you are not able to access the clips until the vent trim is removed.



Step 12: Non-Marring Trim Tool

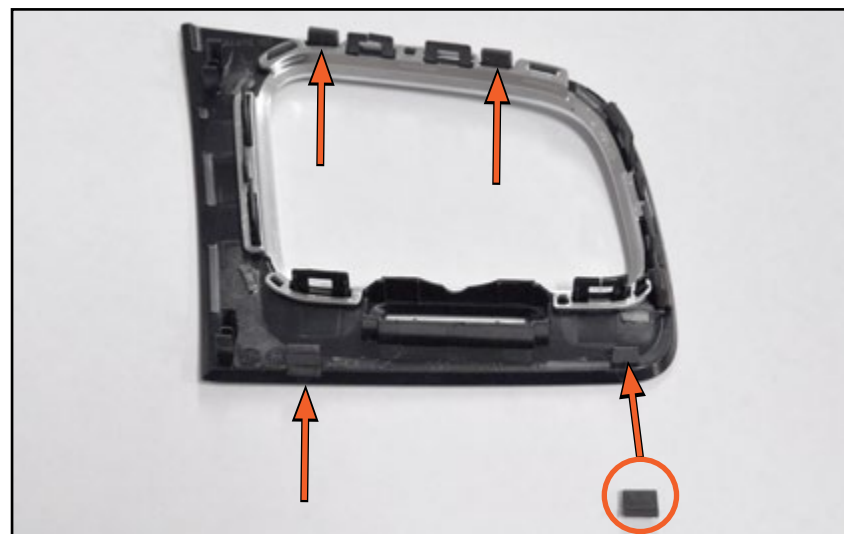
First, gently push the end of the trim tool downwards to pry the bottom edge of the vent trim outwards. This will release the clips securing the trim to the housing at the bottom. Next pull out on the trim along the side using your fingers to release the remaining clips and remove the trim.



INSTALLING THE VENT POD AND BOOST GAUGE

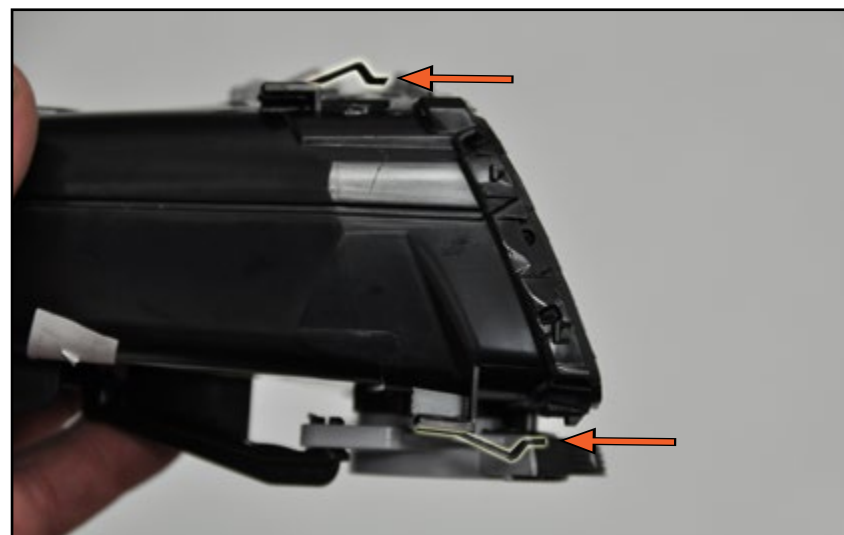
Step 13:

Inspect the trim piece. It has four small rubber insulators on the back that fall off very easily. Make sure they are all in place. If not, find them and slide them back on.



Step 14:

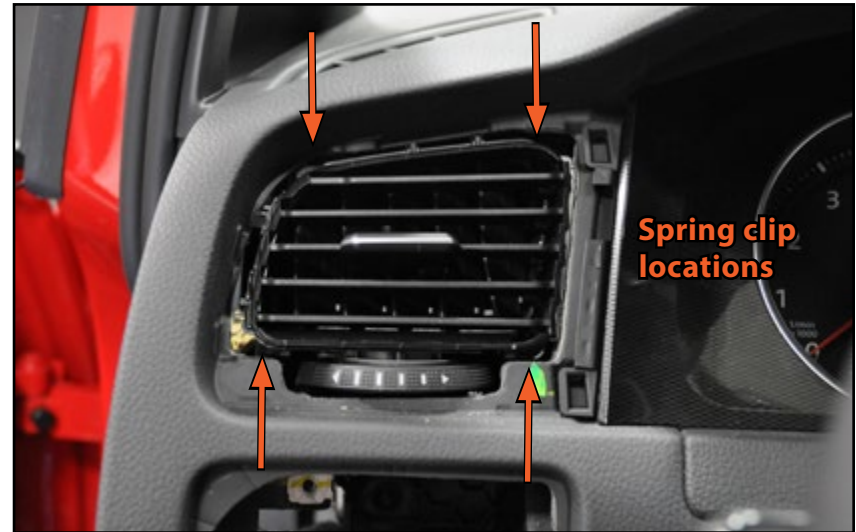
Inspect this side view of the vent housing. Note the two highlighted spring clips. There are four of these spring clips that hold the housing into the dash, one on each corner.



INSTALLING THE VENT POD AND BOOST GAUGE

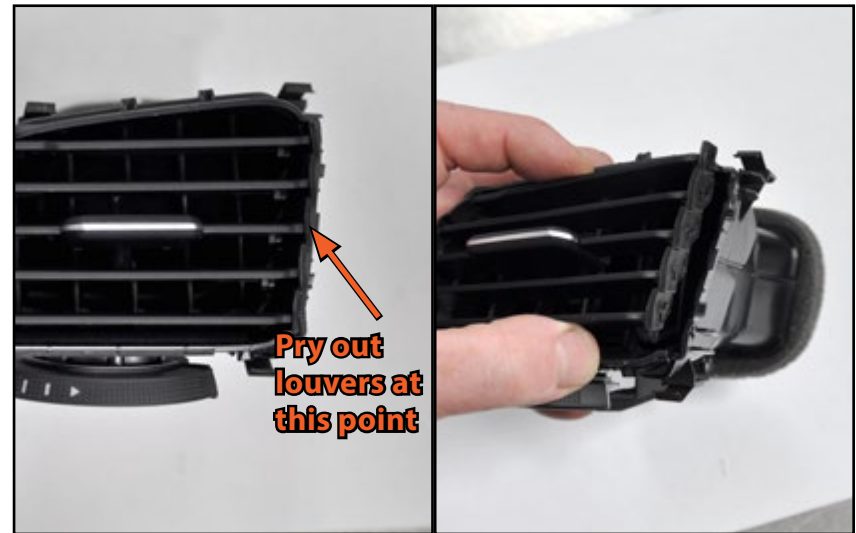
Step 15: Angled Hook or Pick Tool

Locate the four spring clips, then pry them towards the vent housing one at a time while pulling outward on the housing. Once all four clips are past the edge of the dash opening, the housing will easily pull out.



Step 16: Small Flat Blade Screwdriver

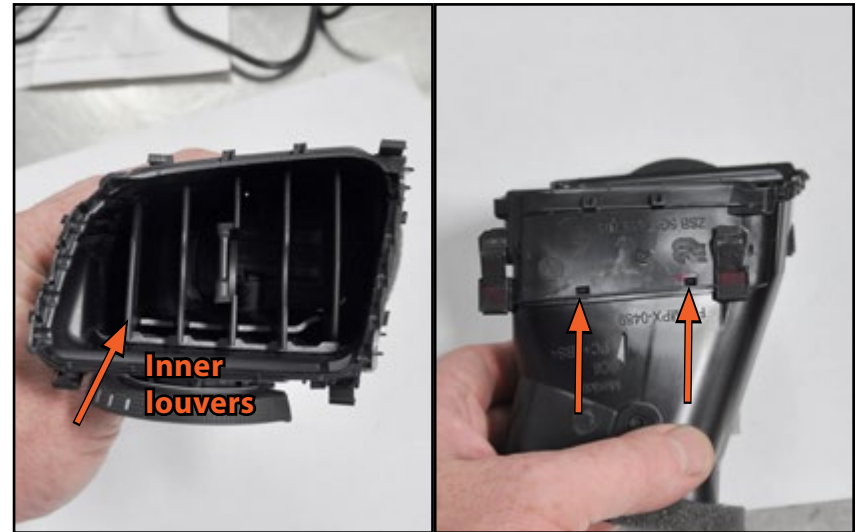
Gently pry between the edge of the vent housing and the outer louvers and lift the louvers out of the housing. You will not be reusing these.



INSTALLING THE VENT POD AND BOOST GAUGE

Step 17: Small Flat Blade Screwdriver

The inner set of louvers (LH picture) is held in by four small tabs that hook into the housing, two on top and two on bottom (RH picture shows the top). Pry these louvers out. This is easiest to do by prying between the top of the louver and the vent housing and pulling the louver forward. You will not be reusing them.



Step 18: Drill, 1/2" Drill Bit

Drill a 1/2" hole in the bottom of the vent housing in the location shown in the pictures. Note the following details and tips before drilling:

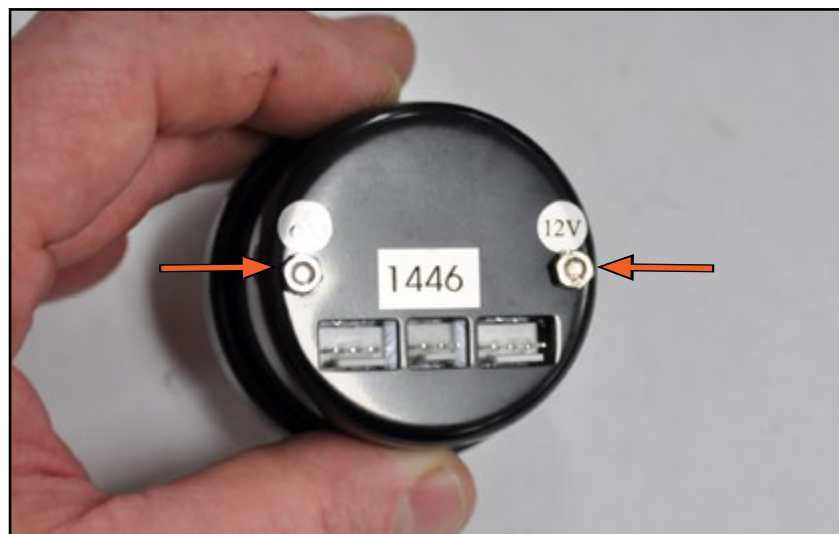
1. The wiring for the boost gauge will run through the bottom of the vent housing and plug into the back of the gauge.
2. When the vent housing is *installed*, the hole will be located on the bottom LH side.
3. The hole location can vary slightly as long as the wires do not interfere with the vent open/close flap, the vent open/close linkage, or the installed vent pod.
4. To confirm location, slide the new vent pod into the housing for reference.



INSTALLING THE VENT POD AND BOOST GAUGE

Step 19: 5.5mm Socket

Remove the two nuts and lock washers from the back of the new ECS Tuning boost gauge.



Step 20:

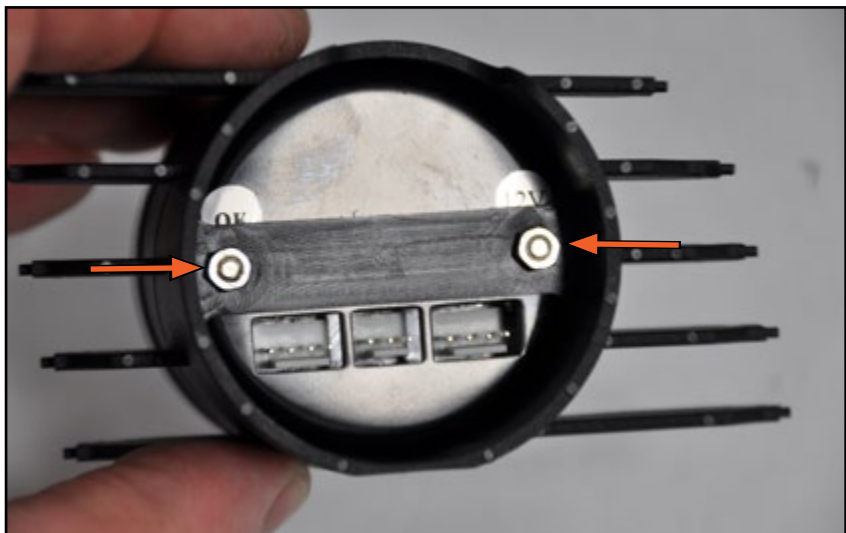
Slide the new boost gauge into the vent pod. When the ECS Tuning logo inside the then vent pod is legible, the vent pod is right side up.



INSTALLING THE VENT POD AND BOOST GAUGE

Step 21: 5.5mm Socket

Install and tighten the two nuts to hold the gauge into the vent pod. These nuts only need to be tightened by hand turning the socket or carefully using a 1/4" driver. Using a ratchet or excessive force will risk breaking the studs on the gauge.



Step 22: T20 Torx Driver

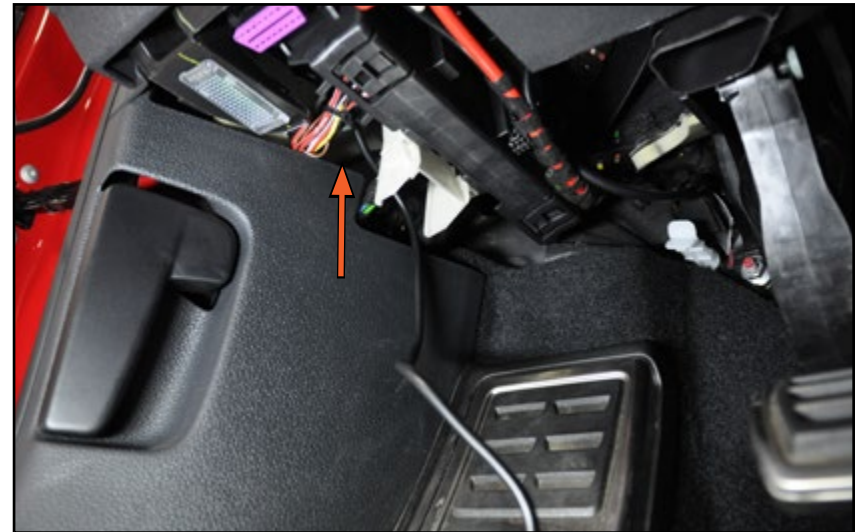
Back inside the car, remove the screw (arrow), pull the lower dash access panel down slightly, then slide it forward and remove it.



INSTALLING THE VENT POD AND BOOST GAUGE

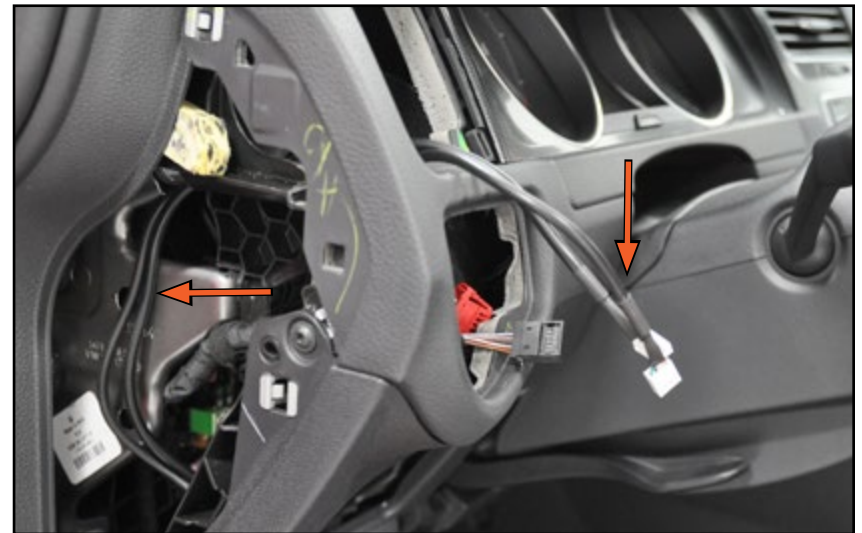
Step 23:

Locate the boost sensor in your kit and remove the twist tie around the harness. Route the harness up through the bottom of the dash (as shown in the picture) and out through the opening for the vent housing (reference step 24).



Step 24:

Locate the power harness in your kit and remove the twist tie. Route it next to the boost sensor harness along the side of the dash and up through the opening for the vent housing so that both connector ends are located at the top. The wire end of the power harness will be connected to the headlight wiring and does not have to be specifically located at this time.



INSTALLING THE VENT POD AND BOOST GAUGE

Step 25:

One at a time, insert the power and boost sensor harnesses through the bottom of the vent housing and pull them out the front as shown. Do not install, but rest the vent housing in the opening of the dash for the next few steps.

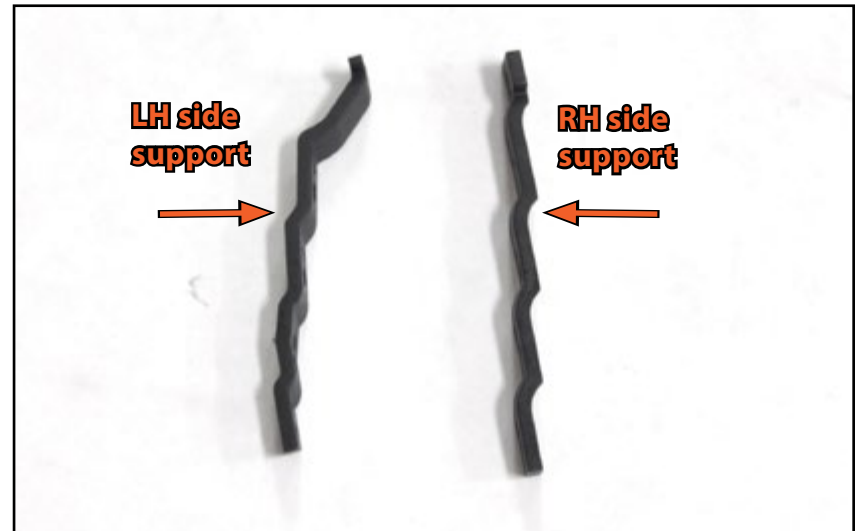


Step 26:

Locate the two vent pod side supports and place them in the car within easy reach of your work area. Note that there is a left and right and they only fit onto the sides of the vent pod one way.

NOTE

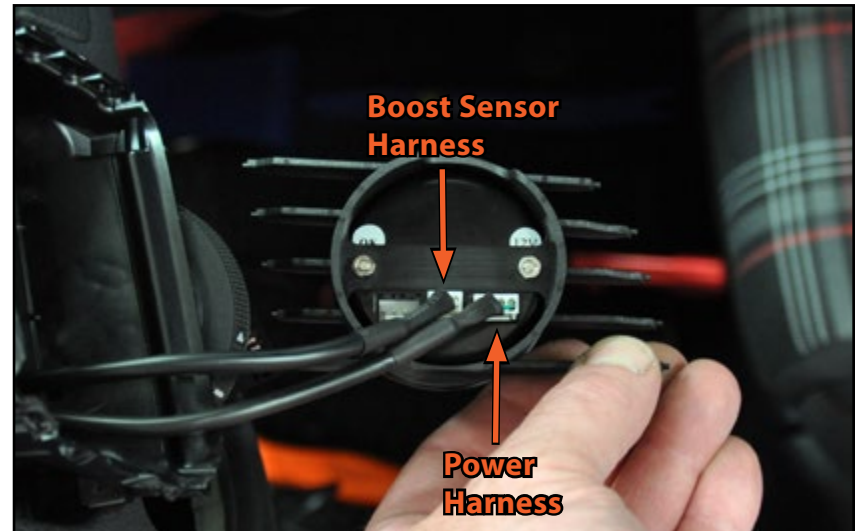
These side supports normally come pre-installed on the Vent Pod, however may come loose during shipping. If they are in place on the Vent Pod, you can skip this step.



INSTALLING THE VENT POD AND BOOST GAUGE

Step 27:

Connect the power harness (4-pin) to the back of the gauge on the RH side (as viewed from the back in this picture) and the boost sensor harness (3-pin) to the center of the gauge.



Step 28:

Install the Vent Pod side supports into place.

NOTE

These side supports normally come pre-installed on the Vent Pod, however may come loose during shipping. If they are in place on the Vent Pod, you can skip this step.



INSTALLING THE VENT POD AND BOOST GAUGE

Step 29:

While gently guiding the harnesses back through the vent housing, push the vent pod into place until it is fully seated. Check the operation of the open/close wheel to make sure that the harnesses are properly routed and not interfering with the open/close flap.



Step 30:

Snap the vent trim back into place, making sure all of the tabs are engaged around the perimeter of the housing.



INSTALLING THE VENT POD AND BOOST GAUGE

Step 31:

While gently guiding the wires into the dash, push the vent housing into place until it is fully seated.

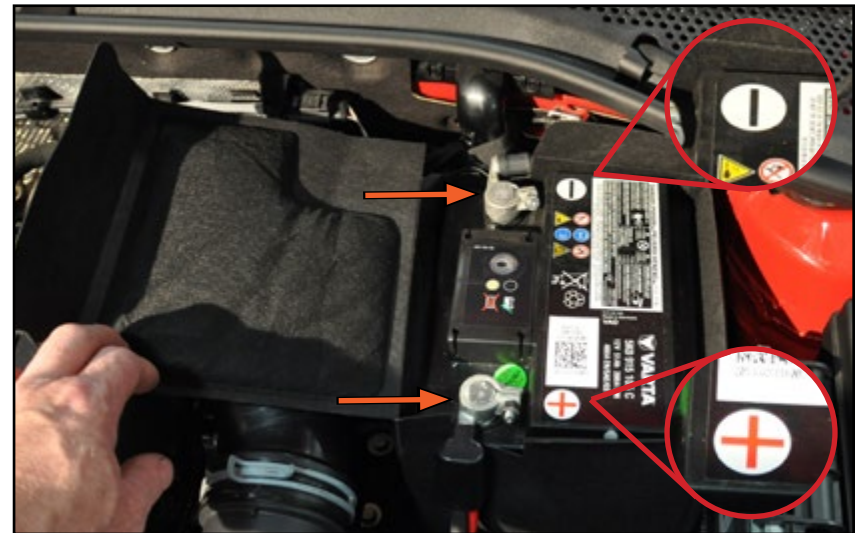


Step 32: 10mm Socket, Ratchet

Moving under the hood, lift open the battery insulator and disconnect both battery terminals.

CAUTION

To reduce the risk of fire, explosion, or personal injury, **ALWAYS** disconnect the battery by removing the negative battery terminal first.



INSTALLING THE VENT POD AND BOOST GAUGE

Step 33:

Pull the battery insulator up and off.



Step 34: 13mm Socket, 3/8" Ratchet, Extension

Remove the battery hold down and remove the battery from the car.

TECH TIP

Check the battery terminals closely for corrosion, clean them thoroughly if necessary.



INSTALLING THE VENT POD AND BOOST GAUGE

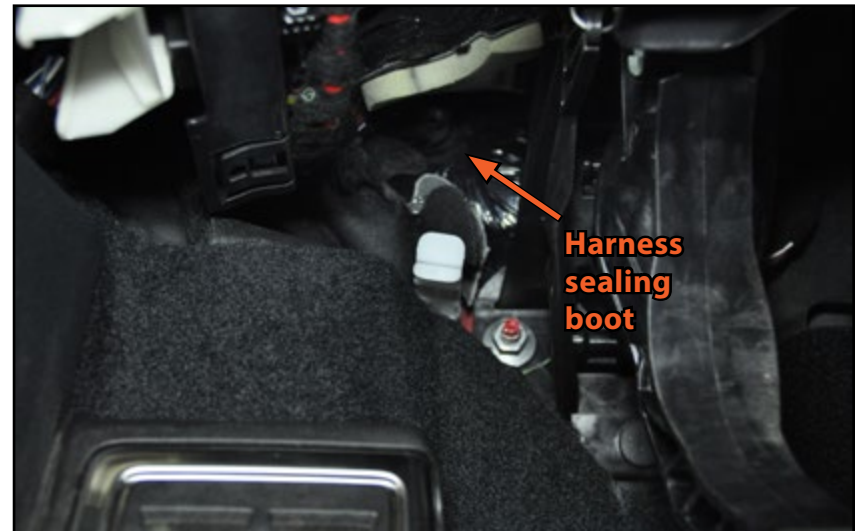
Step 35:

The main harness from inside the vehicle passes through the firewall behind the battery and shock tower on the LH side. You will be routing the vacuum hose for the boost sensor through the rubber sealing boot for this harness.



Step 36:

Now look under the dash and locate the harness where it exits the firewall. It is located just about 2 inches above the white plastic support for the rear of the lower dash access panel. Although difficult to see, you can find it easily by "feel". Run your hand along to harness up to the firewall until you locate and feel the rubber sealing boot.



INSTALLING THE VENT POD AND BOOST GAUGE

Step 37:

To begin with, cut a 6 inch piece of vacuum hose off of the hose included with the kit. You will need this short piece later inside the car.

Cut about a 6 inch piece of coat hanger and sharpen one end to a point. Insert the other end into the long piece of vacuum tubing. Tape the coat hanger to the tubing (electrical tape works the best) and lubricate it with silicone spray.



Step 38:

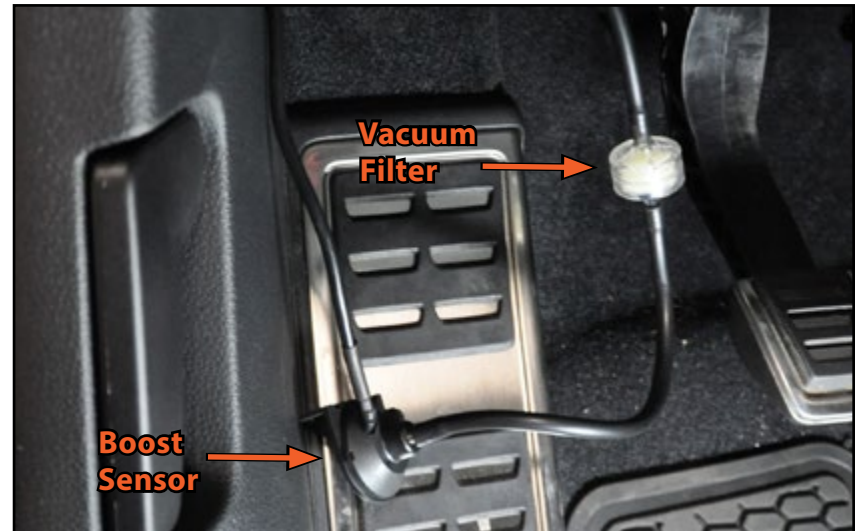
Starting inside the car, pierce the sharpened coat hanger through the rubber boot (identified in step 36), then push it through until it reaches the hose. Underneath the hood, locate the end of the coat hanger through the rubber boot and continue to pull it through until the hose is extended into the engine compartment. Remove the tape and coat hanger. Pull the hose through until there is about 1 foot (12 inches) remaining inside the car.



INSTALLING THE VENT POD AND BOOST GAUGE

Step 39:

Inside the car, install the vacuum filter onto the end of the long piece of vacuum hose, then install the short piece of vacuum hose between the filter and the boost sensor. The vacuum filter can be installed in either direction.



Step 40:

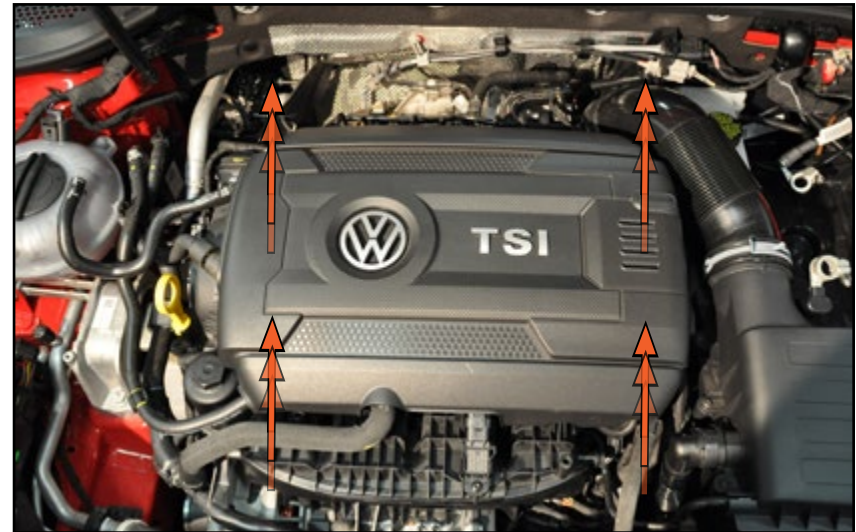
Pull the vacuum hose through under the hood to remove the additional hose length in the car, then locate the boost sensor, excess boost sensor harness, and vacuum filter behind the kick panel and use a wire tie to secure the vacuum hose up out of the way.



INSTALLING THE VENT POD AND BOOST GAUGE


Step 41:

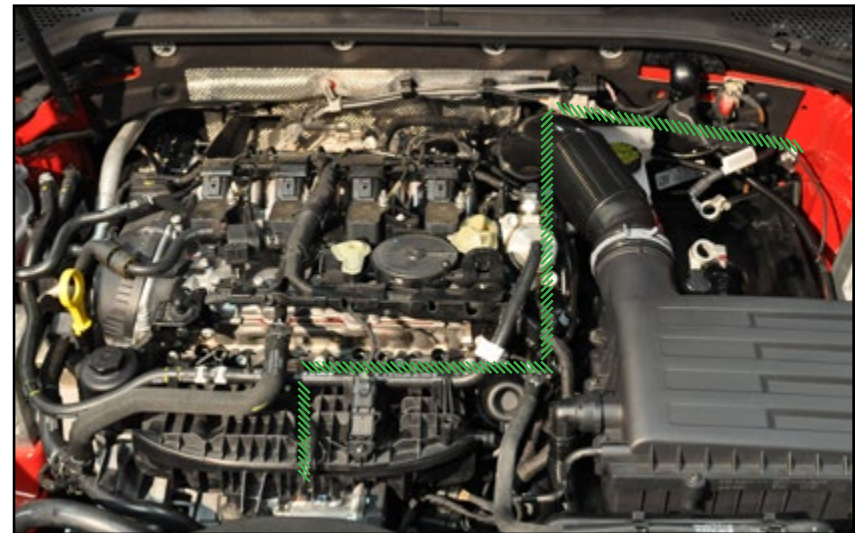
Remove the engine cover by pulling up at the four corners.



Step 42:

Route the vacuum hose along the firewall, underneath the intake tube and along the LH side of the engine and connect it to the boost/vacuum tap on your engine. Here we have installed a boost/vacuum tap between the throttle body and intake manifold so we continued to route the vacuum hose across the manifold and out to the boost/vacuum tap. Trim the hose as necessary for proper fit.

Approximate hose routing is indicated by 



NOTE

We are not using the vacuum "T" included with the kit during our installation. It is included to provide all options for connecting the vacuum hose on your specific application.

INSTALLING THE VENT POD AND BOOST GAUGE

Step 43:

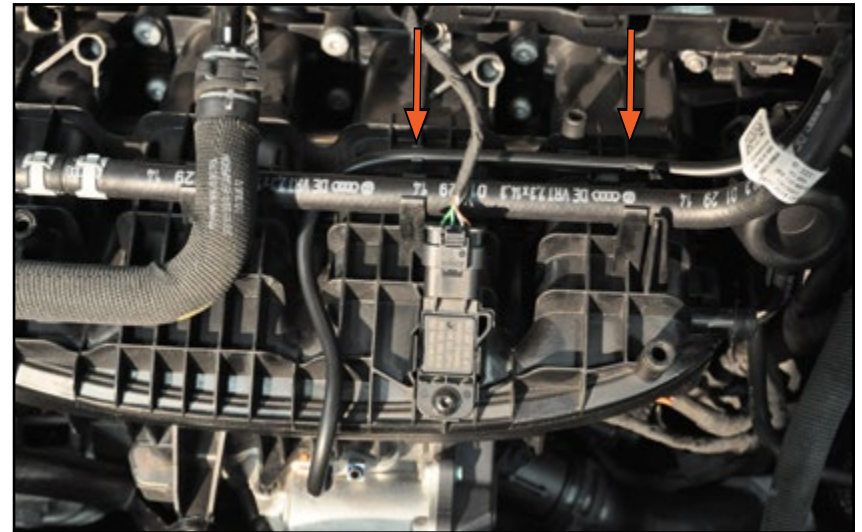
The vacuum hose can be neatly clipped into existing hose brackets on the intake manifold. Perform the following steps:

Reinstall the engine cover.

Reinstall the battery and battery hold down.

Reinstall the battery insulator.

Reconnect the battery terminals - positive first, negative last.



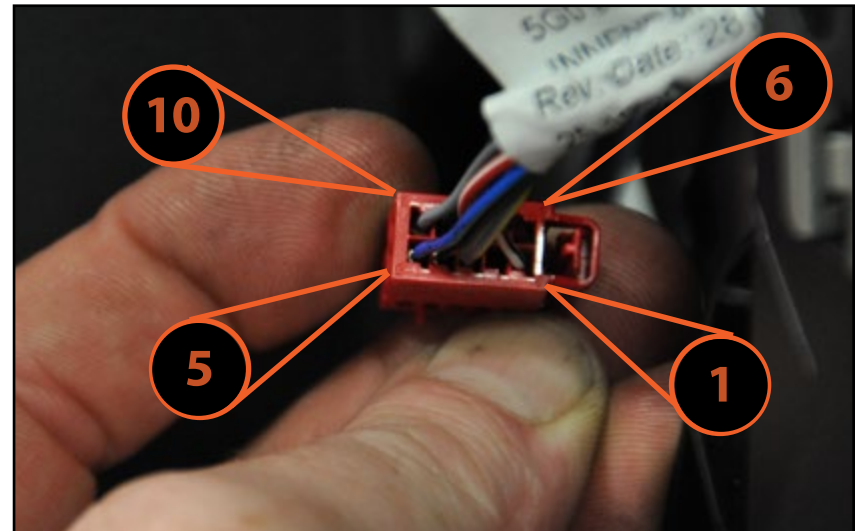
Step 44:

The next step is to install the T-taps onto the headlight switch wiring harness. Begin by familiarizing yourself with the wire locations on the headlight switch connector.

The headlight switch connector is a ten pin connector. The wire/pin locations are each assigned a number one through ten. Look closely at the back of the connector and you will see a reference number at each corner that will allow you to identify the specific wires/pins in between.

NOTE

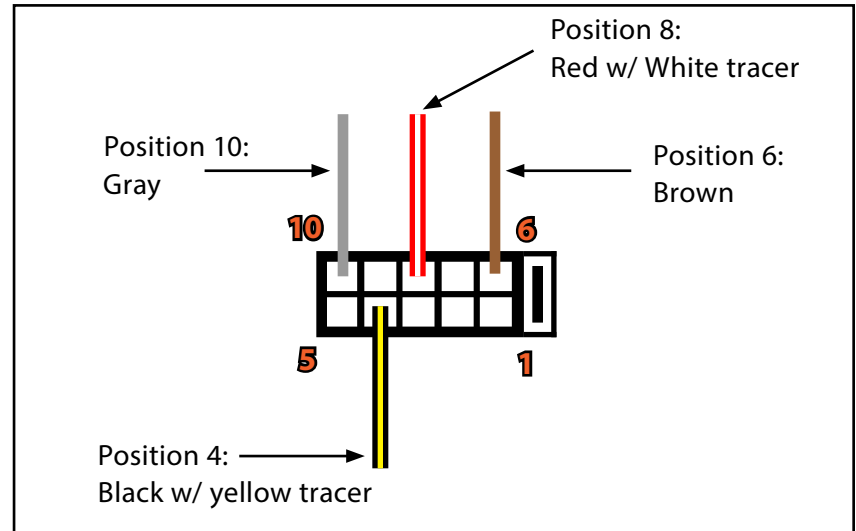
We have pulled the headlight switch connector out the side of the dash to make connections easier.



INSTALLING THE VENT POD AND BOOST GAUGE

Step 45:

You will be installing four T-taps onto the headlight wiring harness. Install one T-tap onto each of the wires shown in the diagram. Inspect the diagram, then follow the T-tap installation procedure in steps 46 and 47.

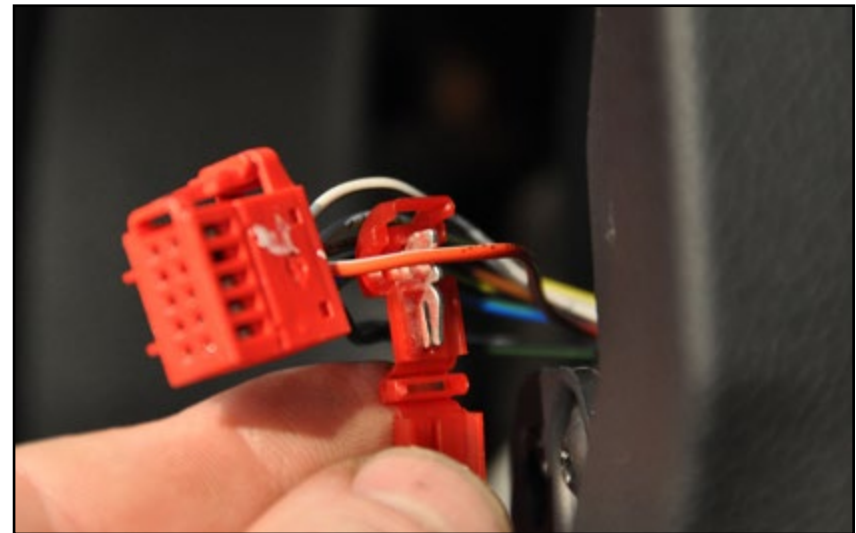


Step 46:

Select one of the wires shown in step 45 and place a T-tap underneath with the wire located in the groove of the blade as shown in the picture.

NOTE

You may need to trim back some of the original wiring harness tape in order to install these T-taps.

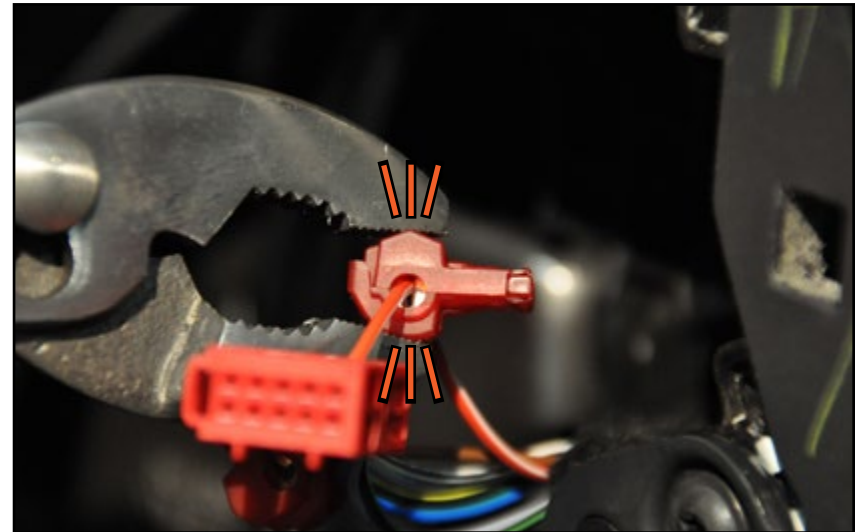


INSTALLING THE VENT POD AND BOOST GAUGE

Step 47: Curved Jaw Pliers

Fold the top of the T-tap over then squeeze it together just until you hear a “click” indicating that the T-tap is fully closed.

Repeat the procedure with all four wires specified in step 45.



Step 48: Wire Crimping Pliers

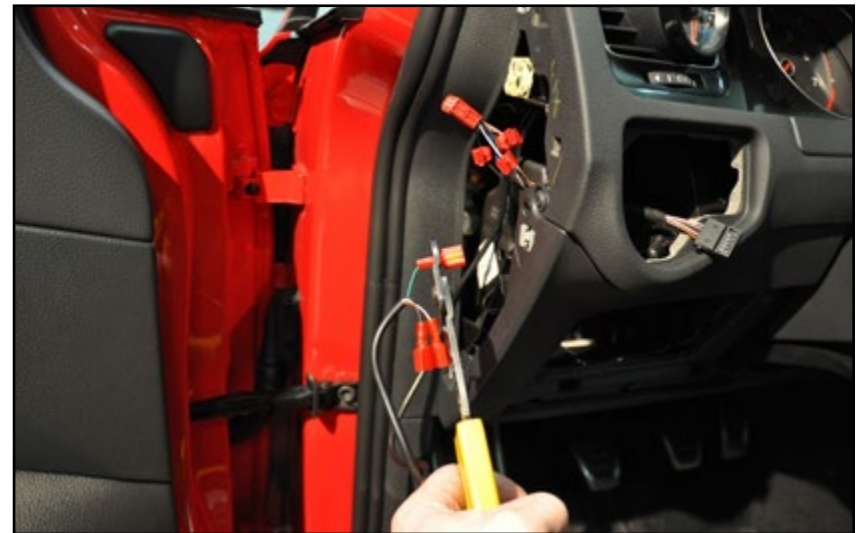
Crimp a spade connector onto the pre-stripped end of each of the four wires in the gauge power harness: red, black, white, and green.

NOTE

This harness may have an additional orange wire in it. This wire is not used.

TECH TIP

You may choose to install heat-shrink tubing over the end of the spade terminals and wire for a clean appearance.

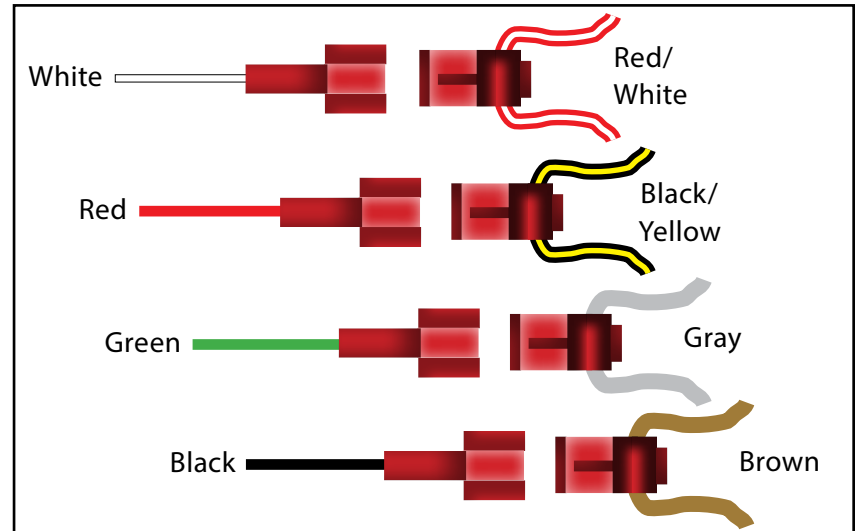


INSTALLING THE VENT POD AND BOOST GAUGE

Step 49:

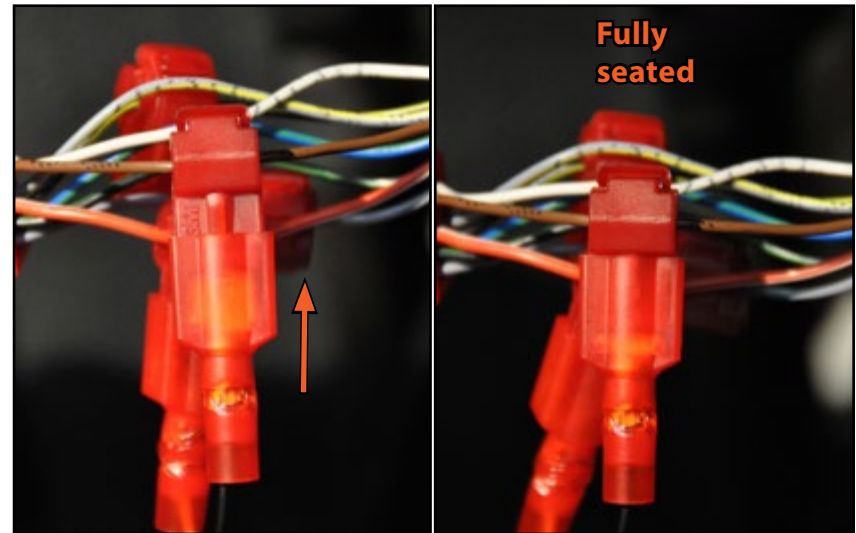
Connect the four spade connectors to the T-taps using the diagram at the right for wire location and step 50 for the connection procedure.

Gauge Wiring	Function	Headlight Switch Wire
• White:	12V Constant.....	Red/White Position 8
• Red:	12V Switched	Black/Yellow Position 4
• Green:	Dash Lighting	Gray Position 10
• Black.....	Ground	Brown Position 6



Step 50:

Push each spade connector onto the correct T-tap. Firmly support the T-tap as you press the spade connector into place. These are a tight fit so you will have to push fairly hard to fully seat the spade connectors.



INSTALLING THE VENT POD AND BOOST GAUGE

Step 51: T20 Torx Driver

With the connections complete, route the headlight switch harness back into the dash and install the headlight switch bezel. Don't forget to reconnect the rheostat when installing the bezel.



Step 52:

Rotate the headlight switch to the off position, reconnect it, then push it back into place. You will hear an audible "click" when it is fully seated.



INSTALLING THE VENT POD AND BOOST GAUGE

Step 53:

Now we'll test the gauge operation before final reassembly. With the key off, the gauge needle will rest at 30 in-Hg.



Step 54:

Turn the key to the "on" position and the gauge will sweep to 30 psi, then return to zero. Now turn on the lights and make sure the gauge illumination works.



INSTALLING THE VENT POD AND BOOST GAUGE

Step 55:

Start the engine and let it idle. Your gauge should read engine vacuum.



Step 56:

Perform the following steps for final reassembly:

Reinstall the lower dash access panel

Reinstall the storage bin

Reinstall the dash end cover

Your ECS Vent Pod and Boost Gauge installation is complete!



Your MK7 Vent Pod and Boost Gauge Installation is complete!



These instructions are provided as a courtesy by ECS Tuning

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.

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