

## PowerTRONIC Installation Manual- Yamaha FZ25/Fazer25 (2018-2019)

Document Version	1	Release Date	05 August 2019
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Application information	Vehicle Specific
Vehicle	<b>Yamaha</b>
Model	<b>FZ25/Fazer25</b>
Year of manufacture	<b>2018-2019</b>
PowerTRONIC application	All PowerTRONIC ECUs, from firmware version F.3.x onward

### 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 tends to heat up during the normal operation of the vehicle at any chance.
- PowerTRONIC 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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### 1. Parts list

1	PowerTRONIC	Piggyback ECU
2	Stock Coupler	Stand by unit <ul style="list-style-type: none"><li>• Can be connected in place of the PowerTRONIC to run the bike in stock mode if need be.</li><li>• Used for the verification of the connectors involved.</li></ul>
3	Harness	Bike specific harness contains the following connectors <ul style="list-style-type: none"><li>• Fuel injector connectors</li><li>• Ignition coil connectors</li><li>• Throttle position sensor connector (TPS) tapping wire</li><li>• Crank position (CKP) sensor connector</li><li>• Map selection connector</li><li>• Quick shifter connector</li><li>• Ground terminal</li></ul>
4	USB cable	Can be used to connect the PowerTRONIC to a laptop for throttle calibration or changing maps
5	Nylon Tags	To secure wiring harness
6	User guide and Warranty card	Instructions

### 2. Tools required

Serial No	Item with description
1	M4, M5, M6 Hexagonal bit
2	M8, M10 Hexagonal socket
3	Phillips-Head screwdriver
4	Wire cutter

### 3. Installation procedure

#### 3.1 Removing panels, fairing

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

Begin from the left side of the bike.



Image 1

Identify the positions of the connections

**Top**

Fuel injector connector

**Right**

TPS Connector  
GND Terminal connector



**Left**

Ignition coil connectors  
CKP Connector

Image 2

3.1.1 Locate the seat lock shown in **Image 3** and unlock the pillion rider seat lock as shown in **Image 4**.



Image 3



Image 4



3.1.2 Detach the seat. Refer [Image 5](#).



Image 5

3.1.3 Unscrew the rider seat bolts using M8 Hexagonal socket. Refer [Image 6](#).

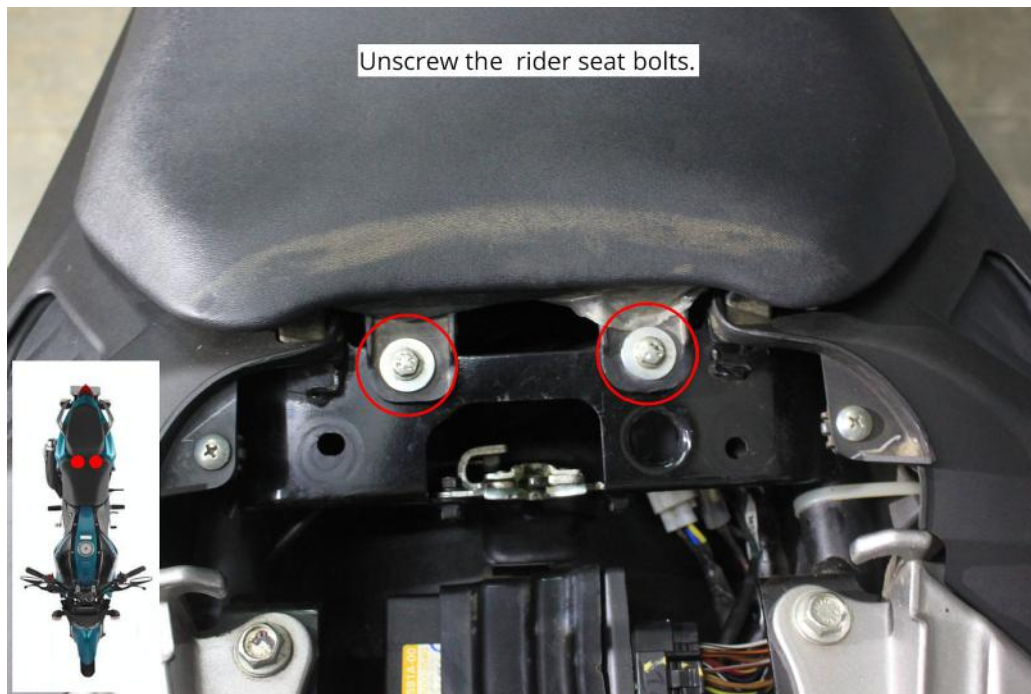


Image 6

**3.1.4** Detach the rider seat. Refer the **Image 7**



Image 7

**3.1.5** Locate and unscrew the side panel screws. Refer **Image 8**.

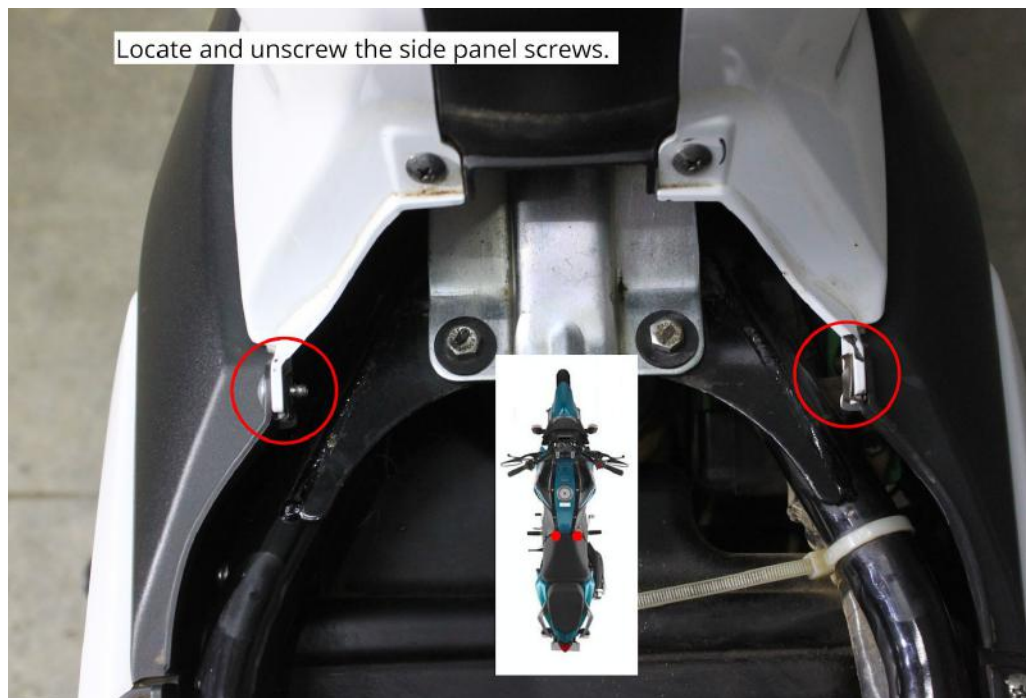


Image 8

**3.1.6** Locate and unscrew the side panel screws. Refer [Image 9](#).

Image 9

**3.1.7** Locate and detach the press clip. Refer [Image 10](#)



Image 10



**3.1.8** Detach the side panel carefully. Refer [Image 11](#)



Image 11

**3.1.9** Detach the press clip. Refer [Image 12](#)



Image 12



**3.1.10** Unscrew the front panel screws using a Phillips head screwdriver. Refer **Image 13**

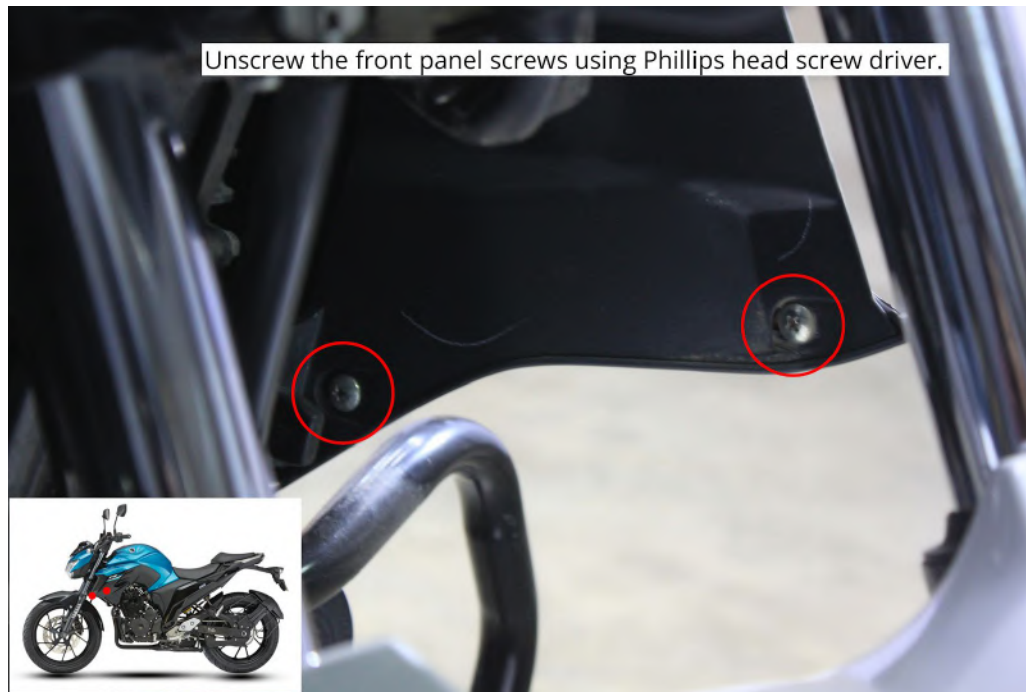


Image 13

**3.1.11** Detach the press clips. Refer **Image 14**



Image 14

**3.1.12** Locate and unscrew the side panel screw using a Phillips head screwdriver. Refer [Image 15](#)

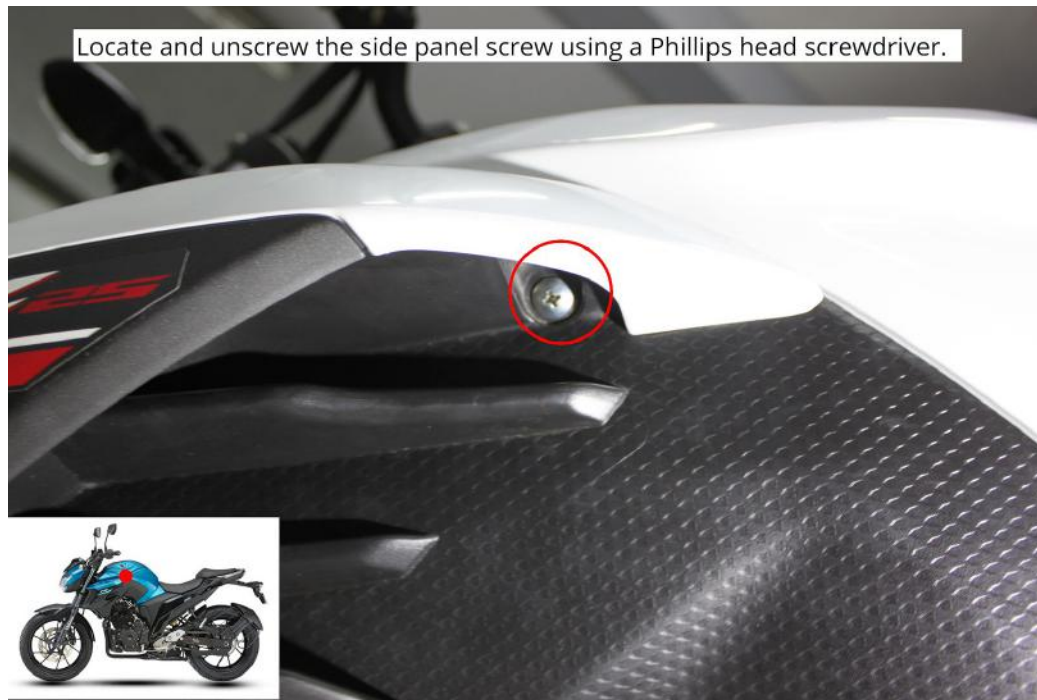


Image 15

**3.1.13** Carefully remove the side panel. Refer [Image 16](#)



Image 16

**3.1.14** Repeat the process on the other side of the bike.

## 3.2 Routing the harness

3.2.1 Identify the connectors. Refer [Image 17](#).

Identify the connector and routing pattern

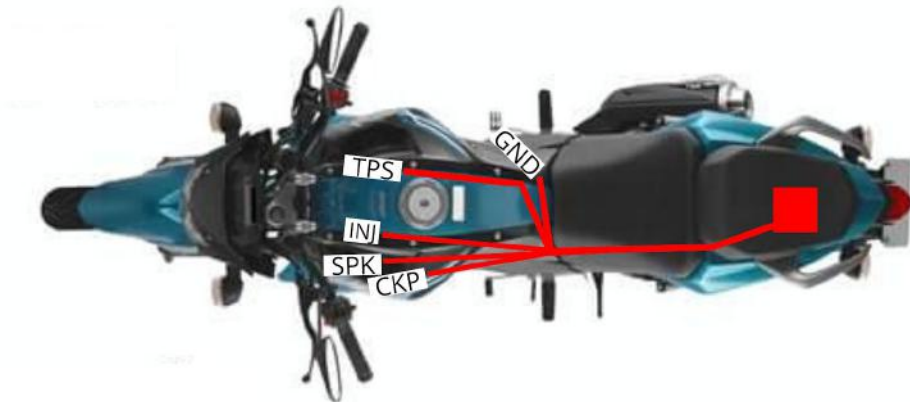


Image 17

3.2.2 Start from the glove compartment, route each connector terminal between the mudguard and seat centre panel. Refer [Image 18](#).

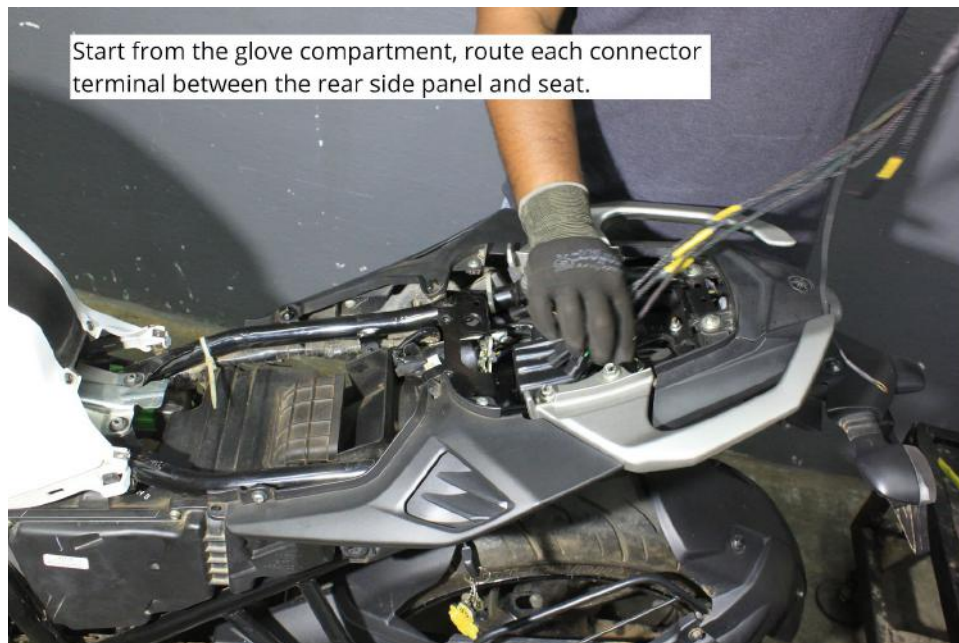


Image 18



3.2.3 Route the connectors as shown in the image. Refer [Image 19](#) and [Image 20](#).



Image 19

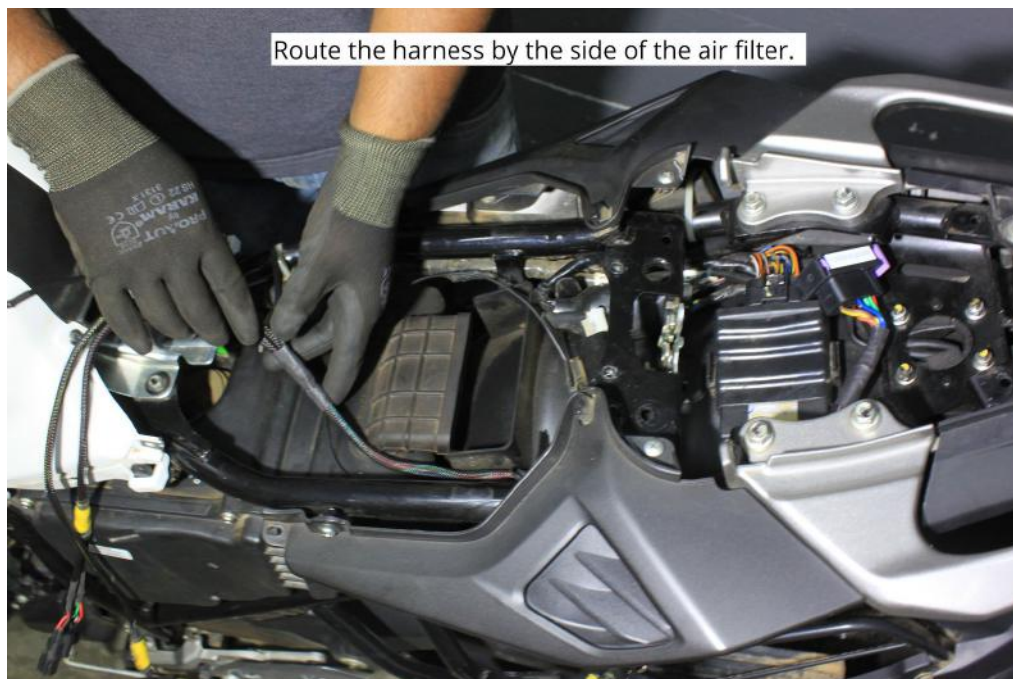


Image 20



**3.2.4** Route the harness as shown in the image. Refer **Image 21.**

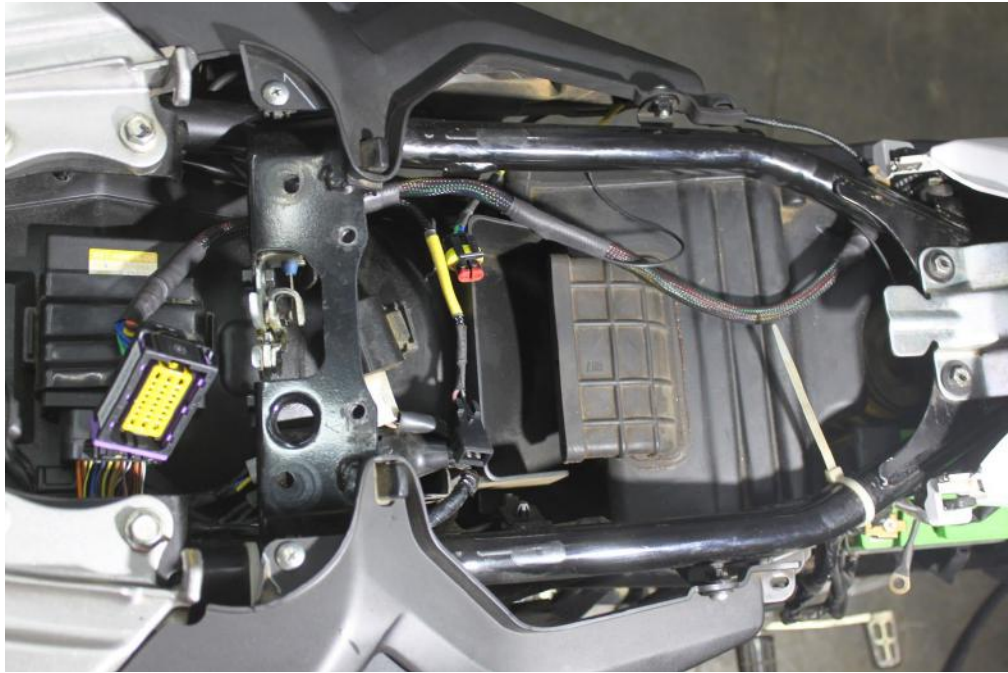


Image 21

**3.2.5** Route the injector ignition harness by the side of the air filter. Refer **Image 22.**



Image 22

**3.2.6** Route the harness by the side of the air filter. Refer **Image 23** and **Image 24**.



Image 23



Image 24



**3.2.7** Route the TPS harness to the left side of the bike. Refer **Image 25**.



Image 25

**3.2.8** Route the ground terminal connector to battery negative terminal. Refer **Image 26**.



Image 26

### 3.3 Fuel Injector Connector

**3.3.1** Locate the stock injector connectors of your bike. Refer **Images 27.**



Image 27

**3.3.2** Identify the fuel injector connector in the PowerTRONIC wiring harness. The connectors are labeled 'INJ1 and INJ2'

**3.3.3** Disconnect the injector connector on your bike. Refer the zoomed view (**Image 28**)



Image 28



**3.3.4** Connect the PowerTRONIC injector female connector to the stock injector male connector. Refer [Image 29](#)

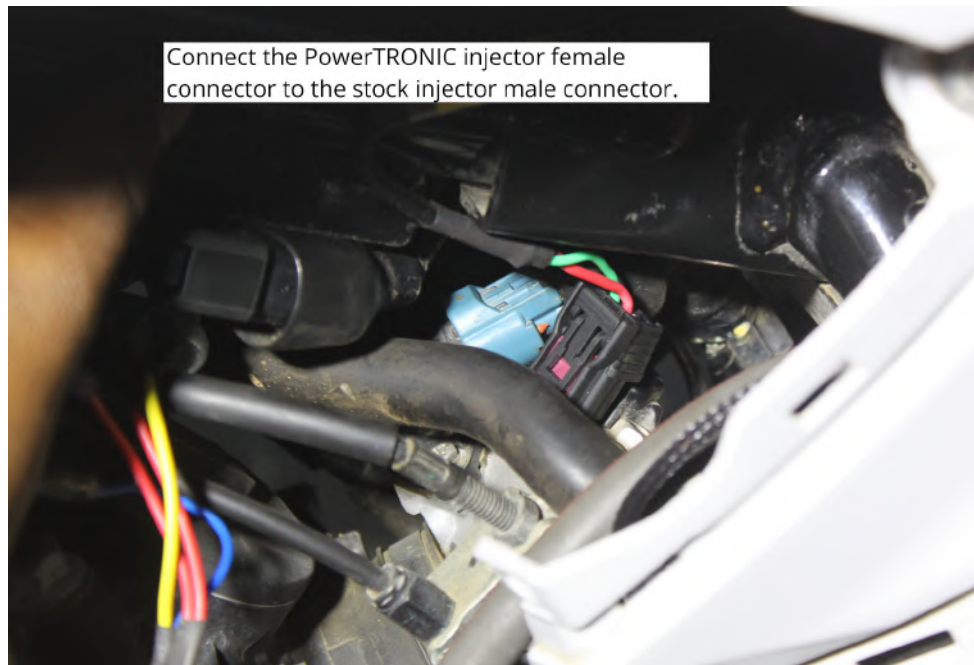


Image 29

**3.3.5** Connect the PowerTRONIC male injector connector to the stock female injector connector. Refer [Image 30](#)



Image 30

### 3.4 Ignition Coil Connector

**3.4.1** Locate the stock Ignition coil connectors. Refer **Images 31**



Image 31

**3.4.2** Identify the Spark/Ignition coil connectors in the PowerTRONIC wiring harness. The connectors are labelled 'SPK'.

**3.4.3** Disconnect the stock ignition coil connectors. Refer **Image 32**



Image 32



**3.4.4** Connect the PowerTRONIC Ignition coil 12V female connector to the stock ignition coil 12V male connector. Refer **Image 33.**



Image 33

**3.4.5** Connect the PowerTRONIC Ignition coil 12V male connector to the stock ignition coil 12V female connector. Refer **Image 34.**



Image 34

**3.4.6** Connect the PowerTRONIC Ignition coil signal male connector to the stock ignition coil signal female connector. Refer **Image 35**.



Image 35

**3.4.6** Connect the PowerTRONIC Ignition coil 12V female connector to the stock ignition coil 12V male connector. Refer **Image 36**.



Image 36



### 3.5 Throttle position sensor connector

**3.5.1** Locate the TPS connector of your bike. It is generally located on the throttle body, parallel to the throttle cable return springs. Refer [Image 37](#)

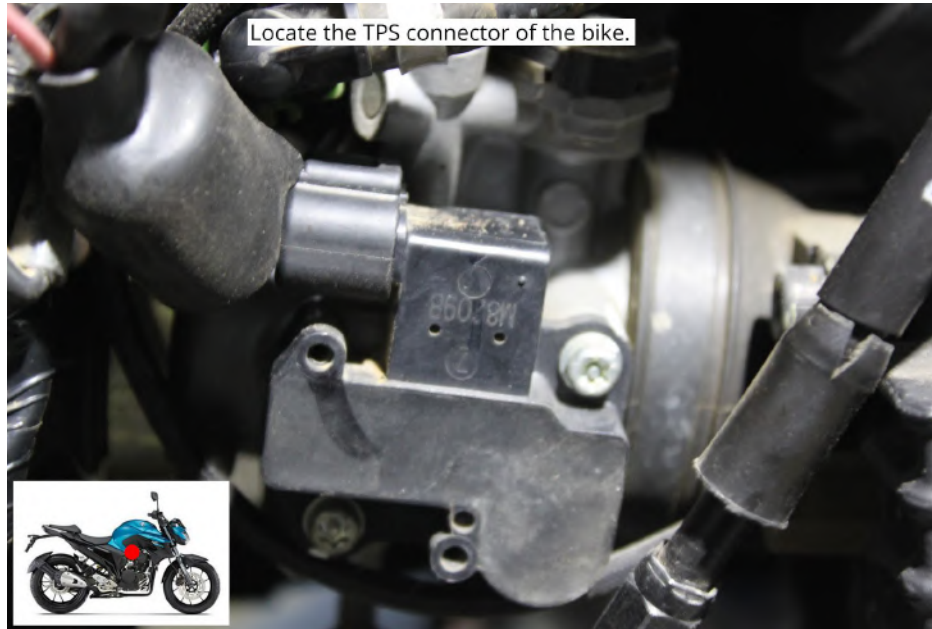


Image 37

**3.5.2** Identify the Throttle Position sensor connector in the PowerTRONIC wiring harness, labeled as 'TPS'

**3.5.3** Disconnect the stock TPS connector. Refer [Image 38](#)



Image 38

**3.5.4** Route the PowerTRONIC TPS tapping wire to the connector terminal. Refer **Image 39**

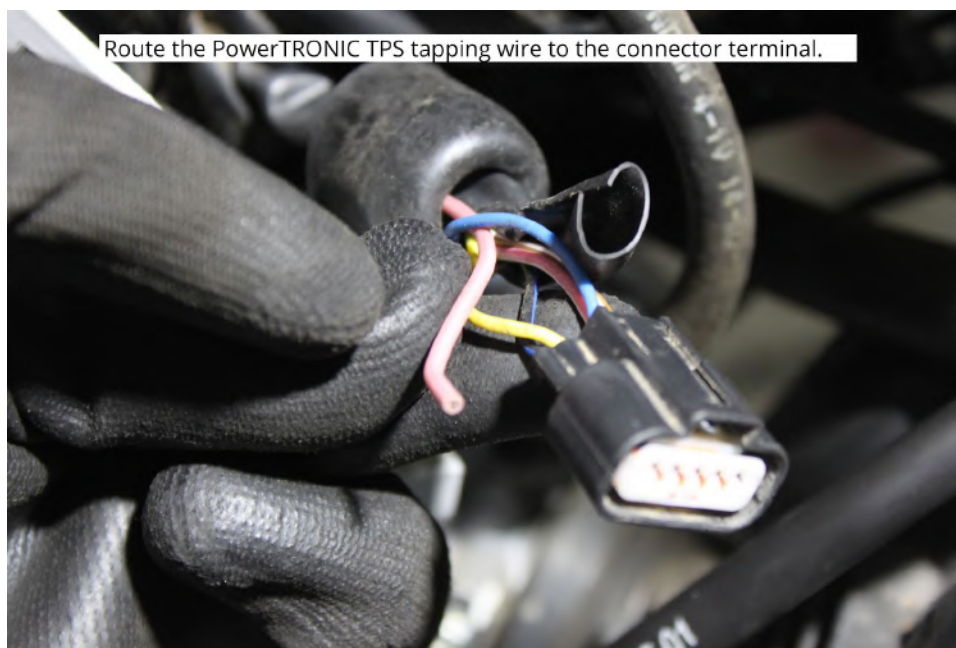


Image 39

**3.5.5** Tap the PowerTRONIC TPS tapping wire to the yellow wire in the connector using the tapping clip provided. Refer **Image 40.**



Image 40

**3.5.6** We advise you to perform a TPS calibration after the installation of PowerTronic ECU.  
Refer the detailed TPS calibration document.

### 3.6 Crank Position Sensor Tapping

**3.6.1** Locate the CKP sensor connector. Refer [Image 41](#)



Image 41

**3.5.3** Disconnect the stock CKP connector. Refer [Image 42](#)

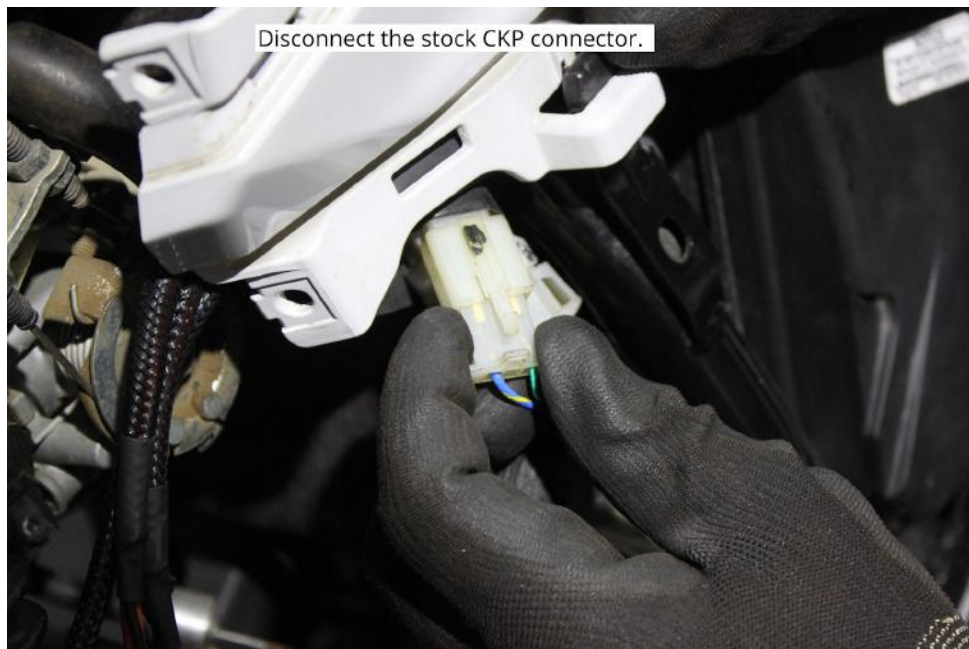


Image 42



**3.5.4** Connect PowerTRONIC male CKP connector to the stock female CKP connector. Refer **Image 43.**

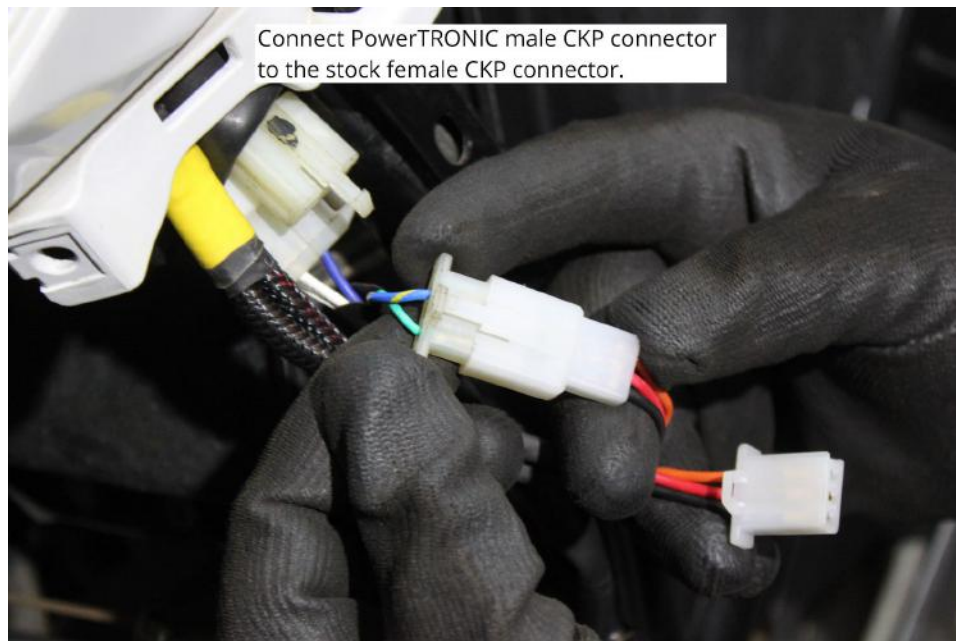


Image 43

**3.5.4** Connect PowerTRONIC female CKP connector to the stock male CKP connector. Refer **Image 44.**



Image 44



### 3.6 Ground Terminal Connector

**3.6.1** Unscrew the battery negative terminal and Identify the Ground terminal connector labelled as GND and connect it to the negative terminal of the battery. Refer **Image 45**

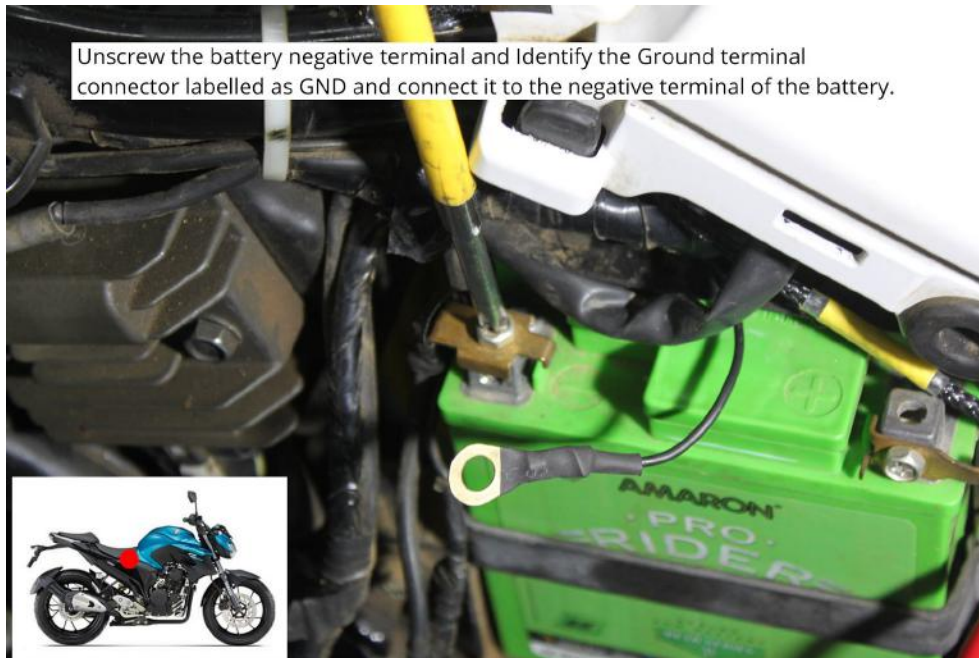


Image 45

**3.6.2** Connect the battery ground connector to the negative terminal of the battery. Refer **Image 46**



Image 46

### 3.7 Securing the harness using ties

**3.7.1** Secure the harness away from general heating areas by attaching it to the chassis or frame using the zip ties provided wherever necessary. Refer **Image 47**

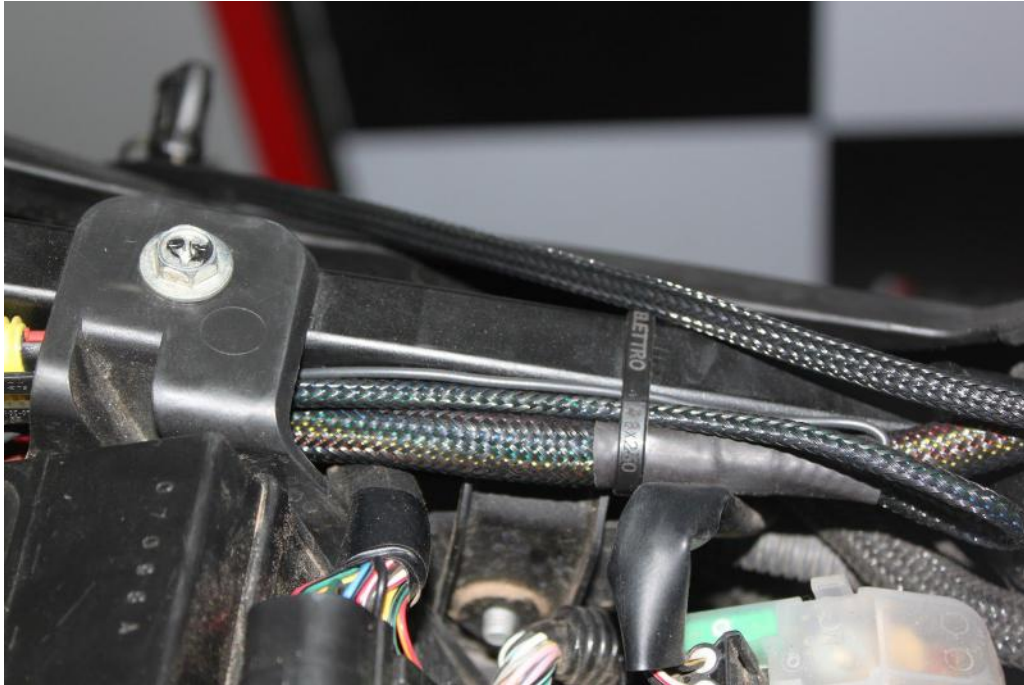


Image 47

**Important note:** The PowerTRONIC harness contains Quick shifter connector. If you have bought the Quickshifter please attach the connector to it. [Please refer Quick shifter installation manual]

If you have not bought the Quickshifter, you can leave it disconnected but make sure the harness is secured using zip ties provided.

### 3.8 Testing with the stock coupler

**3.8.1** Attach the fuel tank.

**3.8.2** You can verify the connections by attaching the stock coupler. Refer detailed Stock coupler test document.

**3.8.3** ***DO NOT proceed with PowerTRONIC ECU without verifying the connections with stock coupler.*** Refer **Image 48**



Image 48



### 3.9 Plugging in the PowerTRONIC

Connect the PowerTRONIC to the harness by connecting the 24 pin connector. Secure it in the glove box. Refer **Image 49**



Image 49

### 3.10 Attaching the panels fairing etc

Attach the panels, fairing as removed from the bike.