



www.stealthhitches.com 833-694-4824

HITCH INSTALLATION INSTRUCTIONS

MAKE:	YEARS:	MODEL/TRIM:
MERCEDES	2020 - 2024	GLE 350 SUV
	2020 - 2024	GLE 350 4matic SUV
	2020 - 2024	GLE 450 4matic SUV
	2021 - 2022	GLE AMG 53 Coupe (SHT25055)
	2020 - 2022	GLS 450 SUV Excludes AMG Exterior Pkg

RACK RECEIVER KIT#: **SHR32023**

COMPATIBLE WITH TOW KITS: **SHT25054 & SHT25055**



2" RACK RECEIVER MAXIMUM PAYLOAD: 600 LBS

MAXIMUM TOW RATING: 8000 LBS

MAXIMUM TONGUE WEIGHT: 800 LBS

UNDER VEHICLE TRIMMING:

HEAT SHIELD: **NO**

FASCIA: **YES**

GRAVEL GUARD TRIMMING: **NO**



READ ALL INSTRUCTION WARNINGS AND LABELS

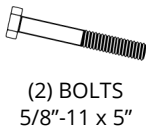


NO WELDING, METAL DRILLING OR VISIBLE TRIMMING REQUIRED

PARTS SUPPLIED WITH RACK RECEIVER KIT:



LATCH BLOCK & KEYS



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



(2) 5/8"
NYLOCK NUTS

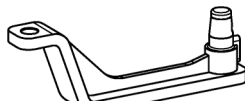


2" RACK
RECEIVER

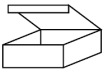
ADDITIONAL PARTS FOR TOW KIT:



BALL MOUNT
5" RISE, LONG
(SHT25054)



BALL MOUNT
7" RISE, EXTRA LONG
(SHT25055)



PASSIVE WIRING
KIT BOX



CHAIN HOOKS



2" BALL

TOOLS REQUIRED:



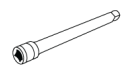
15/16" OPEN
END WRENCH



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



TORQUE
WRENCH



SOCKET
EXTENSION



RATCHET



SAFETY GLASSES



FLASHLIGHT



FILE



DREMEL TOOL



90 DEGREE
PICK



T15, T30 &
T45 TORX



PLASTIC
PRY TOOLS

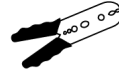


E16 TORX
SOCKET

ADDITIONAL TOOLS FOR TOW KIT:



PLIERS



STRIPPER/
CRIMPING
TOOL



PHILLIPS HEAD
SCREWDRIVER



SIDE
CUTTERS



MULTIMETER



SILICONE



T20 TORX



13mm
SOCKET



T25 TORX
GLS MODELS
ONLY

RACK RECEIVER INSTALLATION: USE STEPS 1-23 & 39-43

TOW KIT INSTALLATION: USE STEPS 1-43

<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

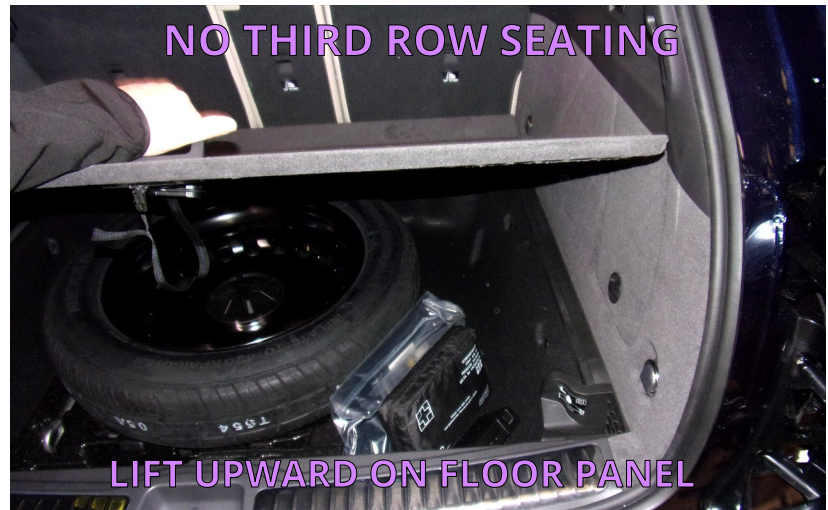
Failure to comply with the safety information in these instructions could result in serious injury or death.

-  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.

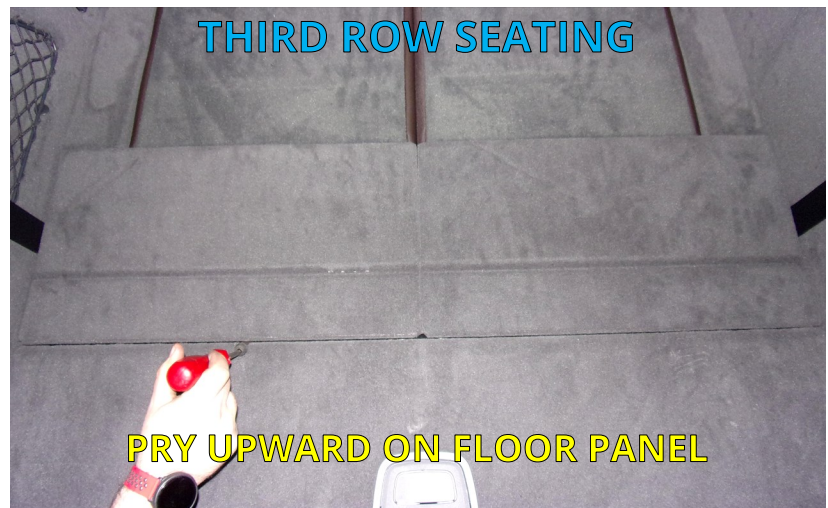
NOTICE: Installation of hitch requires removal of vehicle parts and interaction with vehicular electronics. Before installation, check the condition of body panels and note any locations where panels are not flush. Check the electronic functions of the vehicle, such as: headlights, taillights, turn signals, 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. **Models without third row seating only** In the rear cargo area, remove the cargo floor panel by lifting it up and out. Place panel on blanket or safe area.



2. **Models with third row seating only** Lift up floor panel in cargo area.



or



3. **Models with third row seating only** Remove (6) Torx screws securing the floor panel to the vehicle. Remove the floor panel and place on blanket or safe area.



GAIN ACCESS TO MOUNTING AREA CONTINUED



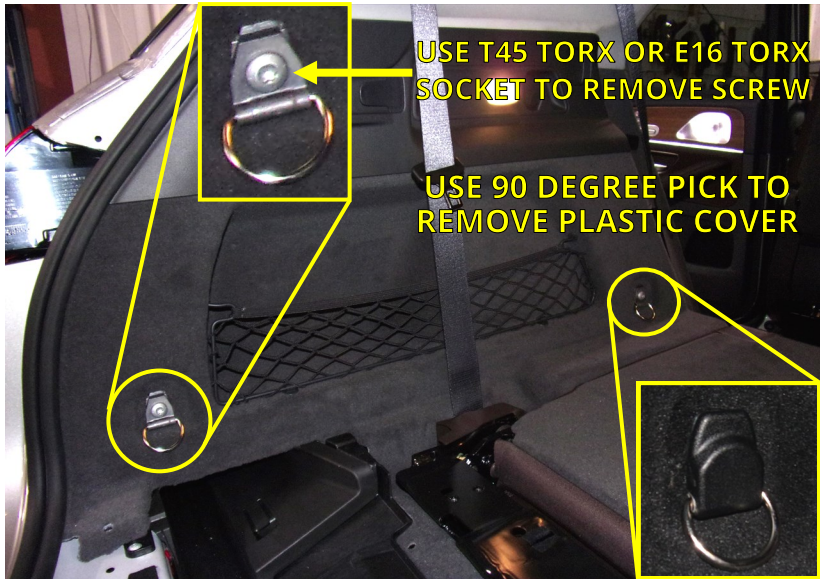
4. Locate the screws on the rear wall of the cargo area securing threshold to the vehicle. Use a T30 torx to remove these screws. Use a 90 degree pick tool to dislodge plastic covers if present. *(Models without third row seating shown.)*
- NOTE:** Models may have (1, 2 or 3) screws securing the threshold.



5. Remove the threshold by lifting up. *(Model with third row seating shown.)*



6. In the corners of the cargo area, locate (4) cargo anchors. Remove the plastic anchor ring cover with a 90 degree pick. Remove (1) screw holding each cargo anchor.



GAIN ACCESS TO MOUNTING AREA CONTINUED

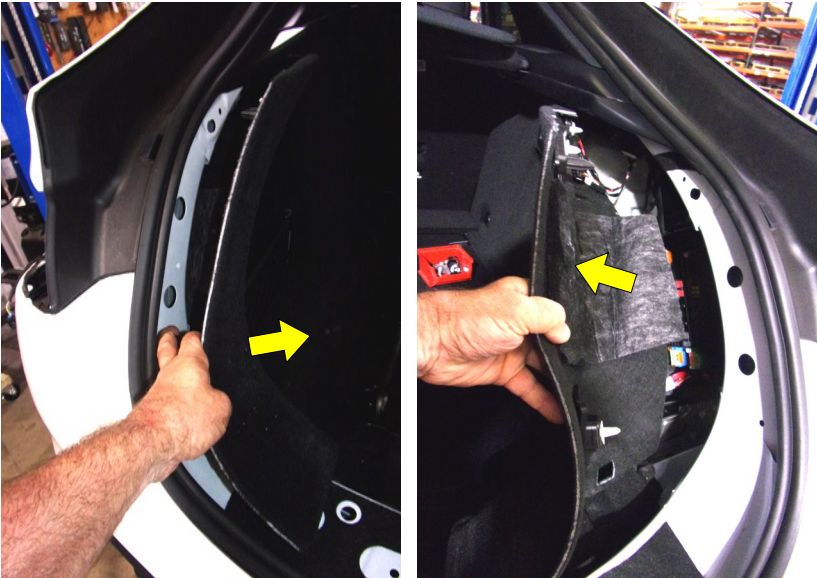
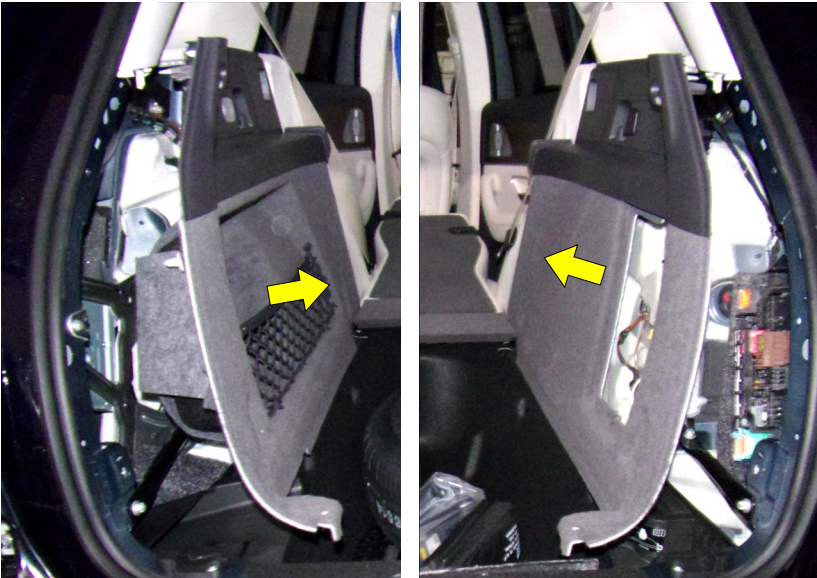


7. **GLS Models only** Locate the cover shown in the image on each of the rear side panels inside the cargo area. Use a 90 degree pick tool to remove the covers. Use a Torx to remove the screw under each of the covers.



8. On both sides of the cargo area, dislodge the rear side panels by pulling inward.

DISLODGE & PULL INWARD



GAIN ACCESS TO MOUNTING AREA CONTINUED



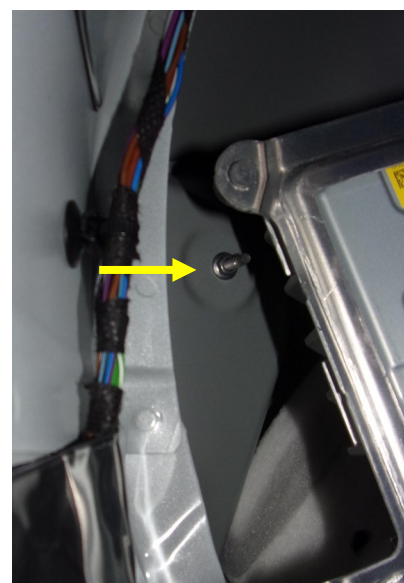
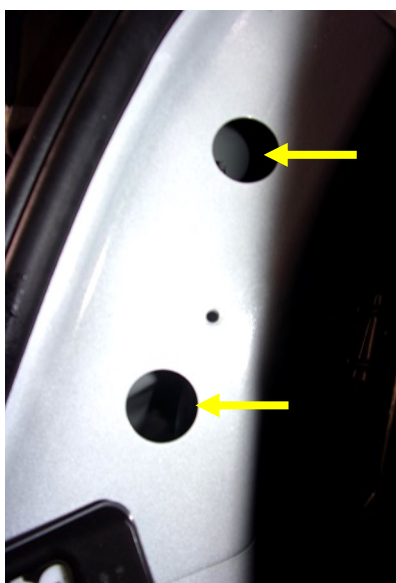
9. Remove the taillight cover. Insert plastic pry tool at the side of the plastic cover and pry inward. *(SUV model shown, Coupe models will look slightly different.)*



10. The taillights are secured with (3) screws. Locate and remove (2) taillight screws inside holes in the rear column. Locate and remove the third screw inside the cargo compartment.



SUV MODELS



COUPE MODELS

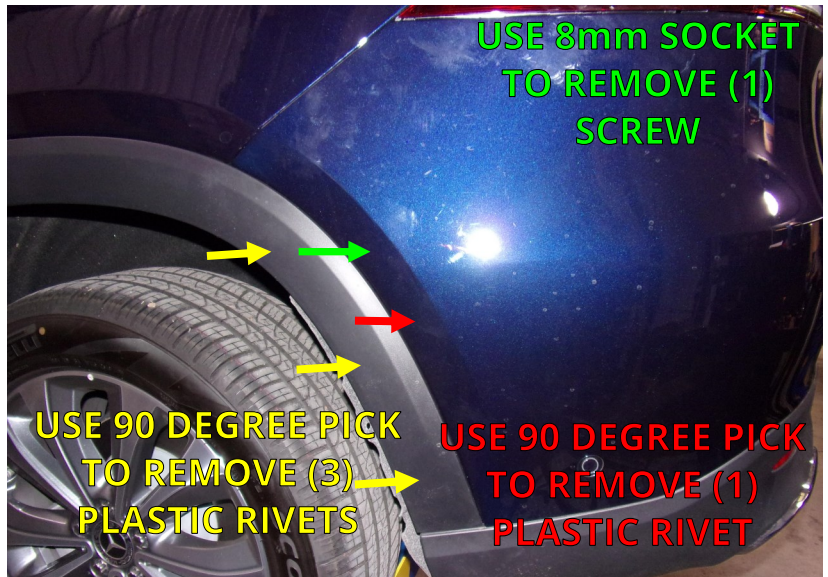
GAIN ACCESS TO MOUNTING AREA CONTINUED



11. Slide the taillight outward and away from the vehicle. A plastic pry tool can be used to help if the light does not slide freely. With the lights dislodged, disconnect the light plug. Remove the taillight. Repeat Steps 8-10 on other side of vehicle



12. **SUV MODELS ONLY.** Use a 90 degree pick to remove (3) plastic rivets (yellow arrows). Move wheel well liner to gain access to (1) screw and (1) rivet. Use socket to remove screw and 90 degree pick to remove rivet.



13. **SUV MODELS ONLY.** To allow partial removal of the rear wheel well trim, (3) clips will need to be disconnected. Apply outward pressure on wheel well trim. Start with the bottom clip and work up. Push down on clip to disconnect. Use plastic pry tools on hard to reach clips.



GAIN ACCESS TO MOUNTING AREA CONTINUED

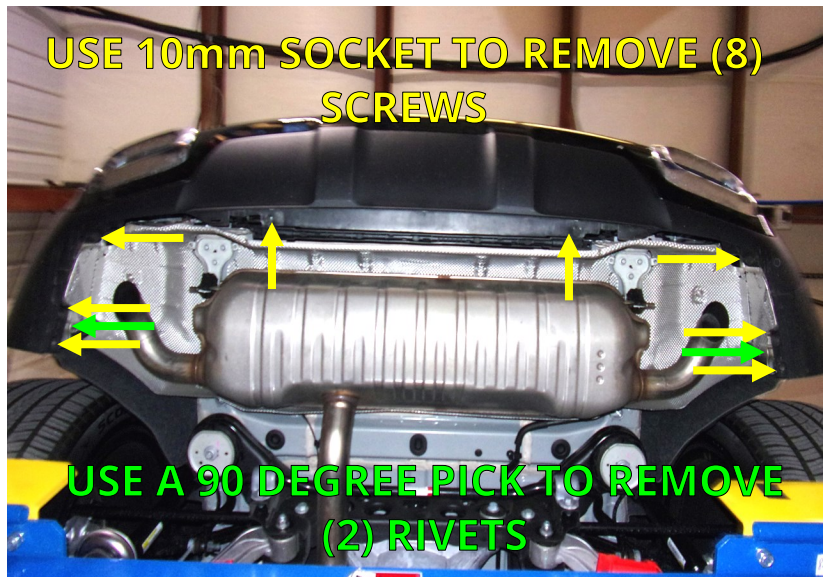


14. **SUV MODELS ONLY.** Release (3) fascia clips with a plastic pry tool.



90 DEGREE
PICK

15. **SUV MODELS ONLY.** Underneath the rear of the vehicle, remove (8) screws and (2) rivets (if present) from the bottom of the fascia.



16. **COUPE MODELS ONLY.** To allow removal of the rear wheel well trim, (3) clips will need to be disconnected. Apply outward pressure on wheel well trim. Start with the bottom clip, in front of rear tire, and work up. Push down on clip to disconnect. Use plastic pry tools on hard to reach clips.



GAIN ACCESS TO MOUNTING AREA CONTINUED



8mm
SOCKET



T15 TORX



90 DEGREE
PICK

17. **COUPE MODELS ONLY.** Use a 90 degree pick to remove (3) plastic rivets (yellow arrows). Move wheel well liner to gain access behind the fascia. Use a 90 degree pick to remove (1) plastic rivet (blue arrow). Use a 8mm socket to remove (1) screw (red arrow). Use T15 Torx to remove (1) screw (green arrow).

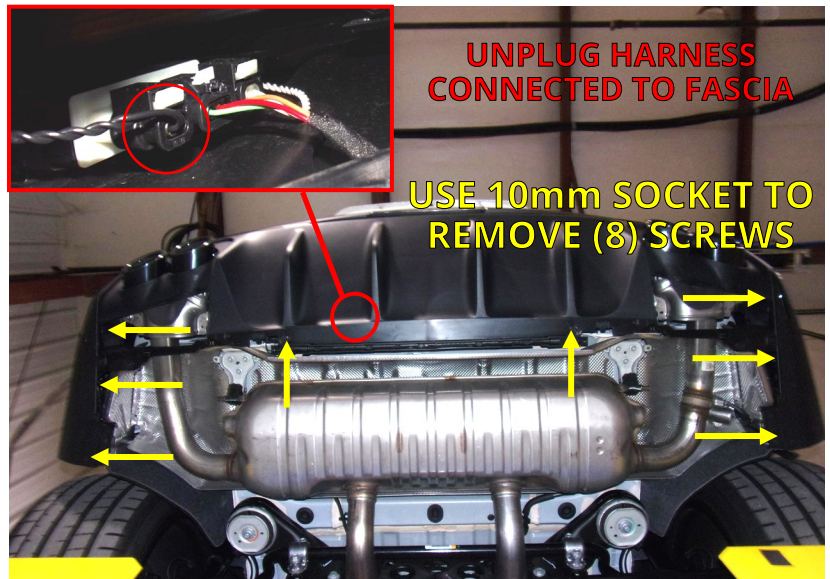


10mm
SOCKET



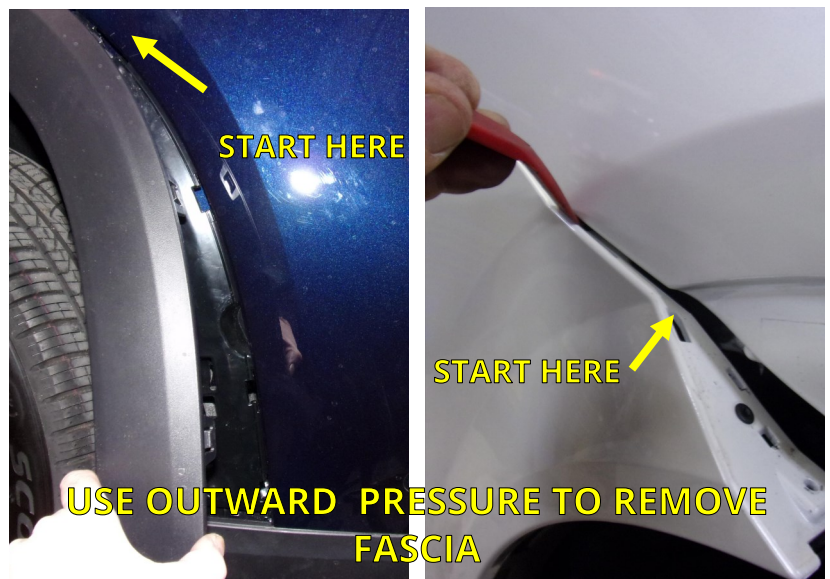
90 DEGREE
PICK

18. **COUPE MODELS ONLY.** Underneath the rear of the vehicle, remove (8) screws from the bottom of the fascia.



PLASTIC
PRY TOOLS

19. 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 until all clips are released. Repeat on other side of vehicle.



SUV MODELS

COUPE MODELS

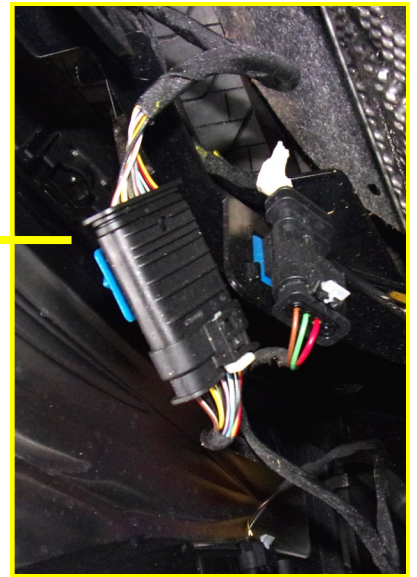
GAIN ACCESS TO MOUNTING AREA CONTINUED



90 DEGREE
PICK

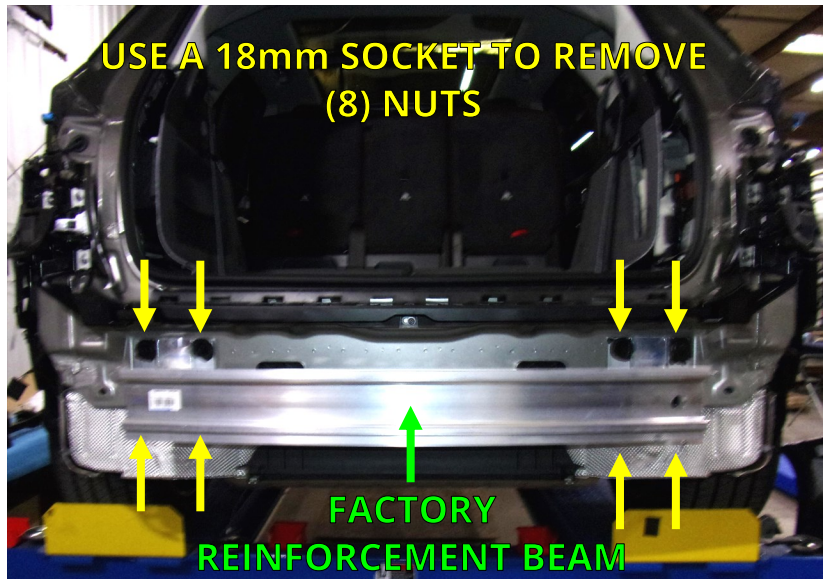
20. This step requires a partner. Pull the fascia rearward enough to access the (2) sensor plugs on the driver side. Press down on the clips to unplug the sensor plugs. In some cases a 90 degree pick tool will be needed to disconnect the sensor plugs. Some models have a third sensor plug that needs to be disconnected in the bottom center of the fascia. Remove the fascia completely.

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



18mm
DEEP WELL
SOCKET

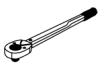
21. Locate and remove (8) nuts securing the factory reinforcement beam to the vehicle. Save the nuts for the hitch installation. Discard the factory reinforcement beam.



INSTALL STEALTH HITCH



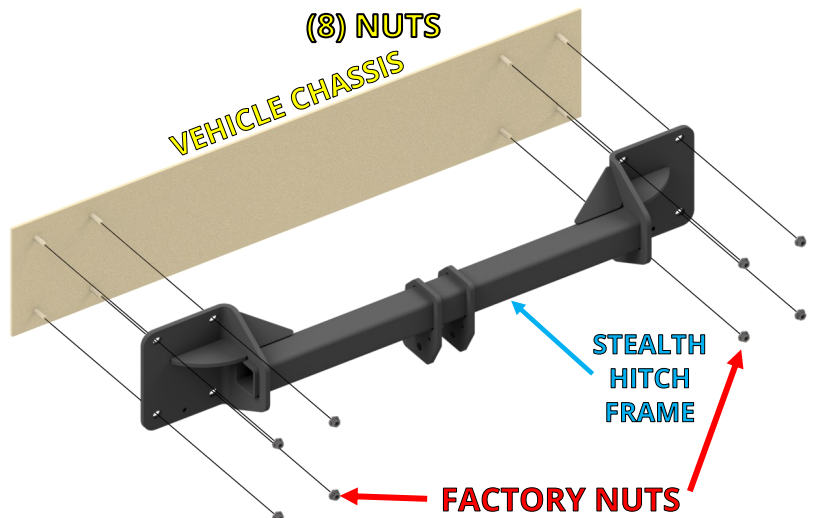
18mm
DEEP WELL
SOCKET



TORQUE
WRENCH

22. Install the Stealth hitch frame onto the vehicle studs. Center the hitch frame before tightening. Use a torque wrench to tighten the bolts to 85 ft.-lbs.

USE 18mm DEEP WELL SOCKET TO INSTALL (8) NUTS



MOUNT LATCH BLOCK



15/16"
SOCKET



15/16" OPEN
END WRENCH



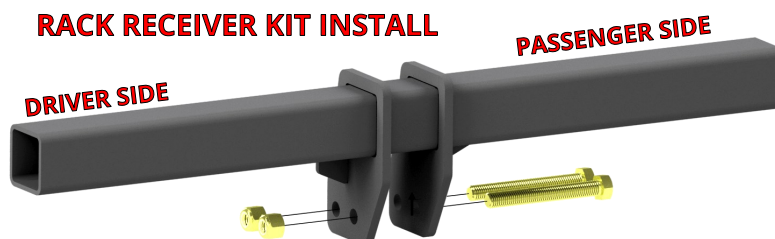
TORQUE
WRENCH

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

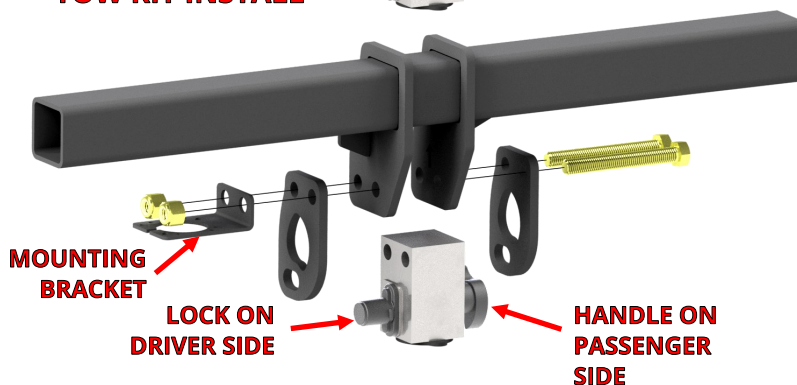
- **Rack Receiver Kit:** Install the latch block with (2) 5/8"-11 x 5" bolts and (2) 5/8" nylock nuts. Tighten each bolt to 150 ft.-lbs.
- **Tow Kit:** Retrieve mounting bracket from wiring harness kit box. Install the latch block, (2) chain hooks, and mounting bracket with (2) 5/8"-11 x 5" bolts and (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 39.
IF INSTALLING A TOW KIT, CONTINUE TO STEP 24.

INSTALL PASSIVE WIRING KIT

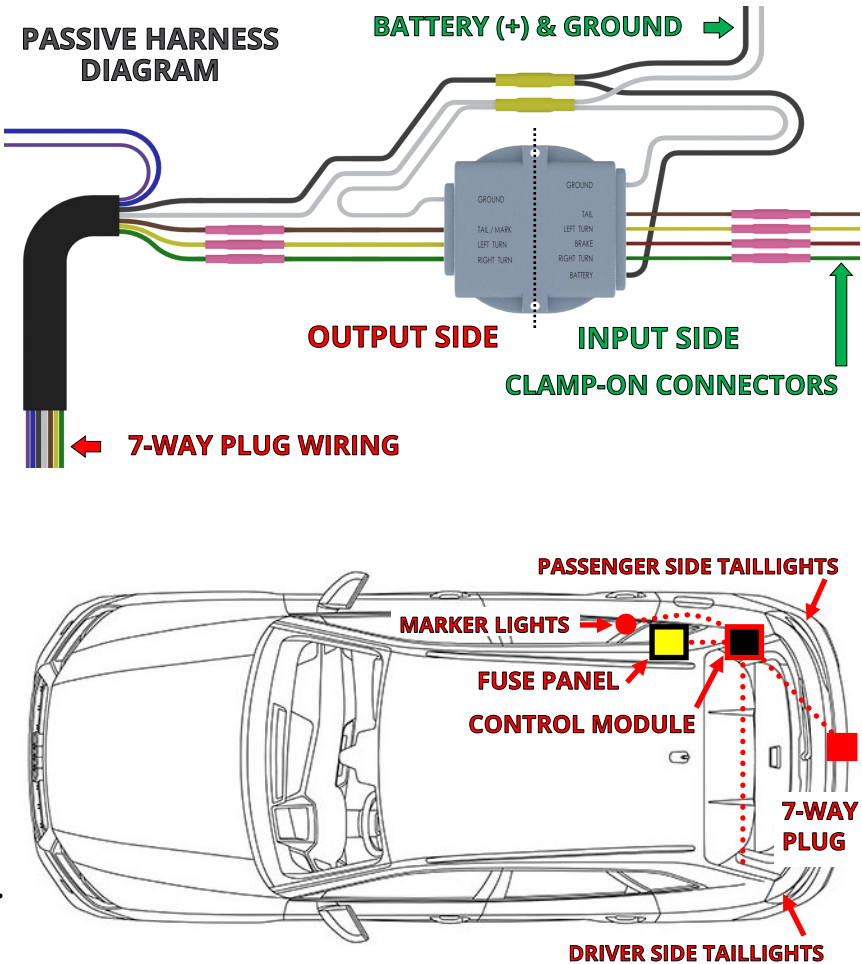
#	DESCRIPTION	QTY
1	7-WAY WIRING HARNESS <ul style="list-style-type: none">FUSE HOLDER & FUSECONTROL MODULE & WIRES	1
2	ADHESIVE FOAM STRIP	2
3	5/8" LONG PHILLIPS SCREWS	4
4	#10 LOCK NUT	4
5	M8 FLANGE NUT	1
6	FORK TERMINAL	1
7	CLAMP-ON CONNECTORS	5
8	CABLE TIE - 8"	8
9	CABLE TIE - 14"	3
10	MOUNTING BRACKET	1
11	7-POLE HOUSING	1
12	7-POLE TO 4-POLE ADAPTER	1



PASSIVE WIRING
KIT BOX

24. 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



SIDE
CUTTERS

25. Place the control module in the passenger side cargo compartment. Locate the grommet on the rear passenger corner of the vehicle. Use side cutters to cut the end from one of the fingers in the grommet. Route the control module output wires from inside to the outside of vehicle.



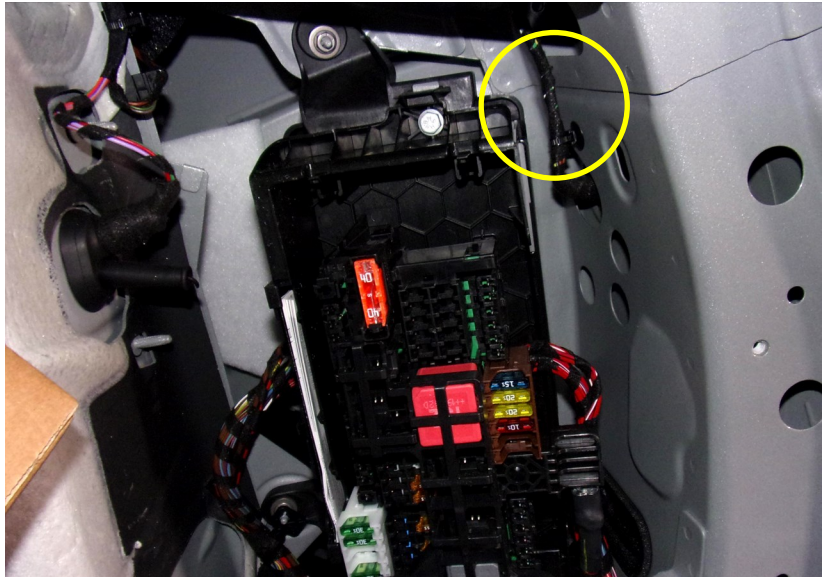
PLIERS



MULTIMETER

26. The wires on the input side of the module need to be attached to the vehicle wiring. Inside the passenger side cargo compartment locate the indicated part of the vehicle wiring harness. Use a clamp-on connector to connect the green wire to the right turn signal wire behind taillight. (As shown in reference table on Page 15.)

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



INSTALL WIRING KIT CONTINUED



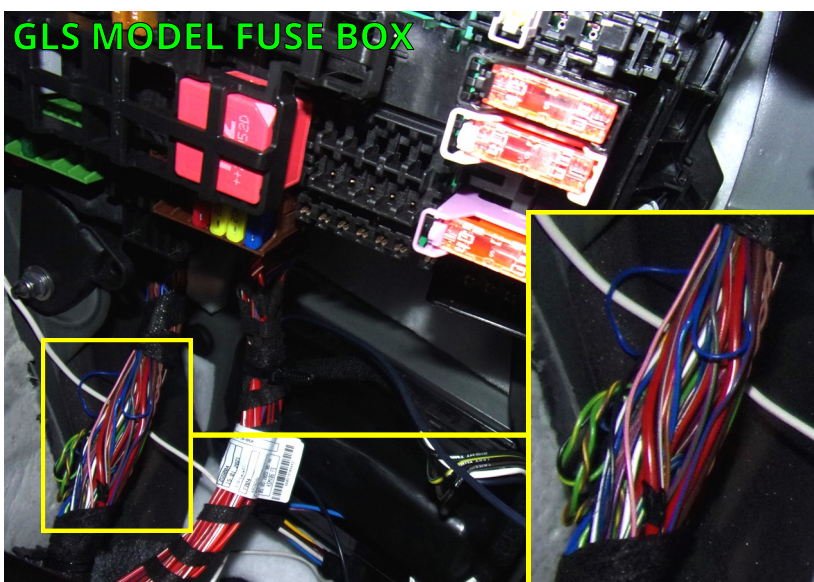
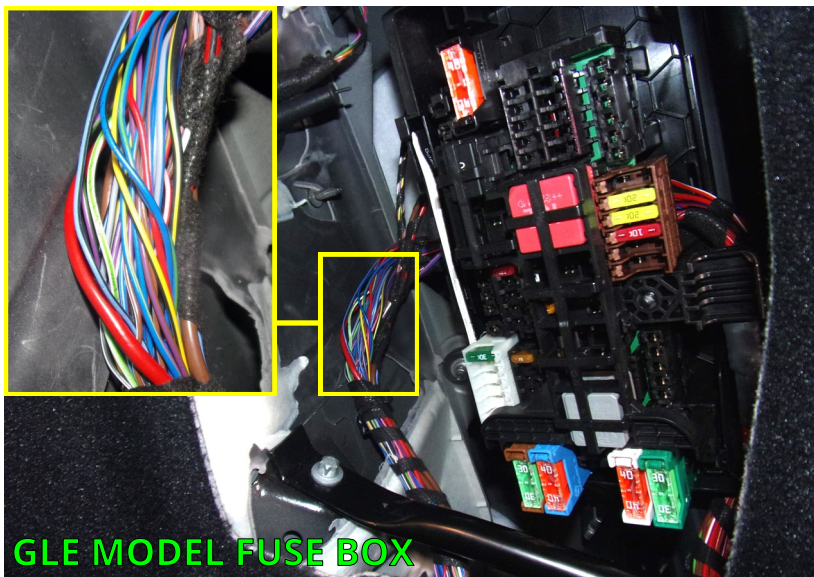
PLIERS



MULTIMETER

27. On the passenger side, find the indicated wire bundle next to the fuse panel. Use a clamp-on connector to connect the brown wire to the tag light (marker light) wire (As shown in "reference table on Page 15.)

NOTE: Vehicles may have multiple wires with the same color or different wire colors than those shown. Verify circuits (wire colors) with multimeter.



PLIERS

















MULTIMETER

28. Use an existing vehicle wire harness as a guide to route the yellow input wire to the driver side of the vehicle. Locate the indicated part of the vehicle wiring harness. Use a clamp-on connector to connect the yellow wire to left turn signal wire behind the taillight. (As shown in reference table on Page 15.)



INSTALL WIRING KIT CONTINUED

CLAMP-ON CONNECTOR COLOR REFERENCE TABLE

SIGNAL INPUT WIRES				POWER & GROUND WIRES		
FUNCTION	HARNESS	MODEL	VEHICLE			
LEFT TURN	 YELLOW	2020-2023	 GREY/BLACK	<u>12V+</u> (POWER)	 BLACK	FUSE PANEL (+)
		2024	 GREEN/BLACK			
RIGHT TURN	 GREEN	2020-2023	 WHITE/GREEN	<u>GROUND</u>	 WHITE	GROUND STUD (-)
		2024	 ORANGE/GREEN			
MARKER	 BROWN	2020-2023	 BLUE/GREEN			
		2024				
BRAKE	 RED	2020-2023	<i>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.</i>			
		2024	 WHITE/GREEN			
REVERSE	 PURPLE	For use with trailer reverse lights or to disable the trailer brakes when backing with surge brakes. To connect, isolate vehicle's reverse light circuit and connect the purple wire from the trailer wiring harness to vehicle reverse light circuit. Trailers rarely have reverse lights or surge brakes.				
ELECTRIC BRAKE	 BLUE	Only used when a hard wired brake controller is mounted inside the vehicle and your trailer has electric brakes. See brake controller instructions for this wire.				

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



10mm
SOCKET



STRIPPER/
CRIMPING
TOOL

29. Locate the ground stud in the passenger 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 wiring does not lose ground.



10mm
SOCKET

30. In the passenger side cargo compartment, locate the fuse panel. Remove (1) screw to dislodge fuse panel.



INSTALL WIRING KIT CONTINUED



T20 TORX

31. After loosening the fuse panel, turn the panel over. Use a Torx socket to remove (2) screws.



13mm
SOCKET

32. Locate the fuse holder and M8 flange nut supplied in the wiring kit box. Remove the fuse from the fuse holder. Turn the fuse panel over. Crimp the control module power wire to the fuse holder lead and attach the ring terminal to the fuse panel with supplied M8 nut.

NOTE: Do not loosen the power supply nut, just add M8 nut on top of ring terminal.

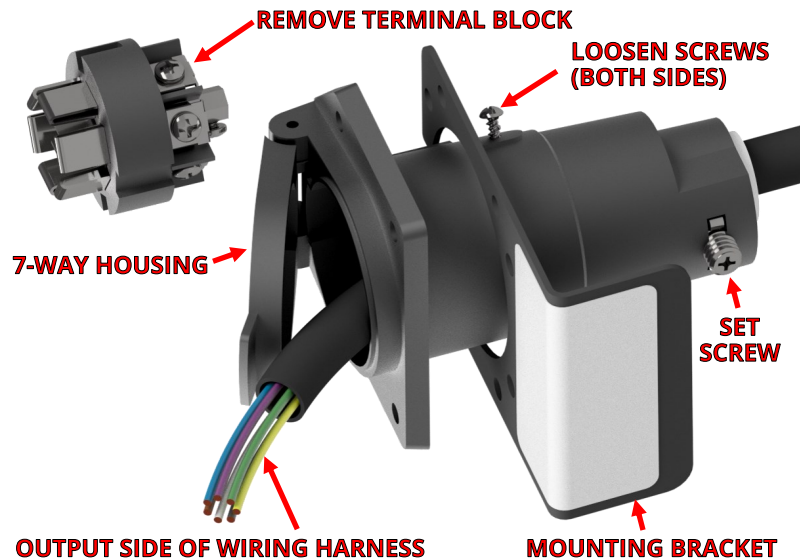


WIRE 7-WAY PLUG



PHILLIPS HEAD
SCREWDRIVER

33. 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.



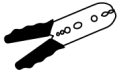
WIRE 7-WAY PLUG CONTINUED

Please follow instructions below very carefully.

Incorrect wiring of the 7-way receptacle causes the vast majority of wiring problems.



PHILLIPS HEAD
SCREWDRIVER

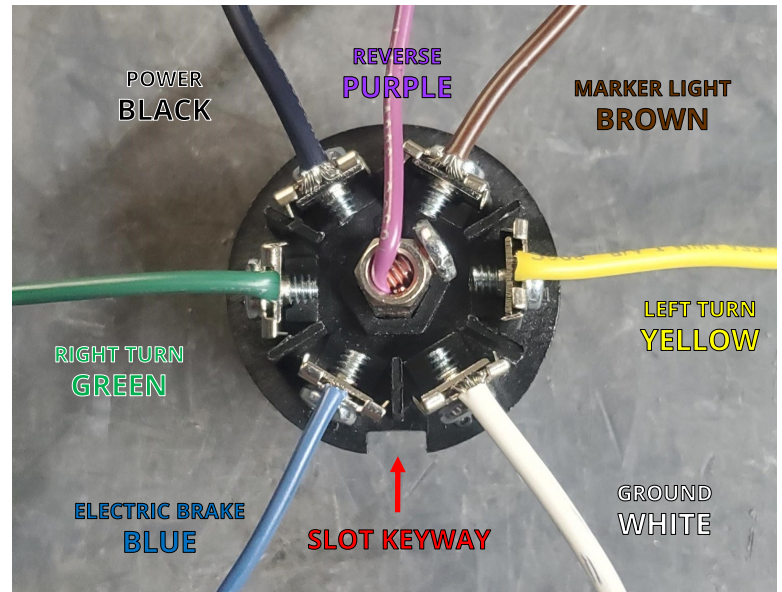


STRIPPER/
CRIMPING
TOOL

34. 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



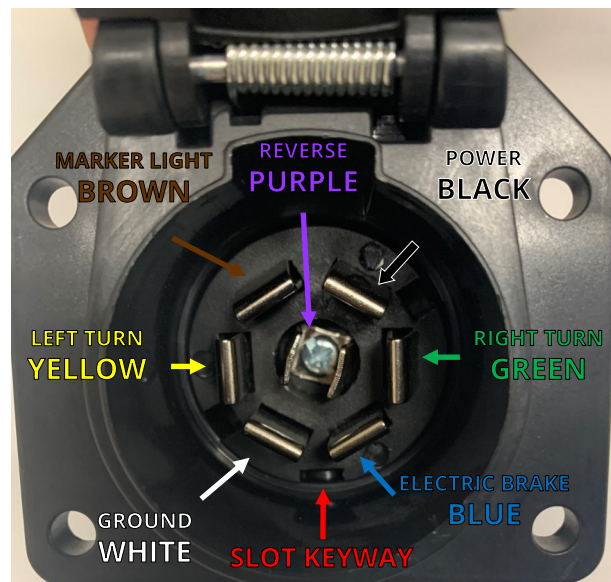
PHILLIPS HEAD
SCREWDRIVER



MULTIMETER

35. 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
attached to the fuse panel.**

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



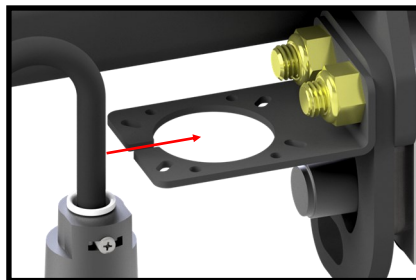
- Start by connecting the multimeter negative probe to the ground blade on the 7-way receptacle.
- Next, connect the multimeter positive probe to the power blade on the 7-way receptacle and check for 12 volts.
- Once that is confirmed, move the positive probe to the left turn blade on the 7-way receptacle 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.

SECURE TOW KIT



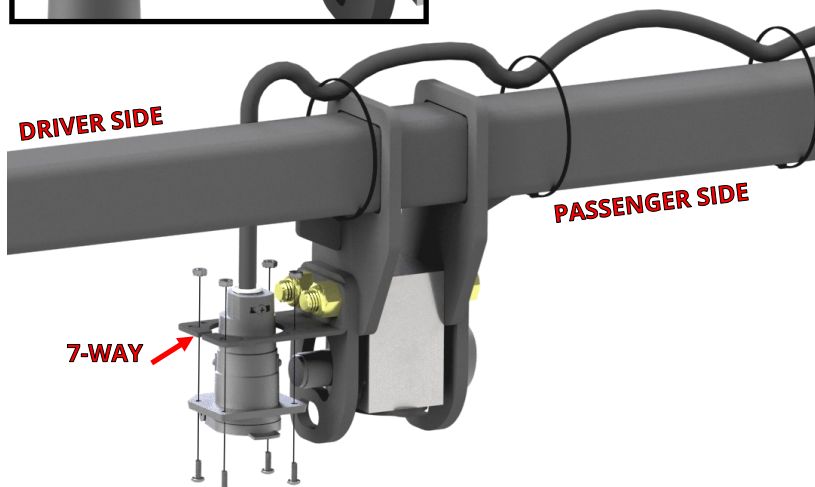
PHILLIPS HEAD
SCREWDRIVER

36. Carefully pass the wire of the 7-way housing through the mounting bracket. Attach the 7-way housing to the Stealth hitch frame as shown. Secure harness to Stealth hitch frame with cable ties provided in the wiring kit.



37. 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.

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



CUT ACCESS FOR LATCH BLOCK



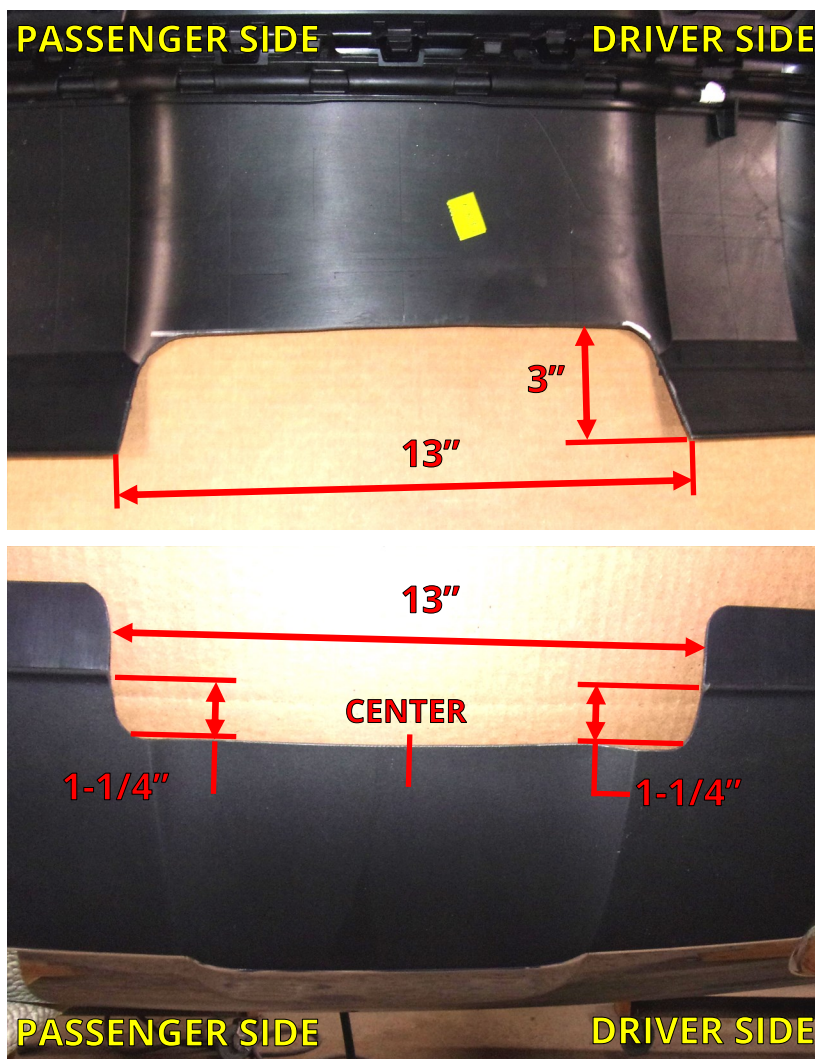
DREMEL TOOL



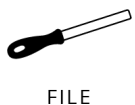
FILE

NOTICE: The latch block cutouts vary between vehicle models. Inspect the fascia and determine if your vehicle is similar to the styles presented in Step 39 or Step 40 on the next page.

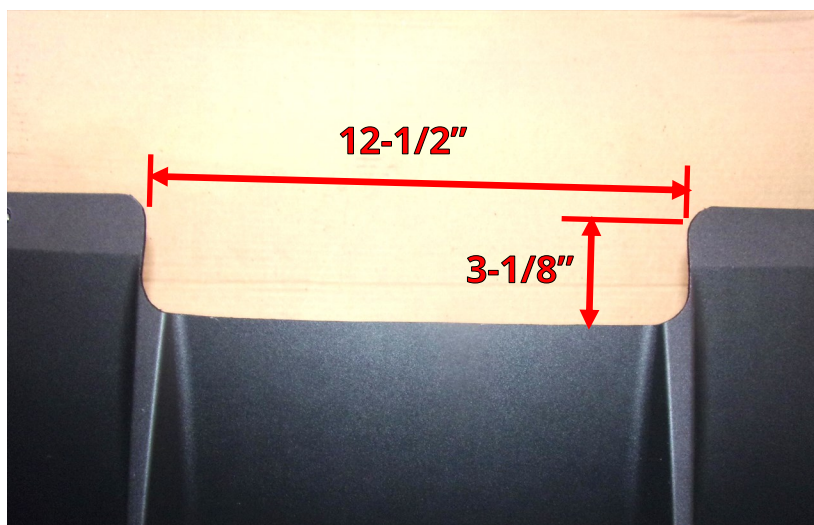
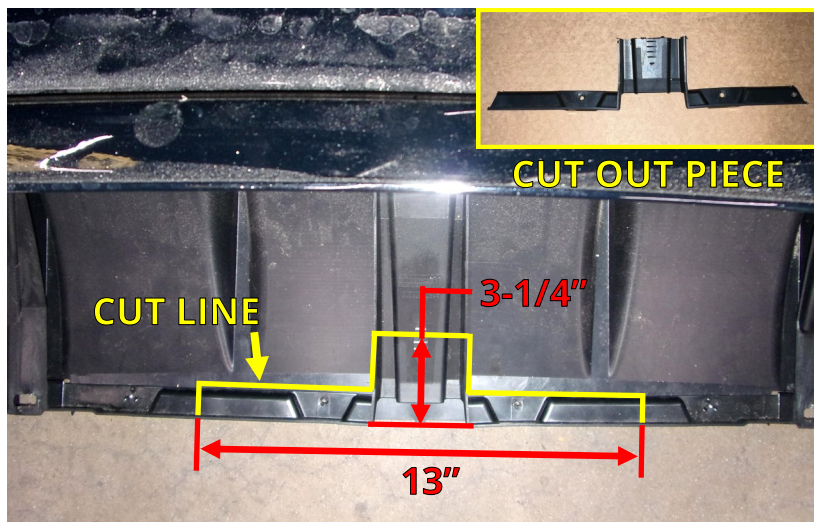
39. If your fascia matches one of the images, use a Dremel tool to cut the fascia as shown. Use a file to smooth the cut edge.



CUT ACCESS FOR LATCH BLOCK CONTINUED



40. If your fascia matches the images, use a Dremel tool to cut the fascia as shown. Use a file to smooth the cut edge.



REINSTALL VEHICLE COMPONENTS

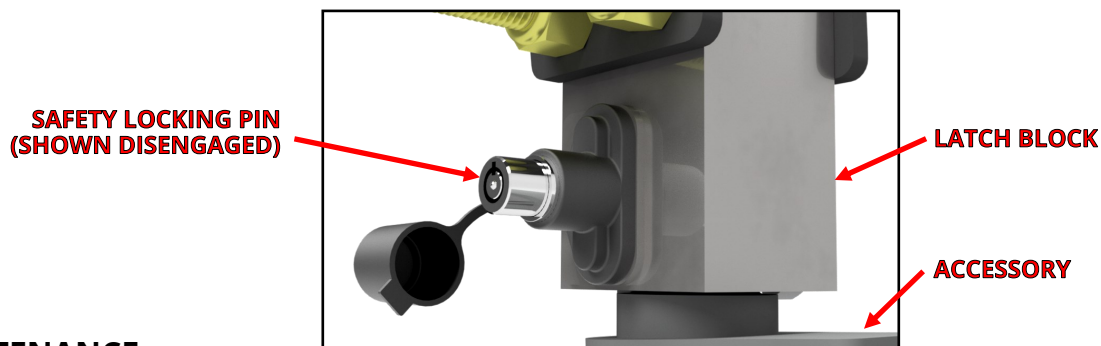
41. Reattach and secure the fascia, taillights, and other vehicle components in reverse order. Refer to Steps 1-18.

NOTICE: Remember to plug in the sensor plugs in Step 18 before reinstalling the fascia.



FINAL VEHICLE EXAMINATION

42. Examine the body panels to ensure that they are in a pre-installation condition. Test the electronic functions of the vehicle. Correct any inconsistencies.
43. 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.

SHR32023_(pn 2120-32023-2) 01 19 2024