

VSETT 9 9+ 10+ 11+ Controller Replacement

Updated 11/24/2021

Applicable Models: VSETT 9, 9+, 10+, 11+

Repair Difficulty: 2/5

Required Tools / Materials:

- Set High Quality Allen Wrenches
- Wire cutters / scissors – for cutting the zip ties holding each controller connection together
- For VSETT 10+ and VSETT 11+: Phillips head screwdriver – for opening motor terminal block
- For VSETT 10+ and VSETT 11+: adjustable wrench or 10mm wrench / socket – for motor terminal block

****Note: some images and descriptions vary slightly from model to model. Please contact REV Rides if you have any questions regarding these differences throughout the repair****

STEP 1: Open the scooter deck and exposing the controller

To replace the controller, the scooter deck must first be removed, and the foam padding removed to expose the controller:

1. As highlighted in Figure 1a, remove the deck cover screws using an Allen wrench.
2. Gently pry up the deck plate to remove it.
3. Unplug the charge ports at the yellow connectors.
4. Take note of the rubber gasket that goes between the deck cover and the deck. If needed, gently peel the gasket back and lay it along the deck to ensure it doesn't get damaged.
5. Remove the black padding atop and adjacent to the controller, as outlined in figure 1b.
 - a. Note: the VSETT 9+ two controllers – one in the front and one in the rear. Please be sure to locate the proper controller before proceeding.
6. Label the old controller using a permanent marker or piece of tape. This helps to ensure the old controller is not confused with the new controller.

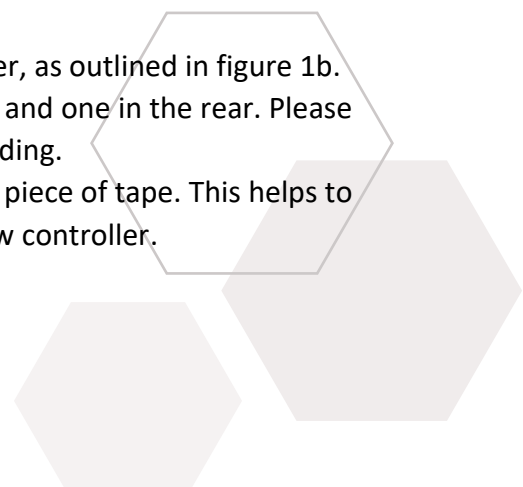
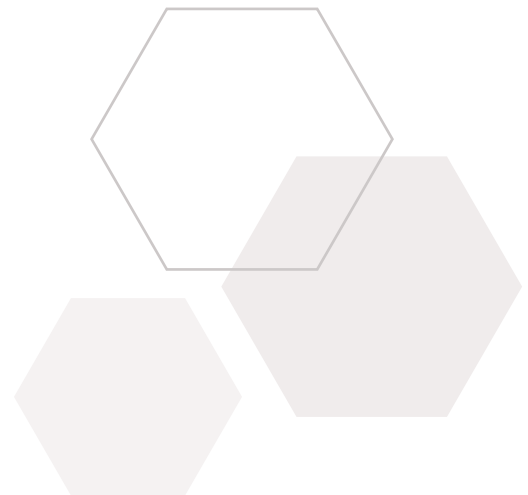


Figure 1a: Deck cover screws

VSETT 9 / 9+



VSETT 10+



VSETT 11+



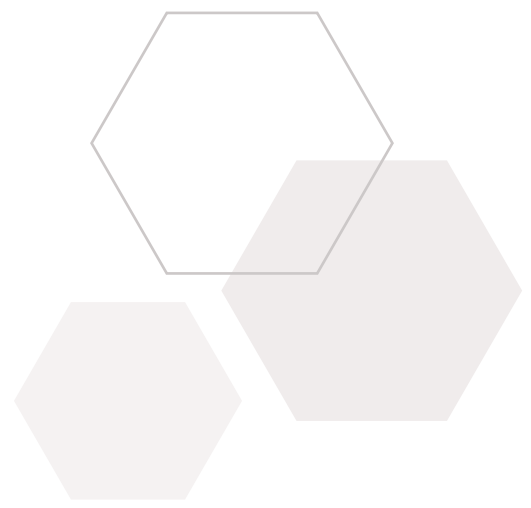
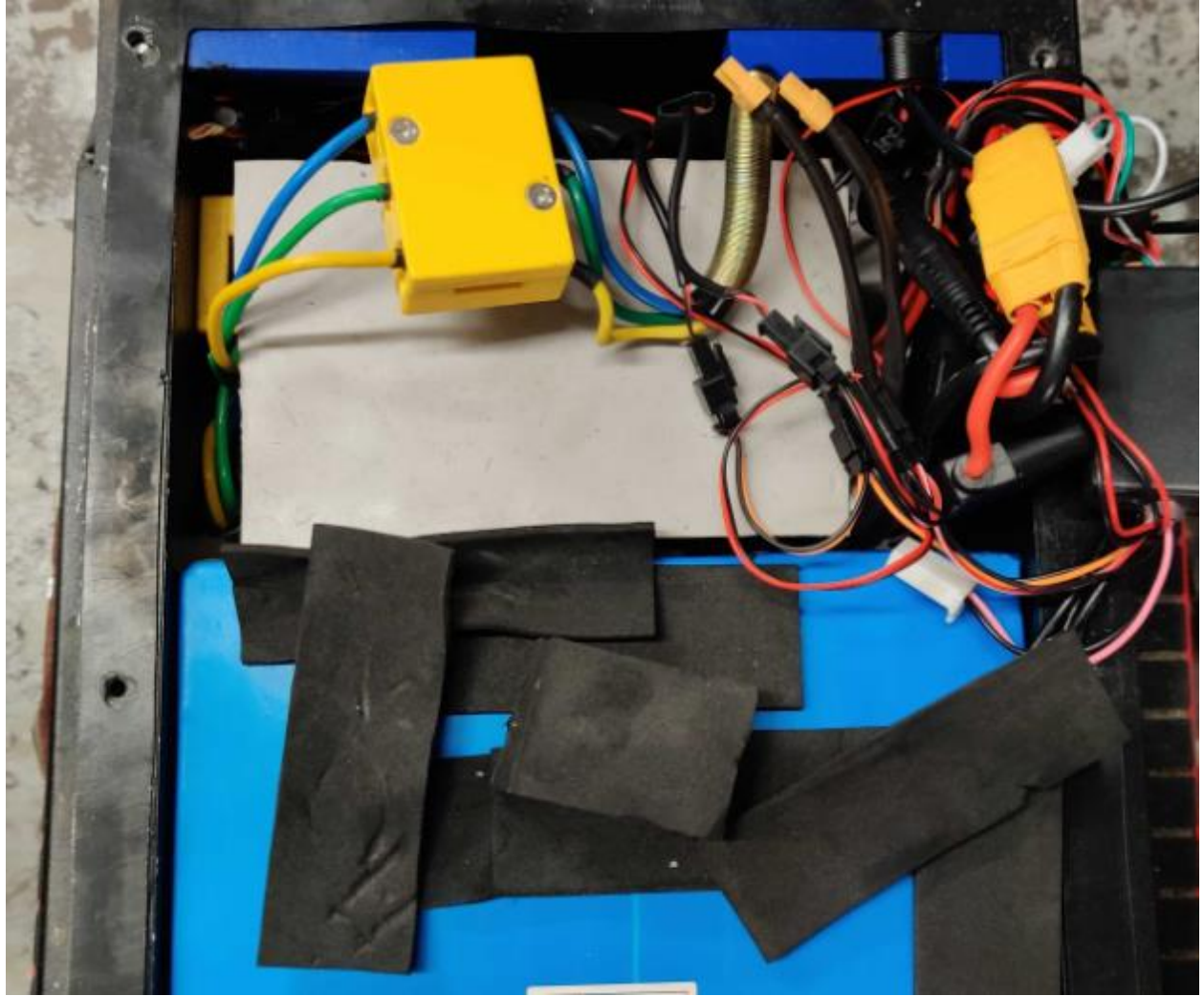
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Figure 1b: Controller protective padding



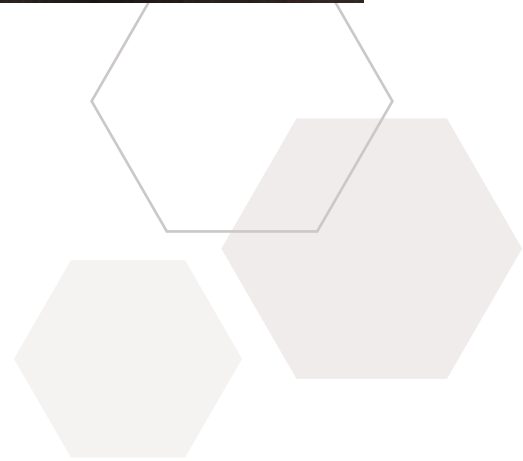
STEP 2: Controller replacement

With the controller visible, it can be removed and replaced. Please note - battery connections contain high voltage – please do not insert any metal objects into the battery connections and wear non-conductive gloves where possible.

1. Begin by unplugging the battery connection, highlighted in figure 2a.
2. After the controller has been labelled according to the above steps, wiggle the controller until it comes loose.
3. If applicable, remove the thermal padding and place it on to the new controller.
4. Unplug the motor phase wires and connect them to the new controller, highlighted in 2b.
 - a. For VSETT 10+ / 11+:
 - i. The motor phase wires are connected via a yellow post terminal block. This block can be opened using a Phillips head screwdriver, and each connection can be moved to the new controller by disconnecting the leads and connecting them to the new controller.
 - b. For VSETT 9 / 9+:
 - i. The motor phase wires are connected via the yellow connector highlighted in figure 2b. Simply unplug the connector and plug it into the new controller.
5. For VSETT 9 / 9+ / 10+:
 - a. Coming from the same cable as the phase wires is the Hall Effect sensor – shown in figure 2c. Unplug this from the old controller and into the new controller.
6. One by one, transfer over each additional connection to the new motor controller.
 - a. Cut the holding cable tie.
 - b. Unplug the connector from the old controller.
 - c. Plug the connector into the matching plug on the new controller.
7. Once all motor controller wires have been transferred, plug in the battery connection, and turn the scooter on.
 - a. Check to ensure that the lights and blinkers are functioning properly. If the blinkers are opposite, switch the blinker connections (two black wires per connection. Two connections per scooter)
8. Unplug or cut the single white wire that loops out and back into the controller. This is the speed restriction wire and needs to be unplugged or cut in order to remove the speed regulation.
9. Place the motor controller and wires back in the scooter deck.

Figure 2a: Battery connections

VSETT 9 / 9+



VSETT 10+ / VSETT 11+

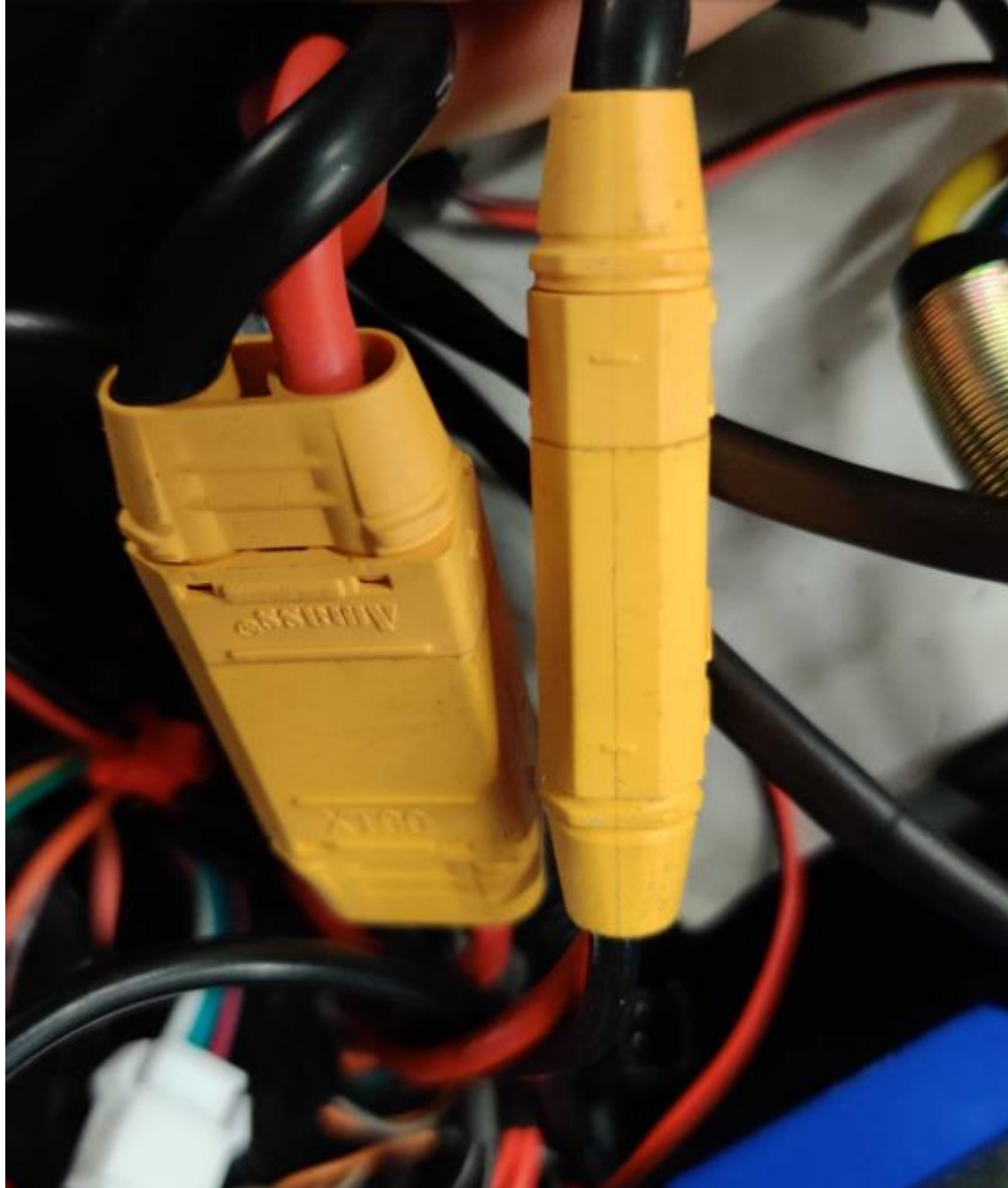
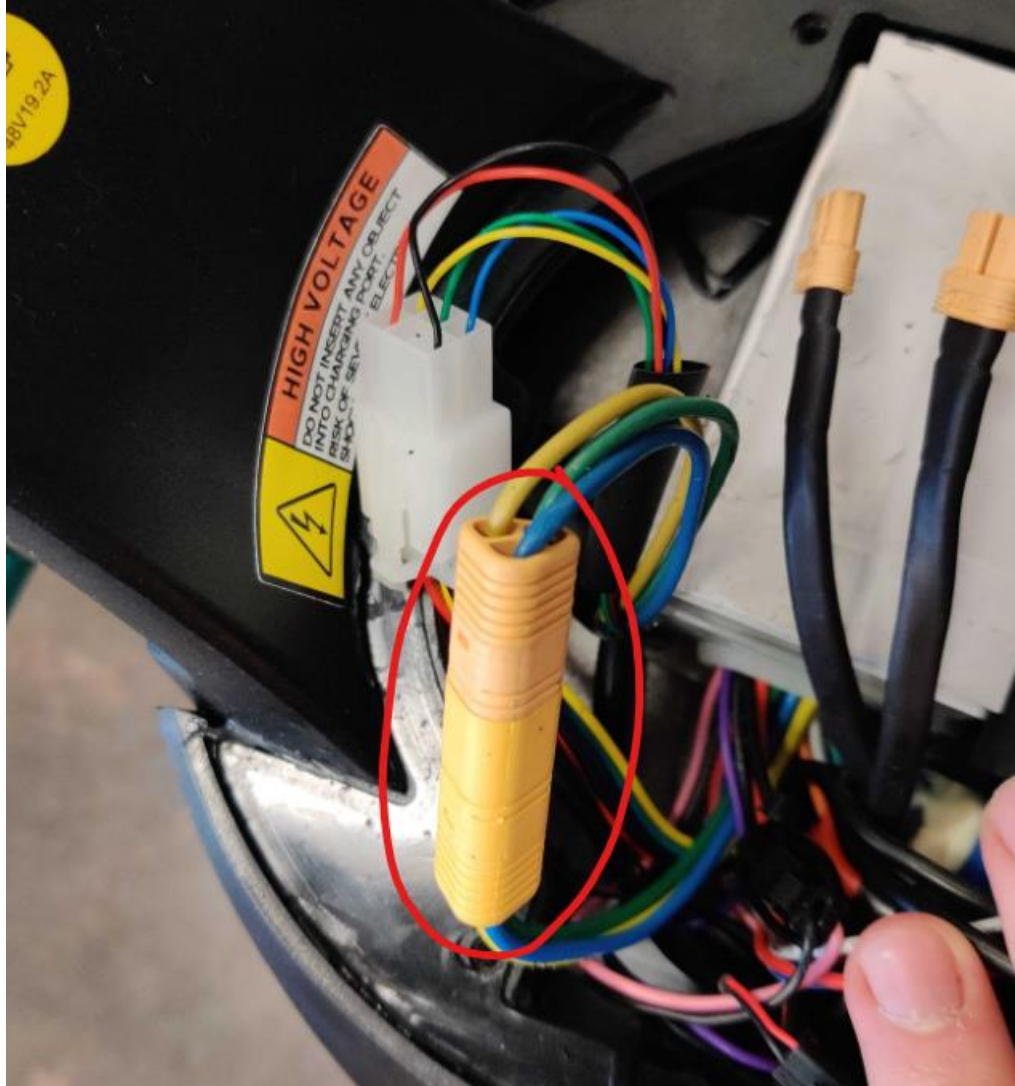


Figure 2b: Motor Phase Wires

VSETT 9 / 9+



VSETT 10+ / 11+

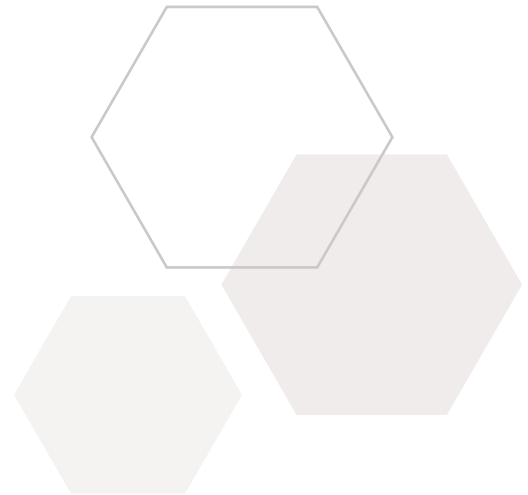
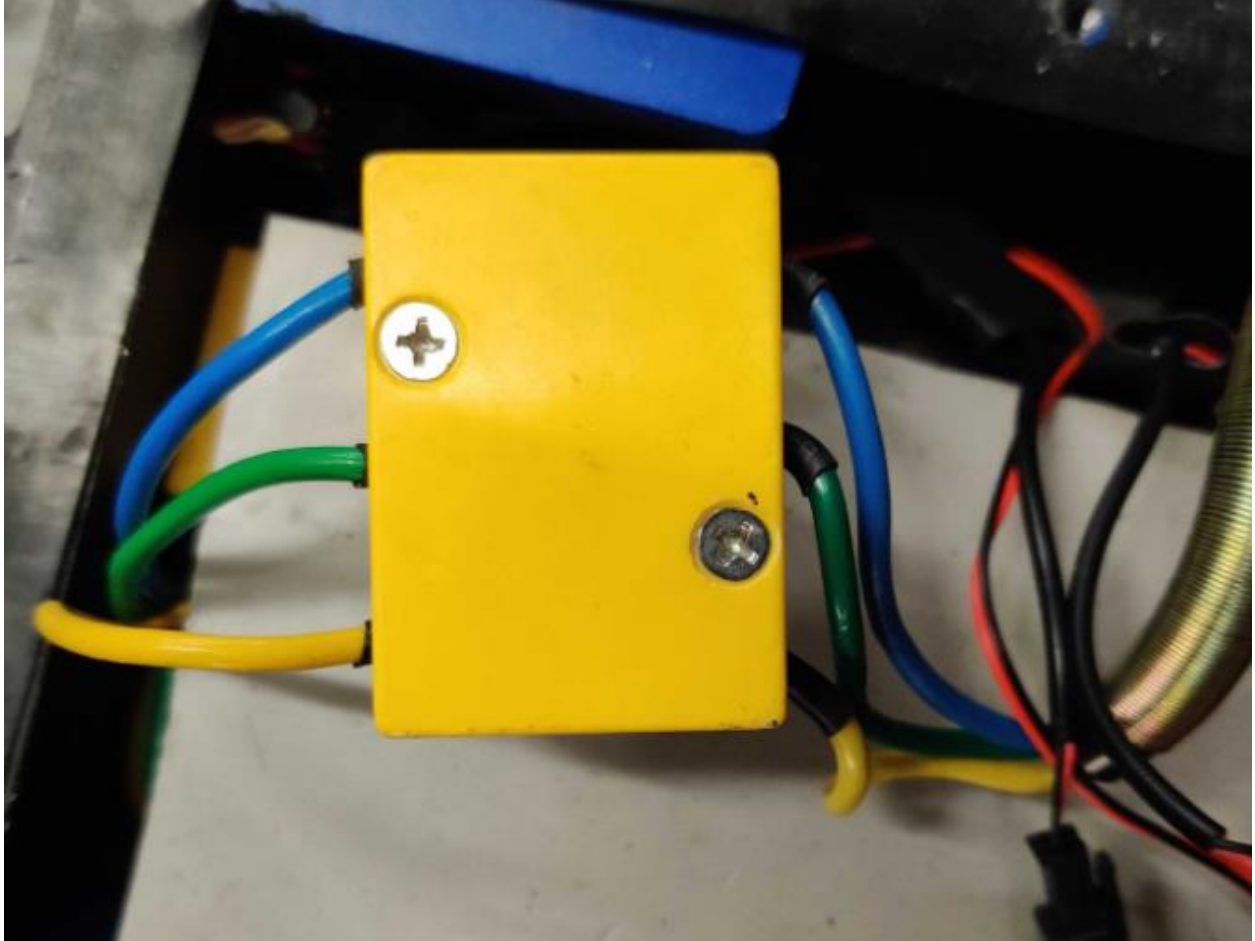
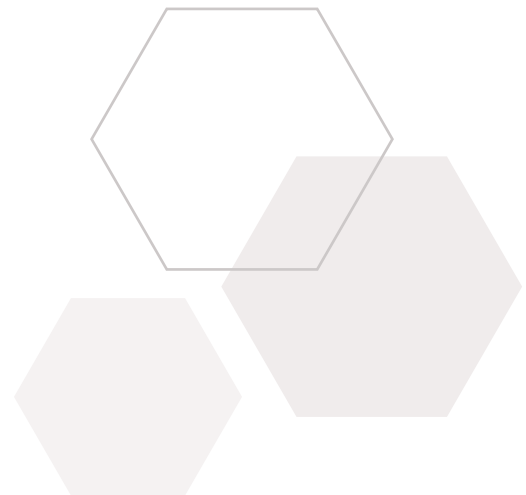
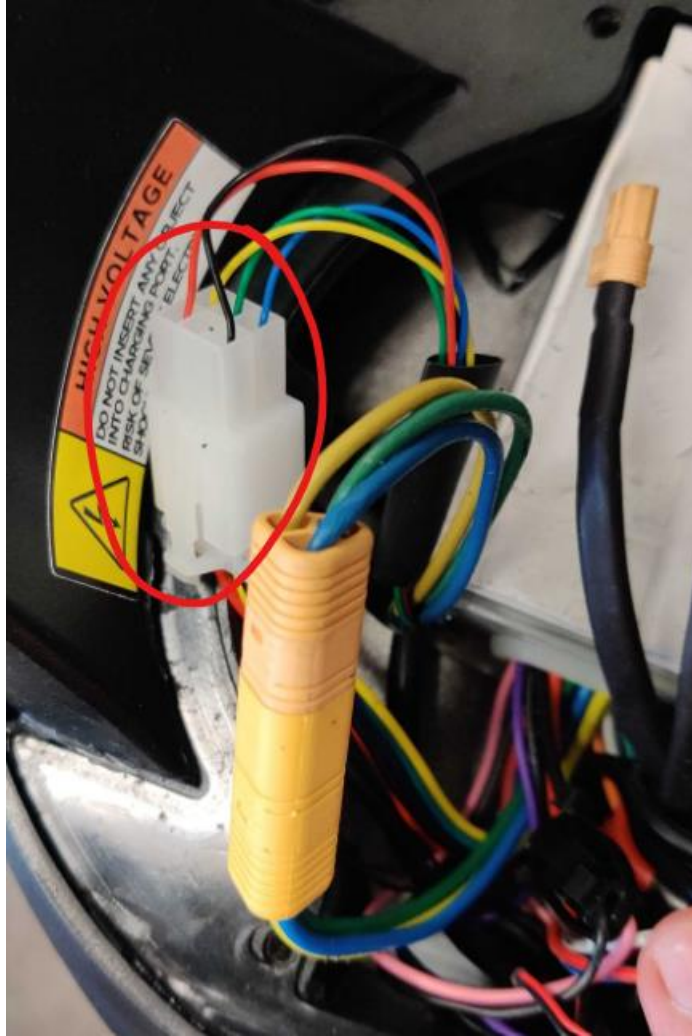
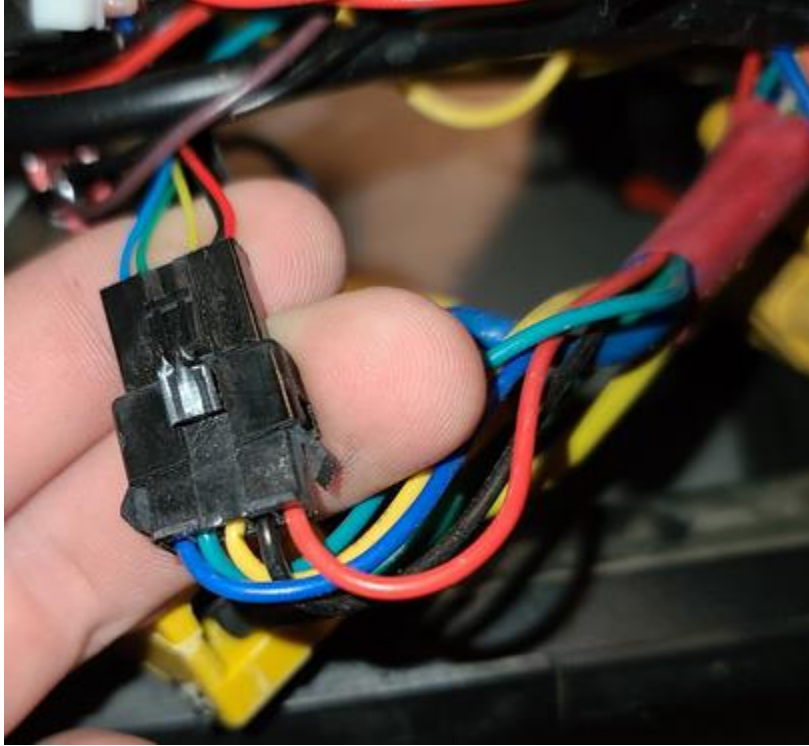


Figure 2c: Hall Effect Sensor

VSETT 9 / 9+



VSETT 10+



STEP 3: Test scooter and replace front cover

Once the controller has been replaced, it is imperative that the scooter be tested before putting the deck cover back on. To test the scooter:

1. Place the scooter on a stand and ensure the wheels are not in contact with the floor.
2. Turn the scooter on and test all lights / blinkers.
3. Test the acceleration. Note that most scooters are set to kick-start and will need the rear tire spun by hand before throttling to ensure the motor functionality.
4. If any issues are encountered, document them in the form of picture, video, and writing, and contact REV Rides to resolve the issue.

Once the scooter has been tested, the front deck cover can be replaced. Begin by replacing the thermal padding and foam padding around the controller. Next, replace the deck gasket and deck cover. Once complete, the scooter motor controller has been replaced. At any point throughout the replacement, please contact REV Rides using the contact information along the side of this guide if you experience trouble with repairs.

