



INSTALLATION GUIDE

PORT INJECTION KIT CTS-FPK-005



20630 Mufford Crescent, Unit #309
Langley, British Columbia V2Y 2V9

www.CTSTURBO.com

WHAT IS INCLUDED

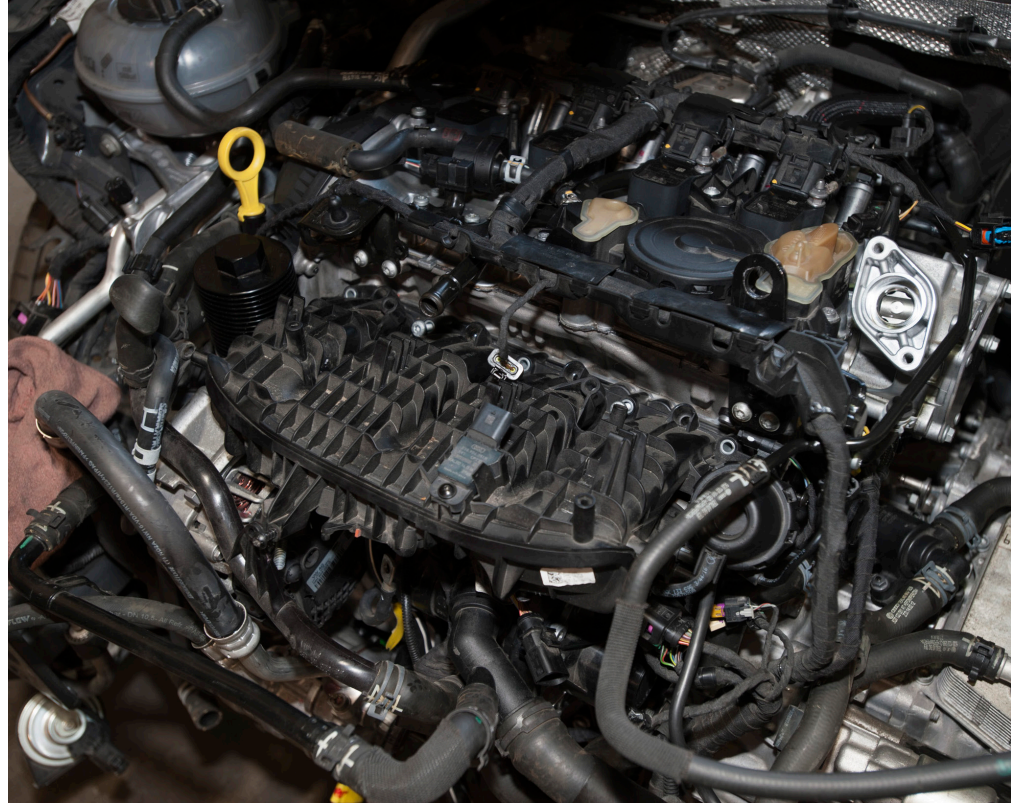
1. CTS Fuel rail
2. CTS wiring harness
3. Hardware

**NOTES**

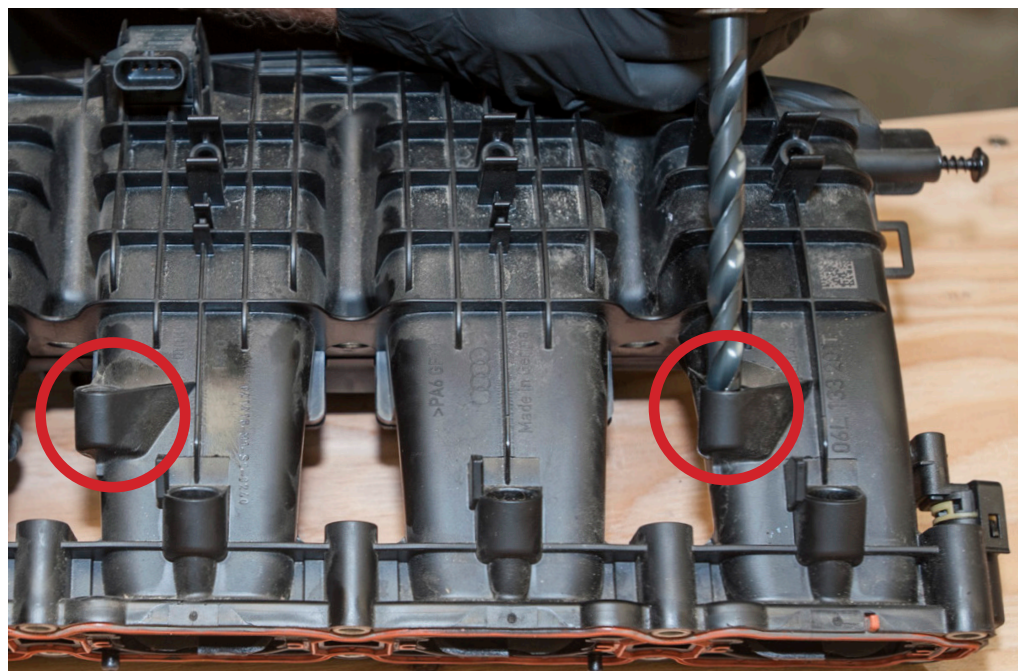
Vehicle used in this guide is a 2016 VW GOLF R. Always make sure the car is safe to work on. Do not work on a hot motor. We do not accept any liability for incorrect installation or damage during the install.

STEP 1

Remove the intake manifold as per the factory procedure

**STEP 2**

Using the supplied 9.5mm drill bit, drill the empty holes about 10mm deep. The holes are tapered so try to drill them as straight as possible.



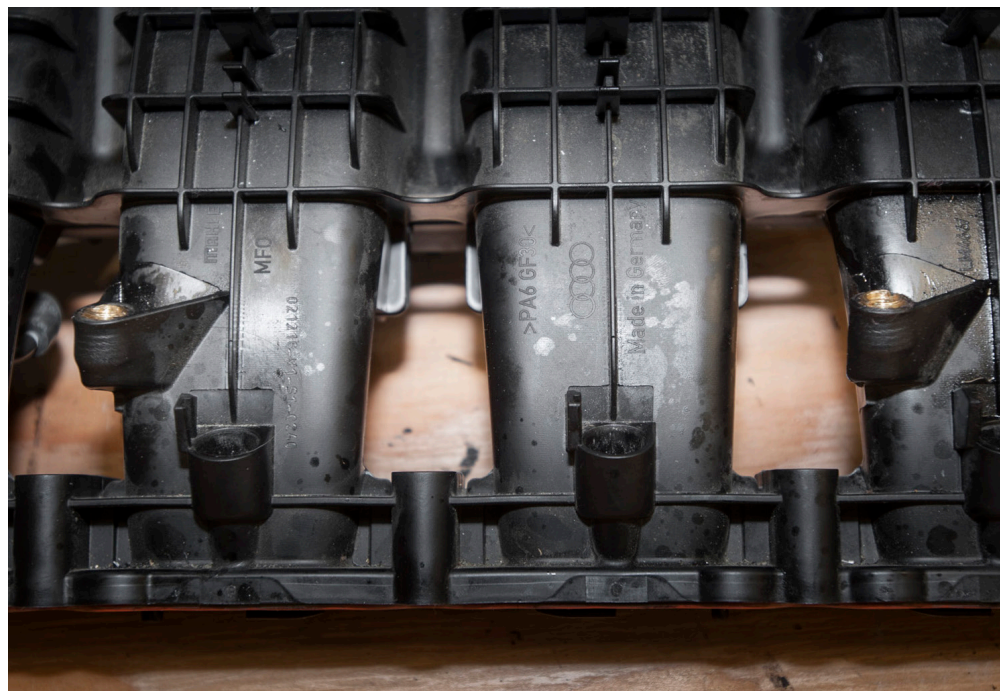
STEP 3

*** Before installing the inserts CAREFULLY heat up the pastic with a hair dryer or heat gun before installing. This will make the plastic more malleable and help avoid cracking ***

Using the supplied threaded inserts and supplied 10mm bolts, turn the insert until it is flush with the top of the hole.

* It is going to be very tight when turning the insert.

Once the insert is flush you may remove the 10mm bolts.



STEP 4

You will need to hold the runner flaps open. We suggest opening the flaps and then using a screw driver to lock the flap linkage. This will help keep you from accidentally drilling into the flaps when drilling holes for the port injectors

**STEP 5**

Using the supplied drill guide and 7mm bit, insert in to one of the port injection holes. Now you may drill through and make sure the tip of the drill bit breaks through.

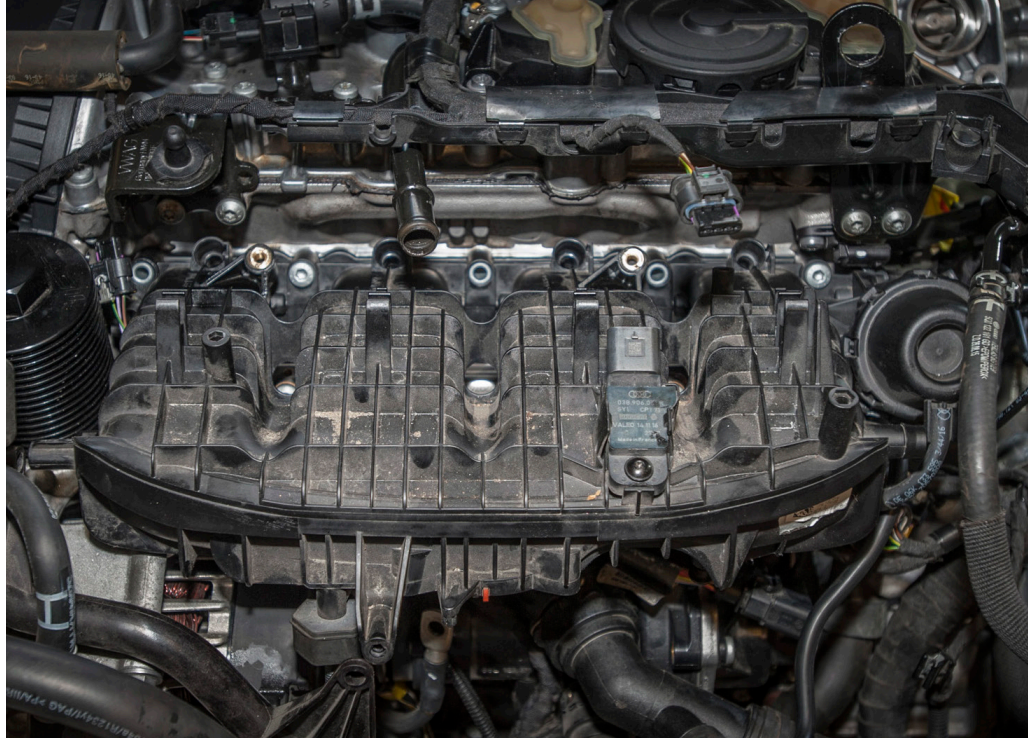
Repeat for the other 3 ports.

Now you will need to deburr the holes on the engine side of the manifold as there will be little pieces of plastic left after drilling.



STEP 6

Reinstall the manifold as per the factory procedure.

**STEP 7**

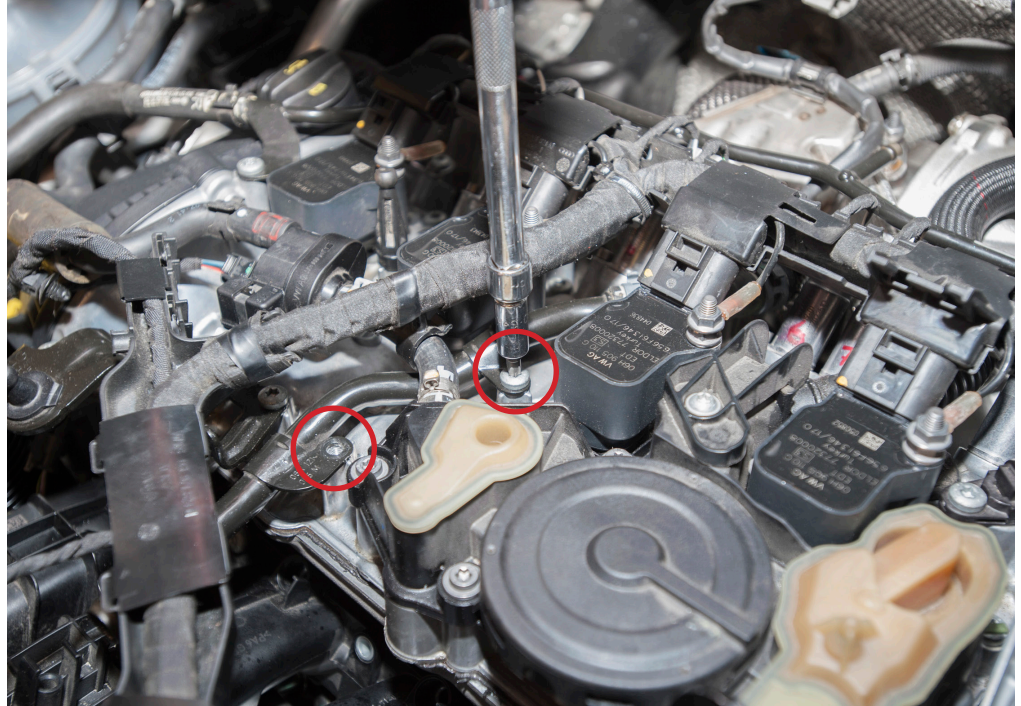
Assemble the fuel rail, injectors and wiring harness.



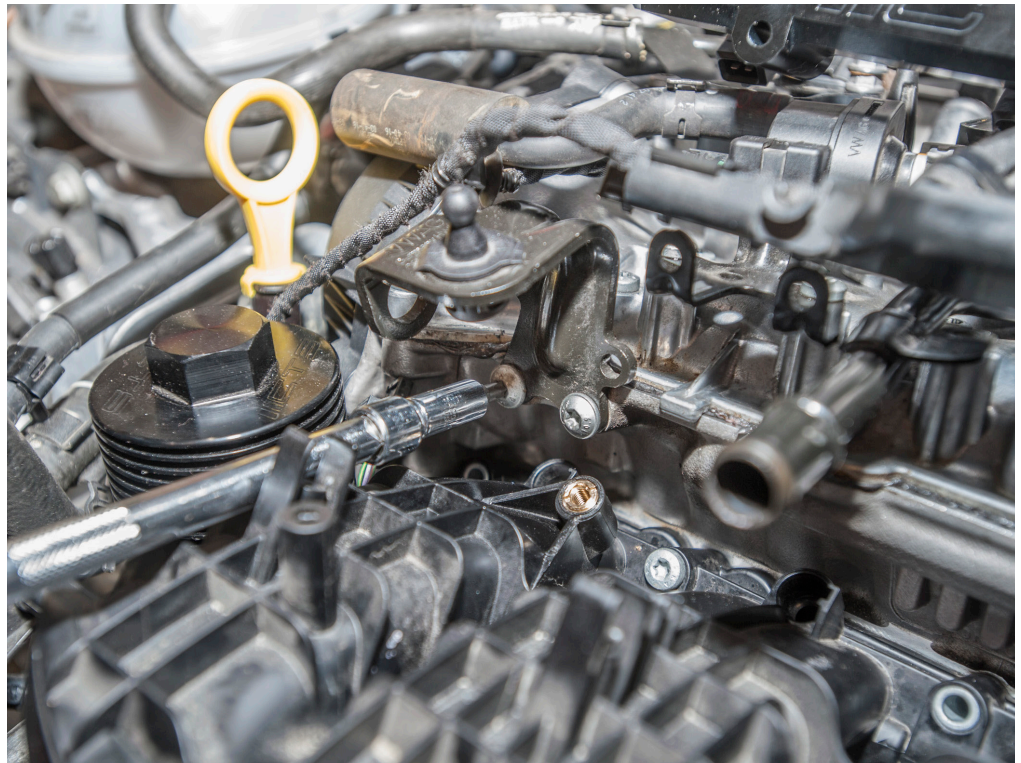
STEP 8

You will need to remove the two screws from the coolant line on top of the valve cover.

This is to create additional room when installing the fuel rail

**STEP 9**

Remove the two screws holding the bracket to the cylinder head and remove.



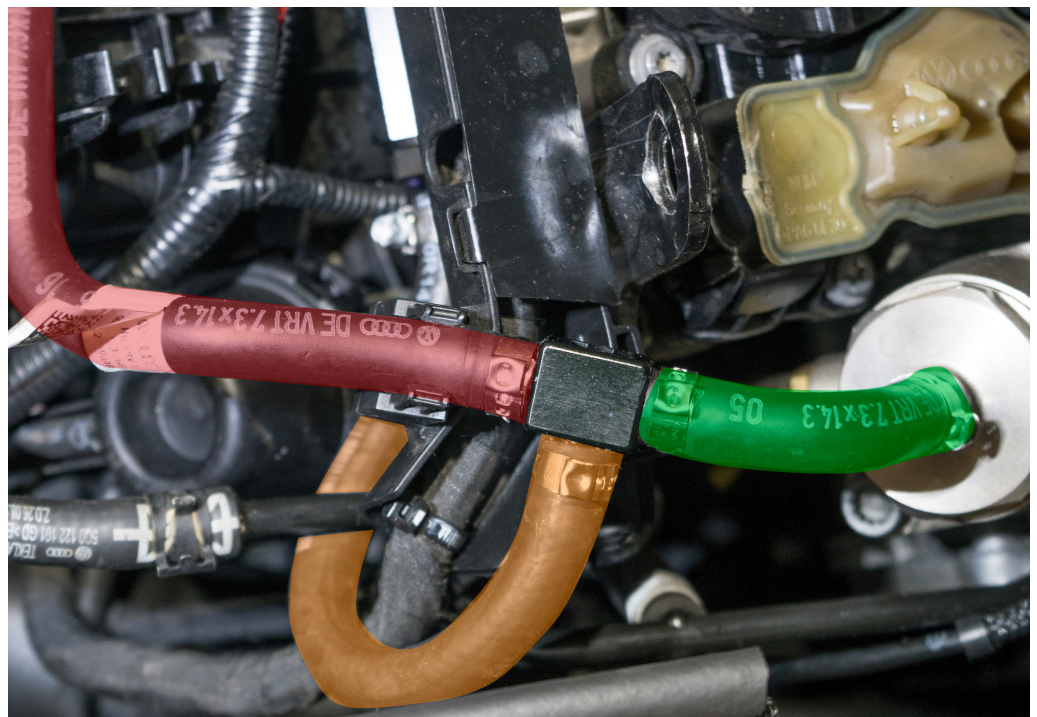
STEP 10

You may install the fuel rail and connect the wiring harness connectors.

**STEP 11**

You will need to cut the OE fuel line and connect the CTS Tee fitting.

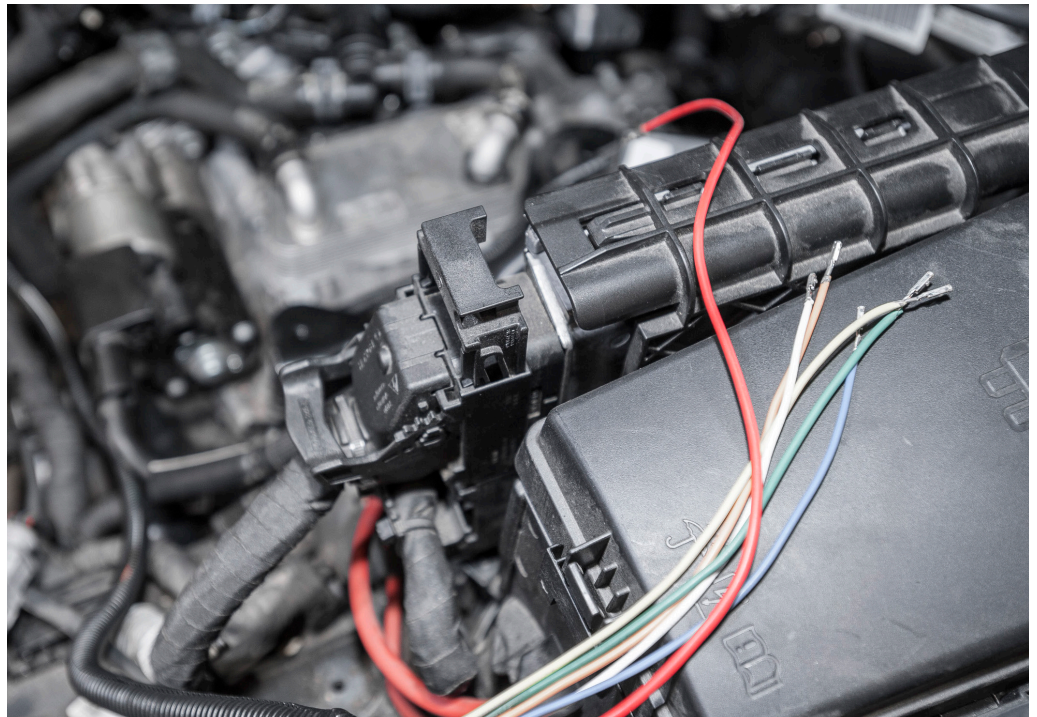
You will also need to run the line from the tee to the fuel rail with the provided hose.



STEP 12

We now need to do the wiring.

Disconnect the 105-pin connector from the ECU

**STEP 13**

The back cover needs to be removed on the connector.

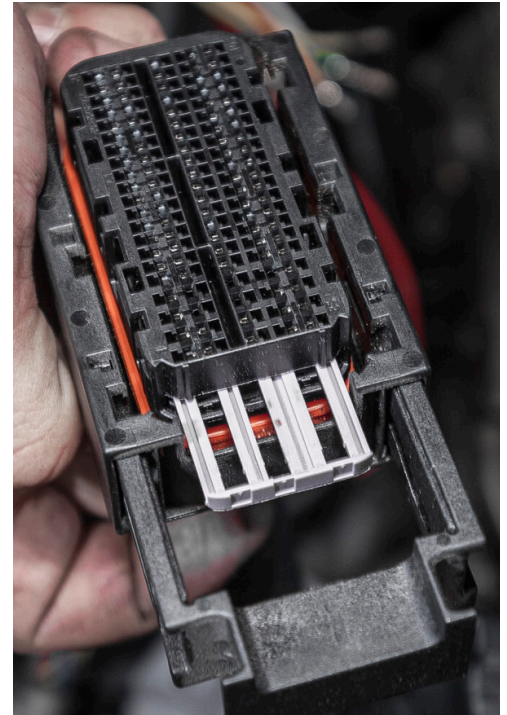
Use a pick tool or a screw driver to pry it off.



STEP 14

Turn the ECU connector over and slide out the locking tab and remove.

Once removed be careful not to pull the wires as they may come loose.



STEP 15

Looking at the connector notice how its numbered from left to right.

From the front of the connector use a wire or paper clip to push out the plastic tab on the backside where you will install the wiring. * Note the orientation of the tab on the way out.

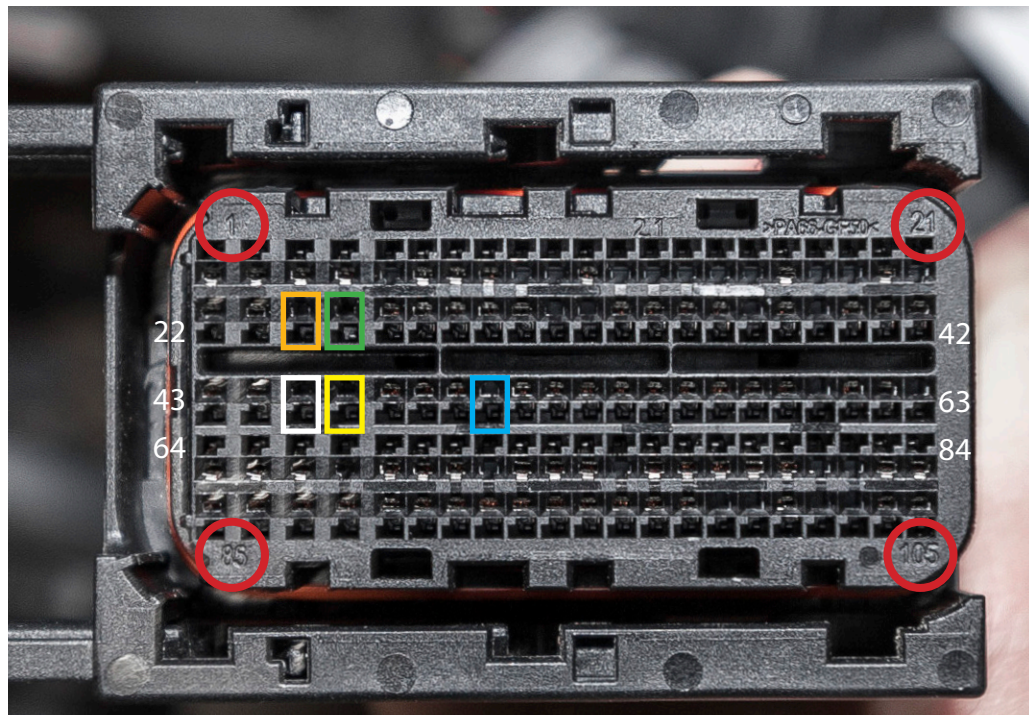
Green - pin 25

Orange - pin 24

Yellow - pin 46

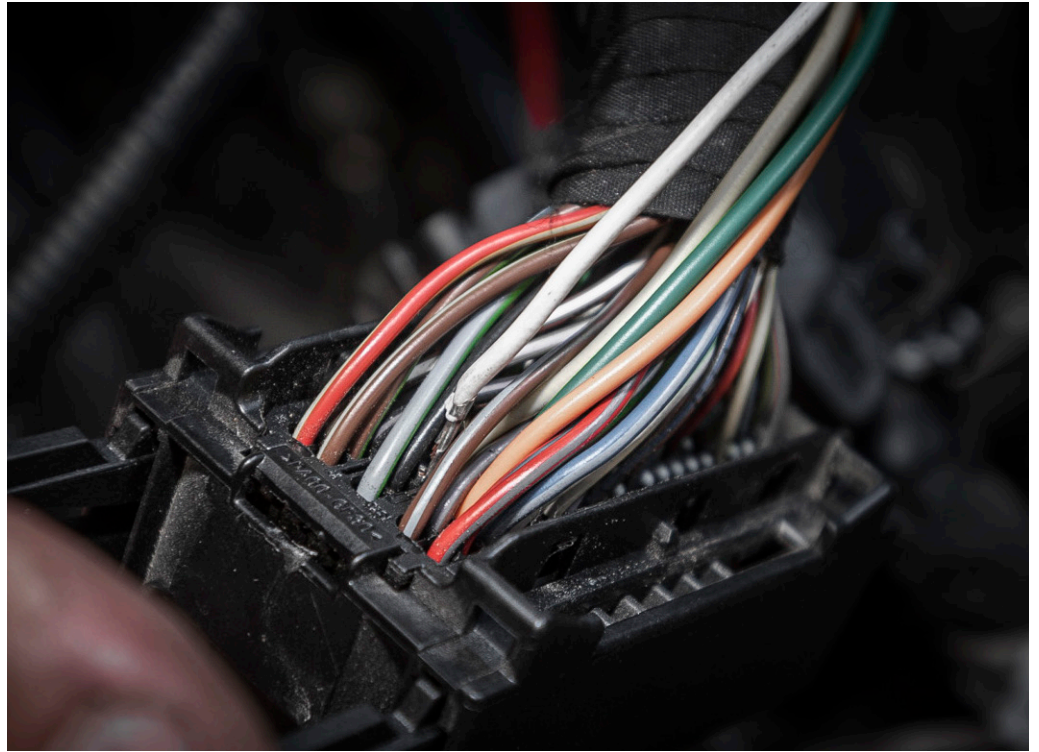
White - pin 45

Blue - pin 50

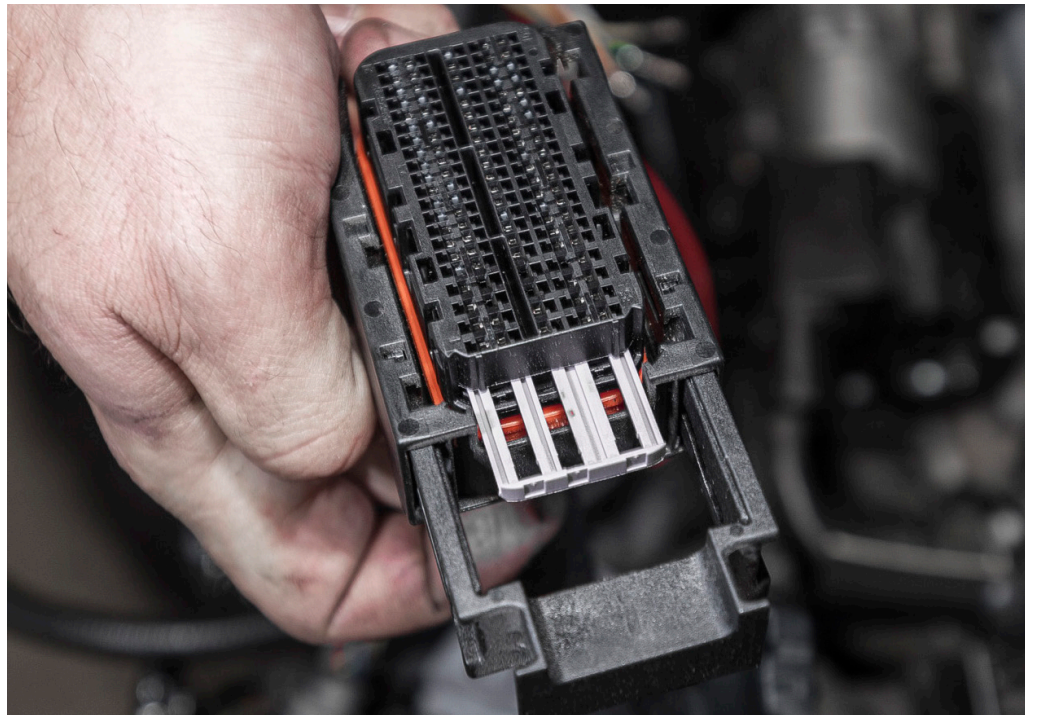


STEP 16

Install the wiring to the correct location as indicated on step 15.

**STEP 17**

Once the wires have been installed reinsert the locking tab.



STEP 18

Wrap the wiring loom with the insulation tape and secure with zip ties.

* Leave the red power wire out of the insulation.

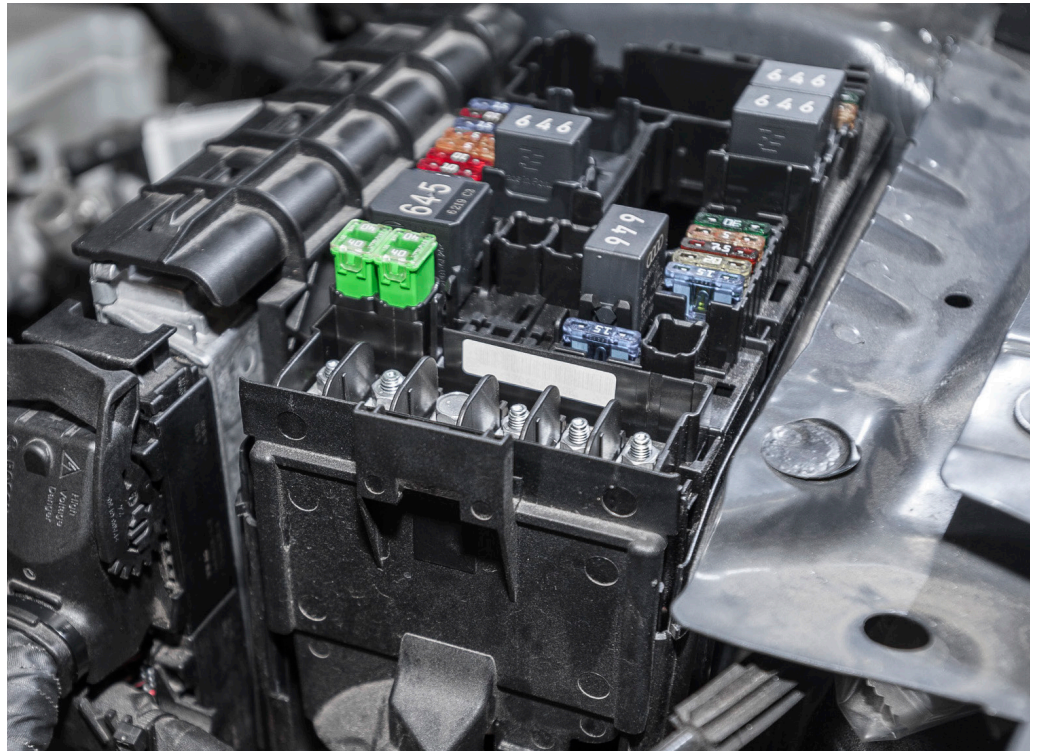
**STEP 19**

Reinstall the connector.



STEP 20

Remove the cover to the fuse box.

**STEP 21**

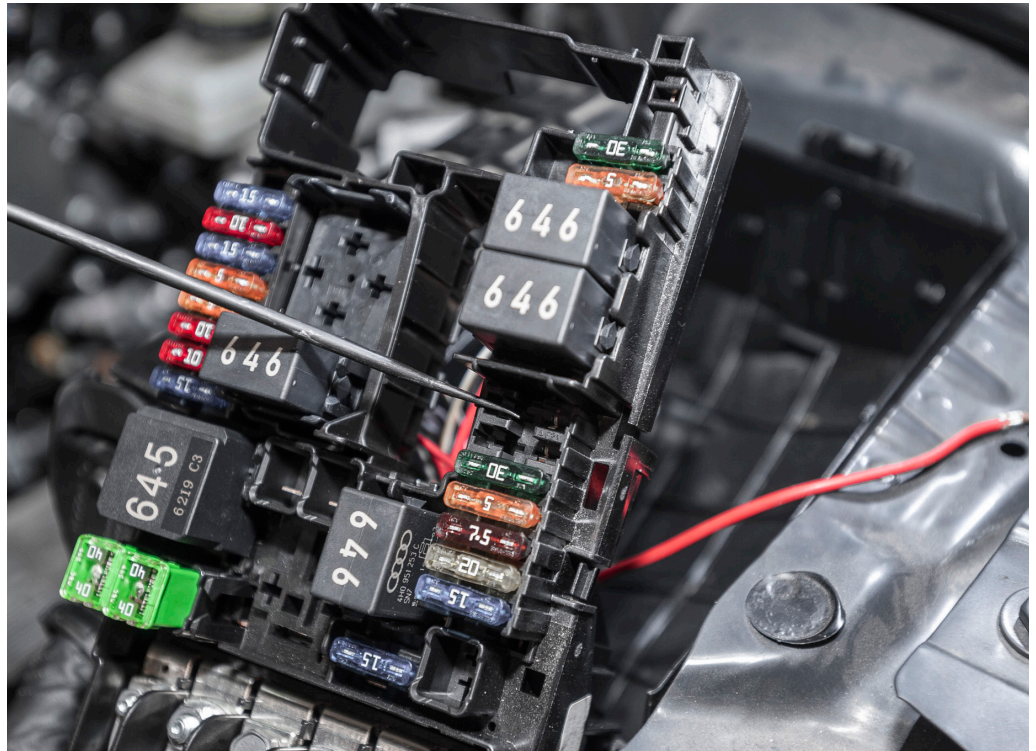
There are little tabs around the fuse box that you will need to unclip to access the back of the fuse plate.



STEP 22

Route the red power wire from the harness along with the other factory power wires underneath the front of the fuse box.

Locate the empty fuse opening, on the left side of the fuse box, indicated by the image.

**STEP 23**

Reinstall the fuse plate and install the fuse into the slot where the power wire was installed.

Put the fuse cover back on and you are **DONE!**

