

Heater Core Replacement

A Guidebook with Pictures

This guide was compiled while following the extensive manual at the Brickboard FAQ. While the manual is very good, this pictorial guide should serve as a helpful supplement for the brave people who undertake 700 series heater core replacement. Good luck to you all! It's actually not that scary.

Estimate between 8 and 12 hours for the complete job. Mine was completed and back together in 10 hours spread over two days. The sedan back seat was adequate to hold almost everything I removed.



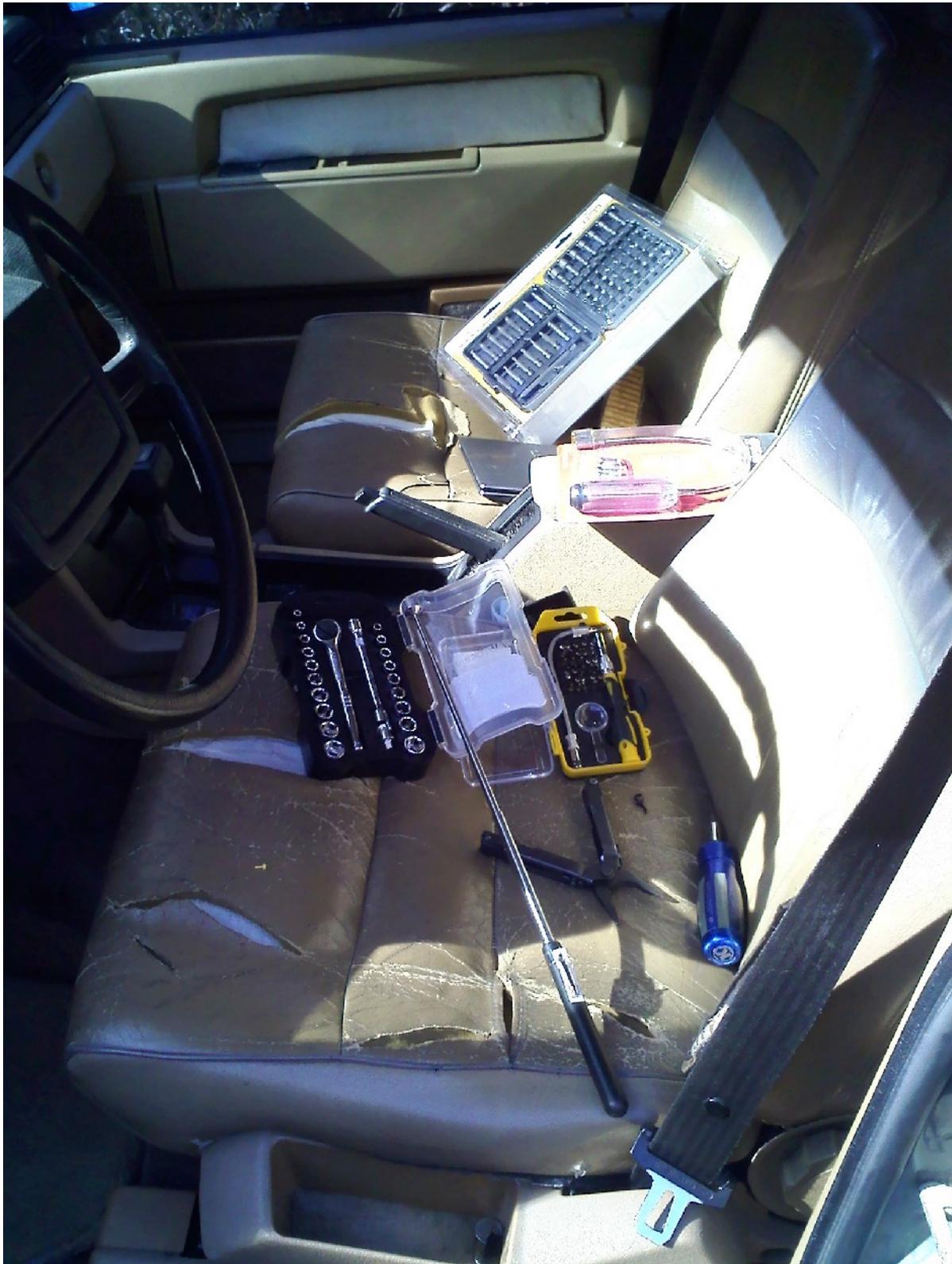
The interior of my 1987 740GLE. It has a few modifications, like some extra gauges, but all in all should be pretty standard. It has an aftermarket Kenwood CD player that requires special keys to remove.



Close-up of the extra gauges shows the electrical and physical hook-ups.



Step 1. Clean out the car! I found some change, an umbrella, and some fossilized fig bars. Gross! But seriously, a clean car is essential so that the job can go smoothly. I vacuumed out the crud before I began. I knew I had to spend 10 hours on the footwell carpets, and laying on crunchy funky carpet is not fun.



My toolkit was basic, and included a 1/4" drive socket set with some extensions and a bendy thing. Screwdrivers (or a multi-tip one), a leatherman tool, plus a telescoping magnetic wand rounded out the required tools.



Inside the center console, pry out the cover for the screws that hold down the console.



Unscrew the console and set the screws aside. This is the time to start organizing the screws and stuff. Either put them in a tackle box, plastic bags, or a vitamin case. Keep your stuff organized or you will end up really confused.



Remove the two screws under the e-brake to detach the center console from the transmission tunnel.





Slip the little plastic cover down and forward, and it will pop out. Be careful with these old, brittle plastic parts.



Remove the ashtray.



Remove the cover from the cigarette lighter. It pops off. Be careful!



A couple of screws hold on the little cubby above the fuse panel. It will pull out.



The clip above the shifter is a pain! Be careful not to lose it down there when it pops off. Do not use tools to pry it or you risk breaking stuff.



See? You didn't believe that it could come off.



Mind the seat heater switch wires. They have connectors you can take off so that you can free the whole black upper panel.



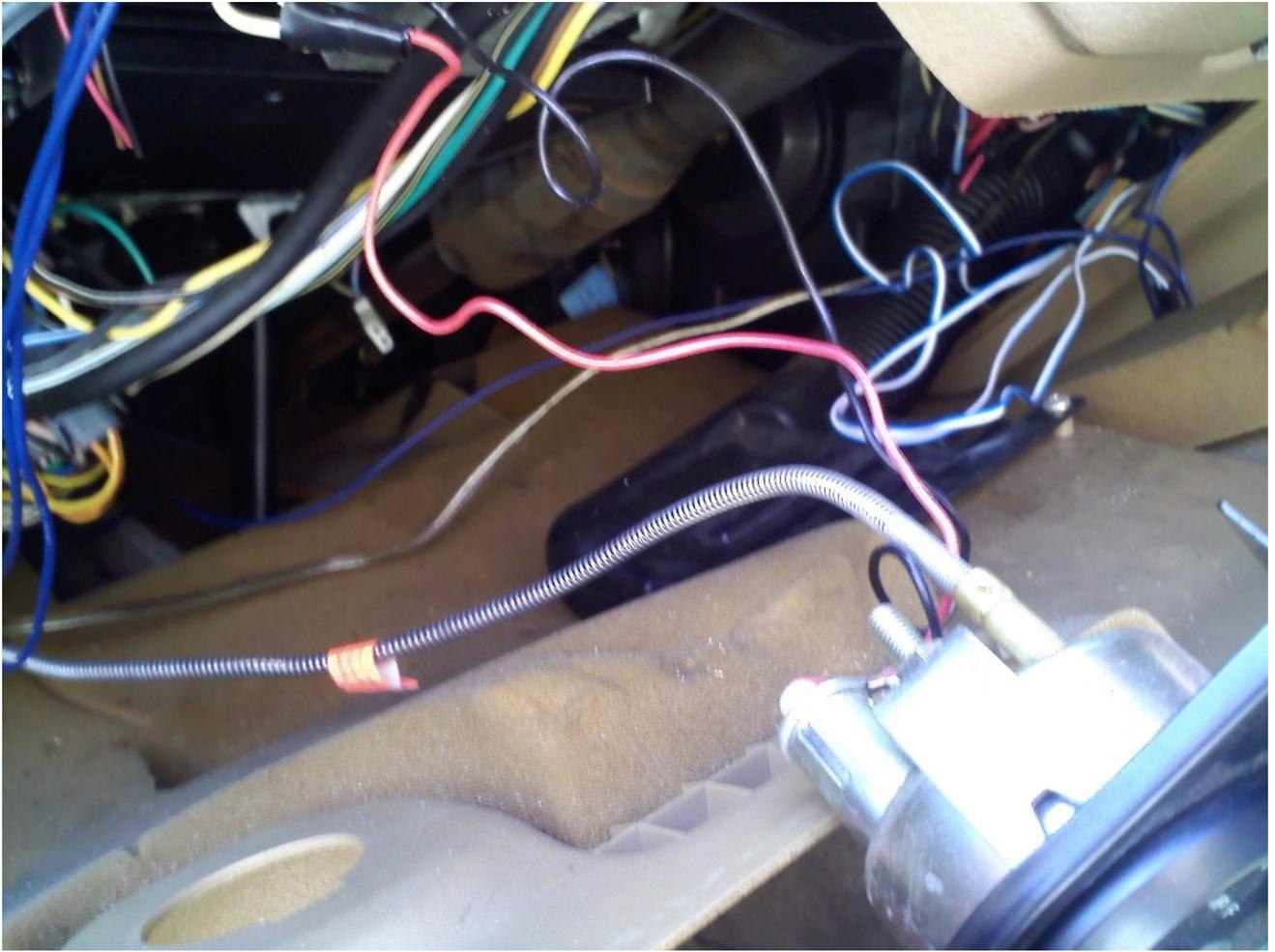
Slip the whole thing off.



The keys!



The stereo slips out and is disconnected from the harness behind.



The driver's side knee bolster, with gauges loose.



Passenger side knee bolster. The clips that hold it on are these ratchet plastic screw things. Turn them 90* and they should come out.



The glove box comes out next.



10mm or 12mm? I can't remember. There is one on each side, where the knee bolster came off.



On one side, the stud came out, and on the other, only the nut.



Gently push on the tab on the side, and the cover pops off, revealing a screw.



The glove box unit. It goes back in just as easily.



Behind the glove box. Don't mess with that yet.



Two bolts hold each side of the kick panel to the transmission tunnel. Take them out.



Keep things organized! This is your last reminder.



One bolt on each side, near the firewall end of the kick panel. Pull up the carpet to find it.



This bolt was really stuck. I had to get a bigger ratchet.



Carefully take up the trim around the heater controls and ignition switch.



Unscrew the two bottom-most screws to free the whole kick panel assembly.



Pull the kick panel assembly forward to get a better reach at the bolts holding it together.



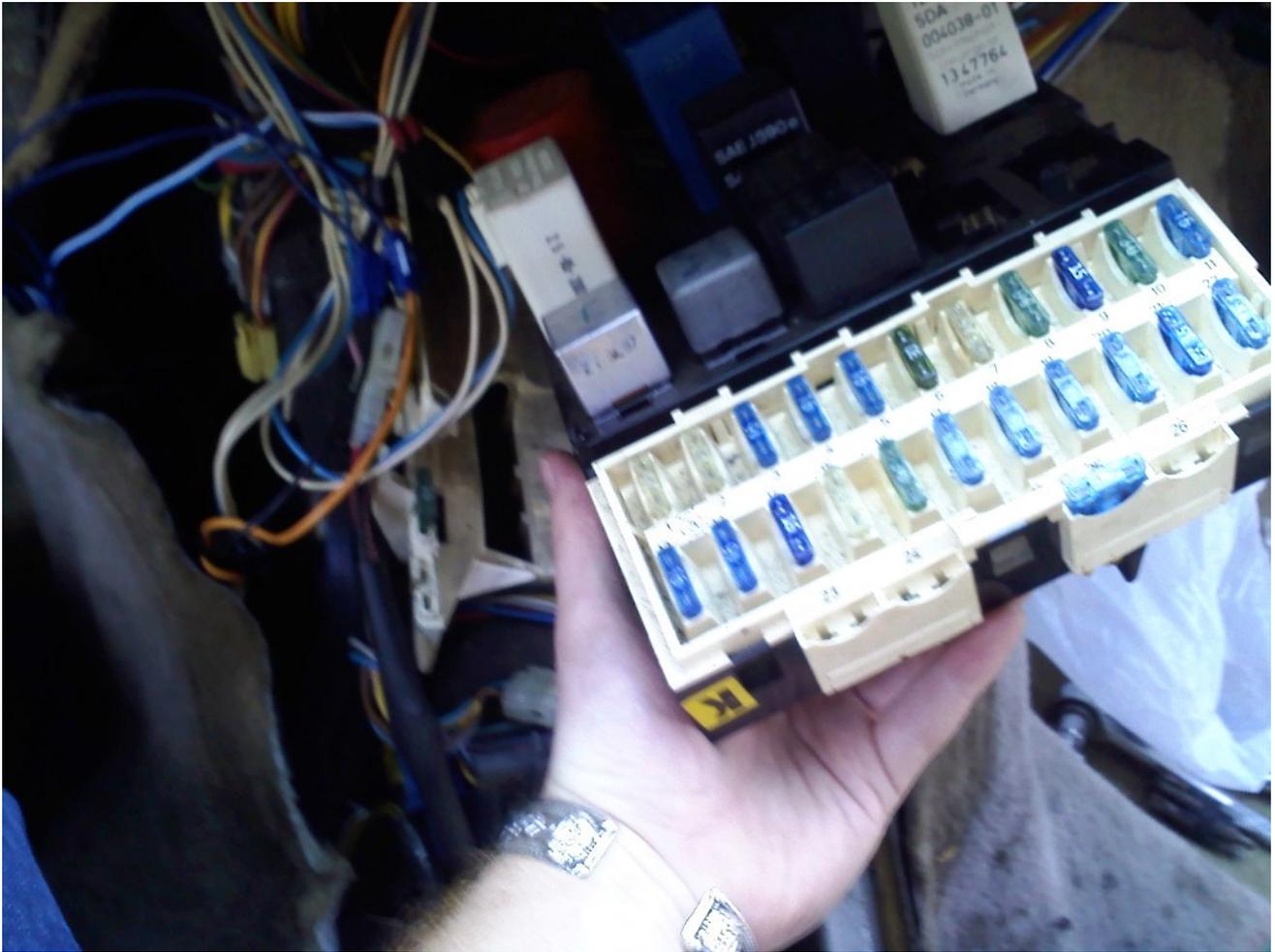
This brace lifts up so the assembly can be pulled further forward.



There are some bolts in there. Be patient. Use a flashlight.



Once one side is off, the whole deal can be removed to the back seat, trunk, or on top of the car.



The tabs on the side of the relay/fuse block work just like described in the FAQ. The whole thing pops out.



Slide the relay panel out of the way



Remove three screws. Use a large phillips bit.



Remove these four screws to free the climate control panel. There are vacuum hoses in rainbow colors back there.



Lower the climate control panel down gently and set to the right.



Here is a reference photo in case any hoses get pulled.



This is the duct maze in front of the heater core. It all has to come out.



Pop the passenger vent duct elbow off. The FAQ is right; you can bend the heck out of these and they're still okay.



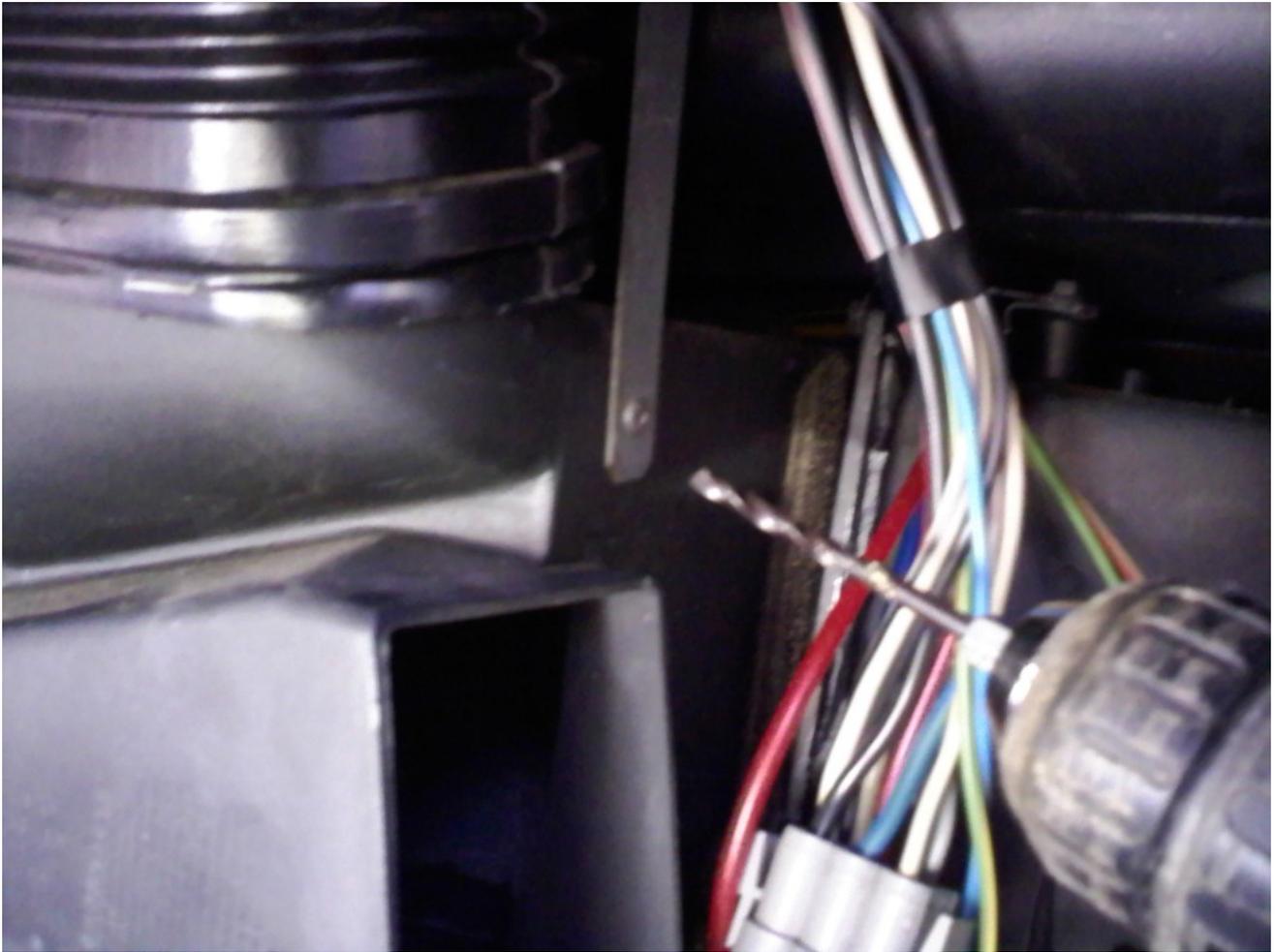
There it is!



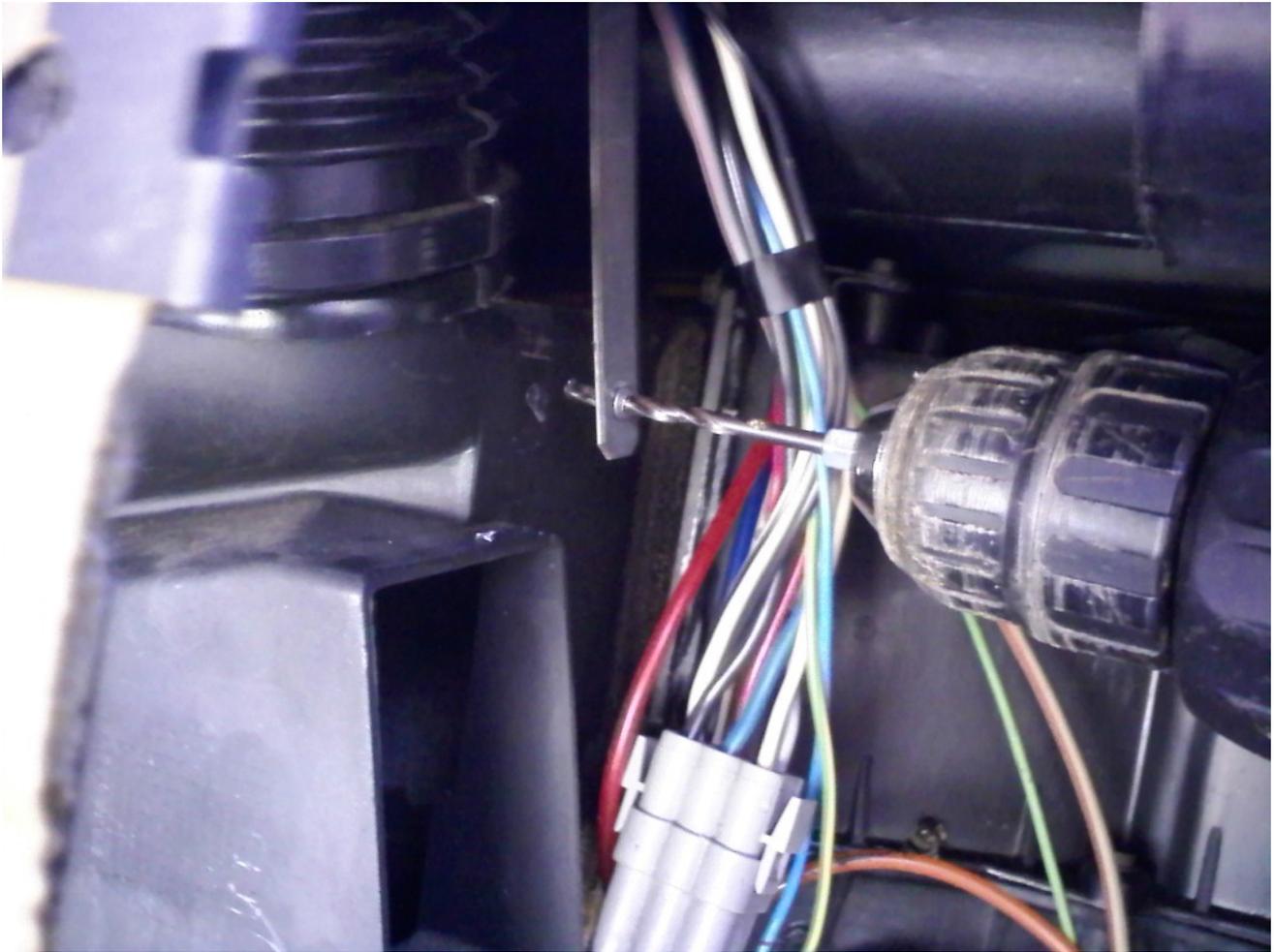
Remove the screw on the ducting.



Step back and BREATHE! Wow, who made this mess?



Behind the elbow duct, there is a metal strap riveted on. Remove this with a careful bit of drilling.



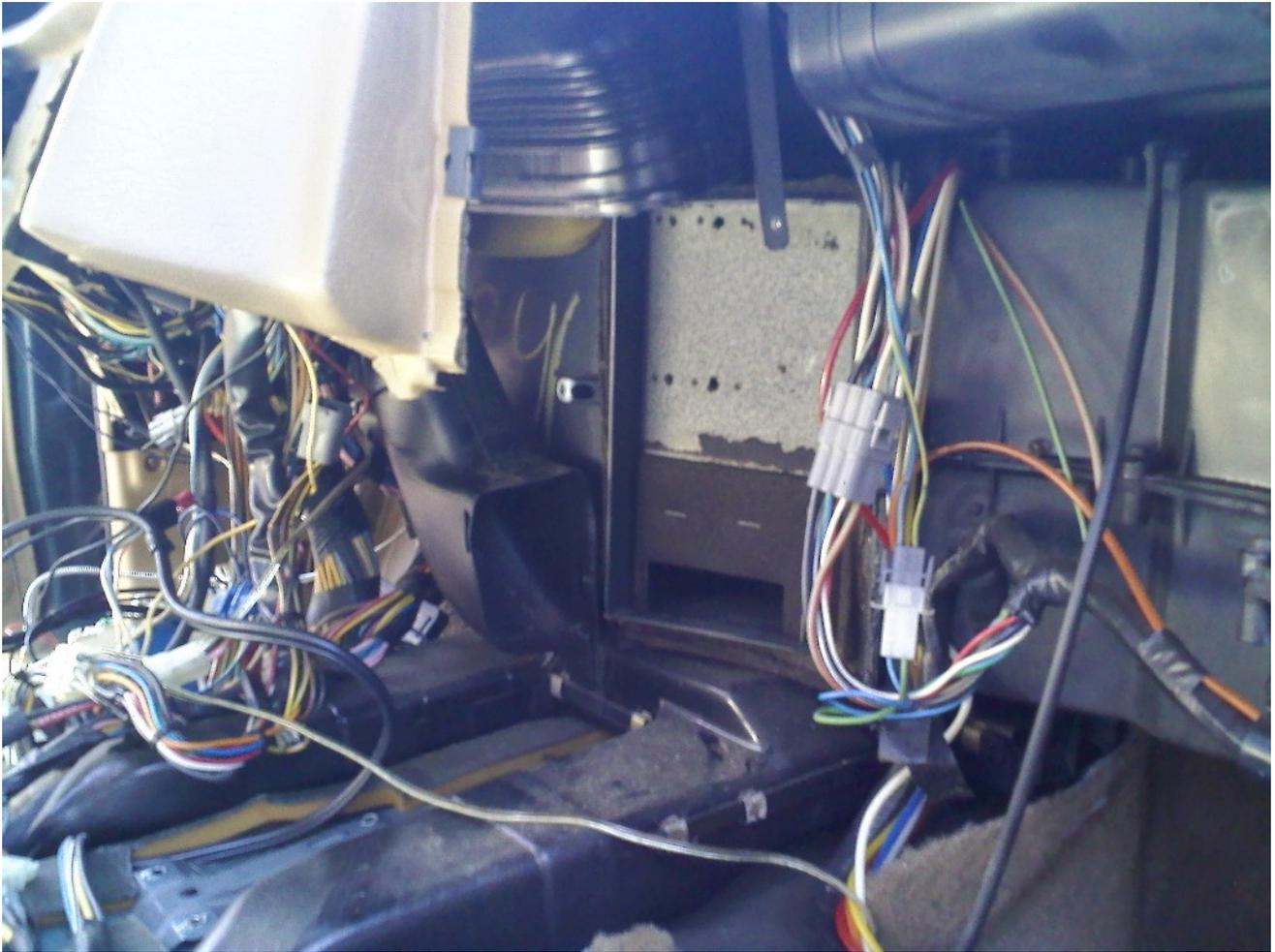
Be gentle. It's very soft metal. This will be replaced with a screw upon reassembly.



Pry around, then push up on, the wide duct in the center.



The maze! It came off!



The rear foot vents are next. They go off under the carpet on either side.



Pull up more carpet to reveal the snap screw holding down the rear vent.



The snap thing around the phillips head screw is not part of the screw. Don't lose it, and do store it with the screw so you remember to put it back on.



Bend aside the driver's side vent elbow to reveal another screw. Remove it.



A blurry side view of the same screw, buried back there. You will need a long driver.



Carefully cut the zip ties holding the floor ducts to the wires underneath.



Pull the floor vent neck back and up to remove it from the floor vent distributor duct.



This floor vent distributor is actually very brittle and stiff. Be careful with it. It will have antifreeze all inside it, so be prepared for dripping. Pull sideways to the left and up to get it out. It will catch badly on the pad underneath. I had to finally cut mine free after 20 minutes of struggling.



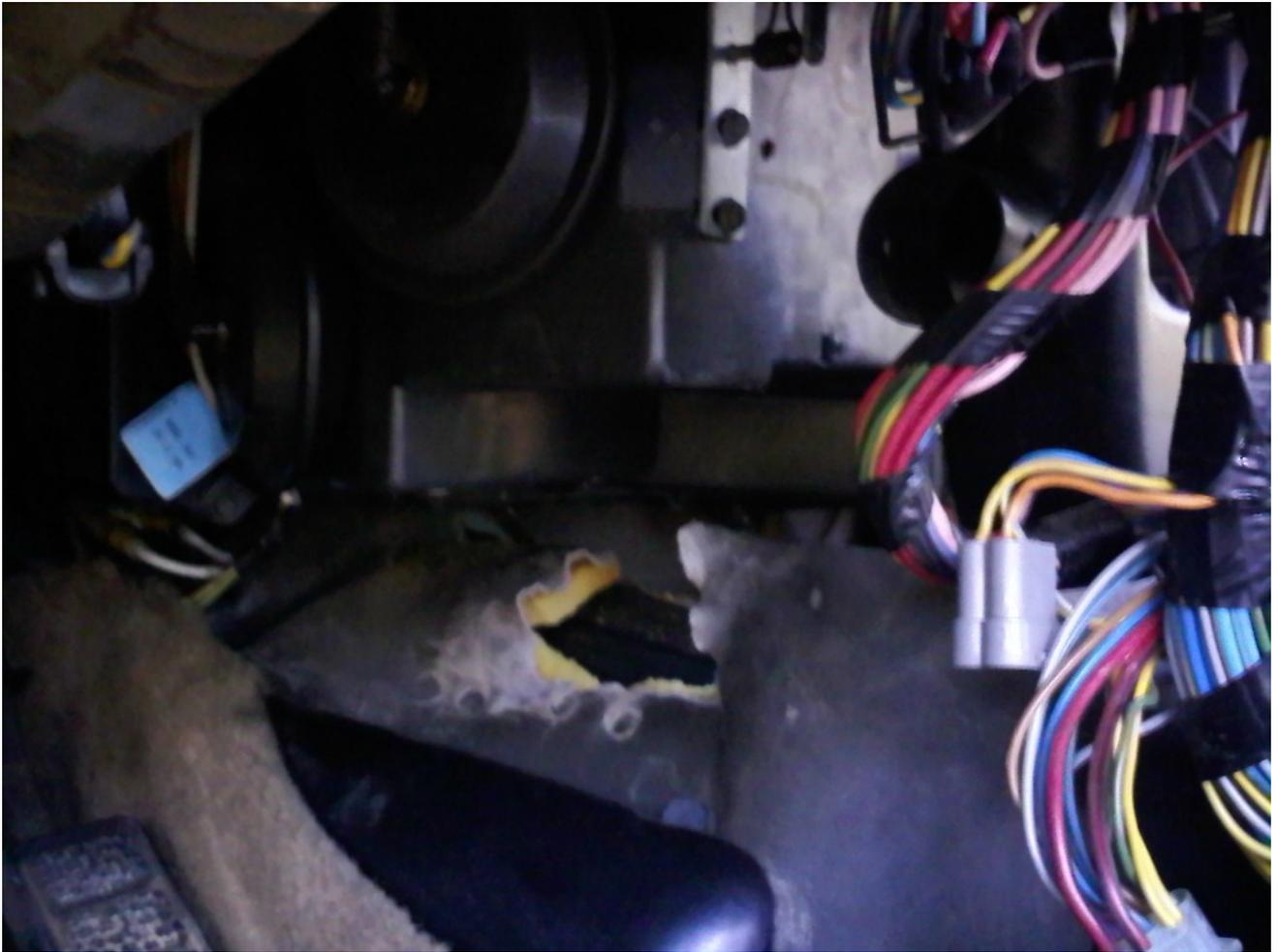
See? It's sticky.



The freed distributor box has the side fins that hold the knee panels.



Some sort of adhesive, or perhaps just crystallized coolant, adhered the box to the foam underneath. I cut it where it began to tear.



That's where I had to cut the foam.



With the bottom duct removed, the heater core box is in sight. Go have lunch and prepare to be patient.



The FAQ describes the location of the screws. There is one buried up above the box, behind the foam ring on top, that is nearly impossible to get to. Don't get frustrated and break this off, or the whole box will likely bust in half. I was able to get it off with an extension and a universal joint after an hour of strain. However, I did not replace this one screw on reassembly.



The vacuum hoses on the side have this funny slip-on yoke. Be careful, patient, and don't break it.



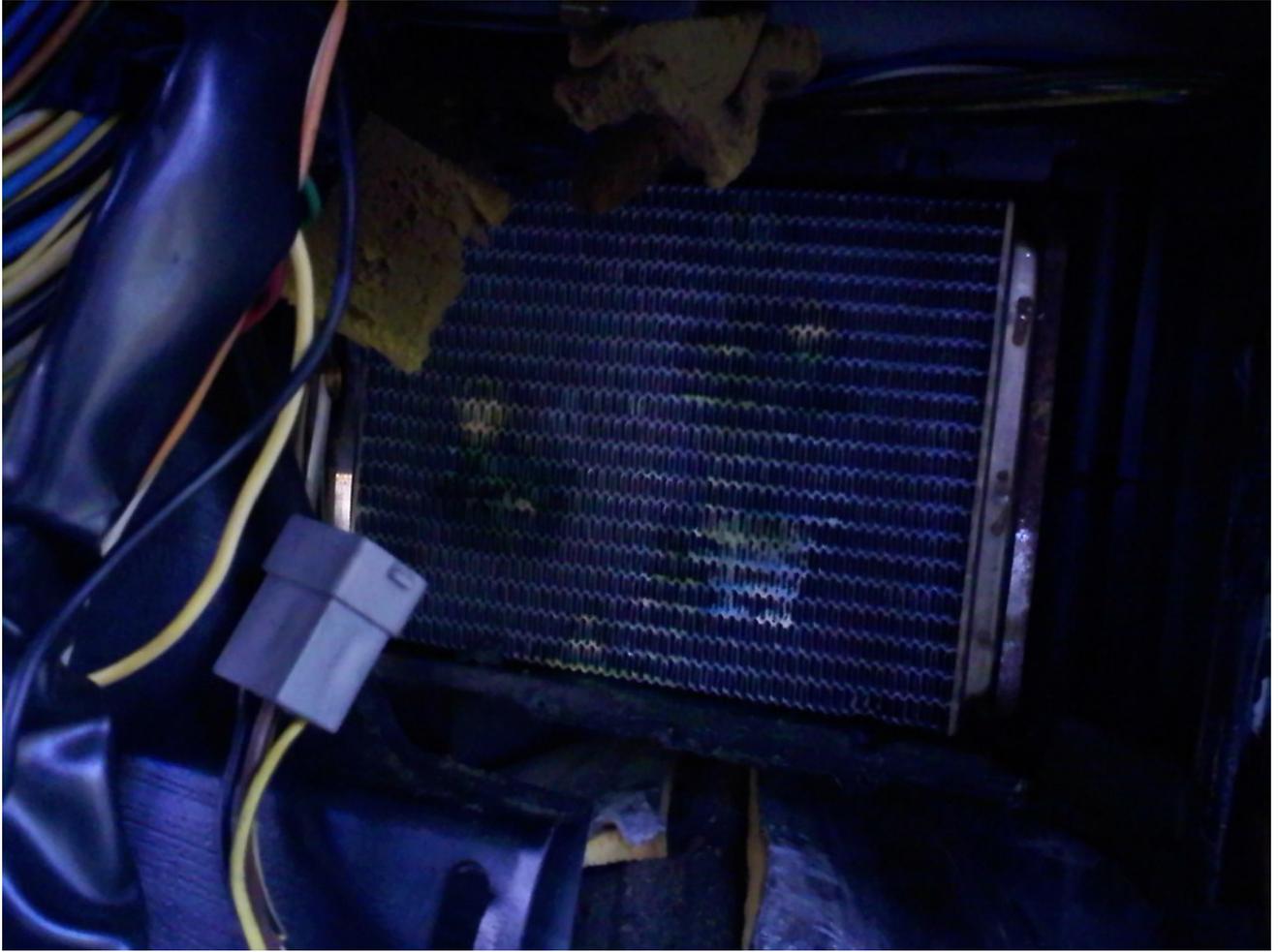
Another shot of the vacuum reservoirs.



The whole box. Whew!



You didn't think you were ever going to see it.



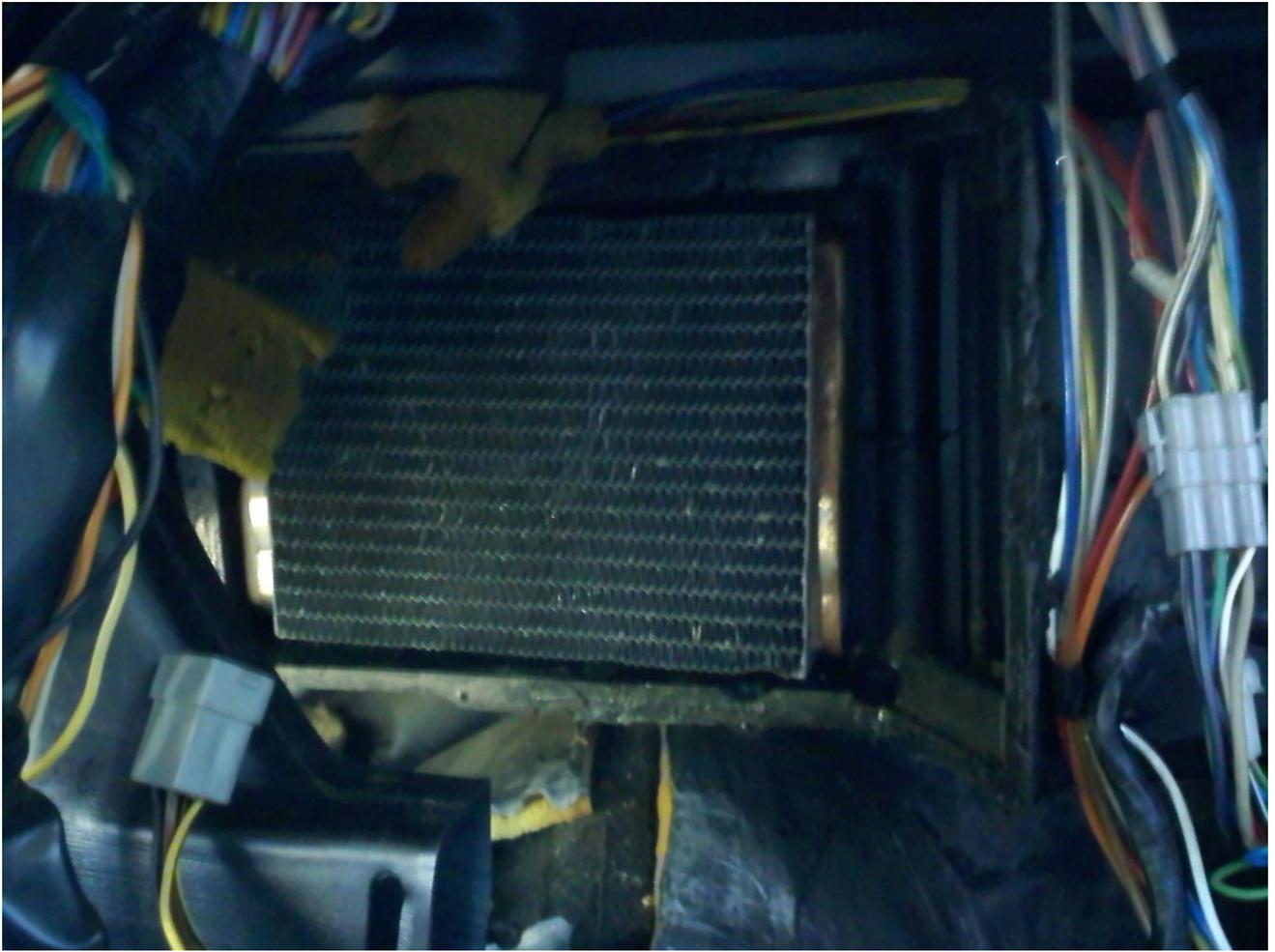
GROSS!



Heater core removed. The straps were easy.



The new heater core was shiny. \$125 at Rock Auto, all metal. Fitment was a bit of an issue, though, and I had difficulty installing it with the straps in the proper place.



Finally! Then I used all the pictures I took earlier to put it together again.



When the time came to put the metal strap back (essential to getting things stable and fit back together), I used a random screw I found.