

PowerTRONIC Installation Manual- Kawasaki ZX10R (2008-2018)

Document Version	1	Release Date	05 March 2019
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Application information	Vehicle Specific
Vehicle	Kawasaki
Model	ZX 10 R
Year of manufacture	2008-2018
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"> • Can be connected in place of the PowerTRONIC to run the bike in stock mode if need be. • Used for the verification of the connectors involved.
3	Harness	Bike specific harness contains the following connectors <ul style="list-style-type: none"> • Fuel injector connectors • Ignition coil connectors • Throttle position sensor connector (TPS) • Crank position (CKP) sensor * if applicable • Map selection connector • Quick shifter connector • Ground terminal
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	3, 4, 5, 6 mm Allen T handle
2	M8, M10, M12 Hexagonal socket
2	Phillips-Head screwdriver
3	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

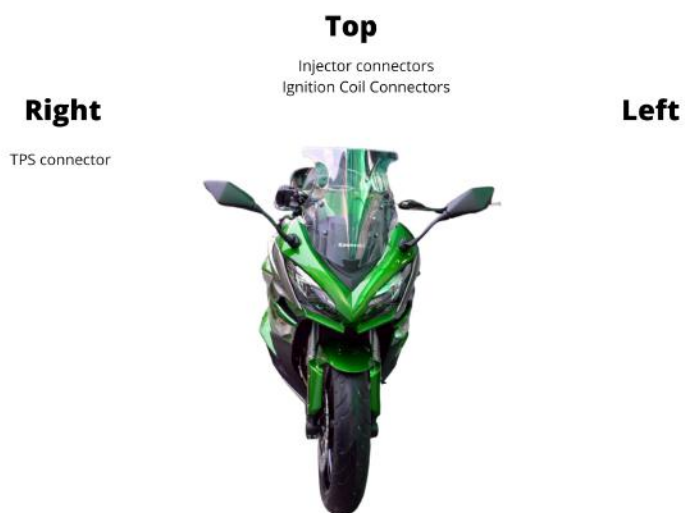


Image 2

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



Image 3



Image 4

3.1.2 Detach the pillion rider seat. Gently detach the rider seat also. Refer [Image 5](#)



Image 5

3.1.3 Unscrew the fuel tank bolts using a 4 mm Allen key. Refer [Image 6](#)



Image 6

3.1.4 Unscrew the pillion rider seat panel bolts using a 4 mm Allen key. Refer the **Image 7**

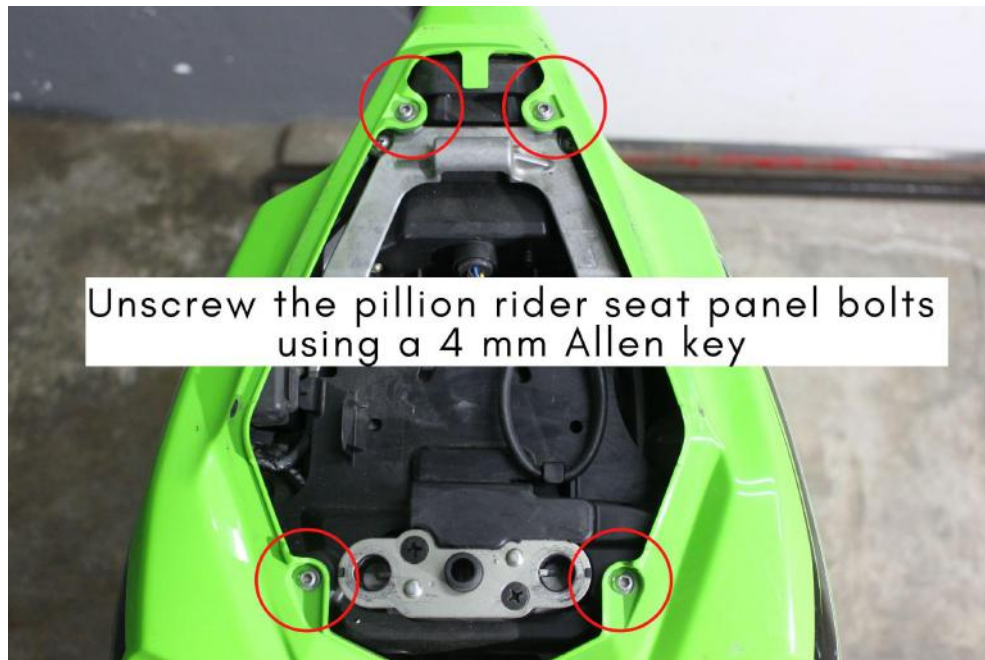


Image 7

3.1.5 Gently detach the side panel. Refer **Image 8**.



Image 8

3.1.6 Unscrew the rider seat bolts using a 10 mm T handle. Refer [Image 9](#).

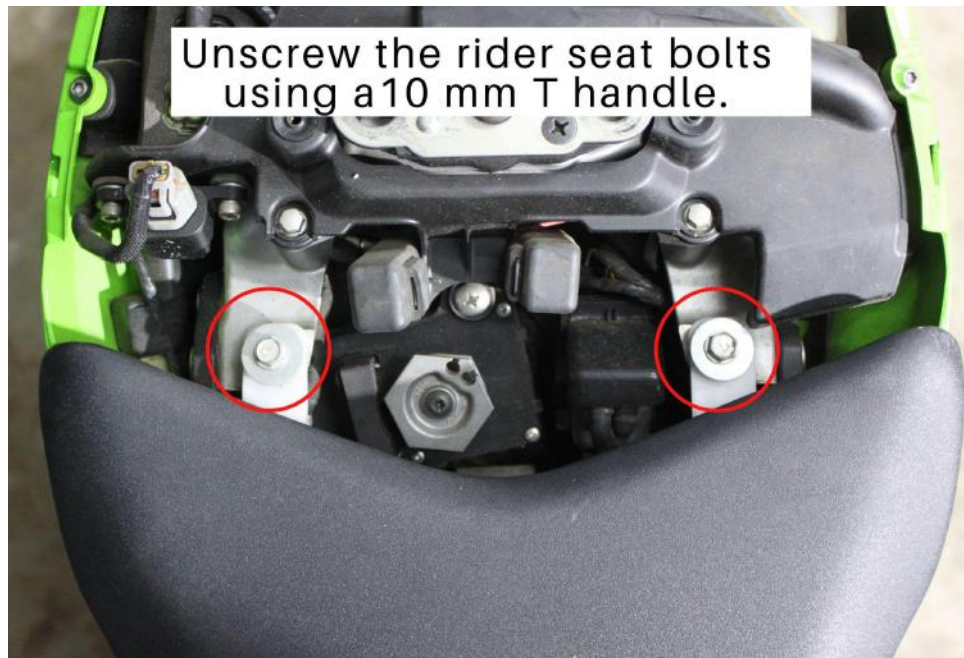


Image 9

3.1.7 Gently detach the rider seats. Refer [Image 10](#)



Image 10

3.1.8 Unscrew the bracket bolts using a 5mm hex bit. Refer [Image 11](#)



Image 11

3.1.9 Unscrew the tank cover bolts using 4 mm Allen key and 8 mm hex socket. Refer [Image 12](#)

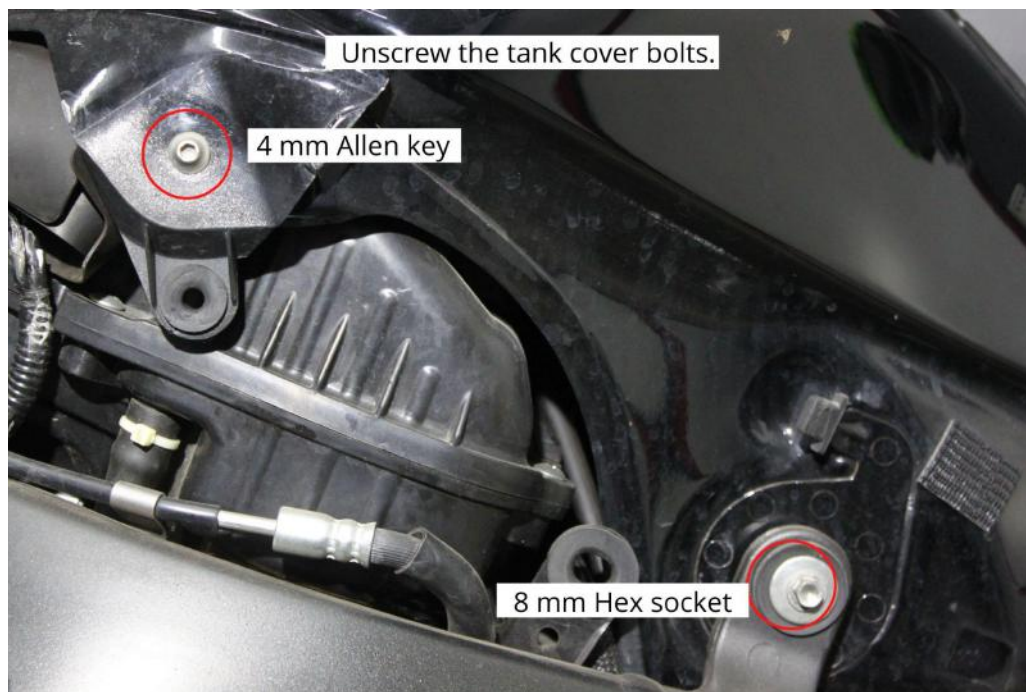


Image 12

3.1.10 Gently remove the tank cover. Refer **Image 13**



Image 13

3.1.11 Gently lift the front end of the tank. Refer **Image 14**



Image 14

3.1.12 Disconnect the two vacuum hoses. Refer **Image 15**

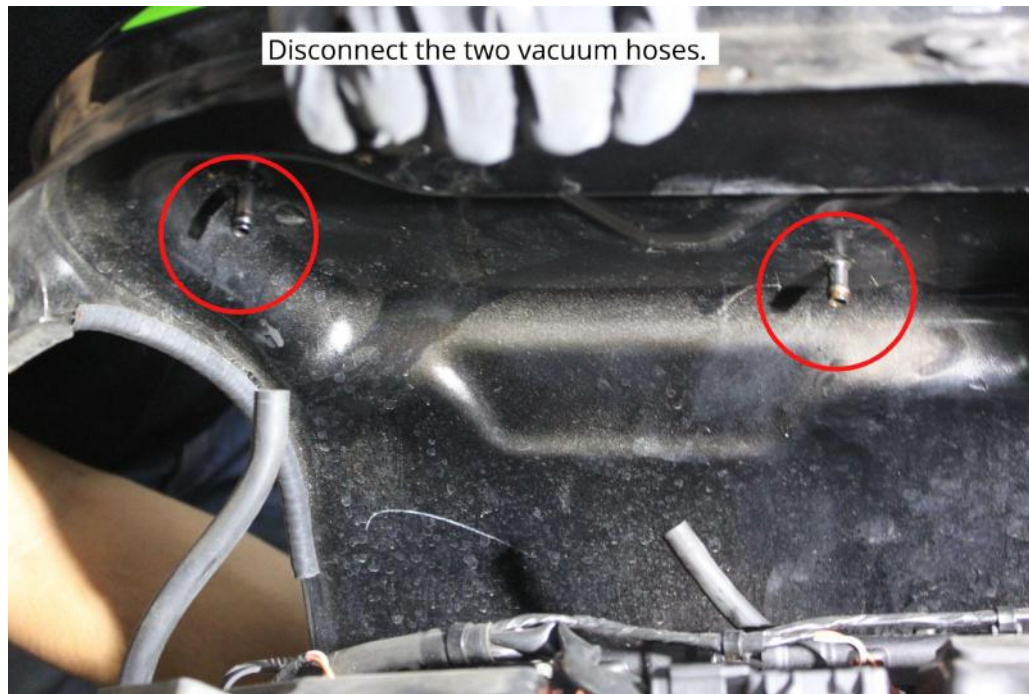


Image 15

3.1.13 Disconnect the fuel line. Refer **Image 16**



Image 16

3.1.14 Disconnect the fuel pump/float connector. Refer **Image 17**

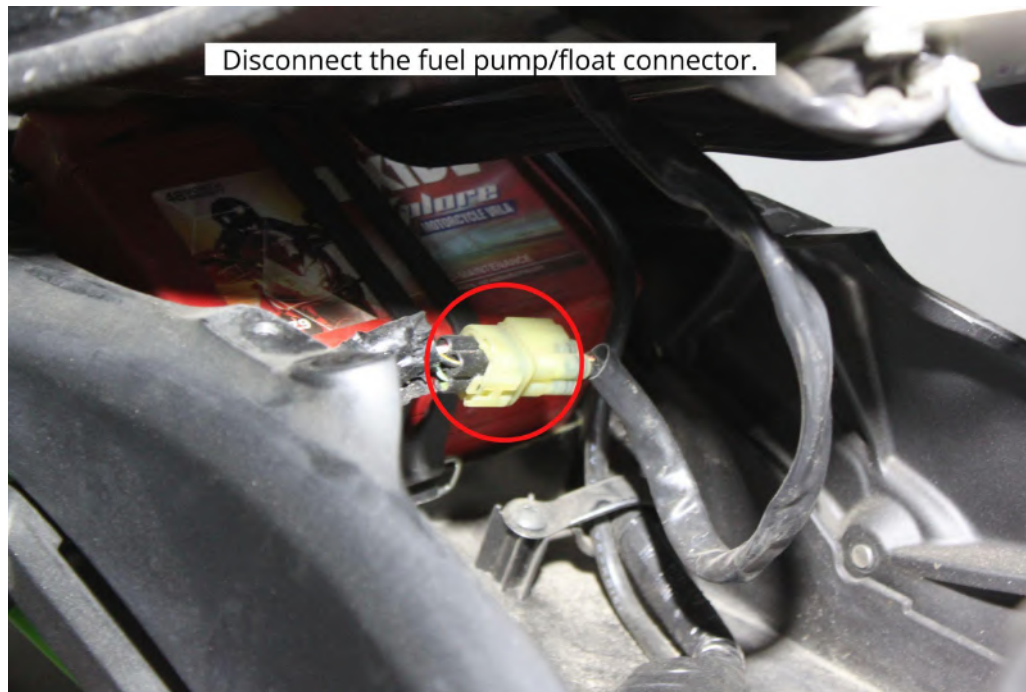


Image 17

3.1.15 Disconnect the fuel injector connectors. Note: Connect the PowerTRONIC connectors after connecting the ignition coil connectors and the air box). Refer **Image 18** and **Image 19**

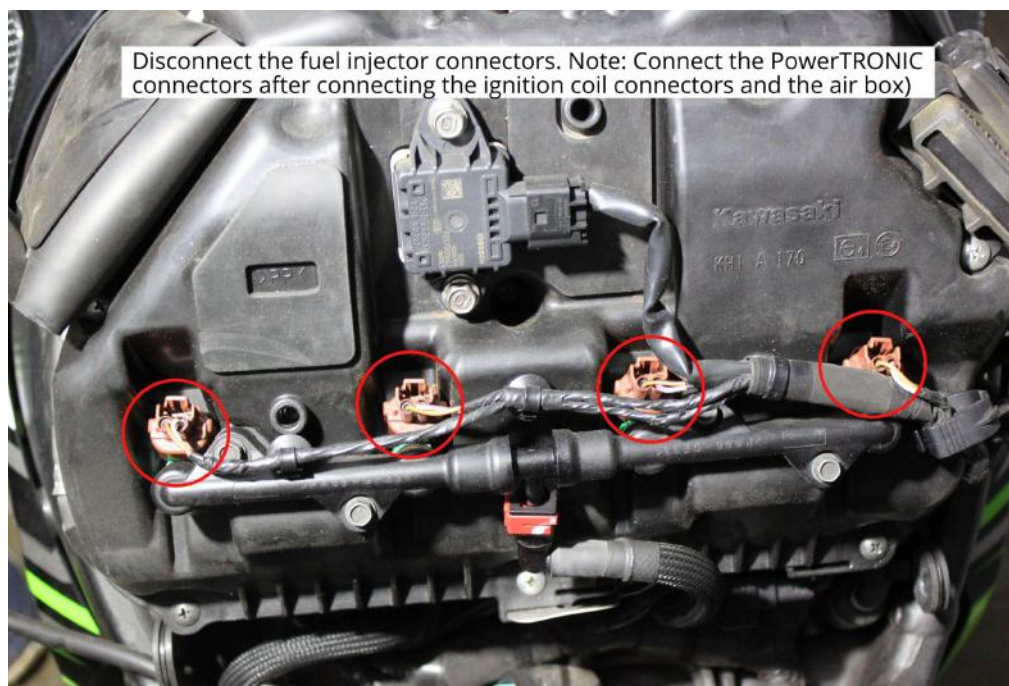


Image 18

3.1.16 . Refer Image 19



Image 19

3.1.17 Locate and carefully disconnect the sensor connector. Refer Image 20

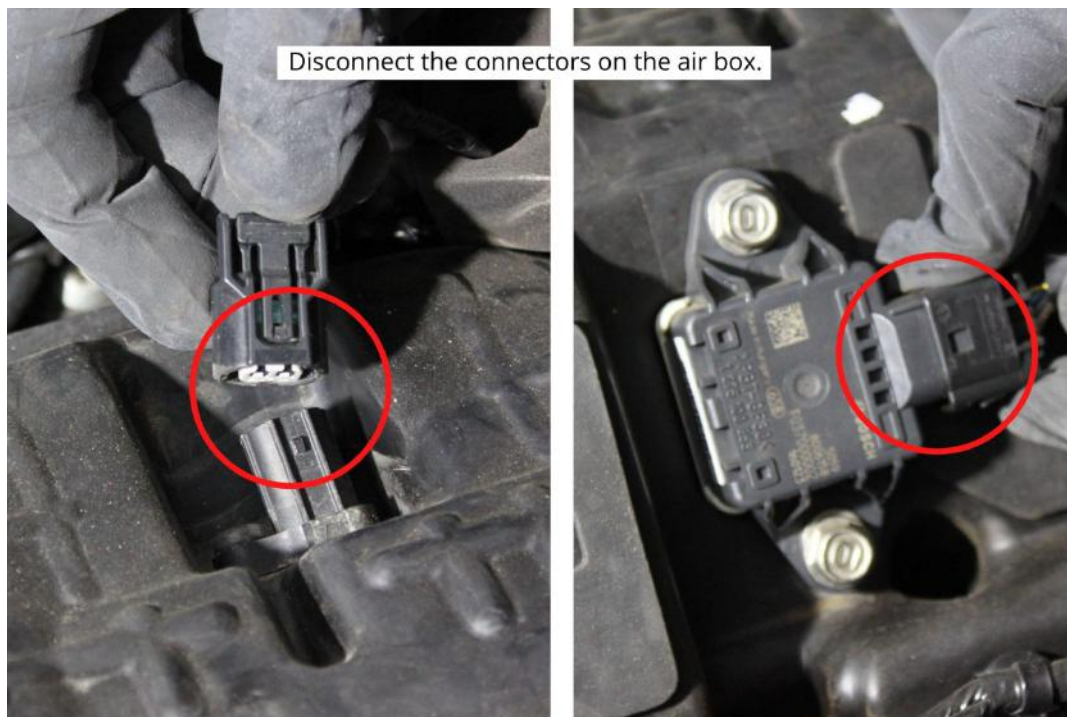


Image 20

3.1.18 Disconnect the relays and Fuel line. Refer **Image 21**

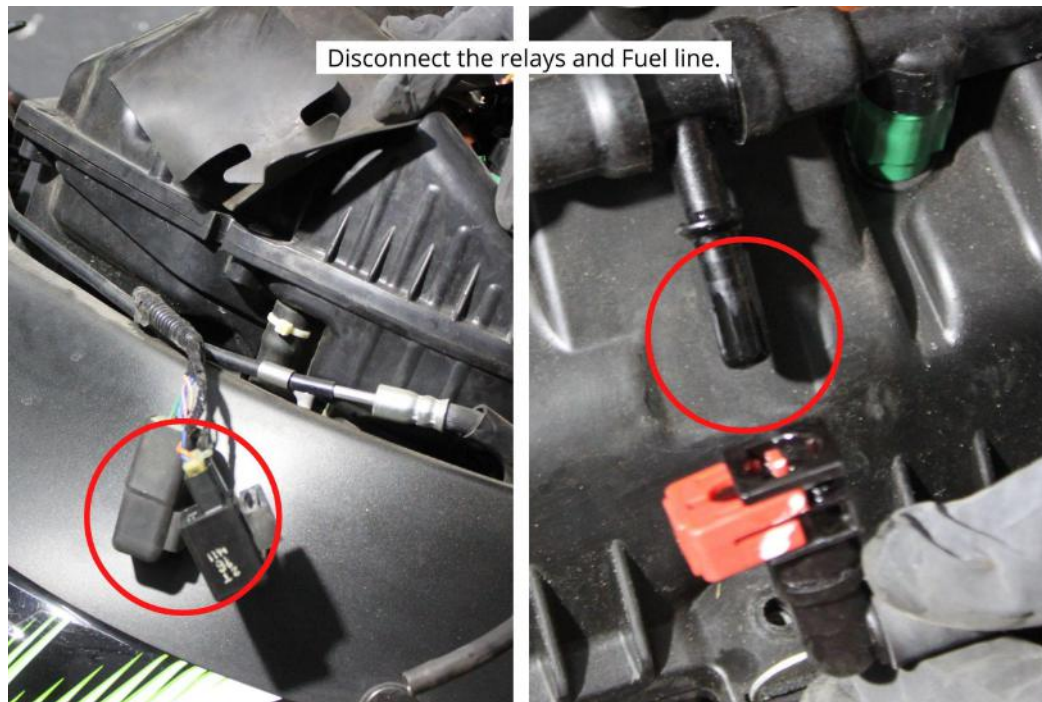


Image 21

3.1.19 Using a Phillips head screw driver, unscrew the screws on the air box cover. Refer **Image 22**

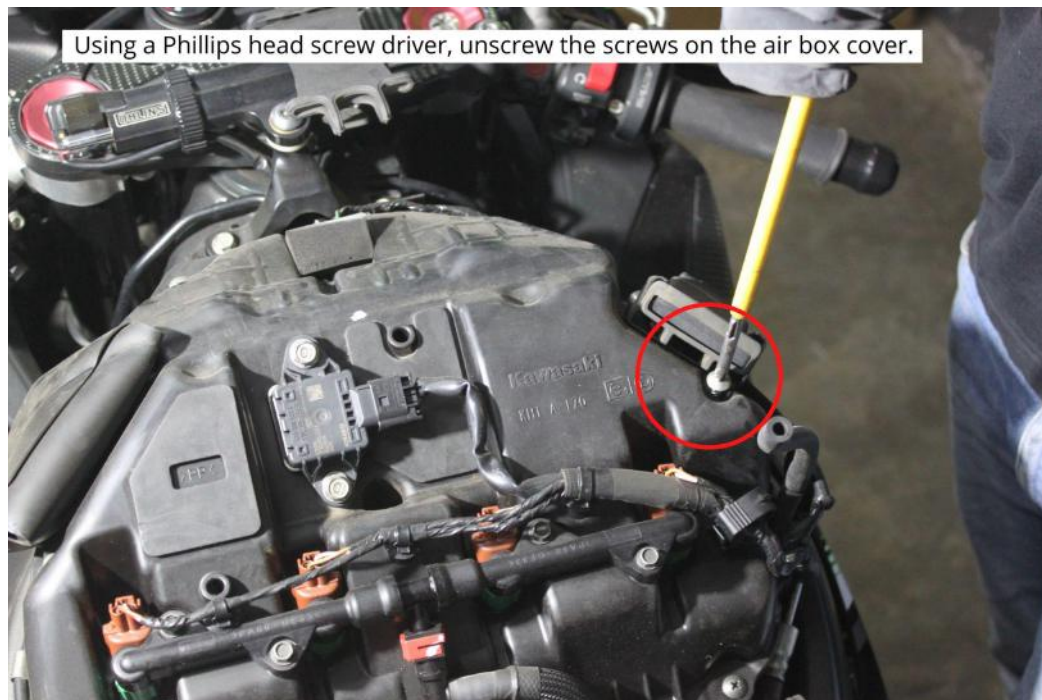


Image 22

3.1.20 Detach the top of the air box. Refer [Image 23](#)



Image 23

3.1.21 Unscrew the bracket bolts using a 10mm Hex socket. Then remove the bracket. Refer [Image 24](#)

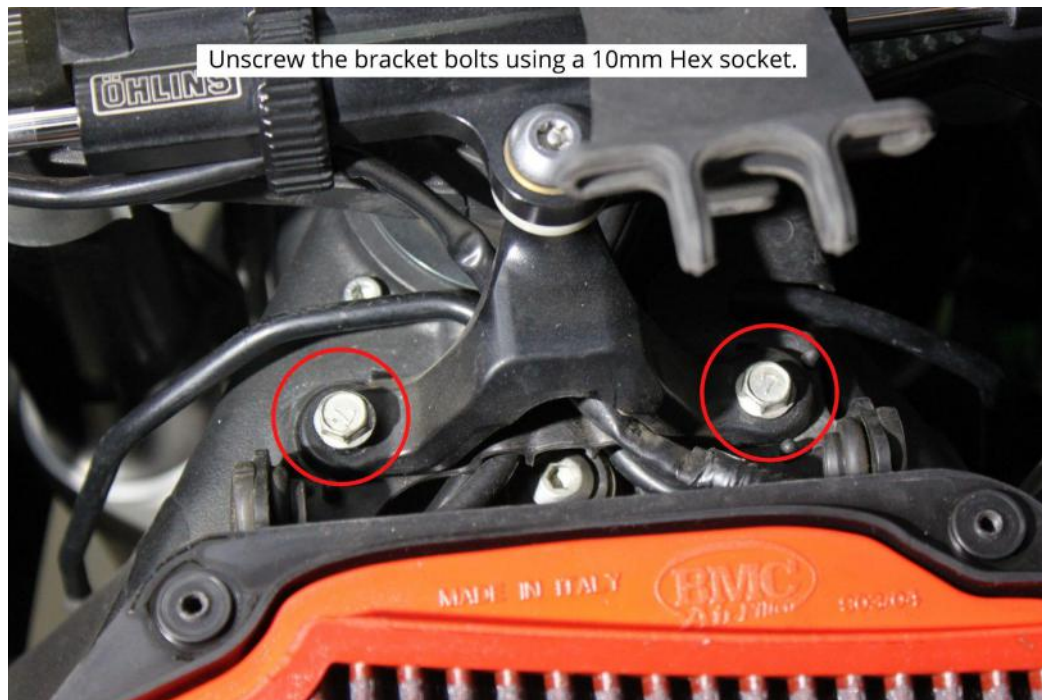


Image 24

3.1.22 Unscrew the bolt using a 5 mm Hex bit. Refer **Image 25**



Image 25

3.1.23 Unscrew the air box mounting bolts using a 5 mm allen key. Refer **Image 26**



Image 26

3.1.24 Gently detach the vacuum tubes from air bo. Refer **Image 27**



Image 27

3.1.25 Gently detach the air box. Refer **Image 28**

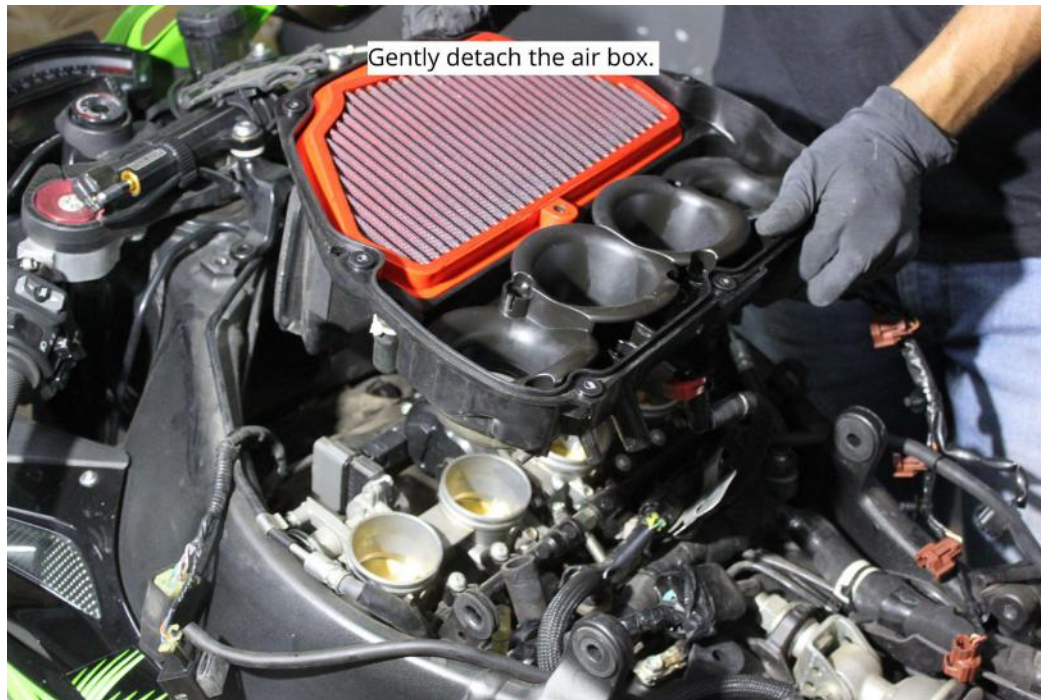


Image 28

3.2 Routing the harness

3.2.1 Starting from the glove compartment, route each connector terminal between the welded plate and the mud guard. Refer **Image 29**.

PowerTRONIC harness routing sequence

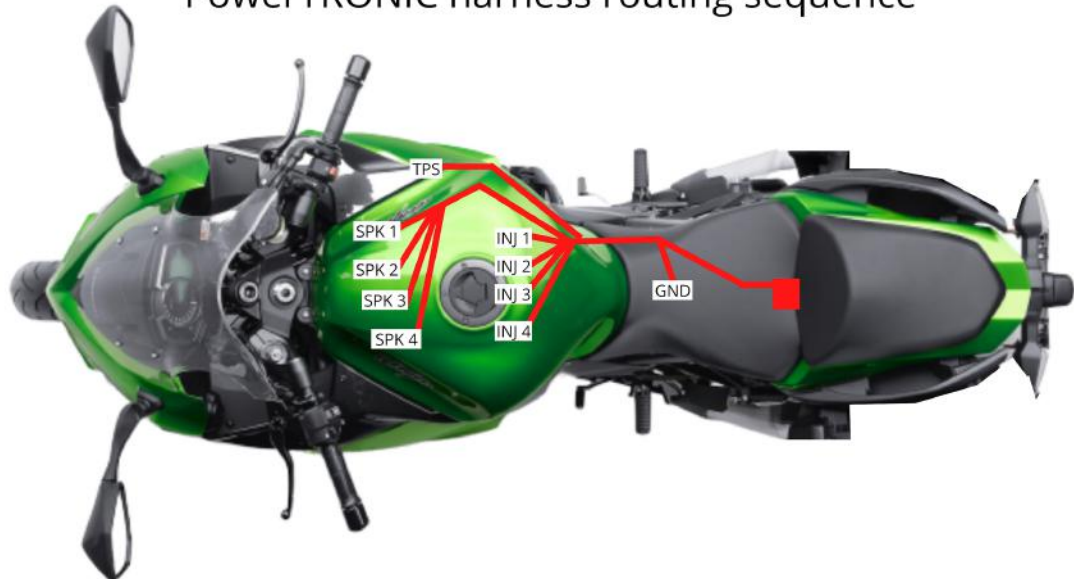


Image 29

3.2.2 Start from the glove compartment, route each connector terminal between the mudguard and seat centre panel. Refer to **Image 30**.

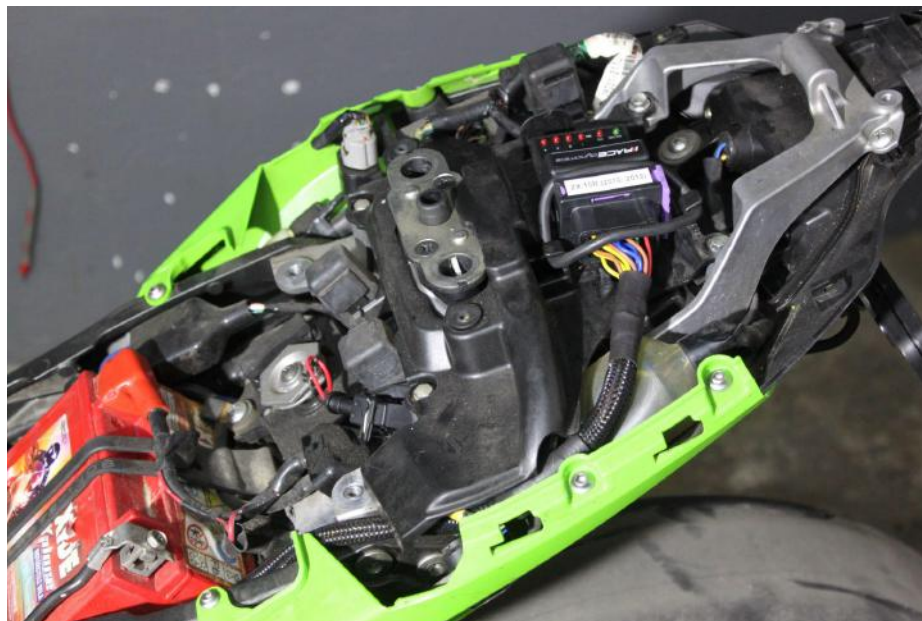


Image 30

3.2.3 Route each connector through the panel carefully and route the entire harness. Refer [Image 31](#) and [Image 32](#)



Image 31



Image 32

3.2.4 Route the Injector connectors and Ignition coil connectors to their respective positions. Refer **Image 33**

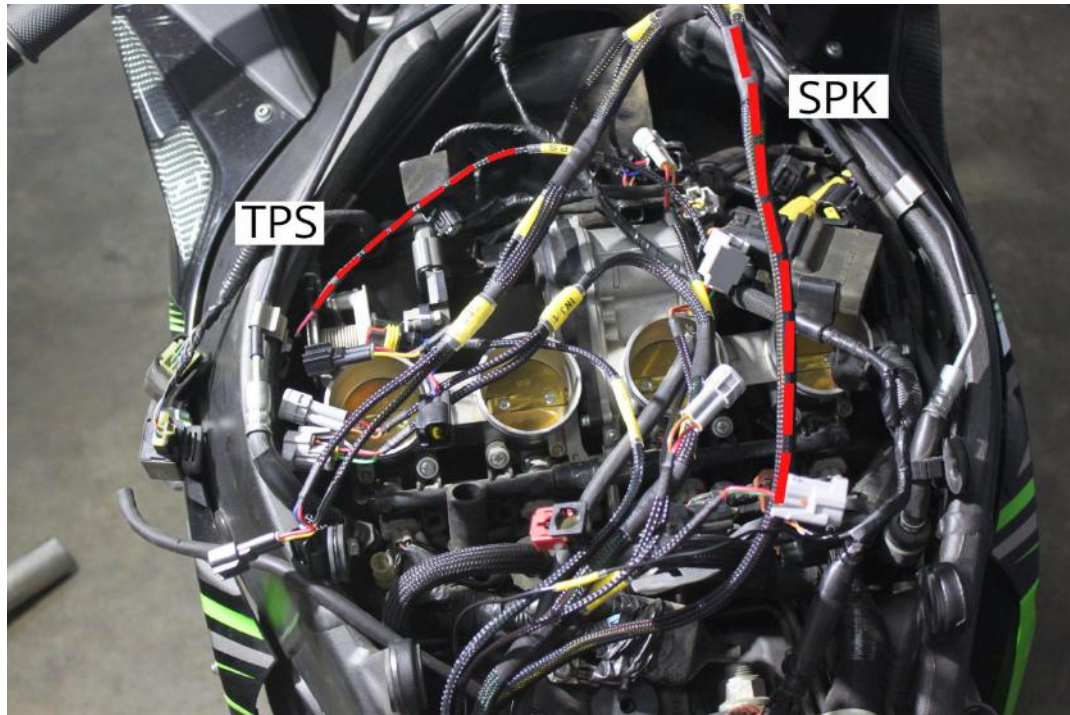


Image 33

Important Note: There are 4 fuel injector connectors and ignition coil connectors. Fuel injectors are labelled as INJ1, INJ2, INJ3, INJ4, and Ignition coil connectors are labelled as SPK1, SPK2, SPK3, SPK4. Before proceeding with the installation, understand the order and then do the installation in the same order for fuel injector and ignition coil connectors. I.e Connect the same number of INJ and SPK to connectors that go to the same cylinder.

3.3 Fuel Injector Connector This can be installed at the last after SPK and TPS connectors.

3.3.1 Locate the stock injector connector of your bike. Refer **Images 34**.



Image 34

3.3.2 Identify the fuel injector connector in the PowerTRONIC wiring harness. The connectors are labeled 'INJ'

3.3.3 Disconnect the injector connector on your bike. Refer **Image 35**

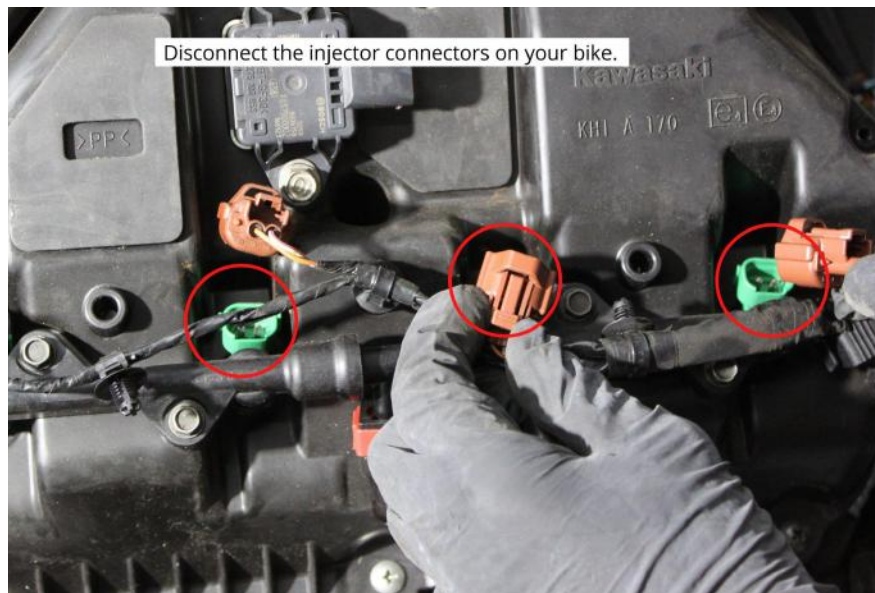


Image 35

3.3.4 Connect the PowerTRONIC female injector connector harness to the stock male injector connector. Refer **Image 36**

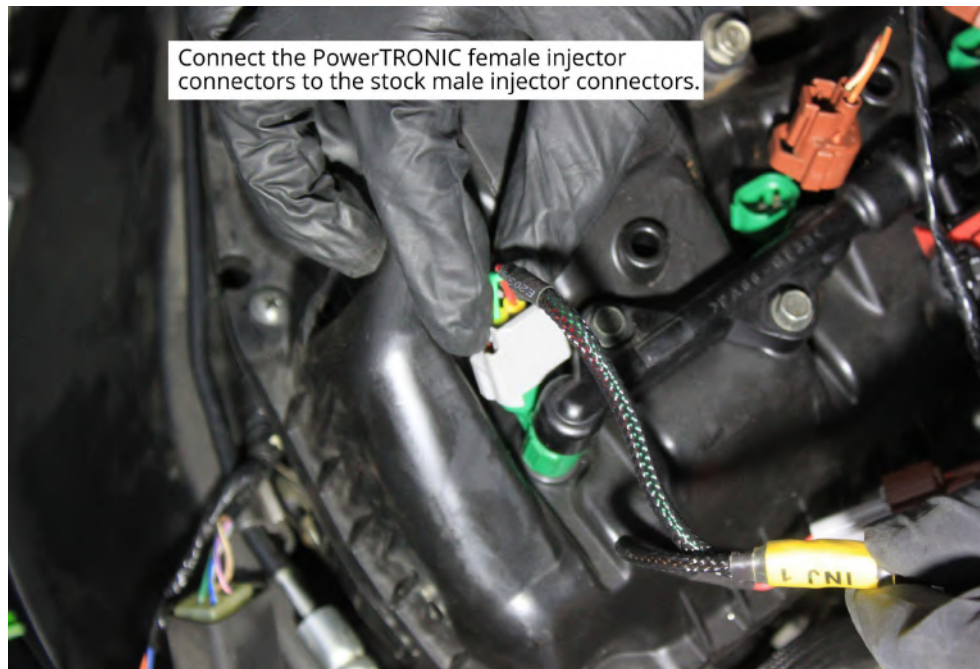


Image 36

3.3.5 Connect the PowerTRONIC male injector connector to the stock female injector connector. Refer **Image 37**



Image 37

3.3.6 Repeat the above steps for the other 3 Injector connectors

3.4 Ignition Coil Connector

3.4.1 Locate the stock Ignition coil connectors. Refer [Images 38](#)



Image 38

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

3.4.3 Disconnect the stock ignition coil connectors. Refer [Image 39](#)



Image 39

3.4.4 Connect the PowerTRONIC Ignition coil female connector to the stock ignition coil male connector. Refer [Image 40](#).



Image 40

3.4.5 Connect the PowerTRONIC Ignition coil male connector to the stock ignition coil female connector. Refer [Image 41](#).



Image 41

3.4.6 Repeat the above steps for the other 3 ignition coils.

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 42**



Image 42

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 43**



Image 43

3.5.4 Tap the purple wire of the TPS connector to the wire labelled as TPS on the PowerTRONIC harness. Refer [Image 44](#)

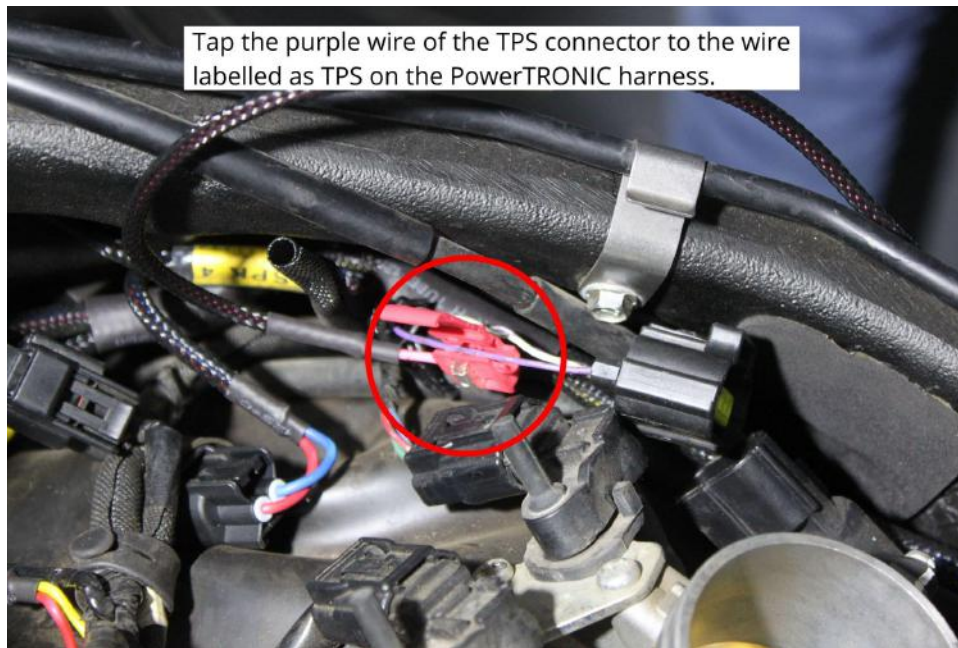


Image 44

3.5.5 For wire position, Refer [Image 45](#). After the tapping procedure, plug the Connector back into the TPS connector.

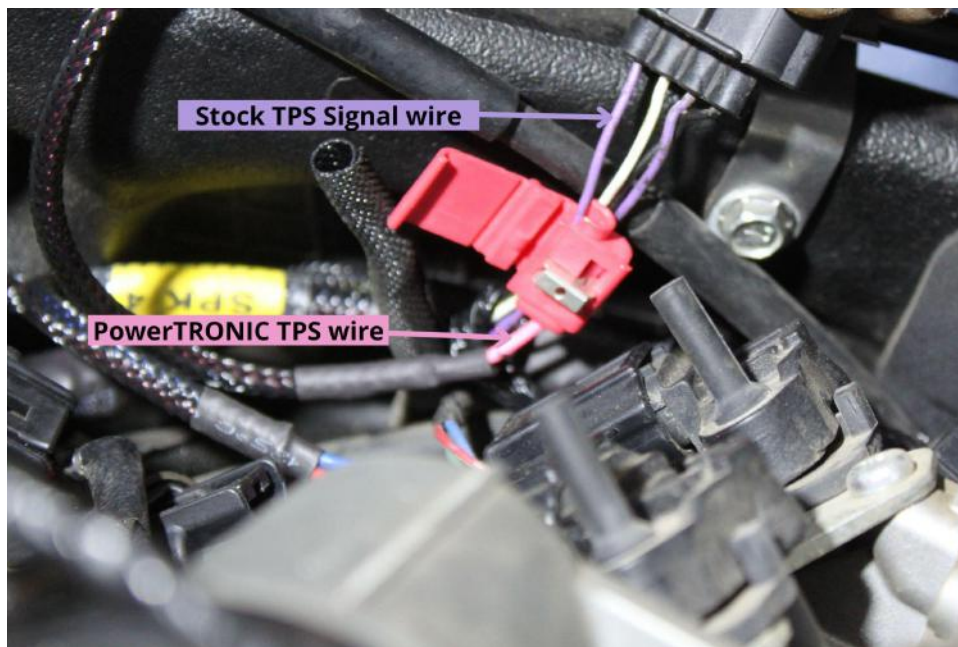


Image 45

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 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 48

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 a 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 to the 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

Note: If the PowerTRONIC injectors connectors are connected to the secondary set of Injectors, then INJ LEDs will pulse at higher RPMs only.

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.