

REV 2, Date 07-05-2016, By RS

Bolt Kit Weight-539g		Kit Weight-539g	Hardware Included
¢	QTY	Fastener	
	2	3/8" Flat Washers	
	2	3/8" Lock Washers	
	2	3/8" - 16 Nuts	
	2	3/8" - 16 x 1" Bolt	
	1	1/2" Flat Washer	
	1	1/2" Lock Washer	
	1	1/2"-13 x 2-1/2" Bolt	
	2	10mm Lock Washer	
	2	M10 - 1.5 x 20mm Stud Extender	
	14	M10 - 1.5 Serrated Flange Nuts	
	2	M10 - 1.5 x 20mm Bolt	
	2	Frame Plate Strap	
	2	Valoro Squaro	

- 2 Velcro Square
- 1 11" Zip-tie

## READ THESE INSTRUCTIONS THOROUGHLY AND ACCOUNT FOR ALL HARDWARE LISTED BEFORE BEGINNING INSTALLATION!

### DUE TO THE NUMBER OF BOLTS AND FASTENERS BEING REMOVED IT IS HIGHLY RECOMMENDED THAT YOU LABEL EVERY PIECE OF HARDWARE REMOVED AND WHICH PANEL IT WAS REMOVED FROM FOR EASE OF RE-ASSEMBLY

### IT IS HIGHLY RECOMMENDED THAT YOU HAVE A PROFESSIONAL BODY SHOP/INSTALLATION FACILITY PERFORM THE INSTALLATION.

The model numbers X7201 and X7202 are fitted for the 2012-2016 Tesla Model S. These model numbers will also fit the **2016 Model S Refresh** with some modification to the cutout access hole (step 21). The bumper removal process may vary slightly on the Refresh Model.

**Step 1.** Raise rear of vehicle off of ground and place on ramps or suitable jack stands.

**Note:** It is recommended to place the vehicle in "Very High" suspension mode to ease in installation if performing on ramps. If using a hoist/lift, ensure that you are utilizing the Tesla approved lifting points/hoist adapters.

**Step 2.** Locate the underbelly panels. Start by removing the innermost fins that are connected to the chrome trim. Once the bolts/clips are removed, the fins unsnap from the panel. Gently pull in a downward motion. Repeat on opposite side as well as outermost fins. See Figures [1] & [2].



Step 3. Disconnect lower underbelly panel closest to the rear. There are many fasteners in this step and it is recommended to label the locations of these fasteners. There are specific machine screws and lag style screws, incorrect re-installation could lead to the "cross-threading" of threads.



# Step 4. Remove the next underbelly panel towards the front of the car from the panel just removed.



**Step 5.** Locate the lower rear inner fender well. Picture shown is of the passenger side. Remove the two lower two piece clips where attached to the bumper. Then remove the three rear most visible clips (This allows access to a hidden bolt in an another step). Repeat on opposite side.





Step 6. Remove the push pin clip in the side of the wheel well. Repeat on opposite side.



**Step 7.** Gently pull back the fender felt. Remove the torx screw (T25) that connects the bumper and body ends together. Repeat for opposite side.



Fig [8]

Step 8. Open hatch and remove interior carpet liners.



**Step 9.** Gently remove the trunk hatch latch plastic by gently pulling in an upward motion. The plastic is held in with four snap clips and may require a small amount of force to remove. You will need to gently remove the weather stripping around this panel to ease removal. Use of a special panel clip removal tool will greatly help with this step.



**Step 10.** Remove the curved plastic panel. Gently pull outwards towards the center of the trunk. **NOTE:** This panel is interconnected with the panel above it. You will need to peel back the weathers tripping as well to remove this panel. Repeat for opposite side.



**Step 11.** Starting with driver's side, remove the push tree style plastic clip and peel back the fabric liner. Repeat on opposite side.



**Step 12.** Behind the carpet liner you will notice a hole in the body panel. In this hole there is a 10mm nut that is attached to a stud, holding on the bumper skin. Remove this nut with a 1/4" drive ratchet, mini extension and 10mm socket. Repeat on opposite side.



Step 13. Starting at the driver side, gently remove the bumper fascia by gently peeling outwards starting at the torx screw removed in Step 8. The bumper fascia is held in by a series of clips that will unsnap as you work your way toward the rear of the vehicle. As you round the corner to the taillights, begin pulling rearward.
 Continue working your way around to the passenger side until removed. It is advised to have help support the bumper when removing.

**Step 14.** With the bumper fascia removed, mark an arrow on the impact bar cover to note upward direction, and remove the impact bar cover held to the body with eight nuts. Remove the sensor located in the center of vehicle (sensor style may vary from shown in picture). See Figure [16].



Fig [16]

**Step 15.** Remove the four nuts holding the impact bar into place and discard. **NOTE:** Some models do not have this impact bar. Skip this step if bar is not present.



**Step 16.** Place the trailer hitch into position on the lower six studs. Ensure that the hitch is centered on the studs as this is important for alignment in the coming steps.



Step 17. Place the impact bar back over the trailer hitch plate and replace the four nuts removed in Step 16 with the supplied M10x1.5 serrated flange nuts. Center the receiver to the car using the center contour as a reference. Torque nuts to 40 ft lbs. If impact bar is not present, secure hitch with four supplied M10x1.5 serrated flange nights and tighten as directed. Repeat on opposite side. See Figure [19].





Step 18. Place impact bar cover back into the upward position from which it was removed. Because of the hitch placement, it will be easiest to tip the bottom of the impact bar cover in first and then onto the studs. Place three M10x1.5 serrated flange nuts on the two top studs and bottom outside stud. Take one M10x1.5 x
20mm stud extender and place onto bottom inside stud. Torque the three M10 nuts and stud extender to 40 ft lbs. Repeat on opposite side.



Step 19. Take the supplied frame plate strap and line up the holes from the stud extender and hitch. Loosely thread one M10x1.5x20mm bolt, one 10mm lock washer, and one 3/8" flat washer through the strap and into the stud extender. Place one 3/8"x16x1" bolt through the strap and hitch and loosely secure with a 3/8" lock washer and 3/8"x16 nut. Torque stud extender bolt to 40 ft lbs, and strap bolt to 30 ft lbs. Repeat on opposite side.



Step 20. Apply the supplied heavy duty Velcro squares to the back of the removed sensor and reattach center of the hitch chain plate. Secure any slack the wiring harness from the sensor may have with the supplied zip-tie.
 NOTE: There are various sensor types, if you have Type 1, install as shown in

Figure [22]. If you have Type 2 and no impact bar, flip sensor bracket upside down and re-install. If impact bar is present and you have Type 2, remove sensor from bracket and place Velcro on sensor to hitch as shown in Figure [25].

Fig [23]



Huscraw from bracket and place Velore

Type 2.

Unscrew from bracket and place Velcro behind sensor bar.



Fig [24]

Type 2.



Step 21a. This is for 2012-2016 Model S (NOT Refresh Model). Before the bumper skin and panels can be re-installed properly, you will need to cut the access hole for the ball-mount adapter. Take the supplied template on the next page and measure 12.5 inches from the center of the middle stud shown in Figure [26]. Make sure that when you mark your location on the bumper skin that the crosshair is in the left hand side of the oval hole to be cut.
NOTE: You may try cutting less material if desired. The recommended amount should be sufficient to allow a hand to pass and tighten the ball-mount set bolt. A 4" hole saw is recommended to start the cutout of your holes and cleaning up the edges with an air saw, Dremel tool, or jigsaw.



**Step 21b.** This is only for the **Refresh Model**. Before the bumper skin and panels can be re-installed properly, you will need to cut the access hole for the ball-mount adapter. Measure **12** inches from the center of the middle stud shown in Figure [26]. This location will be the Center Point for the first 4" hole saw.

**IMPORANT:** The external side of the bumper is directly behind where this cut is made. Only cut through this first layer. Continuing to cut will pierce the external bumper side and will cause a visible hole. This external side can be seen in Figure 27.

**NOTE:** You may try cutting less material if desired. The recommended amount should be sufficient to allow a hand to pass and tighten the ball-mount set bolt. A 4" hole saw is recommended to start the cutout of your holes and cleaning up the edges with an air saw, Dremel tool, or jigsaw.



Fig [27]

**Step 21b.** After the first cut is made, the second cut needs to be made to right of the first. This will also be to the right of the middle stud used to find the initial hole. It is important to cut the hole 0.25 inches lower in order to follow the contour of the bumper.



Fig [28]

**Step 21b.** Place tape across the top and bottom of the arcs as seen in figure [29] for guide lines. Using an air saw, Dremel tool, or jigsaw clean up the material inbetween for a clean look.



Fig [29]

**Step 22.** After you have cut the necessary hole in the bumper fascia skin, reinstall all components by following these instructions in reverse starting at Step 14.

**Step 23.** Take the ball-mount adapter and insert it into the hitch. Secure the ballmount using the 1/2"x13x2-1/2" bolt, 1/2" lock washer, and 1/2" flat washer with the flat washer touching the hitch. Tighten the ball-mount until the lock washer crushes and unit is tight.



Fig [30]



Congratulations on the completed installation of the Tesla Model S Stealth EcoHitch! It is designed with a lifetime warranty for a lifetime of enjoyment. If you have any questions or suggestions please contact our tech support at <u>support@torkliftcentral.com</u> or by phone at (253)-854-1832.



# WARRANTY/DISCLAIMER INFORMATION

Torklift Central requires proof of purchase for warranty claim registration, with pictures of any defective product before issuing a replacement. Torklift will not accept claims on any product without proof of purchase, which can be faxed, scanned, emailed or mailed to the information provided below. Torklift Central warrants its hitches, custom hitch receivers and accessories (excluding electrical wire harnesses which carry a warranty from their specified manufacturer) from date of purchase against defects in material and workmanship under normal use and service for the ownership life of the original consumer purchaser. Torklift Central will replace free of charge any part that proves defective in material or workmanship when presented to Torklift Central, transportation charges prepaid by purchaser, at the address below. This warranty is limited to defective parts replacement only. Labor charges and/or damage incurred in installation or replacement, as well as incidental and consequential damages connected therewith are excluded. This warranty does not include normal wear and tear or the finish and paint. Rusting, cracking or peeling of the finish is also excluded. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Any damage to Torklift Central products as a result of misuse, abuse, neglect, accident, improper installation or any use violative of instructions furnished by Torklift Central will void the warranty. This warranty gives you specific legal rights and you may also have rights, which vary from state to state. With warranty service, you may be able to go to a small claims court, a state court or a federal district court.

Although Torklift Central trailer hitches are both tested and rated for towing within the specific capacity label found on each trailer hitch. Torklift Central assumes no liability for vehicle manufacturers warranty due to the use of a Torklift Central trailer hitch being used for towing behind any vehicle or using the trailer hitch in a manner that it was not designed for. Although this specific trailer hitch has a load rating, which includes trailer tongue weight, and a trailer weight carrying capacity, Torklift Central is not responsible for the voiding of any warranty on any vehicle due to factory towing limitations. All vehicle warranties are the sole property and responsibility of the owner of the vehicle that the Torklift Central trailer hitch is installed upon. Torklift Central does not endorse towing behind any vehicle if the vehicles manufacturer states that towing is not recommended. Check your vehicle's owner's manual for the proper tow rating of your vehicle.

### ADDRESS: 315 Central Ave N. Kent, WA 98032

**\*WARNING\*** Your vehicle may have a lower tow rating than this trailer hitch. If your vehicle's tow rating is less than the rated towing capacity on your Torklift Central trailer hitch, your trailer hitch capacity is limited to your vehicle's factory rated towing capacity.

**FOR EXAMPLE:** the label on your Torklift Central trailer hitch states it's capacity is rated for 500 pounds tongue weight and 5,000 pounds towing weight. However your vehicle's factory rated towing capacity is limited to only 350 pounds tongue weight and 3,500 pounds towing weight. In this example your maximum towing capacity of your Torklift Central trailer hitch is limited to 350 pounds tongue weight and 3,500 pounds towing weight as stated by your vehicle's maximum factory tow rating.

**\*DANGER\***Never exceed your vehicle's manufacturer's recommended towing capacity which may be a lower rating than this trailer hitch

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