

MAKE:

HITCH INSTALLATION INSTRUCTIONS

MODEL/TRIM:

IAGUAR 2017 - 2023 F - PACE

YEARS:

www.stealthhitches.com

833.694.4824

RACK RECEIVER KIT#: SHR37001

COMPATIBLE WITH TOW KIT: SHT25007

2" RACK RECEIVER MAXIMUM PAYLOAD: 600 LBS

MAXIMUM TOW RATING: 6000 LBS MAXIMUM TONGUE WEIGHT: 600 LBS



UNDER VEHICLE TRIMMING:

HEAT SHIELD: NO FASCIA: YES

GRAVEL GUARD TRIMMING: YES



READ ALL INSTRUCTION WARNINGS AND LABELS



NO WELDING, METAL DRILLING OR VISIBLE TRIMMING REQUIRED

PARTS SUPPLIED WITH RACK RECEIVER KIT:



LATCH BLOCK & KEYS

2" RACK RECEIVER



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



(2) 5/8"



NYLOCK NUTS





15/16" OPEN **END WRENCH**



8mm, 10mm, 21mm, & 15/16" SOCKETS



RATCHET



SOCKET **EXTENSION**



SAFETY GLASSES



FLASHLIGHT



TOROUE WRENCH



PLASTIC PRY TOOLS



PHILLIPS HEAD SCREWDRIVER



T20 TORX

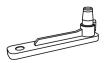


DREMEL TOOL



FILE

ADDITIONAL PARTS FOR TOW KIT:



BALL MOUNT 3" RISE, SHORT



CHAIN HOOKS



2" BALL



PASSIVE WIRING KIT BOX





MULTIMETER



ADDITIONAL TOOLS FOR TOW KIT:

STRIPPER/ CRIMPING



TOOL

90 DEGREE PICK



PLIERS



DRILL & 3/8" BIT



T40 TORX



13mm SOCKET



SILICONE

<THESE INSTRUCTIONS MUST BE GIVEN TO THE END USER>

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

- The Rack Receiver only product does not require adding a wiring harness.
- The <u>Rack Receiver plus Tow Kit</u> 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.



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.



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.



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.



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.



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.



Some accessories, like the rack receiver, are not rated for towing. Do not use any accessories without proper knowledge of their use.



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.



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

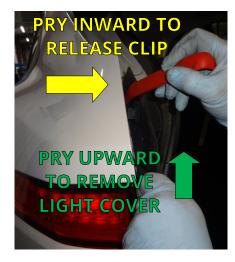


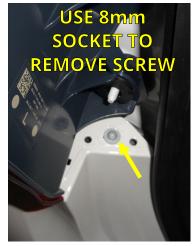
1. Open cargo area door. Remove (2) plastic screw rivets in the bottom left and right corners..





Remove taillight cover. Use a plastic pry tool to pry inward to release and remove clip. Pry upward to remove light cover. Remove (1) screw that was under the cover. Repeat on other side of vehicle.









T20 TORX



3. Inside the wheel well, behind the tire, locate the (2) Phillips head screws which are holding the wheel well liner (yellow arrows). Remove these screws and fold the flexible liner back toward the tire. Behind the liner locate and remove (2) Torx screws (blue arrows), (4) Phillips head screws (red arrows), and (1) hex head screw (green arrow). Repeat on other side of vehicle.



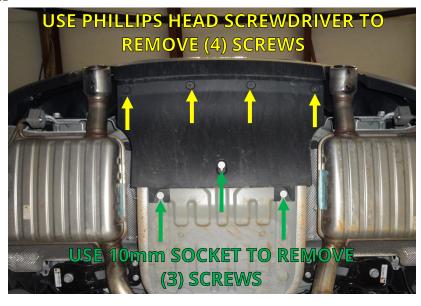
GAIN ACCESS TO MOUNTING AREA CONTINUED



PHILLIPS HEAD SCREWDRIVER



4. Underneath the rear of the vehicle, remove (4) Phillips head screws and (3) hex head screws to remove the gravel guard.



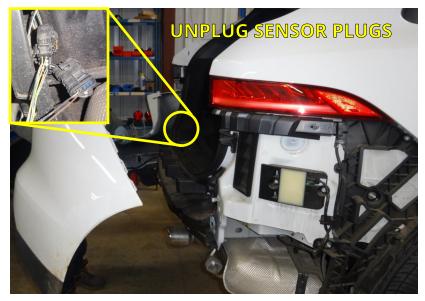


5. The fascia is clipped to the vehicle body directly behind the wheel wells. Pull outward on the fascia to expose the first clip in the seam. With a plastic pry tool, push down on the exposed clip to disconnect. Continue to pull outward on the fascia and disconnect clips as they are exposed until all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



6. This step requires a partner. Pull the fascia rearward enough to access the (1) or (2) sensor plugs on the driver side. Disconnect the sensor plugs. Remove the fascia completely.

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



GAIN ACCESS TO MOUNTING AREA CONTINUED



8mm SOCKET



21mm SOCKET

- 7. Use a socket to remove (5) screws from the plastic fascia support panel.
- 8. Remove the factory reinforcement beam. Remove (8) M14 bolts from the factory reinforcement beam. Discard the factory reinforcement beam. Save the factory bolts for hitch install.



INSTALL STEALTH HITCH FRAME



21mm SOCKET



TORQUE WRENCH 9. Install the Stealth hitch frame onto the vehicle using the (8) factory bolts. Center the hitch frame before tightening. Use a torque wrench to tighten to 125 ft.-lbs.





10. Reattach the plastic fascia support panel.



MOUNT LATCH BLOCK



15/16" SOCKET



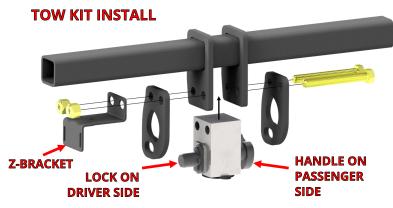
15/16" OPEN END WRENCH



- 11. 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.
- from 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.







IF INSTALLING A RACK RECEIVER KIT, SKIP TO STEP 32. IF INSTALLING A TOW KIT, CONTINUE TO STEP 12.

INSTALL PASSIVE WIRING KIT

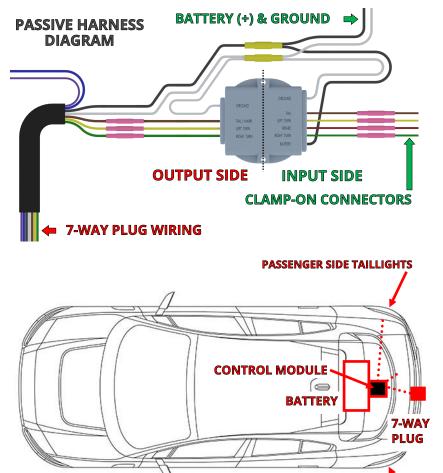
#	DESCRIPTION				
1	7-WAY WIRING HARNESS				
	FUSE HOLDER & FUSE				
	 CONTROL MODULE & WIRES 				
2	ADHESIVE FOAM STRIP	2			
3	FORK TERMINAL	1			
4	CLAMP-ON CONNECTORS	5			
5	5/8" LONG PHILLIPS SCREWS	4			
6	#10 LOCK NUT	4			
7	CABLE TIE – 8"	4			
8	CABLE TIE – 14"	3			
9	Z-BRACKET	1			
10	MOUNTING BRACKET	1			
11	7-POLE HOUSING	1			
12	7-POLE TO 4-POLE ADAPTER	1			





12. 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.



DRIVER SIDE TAILLIGHTS

13. Inside the rear cargo area, remove the cargo area floor panel by lifting up and out. Place panel on blanket or safe area.



14. If present, remove the spare tire by turning knob counterclockwise. Consult owner's manual if necessary. If your vehicle does not have a spare tire in the cargo area, remove the foam insert from this area instead.





15. Remove the passenger side (2) rear cargo anchor screws.





16. To remove the threshold trim, use a socket to remove (2) screws. Lift up on threshold to remove.







17. Remove (2) cargo hooks on the passenger side of the vehicle. Use a 90 degree pick to pull the plastic rivet from cargo hook. Use a Torx to remove (1) screw

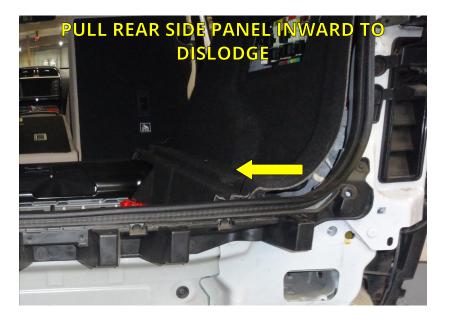




18. Remove (3) plastic screw rivets that are holding the passenger side panel.



19. Dislodge the passenger side panel to gain access to vehicle wiring harness.





- 20. In the center of the vehicle, locate and remove the indicated rubber grommet. Drill a 3/8" hole in grommet. Feed the output wires from inside the vehicle to the outside of the vehicle. Pass the grommet over the wires. Replace the grommet.
- 21. Retrieve the control module from the wiring kit box and attach it to a metal surface inside the battery compartment using the provided adhesive foam strips.



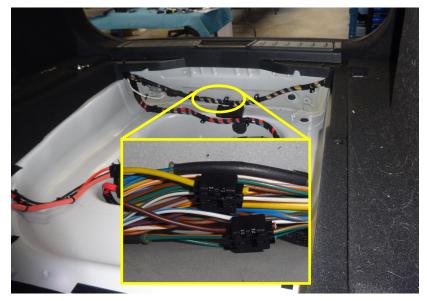






22. The wires on the input side of the wiring module need to be attached to the vehicle wiring. Locate the indicated part of the vehicle wiring harness. Use a clamp-on connector to connect the yellow and brown wires to the vehicle wiring harness. (See reference table below.) Some models have two green/orange wires. Verify circuit function with multimeter.

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

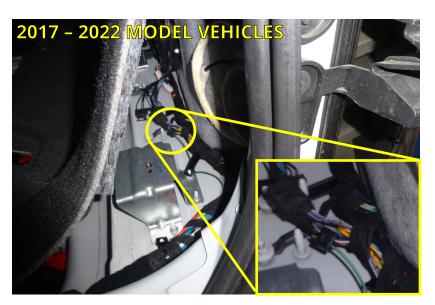






23. Inside the passenger side compartment locate the indicated part of the vehicle wiring harness. Use clamp-on connectors to connect the green wire to wire behind taillight. (See reference table below.)

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





CLAMP-ON CONNECTOR COLOR REFERENCE TABLE							
	SIGNAL IN	PUT WIRES	POWER & GROUND WIRES				
<u>FUNCTION</u>	<u>HARNESS</u>	<u>VEHICLE</u>	FOWER & GROOMD WIRES				
LEFT TURN	YELLOW	WHITE/GREEN (2017-2022) WHITE/BROWN (2023+)	12V+ (POWER)	BLACK	BATTERY (+)		
RIGHT TURN	GREEN	GRAY/PURPLE (2017-2022) PURPLE/ORANGE (2023+)	GROUND	WHITE	BATTERY (-)		
<u>MARKER</u>	BROWN	GREEN/ORANGE					
<u>BRAKE</u>	RED	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.					
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. <i>Trailers rarely have reverse lights or surge brakes.</i>						
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



24. Trim white ground wire so it will reach negative battery terminal (-) 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 ground stud.

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





SOCKET



TOOL

25. Trim black power wire so it will reach positive battery terminal (+) without excess wire. Locate the fuse holder supplied in the wiring kit box. Remove the fuse from the fuse holder. Route the power wire to the battery positive terminal. Crimp the fuse holder lead to the black power wire and connect to the positive battery terminal (+).

NOTICE: Do not allow vehicle wiring to lose power.

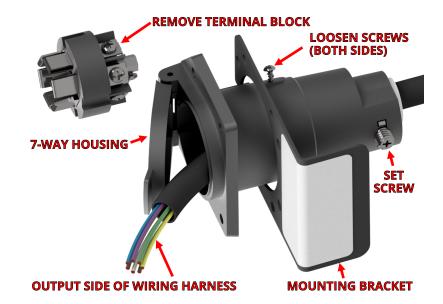


WIRE 7-WAY PLUG



PHILLIPS HEAD SCREWDRIVER

26. Locate the 7-way housing. Use a screwdriver to loosen (2) screws. Remove 7-way round terminal block. Place the mounting bracket onto the 7way housing as shown. Use a screwdriver to loosen the set screw at the bottom of the 7way housing. Route output side wires of the wiring harness through the 7-way housing.



WIRE 7-WAY PLUG CONTINUED

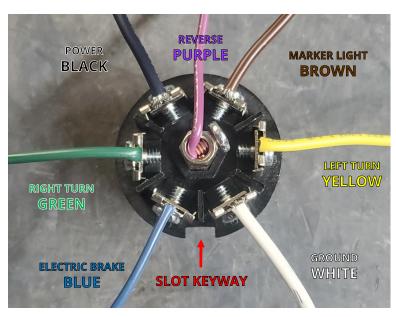
Please follow instructions below very carefully. **Incorrect wiring of the 7-way receptacle causes the vast majority of wiring problems.**





- 27. 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.



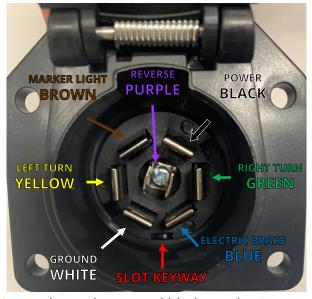
TEST 7-WAY HARNESS WIRING



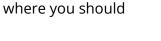
SCREWDRIVER



28. 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 located near the power supply.



- 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.



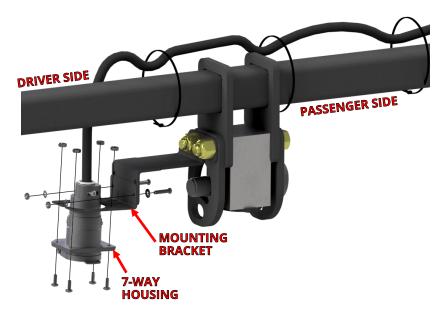


PHILLIPS HEAD SCREWDRIVER

29. Attach the mounting bracket and 7-way housing to the Stealth hitch frame as shown. Secure harness to Stealth hitch frame with cable ties.



- 30. 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.
- 31. Use the provided adhesive foam strips to secure the control module to an inside body panel. Use silicone to waterproof the grommet.



CUT ACCESS TO LATCH BLOCK





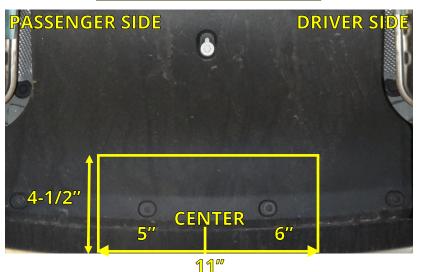
FILE

32. Use a Dremel tool to cut out gravel guard, as shown. The access hole necessary varies depending on which kit you are installing. Follow indicated template. Use a file to smooth out the cut.

TOW KIT



RACK RECEIVER KIT



CUT ACCESS TO LATCH BLOCK CONTINUED



FILE

33. Cut off the two center fascia tabs with Dremel tool. Use a file to smooth out the cut.



REINSTALL VEHICLE COMPONENTS

34. Reattach and secure the fascia and other vehicle components in reverse order. Refer to Steps 1-6 and 13-19.

NOTICE: It's important to remember to connect the sensor plugs before you completely install 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. (<u>Rack Receiver</u> and <u>Ball Mount</u> if purchased.)
 - 1. Prepare latching mechanism. Turn handle clockwise if needed.
 - 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.