



www.stealthhitches.com 833•694•4824

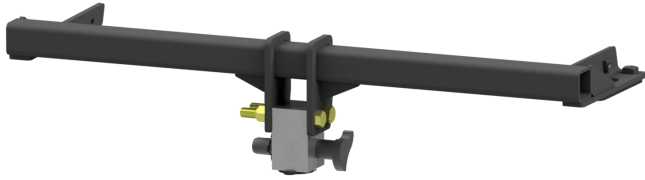
HITCH INSTALLATION INSTRUCTIONS

MAKE: VOLVO **YEARS:** 2011 - 2018 **MODEL/TRIM:** V60

RACK RECEIVER KIT#: **SHR33001**

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: **NO**
 FASCIA: **YES**
 GRAVEL GUARD TRIMMING: **NO**

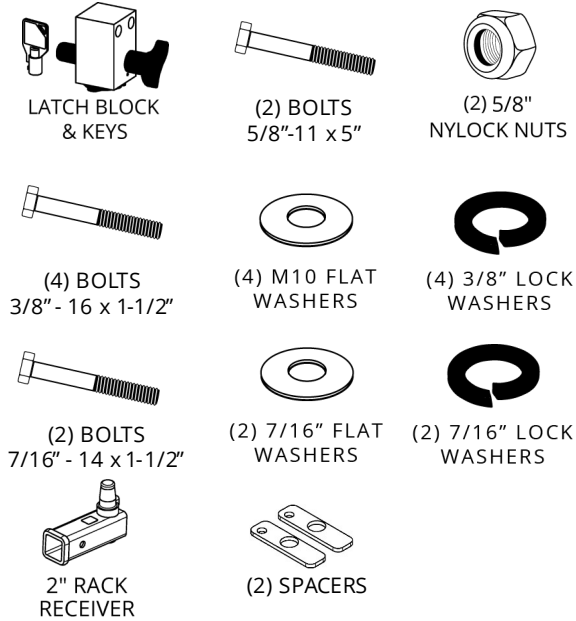


READ ALL INSTRUCTION WARNINGS AND LABELS

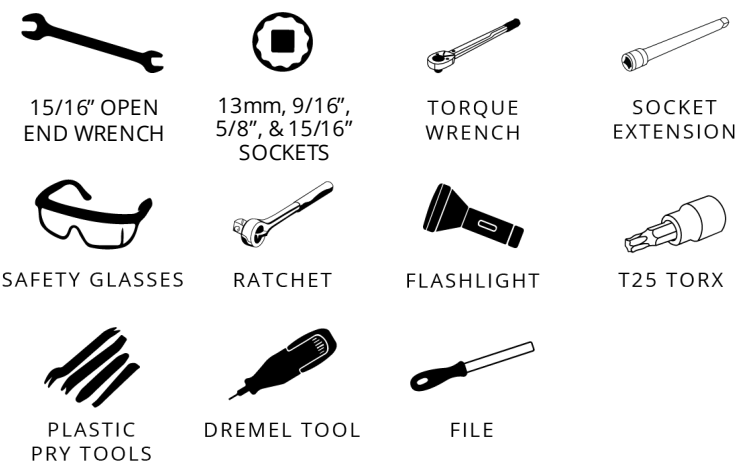


NO WELDING, METAL DRILLING OR VISIBLE TRIMMING REQUIRED

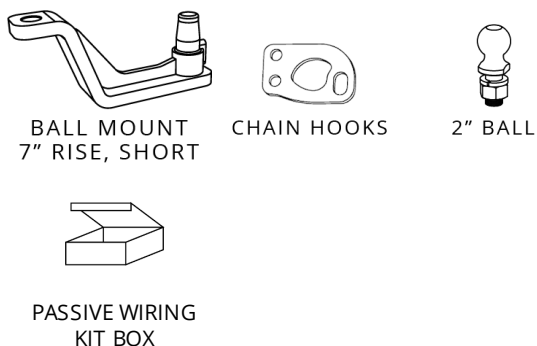
PARTS SUPPLIED WITH RACK RECEIVER KIT:



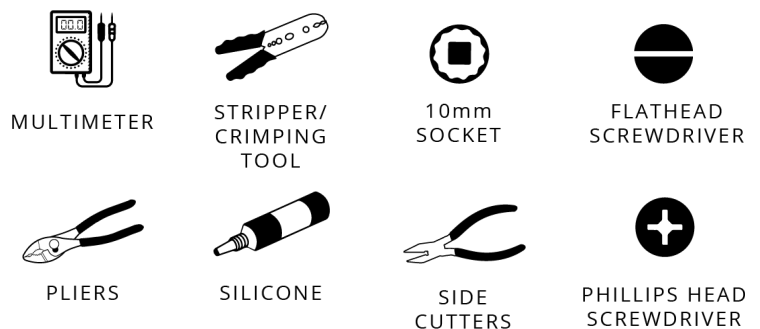
TOOLS REQUIRED:



ADDITIONAL PARTS FOR TOW KIT:



ADDITIONAL TOOLS FOR TOW KIT:



<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

1. Open the rear hatch of the vehicle. Locate and remove the (2) rubber door bumpers in the door seam by turning them counterclockwise.



2. Inside the rear wheel well, behind the tire, locate and remove (2) screws securing rear fascia and (3) screws securing the mud flap, see image.



3. Inside the wheel well, remove (1) screw with a Torx. Repeat Steps 2-3 on the other side of the vehicle.



GAIN ACCESS TO MOUNTING AREA CONTINUED

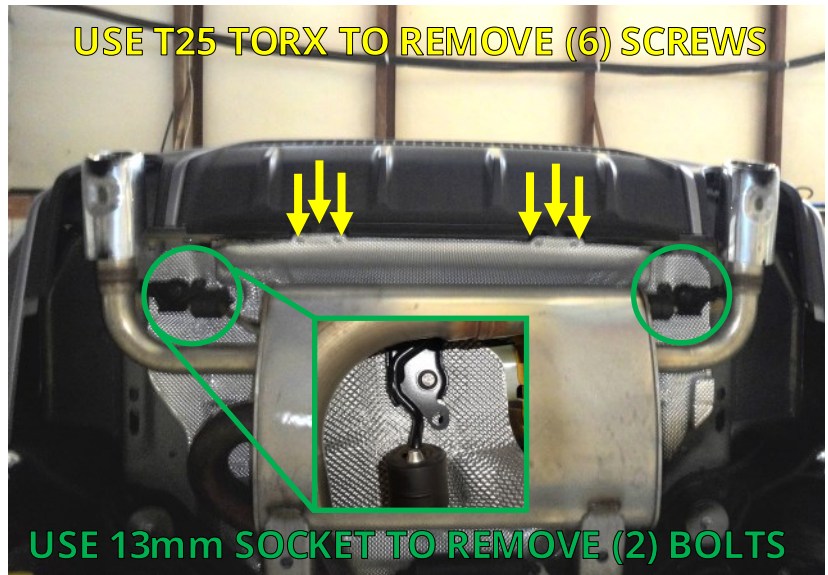


T25 TORX



13mm
SOCKET

4. Under the rear of the vehicle, remove (6) Torx screws from the bottom of the fascia. Remove (2) bolts securing the exhaust brackets.



PLASTIC
PRY TOOLS

5. This step requires a partner. While supporting the fascia so it does not fall, carefully pull outward and rearward on each side of the fascia to release the clips connecting the fascia to the vehicle. Start on the outside and work toward the center.

Note: Keep the fascia close to the vehicle, until the electrical sensor plug is disconnected.



6. Pull the fascia rearward enough to access the electrical sensor plug on the passenger side of the vehicle. Press the clip to disconnect the electrical sensor plug. Remove the fascia.

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



GAIN ACCESS TO MOUNTING AREA CONTINUED



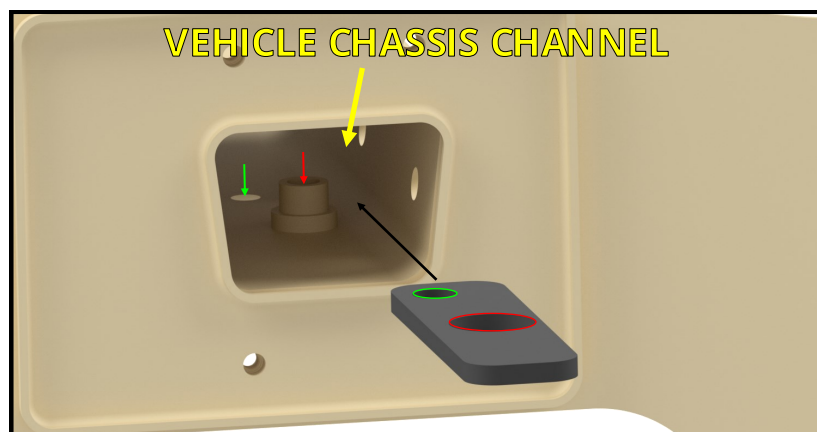
13mm
SOCKET

7. With the fascia out of the way, locate and remove the (6) bolts attaching the factory reinforcement beam to the vehicle. **Save** the factory reinforcement beam and bolts for reinstallation.



INSTALL STEALTH HITCH FRAME

8. Insert the spacers into each of the vehicle chassis channels so the holes align with the features shown inside the channel. (Green and red circle matched to green and red arrow.)



9. Slide the Stealth hitch frame into the chassis channels. Align the holes in the vehicle, spacers, and hitch frame



9/16"
SOCKET



5/8"
SOCKET



TORQUE
WRENCH

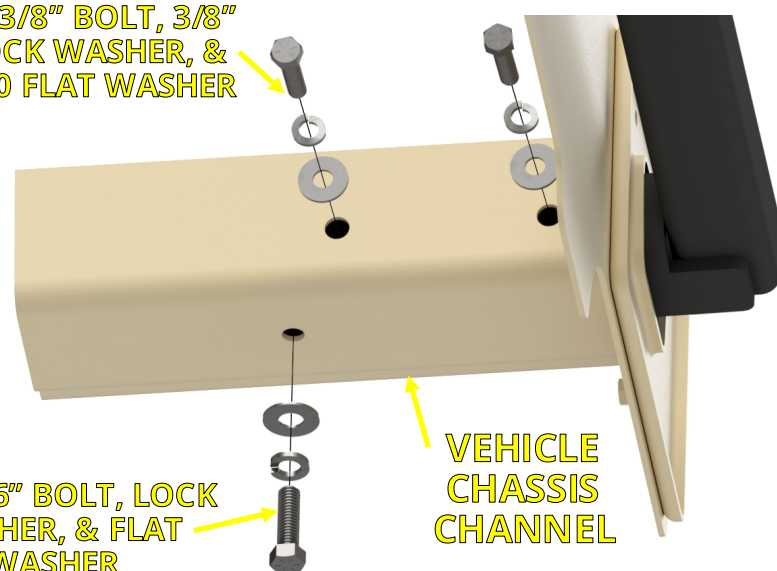
10. Secure the Stealth hitch frame and spacers with (2) supplied 7/16" bolts, lock washers, and flat washers in holes on the under side of chassis channel.

(4) 3/8" BOLT, 3/8"
LOCK WASHER, &
M10 FLAT WASHER

11. Use (4) supplied 3/8" bolts, 3/8" lock washers, and M10 flat washers in the inner holes of each chassis channel, as shown.

12. Torque 7/16" bolts to 65 ft.-lbs. Torque 3/8" bolts to 30 ft.-lbs.

(2) 7/16" BOLT, LOCK
WASHER, & FLAT
WASHER



INSTALL STEALTH HITCH FRAME CONTINUED

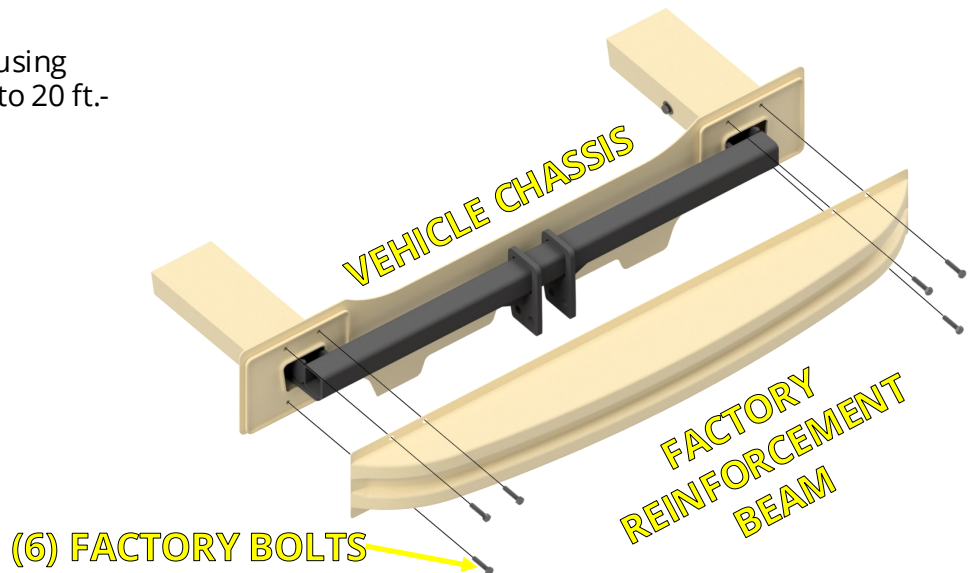


TORQUE
WRENCH



13mm
SOCKET

13. Reattach the factory reinforcement beam using factory bolts. Torque to 20 ft.-lbs.



MOUNT LATCH BLOCK



15/16"
SOCKET



15/16" OPEN
END WRENCH



TORQUE
WRENCH

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

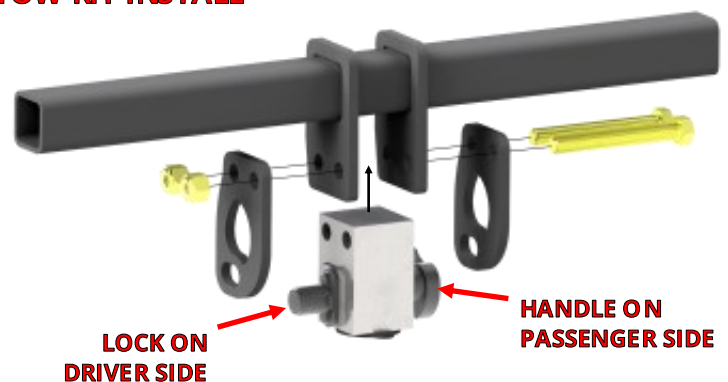
- **Rack Receiver Kit:** Install the latch block with (2) 5/8"-11 x 5" bolts and (2) 5/8" nylock nuts. Tighten each bolt to 150 ft.-lbs.
- **Tow Kit:** Install the latch block and (2) chain hooks with (2) 5/8"-11 x 5" bolts and (2) 5/8" nylock nuts. Tighten each bolt to 150 ft.-lbs.

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 31.
IF INSTALLING A TOW KIT, CONTINUE TO STEP 15.

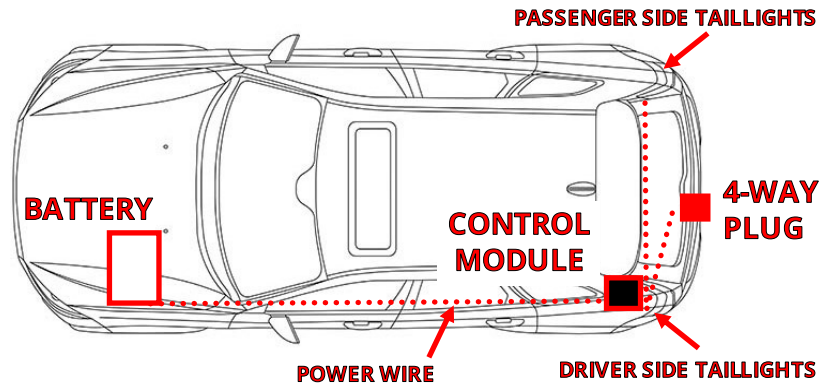
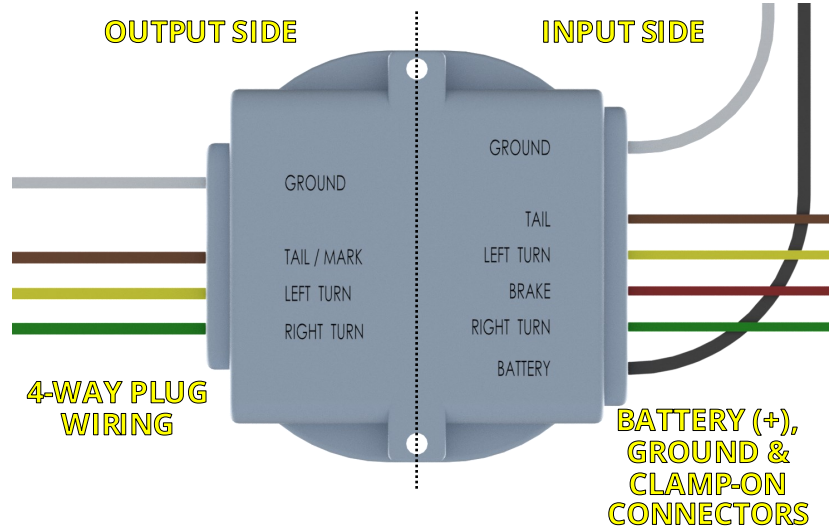
INSTALL PASSIVE WIRING KIT

#	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	POWERWIRE	1



15. 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

16. Lift up the cargo area floor panel and hook it up. Remove the floor pan.



17. Locate and remove the jack holder.



18. Remove the compartment storage covers from both driver and passenger side.



INSTALL WIRING KIT CONTINUED



SIDE CUTTERS

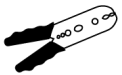
19. Locate the oval grommet on the rear driver side wall of the vehicle. Remove the grommet. Use side cutters to cut grommet as shown. Retrieve the power wire and the 4-way plug with wire. Pass the grommet over the wires so the plug will be on the outside of the vehicle. Thread the end of the wires into the hole and replace the grommet.



REMOVE THE GROMMET



USE SIDE CUTTERS TO CUT GROMMET

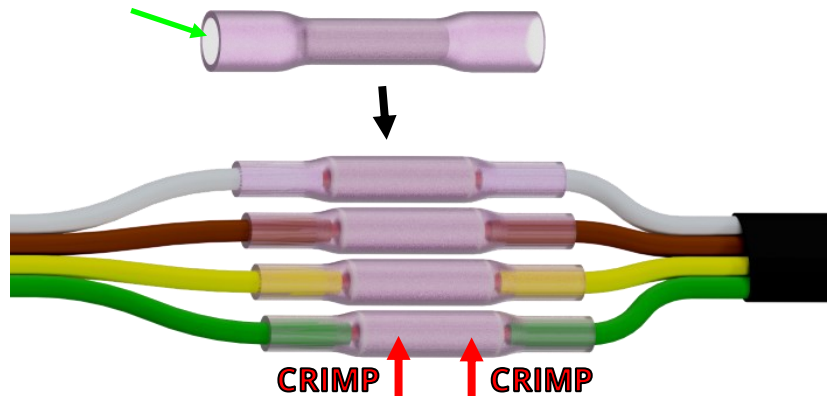


STRIPPER/CRIMPING TOOL

20. 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.

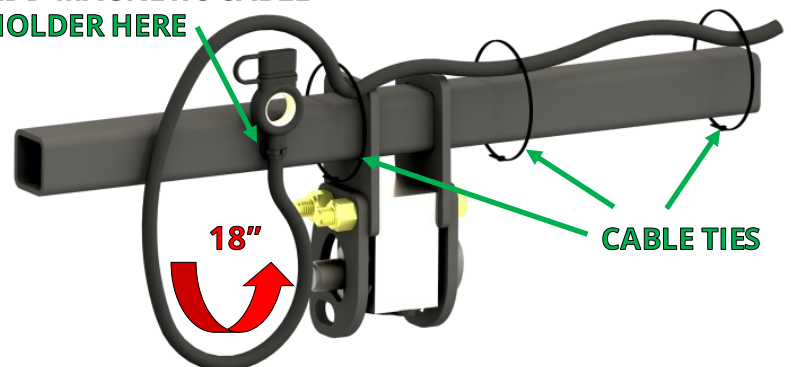
RED BUTT CONNECTOR WITH HEAT-SHRINK ENDS



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

21. 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.

SECURE OUTPUT WIRES TO HITCH FRAME
ADD MAGNETIC CABLE HOLDER HERE



CABLE TIES

INSTALL WIRING KIT CONTINUED



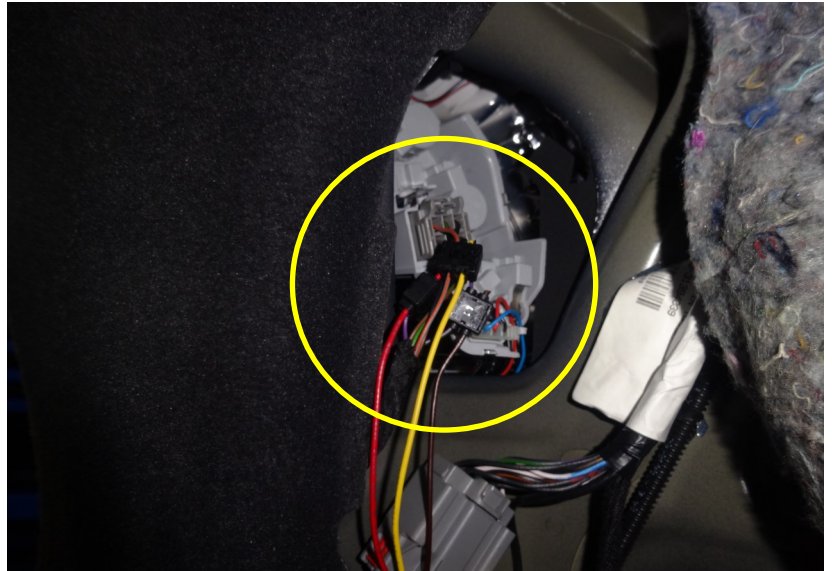
PLIERS



MULTIMETER

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

NOTICE: Verify wire signals with multimeter. Manufacturer may use different colors.



PLIERS













MULTIMETER

23. Use an existing vehicle wire harness as a guide to route the green input wire to the passenger side of the vehicle. Locate the indicated part of the vehicle wiring harness. Use a clamp-on connector to connect the green wire to right turn signal wire behind the taillight. (As shown in reference table below.)



CLAMP-ON CONNECTOR COLOR REFERENCE TABLE

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

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

INSTALL WIRING KIT CONTINUED



10mm
SOCKET



STRIPPER/
CRIMPING
TOOL

24. Locate the ground stud in the driver 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 stud.

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

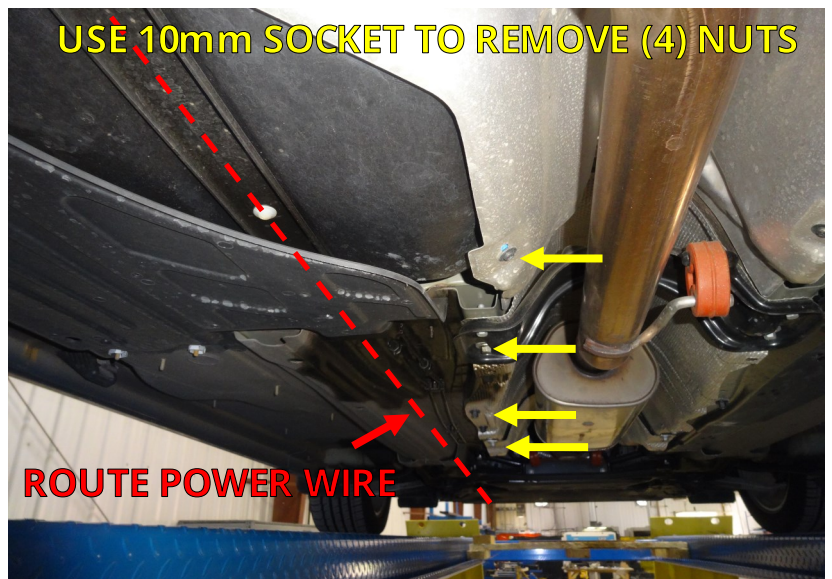


USE 10mm SOCKET TO LOOSEN NUT



10mm
SOCKET

25. 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 (4) nuts holding the gravel guard to allow routing through it. Then pass the wire up into the engine compartment.



USE 10mm SOCKET TO REMOVE (4) NUTS

ROUTE POWER WIRE



10mm
SOCKET



STRIPPER/
CRIMPING
TOOL

26. Remove vehicle battery cover. 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 (+).



USE 10mm SOCKET TO REMOVE NUT

INSTALL WIRING KIT CONTINUED



MULTIMETER



STRIPPER/
CRIMPING
TOOL

27. Determine the amount of power wire needed to reach the control module inside the vehicle. Trim the control module power 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. Reinstall the 20 Amp fuse in the harness fuse holder located near the battery.

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

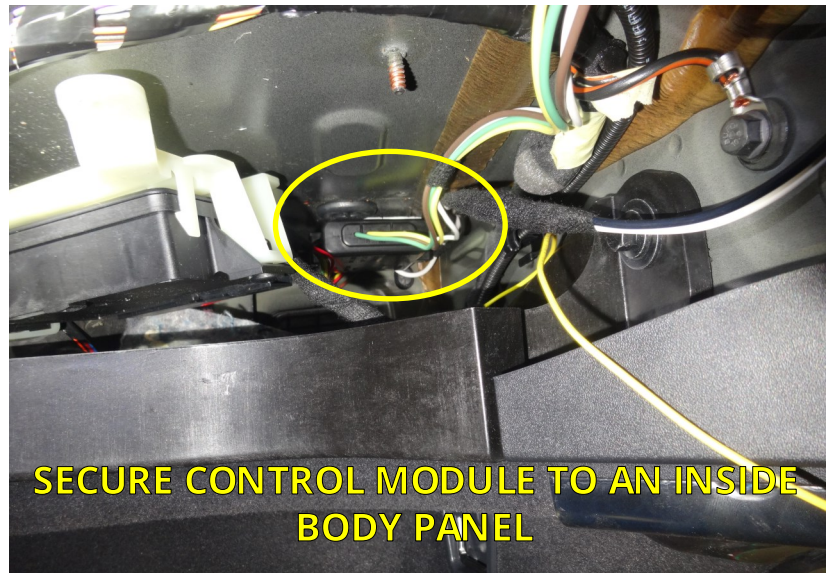
28. Test the 4-way plug using a multimeter or connect the plug to a trailer and verify that the lights and brakes work correctly.



SILICONE

29. 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 provided adhesive foam strips to secure the control module to an inside body panel.

30. 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.



CUT ACCESS TO LATCH BLOCK

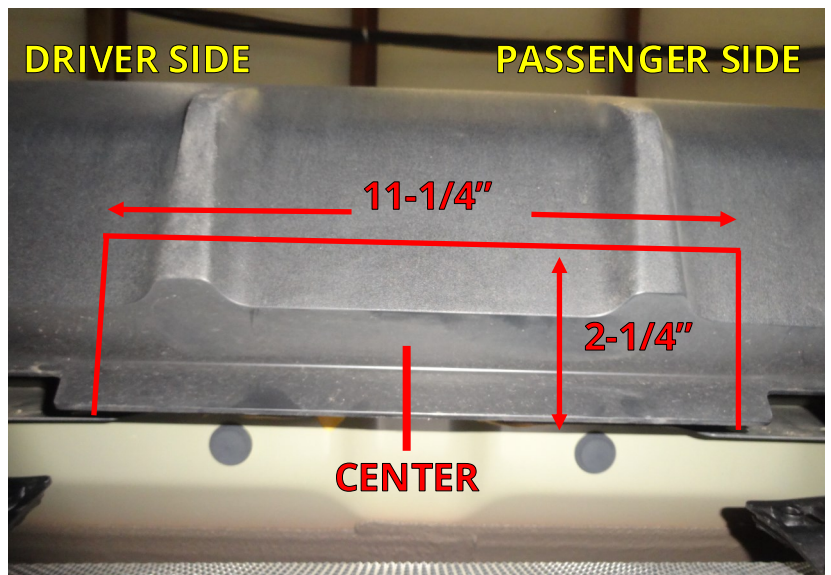


DREMEL TOOL



FILE

31. Trim the bottom of the fascia as shown, with Dremel tool. Use a file to smooth out the cut.



REINSTALL VEHICLE COMPONENTS CONTINUED

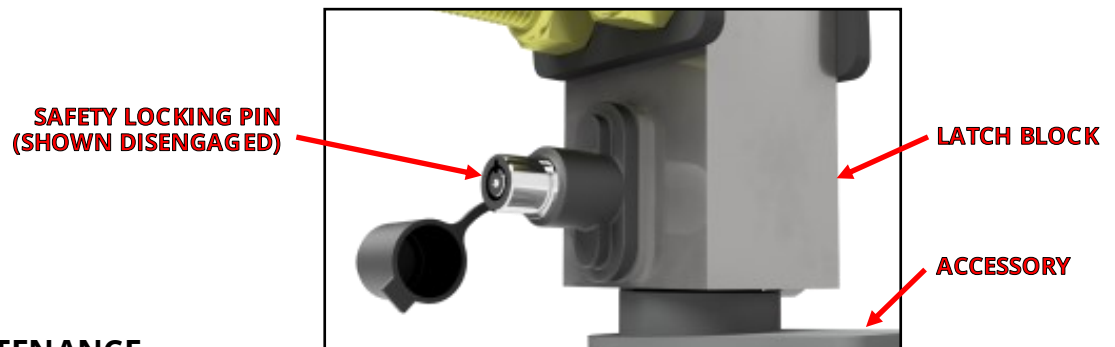
32. Reattach and secure the fascia and other vehicle components in reverse order. Refer to Steps 1-6.

NOTICE: Remember to reconnect the electrical sensor plug in Step 6 before reinstalling the fascia.



FINAL VEHICLE EXAMINATION

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