*Electronic Cruise Control for*

# Kawasaki KLE650 Versys 2015-2021

The following provides a brief description of the power consumption and component locations of the MotorCycle Setup electronic cruise control.

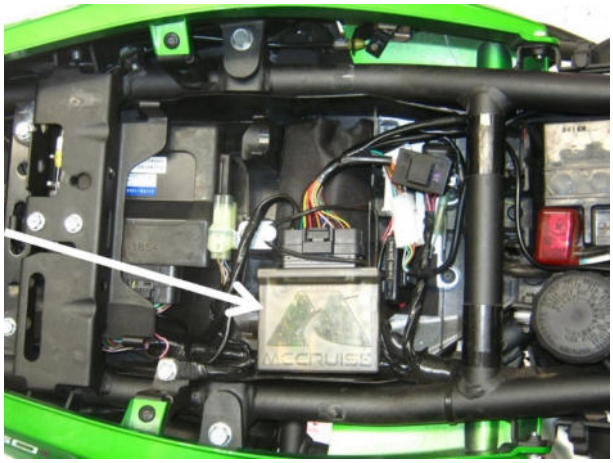
Installed weight of the cruise control is approximately 2.2kg.

Current draw while the cruise is switched on, but not engaged, is approximately 0.2 amp (2.5 watts). Current draw while the cruise is engaged is nominally 0.50~1 amp (6~12 Watts).

By comparison, a head light bulb typically draws about 4 amps (55 Watts), and a taillight bulb (running light) draws about 0.4 amp (5 Watts).

Refer to the line drawing at the end of this document to identify the components from the numbers in the text.

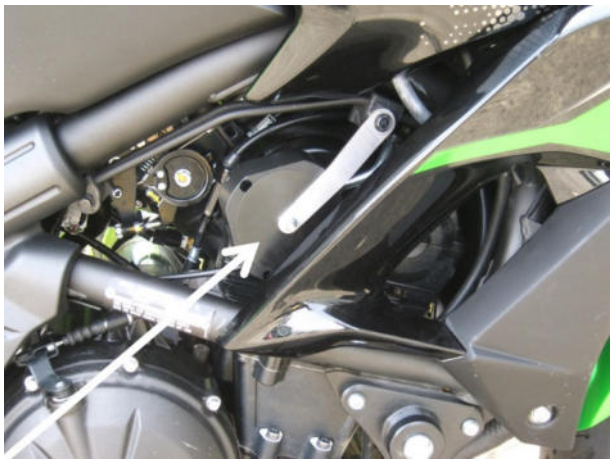
The **Computer (1)** is under seat, on top of the bike's tool kit, held in place using the rubber strap that hold the tool kit.



The **Electric Throttle Servo (2)** is mounted on the bike's frame tubes on the left side of the bike, next to the cylinders. It is mounted using hose clamps and rubber blocks, between the servo and the frame tubes.

The **CIU or Cable Interface Unit (3)** in on the right side of the engine, beside the cylinder head. It is mounted on a bolt that also holds the bike's brake fluid lines to the frame.

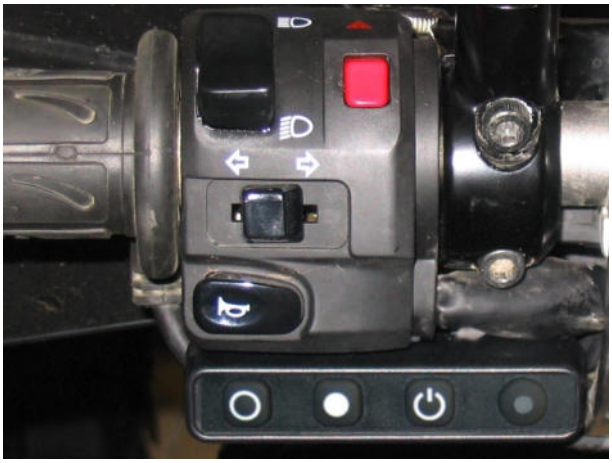
The CIU has a new **cable (4)** running from the CIU to the throttle bodies.



There are three options for the control switch.

The standard **Control Switch (5a)** mounts above the handlebar on the left side on the mirror mount. This switch has back lit buttons for night use, and an indicator light for power (ON-OFF) and engage indication.

The same **Control Switch (5b)** may also be mounted below the handlebar to the left-hand (clutch) master cylinder handlebar clamp. The bracket mounts between the bottom faces of the clamp and the master cylinder. The clamp must have about 1.5~2mm (0.060”~0.080”) filed from the bottom face to allow for the thickness of the switch bracket.



The New Slim **Control Switch (5c)** mounts on the handlebar on the left side beside the bikes’ switch block, between the switch block and the clutch lever mount. This switch also has back lit buttons for night use, and an indicator light for power (ON-OFF) and engage indication.

The new switch is a no cost option, any of these options may be selected when purchasing the cruise control.

The **Wiring Harness (6)** has the same type of plugs or terminals that are already used on the motorcycle. Power for the cruise control and brake sensing is taken off the brake light switches by unplugging the rear brake light switch. Matching connectors on the cruise control loom are plugged in to the switch and the bike’s loom. Speed sensing is taken from the bike’s speed signal at the ECU. There is more detail about this connection over the page. Tach (engine speed) sensing is detected from the bike’s ignition circuit at the ECU. This is used to disengage the cruise if the clutch is operated. The bike’s clutch switch is also connected to the cruise control to disengage the cruise control. The cruise control is grounded on the negative terminal of the battery. All these connections are “Plug & Play”, no cutting of wires or splicing is required, but terminals on the motorcycle do have to be backed out of housings (connector plugs) for two connections.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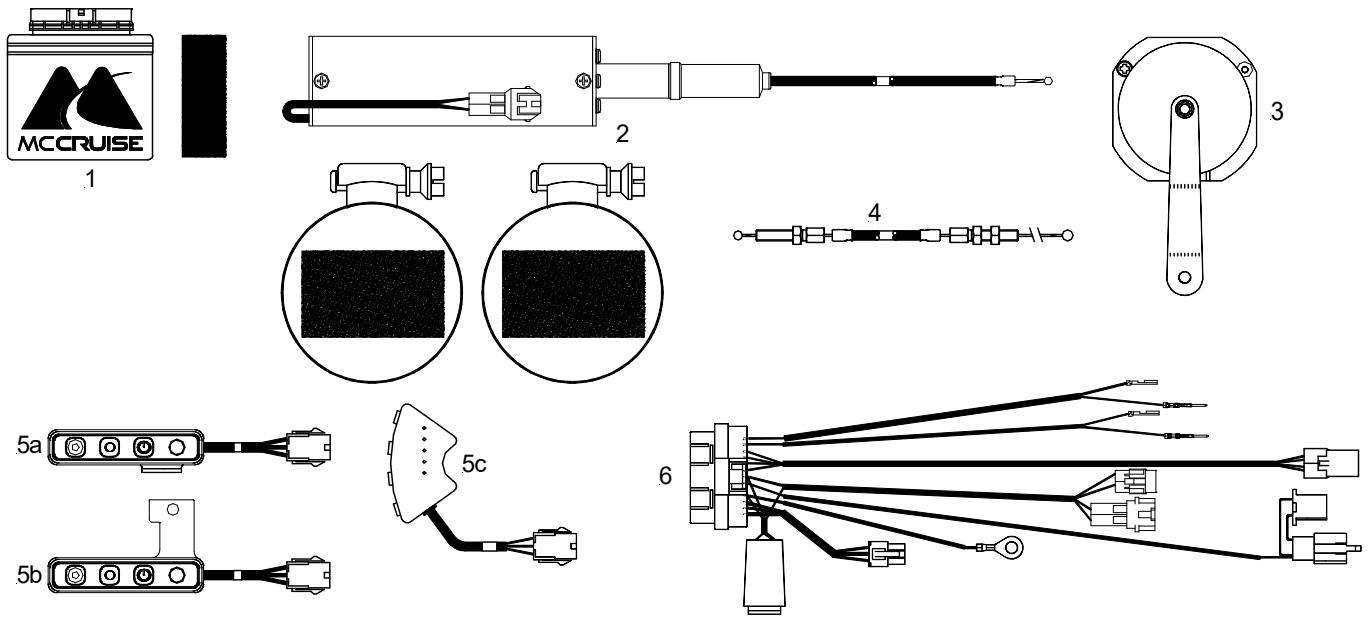


**NOTE: - Cruise control wiring harness connections required.**

**The installation of the cruise control requires that small and delicate electrical terminals be backed out of a connector housing. A dressmaker's pin is supplied in the kit to be used to do this. We recommend a jeweller's screwdriver set is also used to perform this operation. The smallest screwdriver in this set, with the tip sharpened to a chisel point may also be used instead of the pin. You will also need a couple of the larger screwdrivers from the set as well as the smallest one. Backing out these terminals without suitable tools is almost impossible.**

**NOTE: - Engine management ECU type.**

**This model has two different engine ECUs depending on the model year and possibly what country the bike is being sold in. We have not seen it but there may be a third ECU as well. It is not essential for us to know which one you have, the installation instructions cover all versions. The difference is the number of wires in the connector and the wire colours and positions in the ECU connectors are different. The speed signal calibration is different for the two ECU's. We know the calibration for the later version, and we believe the speed calibration for the earlier version is the same as the previous model (pre 2014) Versys which we have, but at this time we do not know if it is exactly the same.**

**If you tell us you have the later ECU the cruise will be calibrated correctly.**

**If you tell us you have the earlier ECU, we will provide the cruise with what we believe is the correct speed calibration from the previous model. This is easy to test by checking the minimum speed the cruise will engage – should be approximately 30kph or 19mph. If the minimum speed is significantly different, recalibrating the speed signal takes 2 minutes by putting the cruise in speed calibration mode (hold two buttons and turn the ignition on), riding the bike at 70kph (44mph) and pressing SET. Stop the bike, then turn the ignition off.**


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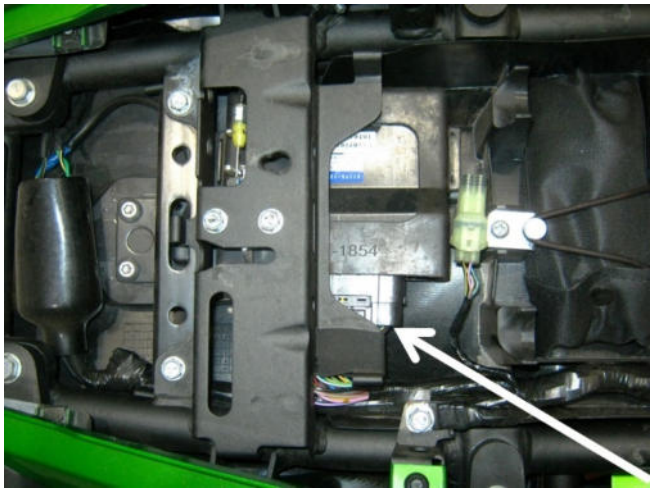
**The photos over the page show the ECU, how to get to it and how to tell which ECU your bike has. Again, knowing this is not critical, the installation manual covers both types of ECU, and re-calibrating the cruise to suit the earlier model is quick and easy to do.**

**<u>If you want to, you can determine what ECU you have by following the instructions below.</u>**

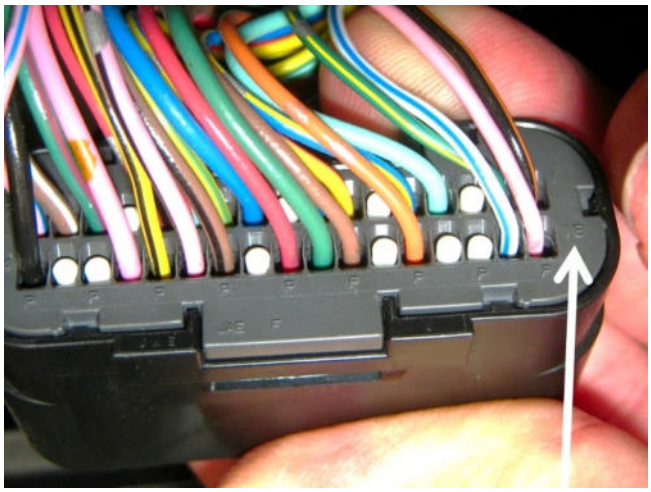
The ECU is under the passenger seat and the ECU plug in question is the one arrowed in the photo. This photo shows the later model.

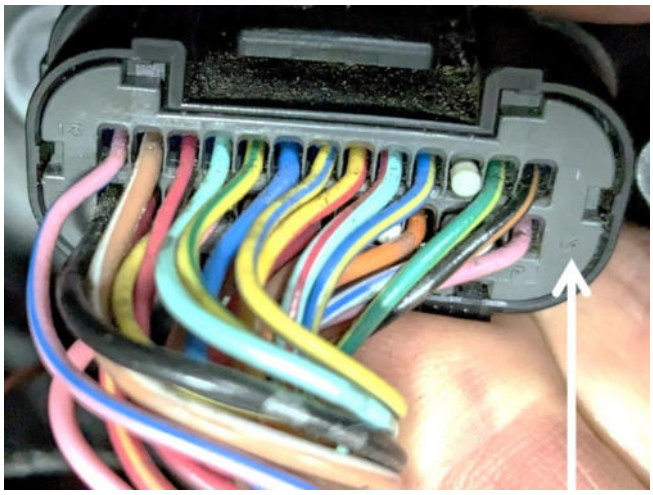


The later model has a 34-way plug. If you can see it, the small number on the end of the bottom row of the plug will be 18, arrowed in the photo below left.

The earlier model has a 26-way plug. If you can see it, the small number on the end of the bottom row of the plug will be 14, arrowed in the photo below right.

If you are unable to read the numbers with the ECU in place the instructions below show how to access the ECU.





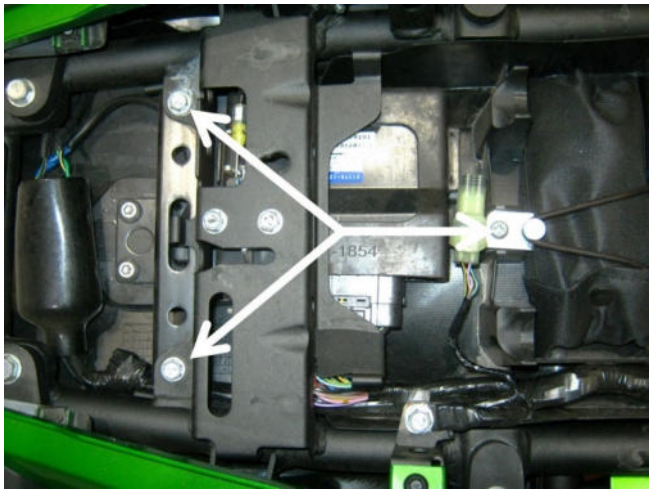
<u>Accessing the ECU.</u>

The bike's ECU is under the passenger seat mounted to the rear mudguard (fender).

To get access to EUC plugs the ECU must be removed first.

Undo the screw for the bracket for the tool bag hold down strap (right arrow).

Undo the two mudguard mounting bolts (left arrows).

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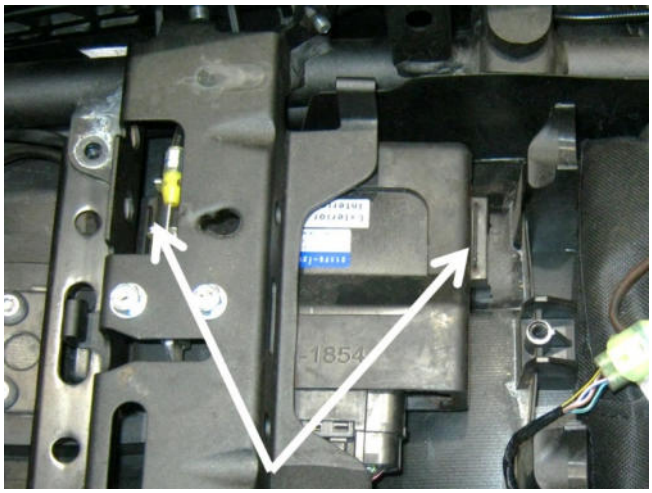
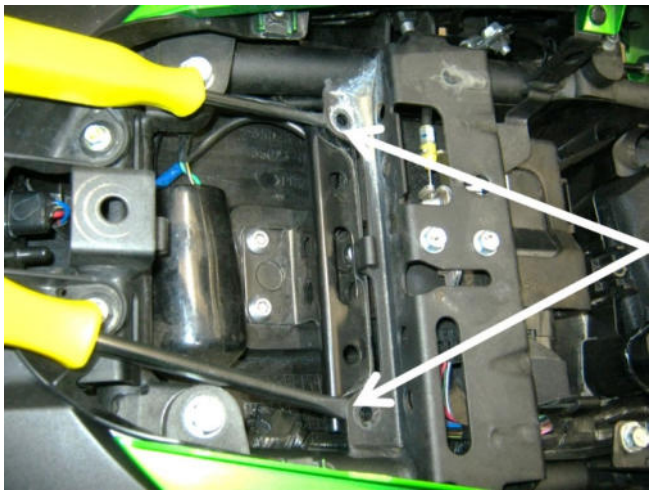
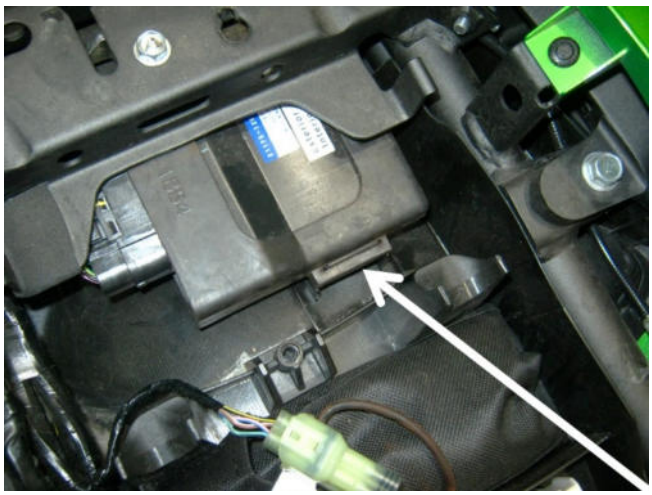
The ECU is mounted on two ‘posts’ on the mudguard and must be lifted off these posts to access it.



Use two suitable levers such as larger flat blade screwdrivers to lever the fender down about 10mm (3/8”).



Lift the ECU up to disengage the posts from the rubber carrier.

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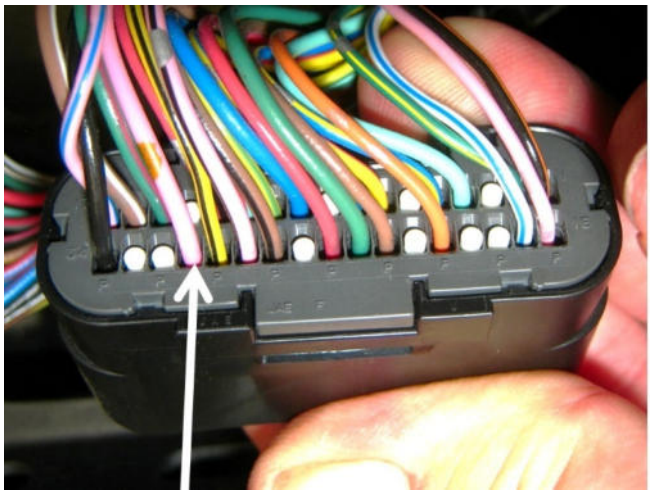
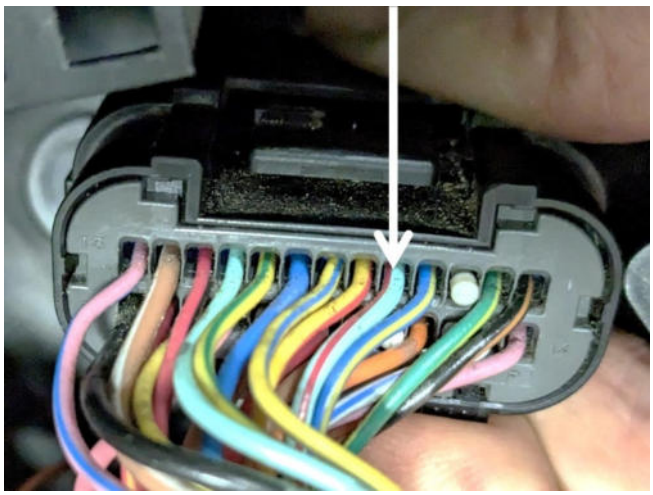
Slide the ECU forward out from under the frame.

The cruise control will source speed signal (road speed) from this connection.

This photo shows the larger 34-way plug from the later model. The cruise control will be connected to the pink wire in position 31 (arrowed).



This photo shows the smaller 26-way plug from the earlier model. On this model the cruise will be connected to the light green/red wire in position 5.



If you do not tell us what ECU the bike has the cruise will be calibrated for the later model. If your bike has the earlier ECU, you will have to perform the speed signal calibration when the installation is finished.

If you tell us that your bike has the earlier ECU we will calibrate it for the previous model (up to 2014) and we believe this will be the correct calibration or very close to it.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