



Stratified GRC/GRY Flex Fuel Plug & Play Installation Guide



Thank you and congratulations on the purchase of your new Stratified GR Flex Fuel Kit. Please follow this document to ensure safe and proper installation and operation of your new flex fuel kit, tuning required.

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.

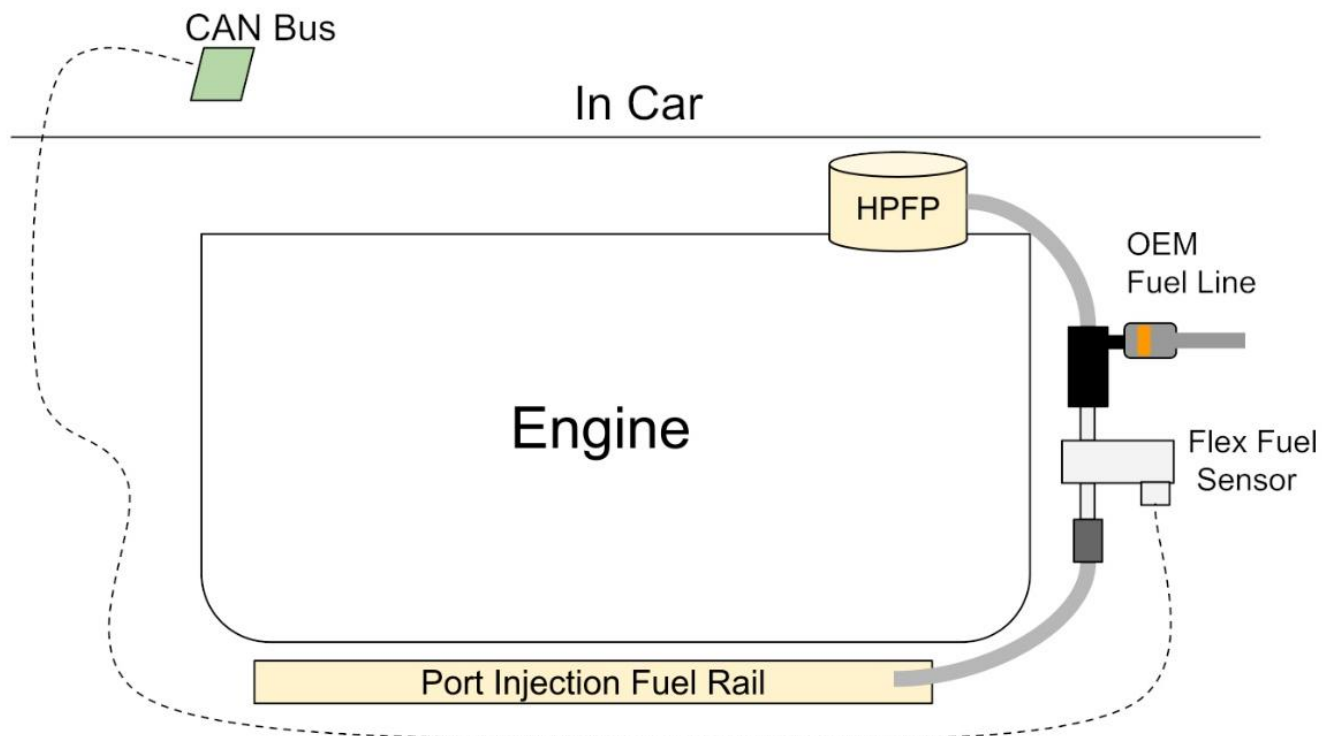
DISCONNECT THE NEGATIVE BATTERY TERMINAL BEFORE PERFORMING ANY ELECTRICAL WORK ON YOUR VEHICLE. IF YOU DO NOT FEEL COMFORTABLE DOING THESE MODIFICATIONS, HAVE THEM PERFORMED BY A PROFESSIONAL.

THE FUEL SYSTEM IS UNDER PRESSURE, RELIEVE THE FUEL SYSTEM PRESSURE BEFORE DISCONNECTING ANY FUEL LINES, ALWAYS USE EYE AND PERSONAL PROTECTION GEAR AND INSTALL IN A WELL-VENTILATED LOCATION. AVOID ANY KIND OF SPARK, OPEN FLAMES, OR OTHER TYPES OF IGNITION SOURCES.

PARTS LIST:

Part/Assy	Description	Quantity
Engine bay	Short fuel line from ethanol sensor to OE port injection rail	1
	Stratified custom T fitting with fuel line to HPFP	1
	Ethanol sensor with mounting bracket	1
	Ethanol sensor wire loom	1
In car items	GR CAN Bus gateway adapter harness	1
	Zeitronix ECA-2 CAN Bus Box	1
Other	Zip ties	10
	Double sided tape	1

DIAGRAM:



- **ENGINE BAY:**

1. **DISCHARGE FUEL SYSTEM PRESSURE:**

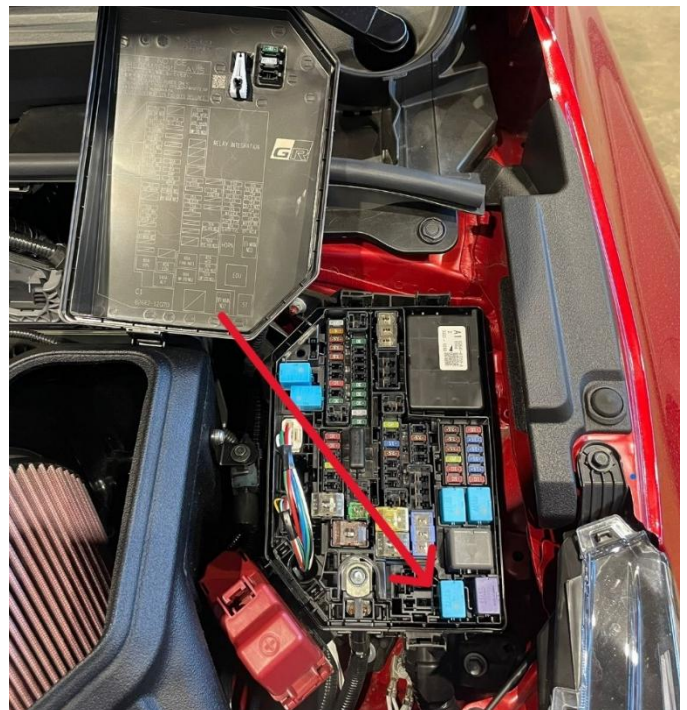
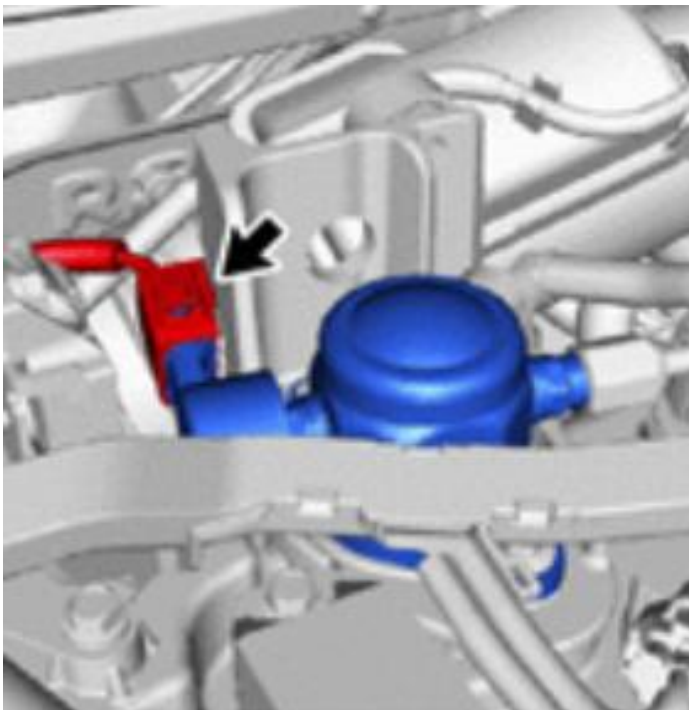
CAUTION:

- a. Make sure the engine coolant temp is below 60°C (140°F).
- b. WEAR PROTECTIVE GEAR, use gloves and safety glasses, keep fuel away from rubber or leather parts.
- c. Some fuel pressure will still remain in line, use a cloth to cover the lines when disconnecting to prevent fuel spray.

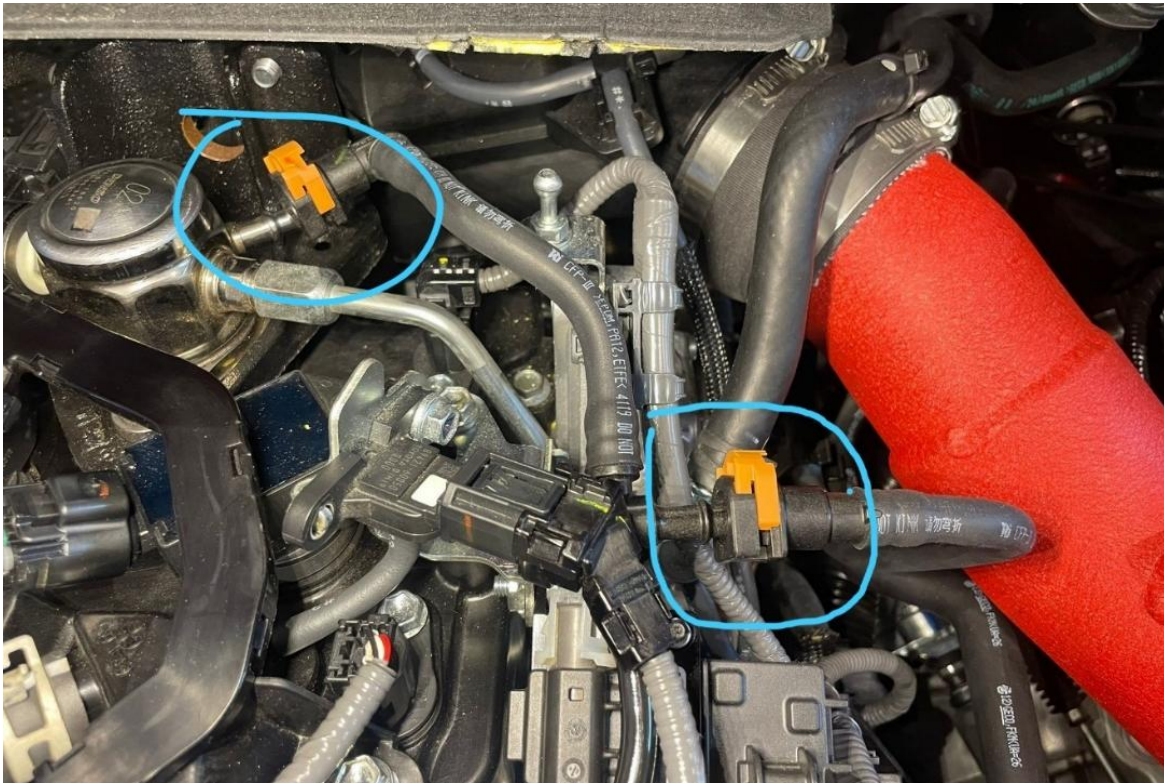
Open the fuse box in the engine bay, and remove the EFI MAIN NO.2 relay.

Remove the engine cover, and pull up on 4 corners to release 4 rubber grommets. Disconnect the high-pressure fuel pump (HPFP) wiring connector.

Start the engine until it stops on its own, do not rev the car during the process. Crank the engine again to make sure it does not start, turn the ignition off.



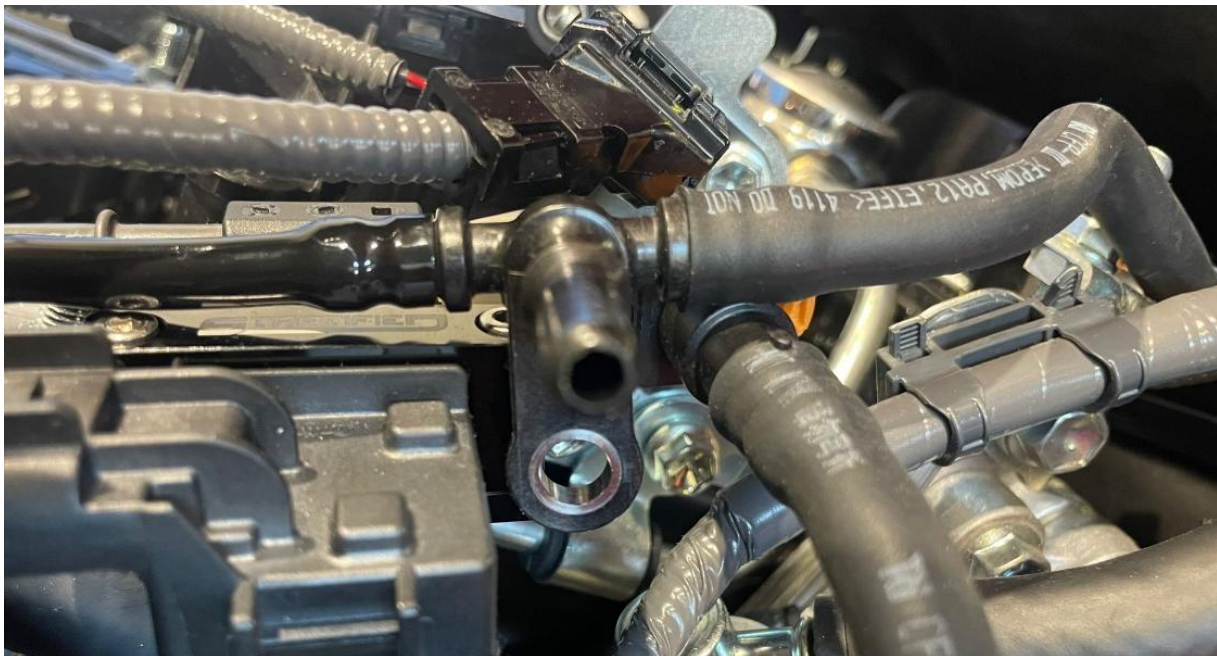
2. Disconnect the negative battery terminal from the trunk.
3. The fuel line we are going to replace is located at the right side of the engine when facing it. Find the T fitting that is between the HPFP and port injection fuel rail with the orange SAE quick-disconnect connector. Carefully pry up the orange lock away from the flat side of the connector as shown, place a cloth underneath and cover the quick-disconnect connector. Slowly remove it from the OEM T fitting. Repeat the same step to remove the fuel line from the HPFP.



4. Follow the fuel line to the front of the engine. On the low-pressure port injection fuel rail, locate the safety locking bracket on top of the SAE quick-disconnect connector with a green lock. Pry on the side to remove the plastic cover. This part is not needed for re-install.
5. Carefully pry up the green lock away from the flat side of the connector, put a cloth underneath, and cover the connector to catch additional fuel when removing it, disconnect it slowly.



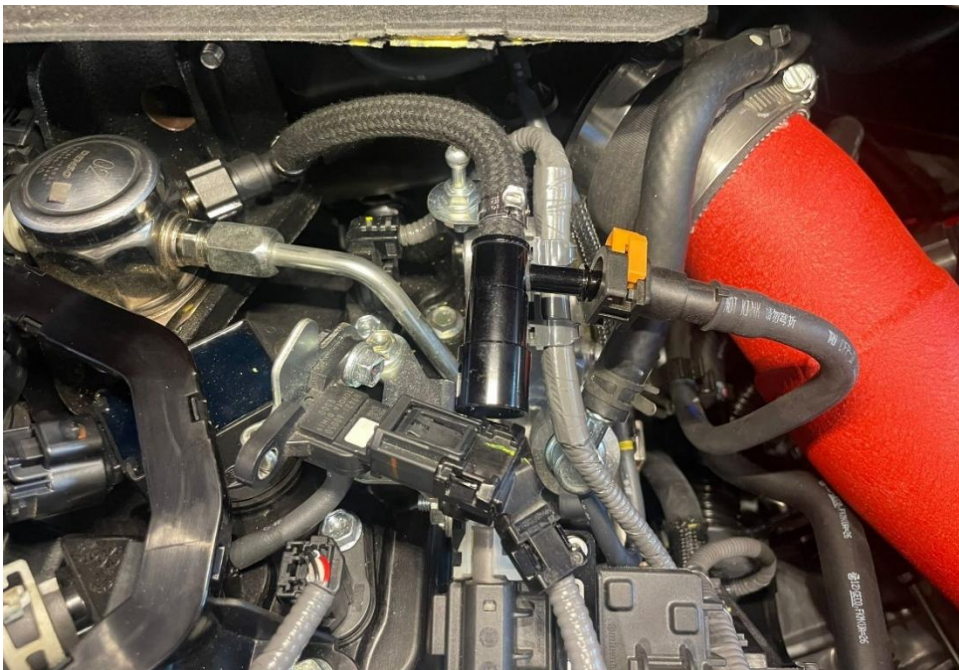
6. Locate the bolt that secures the OE T fitting from the bottom, and remove with a 10 mm socket. This OEM fuel line with T fitting will be replaced with our Stratified custom lines, so store it in case of reverting back to the OEM fuel line setup. We will still use the same bolt and location to secure the ethanol sensor.



7. Now it's time to install the Stratified Flex Fuel kit. Start by mounting the ethanol sensor with the bracket to the engine. Use the same bolt and location for the OE T fitting, don't tighten the bolt yet.

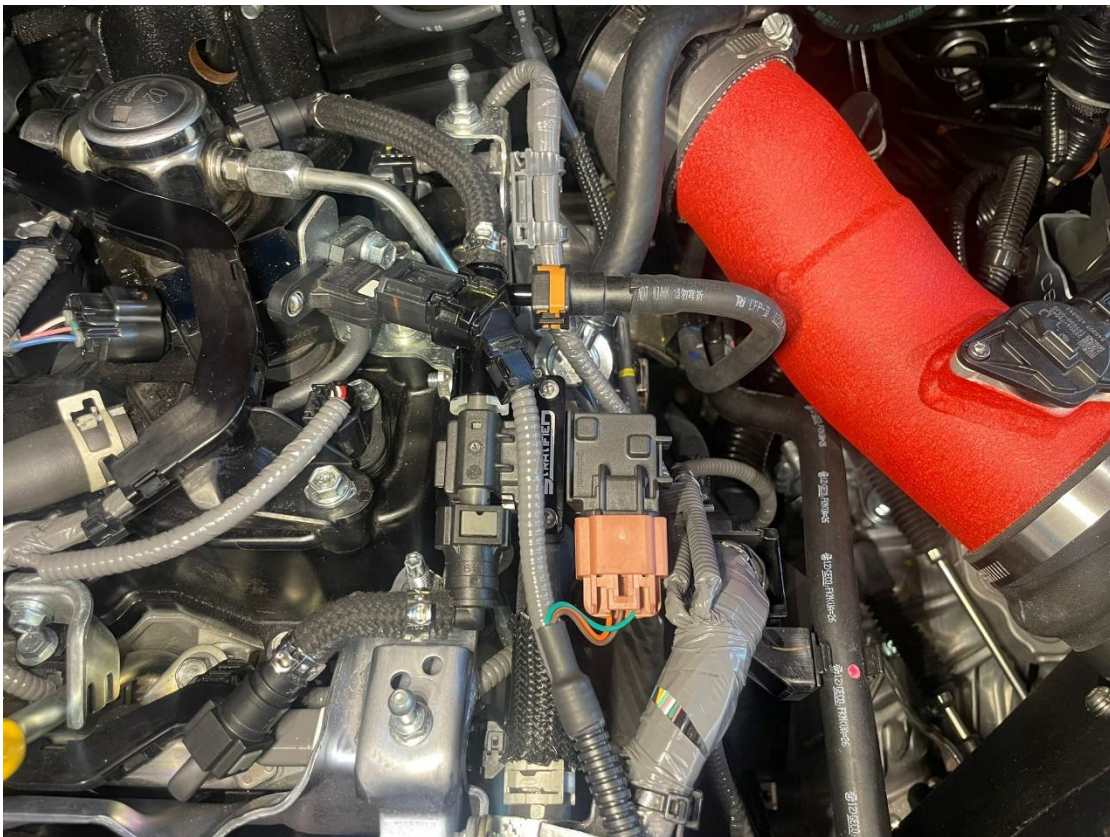


8. For the fuel line connection, start from the HPFP to connect the longer custom fuel line, push in until it clicks. Rotate the T fitting towards the OEM fuel quick-disconnect connector, guide it under the wiring harness, and connect to the ethanol sensor first, then push in the OEM quick-disconnect connector and press down on the orange plastic tab to lock it.

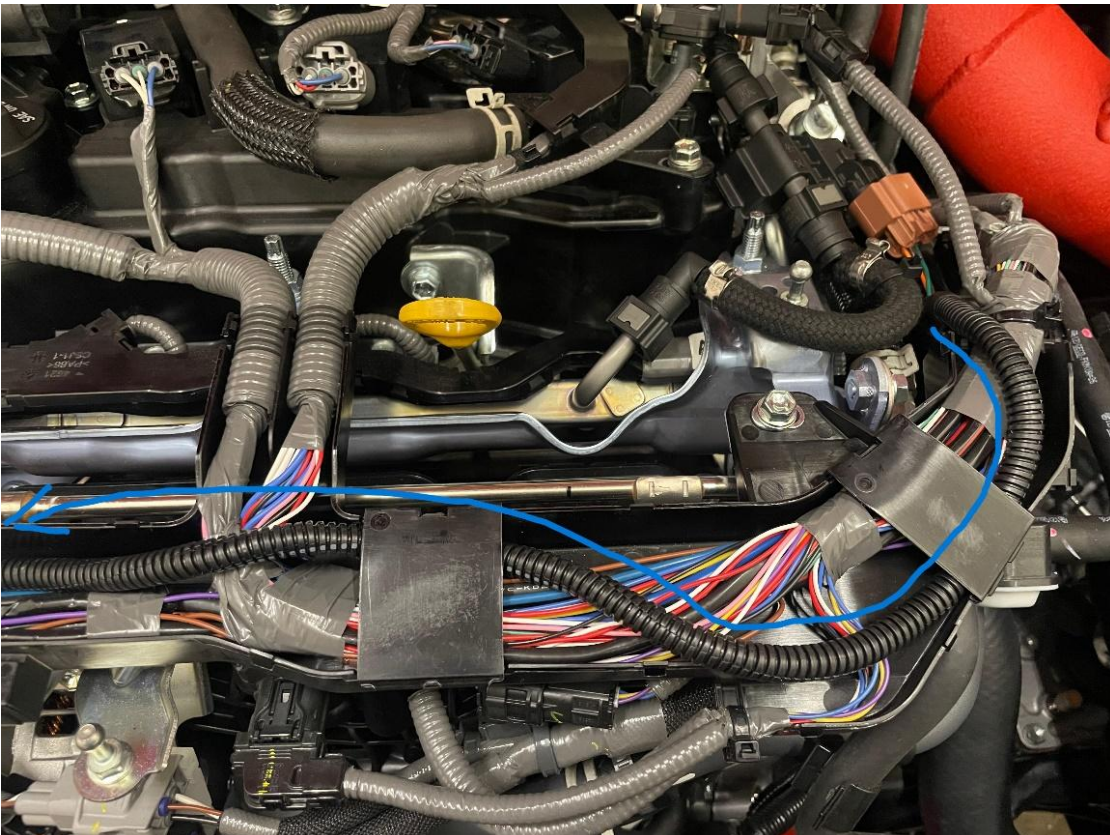
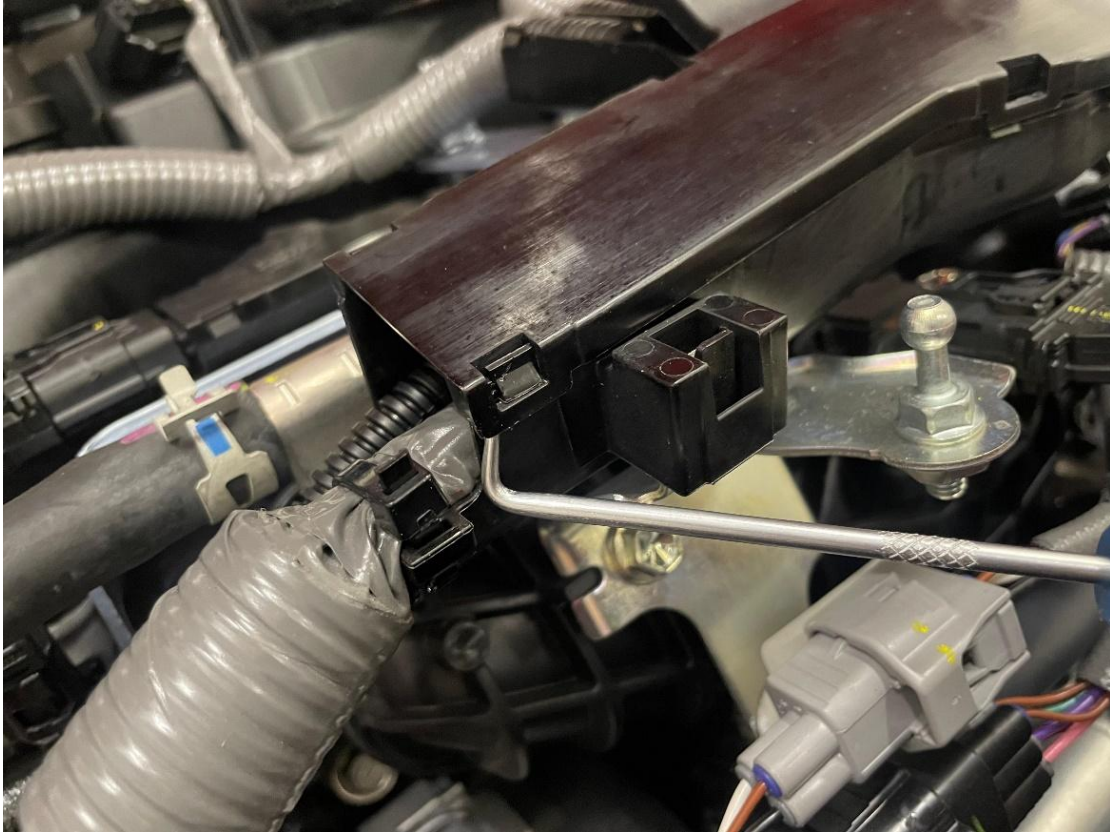


9. Next, connect the low-pressure fuel rail side. Make sure the ethanol sensor is not bolted down fully on the motor, then find the shorter custom fuel line, and connect the 90-degree fitting to the ethanol sensor first. Rotate the line and push in the straight quick-disconnect into the port injection fuel rail until it clicks, may need to move the ethanol sensor to make some room.

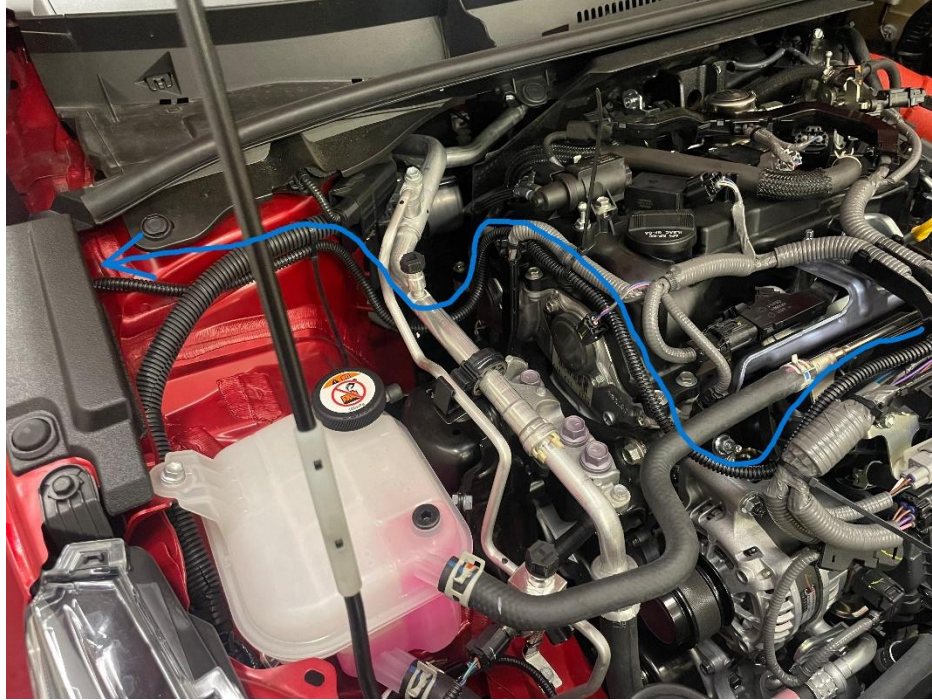
Finally, the fuel line connection should look like below, tighten the 10 mm bolt that holds the ethanol sensor then connect the ethanol sensor to the supplied wiring loom.



10. Next is to route the wiring from the ethanol sensor to the inside of the car so it can connect to the vehicle CAN Bus. Use a pick to carefully pry open the OE wiring harness cover on top of the intake manifold, and guide the wiring loom all the way to the passenger side.



- 11.** Route the wiring to the passenger side of the car, leave enough play between the engine and the chassis, then feed the wire to the wheel well side. Use zip ties to secure it, then reinstall the OEM wiring harness cover.



- 12.** Feed the wire into the wheel well, it will need to be passed through from an existing hole on the passenger side behind the fender liner. Lift that side of the car and remove the wheel, remove the backside of the fender liner, and secure the wire using the OE bracket.



- 13.** Find the spare rubber grommet on the passenger side and remove it, cut like the picture shown to remove the center piece, feed the wire with the 4-pin connector past the grommet, and tape the wiring loom for a better seal.



- 14.** Feed the wire with the grommet into the hole, secure the rest with zip ties, the result should look like below, reinstall the fender liner and the wheel. For RHD cars, use the same hole behind the passenger side fender liner, the CAN Bus gateway is behind the glove box, tuck away the additional wire.



- **IN CAR ITEMS:**

- 15.** From the passenger side we need to remove two trim pieces and the glove box to give access to the CAN Bus gateway.



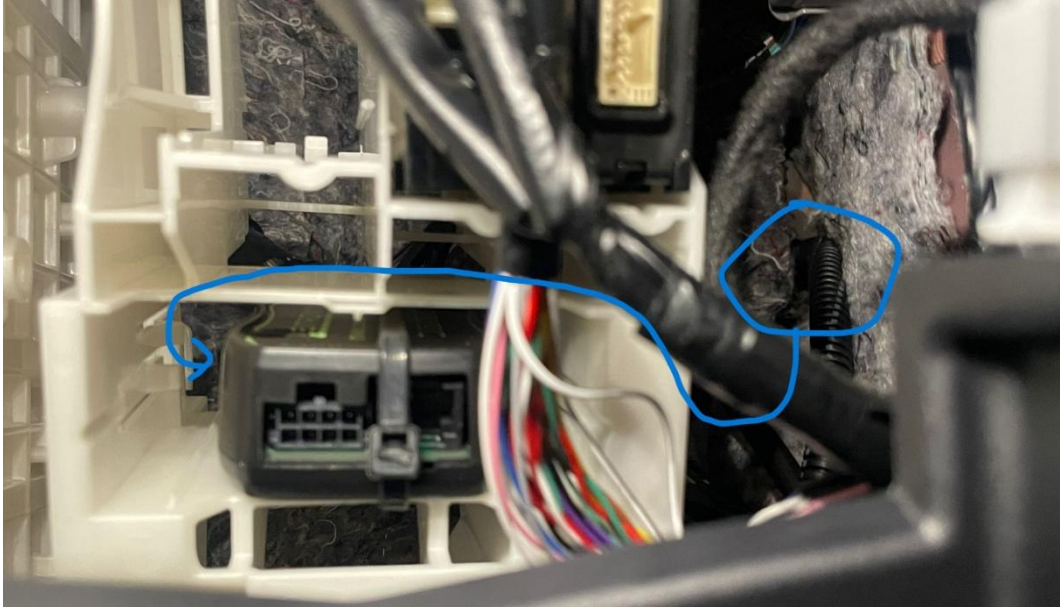
- 16.** Lift up both ends of the side trim piece to pop it off, then unscrew the plastic nut and carefully pull the second panel towards the inside of the car to remove it.



- 17.** Unlink the glove box from the side and squeeze the inside of the box to allow the plastic arm to move out of the dash. Lower the glove box all the way down then it can be removed, try different angles if needed, and don't use force to pull it out.



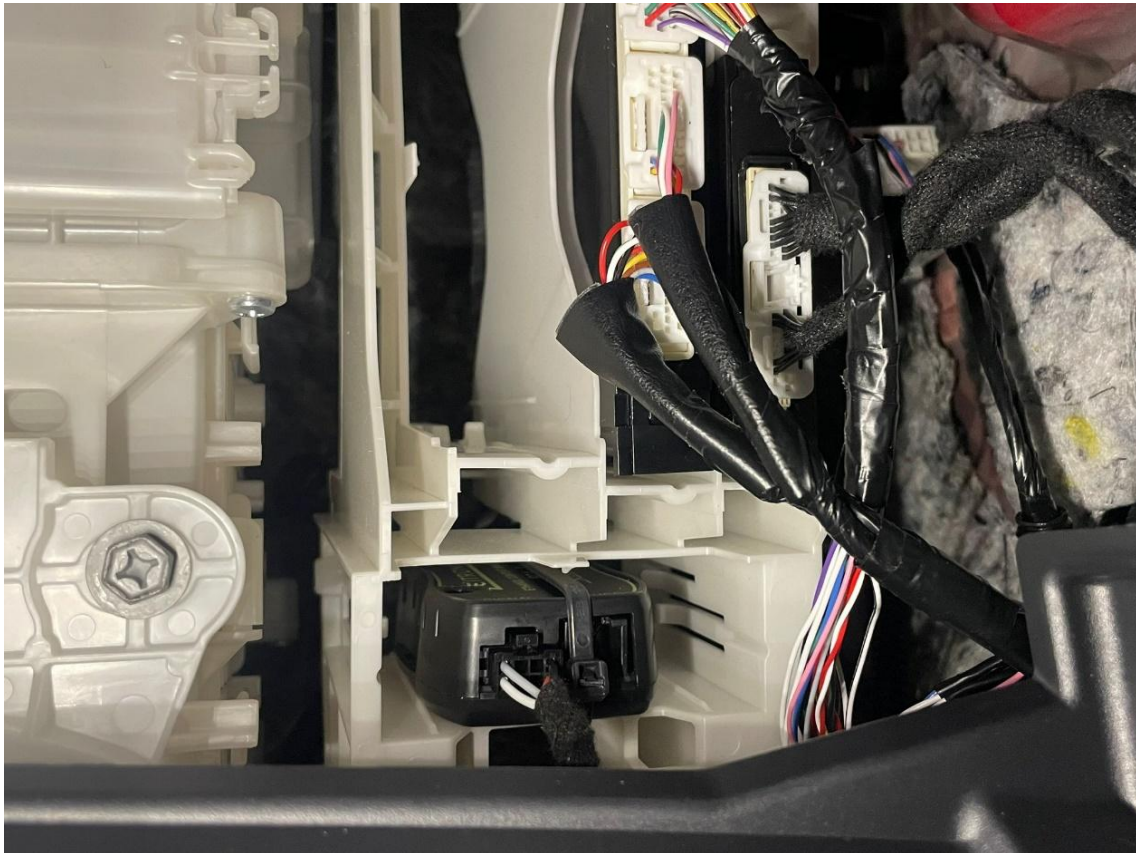
- 18.** Now you can see the wire fished in from the fender, route it behind the OE bracket and through the opening, then connect to the Zetronix ECA-2 CAN Bus box from behind. Secure the Zetronix ECA-2 CAN Bus box to the OEM bracket using double sided tape and zip tie, make sure the side with two wiring connections is facing outwards to show the LED signal once powered.



- 19.** Locate the OEM CAN Bus gateway and find the connector, push in the tab on the side then gently pull it out.



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- 20.** Connect the OEM CAN Bus gateway connector to the grey side of the Stratified adapter harness, and connect the Stratified adapter harness into the OEM CAN gateway. Then connect the 8-pin Molex connector to the Zetronix ECA-2 CAN Bus box, tuck away and zip tie the additional wiring, and make sure it's not making contact with moving items.

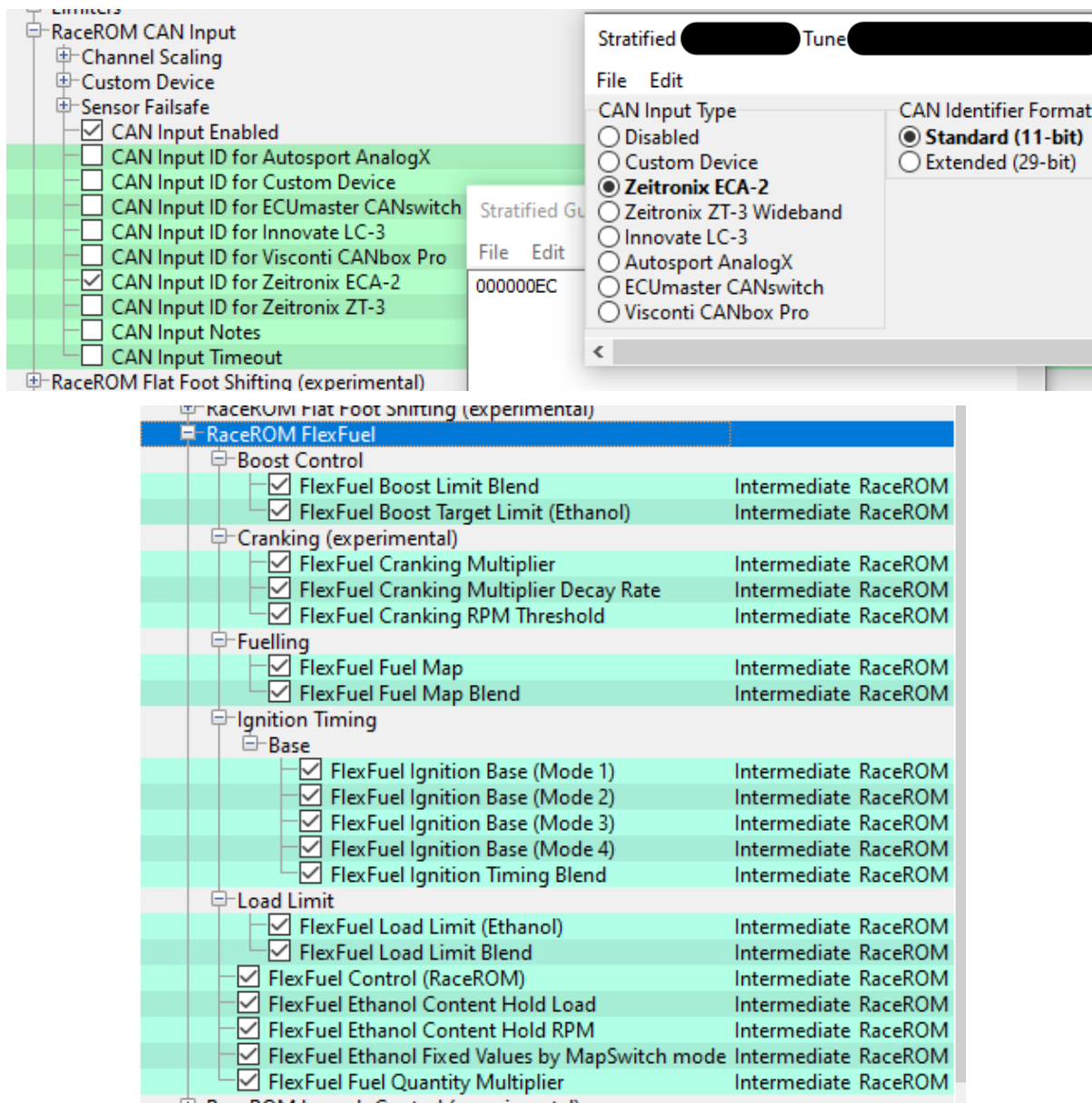


- 21.** Congratulations! Now the Stratified Flex Fuel kit is installed on the car. When the car is tuned for Flex (such as through Stratified Tuning) the ECU will self adjust for any mixture. We recommend you stay below E50 if using OEM injectors and the OEM turbo.
- 22.** Reinstall the EFI MAIN NO.2 relay and connect the HPFP connector, then connect the battery negative terminal, open and close the door a couple of times to prime the fuel system. Check closely on the fuel rail side to make sure there are no leaks.
- 23.** Turn the ignition on and check the Zetronix ECA-2 CAN Bus box, it will be turned on with the ignition and light up the LED, then it will start blinking fast to indicate that the sensor is reading the ethanol content successfully.

- 24.** Clear fault codes, if there are any, due to relieving fuel pressure, certain modules lost power etc. After this you can install the glove box and trim pieces. Reinstall the engine cover.

Please contact your tuner for proper tuning once installed and enjoy your Stratified Flex Fuel enabled GR Corolla / GR Yaris.

If using EcuTek The default ECA-2 CAN input address will be used by the RaceROM, and under Live Data > FlexFuel Ethanol Content will show the current reading.



****GR Yaris CAN Bus Gateway Notes:**

- Some GR Yaris models have additional CAN Bus wiring on the CAN gateway connector or may have different pin allocations. Confirmation is required at the time of purchase for your specific car setup to make sure the kit matches your car works correctly if you have a GRY.
- Before purchasing, please follow steps 15-19 to check on your OEM CAN Bus gateway connector, and take detailed pictures on both sides of the connector and email them to feedback@stratifiedauto.com. We will custom make the adapter harness to work with your GR Yaris.
(Allow an additional 2-5 business days to build.)

