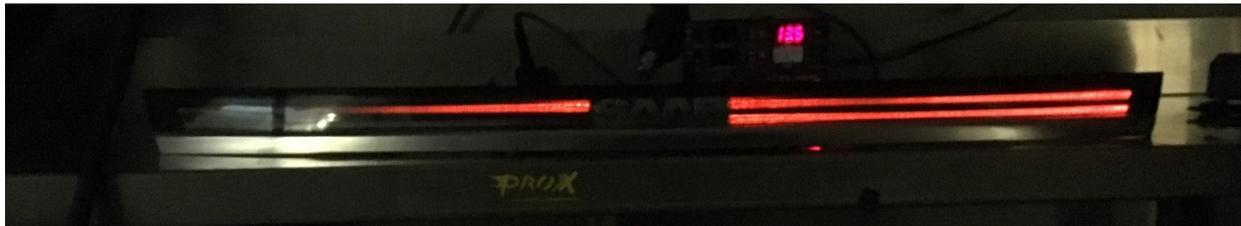


Install repair kit for LED-bar Saab 9-5 2010-2012 (rev 2)

Hi and thank you for buying our repair kit for the LED-bar! A lot of effort has been put into making this as easy to install as possible and with the best quality parts available!

Saab 9-5 has among a lot of other modern cars, an alternator that only charges when needed. This makes the voltage in the car alter. This also can cause voltage spikes. We thought about that when constructing this repair kit, and it's made to have the same light intensity from 8V and can handle spikes up to 120V. So the LEDs won't burn out from voltage spikes as cheaper solutions with just resistors to the LEDs.



To complete the restoration of the LED-bar the following equipment is needed

Wire cutter (Smaller for finer work)

Wire stripper (Or be gentle with the wire cutter)

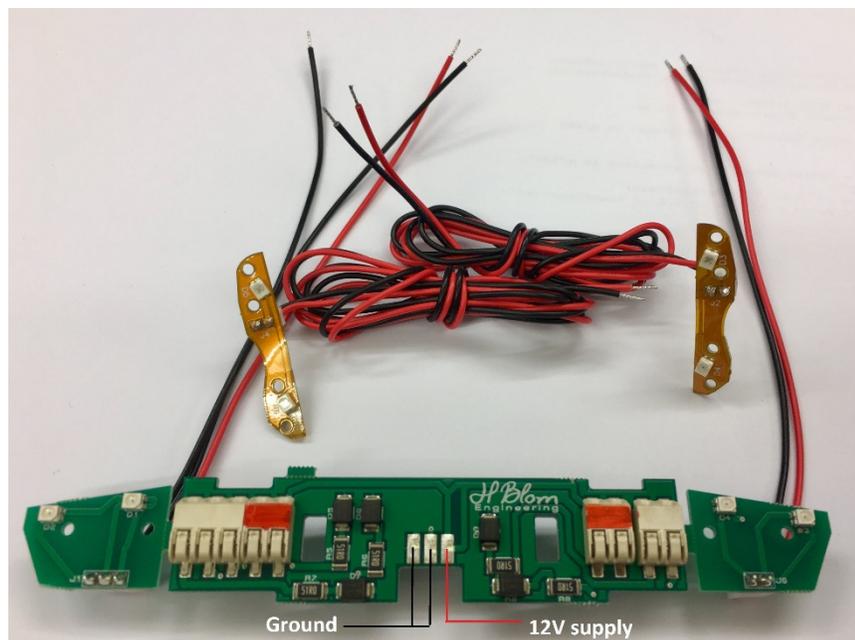
Small pliers, or tweezers

Dremel or angle grinder with thin disc (around 2mm or less), **multi-cutter** (Fein) is also a great tool

Sealing silicone or epoxy glue

Hot glue gun or just the glue (and use heating gun or a lighter to melt it) regular quick glue will work too.

Screwdriver



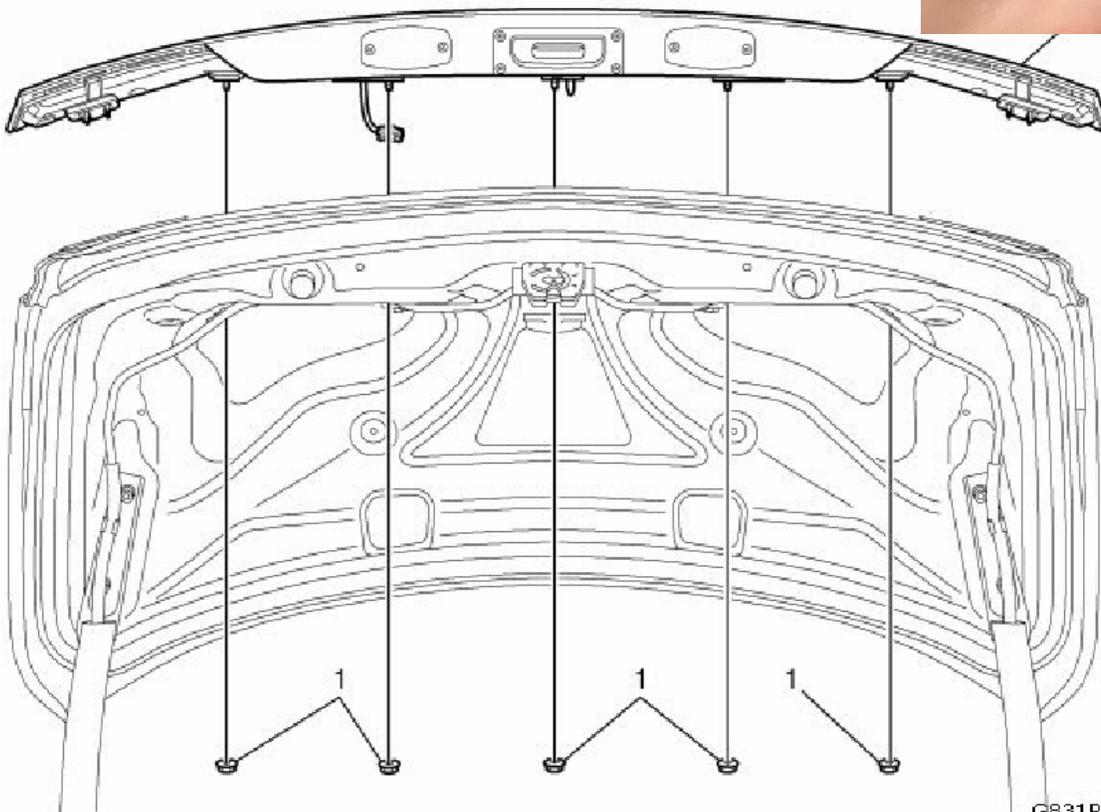
Good to have is a 8-12V supply to test the **installation** before going to the car 9V battery is also fine.

Do not test LED-cards with 9V supply individually– this will burn out the LEDs, testing can be done applying ground (negative) and 9V on the 12V supply once all LED-cards are connected to the controller board.

Before putting in the new card have a look at the quick connectors (white on mainboard) to the cables and get familiar with how it opens and closes by pushing the leveler (don't use too much force though).

Remove LED-bar

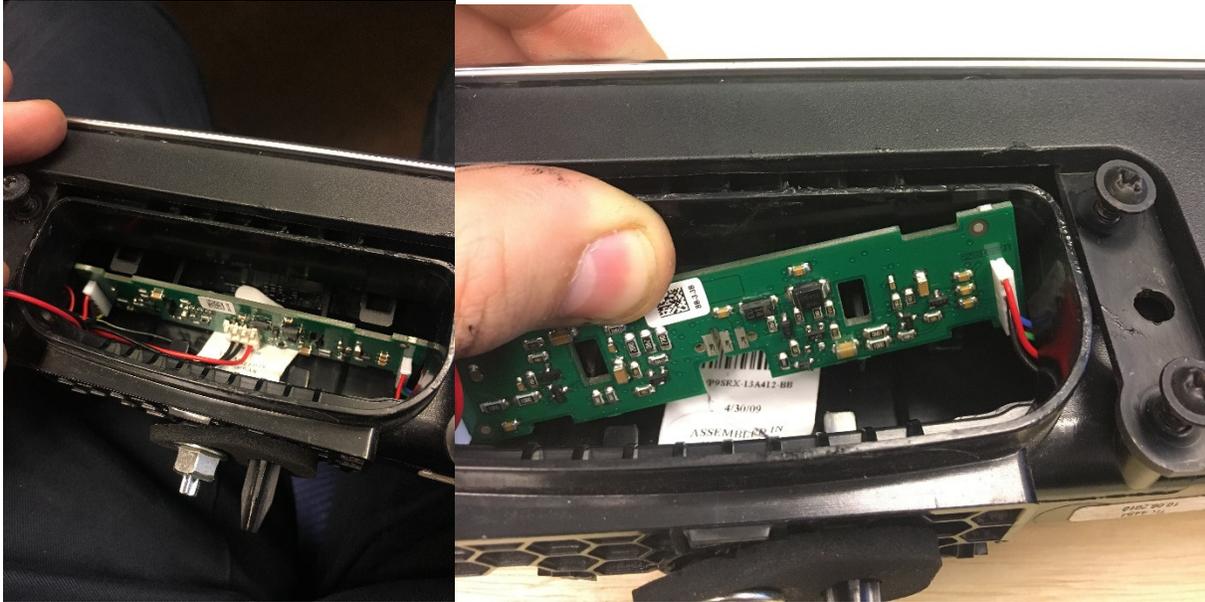
1. Remove the interior cover of the trunk, using a flat screwdriver. 7mm socket is needed to remove the handle so the cover drops down. LED-bar sits with 5 screws as show in picture. Note the plastic clips at the ends that needs a curved piler for safe removal. We have one modified that further simplifies the task.



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Remove controller board

1. First remove the “push-button” for opening the trunk, 4 screws. Note that the sealer can be a bit greasy and sticks to about everything. Snap the controller board loose from the hooks and remove the power cable (white with two black and one red cable).



2. Cut off the LED-cables on the sides (as close to the connector as possible, since you will probably like to re-use the “inner” LED-boards). Remove the controller card, if you have to cut it into pieces, this will not be reused...



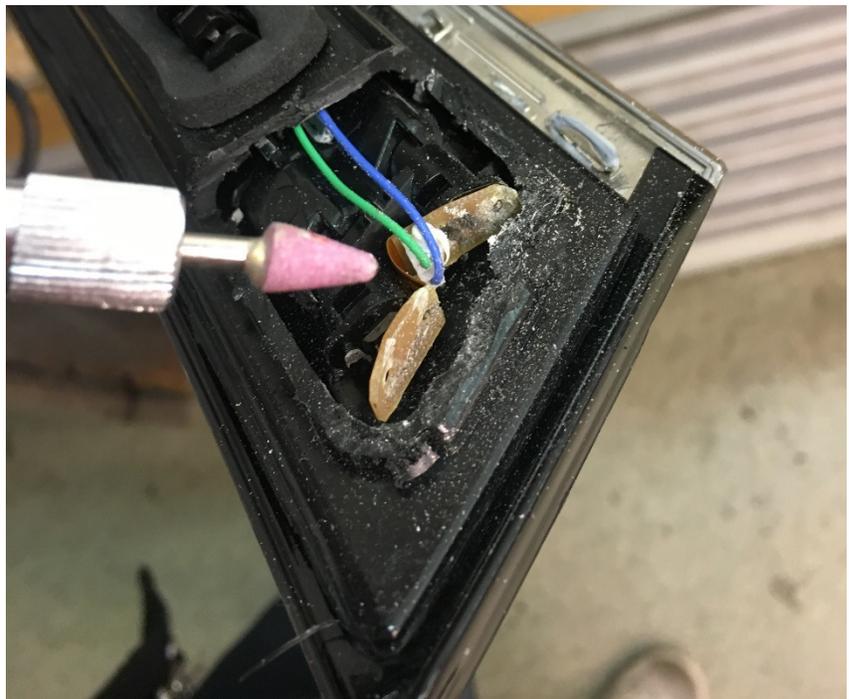
3. Remove outer LEDs, Probably the step most are afraid of. There are a few methods to do this, I prefer angle grinder since it gives the cleanest cut, however most prefer dremel since it is easy to handle.

Red lines indicates were to cut, be careful not to cut too deep, and take it in steps. Save the plastics ends cut loose, since you'll need these to re-seal the bar again.



4. Remove LED-boards.

Behind the plastic at the end you'll find the LED-assembly boards. These are molded to the plastic and needs to be cut away with dremel (grind away), soldering iron (melt away) or cutter. I prefer the first two. If available use compressed air to get rid of debris.

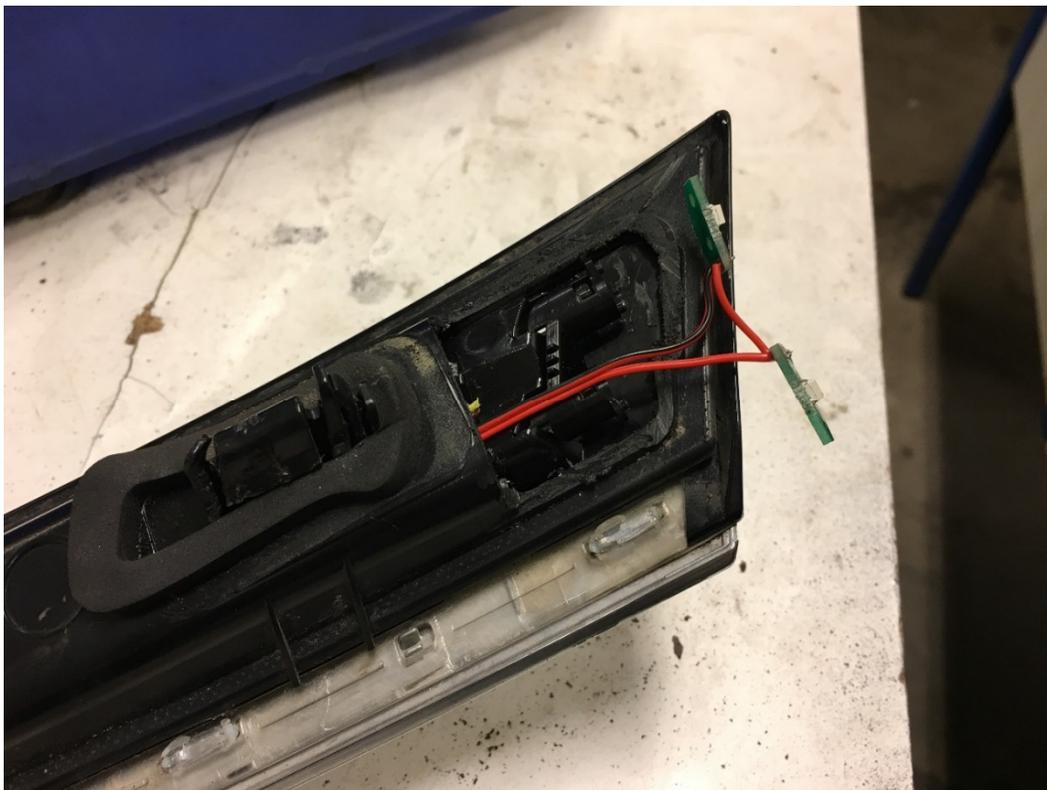
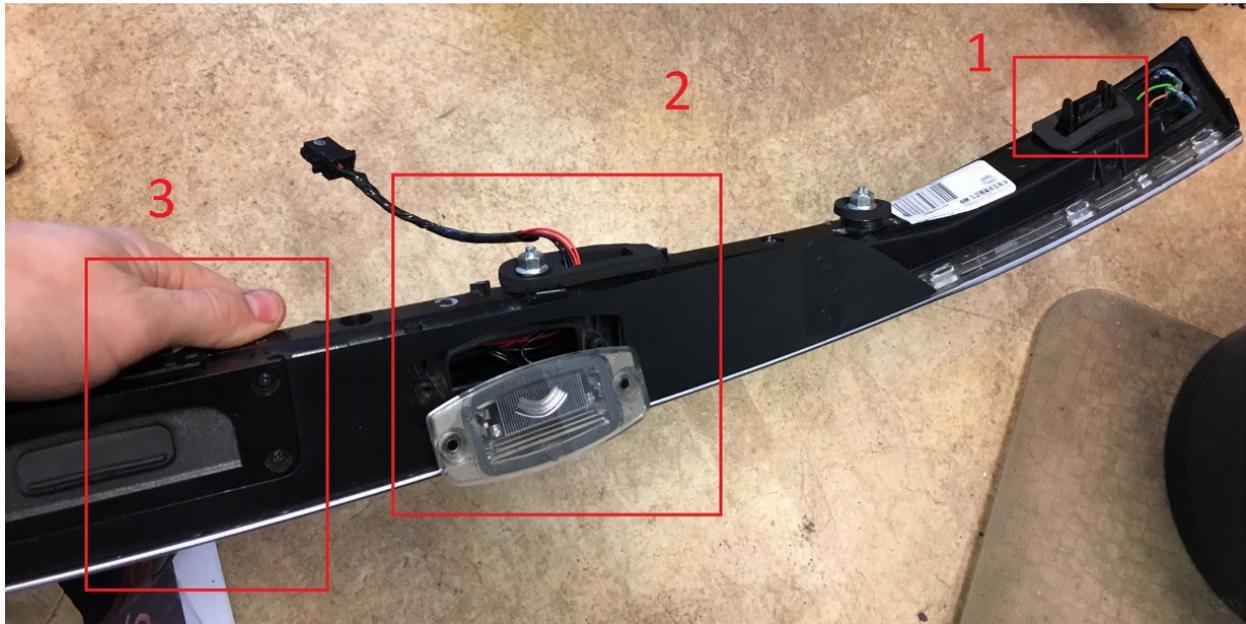


5. Mount the new cards, Put them into place and put some hot glue gun or instant adhesive. The new kits have the flex-boards delivered, for easier installation, also with connector to further improve the quality.



The newer kits have flexi-board (to the right) for easier installation.

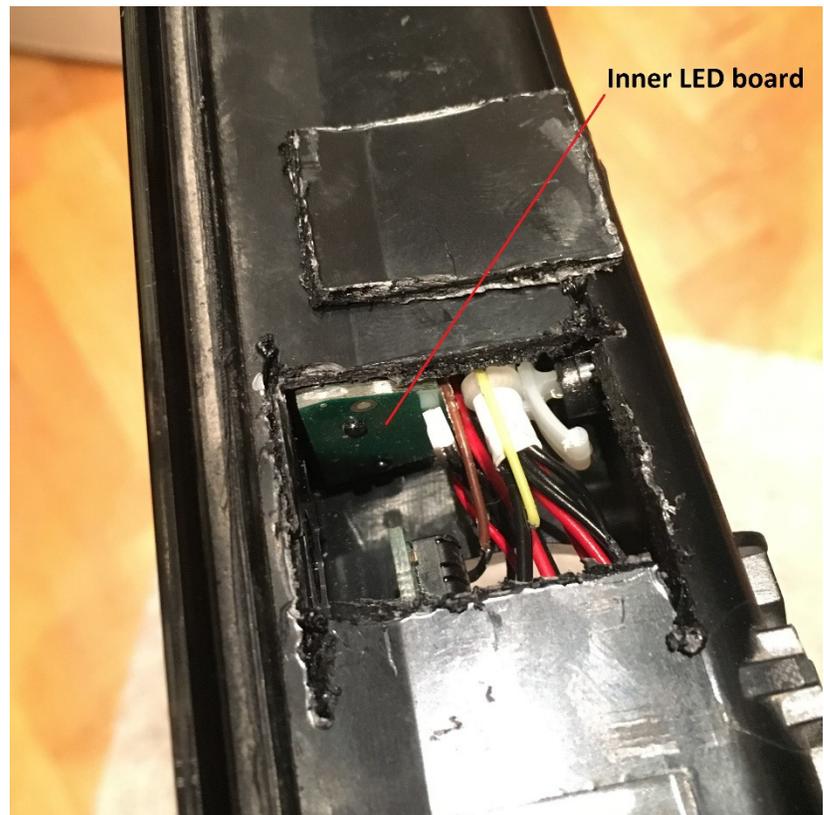
6. Pull the cables through. This is probably the most boring part of the installation and can be both frustrating and time consuming when you haven't done this a couple of times. We usually pull them through by entering at point 1 at the lower side as in the second picture on this page if you're on the right side (seen from the back) and from the upper side if on the left. You'll need to back it off a few times and retry but eventually you'll get to area two which is either the connector cable to the bar or the light for your number plate. Take the cable up and out and drag it through before going back in and go from 2 to 3 where the controller board will be installed.



7. Repeat point 3-7 on the opposite side

8. Keep the inner LED-boards or exchange them

On every single LED-bar I've repaired the inner boards are fine, LED's are working and no moisture. Don't replace them if they work is my opinion since they're trickier to get loose than the outer since they're hard to reach. New boards are included of course but if they work don't replace them. If replacing them the easiest way is to go through the top of the LED-bar like the picture to the right.



9. Install new controller board.

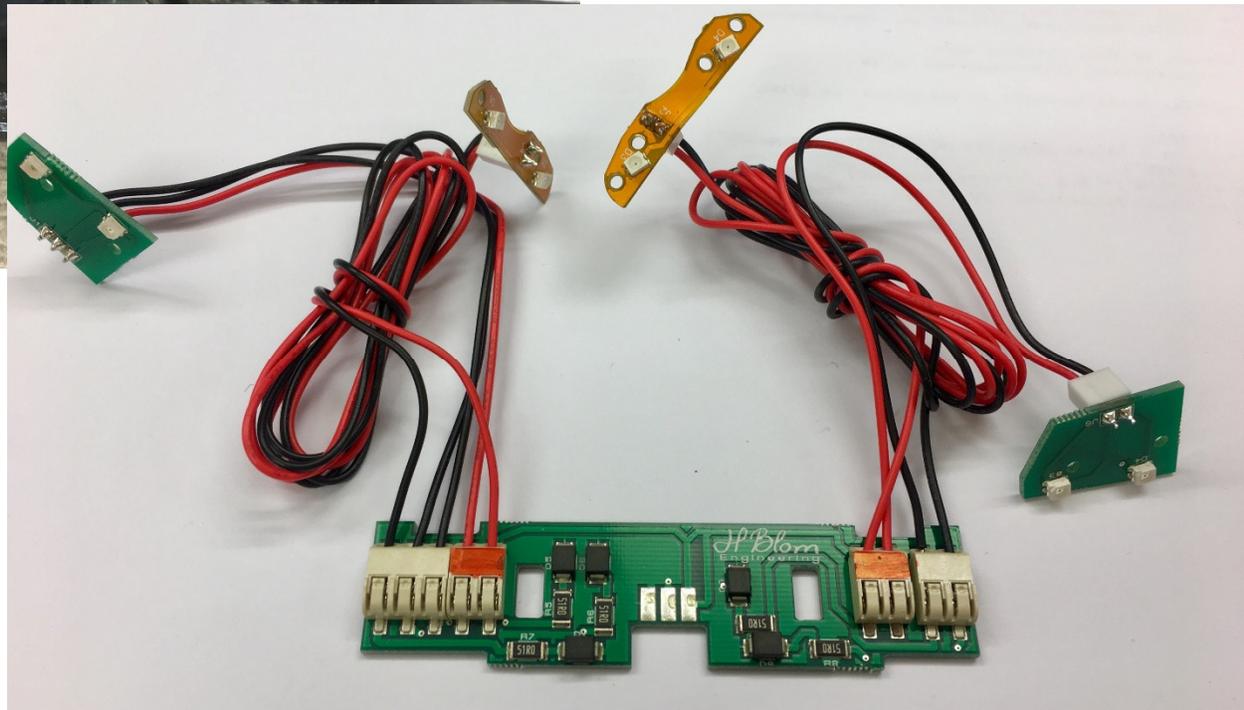
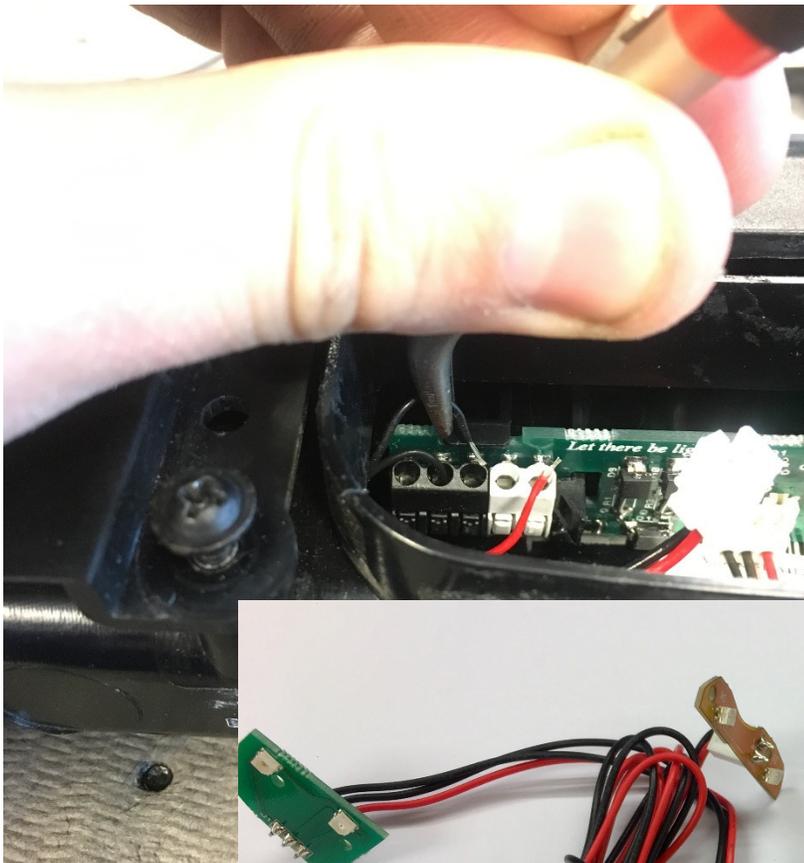
The new one fits right into the old place. Don't forget to put back the power cable to it before snapping it into place.



10. Connect power to the LEDs

The connectors on the mainboard are marked red for supply to LEDs and white are negative side. Connect any black to the white, and any red to the red connectors. The circuit is designed to control the LEDs the same way.

If you haven't replaced the inner LED-boards be gentle when you pile the ends, since they're very short. They're a little tricky to work with. If you've replaced the inner boards you won't have any problems. Use a tweezers or a small pliers to put the cable into the push-connector as in the picture. Use a small screwdriver to push on the leveler to open the connector. When released the connector closes and locks the cable and you can go on with the next one.



Now you're done with the connections and applying power to the LED-bar connector pin 1 and 2 (red it +12V) it will now look like this:



And don't forget to seal the ends with silicone and the plastic left over from when you cut them open. Either use silicone, or epoxy (plastic repair or plastic weld).

