FuelX Autotune- KAWASAKI KLX 230

Document Version	3	Release Date	14 April 2025

Application information	FuelX
Vehicle	KAWASAKI
Model	KLX 230
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 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.

Support:

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

⚠ FOR INDIAN SPECIFICATION BIKES ONLY

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

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 autotunes 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
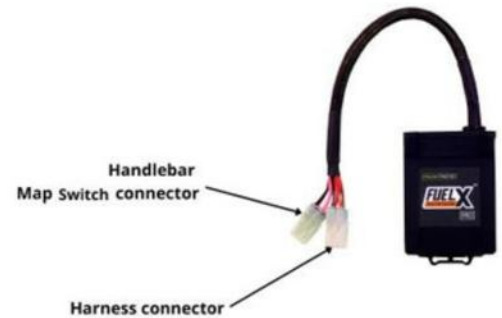
2. FuelX Variants:

FuelX Pro

The FuelX Pro variant has 10 maps that can be changed depending on the preference of the 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)
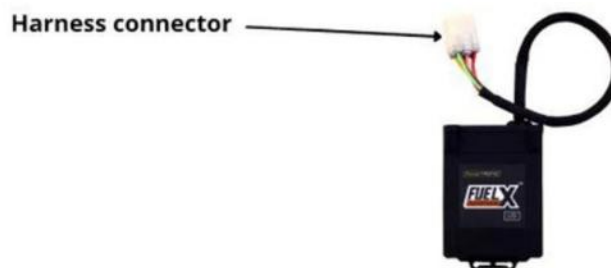
Image 2.1

Image 2.2

Image 2.3

FuelX Lite

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

Image 2.4

Image 2.5

3. FuelX Harness Connectors

The harness contains
> The Lambda connector (O2)
> 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.
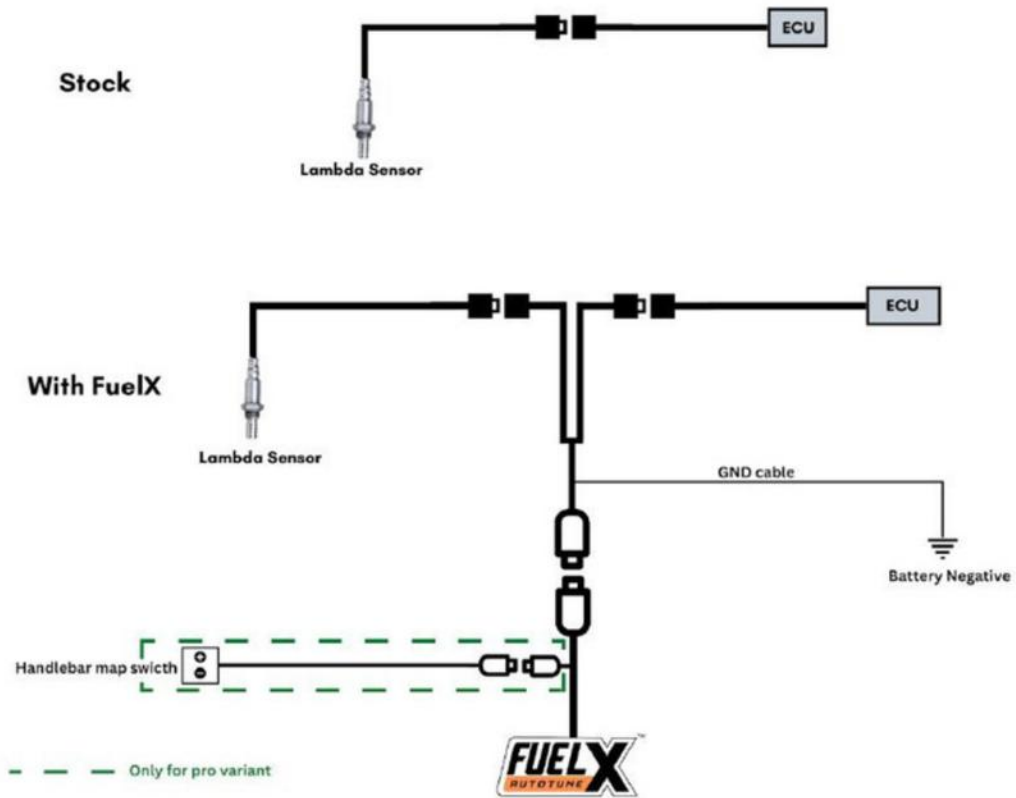
Stock

Lambda Sensor

ECU

With FuelX

Lambda Sensor

ECU

GND cable

Battery Negative

Handlebar map swicth

Only for pro variant

FuelX

Image 3.3

4.1 Removing panels, fairing

Begin at the left side of the bike.

Image 1 and image 2 Refer toence for Lambda Sensor location.

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

Image 1

Image 2

4.1.1 Locate the rider seat lock shown in **Image 3** and unlock the rider seat. Refer to **Image 4**.

Image 3

Image 4

4.1.2 <u>**Image 5**</u> shows the bolts which has to be removed to the seat

Image 5

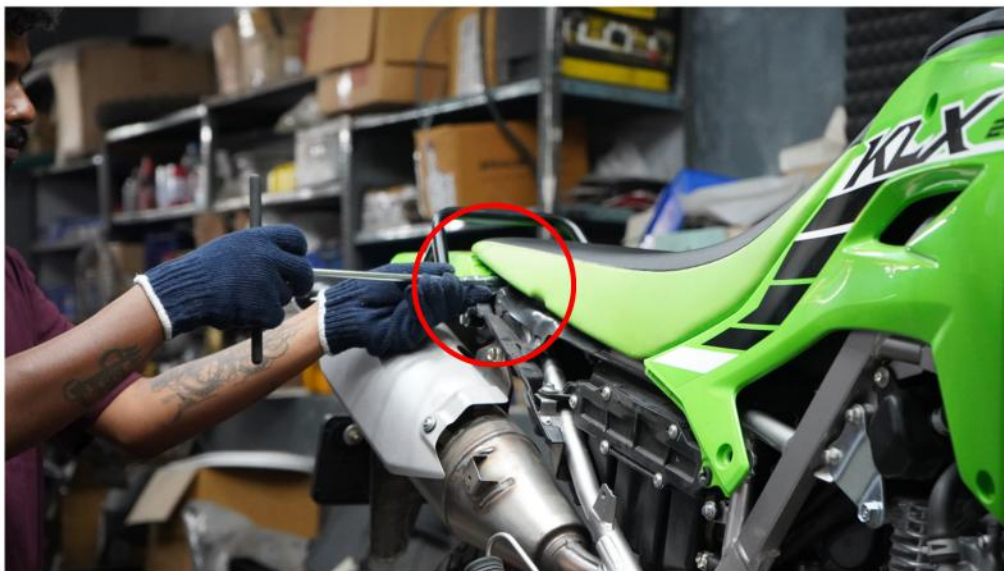*4.1.3* Locate and unscrew the side fairing 8mm bolts. Refer to **Image 6**.   _____

Image 6

4.1.4 After removing the screws, gently detach the panel.

Image 7

4.1.5 Locate the 8mm bolt to remove the seat, refer to the image 8 both left and right side of the bike

Image 8

4.1.6 After removing the bolts remove the seat gently shown in **image 9**

Image 9

4.1.7 Refer to **Image 10,11 and 12** shows the 8mm bolts to be removed to remove the tank cover both left and right side of the bike

Image 10

Image 11

Image 12

4.1.8 Gently lift the panel safely both left and right side of the bike, Refer to **Image 13 and Image 14**

Image 13

Image 14

4.1.9 Remove the 8mm tank mounted bolts by tubular, refer to **image 15**

Image 15

4.1.10 Remove front end tank mounted 8mm bolt by using tubular, refer to **Image 16**
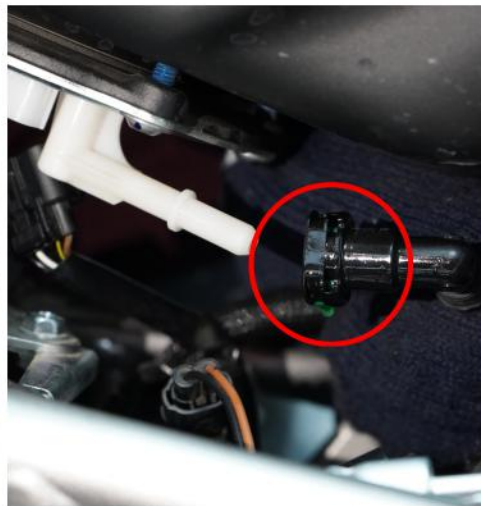

Image 16

4.1.11 Gently lift the tank and remove fuel line , fuel pump, and vaccum hose connection to remove the tank refer to the **Image 17,18 and 19**

Image 17

Image 18

Image 19

4.1.12 Gently lift the tank and keep it safely refer to **image 20**

Image 20

Routing the harness

4.1.13 Route the harness, and locate the lambda sensor of the bike refer to the **image 21**

Image 21

4.1.14 connect fuelx male connector to the lambda female connector refer to the **image 22**

Image 22

4.1.15 connect fuelx female connector to the lambda male connector refer to the **image 23 and Image 24**

Image 23

Image 24

4.1.15 connect the 6 pin connector to the fuelx module refer to the **image 25**

Image 25

4.1.16 connect the 4 pin connector to the fuelx map switch refer to the **image 26**

Image 26

4.1.17 Mount the fuelx handle bar switch on the handle to your suitable position refer to the **image 27**

Image 27

4.2 Attaching the panels fairing etc

Attach the panels, and fairing as removed from the bike. And fit the provided map switch at an accessible place available on the handlebar.

5. FuelX Configurations and Settings

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 know which map is active. Ie the number of blinks on the handlebar switch indicates the number of maps.

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.

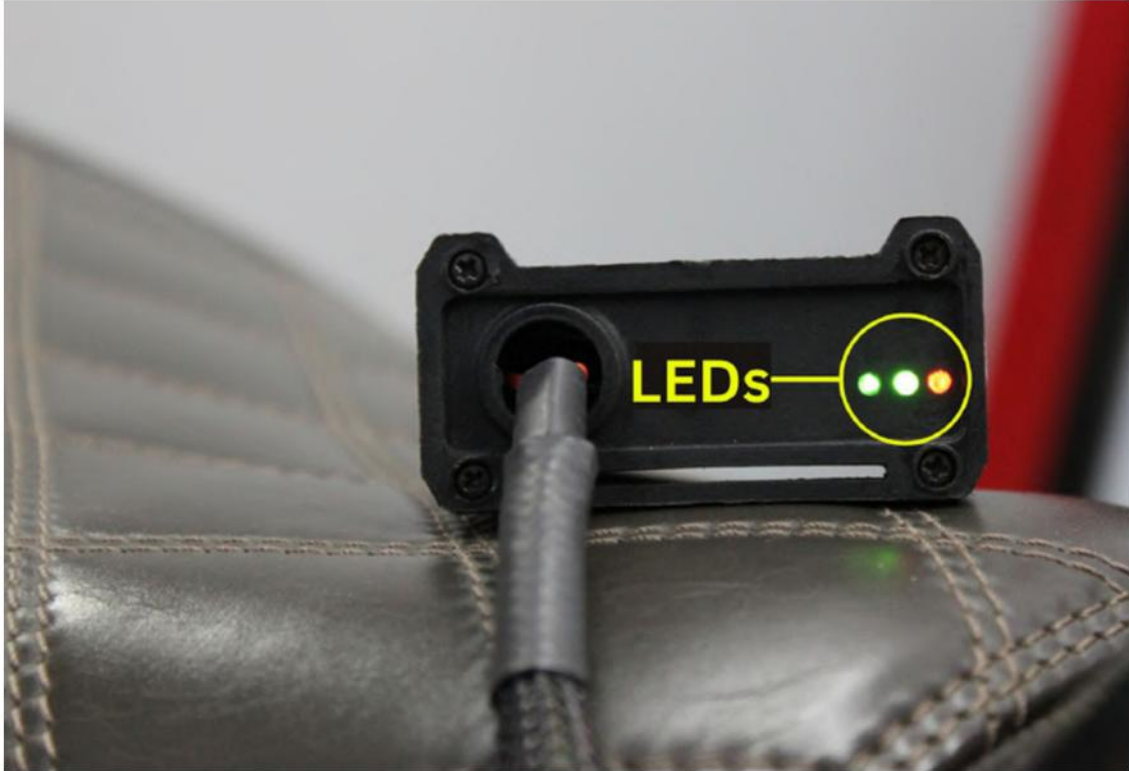**The first two maps are lean maps.**

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.

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 the FuelX Functioning as intended.