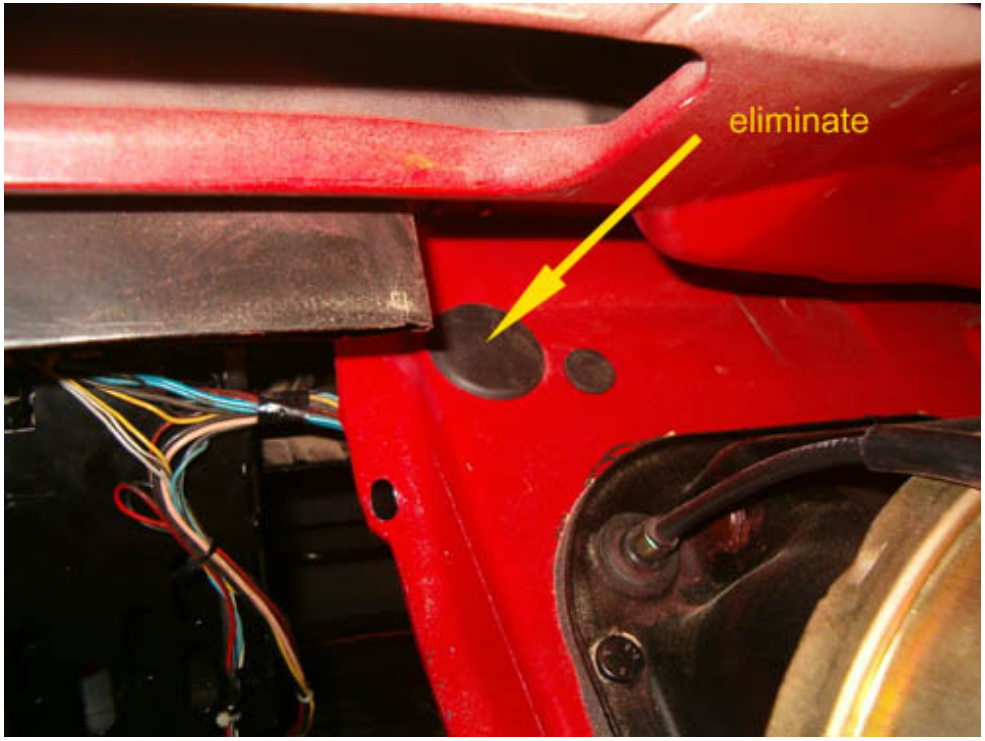
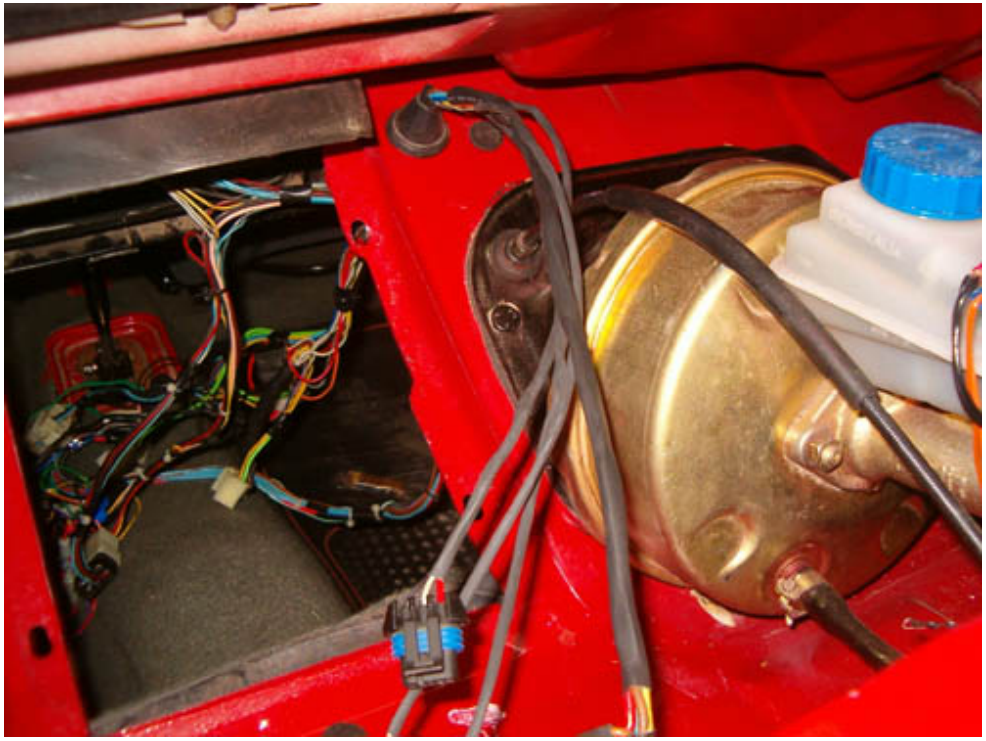
Vehicle Installation

It is now high time I had all those A/C parts installed on the car! Installation actually involves two phases. First for the evaporator installation and second for the condensers. First round of pipes and hoses installation will be done during evaporator installation and second round during condensers installation. Prior installation drain engine coolant since we will disturb the cooling system.

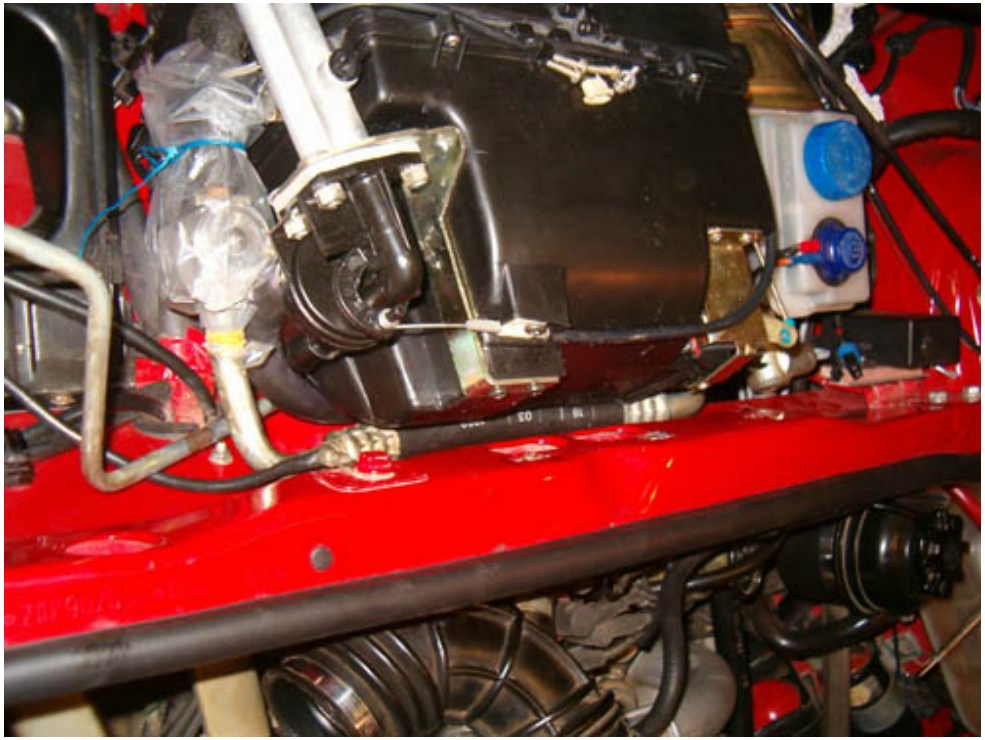


Eliminate the designated plug ...



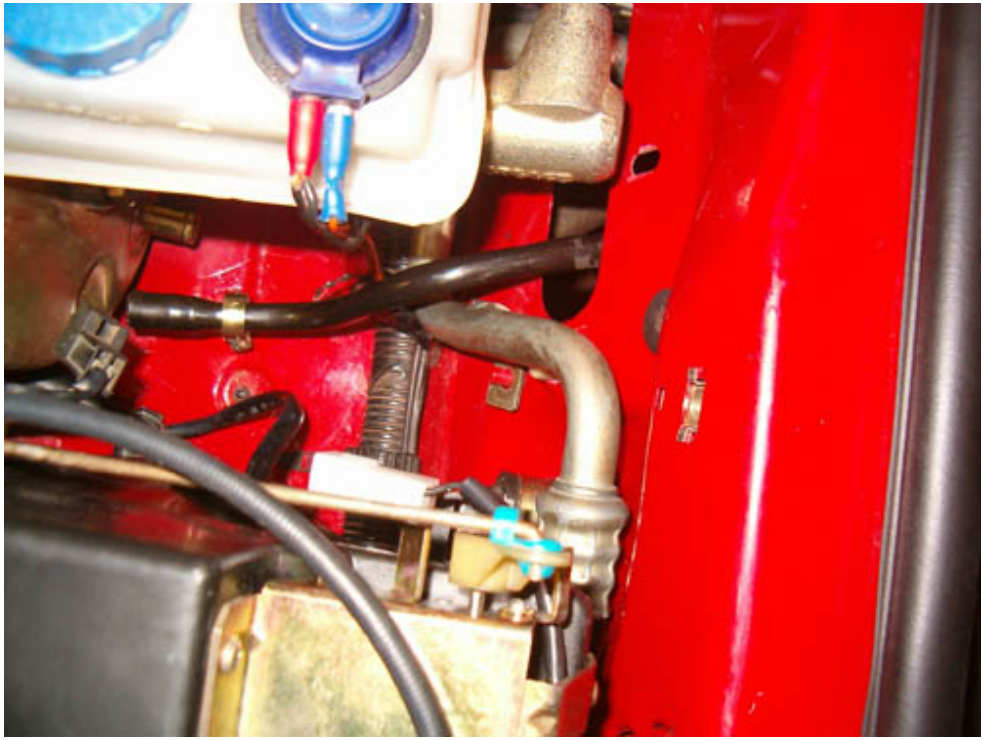
... and pass through the evaporator wiring harness

Then install evaporator as carefully as possible

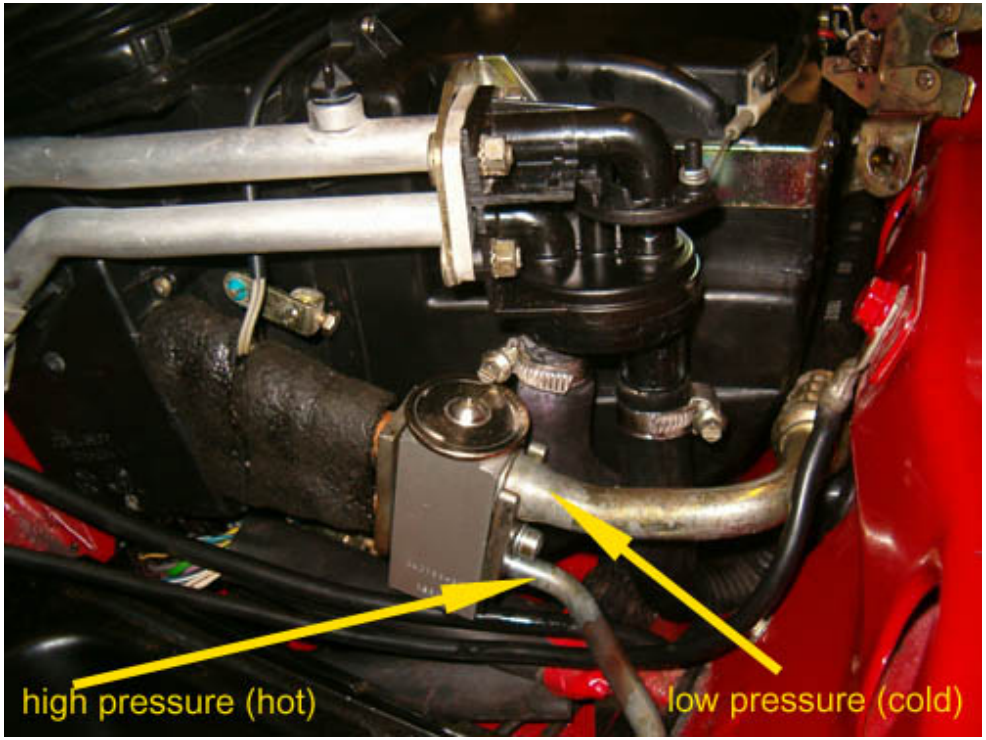


Install heater pipes and Freon hose. This is a tight fit since the clearance between the evaporator and bulkhead is very small.

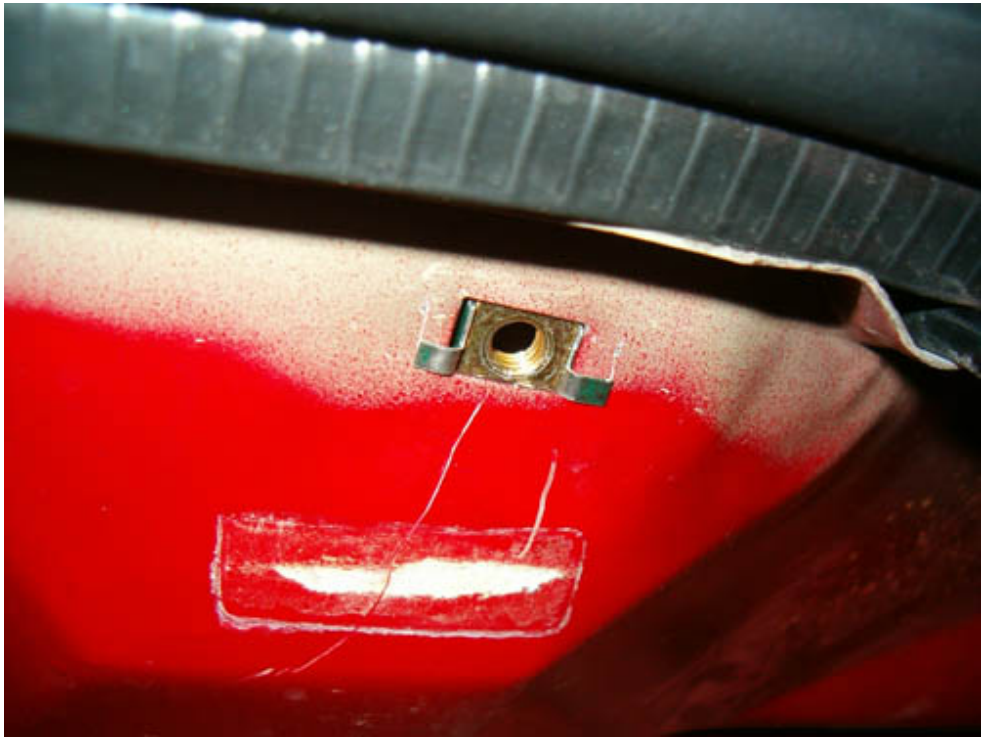
The end of the hose will bolt on the S (suction) port of the compressor



Notice the thread welded on the chassis and the bracket of the hose. This is a nice guide to keep things straight



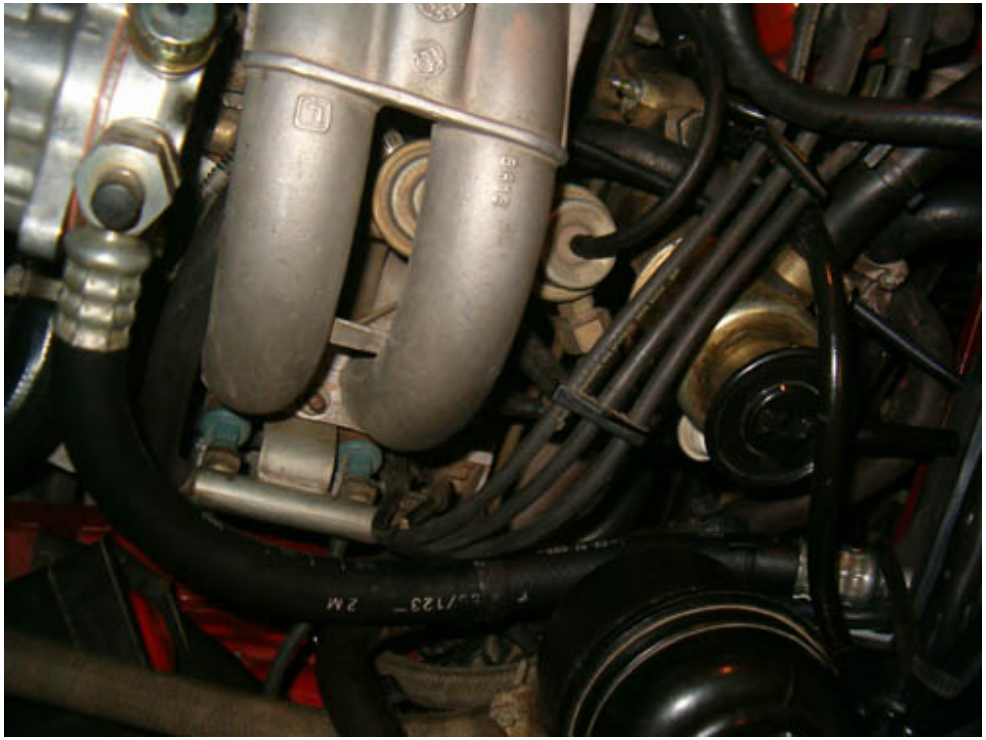
You may now attach Freon pipes on the expansion valve. Be sure to fit O-rings and lubricate them with refrigerant oil prior installation.



Remember those funky nuts? Without them you will have a really hard time securing any kind of stuff

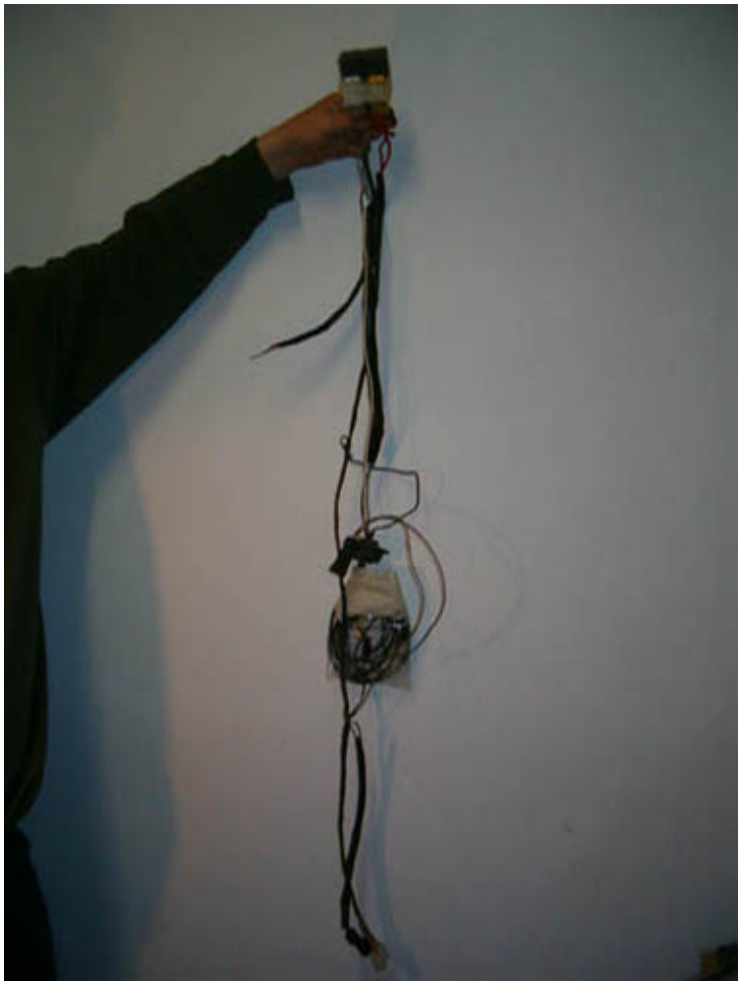
Here is the drier filter along with the respective pipe. This is the pipe that "feeds" the evaporator with Freon (high pressure, liquid form).

This is the part of the hose that bolts on the compressor port. Again use new O-ring coated with refrigerant oil...



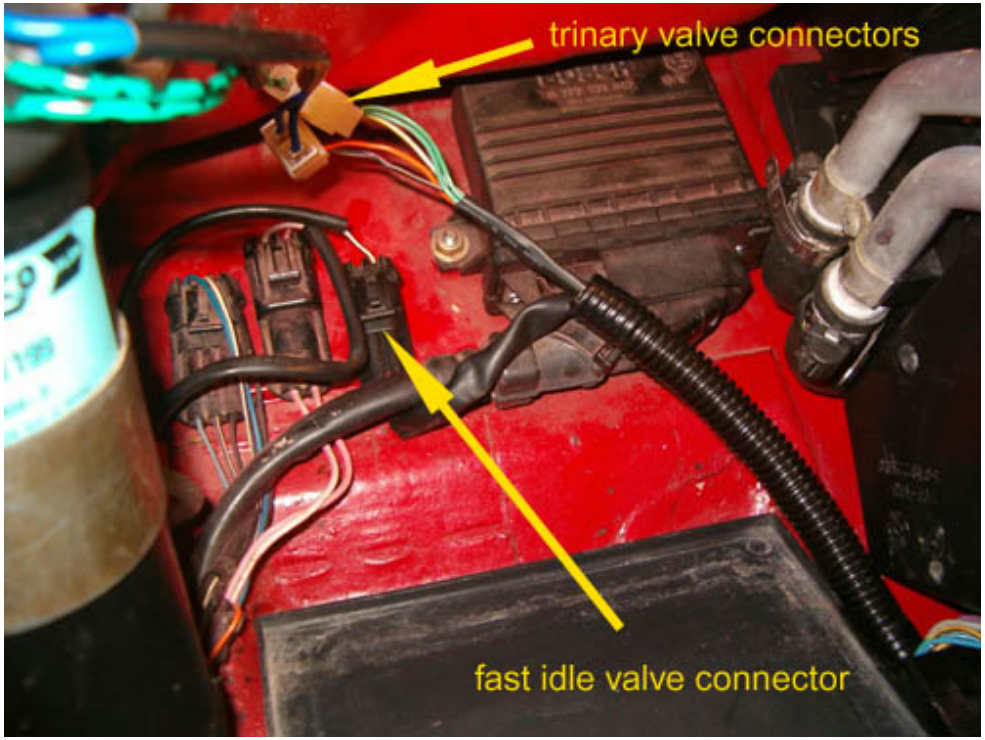
... and attach it to compressor.

We will now deal with the cable harness.

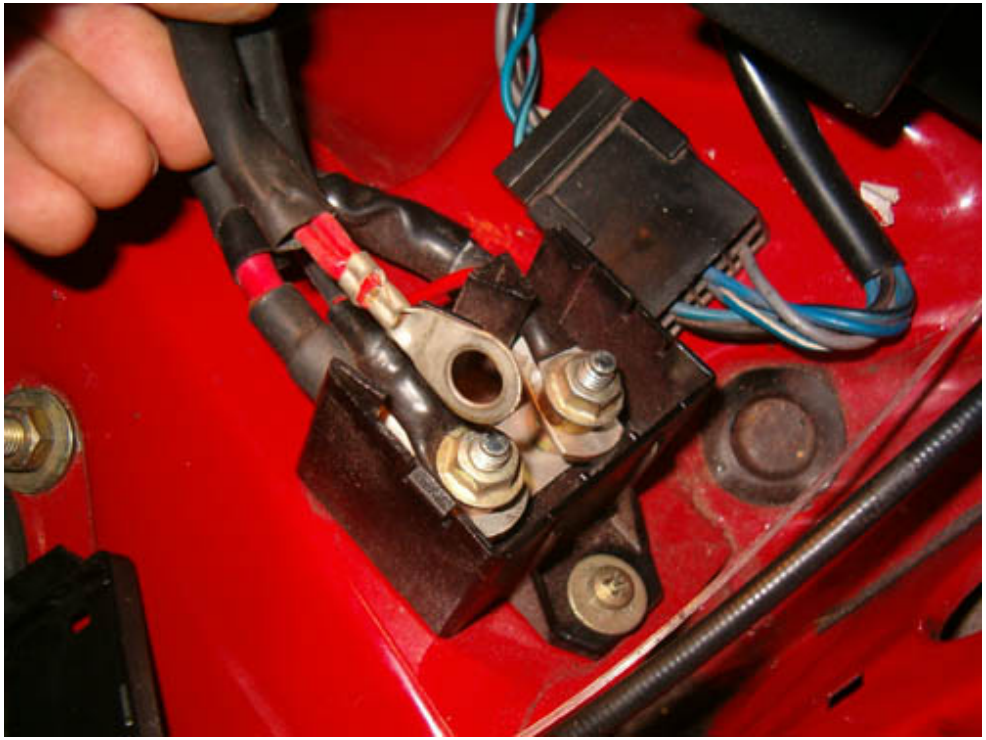


This is the main harness...

.. and the place where the relays bracket attaches.



Attach the fast idle and Trinary valve connectors...

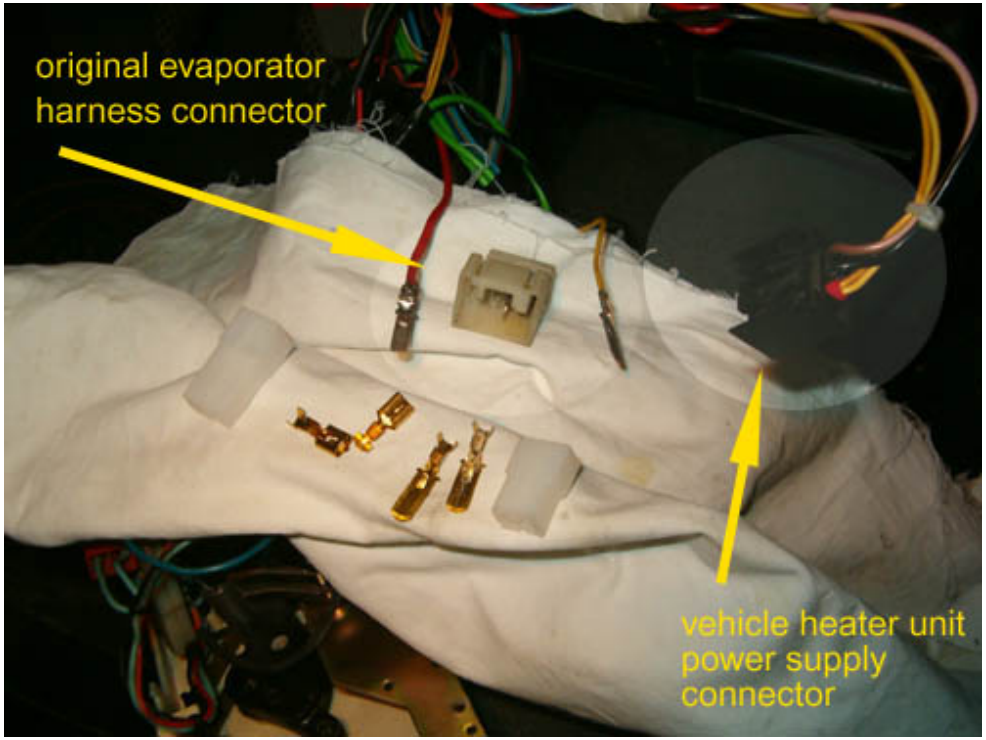


... and the positive current supply (+30 terminal) in the junction box

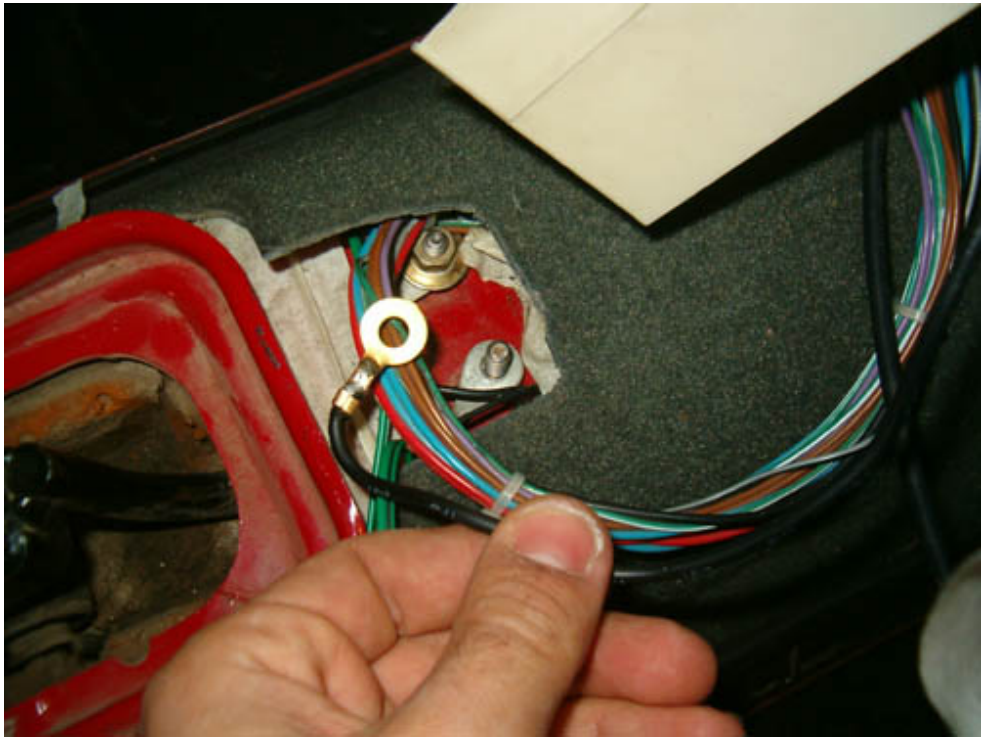
Restore covers...

... and attach all connectors to their respective match. There is no way to make mistake since each one makes a unique pair.

The first round of installation is complete.



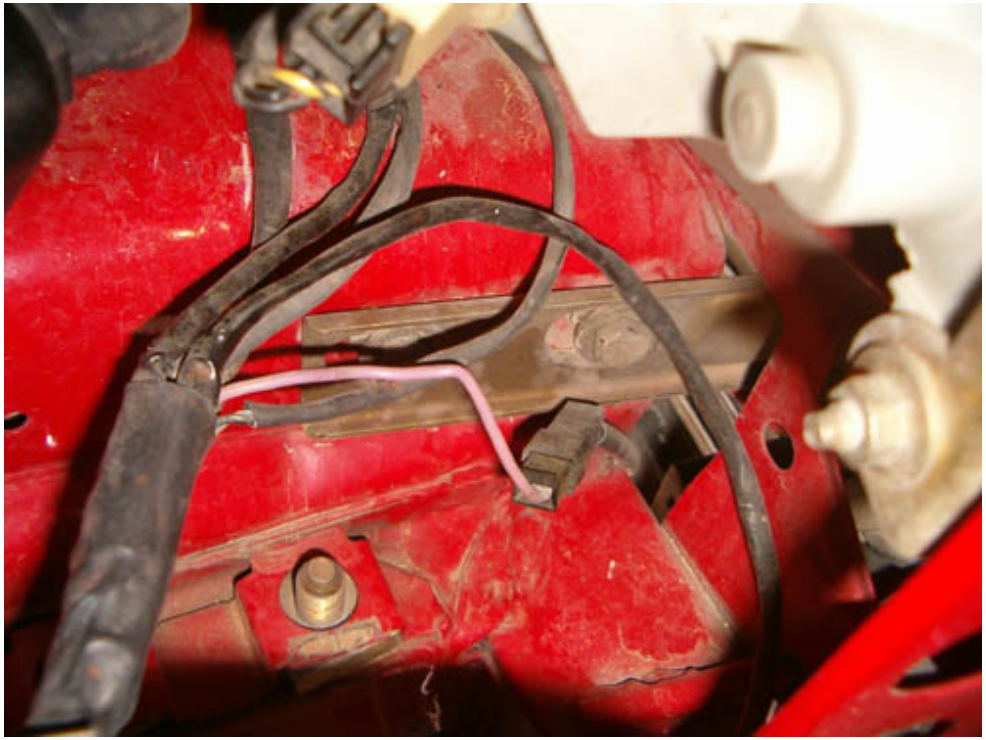
Let's now go inside the passenger compartment to connect the control panel. Here is an important note: The connectors above although being original from the factory, they didn't match each other. The colors (yellow and red) match between the two harnesses but the connectors don't. All you have to do is eliminate them and use a new 2-spade connector; the black cable (earth) that remains will be left unused since we will use the one that the harness supplies as shown below.



Install earth.

Let's now go to the second round of the installation dealing with the condensers.

These were bought new from Alfa.



The bumper is required to be remove. Undo the two 13mm nuts of the bumper rail under the headlight (both sides).

Don't forget to remove the two screws (each side) securing wheel arch cover to bumper and bumper to chassis.

Get that bumper out!

We will remove the horns since the space will be occupied by the condenser.

Note that the original horn bracket will not do the job. The bracket shown above is required so that the horns are relocated on the cross rail under the radiator. I had to use the vice in order to restore the shape after the accident of the donor car...

A close up of the new horns location

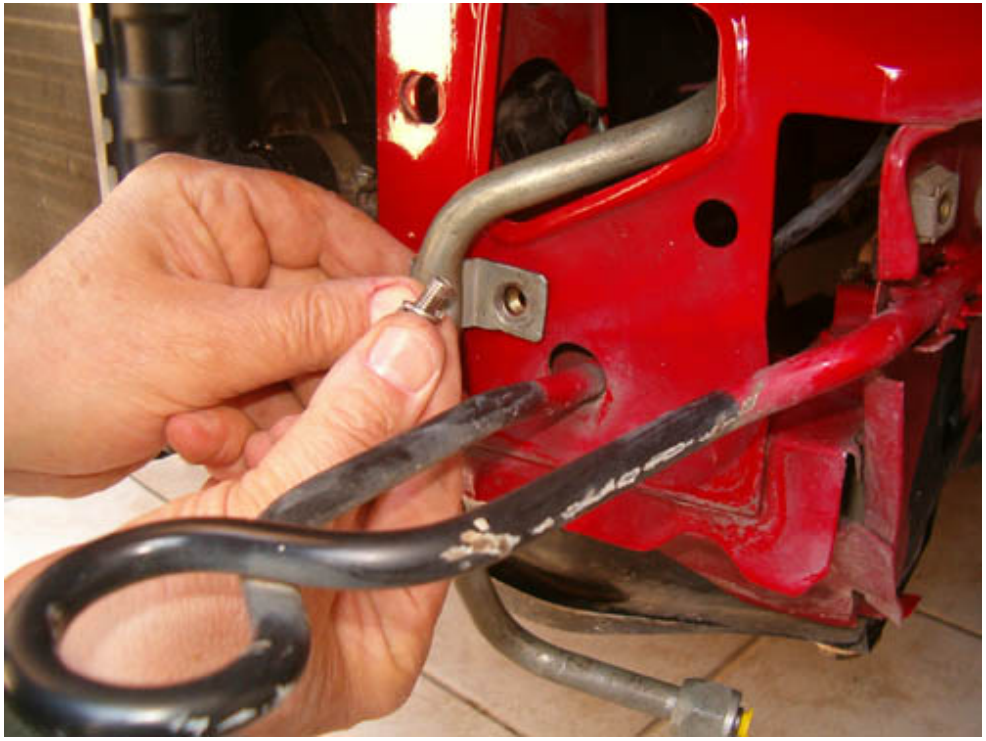
As shown from below.

Horns are on their new position. You can use the original wiring since its length reaches the new location with no problem.

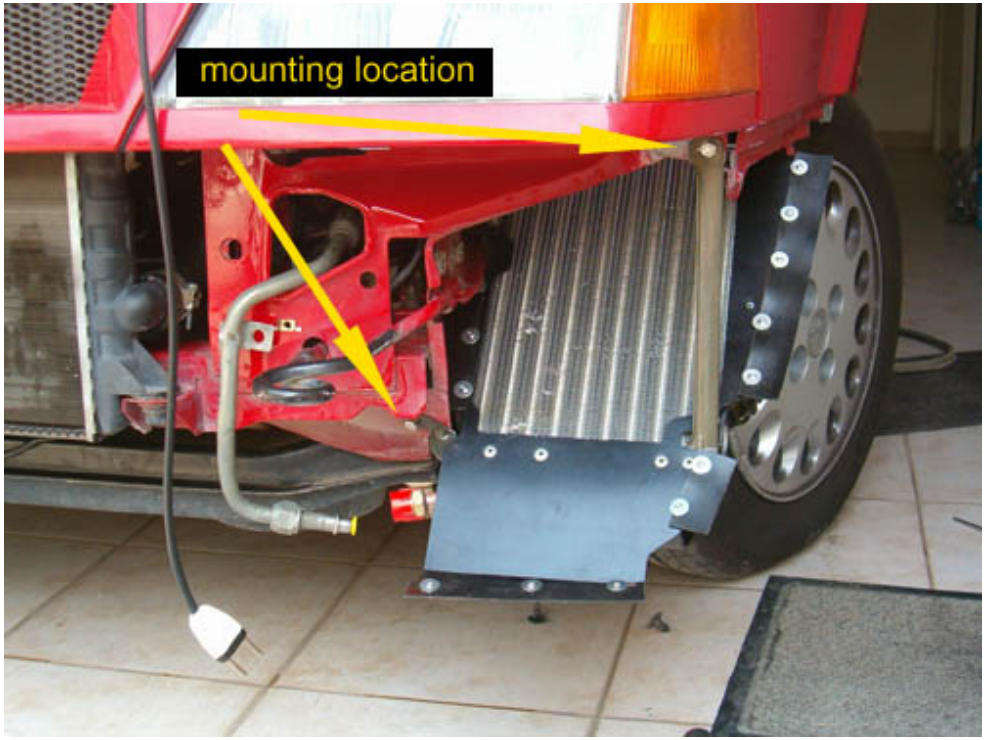
Install Freon hose and secure it on the relative nut. These nuts are not factory installed on the car so be sure to get hold of some.

The end shown will attach on the condenser.

The pipe as it looks from the engine compartment



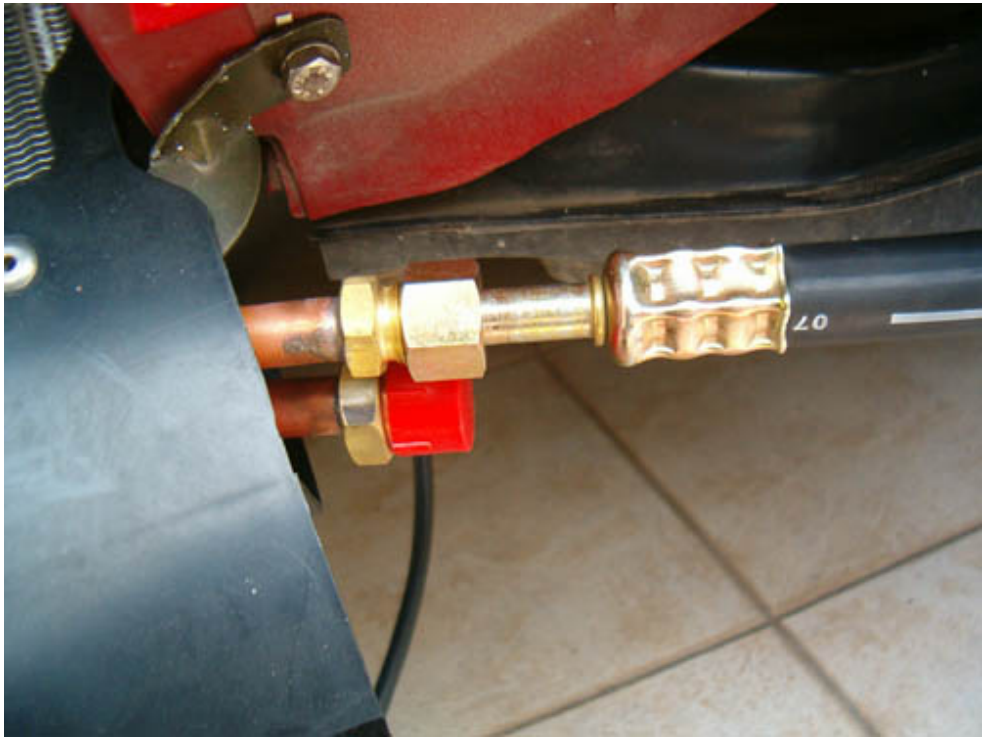
Let's now attach the other side pipe. This pipe attaches to the D (discharge) port of the compressor



Condensers are now installed. These have three mounting locations; two are shown above ....

... and the third one is on the rear of the condenser.

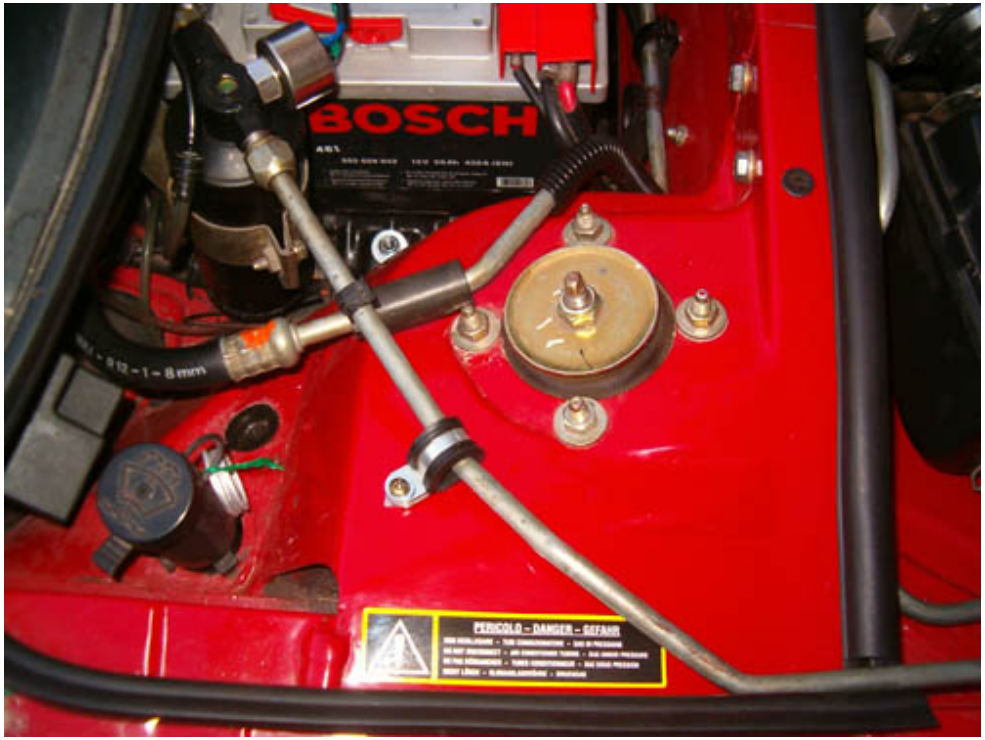
Condensers are now secured in place; let's now install Freon hose connecting them



Use new O-ring and lubricate it with refrigerant oil; be sure to fully tighten the respective nuts

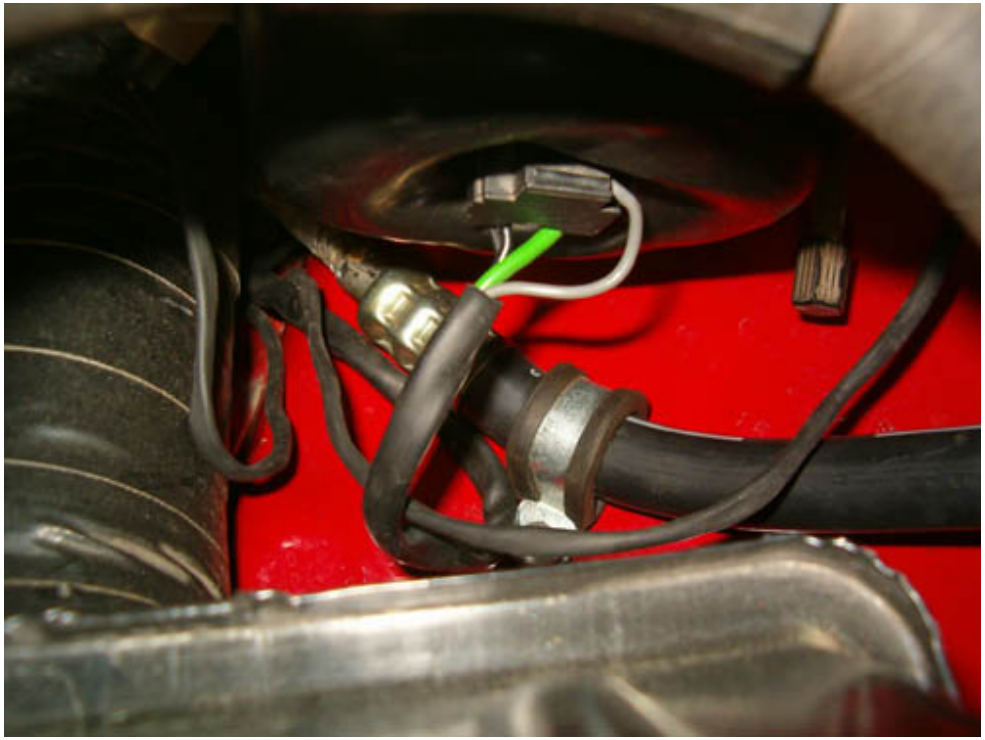
do the same for the left condenser

This is how the front part should look like.

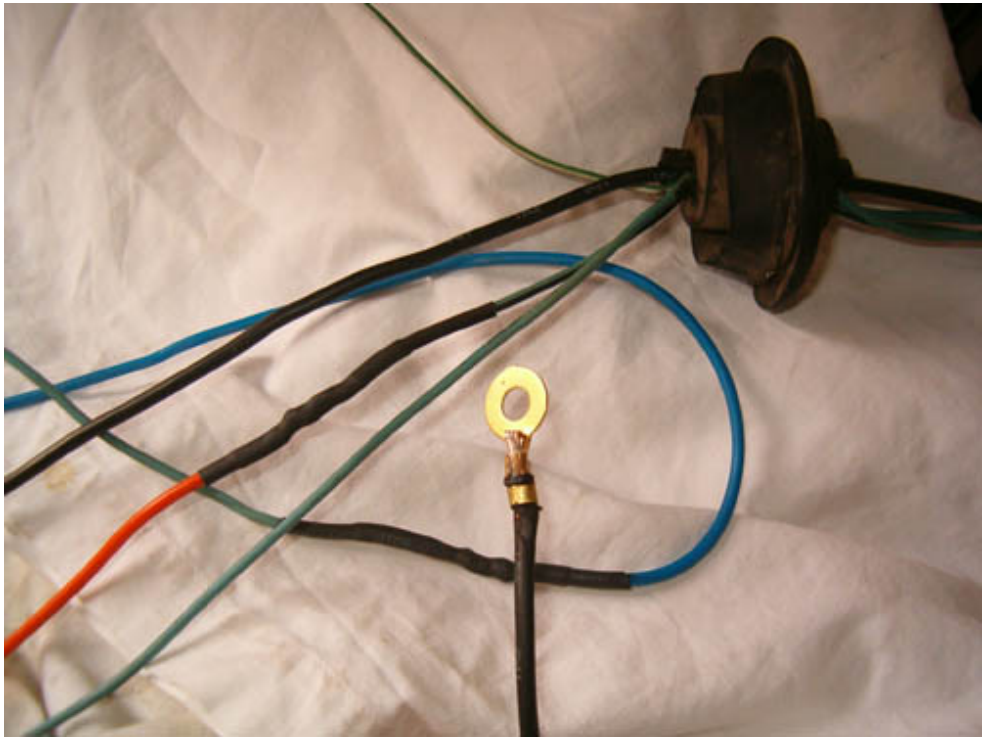


Be sure to connect the pipe to the drier filter and fully tighten the nut.

Secure the Freon hose with the respective plastic clamp. It is different compared to the original clamp since the new one keeps in place two hose instead of one.



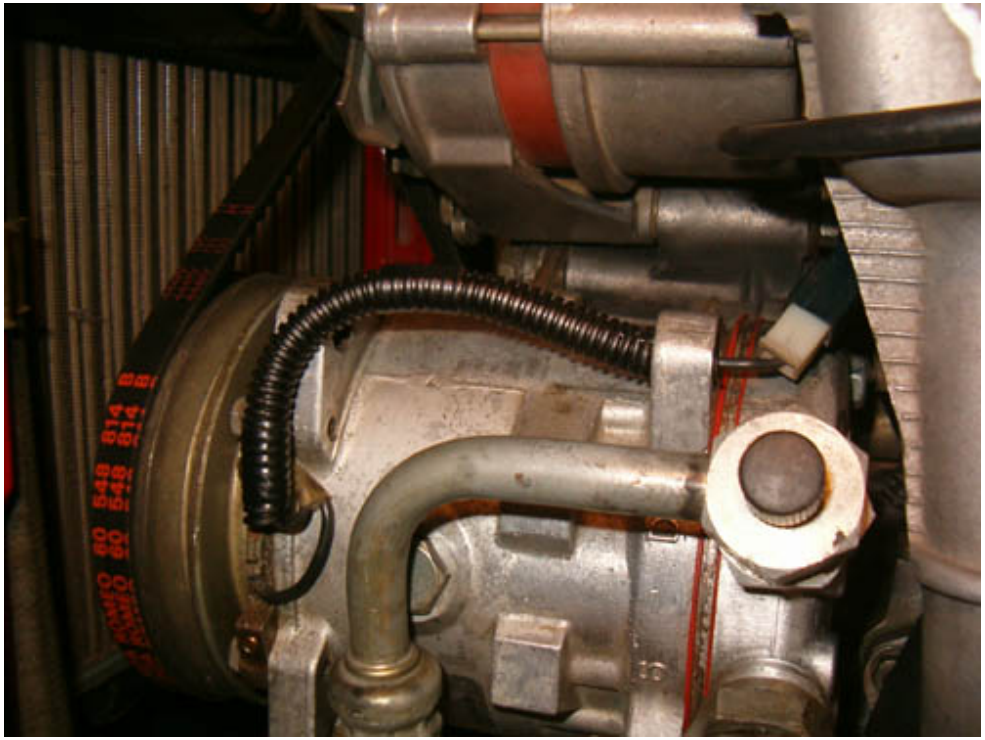
Also secure hose with clamp located under the right headlight



Let's now install wiring for the condenser fans. I have done a patch here as the donor car had a front end collision and a large part of the harness was lost. You will need three cables for the fans. Two of them are different color (+12V) one for each fan and the third is black (earth) common for the two fans.

Remove the plastic cap ...

... pass through the harness and hook the earth cable on the thread welded on chassis.



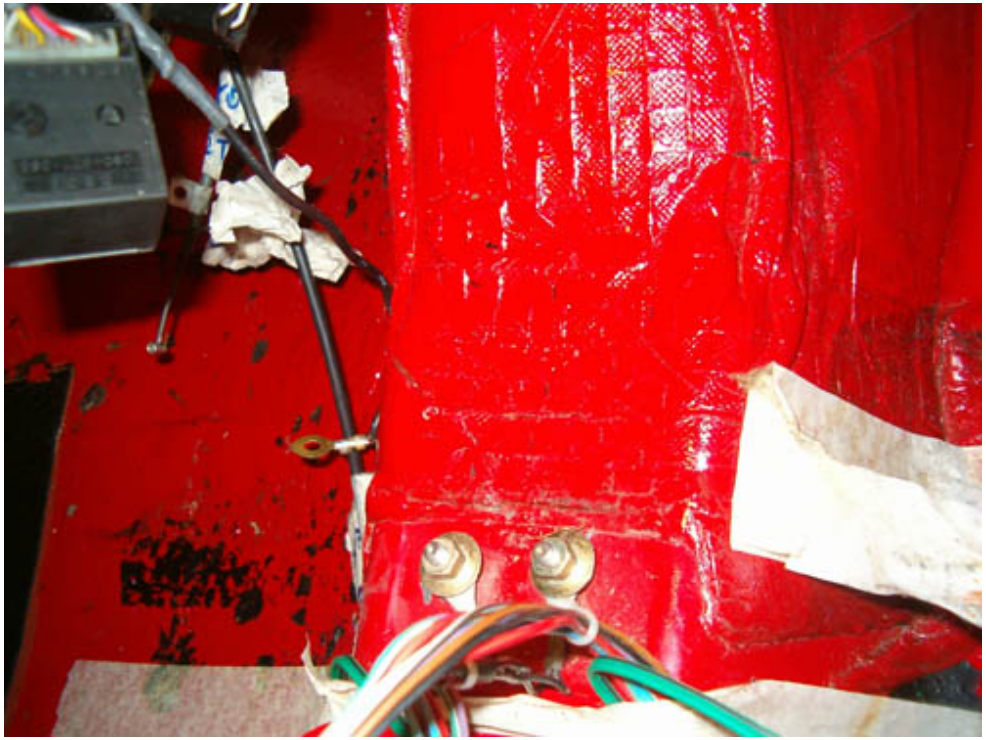
The single wire connector of the harness connects to the compressor clutch ...

... and the first connector goes to the left condenser fan.

Wiring passes along with the Freon hose ...

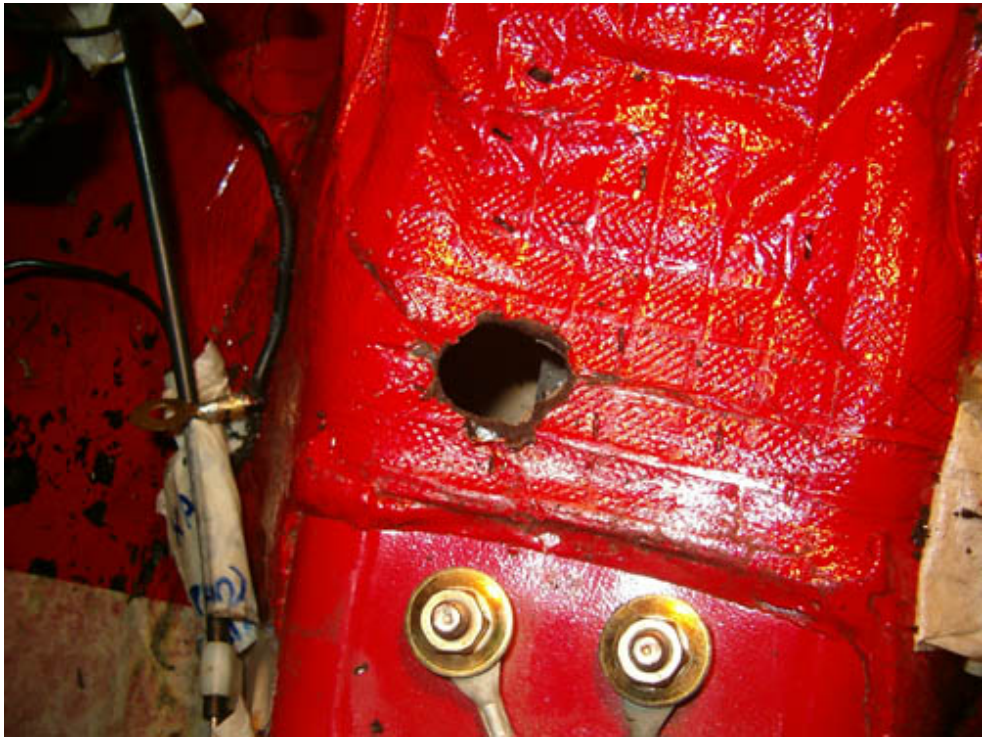
... under the cross rail ...

... and reaches right side condenser fan.

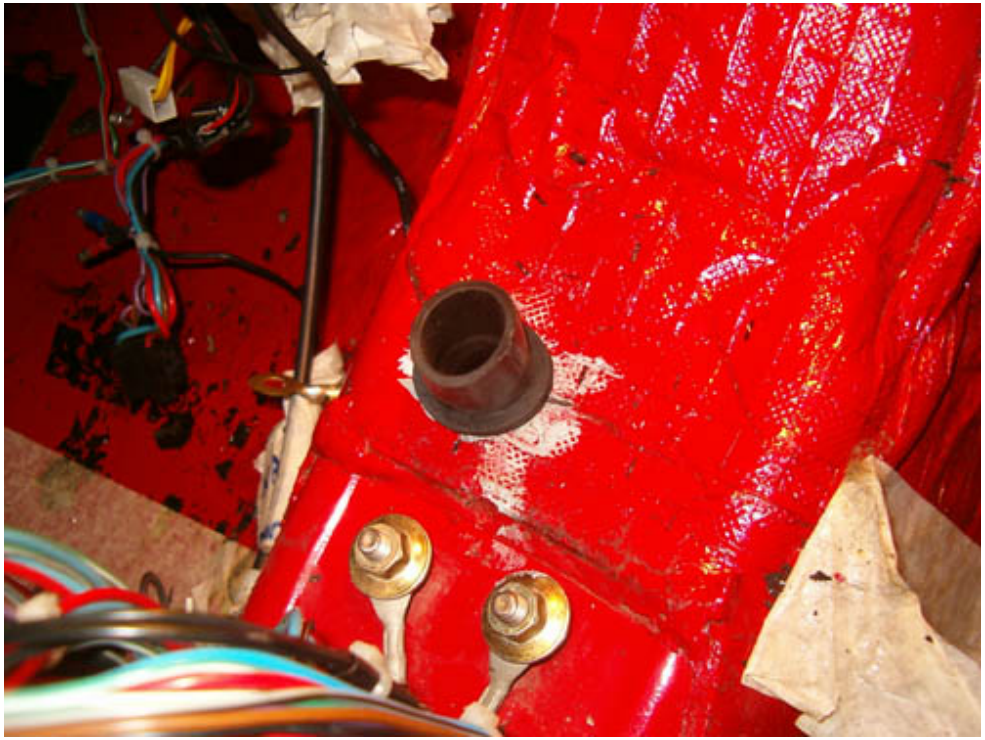


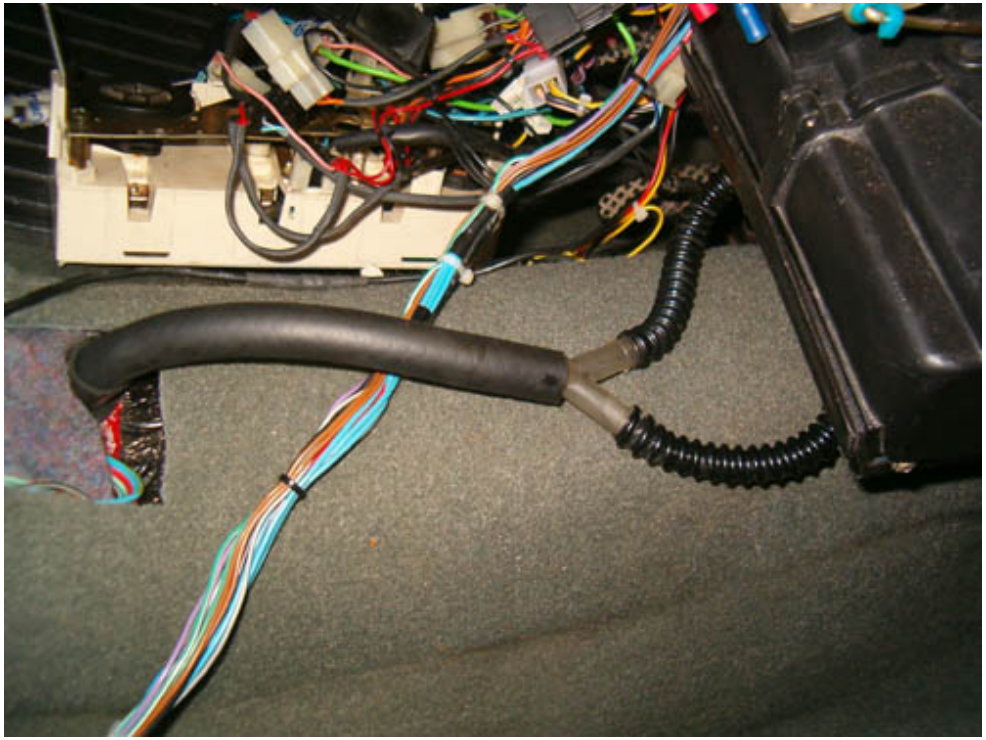
Let's now deal with the water vapor drain.

This small rubber element will pass through the transmission tunnel.



Drill a 16mm hole.





Drain plug is in place and connected to the evaporator.

This the final look of the engine compartment after all A/C parts are in place.