

## PowerTRONIC Installation Manual- Suzuki V-Storm (2017-2018)

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Application information	Vehicle Specific
Vehicle	<b>Suzuki</b>
Model	<b>V-storm</b>
Year of manufacture	<b>2017-2018</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)</li> <li>• Crank position (CKP) sensor connector tapping wire</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	M2.5, M3, M5 Hexagonal bit
2	M8, M10, M12 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 at the left side of the bike.



Image 1

#### Locate the position of the connectors

##### Top

Injector connectors x 2  
Ignition coil x 1  
CKP connector  
TPS connector  
Vacuum tubes  
Fuel line and pump

##### Right

##### Left

Ignition coil x 1



Image 2

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



Image 3



Image 4



**3.1.2** Detach the seat. Refer **Image 5**.



Image 5

**3.1.3** Detach the side panel carefully. Refer **Image 6**.



Image 6

**3.1.4** Locate and unscrew the tank cover bolt using M5 Hex bit. Refer the **Image 7**



Image 7

**3.1.5** Detach the press clips. Refer **Image 8**.

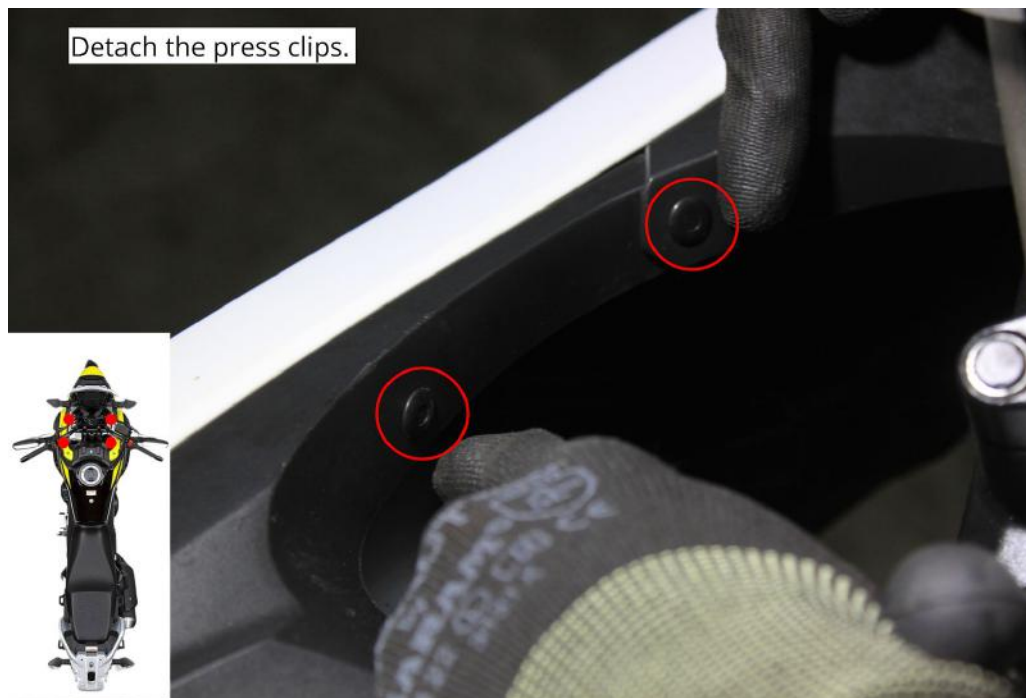


Image 8

**3.1.6** Unpin the tank front cover from the slot and gently detach it. Refer **Image 9**.



Image 9

**3.1.7** Locate and unscrew the side panel bolt using M5 hex bit. Refer **Image 10**



Image 10



**3.1.8** Locate and unscrew the tank rear bolt using M12 Hexagonal socket. Refer [\*\*Image 11\*\*](#)



Image 11

**3.1.9** Detach the bolt plate. Refer [\*\*Image 12\*\*](#)

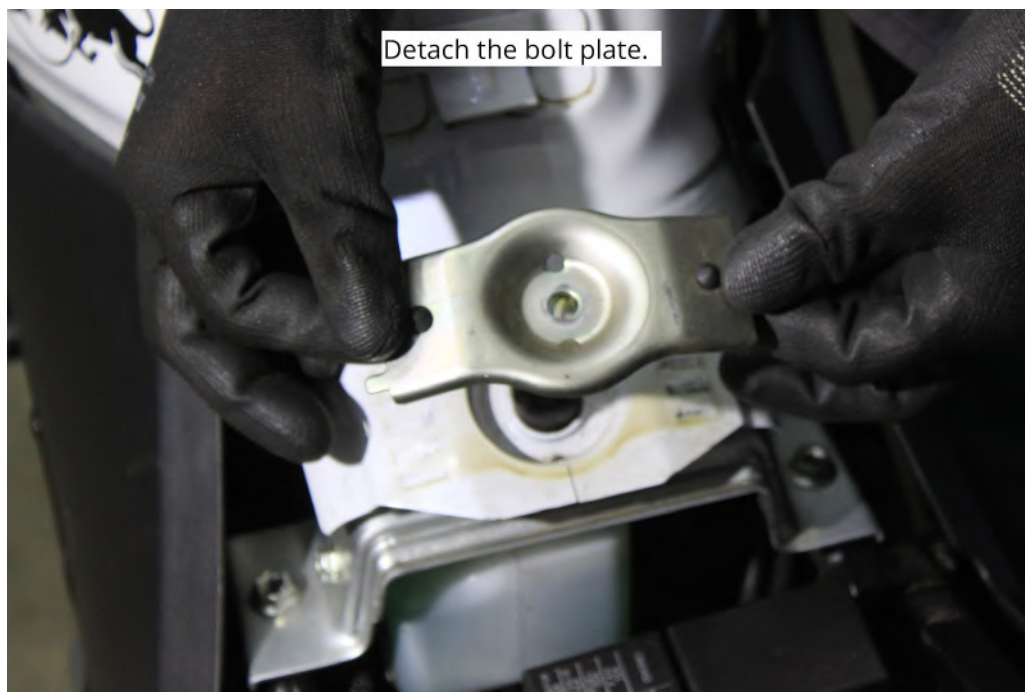


Image 12



**3.1.10** Locate and unscrew the tank front bolts using M5 hex bit. Refer **Image 13**



Image 13

**3.1.11** Detach the bolt plate. Refer **Image 14**

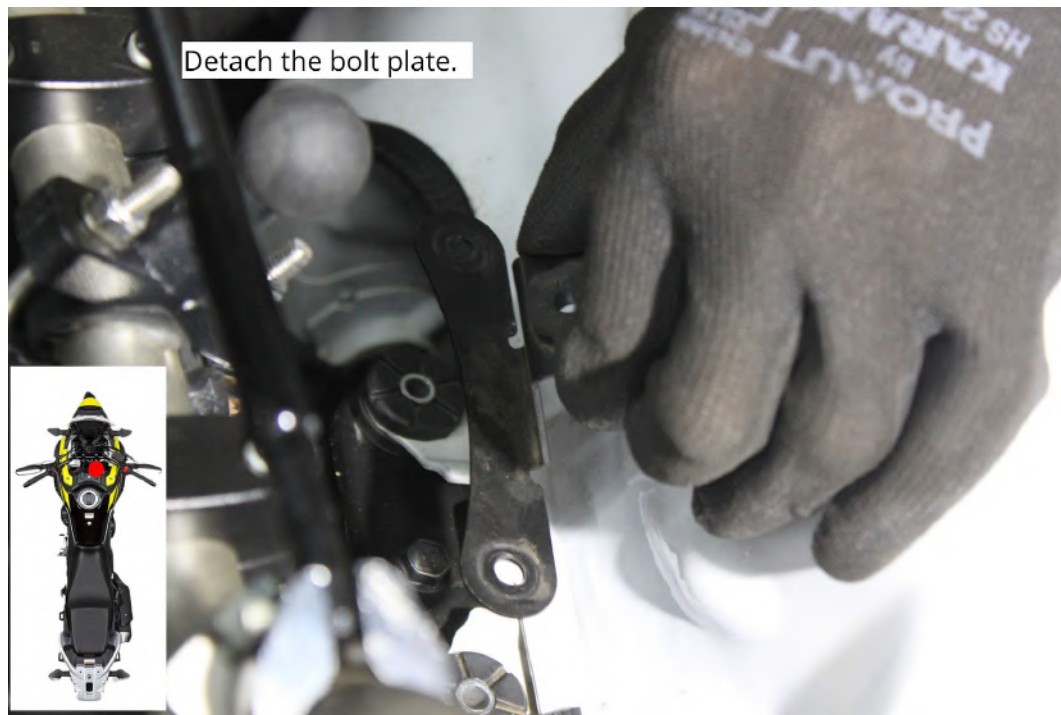


Image 14

**3.1.12** Lift the rear end of the tank slightly, disconnect the fuel line and pump connector. Refer [Image 15](#)



Image 15

**3.1.13** Disconnect the vacuum tubes. Refer [Image 16](#)

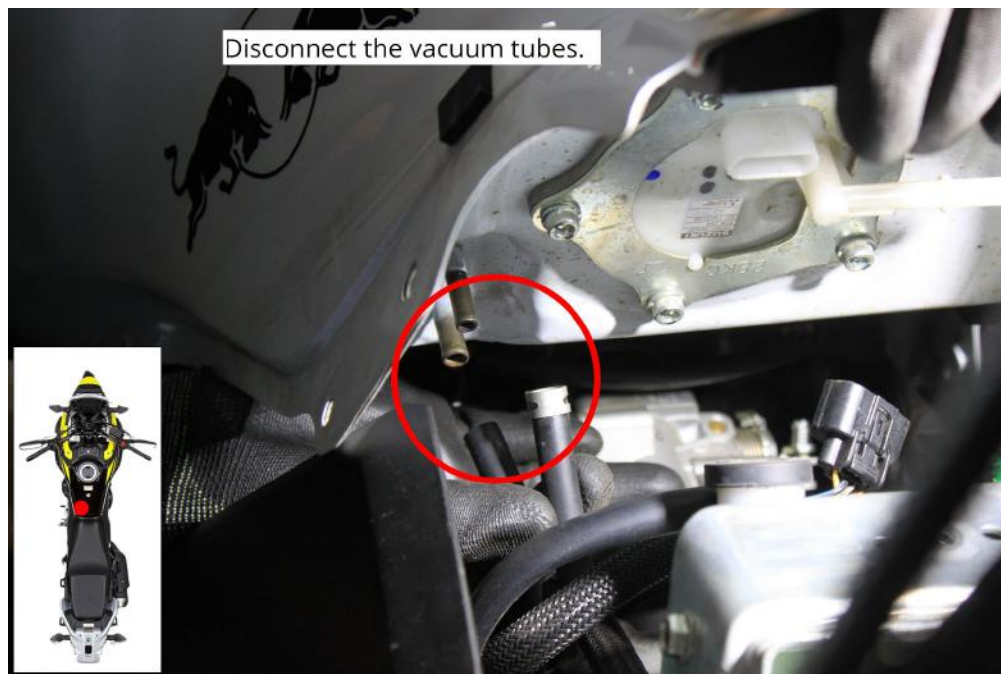


Image 16

**3.1.14** After disconnecting all connections, gently lift the tank and place it safe.

**3.1.15** Disconnect the vacuum tubes from the air box. Refer **Image 17**.



Image 17

**3.1.16** Disconnect the Map sensor connector from the air box. Refer **Image 18**



Image 18



**3.1.17** Unscrew the rectifier bolts using M10 Hex socket. Refer **Image 19**



Image 19

**3.1.18** Unscrew the air box clamp bolt using M2.5 hex bit. Carefully detach the air box. Refer (the detached view) **Image 20**

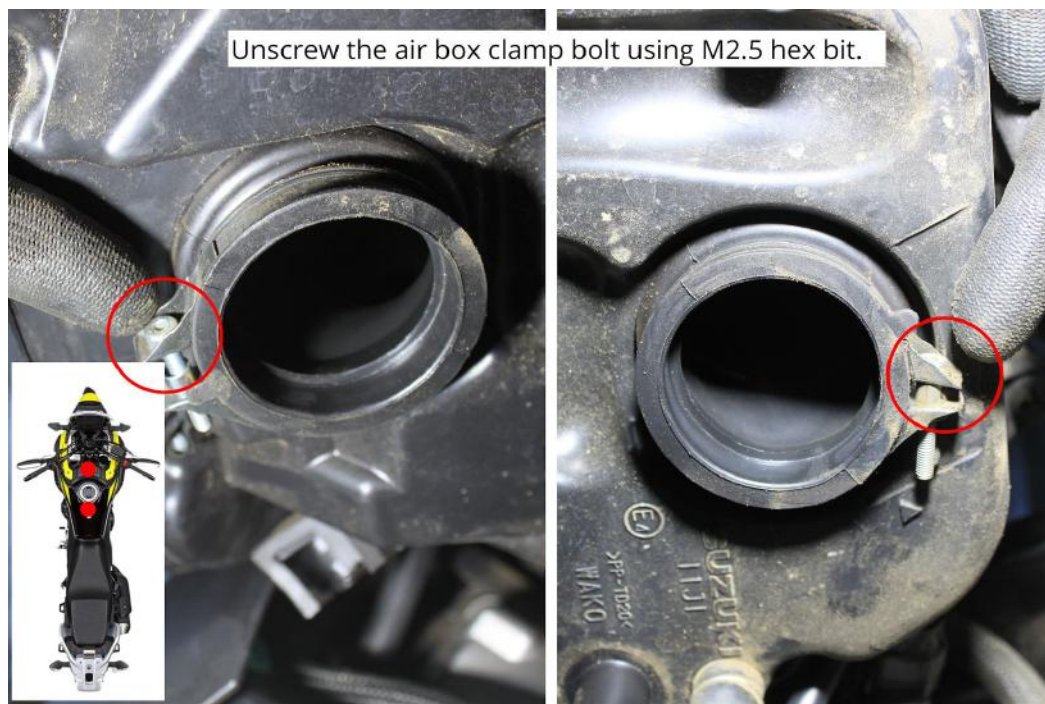


Image 20



### 3.2 Routing the harness

**3.2.1** Identify the connectors. Refer Image 21. **Important Note:** For bikes with more than 1 cylinder and ignition coil, connect the INJ1 and SPK1 connectors to the Injector and ignition coil of the same cylinder. Repeat the process for INJ2 and SPK2 for other cylinder.

Identify the connections

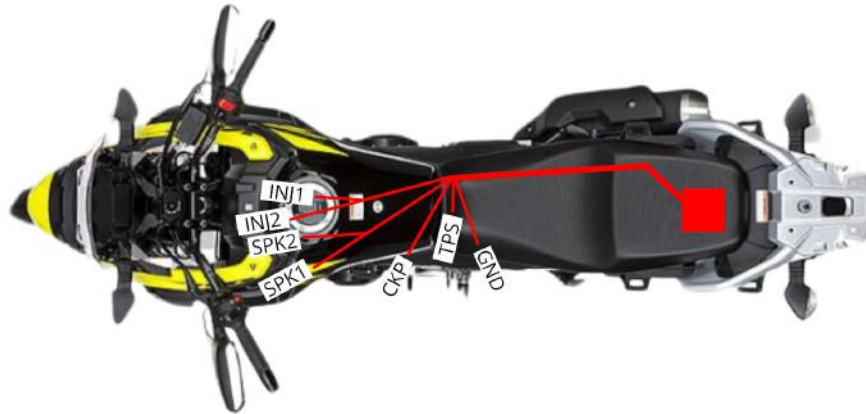


Image 21

**3.2.2** Start from the glove compartment, route each connector terminal between the mudguard and seat centre panel. Refer Image 22.

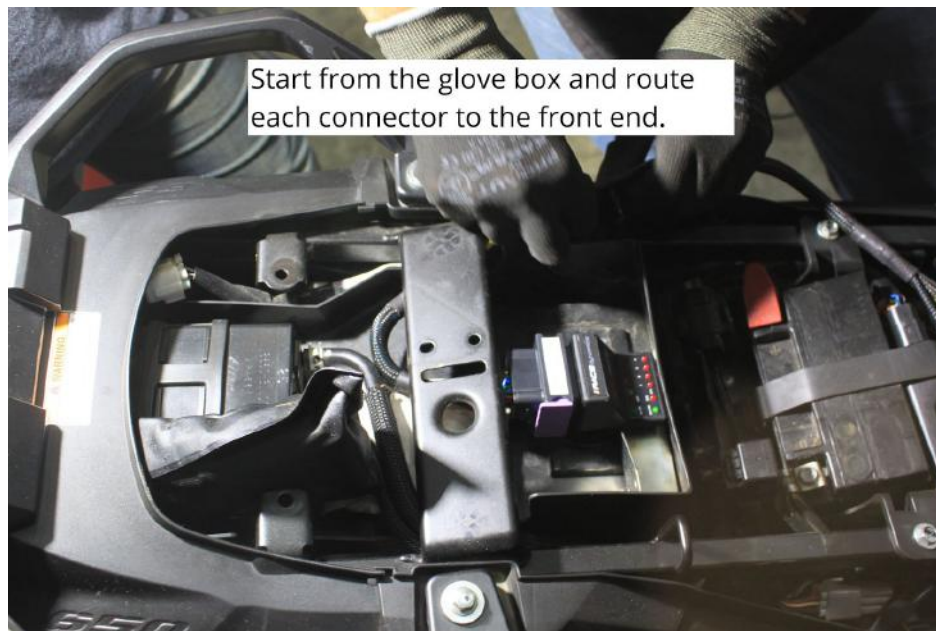


Image 22

**3.2.3** Unlock the bolt with M10 hex socket. Refer **Image 23.**

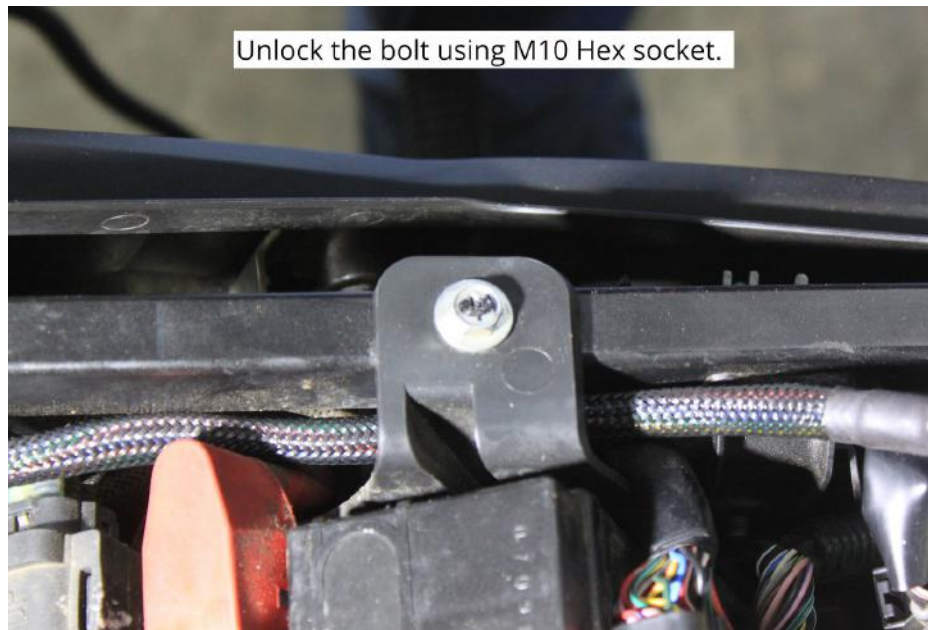


Image 23

**3.2.4** Route the harness around the battery casing and bolt lock. Refer **Image 24.**



Image 24

### 3.3 Fuel Injector Connector

**3.3.1** Locate the stock injector connectors of your bike. Refer Images 25.

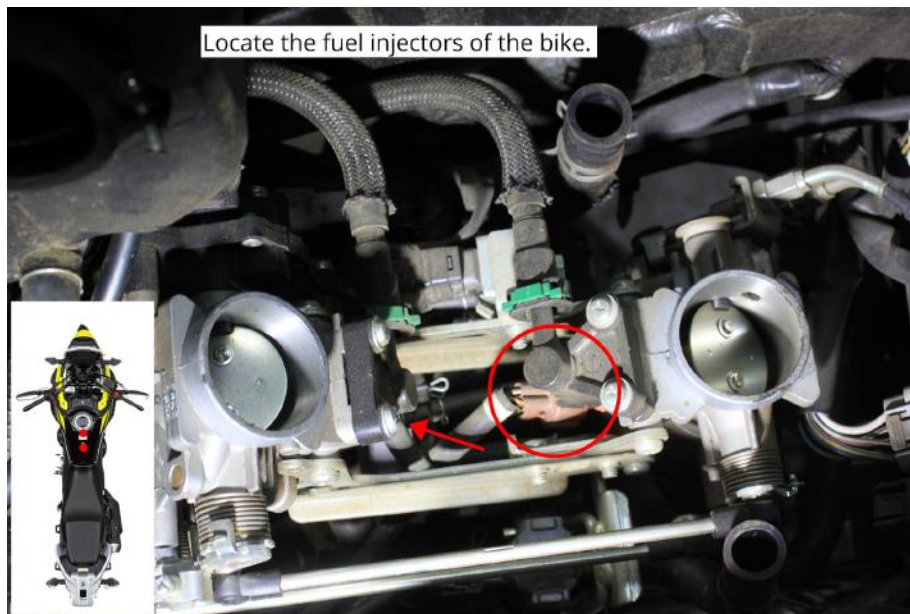


Image 25

**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 26)



Image 26



**3.3.4** Connect the PowerTRONIC female injector connector harness to the stock male injector connector. Refer **Image 27**

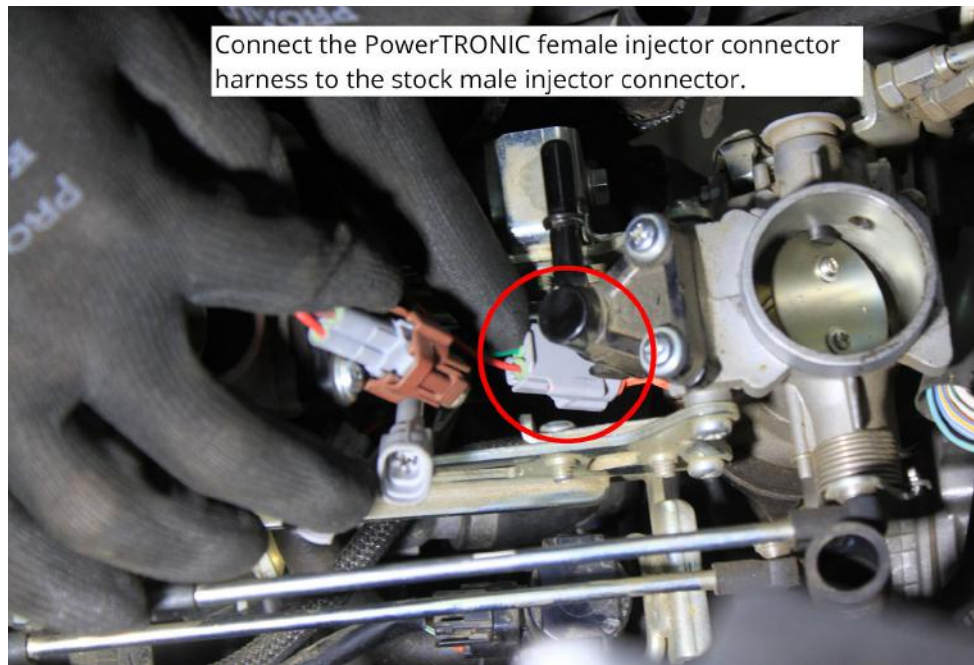


Image 27

**3.3.5** Connect the PowerTRONIC male injector connector to the stock female injector connector. Refer **Image 28**

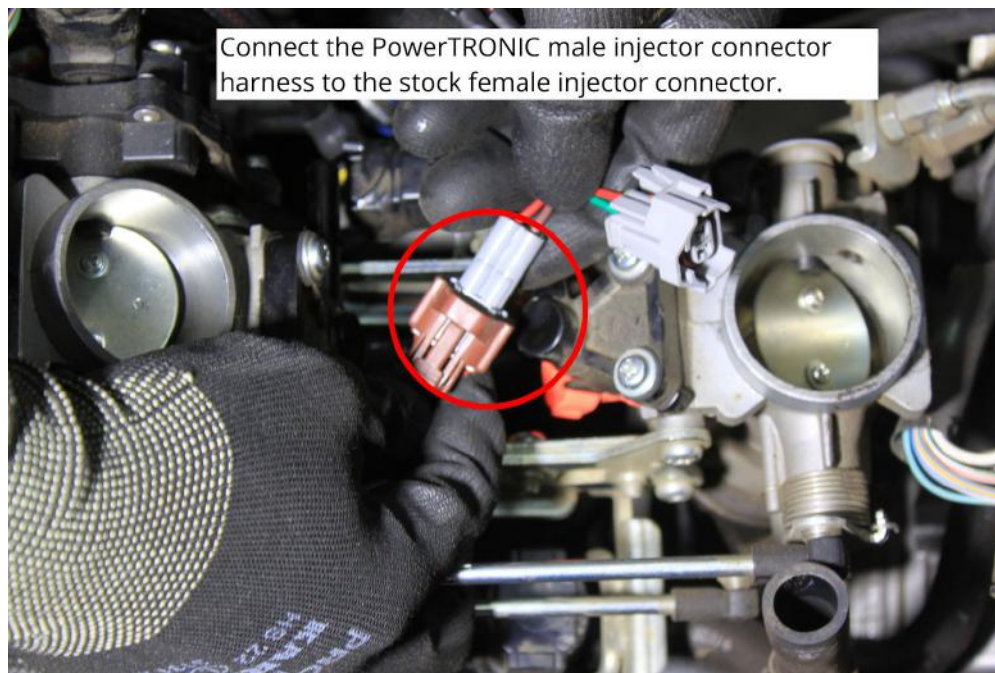


Image 28



3.3.5 Repeat the process on the other injector connector. Refer [Image 29](#)

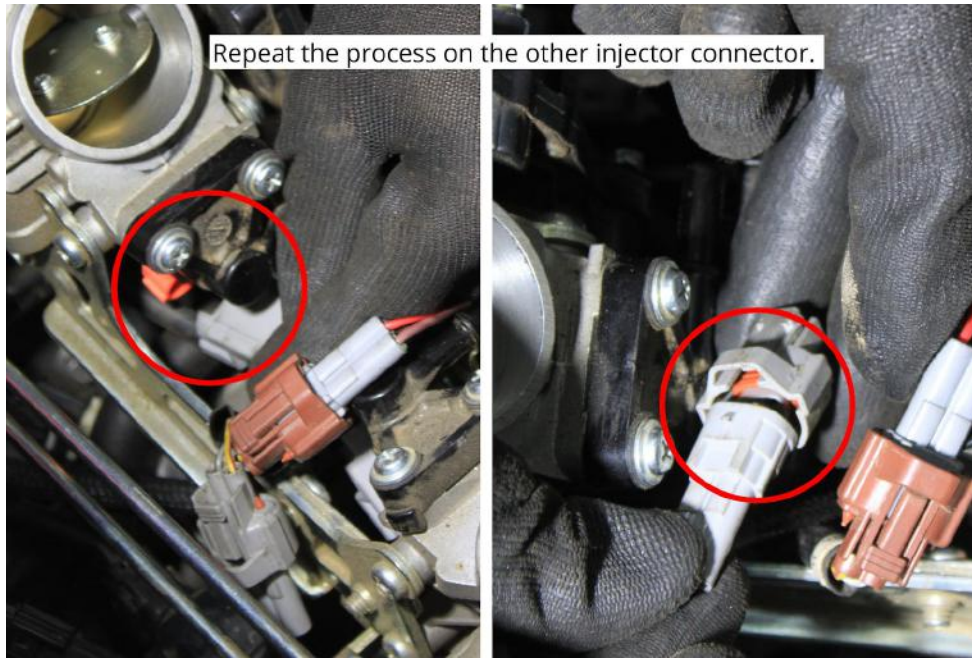


Image 29

### 3.4 Ignition Coil Connector

**3.4.1** Locate the stock Ignition coil connectors. Refer **Images 30**

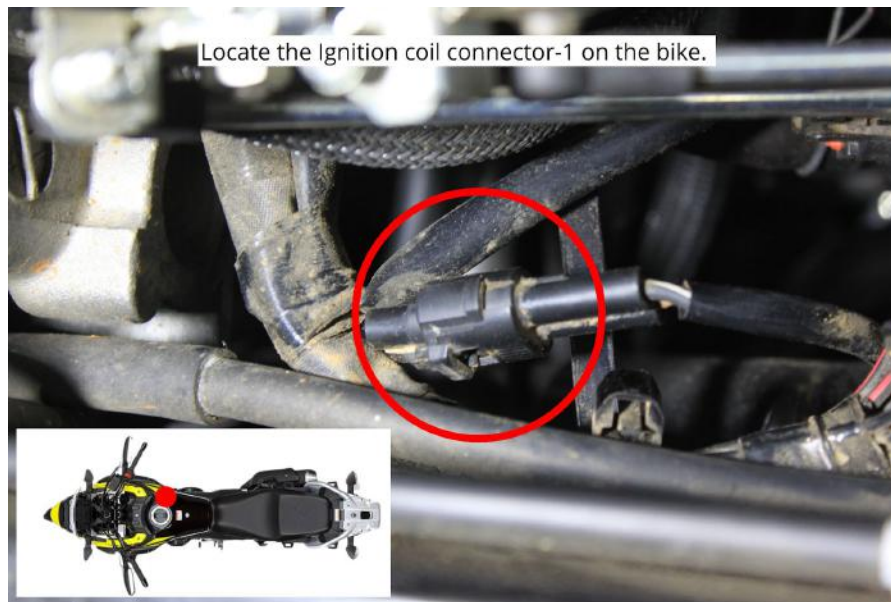


Image 30

**3.4.2** Identify the Spark/Ignition coil connectors in the PowerTRONIC wiring harness. The connectors are labelled 'SPK1 and SPK2'.

**3.4.3** Disconnect the stock ignition coil connectors. Refer **Image 31**



Image 31

**3.4.4** Connect the PowerTRONIC Ignition coil male connector to the stock ignition coil female connector. Refer **Image 32.**



Image 32

**3.4.5** Connect the PowerTRONIC Ignition coil female connector to the stock ignition coil male connector. Refer **Image33.**

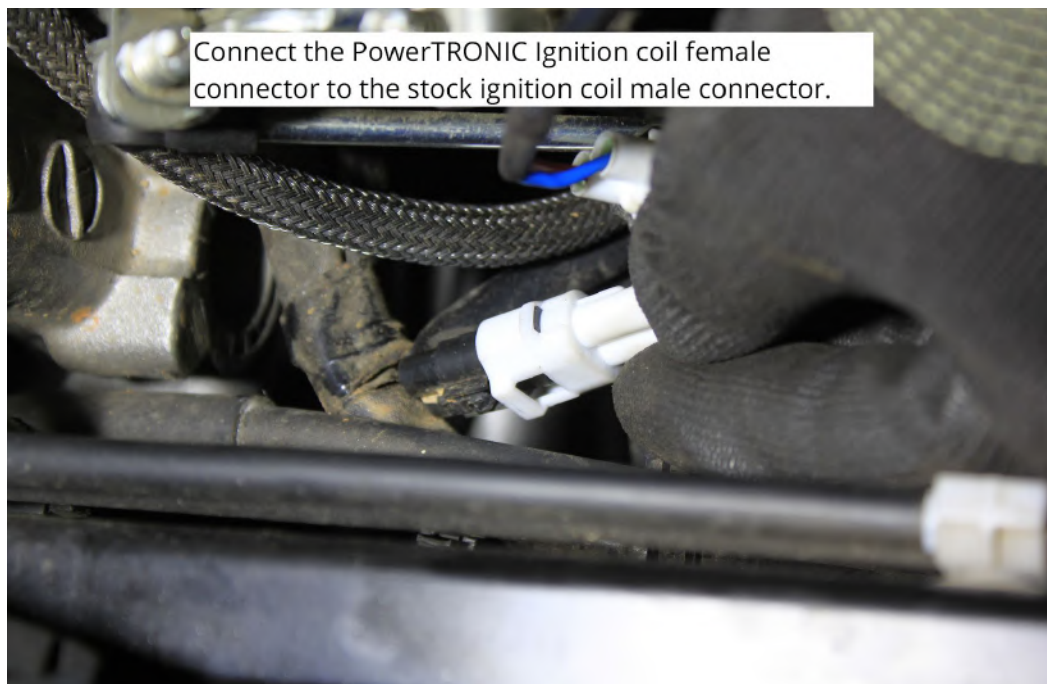


Image 33



**3.4.6** Locate the ignition coil connector -2. Refer **Image 34**.

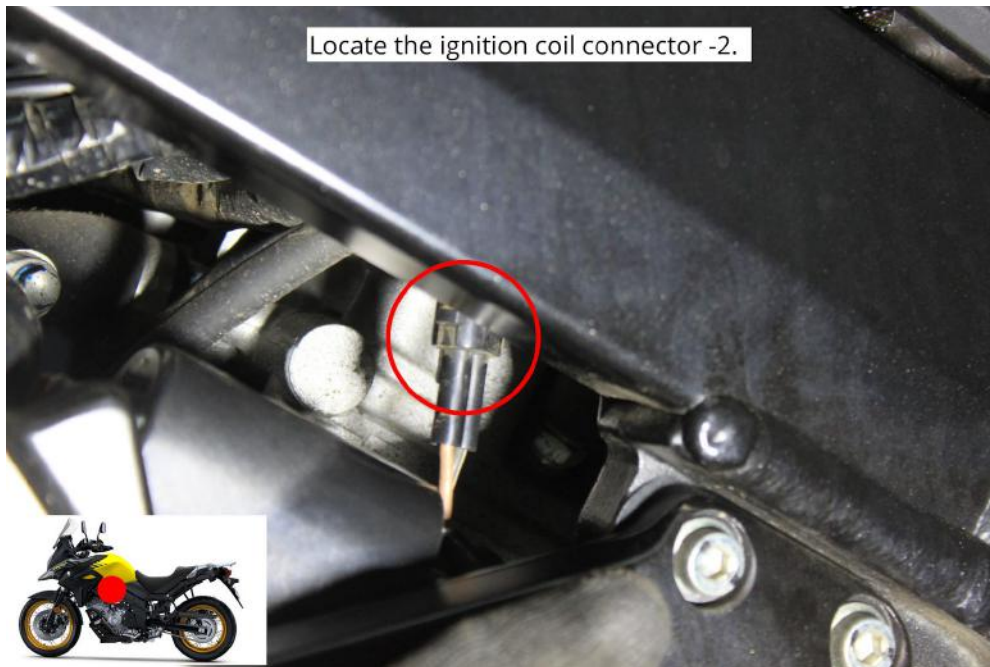


Image 34

**3.4.6** Disconnect the stock ignition coil connector-2. Refer **Image 35**.

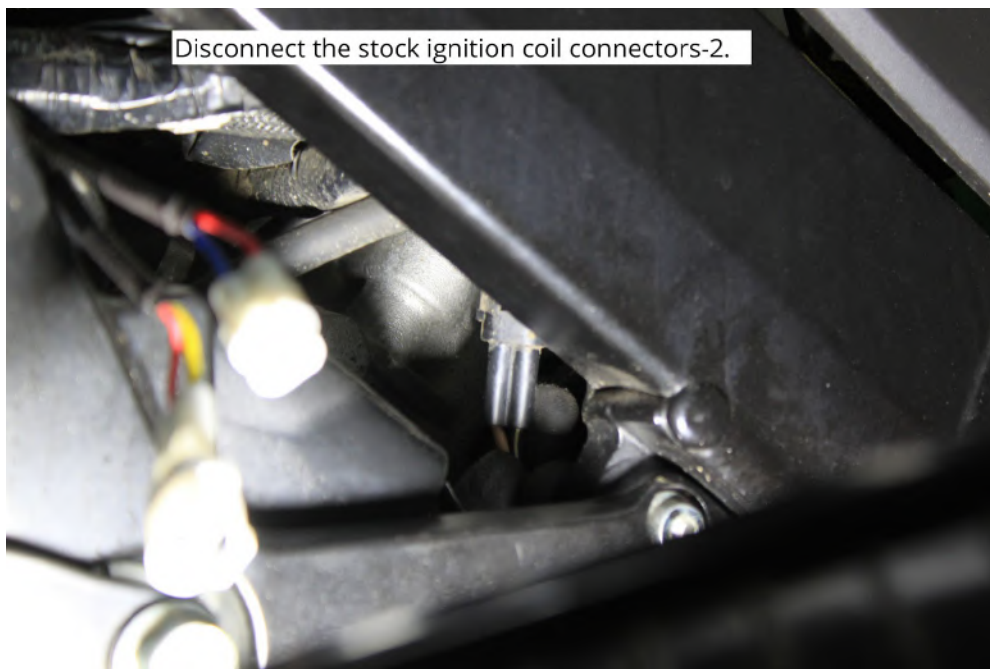


Image 35



**3.4.6** Connect the PowerTRONIC Ignition coil female connector to the stock ignition coil male connector. Refer [Image 36](#).



Image 36

**3.4.6** Connect the PowerTRONIC Ignition coil male connector to the stock ignition coil female connector. Refer [Image 37](#).

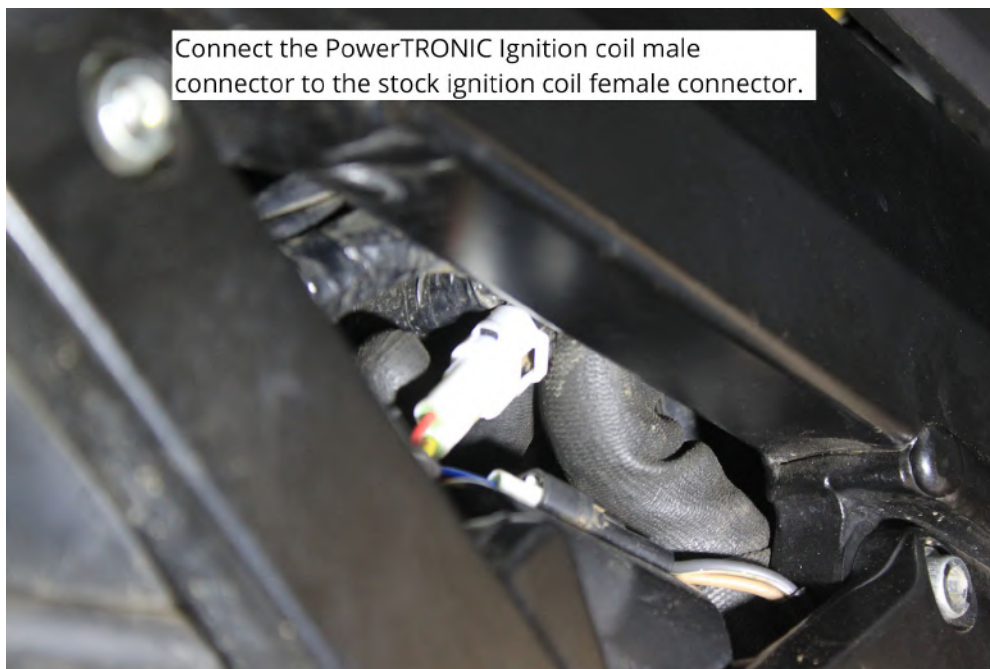


Image 37

### 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 38](#)

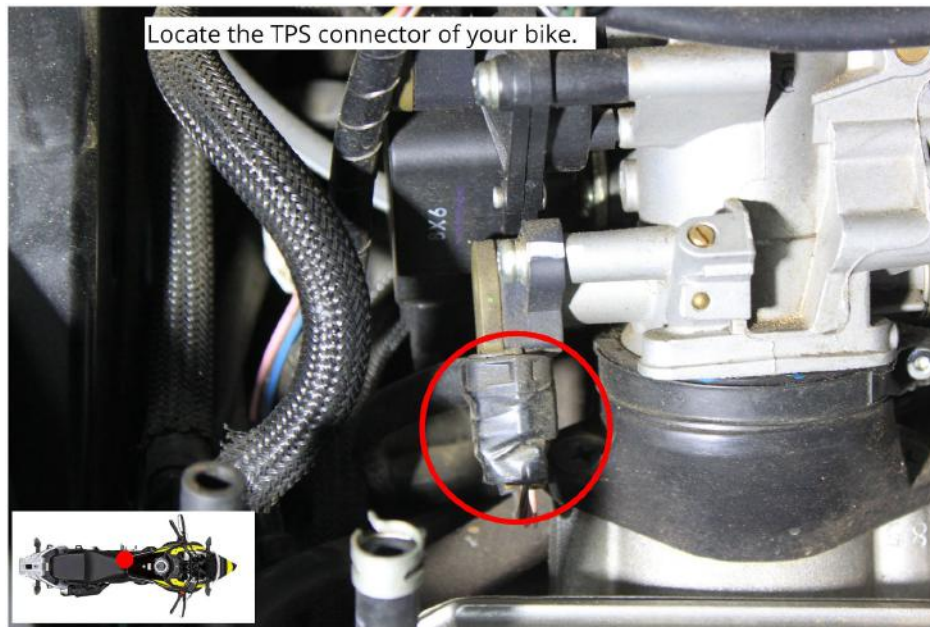


Image 38

**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 39](#)

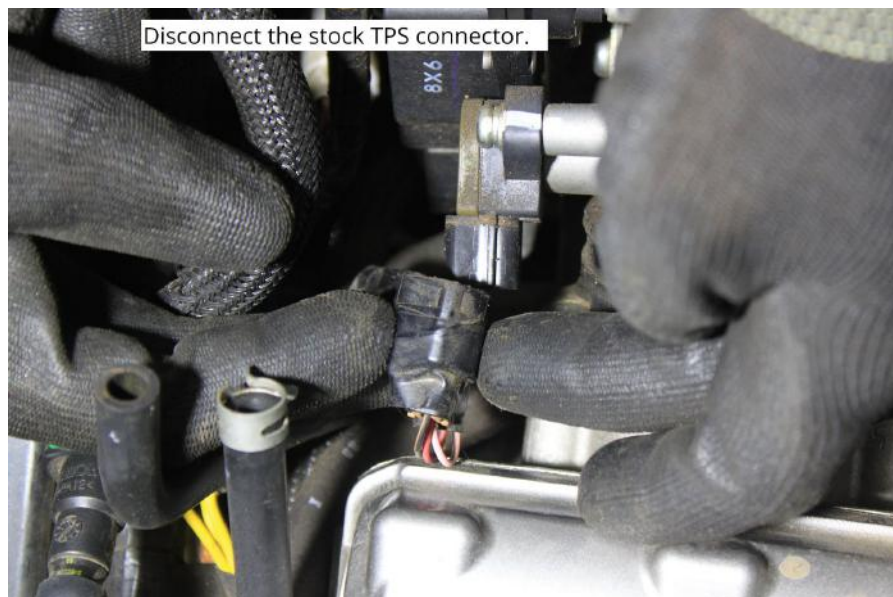


Image 39



**3.5.4** Connect the PowerTRONIC female TPS connector to the stock TPS male connector. Refer [Image 40](#)

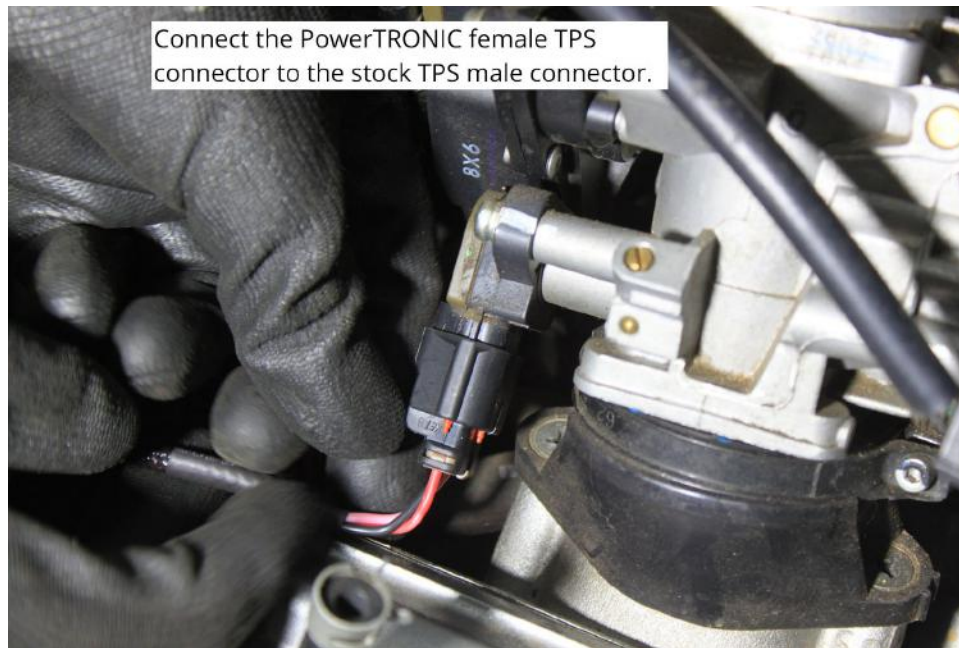


Image 40

**3.5.5** Connect the PowerTRONIC male TPS connector to the stock TPS female connector. Refer [Image 41](#).

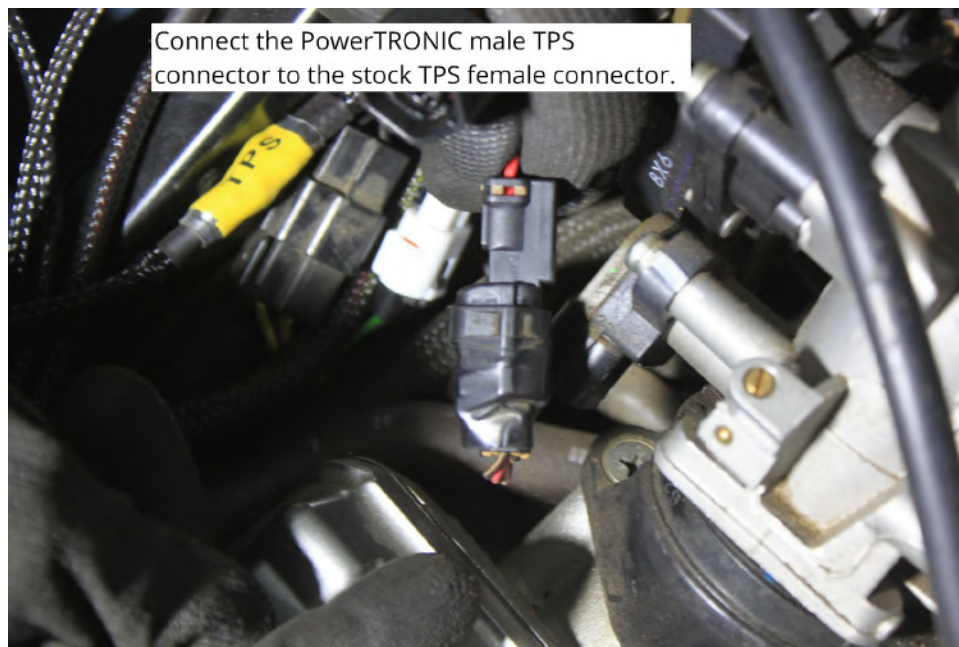


Image 41

**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 42](#)

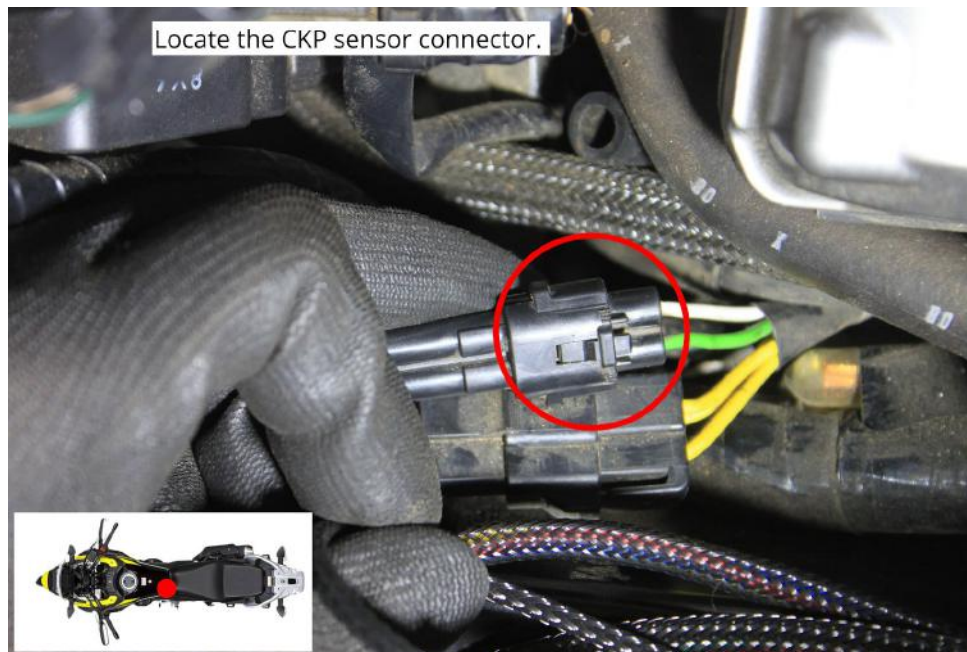


Image 42

#### 3.5.3 Disconnect the stock CKP connector. Refer [Image 43](#)

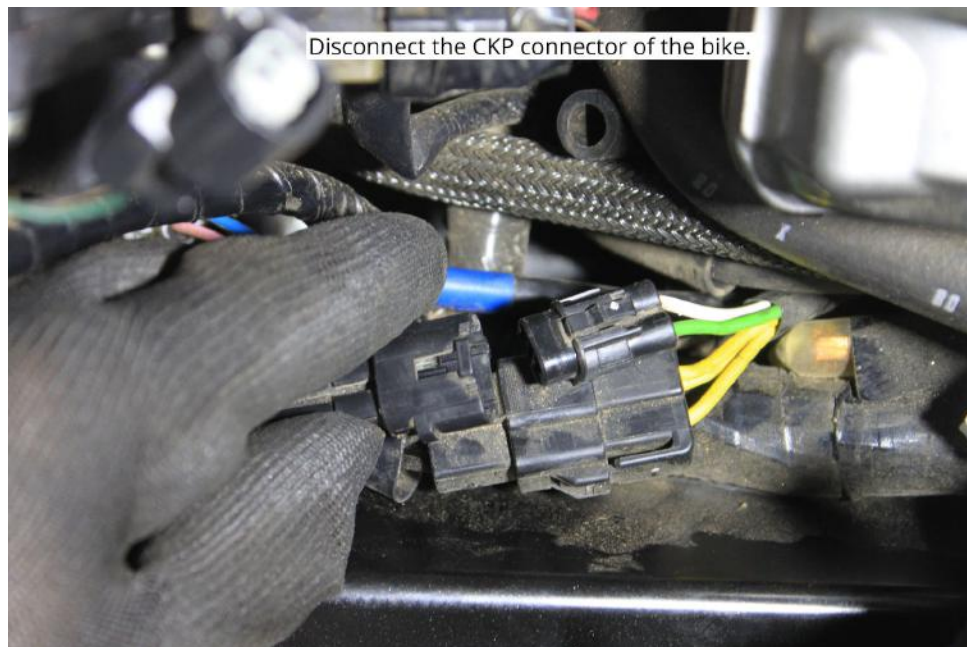


Image 43



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

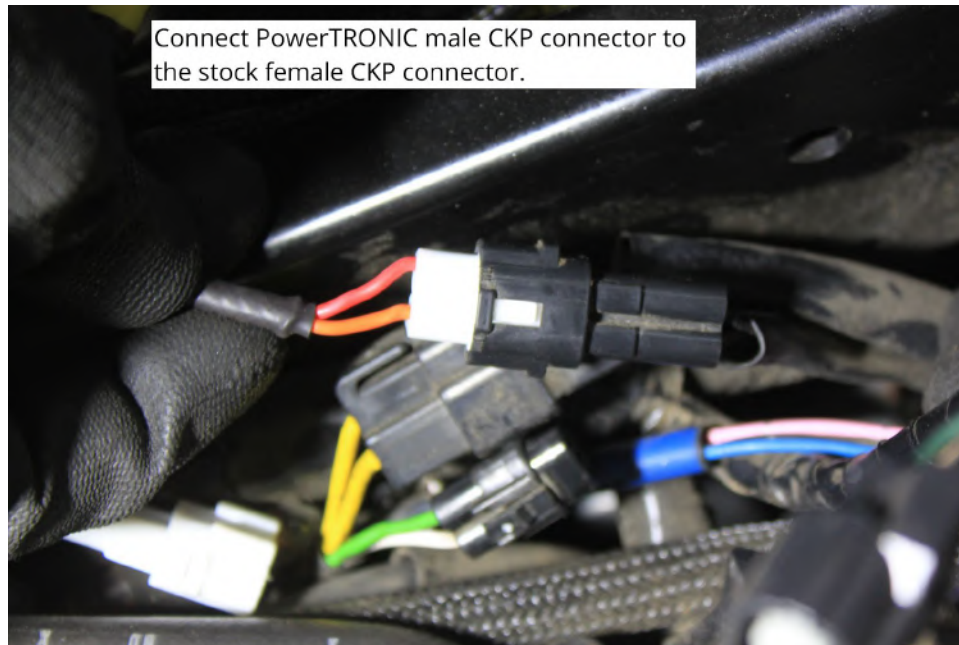


Image 44

**3.5.4** Connect PowerTRONIC female CKP connector to the stock male CKP connector. Refer **Image 45.**

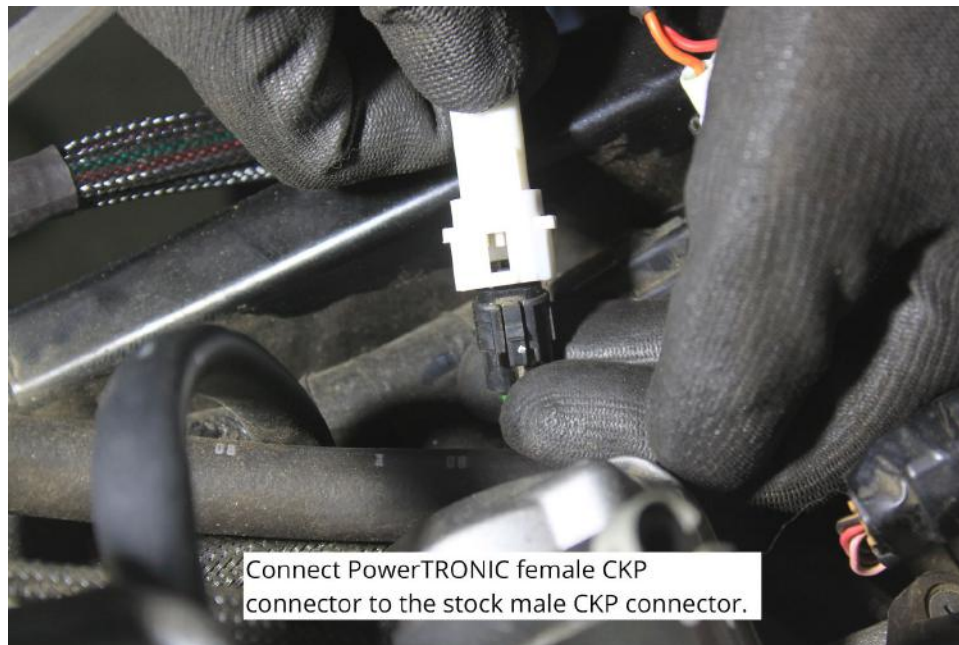


Image 45

### 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 46**



Image 46

**3.6.2** Refer the completed view. Refer **Image 47**



Image 47

### 3.7 Securing the harness using zip 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 48**

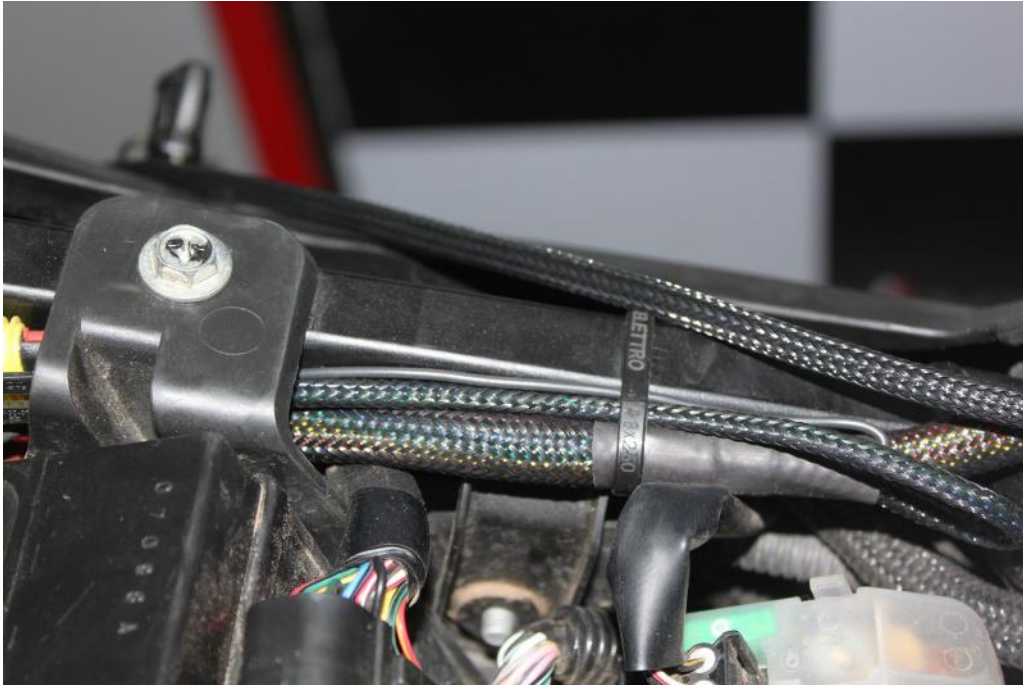


Image 48

**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** Assemble 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 49**



Image 49

### 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 50](#)



Image 50

### 3.10 Attaching the panels fairing etc

Attach the panels, fairing as removed from the bike.