

PowerTRONIC Installation Manual- KTM Adventure 390 (2025)

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|------------------|---|--------------|---------------|
| Document Version | 1 | Release Date | 15 April 2025 |
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|-------------------------|----------------------|
| Application information | Vehicle Specific |
| Vehicle | KTM |
| Model | Adventure 390 |
| Year of manufacture | 2025 |
| PowerTRONIC application | All PowerTRONIC ECUs |

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 tend 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.

Support:

North & South America : +1 267 214 9292 (Call) +91 9606 044 178 (WhatsApp)
India, Bangladesh, Bhutan, Nepal & Sri Lanka : +91 9916 229 292 (Call & WhatsApp)
Rest of the world : +91 9606 044 177 (Call & WhatsApp)
Email : support@powertronicecu.com
Website : www.powertronicECU.com

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1. Parts list

| | | |
|---|------------------------------|---|
| 1 | PowerTRONIC | Piggyback ECU |
| 2 | Stock Coupler | Stand by unit <ul style="list-style-type: none"> It can be connected in place of the PowerTRONIC to run the bike in stock mode if needed. 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 connector Spark/Ignition coil connector Throttle position sensor connector (TPS) Crankshaft position sensor connector (CKP) 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 the wiring harness |
| 6 | User guide and Warranty card | Instructions |

2. Tools required

| Serial No | Main tools | Optional tools |
|-----------|--|--------------------------------|
| 1 | 4, 5, mm Hexagonal socket | Spinner handle |
| 2 | 8, 10, 12 mm bar Hexagonal Socket wrench | Ratchet handle |
| 3 | Wire cutter | Extension bar or Sliding T bar |
| 4 | Phillips head screwdriver | |

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). Refer to **Image 1**



Image 1

3.1.1 Detach the seat by inserting the key into the keyhole shown in **Image 2**.



Image 2

3.1.2 Detach the seat. Refer to **Image 3**



Image 3

3.1.3 Disconnect the battery negative terminal. Refer to **Image 4**



Image 4

3.1.4 Locate and unscrew the tank side bolt. Refer to **Image 5** and **Image 6**. Repeat the process on the other side of the bike.



Image 5



Image 6

3.1.5 Locate and unscrew the tank side panel bolts using a hex bit. Refer to **Image 7.1** and **Image 7.2**.



Image 7.1 & Image 7.2

3.1.6 Gently detach radiator cover bolts. Refer to **Image 8**.



Image 8

3.1.7 Gently remove the side panels. Refer to [Image 9](#) and [Image 10](#)



Image 9



Image 10

3.1.13 Gently detach the key hole cover. Refer to **Image 11**



Image 11

3.1.13 Gently unscrew the fuel tank front bolts. Refer to **Image 12**



Image 12

3.1.13 Gently unscrew the fuel tank rear bolts. Refer to **Image 13**



Image 13

3.1.13 Gently disconnect the vacuum hoses. Refer to **Image 14**



Image 14

3.1.13 Gently disconnect the fuel line. Refer to **Image 15**



Image 15

3.1.13 Gently disconnect the fuel pump connector. Refer to **Image 16**



Image 16

3.1.13 Gently lift the tank and place it safely. Refer to **Image 17**



Image 17

3.1.13 Gently unscrew the number plate mount screws. Refer to **Image 18**



Image 18

3.1.8 Gently unscrew the visor mount bolts. Refer to **Image 19**.



Image 19

3.1.9 Gently unscrew the visor mount bolts from the sides. Refer to **Image 20**.



Image 20

3.1.9 Gently detach the visor. Refer to **Image 21**.



Image 21

3.1.10 Gently detach the headlight assembly bolts. Refer to **Image 22**.



Image 22

3.1.11 Gently detach the headlight assembly bolts from the sides. Refer to **Image 23**



Image 23

3.1.12 Carefully detach the headlight assembly after disconnecting the connectors. Refer to **Image 24**



Image 24

3.1.13 Gently unscrew the ignition coil cover. Refer to [Image 25](#) and [Image 26](#)

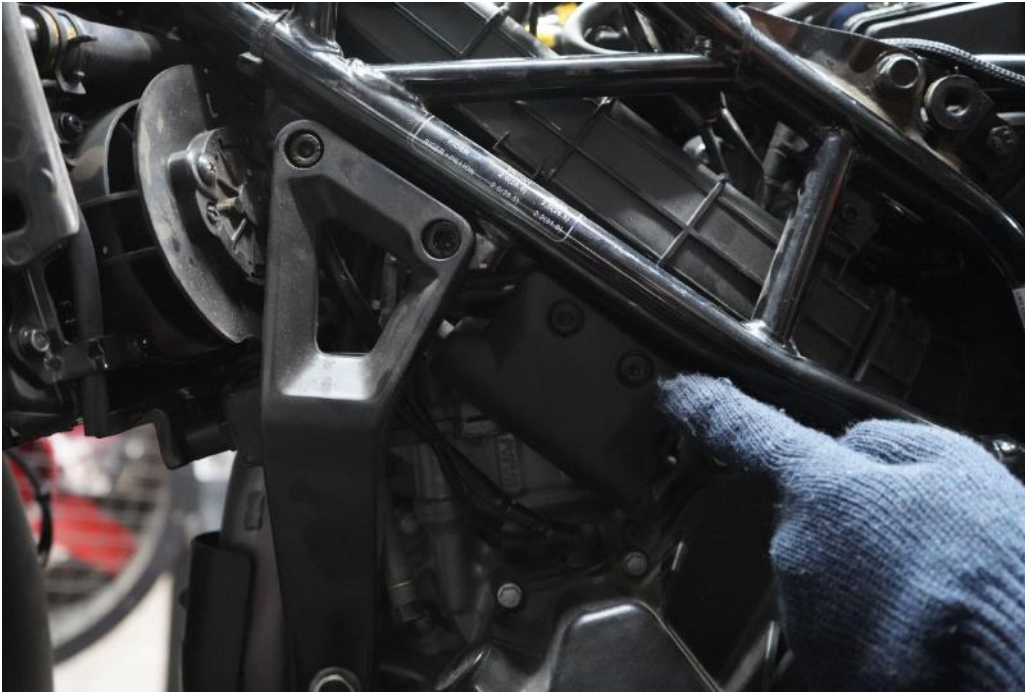


Image 25

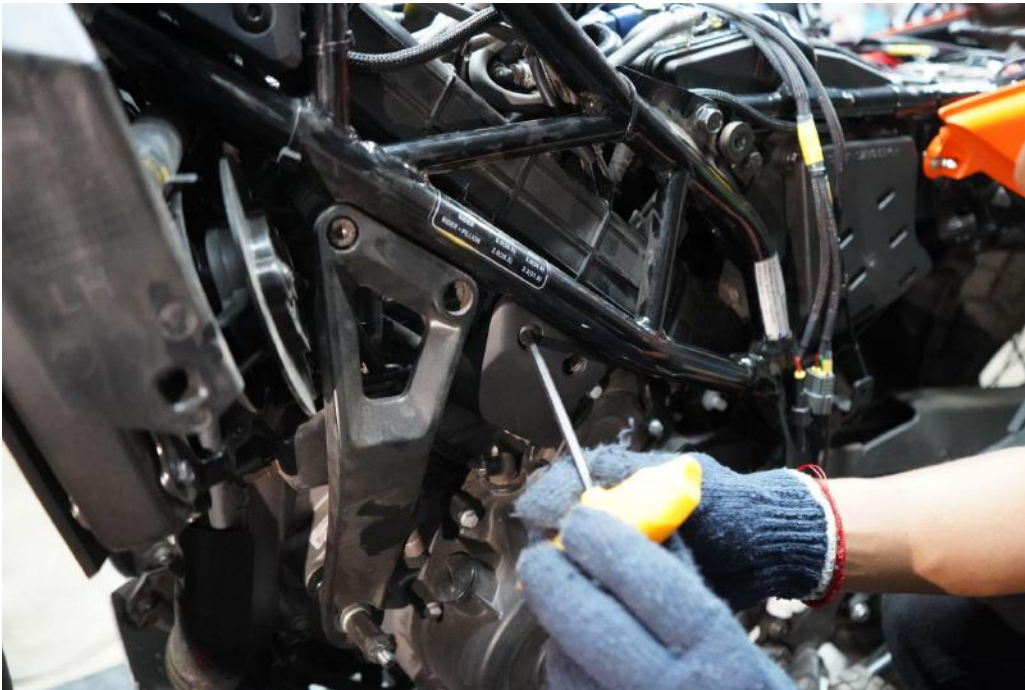


Image 26

3.2 Routing the harness

3.2.1 Place the harness on the bike. Note that the TPS connector goes to the front end of the bike (under the headlight assembly). All other connectors go to their respective positions. Refer to [Image 27](#).



Image 27

3.2.2 Route the harness connectors into the front end from the glove box. Refer to [Image 28](#).



Image 28

3.2.3 Carefully route the harness under the tank on both sides. Once the harness is through, route it inside the frame. Refer to **Image 29**.

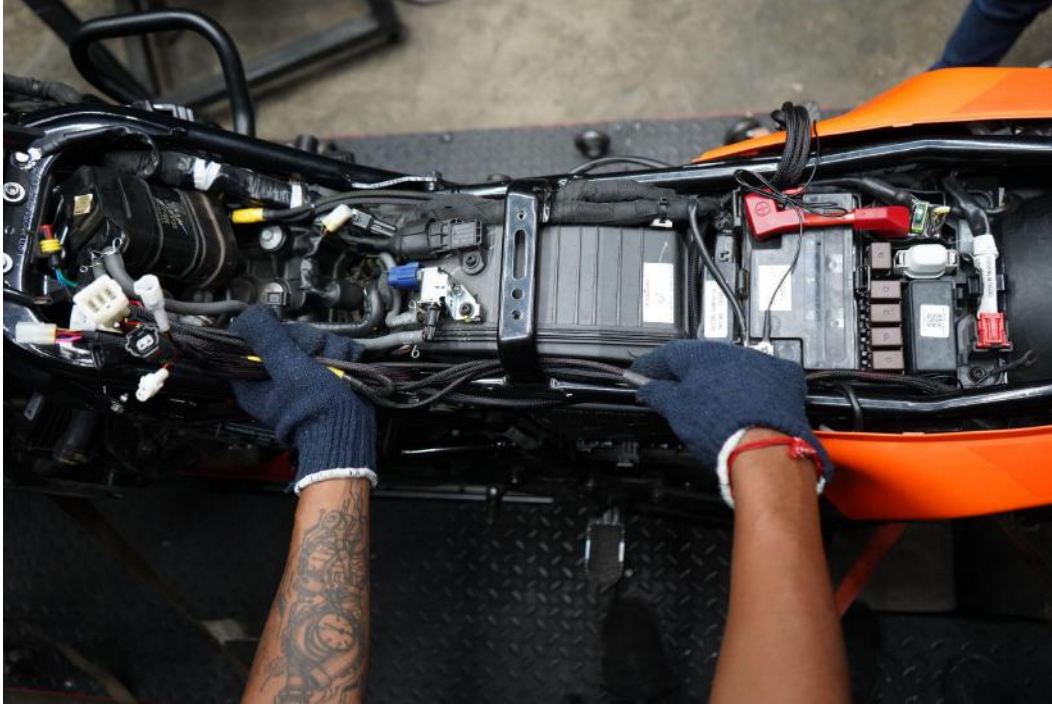


Image 29

3.3 Fuel Injector Connector

3.3.1 Locate the stock injector connector of your bike. Refer to **Image 30** and **Image 31** below.

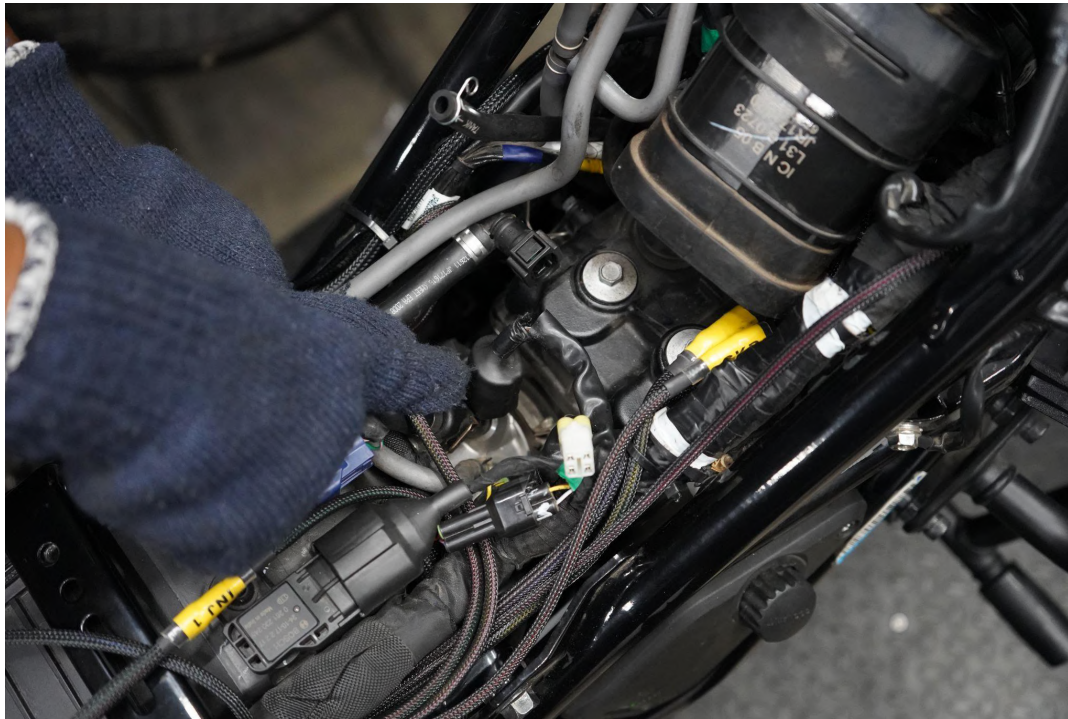


Image 30



Image 31

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 to the zoomed view ([Image 32](#)) below.



Image 32

3.3.4 Connect the female PowerTRONIC injector connector to the stock male injector connector. Refer [Image 33](#)



Image 33

3.3.5 Connect the stock female injector connector to the PowerTRONIC male injector connector. Refer [Image 34](#)



Image 34

3.4 Crank position sensor

3.4.1 Locate the stock crankshaft position sensor connector on the bike. Usually located right above the engine. Refer to **Image 35** and **Image 36** below.



Image 35



Image 36

3.4.2 Disconnect the stock CKP connector. Refer to **Image 37**.

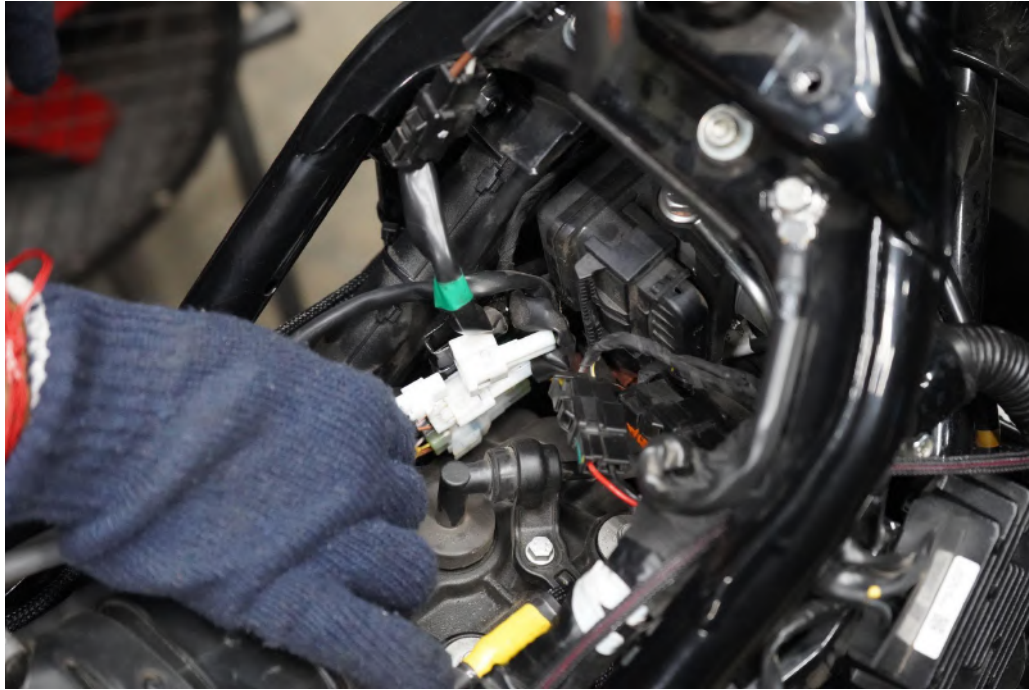


Image 37

3.4.3 Connect the PowerTRONIC male CKP connector to the stock female CKP connector. Refer to **Image 38**

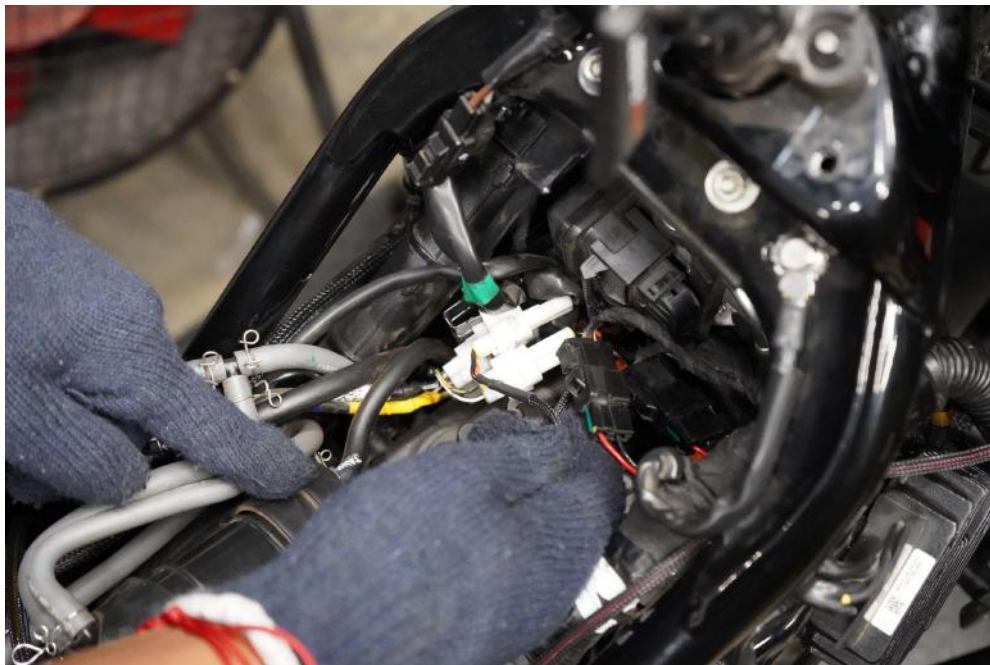


Image 38

3.4.4 Connect the PowerTRONIC female CKP connector to the stock male connector. **Refer to Image 39**



Image 39

3.5 Ignition Coil Connector (Left side of the bike)

3.5.1 Locate the stock Spark/Ignition coil connector on the ignition coil. Usually located right above the engine. Refer to Images 40 and 41 below.



Image 40



Image 41

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

3.5.3 Disconnect the stock ignition coil connectors. Refer to **Image 42** below.



Image 42

3.5.4 Connect the PowerTRONIC Ignition coil female connector to the stock ignition coil male connector. Refer to **Image 43** below.



Image 43

3.5.5 Connect the PowerTRONIC Ignition coil female connector to the stock ignition coil male connector. Refer to **Image 44** below.



Image 44

3.5.6 Refer to **Image 45** for the completed view.

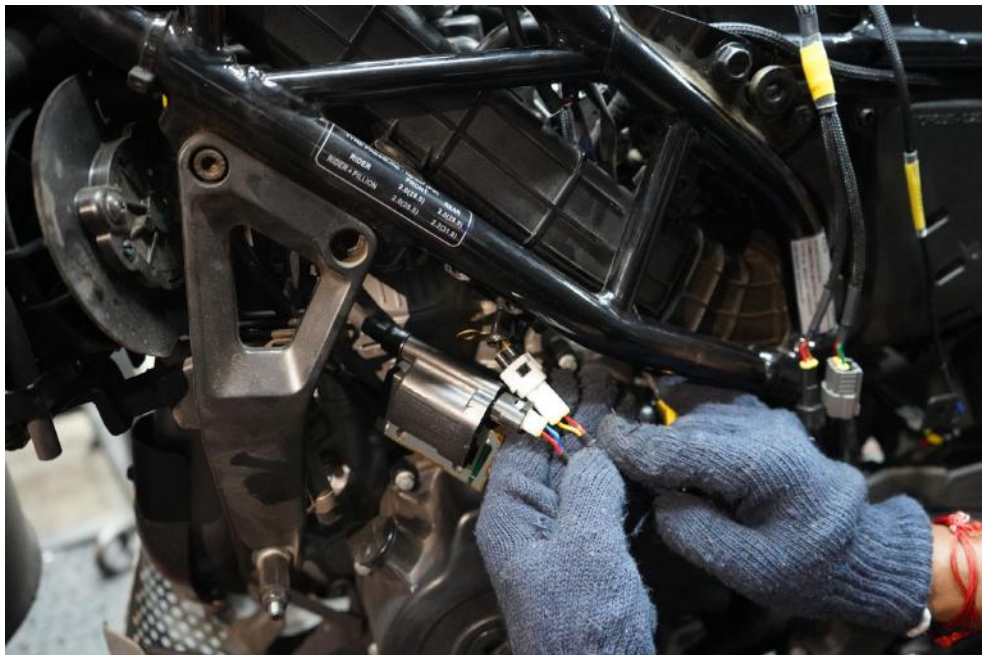


Image 45

3.5.7 Place the connectors and ignition coil back in the original position. Before tightening the bolt of the ignition coil to the frame, make sure the battery negative terminal is kept in place.

3.5.8 Connect the Ignition coil cover to the frame. Refer to **Image 46**.



Image 46

3.6 Throttle position sensor connector

3.6.1 Locate the TPS connector of your bike. Refer to **Image 47** and **Image 48** below.



Image 47



Image 48

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

3.6.3 Disconnect the stock TPS connector. Refer to **Image 49**



Image 49

3.6.4 Connect the PowerTRONIC male TPS connector to the stock female connector. Refer to **Image 50**.



Image 50

3.6.5 Connect the PowerTRONIC female TPS connector to the stock male connector. Refer **Image 51**.



Image 51

3.6.6 We advise you to perform a TPS calibration after the installation of the PowerTRONIC ECU.
Refer to the detailed TPS calibration document.

3.7 Ground Terminal Connector

3.7.1 Identify the Ground terminal connector labeled GND. Refer **Image 52**



Image 52

3.8 Securing the harness using ties

3.8.1 Secure the harness away from general heating areas by attaching it to the chassis or frame using the zip ties provided wherever necessary. Refer the **Image 53**



Image 53

Important note: The PowerTRONIC harness contains a Quick shifter connector. If you have bought the Quickshifter, please attach the connector to it.

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

3.9.3 *DO NOT* proceed with PowerTRONIC ECU without verifying the connections with the stock coupler. Refer Image 54



Image 54

3.10 Plugging in the PowerTRONIC ECU.

Connect the PowerTRONIC to the harness by connecting the 24-pin connector. Secure it in the glove box. Refer [Image 55](#).



Image 55

3.11 Attaching the panels/fairing, etc

Attach the panels, fairing as removed from the bike.