



Flex Fuel Bluetooth Kit BRZ / FRS / GT86 install instructions



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FFBT parts:

- (1) Ethanol Content Analyzer Module
- (1) Ethanol Content Analyzer Sensor
- (1) Sensor Bracket
- (1) Velcro Strip
- (2) Short Stainless Steel Bolts
- (1) Long Stainless Steel Bolt
- (3) Stainless Steel Washers
- (1) Stainless Steel Lock Nut
- (1) Rubber Loop Clamp
- (2) Fuel Lines
- (1) 5/16 Quick Disconnect Removal Tool (included in kit)

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Tools required for installation:

- (1) 3/8 wrench or ratchet
- (1) 1/8 allen wrench
- (1) 12mm wrench or ratchet
- (1) Pliers (optional)
- (2) Shop towels
- (1) 5/16 Quick disconnect fuel line removal tool (included in kit)
- (3) Zip ties

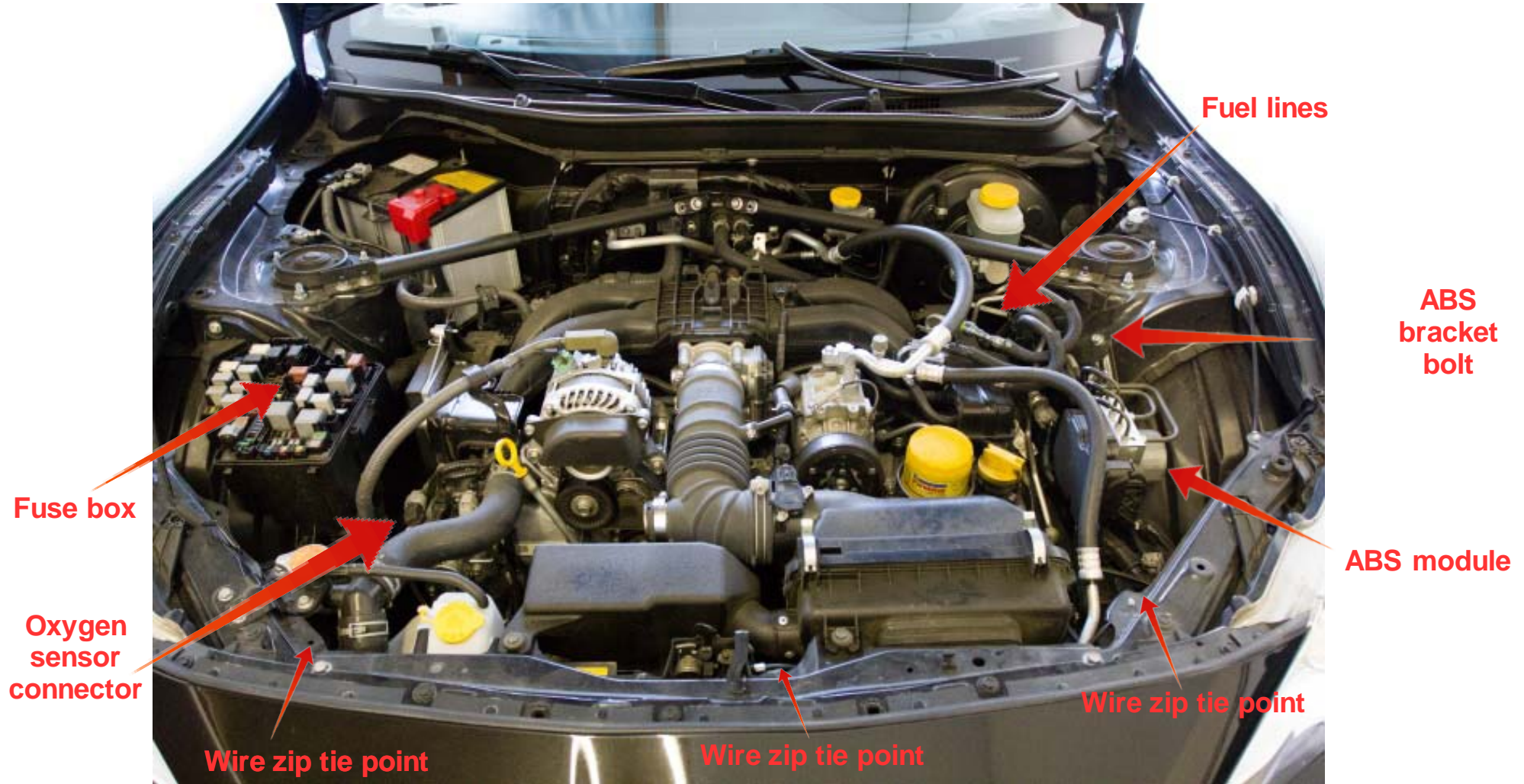
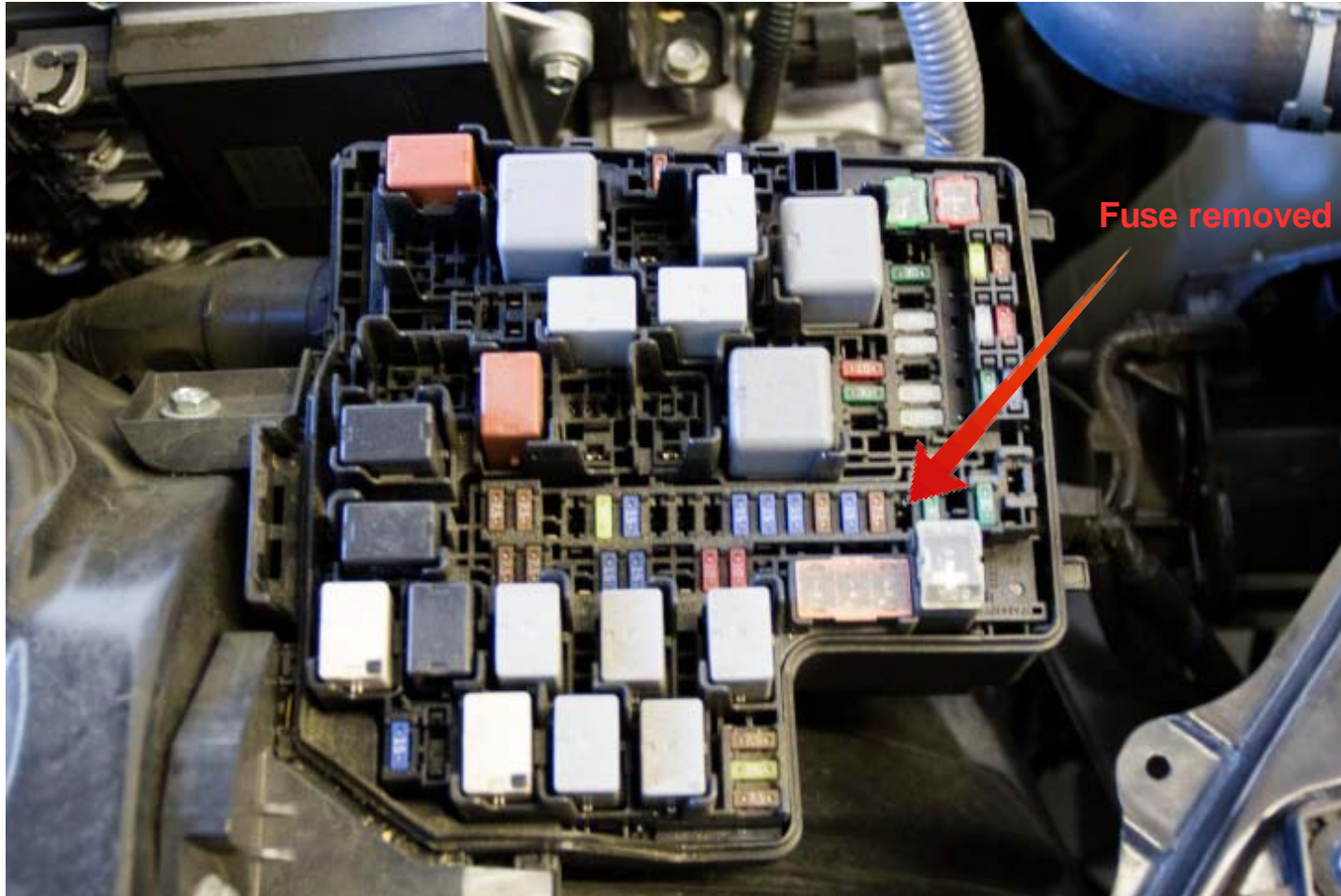


Fig 1.0

Working areas:

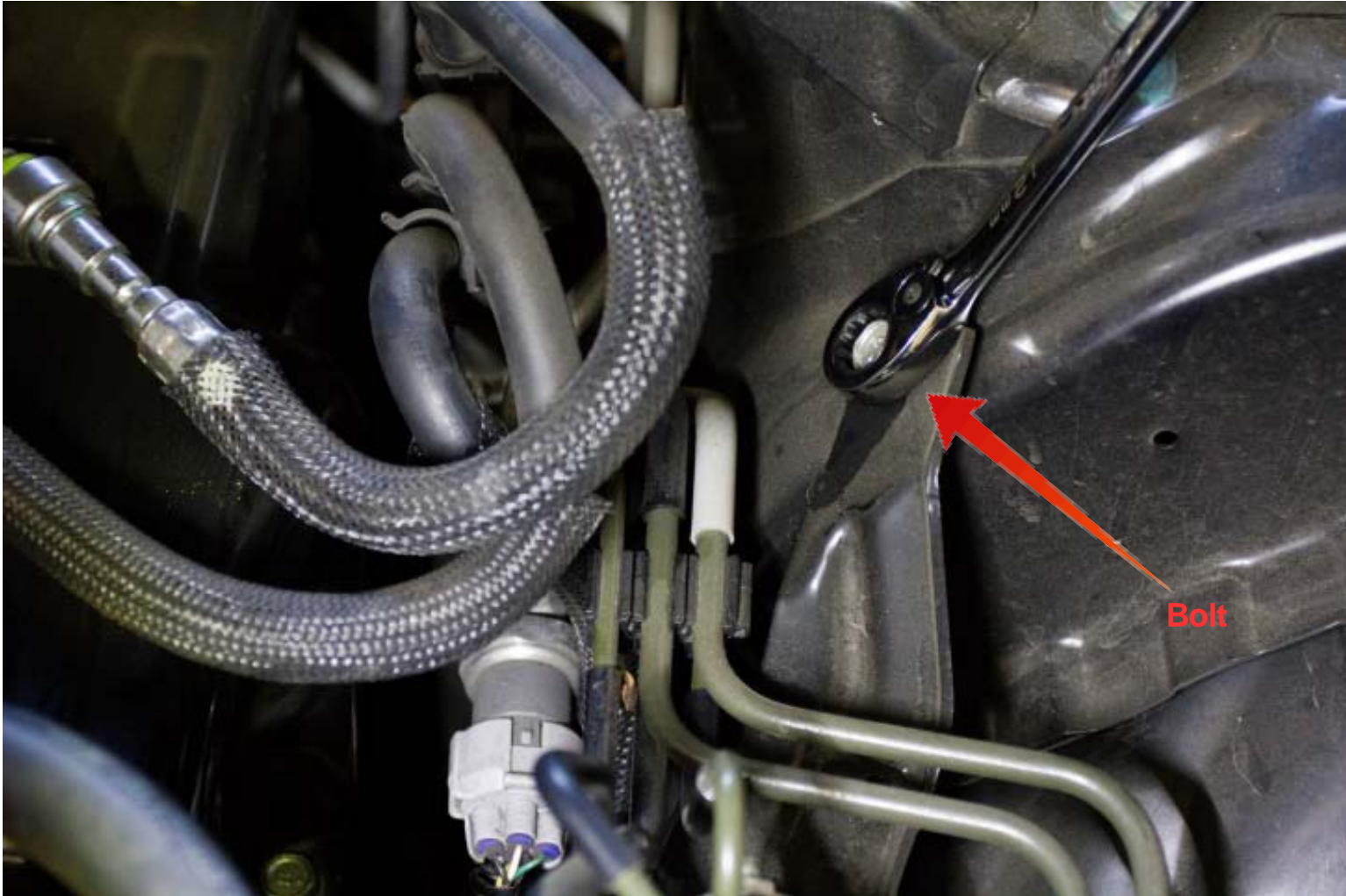
Locate the areas you will be working with when installing the FFBT in the engine bay.

**Fuse and fuel pressure:**

Ensure the vehicle is off and disconnect the light green 20 amp fuel pump fuse, in the main fuse box. It's labeled F/PMP on back of the box cover.

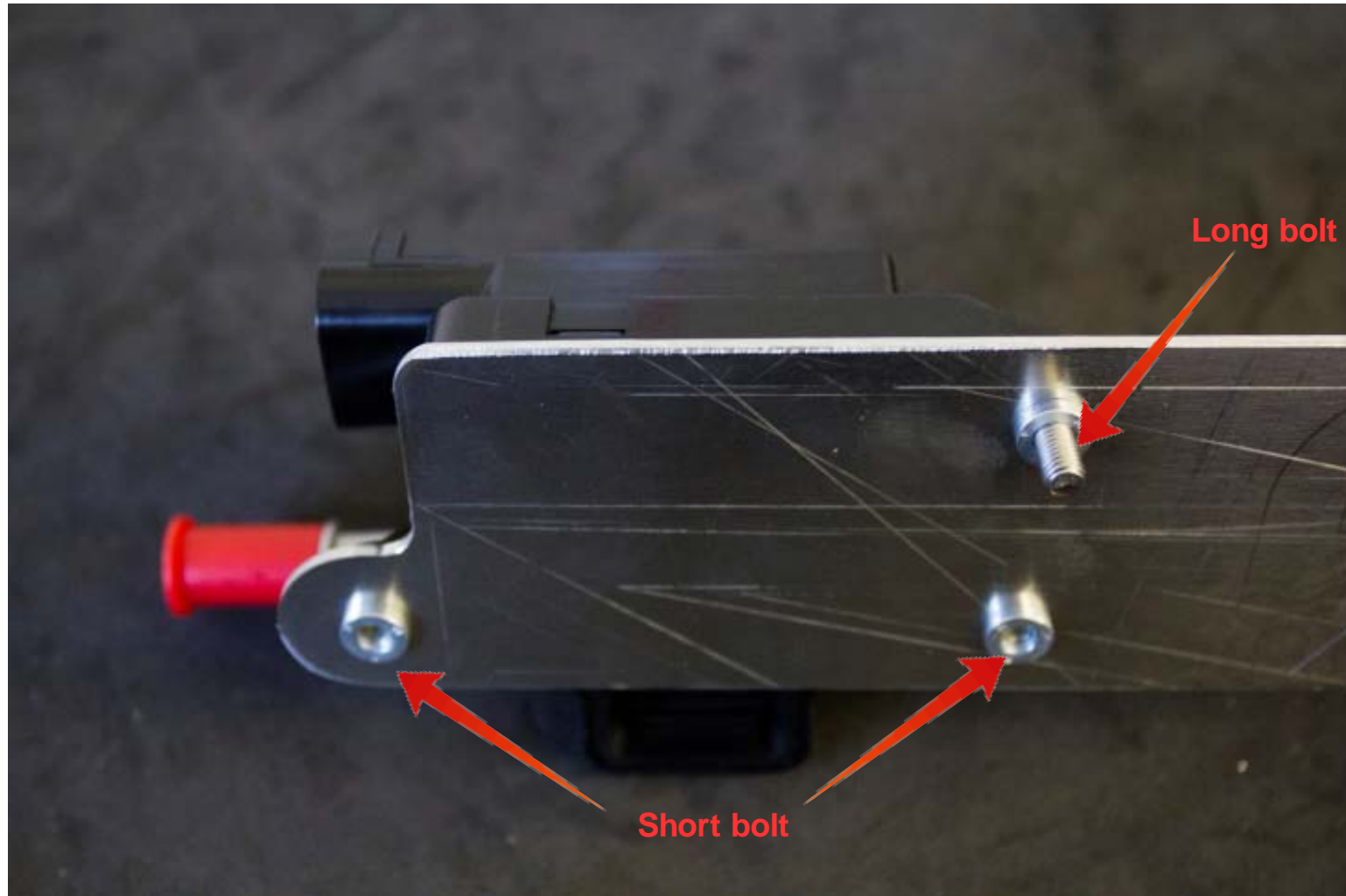
Now try starting the vehicle; it should either refuse to start or start and die once the remaining fuel is used up in the fuel lines.

If the car was running recently, let the vehicle sit for a minimum of 30 minutes to relieve fuel pressure and cool before installation.

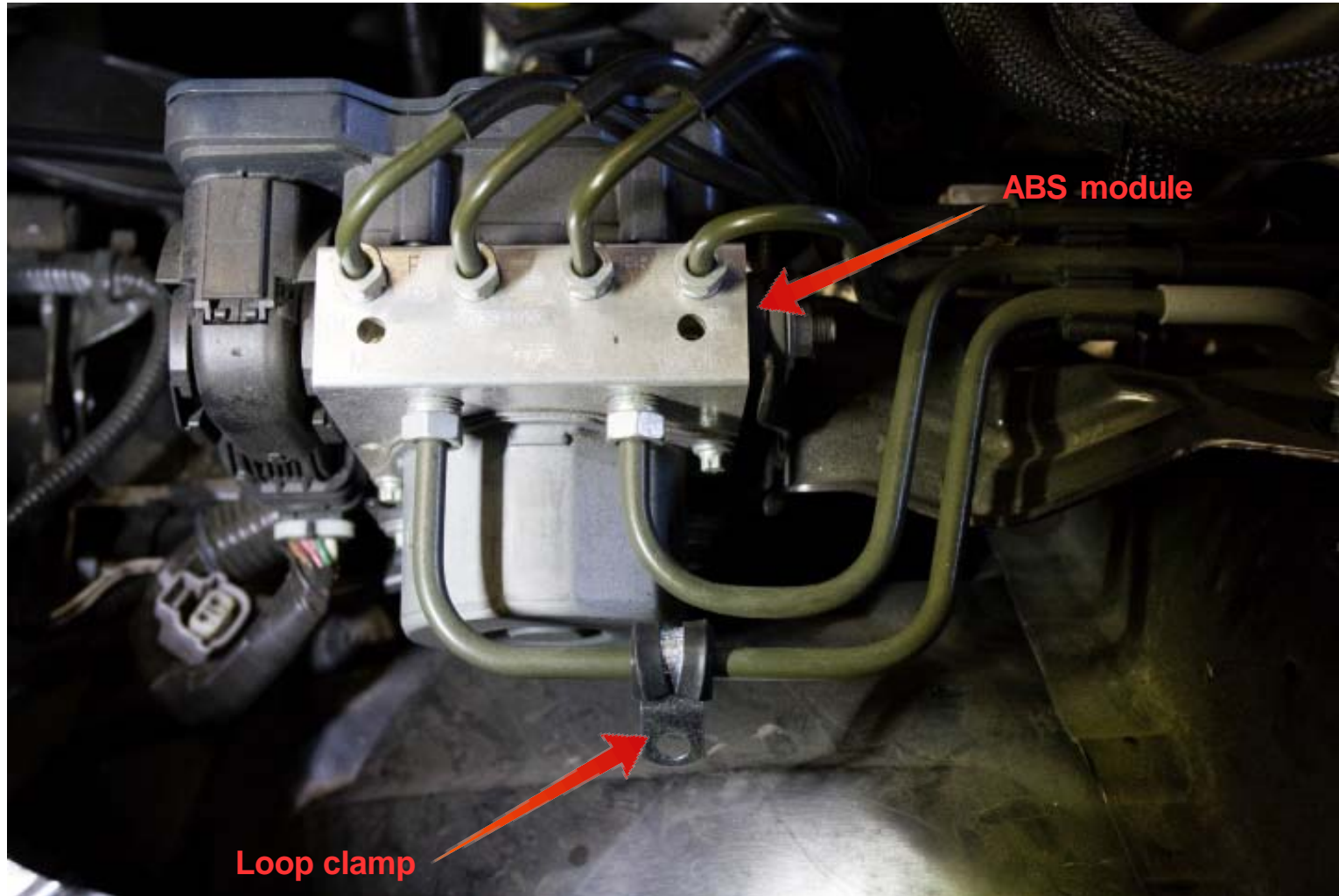
**ABS bracket bolt:**

Locate the ABS bracket bolt, located on the strut tower that holds the ABS module in place. (reference fig 1.0 on pg.1)

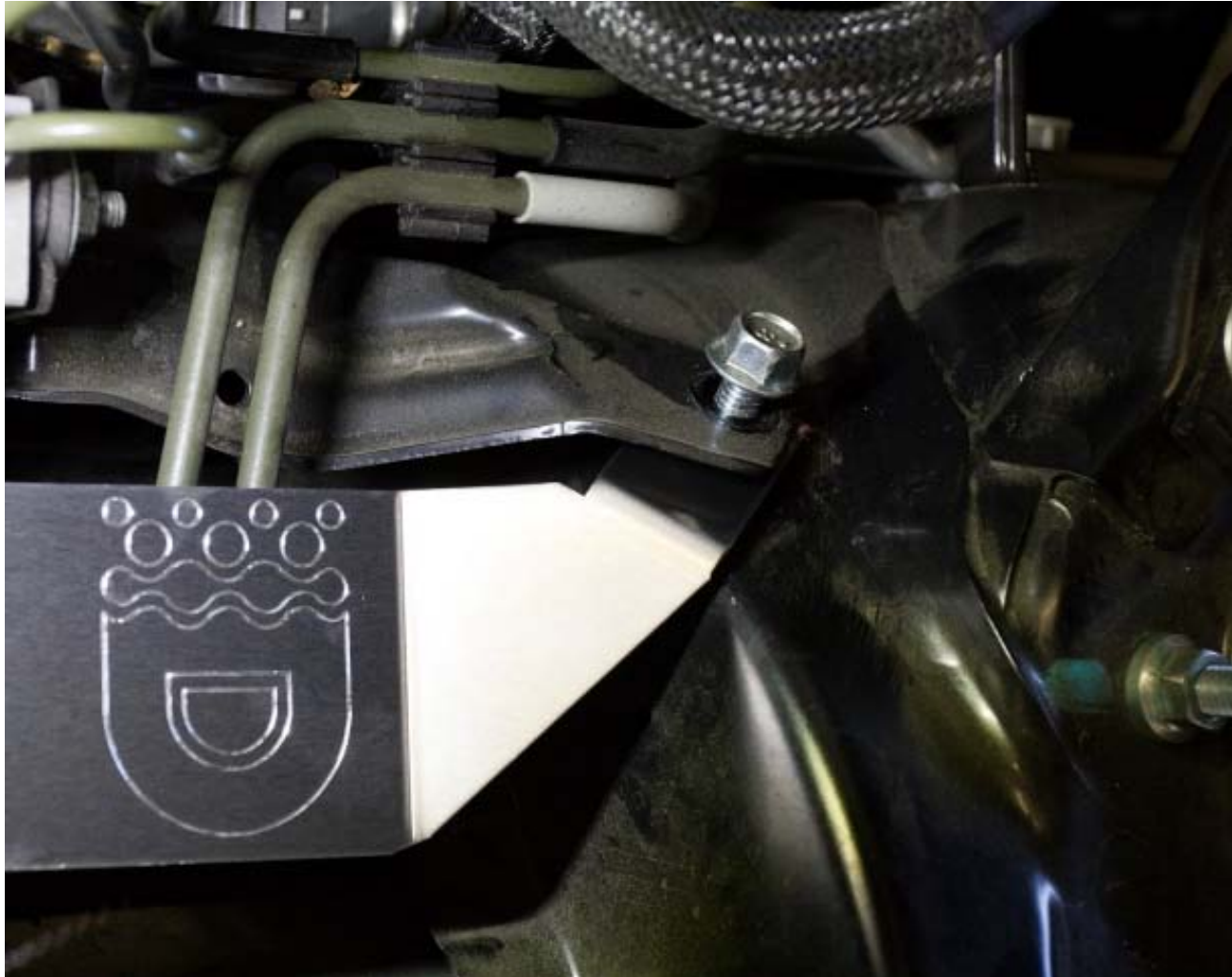
Using a 12mm wrench, loosen the bolt. You do not need to remove the bolt, just back it off to give a 5mm gap.

**ECA sensor bracket:**

Use the supplied two short screws and one long to tighten down the FlexFuel Sensor to the supplied mounting bracket, as shown in the picture above, using the 1/8 allen wrench.

**Loop clamp:**

Install the supplied rubber loop clamp to the brake line closest to the fender liner as shown in the picture. It helps to use the bracket as a guide to position the loop clamp hole to the bracket hole. Then squeeze the clamp together by hand or with pliers.

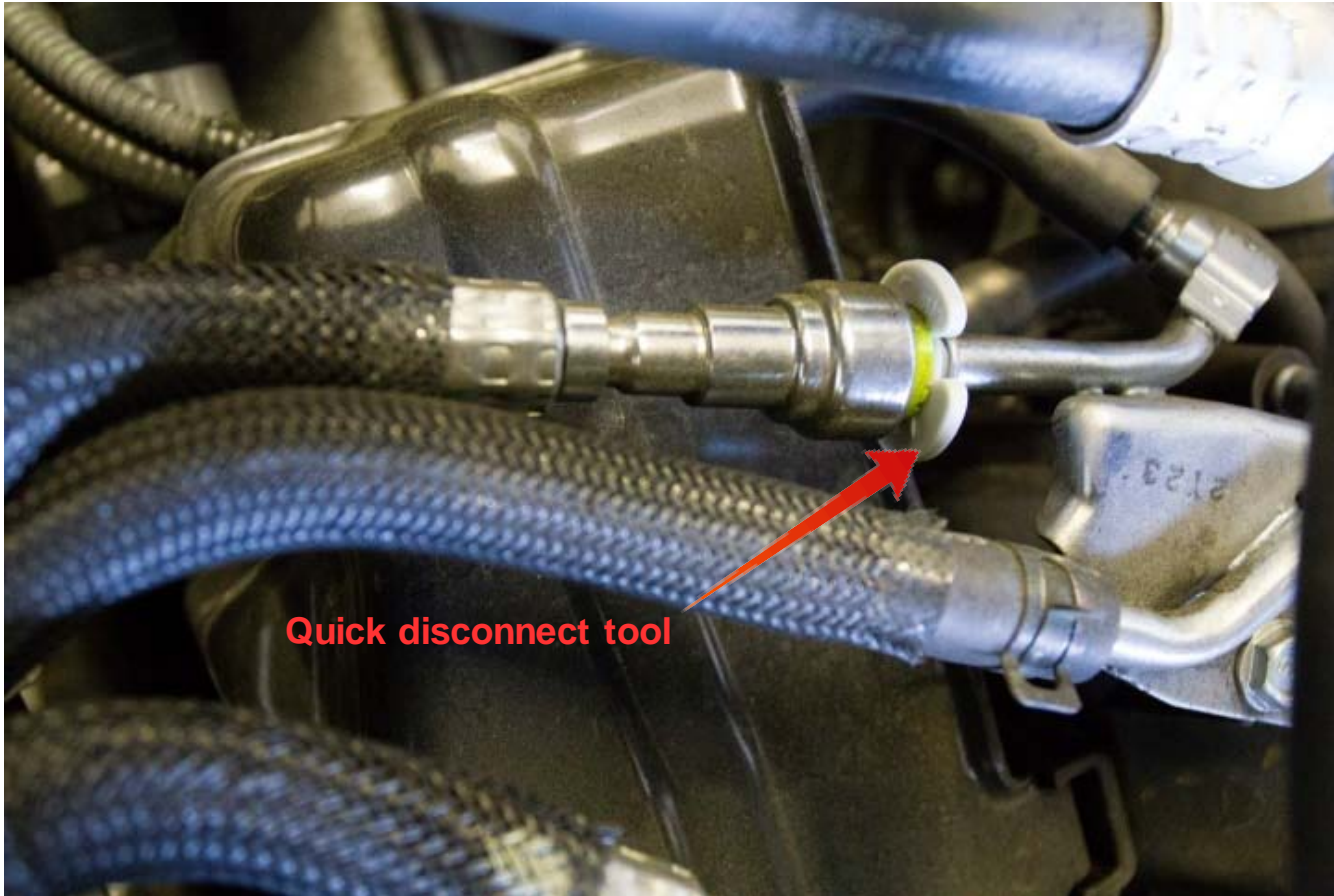
**Bracket installation:**

Insert the mounting bracket (with Flex Fuel Sensor mounted) underneath the ABS mounting bracket along the strut tower.

Align the rubber loop clamp with the longer screw on the mounting bracket.

Screw nylon nut onto the bottom of the mounting bracket to hold the rubber loop clamp to the mounting bracket and tighten with a 3/8 wrench.

Tighten the 12mm bolt down on the strut tower once fitment is adjusted.



Fuel line disconnection:

Disconnect the fuel line closest to the front of the vehicle with the supplied 5/16 quick disconnect tool, by pressing the tool inside the yellow plastic fitting on the OEM connection. Now lightly press the fuel line towards the quick disconnect tool to engage the tool and pull away the line to release it from the hard line. Use a shop towel to cover the line and another under the line to catch any lost fuel. *****Caution***** Take great care when removing the line, as there still may be high pressure fuel in the line. If you pull slowly the pressure will release slowly and should not spray fuel.

**Fuel line installation:**

Remove the black and white protective covers from the fuel lines. Insert the male quick disconnect fuel line into the flexible OEM fuel line that was disconnected on page 9, push until you hear an audible click. (Leave the other end disconnected at this time)

**Fuel line installation:**

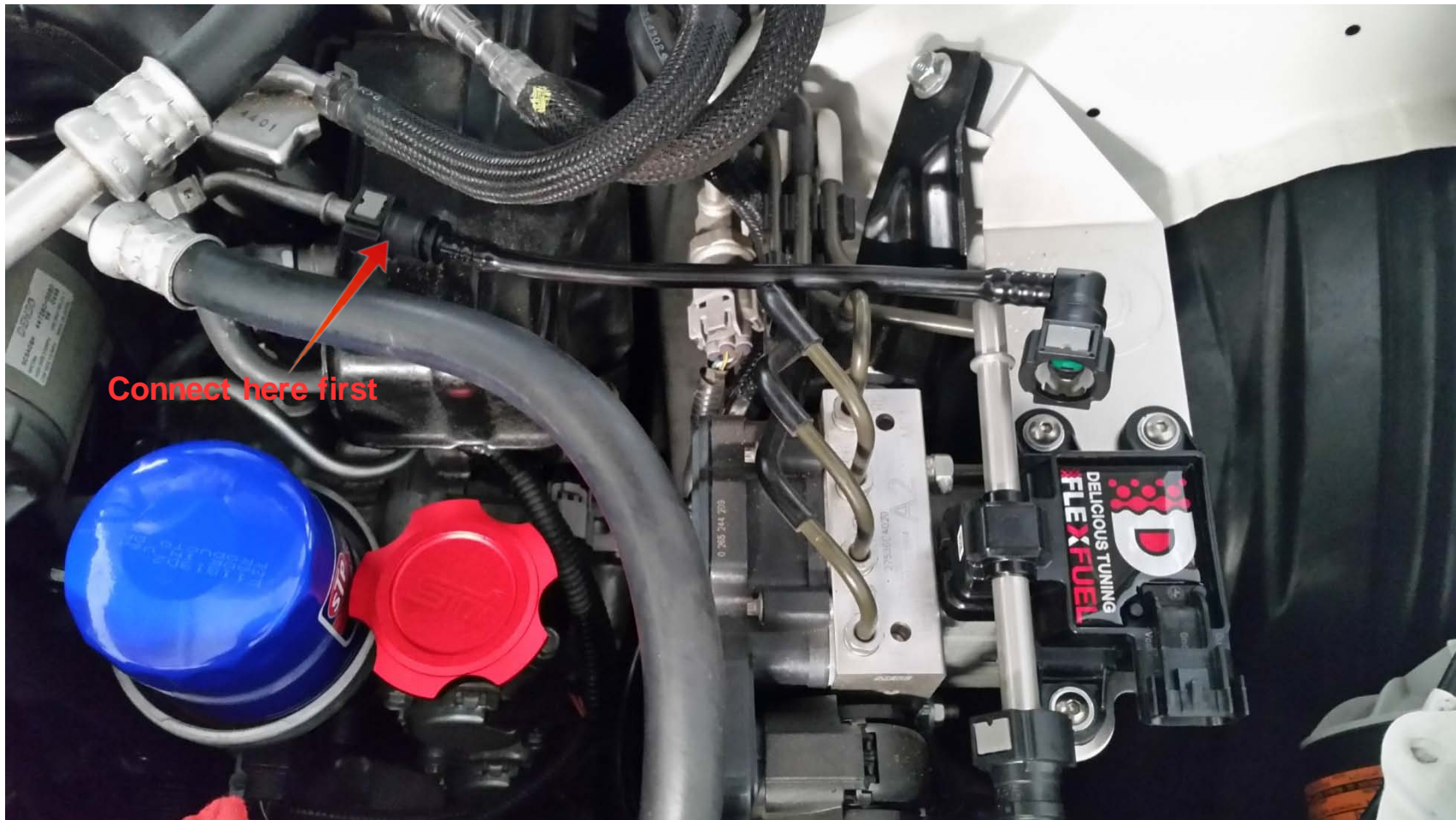
Remove the white protective covers from the short fuel line. Insert fuel line onto the OEM hard fuel line, push until you hear an audible click. Look at page 14 for reference.

**Fuel line routing:**

Move the OEM fuel line with supplied line down and between the grey plastic connector and strut tower so the end comes out below the ABS unit.

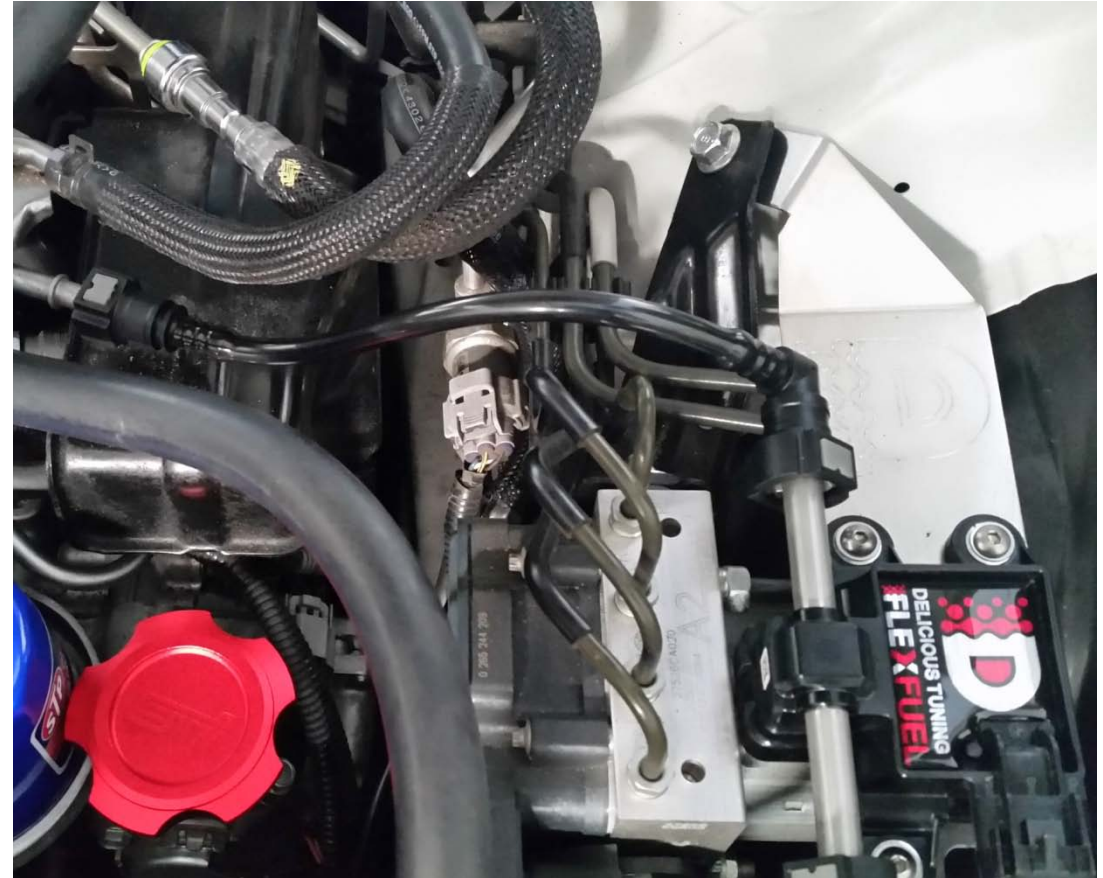
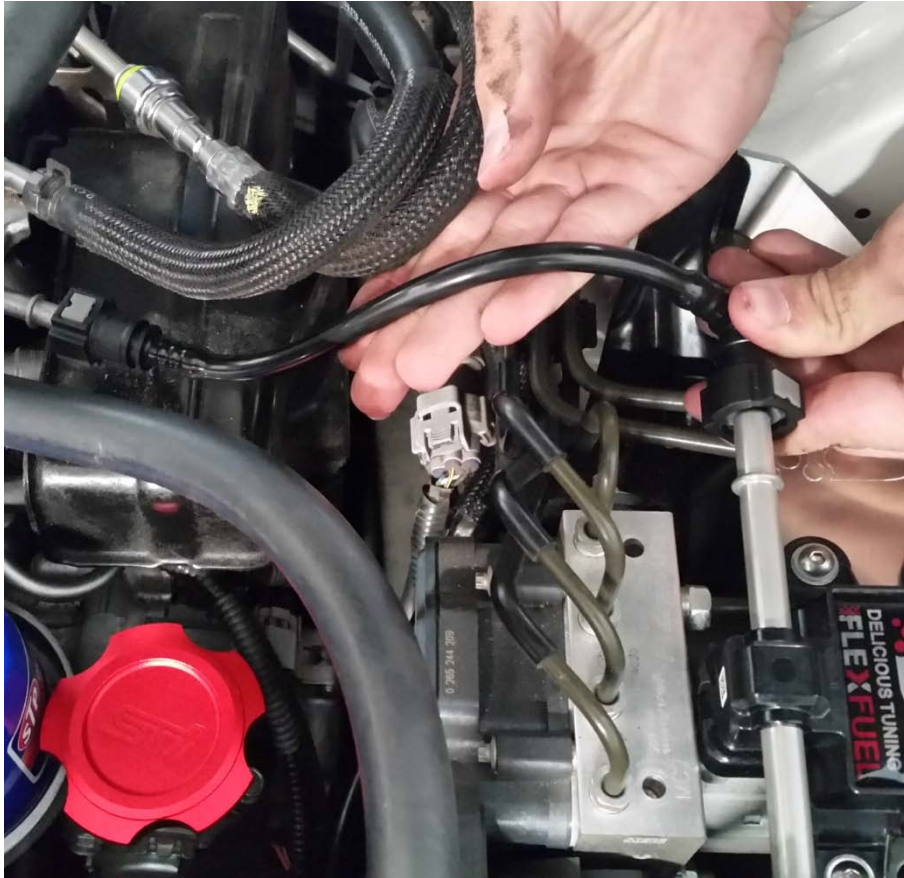
**Fuel line sleeving:**

Slide the plastic protective braided sleeving up, so that it protects the fuel line from rubbing on the brake lines, as seen in the picture above.



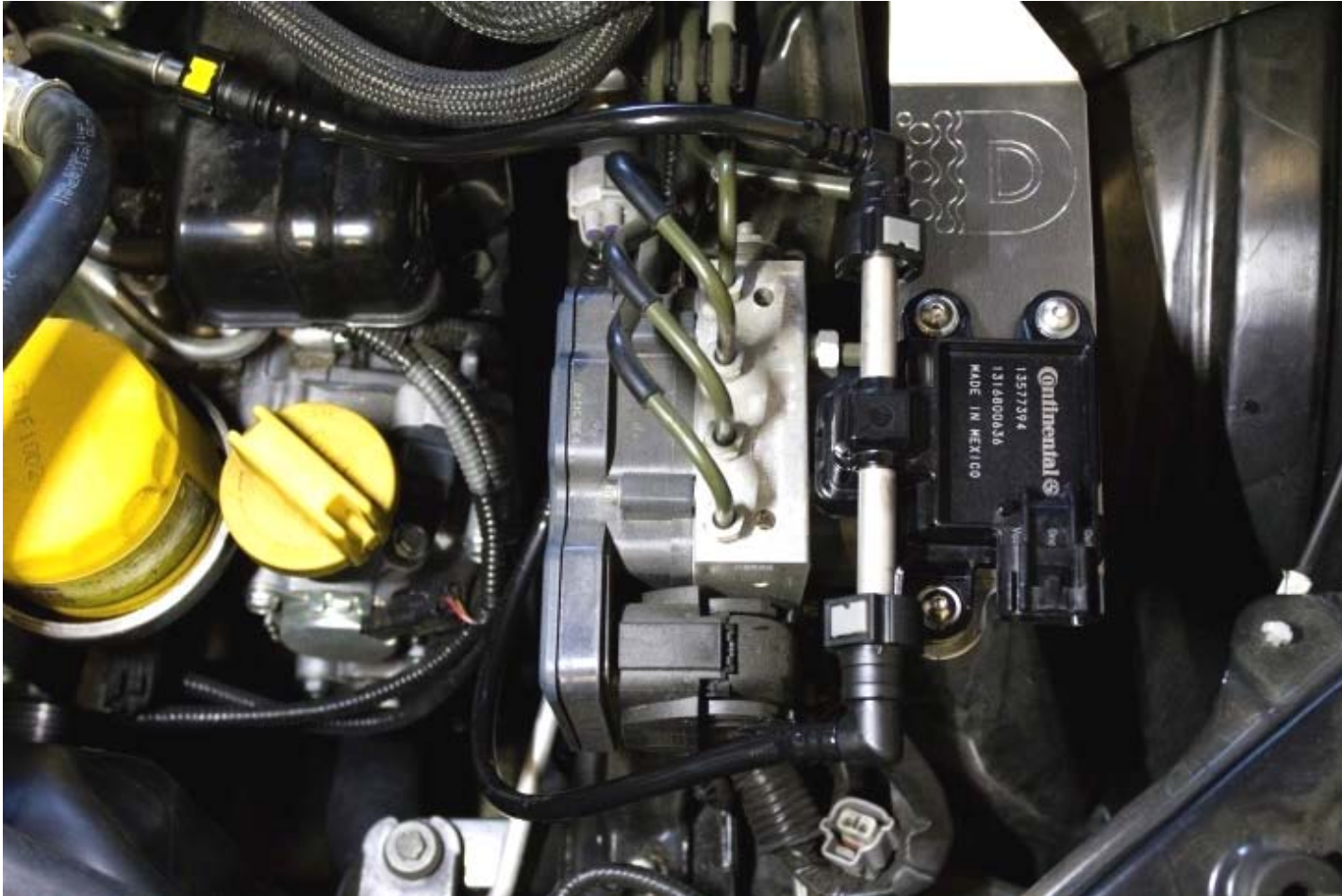
Fuel Line Connection:

The shorter of the two fuel lines should connect to the fuel rail hard line first, to avoid kinking the line. ***Notice*** the line appears to be too long and does not connect to the sensor, this is intentional. **Do not try and connect it yet, this will kink the line.**



Fuel Line S-bend:

Route the fuel line up and over the ABS hard lines by supporting it with your hand, this creates a subtle “S” bend, as shown in the pictures above. **Be very careful not to kink the line.** Connect the line to the ECA sensor. Push until you hear an audible click on all connections. Tug on all connections to make sure they are fully locked without pressing the release buttons.



Fuel Line Connection:

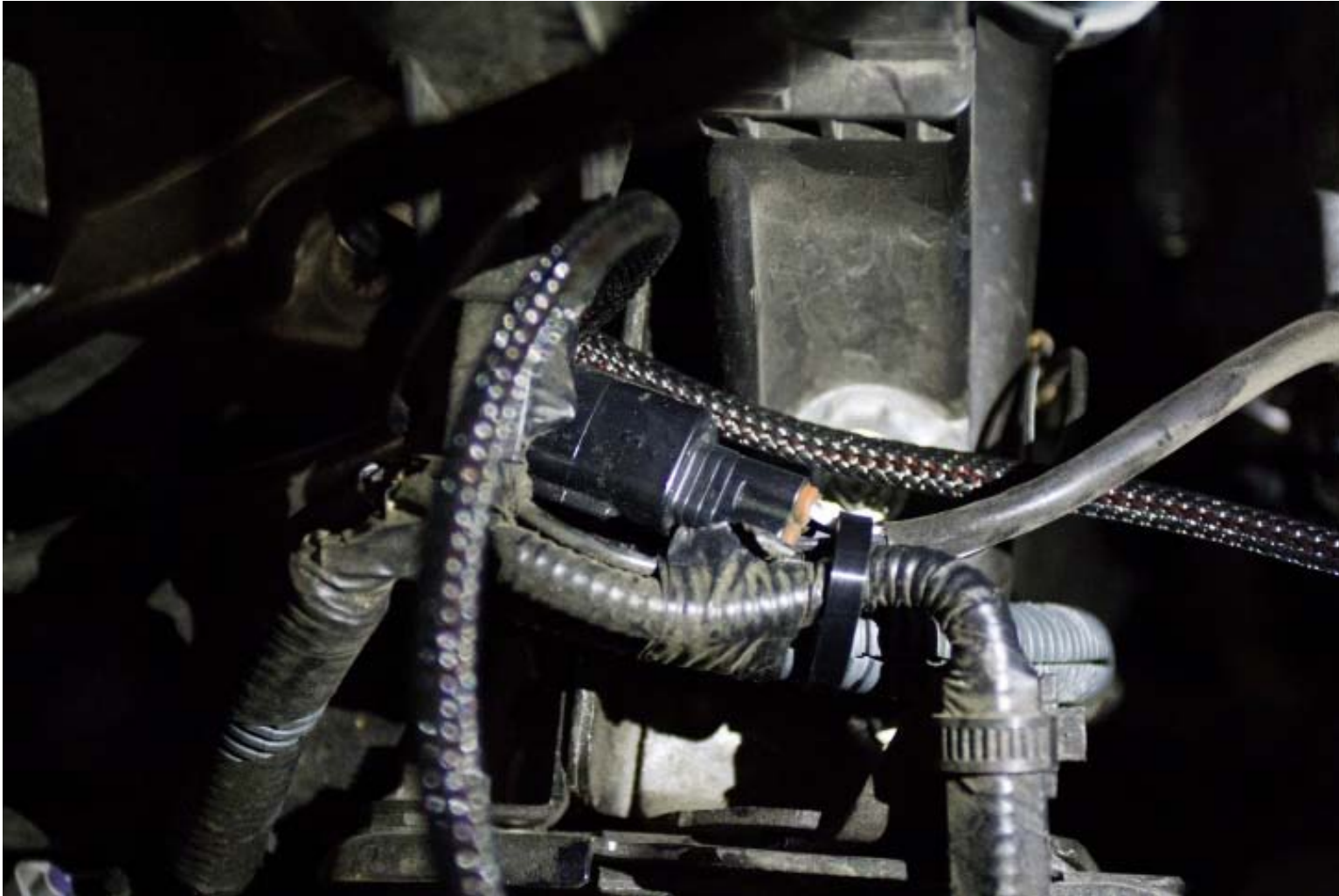
The longer of the two fuel lines should connect to the ECA sensor's fitting, closest to the front of the vehicle. Route the fuel line down and underneath the ABS unit. **Take care not to kink the lines.** Push until you hear an audible click on all connections. Tug on all connections to make sure they are fully locked without pressing the release buttons.

**ECA module mounting:**

Mount the ECA module ("D" box) on top of the fuse box with the supplied Velcro. Route the wires as shown, so they are away from the alternator power wire.

**O2 sensor connection:**

Disconnect the secondary O2 sensor from the black harness on the on the top of the engine towards the front passenger side. Connect the gray supplied connector into the black OEM connector as shown in the pictures. Make sure the wires are still away from the alternator power wire.

**Bundle O2 connector:**

Place the original OEM black connector below the fuse box as shown. Zip tie the OEM black connector to secure the harness.

**Wire routing:**

Run the longer of the two harnesses coming from the “D” underneath the radiator cap and zip tie to the hole in the chassis.

**Wire routing:**

Route the harness underneath the hood latch, above the fans and below the intake. Zip tie the harness to the hood release cable located near the hood latch .



Wire routing:

Zip tie the harness near the A/C condenser line as shown.

**ECA sensor connection:**

Connect the harness into the FlexFuel sensor and check all your connections and lines for proper fitment. Make sure nothing is loose or at risk of being snagged, caught, or rubbing.

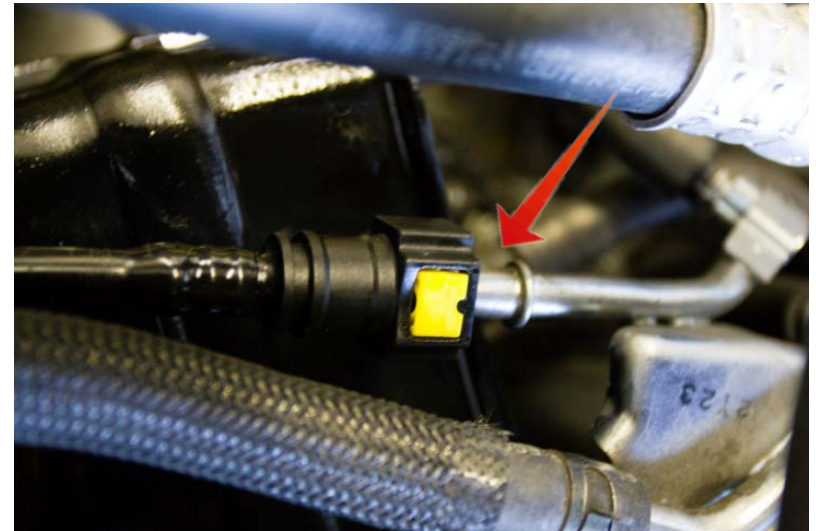
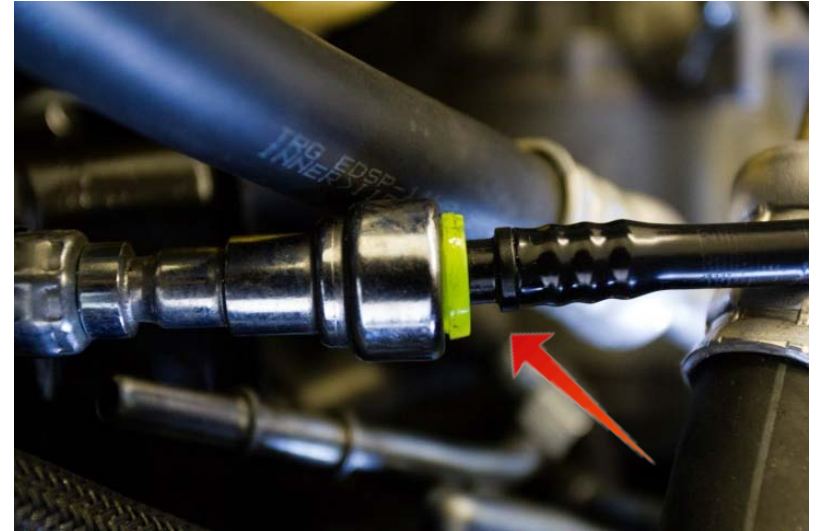
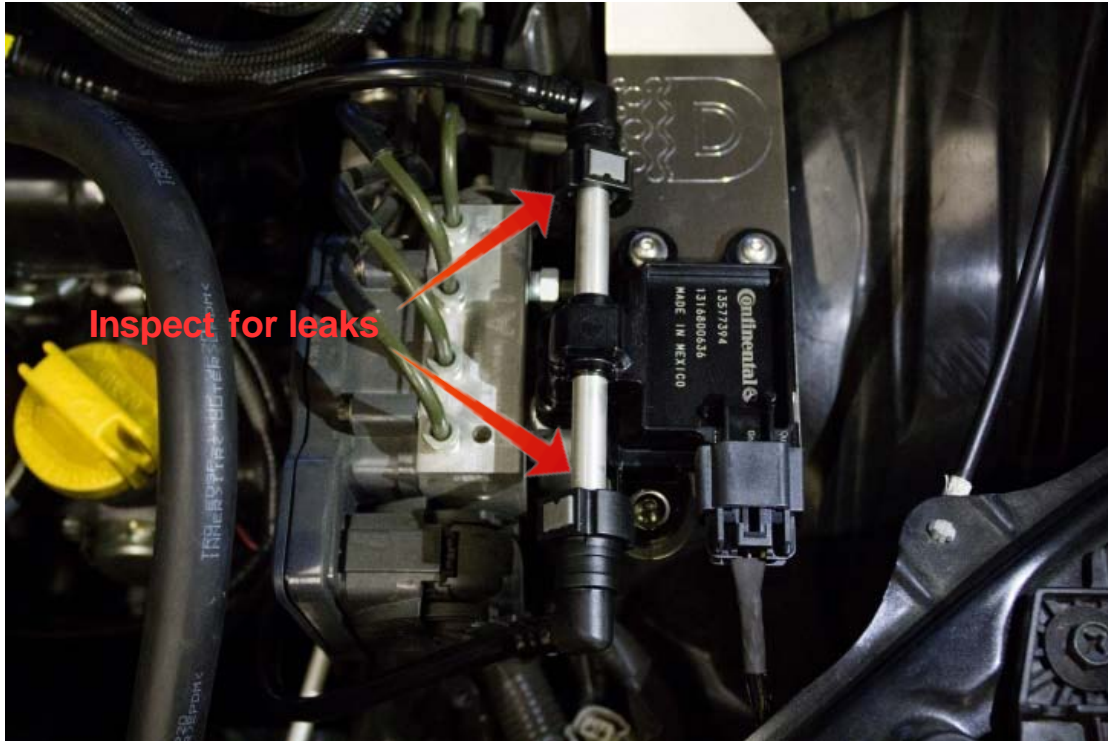
**Installation check:**

Make sure nothing is loose or at risk of being snagged, caught, or rubbed around the engine bay.



Priming & fuel line check:

Prime the vehicle 10 times before starting to completely prime the fuel lines. When doing so, it is very important to check all the fuel line connections very carefully for any small leaks. To prime, turn ignition key to the ON position.



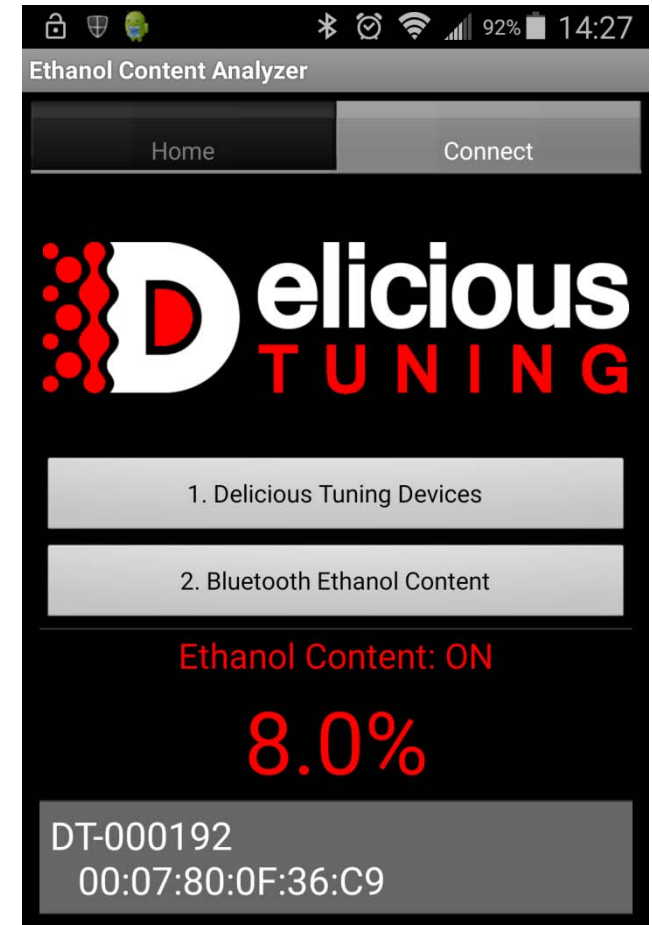
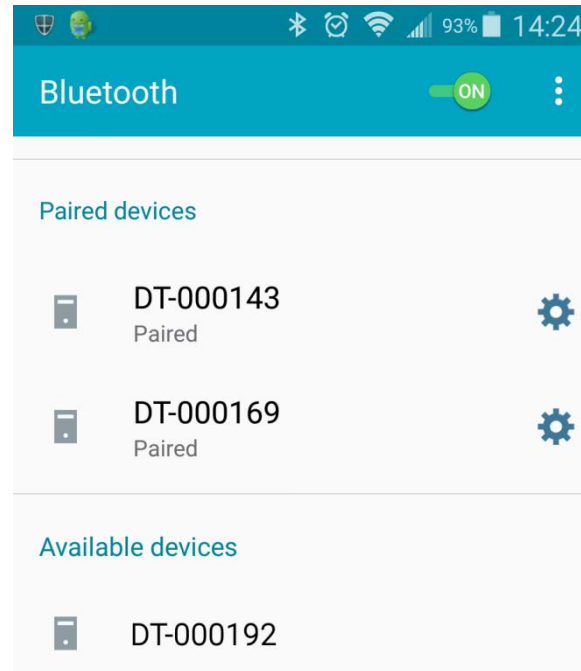
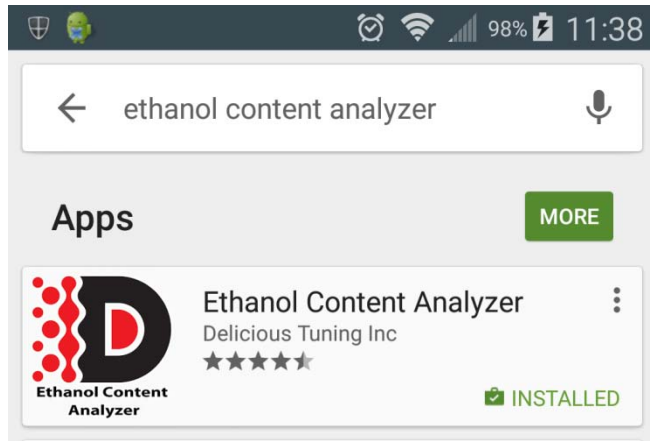
Fuel line check after starting:

When starting the car for the first time, once again, please inspect all fuel lines for any small leaks (for a recommended 5-10 minutes) Start the vehicle.

If a leak is found please shut off the vehicle immediately and contact the distributor of the product for replacement. (At this time it is NOT recommended to drive the vehicle)

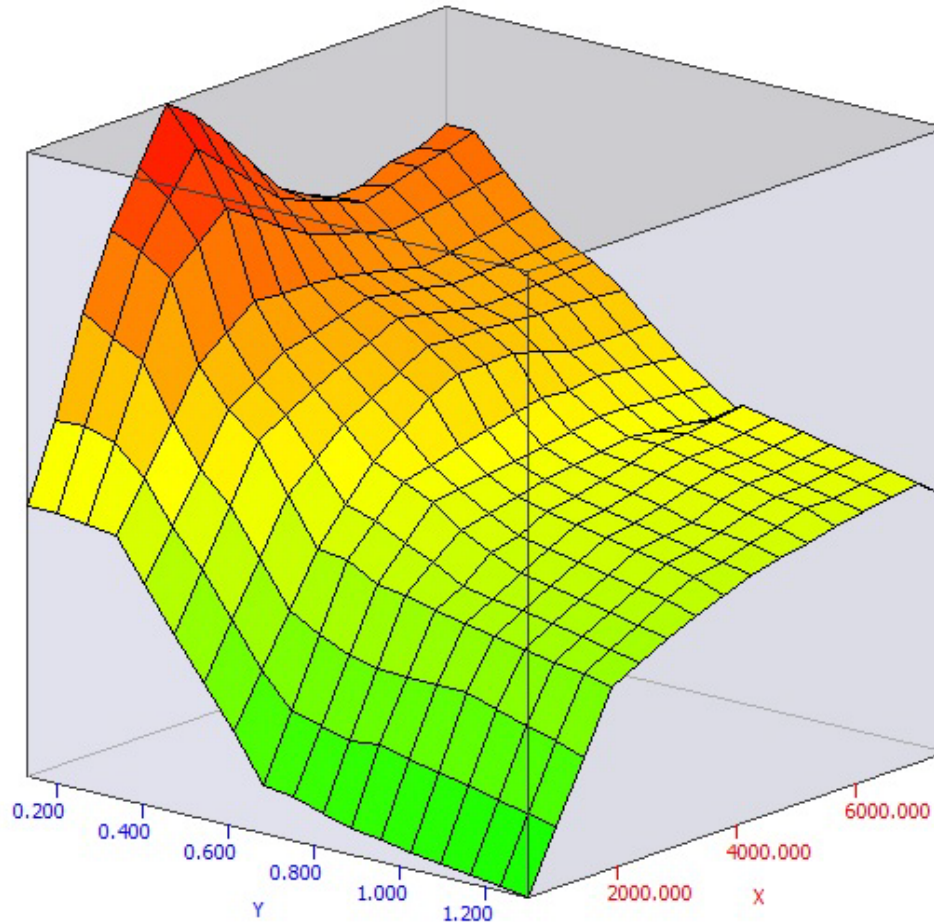
**ECA module power:**

With the vehicle in the ON position verify that the green light on the ECA module has a green blinking light.



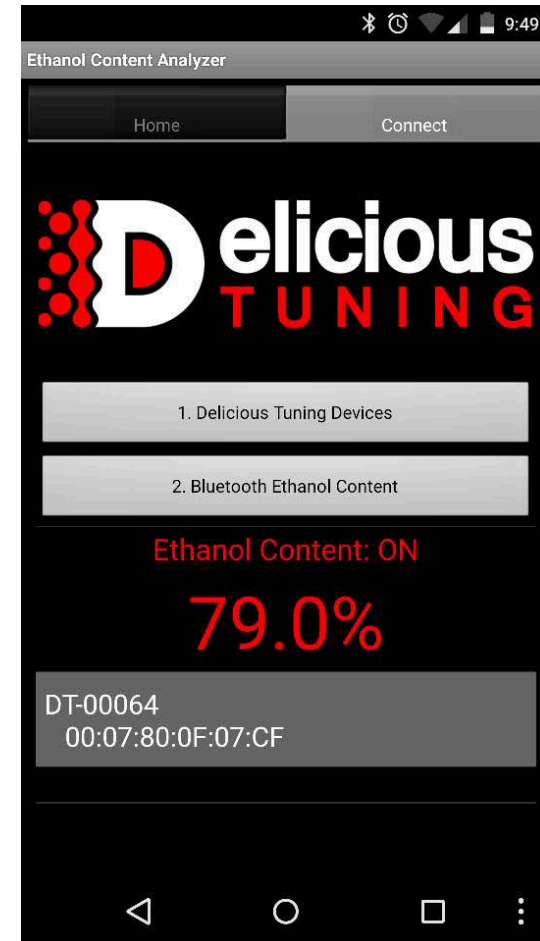
Bluetooth app:

Download the Ethanol Content Analyzer app in the Google Play store. Install the app and turn on your device's Bluetooth function. With your vehicle in the ON position and modules light blinking, scan and pair your device with the module (Pass code is 0000). Now open the app and select "Connect" tab then press "Delicious Tuning Devices" Select the device that you previously paired DT-XXXX, now press "Bluetooth Ethanol Content" The percentage of ethanol should now be displayed, around 8-15% for U.S. pump gas blends.



ECU tuning:

Before adding ethanol (E85) to the gas tank, reflash the ECU with new flex fuel mapping or have a Delicious Tuning approved dealer tune the vehicle for flex fuel mapping. Note, not tuning the vehicle and running ethanol can cause the engine to run poorly or lead to possible engine damage.



E85 / Ethanol:

Add ethanol to your gas tank, then start the vehicle. With the Ethanol Content Analyzer app open, you should see the percentage of ethanol increase after a few minutes or after driving, with returnless fuel systems. The percentage may vary for the first several minutes of driving, as the ethanol mixes with the gasoline that was already present in the fuel system.



Conclusion:

This concludes our flex fuel Bluetooth kit installation. You are now free to enjoy your new found horsepower and torque!

Any questions or issues, please contact the distributor of the kit.