STEALTH® HITCHES

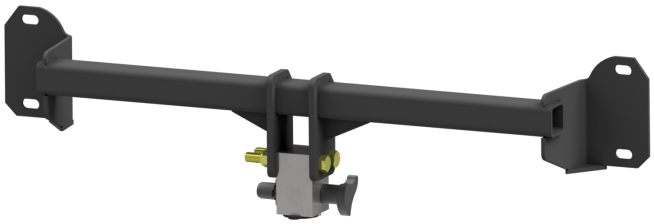
www.stealthhitches.com 833•694•4824

HITCH INSTALLATION INSTRUCTIONS

MAKE:	YEARS:	MODEL/TRIM:
MINI	2016 - 2024	Cooper S Clubman
	2016 - 2024	Cooper S Clubman All4
	2016 - 2024	John Cooper Works Clubman All4

RACK RECEIVER KIT#: **SHR36001**

COMPATIBLE WITH TOW KIT: **SHT25006**



2" RACK RECEIVER MAXIMUM PAYLOAD: 350 LBS
MAXIMUM TOW RATING: 3500 LBS
MAXIMUM TONGUE WEIGHT: 350 LBS

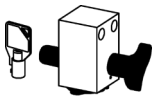
UNDER VEHICLE TRIMMING:

HEAT SHIELD: YES
FASCIA: NO
GRAVEL GUARD TRIMMING: NO

READ ALL INSTRUCTION WARNINGS AND LABELS

NO WELDING, METAL DRILLING OR VISIBLE TRIMMING REQUIRED

PARTS SUPPLIED WITH RACK RECEIVER KIT:


LATCH BLOCK & KEYS


(2) BOLTS 5/8" - 11 x 5"


(2) 5/8" NYLOCK NUTS

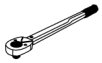

2" RACK RECEIVER

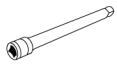

(2) 14" CABLE TIES

TOOLS REQUIRED:


15/16" OPEN END WRENCH


18mm DEEP WELL, 8mm, 10mm, & 15/16" SOCKETS


TORQUE WRENCH


SOCKET EXTENSION


SAFETY GLASSES


RATCHET


FLASHLIGHT


PLASTIC PRY TOOLS


T25 TORX


TIN SNIPS


DREMEL TOOL

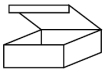

FILE

ADDITIONAL PARTS FOR TOW KIT:


BALL MOUNT 7" RISE, SHORT

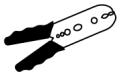

CHAIN HOOKS


2" BALL


PASSIVE WIRING KIT BOX

ADDITIONAL TOOLS FOR TOW KIT:


MULTIMETER


STRIPPER/ CRIMPING TOOL


90 DEGREE PICK


DRILL & 3/8" BIT


PLIERS


SILICONE

RACK RECEIVER INSTALLATION: USE STEPS 1-11 & 28-37
TOW KIT INSTALLATION: USE STEPS 1-37

<THESE INSTRUCTIONS MUST BE GIVEN TO THE END USER>

NOTICE: Installation of Stealth products may or may not require the addition of a wiring harness to the vehicle.

- The Rack Receiver only product does not require adding a wiring harness.
- The Rack Receiver plus Tow Kit requires the addition of a “Passive” wiring harness to the vehicle. The passive harness “reads” the output of the vehicle’s lights and translates the signals to the trailer without being connected to the vehicle computer.

INSTALLATION NOTE: In most instances, these instructions will only outline disassembly of vehicle components. Re-installation of components will require the installer to retain vehicle hardware and work through disassembly instructions in reverse order. When installation is complete, double check that all vehicle components have been replaced and are secured.

IMPORTANT SAFETY NOTICE FOR STEALTH HITCH INSTALLERS AND CUSTOMERS.

Read all installation and operating instructions along with all labels before installing or using this product. Do not perform any installation or towing procedures without fully understanding the correct tools and actions for all steps. Call for support if needed.

⚠WARNING **Failure to comply with the safety information in these instructions could result in serious injury or death.**

⚠ Do not modify this product in any manner. Doing so could alter its integrity and lead to a loss of attachment between the trailer and the tow vehicle.

⚠ Adding Stealth hitch components to the chassis of any vehicle can be hazardous. There is potential for unexpected combustion of fuel, electric shock, burns, shifting or falling of unstable vehicle, damage to vehicle, injury from tool usage and many other hazards. This installation must be completed by someone who is aware of the hazards involved. This person must be knowledgeable of proper safety procedures for a vehicle modification of this nature, and for usage of the equipment required to perform the installation.

⚠ Without proper knowledge, towing can be a dangerous activity. Understand all the risks involved with towing before proceeding. For information on towing safety, see **"The Trailer Handbook: A Guide to Understanding Trailer and Towing Safety"** from the National Association of Trailer Manufacturers, www.NATM.com and your trailer and tow vehicle manufacturer's owner's manual.

⚠ Do not exceed tow or tongue rating of coupler, tow or tongue rating of hitch, or tow or weight ratings of tow vehicle or trailer. See vehicle and trailer manufacturer information for ratings. Exceeding these ratings may cause damage to towing components or loss of attachment between the trailer and vehicle.

⚠ While installation is being performed, check for signs of damage or excessive corrosion. Do not install hitch components over vehicle parts that are broken or have compromised structural integrity.

⚠ This product was designed to fit vehicles in their original, "as manufactured" condition. Compatibility with vehicles having replacement parts, or other modifications is not guaranteed. Inspect vehicle for modifications before installation of this product.

⚠ Some accessories, like the rack receiver, are not rated for towing. Do not use any accessories without proper knowledge of their use.

⚠ A visual inspection of the hitch should be performed before each use. Regularly check that all connections are secure, including those that secure the hitch to the vehicle. Check for cracks or damage to the hitch. Do not use the hitch if cracks or damage outside of normal wear is found. Using a hitch that has unsecure connections and/or cracks or damage could result in damage to the tow vehicle, trailer, towing components and loss of attachment between the tow vehicle and trailer.

⚠ Stealth hitches are not compatible with any weight distribution or sway control products. Adding additional products to the trailer or chassis which modifies the function of the Stealth hitch may cause hitch failure.

NOTICE: Installation of hitch requires removal of vehicle parts and interaction with vehicular electronics. Before installation, check the condition of body panels and note any locations where panels are not flush. Check the electronic functions of the vehicle, such as: headlights, taillights, turn signals, cameras, backup sensors, Parking Distance Controller (PDC), foot activated cargo access, etc. It is the responsibility of the installer to restore the fit and function of the vehicle

GAIN ACCESS TO MOUNTING AREA

PLASTIC PRY TOOLS

1. Open the vehicle rear cargo area. Locate (2) plastic rivets on the sides of the rear hatch. Remove the plastic rivets with a plastic pry tool.

8mm SOCKET

2. Inside the rear wheel well, behind the tire, remove (1) screw inside.

T25 TORX

3. To allow partial removal of the rear wheel well trim, (3) clips will need o be disconnected. Apply outward pressure on wheel well trim. Start with the bottom clip and work up. Unplug the light on the rear wheel well trim piece. Squeeze plug clip then pull outward.
4. Use a T25 Torx socket to remove (1) screw securing the fascia. Repeat Steps 2-4 on other side of vehicle.

GAIN ACCESS TO MOUNTING AREA CONTINUED

8mm
SOCKET

5. Underneath the vehicle, use a socket to remove (8) screws from the bottom edge of the fascia.

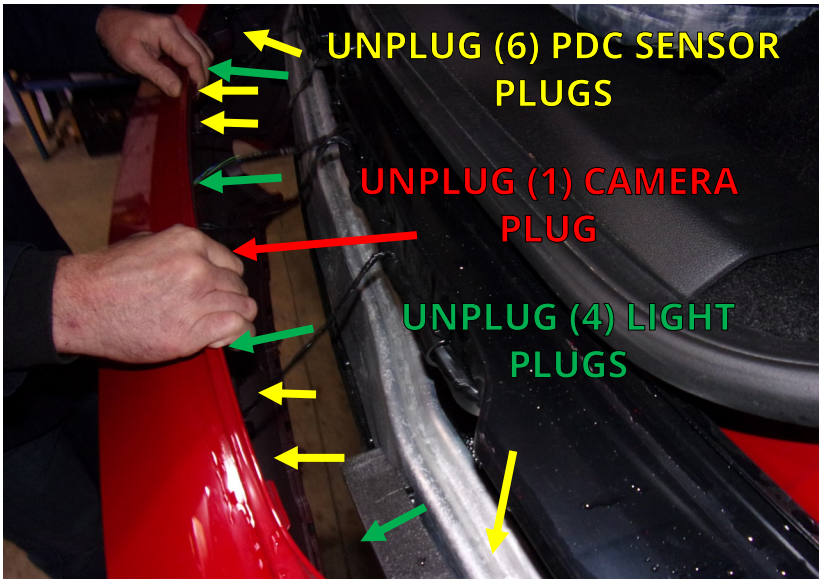
PLASTIC
PRY TOOLS

6. Behind the rear wheel well, put outward pressure on the fascia. With a plastic pry tool, push down on the clips, continue applying outward and rearward pressure until all clips are released. Repeat on other side of vehicle.

PLASTIC
PRY TOOLS

7. This step requires a partner. Slide the fascia rearward, keep the fascia close to the vehicle. Unplug (6) PDC sensor plugs, (4) light plugs and (1) camera plug, before removing fascia completely.

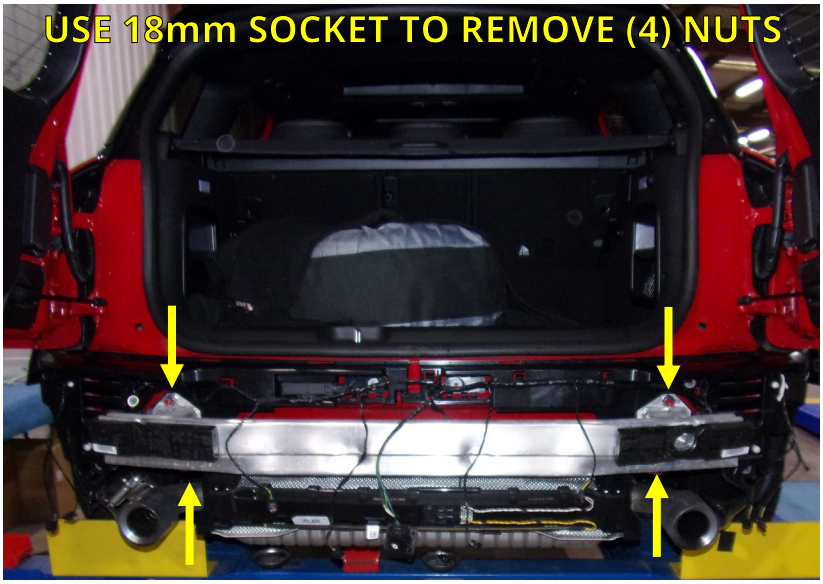
NOTICE: Carefully remove the fascia and place on a blanket or pad.



GAIN ACCESS TO MOUNTING AREA CONTINUED

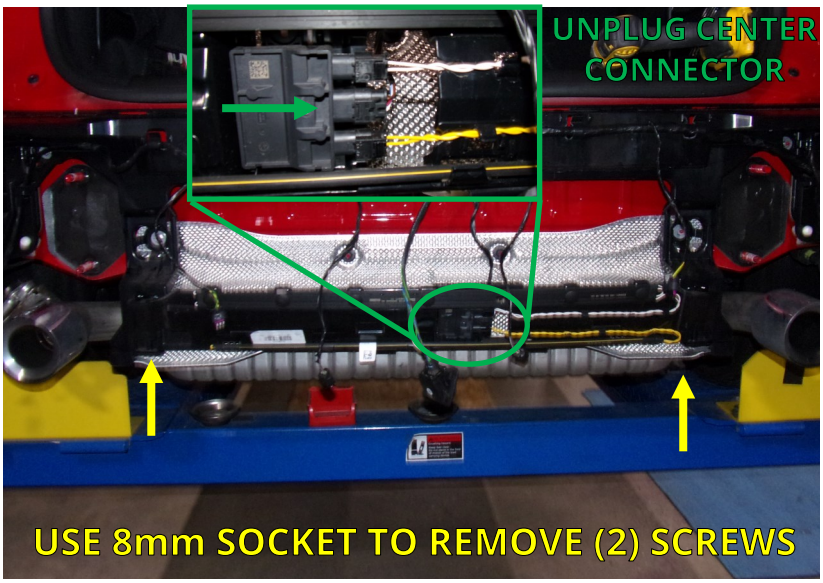
18mm
DEEP WELL
SOCKET

8. Locate and remove (4) nuts securing the factory reinforcement beam to the vehicle. Save the nuts for reinstallation and discard factory reinforcement beam.



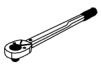
8mm
SOCKET

9. Remove (2) screws from the hands-free trunk release cable holder. Unplug center connector on the hands-free trunk release cable holder. Remove the holder.



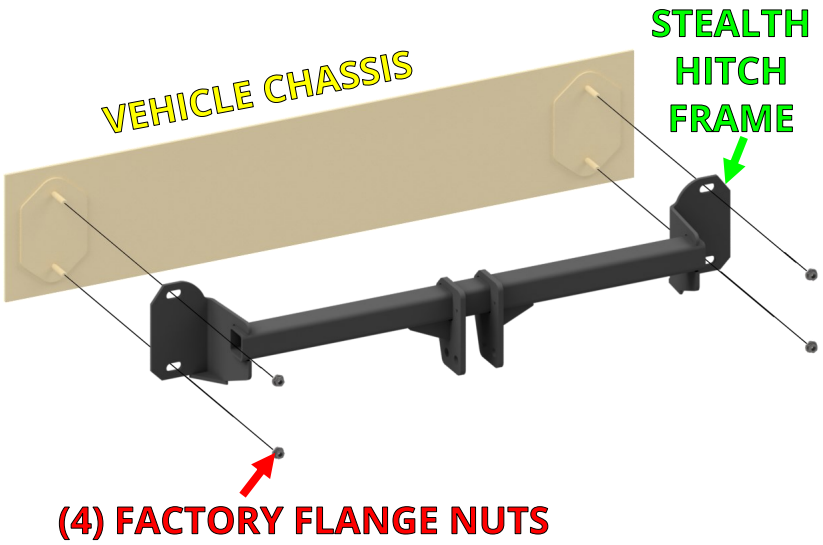
INSTALL STEALTH HITCH FRAME

18mm
DEEP WELL
SOCKET



TORQUE
WRENCH

10. Mount the Stealth hitch frame onto the vehicle studs. Use the (4) nuts saved from the factory reinforcement beam and torque to 85 ft.-lbs.



MOUNT LATCH BLOCK

15/16" SOCKET

15/16" OPEN END WRENCH

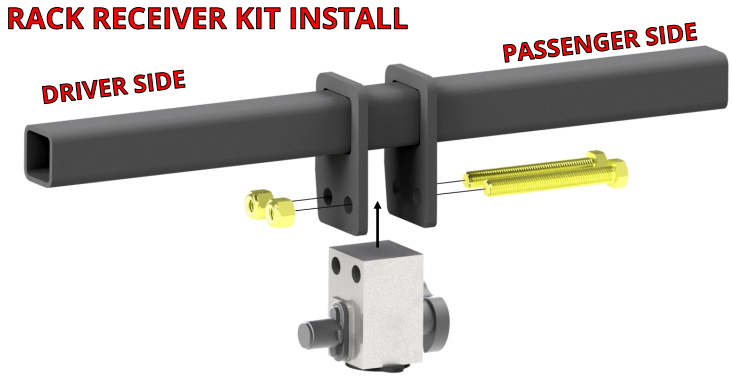
TORQUE WRENCH

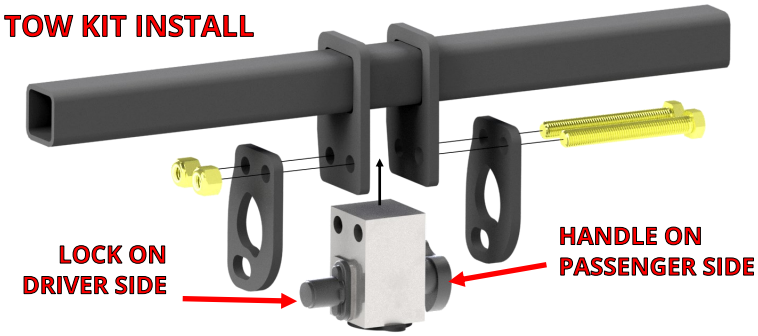
11. Installation of the latch block varies depending on which kit you are installing.

- ***Rack Receiver Kit:*** Install the latch block with (2) 5/8”-11 x 5” bolts and (2) 5/8” nylock nuts. Tighten each bolt to150 ft.-lbs.

- ***Tow Kit:*** Install the latch block and (2) chain hooks with (2) 5/8”-11 x 5” bolts and (2) 5/8” nylock nuts. Tighten each bolt to 150 ft.-lbs.

NOTICE: Keys are packaged within the latch block, remove keys and store in safe location.

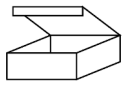




IF INSTALLING A RACK RECEIVER KIT, SKIP TO STEP 28.
IF INSTALLING A TOW KIT, CONTINUE TO STEP 12.

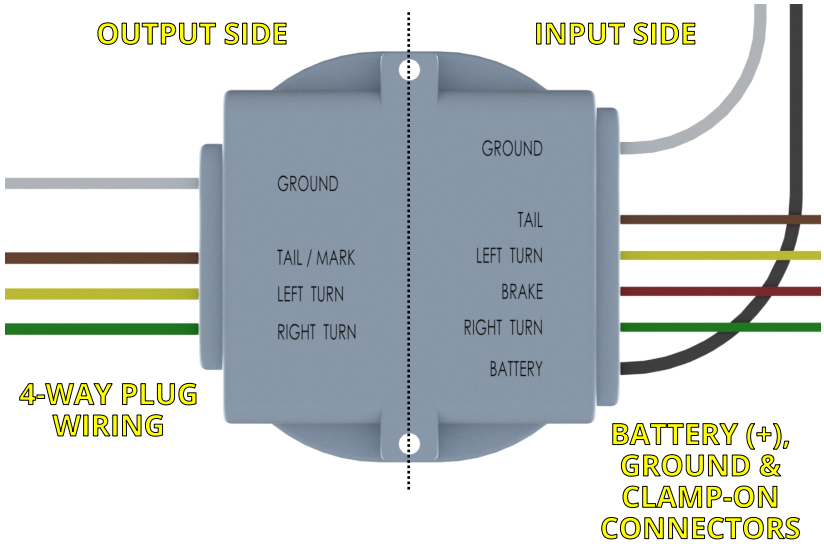
INSTALL PASSIVE WIRING KIT

#	DESCRIPTION	QTY
1	4-WAY CONNECTOR HARNESS	1
2	CONTROL MODULE	1
3	4-WAY CONNECTOR COVER	1
4	CABLE TIE – 8”	8
5	CABLE TIE – 14”	2
6	MAGNETIC CABLE HOLDER	1
7	M8 SERRATED FLANGE NUT	1
8	FORK TERMINAL	1
9	ADHESIVE FOAM STRIP	2
10	BUTT CONNECTOR (BLUE)	1
11	BUTT CONNECTOR (RED)	4
12	CLAMP-ON CONNECTORS	4
13	POWER WIRE	1

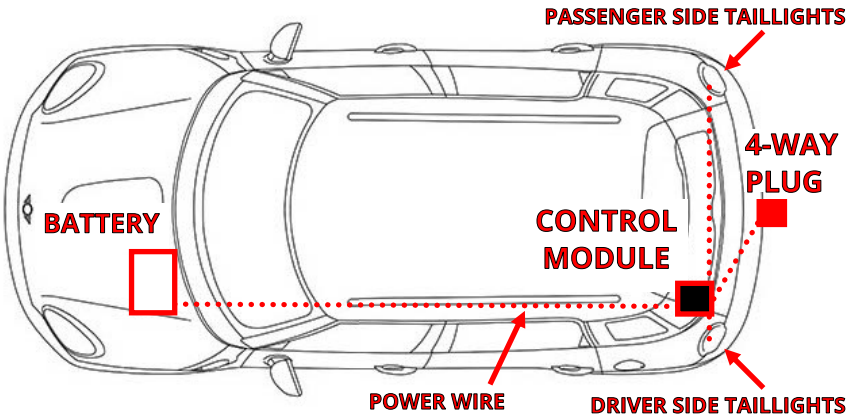


PASSIVE WIRING KIT BOX

12. Locate the wiring kit box. Review the contents of the box against the list above to check for missing components. The passive wiring kit uses a control module to manage the functions of the trailer lighting. The module has an **“input”** side that receives power from the vehicle’s battery and signals from the vehicle’s taillights. The **“output”** side of the module delivers this information to the 4-way plug. The control module is connected to the vehicle’s battery and taillight wiring as outlined in the next steps.



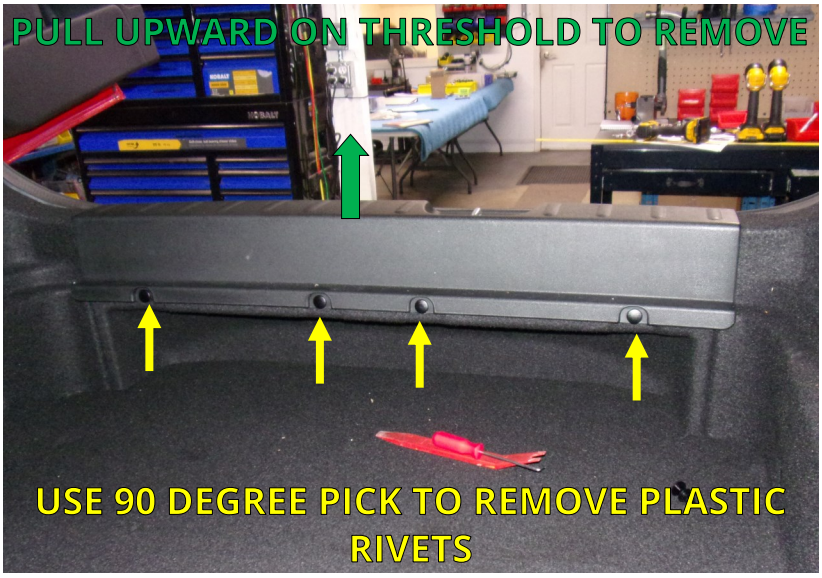
NOTICE: Do not allow electrical system to become disconnected from power or ground. Doing so may interrupt electrical systems.



INSTALL WIRING KIT CONTINUED

90 DEGREE PICK

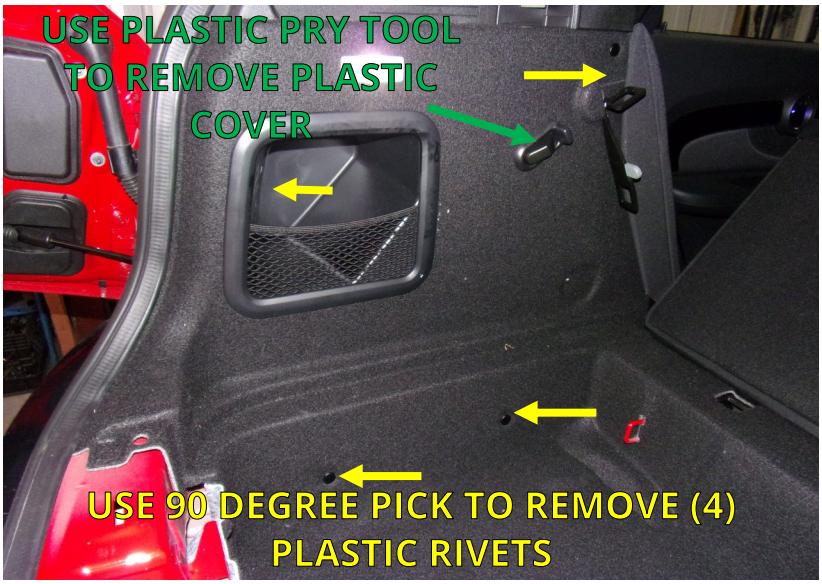
13. Along the rear wall of the vehicle cargo area, locate and remove (4) plastic rivets with a 90 degree pick. Pull upward on the threshold to remove.



PLASTIC PRY TOOLS

90 DEGREE PICK

14. Locate and remove (4) plastic rivets on each side of the cargo area with a 90 degree pick. Use plastic pry tool to pry off the plastic cover.

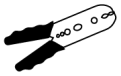


15. Dislodge both rear side panels to gain access to taillight wiring.

INSTALL WIRING KIT CONTINUED

DRILL & 3/8" BIT

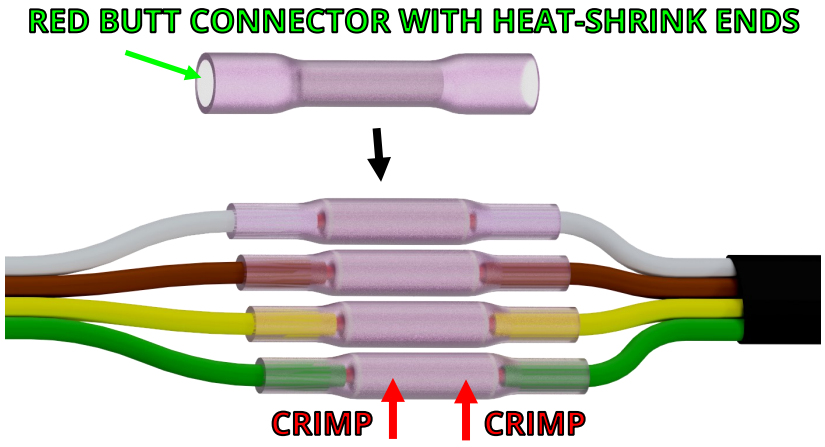
16. Locate and remove the indicated grommet from the driver side of vehicle, above the tire. Drill a 3/8" hole in grommet. Route the 4-way plug output wires and the power wire through the grommet from outside of the vehicle to the inside of the vehicle.



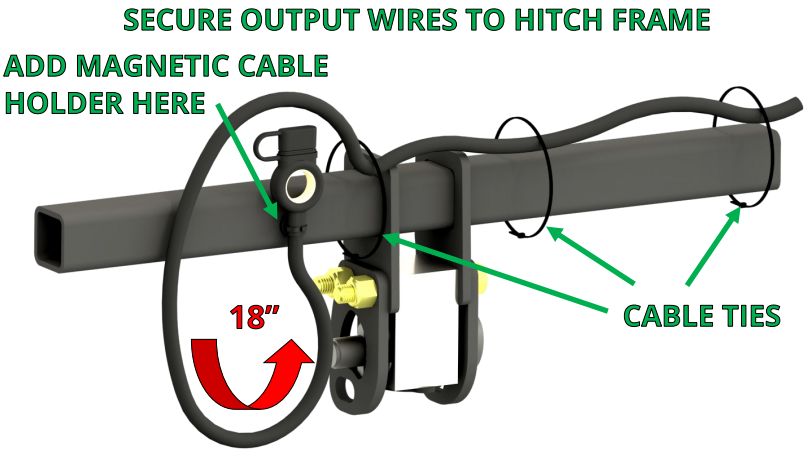
STRIPPER/ CRIMPING TOOL

17. Locate the tail of the 4-way connector wire and the output side wires of the control module. Attach each similar color wire to each other using a red butt connector and crimping tool.

NOTICE (OPTIONAL): The butt connectors are heat shrink connectors. Apply heat to waterproof the connectors after crimping.



18. Secure harness to Stealth hitch frame with cable ties. Maintain an 18" loop from the cable tie to the 4-way plug. Add the magnetic cable holder and secure to the harness close to the 4-way plug, with a cable tie.



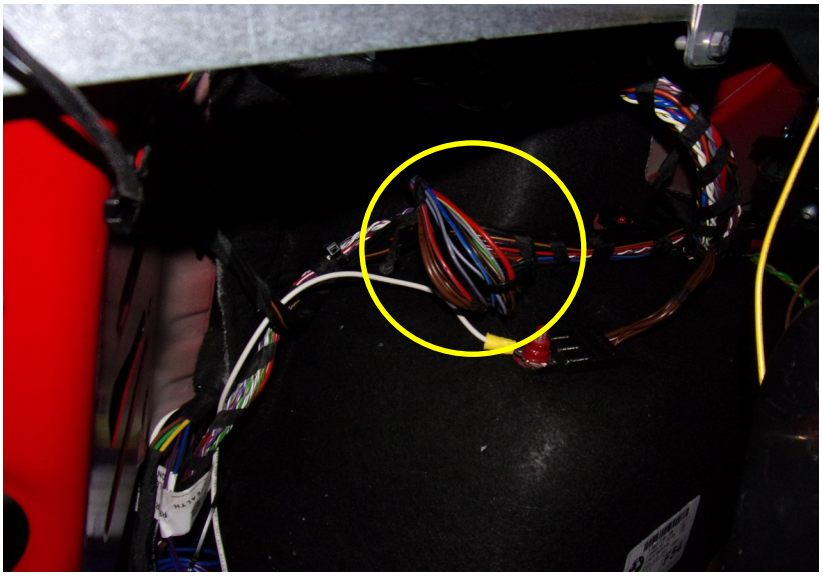
INSTALL WIRING KIT CONTINUED

PLIERS

MULTIMETER

19. The wires on the input side of the module need to be attached to the vehicle wiring. Inside the driver side cargo compartment of the vehicle locate the indicated part of the vehicle wiring harness. Use clamp-on connectors to connect to the brown, red, and yellow input wires. (As shown in reference table below.)

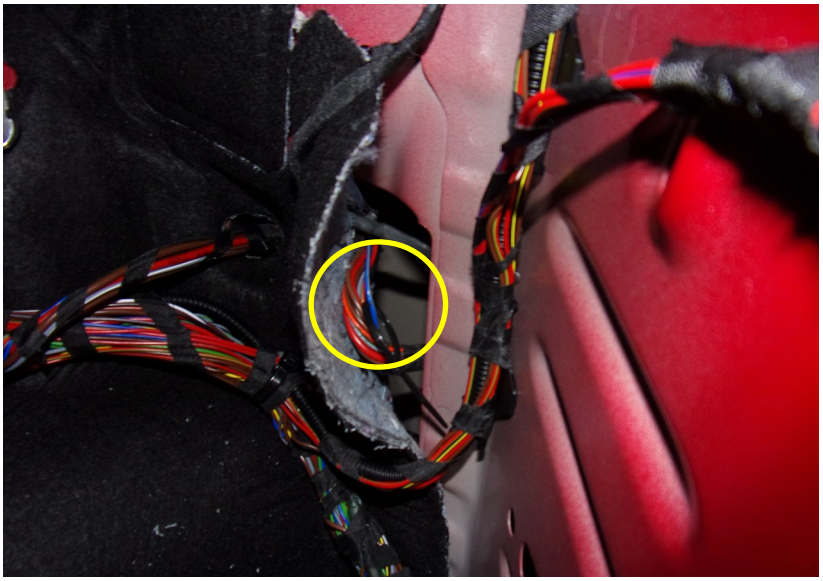
NOTE: *Vehicles may have different wire colors than those shown. Verify circuits (wire colors) with multimeter.*



PLIERS

MULTIMETER

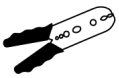
20. Route the green wire to the passenger side compartment. Use a clamp-on connector to connect to green input wire to the indicated part of the vehicle wiring harness. (As shown in reference table below.)



CLAMP-ON CONNECTOR COLOR REFERENCE TABLE					
SIGNAL INPUT WIRES			POWER & GROUND WIRES		
FUNCTION	HARNESS	VEHICLE			
LEFT TURN	YELLOW	BLUE/GRAY or BLACK/WHITE	12V+ (POWER)	BLACK	BATTERY (+)
RIGHT TURN	GREEN	BLUE/GRAY or BLACK/WHITE	GROUND	WHITE	GROUND STUD (-)
MARKER	BROWN	GREY/PURPLE			
BRAKE	RED	BLACK/YELLOW			

NOTE: If two colors are listed, the first color is the dominant color.

INSTALL WIRING KIT CONTINUED

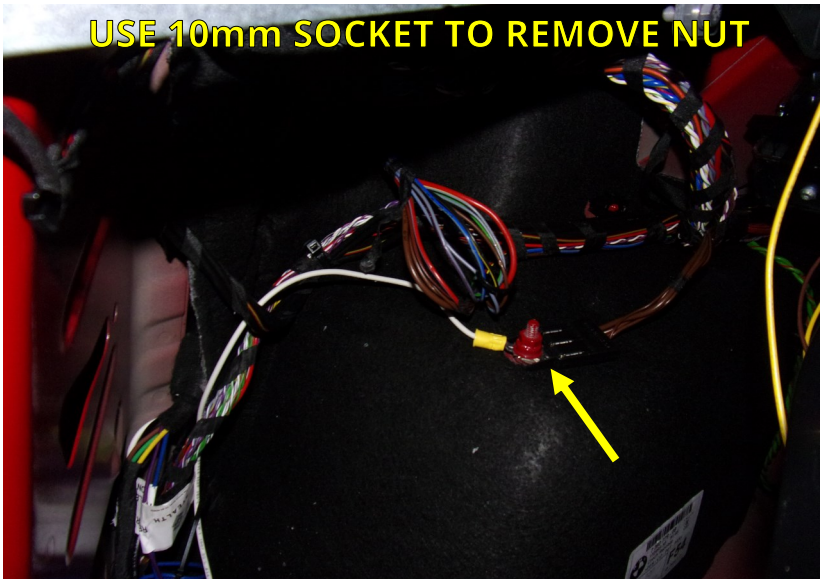


STRIPPER/ CRIMPING TOOL

10mm SOCKET

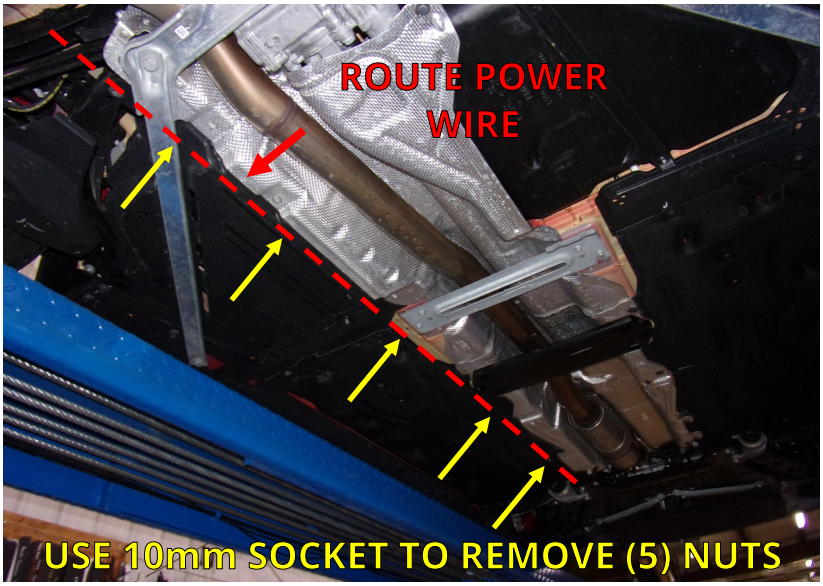
21. Locate the ground stud inside the driver side cargo compartment. Trim the white ground wire so it will reach the stud without excess wire. Crimp the supplied fork terminal to the ground wire with a crimping tool. Loosen the ground stud and secure the fork to the stud.

NOTICE: Loosen ground stud just enough to install fork terminal, so vehicle wiring does not lose ground.



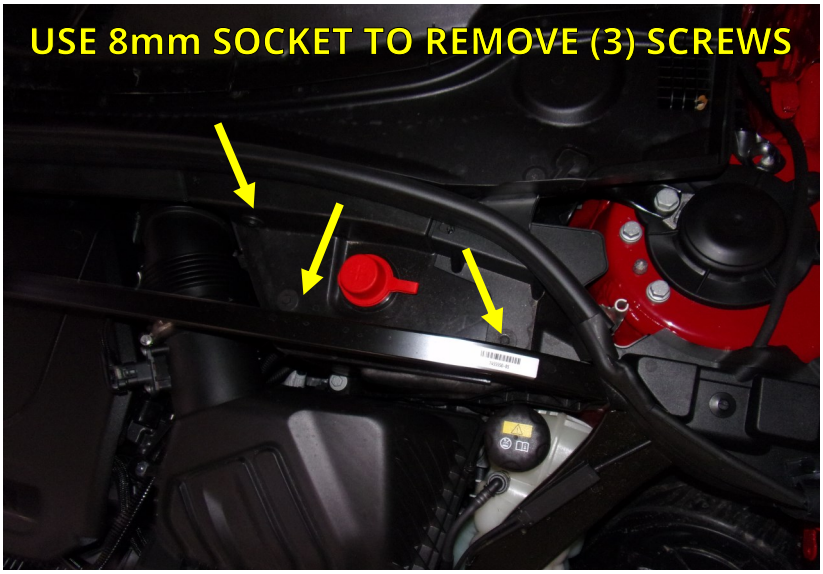
10mm SOCKET

22. The power wire will need to be routed to the engine compartment where it will connect to the battery. Route the wire from the grommet to the gravel guard on the driver side undercarriage. Loosen the (5) nuts holding the gravel guard to allow routing through it. Then pass the wire up into the engine compartment and over to the battery. Replace nuts when wire has been passed through undercarriage.

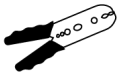


8mm SOCKET

23. Inside the engine compartment, locate and remove (3) screws from the battery cover. Remove the cover. Run power wire to the rear of firewall, and to the positive side of battery.



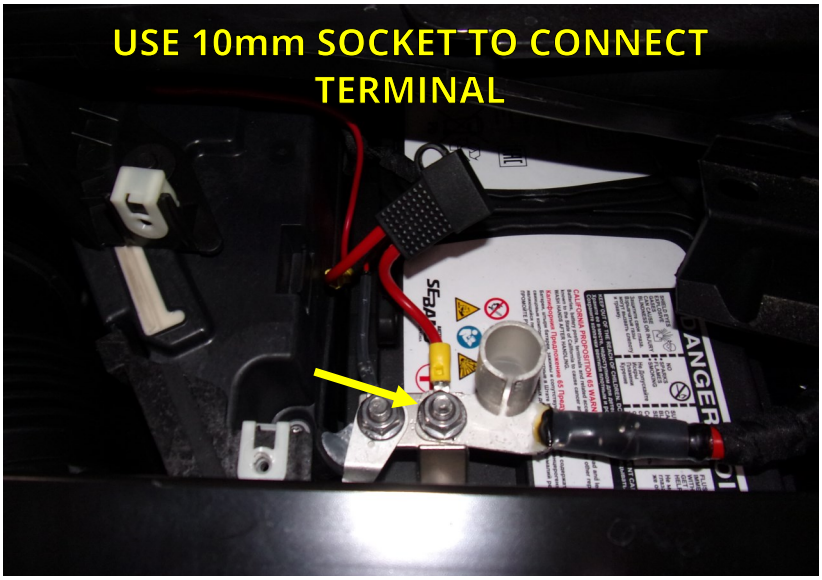
INSTALL WIRING KIT CONTINUED



STRIPPER/ CRIMPING TOOL

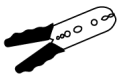
10mm SOCKET

24. Locate the fuse holder supplied in the wiring kit box. Remove the fuse from the fuse holder. Trim the power wire so it will reach the battery without excess wire. Crimp fuse lead to the power wire. Connect fuse ring terminal to the positive battery terminal (+).



MULTIMETER

25. Determine the amount of power wire needed to reach the control module inside the vehicle. Trim the control module wire to remove excess length. Use the included blue butt connector to crimp the power wire leading from the battery to the control module power wire. Use the provided adhesive foam strips to secure the control module to an inside body panel.



STRIPPER/ CRIMPING TOOL

NOTICE: (OPTIONAL): The butt splice connector is a heat shrink connector. Apply heat to waterproof the connector after crimping.

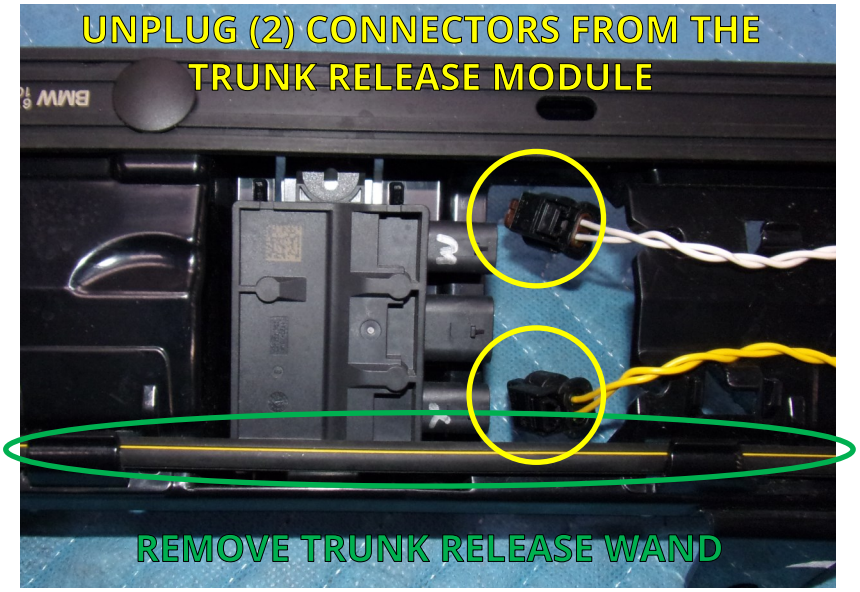
26. Reinstall the 20 Amp fuse in the harness fuse holder located near the battery. Test the 4-way plug using a multimeter or connect the plug to a trailer and verify that the lights and brakes work correctly.

SILICONE

27. Secure all wires and wiring components. Replace the grommet removed earlier on the rear driver side of the vehicle. Use silicone to waterproof the grommet. Use the remaining cable ties to secure wiring so that it is not loose and will not interfere with replacement of the fascia. Wiring should not be visible once the vehicle is reassembled.

MODIFY HANDS-FREE TRUNK RELEASE HOLDER

28. Locate the hands-free trunk release holder removed earlier. Mark and identify each connector, to ensure that the white and yellow plugs can be replaced in the same locations. Unplug (2) connectors to the hands-free truck release module. Remove the hands-free trunk release wand. Dislodge the module from the holder and remove.

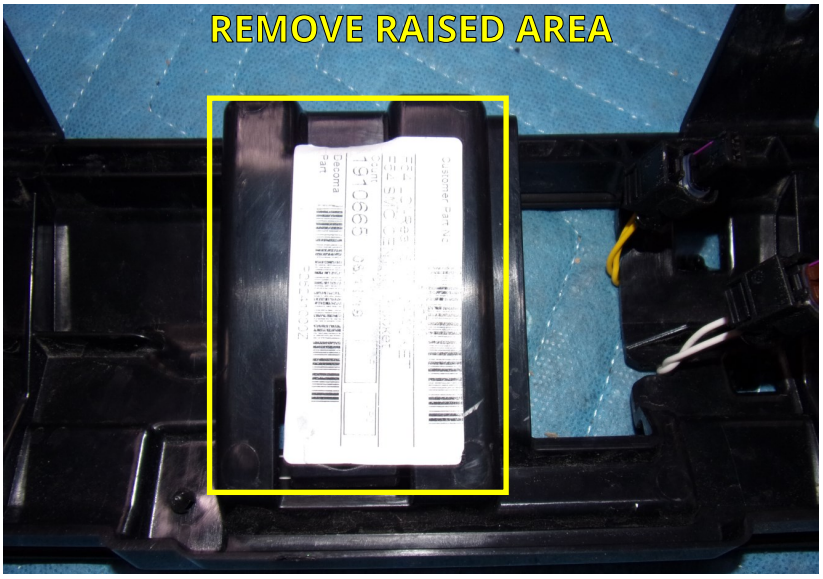


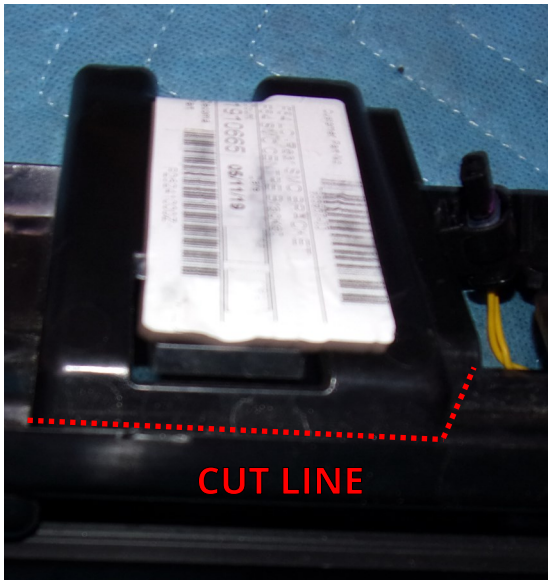
MODIFY HANDS-FREE TRUNK RELEASE HOLDER CONTINUED

DREMEL TOOL

FILE

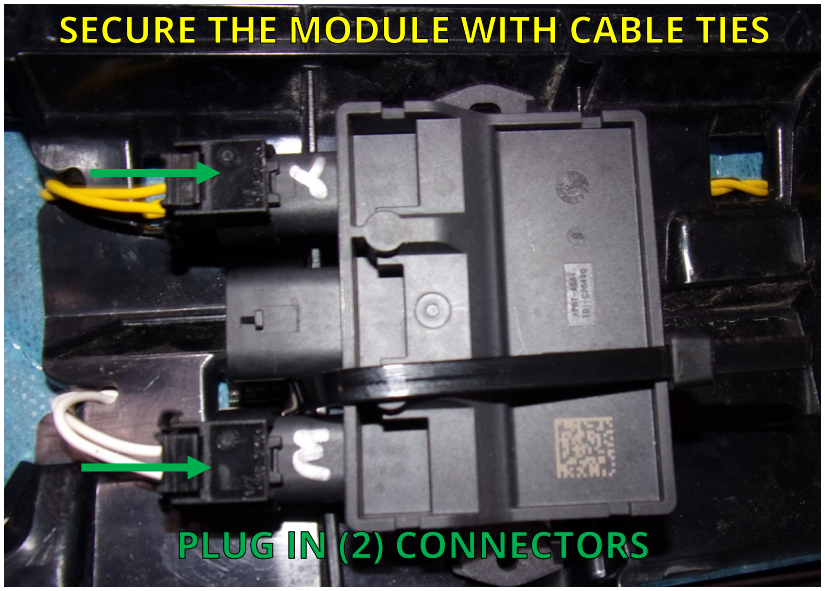
29. Use a Dremel tool or something similar to cut and remove the raised area from the module holder. Smooth the cut edge with a file.





(2) 14” CABLE TIES

30. Guide the yellow and white wires through the gap to the other side of the module holder. Plug the two connectors into the marked plug slots on the module. Secure the module with cable ties to the module holder. Replace the hands-free trunk release wand.

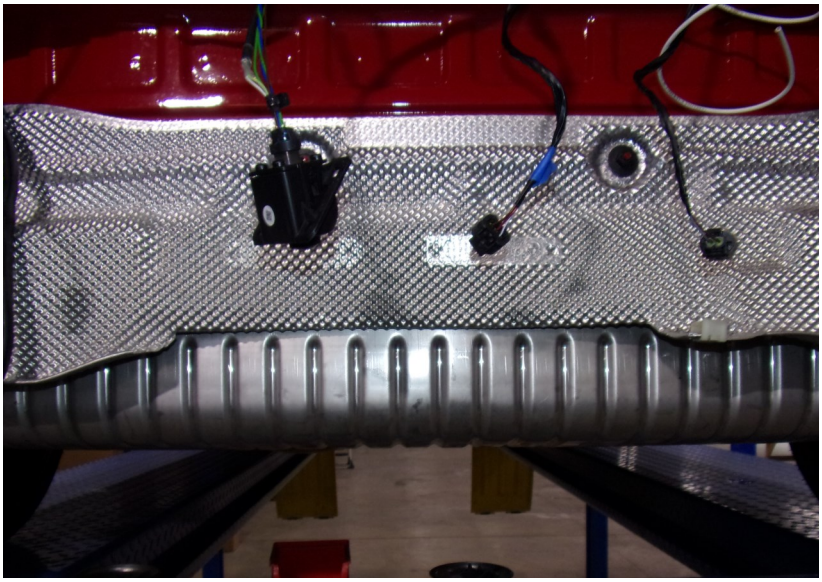


CUT ACCESS TO LATCH BLOCK

TIN SNIPS

31. Trim the heat shield in two places as shown, with tin snips. Fold the cut edges to eliminate sharp, exposed edges. Fold the flap (between cut sides) down and back for clearance. This “fold line” is shown in yellow.

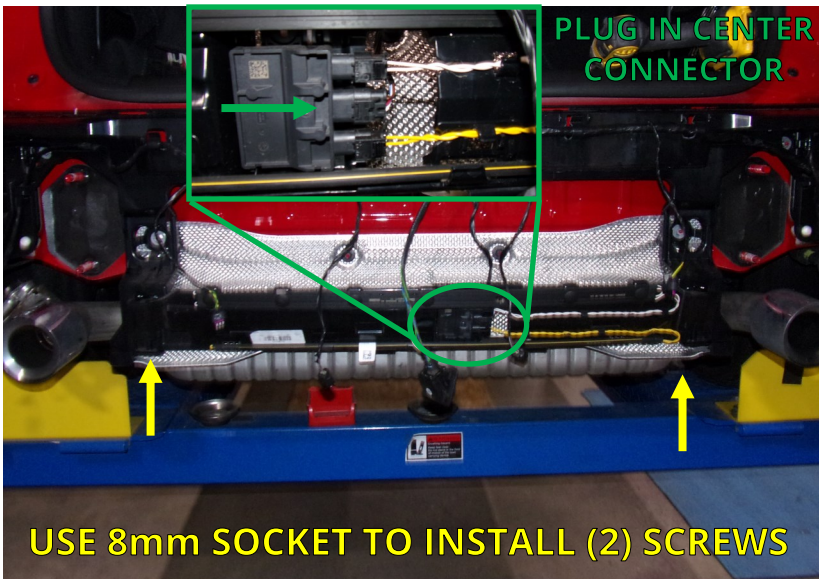
32. Finished look after cutting and bending the heat shield.



REINSTALL VEHICLE COMPONENTS

8mm SOCKET

33. Reattach the hands-free trunk release cable holder using a socket. Plug in the center connector.

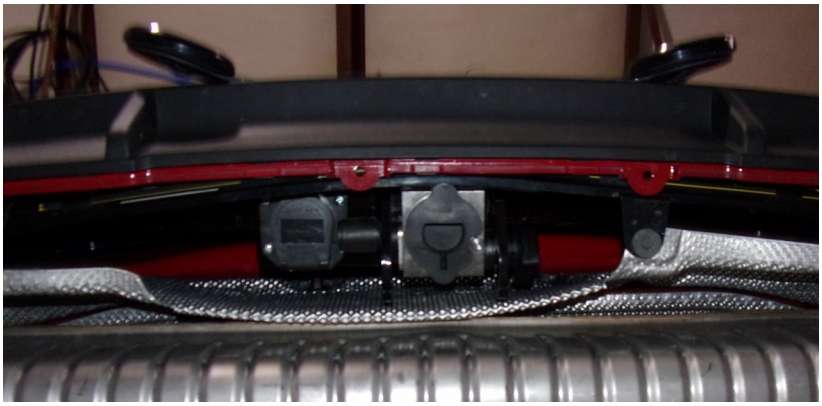


REINSTALL VEHICLE COMPONENTS CONTINUED

34. Reattach and secure the fascia and other vehicle components in reverse order. Refer to Steps 1-7 and 13-15.

NOTICE: Remember to plug in the (6) PDC sensor plugs, (4) light plugs, and (1) camera plug in Step 7 before reinstalling the fascia.

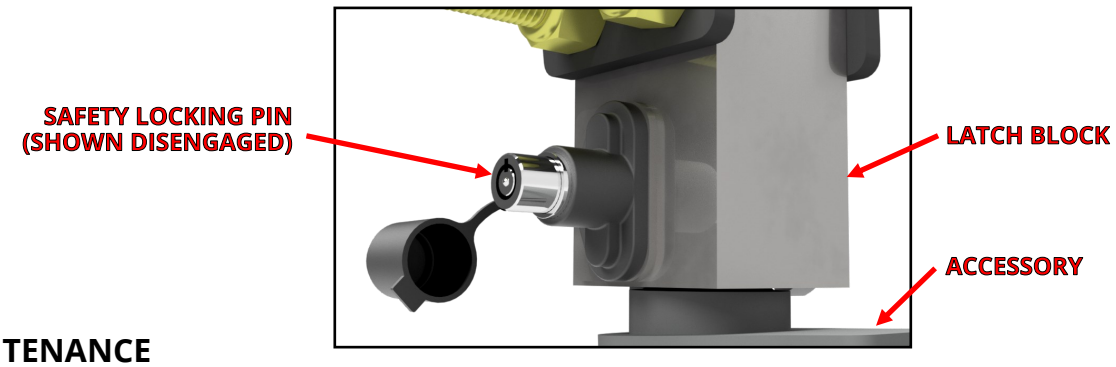
35. Finished look from under the vehicle. Make sure to form the heat shield to make sure the heat shield does not interfere with the latching mechanism handle.



FINAL VEHICLE EXAMINATION

36. Examine the body panels to ensure that they are in a pre-installation condition. Test the electronic functions of the vehicle. Correct any inconsistencies.
37. Ensure that hitch components work properly.

- ***Verify that the lock works correctly.*** Push in the safety lock on the latch block then unlock with key. The lock should slide back out with the key when unlocked.
- ***Verify that each accessory can be installed correctly.*** Use the following steps to install and remove each accessory that will be used with the hitch. *(Rack Receiver and Ball Mount if purchased.)*
    1. Prepare latching mechanism. Turn handle clockwise if needed.
    2. Firmly insert "post" of accessory into latch block until handle releases indicating that the accessory is latched.
    3. Push in the safety locking pin until it fully engages. The locking pin prevents the handle from turning when pushed in, and confirms that the block is securely latched onto the accessory. The safety locking pin will not depress if the accessory is not fully latched.
    4. Use key to release safety locking pin.
    5. While holding on to the accessory, rotate handle clockwise to release and remove the accessory.
- ***Verify that no part of the accessories come into contact with the body of the vehicle***.



PRODUCT USE AND MAINTENANCE

NOTICE: ***If the hitch is being installed by a professional, the installer is responsible for training the end user in the use and maintenance of the product.***

- **Accessory installation procedure:**
    1. Prepare latching mechanism. Turn handle clockwise if needed.
    2. Firmly insert "post" of accessory into latch block until handle spins counter-clockwise indicating that the accessory is latched.
    3. Always depress the safety locking pin and check that it has fully engaged.
- ***Never use any accessory with the safety lock disengaged.*** Until the safety locking pin is engaged, the handle is able to turn. A fully engaged safety locking pin is confirmation that the accessory is properly latched into the latch block.
- ***Never use the rack receiver for towing.*** The rack receiver accessory is only to be used with payload carrying products, such as bike racks or luggage racks.
- ***Before each use, give the post of the accessory a light coating of lithium based grease.***
- ***Before each use, inspect the hitch to ensure that all bolted connections are secure and that no cracks or damage are present.*** Do not tow with the hitch if cracks or damage outside of normal wear is found.
- ***Remove the Stealth accessories from the latch block after each use.*** Do not leave accessories plugged in for extended periods of time.