FuelX Autotune- Royal Enfield Classic/Bullet 350 EU 5+

Document Version	1	**Release Date**	04 October 2025

Application information	**FuelX**
Vehicle	**Royal Enfield**
Model	**Classic/Bullet 350 EU 5+**
Year of manufacture	**2025**

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 tend to heat up during the normal operation of the vehicle at any time.
- 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 from using the product.

Support:

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for Indian specification vehicles, the FuelX module will have a sticker indicating it.

The warranty/support will not be provided for international users with Indian specification FuelX purchased from unauthorized re-sellers.

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's requirement. It autotunes the engine to the 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.

The **FuelX kit contains the following items**

- FuelX Module
- Wiring Harness
- Handlebar map switch (Pro+/Pro versions 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 on the preference of rider. For the Pro+ version, the FuelX contains an additional connector (Refer to Image 2.3) for the Handlebar Map switch (Refer to Image 2.2).

Image 2.1

Image 2.2

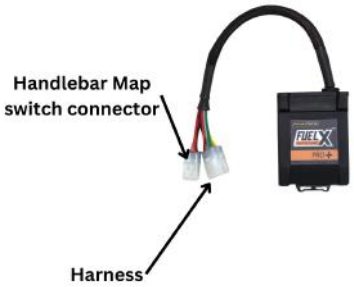


Image 2.3

FuelX Pro

The FuelX Pro variant has 10 maps that can be changed depending on the preference of rider. For the Pro version, the FuelX contains an additional connector (Refer to Image 2.6) for the Handlebar Map switch (Refer to Image 2.5)

Image 2.4

Image 2.5

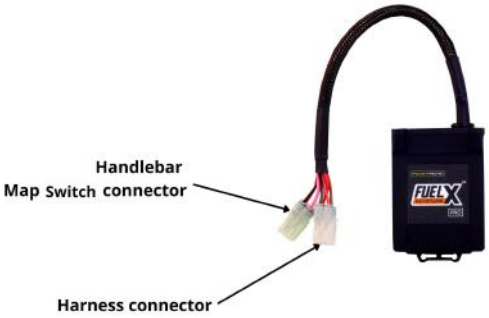


Image 2.6

FuelX Lite

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

Image 2.7

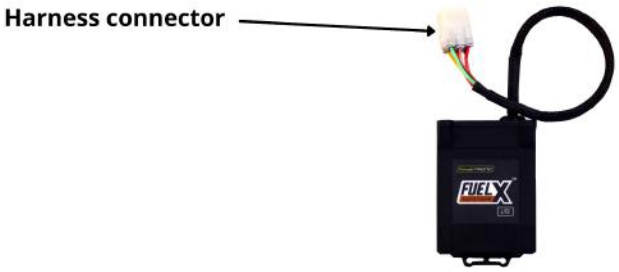


Image 2.7

3. FuelX Harness Connectors

The harness contains

- The Lambda connector (O_2)
- FuelX connector
- Ground/battery negative connector.

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.

Image 3.2

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

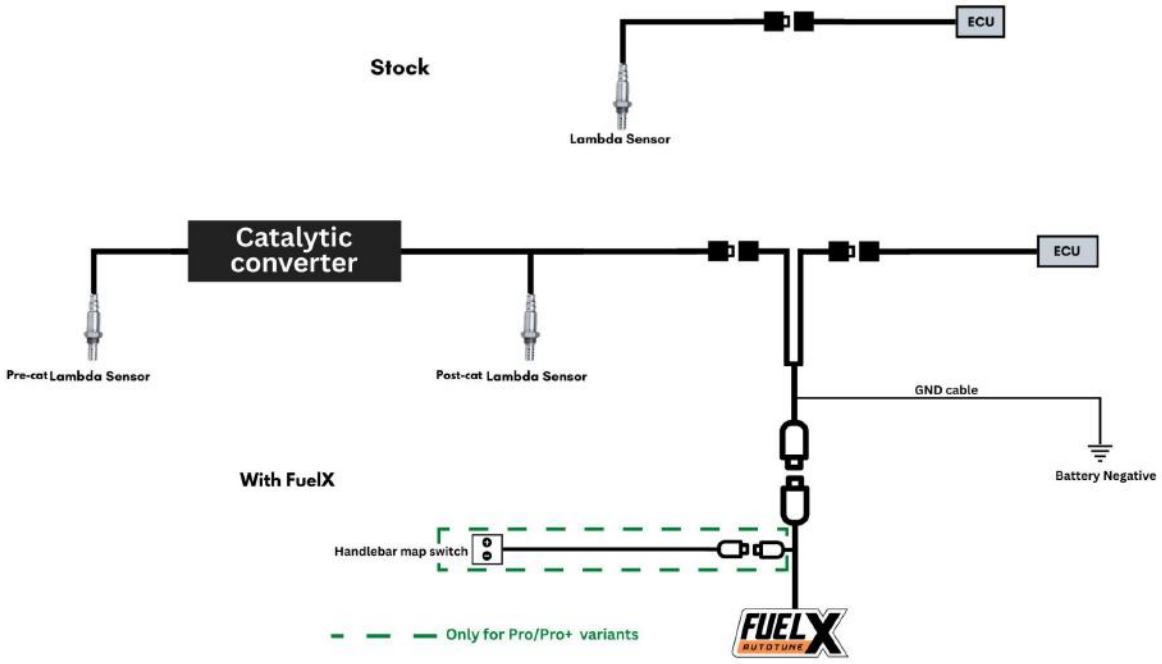


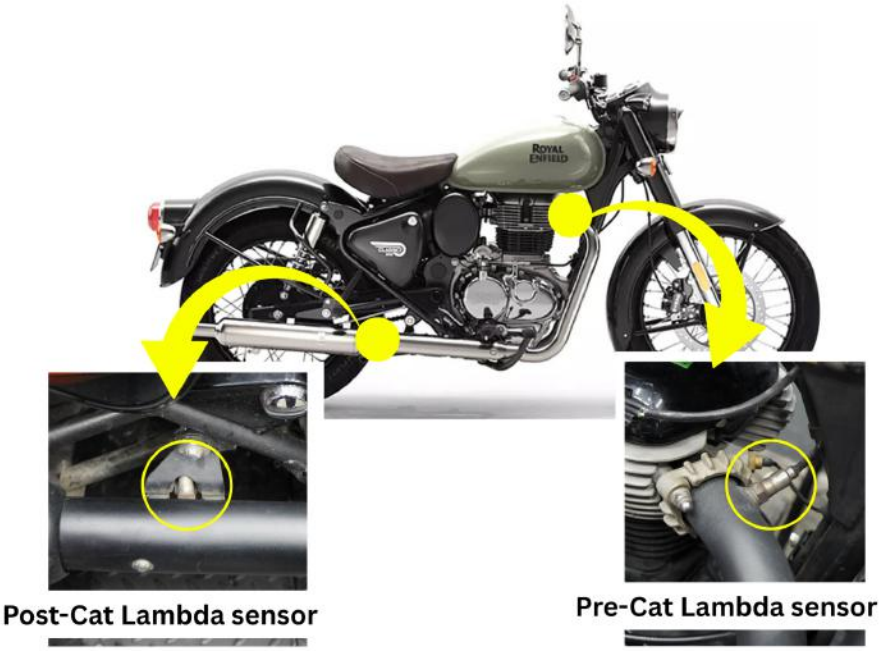
Image 3.3

4. Installation procedure

4.1 Removing panels and fairing

Park the bike using the center stand on a level surface (Or a paddock stand).

Locate the Pre and Post cat Lambda sensors. Trace the wires from the sensors to locate the Lambda sensor connector positions.



4.1.1 Unlock the rider seat bolt using a 12 mm socket or T handle. Refer to **Image 1**

Image 1

4.1.2. Detach the rider seat. Refer to **Image 2**

Image 2

4.1.3 Locate the tank rear mounting bolt. Refer to **Image 3**.

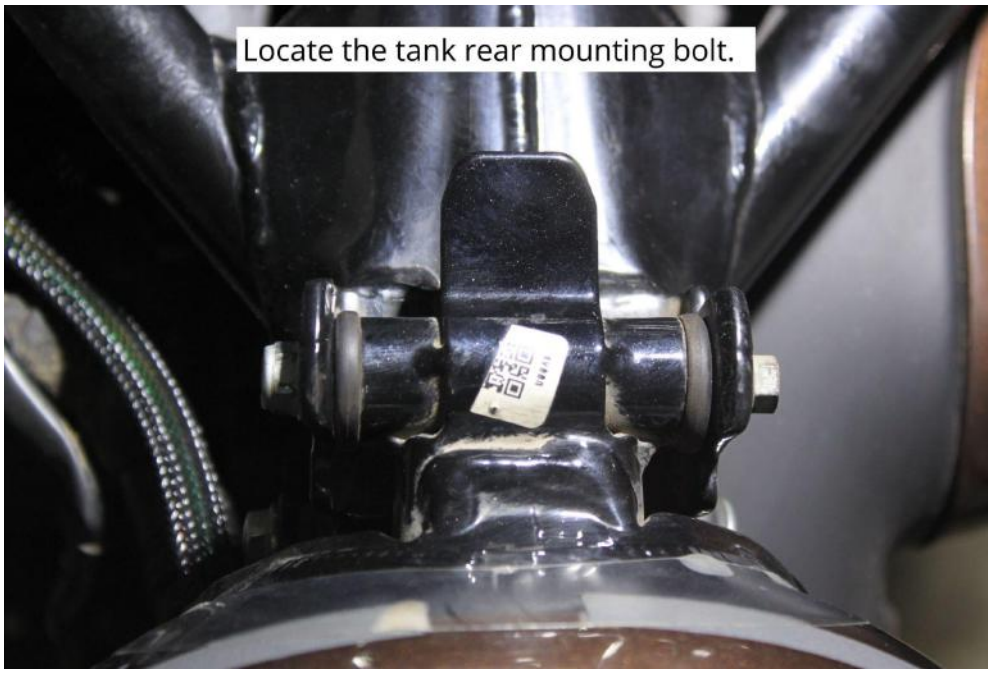


Image 3

4.1.4 Using 10 and 8 mm sockets, unscrew the tank rear bolts. Refer to **Image 4**.

Image 4

4.1.5 Gently lift the rear end of the fuel tank and detach the vacuum hoses. Refer to **Image 5**.

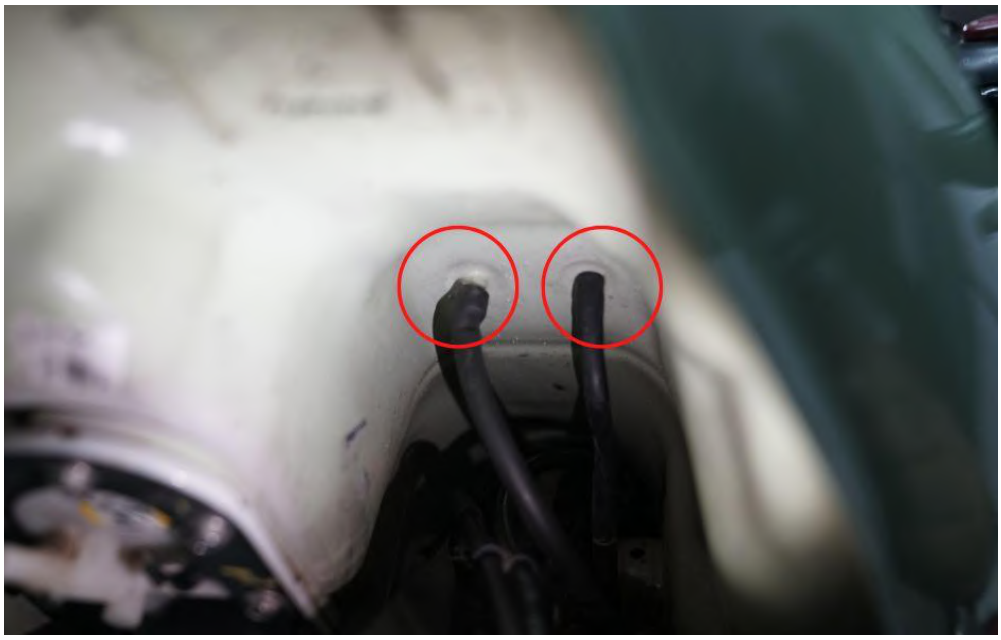


Image 5

4.1.6 Gently disconnect the fuel line from the left side of the fuel tank. Refer to **Image 6**.

Image 6

4.1.7 Gently disconnect the fuel pump connector from the left side of the fuel tank. And gently detach the tank. Refer to **Image 7**

Image 7

4.1.8 Gently disconnect the fuel pump connector from the left side of the fuel tank. And gently detach the tank. Refer to **Image 8**

Image 8

4.1.9 Unscrew the left side compartment bolt. Refer to **Image 9**

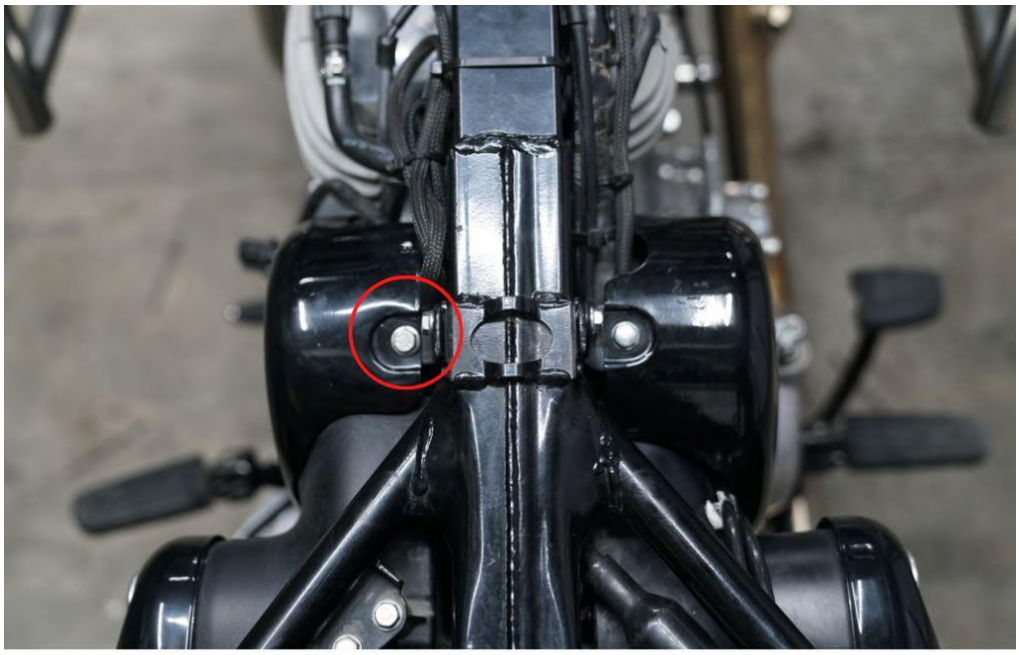


Image 9

4.1.10 After removing the bolt, gently remove the compartment cover. Refer to **Image 10**

Image 10

4.1.11 Route the FuelX harness and handlebar switch wire to the left side compartment. Refer to **Image 11**

Image 11

Pre-cat Lambda sensor connection

4.1.12 Locate the Pre-cat stock lambda sensor connector. Refer to **Image 12**.

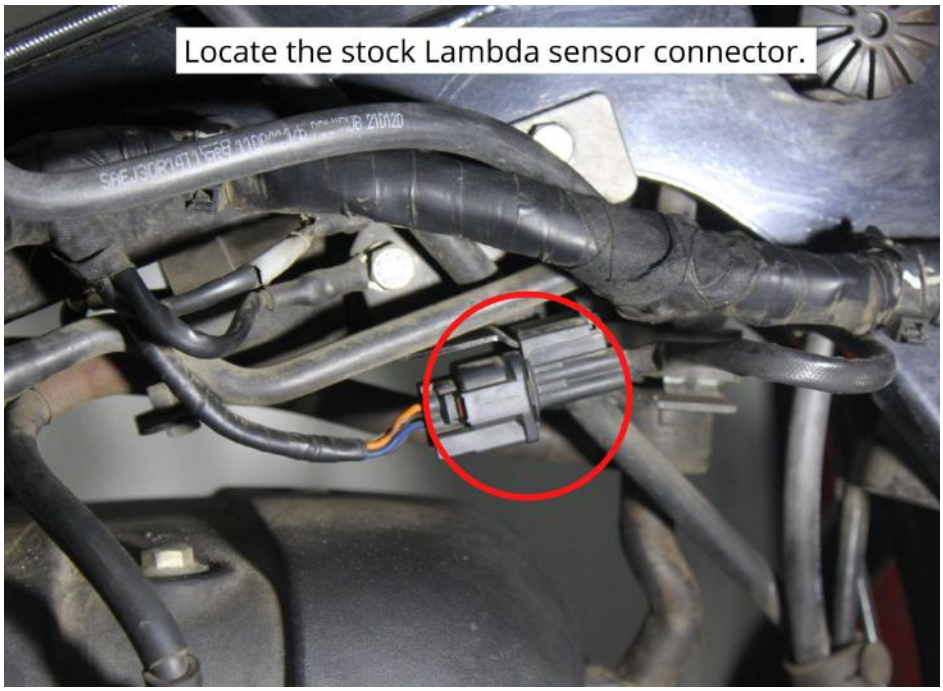


Image 12

4.1.13 Disconnect the Pre-cat stock Lambda sensor connector. Refer to **Image 13**.

Image 13

4.1.14 Connect the FuelX female Pre-cat Lambda sensor connector to the stock Pre-cat male connector. Refer to **Image 14**

Image 14

4.1.15 Connect the FuelX Pre-cat male Lambda sensor connector to the stock Pre-cat female connector. Refer to **Image 15**

Image 15

Post-cat Lambda sensor connection

4.1.16 Locate the Post-cat stock Lambda sensor connector. Trace the Lambda Post-cat Lambda sensor to find the connector. Refer to **Image 16**

Image 16

4.1.17 Disconnect the Post-cat stock Lambda sensor connector. Refer to **Image 17**

Image 17

4.1.18 Connect the FuelX Post-cat female Lambda sensor connector to the stock Post-cat male connector. Refer to **Image 18**

Image 18

4.1.19 Connect the FuelX Post-cat male Lambda sensor connector to the stock Post-cat female connector. Refer to **Image 19**

Image 19

4.1.20 Refer to **Image 20** for the completed view

Image 20

4.1.21 Connect the FuelX Handlebar map switch to the Handlebar. Refer to **Image 21**

Image 21

4.1.22 Using a 2.5 mm Allen key, tighten the bolts. Refer to **Image 22**

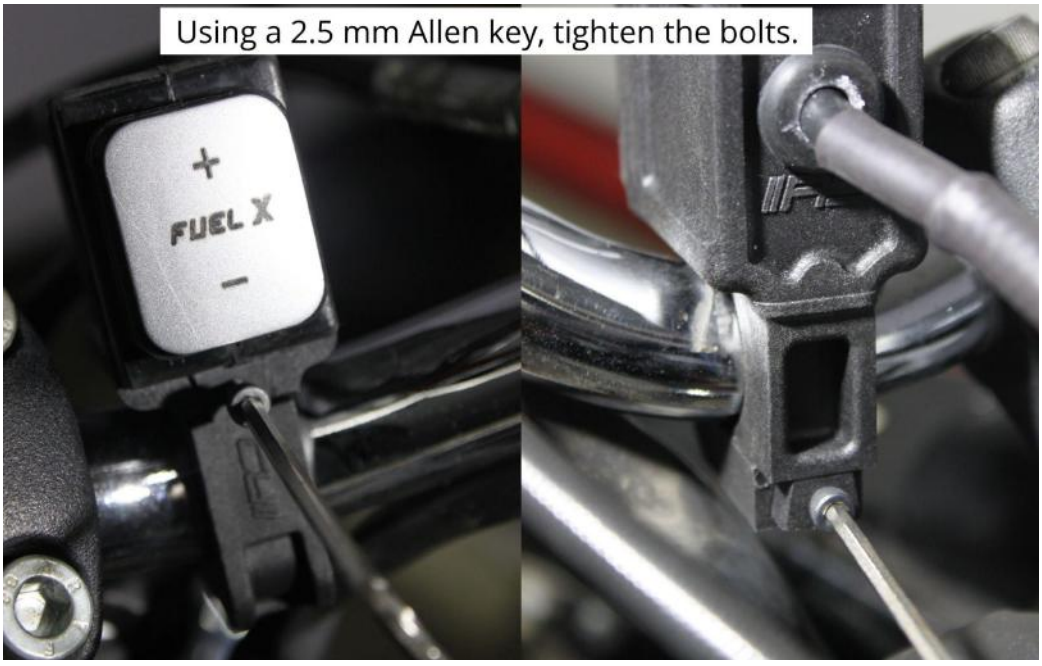


Image 22

4.1.23 Place the FuelX module in the glove compartment. Refer to **Image 23**

Image 23

4.1.24 Connect the FuelX Main connector to the harness. Refer to **Image 24**

Image 24

4.1.25 Connect the 4-pin FuelX connector to the handlebar map switch harness. Refer to **Image 25**

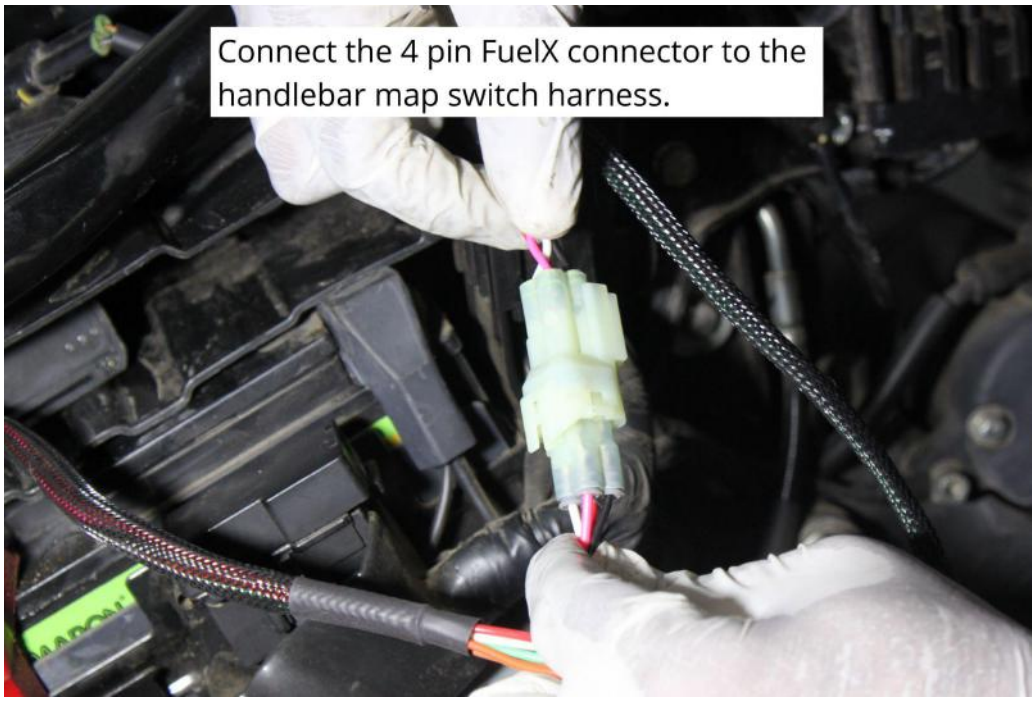


Image 25

4.1.26 Connect the Ground cable to the battery **negative terminal**. Terminal position may vary. Refer to **Image 26**

Image 26

4.1.27 Secure the harness from hot and moving parts using the zip ties provided. Refer to **Image 27**

Image 27

4.1.28 Attach the panels and the tank back.

5. FuelX Configurations and Settings

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

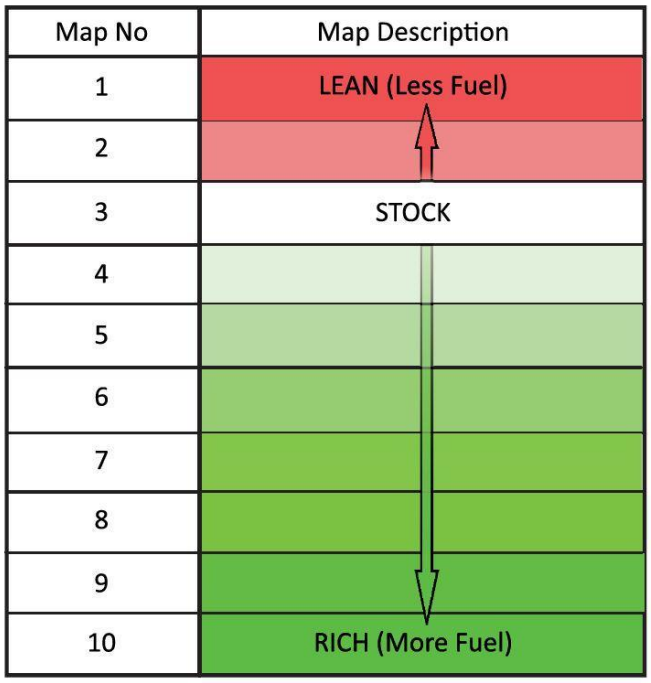


Image 5.1

The rider can choose the map according to the fuel enrichment he wants.

The first two maps are lean maps.

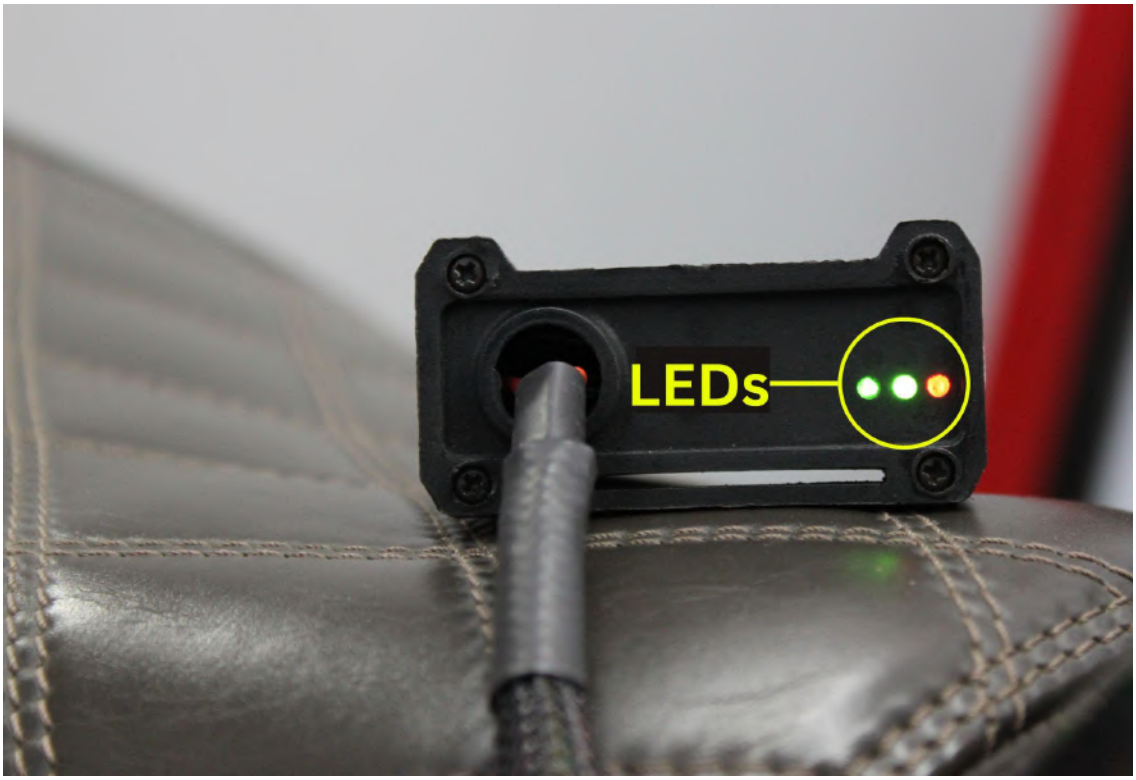
Map 3 runs with stock AFR set by the OEM manufacturer.

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.

6. FuelX LEDs

FuelX has LEDs on the module to indicate the operation.



The blinking of the Red LED indicates that the Map on the FuelX is being activated. The Red LED starts blinking after the key and the kill switch are on.

The blinking of the Green LEDs during the idling of the engine indicates that the FuelX is working in sync with the OEM ECU.

The working of both Green and Red LEDs indicates that the FuelX is functioning as intended.