



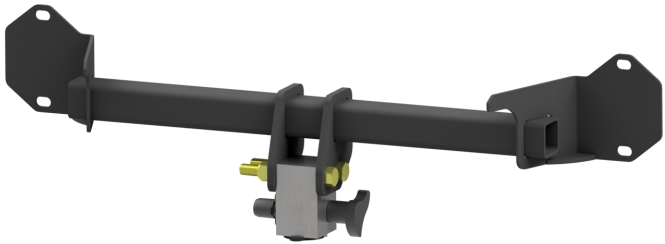
www.stealthhitches.com 833-694-4824

HITCH INSTALLATION INSTRUCTIONS

MAKE: BMW	YEARS: 2014 - 2021 2014 - 2021 2016 - 2021 2016 - 2021	MODEL/TRIM: 2 Series Convertible 2 Series Coupe M2 M2 Competition Coupe
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RACK RECEIVER KIT#: **SHR31001**

COMPATIBLE WITH TOW KIT: **SHT25002**



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

UNDER VEHICLE TRIMMING:

HEAT SHIELD: **2 SERIES ONLY**
 FASCIA: **M2 ONLY**
 GRAVEL GUARD TRIMMING:
M2 ONLY

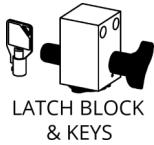


READ ALL INSTRUCTION WARNINGS AND LABELS



NO WELDING, METAL DRILLING OR VISIBLE TRIMMING REQUIRED

PARTS SUPPLIED WITH RACK RECEIVER KIT:



LATCH BLOCK & KEYS



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

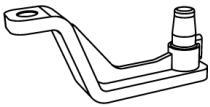


(2) 5/8"
NYLOCK NUTS



2" RACK
RECEIVER

ADDITIONAL PARTS FOR TOW KIT:



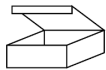
BALL MOUNT
7" RISE, SHORT



CHAIN HOOKS



2" BALL



PASSIVE WIRING
KIT BOX

TOOLS REQUIRED:



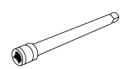
15/16" OPEN
END WRENCH



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



RATCHET



SOCKET
EXTENSION



TORQUE
WRENCH



T20 TORX



FLASHLIGHT



PLASTIC
PRY TOOLS



SAFETY GLASSES



90 DEGREE
PICK



FILE
(M2 Only)



TIN SNIPS
(2 Series Only)



DREMEL TOOL
(M2 Only)

ADDITIONAL TOOLS FOR TOW KIT:



MULTIMETER



STRIPPER/
CRIMPING
TOOL



SILICONE



DRILL &
3/8" BIT



PLIERS

<THESE INSTRUCTIONS MUST BE GIVEN TO THE END USER>

NOTICE: Installation of Stealth products may or may not require the addition of a wiring harness to the vehicle.

- The Rack Receiver only product does not require adding a wiring harness.
- The Rack Receiver plus Tow Kit requires the addition of a "Passive" wiring harness to the vehicle. The passive harness "reads" the output of the vehicle's lights and translates the signals to the trailer without being connected to the vehicle computer.

INSTALLATION NOTE: In most instances, these instructions will only outline disassembly of vehicle components. Re-installation of components will require the installer to retain vehicle hardware and work through disassembly instructions in reverse order. When installation is complete, double check that all vehicle components have been replaced and are secured.

IMPORTANT SAFETY NOTICE FOR STEALTH HITCH INSTALLERS AND CUSTOMERS.

Read all installation and operating instructions along with all labels before installing or using this product. Do not perform any installation or towing procedures without fully understanding the correct tools and actions for all steps. Call for support if needed.

⚠ WARNING Failure to comply with the safety information in these instructions could result in serious injury or death.

- ⚠ Do not modify this product in any manner. Doing so could alter its integrity and lead to a loss of attachment between the trailer and the tow vehicle.
- ⚠ Adding Stealth hitch components to the chassis of any vehicle can be hazardous. There is potential for unexpected combustion of fuel, electric shock, burns, shifting or falling of unstable vehicle, damage to vehicle, injury from tool usage and many other hazards. This installation must be completed by someone who is aware of the hazards involved. This person must be knowledgeable of proper safety procedures for a vehicle modification of this nature, and for usage of the equipment required to perform the installation.
- ⚠ Without proper knowledge, towing can be a dangerous activity. Understand all the risks involved with towing before proceeding. For information on towing safety, see "**The Trailer Handbook: A Guide to Understanding Trailer and Towing Safety**" from the National Association of Trailer Manufacturers, www.NATM.com and your trailer and tow vehicle manufacturer's owner's manual.
- ⚠ Do not exceed tow or tongue rating of coupler, tow or tongue rating of hitch, or tow or weight ratings of tow vehicle or trailer. See vehicle and trailer manufacturer information for ratings. Exceeding these ratings may cause damage to towing components or loss of attachment between the trailer and vehicle.
- ⚠ While installation is being performed, check for signs of damage or excessive corrosion. Do not install hitch components over vehicle parts that are broken or have compromised structural integrity.
- ⚠ This product was designed to fit vehicles in their original, "as manufactured" condition. Compatibility with vehicles having replacement parts, or other modifications is not guaranteed. Inspect vehicle for modifications before installation of this product.
- ⚠ Some accessories, like the rack receiver, are not rated for towing. Do not use any accessories without proper knowledge of their use.
- ⚠ A visual inspection of the hitch should be performed before each use. Regularly check that all connections are secure, including those that secure the hitch to the vehicle. Check for cracks or damage to the hitch. Do not use the hitch if cracks or damage outside of normal wear is found. Using a hitch that has unsecure connections and/or cracks or damage could result in damage to the tow vehicle, trailer, towing components and loss of attachment between the tow vehicle and trailer.
- ⚠ Stealth hitches are not compatible with any weight distribution or sway control products. Adding additional products to the trailer or chassis which modifies the function of the Stealth hitch may cause hitch failure.

NOTICE: Installation of hitch requires removal of vehicle parts and interaction with vehicular electronics. Before installation, check the condition of body panels and note any locations where panels are not flush. Check the electronic functions of the vehicle, such as: headlights, taillights, turn signals, cameras, backup sensors, Parking Distance Controller (PDC), foot activated cargo access, etc. It is the responsibility of the installer to restore the fit and function of the vehicle.

GAIN ACCESS TO MOUNTING AREA



90 DEGREE PICK



10mm SOCKET

1. Use a 90 degree pick to dislodge (2) plastic covers to gain access to (2) nuts. Use a socket to remove (2) nuts.



2. Slide taillight rearward to remove. Disconnect taillight plug. Repeat Steps 1-2 on other side of vehicle.



T20 TORX



8mm SOCKET

3. Locate and remove (4) screws securing the rear fascia inside the rear wheel wells.



GAIN ACCESS TO MOUNTING AREA CONTINUED



90 DEGREE PICK



8mm SOCKET

4. **M2 only** Remove (6) screws from the underside of the fascia. Remove (4) plastic rivets. Remove (4) screws from heat shield.



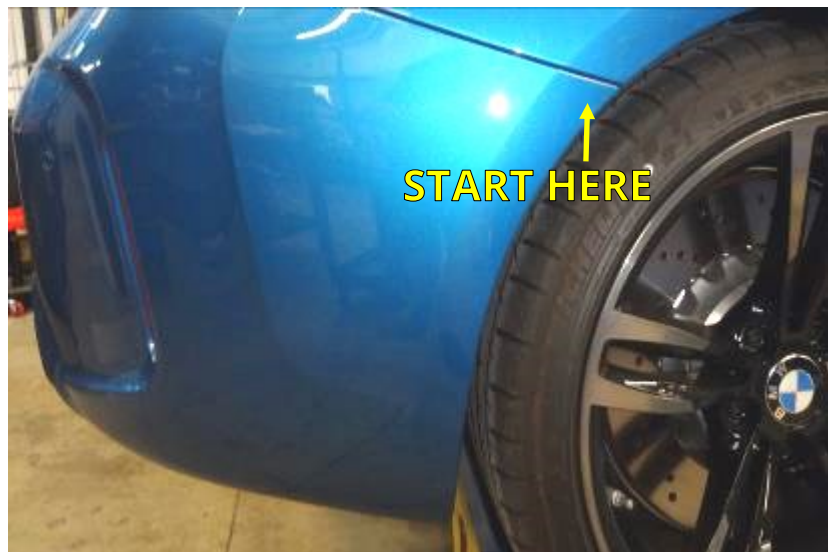
8mm SOCKET

5. **2 Series only** Remove (10) screws from the bottom of the fascia.



PLASTIC PRY TOOLS

6. This step requires a partner. The fascia is clipped to the vehicle body directly behind the wheel wells. Pull outward 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 as they are exposed. Pull the fascia rearward enough to check for any connected wiring between the fascia and the vehicle. Disconnect any plugs located on the inside of the fascia. Remove the fascia completely.

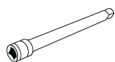


NOTICE: Carefully remove the fascia and place on a blanket or pad.

GAIN ACCESS TO MOUNTING AREA CONTINUED



18mm
DEEP WELL
SOCKET



SOCKET
EXTENSION

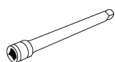
- Remove (4) nuts securing the factory reinforcement beam. Remove reinforcement beam. **Save** nuts and reinforcement beam for reinstallation.



INSTALL STEALTH HITCH FRAME



18mm
DEEP WELL
SOCKET

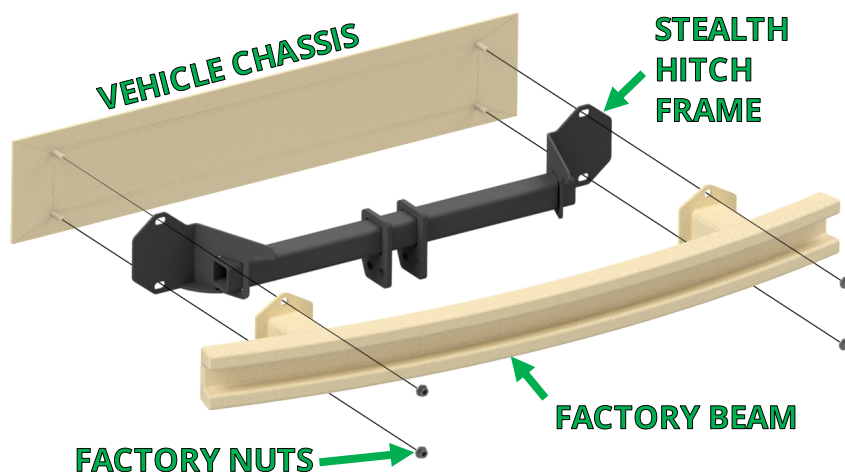


SOCKET
EXTENSION



TORQUE
WRENCH

- Install the Stealth hitch frame and factory reinforcement beam onto the vehicle studs, as shown. Attach using the (4) factory nuts. Center the hitch frame and beam before tightening. Use a torque wrench to tighten the bolts to 85 ft.-lbs.



MOUNT LATCH BLOCK



15/16"
SOCKET



15/16" OPEN
END WRENCH



TORQUE
WRENCH

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

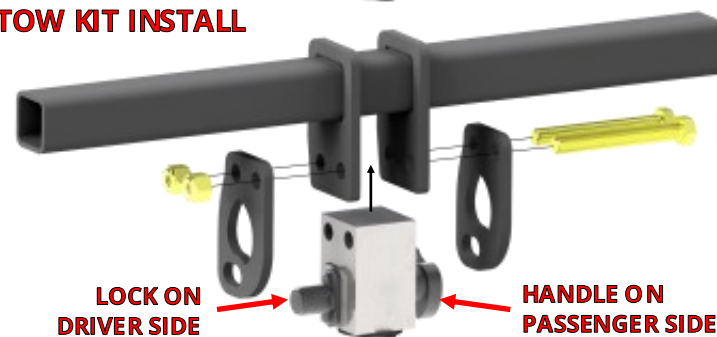
- Rack Receiver Kit:** Install the latch block with (2) 5/8"-11 x 5" bolts and (2) 5/8" nylock nuts. Tighten each bolt to 150 ft.-lbs.
- Tow Kit:** Install the latch block and (2) chain hooks with (2) 5/8"-11 x 5" bolts and (2) 5/8" nylock nuts. Tighten each bolt to 150 ft.-lbs.

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

RACK RECEIVER KIT INSTALL



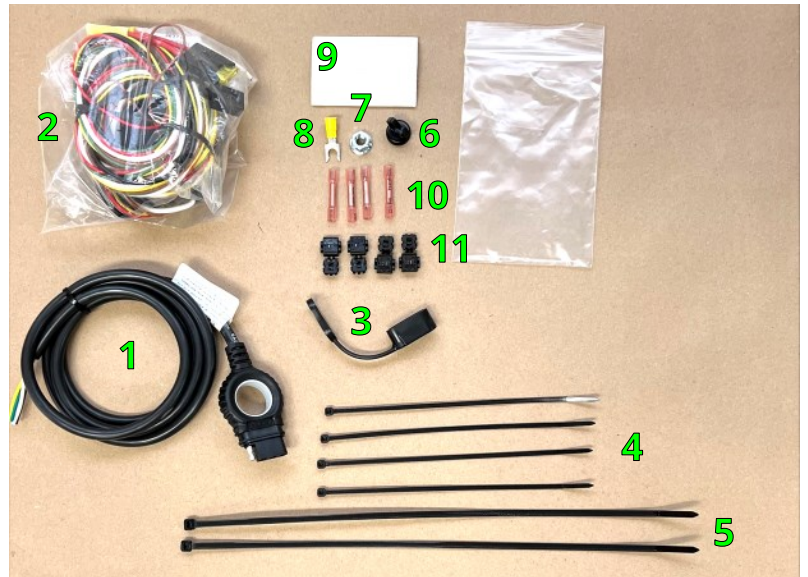
TOW KIT INSTALL



**IF INSTALLING A RACK RECEIVER KIT, SKIP TO STEP 24.
IF INSTALLING A TOW KIT, CONTINUE TO STEP 10.**

INSTALL PASSIVE WIRING KIT

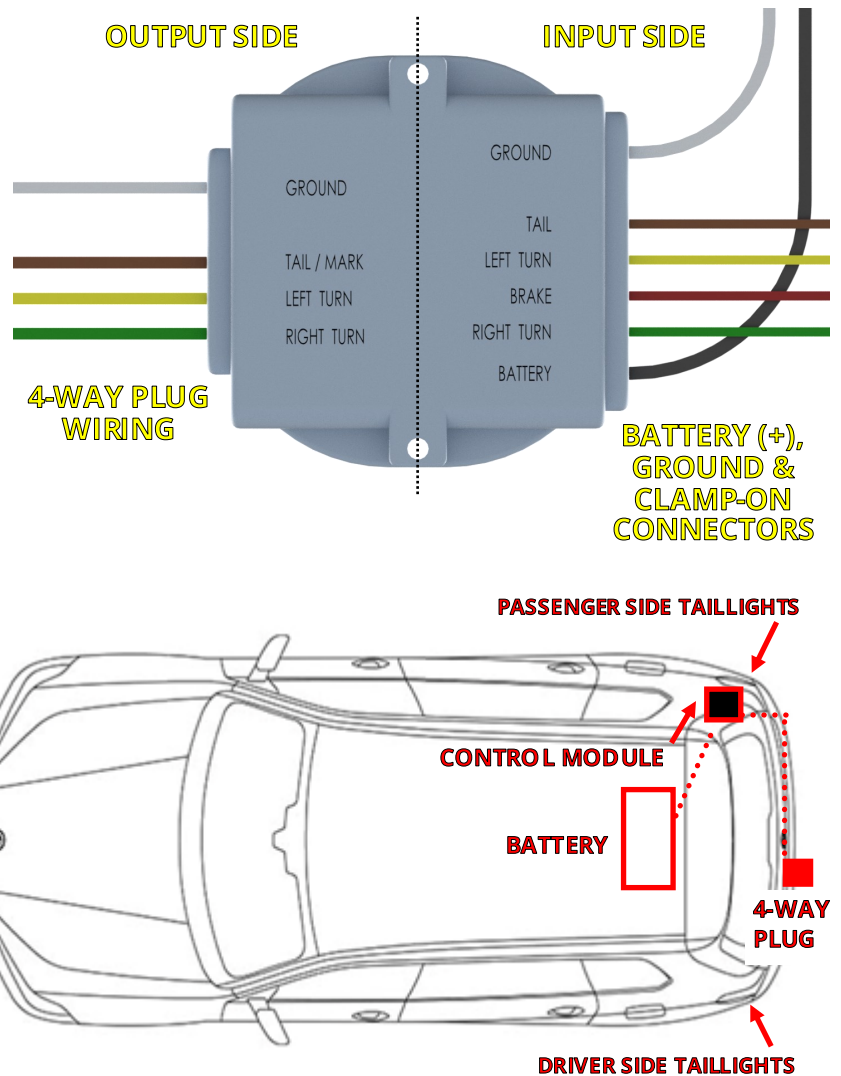
#	DESCRIPTION	QTY
1	4-WAY CONNECTOR HARNESS	1
2	CONTROL MODULE	1
3	4-WAY CONNECTOR COVER	1
4	CABLE TIE - 8"	4
5	CABLE TIE - 14"	2
6	MAGNETIC CABLE HOLDER	1
7	M8 SERRATED FLANGE NUT	1
8	FORK TERMINAL	1
9	ADHESIVE FOAM STRIP	2
10	BUTT CONNECTOR (RED)	4
11	CLAMP-ON CONNECTORS	4



PASSIVE WIRING KIT BOX

10. 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

11. Lift up and remove the cargo area floor panel.



12. Remove the passenger side cargo holder. Locate rubber grommet underneath the cargo holder.



13. Retrieve control module from wiring kit box. Secure control module in indicated area with supplied adhesive foam.



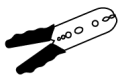
DRILL &
3/8" BIT

14. Remove the grommet from the passenger side of vehicle. Drill a 3/8" hole in grommet.

15. Retrieve the 4-way connector harness from the wiring kit box. From the outside of the vehicle, pass the wires through the grommet and into the vehicle through the grommet hole. Next, locate the input wires connected to the control module inside the vehicle. Pass these wires out of the vehicle through the grommet hole and through the grommet. Replace the grommet. When finished, the 4-way plug and the input wires should be on the outside of the vehicle.



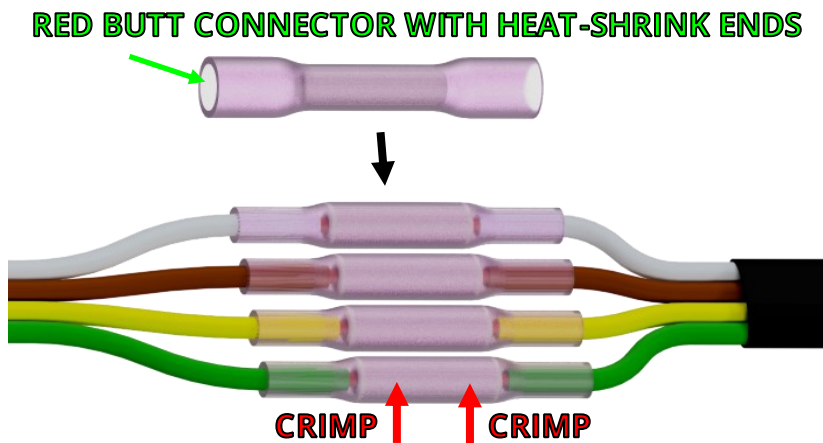
INSTALL WIRING KIT CONTINUED



STRIPPER/
CRIMPING
TOOL

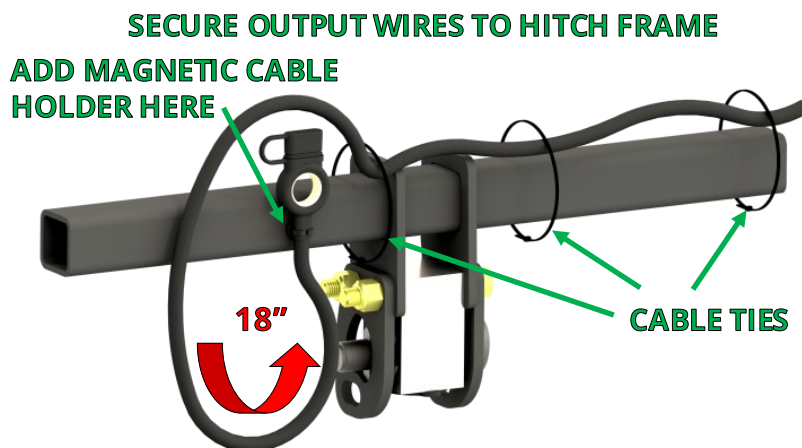
16. Inside the vehicle, locate the tail of the 4-way connector wire and the output side wires of the control module. Attach each similar color wire to each other using a red butt connector and crimping tool.

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

17. 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.



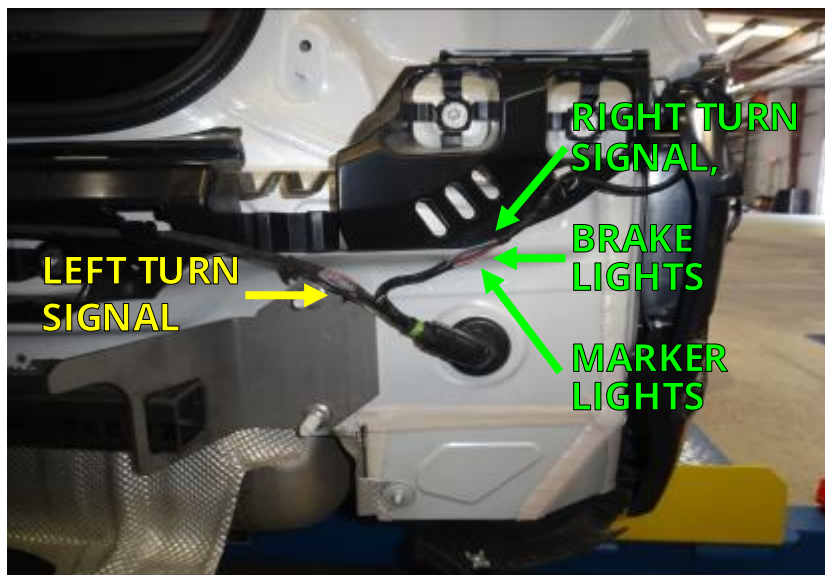
PLIERS



MULTIMETER

18. Locate the indicated wiring bundles on the passenger side, outside of the vehicle. Remove enough factory tape to gain access to wires. Locate the input wires in the vehicle wire bundles (as shown). Use clamp-on connectors to connect to wires. (As shown in reference table on next page.)

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



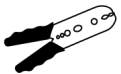
CLAMP-ON CONNECTOR COLOR REFERENCE TABLE

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

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



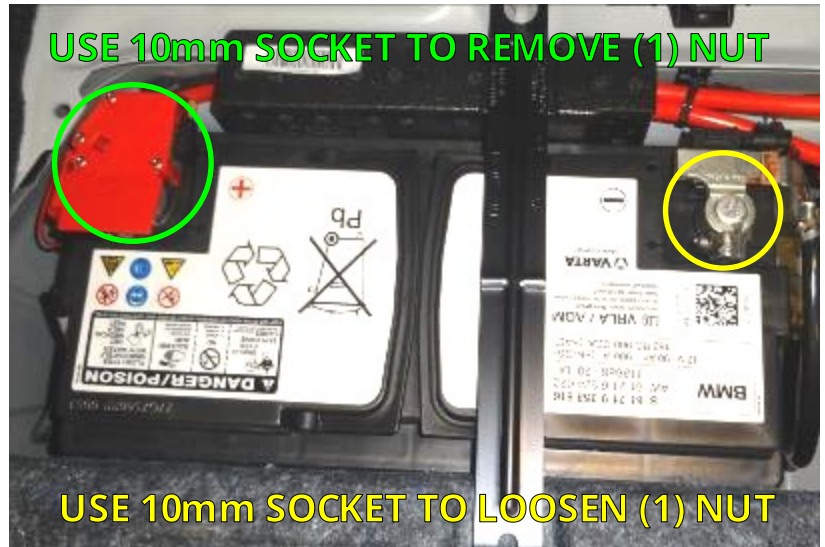
10mm
SOCKET



STRIPPER/
CRIMPING
TOOL

19. 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 (-).

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



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



MULTIMETER



SILICONE

21. Reinstall the 20 Amp fuse in the harness fuse holder located near the battery.

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

23. Secure all wires and wiring components. Use silicone to waterproof the grommet. Use the remaining cable ties to secure wiring so that it is not loose and will not interfere with replacement of the fascia. Wiring should not be visible once the vehicle is reassembled. Reinstall cargo compartment holder and floor panel.

CUT ACCESS TO LATCH BLOCK



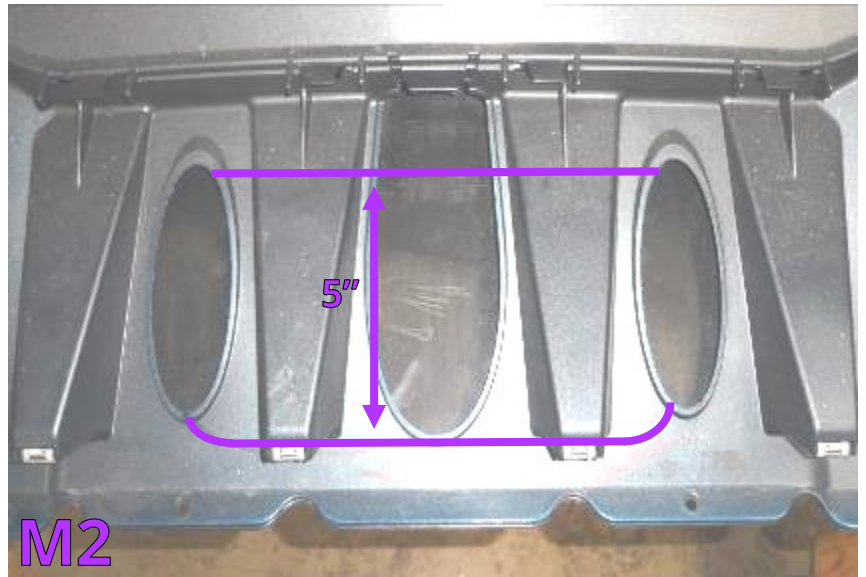
DREMEL TOOL



FILE

24. **M2 only** Cut out the fascia support with Dremel tool as shown. Use a file to smooth out the cut.

NOTE: Cut fascia support carefully, try to stay as close to the image as possible. See Step 25 image for completed cut.

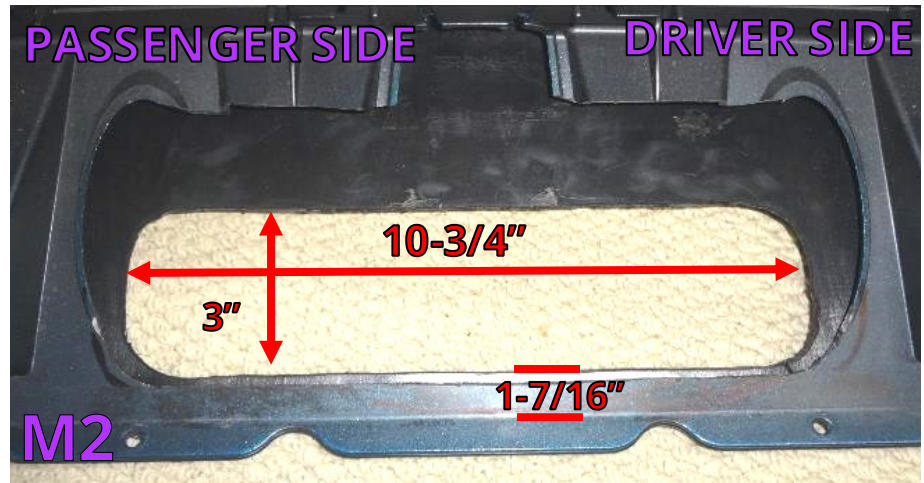


DREMEL TOOL



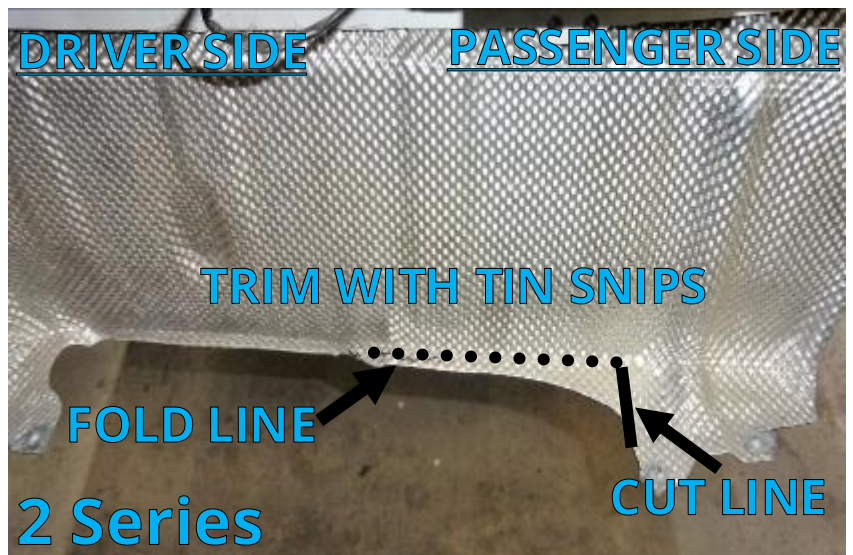
FILE

25. **M2 only** Cut out the fascia with Dremel tool. Use a file to smooth out the cut.



TIN SNIPS

26. **2 Series only** Trim the heat shield. Bend back the cut sections to eliminate sharp edges.



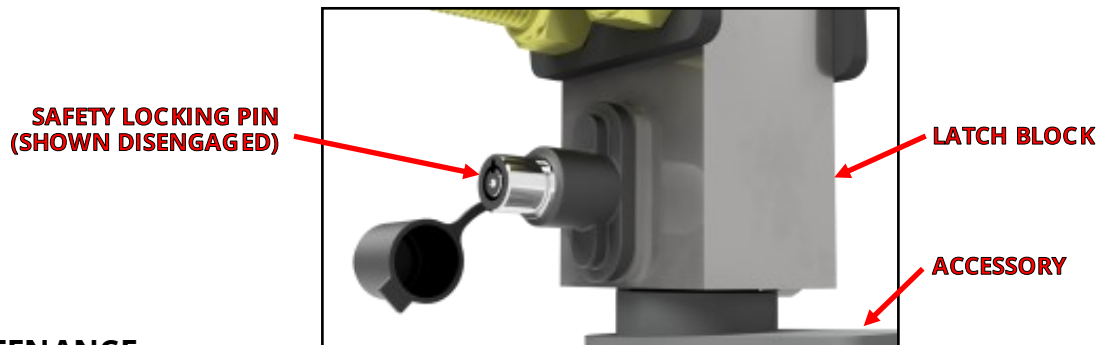
REINSTALL VEHICLE COMPONENTS

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



FINAL VEHICLE EXAMINATION

28. Examine the body panels to ensure that they are in a pre-installation condition. Test the electronic functions of the vehicle. Correct any inconsistencies.
29. 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.

SHR31001_(pn 2120-31001-2) 08 31 2022