



MK7 MULTI-PORT INJECTION KIT INSTALLATION GUIDE



MK7 MPI INSTALLATION GUIDE

Thank you and congratulations on the purchase of your new Stratified Multi-Port Injection Kit. Please follow this document to ensure safe and proper installation and operation of your new fuel system kit.

WARNINGS AND WARRANTY – PLEASE READ CAREFULLY

ALL parts are sold for OFF ROAD RACE-ONLY ground vehicle use only.

Aftermarket systems interacting with engine function are not for use on pollution-controlled vehicles. Alteration of emissions related components constitutes tampering under most local emission regulation guidelines and can lead to fines and penalties.

Limited Warranty

This Stratified product is warranted against defects in materials and workmanship for ninety (90) days from date of purchase. During the warranty period, Stratified will repair, or at its option replace at no charge, components that prove to be defective. The product must be returned, shipping prepaid, to a Stratified facility. This limited warranty does not apply if the product is damaged by accident or misuse. The foregoing warranty is in lieu of all other warranties expressed or implied including but not limited to any implied warranty of merchantability, fitness, or adequacy for any particular purpose or use. Stratified Automotive Controls Ltd. is not responsible for any fines, injuries, or damages incurred as a result of the installation or use or misuse of our products. It is the complete responsibility of the purchaser of such products to ensure that they are used in a legal, safe, and appropriate manner.

DISCONNECT THE NEGATIVE BATTERY TERMINAL BEFORE PERFORMING ANY ELECTRICAL WORK ON YOUR VEHICLE. IF YOU DO NOT FEEL COMFORTABLE DOING THESE MODIFICATIONS, HAVE THEM PERFORMED BY A PROFESSIONAL.



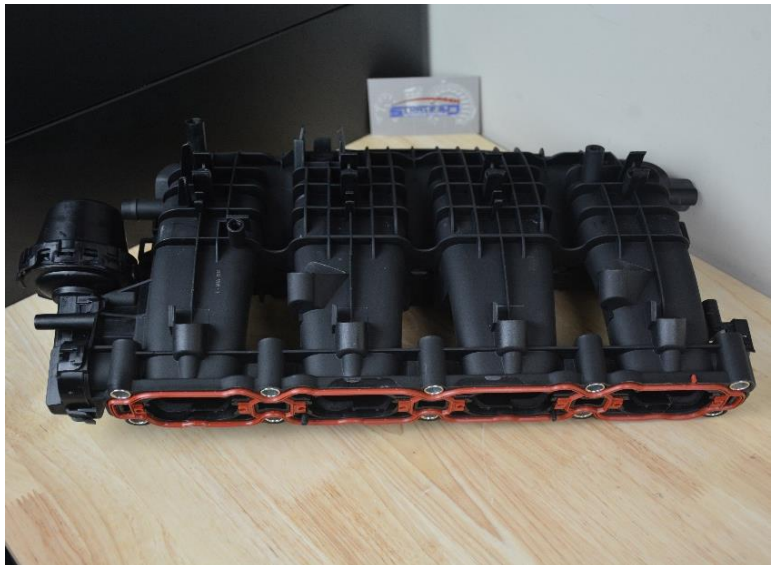
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PARTS LIST:

Fuel System	Fuel Rail	1
	980cc OR 1300cc EV14 Extended Nozzle Injectors	4
	Injector Clips	4
	Left Side Hose Assembly **	1
	Right Side Hose Assembly **	1
	7/16" - 25/32" Hose Clamp	2
	Bosch Fuel Pressure Sensor	1
	Flex Fuel Sensor (optional)	1
Manifold	MPI-Ready Intake Manifold (optional)	1
Electrical	Wiring Harness	1
	20A Automotive Blade Fuse	1
Mounting Hardware	M6 x 1 x 40 Socket Head Screw	2
	M6 x 1 x 10 Screw *	1
	M6 x 1 x 12.29 Brass Threaded Insert *	2
Other Hardware	7mm Drill Bit (for injector holes) *	1
	Drill Guide *	1

* Not included if kit was purchased with the optional MPI-ready intake manifold.

** The fuel hose assemblies will not have provision for a Flex Fuel sensor if the Flex Fuel sensor option was not purchased.





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Step 1:

Disconnect the negative battery terminal. Remove the engine cover and intake box, then remove the stock fuel line all the way from the HPFP to the check valve on the passenger side of the vehicle. Be careful that there will be some fuel pressure in the line and be prepared for fuel spray when removing the line.



Step 2:

Refer to the factory service manual and remove the intake manifold from the car.

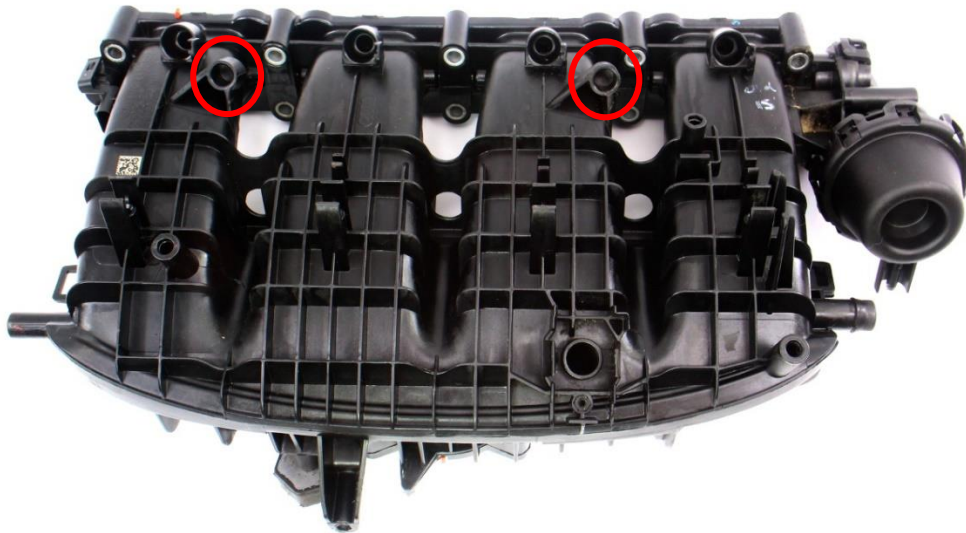
***If you purchased the MPI kit WITHOUT the optional MPI-ready manifold, follow steps 3-5. Otherwise, proceed straight to Step 6.**



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Step 3:

On the North American manifolds, the MPI rail mounting holes are present but do not have the threaded brass inserts, which you must now install. In order to install these inserts, the mounting holes must be slightly enlarged. Using an 11/32" or 9mm drill bit, enlarge the hole and only drill to the bottom of it. **Be careful NOT to drill THROUGH the plastic at the bottom of the two mounting holes.**



Step 4:

Now you are ready to install the provided threaded inserts. To avoid the risk of cracking the manifold, use a heat gun to heat up the holes for the inserts. The plastic should be hot to the touch but not enough to melt it. Thread in the inserts using the supplied hex head M6 bolt and a 10mm socket or wrench. Use the heat gun to keep the plastic warm and further avoid cracking. Remove the M6 bolt after installing the inserts.



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Step 5:

Now you are ready to drill out the four injector ports. Use the included drill guide and 7mm drill bit to drill out the injector ports. The intake runner flaps will need to be held open to avoid damaging them while drilling. Remove any plastic burrs and residue from the injector ports after drilling.



Step 6:

Follow the factory service manual procedure to reinstall the intake manifold assembly onto the vehicle.

Step 7:



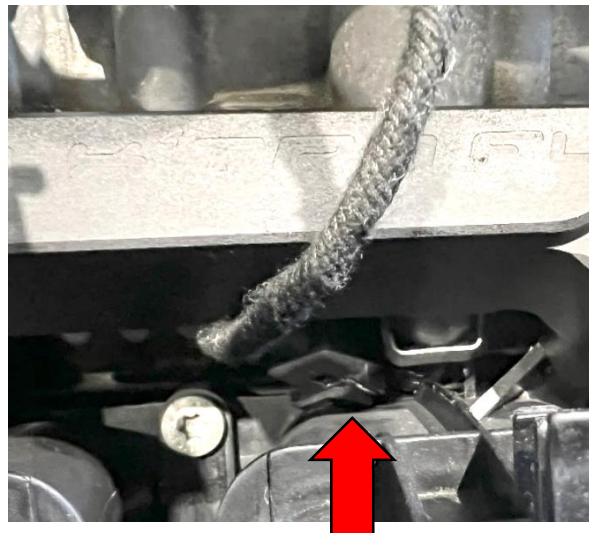
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Install the fuel injectors onto the fuel rail using the supplied injector clips. Use the provided grease to lubricate the o-rings. Point the injector connectors to the left of the assembly as shown below.



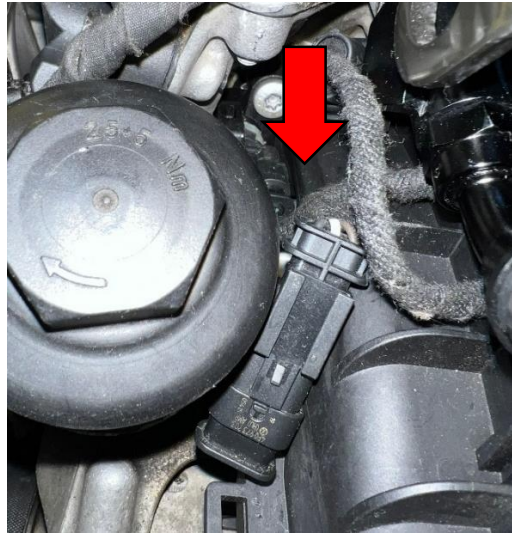
Step 8:

Place the fuel rail and injector assembly on to the intake manifold and line up the injectors with the injector ports but do not push them in yet. Plug in the wiring harness into the four injectors. Make sure the harness is oriented such that the runner flap jumper connectors are on the left side of the assembly, towards the oil filter.

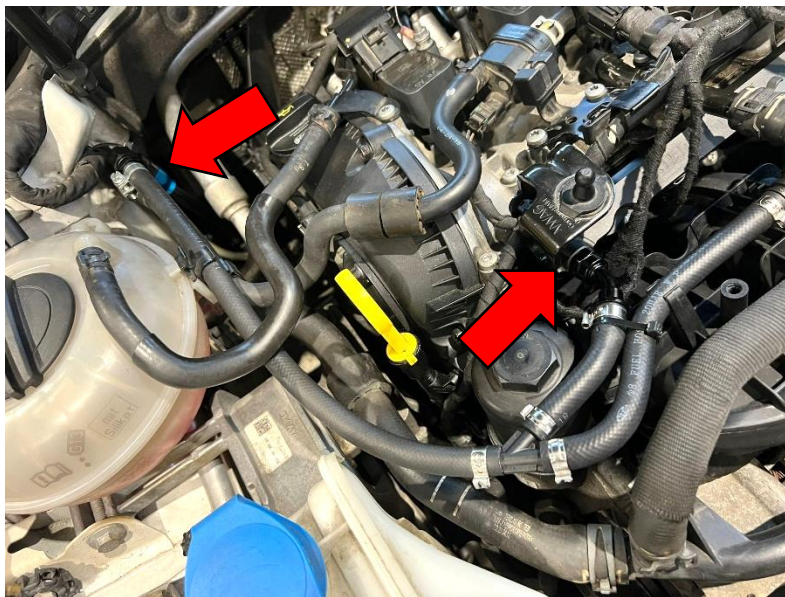


Step 9:

Connect the harness jumper connectors to the runner flap sensor connectors. You may have to remove the oil filter to have better access to these connectors.

**Step 10:**

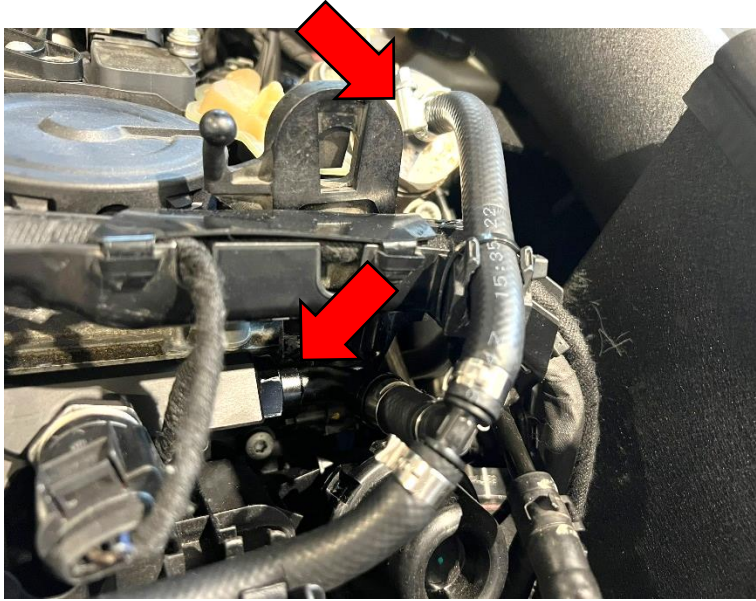
Install the left-side fuel hose assembly first by attaching the bare hose end to the factory fuel feed line barb and secure using one of the provided hose clamps. Then thread in the 45-degree -6 ORB fitting to the left side port of the fuel rail.

**Step 11:**



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Install the right-side hose assembly bare hose end to the HPFP inlet port barb and secure using the other provided hose clamp. Then thread in the 90-degree -8 ORB fitting onto the right-side port of the fuel rail.



Step 12:

With the injectors connected to the harness, press the rail down onto the manifold and use the provided two M6 x 40 bolts to fasten it to the manifold.



Step 13:

Install the fuel pressure sensor onto the fuel rail using a 27mm wrench or deep socket and plug it into the MPI harness. Torque to 318 in-lbs. (36 Nm).



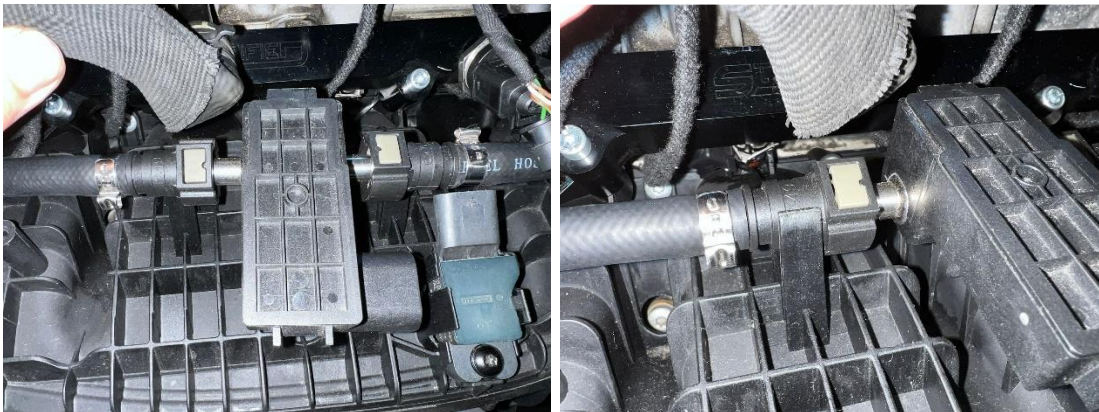
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***Follow step 14 if you purchased the MPI kit with the optional flex fuel sensor. Otherwise, proceed straight to step 15.**

Step 14:

Install the provided flex fuel sensor onto the quick connect ends of the fuel hose assemblies. Refer to the picture below for the intended orientation, and push in the quick connect fittings and hoses onto the clips on the manifold. Plug sensor into the harness. If you did not opt for the flex fuel sensor, you can tuck this harness connector out of the way.

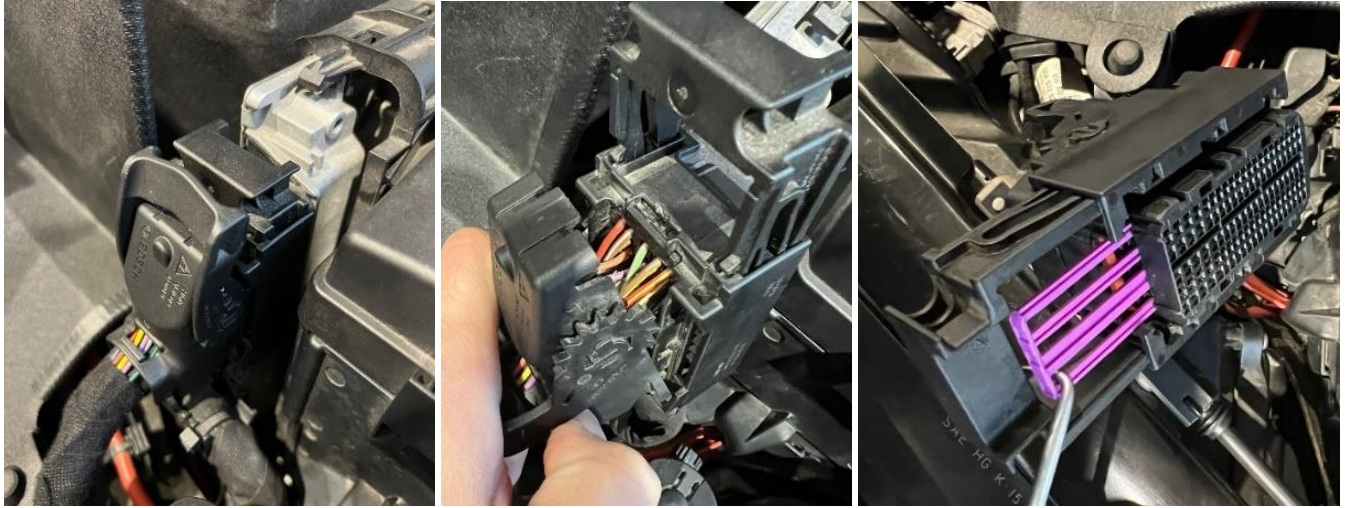


Step 15:

Now we will wire in the MPI harness to the factory ECU. Disconnect the top connector on the ECU, remove the back cover and terminal lock of the connector.

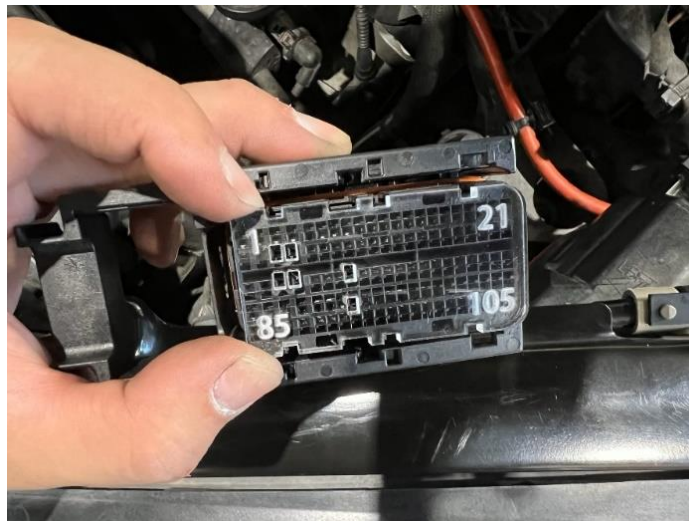


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Step 16:

Use the provided pinning plate to locate which pins to connect the harness to and use a depinning tool to remove the blanking plugs.



Step 17:

Follow the labels on the unterminated end of the harness and insert each pin into the correct connector location. Use the pinning plate as your guide. Reinstall the back cover and terminal lock of the connector afterwards.



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Pin 25 – Injector 1

Pin 46 – Injector 2

Pin 24 – Injector 3

Pin 50 – Fuel Pressure Sensor

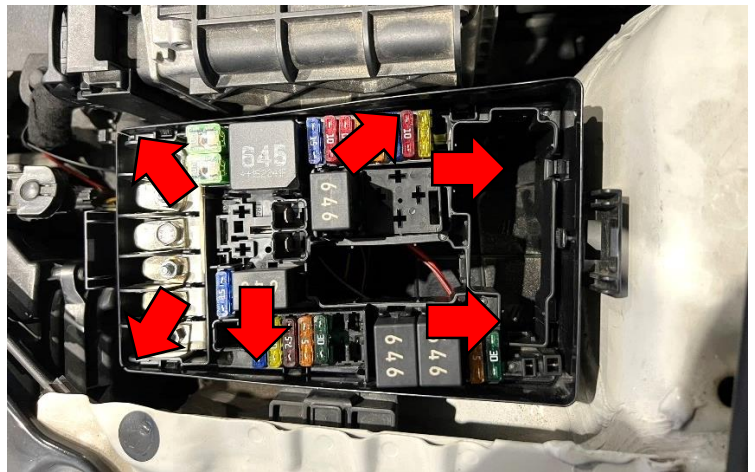
Pin 45 – Injector 4

Pin 71 – Flex Fuel Sensor



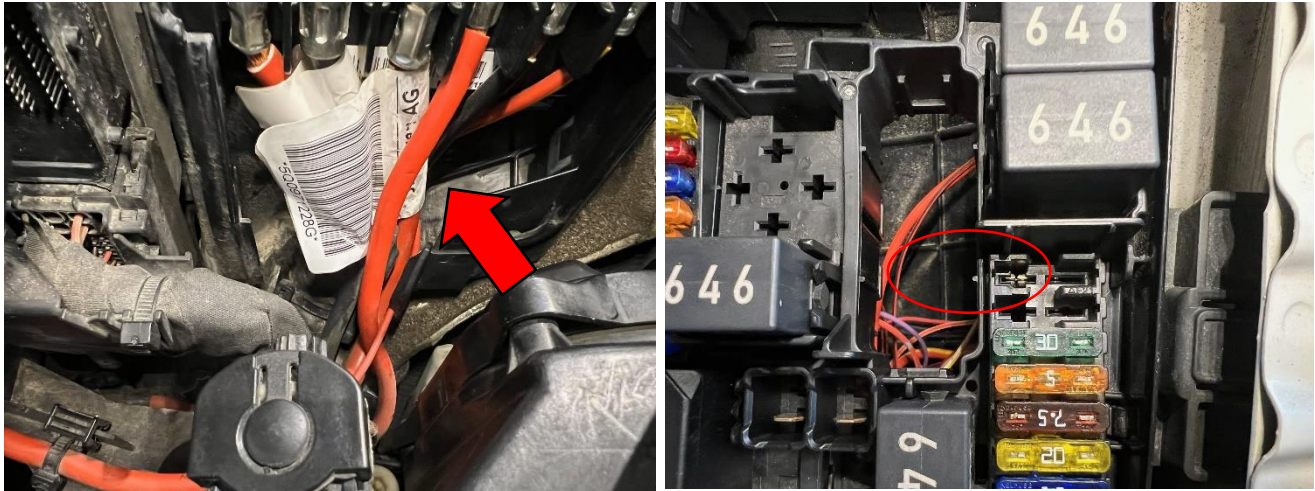
Step 18:

Open the top of the fuse box and remove the front cover. Then undo the six clips holding the fuse panel down and lift it out of the box to give yourself more room. Be careful not to damage or undo any wires attached to this assembly.

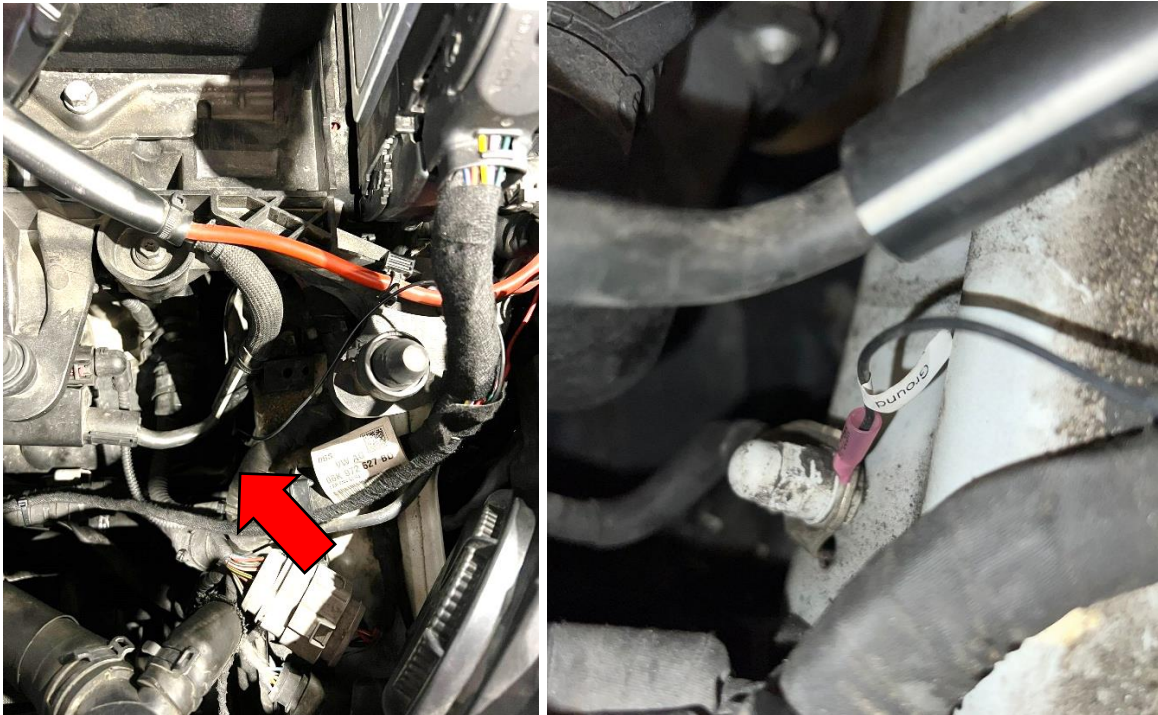


Step 19:

Insert the red 12V power wire into the front opening of the fuse box and insert the terminal into the left hole of fuse slot F21. Install the provided 20A fuse in this slot.

**Step 20:**

Install the ground wire using the chassis ground point on the chassis frame, underneath where the intake box would sit.





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Step 21:

Your MPI fuel system is now installed. Reinstall the intake and reconnect your negative battery terminal, then prime the fuel system and check for any fuel leaks.

Step 22:

In order to activate and run your MPI fuel system, the ECU tune must be correctly setup for it. If you require tuning, we can provide it at www.stratifiedauto.com.

Step 23:

Enjoy the most complete MPI and flex fuel system on the market!