

PowerTRONIC Installation Manual

Royal Enfield Continetal GT 535 Cafe Racer (2009-2019)

Document Version	1	Release Date	29 May 2019
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Application information	Vehicle Specific
Vehicle	Royal Enfield
Model	Continetal GT 535 Cafe Racer
Year of manufacture	2009-2019
PowerTRONIC application	All PowerTRONIC ECUs from firmware version F.3.x onwards

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 connections.
3	Harness	Bike specific harness contains the following connectors <ul style="list-style-type: none"> Fuel injector connector Spark/Ignition coil tapping wire Throttle position sensor connector (TPS) Map selection connector Quickshifter connector (if applicable) 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	Main tools	Optional tools
1	M10 Hexagonal socket	Spinner handle
2	M10 T bar Hexagonal Socket wrench	Ratchet handle
3	M Hexagonal bit	Extension bar or Sliding T bar
4	M10-11 Spanner	Wire cutter

3. Installation procedure

3.1 Removing panels, fairing

Begin at the left side of the bike.

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



Image 1

Top

Fuel line

Fuel Injector Connector

Fuel float and pump Connector

Left

Ignition Coil Connectors



Right

Battery Negative terminal
Relays

Image 2

3.1.1 Locate and unlock the battery box on the left side of the bike. Refer **Image 3**.



Image 3

3.1.2 Unlock and open battery box. Refer **Image 4**.



Image 4

3.1.3 Unlock the right side panel using M10 Socket Refer **Image 5**.



Image 5

3.1.4 Gently Detach the side panel. Refer **Image 6**



Image 6

3.1.5 Locate the seat lock release wire. Refer **Image 7**



Image 7

3.1.6 Unlock the seat by pulling the wire. Refer **Image 8**



Image 8

3.1.7 Gently detach the seat from the bike. Refer [Image 9](#)



Image 9

3.1.8 Locate the tank mounting bolt under the seat. Refer [Image 10](#).

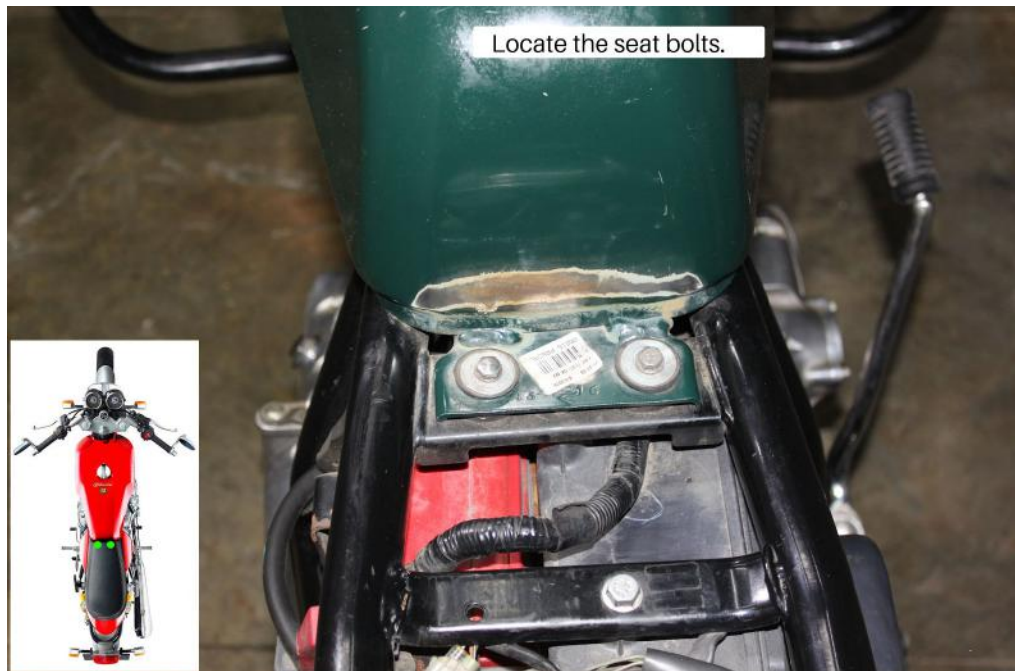


Image 10

3.1.9 Unscrew the mounting bolt using M10 hexagonal socket. Refer **Image 11**



Image 11

3.1.10 Gently lift the rear end of the tank. Refer **Image 12**



Image 12

3.1.11 Gently detach the fuel line. Refer **Image 13**.



Image 13

3.1.12 Gently detach the fuel pump connector. Refer **Image 14**



Image 14

3.1.13 Gently detach the fuel gauge connector. Refer [Image 15](#)



Image 15

3.1.14 Carefully lift the tank and place it safe. Refer [Image 16](#).



Image 16

3.2 Routing the harness

3.2.1 Start from the front end, under the frame, route each connector terminal of PowerTRONIC harness to the rear end. Refer [Image 17](#).

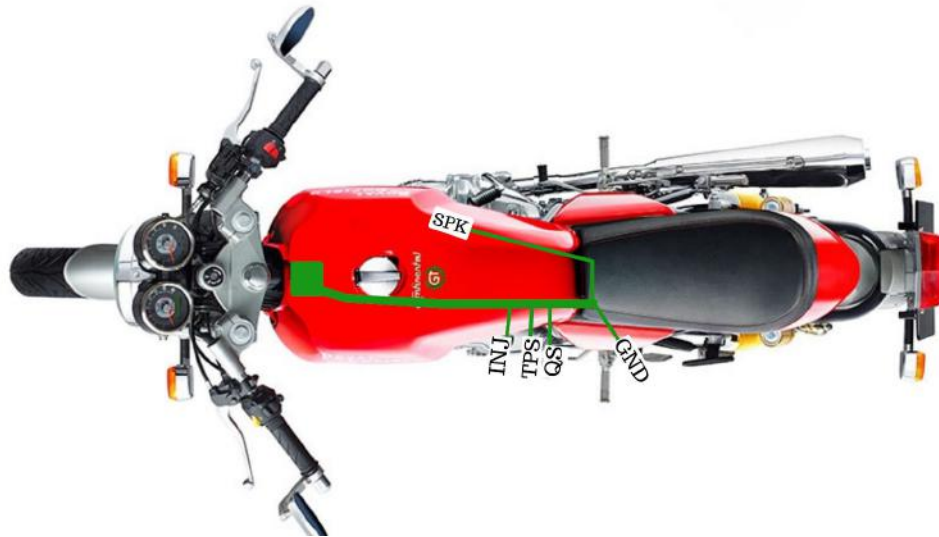


Image 17

3.2.2 Make sure the harness does not touch the engine head. Refer [Image 18](#)

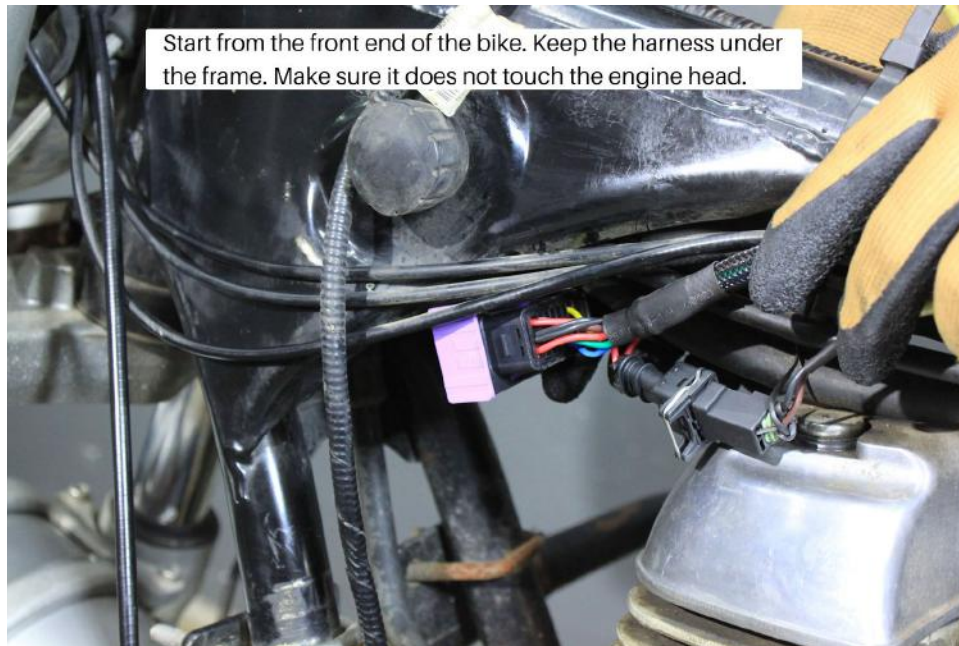


Image 18

3.2.3 Route the harness to rear end and direct them to their respective connections. Refer [Images 19](#)



Image 19

3.3 Fuel Injector Connector (Left side of the bike)

3.3.1 Locate the stock injector connector of your bike. Refer the **Images 20**

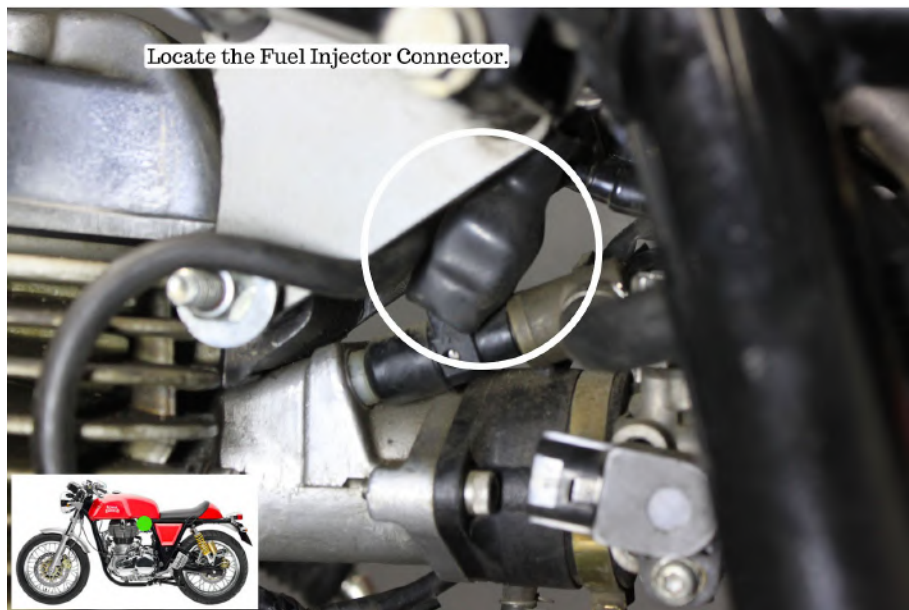


Image 20

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 the zoomed view. (**Image 21**).



Image 21

3.3.4 Connect the female PowerTRONIC injector connector to the stock male injector connector. Refer [Image 22](#).



Image 22

3.3.5 Connect the stock female injector connector to the PowerTRONIC male injector connector. Refer [Image 23](#).



Image 23

3.4 Ignition Coil Tapping(Right side of the bike)

3.4.1 Locate the stock Spark/Ignition coil connector on the ignition coil, located right above the engine. Refer **Images 24**

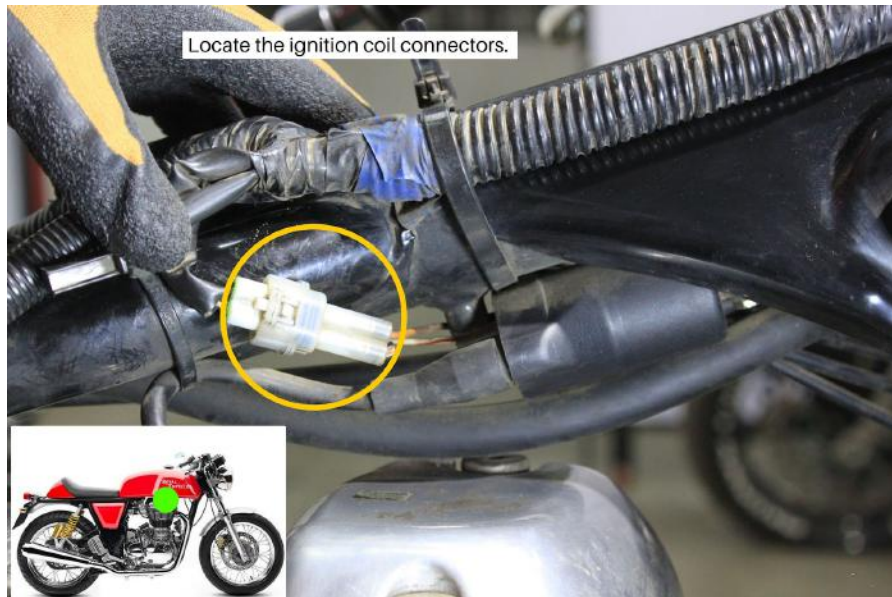


Image 24

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

3.4.3 Detach the stock ignition coil connectors. Refer **Image 25**.



Image 25

3.4.4 Connect the PowerTRONIC Ignition coil male connector to the stock ignition coil female connector. Refer **Image 26**.



Image 26

3.4.5 Connect the PowerTRONIC Ignition coil female connector to the stock ignition coil male connector. Refer **Image 27**.

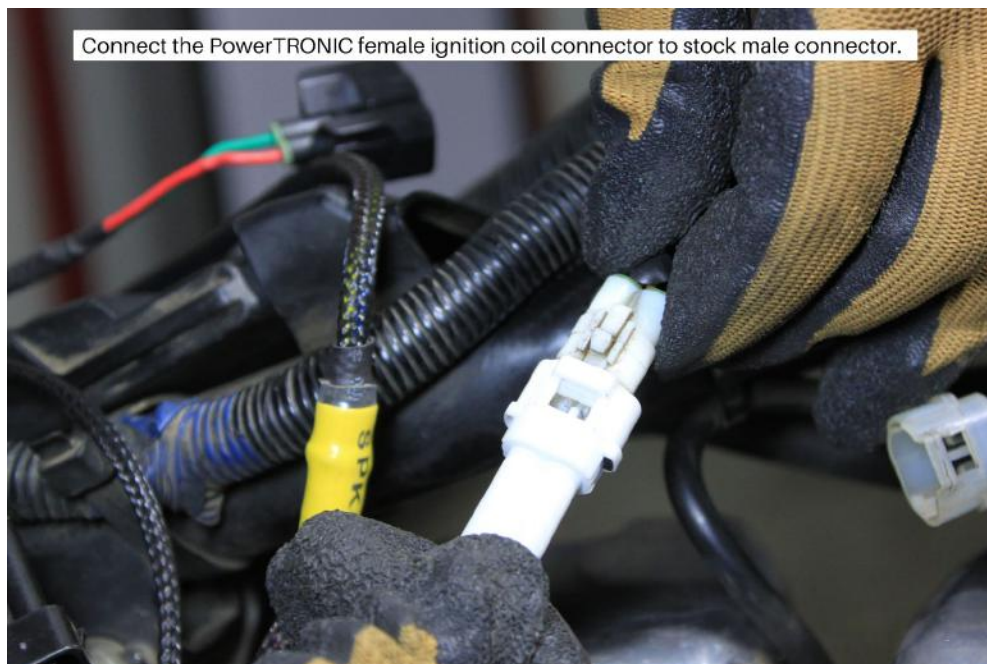


Image 27

3.5 Throttle position sensor connector (Left side of the bike)

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 28](#)

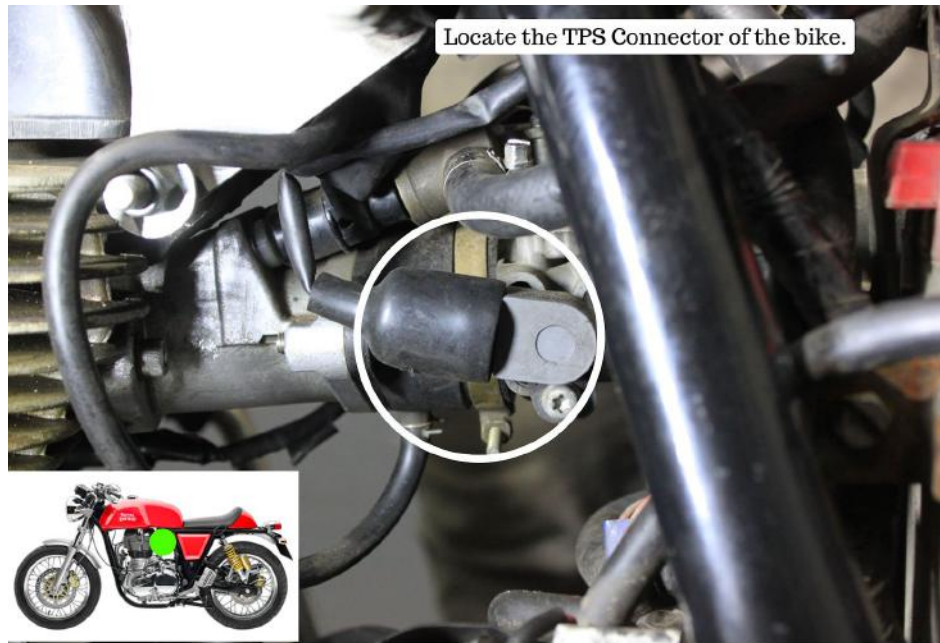


Image 28

3.5.3 Disconnect the stock TPS connector. Refer [Image 29](#)



Image 29

3.5.4 Connect the PowerTRONIC male TPS connector to stock female connector. Refer **Image 30**.



Image 30

3.5.5 Connect the PowerTRONIC female TPS connector to stock male connector. Refer **Image 31**.



Image 31

3.5.6 We advise you to perform a TPS calibration after the installation of PowerTRONIC ECU.

3.6 Ground Terminal Connector (Left side of the bike)

3.6.1 Identify the Ground terminal connector labelled as GND and connect it to the negative terminal of the battery.
Refer the **Image 32** and **Image 33**.



Image 32



Image 33

3.7 Changing Relays (Left side of the bike)

3.7.1 Locate the stock relays Image 34.

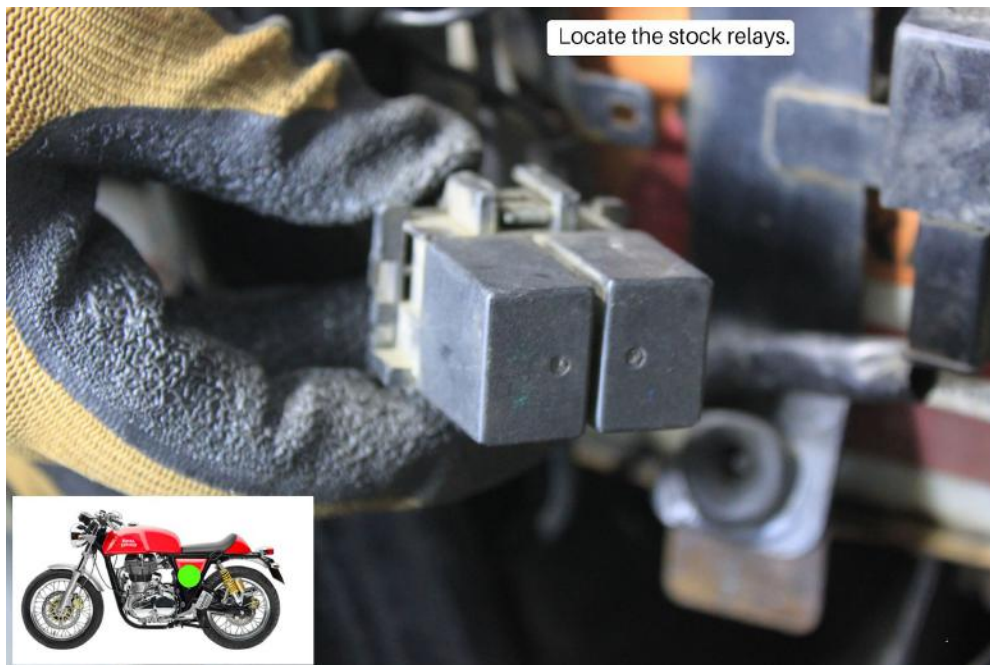


Image 34

3.7.2 Remove the stock relays from the relay kit Refer Image 35.



Image 35

3.7.3 Replace the stock relays with provided relays. Refer [Image 36](#).



Image 36

3.8 Securing the harness using ties

3.8.1 Secure the harness away from hot moving/parts by attaching it to the chassis/frame using the zip ties provided wherever necessary. You can cover the PowerTRONIC ECU with a clean wrap or bubble wrap. Refer the **Image 37**.

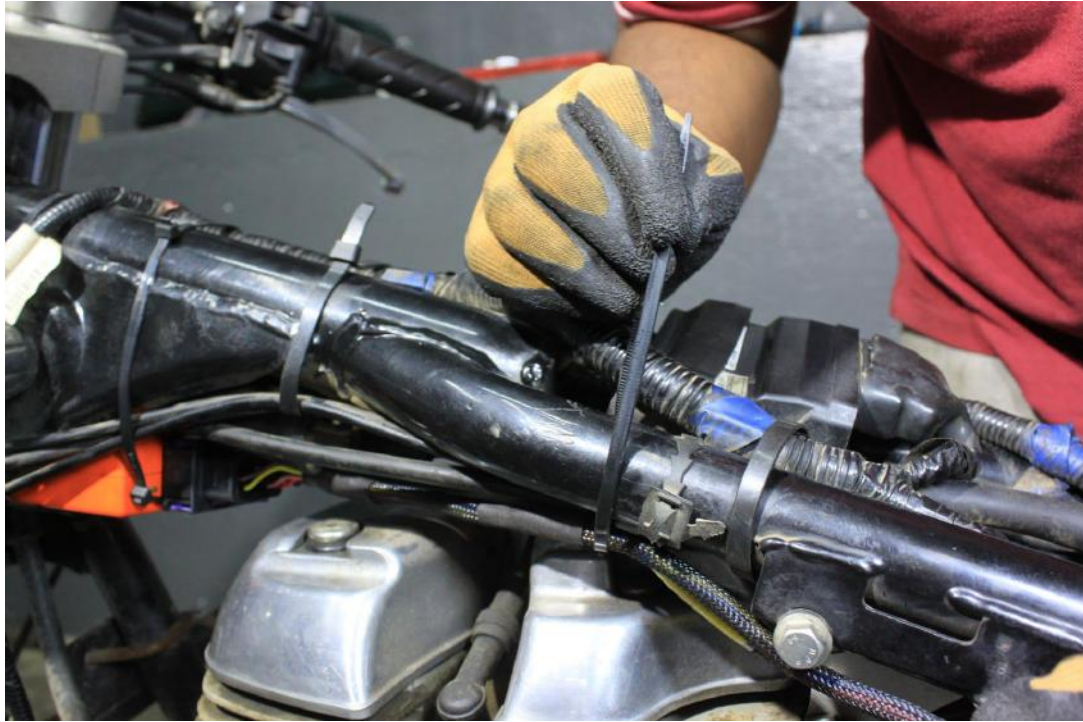


Image 37

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.

3.9 Testing with the stock coupler

3.9.1 Attach the fuel tank.

3.9.2 You can verify the connections by attaching the stock coupler. Refer detailed Stock coupler test document. Refer [Image 38](#)



Image 38

DO NOT proceed with the PowerTRONIC ECU without first verifying the connections with stock coupler.

3.10 Plugging in the PowerTRONIC

Remove the key from the ignition, unplug the stock coupler and connect the PowerTRONIC to the harness by connecting it to the 24 pin connector. Secure it in the glove box. Refer [Image 39](#).

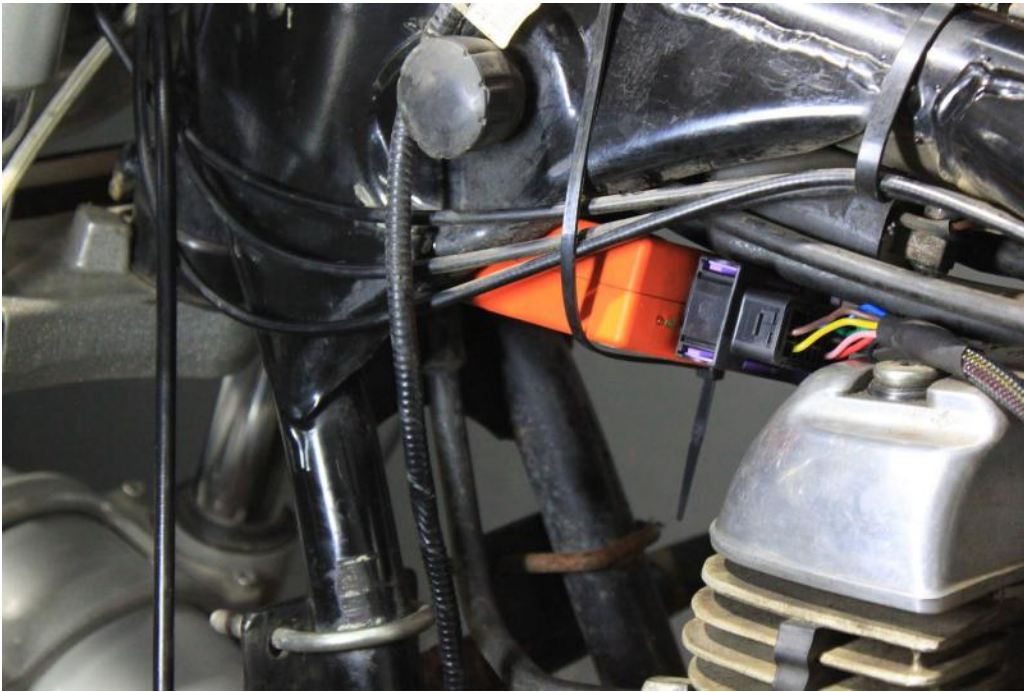


Image 39

3.11 Attaching the panels fairing etc

Attach the panels, fairing as removed from the bike.