

Fitting a LED Brake Load Resistor Patch and blocking diode to a 'F' series (F650/700/800) BMW.



This patch has been released to correct situations when brake application sometimes causes the 'brake light fail' indicator to come on.

Note: - This patch is only suitable for the later model MCS8000C computer. This is the smaller computer shown in the black plastic box in the photo.

The previous model is the one in the metal 'box' at the rear of this photograph. This patch will not work with the earlier model.

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.



There are two separate components to be installed, the LED load resistor patch fitted to the cruise control wiring harness at the cruise control computer plug, and a blocking diode on the brake light sensor wire at the brake light connection point at the back of the bike.

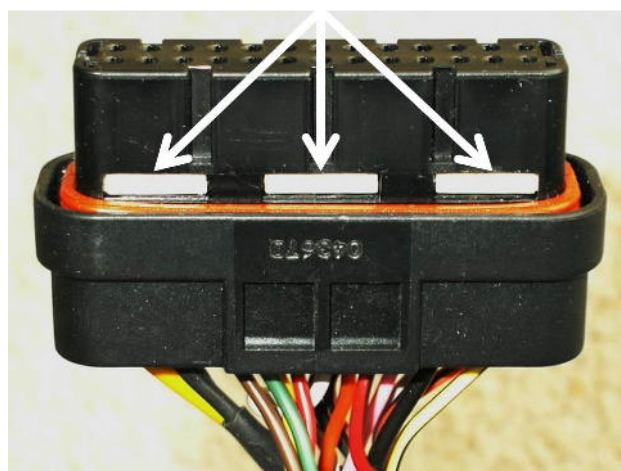
Fitting the LED load resistor 'patch'.

The parts in the 'kit' are the patch, a length of heat shrink tube and a paper clip.



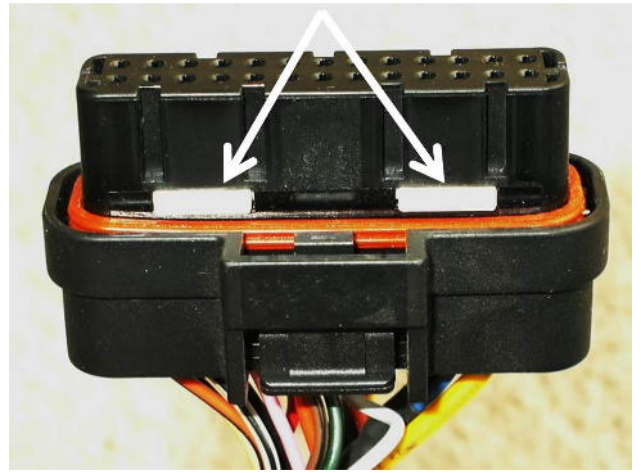
Disconnect the plug from the cruise control computer.

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.

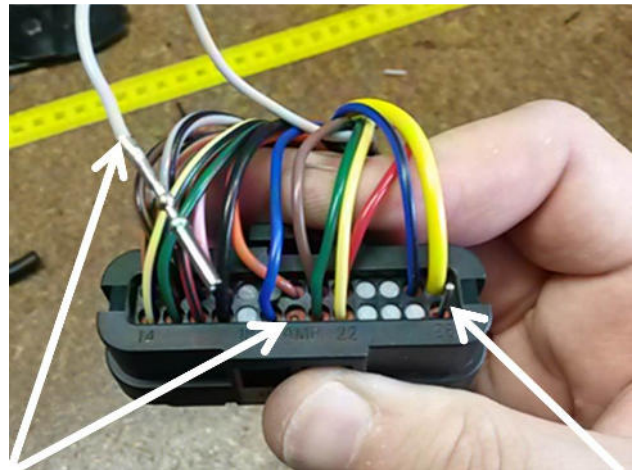
This releases the terminal lock in the plug so terminals may be backed out of the plug.



Gently pull the grey brake sensor wire (terminal hole 20) out of the plug (left arrows).

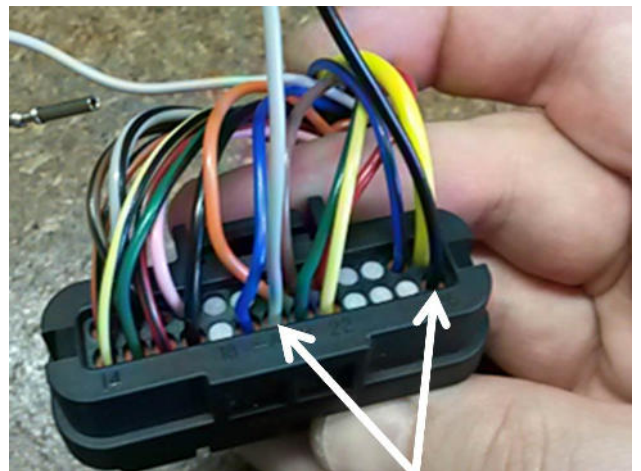
If you have any difficulty getting the terminal to back out, use the paper clip to push the terminal out. Otherwise contact us for assistance.

Unbend the supplied paper clip and insert it into terminal hole 26 and push out the white blanking plug in the wire hole (right arrow).



Insert the terminal on the grey wire from the supplied 'patch' into hole 20 (left arrow).

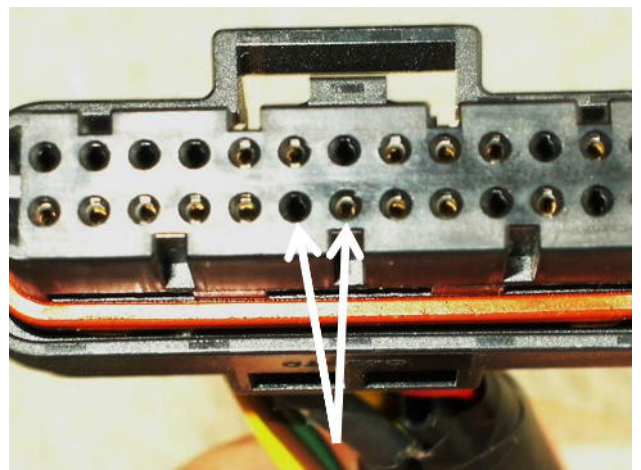
Insert the terminal on the black wire from the supplied 'patch' into hole 26 (right arrow).



Check that the inserted terminals are pushed in all the way.

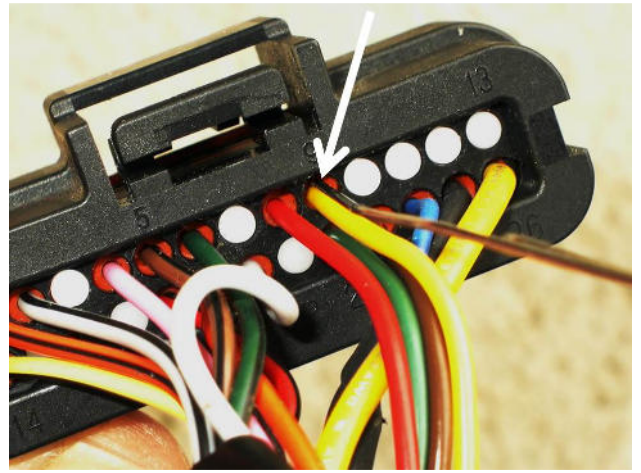
The holes arrowed in the photo show a hole with a terminal and one without. You must be able to see the end of the terminal in all the holes that have terminals.

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.

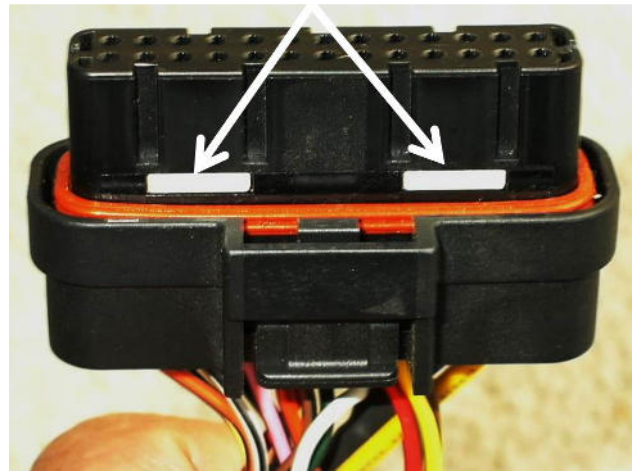


If any terminals are not fully home, use the paper clip to push the terminal in all the way.

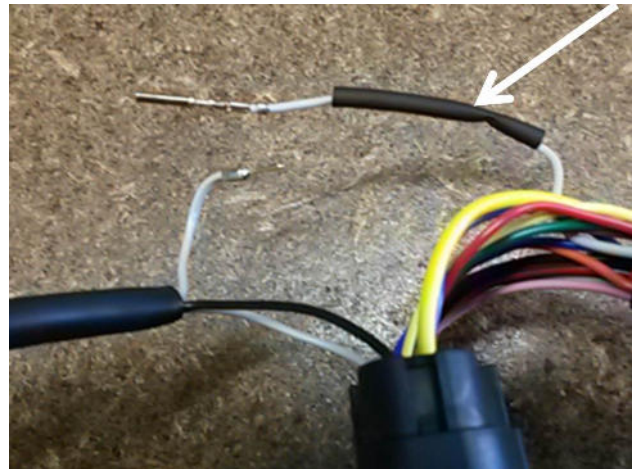
Push the end of the paper clip in between the seal and the wire insulation so it contacts the end of the terminal inside the plug, then push the terminal in all the way.



Push the two white tabs down to close the terminal lock.



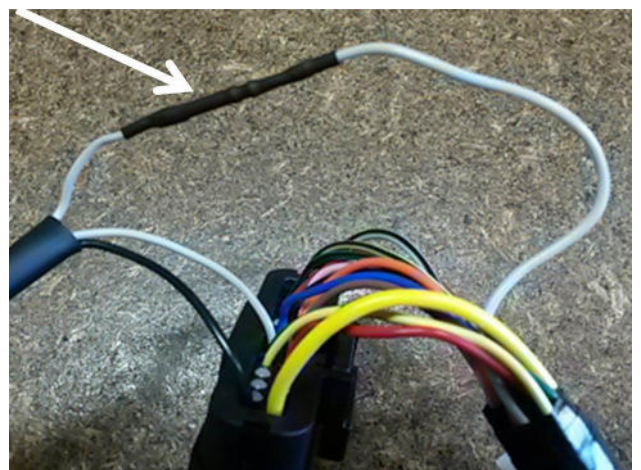
Place a length of the heat shrink tube over the cruise harness grey wire and terminal.



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, either the cruise harness or to the cruise control computer as shown here.

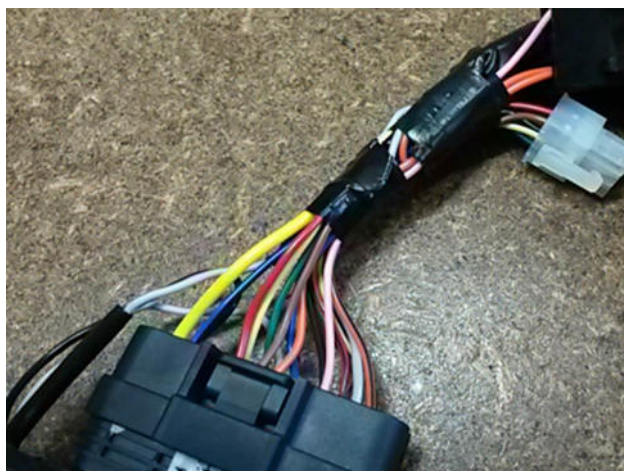


Position the terminals on the grey wires next to the cruise control harness.



Tape the grey wires to the harness.

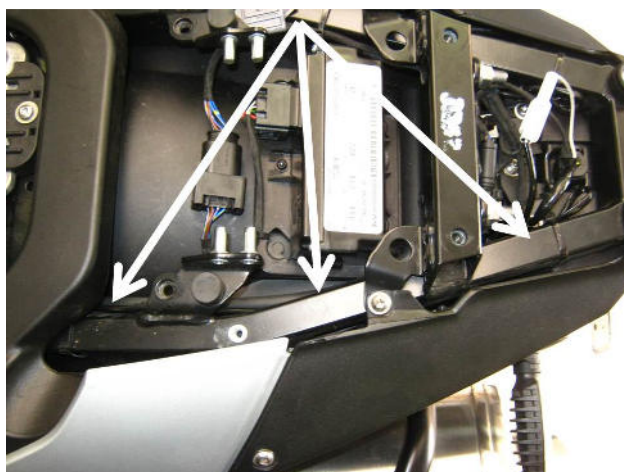
Reconnect the plug to the cruise control computer.



Fitting the blocking diode.

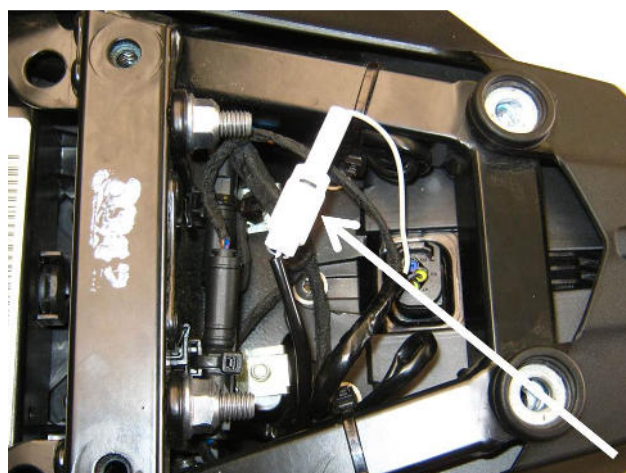
Remove parts from the bike to gain access to the connection for the grey brake sensor wire to the bike's brake light.

The brake sensor wire is routed to the tail light at the rear of the bike on the left side with the bike's harness.



The brake sensor wire is connected to the 'pigtail' fitted to the bike's tail light wire (arrowed).

Disconnect this plug.



Connect the blocking diode to the grey brake sensor wire.

Connect the other end to the grey 'pigtail' fitted to the bike's tail light wire. The blocking diode should be connected in between the original plugs.

Cable tie the blocking diode in place to prevent it bouncing and being damaged.



This completes the installation of the LED patch and blocking diode.

Testing the cruise control brake pressure switch.

Because this combination of parts prevents the cruise control pressure switch activating the bike's brake light, you can no longer easily test the operation of the pressure switch simply by applying the front brake AFTER the ignition is turned off while observing the brake light.

Instead you have to observe the GREEN LED (light) inside the cruise control computer. At the end of each journey, after the ignition has been turned off, during the minute or so that the bike still supplies power to the cruise control via the accessory circuit, apply and release the front brake lever a few times while observing the cruise control computer. A green light will appear inside the computer, near the bottom front corner of the computer 'box, visible through the translucent plastic 'box'. This light MUST come on each time the brakes are applied and go out when released.

NOTE: - This will ONLY work on the front brake lever; it is not connected to the rear brake circuit.

Notes: