



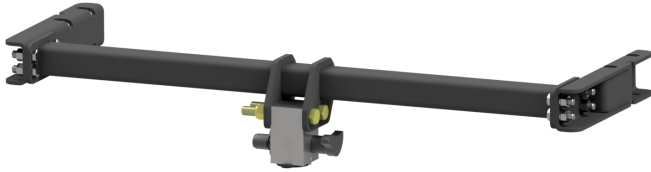
# HITCH INSTALLATION INSTRUCTIONS

**MAKE:** AUDI      **YEARS:** 2009 - 2017      **MODEL/TRIM:** Q5 / SQ5

www.stealthhitches.com      833-694-4824

RACK RECEIVER KIT#: **SHR30013**

COMPATIBLE WITH TOW KIT: **SHT25033**



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

## UNDER VEHICLE TRIMMING:

HEAT SHIELD: **NO**  
 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



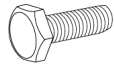
(2) BOLTS  
5/8" - 11 x 5"



(2) 5/8"  
NYLOCK NUTS



2" RACK  
RECEIVER



(8) 1/2" - 13 x  
1-1/2" BOLTS



(8) 1/2" LOCK  
WASHERS



(8) 1/2" NUTS

### ADDITIONAL PARTS FOR TOW KIT:



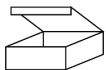
BALL MOUNT  
5" RISE, SHORT



CHAIN HOOKS



2" BALL



PASSIVE WIRING  
KIT BOX

### TOOLS REQUIRED:



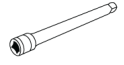
3/4", & 15/16"  
OPEN END  
WRENCH



16mm, 3/4,  
& 15/16" SOCKETS



PLASTIC  
PRY TOOLS



SOCKET  
EXTENSION



SAFETY GLASSES



10 mm  
HOLLOW NUT  
DRIVER



FLASHLIGHT



RATCHET



TORQUE  
WRENCH



FLATHEAD  
SCREWDRIVER



90 DEGREE  
PICK



T25 & T30  
TORX

### ADDITIONAL TOOLS FOR TOW KIT:



STRIPPER/  
CRIMPING  
TOOL



MULTIMETER



PHILLIPS HEAD  
SCREWDRIVER



10mm  
SOCKET



PLIERS



SILICONE



DRILL &  
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](http://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

1. Lift up to remove cargo area floor panel.



2. Disconnect the spare tire plug and remove spare tire. Reference your owner's manual if needed.



3. In the rear of the vehicle cargo area, carefully pull up and dislodge the threshold behind the hatch.
4. Under the threshold, disconnect wiring harness plug. Completely remove threshold.



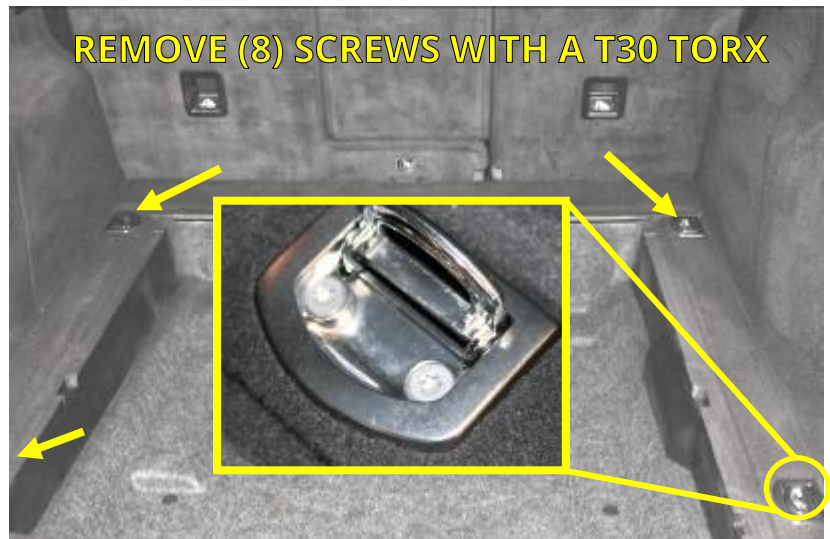
## GAIN ACCESS TO MOUNTING AREA CONTINUED

5. Inside the rear cargo area, remove the compartment storage side panels. On the passenger side panel, locate the 12 volt power supply outlet and unplug it. Squeeze the plug clips to release the plug.



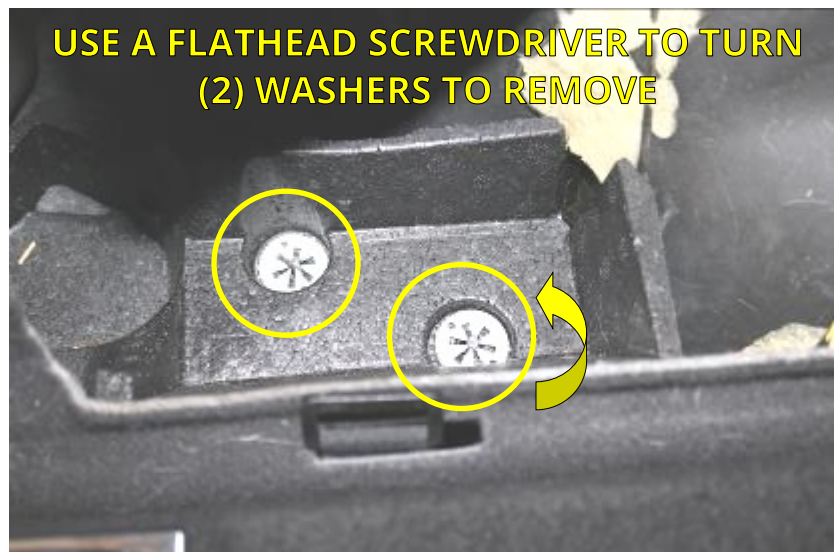
T30 TORX

6. In the corners of the cargo area, locate and remove (4) cargo anchors. Each cargo anchor has (2) screws. On each side of the cargo area, remove the large plastic rails which were held in place under the cargo anchors.



FLATHEAD  
SCREWDRIVER

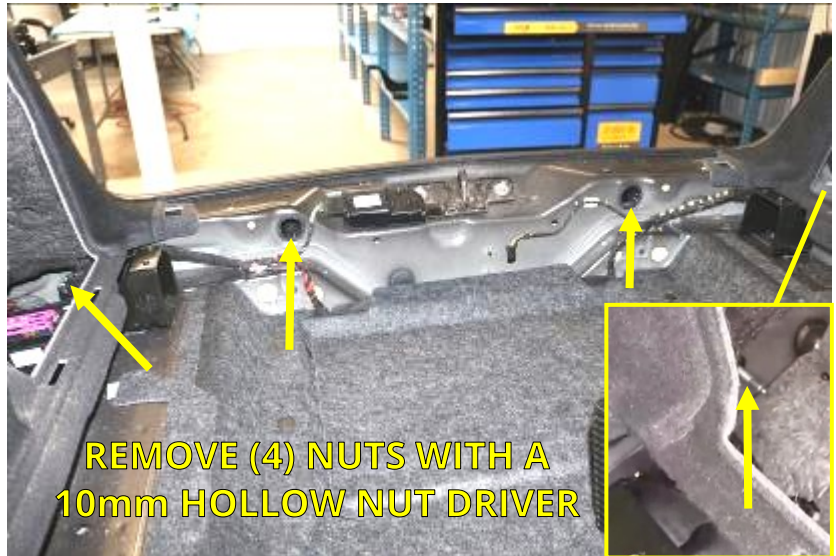
7. On the driver side of the cargo area, locate and remove the air compressor. Under the compressor is a foam holder. Remove the holder by turning the metal lock washers with a flathead screwdriver. Lift up the foam holder to remove.



## GAIN ACCESS TO MOUNTING AREA CONTINUED



8. Locate and remove (2) rubber grommets in the rear of the cargo area, as shown in the image. Remove the (2) nuts located inside the holes that were covered by the grommets. Inside of the side cargo compartments, against the rear wall of the vehicle, are (2) additional nuts to remove.



9. Inside the rear wheel wells locate and remove (4) screws attaching the rear fascia to the wheel rear wheel well liner. Behind the liner, locate the plastic support and slide it to the rear of the vehicle to release a plastic clip at the bottom of the fascia.



10. Underneath the vehicle, remove the (2) screws from the bottom of the fascia shown in the image.



## GAIN ACCESS TO MOUNTING AREA CONTINUED



11. The rear fascia is clipped to the vehicle body behind the wheel wells. Pull outward on the top front of the rear fascia to expose a 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 as they are exposed.

Continue applying outward and rearward pressure until all the clips are released. Repeat on other side of vehicle.



12. The fascia will not be completely disconnected from the vehicle, a wiring harness attached to the fascia must remain attached. Before removing the rear fascia, set up a stand or place a pad down near the rear passenger side of the vehicle. Carefully pull the fascia away from the vehicle. Move the fascia away from the vehicle and place on the stand or pad prepared earlier.



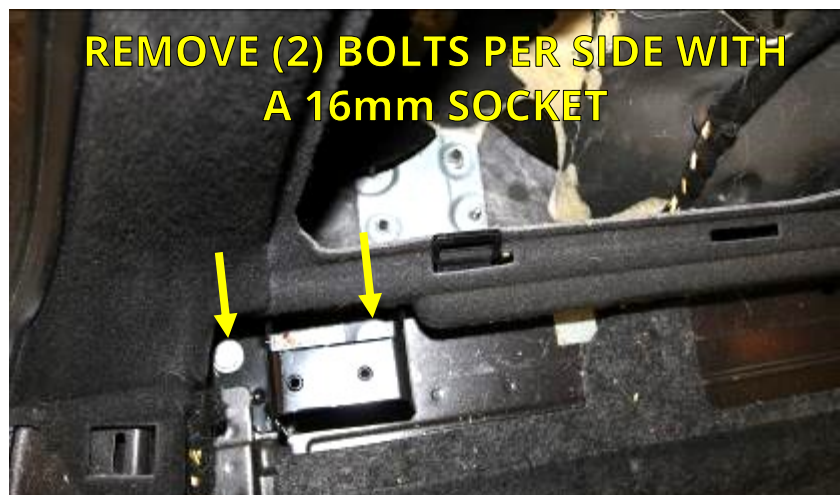
**NOTICE:** Carefully remove the fascia and place on a blanket or pad.

**NOTICE:** If the electrical harness becomes disconnected the vehicle will need reprogramming at an Audi Dealership.



16mm  
SOCKET

13. Locate (2) bolts on each side of the cargo area floor. These bolts secure the factory reinforcement beam. Remove bolts using a socket. Save the bolts for later reinstallation.



VIEW LOOKING AT DRIVER SIDE FLOOR IN CARGO COMPARTMENT

## GAIN ACCESS TO MOUNTING AREA CONTINUED

14. Slide the factory reinforcement beam to the rear to remove. Discard the factory reinforcement beam.



## INSTALL STEALTH HITCH FRAME

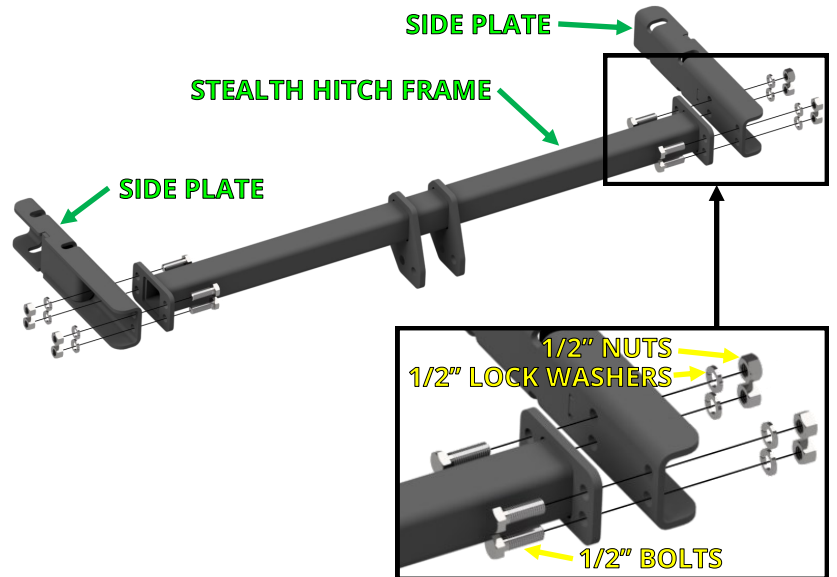


3/4"  
SOCKET



3/4"  
WRENCH

15. Retrieve the side plates, hitch frame, 1/2" bolts, lock washers, and nuts. Use a 3/4" socket and wrench to attach the side plates to the hitch frame, as shown in the image. Before tightening, align the side plates so that the tops are parallel to the top of the hitch frame. Torque the bolts to 110 ft.-lbs.

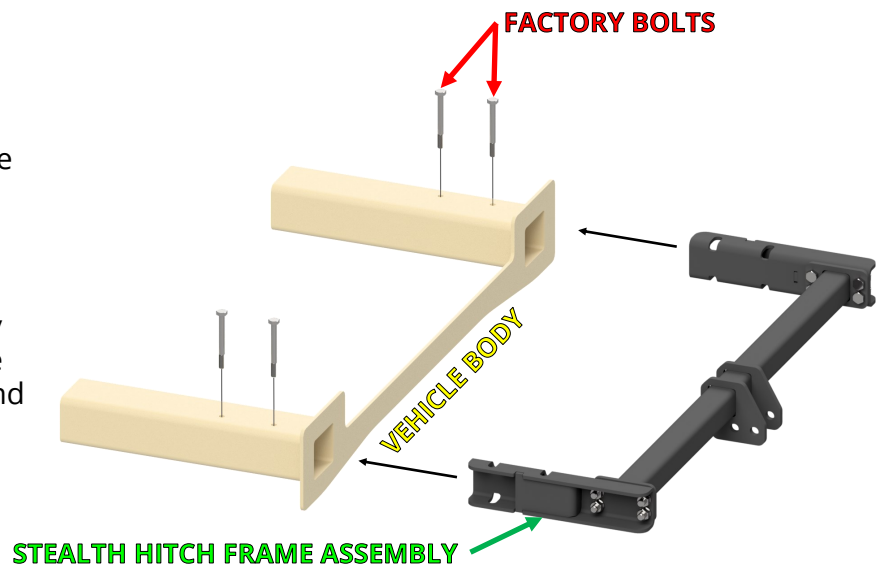


16mm  
SOCKET



TORQUE  
WRENCH

16. Slide the Stealth hitch frame assembly into the vehicle where the factory reinforcement beam was located. Align the holes in the hitch frame so that they are aligned with the holes in the vehicle cargo area. In the (4) rearward holes attach the hitch using the saved factory bolts. Center the hitch frame before tightening. Tighten and torque to 45 ft.-lbs.



## MOUNT LATCH BLOCK



15/16"  
SOCKET



15/16" OPEN  
END WRENCH



TORQUE  
WRENCH

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

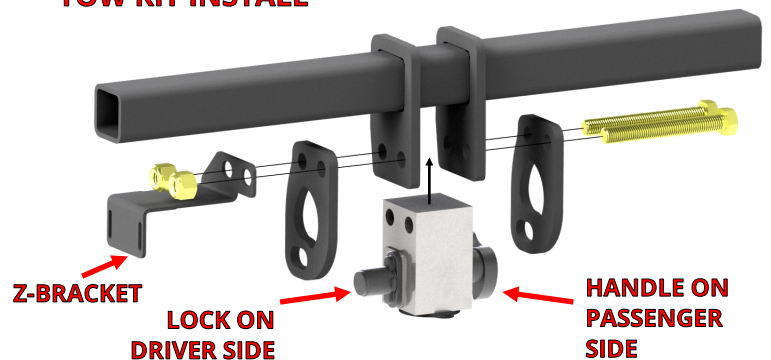
- **Rack Receiver Kit:** Install the latch block with (2) 5/8"-11 x 5" bolts and (2) 5/8" nylock nuts. Tighten each bolt to 150 ft.-lbs.
- **Tow Kit:** Retrieve Z-bracket from wiring harness kit box. Install the latch block, (2) chain hooks, and Z-bracket with (2) 5/8"-11 x 5" bolts and (2) 5/8" nylock 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 32.  
IF INSTALLING A TOW KIT, CONTINUE TO STEP 18.**



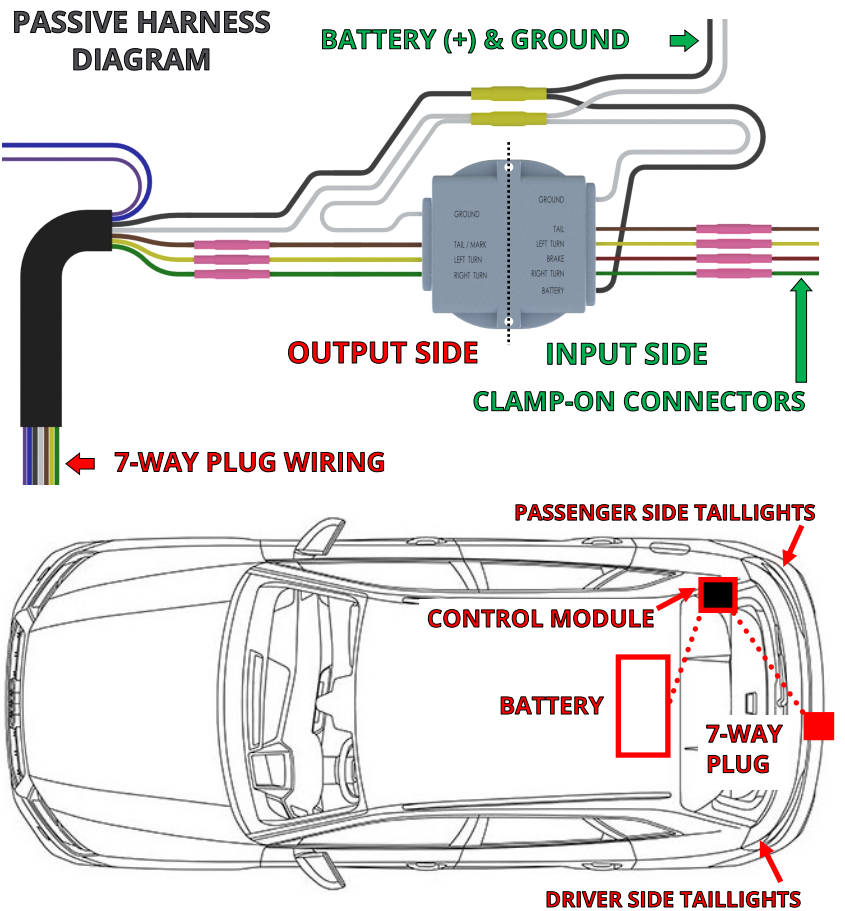
# INSTALL PASSIVE WIRING KIT

#	DESCRIPTION	QTY
1	7-WAY WIRING HARNESS <ul style="list-style-type: none"> <li>• FUSE HOLDER &amp; FUSE</li> <li>• CONTROL MODULE &amp; WIRES</li> <li>• POWER WIRE</li> </ul>	1
2	ADHESIVE FOAM STRIP	2
3	FORK TERMINAL	1
4	CLAMP-ON CONNECTORS	5
5	5/8" LONG PHILLIPS SCREWS	6
6	#10 LOCK NUT	6
7	CABLE TIE - 8"	4
8	CABLE TIE - 14"	3
9	Z-BRACKET	1
10	MOUNTING BRACKET	1
11	7-WAY HOUSING	1
12	7-POLE TO 4-POLE ADAPTER	1



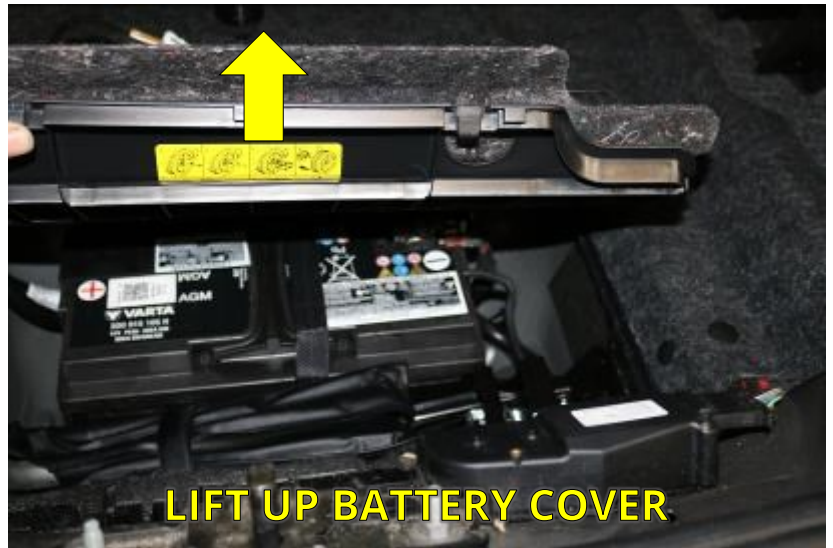
18. Locate the wiring kit box. Review the contents of the box against the list above to check for missing components. The passive wiring kit uses a control module to manage the functions of the trailer lighting. The module has an "input" side that receives power from the vehicle's battery and signals 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.**



## INSTALL WIRING KIT CONTINUED

19. Locate the battery compartment and lift up battery cover.



20. Locate rubber grommet in the center of the rear vehicle wall. Remove the grommet.

21. Place the control module and harness in the passenger side cargo area. Route the black power wire (+) and the white neutral wire into the battery compartment area. Route the wires so that they will be out of the way and covered when the vehicle components are put back in place.



DRILL &  
3/8" BIT

22. Drill a 3/8" hole in grommet. Feed the output wires from the inside to the outside of the vehicle through the hole where the grommet was. Pass the grommet over the end of the output wires.

## DRILL A 3/8" HOLE IN GROMMET



## INSTALL WIRING KIT CONTINUED



PLIERS



MULTIMETER

23. On the passenger side of the vehicle locate the indicated part of the vehicle wiring harness. Use the provided clamp-on connectors to attach the input side wires of the control module to the vehicle wiring as indicated in reference table below.

**NOTE:** Some models may have two grey/black wires.

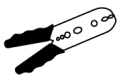
**NOTICE:** Verify wire signals with multimeter. Manufacturer may use different colors. The trunk latch must be closed when probing and confirming wire signals.



### CLAMP-ON CONNECTOR COLOR REFERENCE TABLE

SIGNAL INPUT WIRES			POWER & GROUND WIRES		
FUNCTION	HARNESS	VEHICLE			
LEFT TURN	YELLOW	GREY/BLACK	12V+ (POWER)	BLACK	BATTERY (+)
RIGHT TURN	GREEN	GREY/BLUE	GROUND	WHITE	BATTERY (-)
MARKER	BROWN	BLACK/GREEN			
BRAKE	RED	<b>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.</b>			
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. <b>Trailers rarely have reverse lights or surge brakes.</b>			
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.



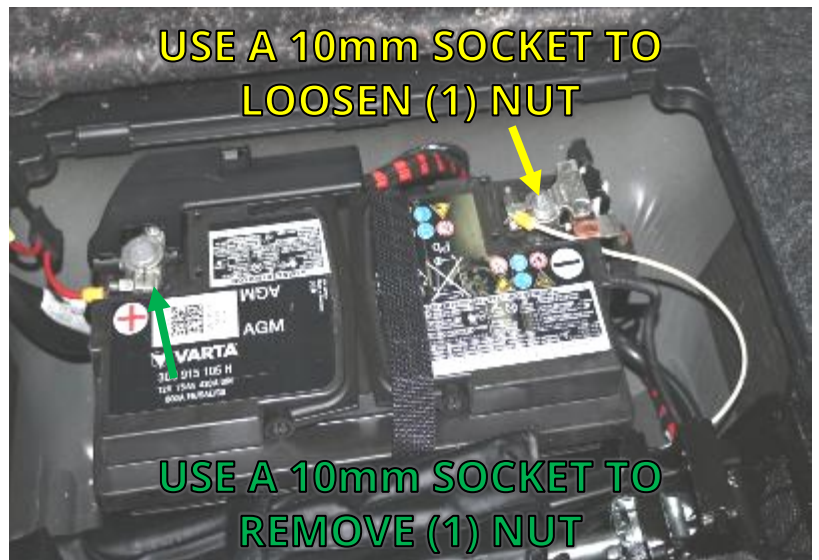
STRIPPER/  
CRIMPING  
TOOL



10mm  
SOCKET

24. Locate the fork terminal supplied in the wiring kit box. Trim excess ground wire length. Crimp the fork terminal to the ground wire. Connect the ground wire to the negative battery terminal (-).

25. Locate the fuse holder supplied in the wiring kit box. Remove the fuse from fuse holder. Trim excess power wire length. Crimp fuse lead to power wire. Connect fuse ring terminal to the positive battery terminal (+).



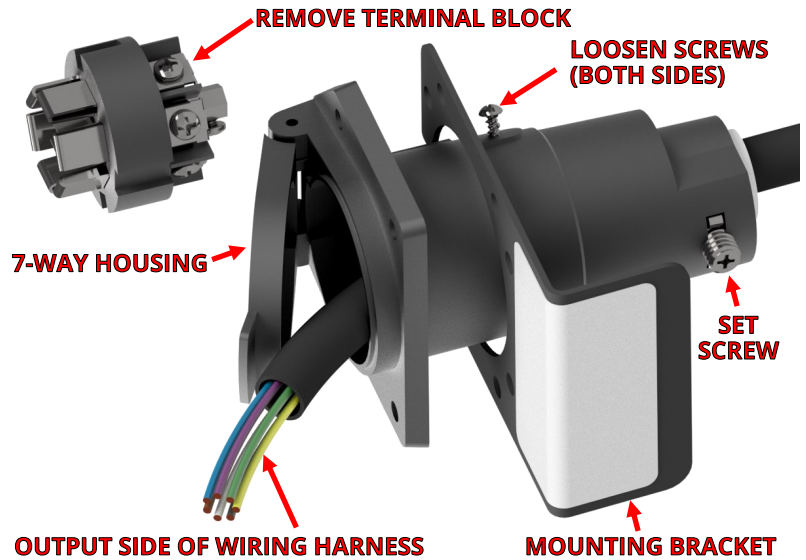
**NOTICE:** Loosen battery terminals just enough to install wiring, so vehicle wiring does not lose ground or power.

## WIRE 7-WAY PLUG



PHILLIPS HEAD  
SCREWDRIVER

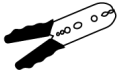
26. Locate the 7-way housing. Use a screwdriver to loosen (2) screws. Remove 7-way round terminal block. Place the mounting bracket onto the 7-way housing as shown. Use a screwdriver to loosen the set screw at the bottom of the 7-way housing. Route output side wires of the wiring harness through the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

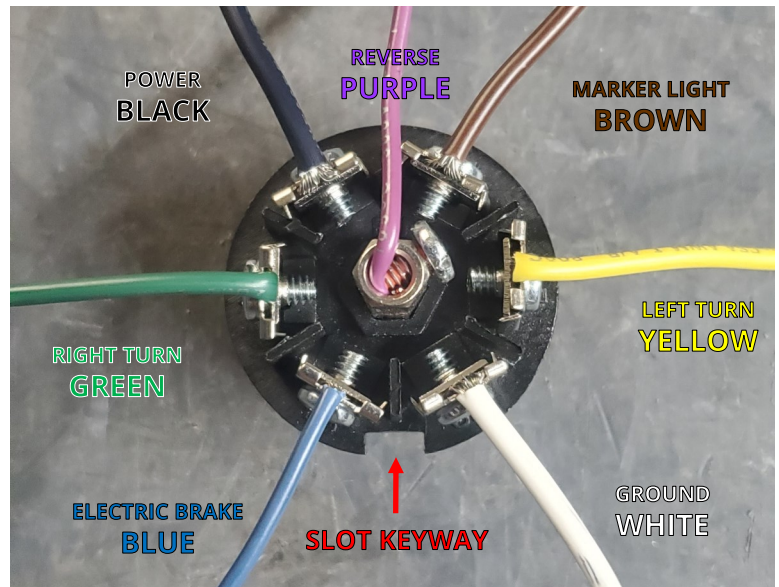


STRIPPER/  
CRIMPING  
TOOL

27. 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



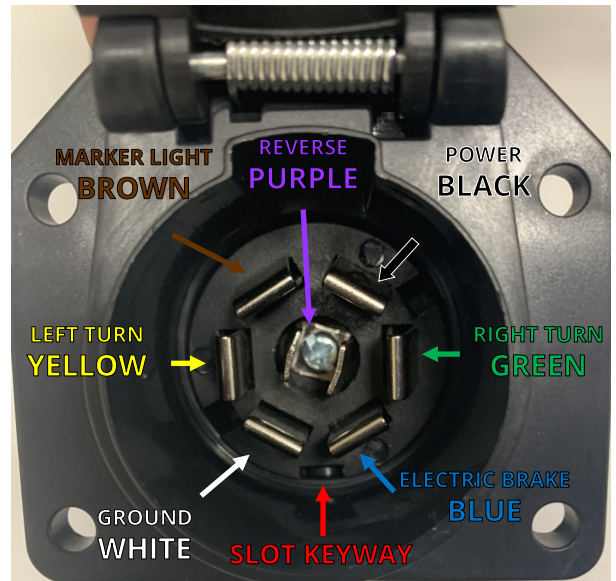
PHILLIPS HEAD  
SCREWDRIVER



MULTIMETER

28. 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 battery.**

**NOTICE: The trunk latch must be closed when probing and confirming wire signals.**



- 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

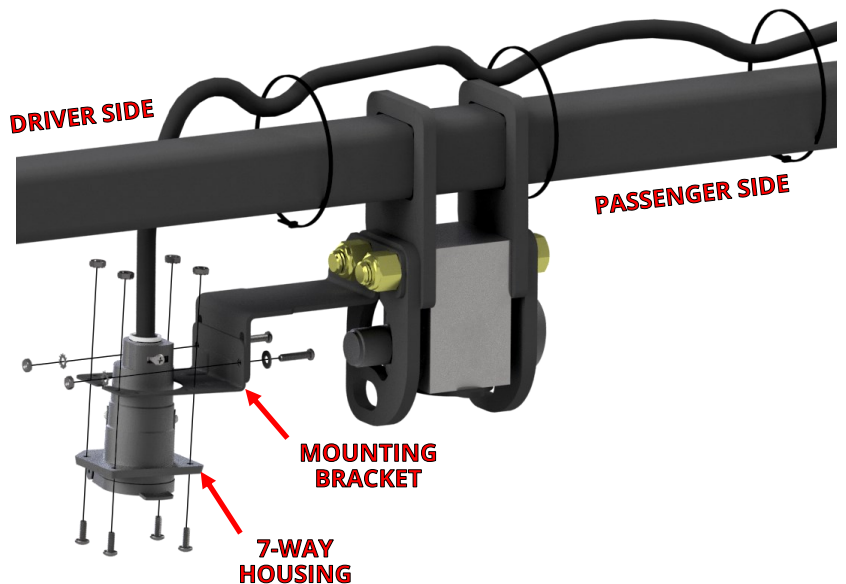


SILICONE

29. Attach the mounting bracket and 7-way housing to the Stealth hitch frame as shown. Secure harness to Stealth hitch frame with cable ties.

30. 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.

31. Use the provided adhesive foam strips to secure the control module to an inside body panel. Use silicone to waterproof the grommet.



## REINSTALL VEHICLE COMPONENTS

32. Reattach and secure the fascia and other vehicle components in reverse order. Refer to Steps 1-12.

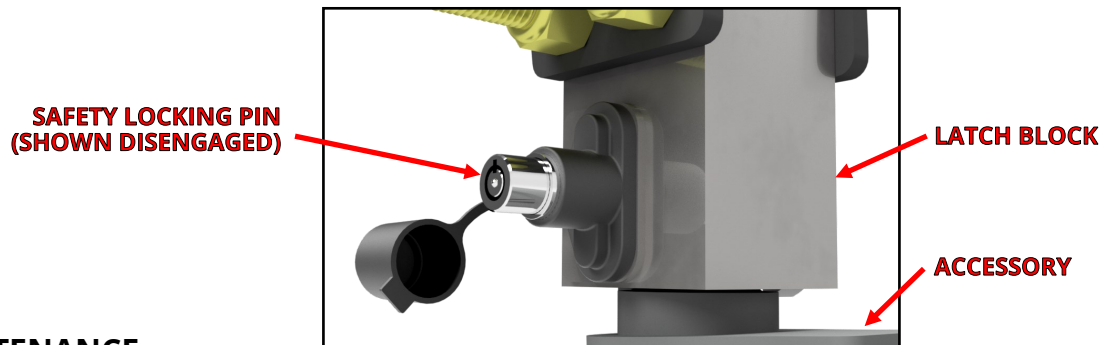


33. The factory cover panel can be removed and replaced by turning (2) plastic screws 90 degrees.



## FINAL VEHICLE EXAMINATION

34. Examine the body panels to ensure that they are in a pre-installation condition. Test the electronic functions of the vehicle. Correct any inconsistencies.
35. 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.