

How to Replace the Alternator and Install a Splash Guard Step by Step

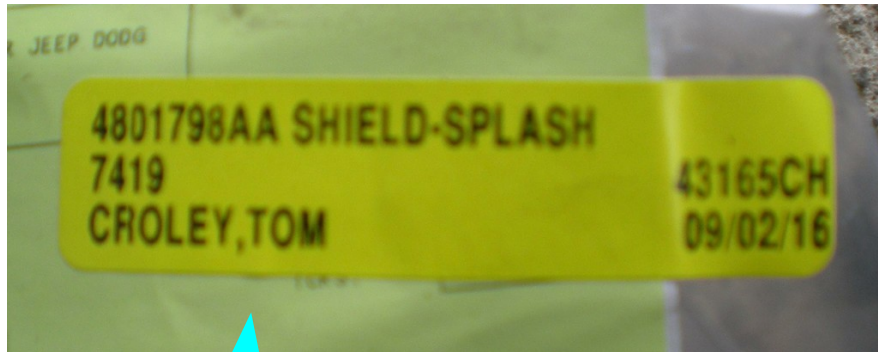
By Chirpz

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The following step by step guide represents how I changed my alternator. I do not claim that it is the best way or the right way. I only claim that it worked for me and I hope that it will be a help to you should you need to do the same. **Use this guide at your own risk.**

You should not be doing this unless you have a basic set of tools. Nothing special is required, just some metric wrenches, sockets, and a few torx tools. So relax you can do it, but it will be a fight at times.

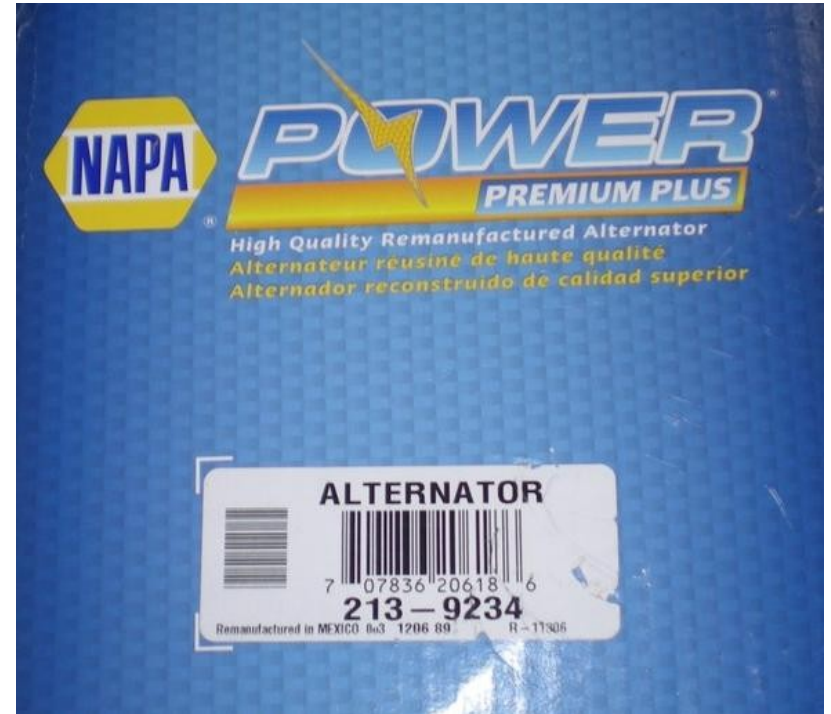
Things to buy



Dealer Items or internet.



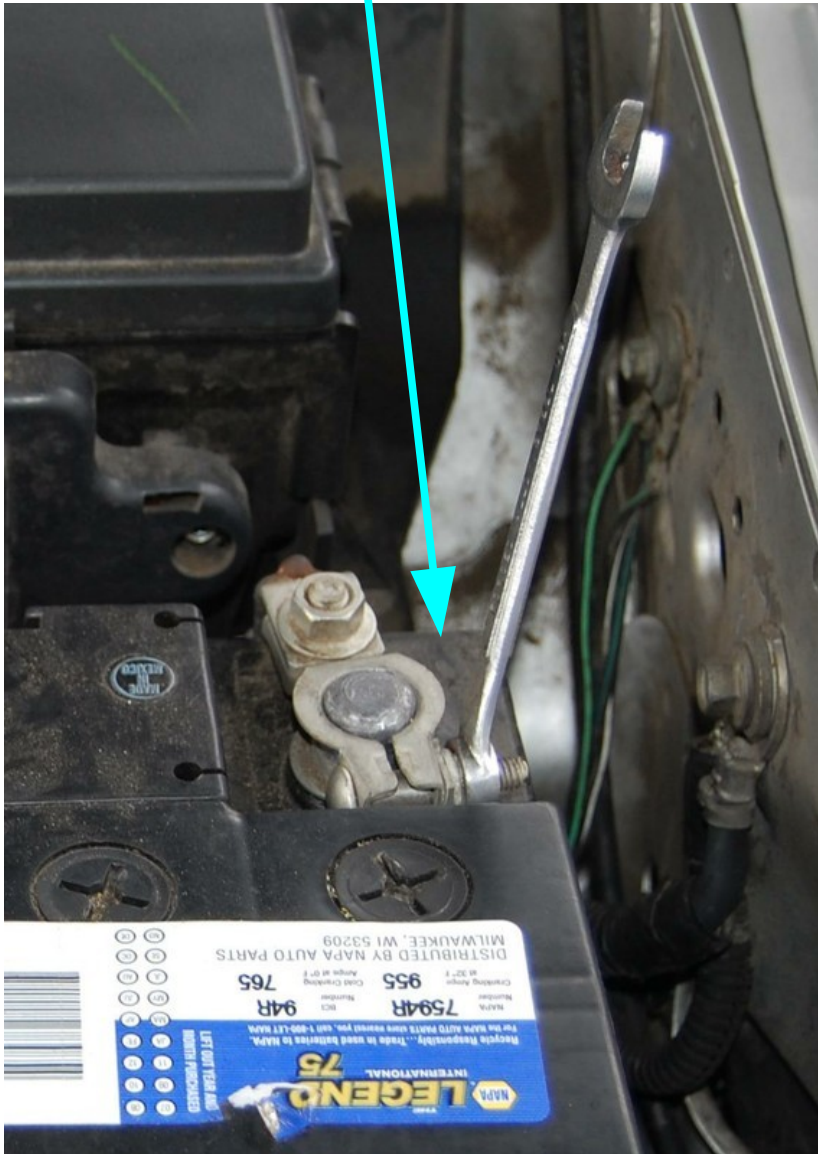
Get a splash shield if you don't have one!!
I paid \$11.85.



I used a Napa Alternator with a
lifetime warranty. Mine was \$249

Throttle Body Gasket . I paid \$11.00

Very Important!



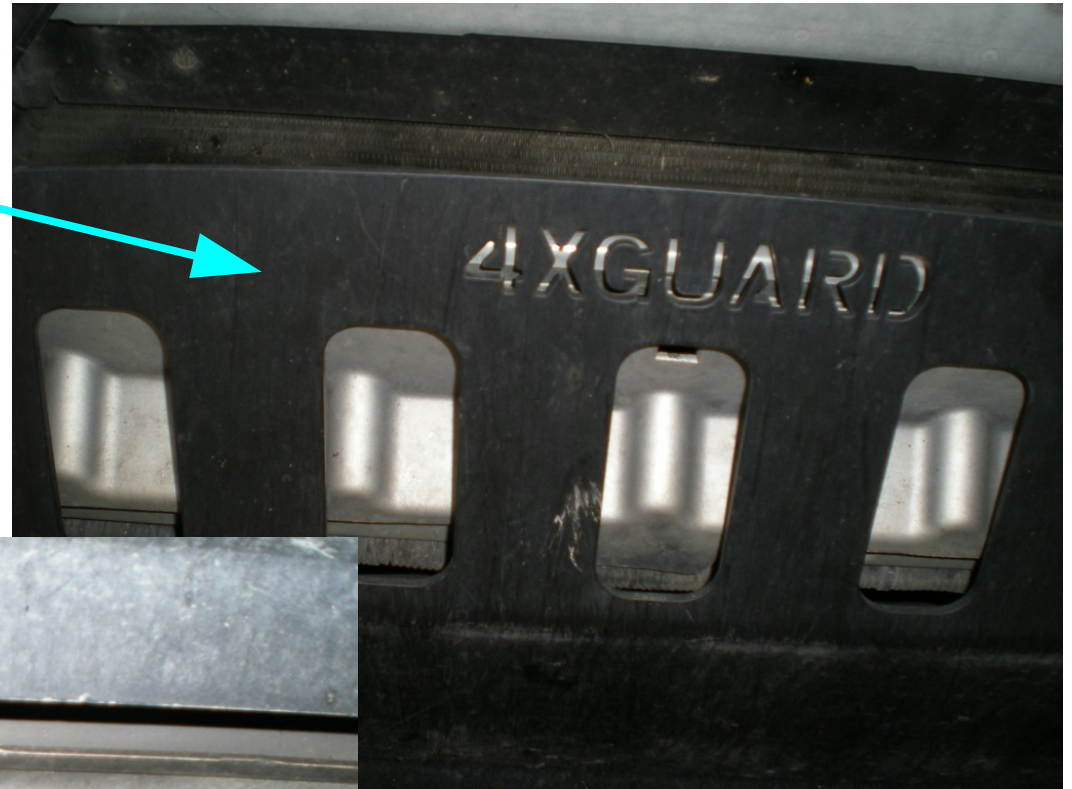
Remove the negative pole of the battery!

Remove your engine cover and sell it on Ebay. It looks pretty but it traps heat. Remove two bolts and the oil cap. Lift the front of the cover and pull it up and forward.

Do **NOT** omit disconnecting the battery. If you do, you will damage your new alternator. Disconnect the battery!



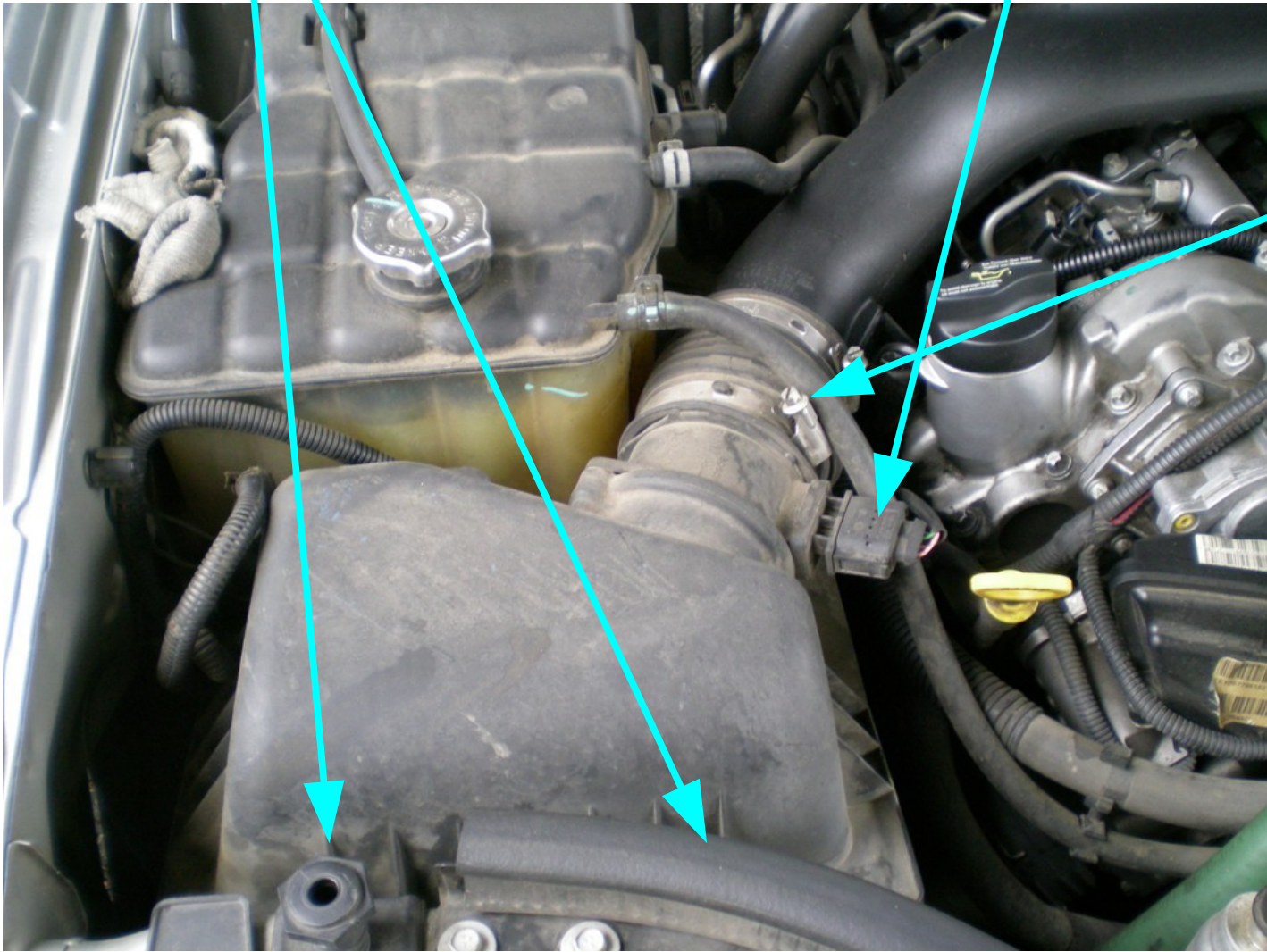
Remove front skid if you have one.
4 bolts hold mine on.



Remove engine skid plate if you have one. Mine is a factory skid held on with 4 bolts. Loose the two in the front. Remove the two in the back.

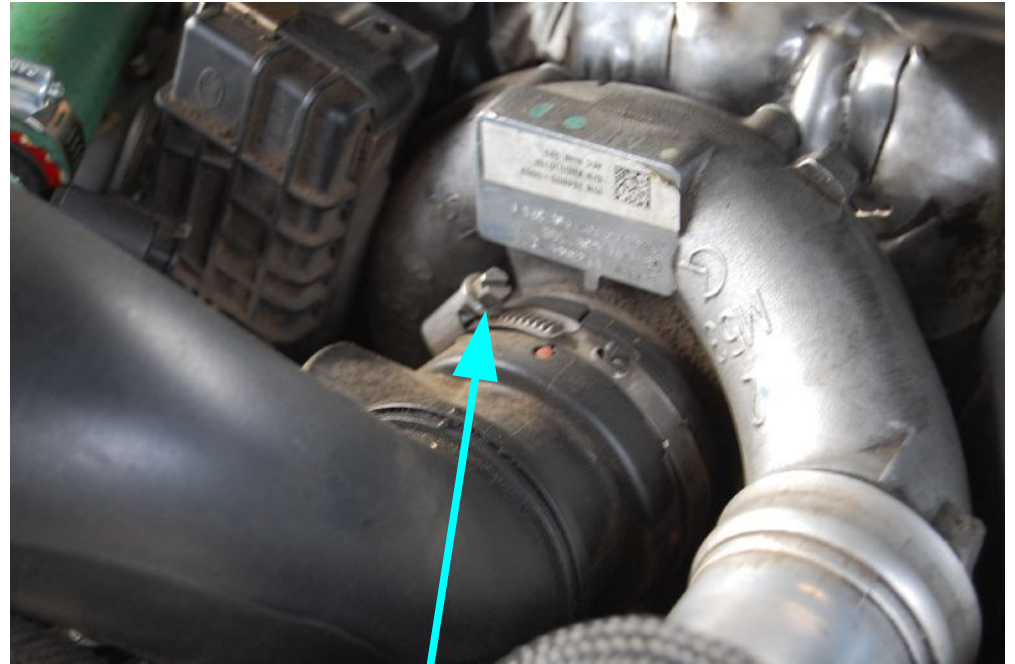
Remove air box cover and air filter. Two spring clips hold it on as shown by arrows.

Remove this plug and move it out of the way. Squeeze, wiggle and pull

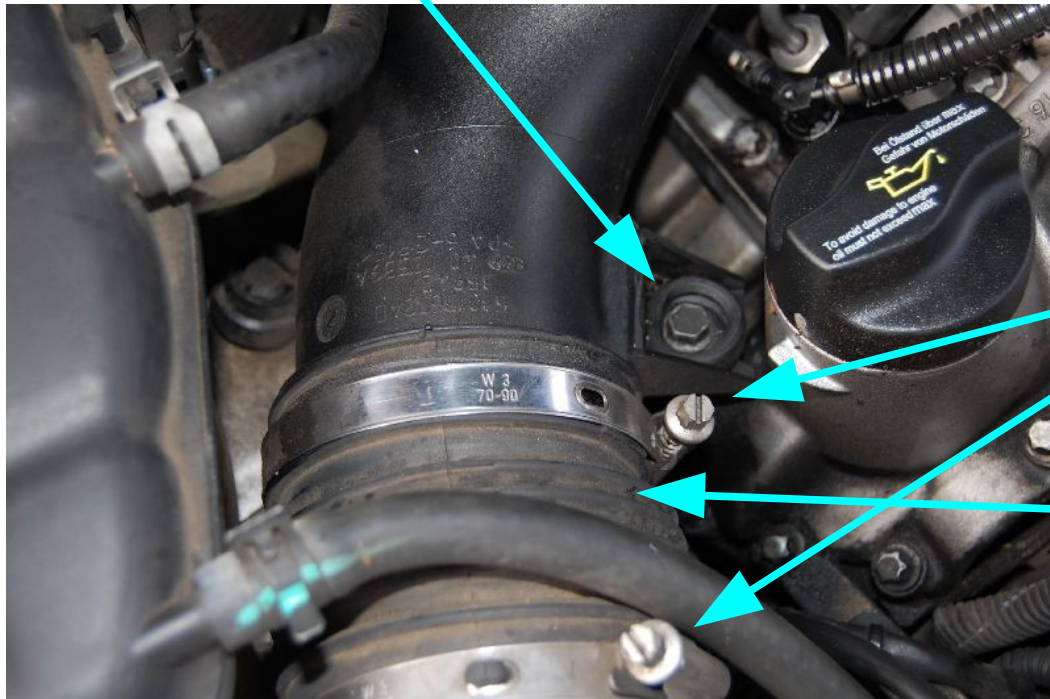


Loosen screw

Remove the fresh air intake.
Loosen two screws and remove
one bolt, then wiggle it off.
Be careful to keep foreign
objects from entering your
turbo or the air tube.



Bolt



Screws

You can leave this rubber connector
attached to the air intake or you can
remove it separately.

Remove the end of the air tube from the air box and then rotate the tube upward. Then wiggle it off of the turbo inlet. (You can leave it attached to the turbo if you want and just swing it up out of the way.)



If you have the older type orange gasket where the intake meets the turbo, this would be a good time to inspect and maybe replace it.

If it is all gunky in there consider doing the Elephant Hose Mod someday soon.

My Elephant Hose

Remove this screw that holds the dip stick tube in place. You want to be able to wiggle the dip stick tube a small amount when pulling the alternator out of the hole.

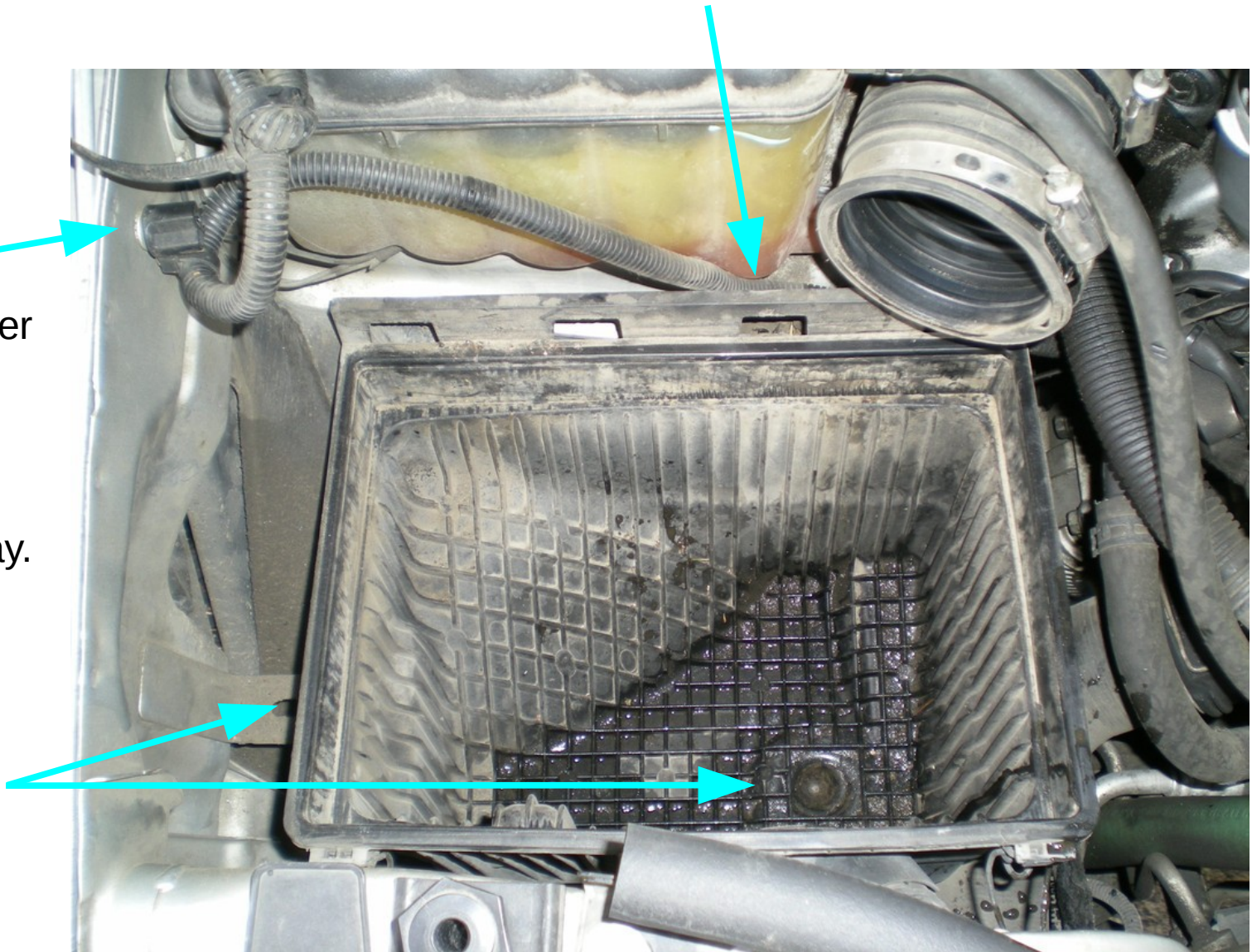


Using a 10mm socket and long extension remove the bolt hidden down here. It secures the air box.

The bolt is not shown in picture. Peek down that crack, you'll see it.

Pull this wire holder out. It just sticks in there. It holds your block heater cord. Move the cord out of the way.

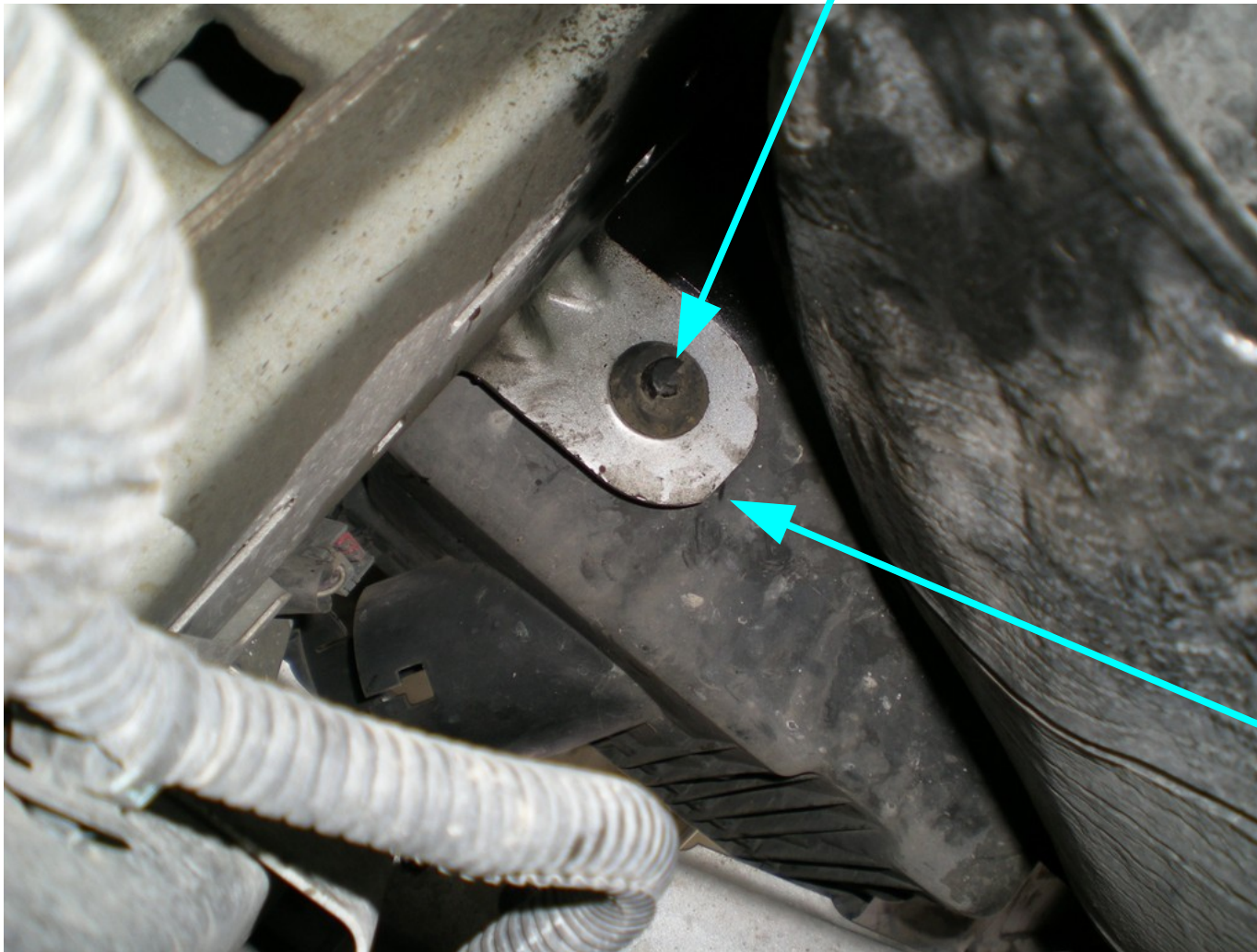
The box is held in by one bolt and two anchors. These are the anchors.



Loosen the air intake pipe and slide it forward and out of the way. A plastic tab secures it loosely to the air box. Now the box can be removed.



Crawl under the car and look up at the bottom of the air box. The center anchor is very tight. It is a plastic spike sticking into a rubber grommet. You can just muscle it out from the top and risk breaking it or you can use a pry bar and ease it off from below. I used the crooked angle of this pry bar. Place the pry bar between the flange and the box. The box spike will pop right out of the grommet. Try not to bend the flange that holds the grommet. Oil the grommet afterward to help replace the box.



Place bar here
Under the flange

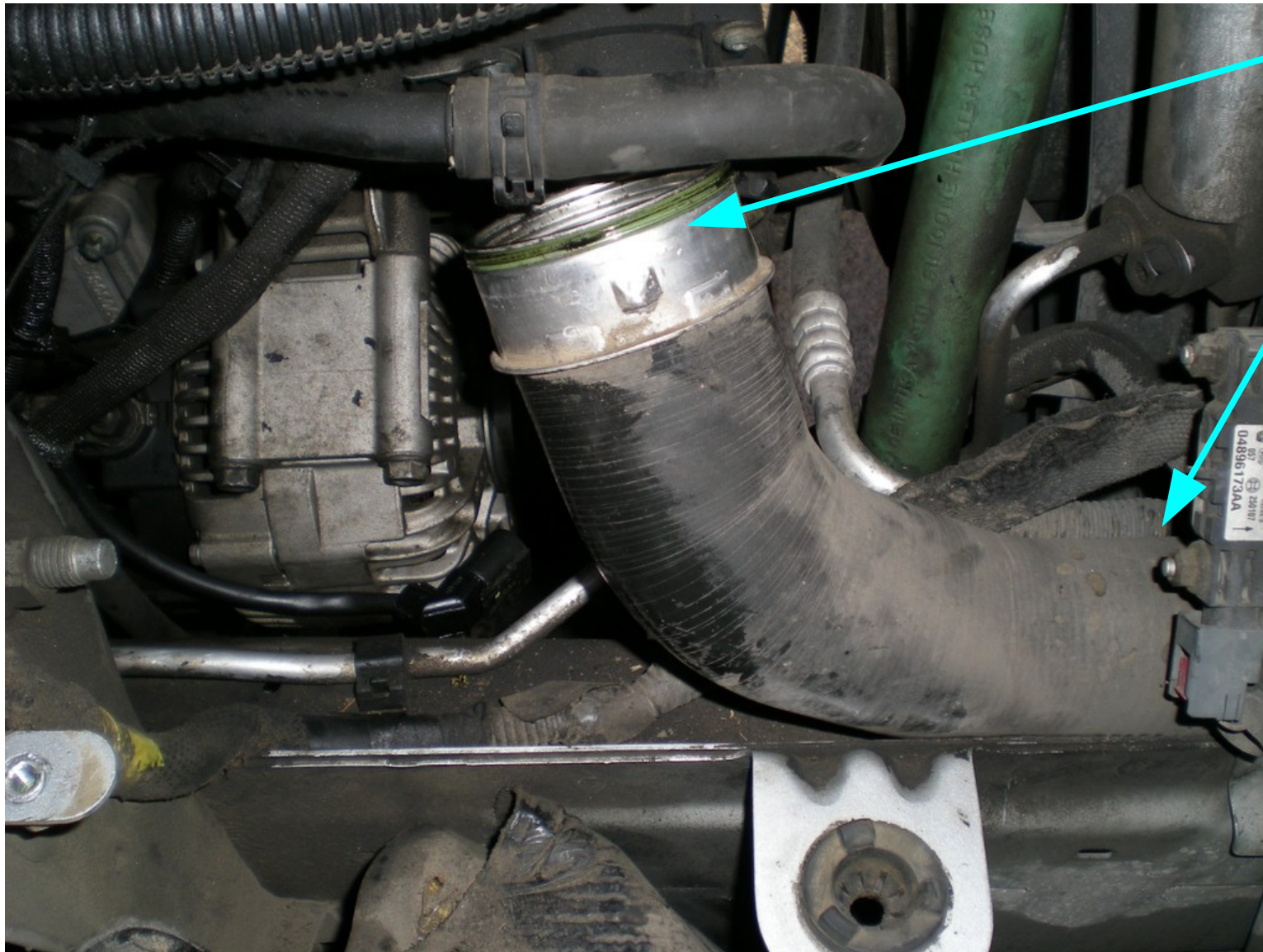
Now you can see it, but you can't get it out yet. You have to get the throttle body and its hose out of the way. You don't have to fully remove the hose!



Carefully remove this clip. Grasp the rubber hose and slide it out of the throttle body. The hose has a metal end on it. Be very careful not to damage the plug that is connected to the plastic throttle body extension.



Slip the hose out, bend it forward and tuck it out of the way. Be careful not to damage the gasket. I forgot to purchase one of those and it is not listed among things to purchase but may be a good idea.



Gasket

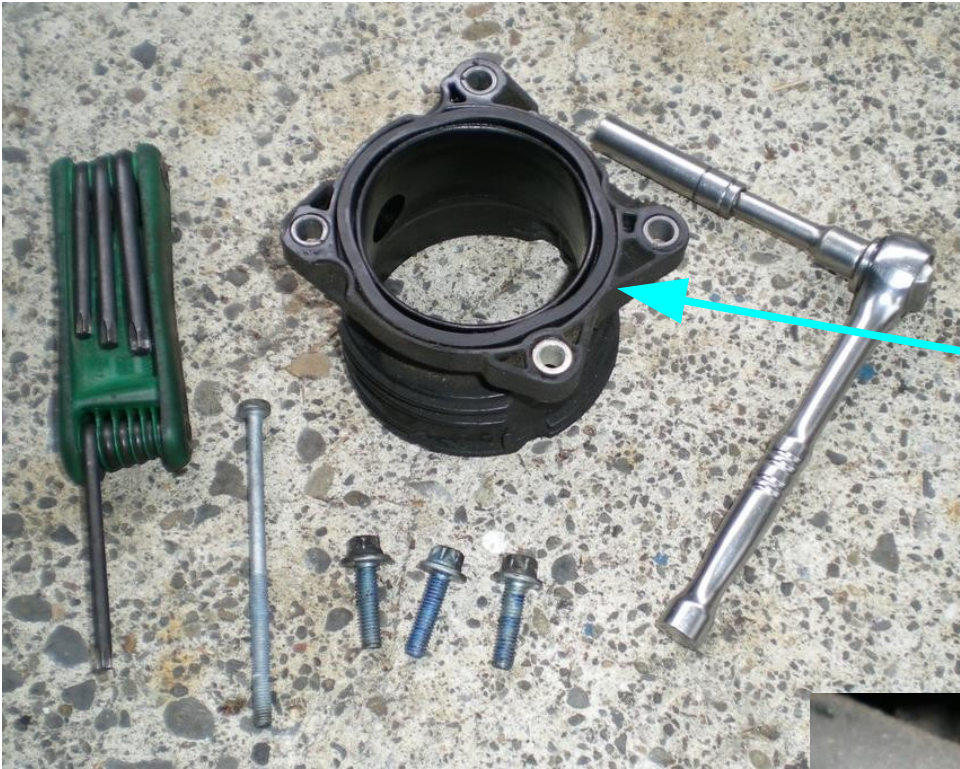
Tuck it over here
somewhere

I also had to
remove my
elephant hose.

Unplug the fragile sensor and use a zip tie to secure it well out of the way. You really don't want to damage it. Squeeze, wiggle and pull gently.



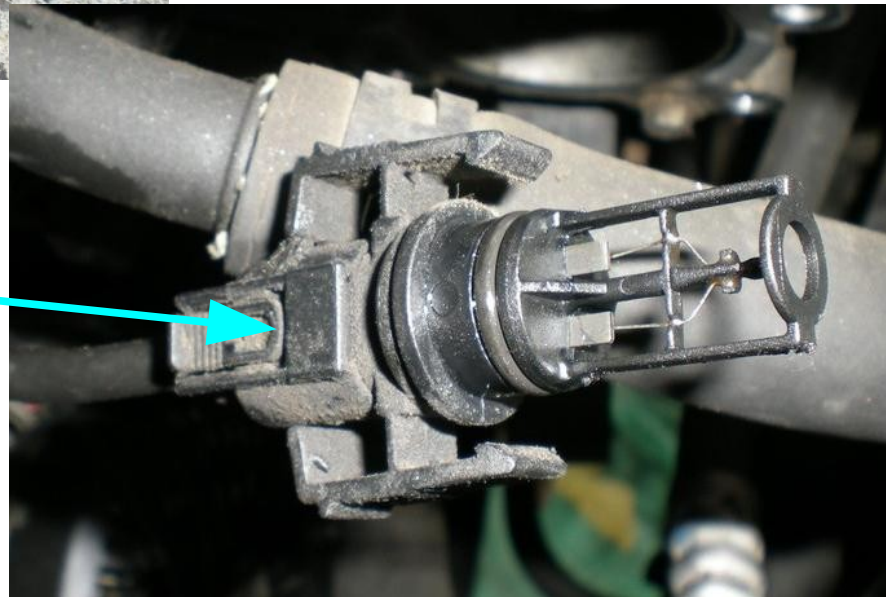
Remove 4 torx screws. For 3 of them you can use a 5/16" socket with 1/4" drive. This makes it WAY easier than a bulky torx socket. Use a torx screw driver on the 4th.

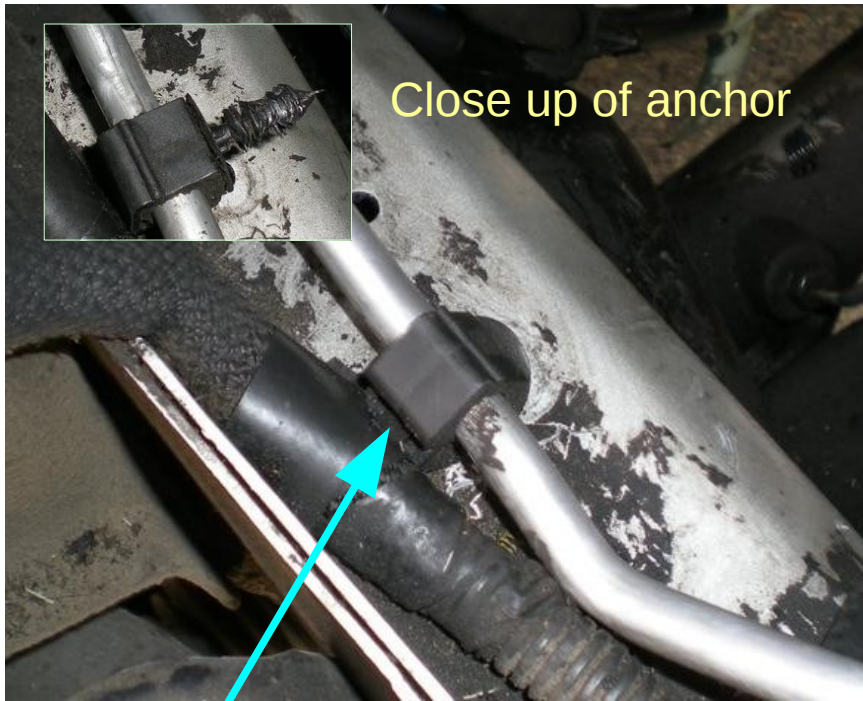


You do not have to remove the entire throttle body, just this plastic extension tube. Replace the gasket with the new one if you purchased it.

Gasket

This is what the fragile whatchamacallit plug looks like. Looks pretty fragile to me. Probably expensive too.





Close up of anchor

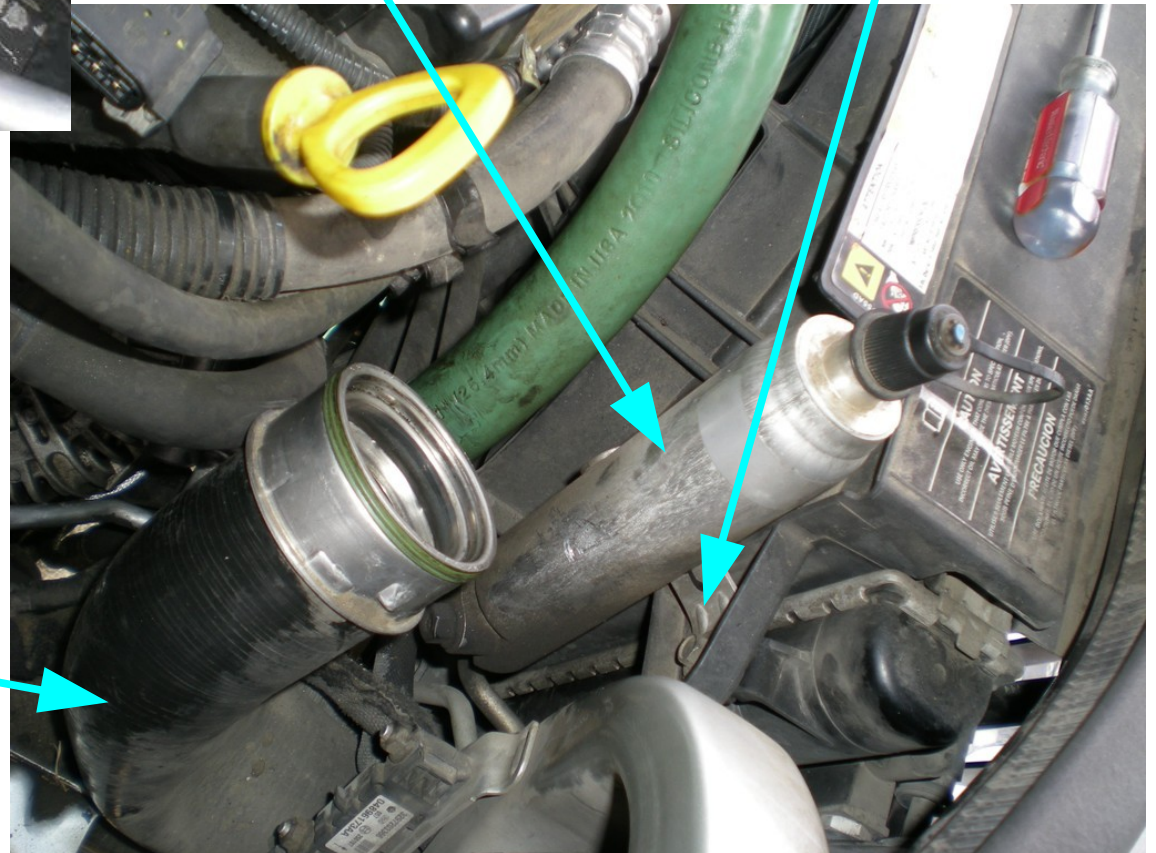
Remove this bolt to loosen this gizmo. Make no hissing sounds. Don't remove the gizmo! Just the bolt. The AC line is connected to this gizmo along with other lines. It needs to be loose enough to wiggle but you don't want to abuse it.

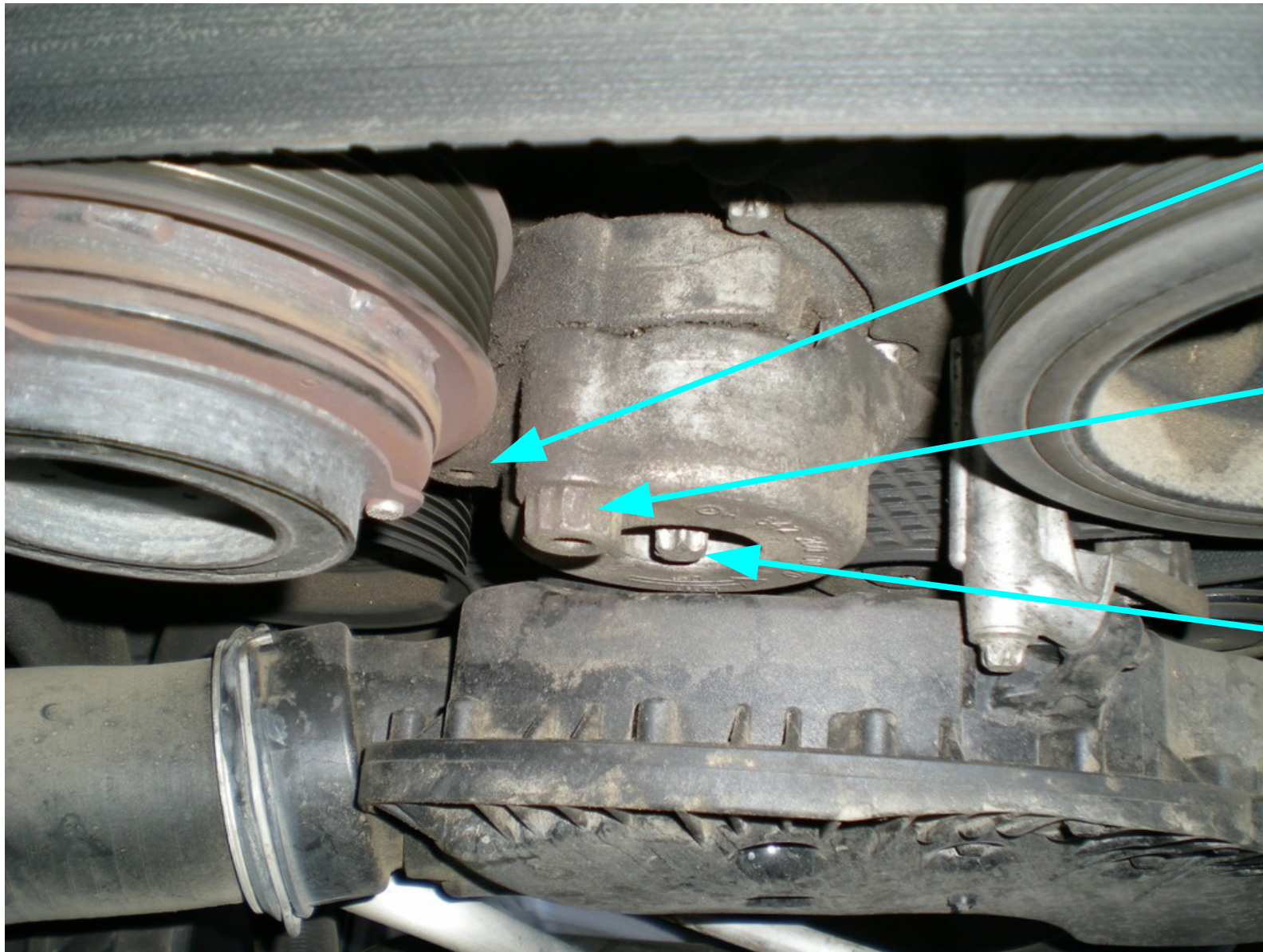
Gizmo

Bolt

Loosen the AC line by pulling this anchor out of its hole. The anchor is tough but it just pulls out. No need to detach it from the AC line.

See how I kinked the hose out of the way?





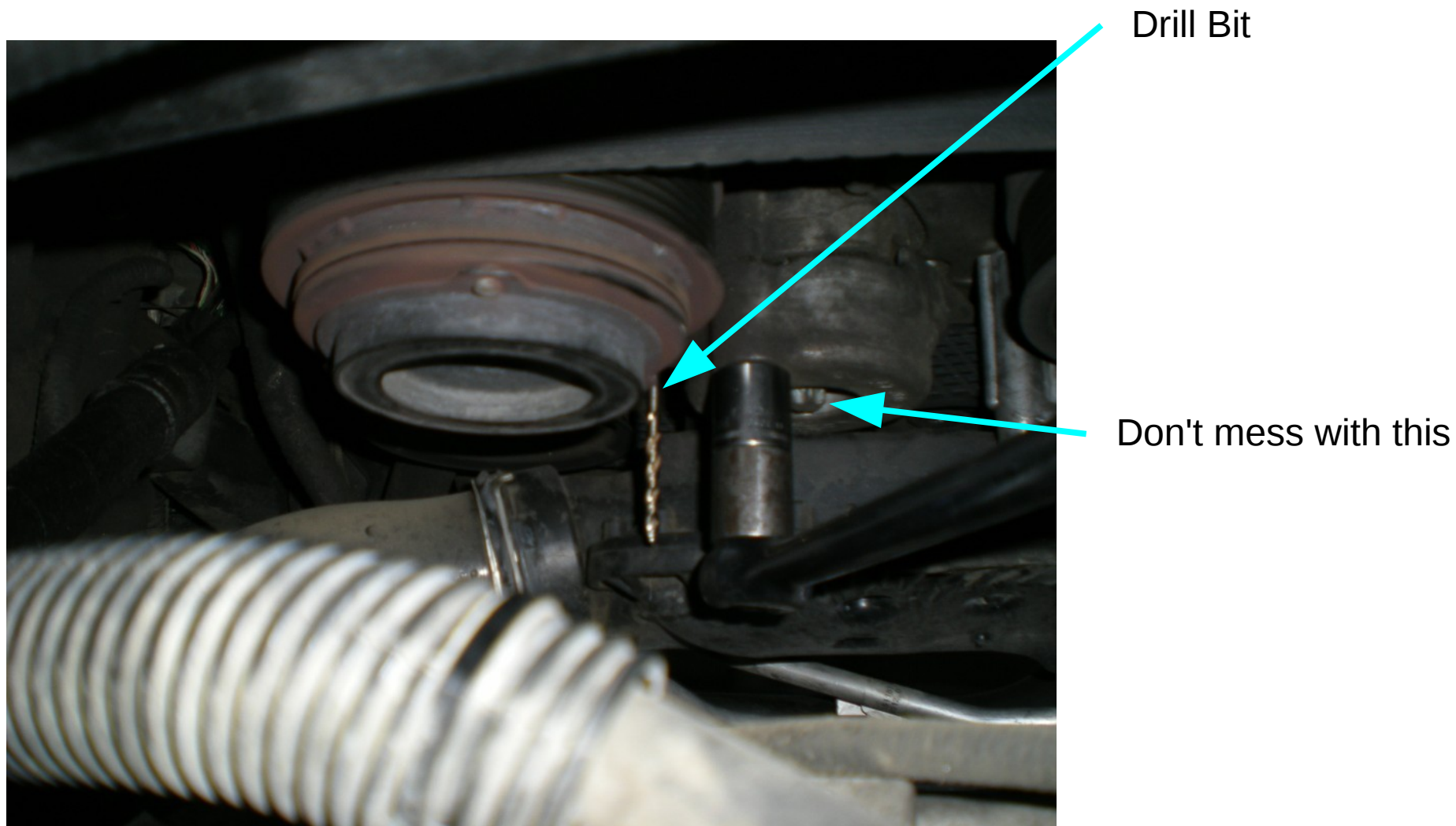
Hole

Put socket here

Don't mess with this!

Loosen the belt tensioner. Use a 17mm socket 1/2" drive and a breaker bar. I converted my socket to 1/2" with an adapter. Use the back side of a drill bit that is close to the size of the hole to hold the tensioner open. You want the bit to be a close fit. You have to crawl under the car to do this.

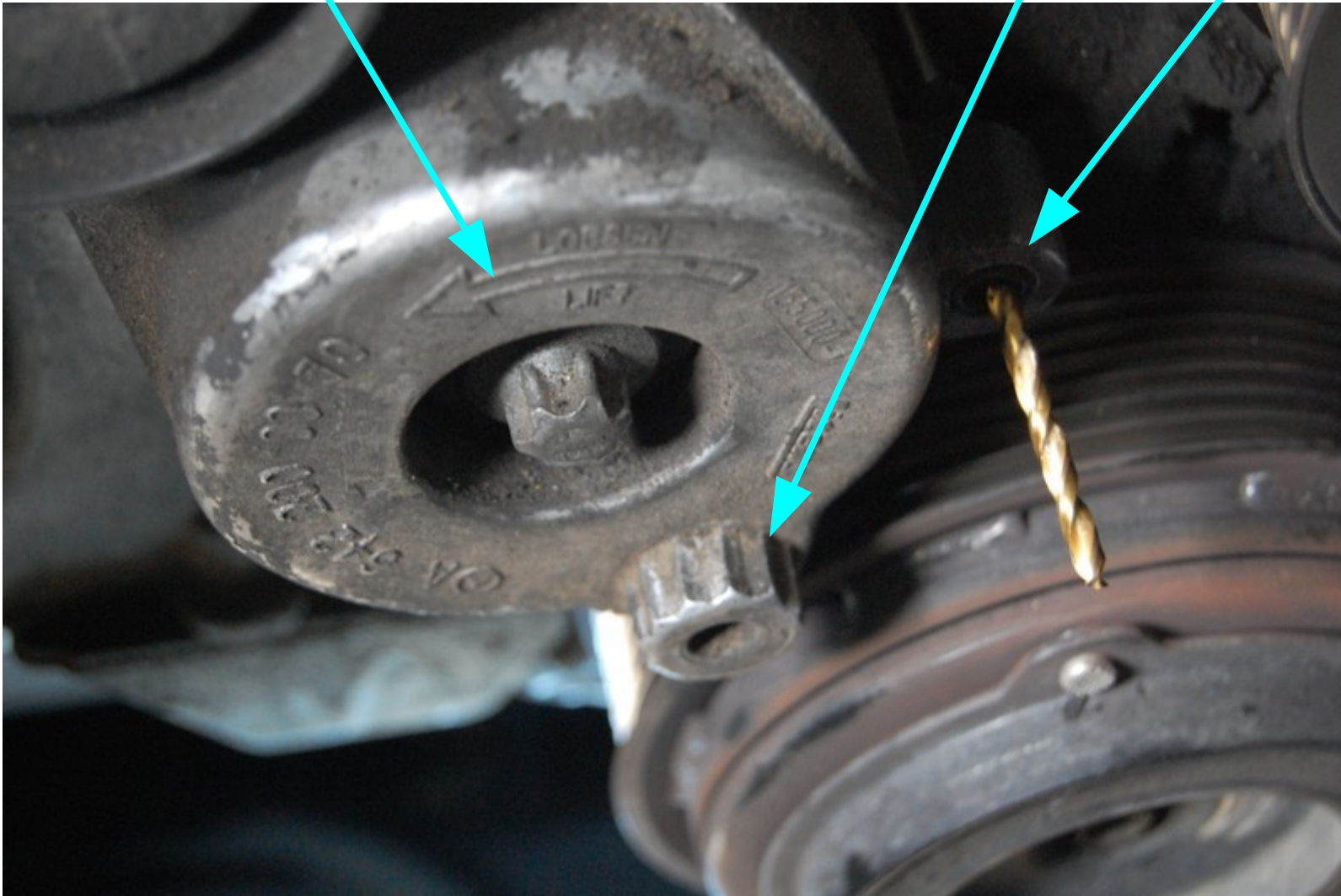
Rotate the socket counter clockwise. Toward the driver side. You will see the belt loosen. Insert the drill bit. If the belt tightens back up when you ease off, repeat using a larger drill bit. Wiggle the drive belt off of the alternator.

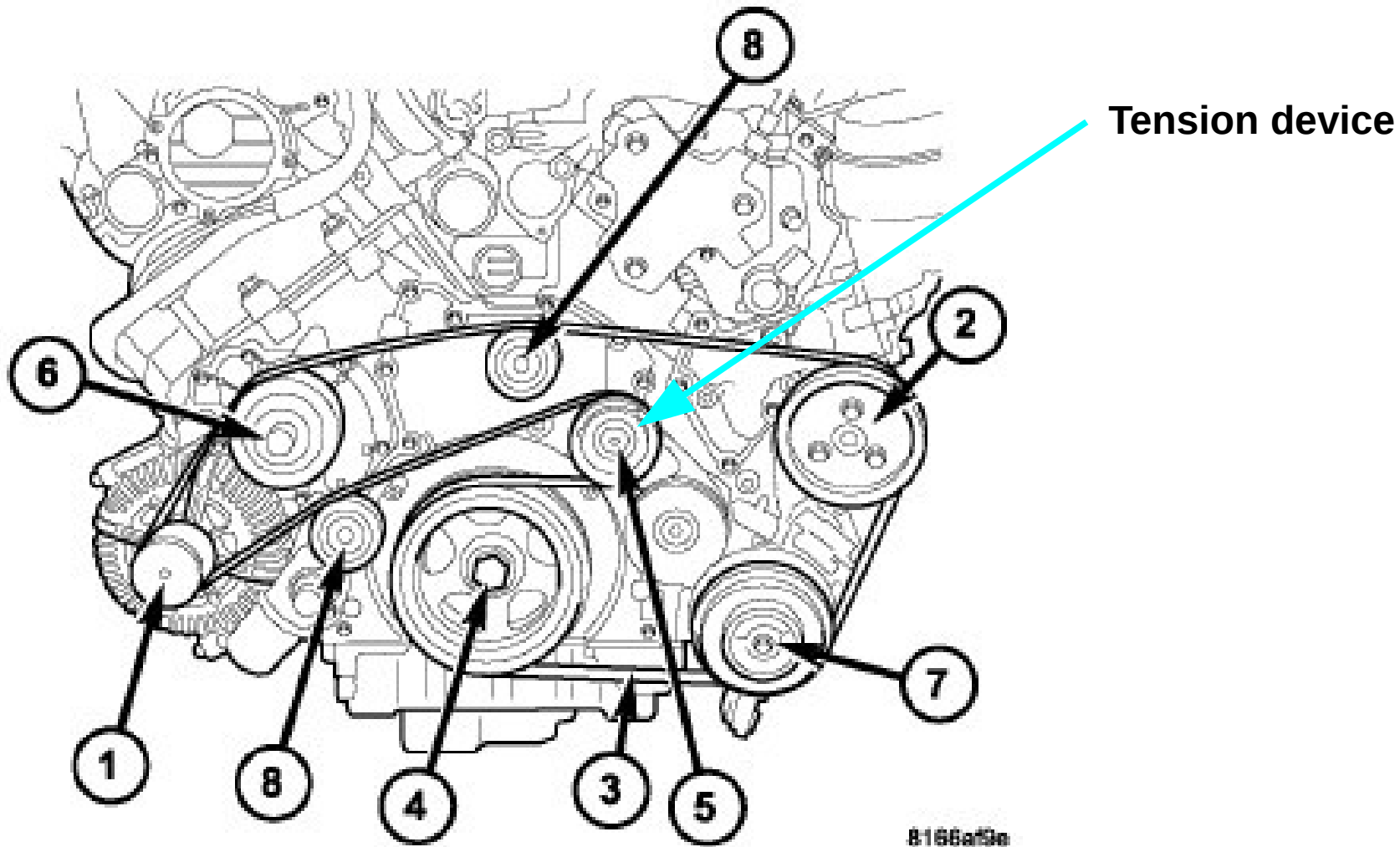


Here is another view of the tension device. Socket goes here.

Arrow indicates direction

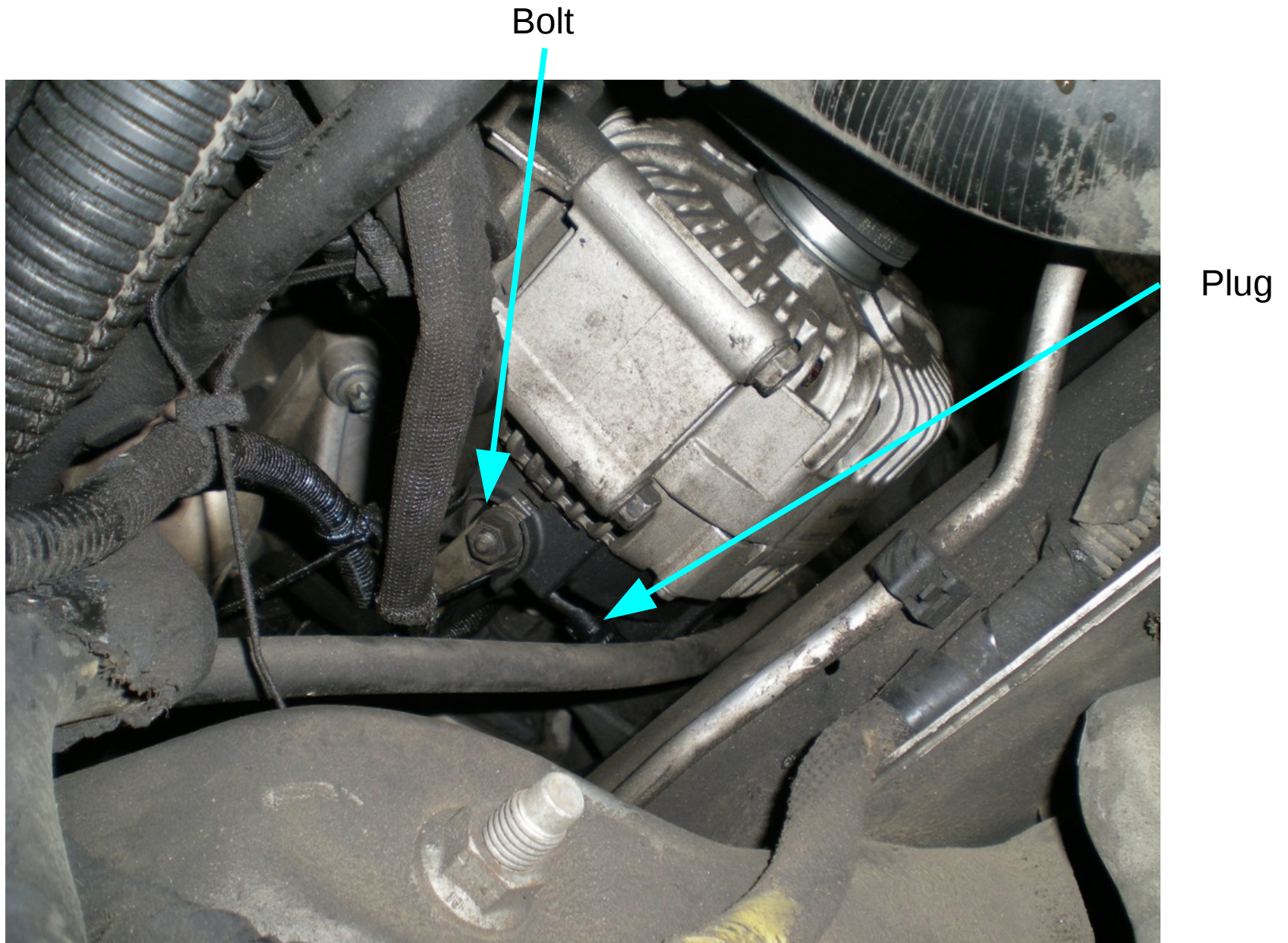
Locking hole

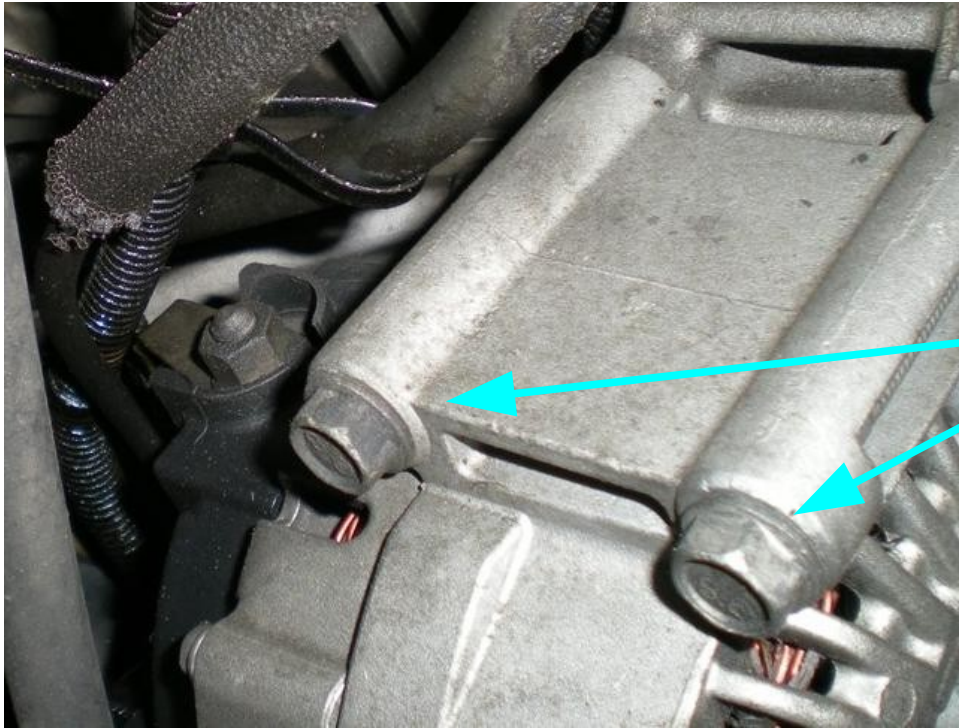




I had to slip the belt off of pulley 6 and 8 in order to remove it from the alternator. Try not to let the belt slip off of anything else.

Remove the two wires from the alternator. Remove the nut. To remove the plug, squeeze, wiggle, and pull gentle. Clean up the plug and cable end.





If you have a splash guard, remove it.

Loosen the top two alternator bolts a little bit, but do not remove them yet.

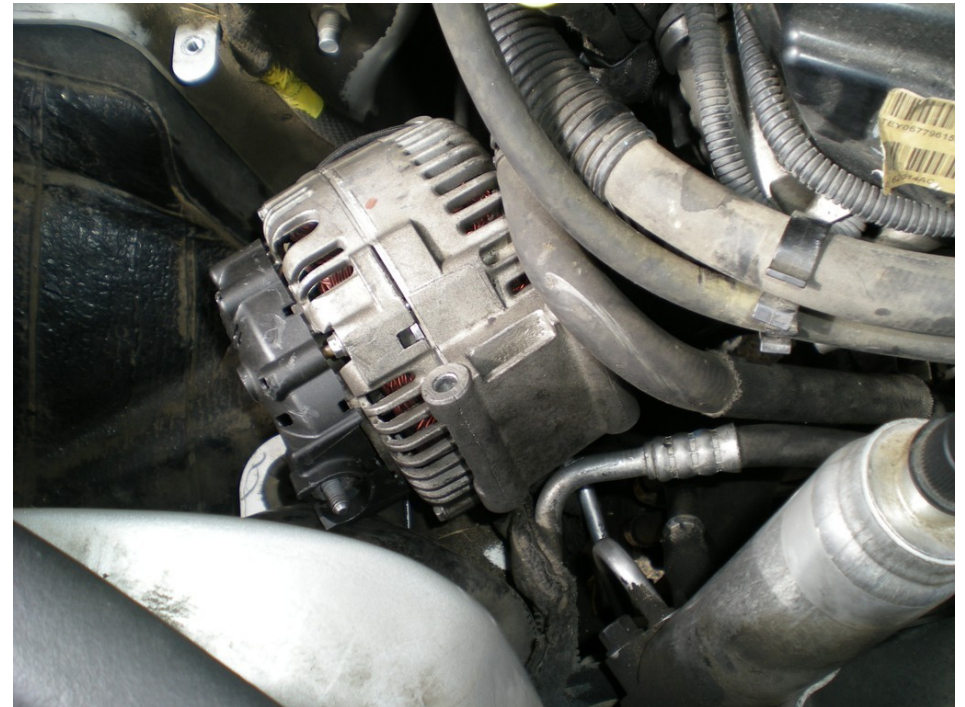
From down below, reach up and remove the bottom two bolts. Try to get them out but you probably can not. The body is in the way.

Remove the top two bolts and the alternator will be loose. By wiggling it around, you can get all of the bolts completely out without having to raise the engine up. Make it so.



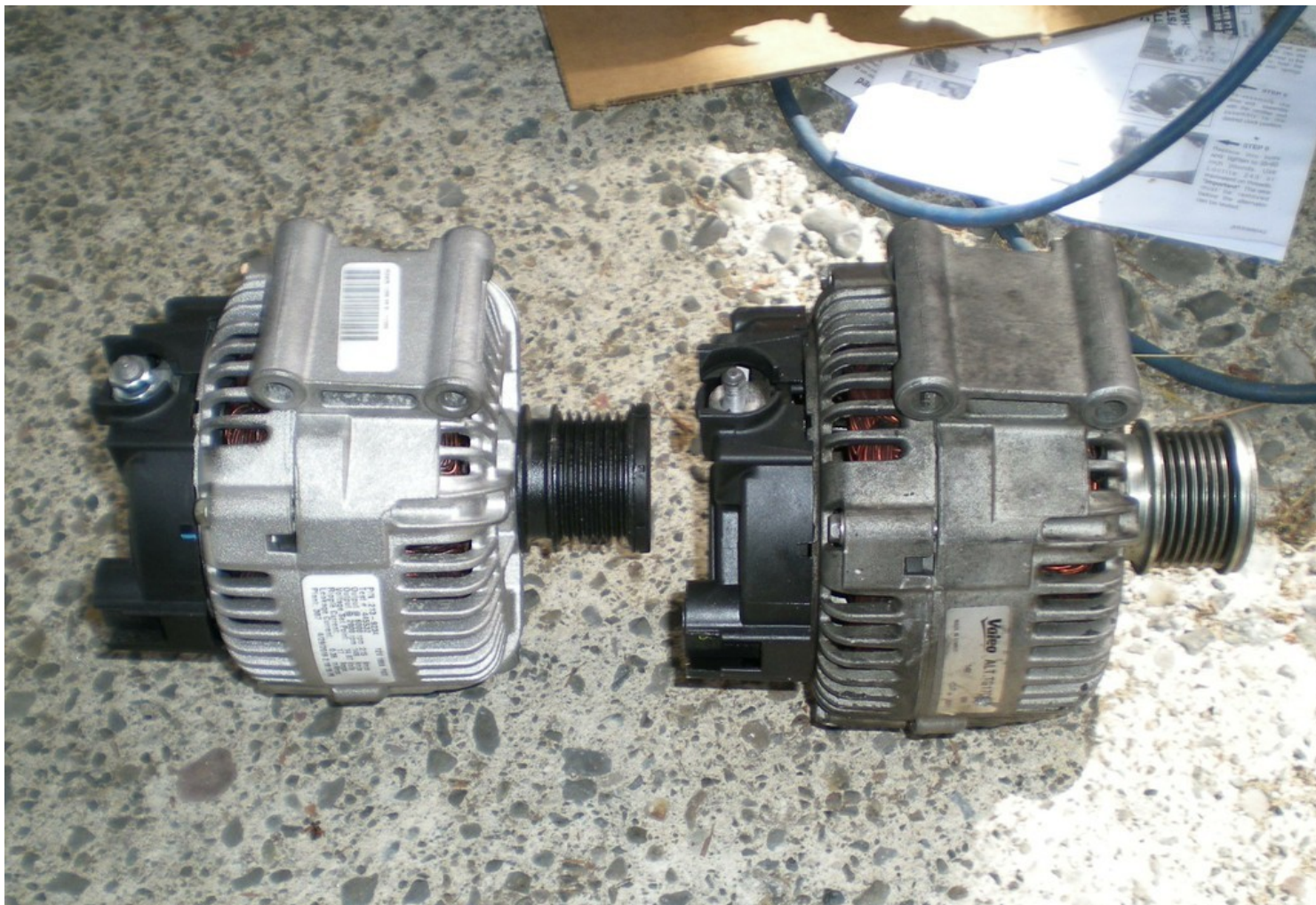


Now for the big fight. Move the alternator forward to clear the throttle body and nose it down while rotating it to clear the AC line. Gently pull the AC line a little and keep wiggling around until you can back the alternator out of the hole. Keep working it. It IS possible. I did this by my self without a helper. Its heavy and it is a very tight fit but keep at it and you will get it.



Pay close attention to the exact position that it is in when you succeed.

Compare. They match. My old one was damaged by oil dripping from the fill cap. One day I put the fill cap on crooked and took off down the freeway. 5 quarts blew out the cap and doused the alternator and everything else.

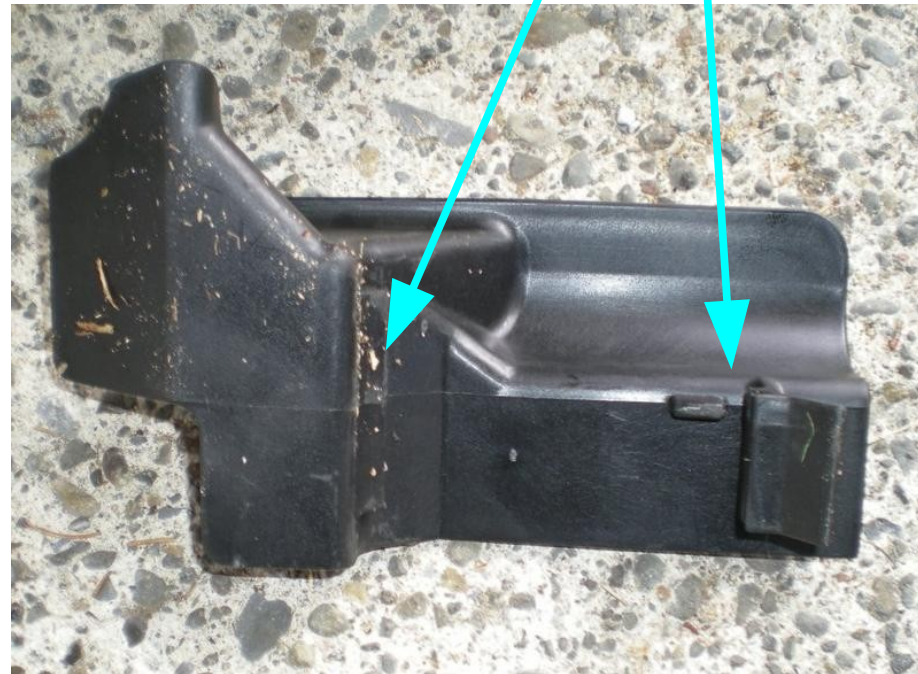


Oil Splash Guard



This is the splash guard. This end goes toward the rear of the alternator. This is the top view of it.

Bottom view. Notice the little flanges that hook to the grooves in the alternator

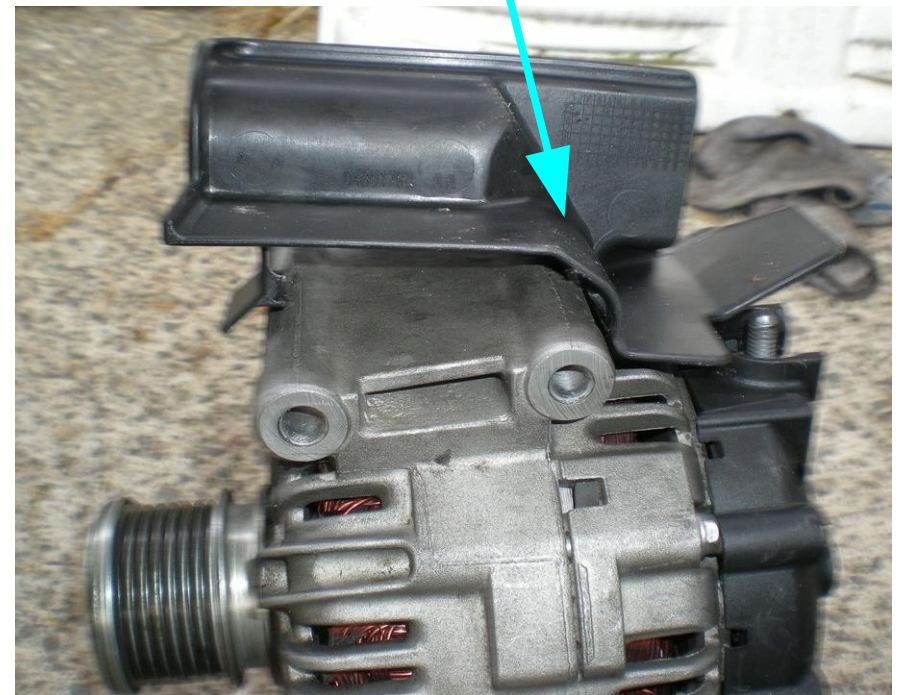




Hook it in the back first, then snap the front down. It is easy to remove so feel free to practice snapping it on before you install the new alternator. To remove it unsnap the front first.

The splash guard fits like this.

Don't install it yet... just practice. You can't get the alternator back in the hole with the guard in place.





Wrestle the beast back into place starting with the position that you carefully noted when you removed it. I goofed and put mine in upside down, then it was very hard to rotate it...but possible.

Place the all the bolts in the their holes by wiggling the beast around to get them in. When they are all in, barely start the two top ones. Then start the bottom ones. Then tighten them all evenly. I do not have the torque but they were very tight. Use a short 13mm wrench to tighten them. Don't over do it.

Snap the splash guard into place.
Replace the drive belt and take
the drill bit out of the tensioner.

Put everything back in reverse order.

Pat yourself on the back. You probably
saved about \$400.00.

