FuelX Autotune- Jawa All

Document Version	1	**Release Date**	12 Feb 2025

Application information	**FuelX**
Vehicle	**Jawa**
Model	**All**
Year of manufacture	**2019-2024**

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 bike 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, ensure that the wiring loom is secured away from movable parts or components, which tend to heat up during normal vehicle operation.
- 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.
- This Manual can be used as a generic installation manual for Jawa 42, 42 Bober, Classic, and Perak

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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 optimiser 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

- FuelX Module
- Wiring Harness
- Handlebar map switch (Pro+ version only)
- Zip ties
- Decals
- Quick start guide and Warranty card

Image 1

2. FuelX Variants:

FuelX Pro+

The FuelX Pro+ variant has 10 maps that can be changed depending on the rider's preference. 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

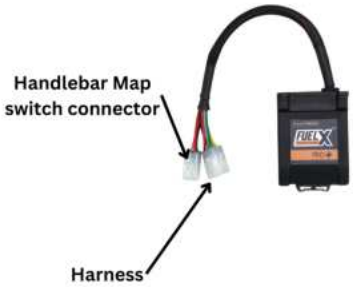


Image 2.3

FuelX Lite

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

Image 2.4

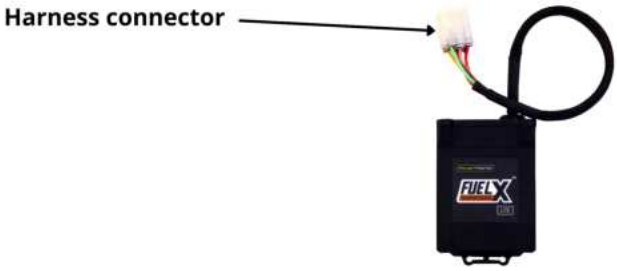


Image 2.4

3. FuelX Harness Connectors

The harness contains

- The Lambda connector (O_2)
  Depending on the year of manufacture and model, the harness may contain either only the Pre-cat branch or Pre-cat & Post-cat branches
- FuelX module connector
- Ground/battery negative connector.

Examples of FuelX harnesses are given below. Refer to Image 3.1

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.

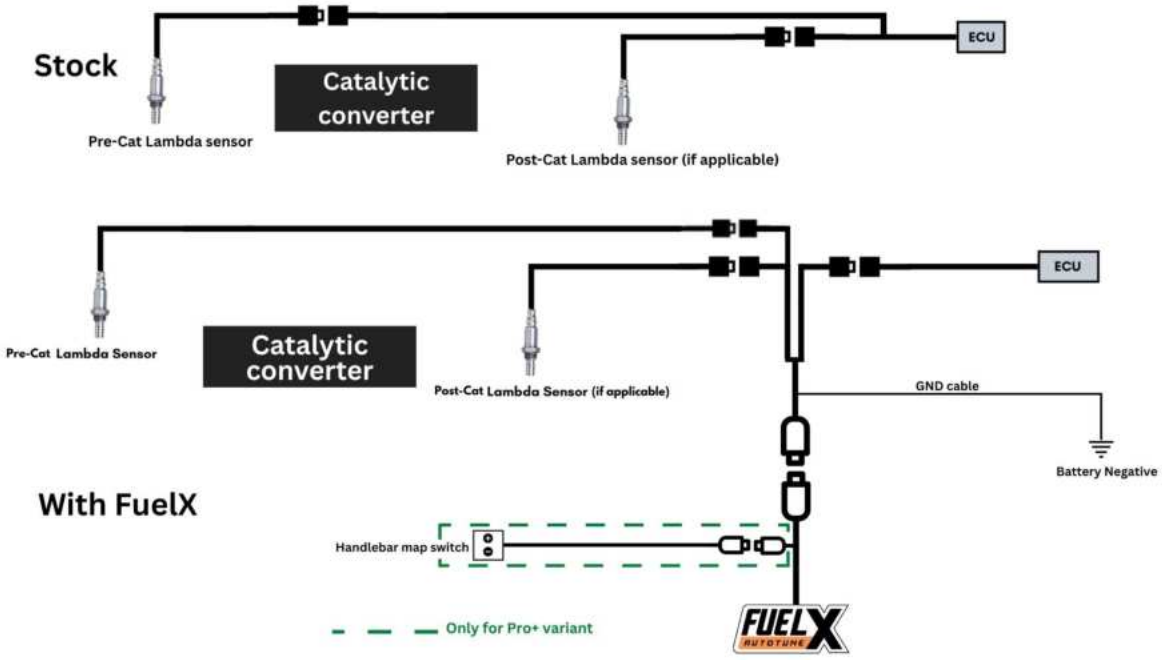


Image 3.3

4. FuelX Installation:

4.1 Removing panels and fairing

Begin at the left side of the bike.

Park the bike using the centre stand on a level surface (Or a paddock stand). Refer to **Image 1**

Image 1

Note the position of the Lambda connector. Refer to **Image 2**

Image 2

4.1.1 Locate the side panel bolt shown in **Images 3, 4, 5, and 6** and unscrew them.

Image 3

Image 4

Image 5

Image 6

4.1.2 Carefully detach the side panel. Refer to **Image 7**

Image 7

4.1.3 Route the FuelX harness as shown in the image. Refer to **Images 8, 9, and 10**

Image 8

Image 9

Image 10

4.1.4 Locate the OEM Lambda sensor connector. Refer to **Image 11**.

Image 11

4.1.5 Unplug the OEM Lambda sensor connector. Refer to **Image 12**.

Image 12

4.1.6 Connect the FuelX female connector to the OEM male connector. Refer to **Image 13**

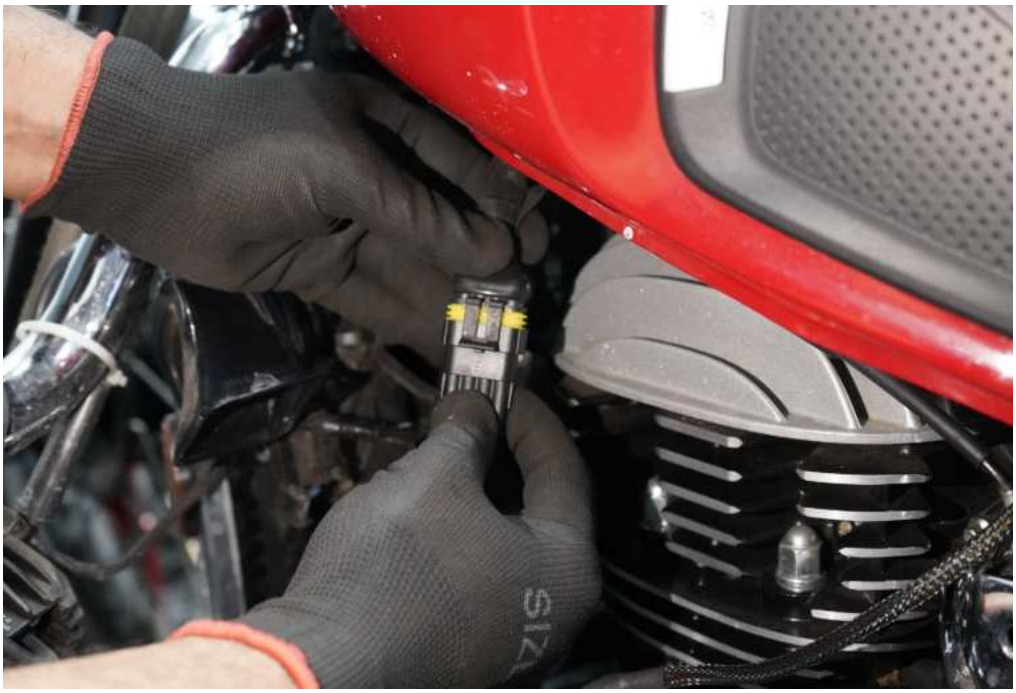


Image 13

4.1.7 Connect the FuelX male connector to the OEM female connector. Refer to **Image 14**.

Image 14

4.1.8 Refer to the completed view. Refer to **Image 15**.

Image 15

4.1.9 Connect the Ground wire to the battery negative terminal of the vehicle. Refer to **Image 16**.

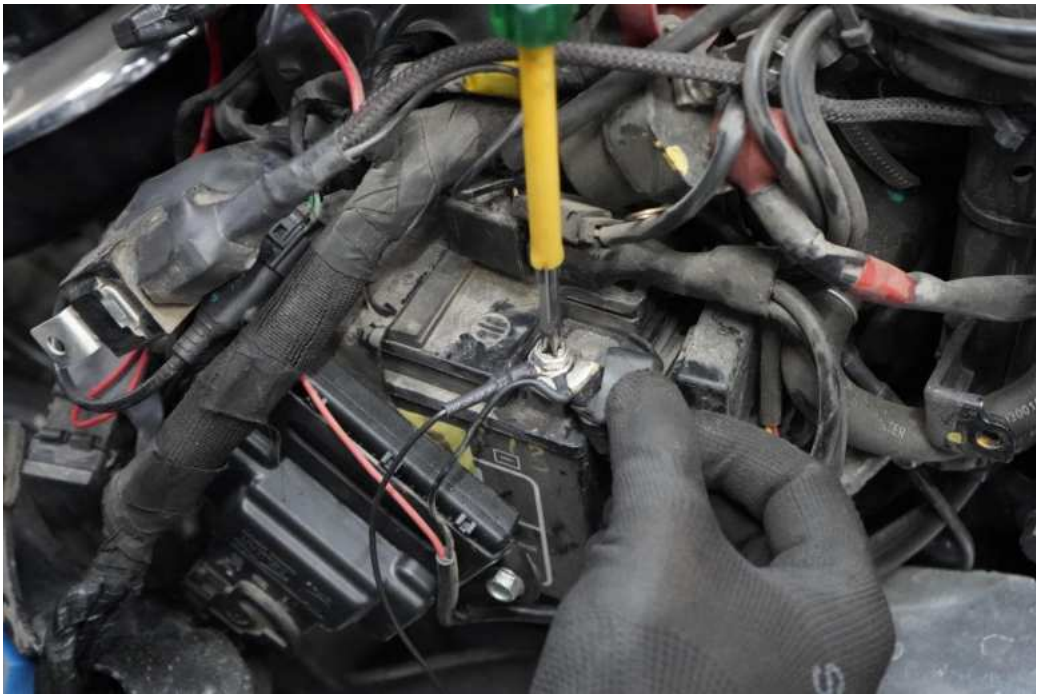


Image 16

4.1.10 For Pro models, connect the Handlebar map switch on the handlebar using the dovetail and using the 2.5 mm Allen key. Refer to **Image 17**

Image 17

4.1.11 Route the Handlebar map switch wire as shown in the image below. Refer to **Image 18**

Image 18

4.1.12 Route the handlebar map switch wire inside the panels carefully. Refer to **Image 19**

Image 19

4.1.13. For pro models, connect the handlebar map switch connector to the matching connector on the FuelX pro module. Refer to **Image 20**

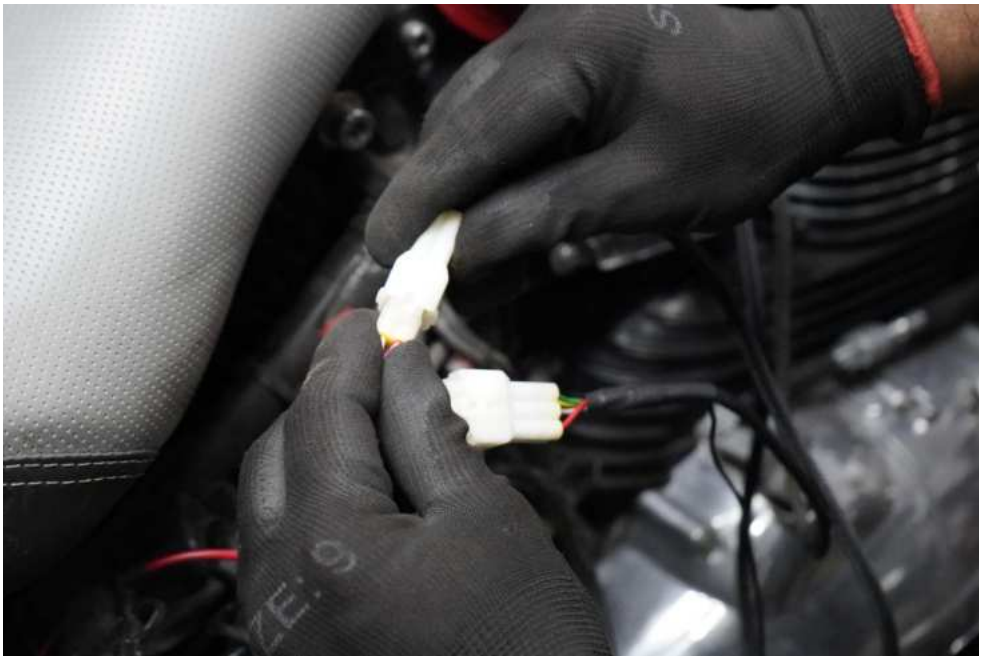


Image 20

4.1.14 Connect the 6-pin connector on the harness to the matching 6-pin connector on the FuelX module. Refer to **Image 21**

Image 21

4.1.15 Place the FuelX module securely inside the glove compartment. Refer to **Image 22**

Image 22

4.1.16 Use zip ties to secure the harness wherever necessary. Attach the panels back. The installation is complete, and you can use the FuelX.

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.

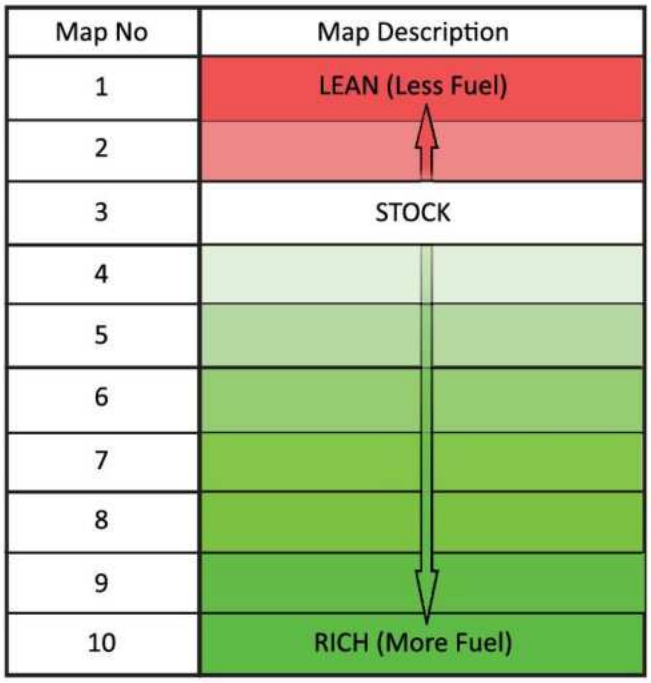


Image 5.1

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

The first two maps are lean.

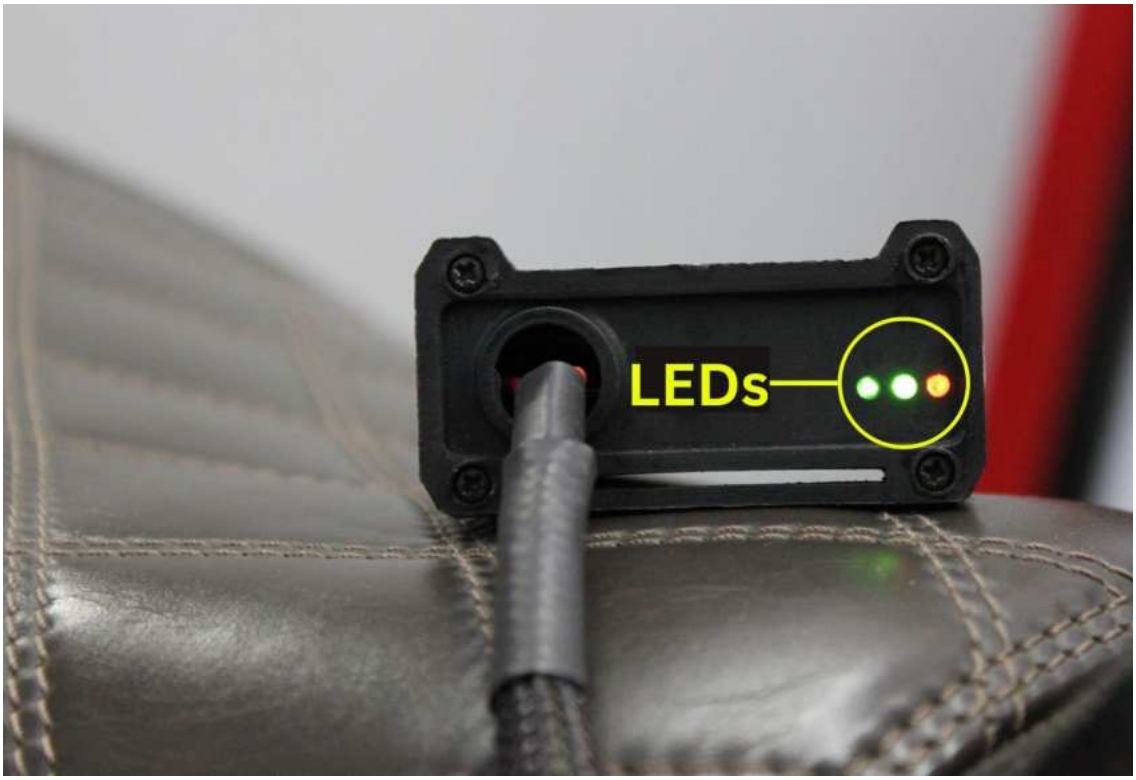
Map 3 runs with the stock AFR set by the OEM manufacturer.

Maps 4 to 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 while the engine is idling indicates that the FuelX is working in sync with the OEM ECU.

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