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Introduction

The purpose of this document is to provide very detailed information regarding the installation of the ND Performance - Traction Control System Electronic Slick Shift (ESS) Cable. The installation of the cable is very straight forward and typically not very difficult. This document includes detailed step-by-step instructions and includes many pictures to help clarify. Average installation time is around 1 hour at a normal pace.

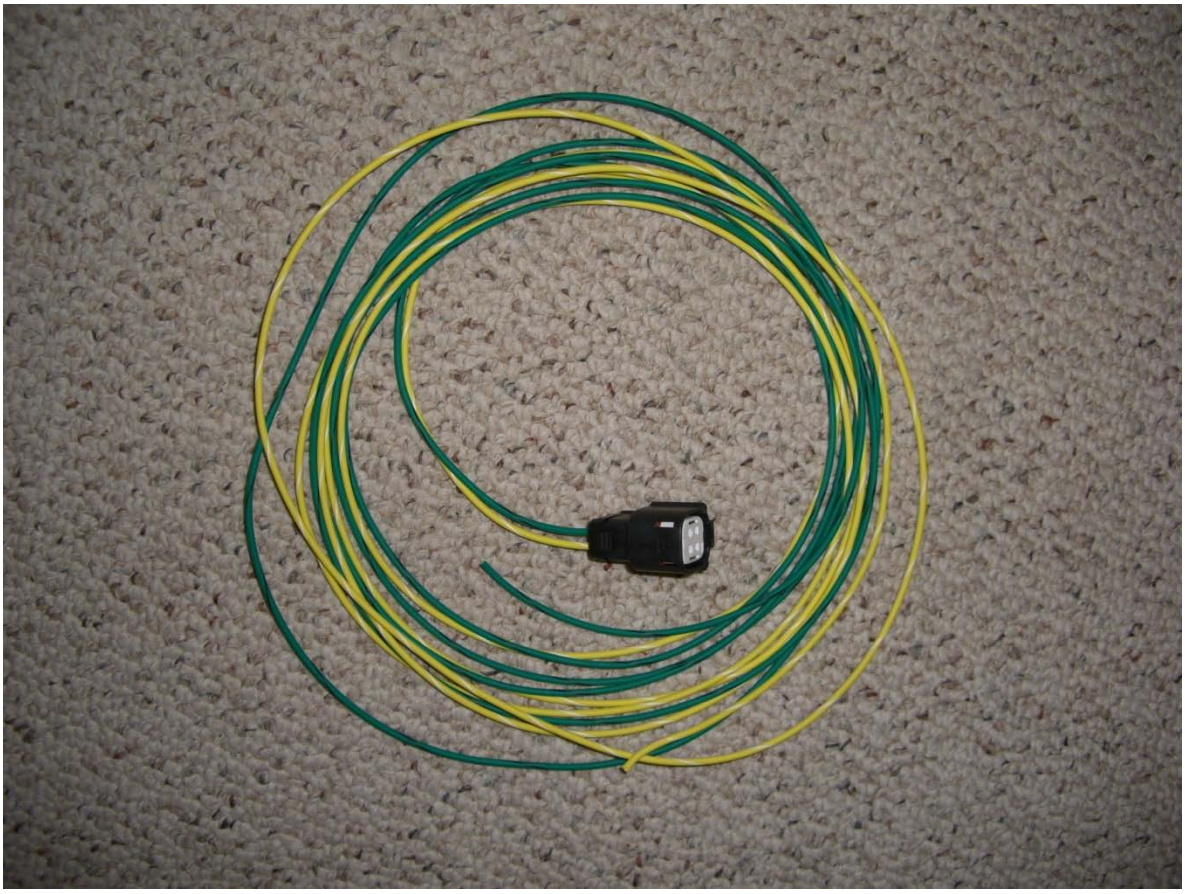
This cable should be installed by professional. In our experience the vast majority of problems associated with aftermarket automotive electronics systems are due to improper installation. Improper installation can lead to a system that is unsafe, unusable, intermittent, and improper installation can even damage the Traction Control System or the vehicle electronics. ND Performance will not warranty this product or any damage that is caused to your vehicle due to improper installation (See warranty and disclaimer documentation). If you do not feel comfortable installing this system on your vehicle we strongly urge that you take your vehicle to a certified professional for installation.

There are two particular ways that the ESS Cable can be wired into the vehicle. The first method is to solder and shrink wrap / tape all wiring into the vehicle's wiring. Soldering provides the most solid wire to wire connection. However once the ESS Cable is soldered into the vehicle, removal of the system is difficult and cannot be performed quickly. The alternative method to use is to crimp terminals and “t-taps” to install all wiring into the vehicle's wiring. This method does not provide as solid of a connection into the vehicles wiring system as the soldering method. However, the use of the crimp terminals allows for quick installation and also quick removal of the system in the case that the vehicle needs to be returned to a factory configuration. Our testing shows that a system **properly** installed using the crimp terminals can be just as reliable as the soldering method. One of the major issues that we find with people improperly installing crimp terminals is the use of bad crimping tools. See the “Tools Needed for Installation” section of this document for a link to a good set of low cost crimpers. All terminals included with this product are high quality fully insulated terminals and include a heat shrink jacket, to provide strong resistance to moisture and corrosion due to the natural elements. To conclude, if you want the most solid wire to wire connection, have soldering experience, and removal time/effort of the ESS Cable is unimportant, we suggest soldering the ESS Cable during installation.

All information needed for the installation should be contained within this detailed document, however if you have any questions please feel free to contact us at neil@ndperformance.com

ESS Cable Packing List

- One (1) ESS Cable



If you are missing any component, please email us at neil@ndperformance.com

Tools Needed for Installation

- Soldering Iron (and solder) or Decent Set of Crimpers.
  - If using crimpers avoid the cheap universal crimpers available at places like Radio Shack. These crimpers are very thin and easily bend, and thus create a crimp that is unusable and a poor install. A good set of crimpers for this job can be found at your local Sears and only cost around eight dollars. They are:
    - Companion 8 in. Crimp-On Staking Tool Sears item #00973647000 Mfr. Model

#73647

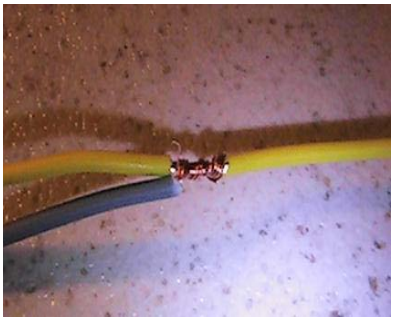
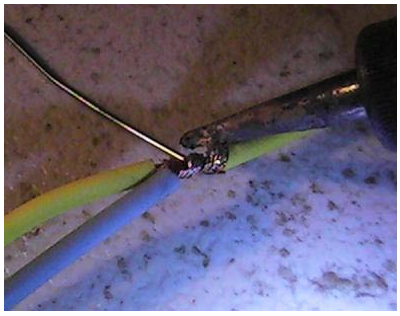
- Wire strippers
- Pliers (Alligator not needle nose)
- Electrical Tape
- Serrated knife/blade
- Wire coat hanger (Stock SRT antenna for you creative guys out there)
- Long flathead screwdriver
- Socket set and ratchet.

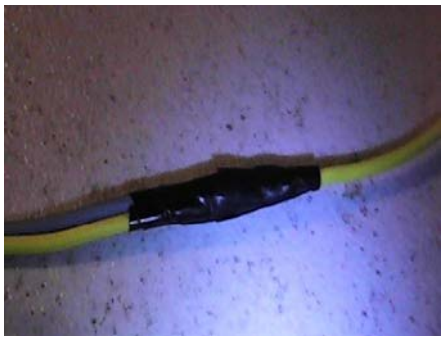
How to Properly Solder

This section of the document simply describes how to properly solder and protect wire to wire connections. It includes how to properly solder a "T" connection, as well as how to solder a standard wire to wire connection (i.e. butt connect).

Soldering "T" Connection

1. With the new wire that is to be teed in (i.e. the wire coming from the ESS Cable) strip approximately 1/2" to 1" of insulation from the wire. With the existing wire that is going to be tapped (i.e. the wire in the vehicle) remove the insulation from a 1/4" to 1/2" section so that only the copper is exposed but the wire is still intact.
2. Wrap the new wire around the existing wire, so that the new wire is parallel to the existing wire.
3. Use a soldering iron (with a small amount of solder on it) to heat the wire for a few seconds, and then simultaneously apply solder to the twisted copper and soldering iron, coating the entire junction with solder. Do not add an excessive amount of solder.
4. Finally using electrical tape cleanly wrap up the soldered junction.

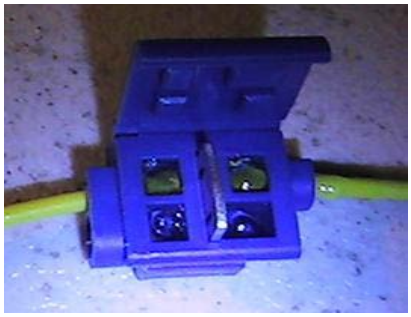


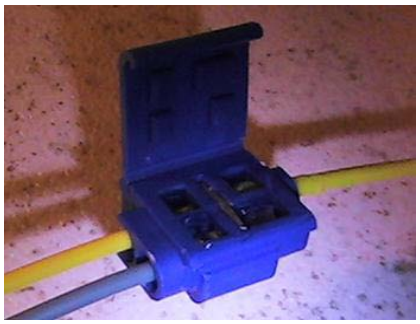
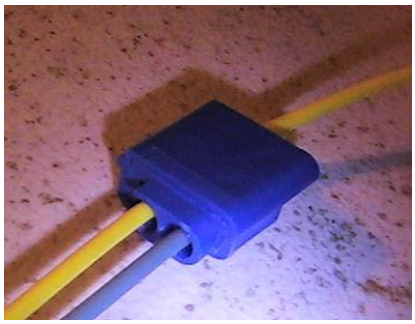
How to Properly Crimp

This section of the document simply describes how to properly crimp all connections used in this installation document. It includes how to properly use the provided t-taps, as well as how to properly crimp the provided quick disconnect terminals (for butt connections).

How to Use T-Taps for "T" Connection

1. Open the t-tap by pulling on the large plastic flap.
2. Place the existing wire to be tapped inside of the of the t-taps opening you created in step 1. Close the t-tap by pushing the large plastic flap to its original position.
3. Place the new wire that you want to tap in into the other side of the t-tap. Push this wire all the way through until it hits the plastic end of the t-tap.
4. Ensuring that both wires are lined up in the t-tap, use large pliers to push the metal piece firmly down into the t-tap. When you are complete, the top of the metal will be flush with the plastic.
5. Take the large plastic flap of the t-tap and lock it in place over the top of the t-tap thus sealing the wires inside the t-tap.

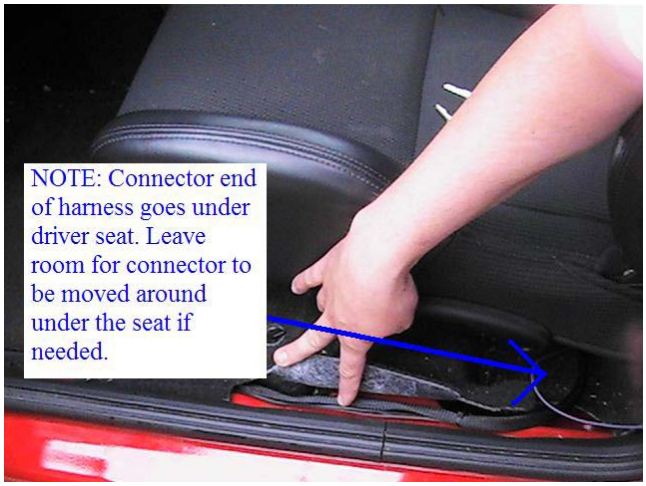



Detailed Installation

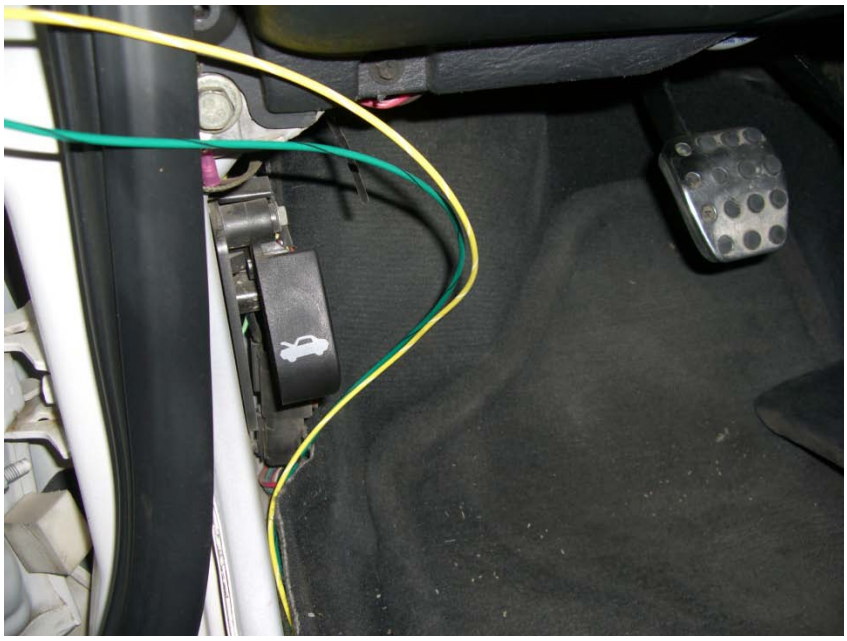
1. Remove driver's side front door sill. This is held in by snap clips, and removes easily by pulling straight up.

2. Lay harness down and place the harness plug side under driver's seat. Route the wires towards the firewall under the carpet.

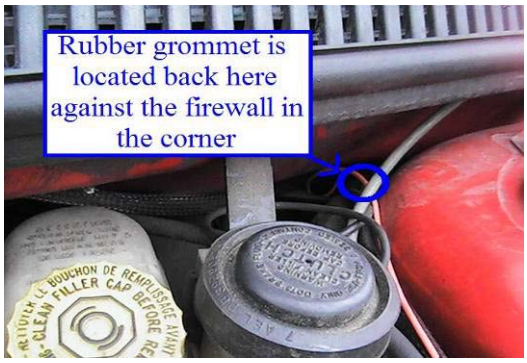


3. Remove the driver side kick panel by pulling it away from the side of the car. This is the panel that goes over the hood release latch.

4. Run the two ESS Cable wires underneath the driver pedal carpeting.



5. There is a large rubber grommet that runs through the firewall that is located in the driver side rear corner of the engine bay. From the inside of the car this grommet can be found approximately one foot above the pedals. Locate this grommet.
6. Cut/Poke a small hole through the grommet to allow the ESS Cable to fit through (You can use the same hole you previously made for the TCS main harness, or make a new one). This can be done with a small serrated knife/blade. When placing the hole in the harness sure not to place the hole too close to the center of the grommet where the existing vehicle wiring harness is located.
7. Use a coat hanger (or other stiff metal rod), and from the under the hood push it through the hole that you created in the rubber grommet against the firewall on the driver's side corner. For reference see the picture in step 7. Once the coat hanger (or antenna) is through the grommet



push it far enough so that you can see it end inside the cabin by the pedal assembly.

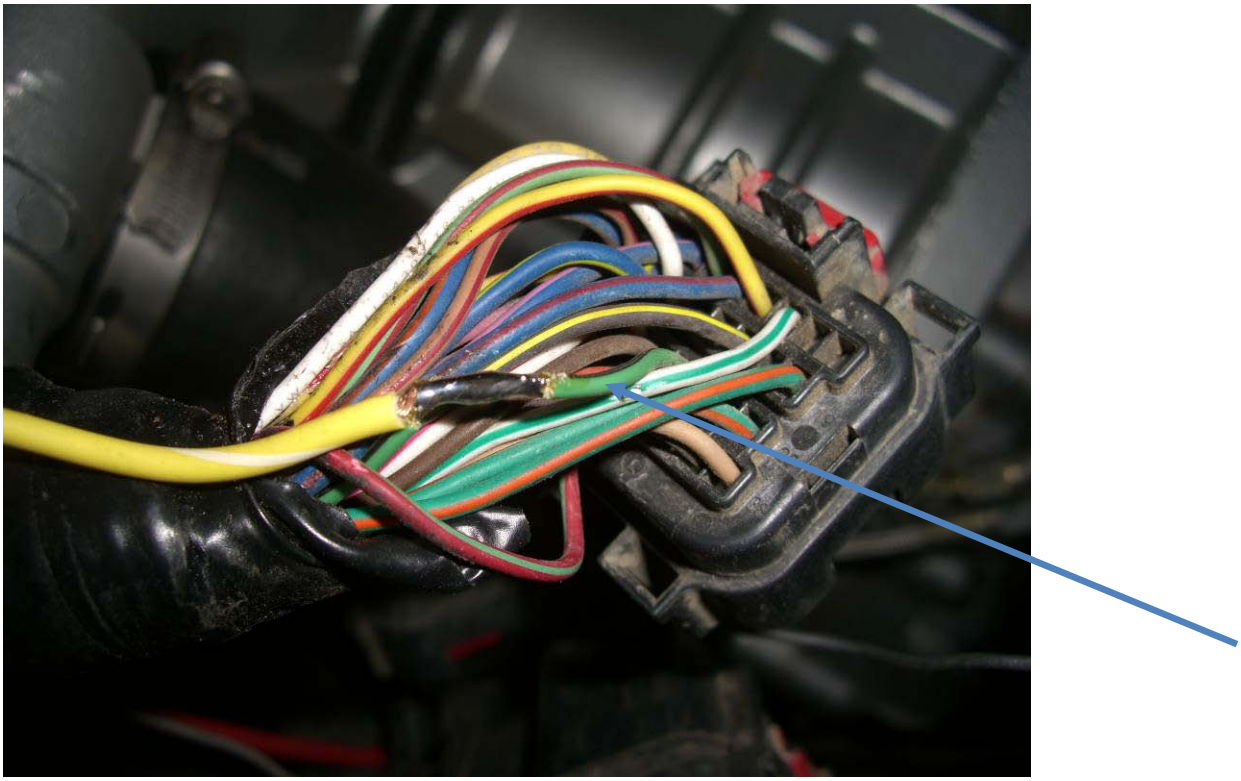
8. Tape the two ESS Cable wires **firmly** to the coat hanger (or antenna). Slowly pull the coat

hanger (or antenna) back through the firewall grommet by pulling on the coat hanger (or antenna) from under the hood. Once the harness has been passed through the firewall grommet release the harness from the coat hanger (or antenna) by removing the tape. Be sure both wires have come through the grommet.

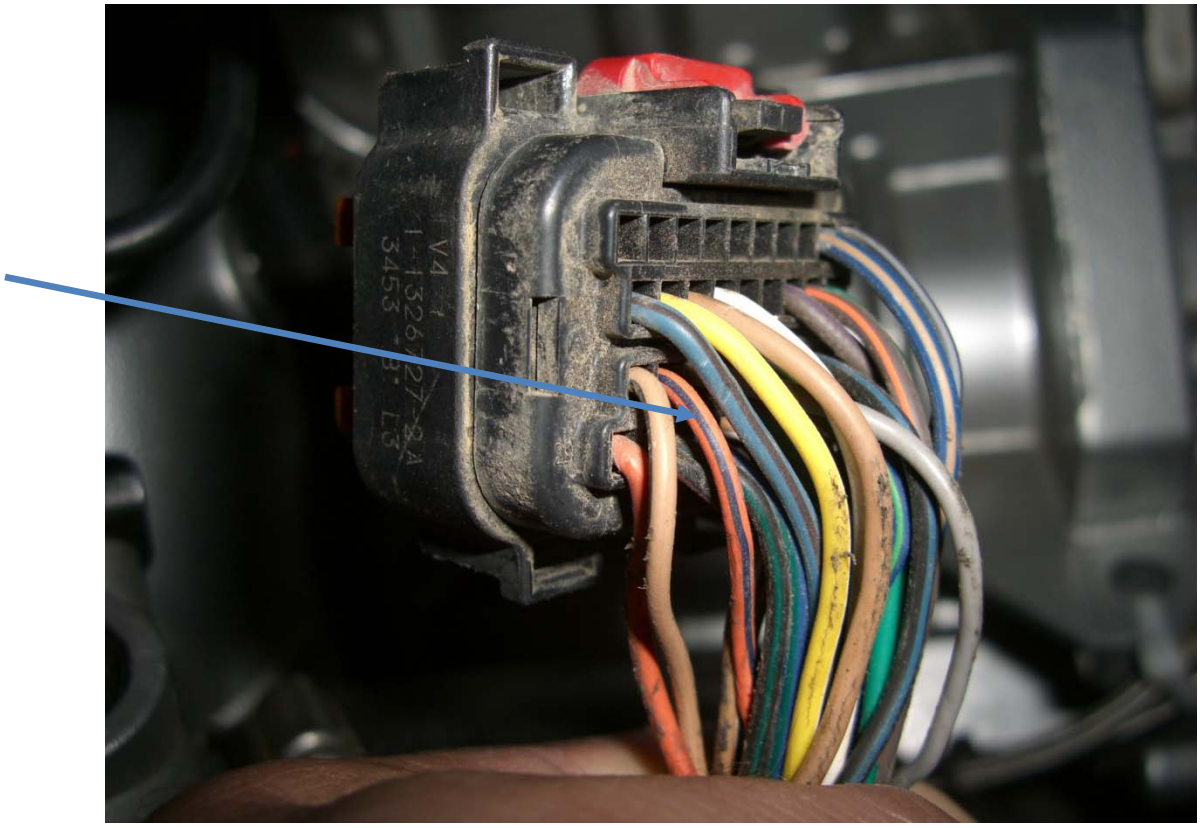
9. Route the both ESS Cable wires towards the PCM. The **GREEN**/**BLACK** wire will go to the middle connector of the PCM. The **YELLOW**/WHITE wire will go to the top connector of the PCM. A suggested routing is shown below. You can use some of the zipties to secure the wire as needed. If you still have the stock airbox in your vehicle it will need to be removed now.

10. Disconnect the top (WHITE) 38-way connector from the PCM. To remove this connector you need to slide black the red locking tab and then press down on the top of the connector while pulling the connector away from the PCM. Once the connector is disconnected from the PCM move the connector up above the PCM so that it can easily be accessed. Remove the tape at the

base of the connector and pull back the plastic looming so that the wires are exposed (See pic below). Locate the **LIGHT GREEN/BLACK** wire (pin 26). "T" the **YELLOW/WHITE** wire from the ESS Cable into the **LIGHT GREEN/BLACK** wire you located. If you are using a crimp type t-tap, see the "How to properly crimp" section. If you are soldering directly see the "How to properly solder" section.

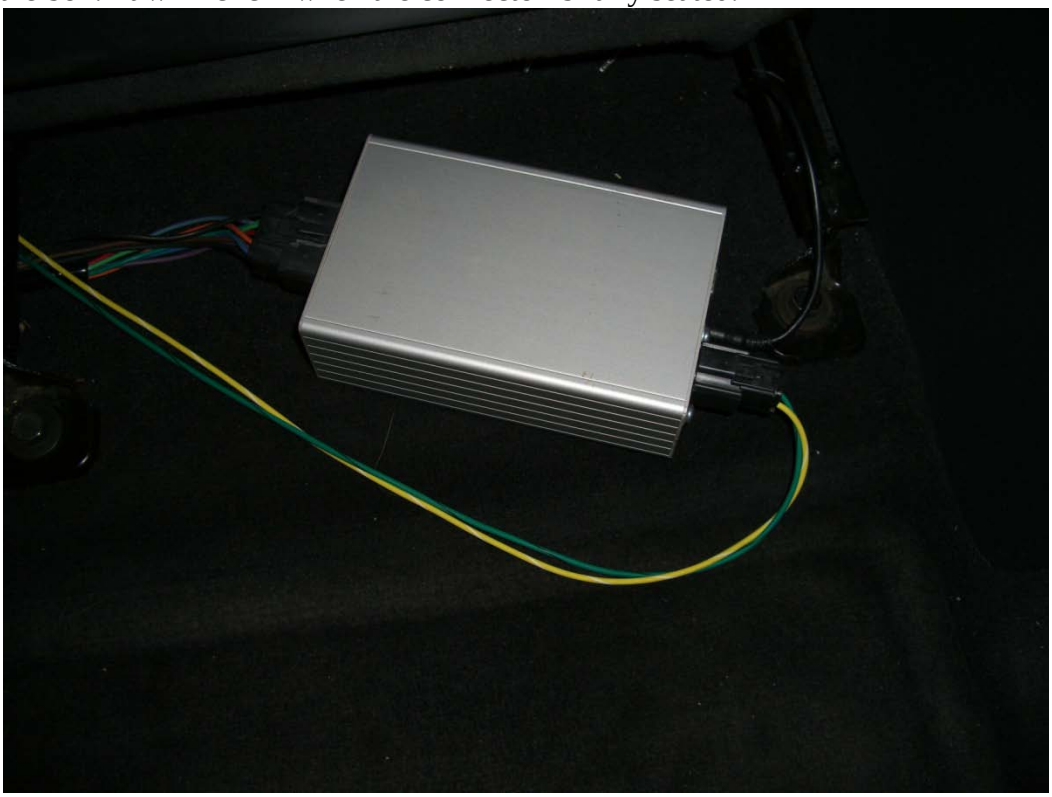


11. After tapping the **LIGHT GREEN/BLACK** wire, place the wires all back in the stock loom and tape up the area and base of the Black 38-way connector, just as it was before the tap. Reinstall the connector into the PCM.
12. Disconnect the middle (ORANGE) 38-way connector from the PCM. To remove this connector you need to slide black the red locking tab and then press down on the top of the connector while pulling the connector away from the PCM. Once the connector is disconnected from the PCM move the connector up above the PCM so that it can easily be accessed. Remove the tape at the base of the connector and pull back the plastic looming so that the wires are exposed (See pic below). Locate the **ORANGE/DARK BLUE** wire (pin 21). "T" the **GREEN/BLACK** wire from the ESS Cable into the **ORANGE/DARK BLUE** wire you located. If you are using a crimp type t-tap, see the "How to properly crimp" section. If you are soldering directly see the "How to properly solder" section.



13. After tapping the **ORANGE/DARK BLUE** wire, place the wires all back in the stock loom and tape up the area and base of the Black 38-way connector, just as it was before the tap. Reinstall the connector into the PCM. If your vehicle is still using the stock airbox reinstall it now.

14. Next slide the driver seat to the completely the most forward position. Access your previously installed TCS:DriverMod box, and attach the new ESS Cable to the accessory port on the end of the box. It will 'click' when the connector is fully seated.



15. Slide the TCS:DriverMod box back under the seat, and move your seat back to the desired position.
16. Reattach all interior panels including the driver side kick panel, front and rear driver side door sills, and the driver side B-pillar. Reinstall the rear seat bottom.
17. Reattach the negative battery terminal, reinstall strut tower brace (if equipped) and check the engine bay to prepare for vehicle run.
18. Startup the vehicle, drive and enjoy. You can adjust all parameters of the new ESS feature via the new PC software interface. If you need to download a new copy of the TCS:DriverMod software, you can do so by visiting our website, http://www.ndperformance.com If the vehicle does not start or operate properly we suggest double checking all of your connections (and this install document in its entirety), and if the problem persists contact ND Performance immediately.