

FuelX Installation Manual

Bajaj NS 400Z

Document Version	1	Release Date	22 July 2024
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Application information	Vehicle Specific
Vehicle	Bajaj
Model	NS 400Z
Year of manufacture	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 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 / PowerTRONIC is not liable for consequences arising out of using the product.

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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.

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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 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

- FuelXModule
- WiringHarness
- Handlebarmapswitch(ProandPro+ versiononly)
- Zipties
- Decals
- QuickstartguideandWarrantycard



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

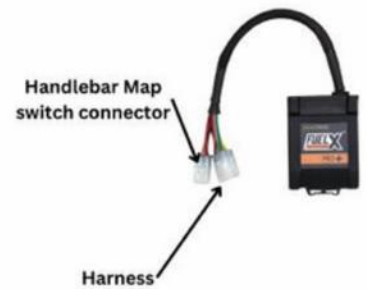


Image 2.3

FuelX 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 2.6) for the Handlebar Map switch (Refer to Image 2.5 m)



Image 2.4



Image 2.5

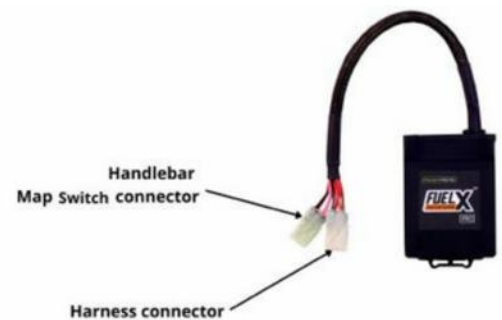


Image 2.6

FuelX Lite

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



Image 2.7

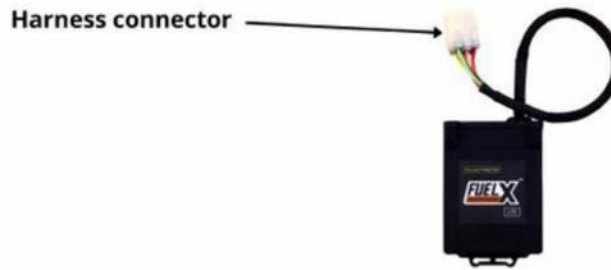


Image 2.7

3. FuelX Harness Connectors

The harness contains

- The Lambda connector(O2)
- FuelX connector
- Ignition coil connector
- Ground/battery negative connector.

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.

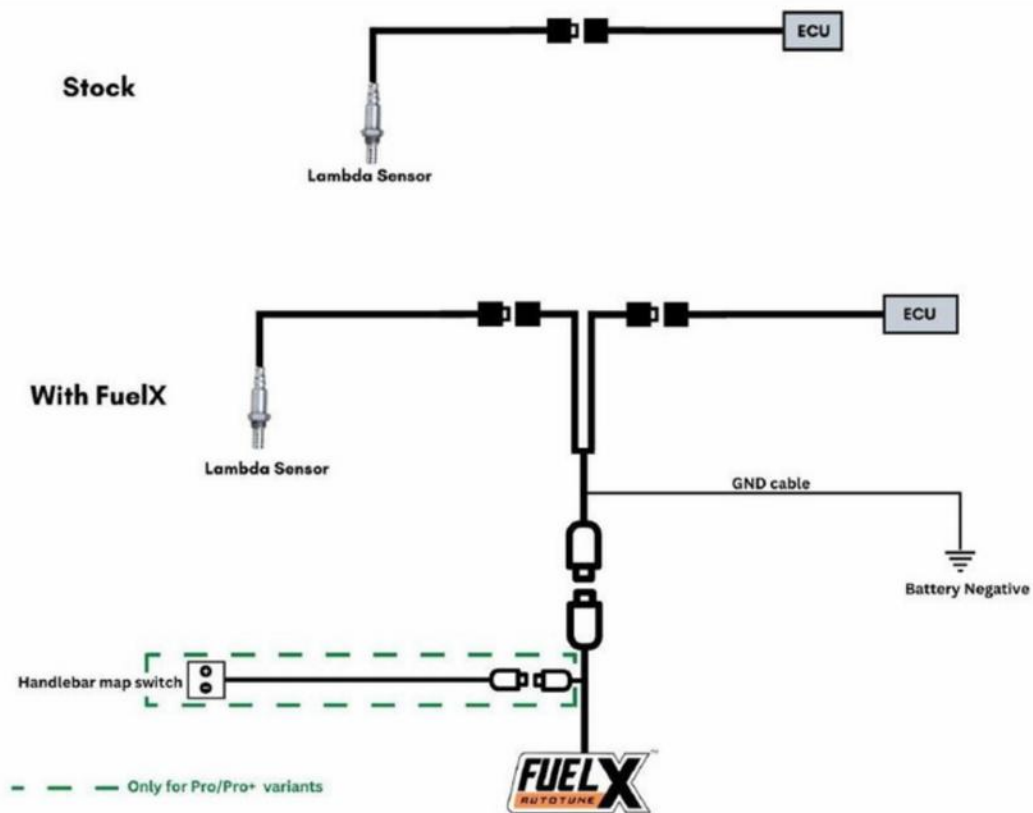


Image 3.4

Tools Required

- Allen keys- 3mm, 4mm
- Philips head screw driver
- 10mm Hexagonal socket

4. Installation procedure

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



Image 1

4.2 Locate the pillion seat lock shown in Image 2 and unlock the pillion seat.



Image 2

4.3 **Image 3** shows how the how the pillion seat detached.



Image 3

4.4 Unscrew the bolts holding the rider seat using a 10mm hexagonal socket. Refer to **Image 4**.



Image 4

4.5 Image 5 shows how the rider seat detached.



Image 5

4.6 Unscrew the screws holding the side panel using a Philips head screw driver. Refer to Image 6 and Image 7.



Image 6



Image 7

4.7 Gently remove the side panel. Refer to [Image 8](#).



Image 8

4.8 Unscrew the screws holding the side fairings using a 4mm Allen key. Refer to **Image 9**.



Image 9

4.9 unscrew the screws on the rear side of the tank cover using a 10mm hexagonal socket. Refer to **Image 10**.



Image 10

4.10 Unscrew the screws holding the tank cover on both sides in the front using a 10mm hexagonal socket. Refer to Image 11.



Image 11

4.11 Unscrew the screws on the top of the tank cover using a 4mm Allen key. Refer to Image 12.



Image 12

4.12 Gently detach the tank cover as shown in **Image 13**.



Image 13

4.13 Locate the O2/Lambda sensor connector on the left side of the bike. Refer to **Image 14**.



Image 14

4.14 Route the FuelX harness through the frame as shown in Image 15 and Image 16.



Image 15

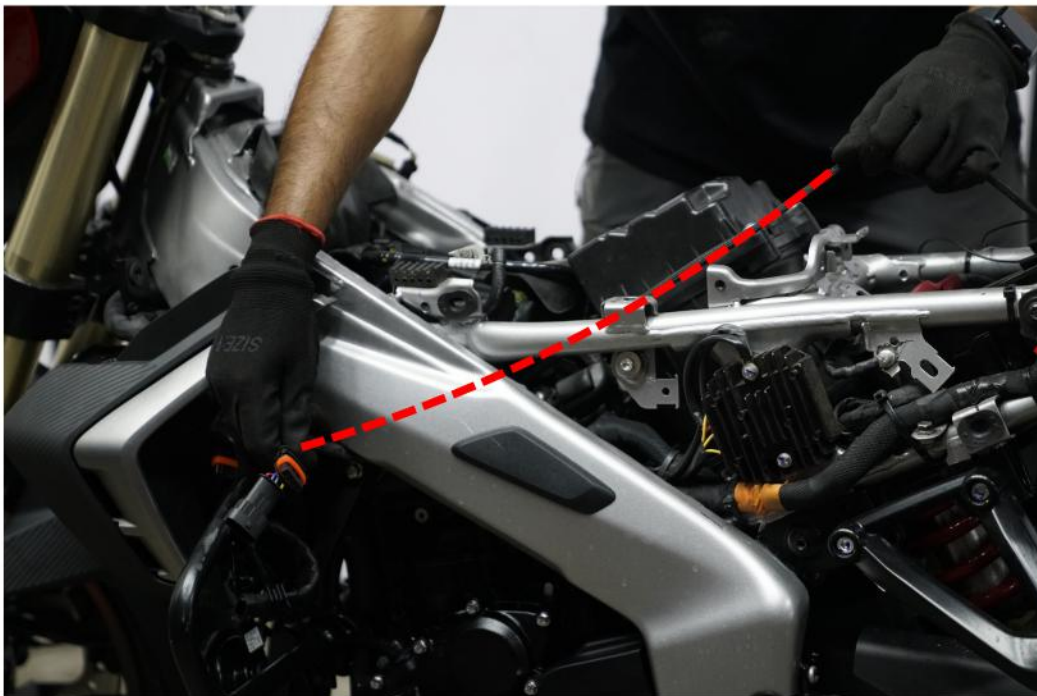


Image 16

4.15 Disconnect the Labda sensor connector as shown in **Image 17**.



Image 17

4.16 Connect the female connector on the FuelX harness to the male connector of the lambda sensor and male connector of FuelX to female connector of lambda sensor. Refer to **Image 18** and **Image 19**.



Image 18



Image 19

4.17 Connect the ground connector on the FuelX harness to the negative terminal of the battery. Refer to **Image 20**.

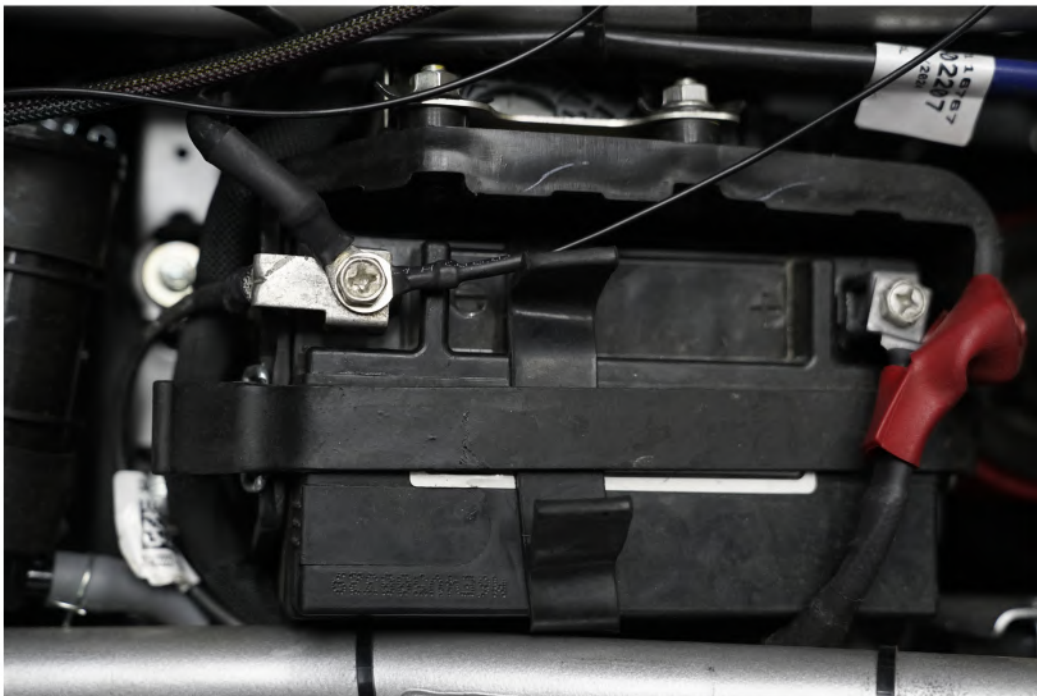


Image 20

4.18 Mount the FuelX map switch on the handlebar using a 3mm Allen key as shown in **Image 21**. Route the map switch harness similar to the FuelX harness.



Image 21

4.19 Place the FuelX unit under the pillion seat and connect the 4 pin connector on the unit to the map switch. Refer to **Image 22**.



Image 22

4.20 Connect the 6 pin connector on the unit to the FuelX harness. Refer to **Image 23**.



Image 23

4.21 Attach the tank cover and panels back on the bike and install the rider and pillion seat. Refer to the next chapter for configuration and settings.

5. FuelX Configurations and Settings

For Pro+ and 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)

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

The first two maps are lean.

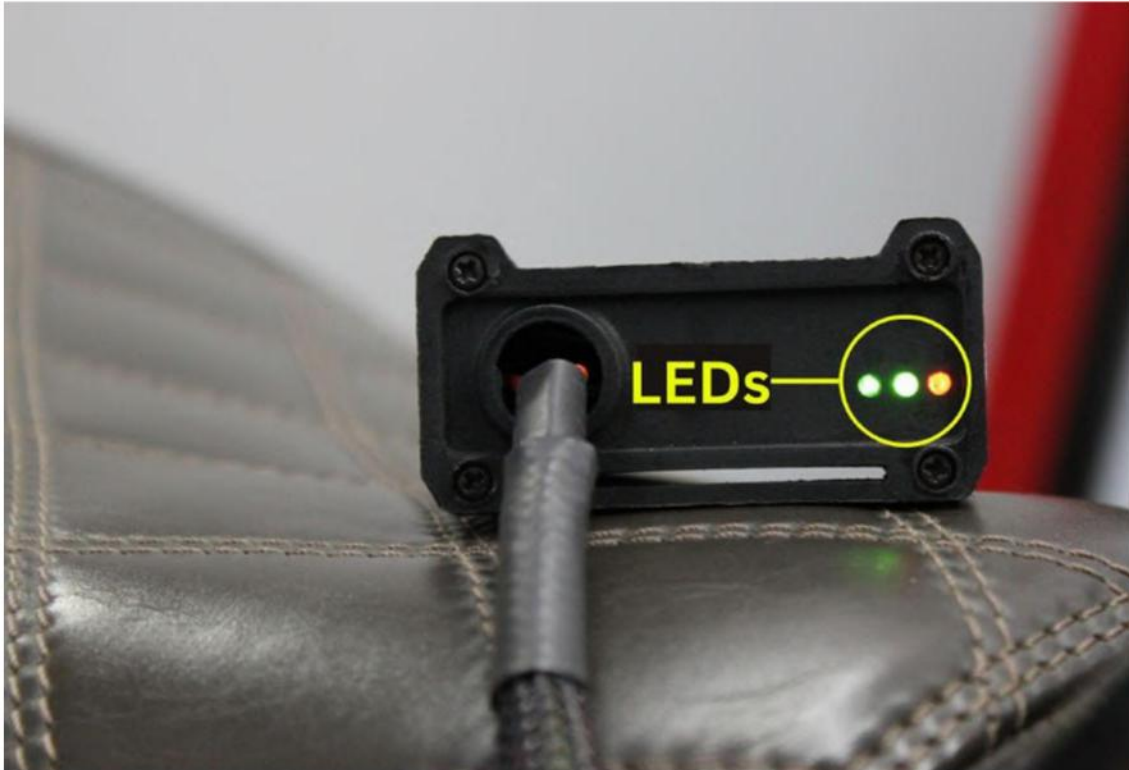
Map 3 runs with stock AFR set by the OEM manufacturer.

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.