

FTDRL Install for a Chevy Avalanche

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Ok, I have been getting a lot of questions about this mod and I know the directions are out there, but I wanted to make a very clear step-by-step set of instructions for the electrically challenged people (like me!). Not to mention 2002 directions get mixed in on some older threads and it gets confusing.

Here are the directions for the diode method for **2003-2006** Avalanches to get:

- FTDRL's (Full-Time Daytime Running Lights) and
- All-On-High (High/Lows/Fogs/DRL come on when switching to high beams or using "flash to pass").

Source thread and commentary: [Chevy Avalanche Fan Club of America](http://www.chevyavalanchefanclub.com/cafcna/index.php/topic,60928.0.html)
(<http://www.chevyavalanchefanclub.com/cafcna/index.php/topic,60928.0.html>)

IMPORTANT NOTE: This will **NOT** work for 2002 or 2007+ models...

Materials

- 4 Diodes (I used N914-Type Diodes) Pic 1
- Heat shrink (optional, but highly recommended!) Pic 2
- Knife or scissors to cut heat shrink tubing
- Lighter or heat gun to use on heat shrink
- Pliers to remove relays (sometimes they can be difficult to remove by hand)

You can find both the diodes and heat shrink at your local radio shack. My diodes came in a 50 pack (only about \$2) and the heat shrink came in a variety pack with multiple sizes (also about \$2). I used the smallest size shrink wrap from the pack).

Estimated time: 20-30 Minutes

Pic 1 shows the diodes I used and packaging. Pic 2 shows the diode next to a heat shrink tube I cut to the proper size (more about this below!).



Pic 1 – Diodes



Pic 2 – Heat Shrink Tubing

Directions

1) First we will need to prepare our diodes for installation.

All you need to do is wrap them in heat shrink. So take some of your heat shrink and line it up with a diode like I did in the previous picture (yours will be longer as I had already cut mine in that pic). Cut the heat shrink with a knife or scissors so that just a bit of the tips are sticking out when the diode is inserted into the tube of heat shrink.

2) Now before you heat shrink it look at the diode.

Note the black stripe on the center piece of the diode. Remember which side this is on before you heat shrink. Center the diode in the heat shrink tube and hold a lighter up to it. The heat shrink now forms tightly around the diode! (see Pic 3) Do this with 4 diodes (making a note of which side the black stripe is on for all of them). You might want to mark the tube with some white out so you don't forget. Another option was provided by BaritoneAV:

When you take the Diodes out of the package, keep the **red** tape on the end of the Diode. Take the white tape off and slip the heat shrink on by that side. **DO NOT** remove the **red** tape until you are ready to install the diode. This also gives you a hold while using your lighter to shrink the tubing.

Pic 3 shows the Heat shrink applied, but no tag or markings at this point.



Pic 3 – Heat Shrink applied

3) Now with our 4 nicely heat shrunk diodes we are ready to get into the Avalanche.

You will need to locate the under hood fuse box. Guess where it is? Under the hood! Pop it open and take a look. (see Pic 4).



Pic 4 – Fuse Box Location

4) Open up the fuse box by pulling off the cover.

It should come off nice and easy. Now you should see a bunch of pretty colors in there as well as a diagram on the back of the cover telling you where everything is (this will come in handy!) (see Pic 5)



Pic 5 – Fuse Box with cover exposed

5) You will be removing 4 of the gray boxes in there 2 at a time, these are relays.

I marked these with white rectangles in Pic 6. These relays are marked on your diagram on the lid as "HDLP-HI" (high beams), "DRL" (Daytime Running Lights), "HDLP-LOW" (low beams), and "fog lp" (fog lights) Note that 3 of these relays are identical while 1 is different (look at the numbers on the top of them). The one that is different is the fog relay.



Pic 6 – Relays highlighted with white box

6) Now with your hand, or by using the pliers if it is too difficult, pull out the hdlp-HI relay by lifting it straight up. See Pic 7.

The bottom of the relay will have 4 prongs sticking downward and you will see the 4 corresponding holes that they came out of. Place the relay to the side... When I did this I placed the relay on the lid diagram corresponding to where I got it from so I wouldn't goof it up.



Pic 7 – Pull Relay with help?

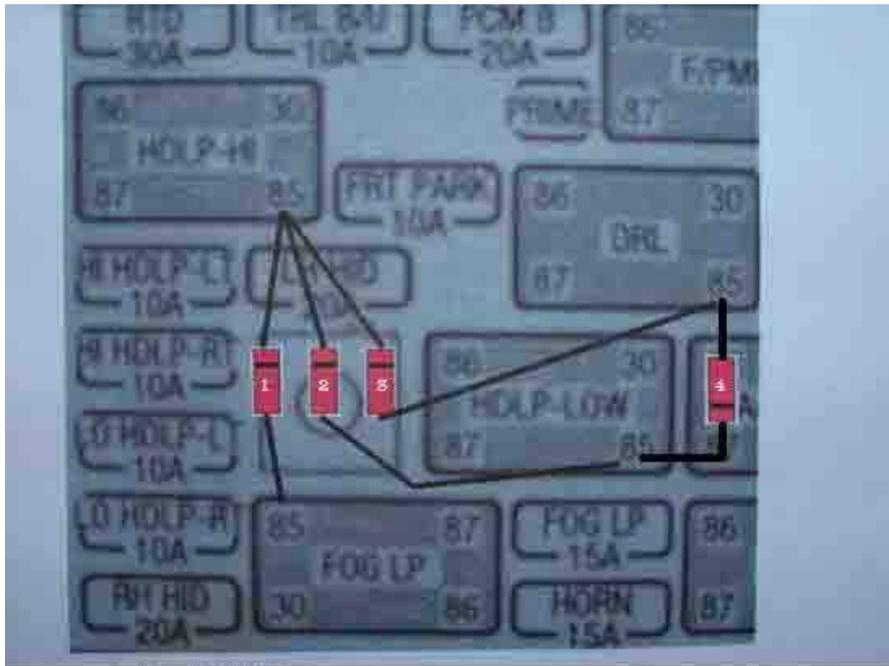
7) We are now going to set it up so our fogs come on when we switch on the high beams! If you don't want this you can skip down ahead. You will still be able to set up FTDRL's (diodes 3 and 4) and/or All-4-On Hi (diode 2).

Now remove the fog lp relay. This is the one that is closest to you and the fender of the truck.

8) Now take one of your diodes and insert the exposed end closest to the black stripe into the hdlp-HI 85 hole.

This is marked on your lid diagram. Now take the other end (which is farther from the black stripe) and stick it into the fog lp 85 hole. If you forgot which side the stripe was on go ahead and install the diode anyway (you have a 50% chance of getting it right and you won't damage your truck if you get it wrong... I went through this myself haha). You can see my installed diode in Pic 1 as well as another diode that we soon will be installing.

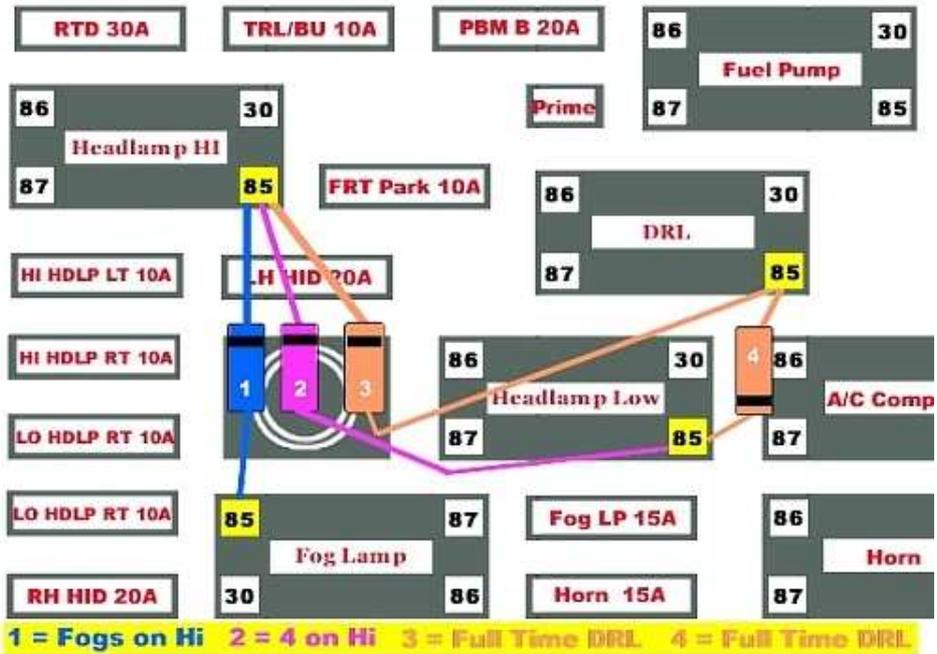
9) Reinstall the fog lp relay... remember this is the one with the different numbers on it (**8567** the 3 other relays are **8866**). The relay should fit snugly and take a little push as it is now sharing the 85 hole with the diode. Now reinstall the hdlp-HI relay the same way. Don't worry about the diode running under the relay, it'll be fine under there.



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Pic 8a – Diode ‘map’ for where to route each of them.

Another illustration of this is below.



Pic 8b – Graphical representation

10) Check your work! You should now have Fogs-On-Hi done, so go ahead and turn on your high beams... your fogs should be on too! If you were one of my fellow idiots who forgot which side the black stripe was on after heat shrinking you may need to turn the diode around if it isn't working. If you did install it properly and its not working make sure the diode is in the relay holes deep enough. The tips need to make contact down in the hole.

Diode 1 of 4 complete! See Pic 8.

11) Now that you have installed one diode successfully we are on easy street!

The process is simply repeated for diodes 2-4. Now we are ready for All-4-On-Hi. This diode will keep your low beams on when you switch on your high beams (normally your low beams shut off when you turn on your high beams). Using the same process, remove the hdlp-HI and the hdlp-LOW relays.

12) Now install your diode in the same fashion that you did your last one! Put the black stripe end into hdlp-HI 85 hole and the other end in the hdlp-LOW 85 hole. Reinstall the relays again... now you have 2 diodes in the hdlp-HI 85 hole. Check your work! Now you should see your high beams, low beams, and fog lights on when you switch on your highs! Sweet! You now have All-4-On-Hi and Fogs-On-Hi!

Diode 2 of 4 complete! See Pic 8.

13) Now we are getting to the good stuff: FTDRL's!

Remove the hdlp-HI relay and the DRL relay. Put the black stripe end of your diode into the hdlp-HI 85 hole (just as the last two) and the other end into the 85 hole of the DRL relay. Reinstall your relays and lets see if it worked. Put on your high beams and you should see every light on (Highs, lows, fogs, and now DRL)!

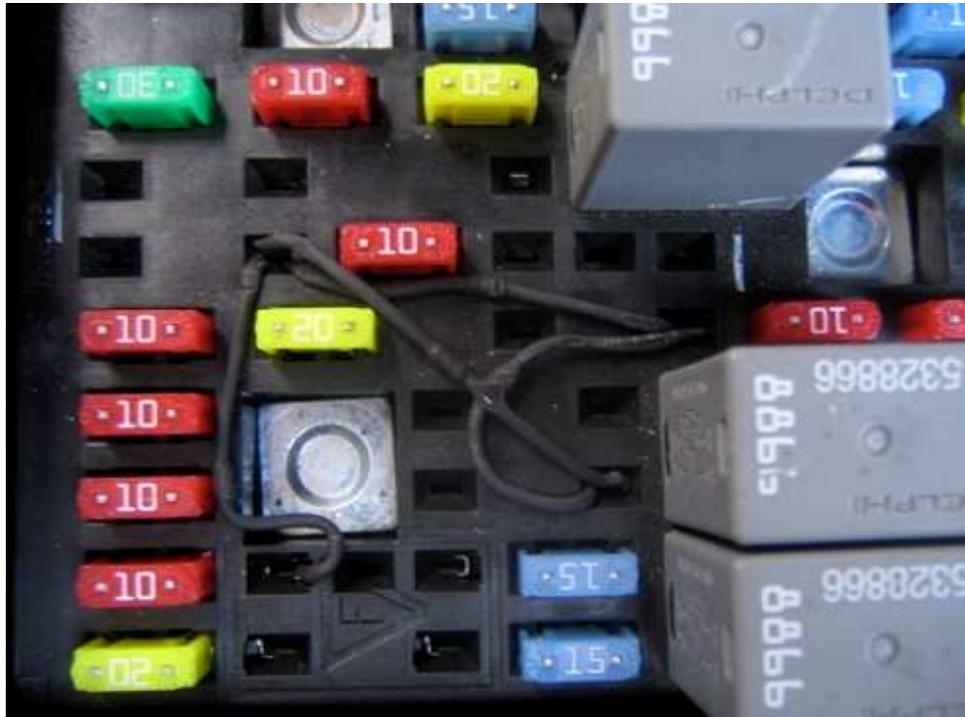
Diode 3 of 4 complete!

14) you: sweet vertabatt I have FTDRLs right?
me: nope! not yet!

Switch your lights to low beams, DRLs are no longer on! The way it is set up now DRLs only come on when the Highs are on. So lets install that 4th diode and take care of it! Remove the hdlp-LOW relay and the DRL relay. Put the black stripe end of your diode into the hdlp-LOW 85 hole and the other end into the DRL 85 hole. Replace your relays and check it! You should now have DRLs on when your low beams are engaged (see Pic 1)! Switching over to high beams your low/high/fogs/and DRL should still come on as before. Some members call this All-On-Hi.

Diode 4 of 4 complete!

Your fuse box should now look like mine (see Pic 9).



Pic 9 – Relays run

You may not want all of these lighting mods so here is a key to get what you specifically want:

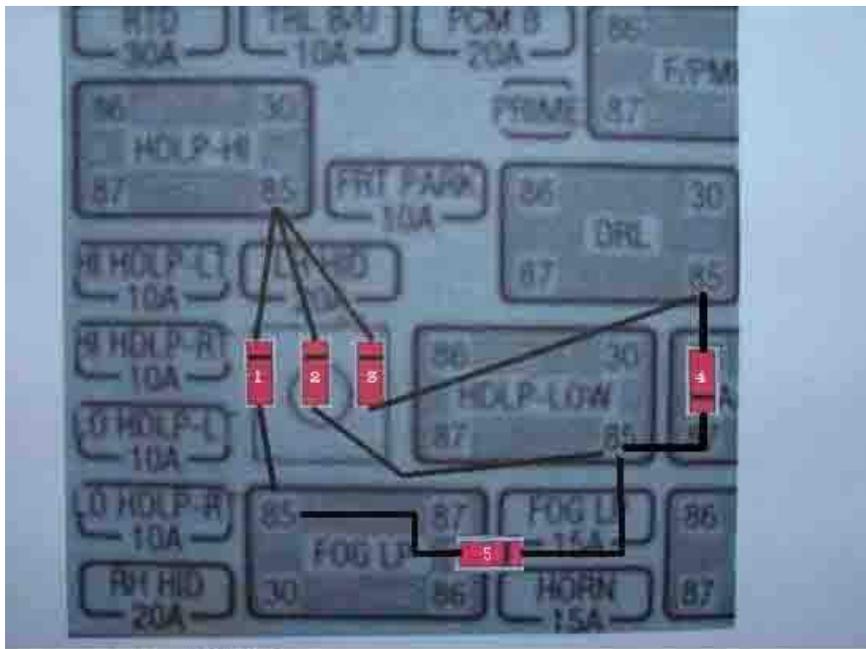
Fogs-On-Hi only: install diode 1

All-4-On-Hi only: install diode 2

FTDRLs only: install diodes 3 and 4

Fogs-On-Low only: install diode 5 (see page 5 of this thread)

*Please note that I have added directions for a **5th diode** that will activate fogs simultaneously with the low beams. See below!*



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Pic 10 – 5th diode

You can do each of these individually to get a combination that you want!

Good luck!!!

PS. this walkthrough is dedicated to ShadowAv, the member who finally set me over the edge to make this. 😊

The final product:



Pic 11 – All diodes run and relays installed



Pic 12 – All on!