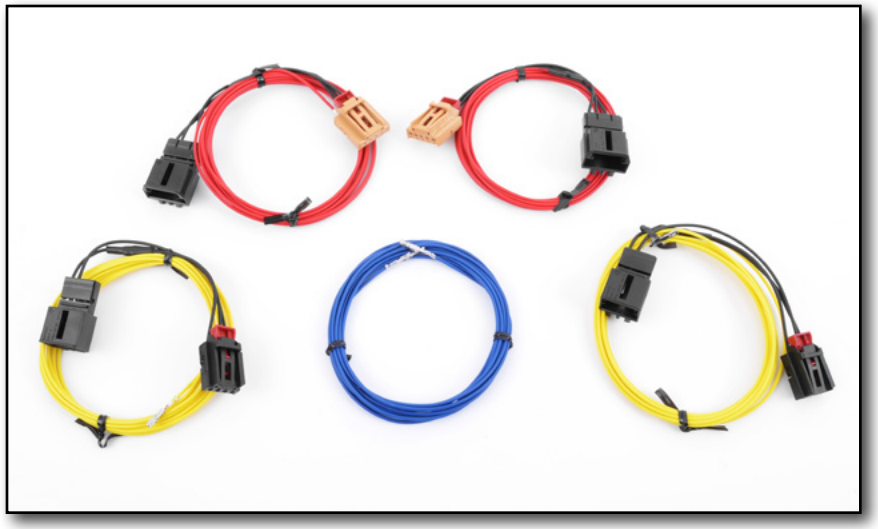
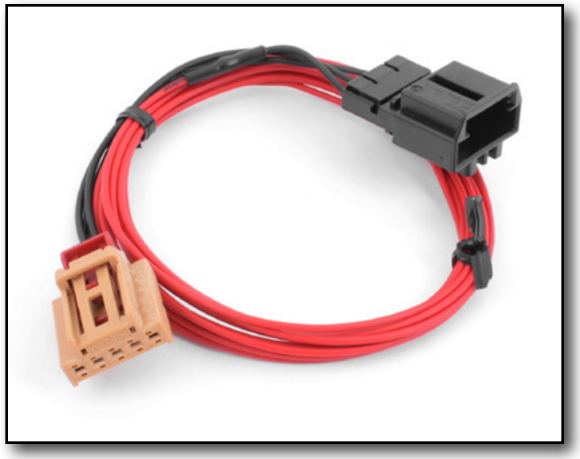
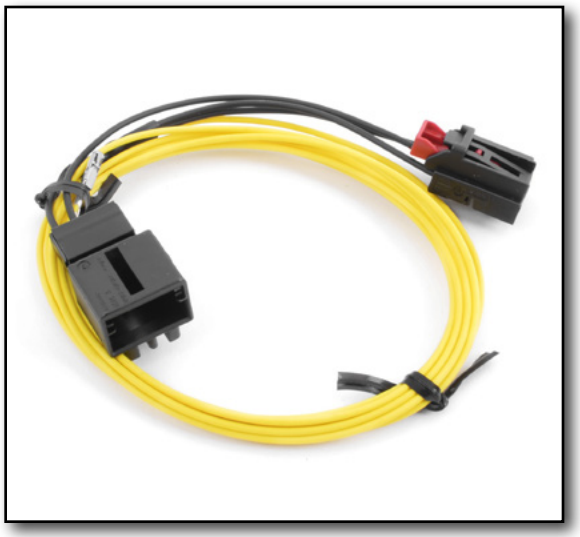
Volkswagen MK7 Golf
European LED Tail Light Harness Kit
Installation Instructions







INTRODUCTION

The Project:

Red Hot is how we describe the European LED Tail Light Sets for the Volkswagen MK7 Golf. These tail lights will give the car a whole new appearance both day and night, and they also have a built in rear fog light and amber colored turn signals, but you won't be able to take full advantage of these extra features without adding the ECS Tuning European LED Tail Light Harness Kit, and making a few coding changes. So today we're going to show you how to install our European LED Tail Light Harness Kit into a MK7 GTI, then we're going to show you how to make the necessary coding changes so that you can take full advantage of all the features these European LED Tail Light Sets have to offer.

ECS Difficulty Gauge

1 - Easy

2 - Moderate

Pro - 4

Advanced - 3

Our Tail Light Harness is easy to install and only requires a few basic tools, but remember you need to make coding changes so a VCDS scanner will be required later. If you don't have a lot of "wrench time" under your belt, rest assured because we are going to walk you through the installation step by step, and once you're done you'll be able to just sit back and admire your work.

Take your time and enjoy this install, these instructions may seem a little daunting, but you should be able to finish this install in a few hours or less. Read these instructions completely first, and with the project overview under your belt, you'll breeze right through it. Just to make sure you have everything you need, reference the required tool list on Page 5 before you begin. Thank you for looking to ECS Tuning for all your performance and repair needs, we appreciate your business!

TABLE OF CONTENTS

The factory wiring harness and its connectors will not need to be cut, altered or modified in any way during this install. Be sure to study the project overview on Page 8, and the wiring diagram on Page 9 before you begin.

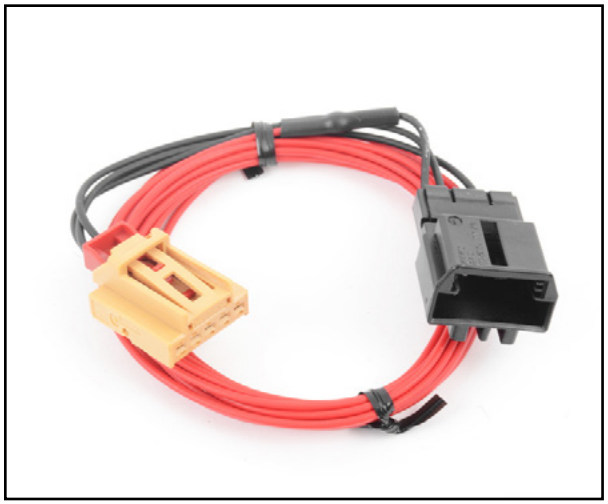
Throughout the instructions you may notice a small icon in the upper left corner of the photographs for clarity. Many photos are taken close up, making it difficult to determine the general area where the step is taking place. The icons, as well as their meanings, are outlined below:

This icon indicates that the work is being performed inside the rear of the vehicle, such as the rear pillars or the outer tail lights.

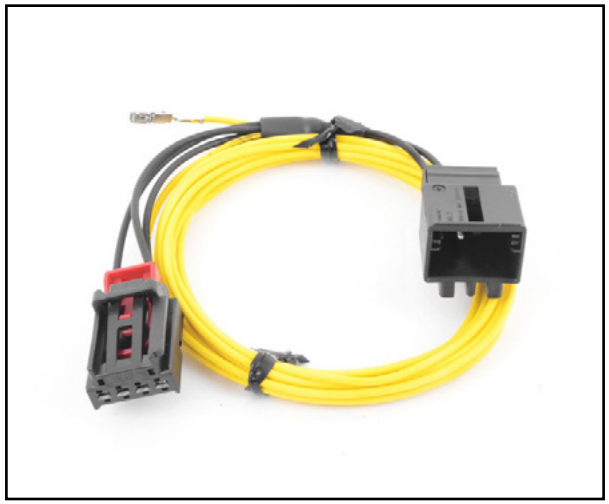
This icon indicates that the work is being performed inside the hatch.

This icon indicates that the work is being performed inside the rear of the vehicle as well as the hatch.

KIT CONTENTS



Inner LED Tail Light Harness (**QTY 2**)



Outer LED Tail Light Harness (**QTY 2**)

Rear Fog Light Trigger Wire (**QTY 1**)

REQUIRED TOOLS

Note: The tools required for each step will be listed by the step number throughout these instructions.

Standard Automotive Tools

- Protecta-Sockets (for lug nuts) ES#2221243
- 3/8" Drive Ratchet ES#2765902
- 3/8" Drive Torque Wrench ES#2221245
- 3/8" Drive Deep and Shallow Sockets ES#2763772
- 3/8" Drive Extensions ES#2804822
- Hydraulic Floor Jack ES#240941
- **Torx Drivers and Sockets** ES#11417/8
- 1/2" Drive Deep and Shallow Sockets ES#2839106
- 1/2" Drive Ratchet
- 1/2" Drive Extensions
- 1/2" Drive Torque Wrench ES#2221244
- 1/2" Drive Breaker Bar ES#2776653
- Bench Mounted Vise
- **Trim Removal Tool Set** ES#517779
- **Hook and Pick Tool Set** ES#2778980

Required For This Install

- 1/4" Drive Ratchet ES#2823235
- 1/4" Drive Deep and Shallow Sockets ES#2823235
- 1/4" Drive Extensions ES#2823235
- Plier and Cutter Set ES#2804496
- **Flat and Phillips Screwdrivers** ES#2225921
- Jack Stands ES#2763355
- Ball Pein Hammers
- Pry Bar Set ES#1899378
- Electric/Cordless Drill
- Wire Strippers/Crimpers
- Drill Bits
- Punch and Chisel Set
- Hex Bit (Allen) Wrenches and Sockets ES#11420
- Thread Repair Tools ES#1306824
- Open/Boxed End Wrench Set ES#2765907

Available On Our Website

Specialty Tools

- **VCDS Scan Tool** ES#3143002
- **Coat Hanger or ECS Dipstick**

SHOP SUPPLIES AND MATERIALS

Standard Shop Supply Recommendations: We recommend that you have a standard inventory of automotive shop supplies before beginning this or any automotive repair procedure. The following list outlines the basic shop supplies that we like to keep on hand. Shop supplies with a hyperlink are available on our website.

- Hand Cleaner/Degreaser - Click Here
- Pig Mats - for protecting your garage floor and work area from spills and stains - Click Here
- Spray detailer - for rapid cleaning of anything that comes into contact with your paint such as brake fluid - Click Here
- Micro Fiber Towels - for cleaning the paint on your car - Click Here
- Latex Gloves - for the extra oily and dirty jobs - Click Here
- Medium and High Strength Loctite Thread lock compound - to prevent bolts from backing out - Click Here
- Anti-Seize Compound - to prevent seizing, galling, and corrosion of fasteners - Click Here
- Aerosol Brake/Parts Cleaner - for cleaning and degreasing parts
- Shop Rags - used for wiping hands, tools, and parts
- Penetrating oil - for helping to free rusted or stuck bolts and nuts
- Mechanics wire - for securing components out of the way
- Silicone spray lube - for rubber components such as exhaust hangers
- Paint Marker - for marking installation positions or bolts during a torquing sequence
- Plastic Wire Ties/Zip Ties - for routing and securing wiring harnesses or vacuum hoses
- Electrical tape - for wrapping wiring harnesses or temporary securing of small components

INSTALLATION NOTES

- **RH** refers to the ***passenger side*** of the vehicle.
- **LH** refers to the ***driver side*** of the vehicle.
- Always use the proper torque specifications.
- If applicable to this installation, torque specifications will be listed throughout the document and at the end as well.
- Please read all of these instructions and familiarize yourself with the complete process **BEFORE** you begin.

GENERAL PREPARATION AND SAFETY INFORMATION

ECS Tuning cares about your health and safety. Please read the following safety information. This information pertains to automotive service in general, and while it may not pertain to every job you do, please remember and share these important safety tips.

- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- **ALWAYS** wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.
- If using an automotive lift, be sure and utilize the factory specified lift points. Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- When lifting a vehicle using a jack, always utilize the factory specified lift points. Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear. **ALWAYS** support the vehicle with jack stands.
- Always read and follow all safety information and warnings for the equipment you are using.

NEVER get underneath a vehicle that is supported only by a jack, and ALWAYS make sure that the vehicle is securely supported on jack stands.

PROJECT OVERVIEW

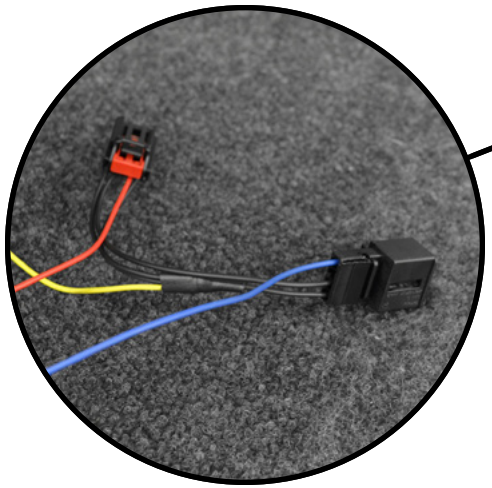
This LED Tail Light Harness Kit is designed as a "jumper harness", meaning that you can install this kit onto your vehicle without needing to cut or splice the factory wiring harness.

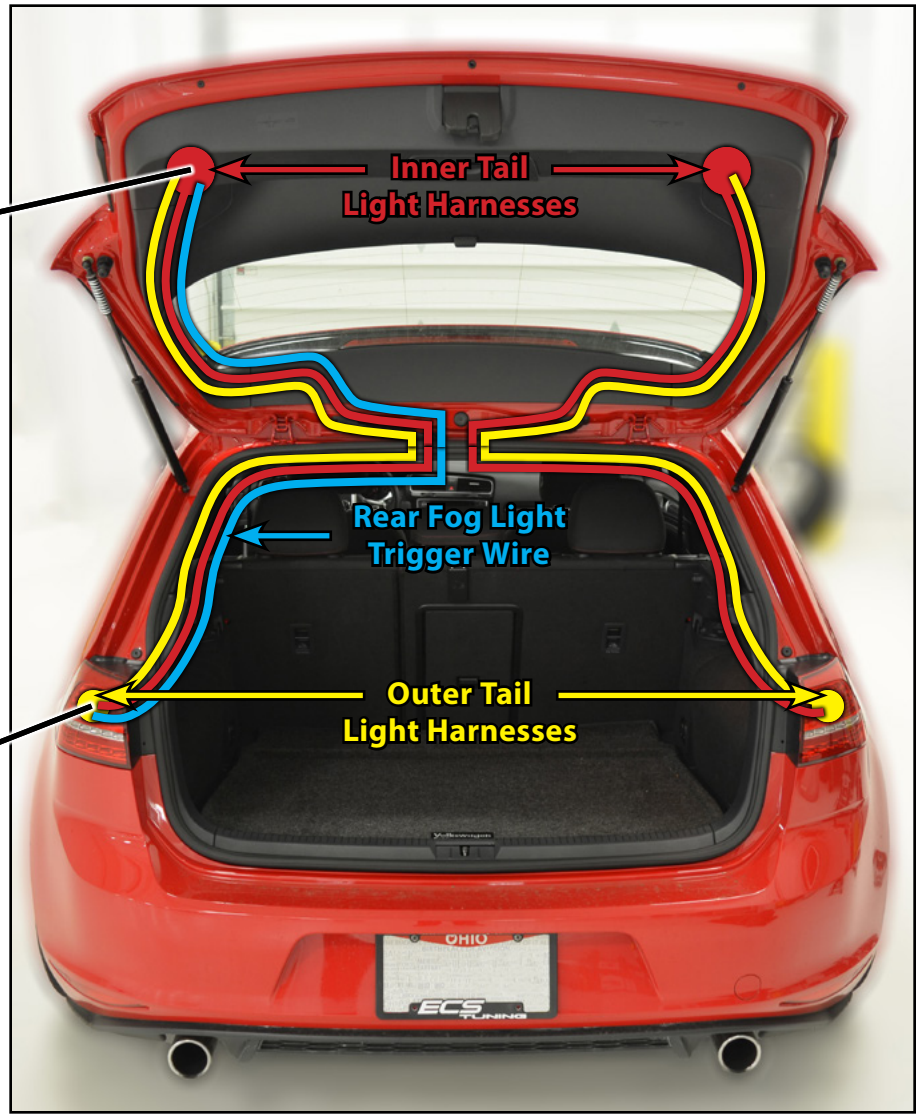
The **RED** line in the photo represents the single wire which runs from the ECS Inner Tail Light Harness to the ECS Outer Tail Light Harness.

The **YELLOW** line in the photo represents the single wire which runs from the ECS Outer Tail Light Harness to the ECS Inner Tail Light Harness.

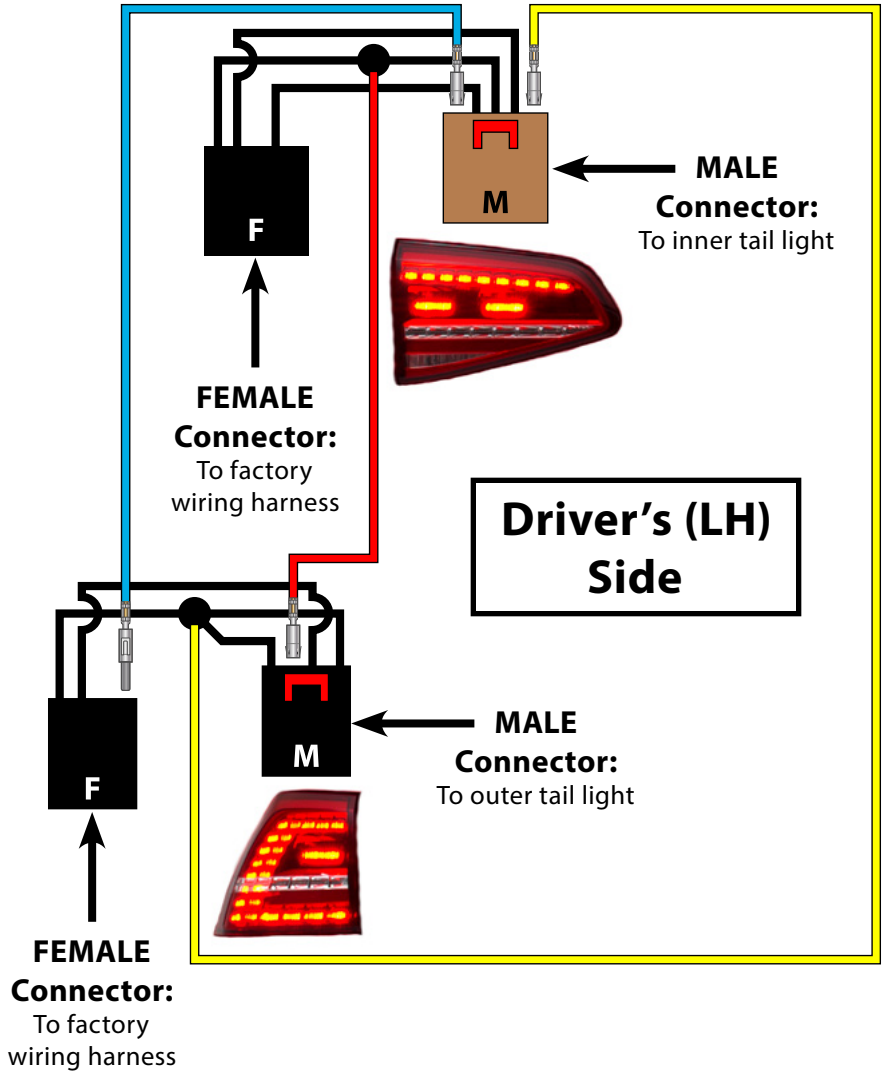
There is also a single **BLUE** wire which is used to power the fog light on the LH side of the vehicle.

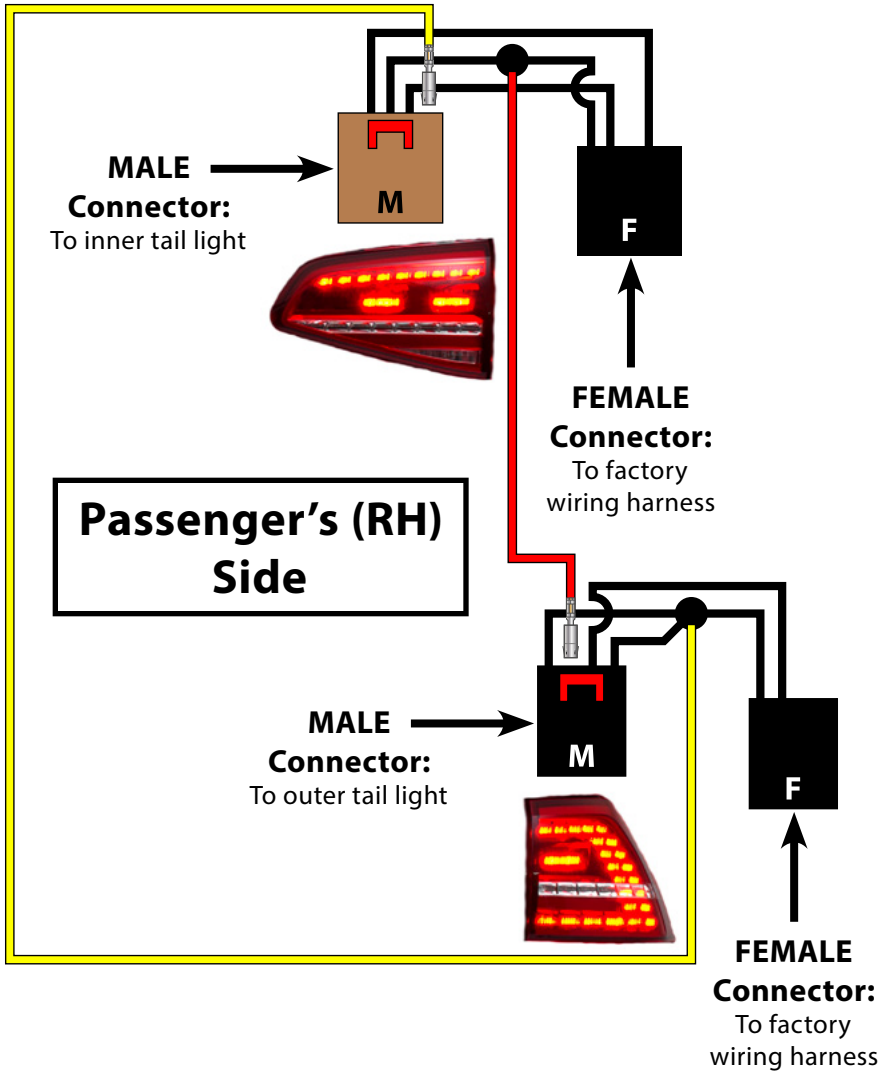
NOTE: The colored wires will only be used to connect the ECS harnesses to one another, they **WILL NOT** be connected to the factory wiring harness.





WIRING DIAGRAM





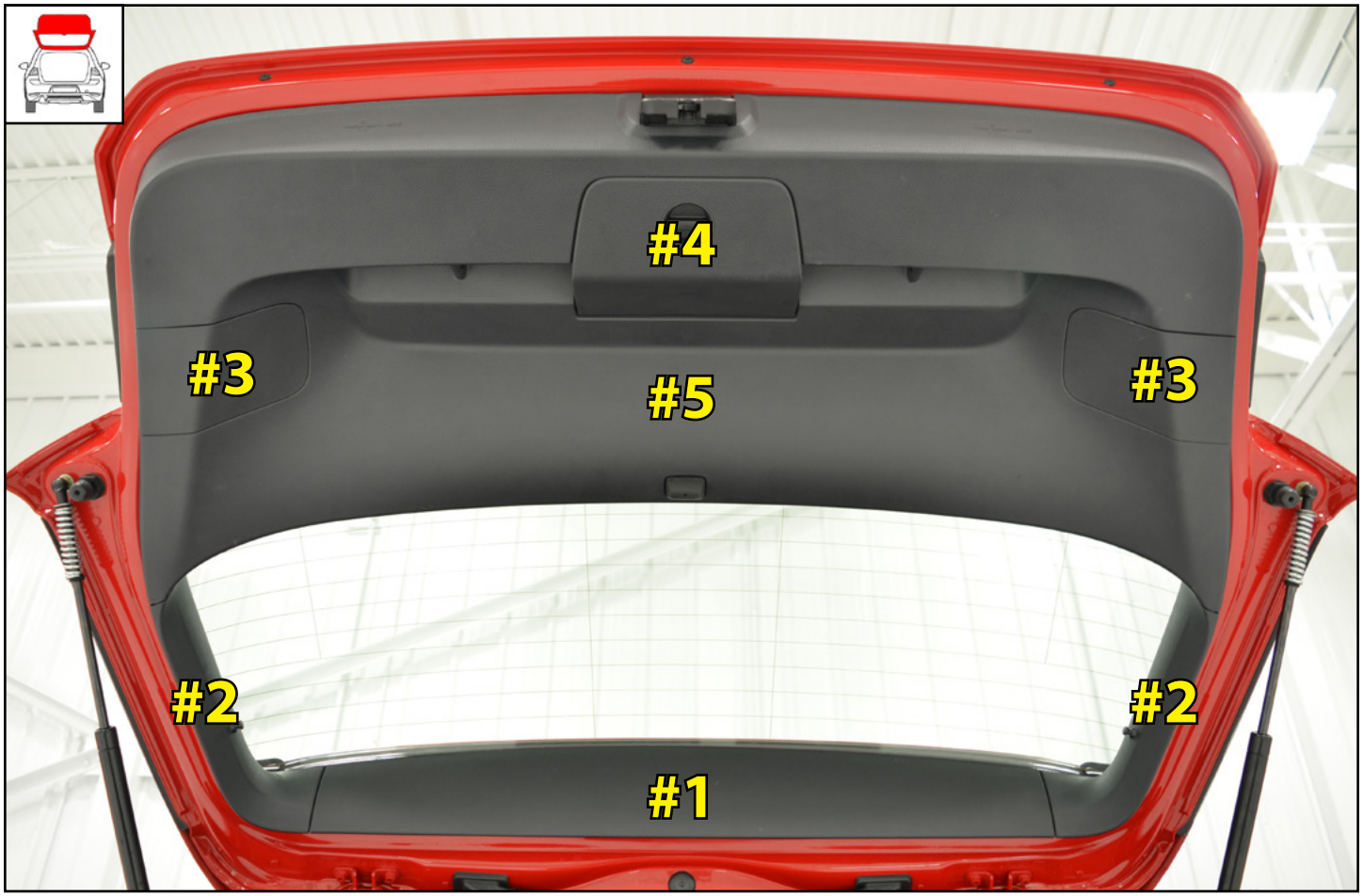
INSTALLING THE LED TAIL LIGHT HARNESS KIT

Hatch Trim Review:

The hatch trim pieces **MUST** be removed in the order shown in the photo on the right.

#1: Upper Trim
#2: Pillar Trim Panels
#3: Tail Light Access Covers
#4: Latch Access Cover
#5: Lower Hatch Panel

We will cover the steps involved in releasing these panels in the following pages.



INSTALLING THE LED TAIL LIGHT HARNESS KIT

Step 1:

Remove the upper trim panel by pulling it away from the hatch, working from one side toward the other. You will hear the push clips release as you move along.

Step 2:

Remove the pillar trim panels by pulling them away from the hatch as shown in the photo, then pivoting them down and away.

INSTALLING THE LED TAIL LIGHT HARNESS KIT

Step 3:

Remove the two tail light access covers by pulling them down.

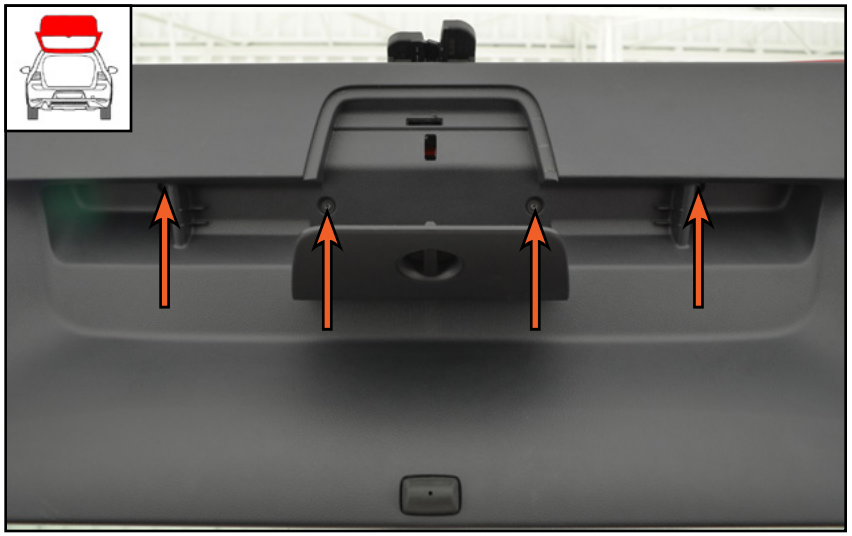
Step 4:

Rotate the knob inside the latch access cover and allow the cover to swing down.

INSTALLING THE LED TAIL LIGHT HARNESS KIT

Step 5: T25 Torx

Remove the four screws which secure the lower hatch trim panel into place.



Step 6:

The lower hatch trim panel is now only secured by the same style of push clips as the upper trim panel and the pillar trim panels. It's easiest to remove the lower panel by first grasping inside one of the tail light access holes and pulling downward. Then you can move your hand in between the panel and the hatch and continue pulling the panel downward, moving from one side to the other as you release the clips.

INSTALLING THE LED TAIL LIGHT HARNESS KIT

Step 7:

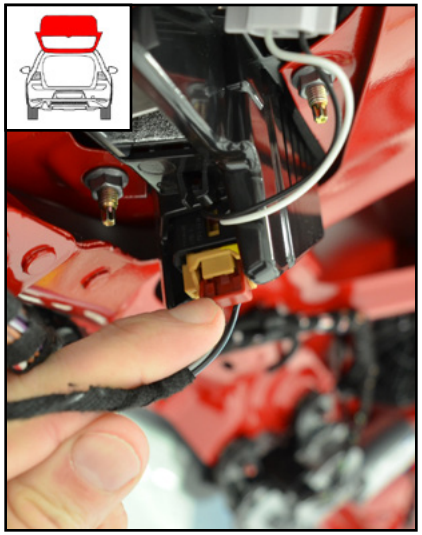
Once all of the clips have been released you can remove the panel from the hatch.

NOTE

When removing the panel from the hatch, be sure to not pinch any of the wires which run down the two pillars.

Step 8:

Release the locking tab on the inner tail light connectors and disconnect them from the tail lights.



INSTALLING THE LED TAIL LIGHT HARNESS KIT

Step 9:

Remove the upper trim panel which runs along the rear of the headliner, this is done by pulling downward on the panel to release the clips. It is best to begin on one side and work your way across, releasing the clips as you go.

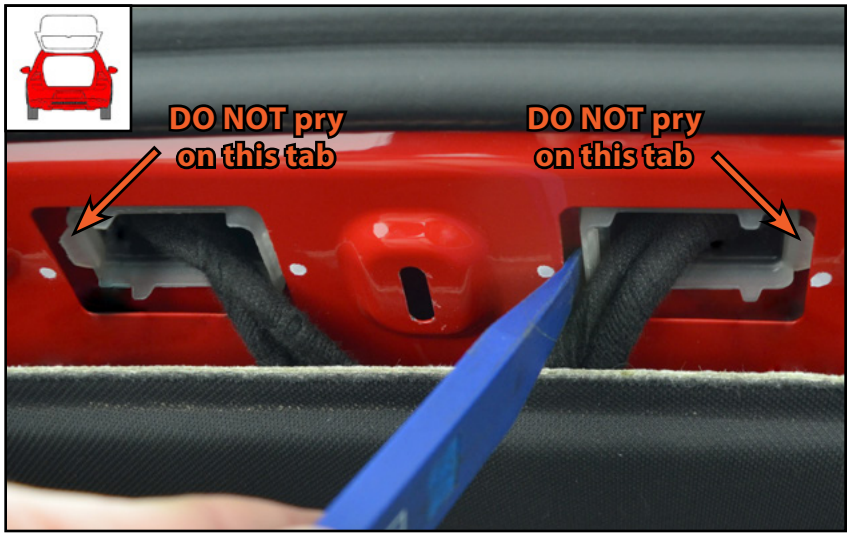
Step 10:

Once all of the clips have been released you can remove the panel from the vehicle and set it aside.

INSTALLING THE LED TAIL LIGHT HARNESS KIT

Step 11: Trim Removal Tool

With the upper trim panel out of the way, locate the bottom of the two hatch accordion tubes. These accordion tubes must be released by **GENTLY** prying on the **INNER** tabs as shown in the photo.



STOP

Be **EXTREMELY** careful not to break these accordion tubes. If these clips are broken they can leak water into the vehicle, and they are **EXTREMELY** difficult to replace.

Step 12:

Once the tab has been released, gently lift the inside edge of the accordion tube approximately 1/8-1/4", then slide the it in the direction shown in the second photo to release it.

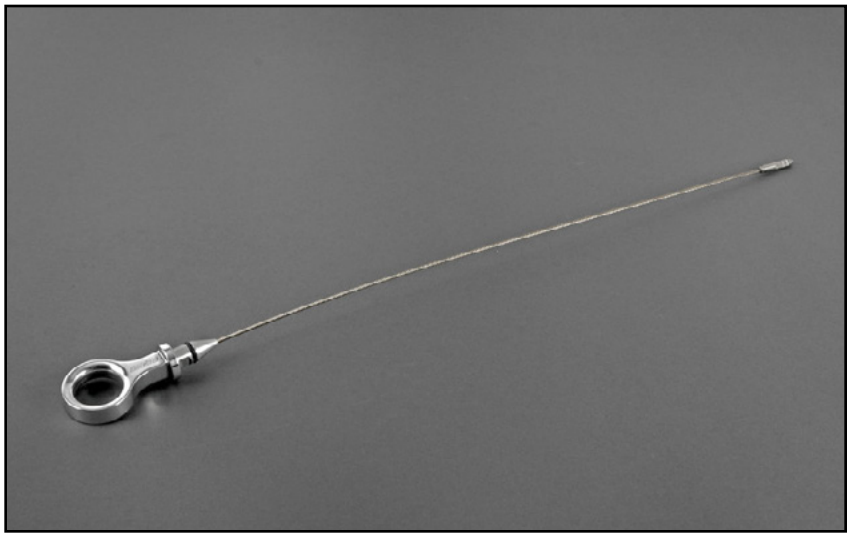
INSTALLING THE LED TAIL LIGHT HARNESS KIT

Step 13:

Release the top corners of both rear pillar trim panels as shown in the photo. We are **NOT** going to completely remove these pillar trim panels, we only need to release them enough to feed the tail light harnesses through the gap.

Step 14:

Now that we're done removing panels, the next step is to feed the wires into place. This can be achieved with a number of different guide tools, but for our install we used one of our ECS Tuning Dipsticks. We did this because unlike a coat hanger, there is no sharp pointy end which could possibly damage paint finishes or interior panels. If you decide to use a coat hanger instead, be sure to completely fold down one side of it, the sharp end **WILL** puncture the rubber accordion tubes leading to the hatch, and replacing those boots is an **EXTREMELY** time consuming repair.



INSTALLING THE LED TAIL LIGHT HARNESS KIT

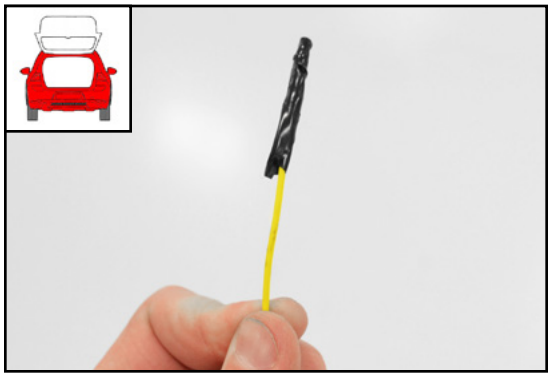
Step 15:

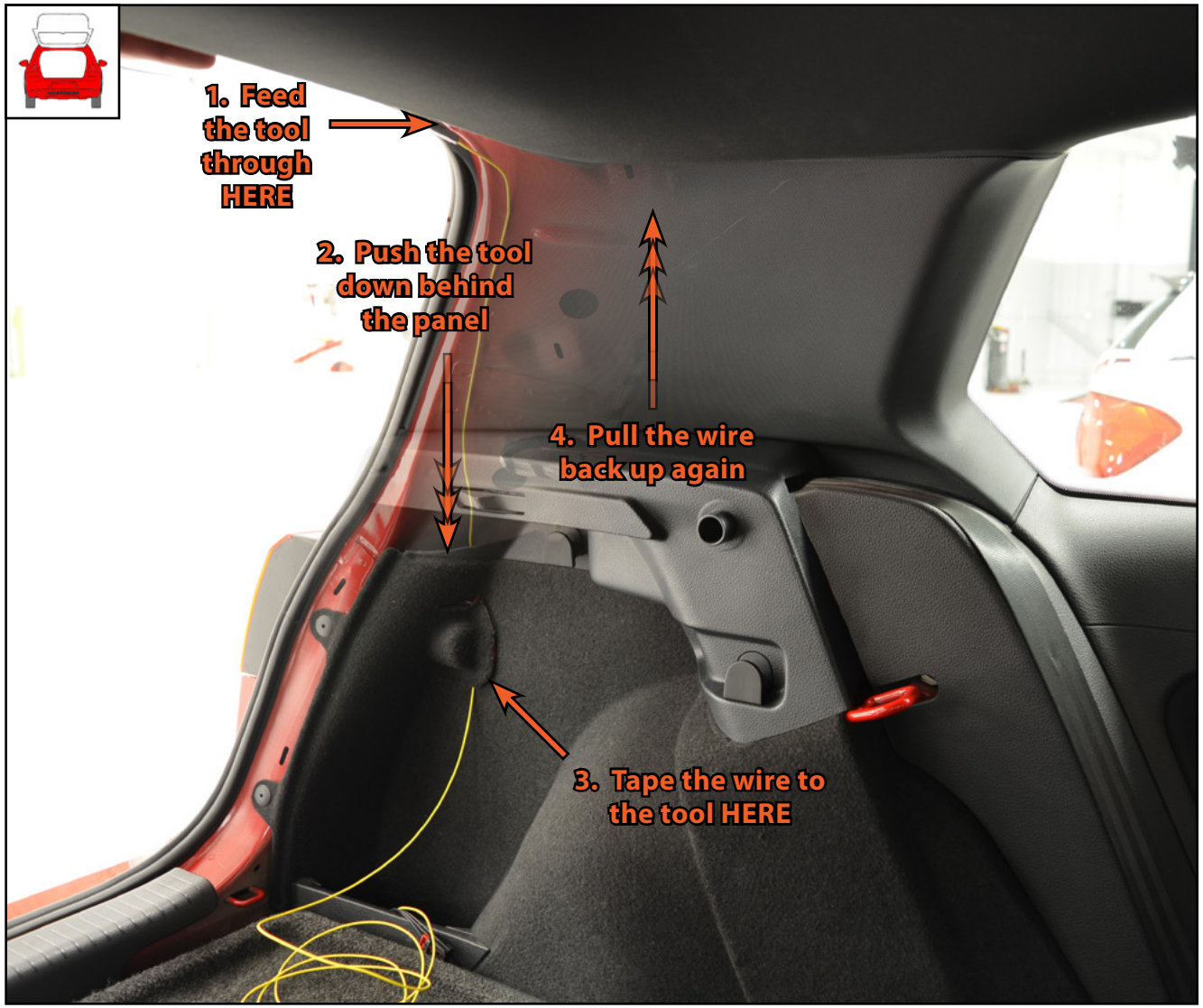
Wrap the **FEMALE** pins on the **YELLOW** wires with electrical tape to protect them from damage.

Feed the guide tool in behind the panel from the **TOP** all the way down until you can reach it with your fingers and pull it through the tail light access hole.

Next, tape the **YELLOW** wire from the outer tail light harness directly to the guide tool, then gently pull back in the other direction. This will pull the wire along the inside of the interior panels and up to the headliner.

Repeat this process on the other side of the vehicle.





INSTALLING THE LED TAIL LIGHT HARNESS KIT

Step 16:

Now we need to run the wires from the inner tail lights out to the outer tail lights. First, ensure that the new harness is in position where it can be plugged in after the wires have been routed.

NOTE

For our install we plugged the harness into the inner tail light in order to ensure that it did not move during the following steps.

Step 17:

Wrap the **FEMALE** pins on the **RED** wires and the **MALE** pin on the **BLUE** wire with electrical tape. This will protect them from damage while routing them through the vehicle.

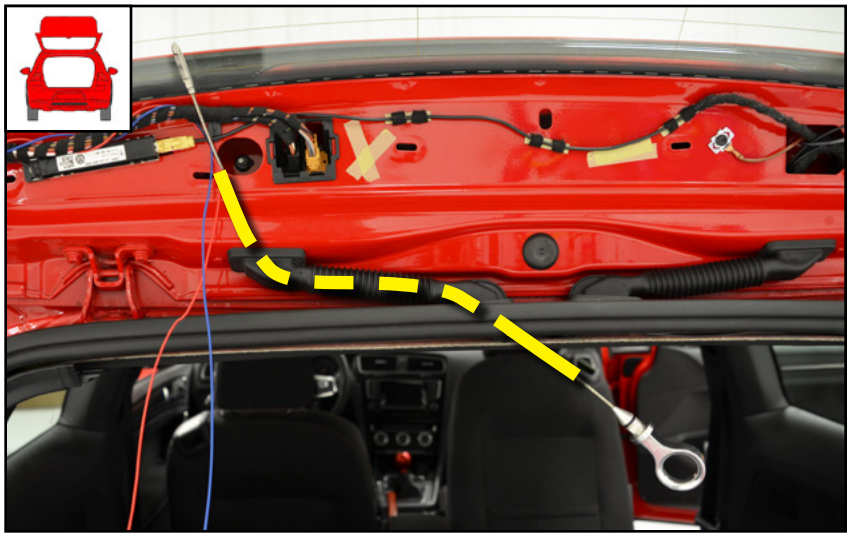
INSTALLING THE LED TAIL LIGHT HARNESS KIT

Step 18:

Route the wires down the hatch pillars around the wiring harnesses as shown in the photo, this will help to protect them from being pinched.

Step 19:

Gently insert your guide tool through the accordion tube and into the hatch.

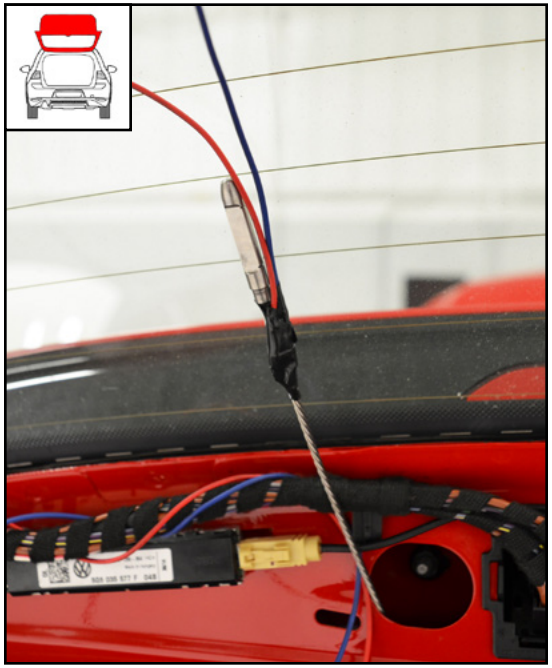


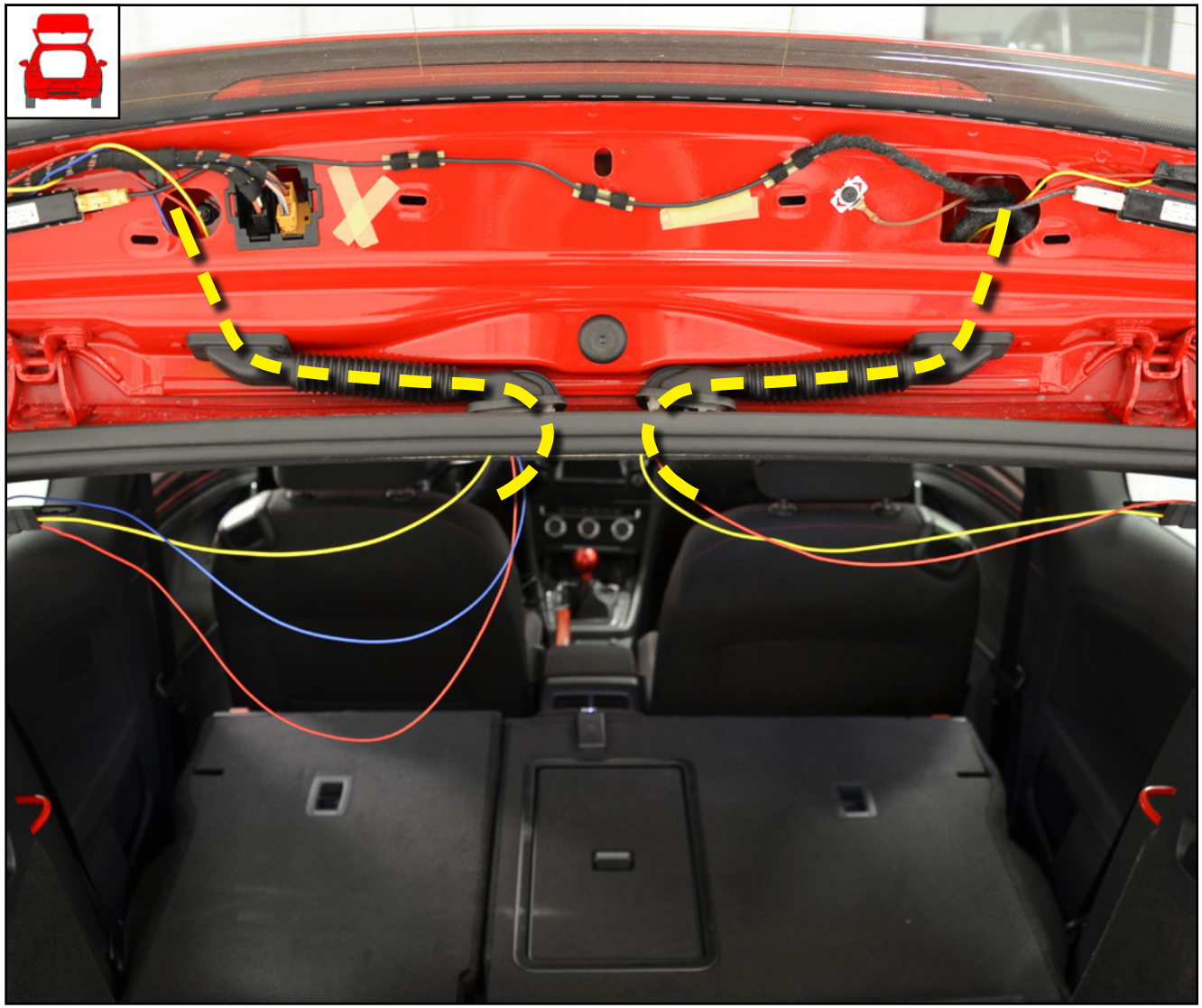
INSTALLING THE LED TAIL LIGHT HARNESS KIT

Step 20:

On the LH side of the vehicle, tape the **RED** wire and the **MALE** end of the **BLUE** wire to your guide tool, then pull the tool and the wires through the accordion tube and into the vehicle. Repeat this procedure for the **RED** wire on the RH side of the vehicle.

Next, reverse this process to feed the **YELLOW** wires into the hatch.





INSTALLING THE LED TAIL LIGHT HARNESS KIT

Step 21:

Now we're ready to pull the **RED** wire **DOWNWARD** behind the interior panels. This photo has been taken to better illustrate the exact path the wire will travel behind the panels.

Feed the guide tool in behind the panel from the **BOTTOM** all the way up until you can reach it with your fingers and pull it out between the pillar trim and the headliner.

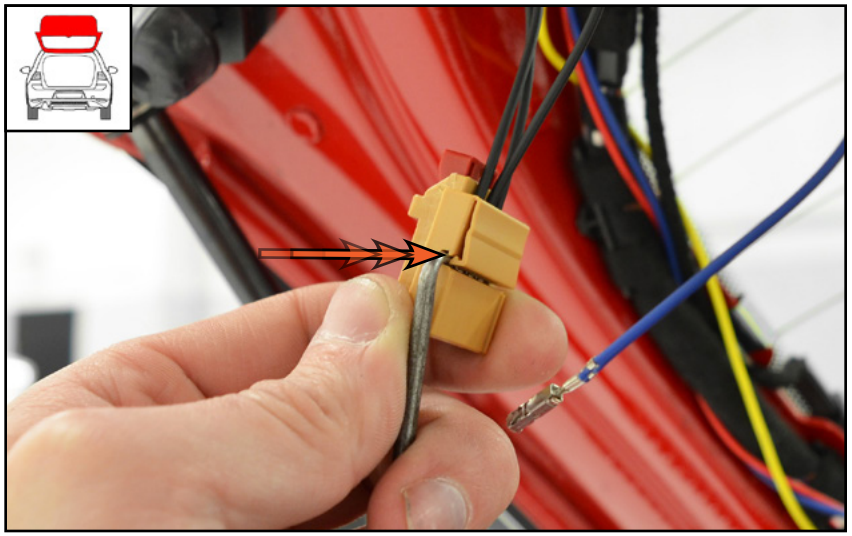
Next, tape both the **RED** wire and the **MALE** end of the **BLUE** wire directly to the guide tool, then gently pull back in the other direction. This will pull the wires along the inside of the interior panels and out through the tail light access hole.

Repeat this process to pull the **RED** wire into place on the other side of the vehicle.

INSTALLING THE LED TAIL LIGHT HARNESS KIT

Step 22: Small Angled Pick

Now we need to connect the wiring leads to the appropriate connectors. Starting with the LH inner tail light, release the connector lock with a small pick or screwdriver as shown in the photo.

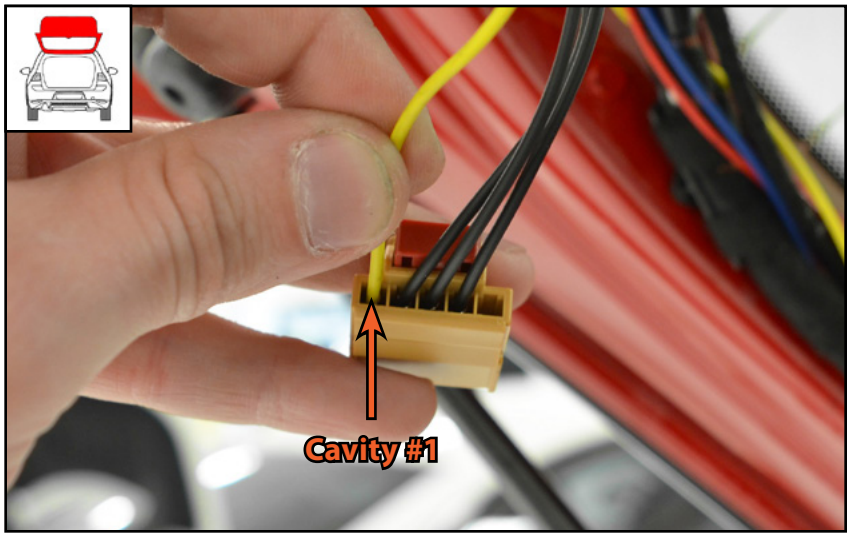


NOTE

Be sure that you are performing this procedure on the new ECS harness connector, **NOT** the factory wiring harness connector.

Step 23:

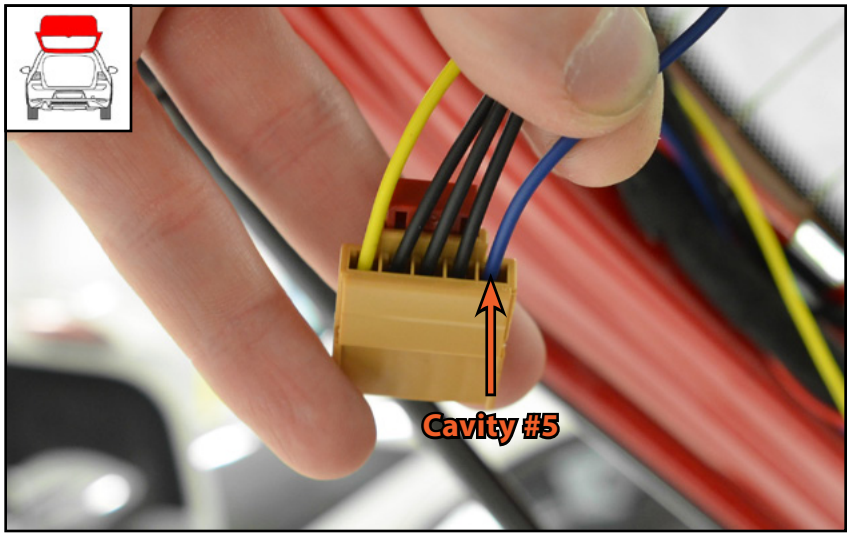
Insert the **FEMALE** pin on the **YELLOW** wire into cavity #1 of the male connector on the new ECS inner tail light harness.



INSTALLING THE LED TAIL LIGHT HARNESS KIT

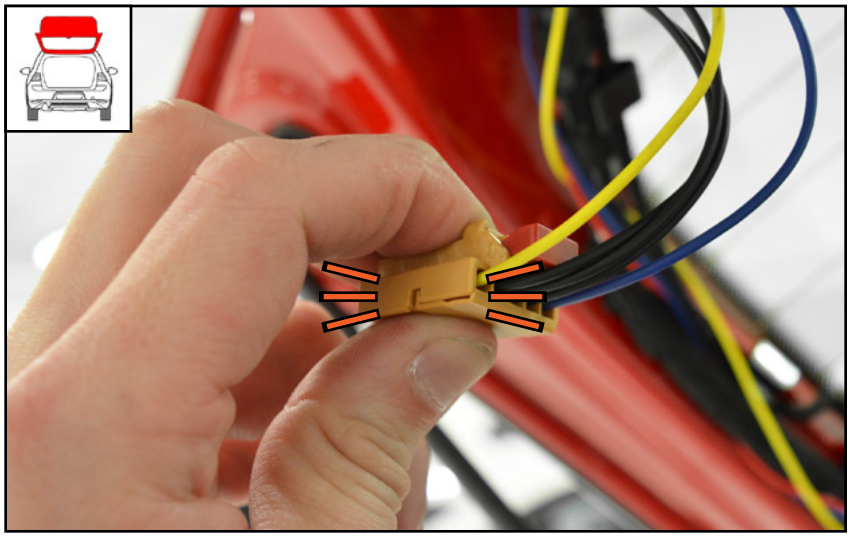
Step 24: Small Angled Pick

Insert the **FEMALE** pin on the **BLUE** wire into cavity #5 of the male connector on the new ECS inner tail light harness (LH side only).



Step 25: Small Angled Pick

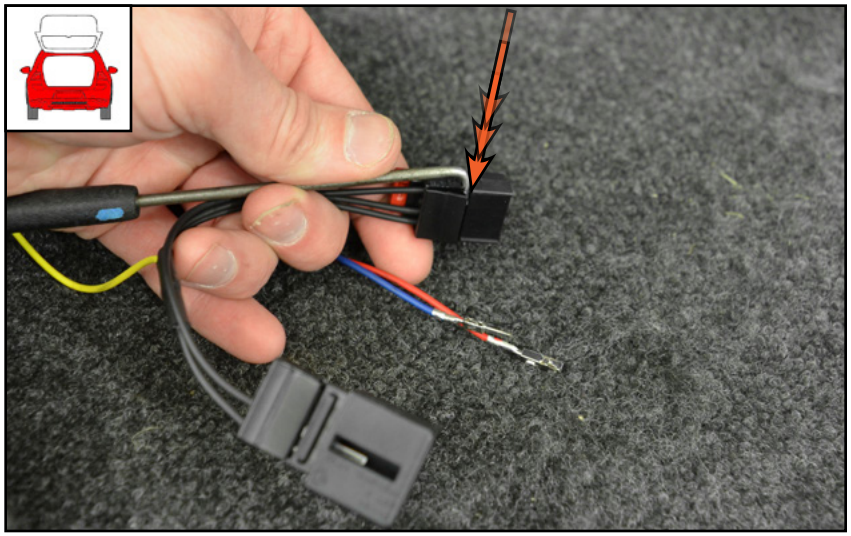
Repeat steps 22 & 23 on the RH side of the vehicle, then squeeze the connector locks until they click into place.



INSTALLING THE LED TAIL LIGHT HARNESS KIT

Step 26: Small Angled Pick

Moving to the ECS outer tail light harnesses, release the locks on the **MALE** connectors with a small pick or screwdriver as shown in the photo.

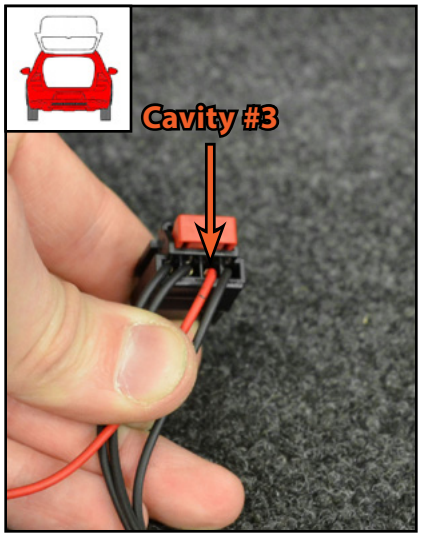


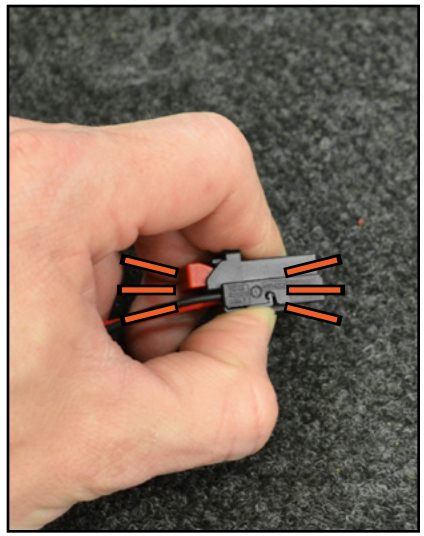
NOTE

Be sure that you are performing this procedure on the new ECS harness connectors, **NOT** the factory wiring harness connectors.

Step 27:

Insert the **FEMALE** pins on the **RED** wires into cavity #3 of the male connectors on the new ECS outer tail light harnesses. Squeeze the connector locks until they click into place.

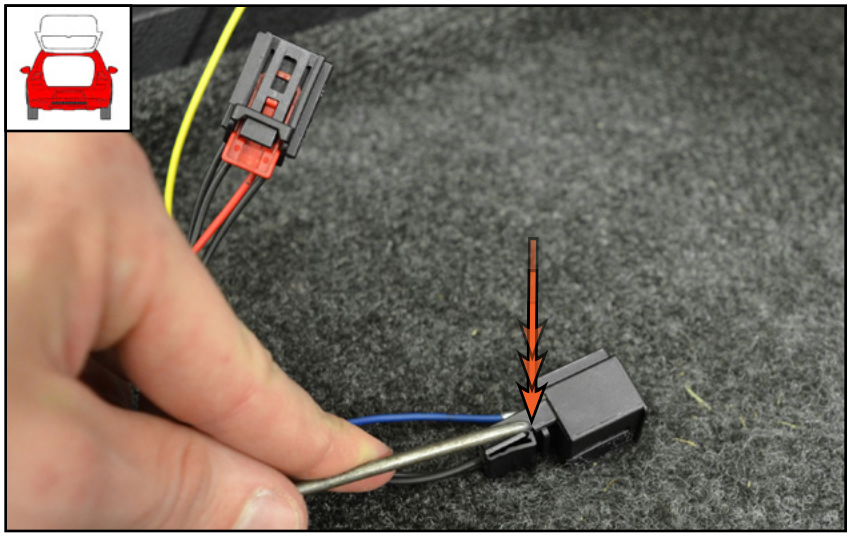




INSTALLING THE LED TAIL LIGHT HARNESS KIT

Step 28: Small Angled Pick

Finally, release the lock on the **FEMALE** connector of the LH outer tail light harness with a small pick or screwdriver as shown in the photo.

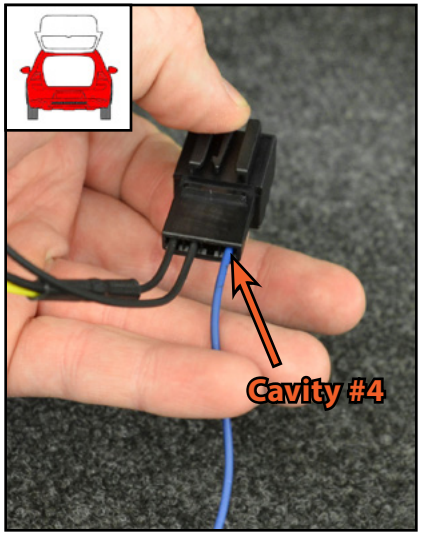


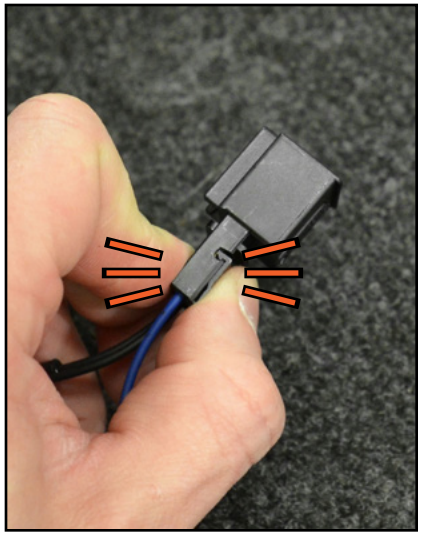
NOTE

Be sure that you are performing this procedure on the new ECS harness connector, **NOT** the factory wiring harness connector.

Step 29:

Insert the **MALE** pin on the **BLUE** wire into cavity #4 of the female connector on the new ECS outer tail light harness. Squeeze the connector lock until it clicks into place.

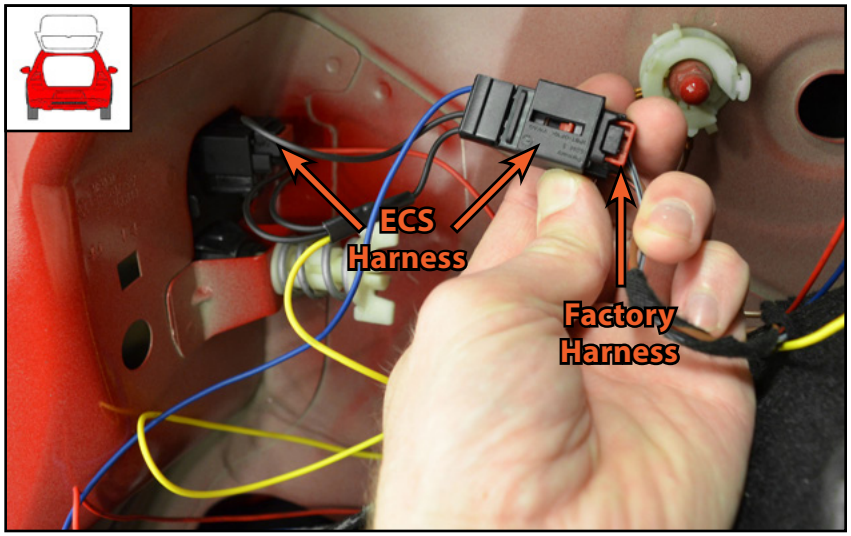




INSTALLING THE LED TAIL LIGHT HARNESS KIT

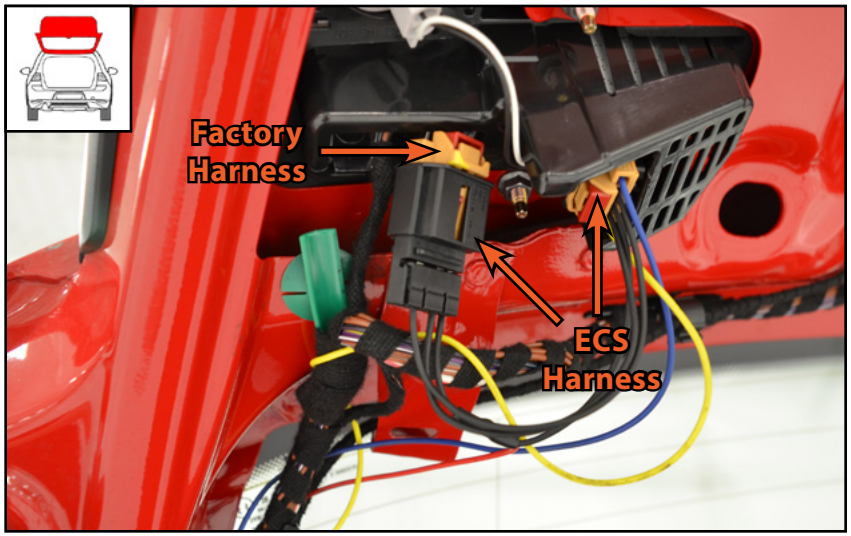
Step 30:

Install the ECS outer tail light harness in between the factory wiring harness and the tail light. Be sure to tuck the wires out of the way where they won't get pinched or damaged.



Step 31:

Install the ECS inner tail light harness in between the factory wiring harness and the tail light. Be sure to tuck the wires out of the way where they won't get pinched or damaged.



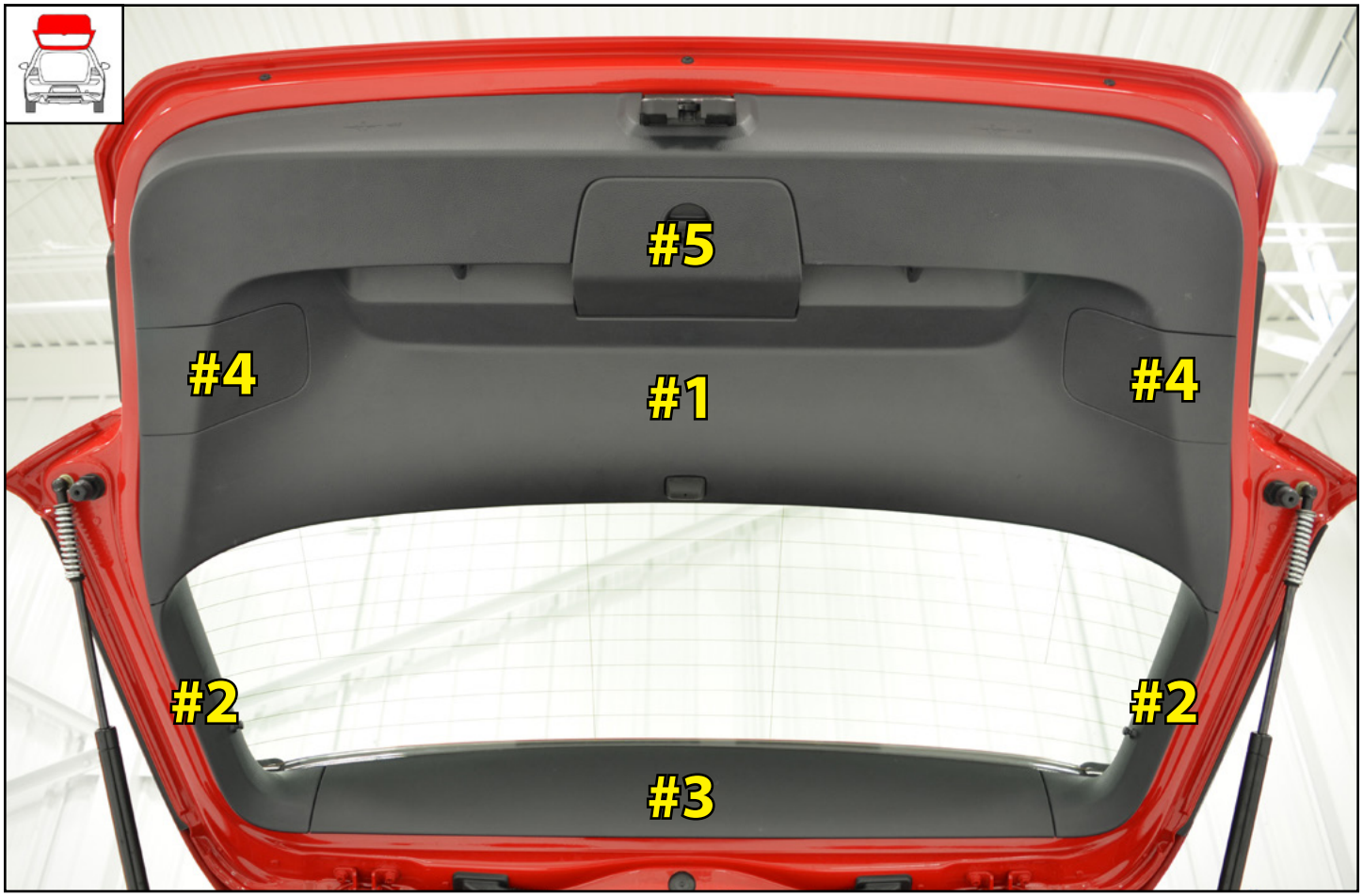
INSTALLING THE LED TAIL LIGHT HARNESS KIT

Step 32:

Reinstall all of the hatch trim pieces in the order shown in the photo (reverse order of removal).

#1: Lower Hatch Panel
#2: Pillar Trim Panels
#3: Upper Trim
#4: Tail Light Access Covers
#5: Latch Access Cover

Reinstall the four screws which secure the lower hatch trim panel into place.



INSTALLING THE LED TAIL LIGHT HARNESS KIT

Step 33:

Reinstall the two accordion boots in the reverse order of removal.

Reinstall the two rear pillar trim panels, but be careful to not pinch the wires while clipping them back into place.

Push the wires into the space above the headliner as shown in the photo, this will prevent them from being pinched by the upper trim panel clips.

INSTALLING THE LED TAIL LIGHT HARNESS KIT

Step 34:

Reinstall the upper trim panel by lining up the clips and pushing them into place. It is best to begin on one side and work your way across, snapping the clips in as you go along.

Step 35:

Make sure the seal is laying on top of the rear pillar trim panels and the upper trim panel.

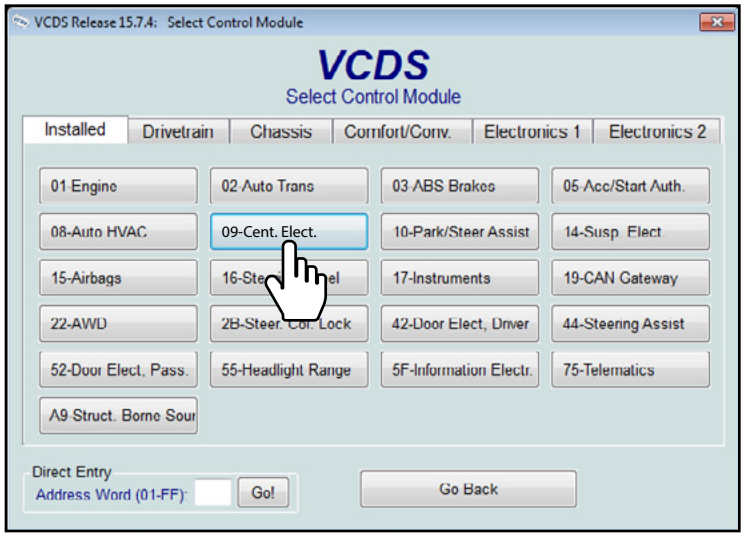
Now, proceed to the next page for details on the required VCDS coding changes

VCDS CODING CHANGES

Step 1:

Now we need to change the adaptations inside the BCM to activate all of the features in our tail lights. To do this, start by selecting:

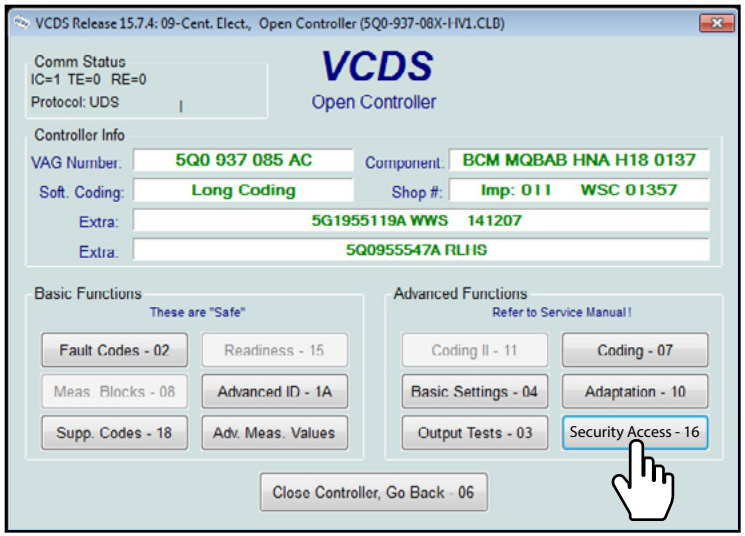
09-Cent. Elect.



Step 2:

Next, select:

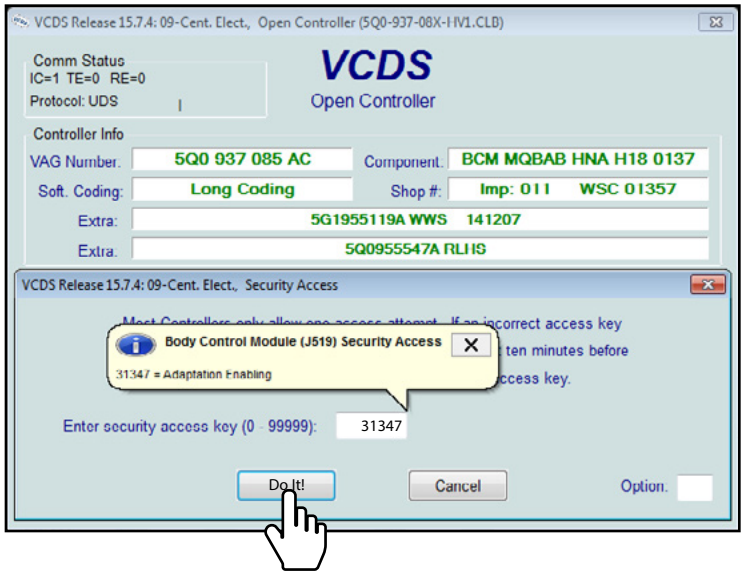
Security Access - 16



VCDS CODING CHANGES

Step 3:

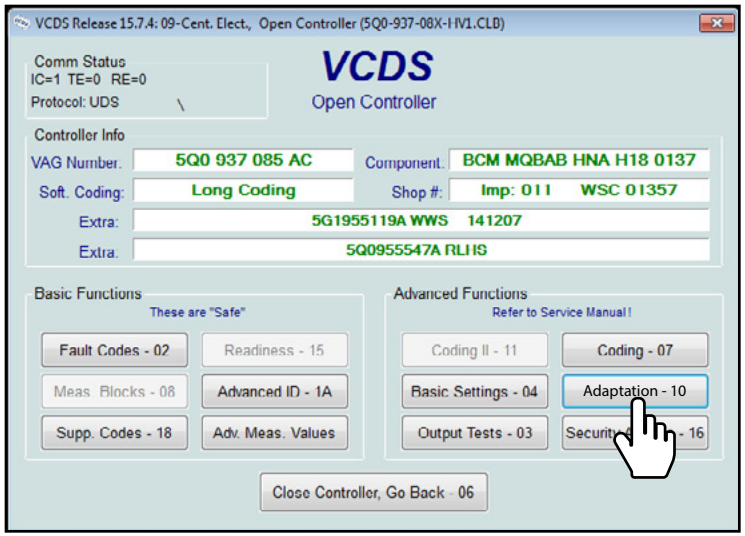
Enter **31347** into the security access key box, then click **Do It!**



Step 4:

Select:

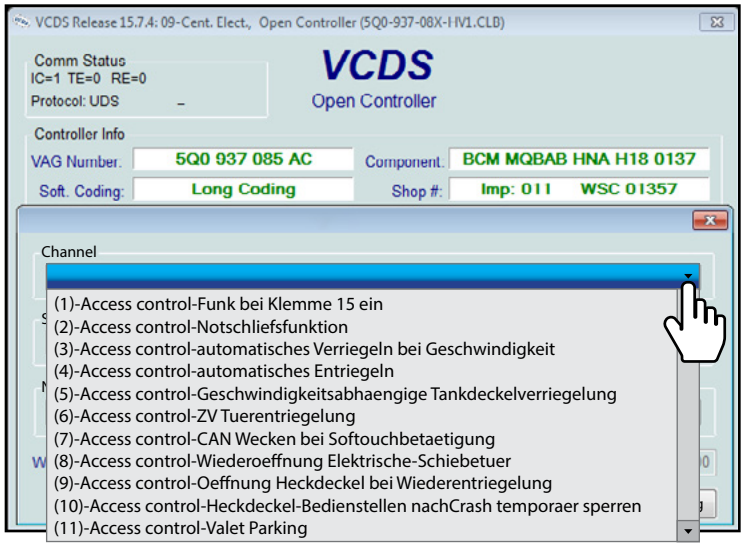
Adaptation - 10



VCDS CODING CHANGES

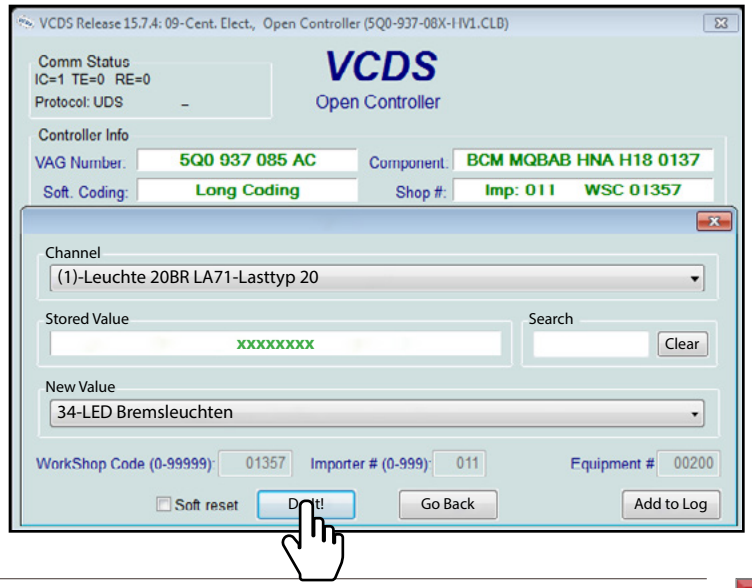
Step 5:

First, we need to click the drop down menu in order to access the channel list, then we need to scroll down the list to find the channels which we need to change. All of the required channels are listed in the tables on the next page, use these tables as a reference as you change all of the stored values to the specified new values.



Step 6:

After you change each **New Value** click **Do It!**



VCDS CODING CHANGES

Outer LH Brake Lamp	Adaptation:	Change to:
	(1)-Leuchte20BR LA71-Lasttyp 20	34-LED Bremsleuchten
	(5)-Leuchte20BR LA71-Lichtfunktion B 20	Not Active
	(6)-Leuchte20BR LA71-Dimmwert AB 20	100
	(8)-Leuchte20BR LA71-Lichtfunktion C 20	Not Active

Outer RH Brake Lamp	Adaptation:	Change to:
	(1)-Leuchte21BR RC8-Lasttyp 21	34-LED Bremsleuchten
	(5)-Leuchte21BR RC8-Lichtfunktion B 21	Not Active
	(6)-Leuchte21BR RC8-Dimmwert AB 21	100
	(8)-Leuchte21BR RC8-Lichtfunktion C 21	Not Active

Inner LH Parking Lamp	Adaptation:	Change to:
	(1)-Leuchte23SL HLC10-Lasttyp 23	33-led-Modul Blinkleuchten
	(4)-Leuchte23SL HLC10-Lichtfunktion A 23	Not Active
	(8)-Leuchte23SL HLC10-Lichtfunktion C 23	Blinken links Hellphase
	(10)-Leuchte23SL HLC10-Dimmwert CD 23	127

Inner RH Parking Lamp	Adaptation:	Change to:
	(1)-Leuchte24SL HRA65-Lasttyp 24	33-led-Modul Blinkleuchten
	(4)-Leuchte24SL HRA65-Lichtfunktion A 24	Not Active
	(8)-Leuchte24SL HRA65-Lichtfunktion C 24	Blinken Rechts Hellphase
	(10)-Leuchte24SL HRA65-Dimmwert CD 24	127

LED Rear Fog Lights	Adaptation:	Change to:
	(1)-Leuchte26NSL LA72-Lasttyp 26	1-LED Tagfahrlichtmodul Versorgung (3-LED lighten module)
	(4)-Leuchte26NSL LA72-Lichtfunktion A 26	Standlicht allgemein (Schlusslicht; Positionslicht; Begrenzungslicht) (Nebelschlusslicht wenn kein Anhaeenger gesteckt)
	(6)-Leuchte26NSL LA72-Dimmwert AB 26	127

There was a split in the middle of MY2015 which changed the channel for the rear side marker lights from **Leutchte26NSL** to **Leutchte27NSL**. If your vehicle falls after that split you will need to perform these Adaptations on Leutchte27NSL.

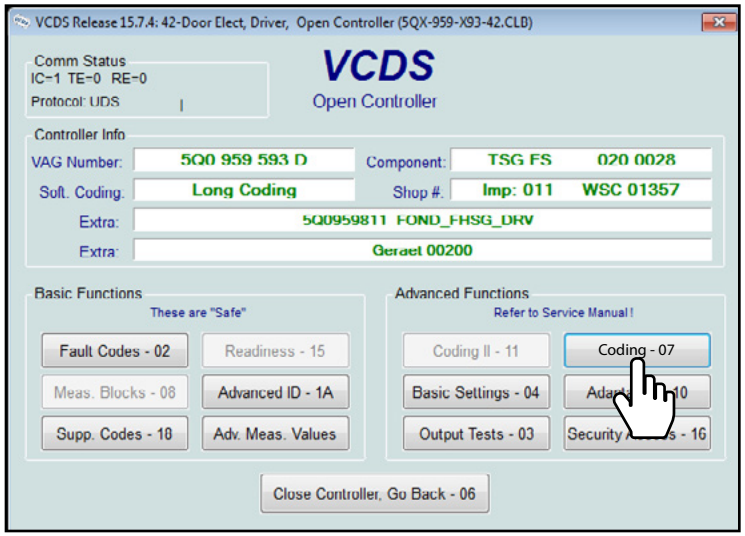
We're almost there, continue to the next page for the final coding changes!

VCDS CODING CHANGES

Step 7:

Close the Adaptation screen, then select:

Coding - 07

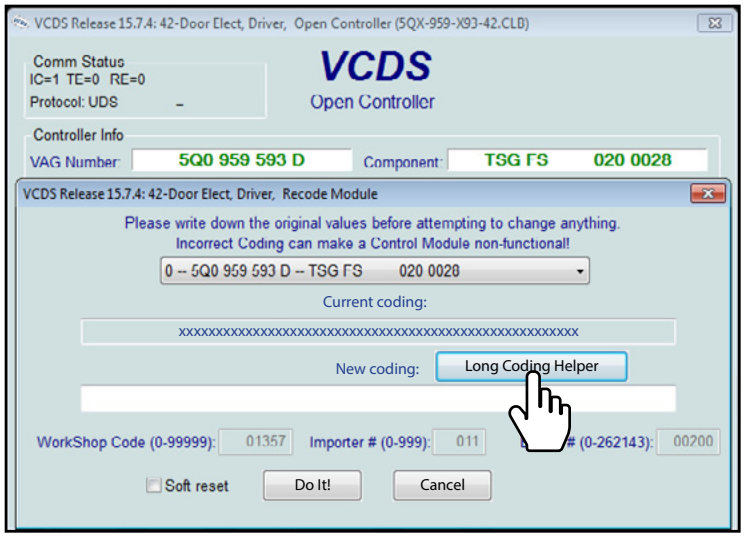


Step 8:

Write down or save your Current Coding for reference, then select:

Long Coding Helper

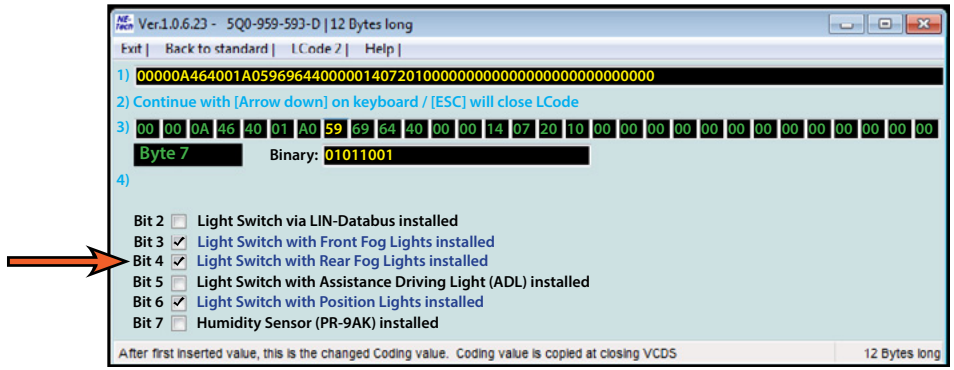
CAUTION: Store the Current Coding somewhere safe, without it you will not be able to easily revert to factory coding.



VCDS CODING CHANGES

Step 9:

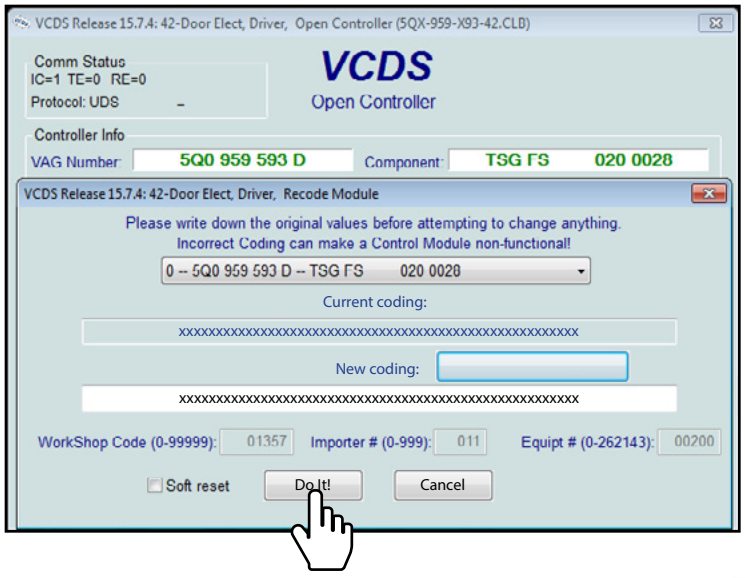
Select the eighth box in the #3 row to open **BYTE 7**, then check **Bit 4**.



Step 10:

Close the Long Coding Helper and click **Do It!** Another screen should pop up saying the coding was accepted, click **OK** and close the controller.

Your installation is now complete!



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Your MK7 European LED Tail Light Harness Kit installation is complete!

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