

Headlight Washers Installation

Yet another project for the 33. This time I am dealing with headlight washers installation. Unfortunately this kit is out of production (among many other items) and luckily mr. Richard Bell from the UK was able to supply me a complete kit from a donor 33; the kit was as complete as it gets including wiring, washers, washers bottle, pumps even plastic clips that keep hoses firmly attached to the chassis/bumper. A big thanks to Richard for his effort and help to source a complete kit for me.

Here are some photos right after the washers kit were removed from the donor car.



These are the washers. The design is from Bosch hence the serial number stamped on them



hose as removed from the donor car.



A close up of the hose connector that hooks on each washer



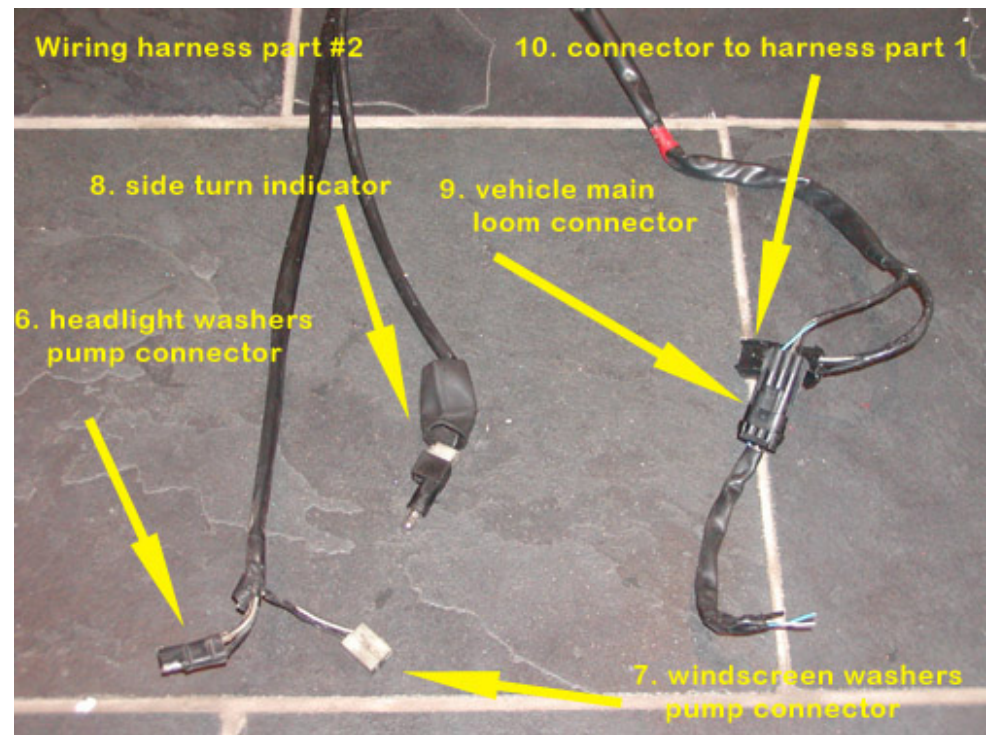
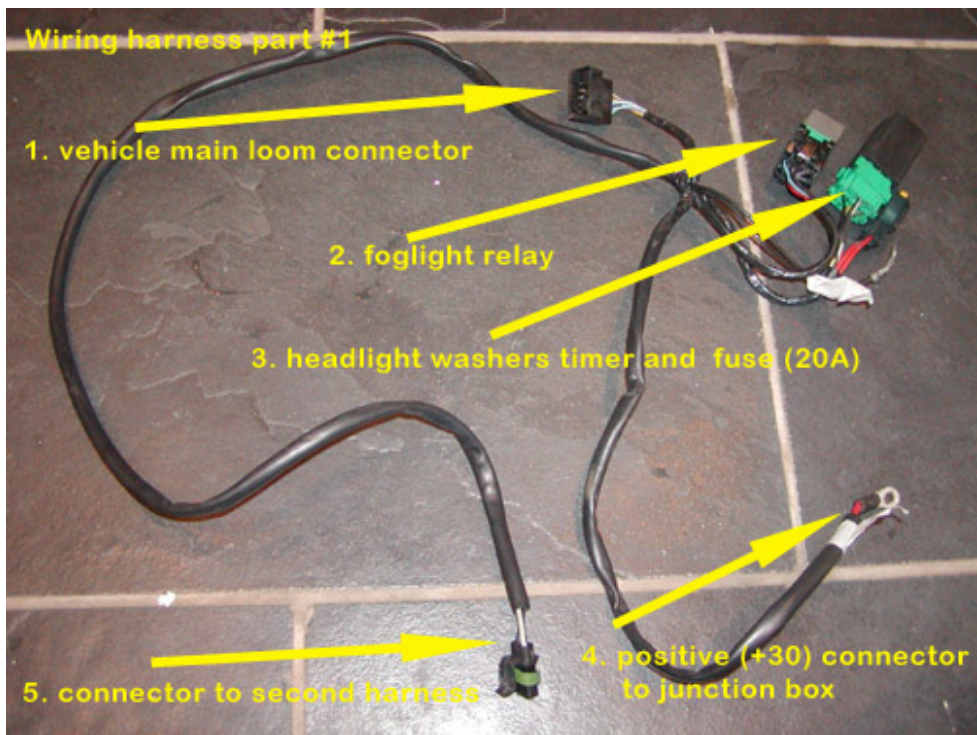
Windscreen washer bottle showing the two pumps. On the left is the windscreen sprinklers pump and on the right is the headlight washers pump; it is almost double size compared to the windscreen one as the cleaning of the headlights is solely depended on the force of the water jet.



Wiring passing through the left fender well



and the respective harness connector on the vehicle main loom. Although the washers kit came off a RHD car, the connector on the LHD version is on the same place (just behind the battery)



Here is a comprehensive view of the wiring (vehicles equipped with headlight washers and fog light share a common wiring harness.):

Connector 1: connects to the vehicle main loom (found under the master cylinder on a LHD car)

Connector 2: Fog light relay

Connector 3: Headlight washers timer and 20A fuse; This black device triggers the headlight washers for 1 second when the wiper stalk is pulled to wash the windscreen only if the lights are on.

Connector 4: Positive (+30) connector to junction box.

Connector 5: connects to harness part 2

Connector 6: connects to headlight washers pump

Connector 7: connects to windscreen washers pump

Connector 8: side turn indicator bulb

Connector 9: Connects to the vehicle main loom (windscreen wipers connector)

Connector 10: connects to harness part1.

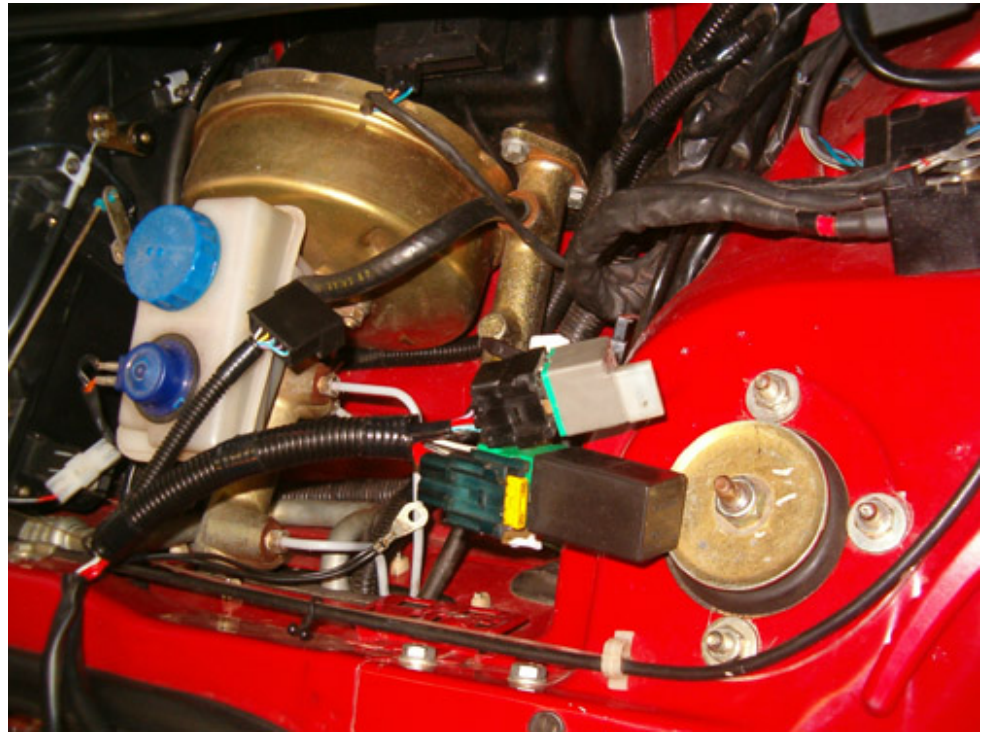
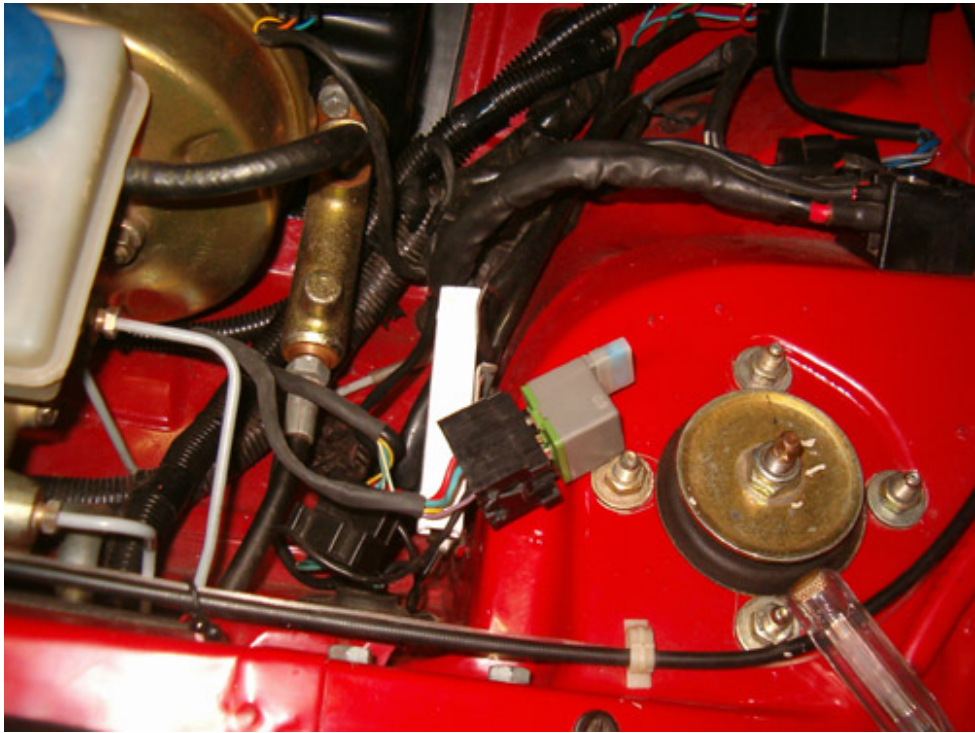


Finally do not neglect those 6 plastic keepers that hold the hoses firmly attached to the bumper

Let's now get down on business



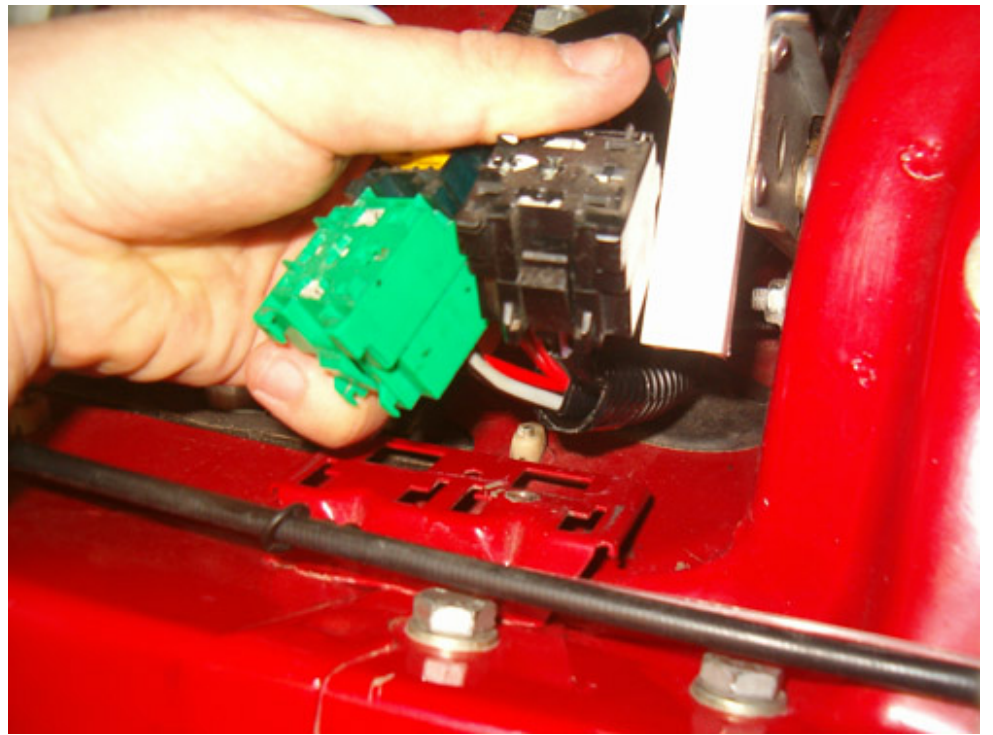
I tidied up both cable harnesses by cleaning the connectors and passing all cables inside those special wiring harness split canals. This way you can have a nice and neat engine bay avoiding cables hanging around.



The fog light harness must be removed so that it is substituted by the dual function harness (headlight washers and fog light)



Attach the multi pole connector ...



... and hook the relay holders on the bracket.



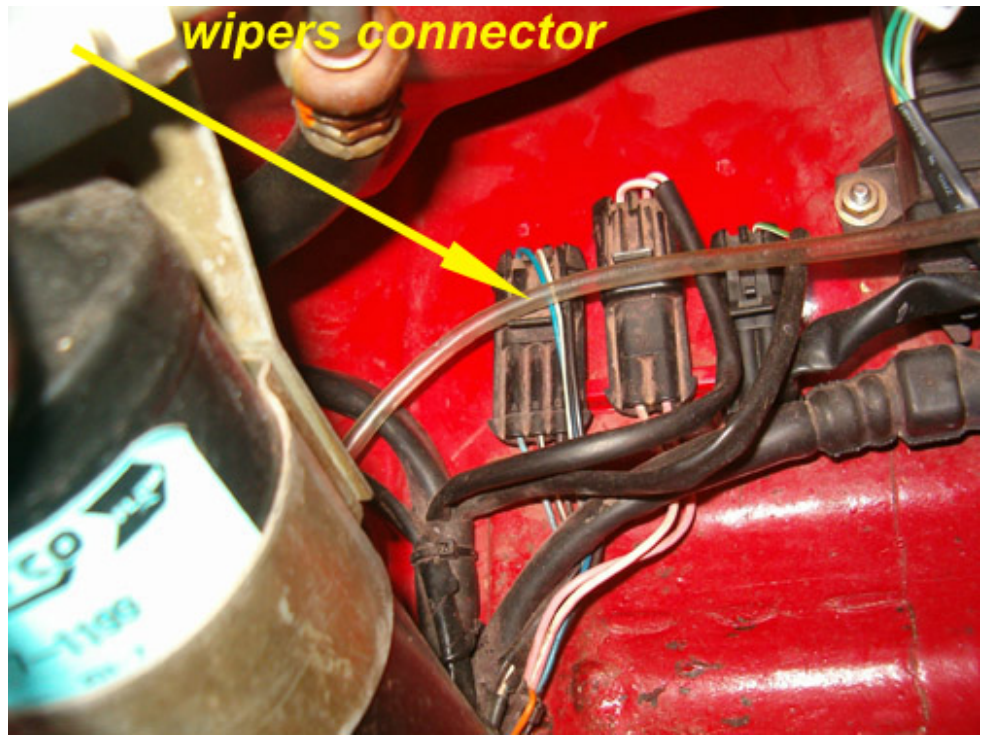
Remove carefully the junction box cover and attach the positive lead of the harness



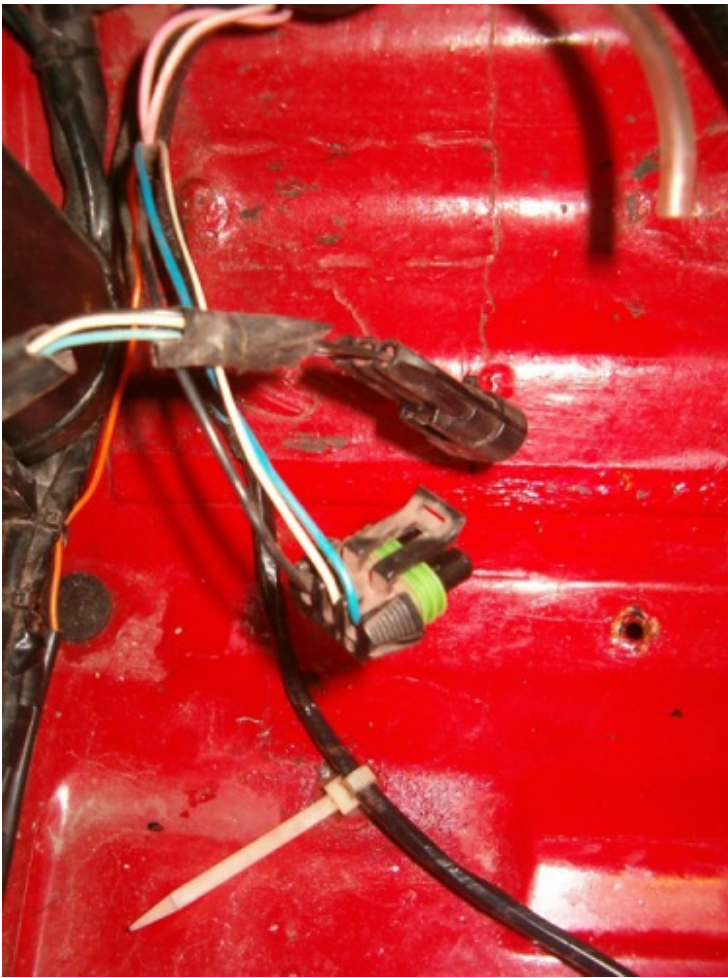
You may now tidy up the place so that we move on to the second part of the wiring installation



Remove battery along with its support frame.



Locate the wipers connector



... and disconnect it from each other



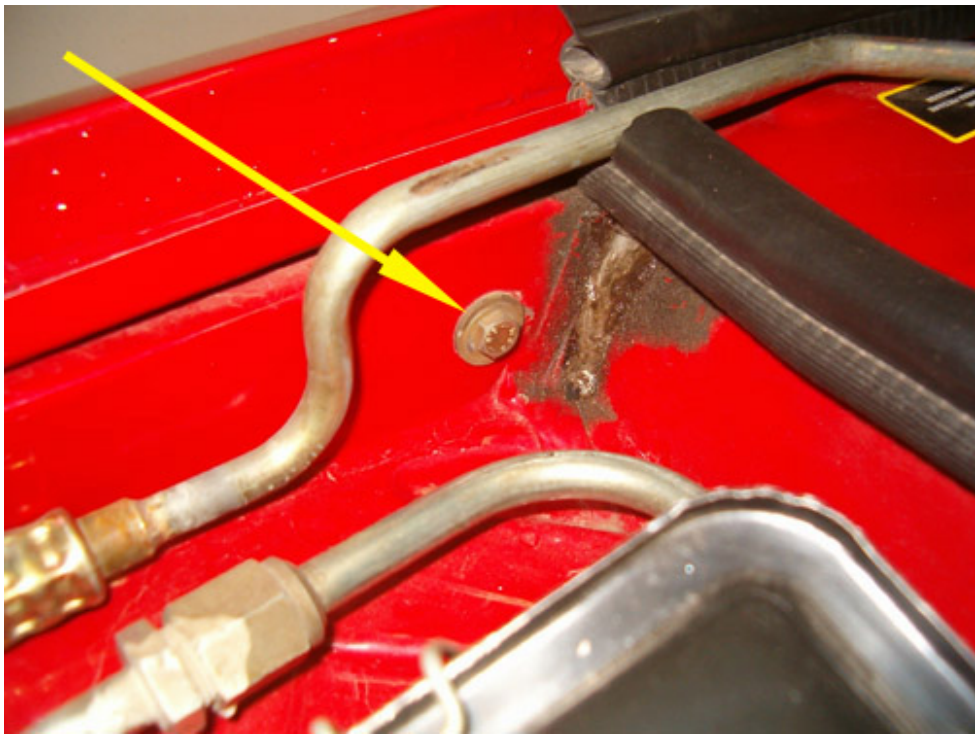
This part passes through the fender via the opening on the wheel arch



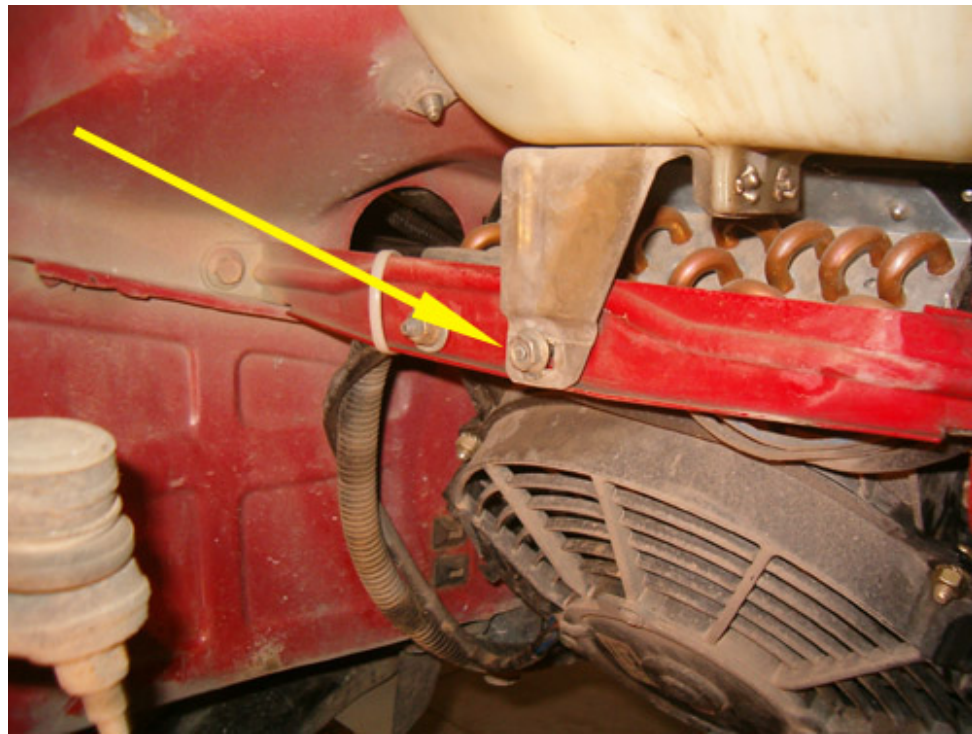
Let's now move lower to remove the plastic wheel arch liner



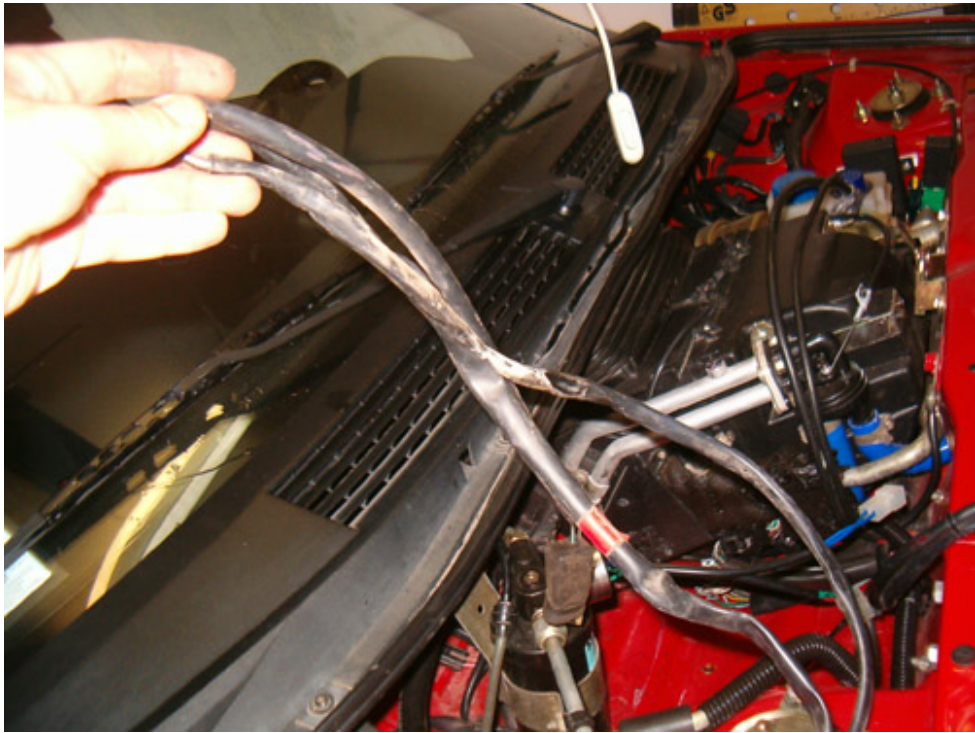
The already existing wiring is now exposed along with the washing fluid supply line



Lets now remove the washer liquid bottle. It is kept in place with the help of two screws; undo the first one ...



... and the second one on the wheel arch - fender support bracket



Wiring is removed along with the washer bottle



Pass the new harness through the same opening on the wheel arch. Install the bulb on the side repeater and attach the wiring and hoses to the washer pumps



Let's now move on to the bumper. This is the opening that the washer passes through. We need to create an opening on the bumper so that the sprinklers pass through.



I decided to use the soldering iron to create a small hole on the bumper; it is recommended to make the hole from the inside out so that you don't miss the correct position. Otherwise you may end up buying a new bumper!



Carefully insert the iron on the opening being careful not to melt the surrounding area



Right after the opening has been created, I used the Dremel tool to machine the plastic and create a round opening.



Now that the opening is large enough insert the washer sprinkler; do not forget to install the relative washer and nut.



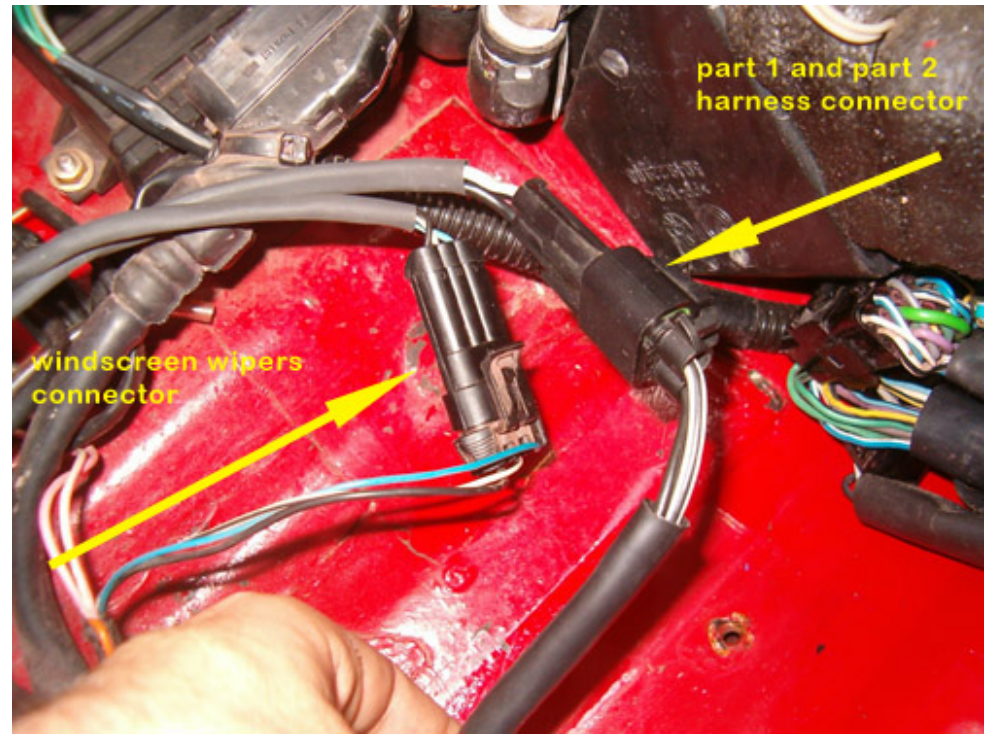
Attach the plastic keepers for the washers hose (6 in total)



Time to measure the length of the hose and attach it to the headlight washers



Hose is attached for good!



Lets now go back to the wiring . Connect the windscreen wipers connector to the vehicle main loom and the two harnesses between each other.



Restore the connectors to their original position, and install battery bracket along with battery



We have a successful test run here!

Yet another project is over! I got impressed with the force that the sprinklers inject washing fluid to the headlights. The force is so great that it can remove any dirt or debris on the surface of the headlight. For sure headlight washers is an addition that pays off.

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