FuelX Autotune- Bajaj Dominar

Document Version	1	Release Date	14 Sep 2021

Application information	FuelX
Vehicle	**Bajaj**
Model	**Dominar**
Year of manufacture	**2016-2021**

Note:

- Read through all instructions before installation and use.
- Ensure that the bike is switched off and the key is out of the ignition before proceeding with the installation.
- Some parts of the bikes might be hot/sharp and may cause burns/cuts. Proceed with extreme caution or wait until the bike has cooled down. Always wear safety gloves.
- When the installation is complete, make sure to secure the wiring loom away from the movable parts or components which tends to heat up during the normal operation of the vehicle at any chance.
- FuelX is intended for motorsport use on a closed course, please check with your local laws before using this product. Race Dynamics is not liable for consequences arising out of using the product.

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1. FuelX

FuelX is an electronic, plug-in, fuel-injection optimizer for modern engines. It either enriches or decreases the AFR in all operating regions according to the rider requirement. It autotune the engine to best operational parameters, constantly monitoring, learning, and adapting to the engine condition, wear and tear, riding style, add-ons (such as air filter and/or exhaust), etc as well as the environmental conditions such as temperature, humidity, altitude, etc. always ensuring the engine performs in the safest and most optimal zones.

FuelX kit contains the following items
- FuelX Module
- Wiring Harness
- Handlebar map switch (Pro version only)
- Zip ties
- Decals
- Quick start guide and Warranty card

Image 1.1

2. FuelX Variants:

FuelX Pro

The FuelX Pro variant has 10 maps that can be changed depending upon the preference of the rider. For the Pro version, the Fuelx contains an additional connector (Refer Image 2.3) for the Handlebar Map switch(Refer Image 2.2)

Image 2.1

Image 2.2

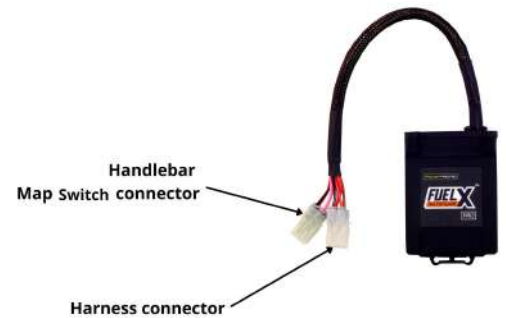

Image 2.3

FuelX Lite

The FuelX Lite variant has a single autotune map and only one connector for the harness.
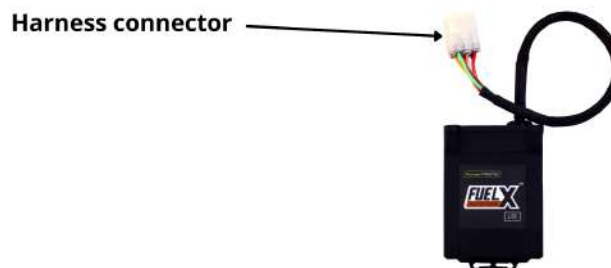

Image 2.4

Image 2.5

3. FuelX Harness Connectors

The harness contains only the Lambda connector (O_2).

Image 3.1

The type and number of connectors may vary depending on the vehicle, year of manufacture, and the number of cylinders. Examples of different types of Lambda sensor connectors are shown below.
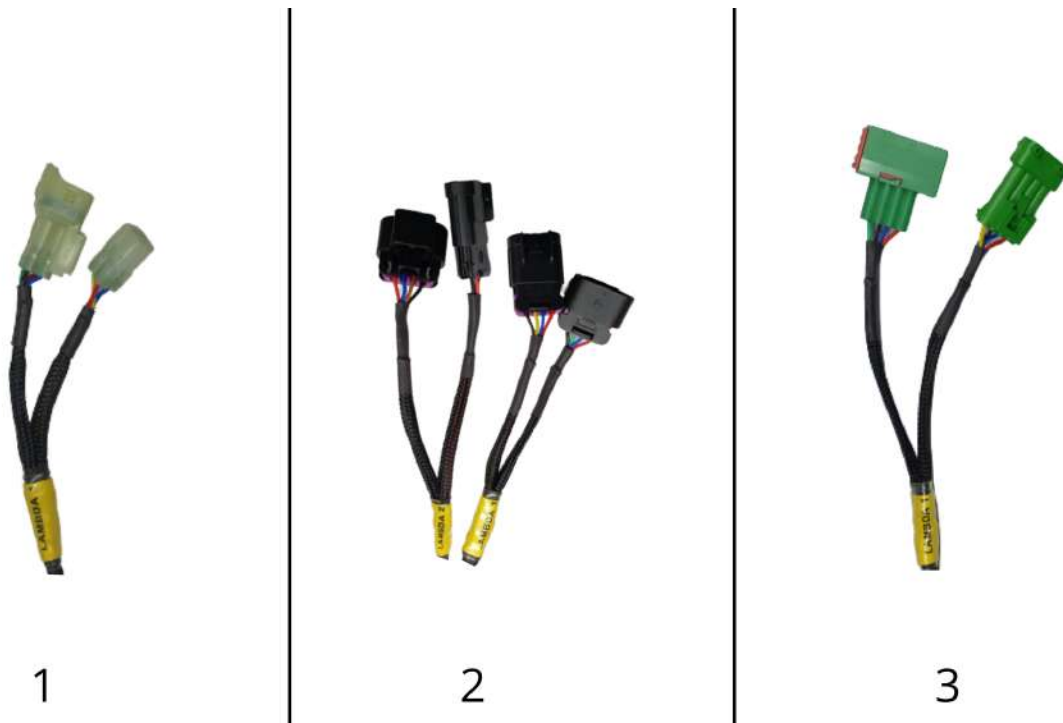

1   2   3

Image 3.2

The FuelX is connected between the Lambda sensor connector and the ECU. The male connector of FuelX, connected to the female of the Lambda sensor and vice versa.
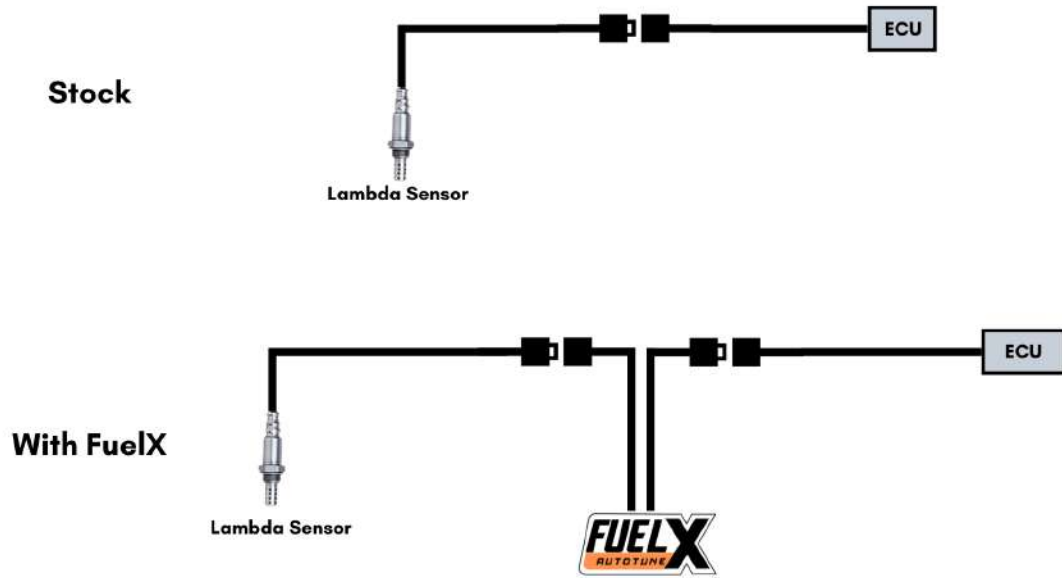

Image 3.3

4. Installation procedure

Begin at the left side of the bike.
Park the bike using the centre stand on a level surface (Or a paddock stand). Refer **Image 1**

Image 1

Note the position of the Lambda sensor connector. connector/hoses/wires to be removed. Refer **Image 2**

Image 2

4.1.1 Detach the pillion seat by inserting the key into the keyhole shown in **Image 3** and unlock the pillion seat. **Image 4** shows how the pillion seat is detached.

Image 3

Image 4

4.1.2 Unscrew the rider seat bolts using M10 Hexagonal Socket - Refer **Image 5**.
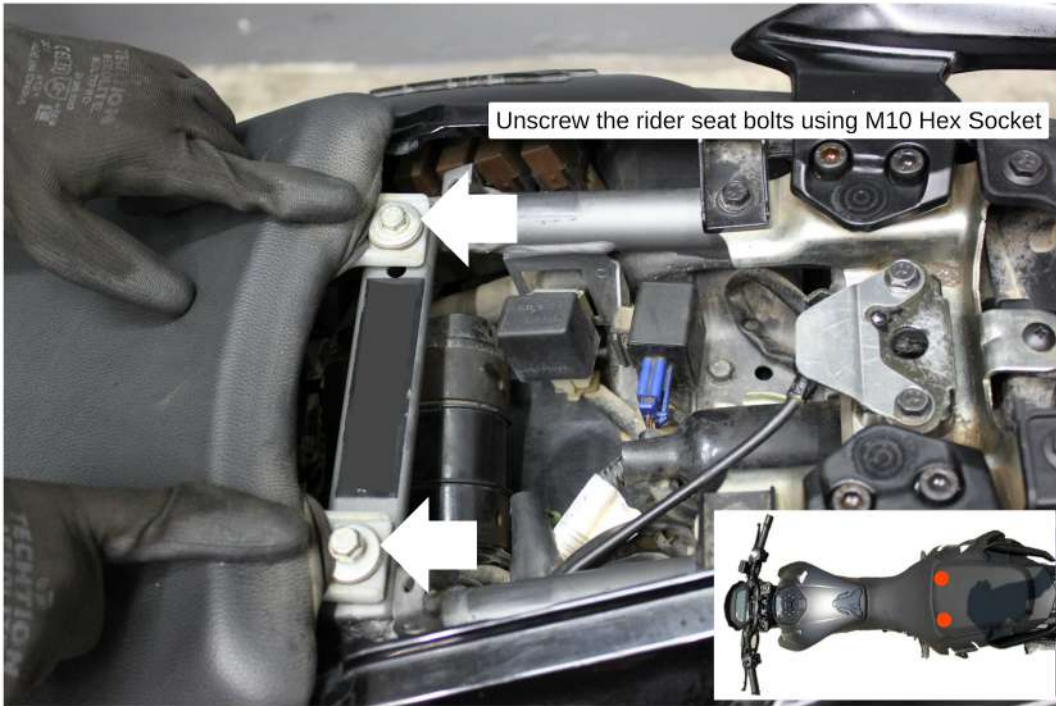

Image 5

3.1.3 Refer **Image 6**

Image 6

4.1.4 Once the rider seat bolts are removed, gently lift the seat. Refer **Image 7.** Refer **Image 8** for detached view.

Detach the rider seat

Image 7

Image 8

4.1.5 Locate and unscrew the bolts and screws (8 on sides and 2 in the front) using M5 Hexagonal bit and Phillips-head screwdriver. [The tank cover is attached by M5 screw and the panel is attached by screws.] Refer **Image 9** for side view and **Image 10** for front view.

Remove the 2 screws and 2bolts using a Phillips-head screwdriver and M5 hex bit. Repeat the process on the right side also.

Image 9

Remove the bolt using M5 Hex bit
Repeat the process on the right side also

Image 10

4.1.6 Once the bolts and screws are removed, gently disconnect the side panel. Refer **Image 11**.

Image 11

4.1.7 Unscrew the cover bolt using M10 Hexagonal T socket. Refer **Image 12** and **Image 13**.

Image 12

Image 13

4.1.8 Remove the cover. Refer **Image 14**.

Image 14

4.1.9 Gently lift the tank cover and locate the tank cover connector on the left side of the bike. Refer **Image 15**.

Image 15

4.1.10 Disconnect the connector. Refer **Image 16**.

Image 16

4.1.11 After removing the tank cover connector gently lift the tank cover and place it securely. Refer **Image 17**

Image 17

4.1.12 Locate the tank bolt in the front end and unscrew it with M14 Hexagonal socket. Refer **Image 18** and **Image 19**

Image 18

Image 19

4.1.13 Locate the tank side bolt on both sides of the bike. Unscrew it with M12 Ring . Refer **Image 20** and **Image 21**

Image 20

Image 21

4.1.14 Gently lift the tank. Refer **Image 22**

Image 22

4.1.15 Locate and identify the connections under the tank. Note that while removing the fuel line, remove the connector which goes to the throttle body. Refer **Image 23**

Identify the connections
and carefully detach them.
1) Fuel line
2) Fuel pump conector
3) Vacuum line 1
4) Vacuum line 2

Image 23

4.1.16 Use a nose plier to loosen the metal clamp. Refer **Image 24**
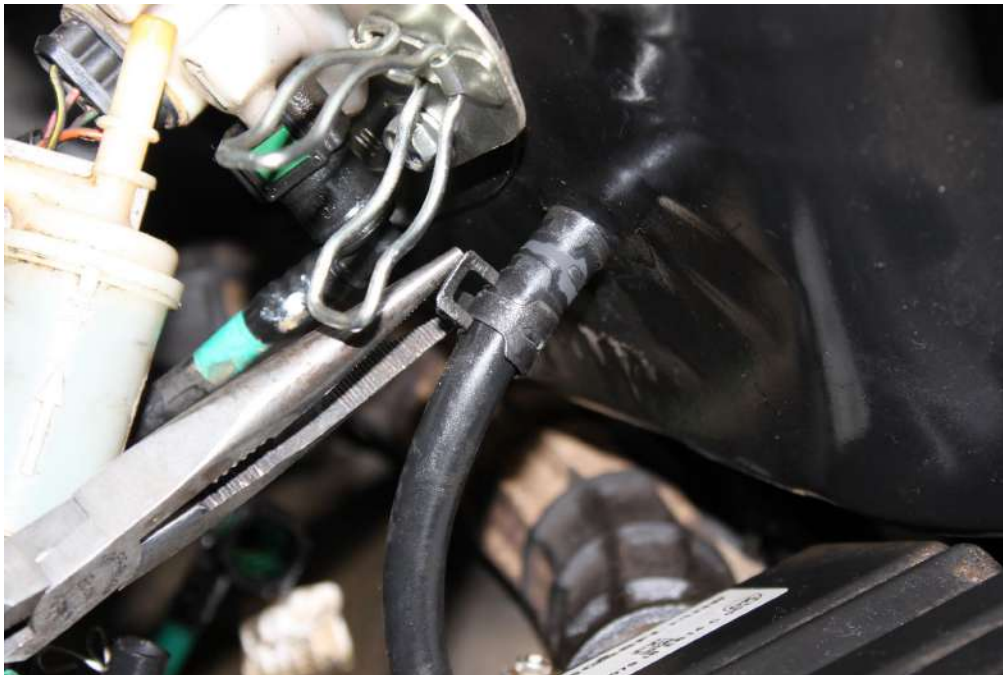
Image 24

4.1.17 Refer **Image 25** for detached view of tank.

Disconnected position
1) Fuel line
2) Fuel pump conector
3) Vacuum line 1
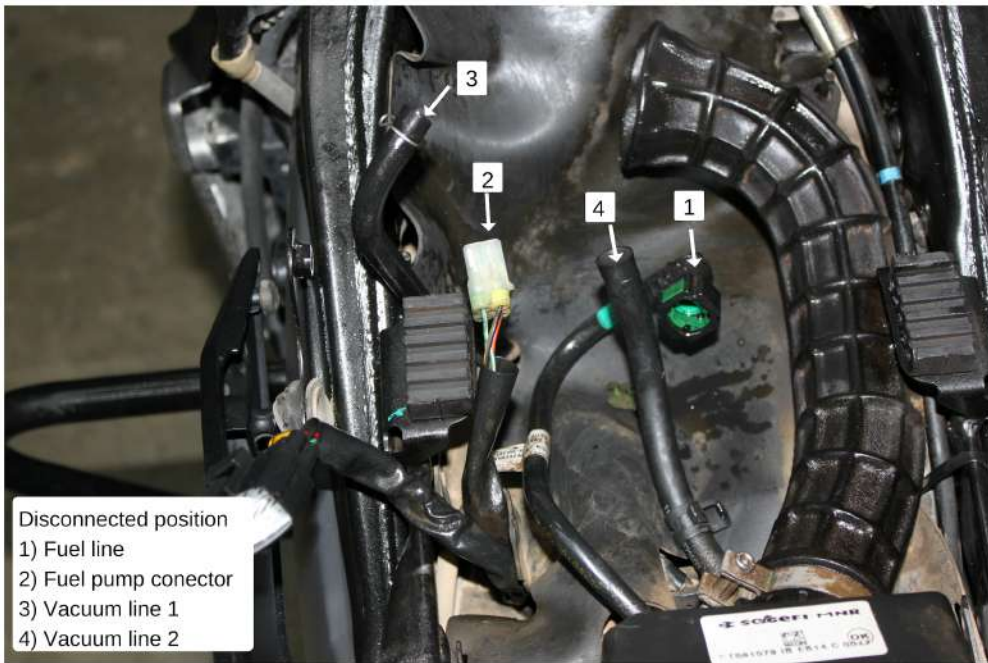4) Vacuum line 2

Image 25

4.1.18 Locate and unscrew the Phillips head screws of the air filter box. [Two screws are at the rear side of the air-filter box (Refer **Image 26**) and two screws are in front of the air-filter chamber(Refer **Image 27**)]

Locate the screws (4) on the air filter box. Unscrew them with a Phillips head screw driver.

Image 26

Image 27

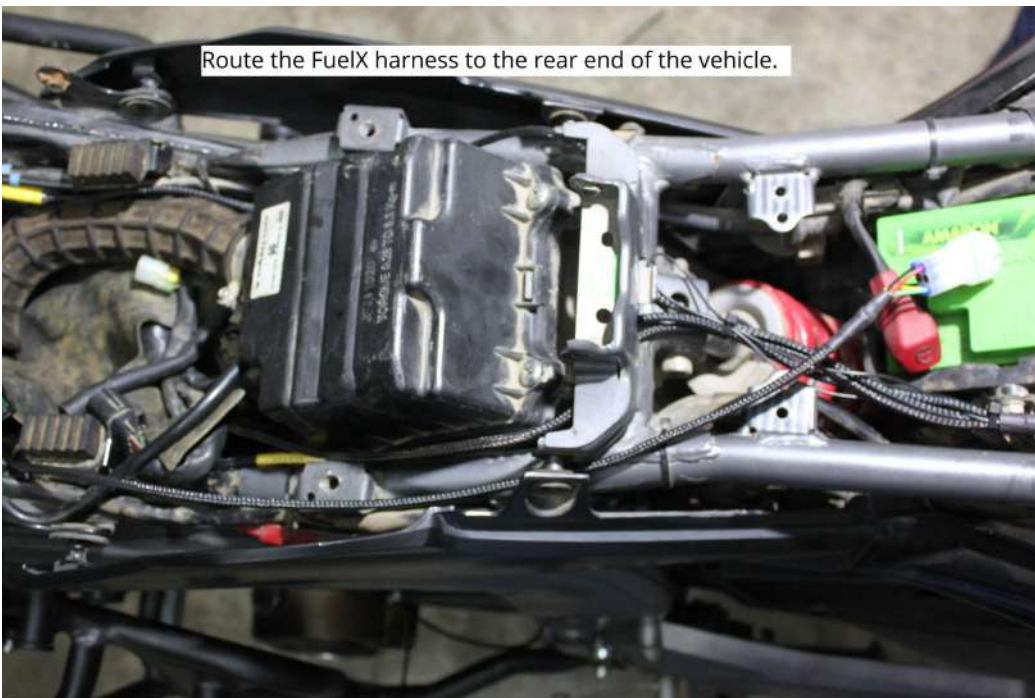**4.1.19** Route the FuelX harness to the rear end of the vehicle. Refer **Image 28**

Image 28

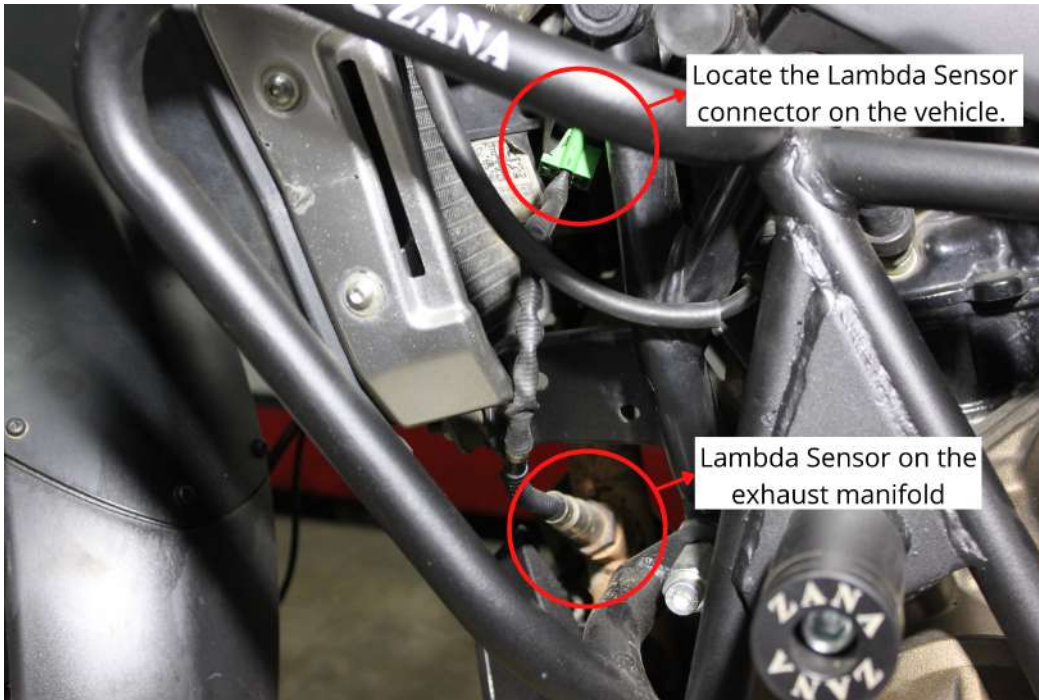***4.1.20*** Locate the Lambda Sensor connector on the vehicle. Refer **Image 29**

Image 29

4.1.21 Gently pull the connector out of the rubber cover. Refer **Image 30**

Image 30

4.1.22 Carefully pull the red lock and disconnect the connectors. Refer **Image 31**

Image 31

4.1.23 Connect the lambda stock male connector to FuelX female connector. Refer **Image 32**

Image 32

4.1.24 Connect the lambda stock female connector to FuelX male connector. Refer **Image 33**

Connect the lambda stock female connector to FuelX male connector.

Image 33

4.1.25 Attach the handlebar map switch on the handlebar. Refer **Image 34**

Attach the handlebar map switch on the handlebar.

FUEL X

Image 34

4.1.26 Using a 2.5 mm Allen key, tighten the screws. Refer **Image 35**

Image 35

4.1.27 Route the map switch to the rear end of the vehicle. Refer **Image 36**

Image 36

4.1.28 Route the map switch to the rear end of the vehicle. Refer **Image 37**

Route the map switch to the rear end of the vehicle.

Image 37

4.1.29 Place the FuelX module on the vehicle. Refer **Image 38**

Place the FuelX module on the vehicle.

Image 38

4.1.30 Connect the FuelX female 6 pin connector to the harness female 6 pin connector. Refer **Image 39**

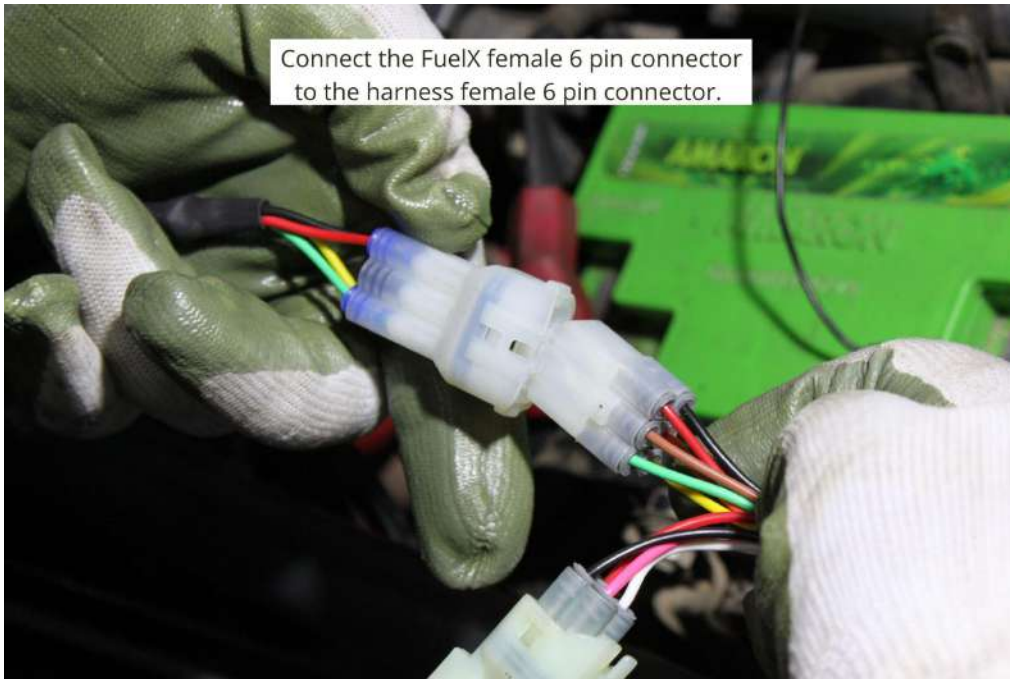Image 39

4.1.31 Connect the FuelX female 4 pin connector to the handlebar map switch female 4 pin connector. Refer **Image 40**
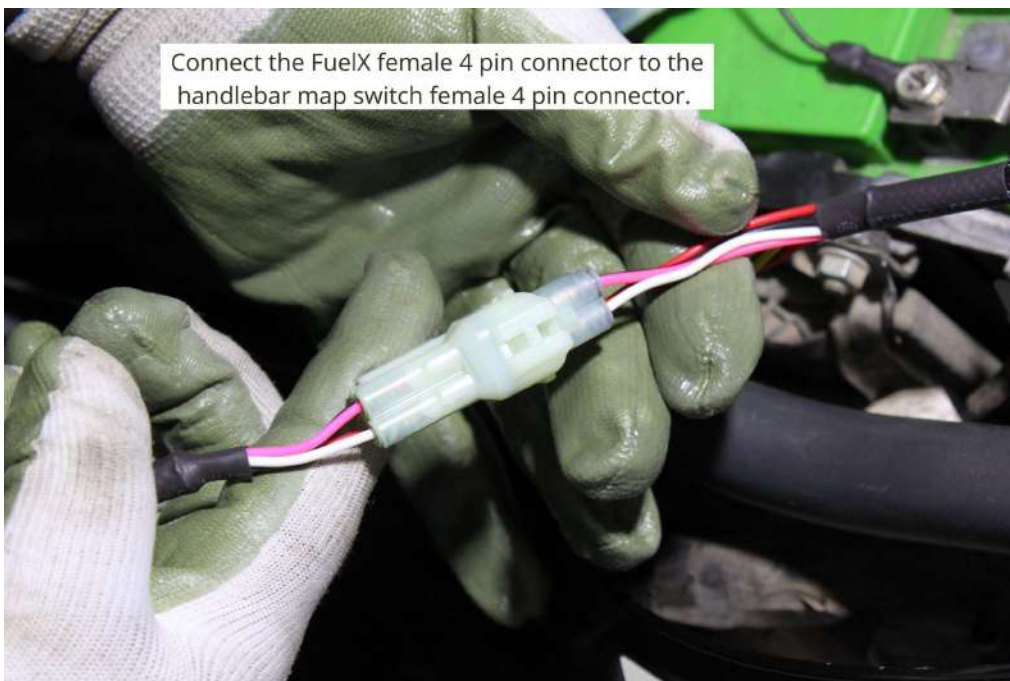

Image 40

4.1.32 Tag the wires securely using the nylon tags provided within the kit. Refer **Image 41**

Image 41

4.1.33 Attach the panels back after the installation.

5. FuelX Configuration

The Red LED on the FuelX blinks once the FuelX activates.

For Pro versions, maps on the FuelX can be changed according to the preference of the customer. By just pressing the +/- button on the Handlebar map switch. **The green LED on the FuelX Handlebar map switch will help the customer to know which map is currently active.**

Map No	Map Description
1	LEAN (Less Fuel)
2	
3	STOCK
4	
5	
6	
7	
8	
9	
10	RICH (More Fuel)

Image 5.1

The rider can choose the map according to the fuel enrichment he wants.
The first two maps are lean maps.

Map 3 runs with stock AFR set by the OEM manufacturer.

Maps 4 from 10 make the AFR richer as the numbers go higher.

For Lite versions, a single autotune map is provided for adjusting the AFR for the best operational parameters.