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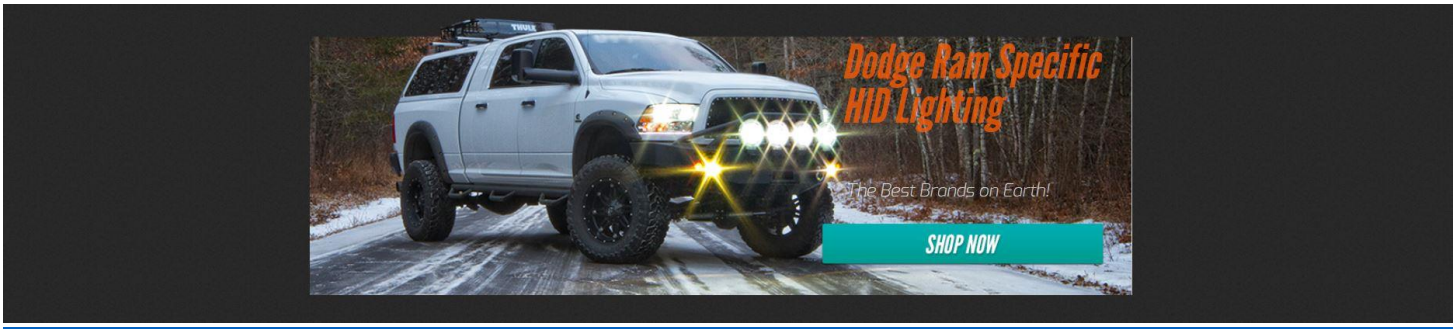

Installation instructions and tips on using the 2013-2014 Dodge Ram HID conversion kit from Headlight Revolution.

NOTE: 2015 Ram Truck with same headlights have a different install!

This method will not work! Contact Headlight Revolution for details!

Note: This installation is designed for Ram trucks that use the factory projector headlights and 9012 style low beam bulbs. If your Ram has reflector headlights using H11 bulbs, the install is the same but you MUST use the GTR Lighting GEN 4 Hylux Series HID ballast. If your Ram has reflector headlights using H13 bulbs, it doesn't matter what ballast you use because you'll have to add extra parts to the relay harness. Contact us for more details at sales@HeadlightRevolution.com

This installation guide is only designed for Ram trucks 2013 - 2014 with the factory projector headlights that look like this:

These new headlights use what is called a 9012 or 9012LL halogen bulb and although it looks like a standard halogen incandescent bulb, technically it is called "HIR" or "Halogen Infra-Red". Even though it's a new type of halogen bulb, most Ram owners still say they are terrible and should be brighter. Doing an HID conversion kit in the new Ram trucks is safe, doesn't void warranty, and is how the truck should have come from the factory, as long as you use the right parts!

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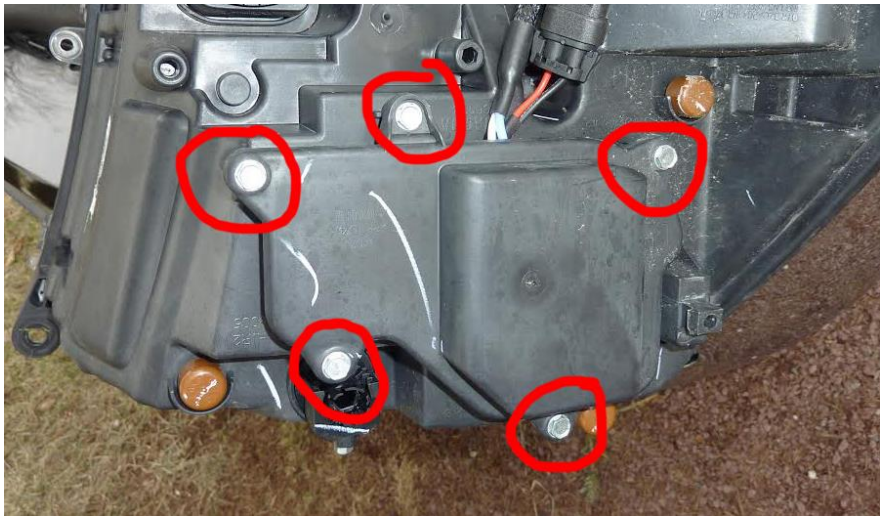
Step 1: Remove the headlight from your truck:

This will require removing the grill and then gaining access to the headlight mounting hardware. There are a couple bolts near the middle of the truck in front that hold it on, and you'll have to gain access to a pressure fit mounting tab by going in through the wheel well. There's a little access port flap, open it, reach your hand in and detach the retainer that holds the "ball and socket" mount together. At that point carefully pull the headlight out towards you (be careful to not scratch your paint) and while doing so, with a friend, disconnect the wires connecting to the headlight.

Take great care to remember how all the wires go together! This will be important later.

Step 2: Remove the Dust Cover from the housing:

The bulbs are hidden on the back side of the headlight housing by a dust cover. This cover ensures that no water or debris get inside of the housing. There are 5 small bolts that hold it in place. Remove each one and set them aside to reuse later.

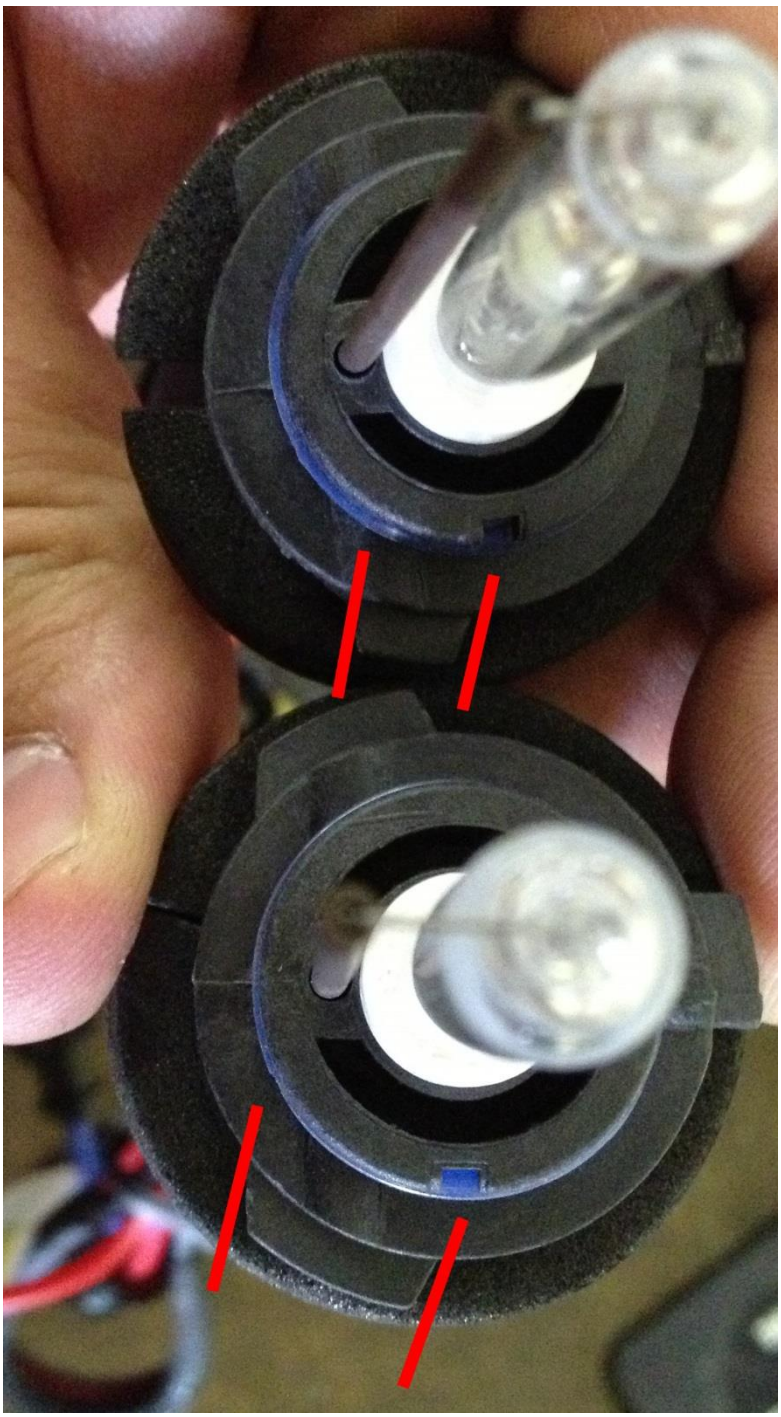


Step 3: Install the new bulbs:

The stock headlight bulbs inside the projector are called 9012 (Or HIR2), but in the HID bulb world the crossover for that is the 9006. In terms of dimension and shape 9012 and 9006 are almost identical. The biggest difference is that one of the 3 locking tabs is a little larger on the 9006. To get around this tiny hurdle you have two options:

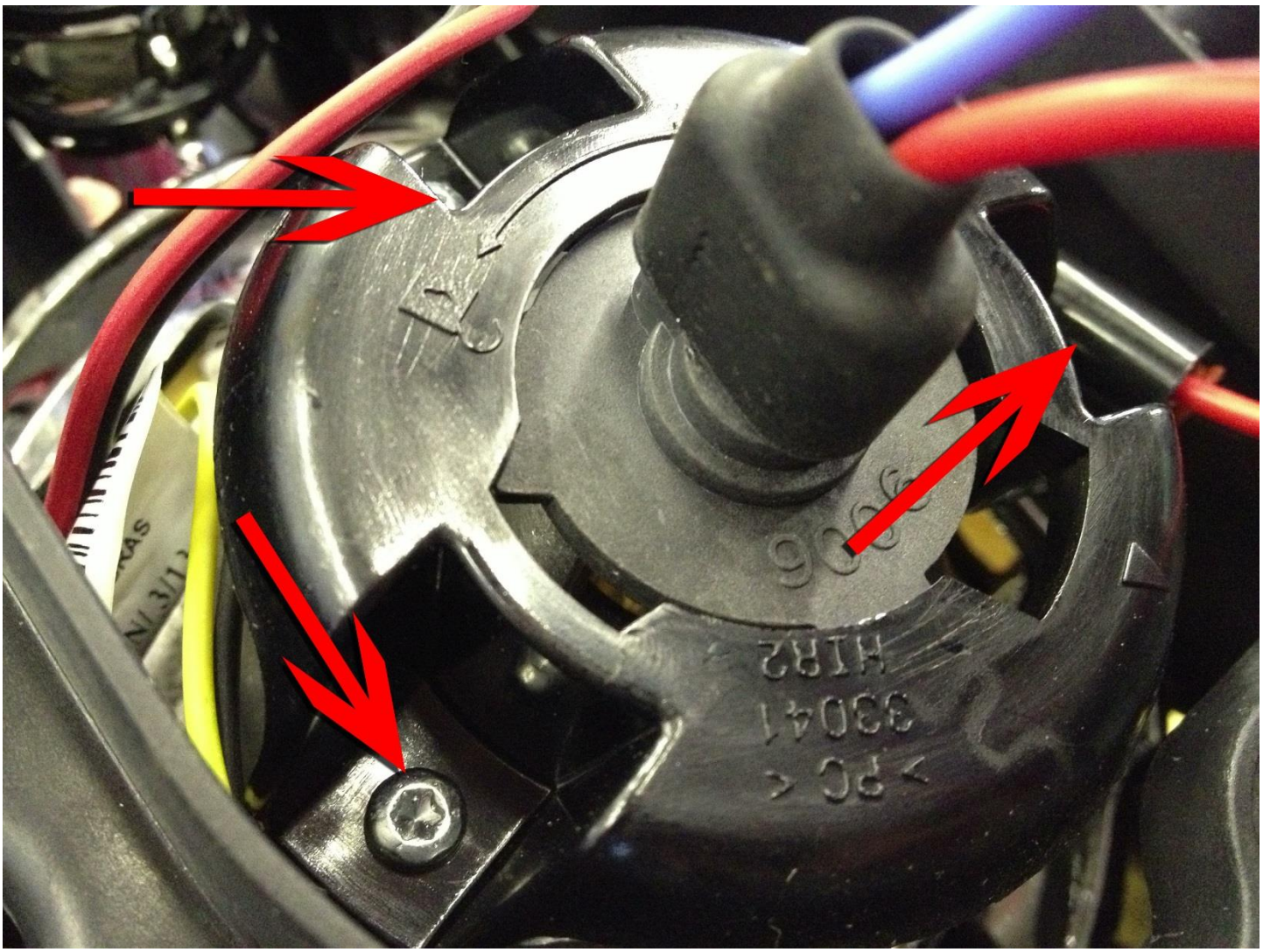
1. Trim the tab that is larger on the 9006 HID bulb.
2. Loosen up the 3 torx bits on the headlight retainer behind the dust cap. You don't even have to take it off completely. Loosening up these 3 torx bit screws that hold the black plastic bulb retainer into the back side of the housing will give you the wiggle room to be able to tilt the 9006 HID bulb inside without modifying it. When the new bulb is seated simply tighten the 3 torx screws down again.

Low Beam Bulb Install Option 1: Trim the Tabs



Compare the stock 9012 bulbs with the new 9006 HID bulbs and you'll see this tab is the only difference. Take a file, a sharp side cutter or a Dremel tool and carefully trim the bottom half of the locking tab off, it's the one to the right of the ceramic wire insulator that goes up the side of the glass bulb. Just keep trimming it a little at a time until it fits easily.

Low Beam Bulb Install Option 2: Loosen the Screws



The low beam headlight bulb retainer is made of black plastic and is held onto the back side of the projector with 3 torx bit screws. If you loosen them about half way (don't have to totally remove them!) it will give you the slack needed to slide the new 9006 bulb in place without modifying it.

This is probably the best option of the two because it doesn't require modifying anything.

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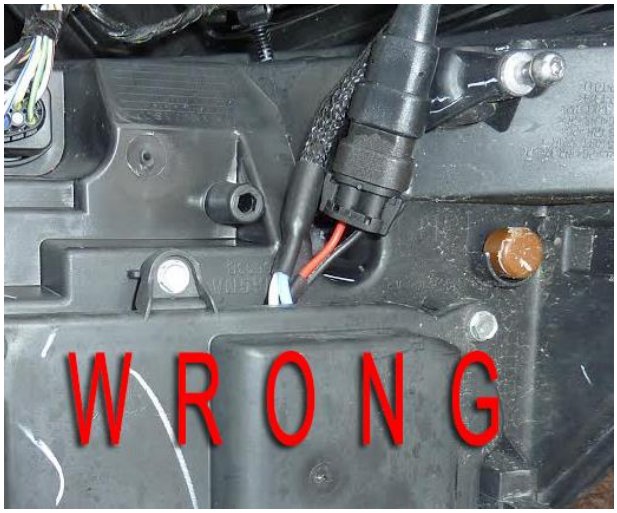
Step 4: Drill holes in the dust covers:

You already removed the dust cover in step 2, and now you should have your bulb or bulbs installed. Mock up where the bulbs will interfere with the dust cover and drill a ¾" hole in each dust cover above where you think the bulbs will be located. This is where you will draw the HID wiring through to connect the factory wiring and bulb to the new HID ballast.

If you are just doing the low beam or just doing the high beam you'll only need to drill one hole. If you're doing both high beam and low beam you'll need to put one hole in each dust cover. You'll use these holes next to run the wiring through.

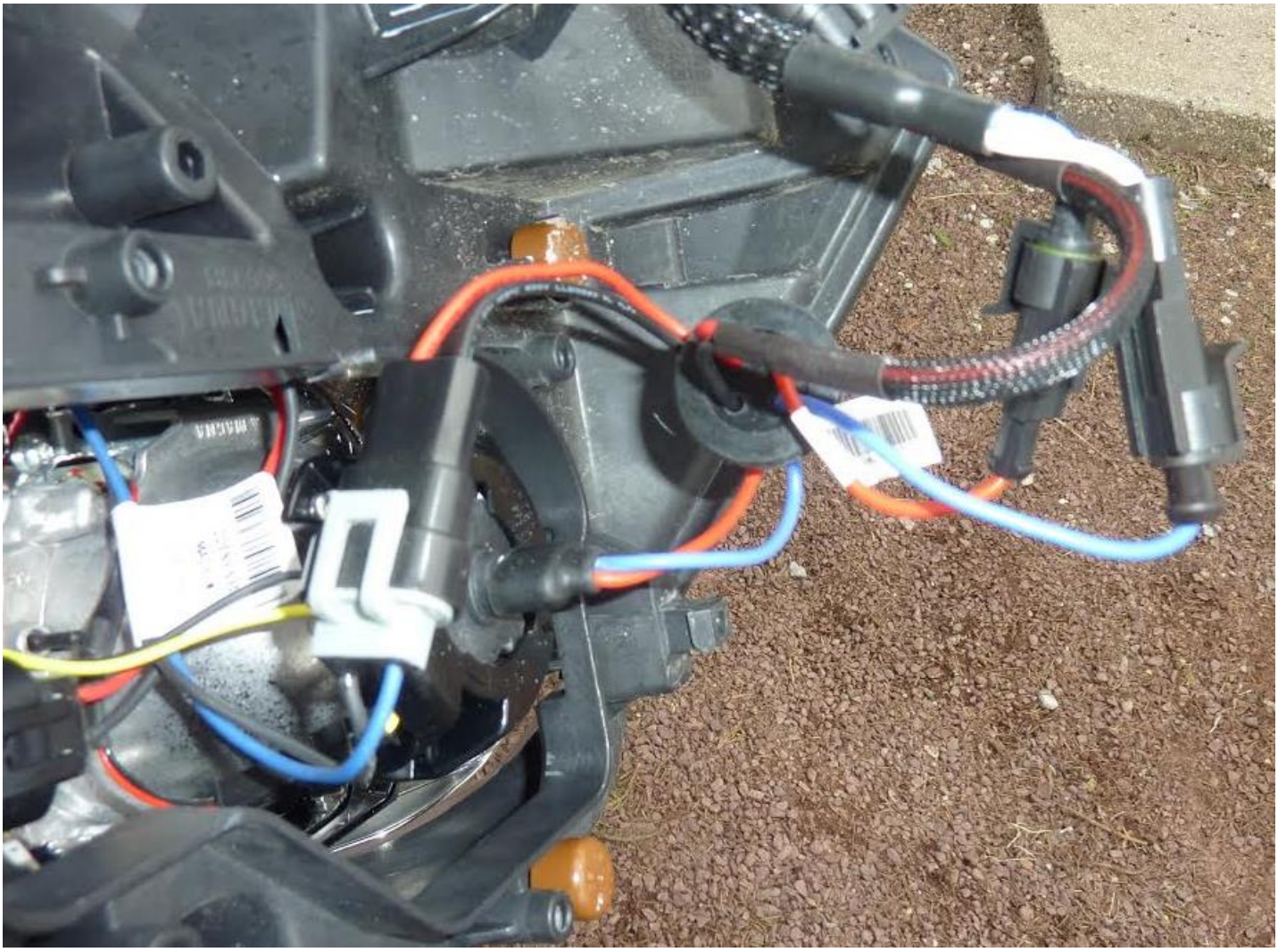
Step 5: Run Wires Out of Headlight:

DO NOT smash the wires between the headlight and the dust cover, this can cause a short and a fire…



The HID bulb has 4 wires attached to it within the harness. A red and blue set of wires and a red and black set of wires.

The red and black wires connect to the factory headlight wiring. The red and blue wires connect to the new HID ballast:



In this picture you can see the black plastic connector that holds the red and black wires is connected to the blue and black wires that used to connect to the original 9012 headlight bulb. You can also see the red and blue wires that come out of the new HID bulb pass through the rubber grommet with the other wires and go to the ballast.

The red and blue wires are what connects the ballast output to the HID bulbs.

The red and black wires are what connects the factory headlight wiring to the power input wiring for the new HID ballast. The polarity here is very important!

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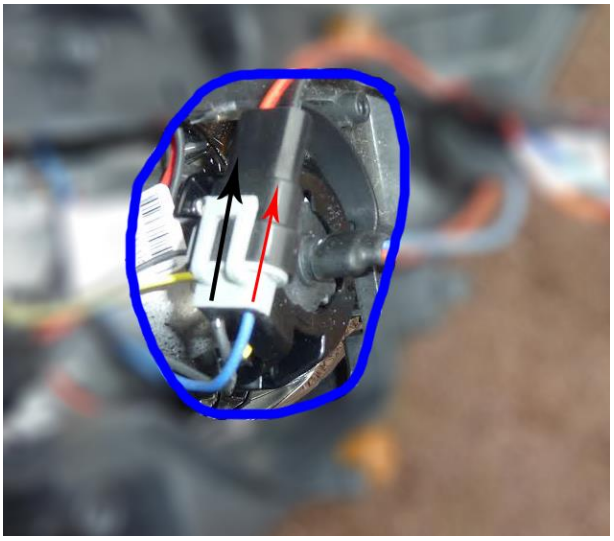
The polarity here is very important! If your wires are backwards they must be swapped around. Sometimes the polarity is switched on some trucks depending on how they were assembled because it doesn't matter. The stock bulbs are not polarity specific so it doesn't matter which way the power wires went. With the new HID converison kit you MUST have your + power wire connected to the HID bulb red wire and the – negative wire connected to the HID bulb black wire. This picture shows the 2 wires hooked up backwards:

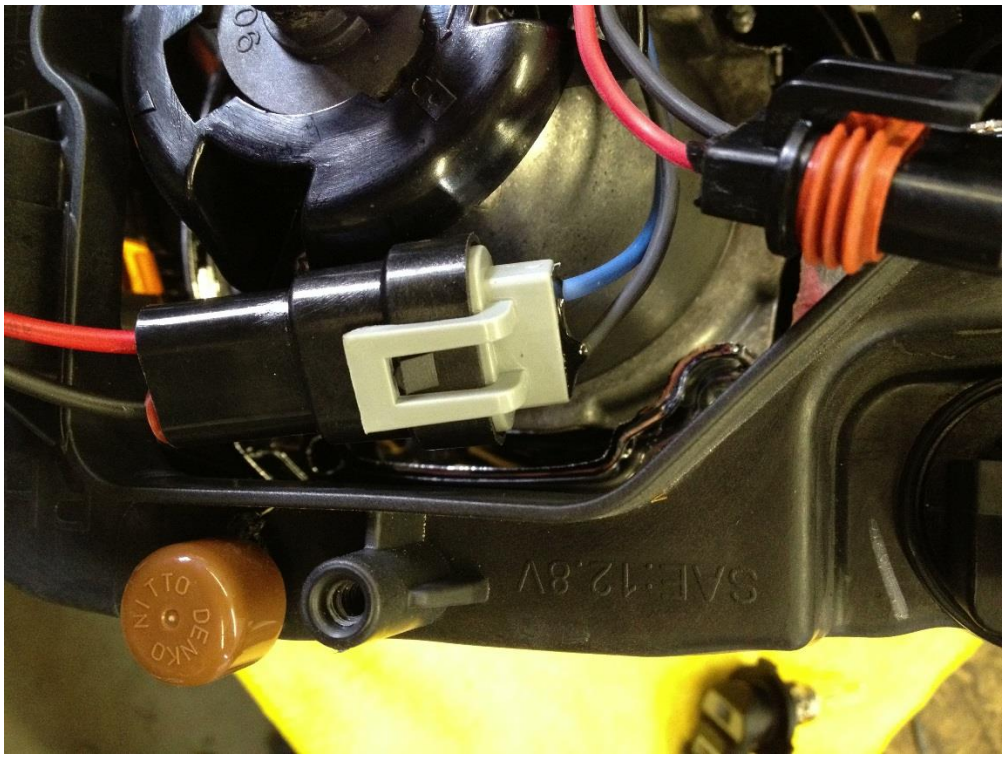


You can see in this picture the blue wire on the truck (the factory + wire) is connected to the black HID wire which is – ground. This connection needs to be flipped around, either right here, or where it plugs into the ballast. You can either cut and splice the wiring so it flips them around, you can de-pin the black connector and flip the wires around or you can just plug the connector in backwards to make sure the positive and negative wires match up.

THIS DOESN'T HAPPEN IN EVERY TRUCK! MOST TRUCKS ARE WIRED RIGHT!

IF YOURS JUST PLUGS IN AND TURNS ON YOU DON'T NEED TO DO THIS.

This is how it should look:



Step 6: Mount the Ballasts:

There are 3 ballast options that work as a plug and play solution for the new Dodge Ram trucks:

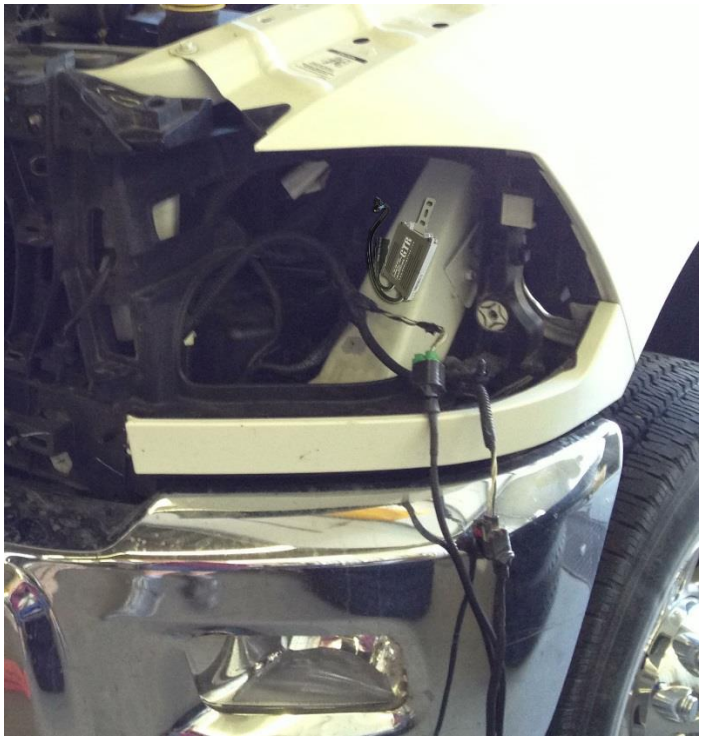
Part # 8013501: GTR Lighting GEN 4 Hylux Series CANBUS HID Ballast
Part #8013502: GTR Lighting GEN 3 CANBUS HID Ballast
Part #8015504: GTR Lighting GEN 4 Hylux Series CANBUS HID Ballast

Every other ballast from every other manufacturer we've tried either just didn't work, or they required all sorts of extra parts like capacitors, or resistors or extra modules. These 3 GTR Lighting HID ballasts are plug and play with no extra parts required.

NOTE: If your Ram has the H11 low beam bulb instead of 9012, the only two that will work plug and play are the GEN 4 Hylux Series ballasts.

The GEN 4 Hylux ballast from GTR Lighting has 2 mounting tabs built right into the body of the ballast. Those should be mounted directly to a good metal ground on the chassis of the truck. Don't zip tie them up somewhere or double sided tape them. Grounding directly to the ballast is part of how the circuitry works on these new ballasts, they have to be grounded.

The GEN 3 CANBUS ballast from GTR Lighting comes with a mounting tab that works really good for mounting on the Ram truck behind the headlight. Here are a couple mounting options for the GEN 3 CANBUS Ballast:



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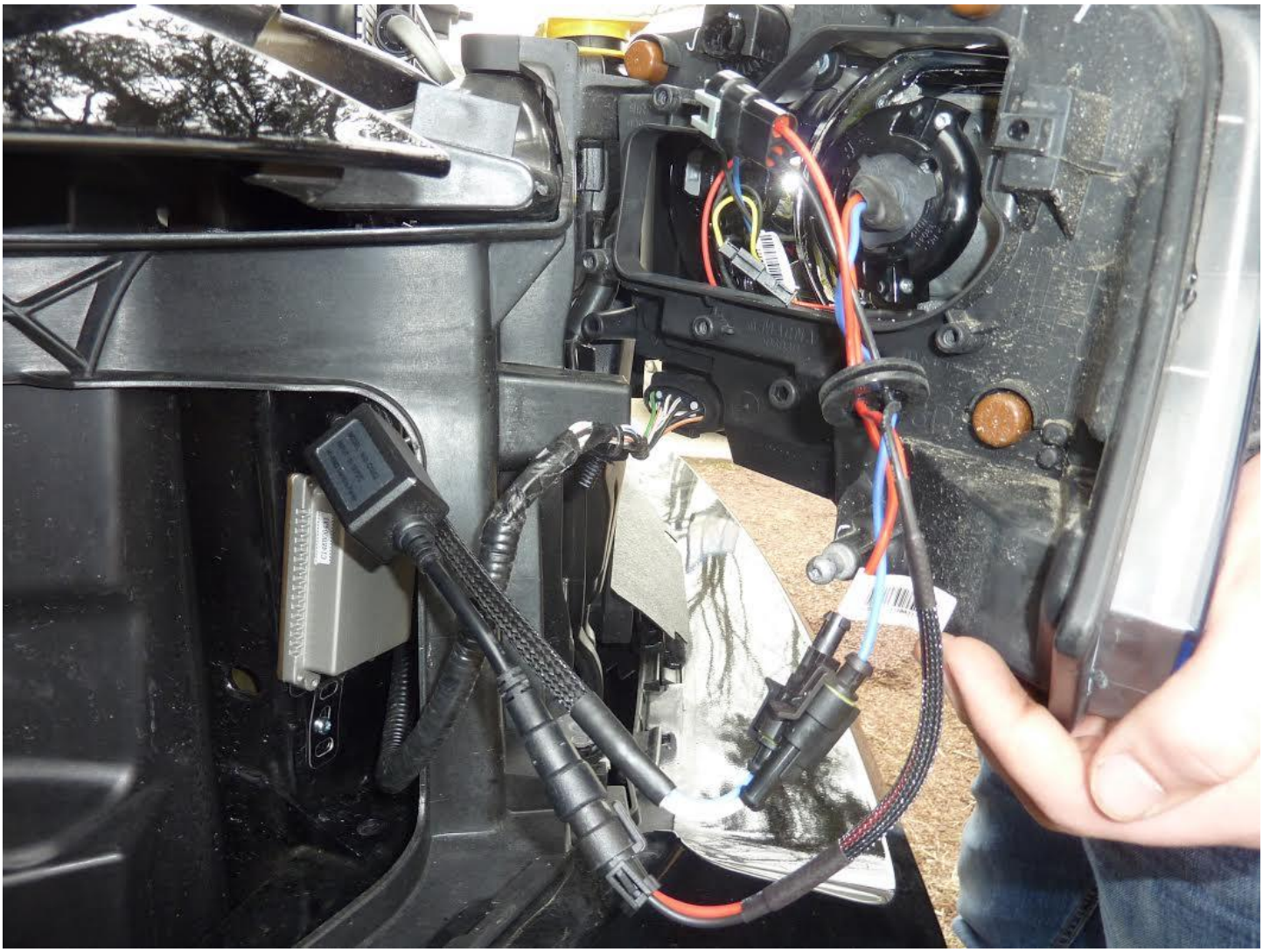
Step 7: Test Before Re-Installing:

Now that you have the ballasts mounted, and the HID bulbs installed into the headlights, before putting the dust cover back in place y ou should test everything. Connect the wiring like this:



Connect the red and black wires to the black plastic 2-pin connector on the ballast, that's your power input to the ballast.

Connect the red and blue single-pin wires into the single-pin black plastic connectors coming out of the ballast, that's your power output from the ballast to the bulbs.

Have a friend hold the headlight and keep all the wiring safe, make sure it's safe to start the engine, then start the engine and test the headlights. The reason for starting the engine is because you've been working on the truck for a little while and you might need a voltage boost for the HID lights to work properly if your battery was drained. They can't function very well under 11.5 volts of power. Also, with the engine shut off the truck's CANBUS system isn't operating. We want to make sure the CANBUS system is functioning to make sure everything works right. So, start the engine and test the headlights. They should come on and turn off just like the factory headlights functioned, but they'll have a 10 second "warm up time" and they'll be WAY WAY WAY BRIGHTER!

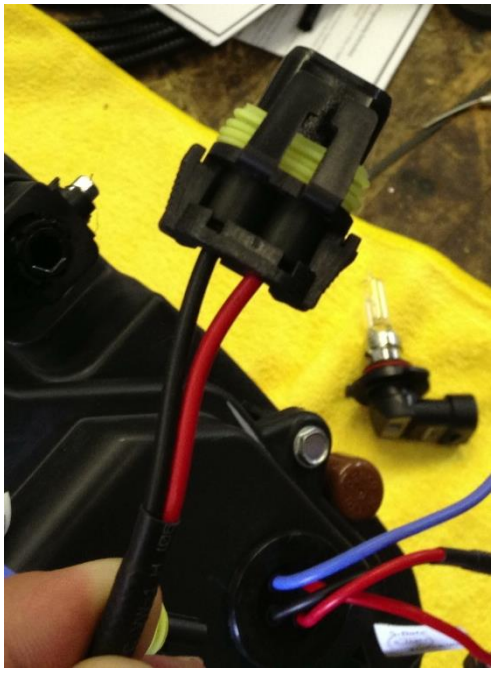
Step 8: Run Wiring Through Dust Cover; Re-Install Dust Cover:

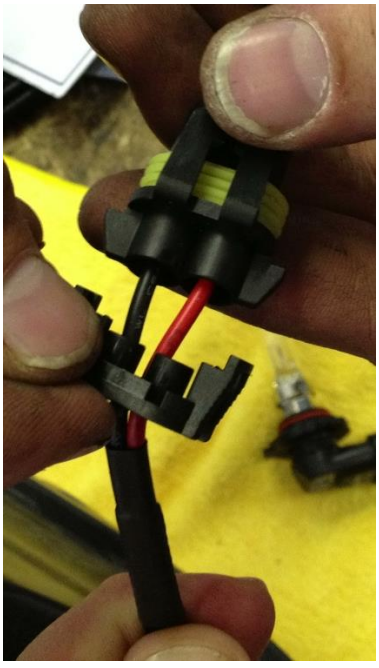
One of the last things to do is to put the headlight back together, to do this you'll have to run the HID wiring through the dust cover and bolt the dust cover back in place.

Dust Cover with holes already drilled from before:

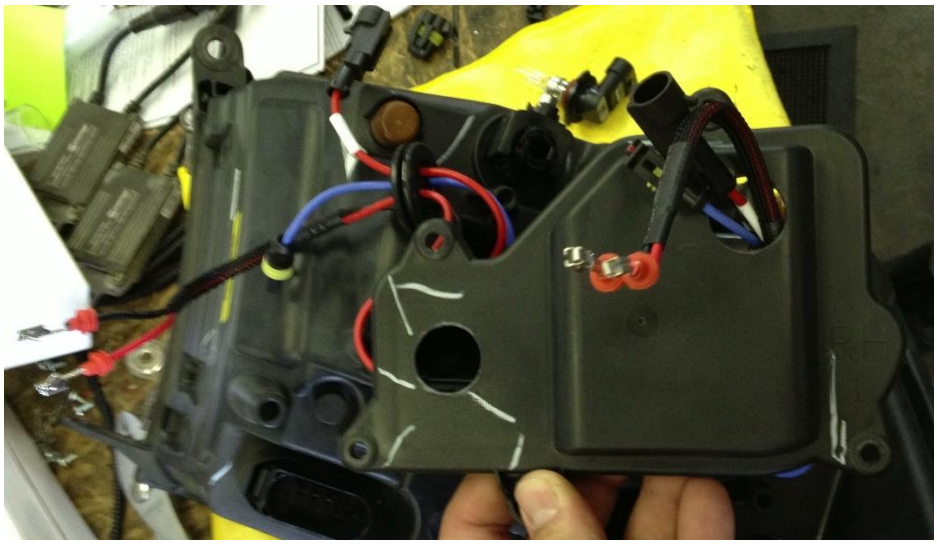
In order to get the 2-pin red and black wires out of these little holes you will have to remove the wires from the connector. You can do this quite easily with a very small jeweler's flat screw driver or a pick tool of some kind. Take off the plastic wire retainer that helps keep the wires plugged in (it's located on the back side of the connector) then de-pin the two wires.

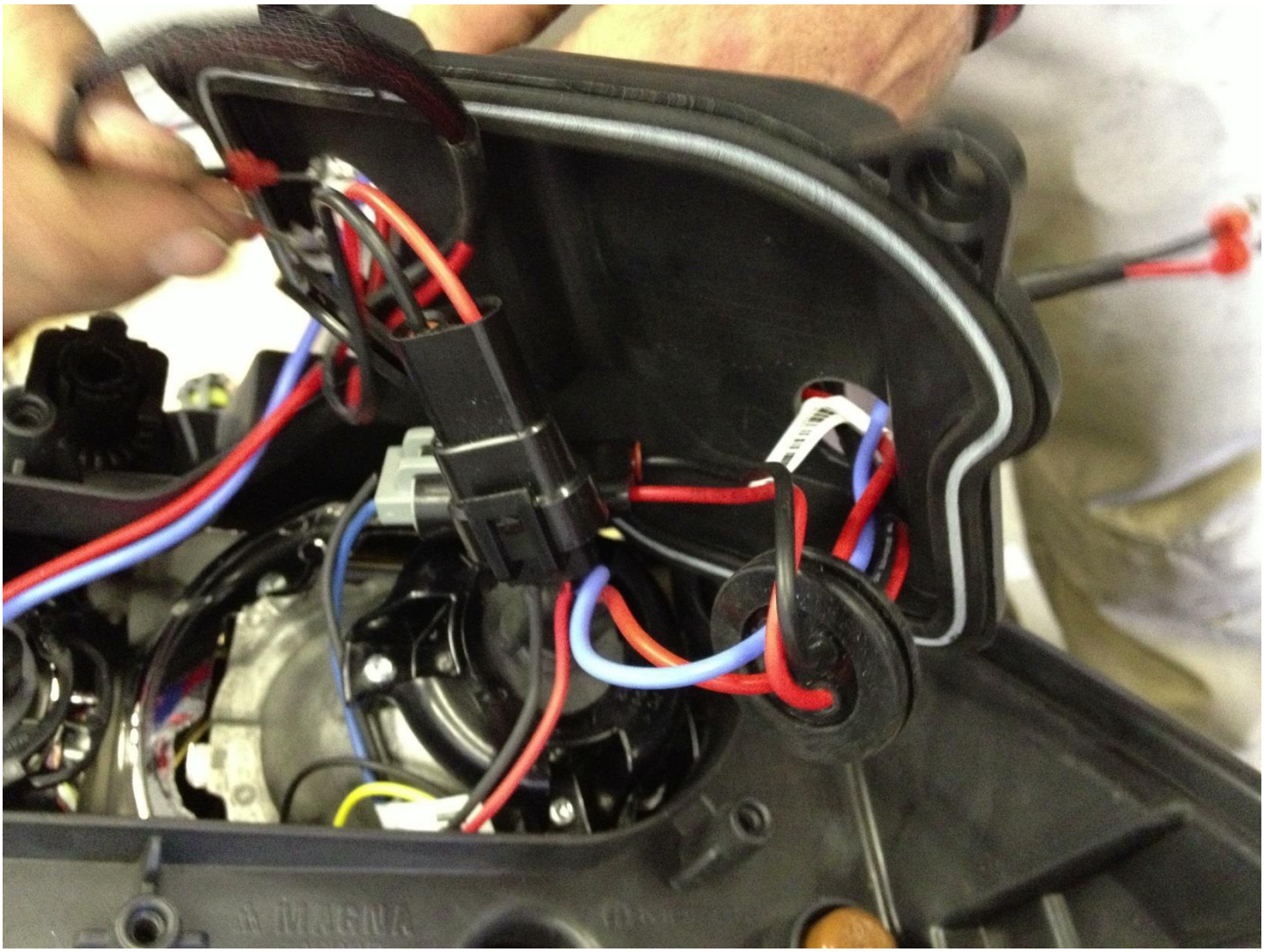
Be careful to remember how they go back together in the connector! Also, if you have reversed polarity factory wiring, this is a good time and place to swap your positive and negative wires around so it works with the HID ballast:

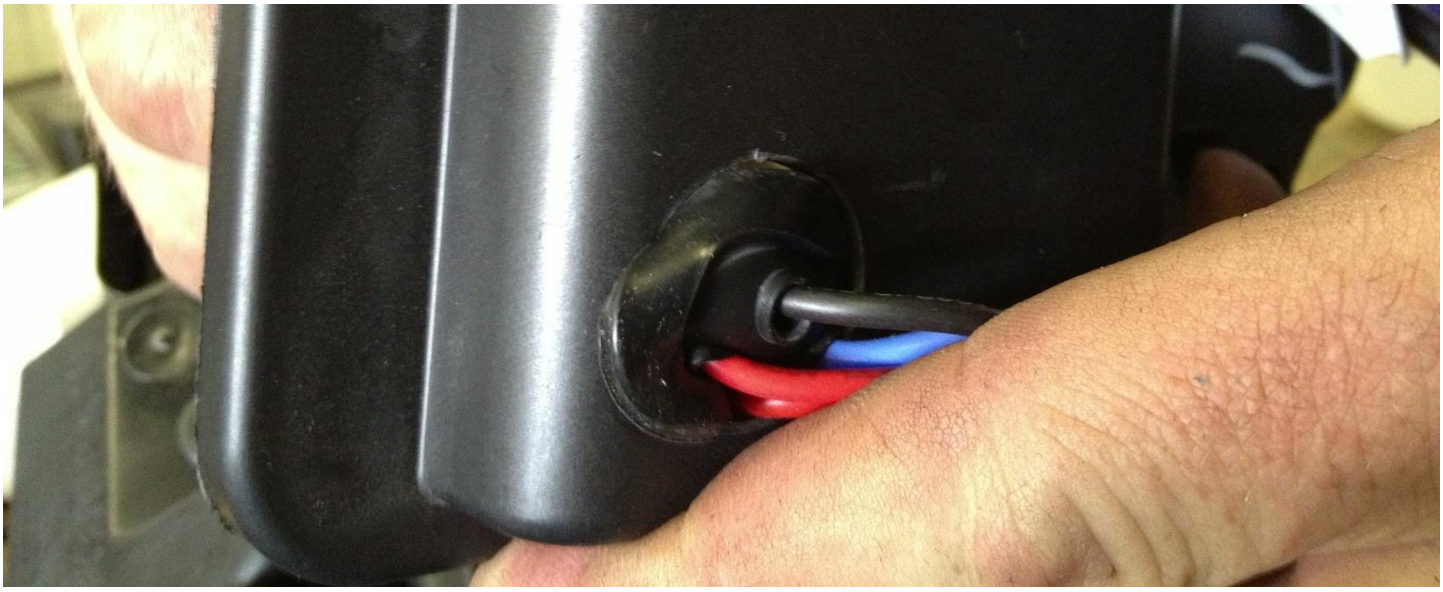


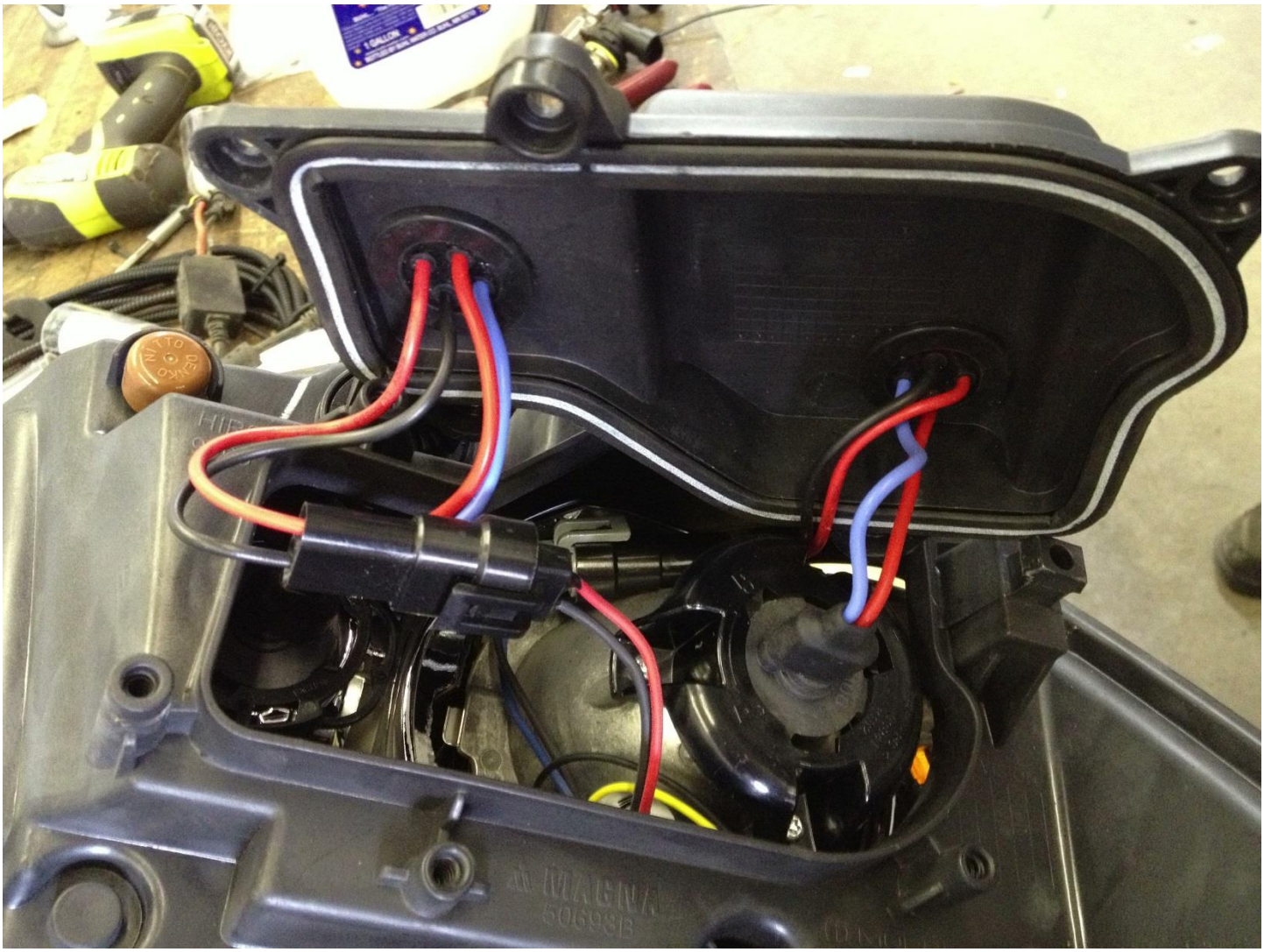


Once you have the 2 pins out you can feed all 4 wires through the hole in the dust cover and place the protective grommet in place:

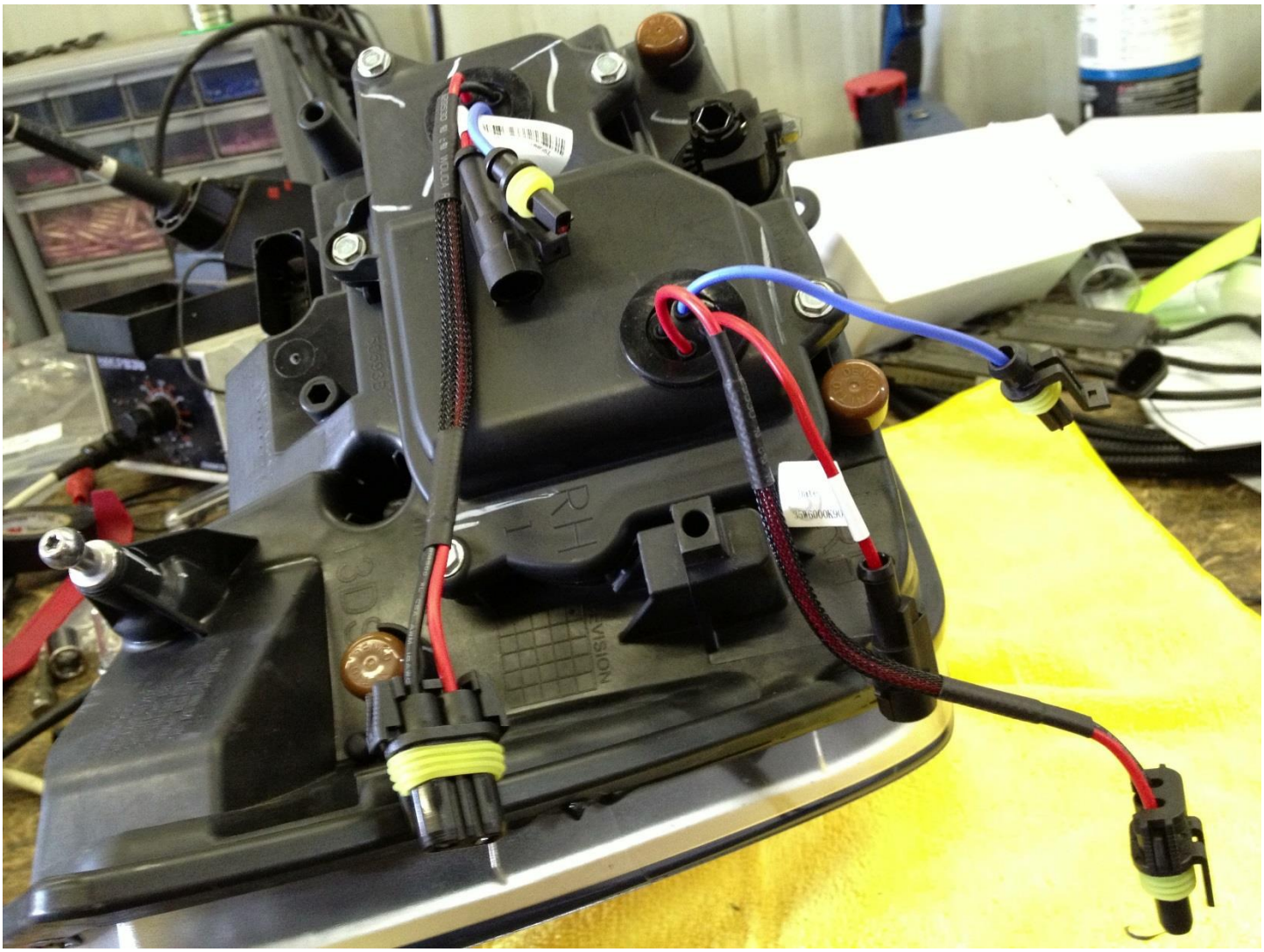




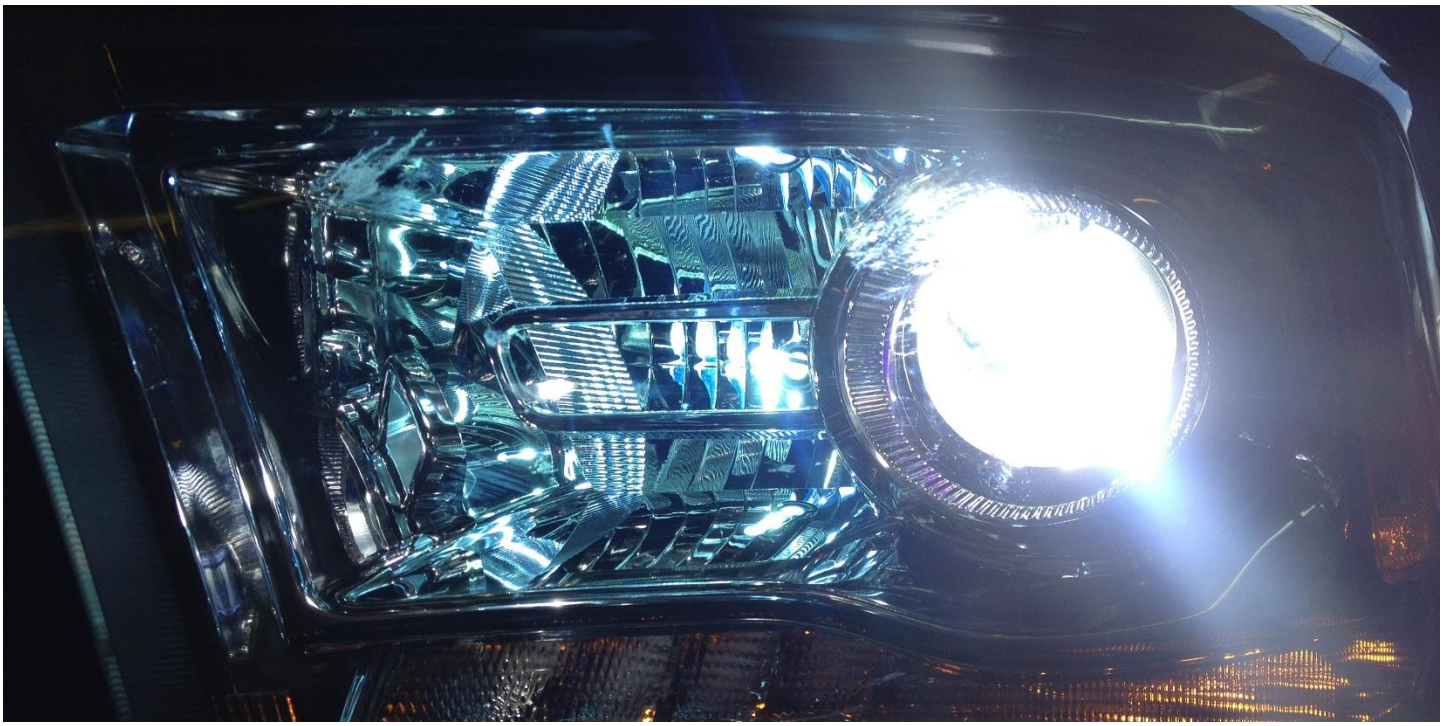




Once you have all the wires through the dust cover you can put the black plastic 2-pin connector back together with the red and black wires and re-secure the dust cover onto the headlight.



At this point all you should have to do is re-install the headlight and hook up all the wiring. Make sure you don't get the high beam and low beam HID wires mixed up, otherwise the wrong lights will turn on at the wrong time.



This product can be found online for sale at www.HeadlightRevolution.com

We recommend using ONLY the GTR Lighting GEN 3 or GEN 4 CANBUS HID conversion kits. No other kit out there will work as a plug and play option.

Troubleshooting:

1. **One works but the other doesn't:**
   a. This is due to either a defective bulb or ballast or you have one of the sets of wires reversed. Read step 5 about making sure your wiring is correct at the factory wiring, and make sure the red and black wires match up to the "+" and "-" symbols on the ballast power input. If all that is good to go and you're getting power at the ballast, try swapping your ballasts around. If one side is working and the other is not the problem is either power or a bad product. If you swap the ballasts left to right, and the problem "follows" the ballast, then you have a bad ballast. If the problem stays on the original side, and now the ballast that wasn't working is working fine, that's an indicator that you have a defective bulb. GTR Lighting HID kits have a lifetime warranty, so just contact your GTR Lighting retailer for a replacement part.
2. **Neither headlight works:**
   a. This is either an issue of reverse polarity (see step 5 above) or you have several defective products. You can either swap parts (bulbs and/or ballasts) around until you find a working combination or send us the product back and we can test it to make sure it is or is not functioning properly.
3. **The lights take a while to reach their full brightness:**
   a. This is normal, unlike LED or halogen, HID systems can take as long as 12 seconds to get to their fully brilliant stage. This is due to how the ballast transforms electricity into high current energy for the bulbs. Right now there is not way to decrease the "warm up time".
4. **The lights work but one of them or both of them flicker:**
   a. Sometimes a flicker can be the cause of a defective bulb or a defective ballast. But also it can be an issue of low voltage. Try turning the headlights to the manual OFF position and start the engine of the truck. After about 10 seconds try turning the headlights on manually. Do they still flicker? If not then the problem is due to the voltage drop during engine start-up. This is normal and the fix is to only turn the headlights on manually, don't let them turn on automatically. Remember, your truck was never designed to use xenon HID headlight bulbs so some of the operation of the headlights is not ideal for HID operation. You can try installing a better battery in the truck that doesn't drop in voltage during start up, but there aren't many other options available.