Fitting a LED Brake Load Resistor Patch to a 'MotorCycle Cruise' electronic cruise control using the MCS10000C Throttle-By-Wire cruise control computer.

Usually the cruise control is configured to suit the lighting system on the bike, and in most cases the cruise will work with Original Equipment (OE) LED brake light and conventional light globes without having a LED load resistor fitted. Some OE light do require an LED load resistor, but in these cases the cruise control's wiring harness will already be fitted with a load resister if it is required for that bike.

The most common reason for fitting this patch is if the bike has been fitted an aftermarket tail light assembly that has different electrical characteristics to the original OE tail light. Most aftermarket tail lights will require that the LED load resistor is fitted and until it is fitted the cruise control will not be able to detect brake application and will not work as a result.

This document shows how to fit the LED tail light load resistor patch on a MCS1000C computer.

WARNING: - The wiring 'pin' positions on the new model are different to the old model and the units are NOT interchangeable without re-wiring the connector.

NOTE: - Check for a wire in position 7 (middle of the top row) on your cruise control harness. If there is already a wire in this position (usually a black wire) it is not possible to fit this LED patch. Usually if there is a black wire in this position, the harness already has an LED patch built into it, however some accessories such as a Bluetooth module also use this position in the plug. Contact us if there is already a wire in this position.
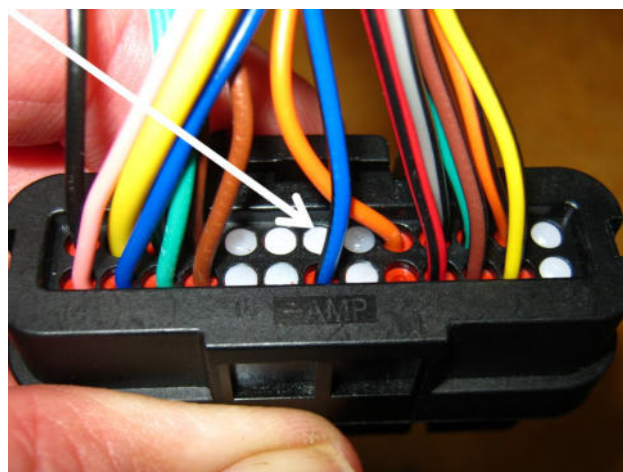
This wiring positions shown in this document are only suitable for the later model MCS10000C Throttle-By-Wire cruise control computer. If the computer is the MCS10000C the label on the computer will look like this, the top line will read MCS10128TBW or MCS10128TBW CAN BUS.

The second line will read MCS7--- TBW.

If the first line reads MCS8128 TBW and the second line reads MCS6--- TBW your computer is NOT an MCS10000C TBW, it is the older MCS8000C TBW computer. The LED brake patch is the same, but the pinouts of the connector are different and are shown in a different document.
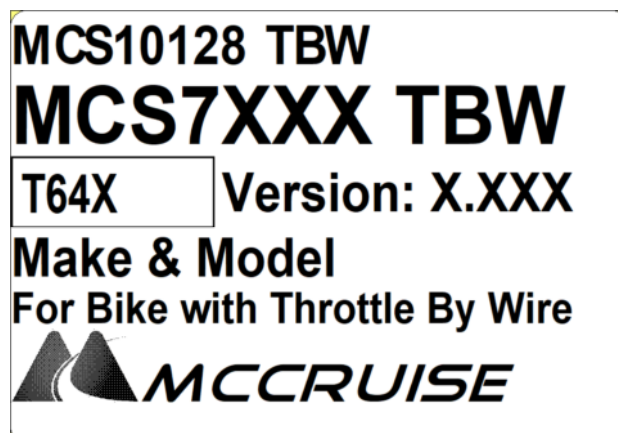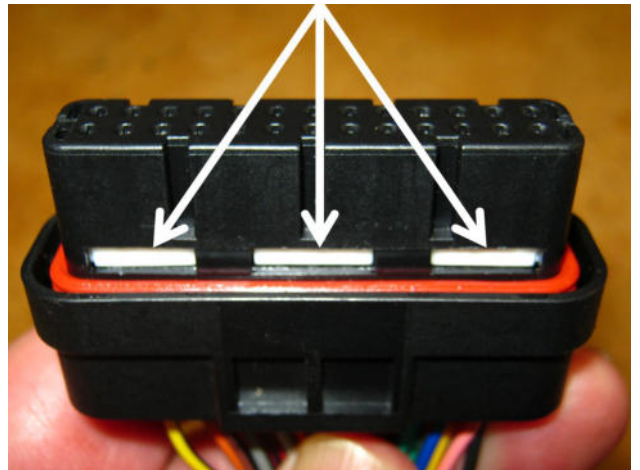
The parts in the 'kit' are the patch, a length of heat shrink tube and a paper clip.

Disconnect the plug from the cruise control computer.

Turn the plug upside down and press the three white rectangles down. They will move about 3mm (1/8").

The two white rectangles on the top of the plug will rise about 3mm.

This releases the terminal lock in the plug so terminals may be backed out of the plug.

NOTE: - Take care not to accidentally pull on the wires and pull the terminals out of the plug.
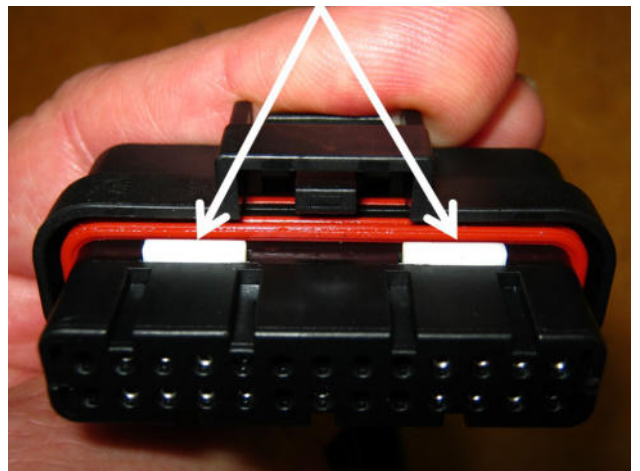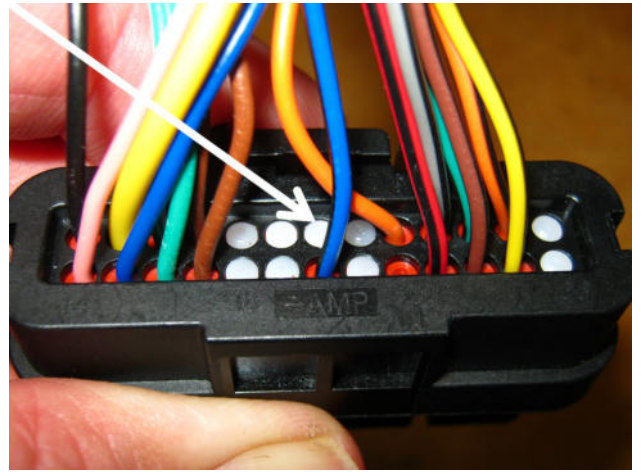
Gently pull the grey brake sensor wire (terminal hole 22) out of the plug.

If you have any difficulty getting the terminal to back out, use the paper clip to push the terminal out. Otherwise contact us for assistance.
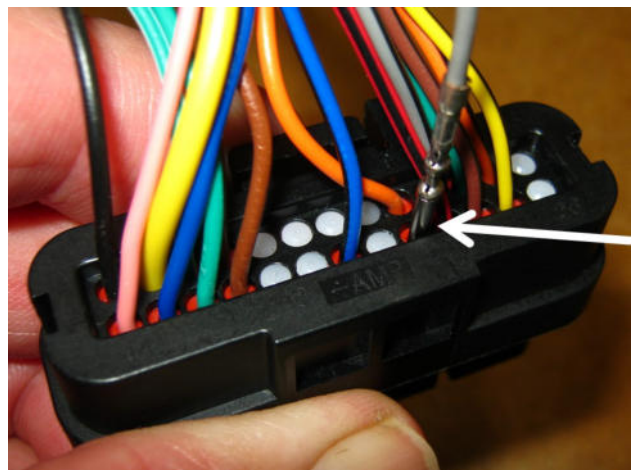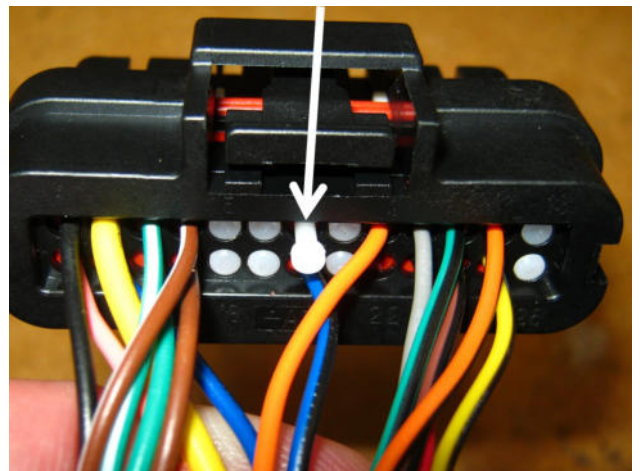
The blanking plug fitted in terminal hole 7 must be removed from the connector.
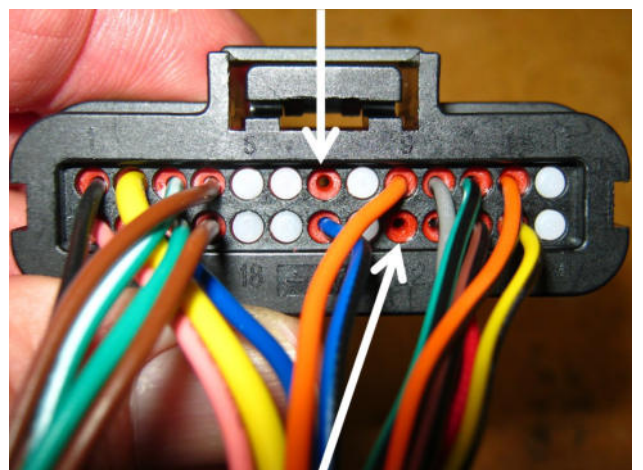
Unbend the supplied paper clip and insert it into terminal hole 7 and push out the white blanking plug.
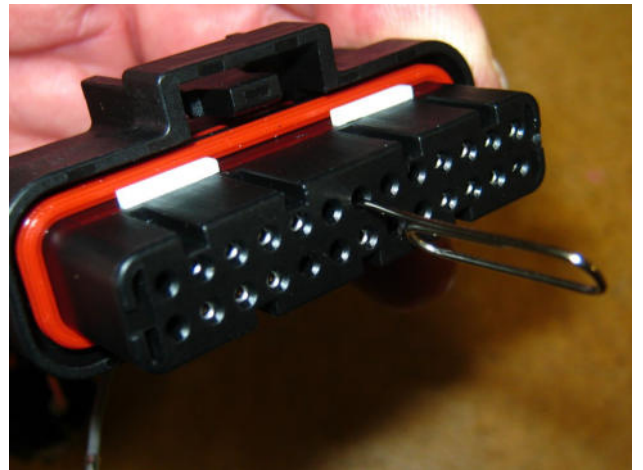
The blanking plug being pushed out of position 7 by the paper clip.

The connector with positions 7 (top arrow) and 22 (bottom arrow) empty.

Insert the receptacle terminal on the grey wire from the supplied 'patch' into terminal hole 22 (right arrow).

NOTE: - The pin terminal on the other grey wire is NOT inserted into the connector.

Insert the receptacle terminal on the black wire from the supplied 'patch' into terminal hole 7 (left arrow).
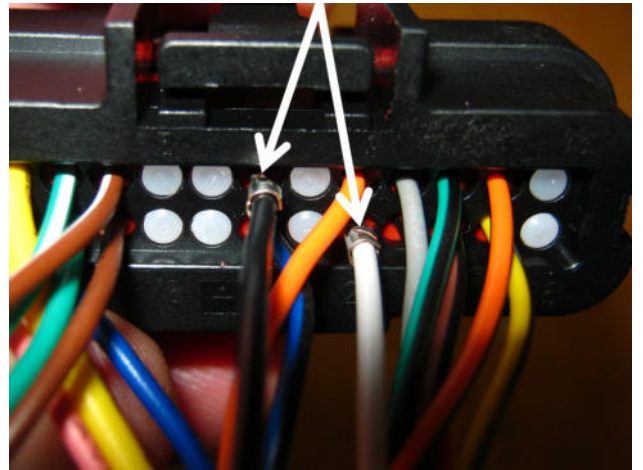
Check that the inserted terminals are pushed in all the way.

The holes arrowed in the photo show the two new terminals in positions 7 and 22. You must be able to see the end of the terminal in all the holes that have terminals.

You can clearly see which holes have terminals that are inserted all the way.
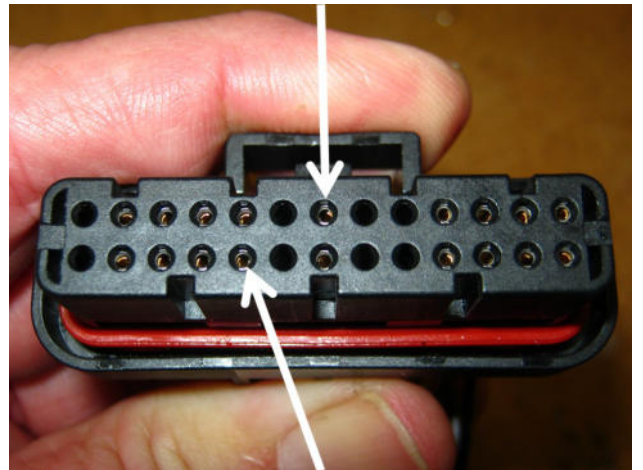
Push the two white tabs down to close the terminal lock. If the lock does not push down easily, one or more terminals are not fully home.

Push the end of the paper clip in between the seal and the wire insulation so it contacts the end of the terminal inside the plug, then push the terminal in all the way.
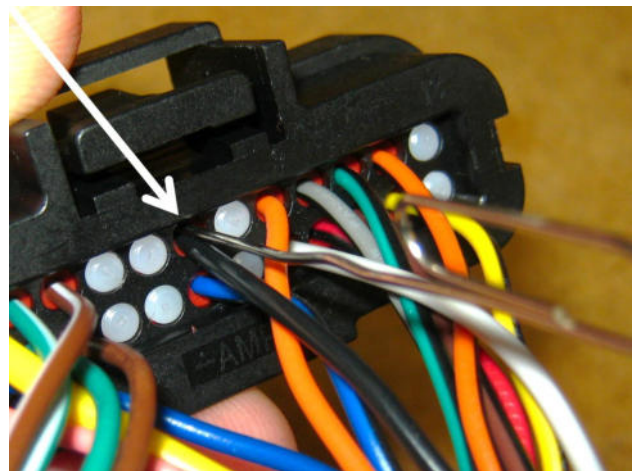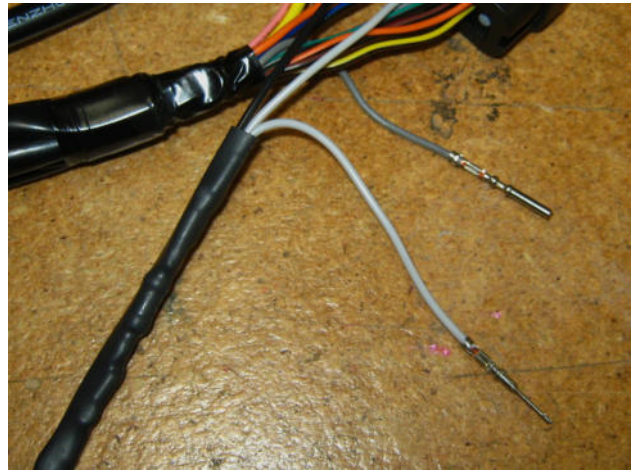
Push the two white tabs down to close the terminal lock.

NOTE: - If any of the terminals are not fully inserted the terminal lock will not close fully.
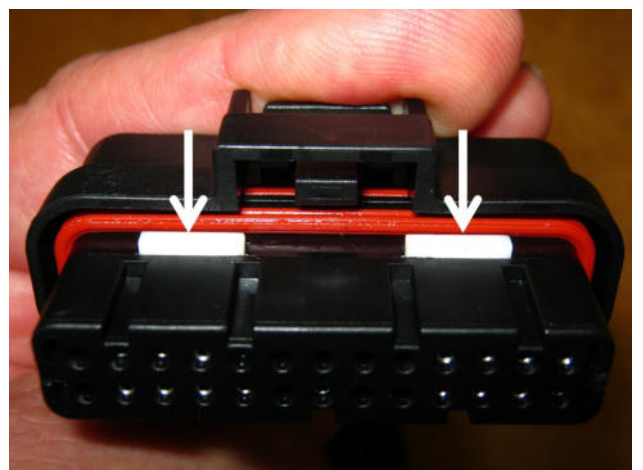
There will now be two grey wires not connected, one from the cruise harness and one from the patch.
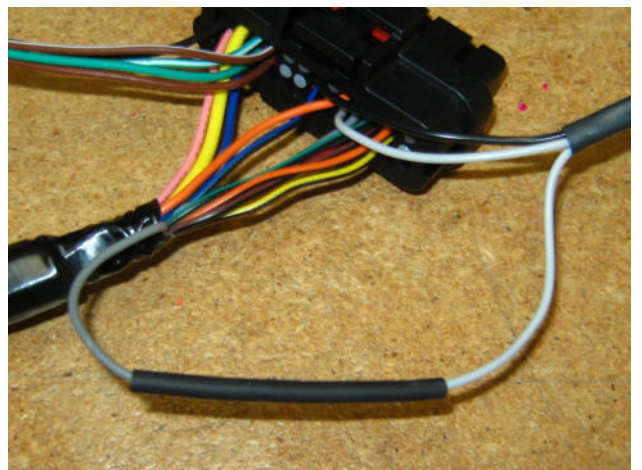
Place a length of the heat shrink tube over the cruise harness grey wire and terminal or the patch harness grey wire and terminal.
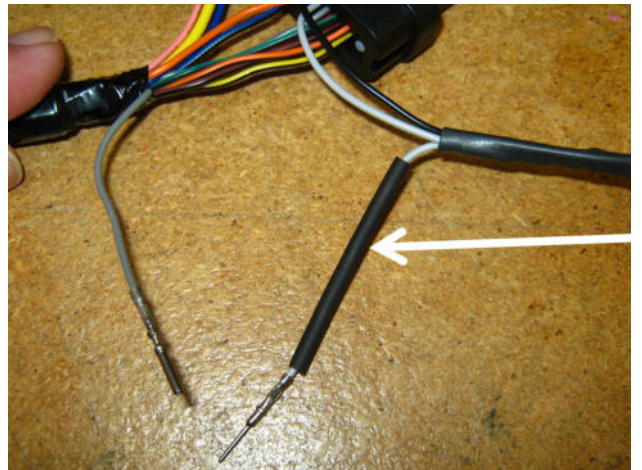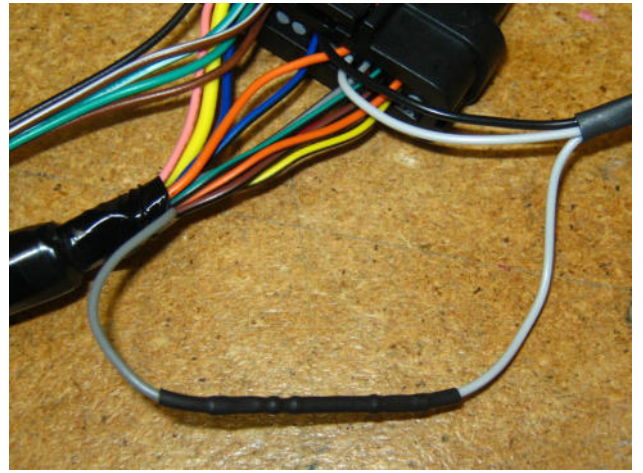
Connect the terminals on the grey wires from the patch and the cruise harness.

Slide the heat shrink tube over the terminals.

Use a suitable heat source such as a hot air paint stripper to shrink the tube.

Connect the cruise control harness to the cruise control computer.

Cable tie the 'patch' to a suitable location. In this case the patch is cable tied to the cruise control computer.

NOTE: - It is important that the section of the patch covered with heat shrink tube is NOT bent or flexed. The resistor inside the patch is brittle and will break if bent. The terminals on the grey wires also should not be bent or they may break.
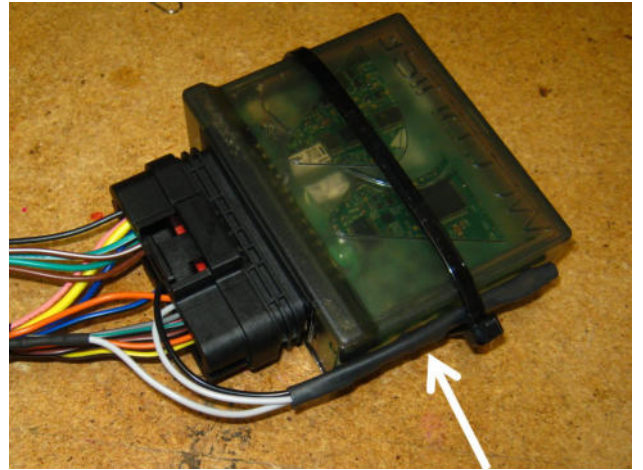
Position the terminals on the grey wires next to the cruise control harness and either cable tie or tape the wires to the harness.
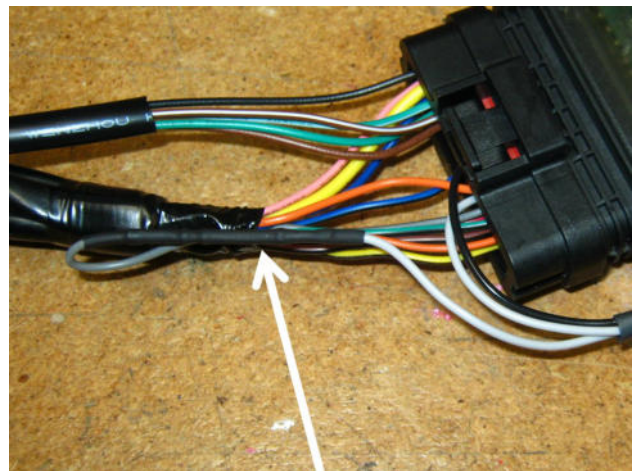
Alternatively, cable tie or tape both the patch and grey wires to the harness.

NOTE: - It is important that the section of the patch covered with heat shrink tube is NOT bent or flexed. The resistor inside the patch is brittle and will break if bent. The terminals on the grey wires also should not be bent or they may break.