

FuelX Installation Manual

Triumph Speed 400/ Scrambler 400/ Speed T4

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Application information	Vehicle Specific
Vehicle	Triumph
Model	Speed 400, Scrambler 400, Speed T4
Year of manufacture	2024-2026

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, 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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Tools required

Serial No	Main tools	Optional tools
1	4mm, 5mm Hex bit	Spinner handle
2	10mm, 8 mm T bar Hexagonal Socket wrench	Ratchet handle
3	Wirecutter	Extension bar or Sliding T-bar

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 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 and 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 to suit 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

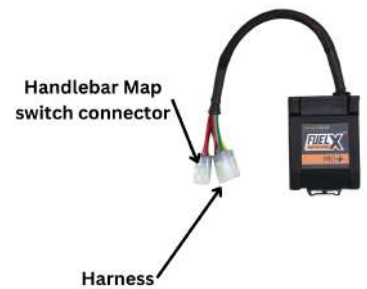


Image 2.3

FuelX Lite

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



Image 2.4

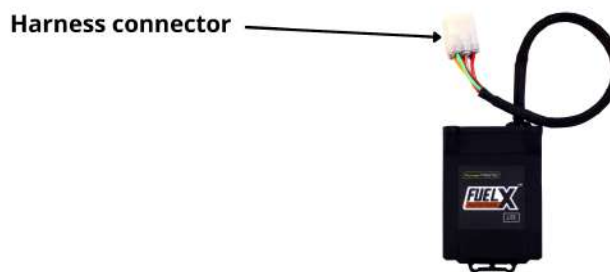


Image 2.5

3. FuelX Harness Connectors

The harness contains

- The Lambda connector (O₂)
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 Lambda sensor connector types 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.

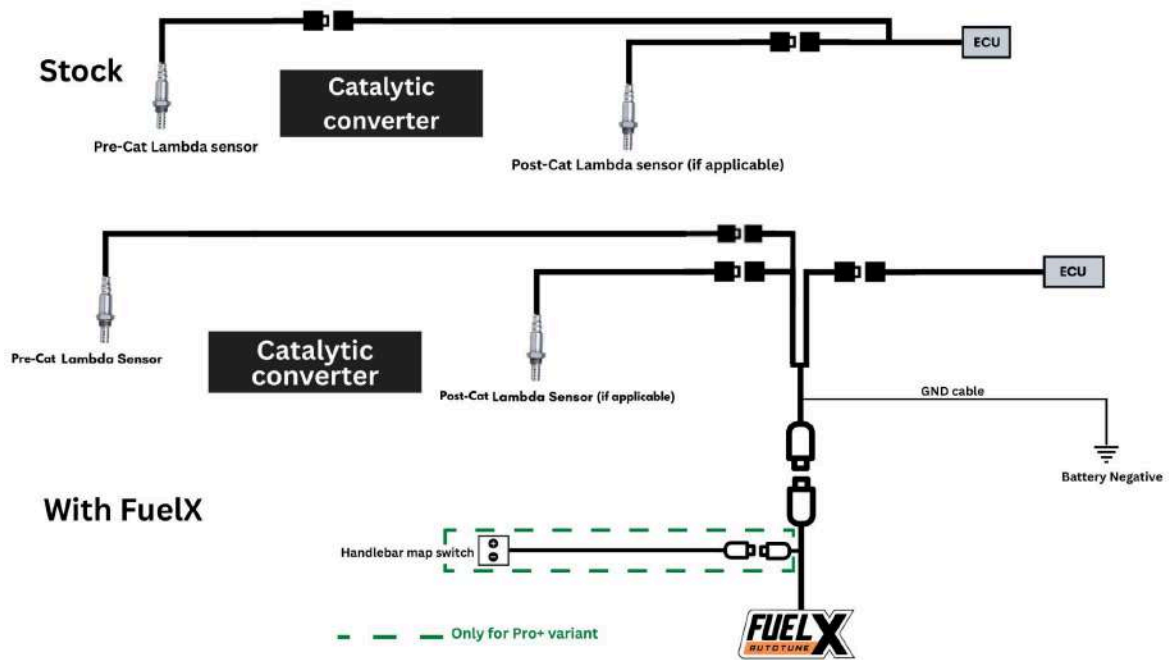


Image 3.3

Type 1

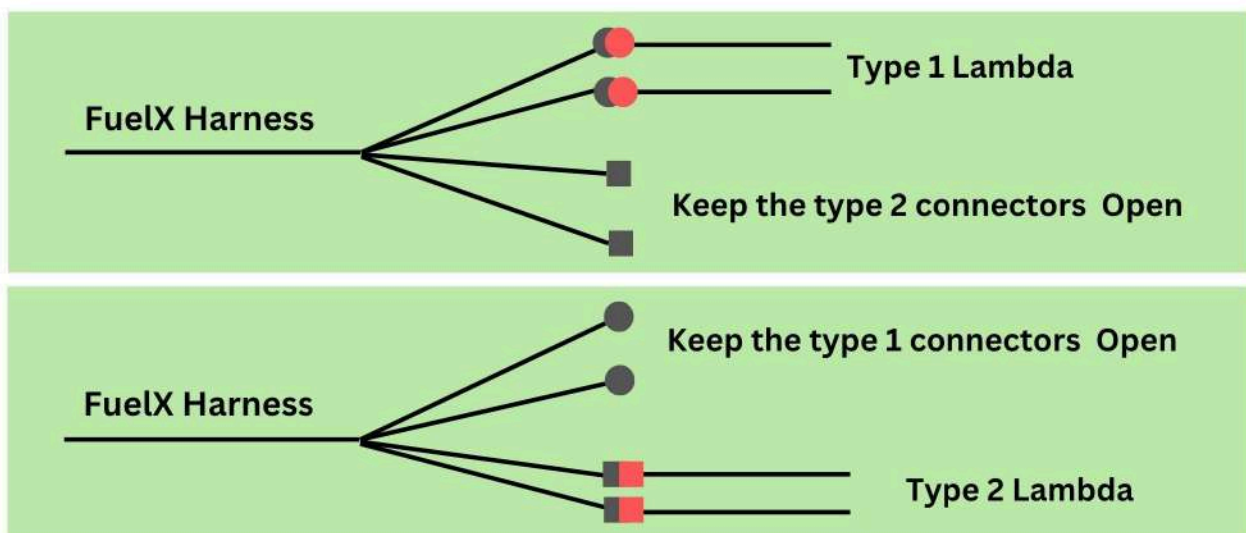


Type 2



FuelX Harness contains 2 types of Pre-cat & Post-cat Lambda connectors. Connect the appropriate connectors that match your vehicle's connectors.

Keep the other connectors disconnected, but ensure they are kept open.



4. Installation procedure

4.1 Removing panels and tank.

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

4.1.1 Detach the pillion seat by inserting the key into the keyhole as shown in **Image 2** and unlock the seat. **Image 3** shows the seat detached.



Image 2

4.1.2 **Image 3** shows the seat detached



Image 3

4.1.3 Unscrew the rear end tank panel bolts using the 5 mm Hexagonal bit. Refer to **Image 4**.



Image 4

4.1.4 Unscrew the tank mounting bolts. Refer to **Image 5**.



Image 5

4.1.5 Gently detach the side panel. Refer to **Image 6**.



Image 6

4.1.6 Unscrew the rear end mounting bolts using the spanner. Refer to **Image 7.**



Image 7

4.1.7 Gently lift the rear end of the tank and locate the vacuum hoses. Detach the hoses carefully. Refer to **Image 8.**

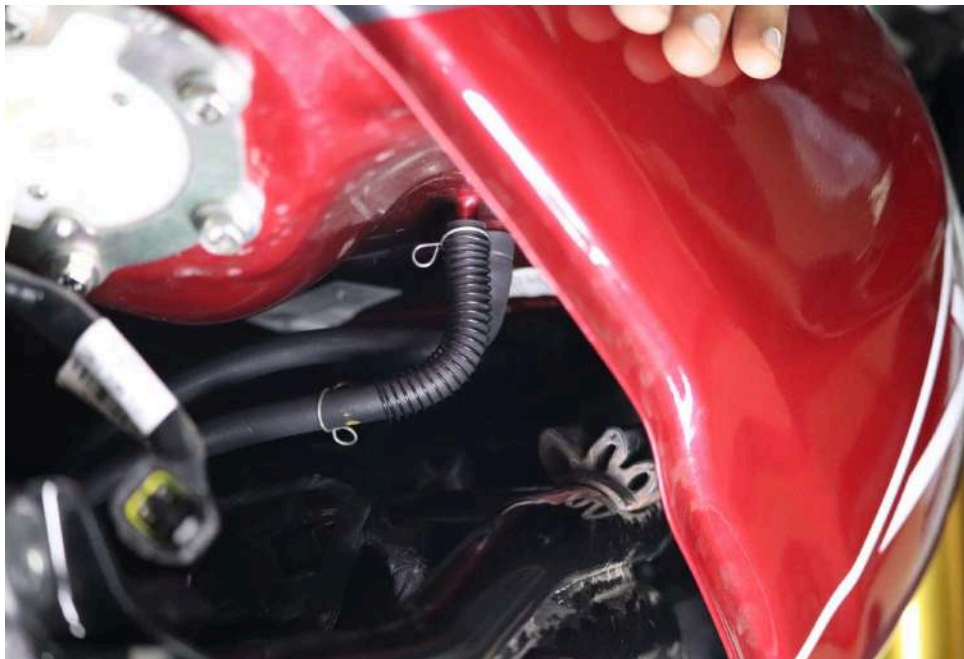


Image 8

4.1.8 Locate the Fuel line and detach the connector carefully. Refer to **Image 9**.



Image 9

4.1.9 Locate the Fuel Pump connector and detach the connector carefully. Refer to **Image 10**



Image 10

4.1.10 Once all the connectors are detached from the tank, gently lift and place it carefully. Refer to **Image 11**



Image 11

4.2 Routing the harness

(Omit the Post-cat Lambda sensor routing if your vehicle does not have a Post-cat Lambda sensor)

4.2.1 Route the FuelX harness Main connector towards the rear end, and the Pre- and Post-Lambda connector branches to their respective positions. Refer to **Image 12**.



Image 12

4.2.2 Route the Pre-cat Lambda sensor connector branch as shown in the image. Refer to **Image 13**.

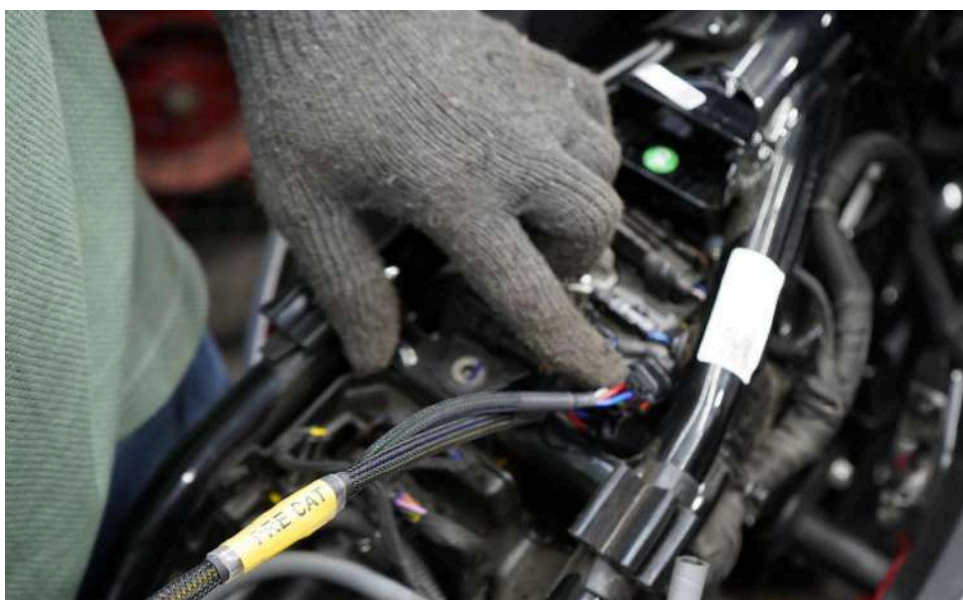


Image 13

4.2.3 Route the Post-cat Lambda sensor connector branch as shown in the images. Refer to **Image 14**.



Image 14

4.2.4 Refer to **Image 15** for the routing process.



Image 15

Pre-Cat Lambda sensor connection (Type 1 connectors shown as examples)

4.2.5 Locate the stock Lambda sensor connector. Refer to [Image 16](#).

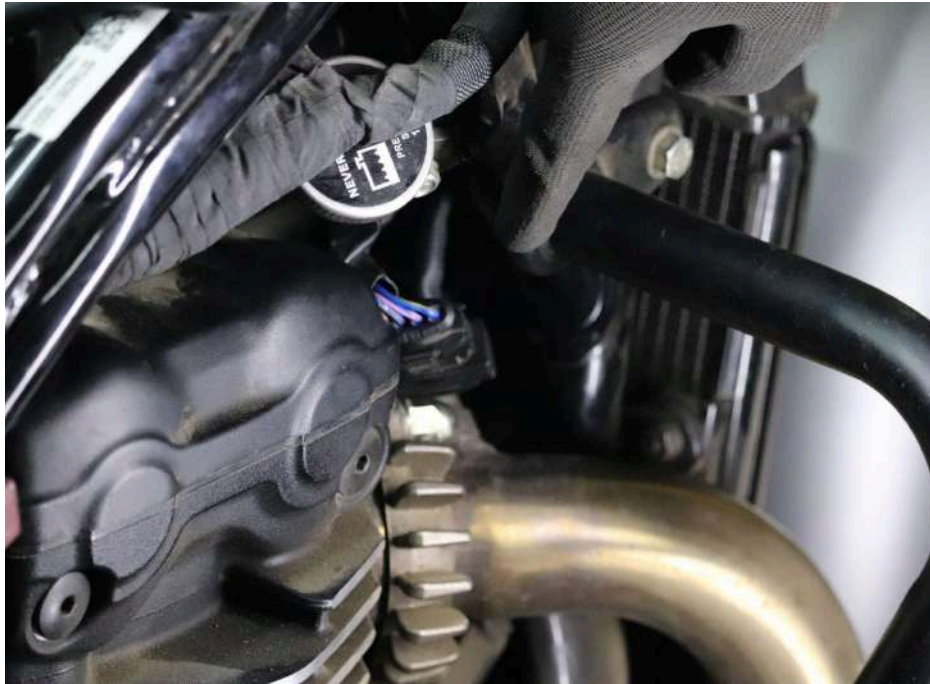


Image 16

4.2.6 Disconnect the stock Lambda sensor connector. Refer to [Image 17](#).



Image 17

4.2.7 Connect the FuelX female Lambda sensor connector to the stock male connector. Refer to **Image 18.**



Image 18

4.2.8 Connect the FuelX male Lambda sensor connector to the stock female connector. Refer to **Image 19.**



Image 19

Post-cat Lambda sensor connection (Proceed if your vehicle has a post-cat Lambda sensor; if not, omit the steps. (Type 2 connectors shown as the examples))

4.2.9 Locate the Post-cat stock Lambda sensor connector. Trace the Post-cat Lambda sensor to find the connector. Refer to **Image 20**



Image 20

4.2.10 Disconnect the Post-cat stock Lambda sensor connector. Refer to **Image 21**



Image 21

4.2.11 Connect the FuelX Post-cat female Lambda sensor connector to the stock Post-cat male connector. Refer to **Image 22**



Image 22

4.2.12 Connect the FuelX Post-cat male Lambda sensor connector to the stock Post-cat female connector. Refer to **Image 23**



Image 23

4.2.13 Refer to **Image 24** for the completed view



Image 24

4.2.14 Connect the FuelX Handlebar map switch on the Handlebar. Refer to **Image 25**



Image 25

4.2.15 Using a 2.5 mm Allen key, tighten the bolts. Refer to Image [26](#).



Image 26

4.2.16 Route the FuelX harness and handlebar switch wire. Refer to Image [27](#)

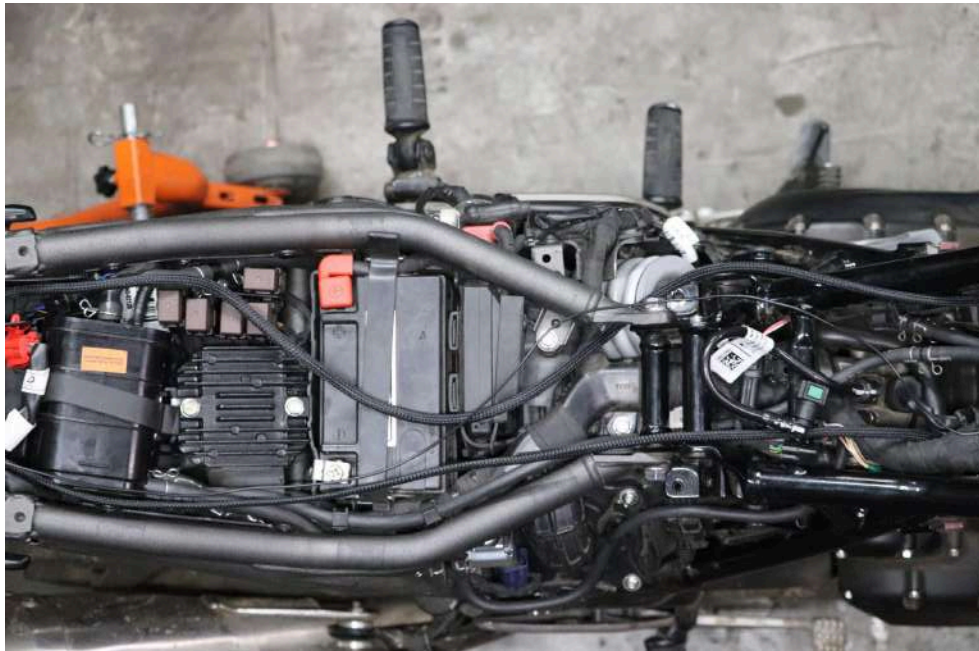


Image 27

4.2.17 Place the FuelX module under the seat on top of the battery. Refer to [Image 28](#).

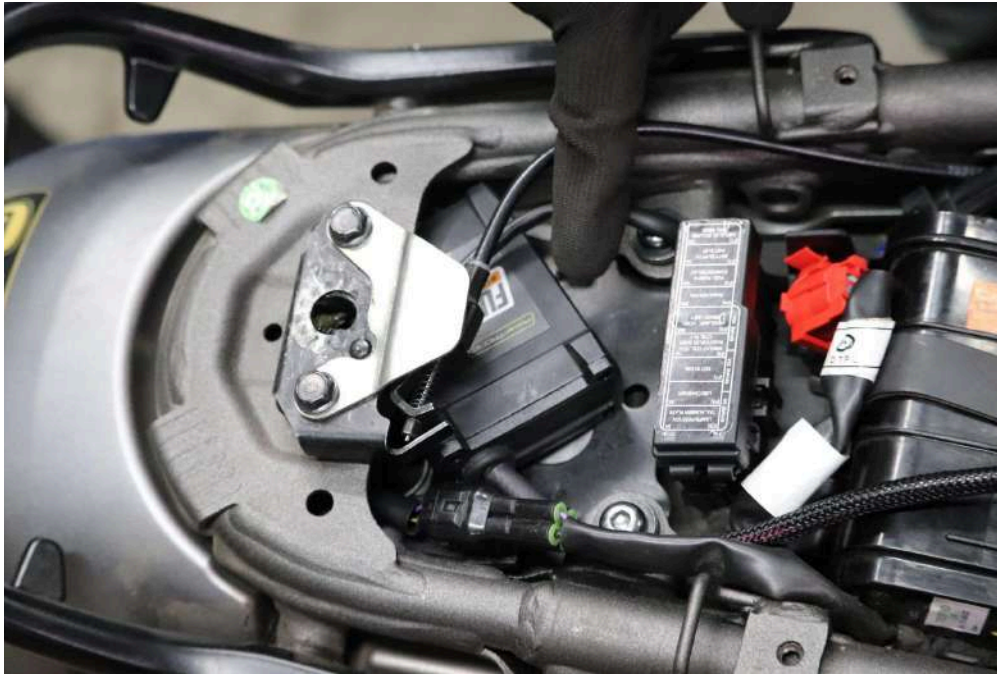


Image 28

4.2.18 Connect the 6-pin FuelX connector to the harness. Refer to [Image 29](#)



Image 29

4.2.19 Connect the 4-pin FuelX connector to the handlebar map switch harness. Refer to **Image 30**.



Image 30

4.2.20 Connect the Ground cable to the battery **negative terminal**. Terminal position may vary. Refer to **Image 31**



Image 31

- 4.2.21** Secure the harness from hot and moving parts using the zip ties provided.
- 4.2.22** Attach the panels and the tank back.

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. I.e 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 32

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.



Image 33

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 is functioning as intended.