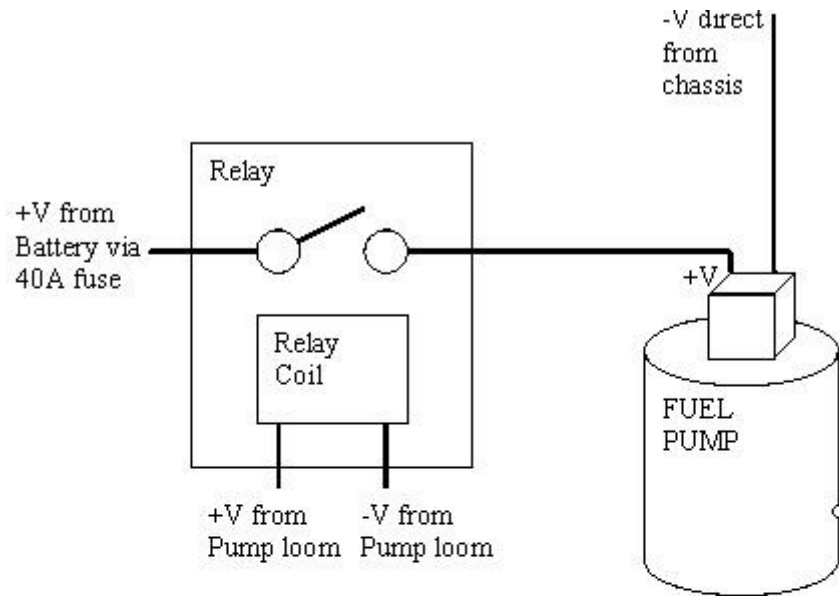
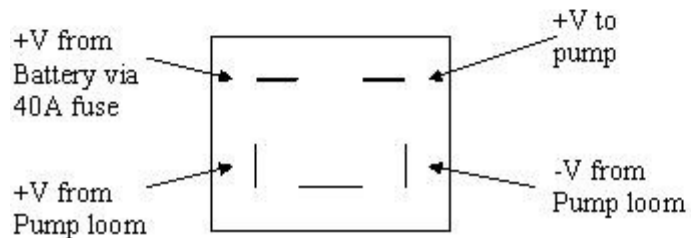


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Fuel Pump Voltage Drop Fixed



How a 40A automotive relay really looks



Fairly self-explanatory - the bottom diagram is (if I remember correctly) the design of a standard 40A automotive relay.

The -v (ground) to the pump should be connected to the chasis directly

Before anyone else has to search for the info on this relay, here it is.

The coil connections, which connect to the OEM fuel pump wiring (I don't believe that the polarity is important), are marked 85 and 86 on the relay. The switch common terminal (to high current permanent live) is 30 and the output terminal when ON is 87 (87a when off, which we don't need).

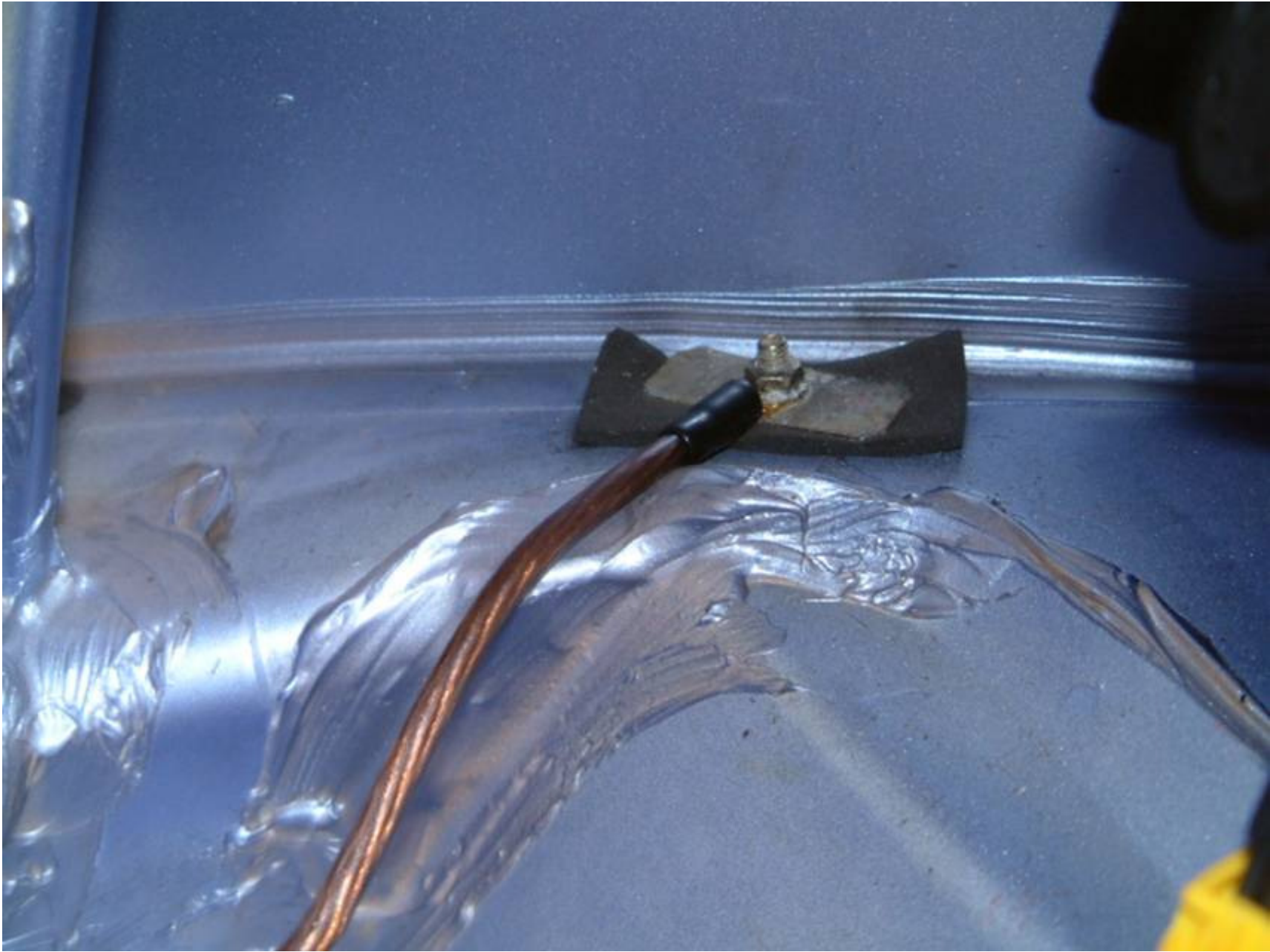
For safe operation of a fused circuit (so the fuse doesn't keep blowing but protects the wiring/relay/connectors/pump before it melts) the fuse should be rated so that at maximum current it's at about 70% of it's total continuous capacity; so that would mean a fuse of 11.57 amps for 12v supply or 11.36 amps for 13.5 v supply. As fuses of this rating are not available the closest one (higher) is 15 amps (continuous rating) so that should be OK.

It's also worth mentioning that at 60psi @ 12 volts the pump can supply 121 ltr/hr; but at 60 psi @ 13.5 volts the pump can supply 159 ltr/hr. That's an amazing 31.4% more fuel. That alone justifies getting the power at the pump as high as possible.

anyway here are some photos



top of the fuel pump with the plug removed (Black -VE Black/Purple +VE)



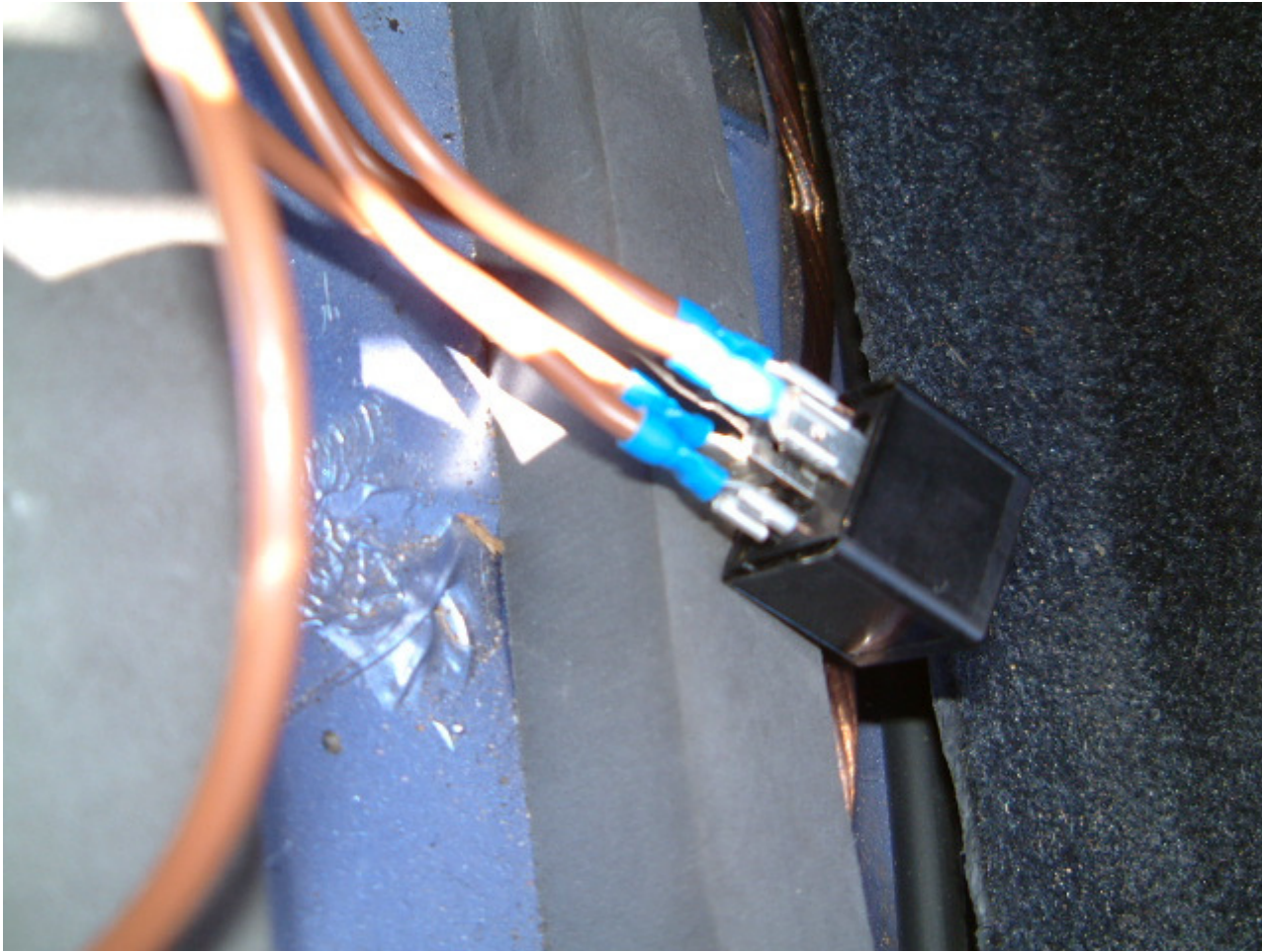
The new earth connection



Earth wired up +VE in the boot just connected like this the voltage went up from 12.5 to 12.7



All wired up



The connections to the relay