PowerTRONIC Installation Manual- KTM RC 390 (2024)

Document Version	1	Release Date	22 August 2024

Application information	Vehicle Specific
Vehicle	**KTM**
Model	**RC 390**
Year of manufacture	**2024**
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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Table of Contents

1. Parts list

1	PowerTRONIC	Piggyback ECU
2	Stock Coupler	Stand by unit • CanbeconnectedinplaceofthePowerTRONICtorunthebikeinstock mode if need be. • Usedfortheverificationoftheconnectorsinvolved.
3	Harness	Bike specific harness contains the following connectors • Fuelinjectorconnector • Sparkconnector • Throttlepositionsensortappingwire(TPS) • Crankshaftpositionsensorconnector(CKP) • Mapselectionconnector • Quickshifterconnector • Groundterminal
4	USB cable	Can be used to connect the PowerTRONIC to a laptop for throttle calibration or changing maps
5	NylonTags	To secure wiring harness
6	User guide and Warranty card	Instructions

2. Tools required

Serial No	Item with description
1	M10 Hexagonal socket Phillips-Head
2	Philips head screwdriver
3	4mm Allen key
4	5mm Allen key
5	Cutter for zip ties

3. Installation procedure

3.1 Removing panels, fairing

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

Image 1

3.1.1 Locate the rider seat lock shown in **Image 2** and unlock the rider seat. Refer to **Image 3**.

Image 2

Image 3

3.1.2 Gently detach the rider seat. Refer to **Image 4**.

Image 4

3.1.3 Locate the screws holding the tank cover and unscrew them using 4mm Allen key.

Image 5

3.1.4 Gently lift the tank cover protector and unscrew the screw with a 4mm Allen key as shown in **Image 6**.

Image 6

3.1.5 Detach the tank cover, Refer to **Image 7**.

Image 7

3.1.6 Locate the screw in front of the tank as shown in **Image 8** and unscrew it using a 5mm Allen key.

Image 8

3.1.7 Detach the cover as shown in **Image 9**.

Image 9

3.1.8 Unscrew the screw shown in **Image 10** with a 4mm Allen key.

Image 10

3.1.9 Unscrew the screw on the fairing shown in **Image 11** with a 4mm Allen key.

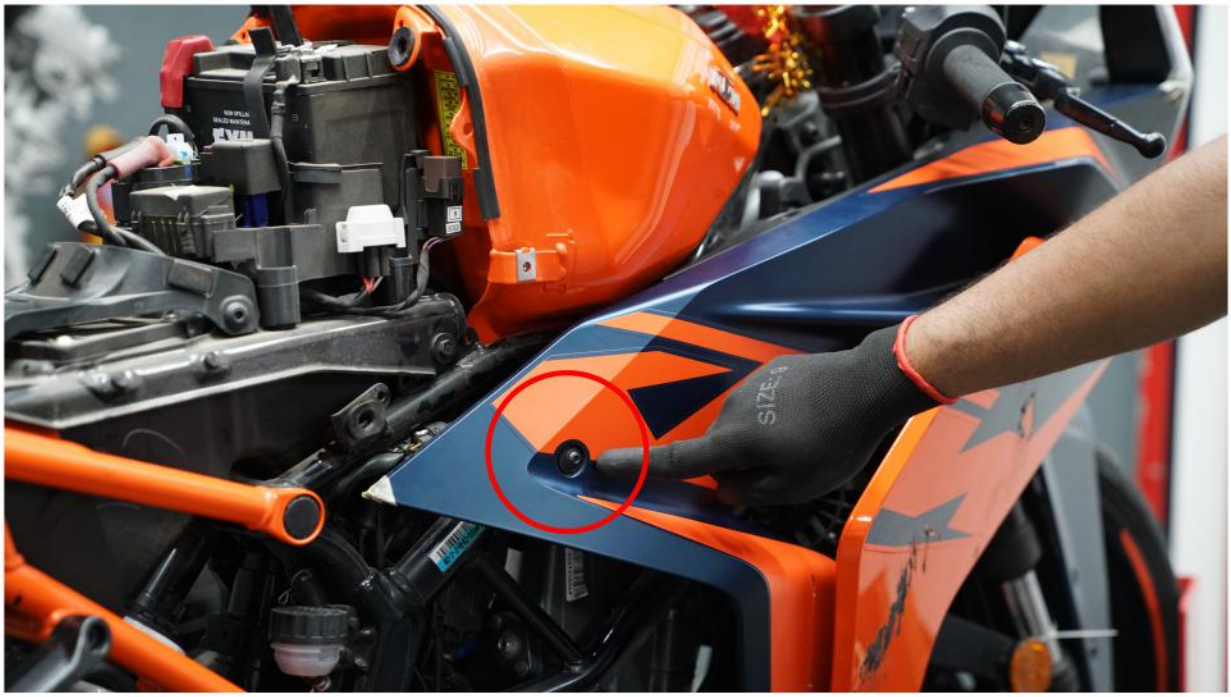

Image 11

3.1.10 Unscrew the screw under the headlights shown in **Image 12** with a 4mm Allen key.

Image 12

3.1.11 Unscrew the screw next to the radiator shown in **Image 13** with a 4mm Allen key.

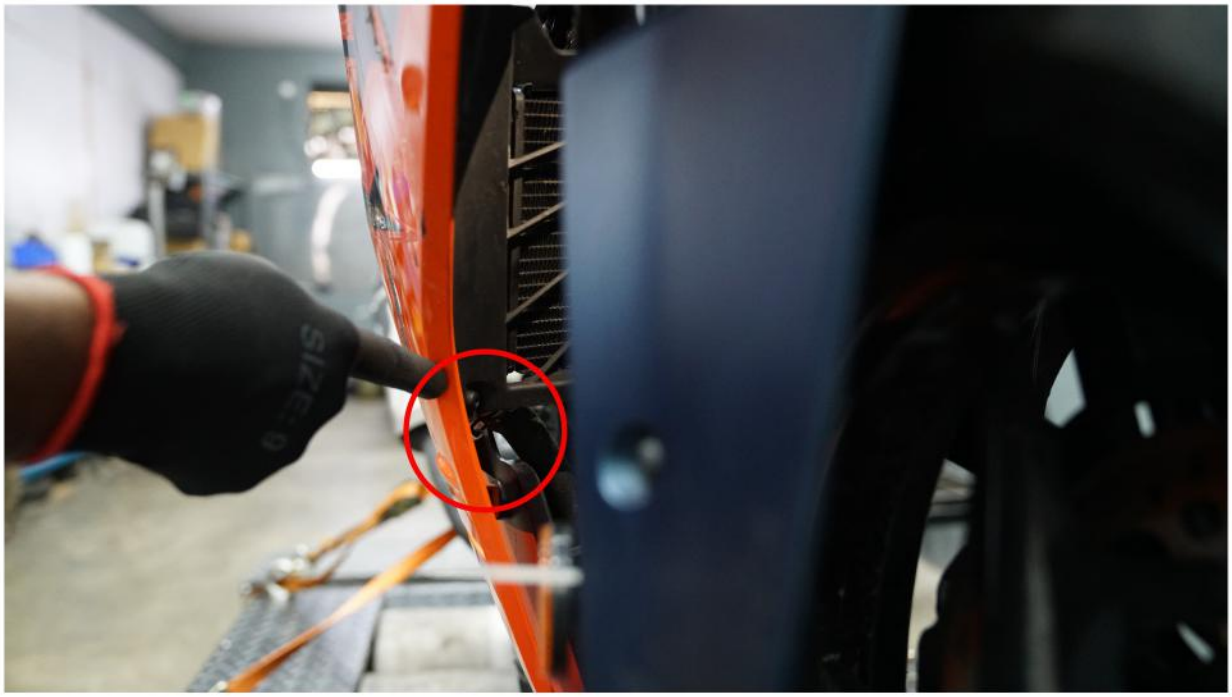

Image 13

3.1.12 Unscrew the screw under the fairing shown in **Image 14** with a 4mm Allen key.

Image 14

3.1.13 Unscrew the bolt holding the fuel tank on either side with a 10mm Hexagonal socket/spanner. Refer to **Image 15**.

Image 15

3.1.14 Gently detach the fairings.

Image 16

3.1.15 Detach the main fuel line. Refer to **Image 17**.

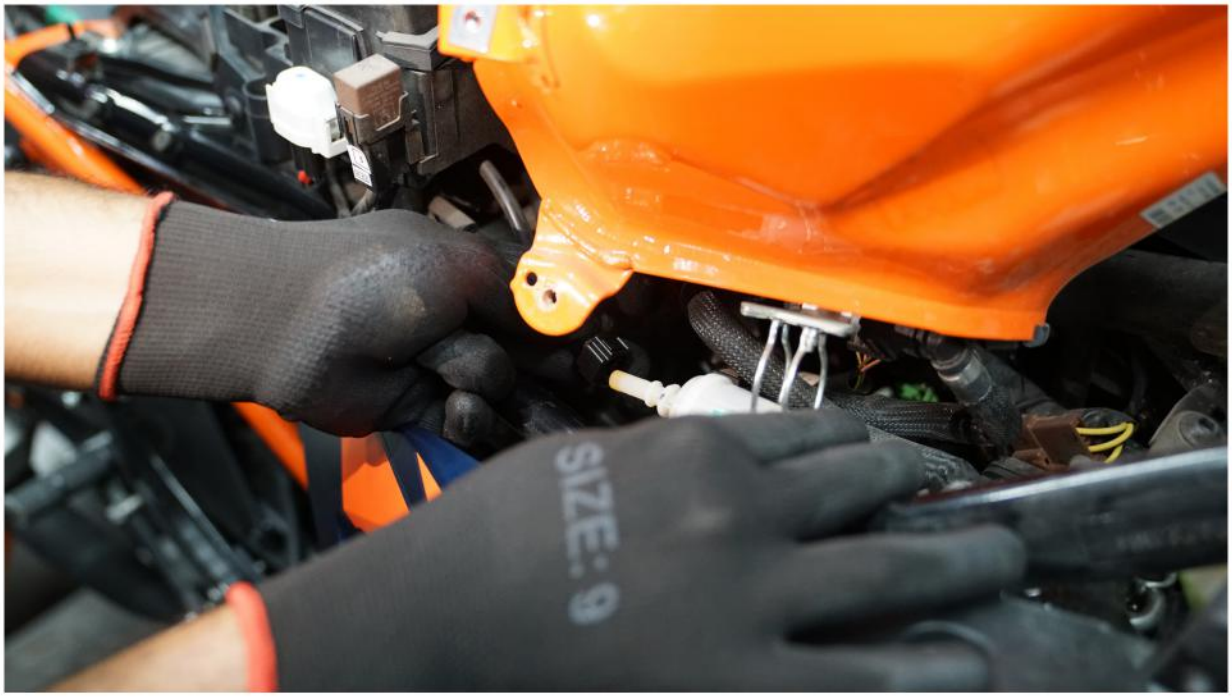

Image 17

3.1.16 Detach the vacuum hose and EVAP hose. Refer to **Image 18**.

Image 18

3.1.17 Disconnect the fuel pump connector as shown in **Image 19**. Then detach the fuel tank.

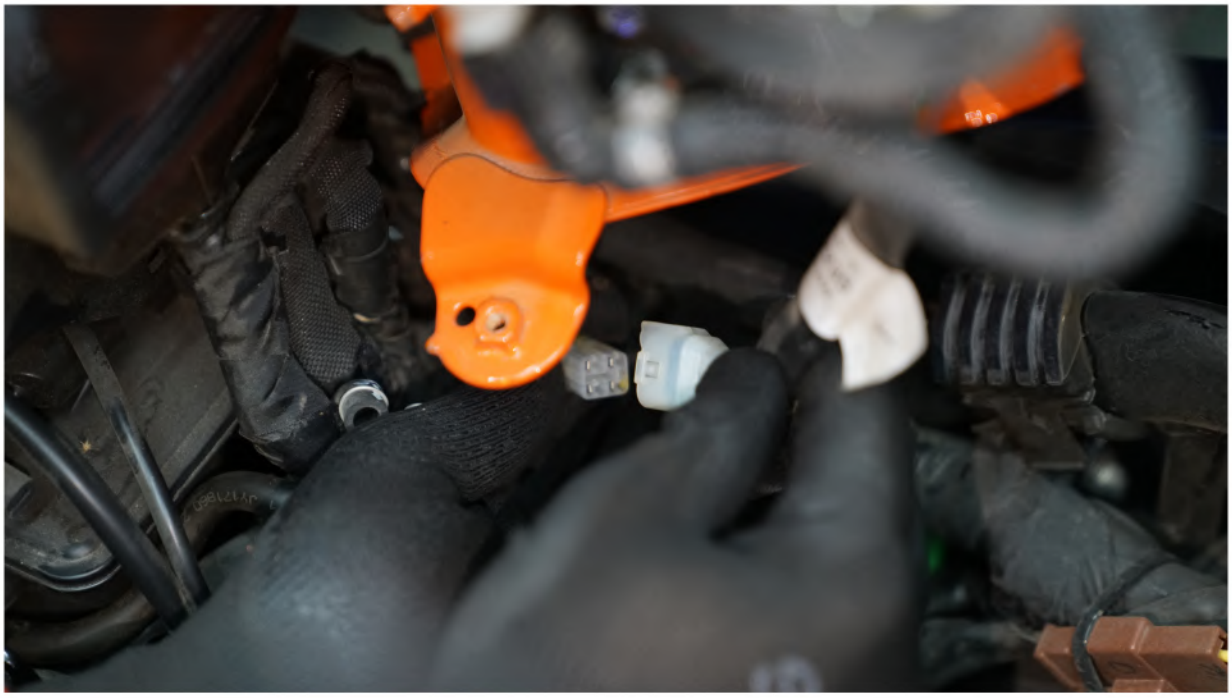

Image 19

3.2 Routing the harness

3.2.1 Route the harness from the rear of the bike under the rider seat and battery setup towards the from of the bike under the fuel tank as shown in **Image 20**.

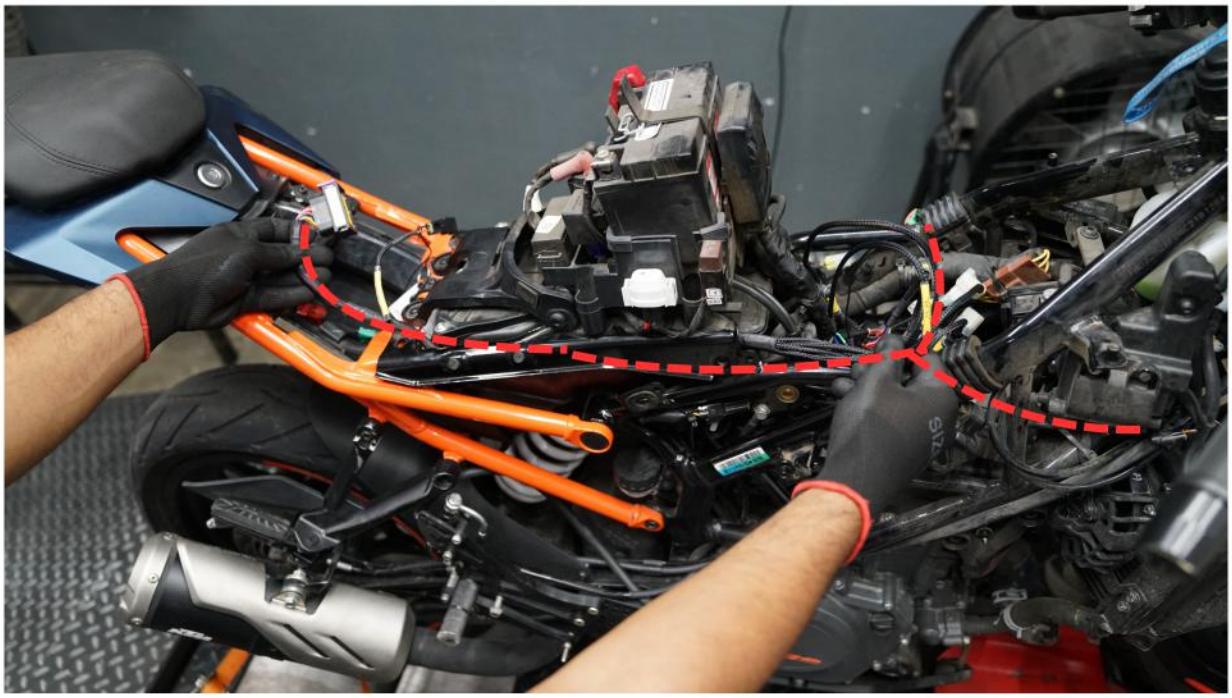

Image 20

3.2.2 Route the SPK connectors towards the Ignition coil as shown in **Image 21**.

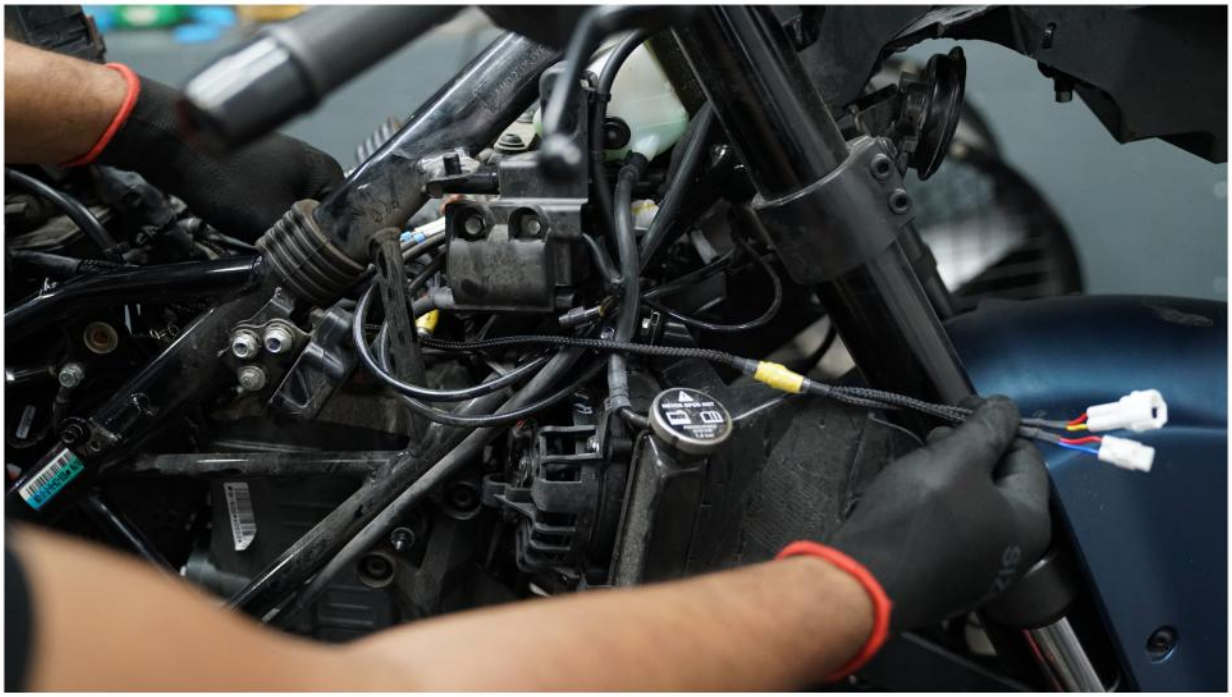

Image 21

3.2.3 Route the TPS connectors under the chassis as shown in **Image 22**.

Image 22

3.3 Fuel Injector Connector

3.3.1 Locate the Injector connector near the throttle body. Refer to **Image 23**.

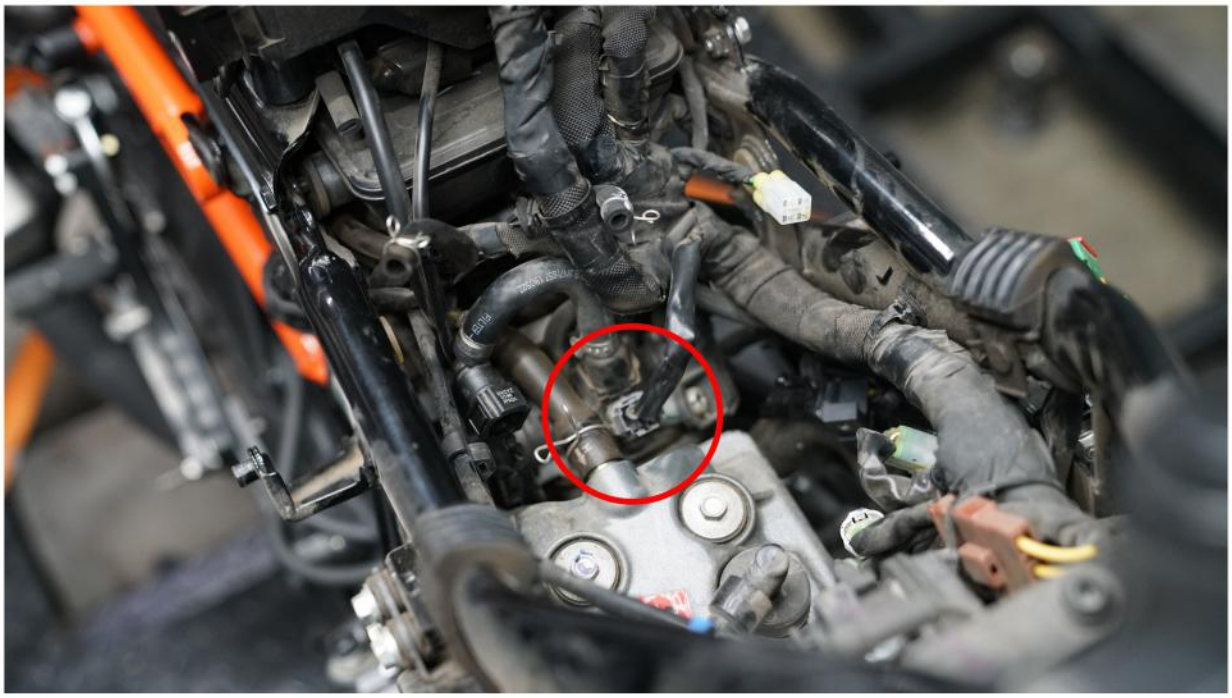

Image 23

3.3.2 Disconnect the Injector connector. Refer to **Image 24**.

Image 24

3.3.3 Connect the male connector on the INJ harness to the female connector of the bike's injector connector. Refer to **Image 25**.

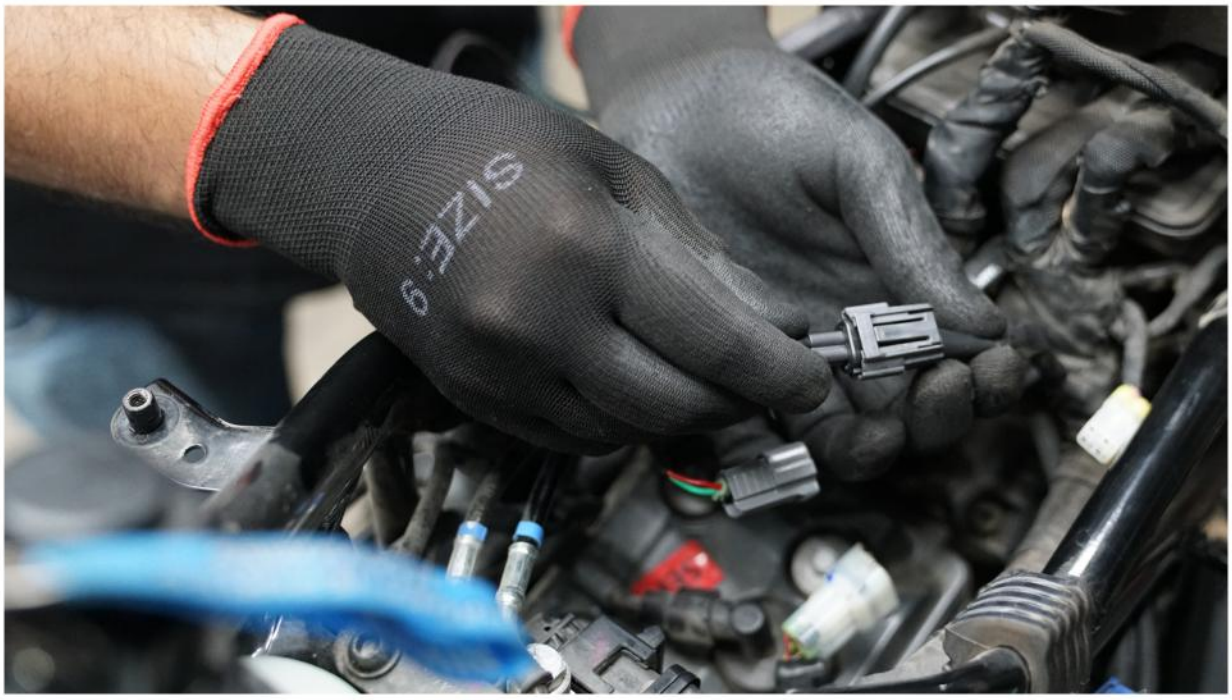

Image 25

3.3.4 Connect the female connector on the INJ harness to the male connector of the bike's injector connector. Refer to **Image 26**.

Image 26

3.4 Ignition Coil Connector

3.4.1 Locate the Ignition coil connector as shown in **Image 27**.

Image 27

3.4.2 Disconnect the ignition coil connector. Refer to **Image 28**.

Image 28

3.4.3 Connect the male connector of the SPK harness to the female connector of ignition coil. Refer to **Image 29**.

Image 29

3.4.4 Connect the female connector of the SPK harness to the male connector of ignition coil. Refer to **Image 30**.

Image 30

3.5 Crankshaft position sensor connector

3.5.1 Locate the crankshaft position(CKP) sensor above the crank case on the opposite side of the clutch basket. Refer to **Image 31**.

Image 31

3.5.2 Disconnect the CKP sensor. Refer to **Image 32**.

Image 32

3.5.3 Connect the male connector of the CKP harness to the female connector of the bike's CKP sensor. Refer to **Image 33**.

Image 33

3.5.4 Connect the female connector of the CKP harness to the male connector of the bike's CKP sensor. Refer to **Image 34**.

Image 34

3.6 Throttle position sensor connector

3.6.1 Locate the Throttle position sensor(TPS) on the throttle body on the opposite side of the throttle control. Refer to **Image 35**.

Image 35

3.6.2 Disconnect the TPS. Refer to **Image 36**.

Image 36

3.6.3 Connect the male connector of the TPS harness to the female connector of the bike's TPS. Refer to **Image 37**.

Image 37

3.6.4 Connect the female connector of the TPS harness to the male connector of the bike's TPS. Refer to **Image 38**.

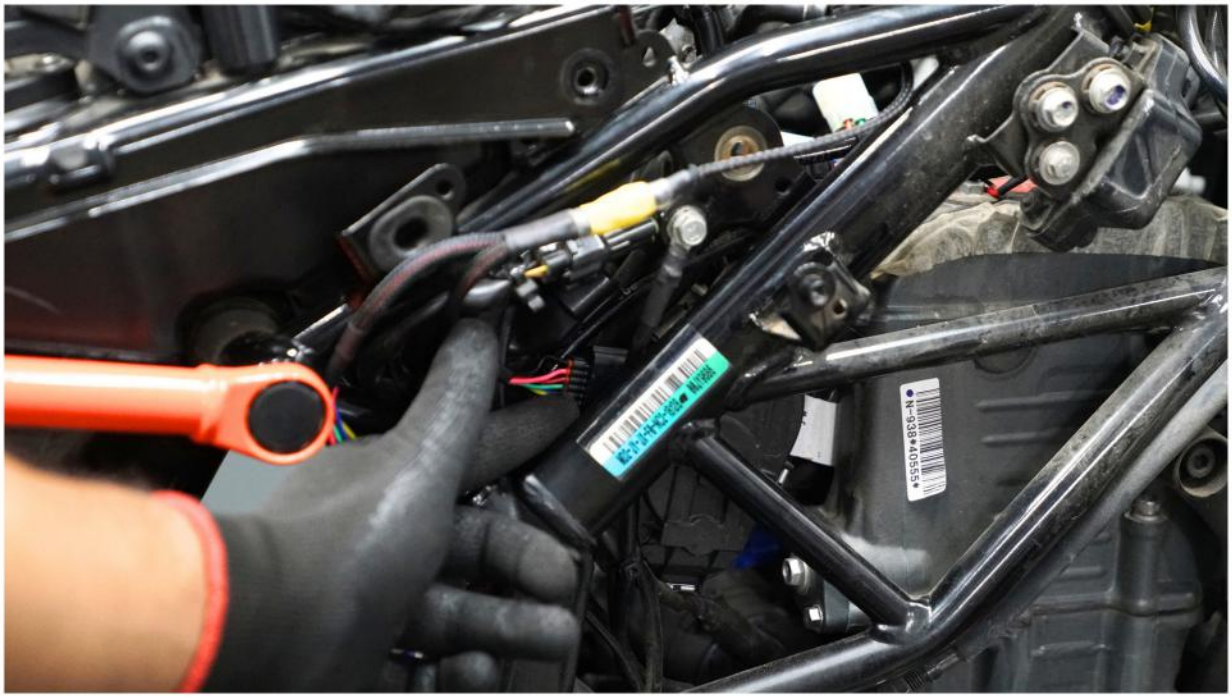

Image 38

3.7 Ground Terminal Connector

3.7.1 Unscrew the bolt on the negative terminal of the battery with a Philips head screw driver. Refer to **Image 39**.

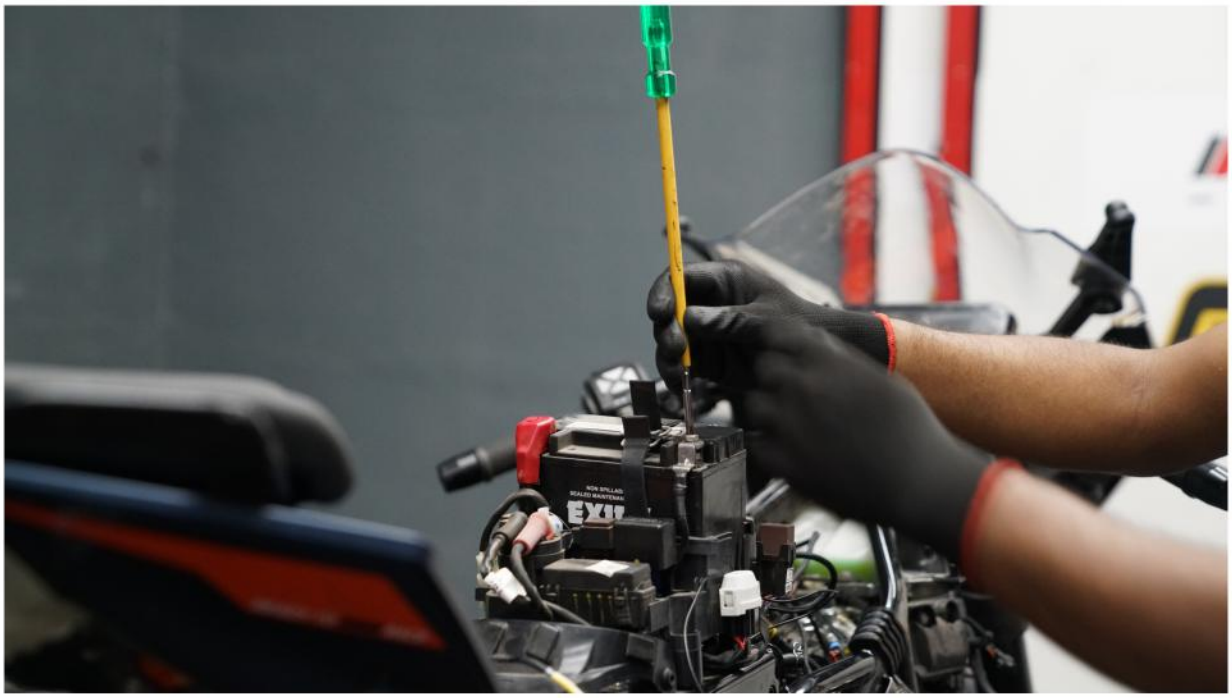

Image 39

3.7.2 Connect the ground connector(GND) harness to the negative terminal of the battery.

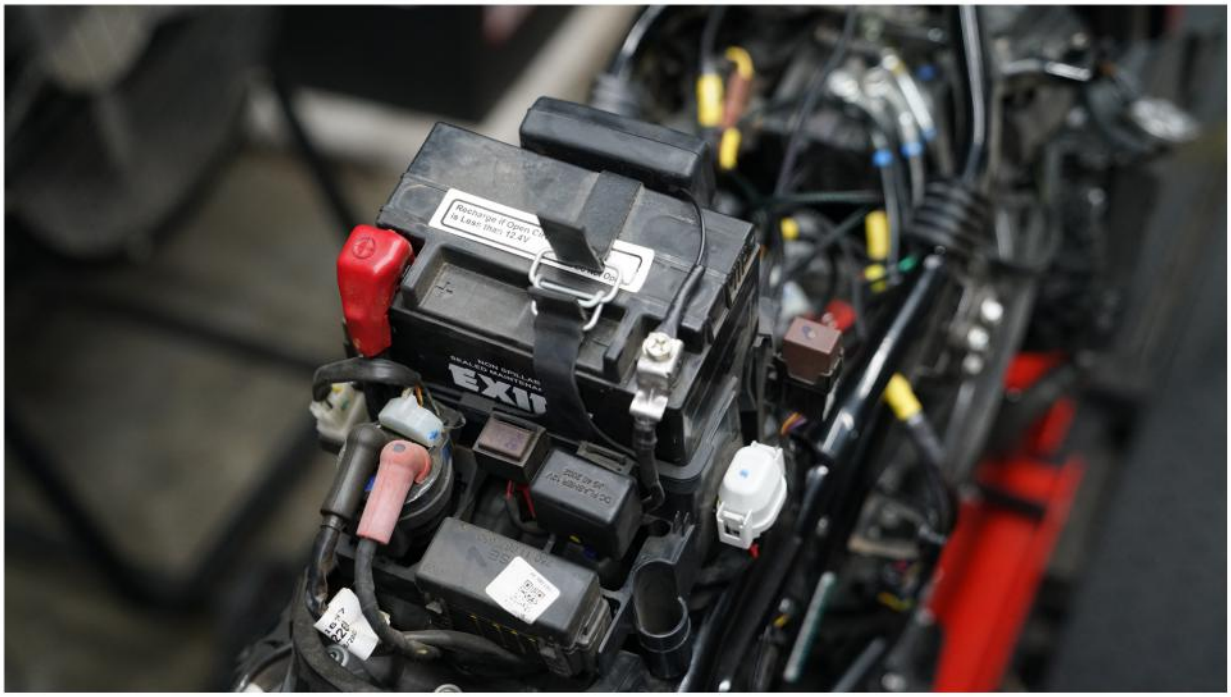

Image 40

3.8 Secure the harness wherever necessary with zip ties away from heating parts.Attach the fuel tank and the panels and connect the stock coupler to the harness. Verify the connections by attaching the stock coupler. Refer to detailed Stock coupler test document.

Image 41

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

Image 41