

DISCLAIMER:

Warning: By following the course of action described below, you will void your warranty, and may cause one, some, or all of the following effects: your ABS may malfunction; your ABS computer may be destroyed; your Motronic engine management system might be destroyed; your electrical system could fail; your electrical system could catch fire; your ABS may malfunction causing you to crash and be horribly maimed or die, or even worse, cause your shiny Aerostich suit to be damaged; your electrical system could catch fire whilst you are riding your GS, causing your genitals to be burnt to a crisp, resulting in a lapse of concentration, causing you to crash and be horribly maimed or die, or even worse, cause your shiny Aerostich suit to be damaged; A malfunction in your wiring system as a result of this modification could even trigger the onset of the Apocalypse, causing the Whore of Babylon to walk the Earth, drunken with the blood of saints. In short, following the instructions described below is entirely at your own risk and responsibility, and neither author, translator or hosting provider bear any liability for any actions you choose to take on the basis of this information. In Even Shorter: DON'T DO IT!! SOMETHING MIGHT GO WRONG!!!

ABS Modification

Riders of BMW's R11xx series motorcycles will all too readily recognise the phenomenon of flashing ABS lights after starting their motorcycles, as the ABS fails to initialise. The reason for this is that the ABS control unit detects that the system voltage has dropped below 10 volts during starting. This voltage drop is common on bikes with less-than-perfect batteries, or in cold weather, or if you try and start the bike whilst your lights, GPS, heated grips, heated jacket, intercom, radio, mobile phone and PIAA lights are all switched on.

This problem can be fixed fairly quickly and simply without affecting the function or safety of the ABS system (but read the disclaimer above first). Proceed as follows:

Remove the front and rear seat and the tank, and disconnect the negative terminal of the battery. On the left hand side of the bike, near the mouth of the intake air duct, you will find a solder point in the wiring harness.



This solder point is at the back of the wiring harness. Remove the cotton tape which is wrapped around the solder point. This will reveal several different wiring "nodes" or bundles.

We are only interested in the bundle with the green wires. We will leave the other bundles alone.



Cut the black insulating cap open and cut off the cap connecting the wires together. This will leave you with a bunch of 9 loose wires.



Now we need to find out which of these wires are connected to the ABS system and which are not.

Remove the connector from the ABS Unit.

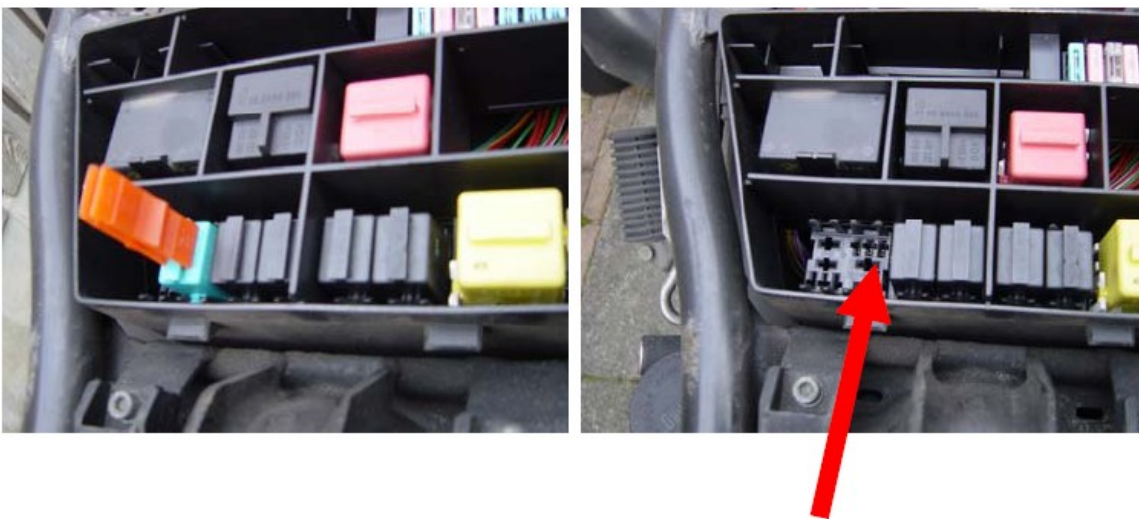
The red arrow in the photograph points to connector pin 15 in the connector. Holding the connector in your hand, with the cable side downwards, it's the second connector pin from the bottom right-hand side.

This is one of the three wires we are interested in.



Attach one end of a multimeter to this connector pin, and find the other end of this wire in the bunch of 9 loose wires. Once you've found the corresponding wire, mark it so you can recognise it (e.g. attach a label or a piece of tape).

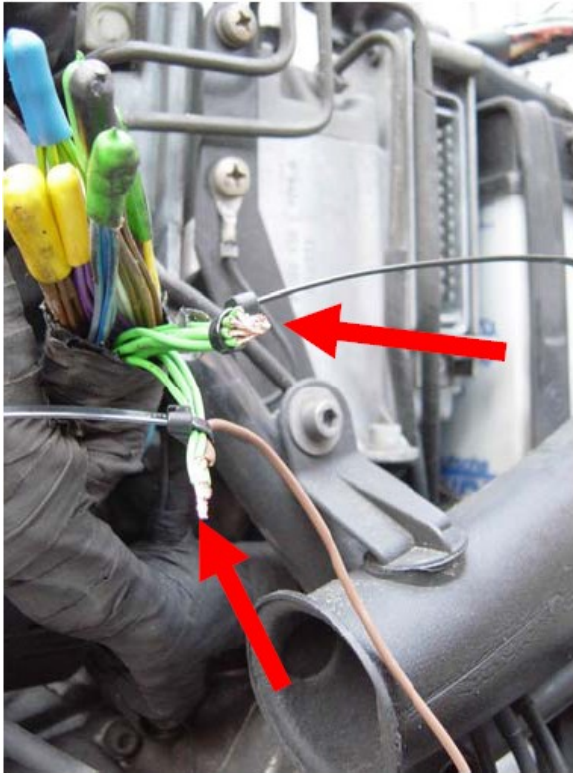
Remove the ABS relay from the fuse/relay box located under the seat. This relay makes the ABS warning lights flash. The relay is on the right hand side at the front of the relay box.



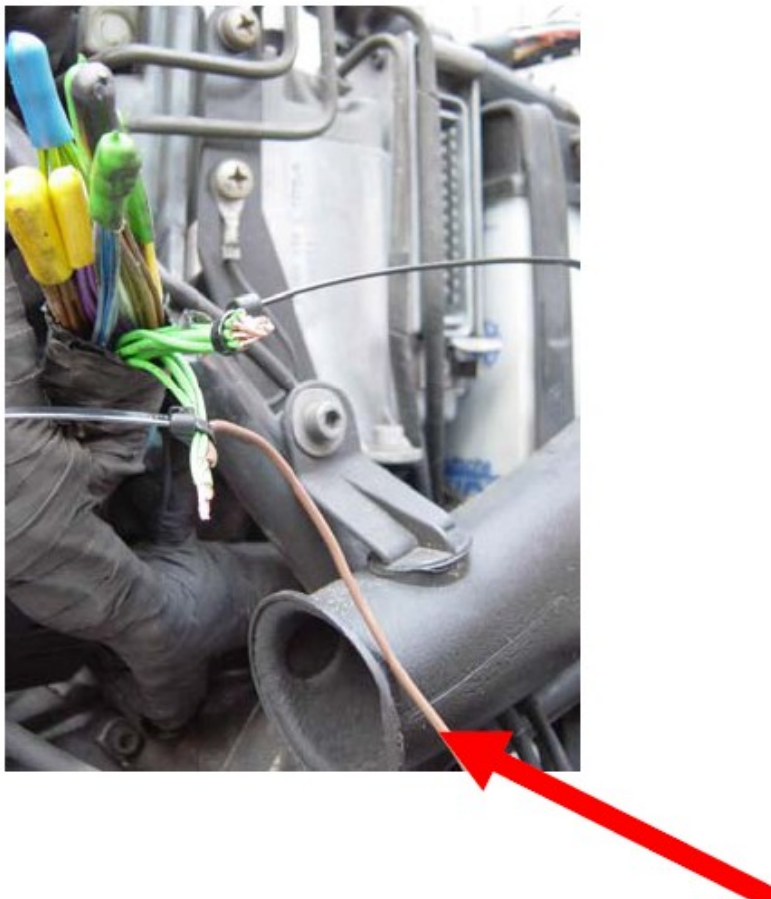
2 green wires from our bunch connect to the rear of the relay. Find these wires using your multimeter and mark them, in the same way you marked the connector pin wire.

The remaining 6 wires from the green bunch should be reconnected. Which means you will have to strip the ends and connect them again.

Then strip the ends of the 3 wires you found and connect them together. You should now have 2 groups of wires, one with 6 wires, and one with 3 wires.



Now, add a wire of the same gauge as the green wires to bunch of 3 green ABS wires. (In the picture, the brown wire).

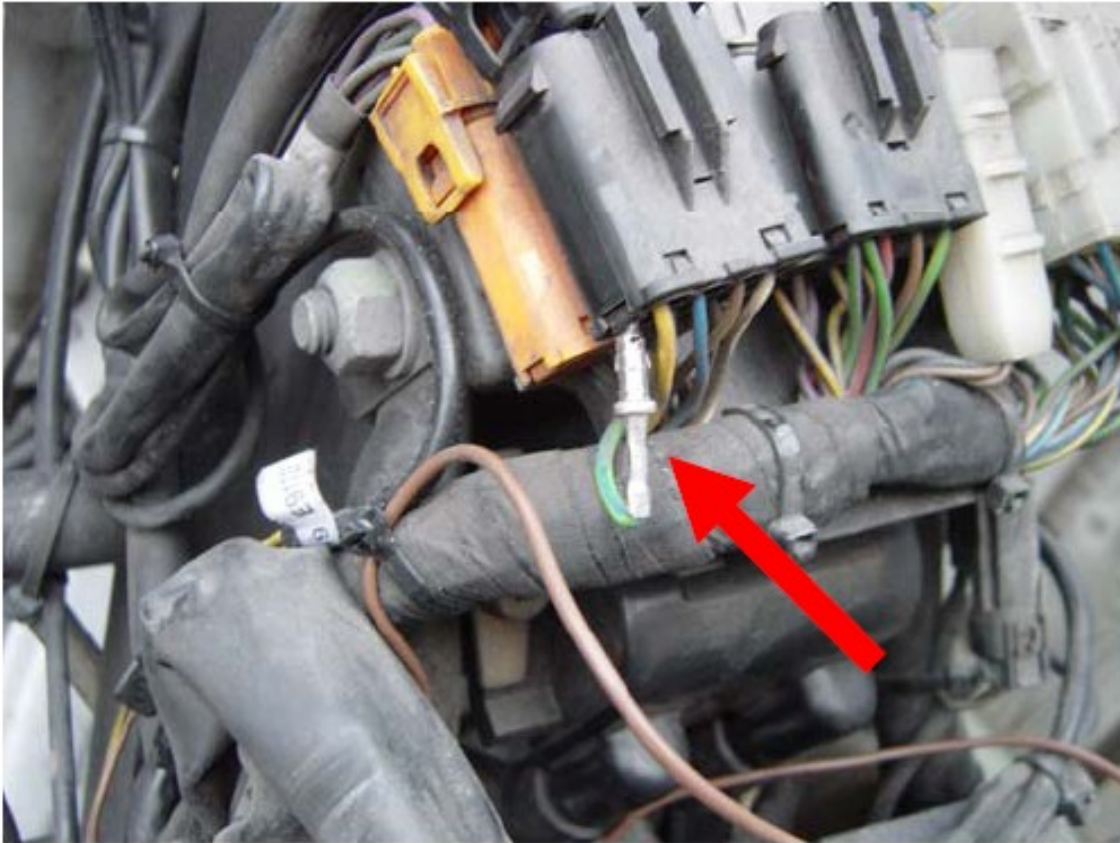


Solder or crimp the ends of the two bunches, and insulate them with heat shrink tape or similar.



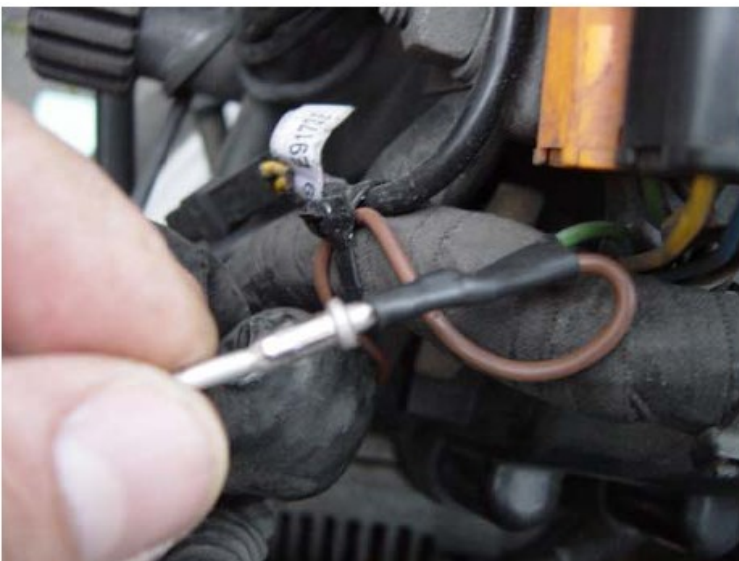
Route the brown wire (or whatever colour you used) up towards the connector block on top of the frame, just below the tank.

Now find the connector which goes to the ABS switch on the left-hand handlebar switch. It's the black connector on the left at the top of the connector block. Remove the green/blue connector from this connector block. This wire comes from the starter load-relief relay.

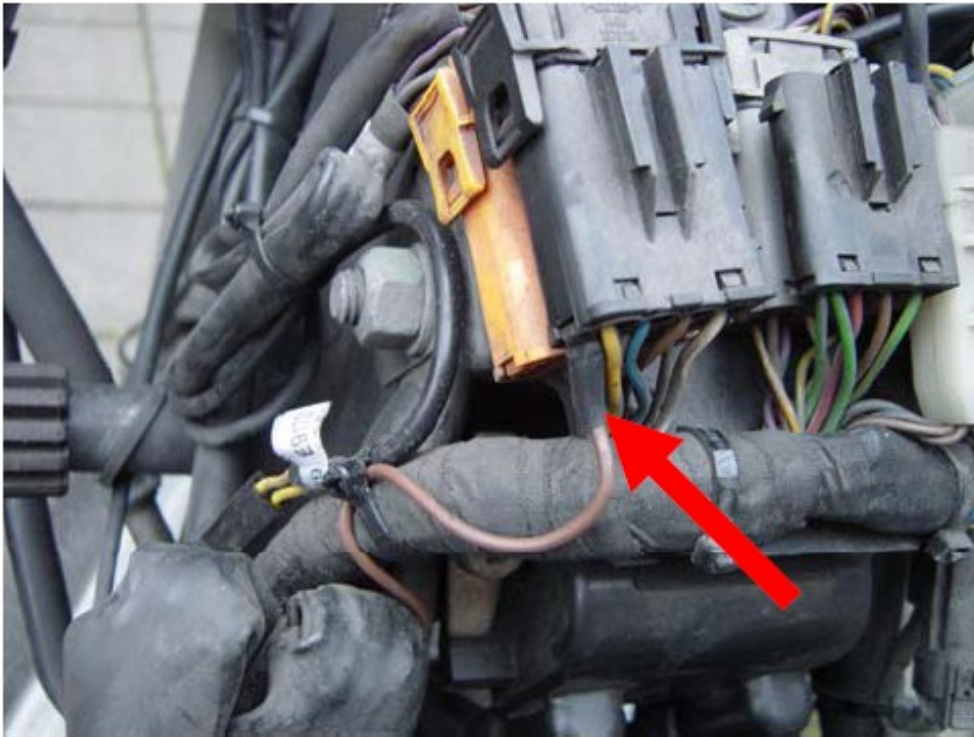


Removing this connector is best done with a special tool. If you manage to remove this connector, solder the brown wire from the bunch of 3 green wires on to the connector pin and insulate it using a piece of heat shrink.

If you don't have this special tool, you can strip a bit of the insulation, and solder the brown wire on to it. Make sure you insulate this wire again once you're finished.



Fit the connector pin back into the connector block and refit the handlebar switch connector block.



We're now done with fitting the wires. Tie the wiring solder points back together again and insulate them with some self-vulcanising tape.



Push the solder point bunch back in place and tie-wrap everything in place.
Refit the ABS control unit connector and the ABS relay.
Reconnect the battery and set the time display.
Replace the tank and the front and rear seats, and you're done!

This modification means that the ABS control unit receives no power as long as the starter is turning. The load-relief relay removes all powered items the power circuit which aren't directly related to starting the engine while the starter is turning. As a result, the ABS control unit doesn't pick up the voltage drop during starting, and therefore the ABS control unit will start normally after the engine starts.

(Author Freek C, Translator David E)