

DIY Write-Up
Ball Joint Replacement
2007 Honda Accord SE 4CYL

At 318K Miles (2007 4CYL SE) my lower ball joint (factory original) started squeaking over bumps and there was visible play in the joint. I replaced the ball joint and learned a lot along the way. In the hope that it might save others from some hassle, this document shows the process I went through to replace the ball joint and documents a few things I learned along the way.

Symptoms Experienced From Bad Ball Joint:

On my vehicle the failing ball joint made a slight squeaking noise when going over bumps. The video clip below depicts the sound it made which could be readily reproduced by pushing down on the hood of the car:

<https://youtu.be/ubRLxveGIQU>

Testing for Play in the Ball Joint:

With the car jacked up off the ground, there was NO noticeably play in the wheel (when grabbing it and shaking it at any position or when using a lever arm to push up under the wheel). This is due to the fact that when the car is jacked up, the strut expands and puts downward pressure on the ball joint making it very difficult to see any play in the joint. A better way to check the condition of the lower ball joint on this vehicle is to support the vehicle's weight by the lower control arm and then check for play in the ball joint (by prying between the knuckle and lower control arm, or prying up on the knuckle). Using this recommended method, the play in my failing ball joint was readily apparent. Here is a video clip to demonstrate:

<https://youtu.be/qdkF7IUv5YU>

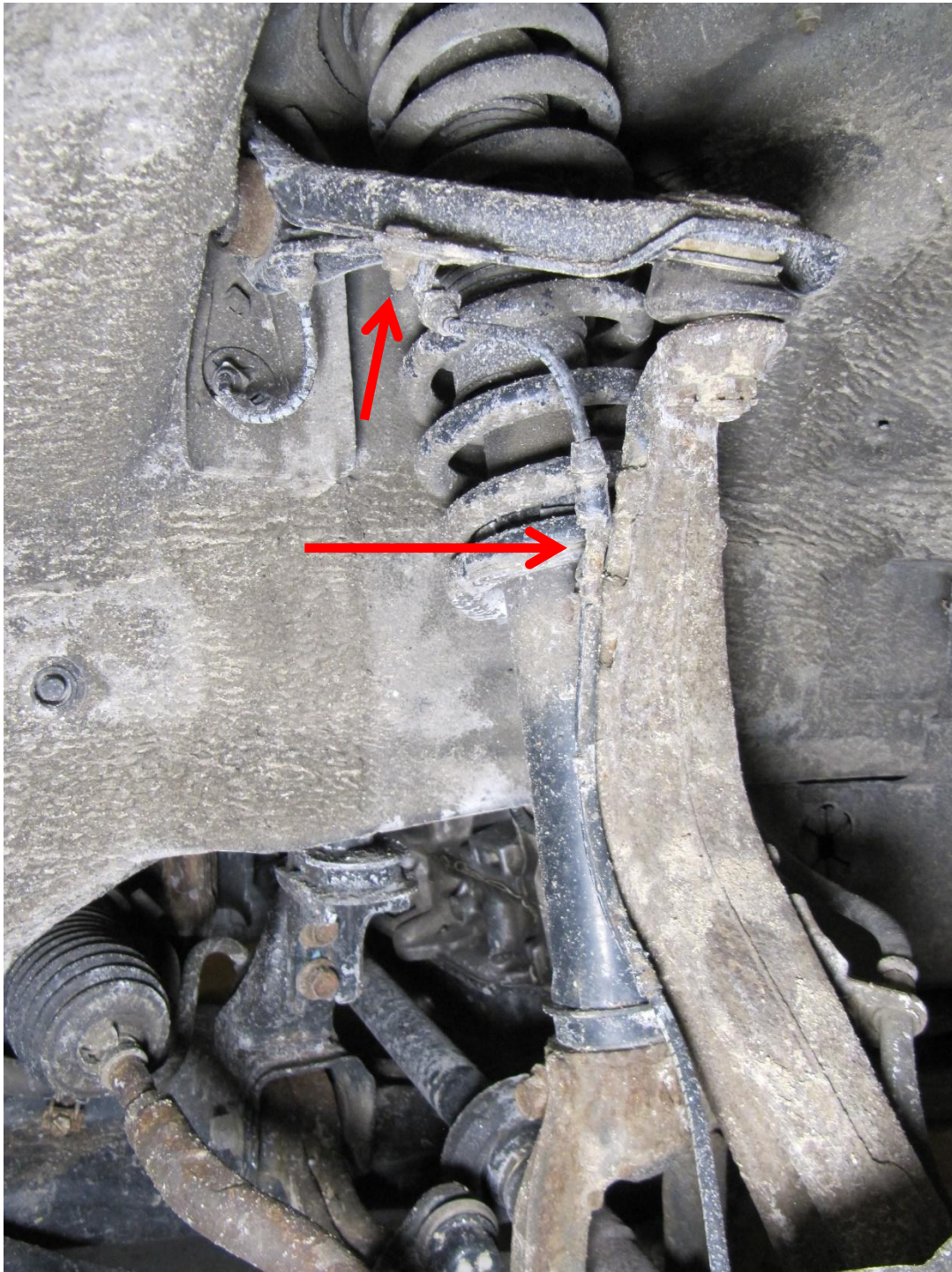
Zoomed-in video clip more clearly showing the play in the lower ball joint:

<https://youtu.be/b8L2N1GtYXI>

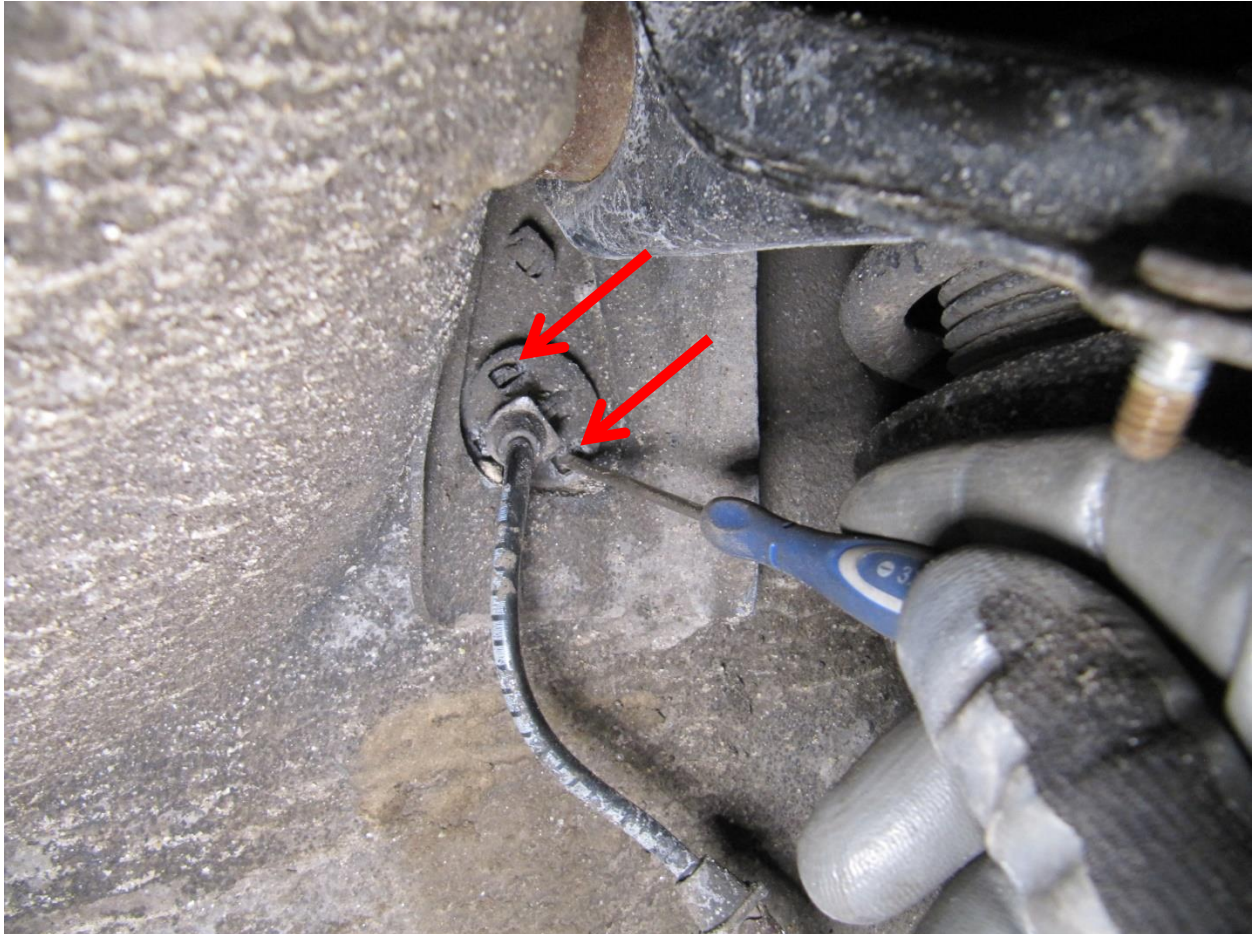
It can be pretty difficult to remove the ABS sensor from the knuckle (mine were really rusted in). I found it easier to simply disconnect the ABS sensor at its connector under the hood as shown below instead:



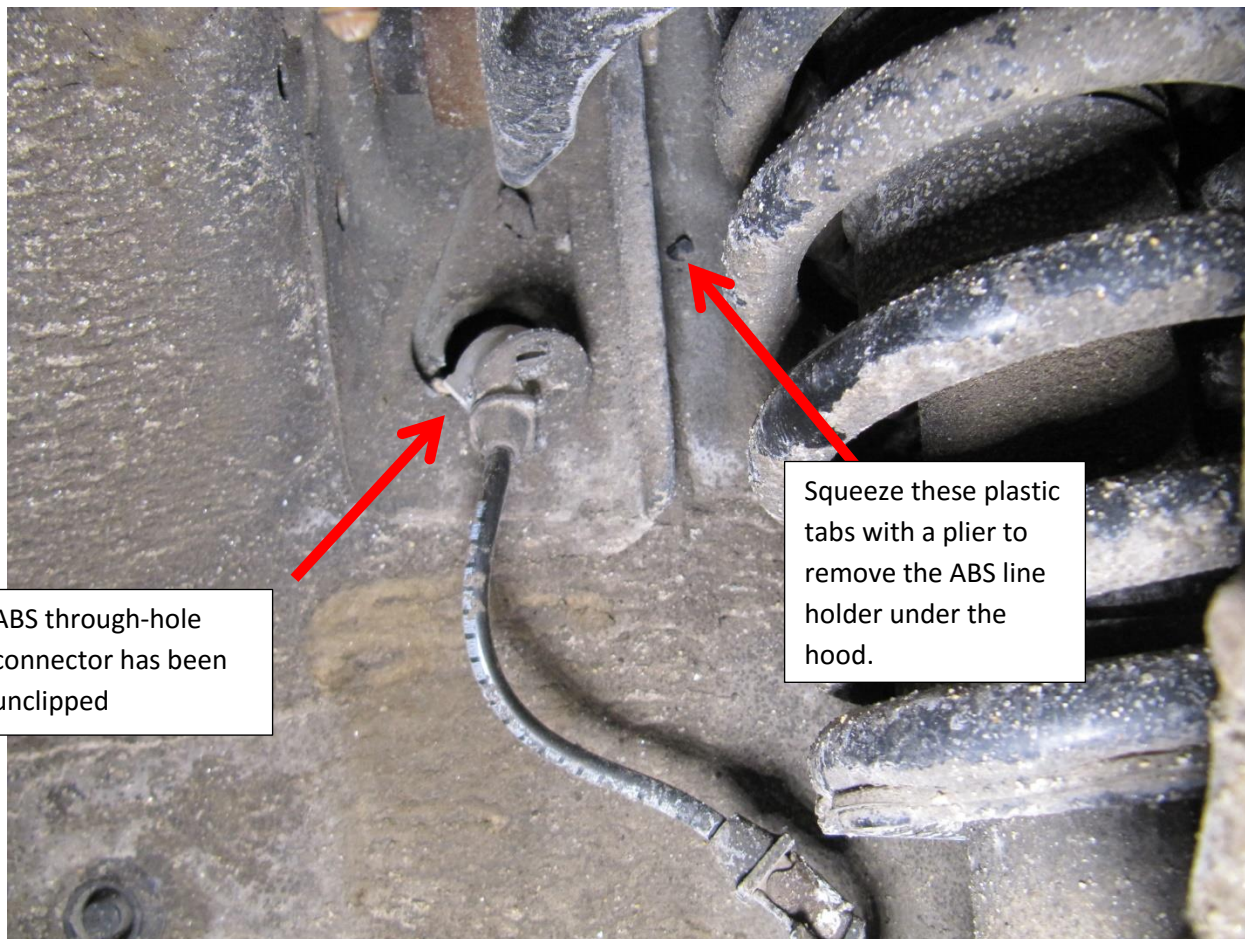
Next, remove the two bolts holding the ABS wire onto the upper control arm and knuckle:



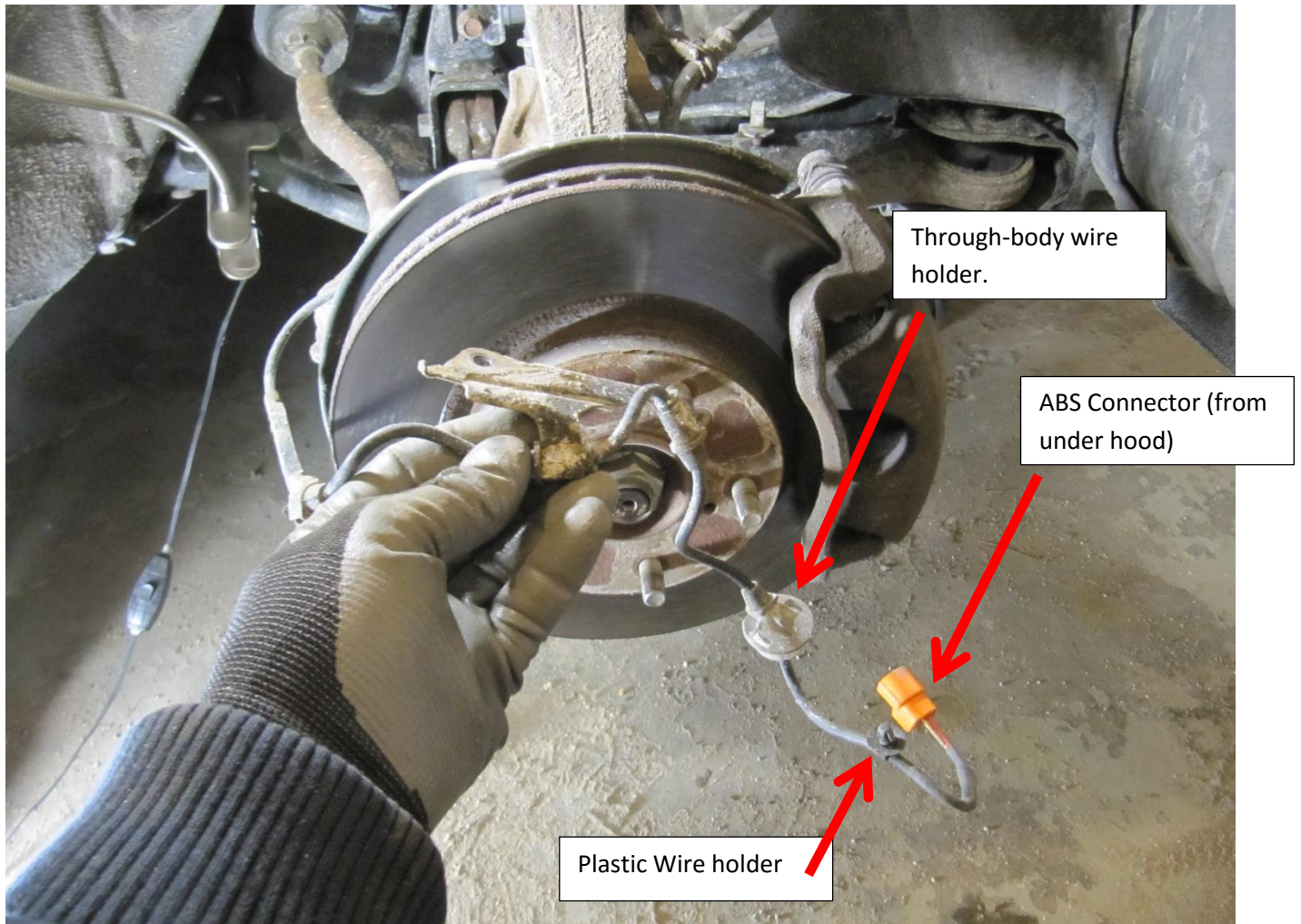
There are two small tabs that you need to press in with a screw driver in order to remove the ABS line from the body.



Once the ABS through-hole connector is removed, there is another wire holder on the inside of the engine compartment that holds the wire in place. This can be removed by squeezing the plastic tabs at the location shown below and then pulling the wire holder off from under the hood:



Here is what the entire ABS line looks like once it is removed:



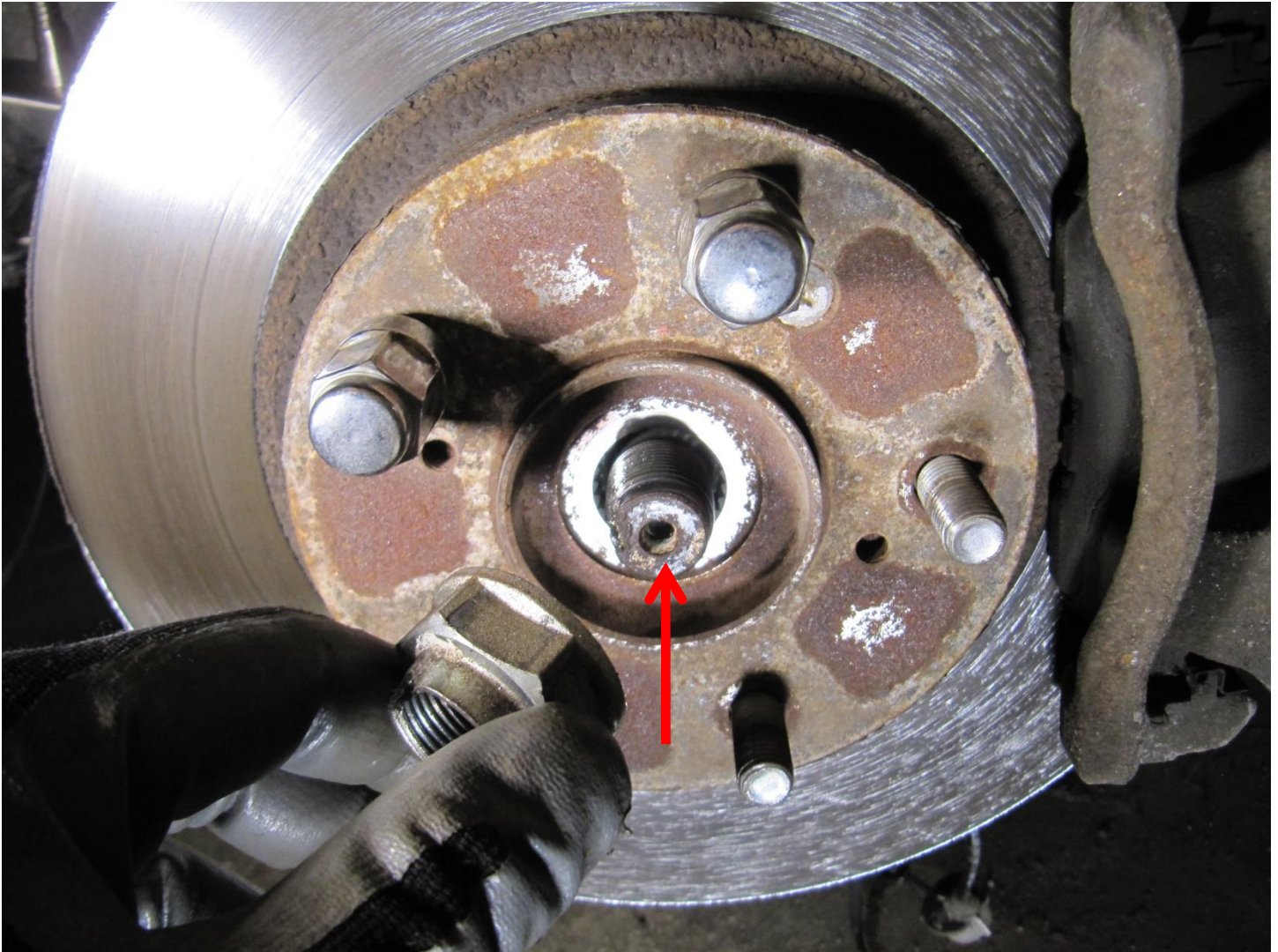
Un-stake the axle nut:



And remove the axle nut. I used a crowbar to keep the rotor/hub from turning. If you use this method, be sure you put lug nuts on to ensure that the threads don't get marred up in the process. Another option is to loosen the axle nut with the wheel still on before jacking up the car.



Once you remove the axle nut, you might want to ensure that the axle is not stuck in the hub by pressing in on the end of the axle (Hopefully it pushes in freely, as it did in my case):



Next, remove the cotter pin from the tie rod end (if you can!). In my case the cotter pin was so rusted in (it has been in there for about 10 years) that there was no way it was coming out. I just cut off the ends of the cotter pin and drilled out the hole:



Loosen the tie rod end nut, but don't take the nut off completely yet:



Use a Pitman puller to remove the tie rod end from the knuckle (or hammer on the knuckle where the tie rod end goes through it, if you prefer):



And remove the tie rod end from the knuckle:

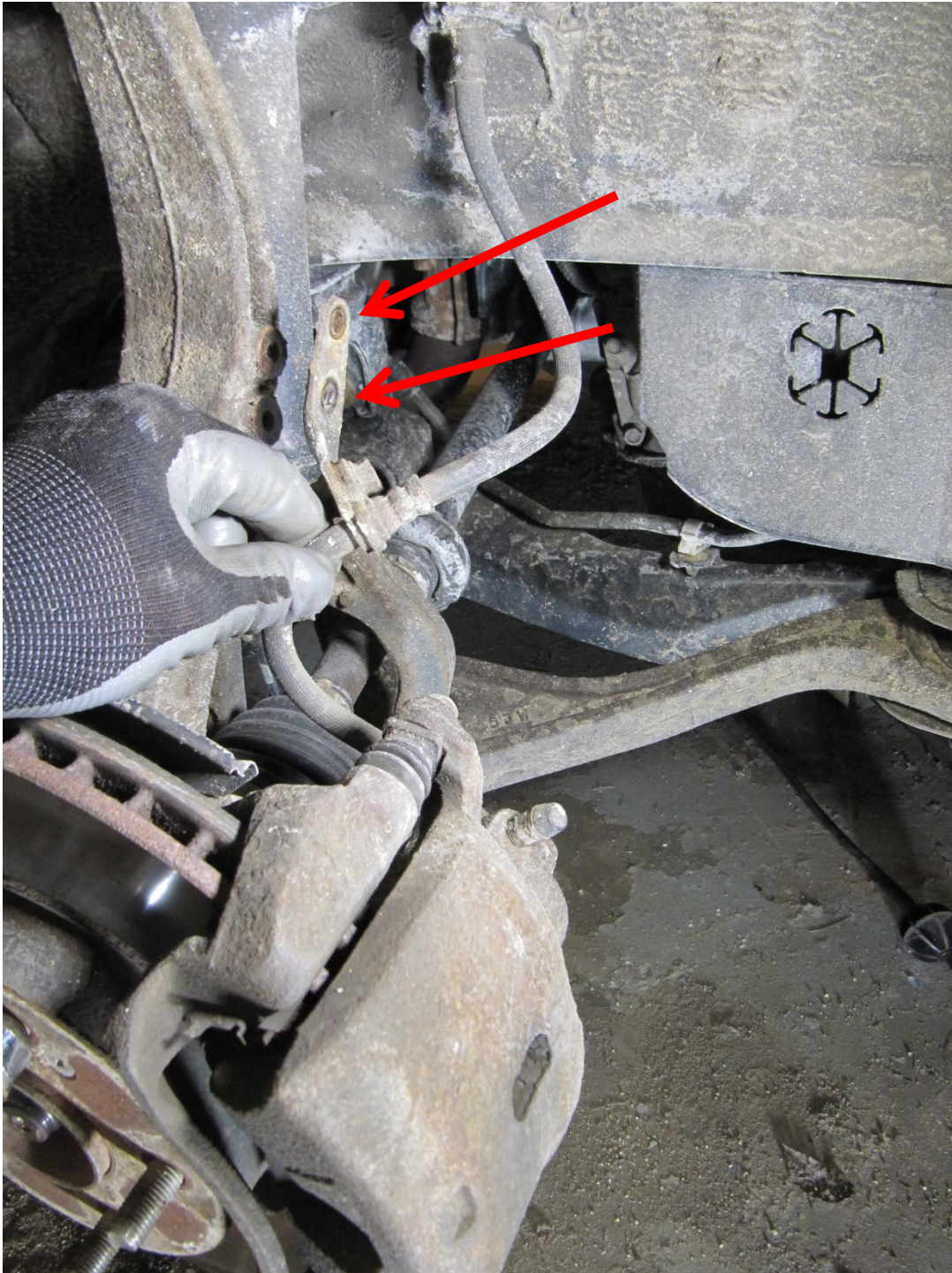


When you go to remove the tie rod end nut, you may find that the tie rod ball joint spins (instead of the nut). If so, it may be necessary to apply some downward pressure on the tie rod end to prevent this from happening as shown below:

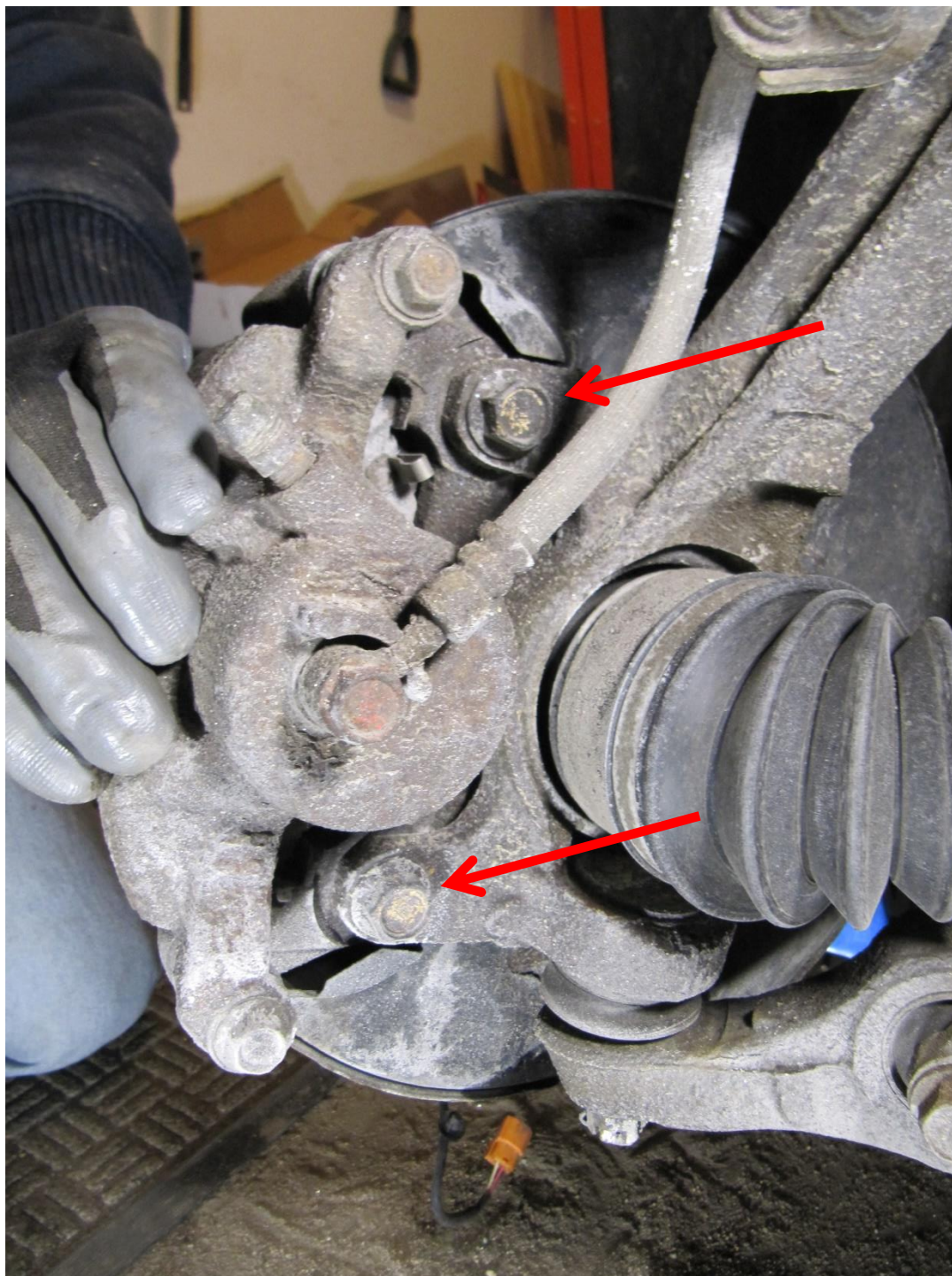
Press down on pry bar out here to exert pressure on the tie rod in order to prevent the shank of the tie rod end from spinning in order to remove the nut.



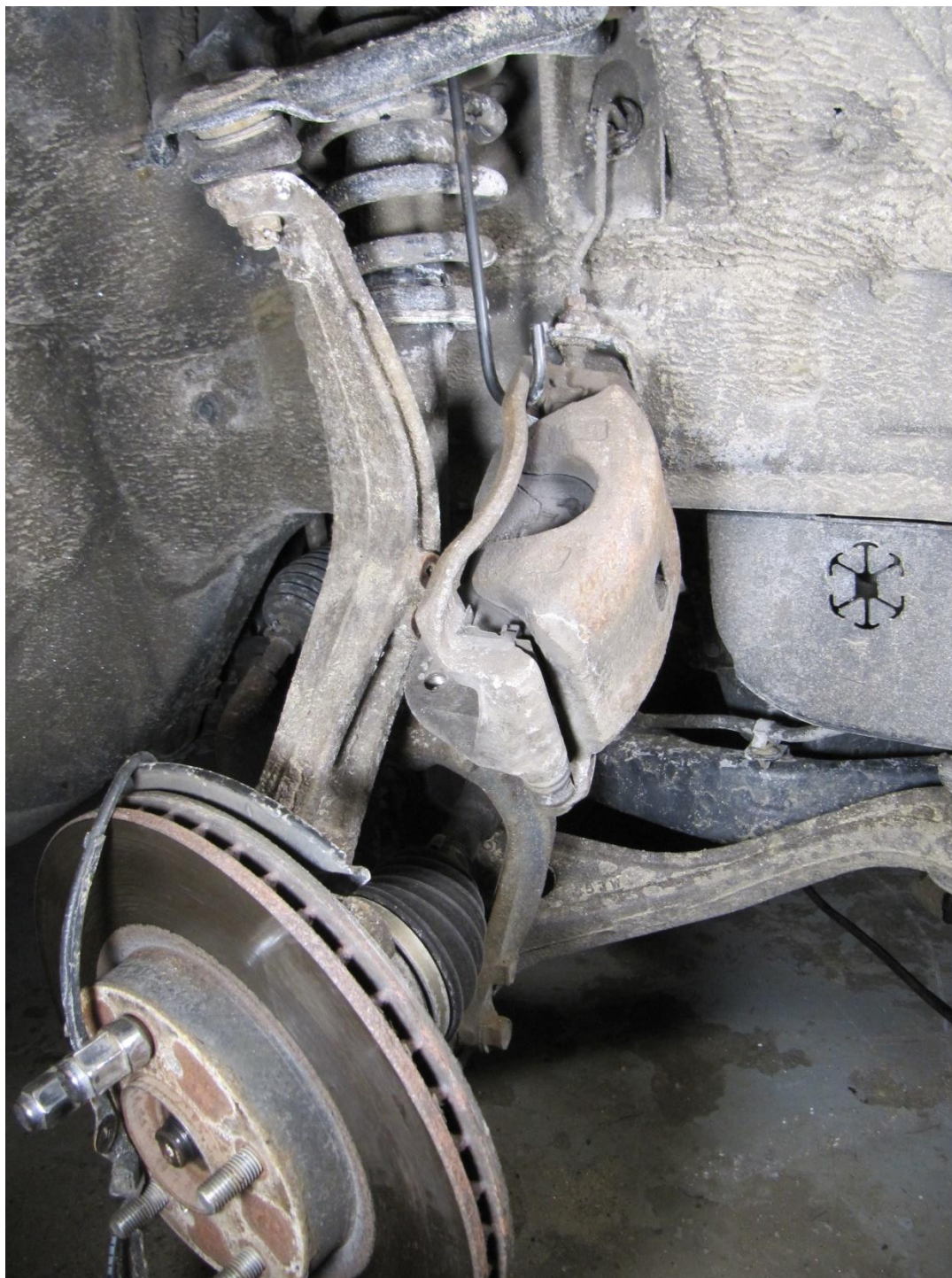
Remove the two small bolts holding the brake line onto the knuckle:



Remove the two bolts holding the caliper bracket (and entire caliper) onto the knuckle:



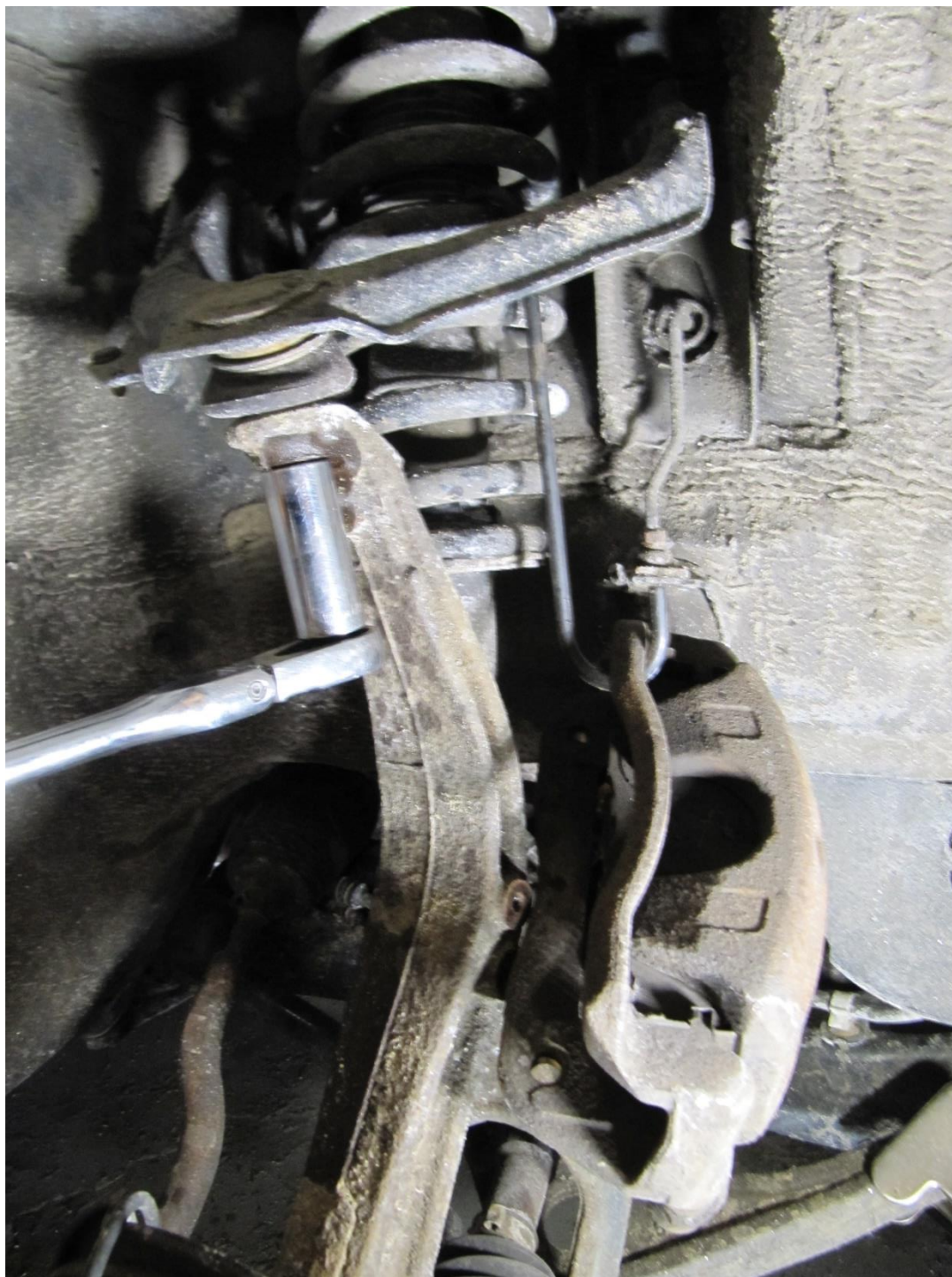
Pull the entire caliper off and secure it somehow so it is not hanging from the brake line:



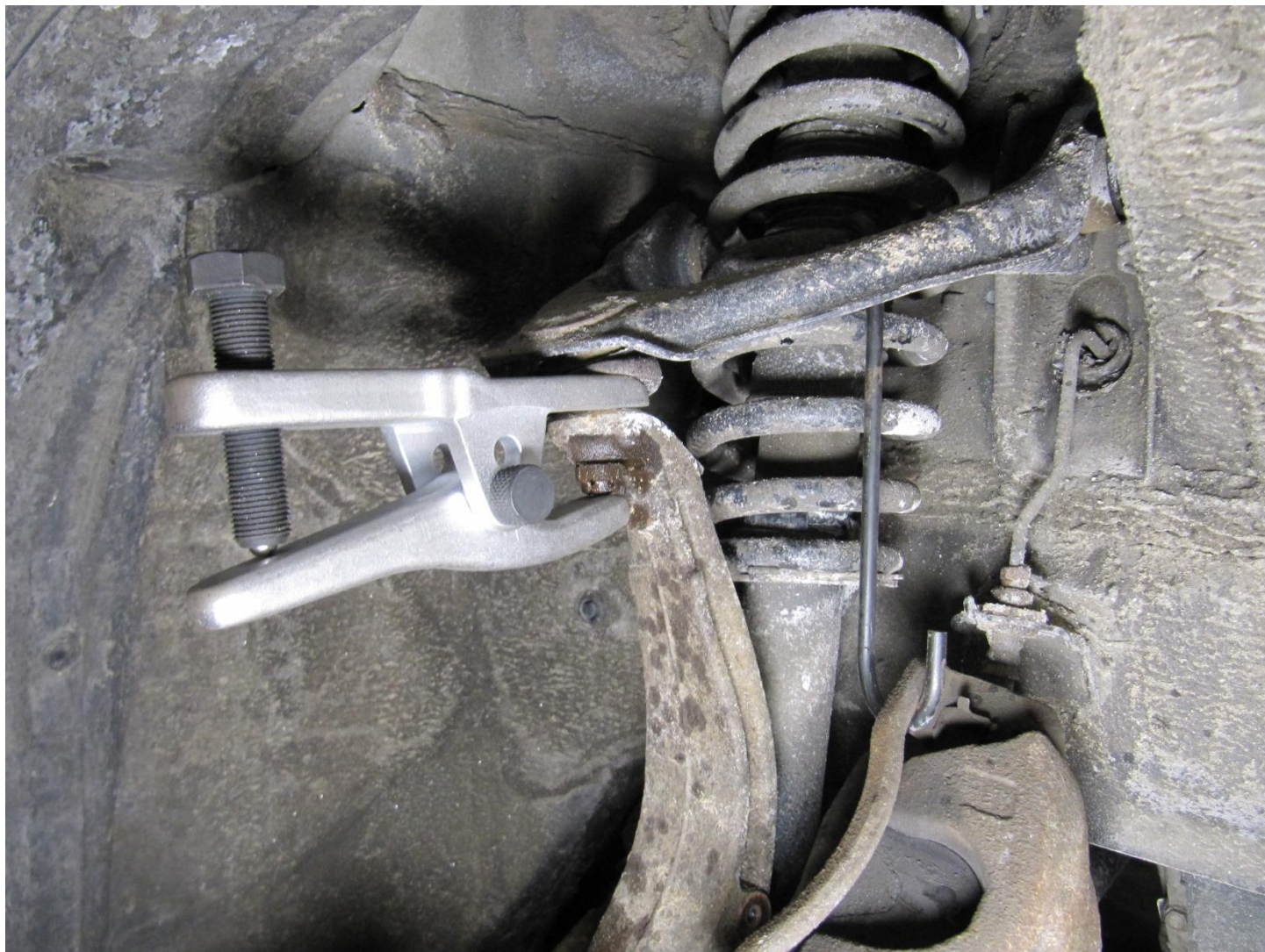
Remove the cotter pin from the upper ball joint:



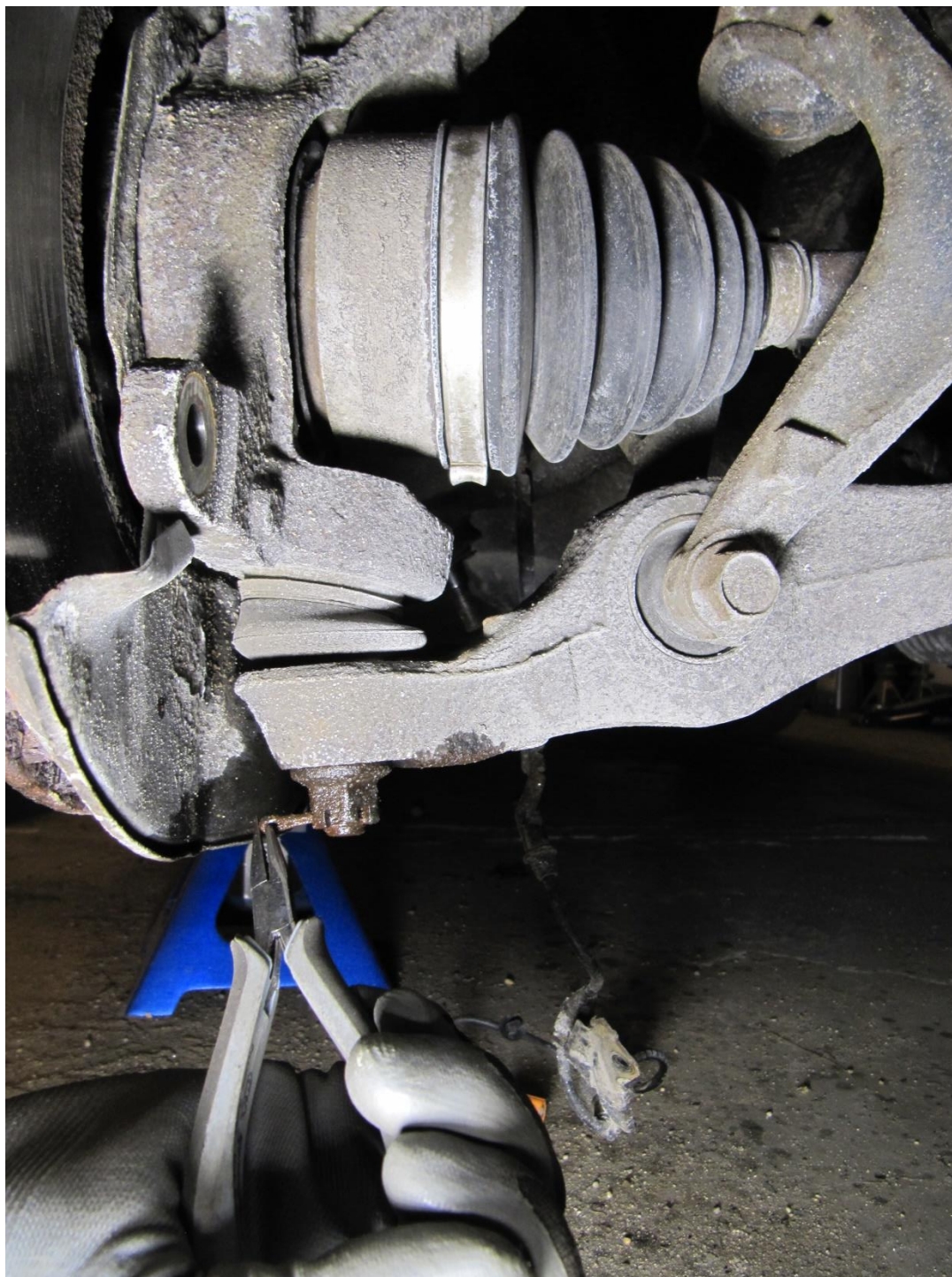
And loosen the upper ball joint nut, but don't remove the nut entirely:



Use a ball joint separator to separate the upper ball joint (leaving the nut on will prevent the whole knuckle from flying around when the joint breaks loose):



Remove the cotter pin from the castle nut from the lower ball joint:



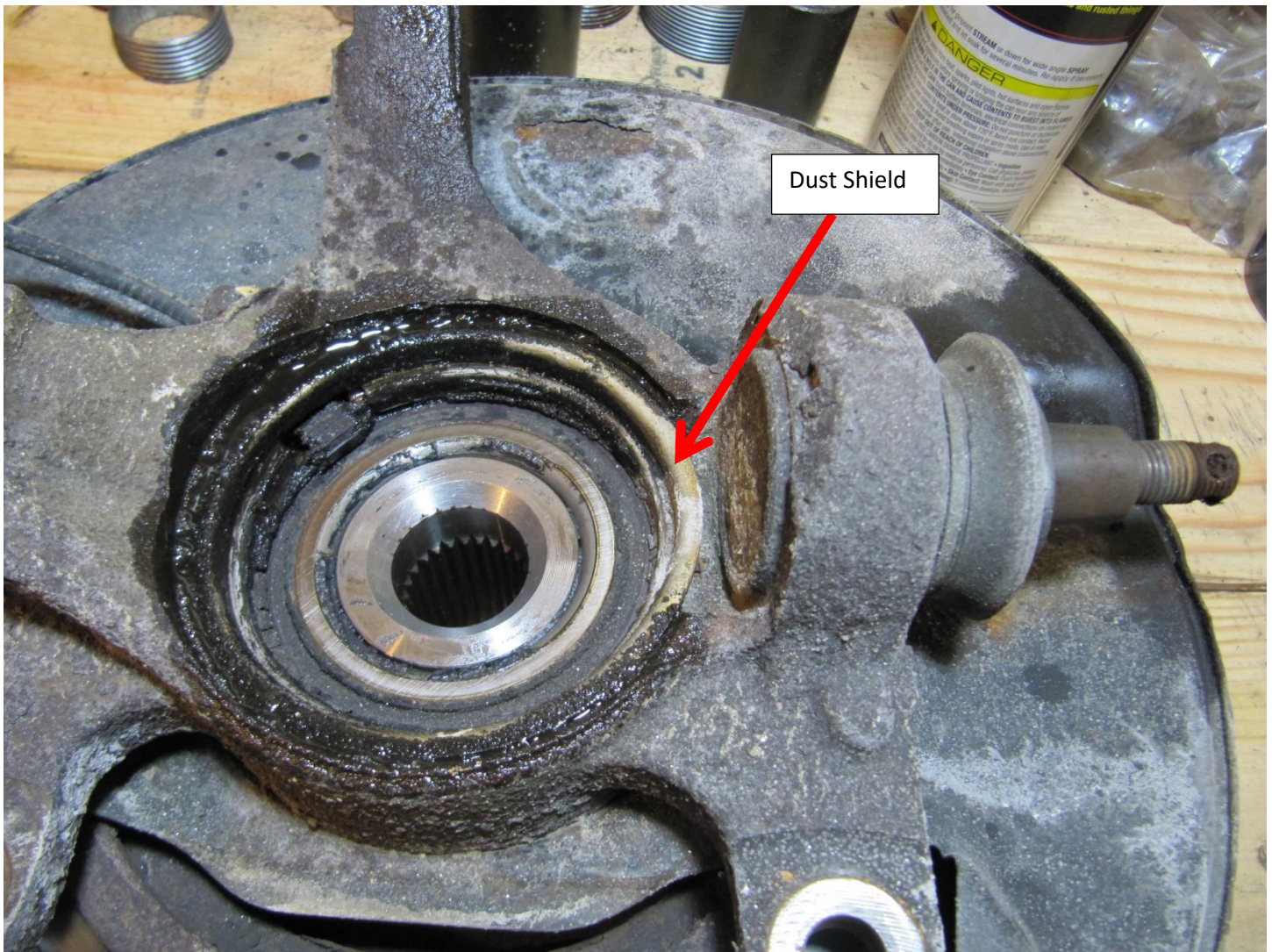
And use a two jaw puller to separate the lower ball joint (leave the nut on, but loosened to prevent everything from flying around when the joint pops loose):



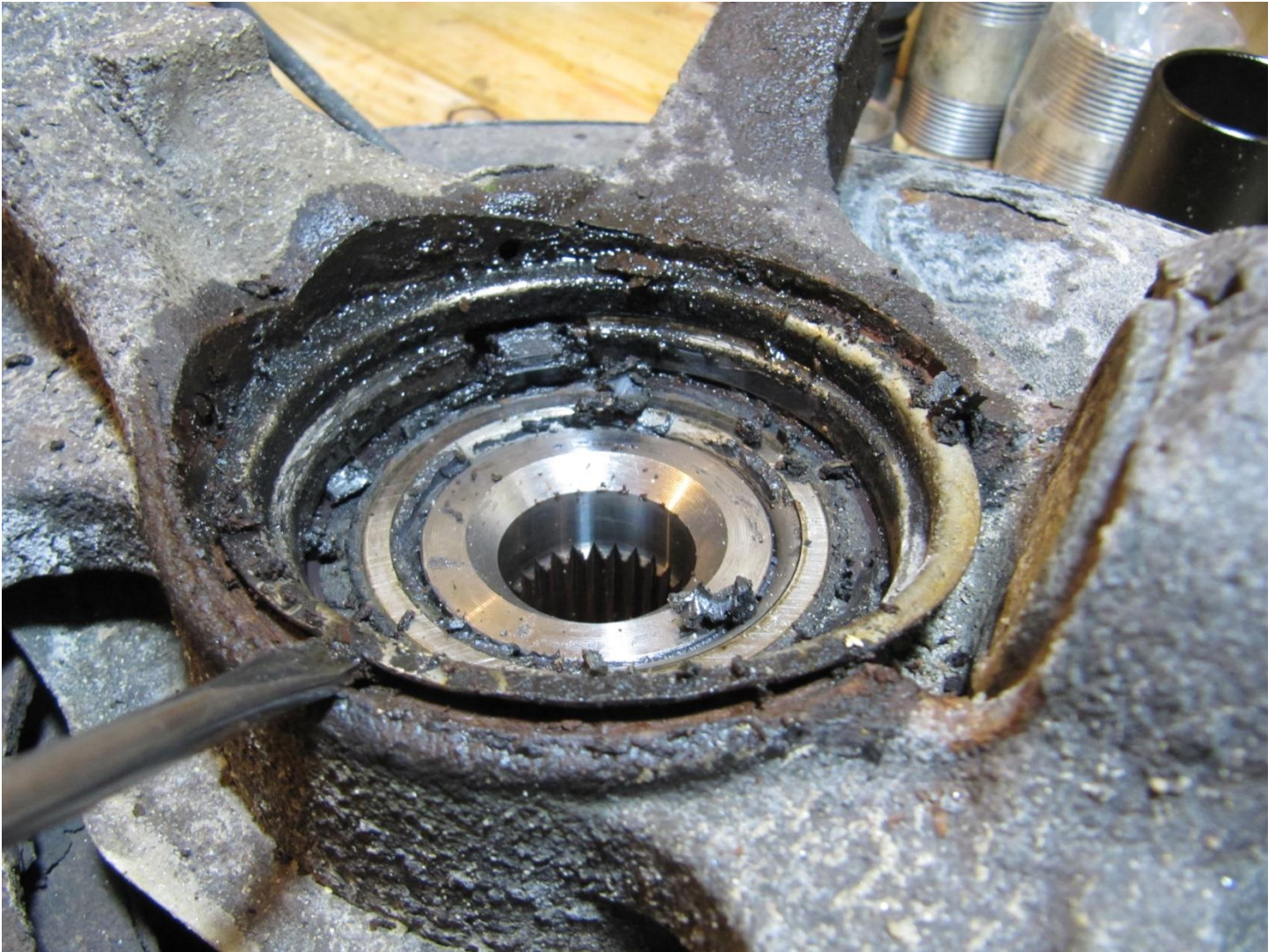
The knuckle should now be free to be pulled entirely out. Be careful to not pull the axle too far out in the process of removing the knuckle so you don't accidentally separate the internal CV joints.



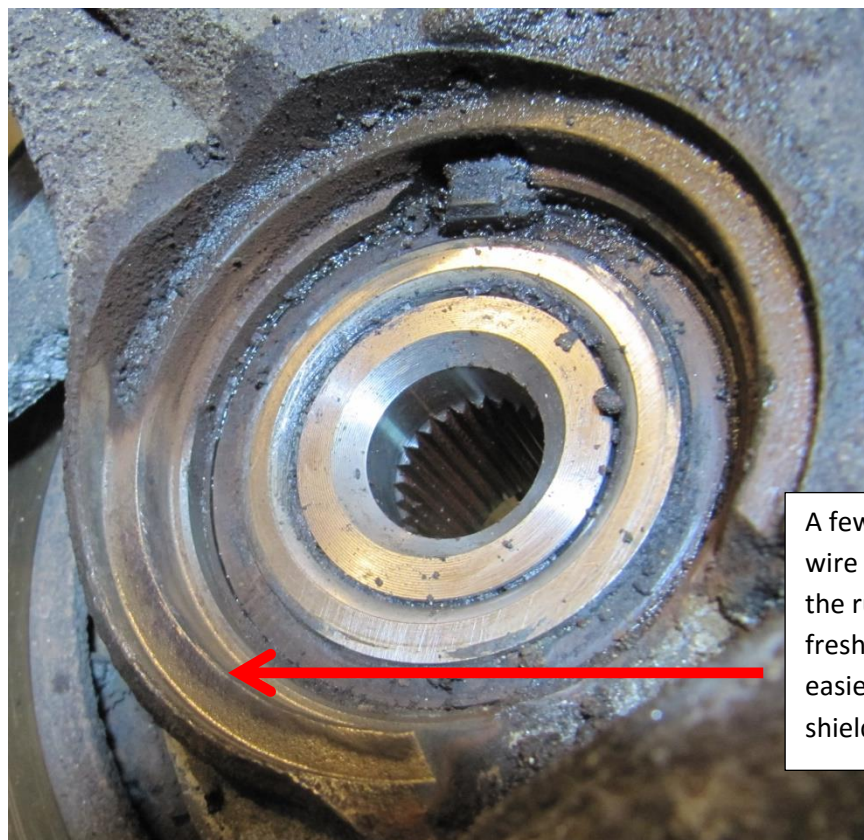
Next, you will need to remove the metal dust shield. It can be pretty stuck in there. I sprayed the outside with some penetrating oil to help free it up:



Then I pried up gently around the edges with a screwdriver. The dust shield is made out of pretty thin metal, so take care to not deform it or damage it in the process of removing it:



I used a Dremel Tool and wire wheel to clean up the seat for the dust shield. I find this method to be very quick and easy and it is able to get into all the small and awkward places.

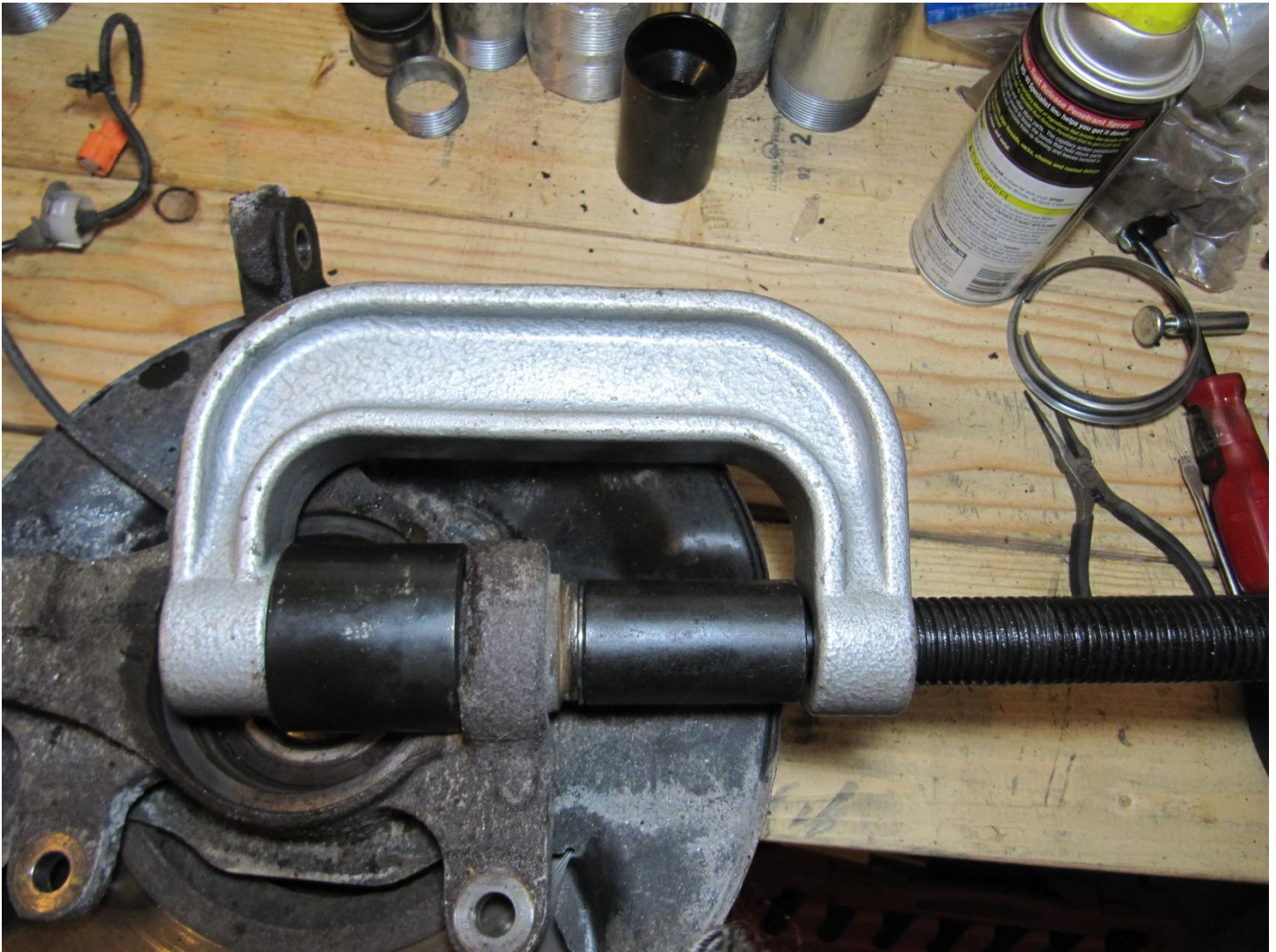


A few seconds with the wire wheel takes off all the rust and leaves a nice fresh surface (to make it easier to reinstall the dust shield later)

I also used the wire wheel to clean up the dust shield:



I use a C-Frame Press with the OTC 6734 adapters to press out the old ball joint.



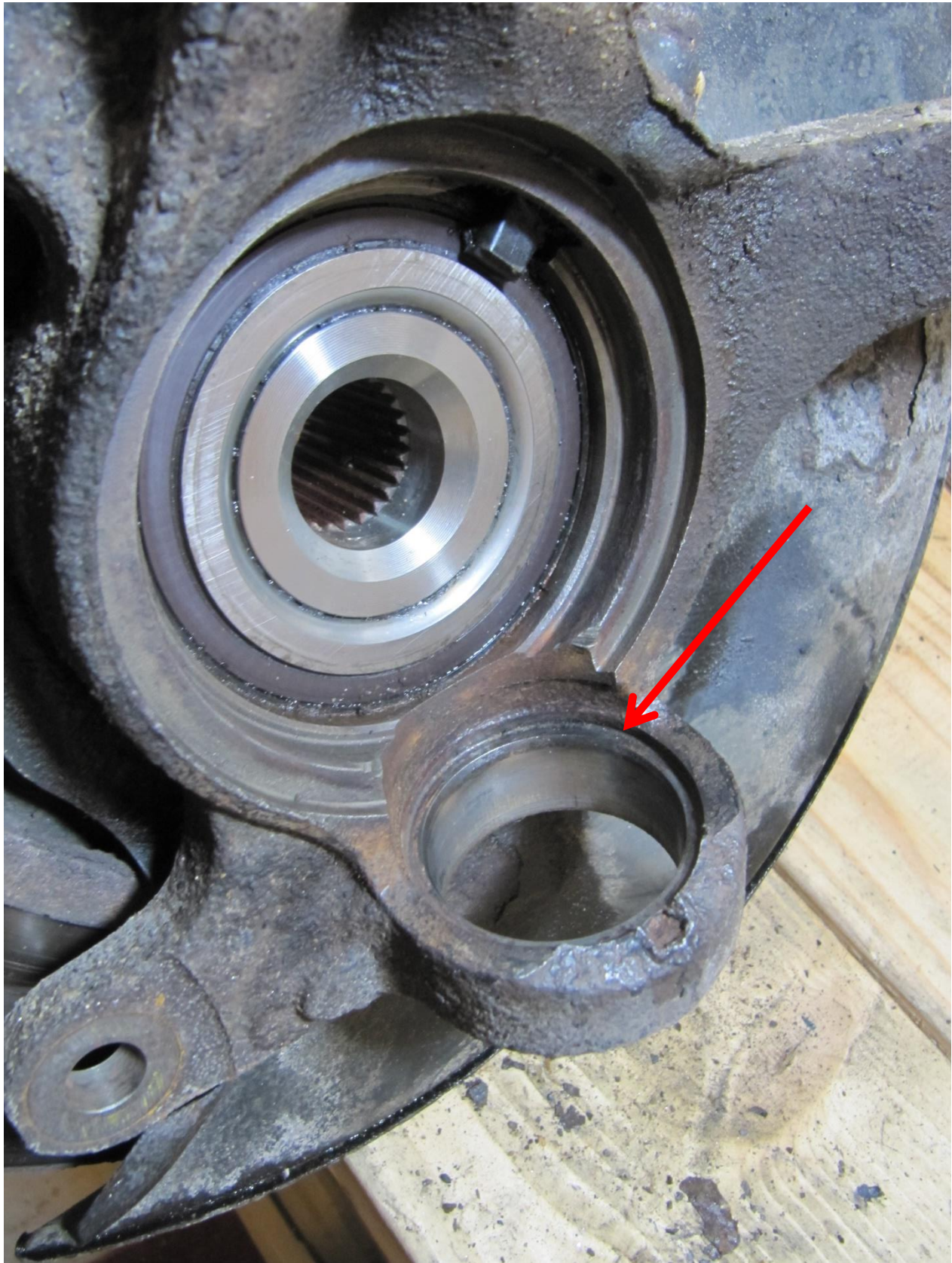
I found that applying a little heat to the knuckle around the ball joint helped a great deal. I wouldn't go too crazy as you probably don't want to cook the wheel bearing or ABS sensor. I used a simple plumbers (MAP) torch and just heated the outside of the "ring" for probably under 10 seconds. This definitely made it much easier to extract the ball joint.



Then I used a half-inch ratchet and cheater bar to drive out the ball joint while holding the end of the knuckle in a bench vise. It wasn't too tough, but heating definitely made a big difference.



Once the ball joint was out, I cleaned up the ball joint seating surface (arrow) with the wire wheel:



Here are the new and old ball joints:



And here is the arrangement used to press in the new ball joint with the C-Frame Press. The new ball joint went in very smoothly and easily.



Here is the ball joint once it is fully pressed in and a picture of the newly installed ball joint:



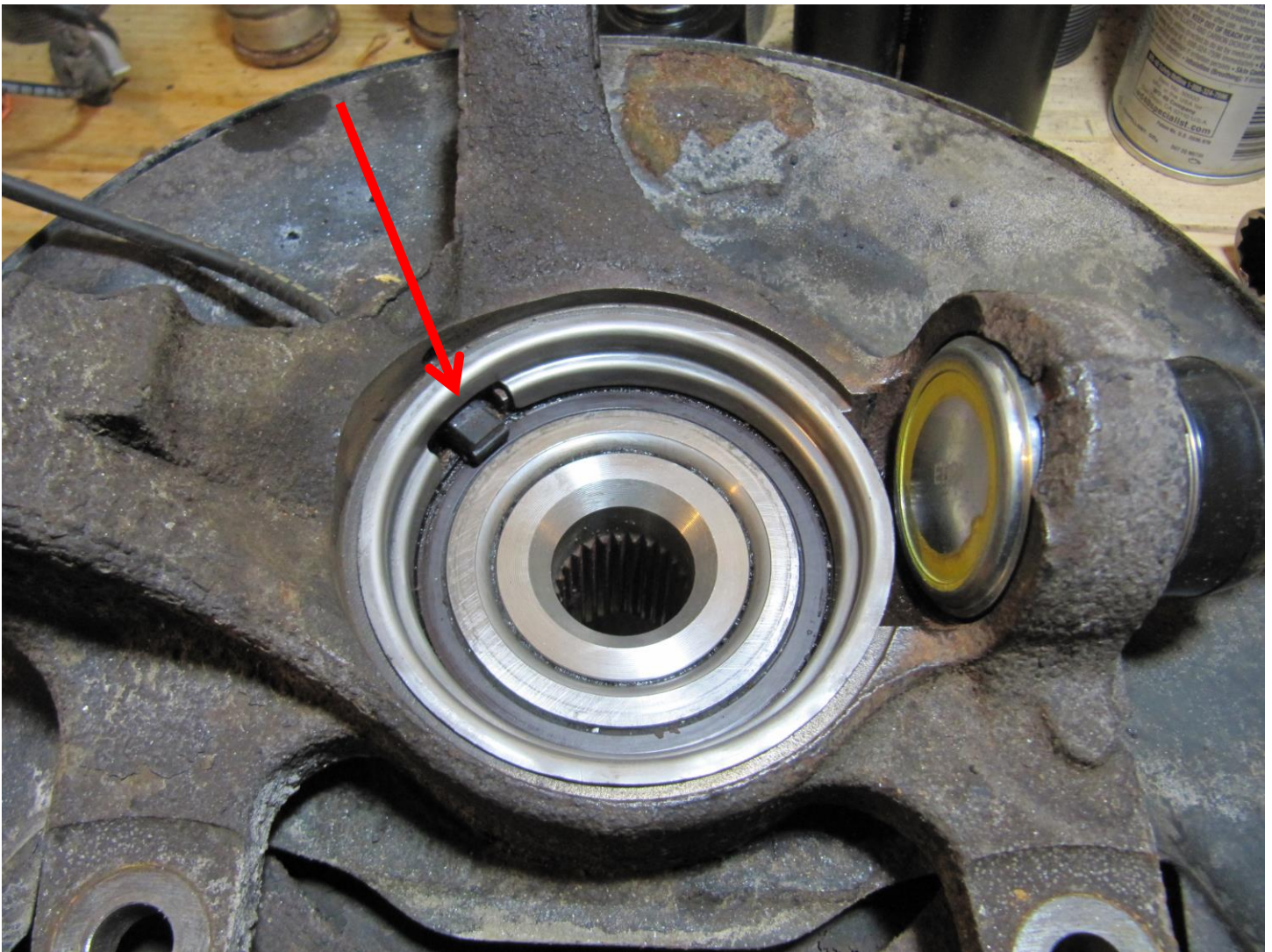
This image shows the ball joint fully seated in the knuckle:



And notice that there is NO place for a snap ring on the bottom (No snap ring was present on the original factory ball joint, and no snap ring is needed for the replacement OEM ball joint. I believe some aftermarket ball joints do require a snap ring though):



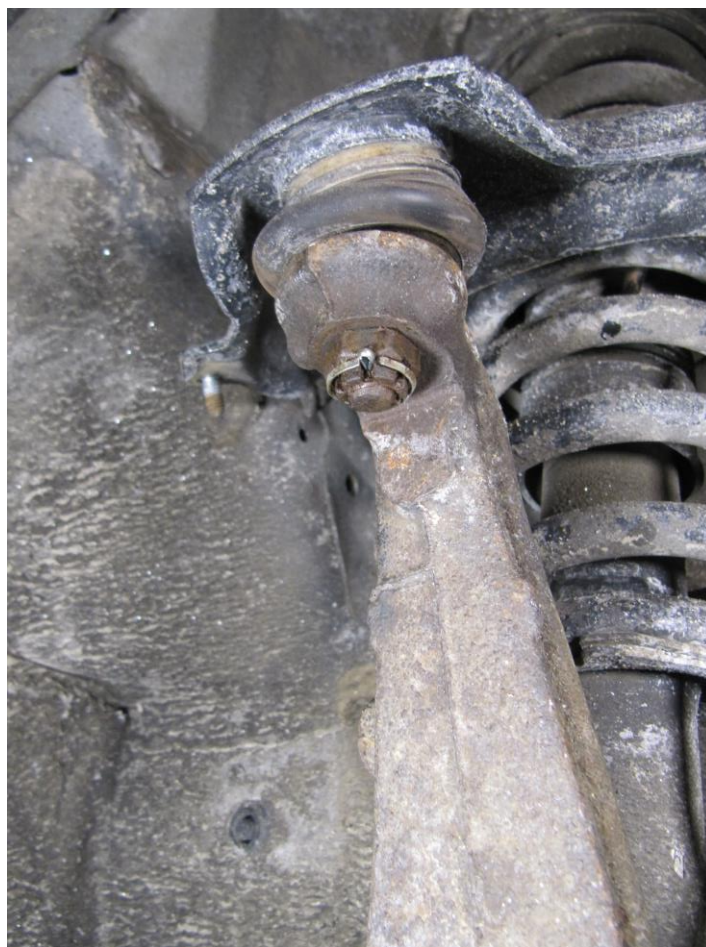
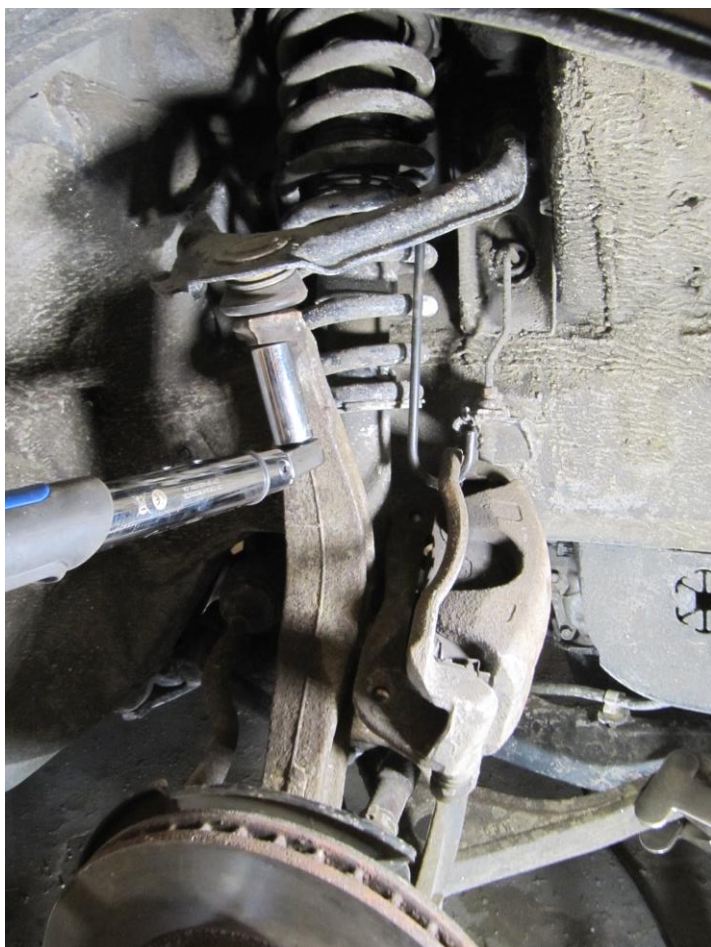
Reinstall the dust ring, lining up the gap in the ring with the ABS sensor (arrow):



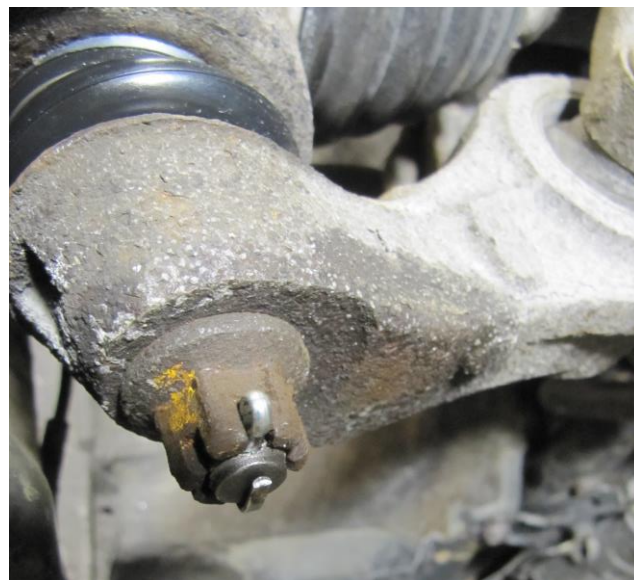
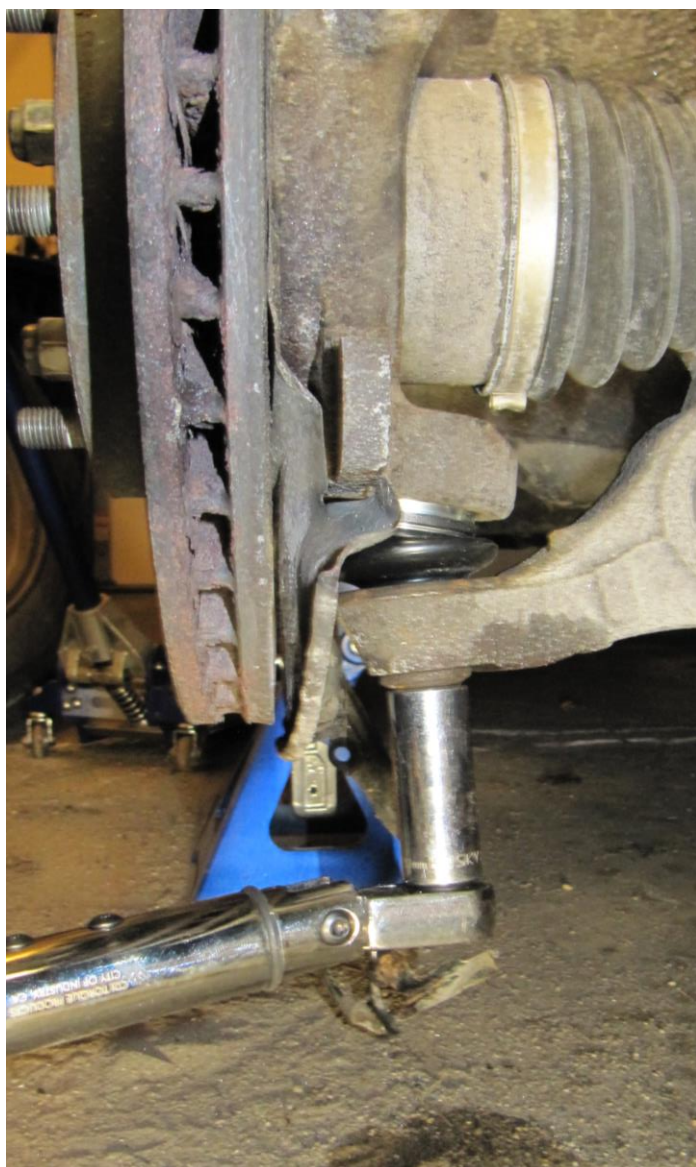
Before reassembling, I like to coat the splines of the drive shaft with anti-seize to help ensure that the drive shaft won't get seized up in the hub in the future and I wire brushed all of the ball joint contact surfaces to clean off the rust and ensure a good mating surface for the boots:



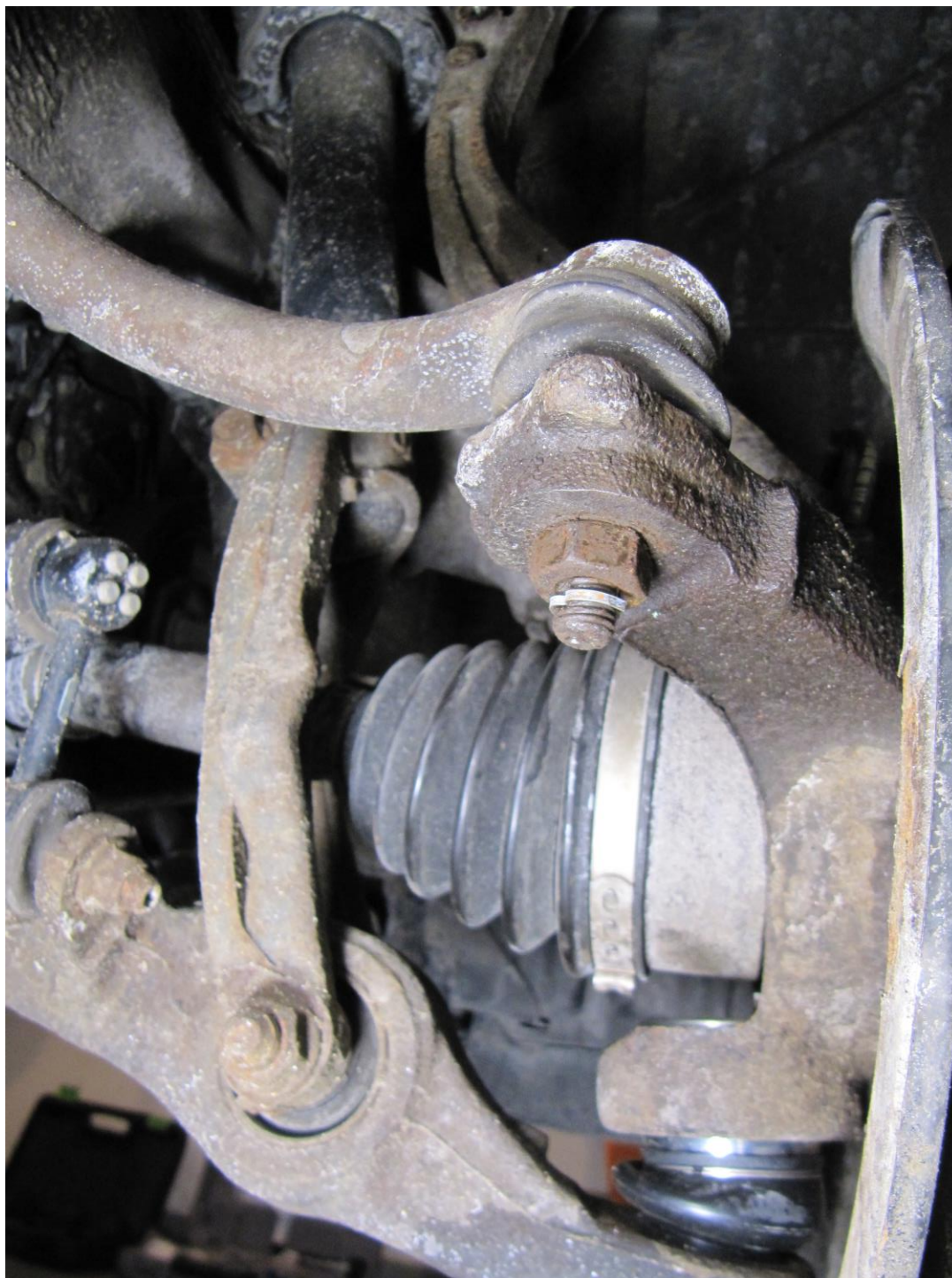
Then, it is just a matter of reassembly. Insert the knuckle and torque the upper ball joint nut to 39Nm. Then install a new cotter pin:



Install the lower ball joint nut and torque to 78Nm. Install a new cotter pin:



Reinstall the tie rod end nut and torque to 43Nm. Install a new cotter pin:



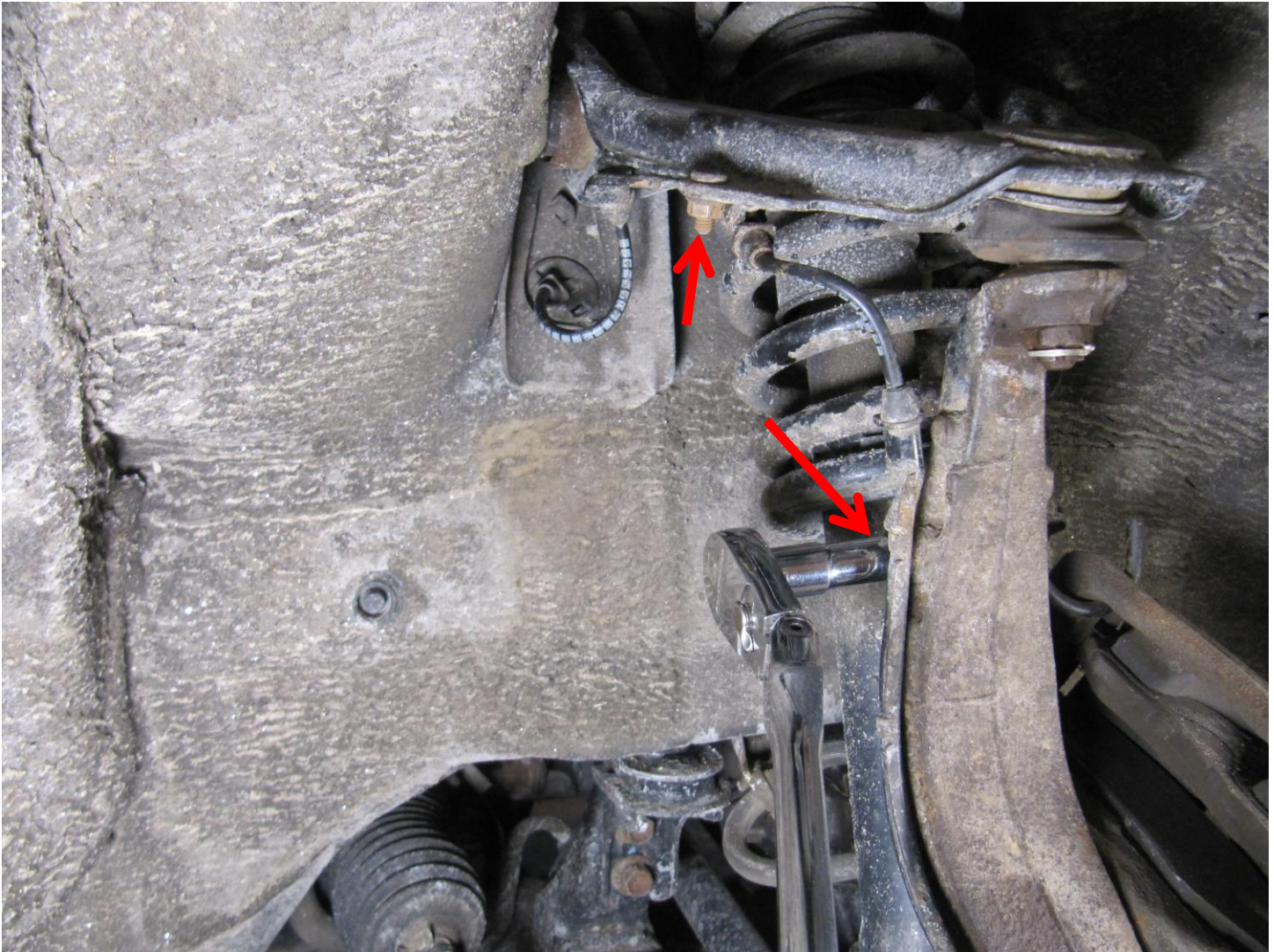
Per the Honda Service Manual, use a new axle nut when reassembling and put a drop of motor oil on the threads. Install the new axle nut and torque to 134 ft-lb.



Stake the new axle nut:



Reattach the ABS sensor wire and its fasteners:



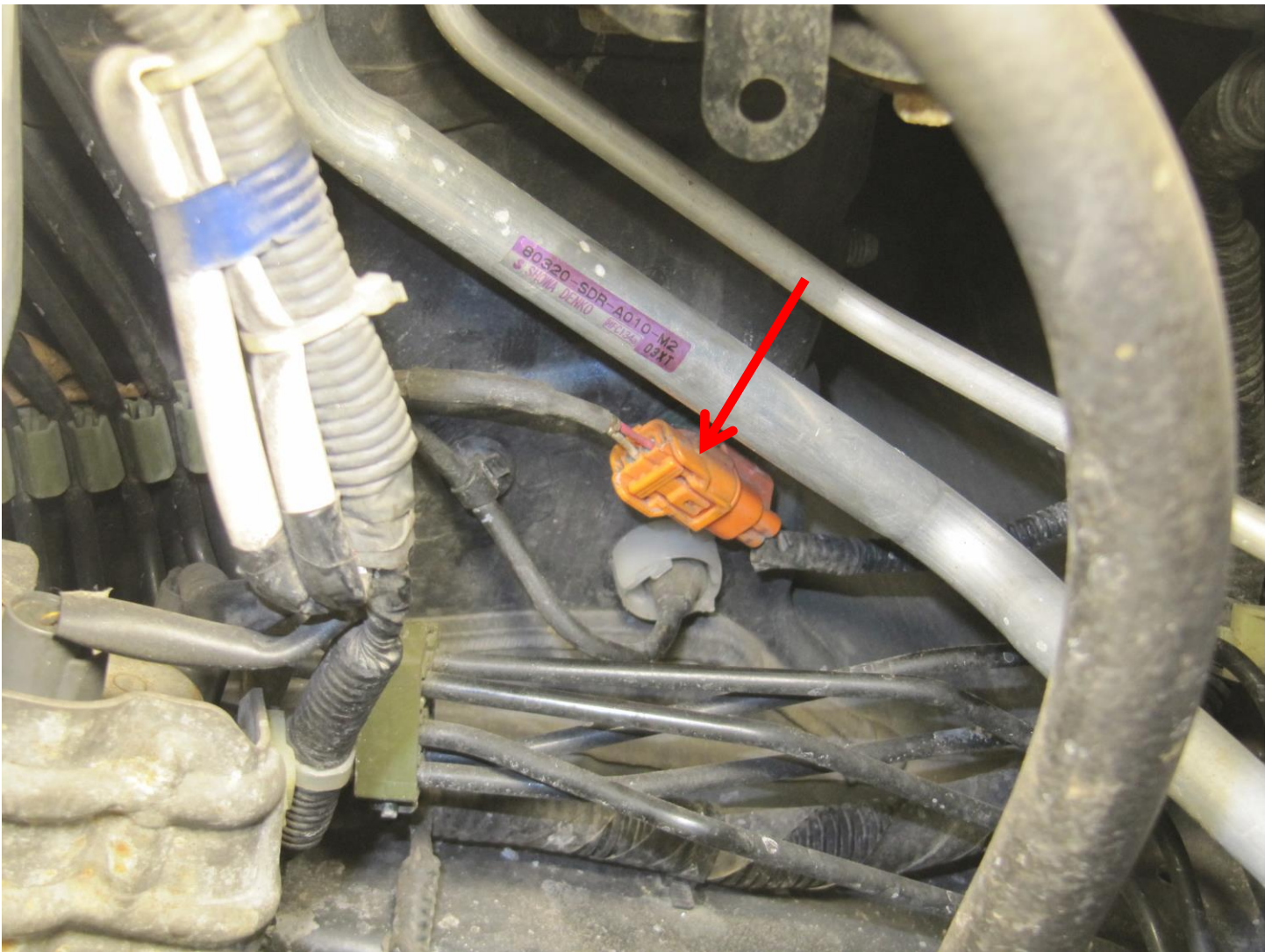
Reinstall the caliper and tighten the bolts to 108Nm:



And finally reinstall the brake line bracket:



And, don't forget to reattach the ABS sensor connector under the hood:



And that's all there is to it! Enjoy your shiny new ball joint!



Note that the commonly available PowerBuilt Kit 76, Model 641321 adapters pictured below (which I initially borrowed from an auto parts store) do NOT work with this vehicle (nor, are they advertised to since the documentation states that this kit is for 1980-2000 Accords):



The “pushing” adapter does not fit over the shank of the ball joint:



And the receiver cup isn't large enough to fit the base of the ball joint:

