



HITCH INSTALLATION INSTRUCTIONS

MAKE: BMW **YEARS:** 2017 - 2023 **MODEL/TRIM:** 5 SERIES (G30 CHASSIS)

www.stealthhitches.com 833-694-4824

RACK RECEIVER KIT#: **SHR31009**

COMPATIBLE WITH TOW KIT: **SHT25000**



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

UNDER VEHICLE TRIMMING:

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

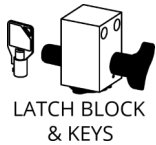


READ ALL INSTRUCTION WARNINGS AND LABELS

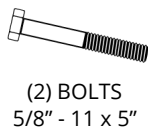


NO WELDING, METAL DRILLING OR VISIBLE TRIMMING REQUIRED

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) PLASTIC
RIVETS

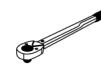
TOOLS REQUIRED:



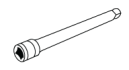
15/16" OPEN
END WRENCH



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



TORQUE
WRENCH



SOCKET
EXTENSION



SAFETY GLASSES



RATCHET



FLASHLIGHT



FILE



90 DEGREE
PICK



PLASTIC
PRY TOOLS

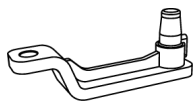


DREMEL TOOL



T15 & T40
TORX

ADDITIONAL PARTS FOR TOW KIT:



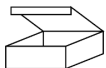
BALL MOUNT
5" RISE, SHORT



CHAIN HOOKS



2" BALL

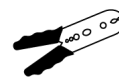


PASSIVE WIRING
KIT BOX

ADDITIONAL TOOLS FOR TOW KIT:



PLIERS



STRIPPER/
CRIMPING
TOOL



MULTIMETER



DRILL &
3/8" BIT



SILICONE

<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. Remove the taillight cover with a plastic pry tool. Use pry tool to release clips on top outer edge of cover. Lift up to remove. Repeat on other side of vehicle.



2. Remove (4) nuts that secure the taillights with a socket. (Taillights are still held in place with a screw inside the cargo area)
3. Remove (2) T15 screws holding the top of the fascia with Torx. (green arrows)



4. Inside the cargo area, remove the floor panel by lifting up.



GAIN ACCESS TO MOUNTING AREA CONTINUED



90 DEGREE PICK

5. Locate (4) plastic rivets along the rear wall of the cargo area. Remove these rivets with a 90 degree pick. Pull upward on the threshold to remove.

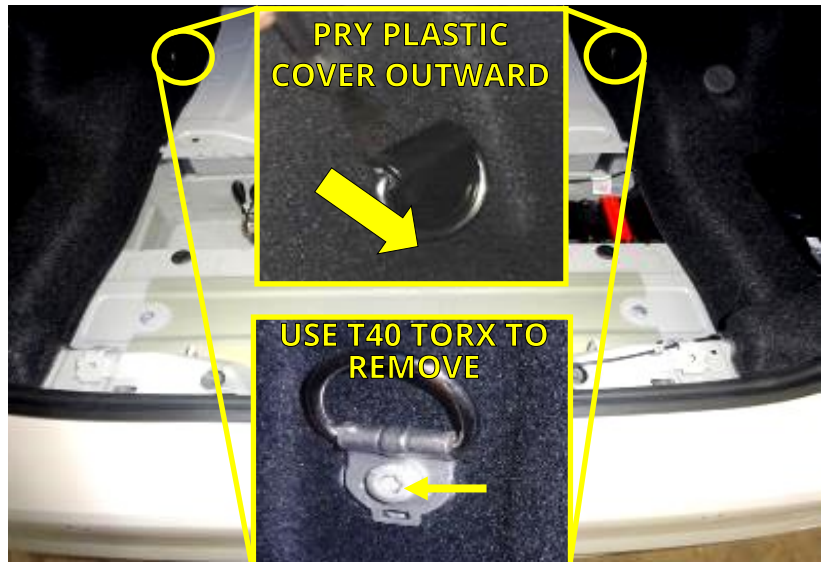


PLASTIC PRY TOOLS



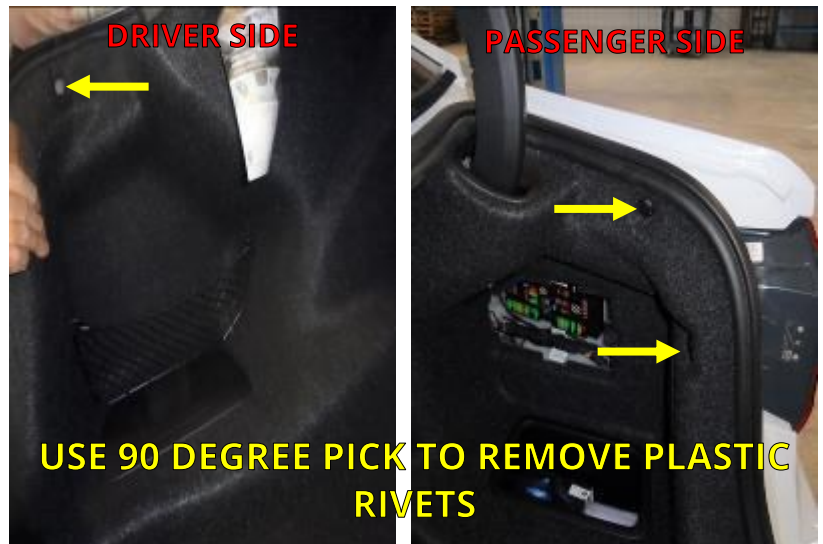
T40 TORX

6. Locate (2) cargo anchors in the cargo area. Remove plastic cover to expose cargo anchor screw. Remove the cargo anchor screw with a Torx.



90 DEGREE PICK

7. Locate (1) plastic rivet on the driver side of the cargo area and (2) plastic rivets on the passenger side. Remove the plastic rivets on each side of the cargo area with a 90 degree pick.



GAIN ACCESS TO MOUNTING AREA CONTINUED

8. Squeeze and remove the plastic trim around the trunk support beams to facilitate opening up the trunk liner to enable opening up the trunk liner.

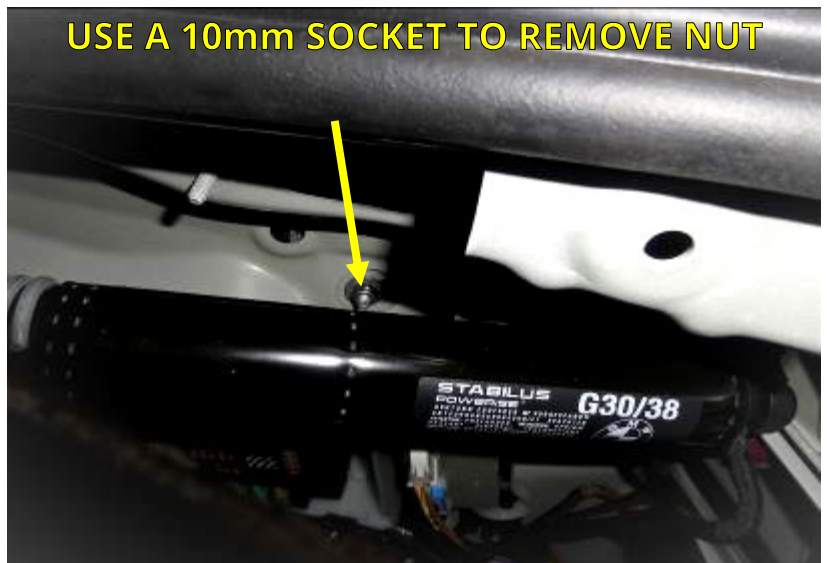


9. Pull the liner away from the sides of the vehicle to access the third screw holding the taillight.



10mm
SOCKET

10. Locate and remove nut with socket inside the cargo area holding the taillight in place. Remove the taillight. Repeat on other side of vehicle.



GAIN ACCESS TO MOUNTING AREA CONTINUED



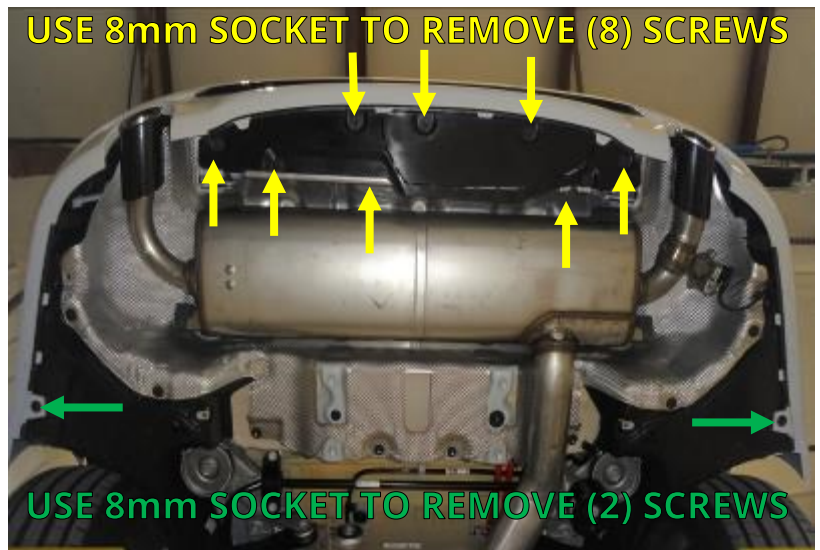
8mm
SOCKET

11. Inside the rear wheel well, behind the tire, locate the (3) screws which are holding the wheel well liner. Remove these screws and fold the flexible liner back toward the tire. Behind the liner locate (1) screw and remove it.



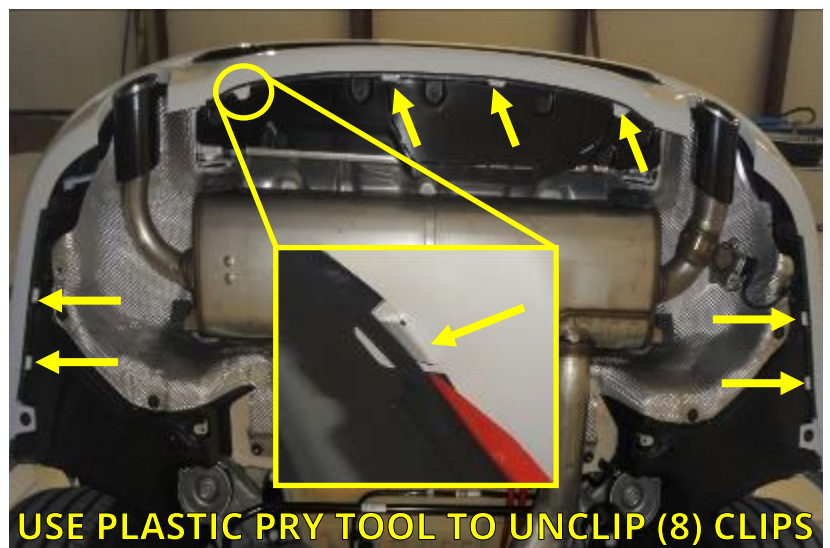
8mm
SOCKET

12. Underneath the rear of the vehicle remove (8) screws from the gravel guard with a socket. (yellow arrows)
13. Remove (2) screws from the outside edges of the fascia. (green arrows)



PLASTIC
PRY TOOLS

14. Unfasten (8) clips under fascia. Press down with a plastic pry tool to unclip.



GAIN ACCESS TO MOUNTING AREA CONTINUED



15. 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 to disconnect (4) clips on the side of the vehicle.

16. Continue applying pressure around the rear of the fascia until (3) clips are released. Repeat on other side of vehicle.



17. This step requires a partner. Pull the fascia rearward enough to access the PDC sensor plug on the passenger side. Disconnect the sensor plug. Remove the fascia completely.

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



18. Remove the plastic bumper panel from the factory reinforcement beam. Release (2) clips that secure the plastic bumper panel by pressing down with a plastic pry tool. Remove (4) plastic rivets with a 90 degree pick. Unplug any wires connected to plastic bumper panel and put aside.

19. Remove (4) nuts securing the factory reinforcement beam. **Save** nuts for reinstallation. Remove reinforcement beam and discard.



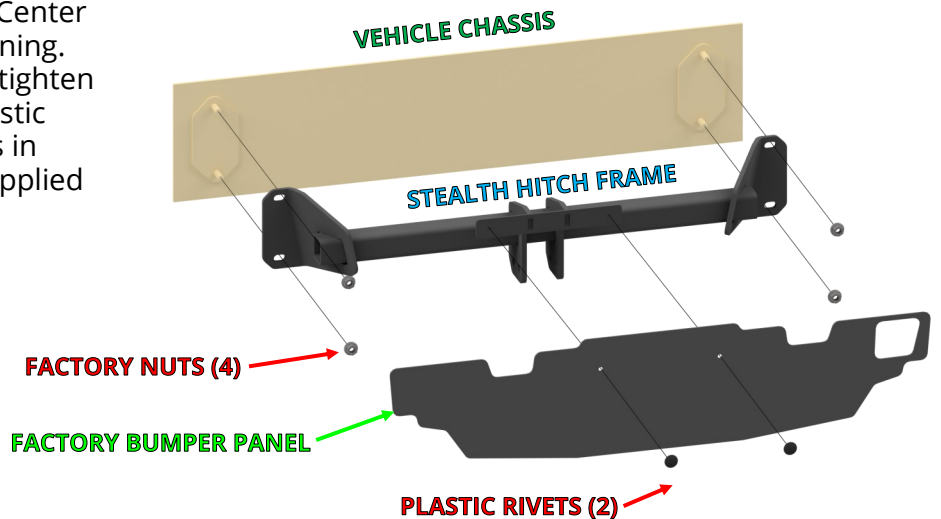
INSTALL STEALTH HITCH FRAME



TORQUE
WRENCH

20. Install the Stealth hitch frame using (4) factory nuts. Center the hitch before tightening. Use torque wrench to tighten to 85 ft.-lbs. Attach plastic bumper panel to holes in hitch frame with (2) supplied rivets.

USE 18mm SOCKET TO INSTALL (4) NUTS



MOUNT LATCH BLOCK



15/16"
SOCKET



15/16" OPEN
END WRENCH



TORQUE
WRENCH

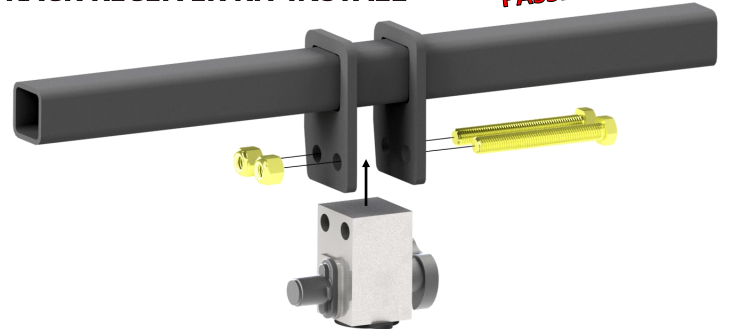
21. Installation of the latch block varies depending on which kit you are installing.

- **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

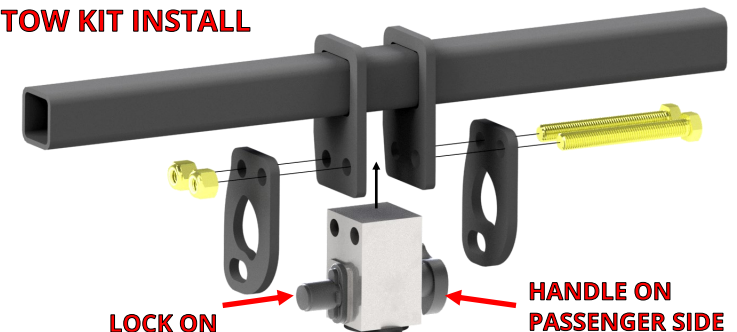
PASSENGER SIDE



TOW KIT INSTALL

LOCK ON
DRIVER SIDE

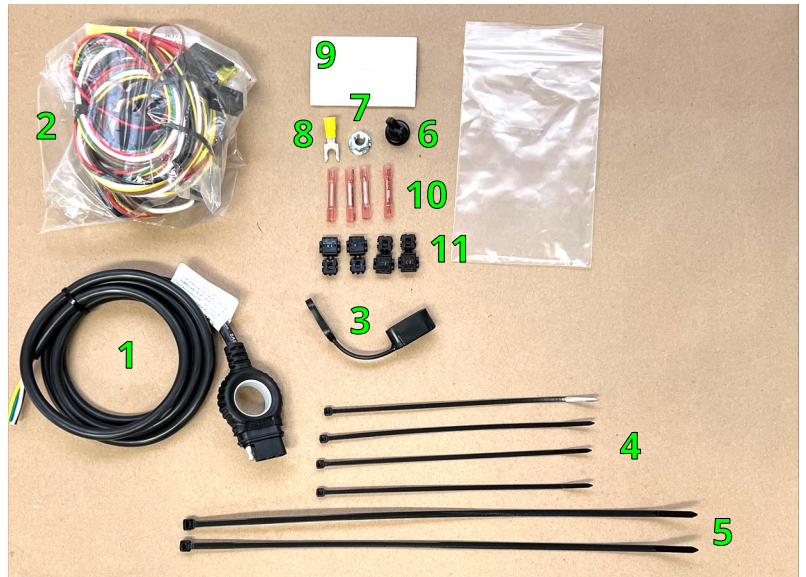
HANDLE ON
PASSENGER SIDE



IF INSTALLING A RACK RECEIVER KIT, SKIP TO STEP 34.
IF INSTALLING A TOW KIT, CONTINUE TO STEP 22.

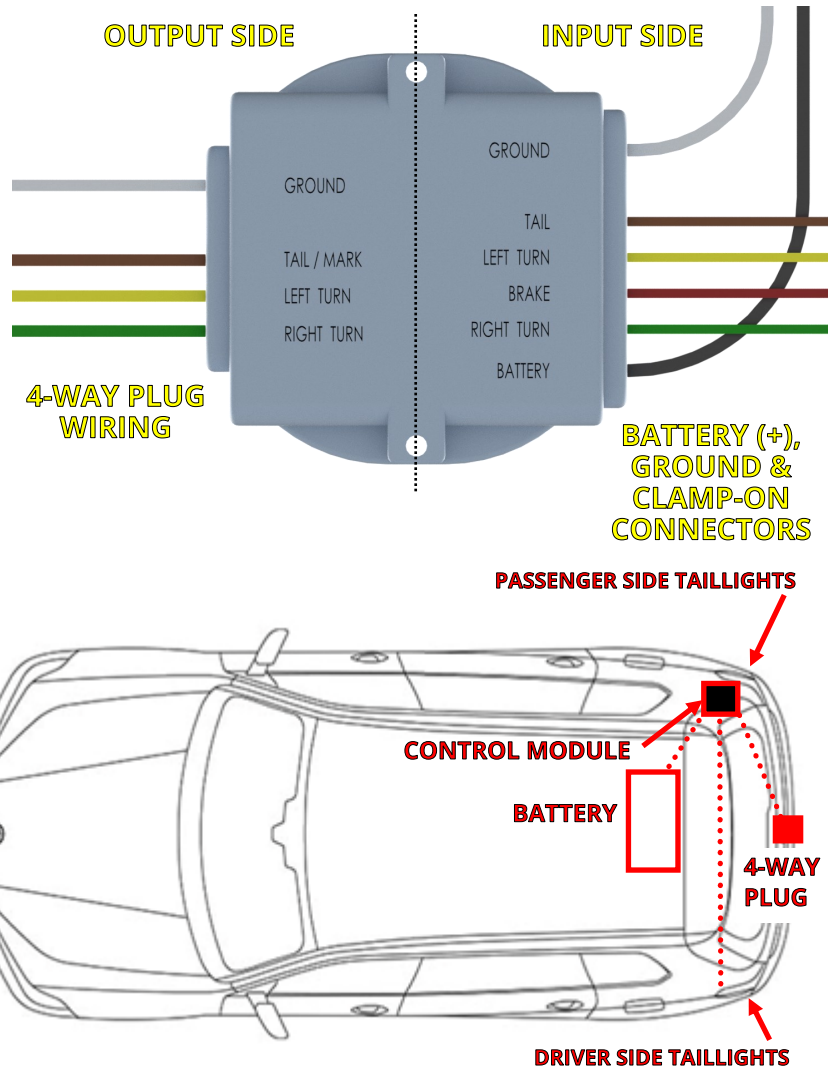
INSTALL PASSIVE WIRING KIT

#	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



22. 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

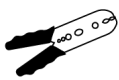


DRILL &
3/8" BIT

23. Locate and remove rubber grommet on passenger side of vehicle. Drill a 3/8" hole in the center of the grommet. Retrieve the 4-way connector harness. 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.



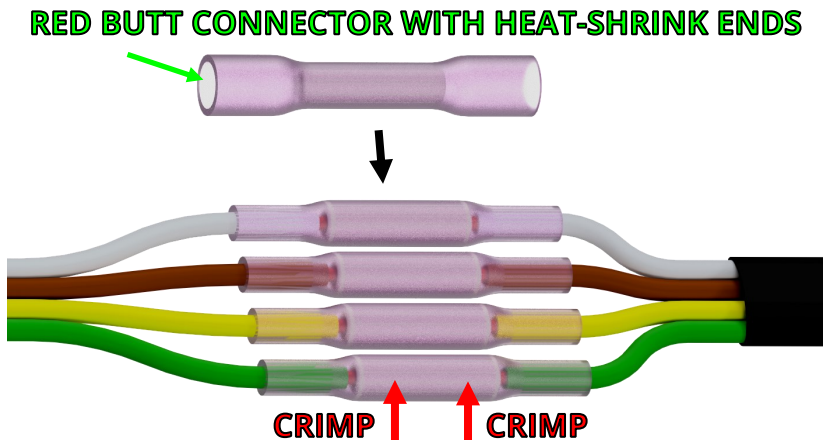
24. Place control module in the passenger side compartment. Use provided adhesive strips to secure control against a flat metal surface.



STRIPPER/
CRIMPING
TOOL

25. 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.

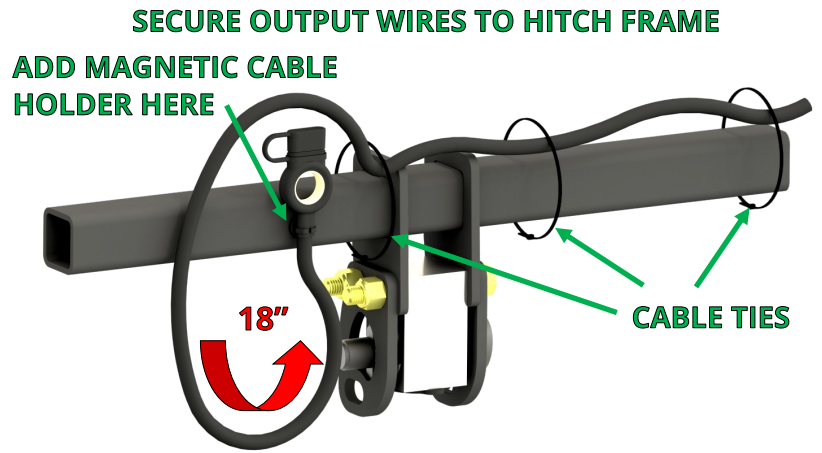
NOTICE (OPTIONAL): The butt connectors are heat shrink connectors. Apply heat to waterproof the connectors after crimping.



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

INSTALL WIRING KIT CONTINUED

26. 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











27. The wires on the input side of the module need to be attached to the vehicle wiring. Inside the passenger side cargo compartment use clamp-on connectors to connect the brown, red and green wires to wires behind taillight. (As shown in reference table below.)



28. 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 the taillight. (See reference table below.)

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

CLAMP-ON CONNECTOR COLOR REFERENCE TABLE

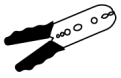
SIGNAL INPUT WIRES			POWER & GROUND WIRES		
FUNCTION	HARNESS	VEHICLE			
LEFT TURN	 YELLOW	 BLUE/GREEN	12V+ (POWER)	 BLACK	BATTERY (+)
RIGHT TURN	 GREEN	 BLUE/BROWN	GROUND	 WHITE	BATTERY (-)
MARKER	 BROWN	 GREEN/GRAY			
BRAKE	 RED	 GRAY/YELLOW			

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

INSTALL WIRING KIT CONTINUED



10mm
SOCKET



STRIPPER/
CRIMPING
TOOL

29. Locate the fork terminal supplied in the wiring kit box. Trim white ground wire so it will reach negative battery terminal (-) without excess wire. Crimp the fork terminal to the ground wire. Connect the ground wire to the negative battery terminal (-).

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



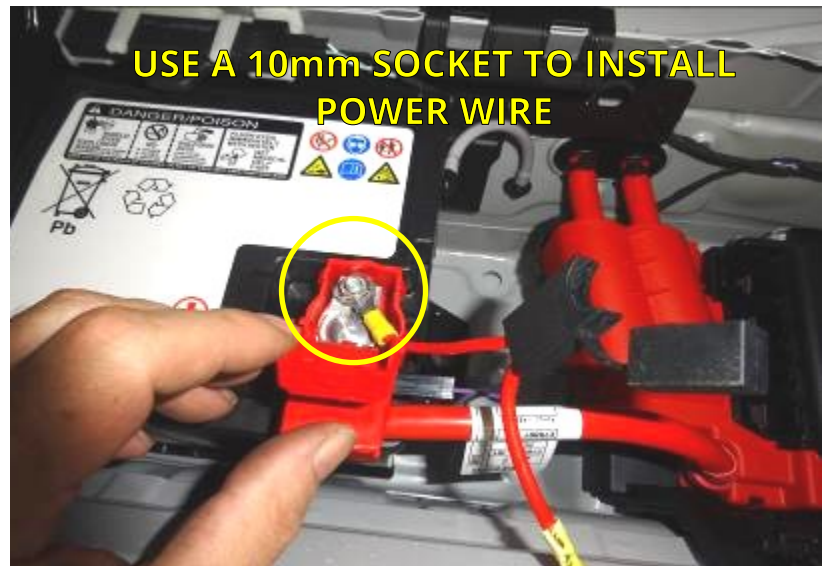
10mm
SOCKET



STRIPPER/
CRIMPING
TOOL

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

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



SILICONE

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

NOTE: Taillights will need to be temporarily plugged in during testing.

32. Use silicone to waterproof the grommet.

33. 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.

CUT ACCESS TO LATCH BLOCK

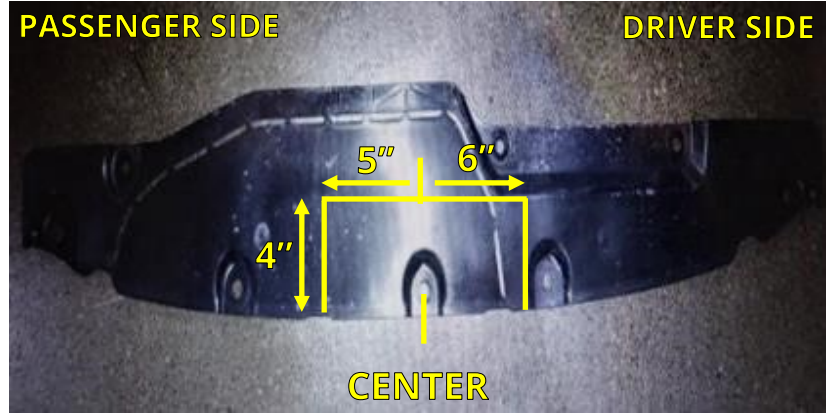


FILE



DREMEL TOOL

34. Cut out the gravel guard with Dremel tool. Use a file to smooth out the cut



REINSTALL VEHICLE COMPONENTS

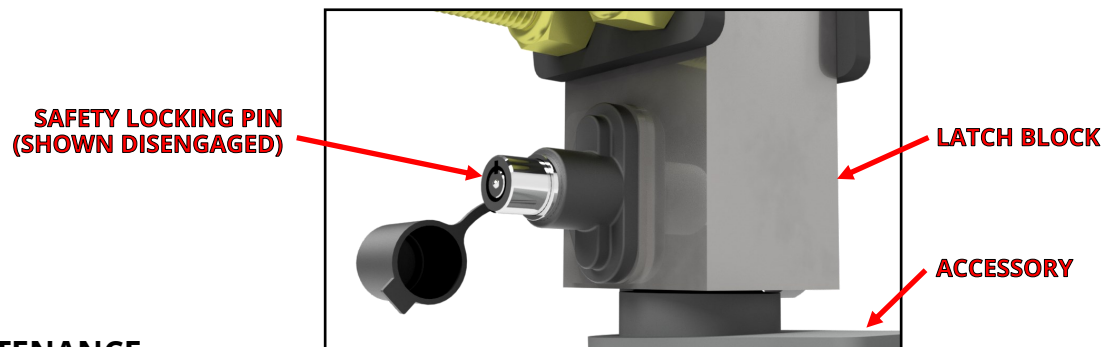
35. Reattach and secure the fascia, taillights, and other vehicle components in reverse order. Refer to Steps 1-17.

NOTICE: Remember to plug in the sensor plugs in Step 17 before reinstalling the fascia.



FINAL VEHICLE EXAMINATION

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



PRODUCT USE AND MAINTENANCE

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

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