

# Genesis MDPS Hack **FOR DUMMIES**

*\*for Steering down to 0 mph*

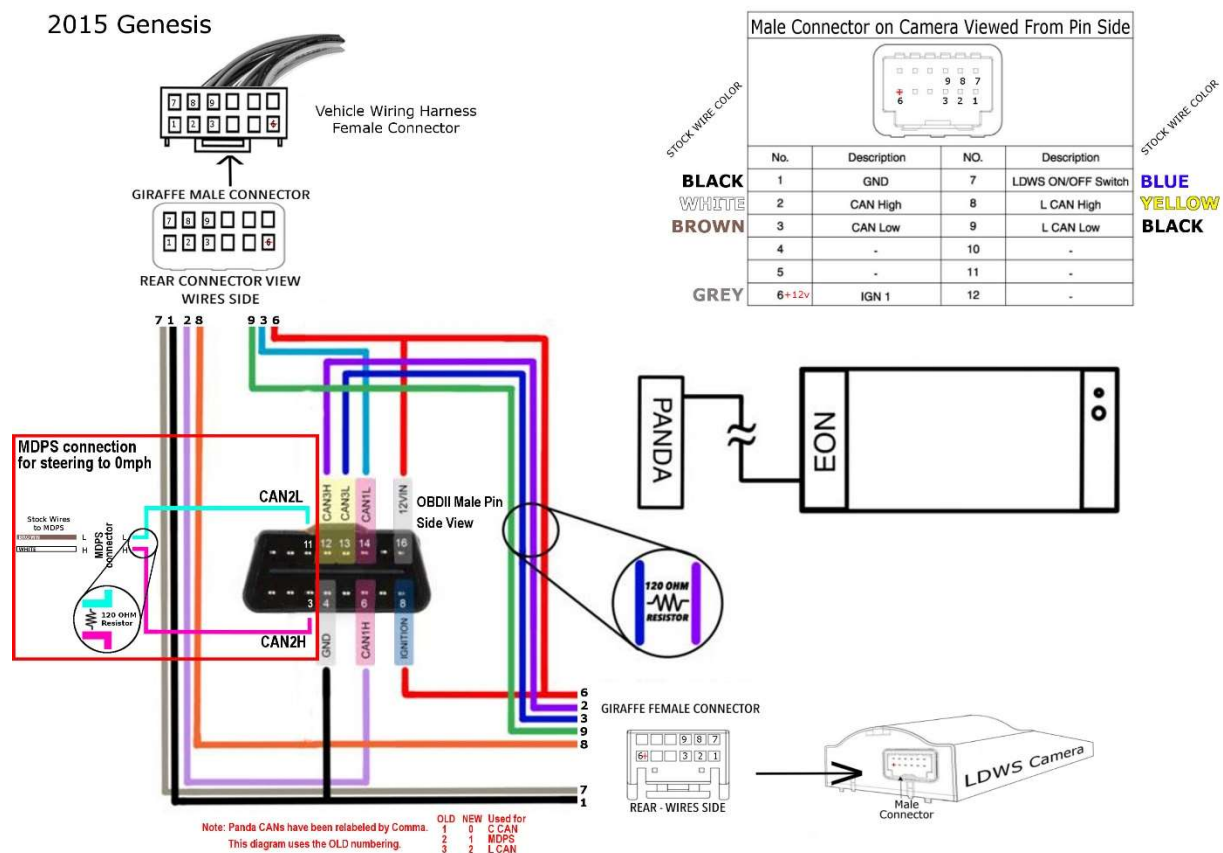
Thanks to [Ahmed Barnawi](#) for his excellent writeup on how to perform this hack! Review his guide for more in depth details.

This guide is for those less technical.

## CONCEPT

The Motor Driven Power Steering (MDPS) system is connected to the Genesis' Controller Area Network (CAN) and receives speed messages from it preventing the car from steering below 37 mph. Therefore, we need to disconnect it from that CAN and connect it to the PANDA so the PANDA can send a message that the car is always going over 37 mph so it can steer.

If you have already made a Giraffe (harness) to connect your PANDA and EON this is easy only the 2 wires & resistor circled in red will be added.



## EXECUTION

Purchase these items...

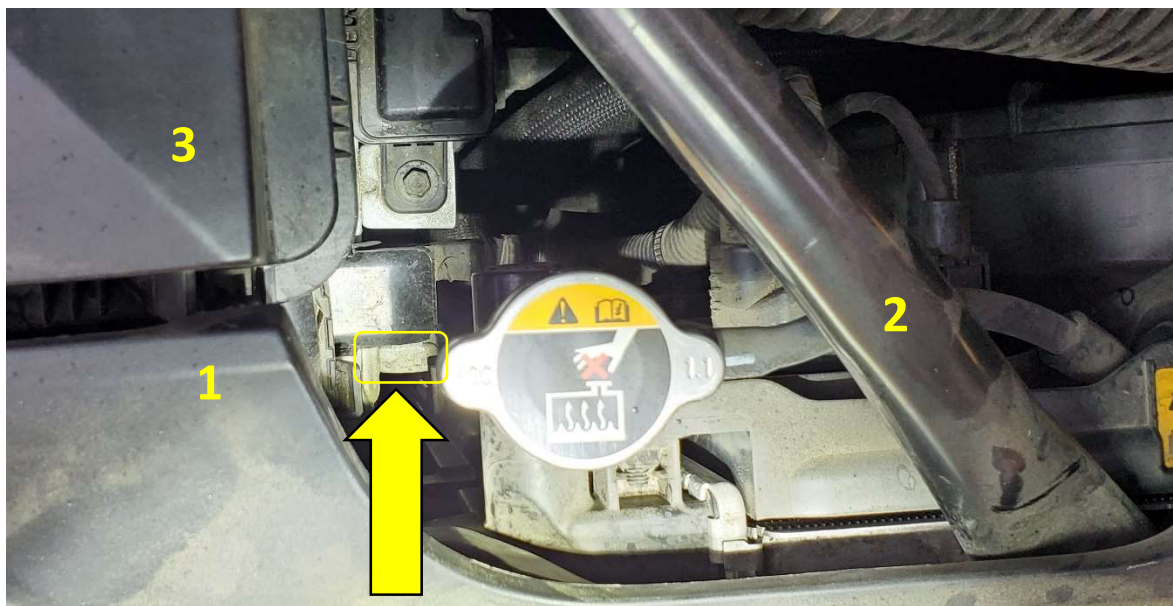
1. Connectors <https://www.aliexpress.com/item/32655106876.html>

You will get 5 pairs which is ok you will have extras which you may need if you mess up a pin. Order now they take a while to ship.

2. Also purchase some brown and white wire.

3. If you don't have an extra 120 OHM resistor from your original Giraffe build buy one of those.

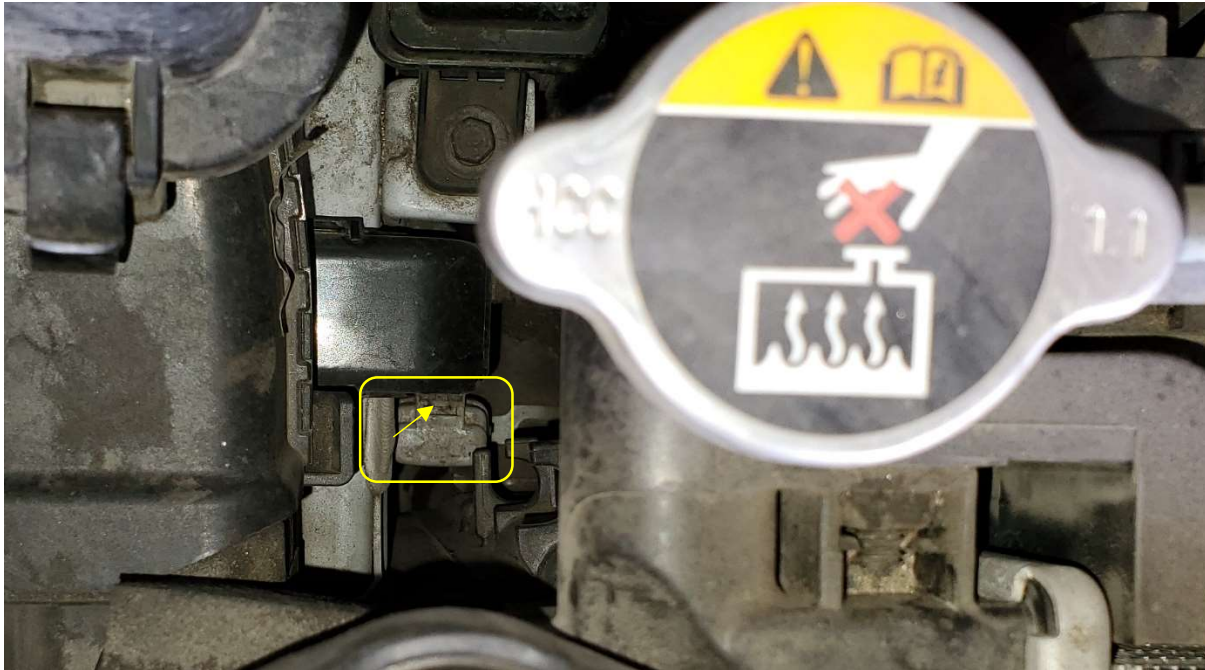
Next find the connection where the MDPS connects to the CAN. It is located on the passenger side at the front of the car below the radiator cap. It is the grey cap by the yellow arrow.



It is not easy to access and you will need to remove the following items.

1. Plastic trim along front of engine bay.
2. Support rod.
3. Air Filter box.

You can then better see the connector.



Press this tab toward the front of the car and the cap and connector will slide down and off the plastic mount.

Once you have access you will see that the grey cap has no wires. There are only wires on the bottom plug.



The grey cap has a catch on each side to hold it on the connector. Release each side and remove.



You now have just the bottom connector.

There are 3 brown wires and 3 white wires. We will disconnect the 2 center wires (1 brown and 1 white) which go to the MDPS. (This disconnects the MDPS from the CAN).



First use a small object (I used a push pin) to push the yellow retainer out of the connector. Pull the yellow retainer completely out.



Then remove the two middle wires.

To get the terminals out I put a hemostat on the wire I was removing then used the push pin to slide alongside of the terminal until it pressed against the plastic retainer (yellow arrow). The terminal will come out easily once released. You do NOT have to pull hard!

Now insert these pins into one of the connectors you ordered and it should look something like this. (This is connector #1 in last diagram)

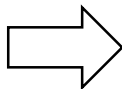


Photo Credit BARNAWI

Now make a mating connector (This is connector #2 in last diagram) with 2 wires (brown and white) and plug it into the connector you put the factory wires into (#1) and run it inside the car and connect it to the OBDII connector as shown on the 1<sup>st</sup> page. The brown wire will connect to pin 11 for CAN L and the white wire will connect to pin 3 for CAN H.

Wire in the 120 OHM resistor between these 2 wires.

\*Review the suggested extra wiring. You want to do it now while everything is apart.

Plug the grey connector back into the factory plug and slide onto its mount.

Reassemble the air filter, support, and plastic trim.

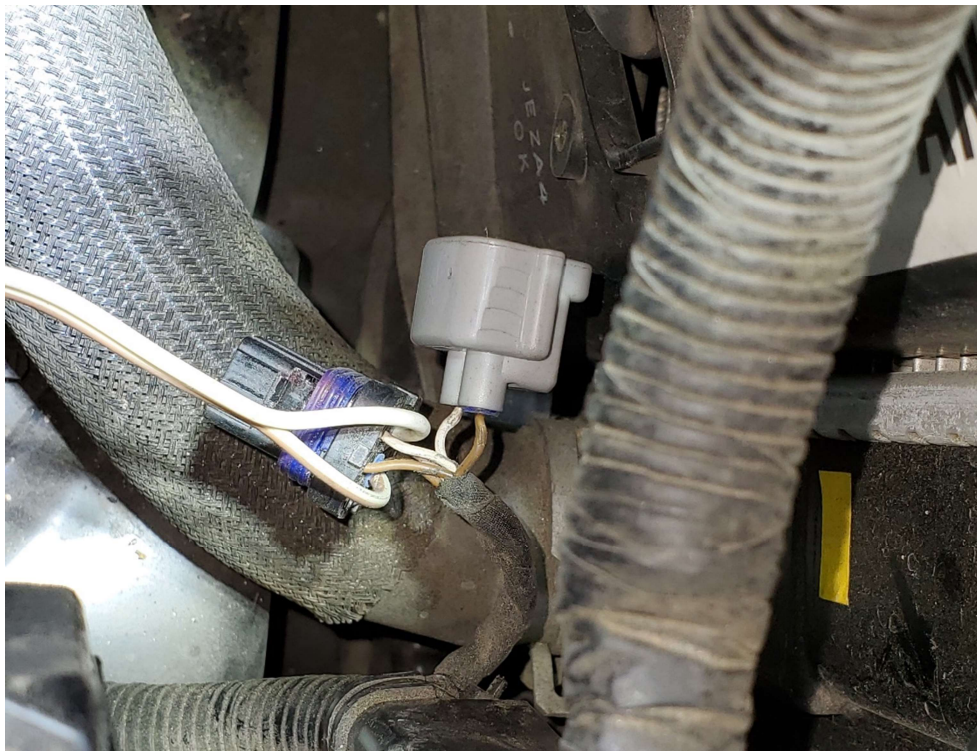
***Fire up OP on a branch that supports the MDPS hack and you are done!***

### Suggested Extra wiring

Since you may need to revert to stock operation at some point it would be nice to be able to do so without pulling the pins out of the new connector (#1) and putting them back in the stock connector. To do so we can wire a connector back into the factory plug so that you can unplug the wires going to the PANDA and easily (although difficult to reach) plug back into the cars CAN.

Take 2 of the female terminals from the connectors you bought and connect them to 2 pieces of wire (a brown and white wire would be nice to match the factory wire). On the other end connect male terminals and put them in a matching connector (#3 on last diagram).

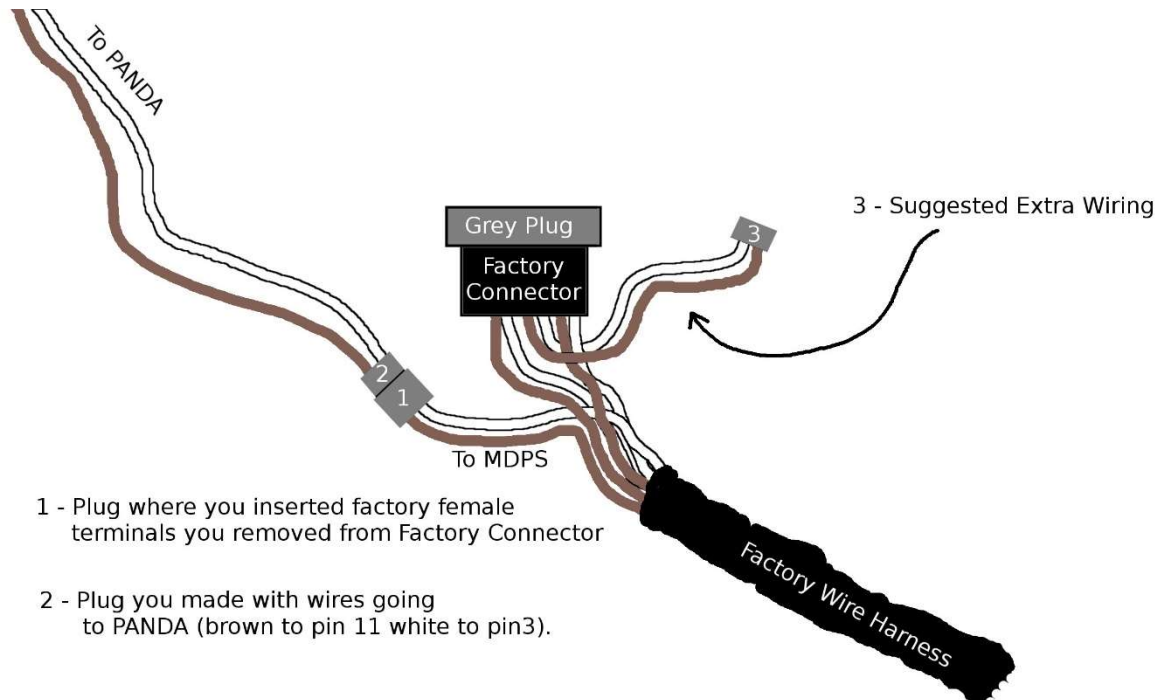
Push the female terminals into the factory connector in the same place you removed the previous factory terminals (they will go between the brown and white wires going into the connector).



This photo shows an end view of the factory connector. Note the heavier wires are the new ones I inserted.

The plug for the wire going inside the car is not yet plugged in in this photo. It will plug into the grey connector (#1).

Now if you need to reconnect the MDPS to the cars CAN for stock operation you can unplug the connector going to the Panda (#2) and plug the MDPS connector (#1) into the connector which goes back to the CAN where you took the terminals out (#3). This will connect the MDPS back into the cars CAN so it can work like stock.



For steer to 0 mph use as shown.

For factory operation unplug 1 & 2 and plug 1 & 3 together.

Two suggestions for the suggested extra wiring.

You may want to make this long enough you can reach it after you put all the car back together.

You can also splice in connectors on the wire running to the Panda up high so it will be easy to reach if you want to return to stock operation.

Also seal up a matching empty connector and plug it into #3 when not in use to keep out the crud.