



HITCH INSTALLATION INSTRUCTIONS

MAKE: YEARS: MODEL/TRIM:

LEXUS 2020- 2022 RX 350

Excludes: RX350L and RX 350 F-Sport

www.stealthhitches.com 833•694•4824

TOW SYSTEM ONLY AVAILABLE FOR VEHICLES THAT ARE PRE-WIRED FOR TOWING

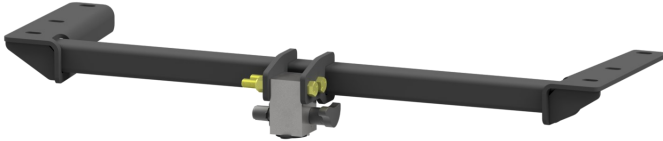
RACK RECEIVER KIT#: **SHR64003**

COMPATIBLE WITH TOW KIT: **SHT25049**

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: **NO**

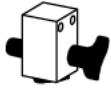


READ ALL INSTRUCTION WARNINGS AND LABELS



NO WELDING, METAL DRILLING OR VISIBLE TRIMMING REQUIRED

PARTS SUPPLIED WITH RACK RECEIVER KIT:



LATCH BLOCK



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



(2) 5/8"
NYLOCK NUTS



2" RACK
RECEIVER



(6) 1/2" FLAT
WASHERS

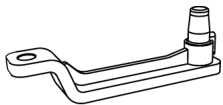


(6) M12 LOCK
WASHERS



(6) M12 1.25 x
50mm BOLTS
FINE THREAD

ADDITIONAL PARTS FOR TOW KIT:



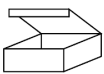
BALL MOUNT
5" RISE, LONG



CHAIN HOOKS



2" BALL



PASSIVE WIRING
KIT BOX

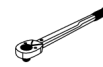
TOOLS REQUIRED:



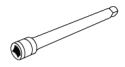
15/16" OPEN
END WRENCH



17mm, 19mm, &
15/16" SOCKETS



TORQUE
WRENCH



SOCKET
EXTENSION



SAFETY GLASSES



RATCHET



FLASHLIGHT



FLATHEAD
SCREWDRIVER



90 DEGREE
PICK



PUTTY KNIFE

RACK RECEIVER INSTALLATION: USE STEPS 1-9 & 23-24

TOW KIT INSTALLATION: USE STEPS 1-23

<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.

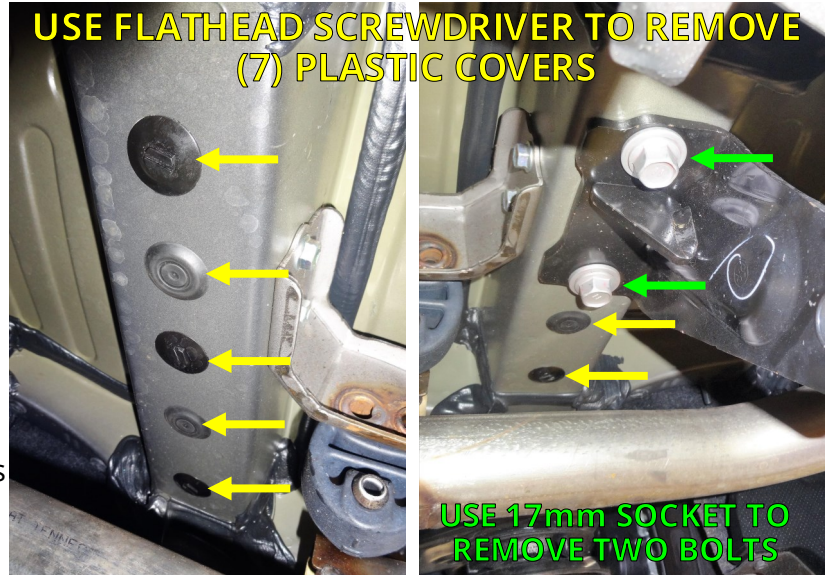
-  Do not modify this product in any manner. Doing so could alter its integrity and lead to a loss of attachment between the trailer and the tow vehicle.
-  Adding Stealth hitch components to the chassis of any vehicle can be hazardous. There is potential for unexpected combustion of fuel, electric shock, 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

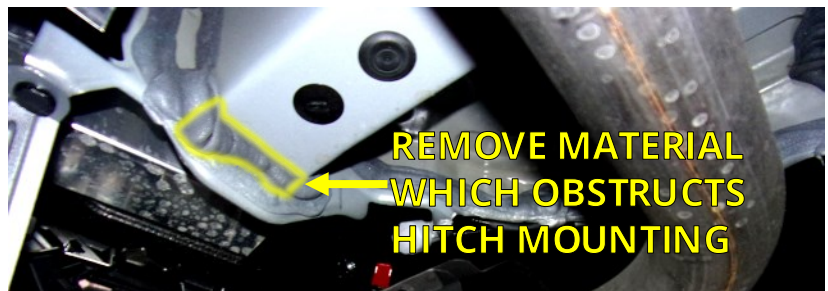
GAIN ACCESS TO MOUNTING AREA



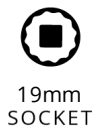
1. Locate (5) plastic covers along the bottom of the driver side frame rail. Remove the covers with a flathead screwdriver. Locate and remove (2) plastic covers from the passenger side frame rail.
2. Use a socket to remove (2) bolts holding the tow loop under the passenger side frame rail (green arrows). Save the tow loop for later reinstallation.
3. Screw the (6) supplied M12 bolts into the uncovered holes to confirm there is no dirt or obstruction in bolt holes. Remove bolts for hitch install.



4. Check the rear most area of each frame rail for adhesive material that may obstruct the hitch installation. If present, remove material which interferes with the hitch mounting flat against the frame rails.



INSTALL STEALTH HITCH FRAME



5. Raise the Stealth hitch frame. Align hitch holes with (6) threaded holes underneath the frame rails. Use (4) of the supplied M12 bolts, 1/2" flat washers, and M12 lock washers to secure the hitch to the vehicle (yellow arrows).
6. Raise the tow loop to its previous location and install over the hitch using (2) M12 bolts, 1/2" flat washers, and M12 lock washers (green arrows)
7. Tighten and torque bolts to 85 ft.-lbs.



MOUNT LATCH BLOCK



90 DEGREE PICK

8. Use a 90 degree pick tool to remove (1) rivet next to the latch block installation area, as shown in images. Removing rivet will allow better access to the bolts securing the latch block.



15/16" SOCKET



15/16" OPEN END WRENCH



TORQUE WRENCH

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

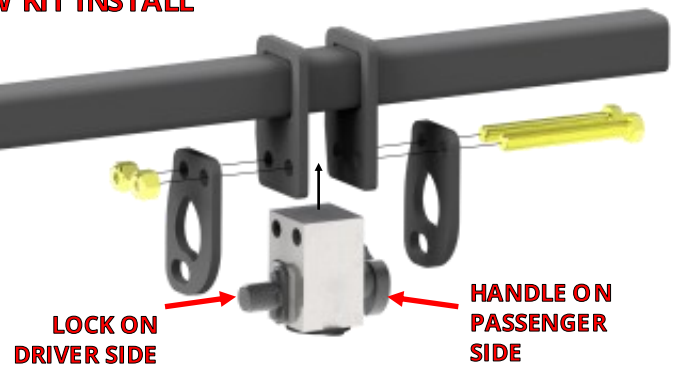
- **Rack Receiver Kit:** Install the latch block with (2) 5/8"-11 x 5" bolts and (2) 5/8" nylock nuts. Tighten each bolt to 150 ft.-lbs.
- **Tow Kit:** Install the latch block and (2) chain hooks with (2) 5/8"-11 x 5" bolts and (2) 5/8" nylock nuts. Tighten each bolt to 150 ft.-lbs.

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

RACK RECEIVER KIT INSTALL



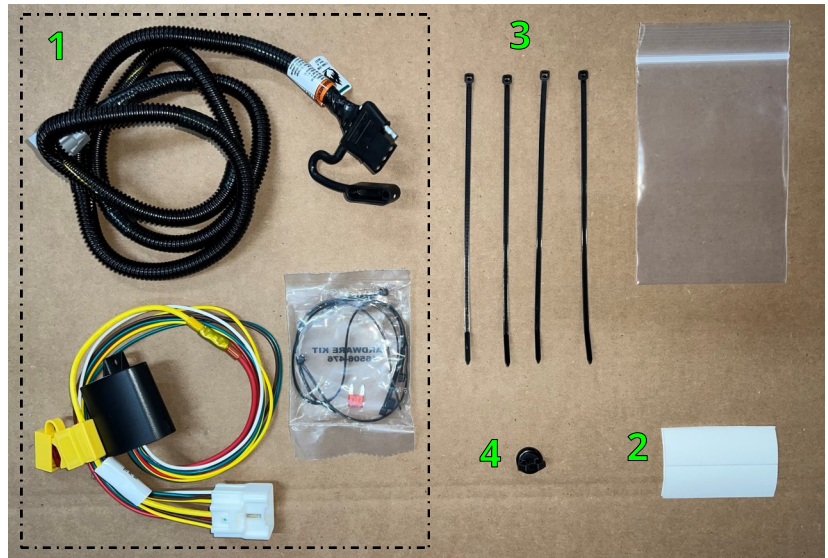
TOW KIT INSTALL



**IF INSTALLING A RACK RECEIVER KIT, SKIP TO STEP 23.
IF INSTALLING A TOW KIT, CONTINUE TO STEP 10.**

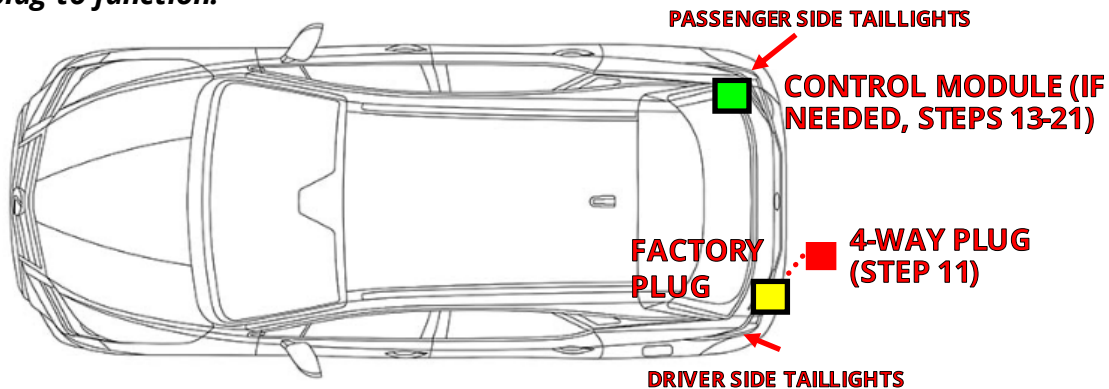
INSTALL PASSIVE WIRING KIT

#	DESCRIPTION	QTY
1	4-WAY WIRING HARNESS <ul style="list-style-type: none"> • 4-WAY PLUG & WIRE • CONTROL MODULE • 10 AMP FUSE • CABLE TIE - 6" • CABLE TIE - 14" 	1
2	ADHESIVE FOAM STRIP	2
3	CABLE TIE - 8"	4
4	MAGNETIC CABLE HOLDER	1



10. Locate the wiring kit box. Review the contents of the box against the list above to check for missing components. The wiring kit uses a 4-way plug wire that connects directly to the vehicle through a factory installed plug. The wire has an "input" side that receives power and signals from the vehicles electronic systems. The "output" side of the wire is the 4-way plug.

NOTE: On some vehicles only the 4-way plug is needed for trailer lights to function. On others a control module must be plugged-in inside the vehicle cargo area for the 4-way plug to function.



11. Locate the factory wiring plug under the driver side of the vehicle. Remove the protective cap. Plug the 4-way wiring harness into the factory wiring plug.

12. Test the function of the 4-way plug with a trailer or multi-meter.

If the plug is functioning skip to Step 22.

If the plug is not functioning continue to Step 13.



INSTALL WIRING KIT CONTINUED

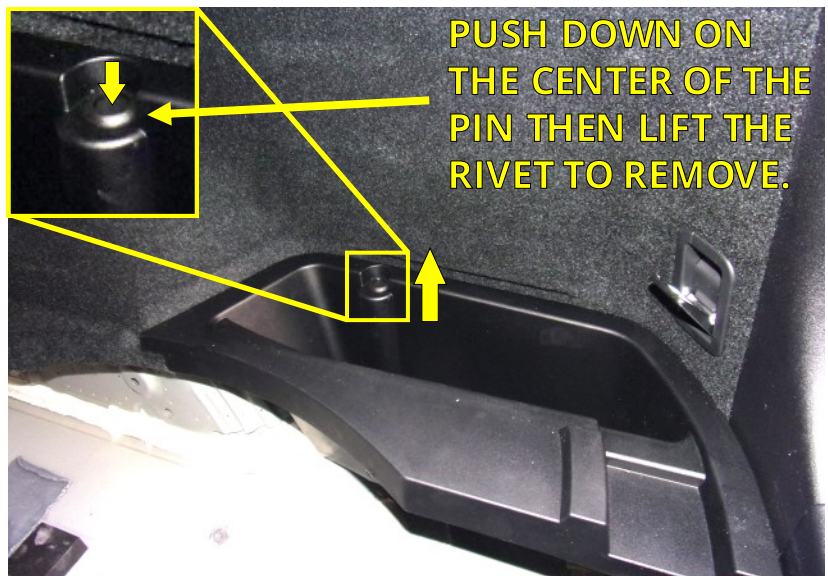
13. Inside the cargo area, lift and remove the rear floor panel.



14. On the passenger side of the cargo area, lift and remove the cargo holder lid.



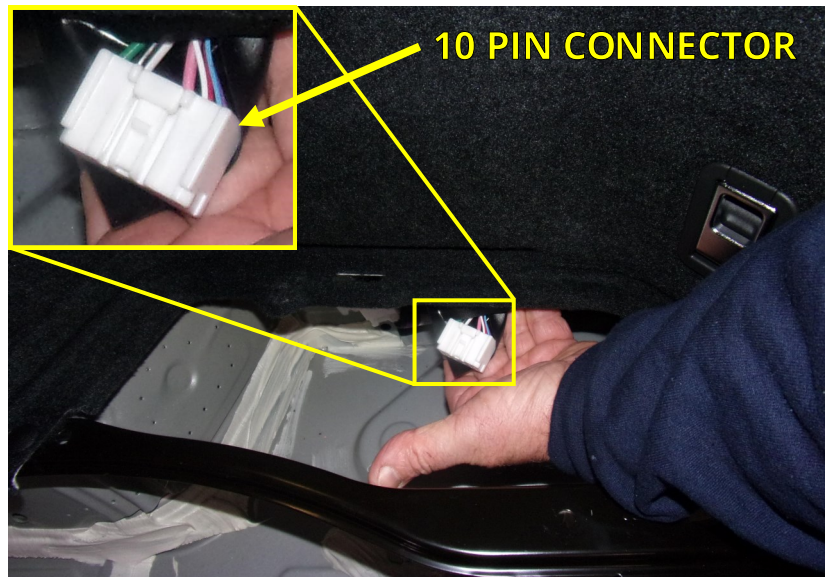
15. Locate the "push pin" rivet securing the cargo holder. Use a 90 degree pick tool to push down the center pin, then lift up on the rivet to remove. Lift up and remove the cargo holder.



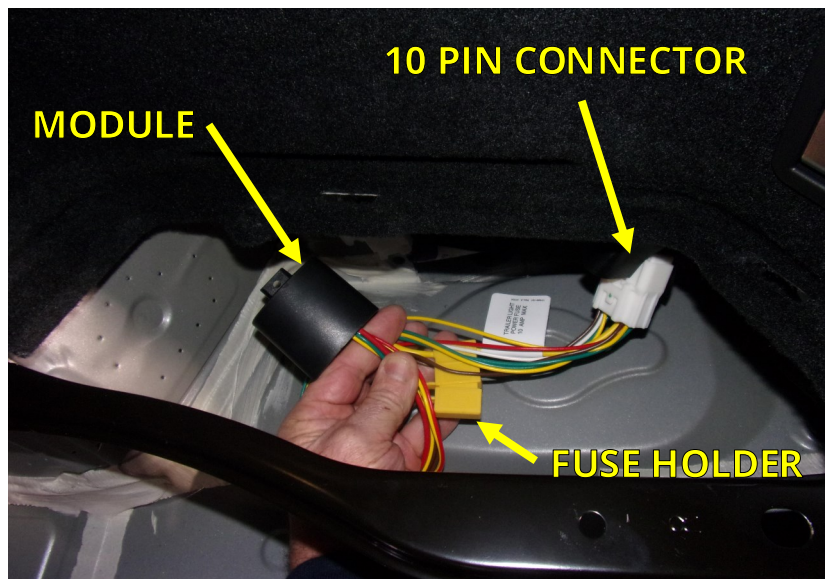
90 DEGREE PICK

INSTALL WIRING KIT CONTINUED

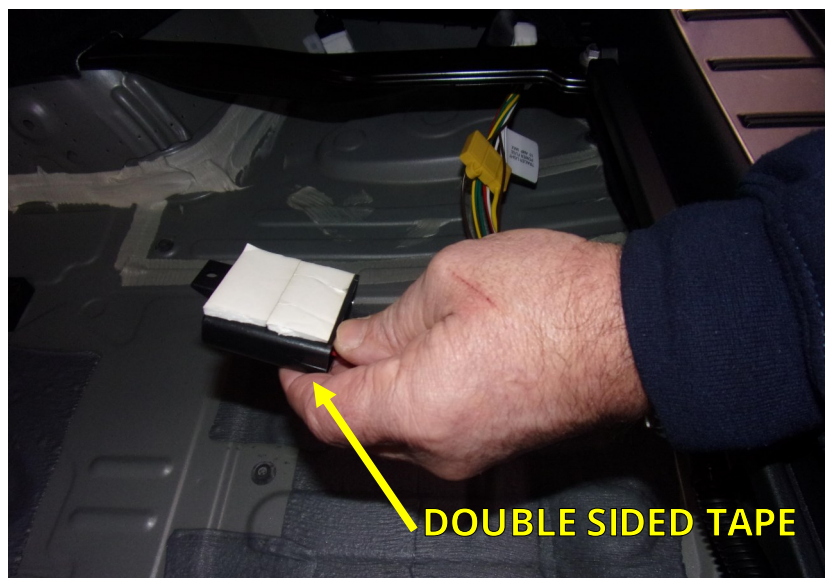
16. After removing the cargo holder, feel behind the cargo wall panel and locate the vehicle 10 pin connector or plug.



17. Locate the 10 pin trailer harness control module in the tow kit box. Plug the harness control module into the vehicle 10 pin connector



18. Locate the double sided tape in the tow kit box. Add the tape to the control module, as shown. Secure the module to the vehicle body behind the panel wall.



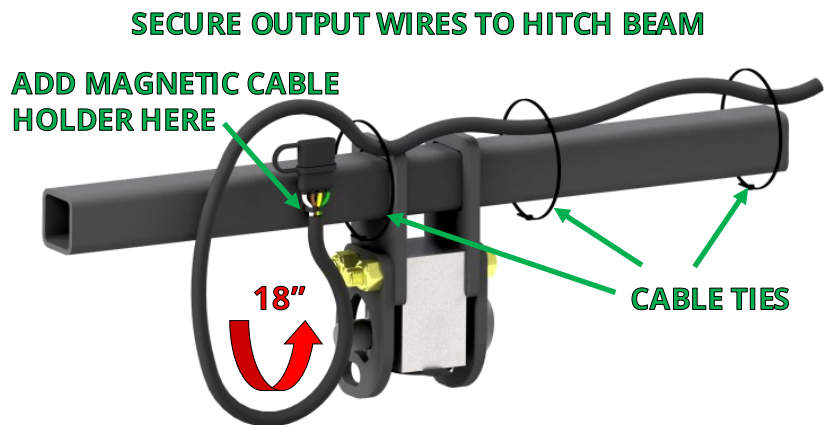
INSTALL WIRING KIT CONTINUED

19. Add the supplied 10 Amp fuse to the fuse holder.
20. Replace the cargo holder and cargo area floor panels.
21. Test the function of the 4-way plug with a trailer or multi-meter.

NOTE: Some vehicle models may require an additional 10 amp fuse to be added to the vehicle fuse panel located under the hood. Refer to the vehicle's owner manual to locate the correct fuse slot.

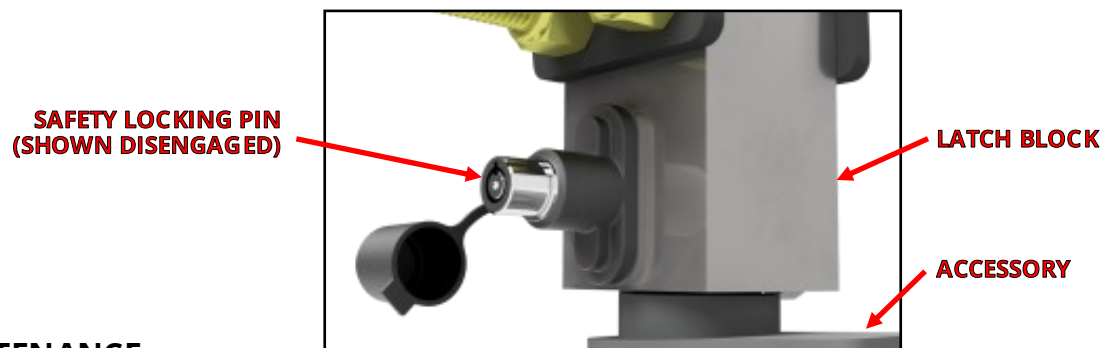


22. Secure harness to Stealth hitch frame with cable ties. Maintain an 18" loop from cable tie to 4-way plug. Add the magnetic cable holder and secure to the harness close to the 4-way plug, with a cable tie.



FINAL VEHICLE EXAMINATION

23. Examine the body panels to ensure that they are in a pre-installation condition. Test the electronic functions of the vehicle. Correct any inconsistencies.
24. 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.