



HITCH INSTALLATION INSTRUCTIONS

MAKE:
VOLVO

YEARS:
2019 - 2024
2019 - 2024
2024

MODEL/TRIM:
V60
V60 Cross Country
V60 Recharge

www.stealthhitches.com 833•694•4824

RACK RECEIVER KIT#: **SHR33002**

COMPATIBLE WITH TOW KIT: **SHT25002**



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

UNDER VEHICLE TRIMMING:

HEAT SHIELD: **NO**
 FASCIA: **YES**
 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) 1/4" NYLON
SCREWS



(2) 1/4" NYLON
NUTS



2" RACK
RECEIVER



(4) 8" CABLE
TIES



(6) M10 SERRATED
FLANGE NUTS

ADDITIONAL PARTS FOR TOW KIT:



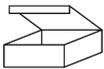
BALL MOUNT
7" RISE, SHORT



CHAIN HOOKS



2" BALL



PASSIVE WIRING
KIT BOX

TOOLS REQUIRED:



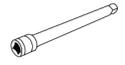
15/16" OPEN
END WRENCH



10mm, 15mm
& 15/16"
SOCKETS



TORQUE
WRENCH



SOCKET
EXTENSION



RATCHET



SAFETY GLASSES



FLASHLIGHT



T25 TORX



PLASTIC
PRY TOOLS



90 DEGREE
PICK



SIDE
CUTTERS



DRILL &
5/16" BIT



DREMEL TOOL



FILE



FLATHEAD
SCREWDRIVER

ADDITIONAL TOOLS FOR TOW KIT:



STRIPPER/
CRIMPING
TOOL



MULTIMETER



PLIERS



PHILLIPS HEAD
SCREWDRIVER



SILICONE



8mm &
13mm
SOCKETS



3/8" BIT

<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



90 DEGREE PICK

1. Open cargo area door. Remove (2) push pin rivets in the bottom left and right corners by pushing the center of the rivet.



T25 TORX

2. Inside the rear wheel well, behind the tire, remove (4) screws (yellow arrows). Move the wheel well liner toward tire to gain access to (1) screw (red arrow). Remove screw with a Torx. Repeat on the other side of the vehicle.



T25 TORX

3. Underneath the rear of the vehicle, remove (4) screws holding the fascia.



GAIN ACCESS TO MOUNTING AREA CONTINUED



PLASTIC
PRY TOOLS

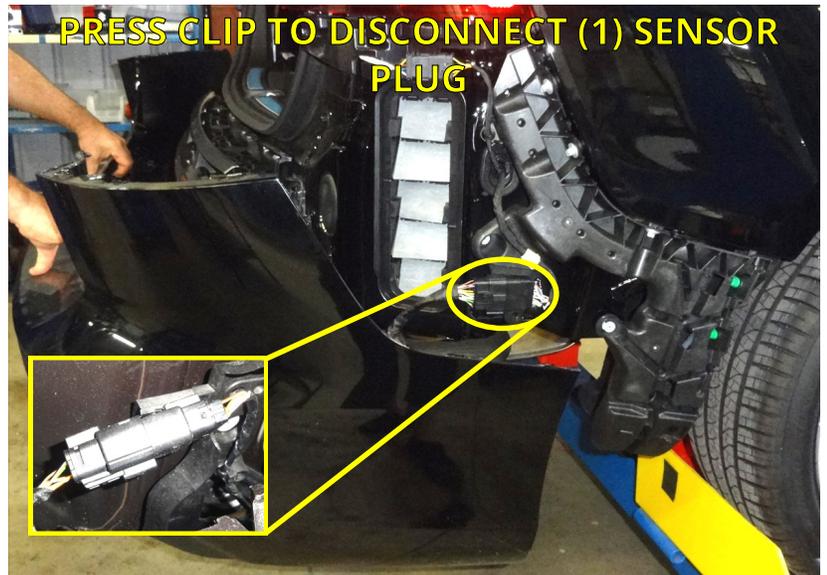
4. The rear fascia is clipped to the vehicle body above and behind the wheel wells. Pull outward on the top front of the rear fascia to disconnect clips. Continue to pull outward on the fascia until all the clips are released. Repeat on other side of vehicle.

NOTICE: The fascia is connected to the vehicle by an electrical harness. Keep the fascia close to the vehicle until disconnected.



5. While holding the fascia close to the vehicle, unclip and disconnect (1) electrical sensor plug.

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

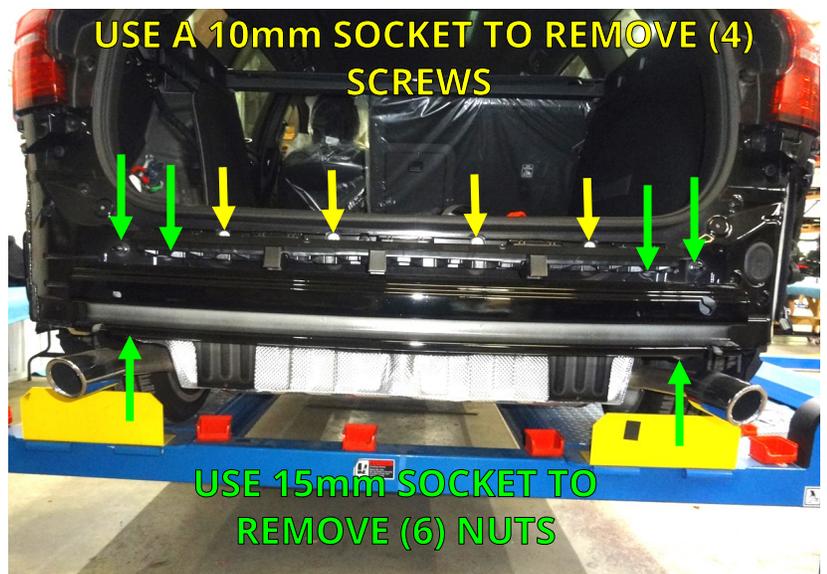


10mm
SOCKET



15mm
SOCKET

6. Remove the fascia support bracket by removing the (4) indicated screws (green arrows).
7. Remove (6) nuts from the factory reinforcement beam (yellow arrows). **Save** the factory reinforcement beam for reinstallation. Discard factory nuts.

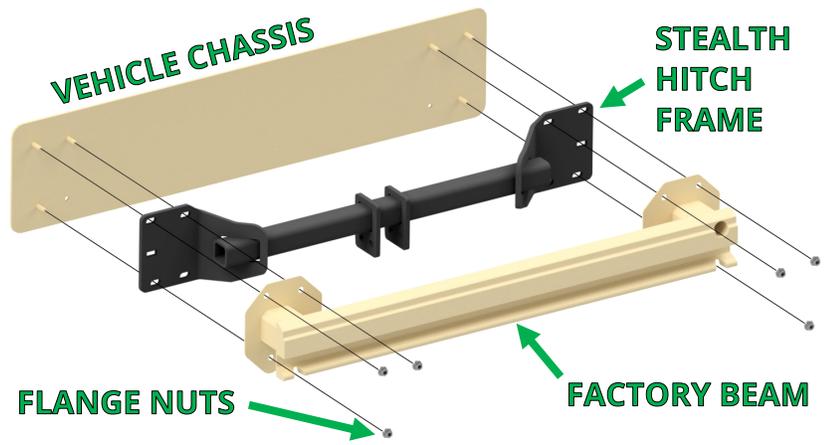


INSTALL STEALTH HITCH FRAME



15mm
SOCKET

8. Mount the Stealth hitch frame onto the vehicle studs and place the factory reinforcement beam on top. Attach the frame and beam to the vehicle with (6) supplied M10 serrated flange nuts. Torque each nut to 45 ft.-lbs.



USE 15mm SOCKET TO INSTALL (6) NUTS



10mm
SOCKET

9. Reinstall the fascia support bracket with (4) screws using a socket.



MOUNT LATCH BLOCK



15/16"
SOCKET



15/16" OPEN
END WRENCH



TORQUE
WRENCH

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

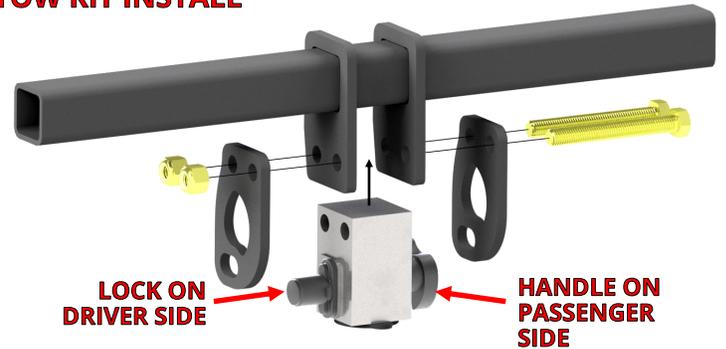
- **Rack Receiver Kit:** Install the latch block with (2) 5/8"-11 x 5" bolts and (2) 5/8" nylock nuts. Tighten each bolt to 150 ft.-lbs.
- **Tow Kit:** Install the latch block and (2) chain hooks with (2) 5/8"-11 x 5" bolts and (2) 5/8" nylock nuts. Tighten each bolt to 150 ft.-lbs.

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

RACK RECEIVER KIT INSTALL



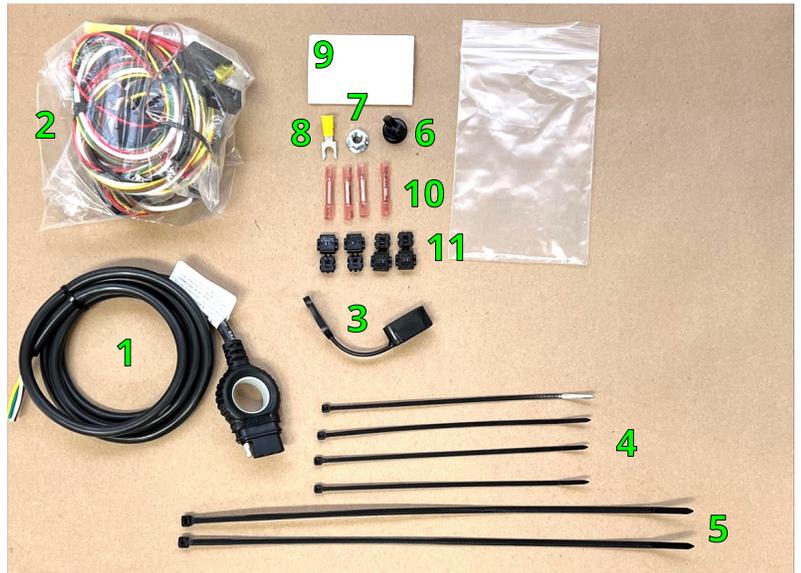
TOW KIT INSTALL



IF INSTALLING A RACK RECEIVER KIT, SKIP TO STEP 29.
IF INSTALLING A TOW KIT, CONTINUE TO STEP 11.

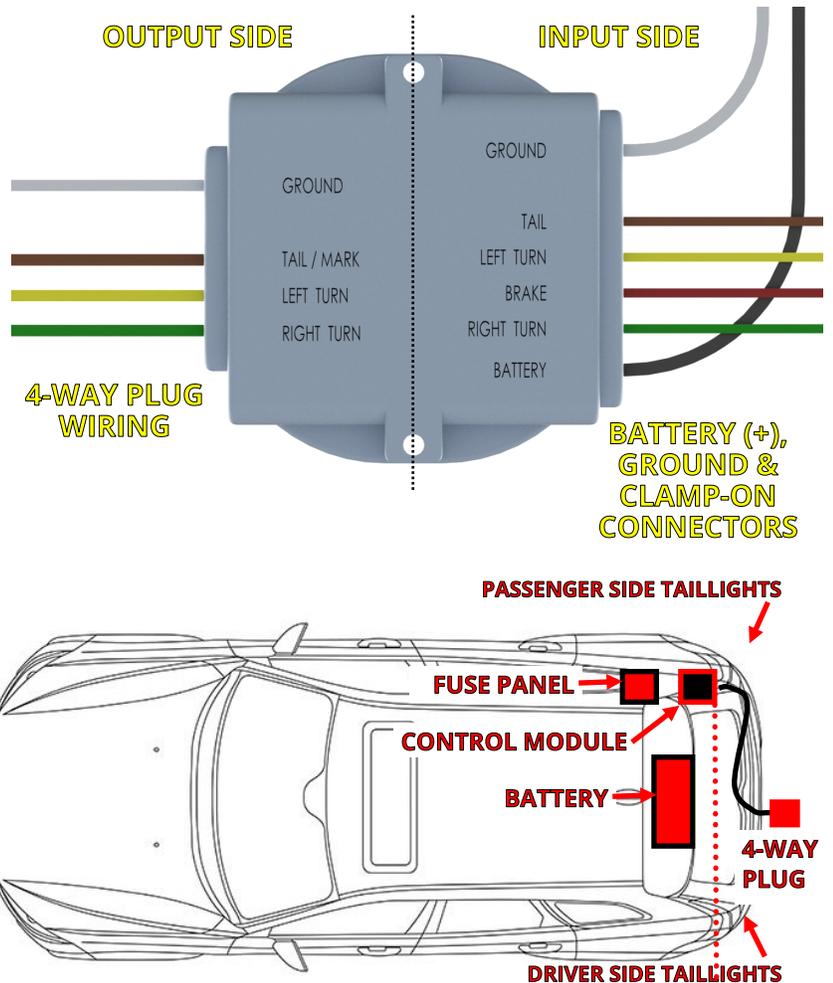
INSTALL PASSIVE WIRING KIT

#	DESCRIPTION	QTY
1	4-WAY CONNECTOR HARNESS	1
2	CONTROL MODULE	1
3	4-WAY CONNECTOR COVER	1
4	CABLE TIE - 8"	4
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 (RED)	4
11	CLAMP-ON CONNECTORS	4



11. 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



10mm
SOCKET

12. Locate the rear passenger side cargo anchor. Remove the cargo anchor screw with a socket.



PLASTIC
PRY TOOLS

13. Release clips on the passenger rear seat belt cover by prying upward.



8mm
SOCKET

14. Use a socket to remove (1) screw from the plastic seat belt holder. Pull up on the plastic holder to release (3) clips. Remove plastic seat belt holder.

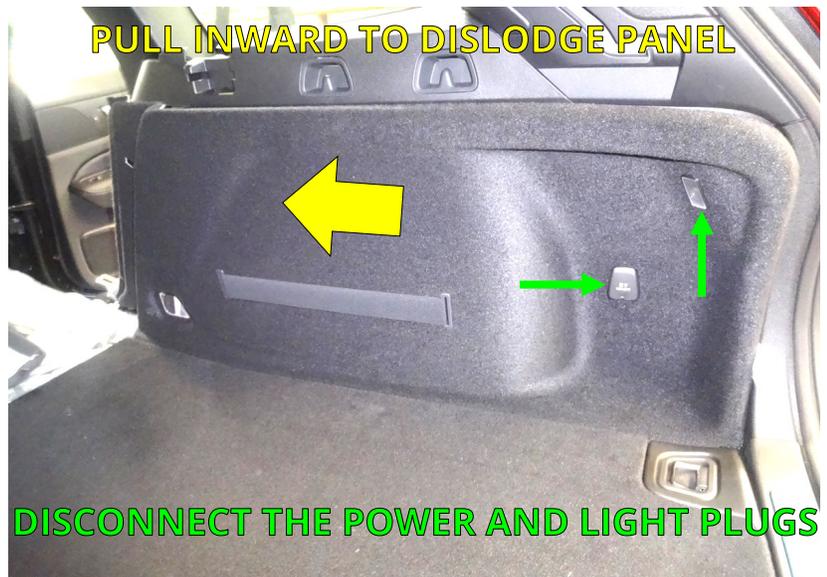


INSTALL WIRING KIT CONTINUED

15. Release the latch, then remove leather trim piece from passenger side.



16. Pull inward to dislodge the passenger side panel. On the inside of the panel locate and disconnect the power plug and the light plug. Remove the panel.

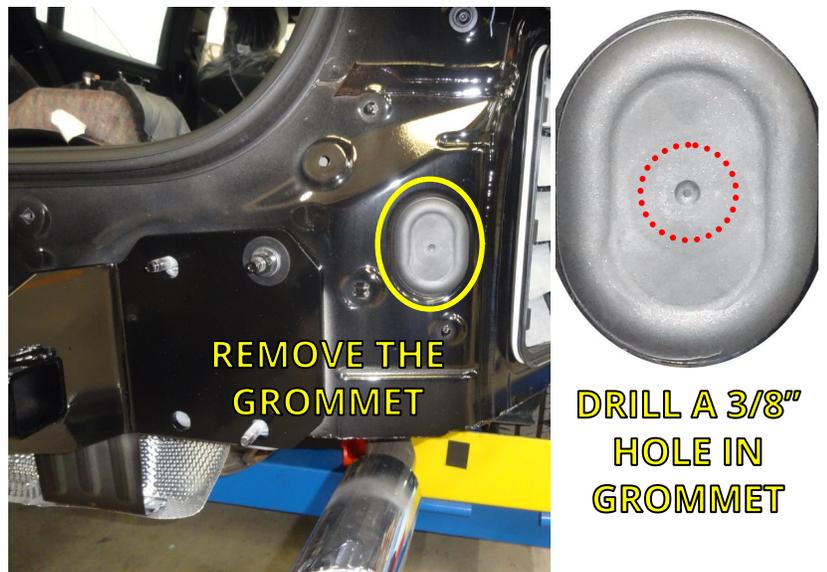


17. Retrieve the control module from the wiring kit. Put the control module in the passenger side cargo area.



DRILL &
3/8" BIT

18. Locate rubber grommet on the passenger side of the vehicle beside the Stealth hitch frame. Remove the grommet. Drill a 3/8" hole in the grommet. Route the control module output wires from outside the vehicle to the inside through the hole where the grommet was. Pass the grommet onto the output wires.



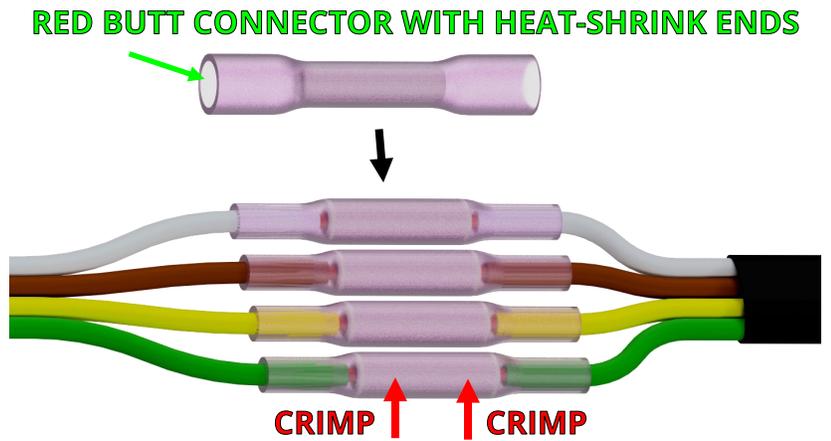
INSTALL WIRING KIT CONTINUED



STRIPPER/
CRIMPING
TOOL

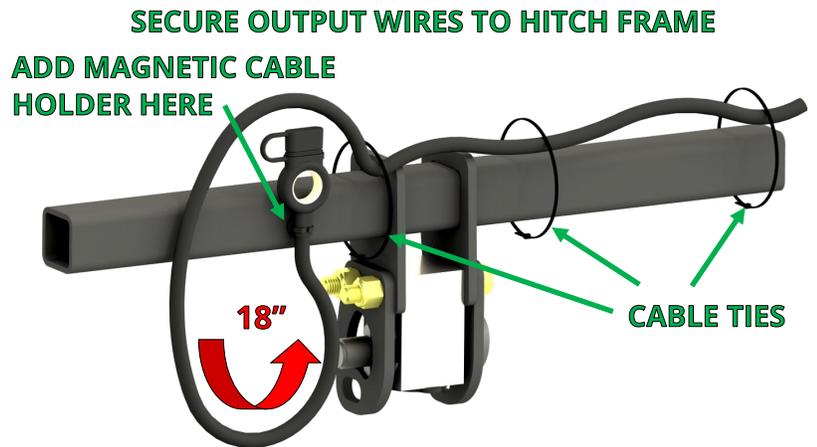
19. Locate the tail of the 4-way connector wire and the output side wires of the control module. Attach each similar color wire to each other using a red butt connector and crimping tool.

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



MATCH THE WIRE COLORS AND CRIMP EACH WIRE INTO THE SIDE OF EACH BUTT CONNECTOR. APPLY HEAT TO WATERPROOF AFTER CRIMPING

20. 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.



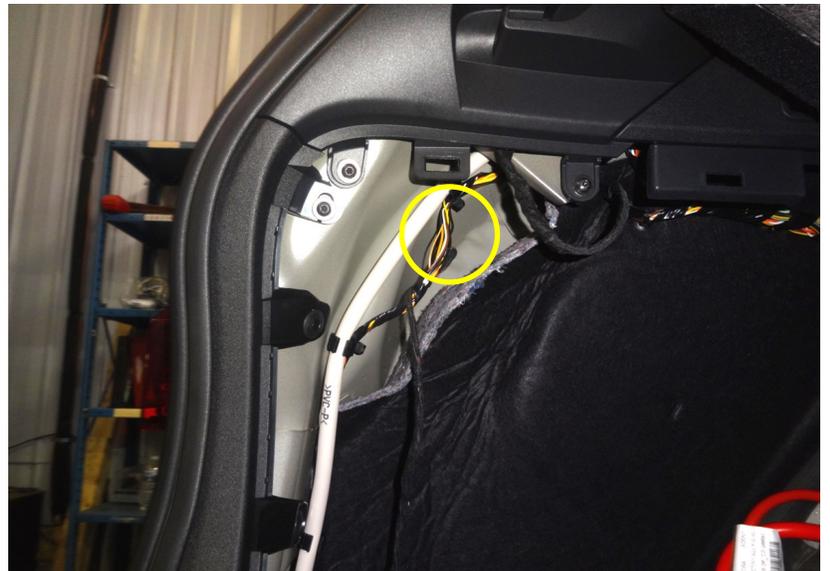
PLIERS



MULTIMETER

21. The wires on the input side of the wiring module need to be attached to the vehicle wiring. Route the yellow input wire to the driver side of the vehicle using an existing wire harness as a guide. Use a clamp-on connector to connect the yellow wire to the left turn signal wire, behind taillight. (See reference table on the next page.)

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



INSTALL WIRING KIT CONTINUED



PLIERS



MULTIMETER

22. Inside the passenger side compartment, locate the indicated wire harness. Use clamp-on connectors to connect the green, red, and brown input wires to wires behind taillight. (See reference table below.)



CLAMP-ON CONNECTOR COLOR REFERENCE TABLE

SIGNAL INPUT WIRES			POWER & GROUND WIRES		
FUNCTION	HARNESS	VEHICLE			
LEFT TURN	YELLOW	YELLOW/PURPLE	12V+ (POWER)	BLACK	BATTERY (+)
RIGHT TURN	GREEN	YELLOW/PURPLE	GROUND	WHITE	GROUND STUD
MARKER	BROWN	BROWN			
BRAKE	RED	YELLOW			

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



10mm
SOCKET



STRIPPER/
CRIMPING
TOOL

23. Locate the ground stud in the rear passenger side cargo area. Trim white ground wire so it will reach stud without excess wire. Crimp supplied fork terminal to the ground wire with a crimping tool. Loosen the ground stud and secure the fork to the terminal.

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



USE A 10mm SOCKET TO LOOSEN NUT

INSTALL WIRING KIT CONTINUED



NOTICE: SOME 2023 AND NEWER VEHICLES DO NOT HAVE A BATTERY IN THE TRUNK. IF YOUR VEHICLE'S BATTERY IS IN THE TRUNK CONTINUE TO STEP 24, IF NOT SKIP TO STEP 25



13mm
SOCKET

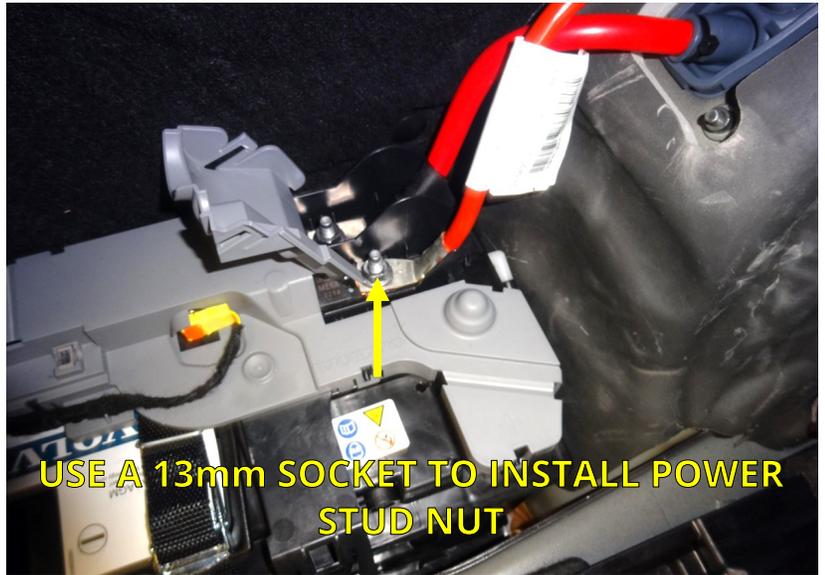


STRIPPER/
CRIMPING
TOOL

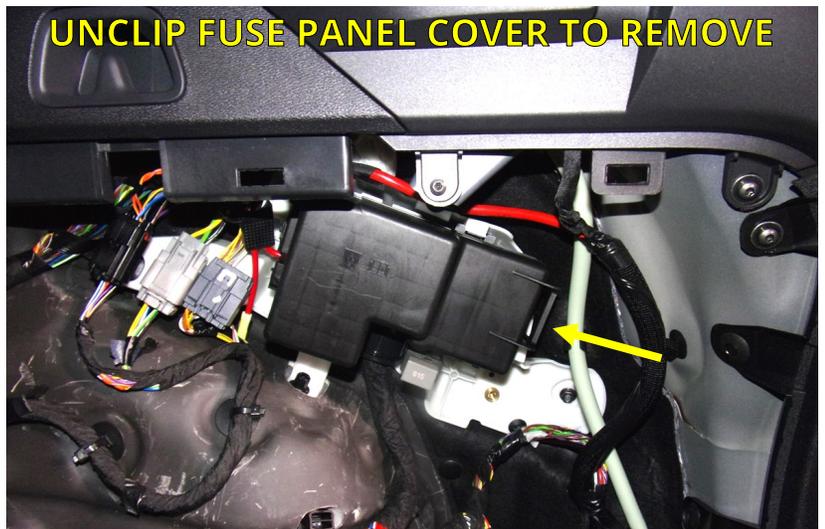
24. Locate the fuse holder supplied in the wiring kit box. Remove the fuse from the fuse holder. Crimp the fuse holder lead to the black power wire. Place the ring terminal on top of the battery power stud. Use provided M8 nut to connect.

NOTE: Do not loosen the battery stud nut, just add M8 nut on top of ring terminal.

SKIP TO STEP 27



25. Route the input side power wire to the passenger side of the cargo area. Locate the fuse box and remove the lid



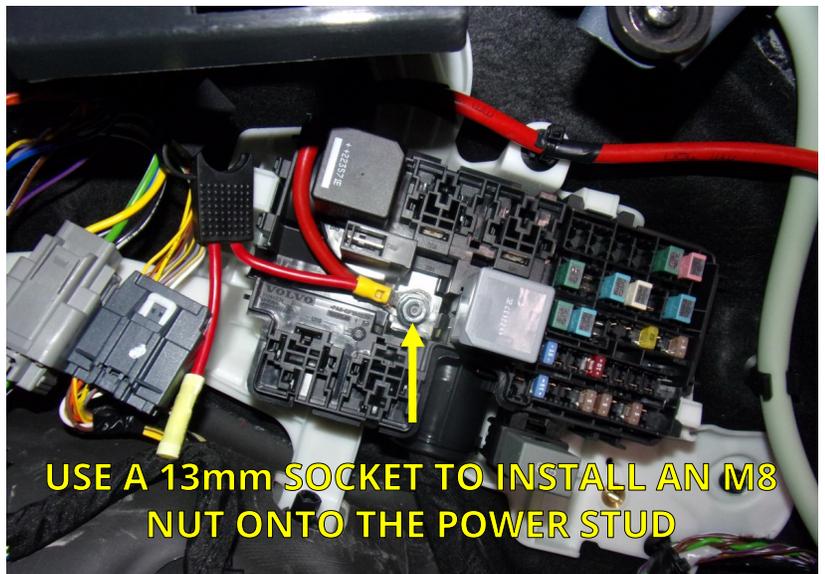
13mm
SOCKET



STRIPPER/
CRIMPING
TOOL

26. Locate the fuse holder supplied in the wiring kit box. Remove the fuse from the fuse holder. Crimp the fuse holder lead to the black power wire. Place the ring terminal on top of the fuse box power stud. Use provided M8 nut to connect.

NOTE: Do not loosen the battery stud nut, just add M8 nut on top of ring terminal.



INSTALL WIRING KIT CONTINUED



MULTIMETER



STRIPPER/
CRIMPING
TOOL



SILICONE

27. 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.

28. Secure all wires and wiring components. 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. Use the provided adhesive foam strips to secure the control module to an inside body panel.



**IF INSTALLING ON A 2023 OR NEWER VOLVO V60 RECHARGE SKIP TO STEP 44
ALL OTHER VEHICLE MODELS CONTINUE WITH STEP 29.**

CUT ACCESS FOR LATCH BLOCK

29. Inside the removed fascia, locate and detach the kick wand holder by sliding it toward the passenger side.



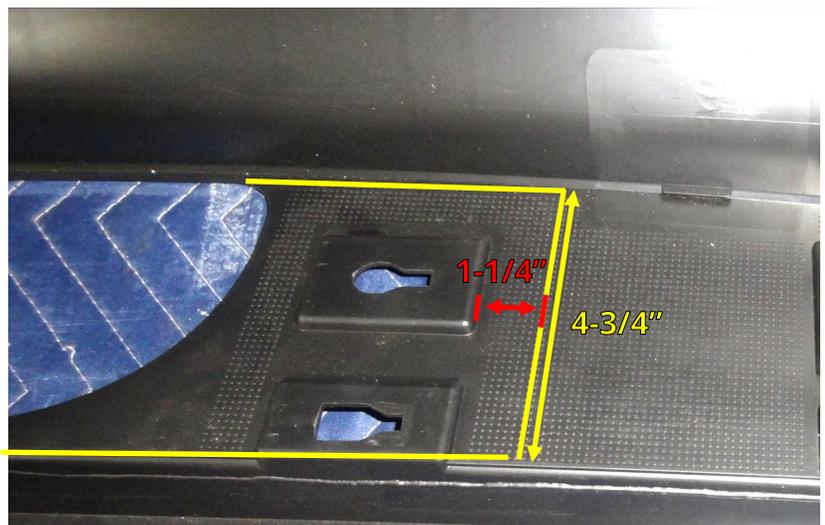
30. Using a Dremel tool trim the bottom of the fascia as shown. Use a file to smooth out the cut.



DREMEL TOOL



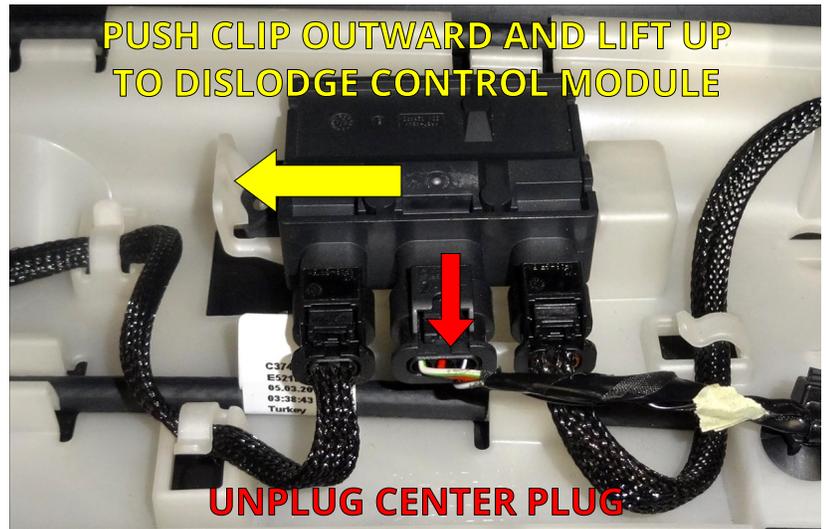
FILE



CUT ACCESS FOR LATCH BLOCK CONTINUED

31. Dislodge the kick wand control module by pushing clip outward and lifting up. Unplug the center plug by pushing clip down and pulling plug outward.

NOTE: The kick wand holder will need to be modified to allow the access to the latch block. The modifications necessary for the Volvo V60 and Volvo V60 Cross Country are different.



FOR VOLVO V60 CROSS COUNTRY, SKIP TO STEP 37.
FOR VOLVO V60, CONTINUE TO STEP 32.

MODIFY V60 KICK WAND HOLDER



DRILL &
5/16" BIT

32. The kick wand holder will be reattached with (2) nylon screws and nuts. Holes will be drilled through the kick wand holder and fascia for these screws. Mark the two spots (A) and (B) using the measurements on photo. Use a 5/16" drill bit to drill two holes through the kick wand holder.

NOTICE: Use caution to only drill through holder. Do not damage antenna or harness.



DRILL &
5/16" BIT

33. Insert (1) supplied nylon screw through the rectangular hole in the fascia, from the underside. Place the kick wand holder on the fascia with the nylon screw through drilled hole "A". Add a nylon nut and hand tighten.

34. Align the kick wand holder on the fascia. Use drilled hole "B" as a guide to drill a 5/16" hole in the fascia. Insert (1) nylon screw through drilled hole (B), from the outside of the fascia. Add a nylon nut and hand tighten.



MODIFY V60 KICK WAND HOLDER CONTINUED



SIDE CUTTERS

35. Reinstall the control module and plug in the center plug that was disconnected.
36. The new location of the kick wand holder is closer to the driver side exhaust. To prevent the harness from touching the exhaust, use a provided 8" cable tie to shorten the harness.

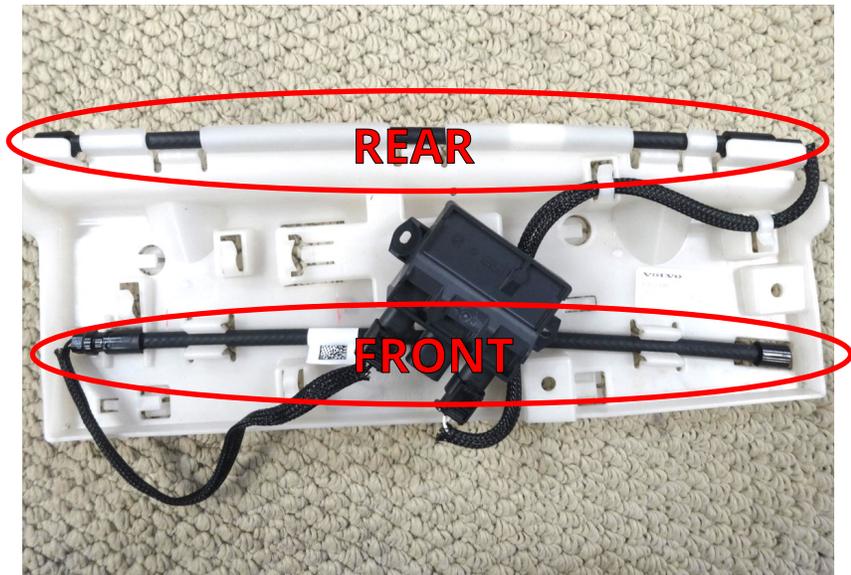


Skip to Step 50 to complete install.



MODIFY V60 CROSS COUNTRY KICK WAND HOLDER

37. Before removing the kick wands from the kick wand holder, mark the two kick wands to ensure that the rear and the front wand are returned to their original placement on the vehicle. Remove both kick wands from the kick wand holder.

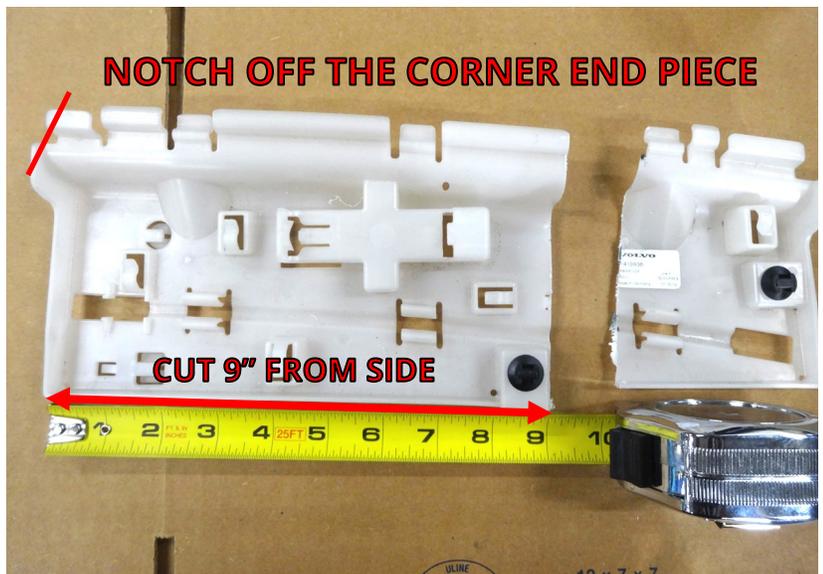


DREMEL TOOL



FILE

38. With all the parts removed from the kick wand holder, make a cut 9" from the side as shown. Notch off the top corner end piece as shown.



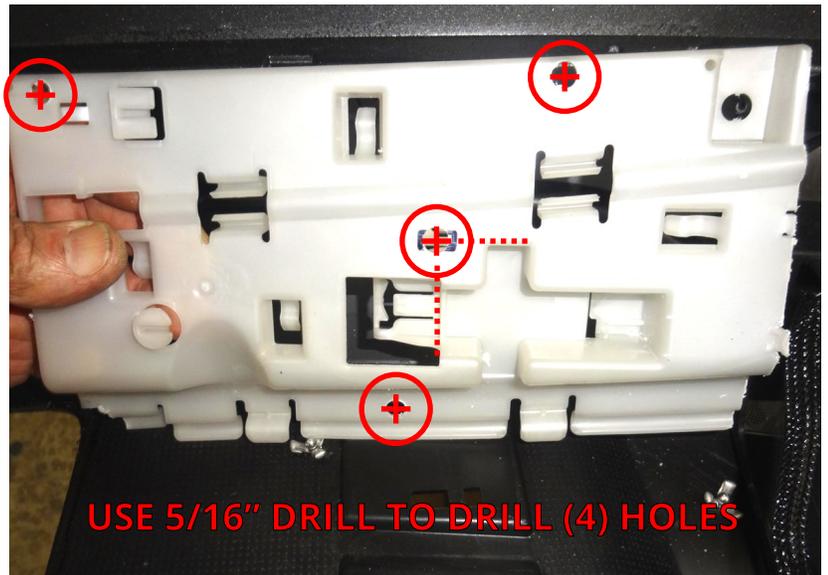
MODIFY V60 CROSS COUNTRY KICK WAND HOLDER CONTINUED



DRILL &
5/16" BIT

39. The kick wand holder will be reattached to the fascia with (1) nylon screw and nut. The kick wands will be attached to the holder with (3) cable ties. Holes will be drilled through the kick wand holder for attachment points. From the back of the kick wand holder use a 5/16" drill bit to drill (4) holes in the indicated locations.

NOTE: The location of the center hole shown in the photo. This will be the hole that attaches the kick wand holder with the fascia.



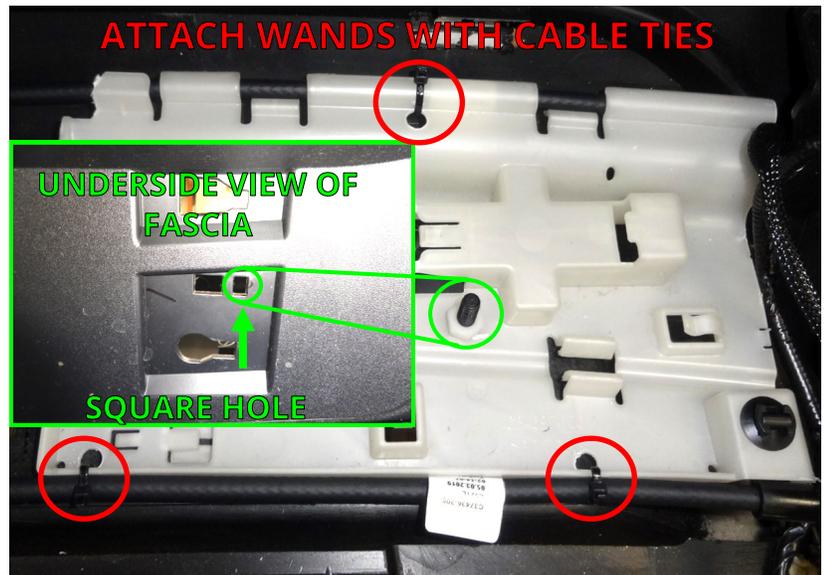
USE 5/16" DRILL TO DRILL (4) HOLES



SIDE
CUTTERS

40. Reinstall the kick wands. Make sure to put the front and rear wand in the correct location. Use cable ties to secure the kick wands to the holder.

41. Insert (1) supplied nylon screw through the square hole in the fascia, from the outside. Place the kick wand holder on the fascia with the nylon screw through center hole. Add a nylon nut and hand tighten.



ATTACH WANDS WITH CABLE TIES

UNDERSIDE VIEW OF
FASCIA

SQUARE HOLE



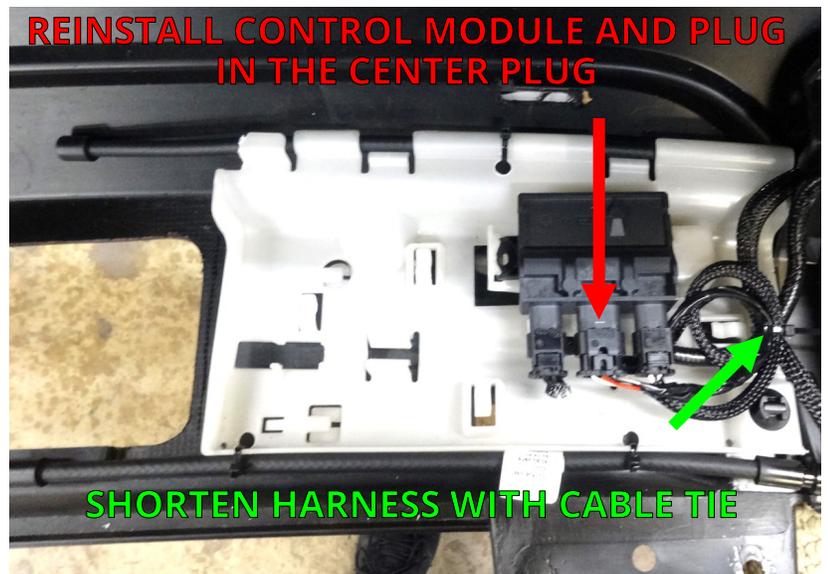
SIDE
CUTTERS

42. Reinstall the control module and plug in the center plug that was disconnected.

43. The new location of the kick wand holder is closer to the driver side exhaust. To prevent the harness from touching the exhaust, use a provided 8" cable tie to shorten the harness.



Skip to Step 50 to complete install.

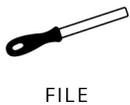
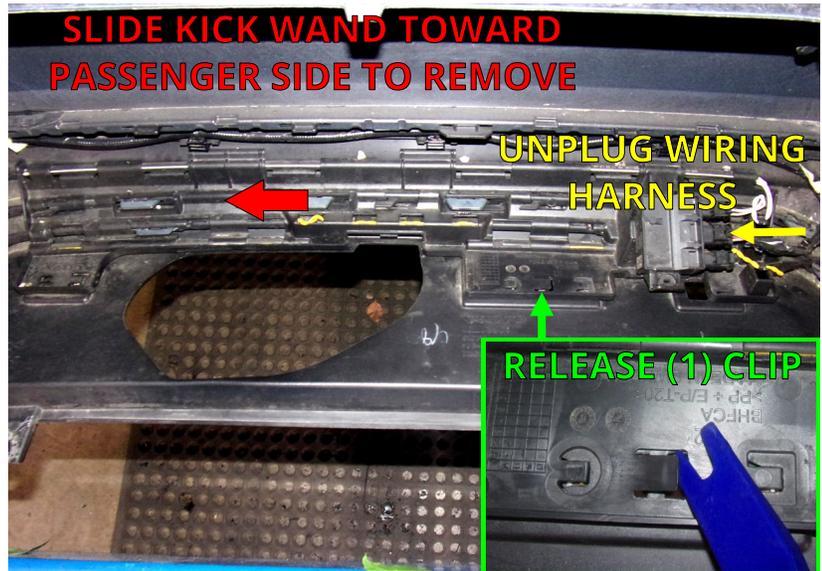


REINSTALL CONTROL MODULE AND PLUG
IN THE CENTER PLUG

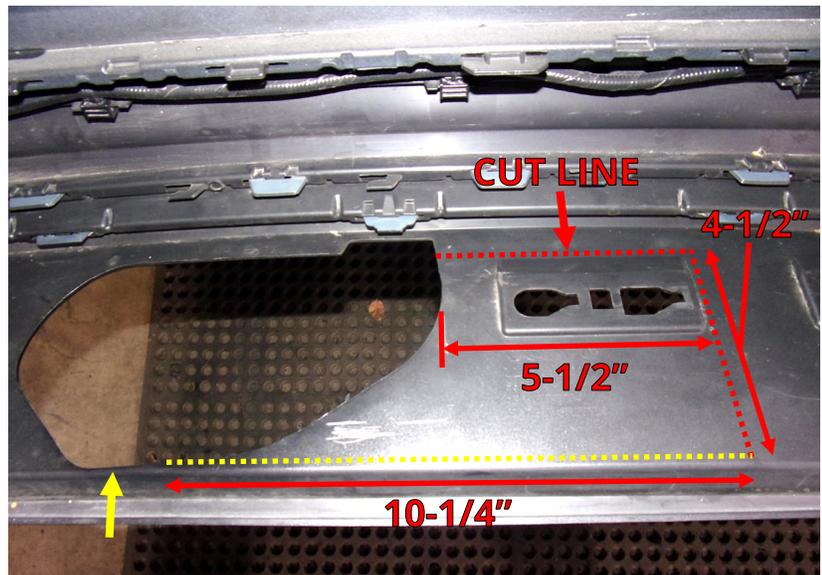
SHORTEN HARNESS WITH CABLE TIE

MODIFY V60 RECHARGE KICK WAND HOLDER

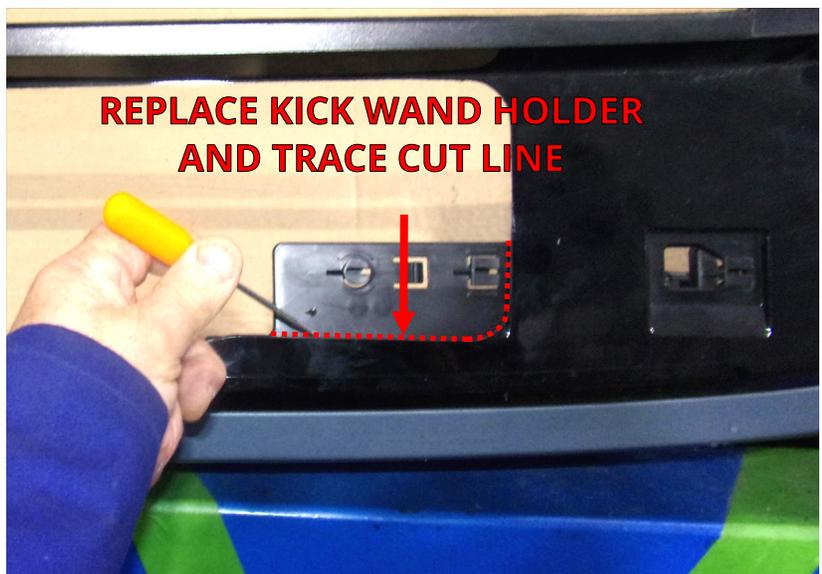
44. Locate the kick wand holder inside the removed fascia. Before trimming the fascia, remove the kick wand holder. Unplug the wiring harness, as shown in the image (yellow arrow). Release the clip that secures the kick wand holder to the fascia (green arrow). Slide the kick wand holder toward the passenger side until it detaches from the fascia and can be removed (red arrow).



45. With the kick wand removed, use a Dremel tool to extend the opening of the cutout in the fascia, as shown in the image. Pay attention to aligning the bottom edge of the new cut with the existing cut in the fascia (yellow arrow). Use a file to smooth the cut.



46. Replace the kick wand holder in the fascia. Use the (2) remaining slots to position the kick wand then slide it toward the driver side to secure it in the original location. Flip the fascia over and mark the kick wand holder by tracing the cutout shape in the fascia.



MODIFY V60 RECHARGE KICK WAND HOLDER CONTINUED



47. Slide the kick wand holder toward the passenger side and remove it from the fascia. Use a Dremel tool to cut along the marked line. Use a file to smooth the cut. Be cautious not to damage the kick wand or any electrical components.



48. Reinstall the cut holder back into the fascia. Due to the kick wand's latching location being removed, a hole will need to be drilled so a nylon screw and nut can be installed. Use a 5/16" drill bit to create a hole through both the holder and the bottom of the fascia where shown in the image



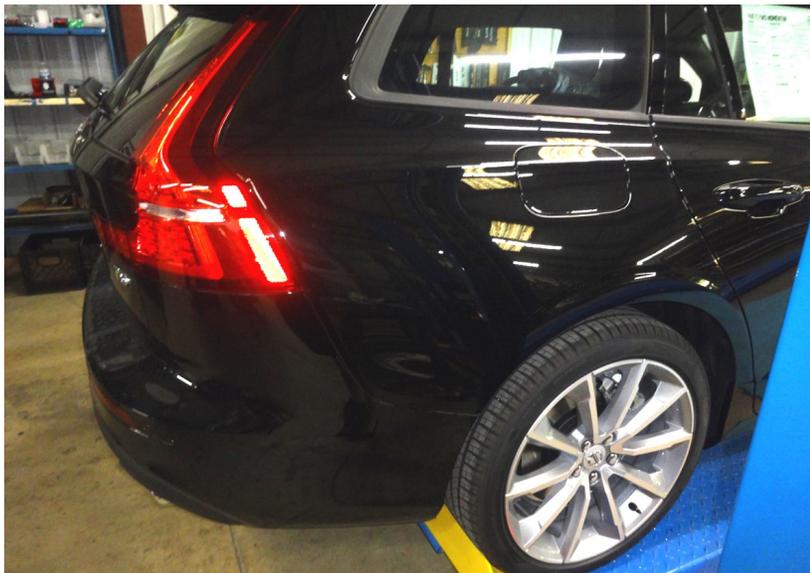
49. After drilling the hole through the holder and the fascia, insert the provided nylon screw from the bottom of the fascia, threading it through the holes and into the interior of the fascia. Secure the kick wand holder in place by tightening the nylon nut. Finally, reattach the harness plug that was removed in Step 44.



REINSTALL VEHICLE COMPONENTS

50. Reattach and secure the fascia and other vehicle components in reverse order. Refer to Steps 1-5.

NOTICE: Remember to plug in the electrical sensor plug in Step 5 before reinstalling the fascia.

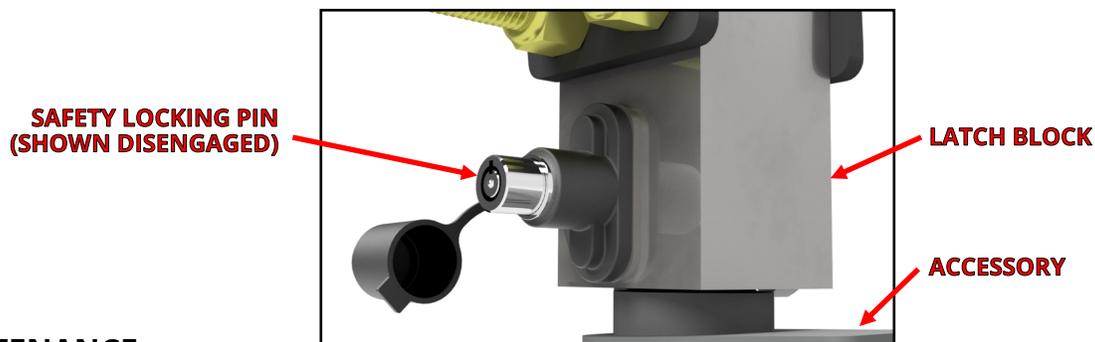


51. The finished, under vehicle view. (V60 Recharge with tow kit)



FINAL VEHICLE EXAMINATION

52. Examine the body panels to ensure that they are in a pre-installation condition. Test the electronic functions of the vehicle. Correct any inconsistencies.
53. 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.