



www.stealthhitches.com 833•694•4824

# HITCH INSTALLATION INSTRUCTIONS

**MAKE:** LAND ROVER **YEARS:** 2013 - 2022  
2014 - 2022 **MODEL/TRIM:** Range Rover  
Range Rover Sport  
*Excludes: GEN 5, Evoque, and SVR Models.*

RACK RECEIVER KIT#: **SHR40002**

COMPATIBLE WITH TOW KIT: **SHT25032**

**2" RACK RECEIVER MAXIMUM PAYLOAD:** 600 LBS  
**MAXIMUM TOW RATING:** 8000 LBS  
**MAXIMUM TONGUE WEIGHT:** 800 LBS



## UNDER VEHICLE TRIMMING:

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

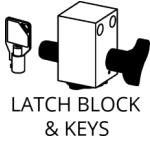


**READ ALL INSTRUCTION WARNINGS AND LABELS**



**NO WELDING, METAL DRILLING OR VISIBLE TRIMMING REQUIRED**

## PARTS SUPPLIED WITH RACK RECEIVER KIT:



LATCH BLOCK & KEYS



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



(2) 5/8"  
NYLOCK NUTS



2" RACK  
RECEIVER



(2) EXHAUST  
BRACKETS

## TOOLS REQUIRED:



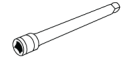
15/16" OPEN  
END WRENCH



10mm, 13mm, 15mm  
& 15/16" SOCKETS



TORQUE  
WRENCH



SOCKET  
EXTENSION



RATCHET



FLASHLIGHT



SAFETY GLASSES



T20 & T30 TORX



PHILLIPS HEAD  
SCREWDRIVER



FLATHEAD  
SCREWDRIVER

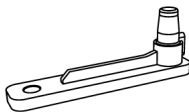


90 DEGREE  
PICK



PLASTIC  
PRY TOOLS

## ADDITIONAL PARTS FOR TOW KIT:



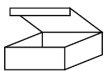
BALL MOUNT  
3" RISE, SHORT



CHAIN HOOKS



2" BALL



PASSIVE WIRING  
KIT BOX

# <THESE INSTRUCTIONS MUST BE GIVEN TO THE END USER>

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










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

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

## IMPORTANT SAFETY NOTICE FOR STEALTH HITCH INSTALLERS AND CUSTOMERS.

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

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

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

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

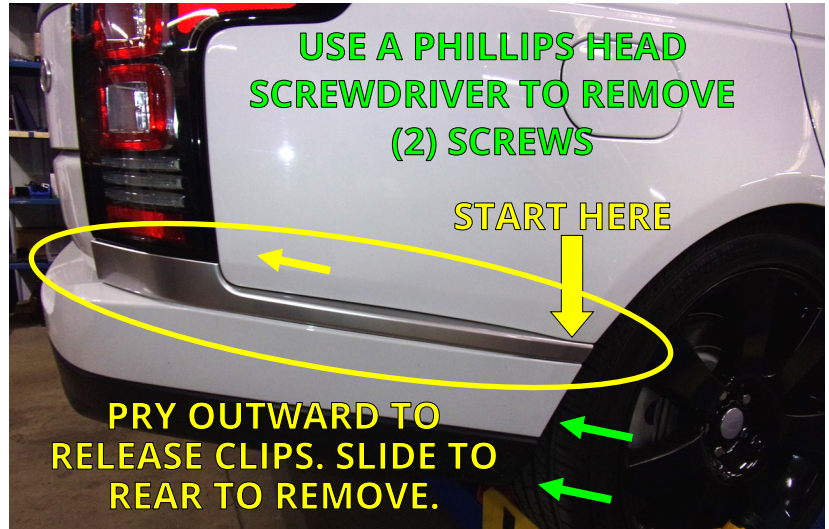


**IF INSTALLATION VEHICLE IS A RANGE ROVER MODEL START AT STEP 1.  
IF INSTALLATION VEHICLE IS A RANGE ROVER SPORT MODEL SKIP TO STEP 13**

### RANGE ROVER MODELS - GAIN ACCESS TO MOUNTING AREA



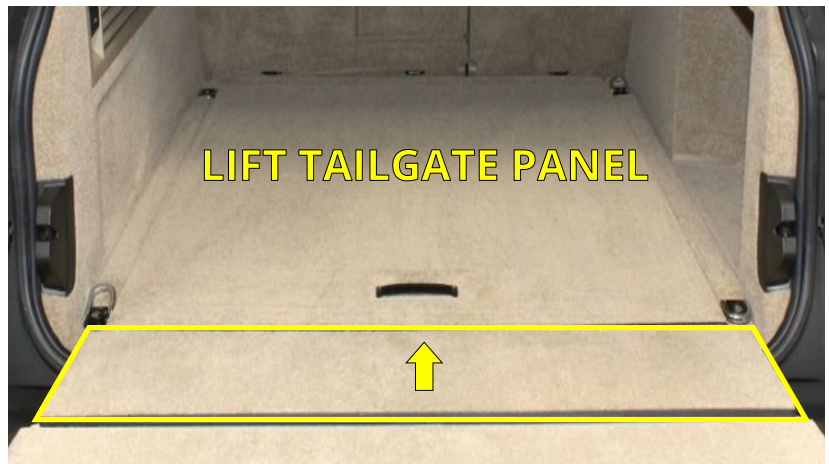
1. Below the taillights, use a plastic pry tool to carefully remove the plastic trim piece shown in the image. (yellow arrow)
2. Inside the rear wheel well, locate and remove (2) Phillips heads screws located on the bottom rear of the wheel well (green arrows).



3. Under where the trim piece was removed in Step 1, use a T30 Torx socket to remove (1) screw securing the rear bottom fascia.
4. Below the taillight, use a 10mm or 13mm socket to remove (1) screw securing the rear bottom fascia. Repeat Steps 1-4 on other side of vehicle.



5. Lift the tailgate panel to gain access to the plastic rivets that secure the rear fascia.

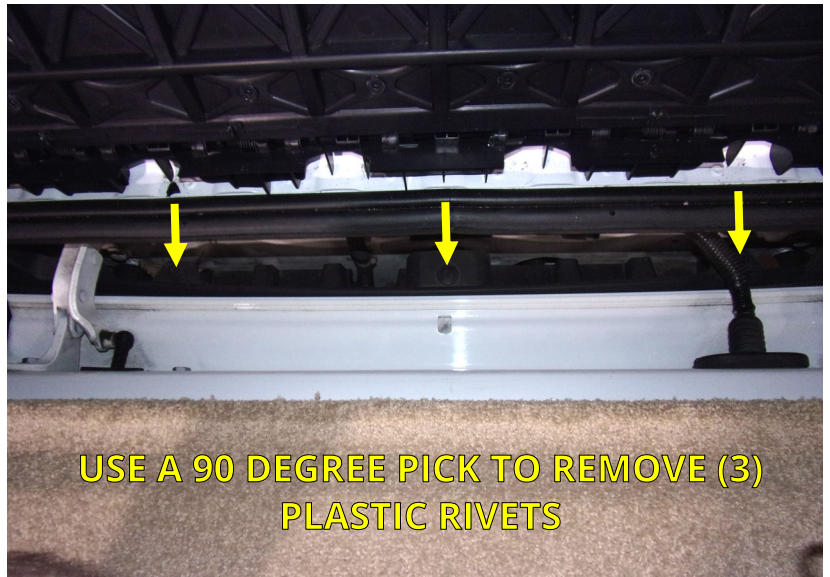


## RANGE ROVER MODELS - GAIN ACCESS TO MOUNTING AREA CONTINUED



90 DEGREE PICK

6. Under the tailgate panel, use a 90 degree pick to remove (3) plastic rivets that secure rear fascia.



PHILLIPS HEAD SCREWDRIVER

- OR -



T20 TORX

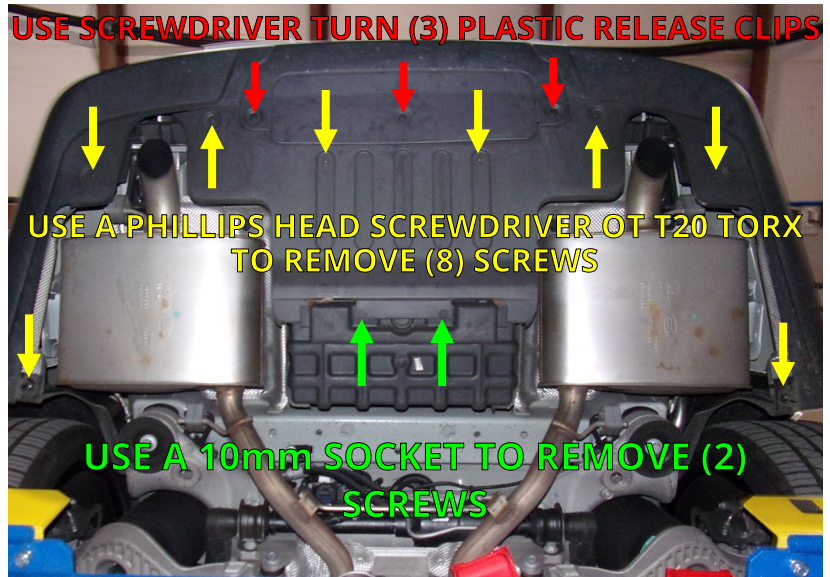


10mm SOCKET



FLATHEAD SCREWDRIVER

7. Use a flathead screwdriver to turn (3) plastic release clips holding bumper access panel. Remove the access panel.
8. Underneath the vehicle, remove (2) screws holding the fascia with a socket. (green arrows)
9. Remove the (8) screws holding the fascia to the vehicle with a Phillips head screwdriver or Torx. (yellow arrows)



PLASTIC PRY TOOLS

10. The bottom 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 clips to disconnect. Continue to pull outward on the fascia and disconnect clips as they are exposed. Continue until all the clips are released. Repeat on other side of vehicle.



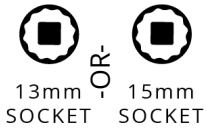
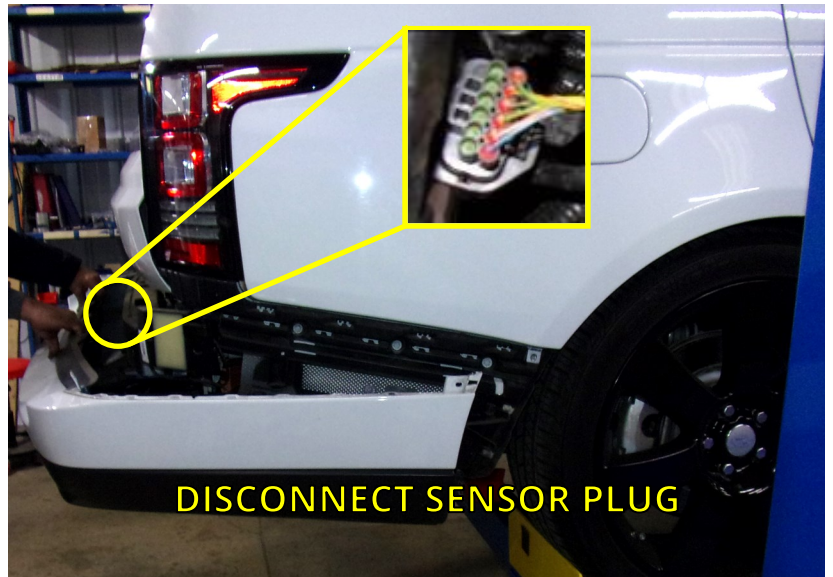
## RANGE ROVER MODELS - GAIN ACCESS TO MOUNTING AREA CONTINUED



90 DEGREE  
PICK

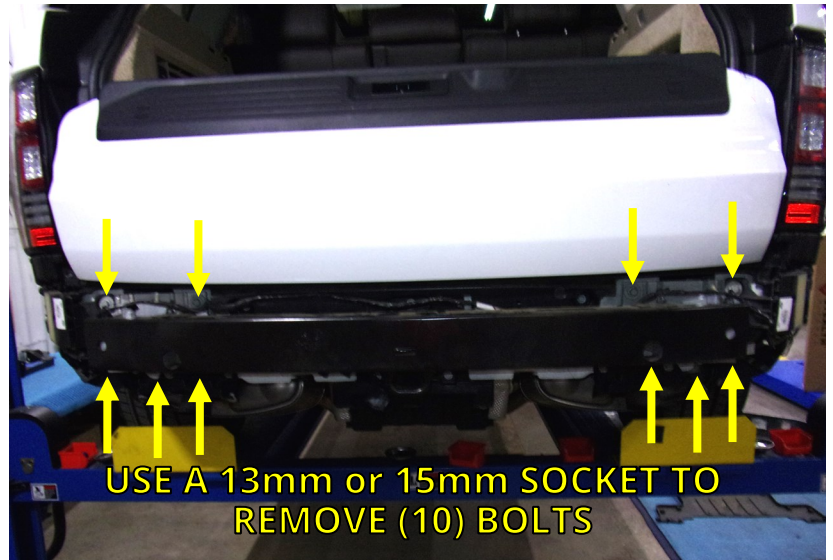
11. This step requires a partner. Pull the fascia rearward enough to access the sensor plug in the center of the vehicle. Disconnect the sensor plug. In some cases a 90 degree pick tool will be needed to disconnect the sensor plug. Remove the fascia completely.

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



12. Remove (10) bolts from the factory reinforcement beam. Discard factory reinforcement beam, keep the bolts for later reinstallation.

**NOTE:** Socket required may vary. Bolts may use a 13mm socket or a 15mm socket.



**RANGE ROVER MODELS - SKIP TO STEP 25.**

## RANGE ROVER SPORT MODELS - GAIN ACCESS TO MOUNTING AREA



13. At the rear of the vehicle, use a pry tool to remove the taillight cover trim. Use a T30 Torx to remove the (2) screws securing the taillights to the vehicle.



14. Slide the taillight toward the rear of the vehicle to remove. A plastic pry tool can be used if the light does not slide freely. Disconnect the light plug by pushing down on the clip and pulling the plug outward. Repeat Steps 13-14 on other side of vehicle.



15. Using a Phillips head screwdriver locate and remove (2) plastic screws on the bottom left and right corners under the door.



## RANGE ROVER SPORT MODELS - GAIN ACCESS TO MOUNTING AREA CONTINUED



90 DEGREE PICK



PHILLIPS HEAD SCREWDRIVER

- OR -



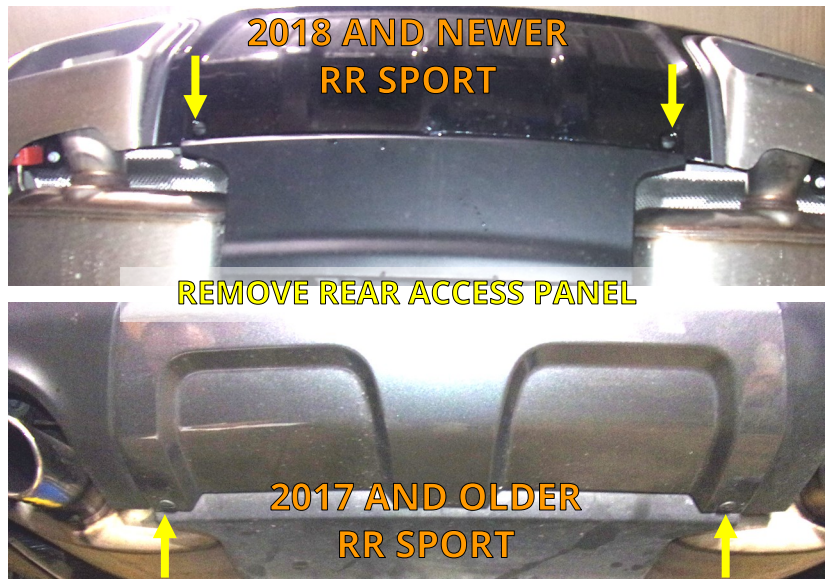
T20 TORX

16. Inside the rear wheel well, behind the tire, locate the plastic rivet (yellow arrow) and three screws (red arrows). Use a 90 degree pick tool to remove the rivet and a Phillips head screw driver or Torx to remove the screws. Fold the flexible liner back toward the tire. Behind the liner, locate (1) additional white rivet. Unclip the rivet by using outward pressure on the fascia (blue arrow). Repeat step on other side of vehicle.



FLATHEAD SCREWDRIVER

17. Under the vehicle locate the rear access panel. Use a flathead screwdriver to turn the (2) plastic screws 90 degrees. Remove the rear access panel.



PHILLIPS HEAD SCREWDRIVER

- OR -



T20 TORX



10mm SOCKET

18. Use a Phillips head screwdriver or Torx to remove (2) screws (red arrows). Use a 10mm socket to remove (2) screws (yellow arrows). Remove the plastic cover held in place with the (4) removed screws.



## RANGE ROVER SPORT MODELS - GAIN ACCESS TO MOUNTING AREA CONTINUED



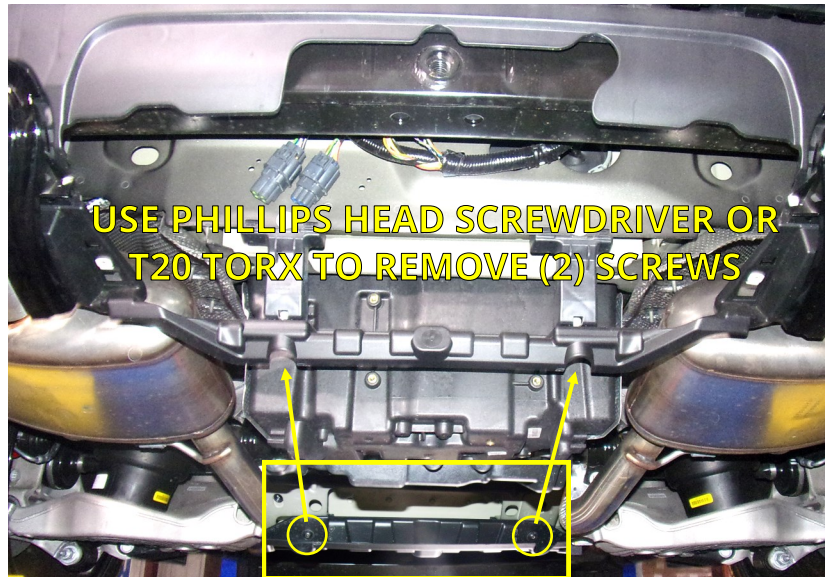
PHILLIPS HEAD  
SCREWDRIVER

- OR -



T20 TORX

19. Use a Phillips head screwdriver or Torx to remove (2) screws shown in image.



PLASTIC  
PRY TOOLS

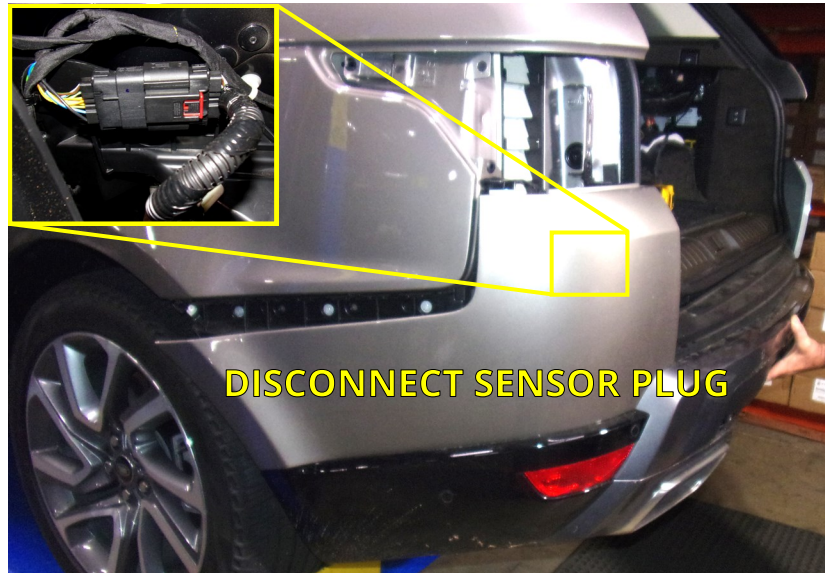
20. The bottom fascia is clipped to the vehicle body directly behind the wheel wells. Pull outward on the fascia to expose the first clip in the seam. With a plastic pry tool, push down on the exposed clip to disconnect. Continue to pull outward on the fascia and disconnect clips as they are exposed. Continue until all the clips are released. Repeat on other side of vehicle.



90 DEGREE  
PICK

21. This step requires a partner. Pull the fascia rearward enough to access the sensor plug behind the fascia, on the driver side. Disconnect the sensor plug. In some cases a 90 degree pick tool will be needed to disconnect the sensor plug. Remove the fascia completely.

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





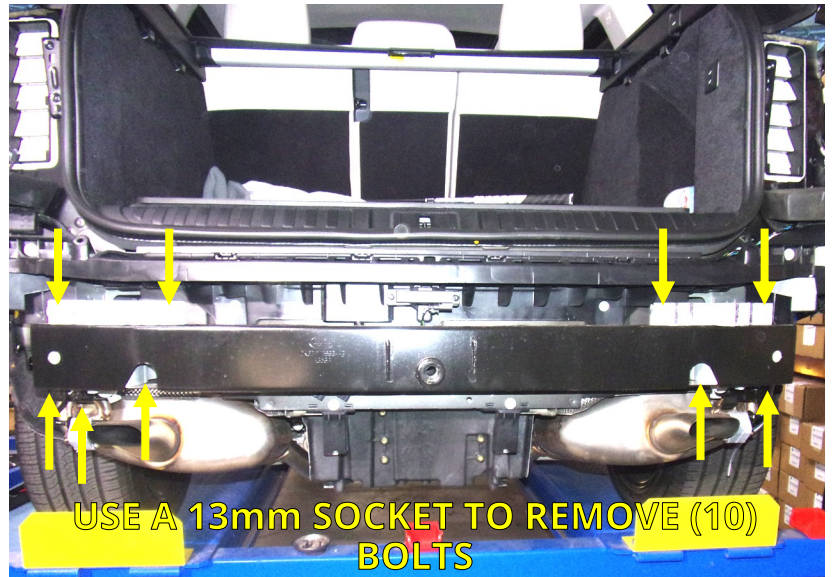
## RANGE ROVER SPORT MODELS - GAIN ACCESS TO MOUNTING AREA CONTINUED



13mm  
SOCKET

22. Use a 13mm socket to remove (10) bolts from the factory reinforcement beam. Discard factory reinforcement beam, keep the bolts for later reinstallation.

**NOTE:** *Model year 2017 or older vehicles may have exhaust hangers which will be removed along with the reinforcement beam and replaced with supplied exhaust brackets. Model year 2018 and newer vehicles will re-use the factory exhaust hangers.*

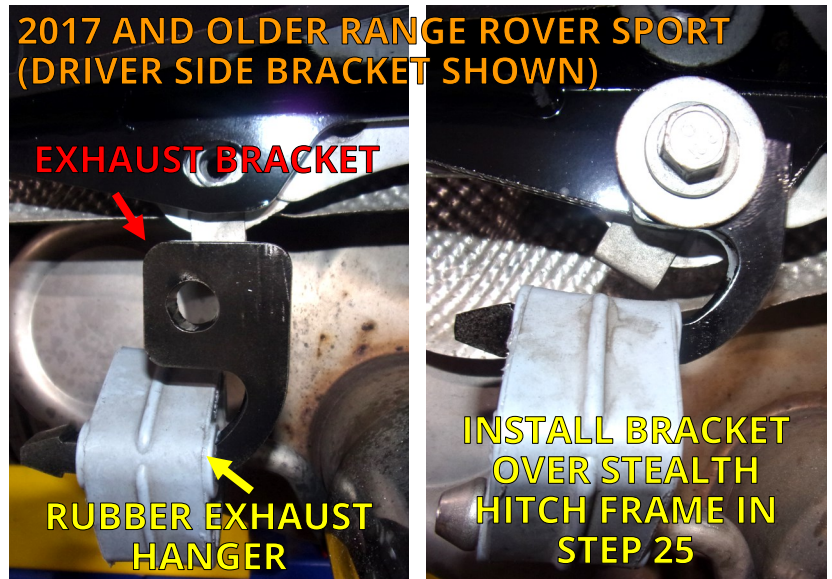


## EXHAUST BRACKET INFORMATION



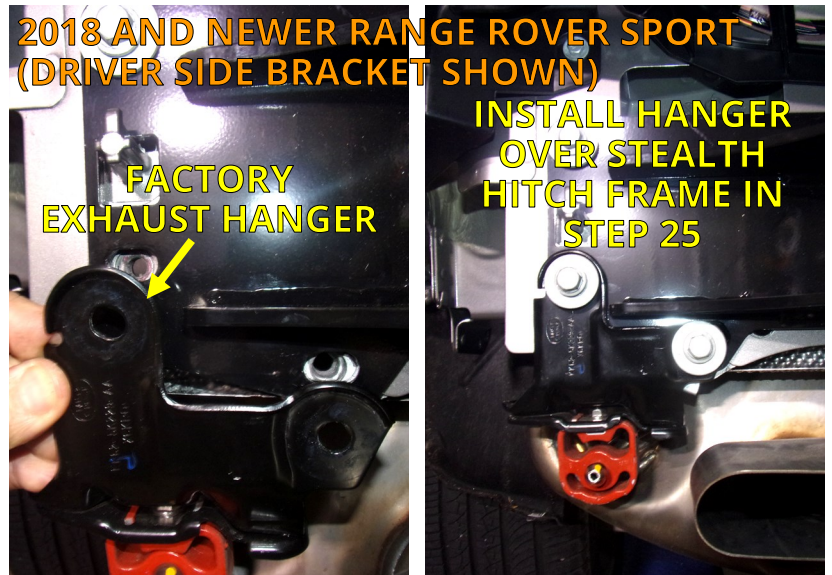
13mm  
SOCKET

23. **2017 AND OLDER RANGE ROVER SPORT** Attach the two provided exhaust brackets to the rubber exhaust hanger as shown. When attaching the hitch frame in Step 25, include the exhaust brackets.

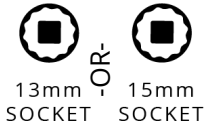


13mm  
SOCKET

24. **2018 AND NEWER RANGE ROVER SPORT** When attaching the hitch frame in Step 25, include replacing the factory exhaust hanger over the hitch frame as shown.



## INSTALL STEALTH HITCH FRAME



TORQUE WRENCH

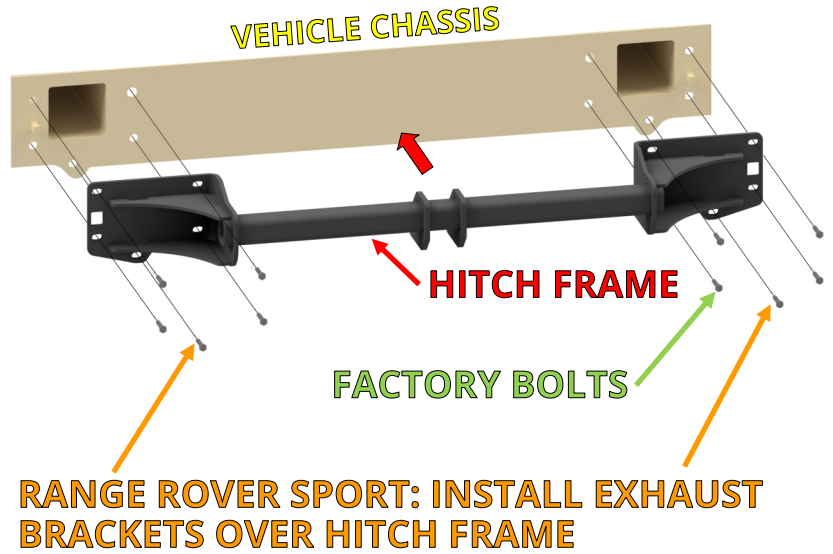
25. Align the slots in the Stealth hitch frame with the holes in the vehicle. Secure the Stealth hitch frame and any exhaust brackets to vehicle with (10) factory bolts.

**NOTE:** Socket required may vary. Bolts may require a 13mm socket or 15mm socket.

**NOTE:** Avoid pinching any wiring between the hitch frame and the vehicle.

26. Torque the (10) factory bolts:

- 20 ft.-lbs. for M8 bolts.
- 35 ft.-lbs. for M10 bolts.



## MOUNT LATCH BLOCK



15/16" SOCKET



15/16" OPEN END WRENCH



TORQUE WRENCH

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

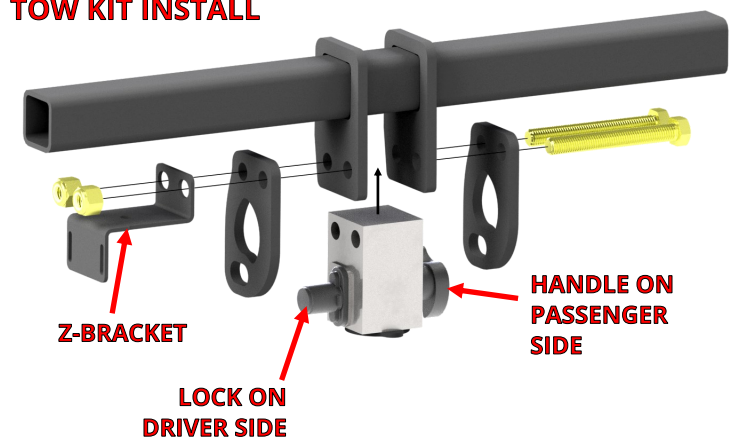
- **Rack Receiver Kit:** Install the latch block with (2) 5/8"-11 x 5" bolts and (2) 5/8" nylock nuts. Tighten each bolt to 150 ft.-lbs.
- **Tow Kit:** Retrieve Z-bracket from wiring harness kit box. Install the latch block, (2) chain hooks, and Z-bracket with (2) 5/8"-11 x 5" bolts and (2) 5/8" nylock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

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

### RACK RECEIVER KIT INSTALL



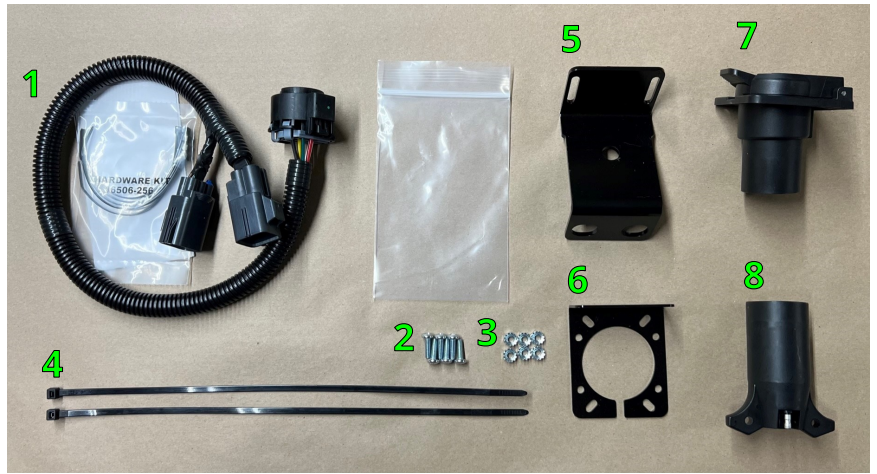
### TOW KIT INSTALL



**IF INSTALLING A RACK RECEIVER KIT, SKIP TO STEP 34.  
IF INSTALLING A TOW KIT, CONTINUE TO STEP 28.**

## INSTALL PASSIVE WIRING KIT

#	DESCRIPTION	QTY
1	7-WAY WIRING HARNESS <ul style="list-style-type: none"> <li>• "Y" HARNESS CABLE</li> <li>• (5) CABLE TIES</li> </ul>	1
2	5/8" LONG PHILLIPS SCREWS	6
3	#10 LOCK NUT	6
4	CABLE TIE - 14"	2
5	Z-BRACKET	1
6	MOUNTING BRACKET	1
7	7-WAY HOUSING	1
8	7-POLE TO 4-POLE ADAPTER	1



28. 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 cable connected to the vehicle's wiring to manage the functions of the trailer lighting. The cable has an **"input"** side with (2) plugs 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.

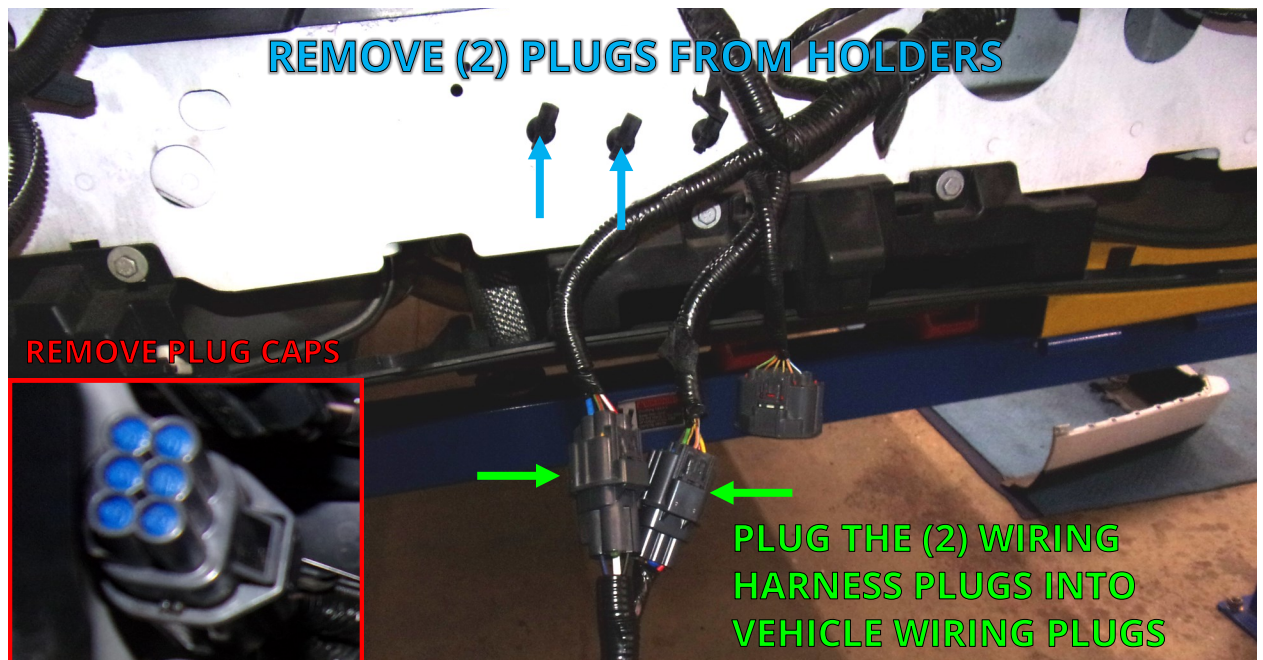
**NOTICE: Do not allow electrical system to become disconnected from power or ground. Doing so may interrupt electrical systems.**

## INSTALL WIRING KIT CONTINUED

29. In the center of the vehicle, behind the Stealth hitch frame, locate and detach (2) vehicle trailer wiring plugs from the holders (blue arrows)

30. Remove plug caps from the vehicle trailer wiring.

31. Plug the (2) plugs of the "Y" harness cable into the (2) vehicle wiring plugs (green arrows).

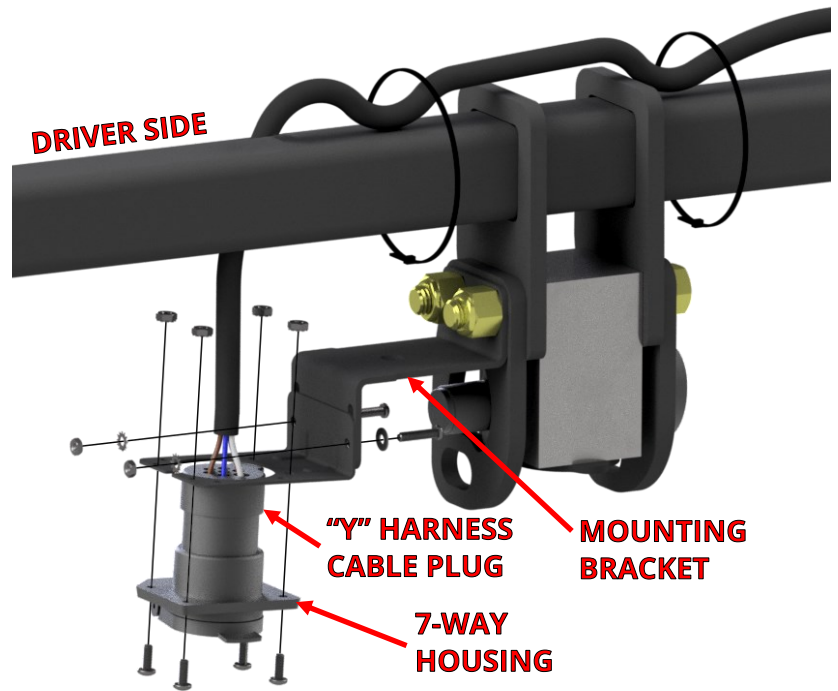


## INSTALL WIRING KIT CONTINUED



PHILLIPS HEAD  
SCREWDRIVER

32. Attach the mounting bracket to the Z-bracket as shown. Pass the plug of the "Y" harness cable through the mounting bracket. Plug the cable into the 7-way housing. Attach the 7-way housing to the mounting bracket as shown. Secure harness to Stealth hitch frame with cable ties.
33. Secure all wires and wiring components. Use the remaining cable ties to secure wiring so that it is not loose.



## REINSTALL VEHICLE COMPONENTS

34. Reattach and secure the fascia.
  - **RANGE ROVER MODELS** Refer to Steps 1-11. Replace bumper access panel when hitch is not in use.

**NOTICE: Remember to plug in the sensor plug in Step 11 before reinstalling the fascia.**



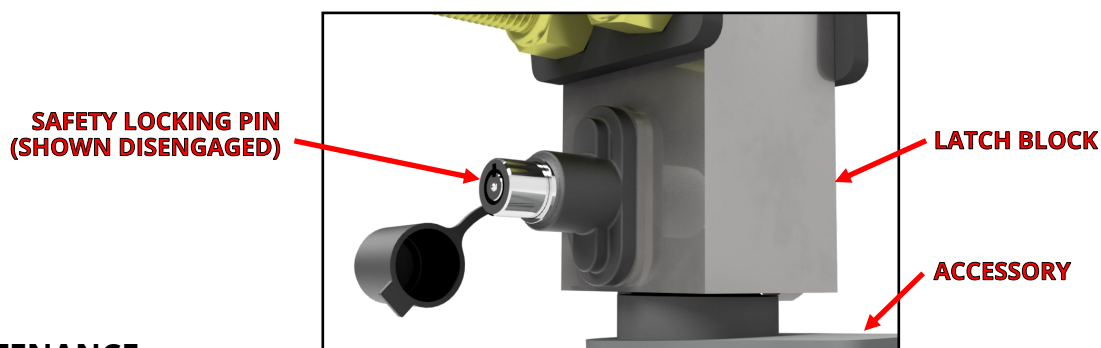
- **RANGE ROVER SPORT MODELS** Refer to Steps 13-21. Replace bumper access panel when hitch is not in use.

**NOTICE: Remember to plug in the sensor plug in Step 21 before reinstalling the fascia.**



## FINAL VEHICLE EXAMINATION

35. Examine the body panels to ensure that they are in a pre-installation condition. Test the electronic functions of the vehicle. Correct any inconsistencies.
36. 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.