

Lately it seems that a lot more 1999-2005 BMW 3-series owners (E46 chassis) have been having problems with the K-Bus. When I say that there is a problem with the K-Bus they look very confused and ask, "What's that?"

Last updated February 3th, 2014

If you find my web site helpful and would like to make a donation please click the PayPal link below.



Symptoms: Turn signals work, but, don't display on the instrument cluster, fog light and high beams do not indicate on the instrument cluster, door ajar status does not indicate on the instrument cluster, steering wheel controls for the radio do not work, CD changer doesn't work, radio may say "--DISABLED--", lights don't flash when locking/unlocking the car, sunroof controls don't work and dash light control does not work on the radio display, instrument cluster display, A/C display and on the steering wheel controls.

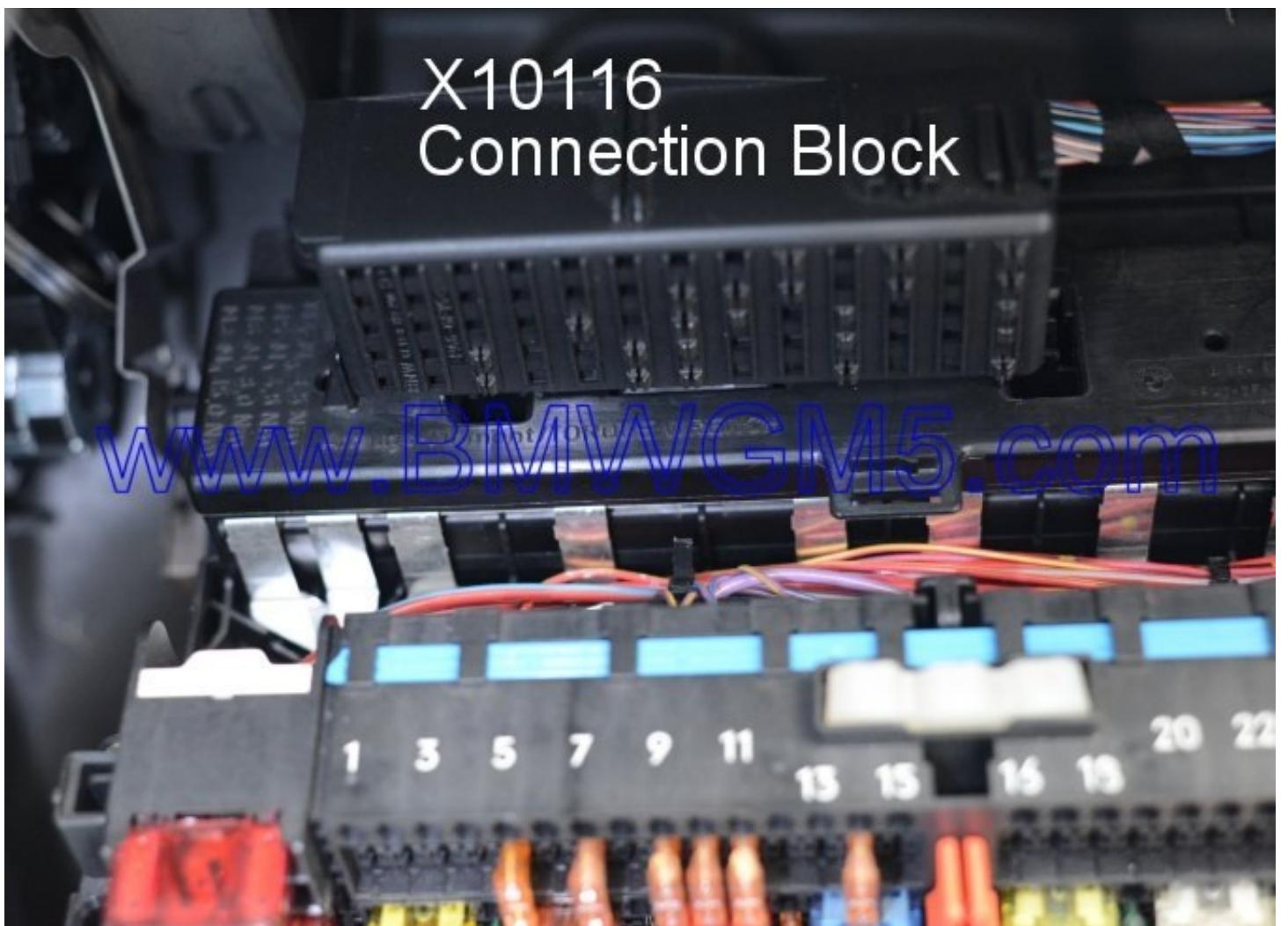
What is the K-Bus: The K-Bus is basically a wire that connects up to about a dozen modules in the car together. The K-Bus was created to help minimize the number of wires needed to interconnect the various electronic in the newer generation of cars that have more and more electronics. The electronic modules in the car communicate with each other on the K-Bus using a serial communication protocol. Like in a computer network each electronic module in the car has a number (like a MAC address or IP address) that uniquely identified it from the other electronic modules. The steering wheel has a module that takes the radio control buttons and each time a button is pressed or released it sends a message to the radio for processing. When there is a problem with the K-Bus this message never gets to the radio and the intended result does not happen.

Finding the cause of K-Bus problems: When K-Bus problems happen the cause is usually one of the modules has gone bad and that module needs to be isolated for the bus and then identified. Luckily BMW engineers have wired the K-Bus in a star configuration. The wires to all the modules come together at a single point where it can be disconnected for testing purposes.

Troubleshooting the K-Bus: The troubleshooting tips below

1) Remove the glove box to gain access to the Connection Block located above the fuse box. Follow steps 2-4 on [this page](#) to get the glove box off.

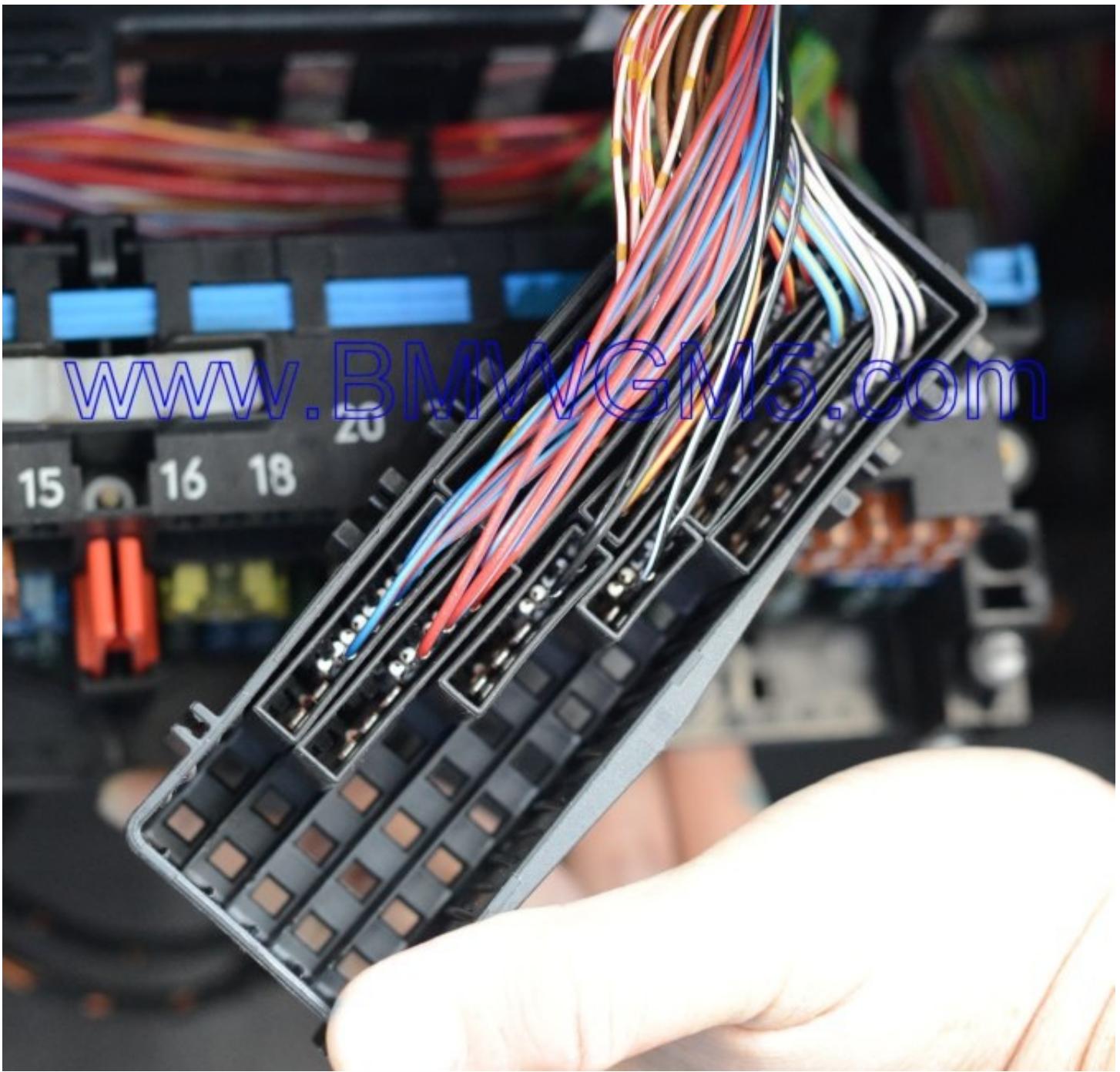
2) Open the fuse box and swing it down beyond the normal position to gain access to the Connection Block.



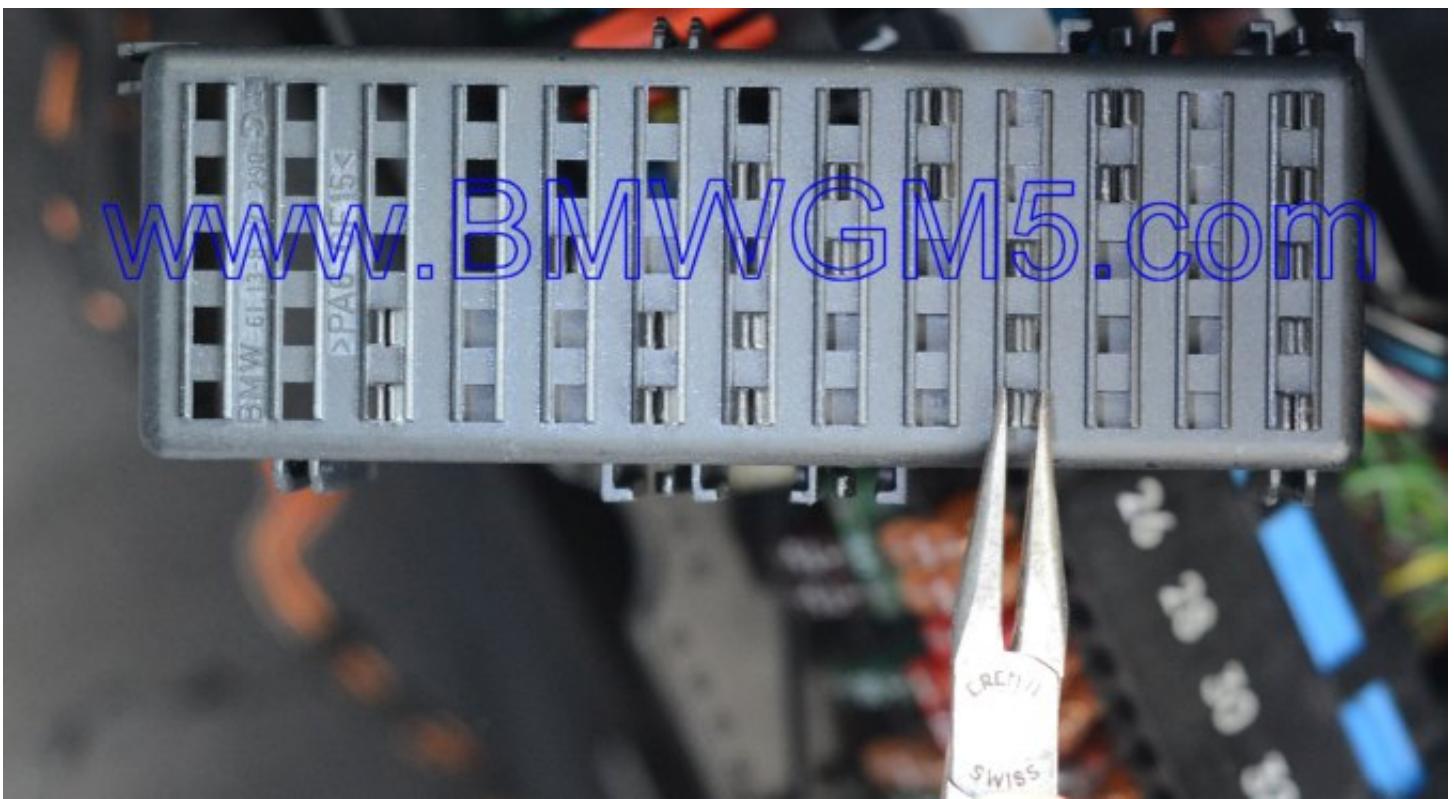
3) Disconnect the Connection Block from the fuse box by squeezing the locking clips with a pair of long nose pliers and push the Connection Block back. It will slide backwards and become free. See picture below.



- 4) The block contains many sets of smaller connection blocks. Locate the small block with the white/red/yellow wires.



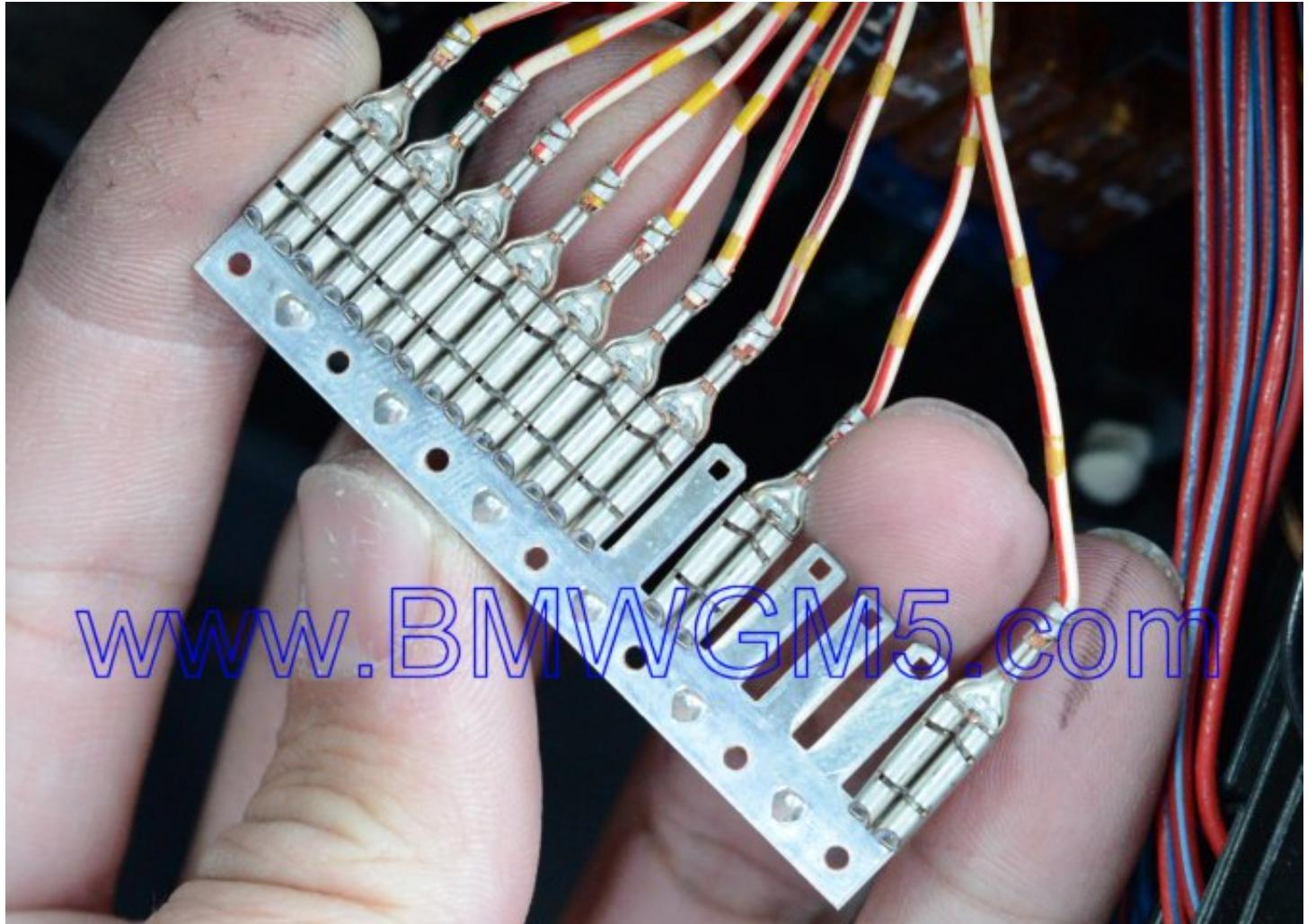
5) This smaller block needs to be removed. Squeeze the locking clips on the back of the block to release it.



6) Once free from the large block the shorting bar needs to be removed. Gently lift up on the locking tabs (white arrows) while pulling on the wires.



7) Now remove one of the wires from the shorting bar and test the car to see if the problem has improved. A good way to do that is to turn the ignition to the ON position and turn on the turn signals and check to see if it indicates correctly on the instrument cluster. Also test the radio controls on the steering wheel to see if they work the radio properly. If there is no improvement, reconnect the wire and disconnect another one and repeat the test.



8) To remove the wire from the shorting bar bend up the little tabs as shown below.



9) One of the wires when disconnected should restore some, if not all, of the functions that didn't work before. Now the figuring out which module that wire connects to. One way is to connect up a diagnostic computer such as the GT1 or INPA and go through the modules to see which ones respond to diagnostic request. A list of modules can be found [here](#). Another way is to try and figure out by experimenting, but, that may or may not work. For example if it was the K-Bus to the CD changer then everything listed in the symptoms section above would work except the CD changer. If it was the K-bus for the airbag module then the only way to figure it out would be to try and read the fault codes from that module using the computer. Once the offending K-Bus wire is identified it could be a problem with the wire (melted, pinched, chaffed, corroded) or with the module that is connected at the end. Inspect the wire carefully and replace the module as a last resort because nothing electronic in these cars is cheap and may require coding.

If you found my web site helpful and would like to make a donation please click the PayPal link below.



Send comments to scott@bmwgm5.com

Got door lock problems in your BMW E46, E52, E83 or E85? It could be the GM5 module. Find out more at www.bmwgm5.com

008407

Counter Site