# HITCH INSTALLATION INSTRUCTIONS

**MAKE:** ALFA ROMEO
**YEARS:** 2018 - 2023
**MODEL/TRIM:** STELVIO & STELVIO QUADRIFOGLIO

www.stealthhitches.com 833•694•4824

RACK RECEIVER KIT#: **SHR38001**

COMPATIBLE WITH TOW KIT: **SHT25037**

**2" RACK RECEIVER MAXIMUM PAYLOAD:** 600 LBS
**MAXIMUM TOW RATING:** 6000 LBS
**MAXIMUM TONGUE WEIGHT:** 600 LBS

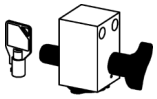
## UNDER VEHICLE TRIMMING:

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

**READ ALL INSTRUCTION WARNINGS AND LABELS**

NO WELDING, METAL DRILLING OR VISIBLE TRIMMING REQUIRED

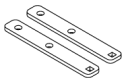
## PARTS SUPPLIED WITH RACK RECEIVER KIT:


LATCH BLOCK & KEYS


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


(2) 5/8" NYLOCK NUTS


2" RACK RECEIVER


(2) ANCHOR STRAPS


(2) CARRIAGE BOLTS 7/16"-14 x 1"


(2) 7/16" SERRATED FLANGE NUTS


(4) 1/2" FLAT WASHERS

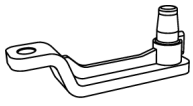

(4) BOLTS 1/2" - 13 x 1-1/2"


(2) BOLTS 3/8" - 16 x 3"


(2) 3/8" NYLOCK NUTS

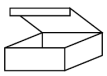

(4) 1/2" LOCK WASHERS

## ADDITIONAL PARTS FOR TOW KIT:


BALL MOUNT 5" RISE, SHORT

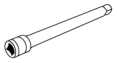

CHAIN HOOKS

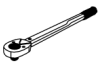

2" BALL


PASSIVE WIRING KIT BOX

## TOOLS REQUIRED:


15/16" & 9/16" OPEN END WRENCH


SOCKET EXTENSION


TORQUE WRENCH


13mm DEEP WELL, 9/16", 11/16", 3/4", & 15/16" SOCKETS


SAFETY GLASSES


RATCHET


FLASHLIGHT


FILE


PLASTIC PRY TOOLS


T25 & T30 TORX


DREMEL TOOL


PRY BAR (QUADRIFOGLIO ONLY)

## ADDITIONAL TOOLS FOR TOW KIT:


90 DEGREE PICK


STRIPPER/ CRIMPING TOOL


PHILLIPS HEAD SCREWDRIVER


PLIERS


MULTIMETER


10mm SOCKET


5mm ALLEN WRENCH

**RACK RECEIVER INSTALLATION:** USE STEPS 1-15, & 37-41
**TOW KIT INSTALLATION:** USE STEPS 1-41

# <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

T25 TORX

1. Locate and remove (2) screws inside the rear wheel well with Torx.


PLASTIC PRY TOOLS

2. With a plastic pry tool, lift the front edge of rear wheel trim, where shown. Grasp trim piece and pull outward (away from the vehicle) to release clips. Continue to pull the trim away around the rim, using the plastic pry tool as need, until trim is removed.


T25 TORX

3. Locate (1) screw holding the rear fascia that was exposed by removing the wheel well trim. Remove this screw. Repeat Steps 1-3 on other side of vehicle.

## GAIN ACCESS TO MOUNTING AREA CONTINUED

T30 TORX

4. Open the vehicle hatch. Locate and remove (2) screws attached to the rear fascia on either side of the door sill.

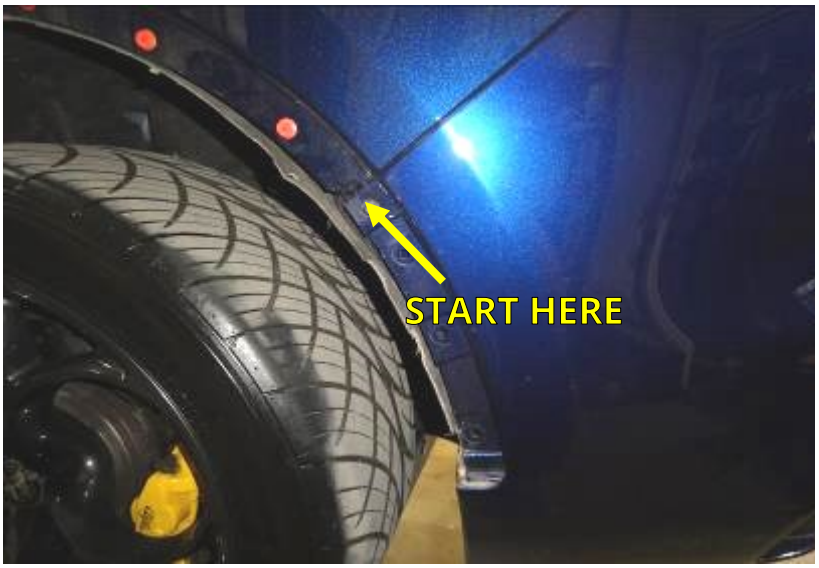

T25 TORX

T30 TORX

5. Underneath the rear of the vehicle, remove (8) screws from the bottom of the fascia with a T25 Torx (yellow arrows). Remove (2) screws and washers with a T25 Torx (red arrows).
6. Remove (8) screws with a T30 Torx (green arrows).


PLASTIC PRY TOOLS

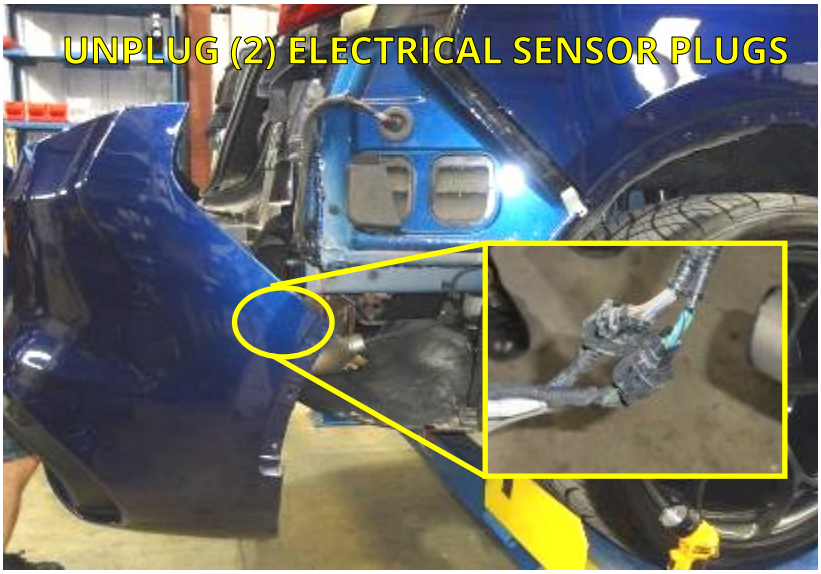
7. The fascia is clipped to the vehicle body directly behind the wheel wells. Put outward pressure on the fascia to expose the first clip in the seam. With a plastic pry tool, push down on the exposed clip to disconnect. Continue to pull outward on the fascia and disconnect clips until all clips are disconnected. Repeat on other side of vehicle.



## GAIN ACCESS TO MOUNTING AREA CONTINUED

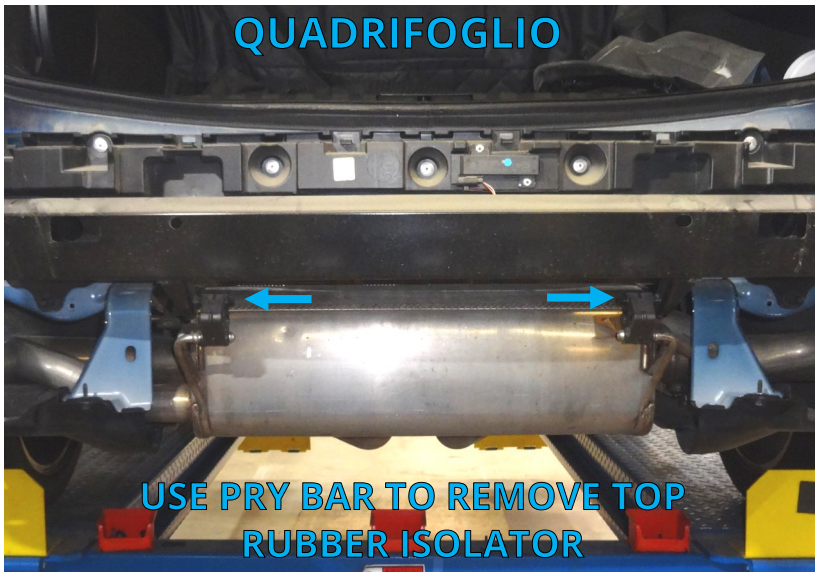
8. This step requires a partner. Pull the fascia rearward enough to access the (2) electrical sensor plugs on the passenger side. Press down on the clips to unplug the sensor plugs. Remove the fascia completely.

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



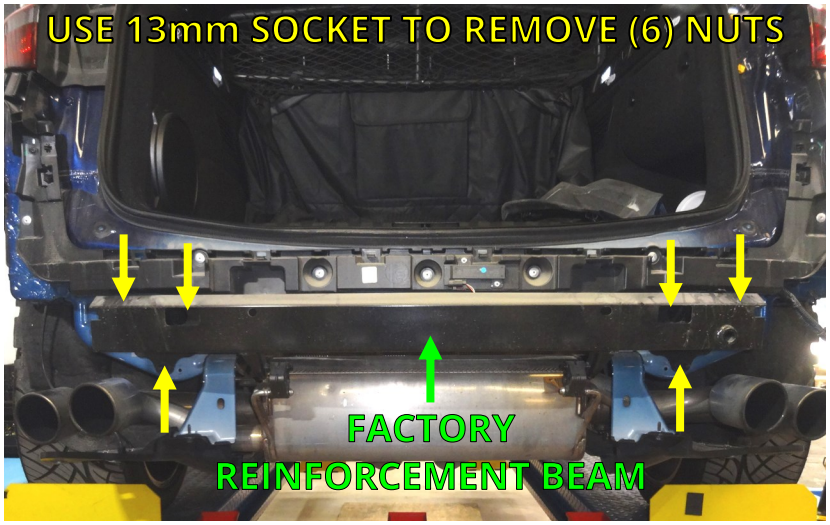

PRY BAR

9. **Quadrifoglio only** Locate (2) rubber isolators holding the exhaust to the factory reinforcement beam. Use a pry bar to remove the top rubber isolator from the reinforcement beam on each side.



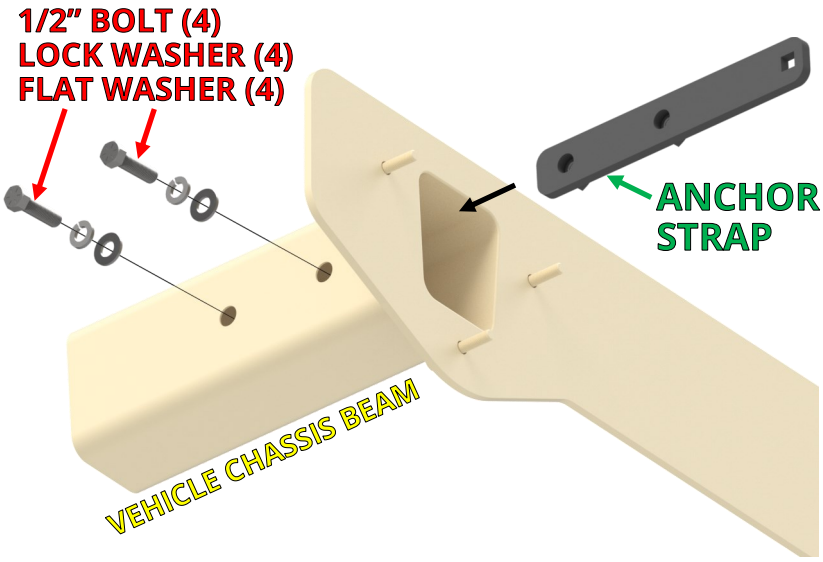

13mm DEEP WELL SOCKET

10. Remove (6) nuts using a socket. Some models have (2) exhaust brackets on the lower studs that will be disconnected. Remove and discard the reinforcement beam. Save the factory nuts for hitch installation.



## INSTALL STEALTH HITCH FRAME

11. Insert (2) supplied anchor straps into chassis beams. The brackets should be inserted weld nut end first, with the weld nuts toward the center of the vehicle, as shown. Align the weld nuts with holes on outside of each chassis beam. Insert a 1/2” bolt, lock washer, and flat washer into each weld nut. Hand tighten hardware.

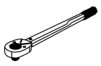




13mm DEEP WELL SOCKET

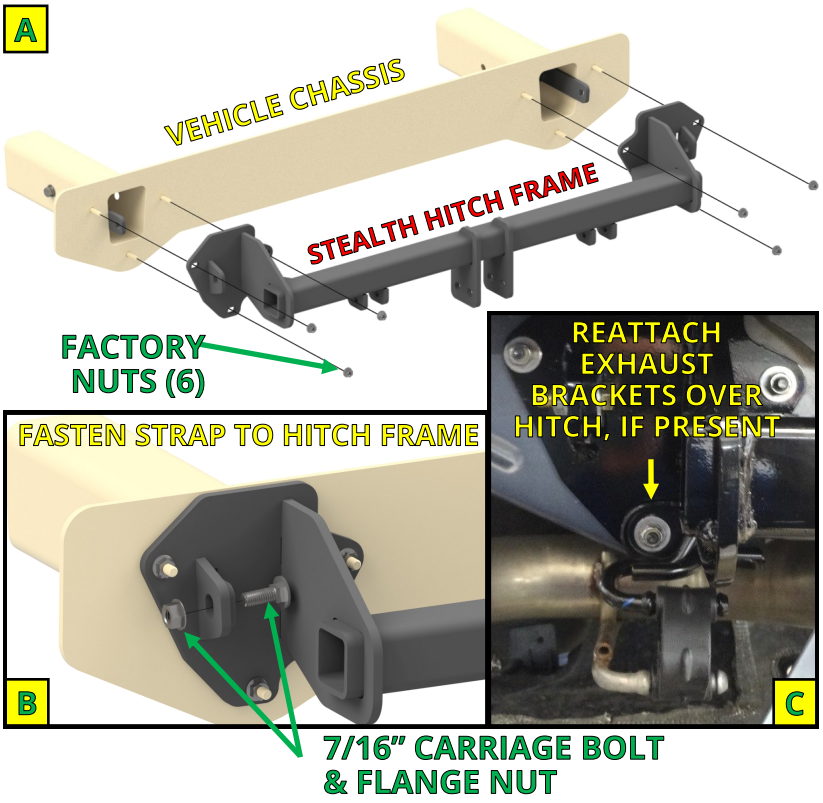

3/4” SOCKET


11/16” SOCKET


TORQUE WRENCH

12. Align the slots in the Stealth hitch frame with anchor straps. Slide the hitch frame onto the anchor straps and vehicle studs. Secure the Stealth hitch frame to vehicle with (6) factory nuts, Image A. Reattach exhaust brackets if present, Image C. Insert 7/16” carriage bolts through anchor strap and hitch frame. Fasten with 7/16” serrated flange nuts, Image B.

13. Torque the (6) factory nuts to 25 ft.-lbs. Torque the (2) serrated flange nuts to 45 ft.-lbs. Torque the (4) 1/2” bolts on each side to 100 ft.-lbs.

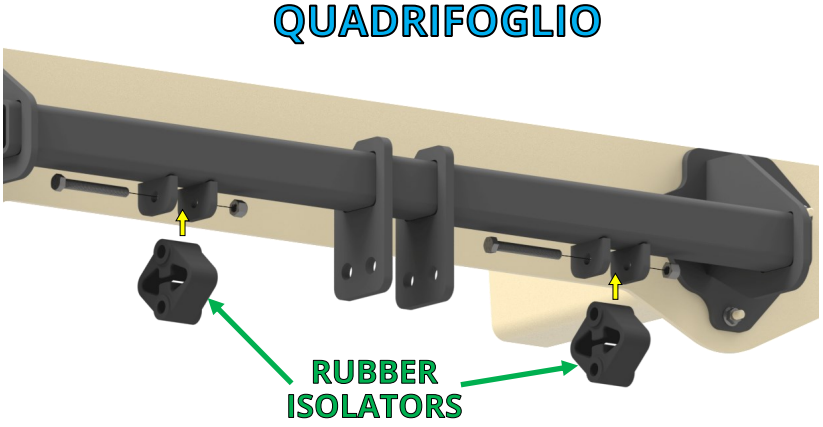




9/16” SOCKET


9/16” OPEN END WRENCH

14. **Quadrifoglio only** Reattach the rubber isolators to the hitch beam. Lift the exhaust until the isolators are between the tab holes. Attach the isolators with 3/8” bolts and nylock nuts. Torque the 3/8” hardware to 30 ft.-lbs.



## MOUNT LATCH BLOCK

15/16" SOCKET

15/16" OPEN END WRENCH

TORQUE WRENCH

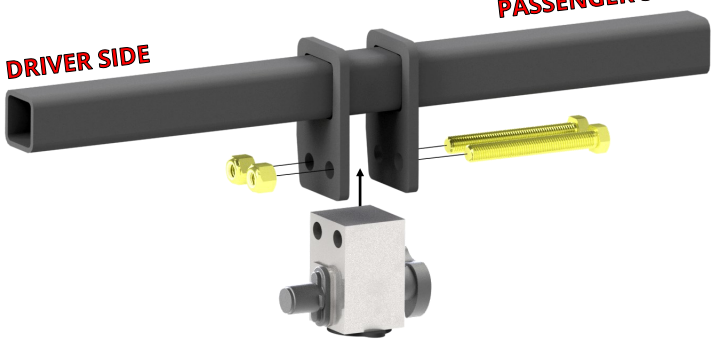
15. Installation of the latch block varies depending on which kit you are installing.

- ***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.

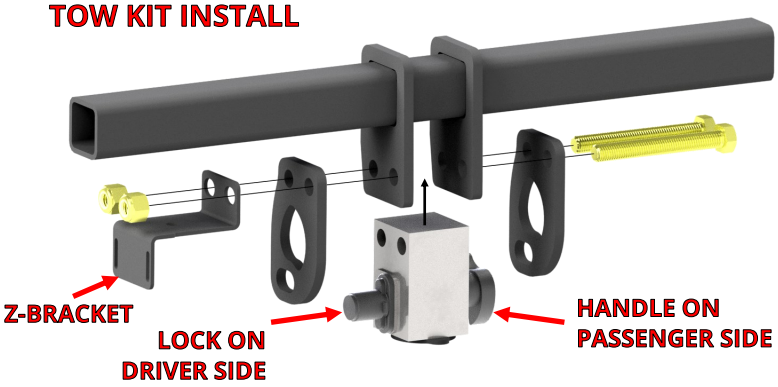
- ***Tow Kit:*** Retrieve Z-bracket from wiring harness kit box. Install the latch block, (2) chain hooks, and Z-bracket with (2) 5/8”-11 x 5” bolts and (2) 5/8” nylock nuts. Tighten each bolt to 150 ft.-lbs.

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

**RACK RECEIVER KIT INSTALL**




**TOW KIT INSTALL**

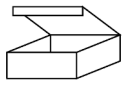




**IF INSTALLING A RACK RECEIVER KIT, SKIP TO STEP 37.**
**IF INSTALLING A TOW KIT, CONTINUE TO STEP 16.**

## INSTALL PASSIVE WIRING KIT

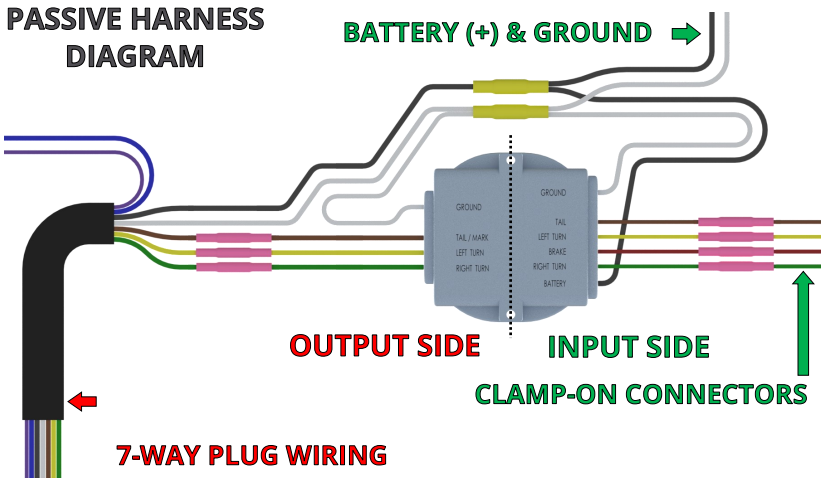
| # | DESCRIPTION | QTY |
|---|---|---|
| 1 | 7-WAY WIRING HARNESS<br>• FUSE HOLDER & FUSE<br>• CONTROL MODULE & WIRES | 1 |
| 2 | ADHESIVE FOAM STRIP | 2 |
| 3 | FORK TERMINAL | 1 |
| 4 | 5/8" LONG PHILLIPS SCREWS | 6 |
| 5 | #10 LOCK NUT | 6 |
| 6 | CLAMP-ON CONNECTORS | 5 |
| 7 | CABLE TIE – 8" | 4 |
| 8 | CABLE TIE – 14" | 3 |
| 9 | Z-BRACKET | 1 |
| 10 | 7-WAY HOUSING | 1 |
| 11 | HEAT SHIELD BRACKET | 1 |
| 12 | MOUNTING BRACKET | 1 |
| 13 | 7-POLE TO 4-POLE ADAPTER | 1 |

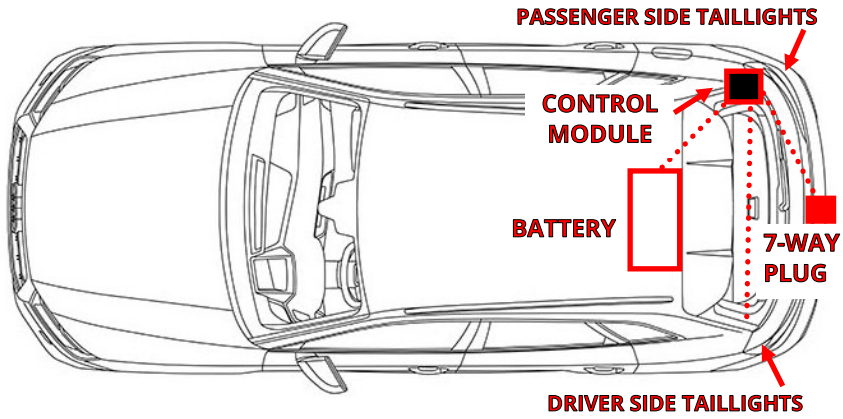



PASSIVE WIRING KIT BOX

16. 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 7-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.***



17. In the rear cargo area, remove the cargo floor panel and cargo holder by lifting it up and out. Place panel and cargo holder on blanket or safe area.



T30 TORX

18. Remove the cargo anchor rails. Remove the screws that are holding the rails in place. Some models will have (4) cargo anchors with 2 screws each. Some models will have (3) screws in the front of each rail and (2) screws in the rear, as shown. Remove side rails by lifting up.

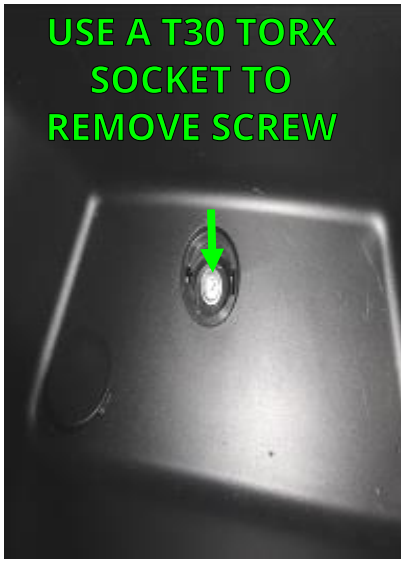

19. Carefully pull up and remove threshold. Remove the large foam insert from the cargo area.

## GAIN ACCESS TO MOUNTING AREA CONTINUED

90 DEGREE PICK

T30 TORX

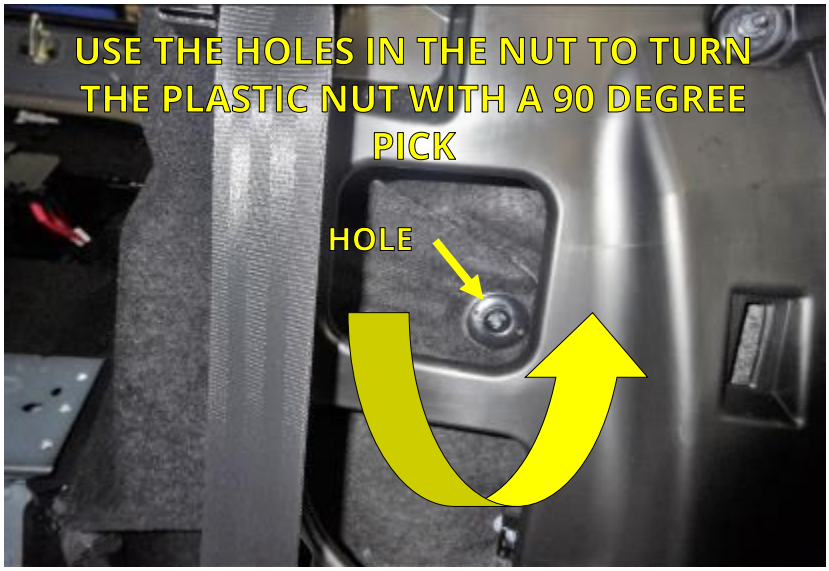
20. Locate the passenger side plastic storage compartment. Remove the plastic cap to gain access to screw securing the storage compartment. Remove the screw then lift and remove the plastic storage compartment.


21. Inside the rear side doors, locate the leather trim piece. Pull the top of the trim piece outward to release clips holding it. Continue pulling outward until all the clips are released. Remove the leather trim piece completely.


90 DEGREE PICK

22. Locate a plastic nut holding the rear side panel that was exposed by the removal of the leather trim piece. Remove the plastic nut. Use a 90 degree pick in the holes to turn the nut. Repeat Steps 21-22 on the other side of the vehicle.



## GAIN ACCESS TO MOUNTING AREA CONTINUED

90 DEGREE PICK

5mm ALLEN WRENCH

23. On the rear side panel lift the rear seat latch. Use a 90 degree pick to remove plastic cap covering screw. Remove the screw.

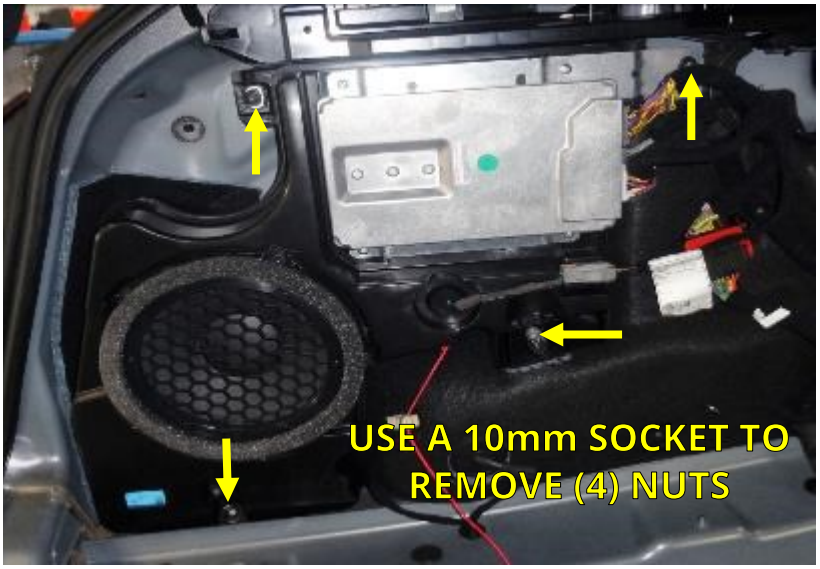


90 DEGREE PICK

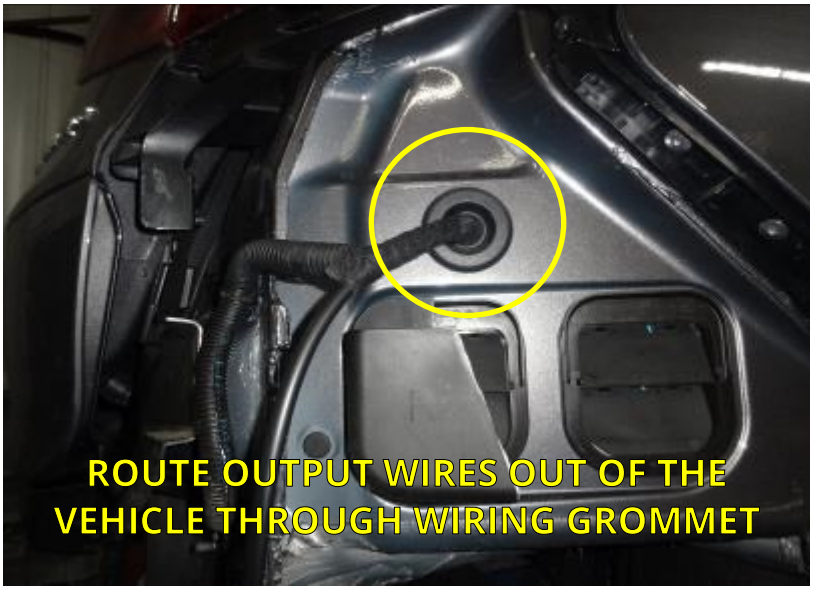
24. Dislodge the plastic side panel. Locate and remove (2) plastic rivets. Remove the lower side panel. Repeat Steps 23-24 on other side of the vehicle.


10mm SOCKET

25. If vehicle has a subwoofer on the driver side it will need to be removed to gain access to the left turn signal wires. Locate and remove (4) nuts to remove the subwoofer.



26. Retrieve the control module from the wiring kit. Place it in the passenger side cargo compartment. On the rear passenger side of the vehicle, locate the indicated wiring grommet. Route the output wires through the shared grommet from the inside to the outside of the vehicle.

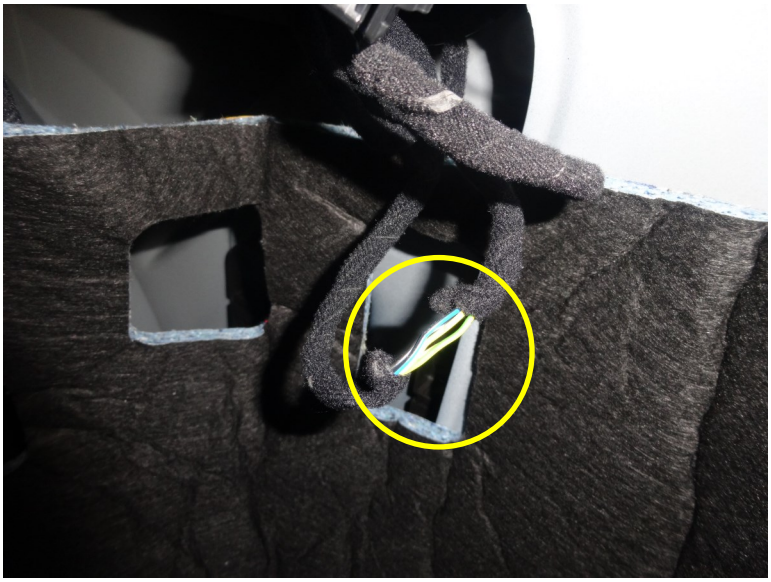



PLIERS

MULTIMETER

27. The wires on the input side of the module need to be attached to the vehicle wiring. Inside the passenger side cargo compartment, locate the indicated part of the vehicle wiring harness. Remove enough tape to access wires. Use clamp-on connectors to connect the brown and green wires to wires behind taillight. (As shown in reference table on next page.)

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



PLIERS

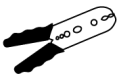
MULTIMETER

28. Route the yellow input wire to the driver side of the vehicle. Locate the indicated part of the vehicle wiring harness. Remove enough tape to access wires. Use a clamp-on connector to connect the yellow wire to left turn signal wire behind the taillight. (As shown in reference table on next page.)

## CLAMP-ON CONNECTOR COLOR REFERENCE TABLE

| SIGNAL INPUT WIRES | | | POWER & GROUND WIRES | | |
|---|---|---|---|---|---|
| FUNCTION | HARNESS | VEHICLE | | | |
| LEFT TURN | YELLOW | BLUE/WHITE | 12V+ (POWER) | BLACK | BATTERY (+) |
| RIGHT TURN | GREEN | GREEN/YELLOW | GROUND | WHITE | GROUND STUD |
| MARKER | BROWN | YELLOW/GREEN | | | |
| BRAKE | RED | ***Do not connect the red brake wire. This vehicle does not utilize a separate brake circuit. The brake signal is sent down the left and right turn circuits simultaneously.*** | | | |
| REVERSE | PURPLE | For use with trailer reverse lights or to disable the trailer brakes when backing with surge brakes. To connect, isolate vehicle's reverse light circuit and connect the purple wire from the trailer wiring harness to vehicle reverse light circuit. ***Trailers rarely have reverse lights or surge brakes.*** | | | |
| ELECTRIC BRAKE | BLUE | Only used when a hard wired brake controller is mounted inside the vehicle and your trailer has electric brakes. See brake controller instructions for this wire. | | | |

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

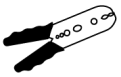


STRIPPER/ CRIMPING TOOL

10mm SOCKET

29. Locate the ground stud to the rear of the battery. 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 ground stud.

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

STRIPPER/ CRIMPING TOOL

13mm SOCKET

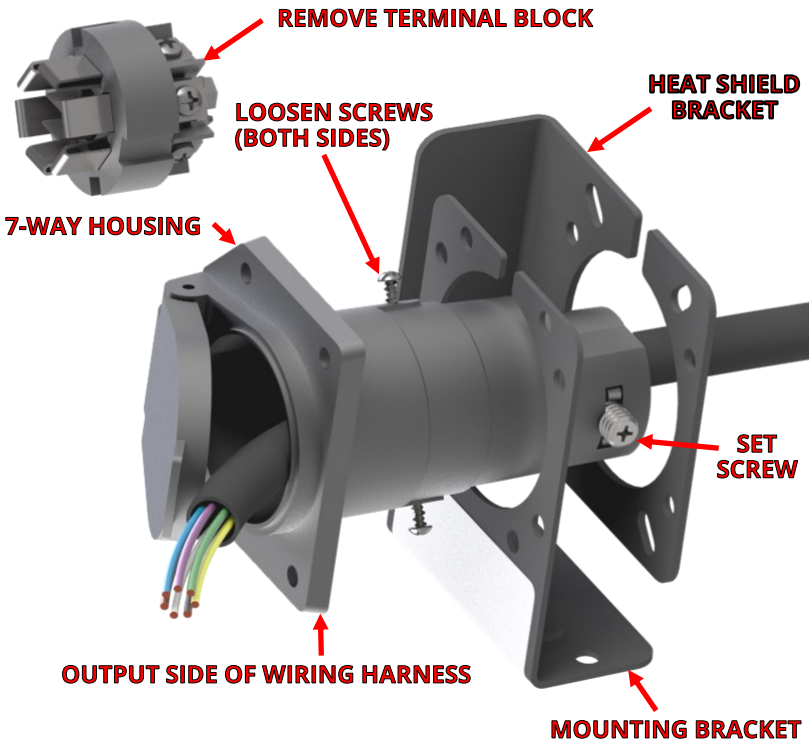
30. Route the black power wire to the battery. Locate the fuse holder supplied in the wiring kit box. Remove the fuse from the fuse holder. Crimp the fuse holder lead to the black power wire. Connect the ring terminal to the positive battery terminal (+).

***NOTICE: Loosen battery terminal just enough to install wiring, so vehicle wiring does not lose power.***

## WIRE 7-WAY PLUG

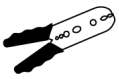
PHILLIPS HEAD SCREWDRIVER

31. Locate the 7-way housing. Use a screwdriver to loosen (2) screws. Remove 7-way round terminal block. Place the mounting bracket and heat shield bracket onto the 7-way housing as shown. Use a screwdriver to loosen the set screw at the bottom of the 7-way housing. Route output side wires of the wiring harness through the 7-way housing.




**PLEASE FOLLOW INSTRUCTIONS BELOW VERY CAREFULLY.**
**INCORRECT WIRING OF THE 7-WAY RECEPTACLE CAUSES THE VAST MAJORITY OF WIRING PROBLEMS.**

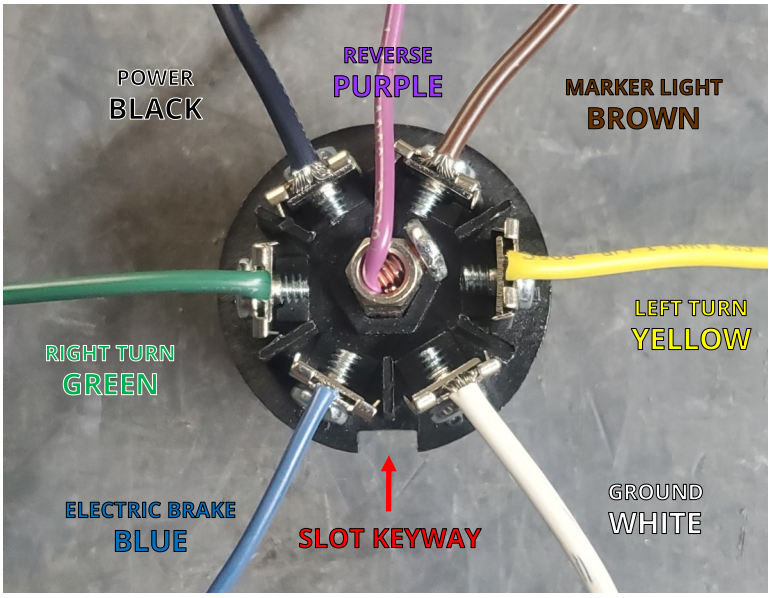
PHILLIPS HEAD SCREWDRIVER



STRIPPER/ CRIMPING TOOL

32. Locate the slot keyway. Starting from the keyway going **clockwise**, attach the wires as follows:
    - Blue
    - Green
    - Black
    - Brown
    - Yellow
    - White
    - Purple (middle)

***NOTICE: Markings on the receptacle may not match the correct wire configuration. Please disregard and follow the instruction above.***

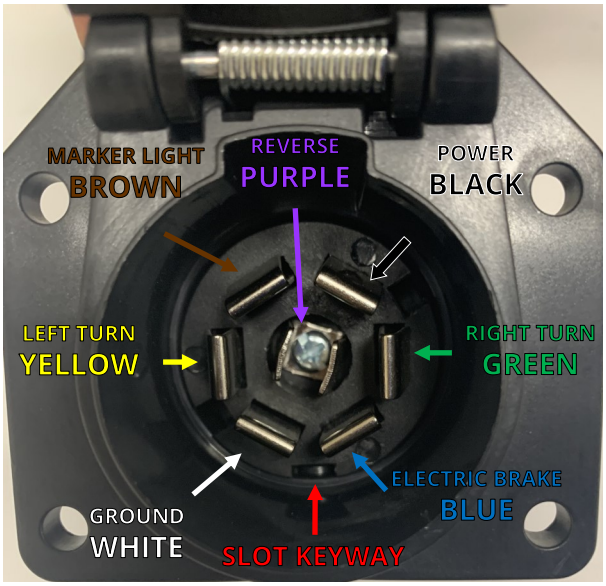


## TEST 7-WAY HARNESS WIRING

PHILLIPS HEAD SCREWDRIVER

MULTIMETER

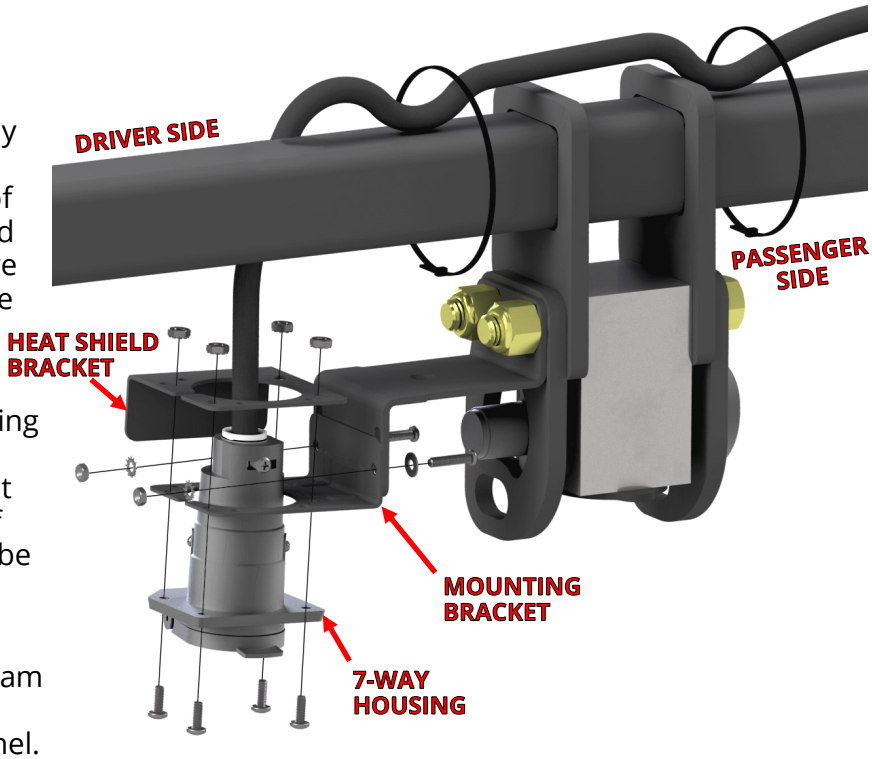
33. Put the 7-way receptacle back together. While everything is still accessible, you should test the wiring to make sure everything is connected properly and in working order. **Replace the 20 Amp fuse into the fuse holder located near the power supply.**




- Start by connecting the multimeter negative probe to the ground blade on the 7-way receptacle.
- Next, connect the multimeter positive probe to the power blade on the 7-way receptacle and check for 12 volts.
- Once that is confirmed, move the positive probe to the left turn blade on the 7-way receptacle and check for 12 volts when the vehicle left turn blinker is active. You should see it pulse.
- Next, move the positive probe to the right turn blade and check for 12 volts when the right turn blinker is active. You should see it pulse.
- Next, move the positive probe to the marker/taillights. With the vehicle lights on you should see 12 volts constant.
- Lastly, with the brake depressed, move the positive probe to the left turn blade where you should see 12 volts constant. Move the probe to the right turn blade where you should also see 12 volts constant.

PHILLIPS HEAD SCREWDRIVER

34. Attach the mounting bracket, heat shield bracket, and 7-way housing to the Stealth hitch frame as shown. The flange of the heat shield bracket should be towards the vehicle. Secure harness to Stealth hitch frame with cable ties.




35. Secure all wires and wiring components. 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.

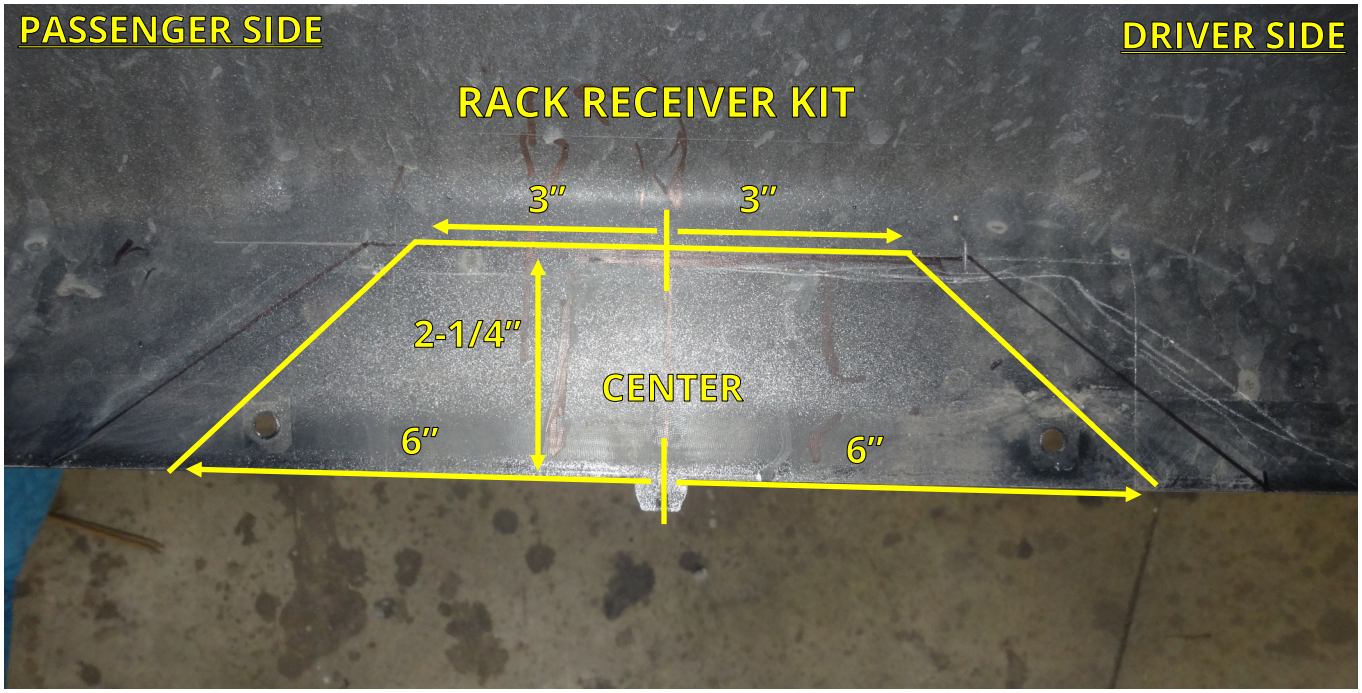
36. Use the provided adhesive foam strips to secure the control module to an inside body panel. Reattach and secure side panels, threshold, and other vehicle components that were detached for wiring kit install. Refer to Steps 17-25.

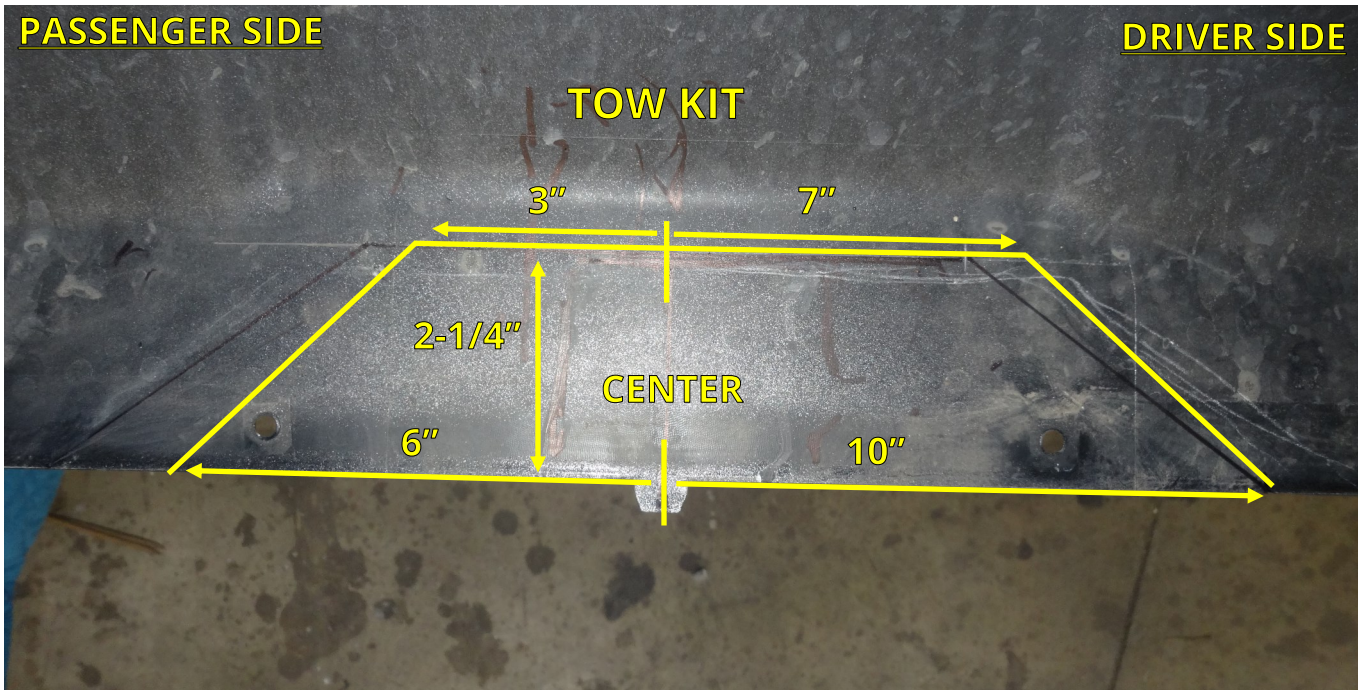
## CUT ACCESS FOR LATCH BLOCK

DREMEL TOOL

FILE

37. Use a Dremel tool to cut out fascia, as shown. The access hole necessary varies depending on which kit you are installing. Follow indicated template. Use a file to smooth out the cut. Discard black fascia trim piece if present.



## REINSTALL VEHICLE COMPONENTS

38. Reattach and secure the fascia, wheel well trim, and other vehicle components in reverse order. Refer to Steps 1-8.

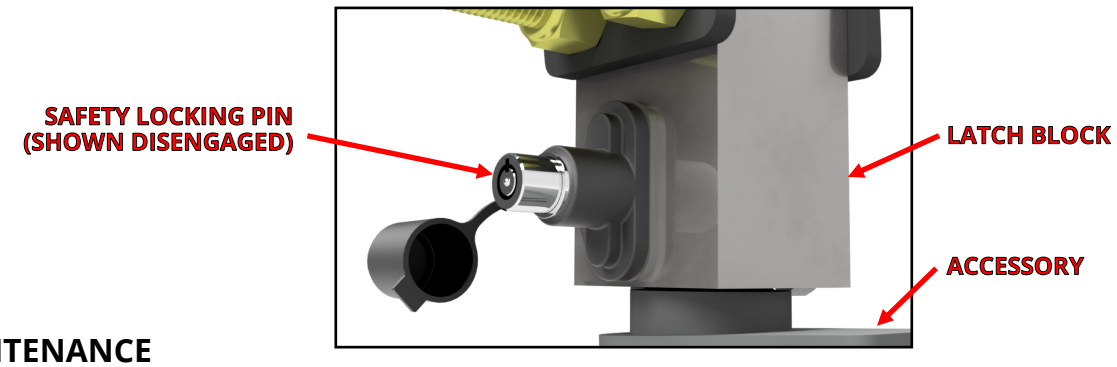
***NOTICE: It's important to remember to plug in the electrical sensor plugs before you completely install the fascia.***

39. Finished look from underneath the vehicle.

## FINAL VEHICLE EXAMINATION

40. Examine the body panels to ensure that they are in a pre-installation condition. Test the electronic functions of the vehicle. Correct any inconsistencies.
41. 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.