

# Installation Instructions



## Ford F150 Adventure Series Rear Bumper Part #S/B613934



### Application:

2015+ F150

Excludes:

Applications with 6 rear sensors.

Applications with dual exhaust.



**Modifications to the OE Tow Hitch  
are REQUIRED.**

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Smittybilt, 400 W Artesia, Compton, CA 90220

## Introduction

Thank you for choosing Smittybilt accessories for your **Ford F150**. If you would like to view our full range of available accessories, please visit us at [www.smittybilt.com](http://www.smittybilt.com)



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## Important Notes Before Starting

### ! IMPORTANT NOTE

Carefully read through this entire instruction manual thoroughly before attempting to install this part.

### ! WARNING

Serious injury can occur when working on vehicles alone.

When possible, work with another person to reduce risk of injury from strain or other dangers that can occur when working alone.

The following tools will be required to complete the installation of this part:

#### TOOLS REQUIRED

Trim Pry Tool	Chisel & Mallet	Metric socket set
Socket wrench	Needle nose Pliers	Flush cut Pliers
Grinder		



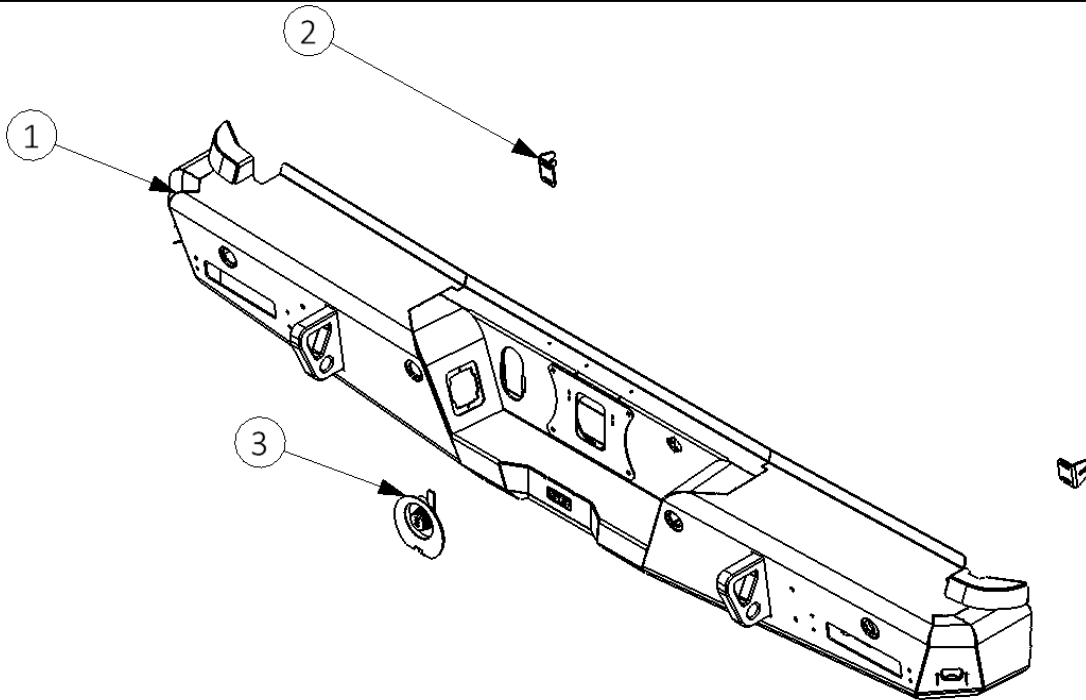
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# Box Contents & Technical Information

## Box Contents

### **!** IMPORTANT NOTE

Modification to the factory Tow hitch are **required**.



Ford F150 Rear Bumper		
Item	DESCRIPTION	QTY
1	F150 REAR BUMPER	1
2	ADJUSTABLE 6" LIGHT BRACKET	2
3	LICENSE COMPARTMENT LOCKING COVER	1



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# Box Contents & Technical Information

## Box Contents

<b>90-60859 HITCH MOUNTING HARDWARE</b>	
QTY	DESCRIPTION
12	M10 OVRSD WSHR 10.5 mm ID. 30mm OD, 2.3-2.7 THKN CZ
6	M10X1.5MM NYLOCK GR10 CZ
6	M10X1.5X30 HHCS GR 10.9 CZ

<b>90-60844 HDW PACK. CABLE TIES, 6IN</b>	
QTY	DESCRIPTION
10	CABLE TIE, STANDARD, 6" LONG

<b>90-60861 LIGHT MOUNTING HARDWARE</b>	
QTY	DESCRIPTION
4	M6X1 NYLOCK GR 10.9 CZ
4	M6 FLAT WSHR CZ

<b>90-60840 HDW PACK, PANEL PLUGS</b>	
QTY	DESCRIPTION
2	PANEL PLUG, 1.094 HOLE, 1.25 OD, .016-.125 THICK

<b>90-60862 LICENSE PLATE BUMPERS &amp; HW</b>	
QTY	DESCRIPTION
2	UNTHREADED RUBBER BUMPER 1-1/32" OD 5/8" HEIGHT
1	LICENSE PLATE HARDWARE
4	M6X1 NYLOCK GR 10.9 CZ
8	M6 FLAT WSHR CZ
2	M6X1X10 BHCS SS
2	M6X1X12MM BHCS 18-8 SS
2	M6X1X16MM BHCS 18-8 SS



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# Installation Instructions: OE Bumper Disassembly

## **WARNING**

Chock all four wheels and make sure parking brake is engaged before starting this install. Failure to do so could result in serious injury. Place masking tape on the areas of the rear fenders and tailgate that can be scratched by OE bumper removal.

### **Step 1: Box Check**

Open the box containing your Ford F150 Smittybilt Rear Bumper, check all parts against the Bill of materials found on page 3 & 4 .

**If anything is missing, contact Smittybilt Technical support immediately.**



### **Step 2: Disconnect Battery**

Remove both terminals from the battery to protect parking sensors and the wire harness during install.

**Note: If the vehicle is not equipped with parking sensors skip to step 4.**



### **Step 3: Disconnect wire harness from vehicle**

Disconnect wire harness from behind the rear bumper/ above the spare tire.

Tip: Push a flathead under the plug locking arm and pivot it to easily open locking arm.



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## Installation Instructions: OE Bumper Disassembly



### Step 4: Disconnect ground wires

Use a 10mm socket to remove the ground terminals from the vehicle frame.



### Step 5: Loosen bumper

Remove 6X flange nuts behind frame .



### Step 6: Bumper removal

With the help of another individual remove the bumper from the vehicle frame.



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## Installation Instructions: OE Bumper Disassembly



### Step 7: Sensor uninstall

Remove sensor by separating tabs and pushing out the sensor from the plastic bezel.

Remove plastic sensor bezels from chrome & plastic trim by squeezing together plastic tabs on bezel.

Tip: Mark sensor locations 1-4



### Step 8: Wire harness uninstall

Disengage wiring harness clips from OE bumper with a pry tool.



### Step 9: License plate lights uninstalled

Disconnect wire harness from license plate light by squeezing tabs on connector.

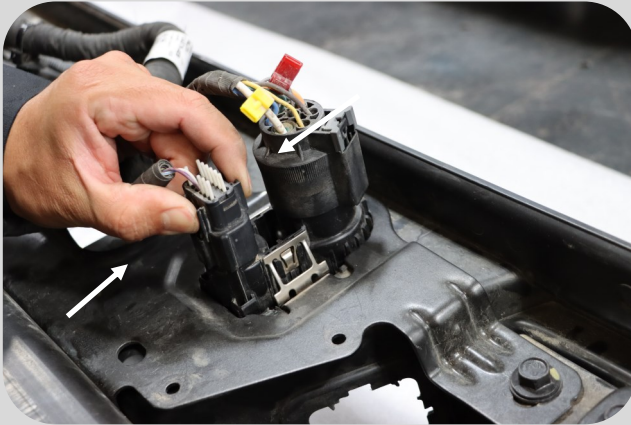
Squeeze plastic tabs and push out light housing.



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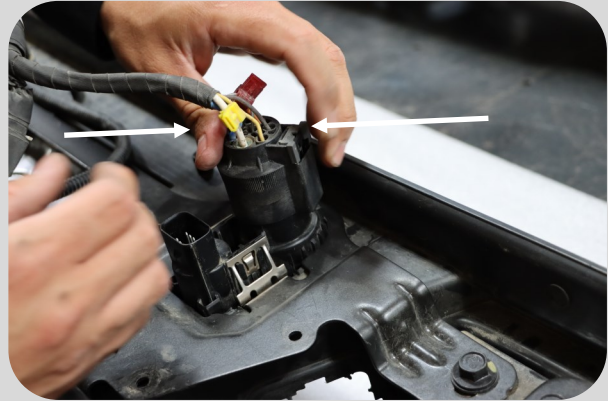


## Installation Instructions: OE Bumper Disassembly



### Step 10: Disconnect Trailer plug

Disconnect wiring harness from trailer plug by disengaging clips on both connectors.



### Step 11: Remove trailer plug

Squeeze metal prongs on trailer plug and remove from OE bumper.



### Step 12: Remove OE bumper black trim

Remove black plastic bumper skin by squeezing black clips locked in chrome panels/ hitch.



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## Installation Instructions: OE Bumper Disassembly



### Step 13: Remove bolt plates

Remove both bolt plates from the hitch by loosening the 6X OE push nuts carefully.

**Note:** These push nuts and bolt plates will be reused. Store in a safe place.



### Step 14: Disassemble OE bumper from hitch

Remove 8X bolts connecting hitch to OE bumper components.



### Step 15: Remove sheet metal from OE Hitch

Grind through 5 slot welds and remove sheet metal from hitch structure.



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## Installation Instructions: OE Bumper Disassembly



### Step 16: Post-process OE Hitch

Grind smooth and paint ground location to protect against corrosion.



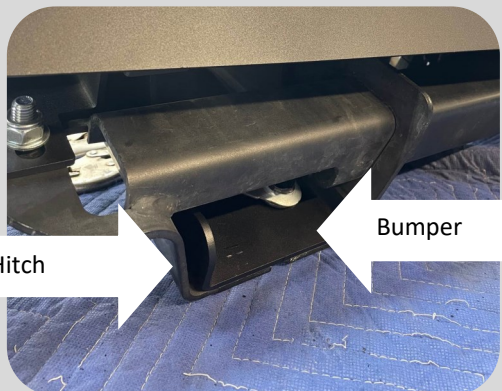
### Step 17: SB Bumper assembly

Mount SB bumper to OE hitch using 6X M10 Hexbolts, nuts and washers provided in hardware pack 90-60859.

Install the OE provided bolt plate by reusing the 6X OE push nuts.

(Previously removed on step 13)

Leave loose.



**Note:** Align The bottom of the hitch with the bottom of the bumper mount. As seen in the figure to the left.



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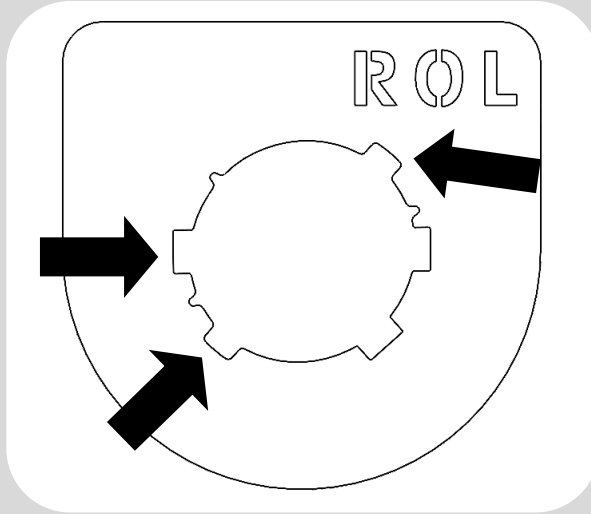
# Installation Instructions: SB Bumper assembly

## ! IMPORTANT NOTE

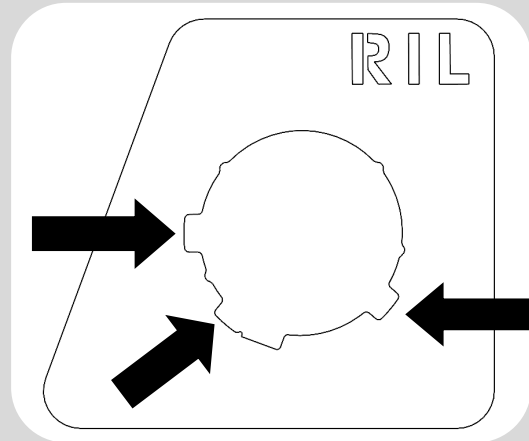
Bezels can be identified by three letter engravings such as ROL or ROD.

### Step 18: Install OE plastic bezels taken from OE bumper. (2021+ ONLY)

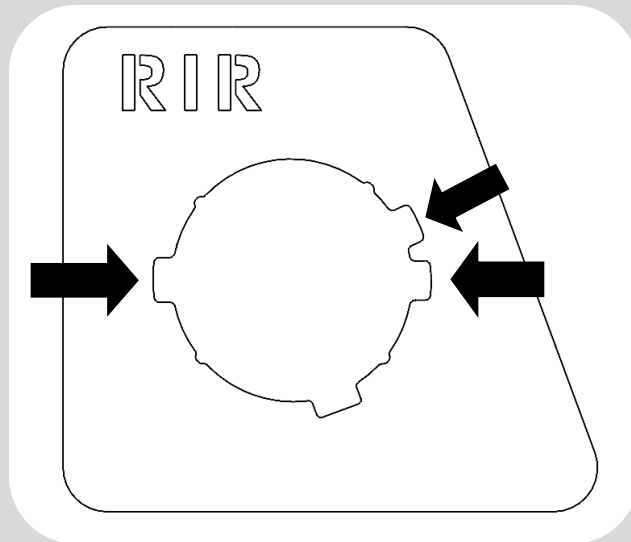
Note: Bezels lock into indicated slots



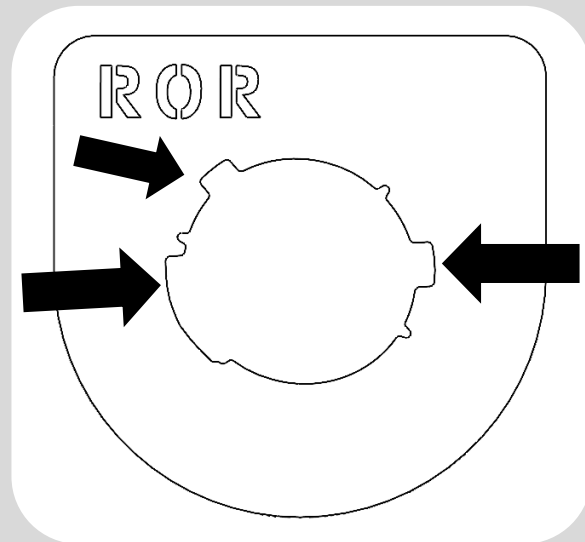
ROL: Driver side outer sensor



RIL: Driver side inner sensor



RIR: Passenger side inner sensor



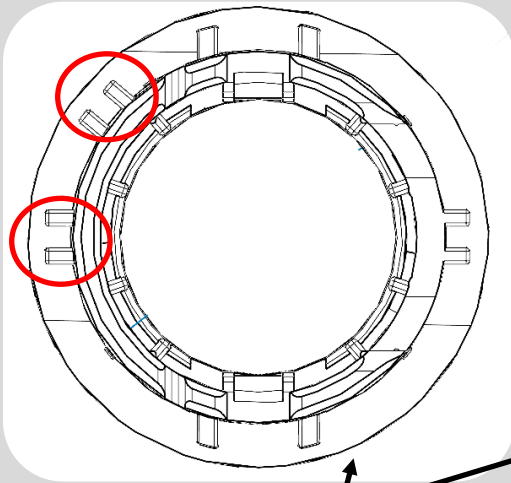
ROR: Passenger side outer sensor



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# Installation Instructions: SB Bumper assembly

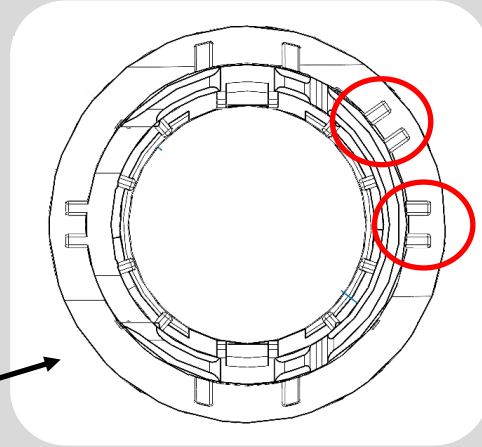
Passenger inner (RIP engraved on plastic bezel).



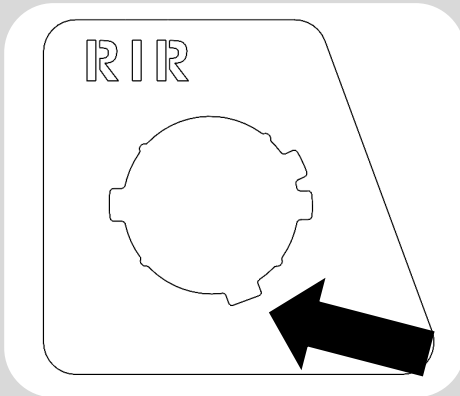
Plastic bezels pictured above

**Prep: 2015-2020 models ONLY. Trim these tabs with a razor blade.**

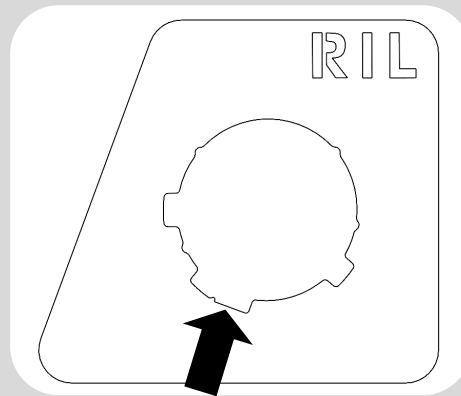
Driver inner (RID engraved on plastic bezel).



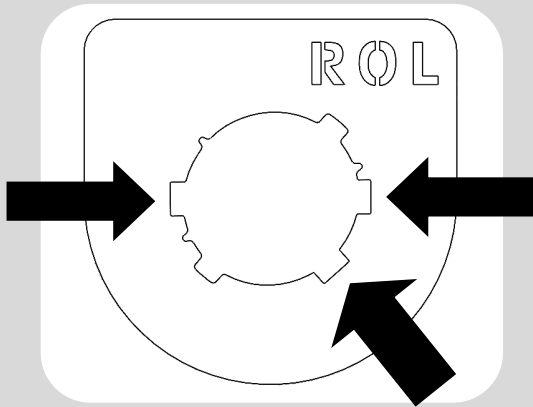
**Step 18: Install OE plastic bezels taken from OE bumper. (2015-2020 Models ONLY)**



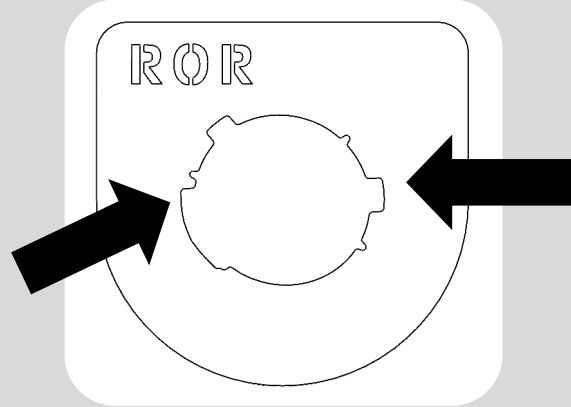
RIR (2021+) / RIP(2015-2020): Passenger side inner sensor



RIL(2021+)/RID(2015-2020): Driver side inner sensor



ROL(2021+)/ROD(2015-2020): Driver side outer sensor



ROR(2021+)/ROP(2015-2020): Passenger side outer sensor



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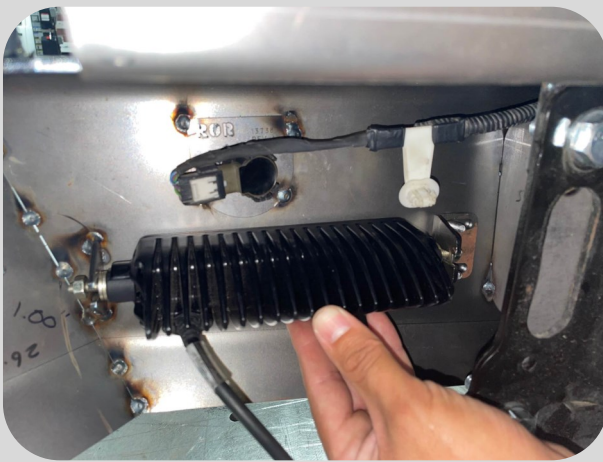
## Installation Instructions: SB Bumper Assembly



### Step 19: Install license plate lights

Insert light housing into light pocket.

Important note: Make sure all “clips” have securely locked into place on the inside of the bumper.



### Step 20: Install 6” light bar (Optional)

Pre-install bolts (Provided with your light) on both ends of your light bar and center it in the window using the adjustable bracket provided and extra washers if needed.

Leave loose for final adjustment.



### Step 21: Wire harness installation

Run wire harness to all electrical components as pictured.

Note: Run Wire harness (a) over D ring Structure to outer sensors

Multiple zip tie locations provided for your convenience (b).



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## Installation Instructions: SB Bumper Assembly



### Step 22: Install bumper

Center the bumper on the vehicle frame and tighten the 6X OE provided flange nuts.

Adjust the height of the bumper to avoid contact with the tailgate when opened.



### Step 23: Re-connect harness

Re-connect the wiring harness to the plug behind the rear bumper/ above the spare tire.

Uninstall spare tire lock from OE bumper using key.



### Step 24: Uninstall spare tire lock and reinstall

Re-install spare tire lock onto SB bumper.



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## Installation Instructions: SB Bumper Assembly



### Step 25: Adjust lights

Adjust the lights such that they are angled to your preference.

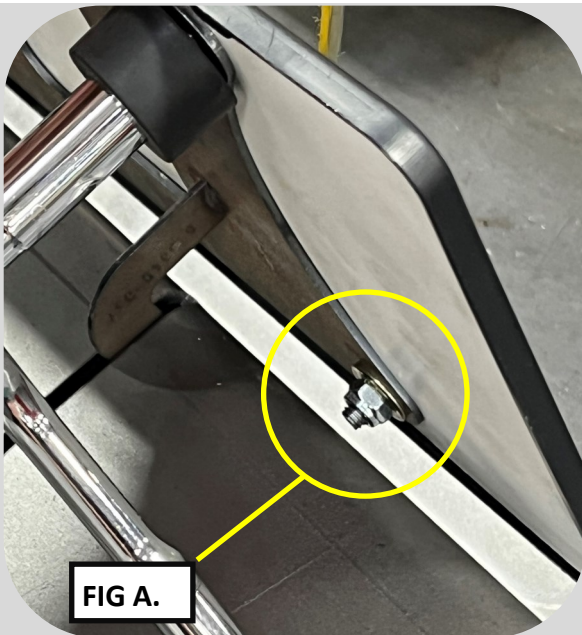
**Leave hardware for lights hand tight.**



### Step 26: Tighten everything.

Use a torque wrench tool and torque all fasteners to spec. follow the chart listed on the following page.

**Leave fasteners for 6" light bars hand tight (c).**



### Step 27: Install License Plate

Install license plate to the license plate cover on the bumper. Using a 10mm socket and 5mm hex key.

Install the rubber bumper pieces on the bottom of the license plate cover using 16mm long screws.

#### Notes:

Make sure to use the correct length (shortest possible) hardware on the top of the license plate cover, so that it does not scratch the paint when opening. **(Fig A)**. Longer hardware is supplied for use with license plate frames.

### Step 28: Install Cubby Lock (SB2764)

See instructions provided with lock

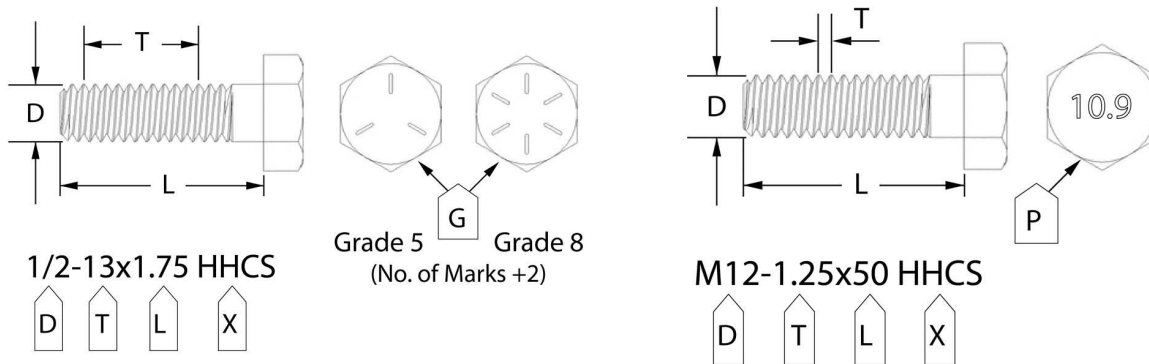


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# Bolt Torque Specifications

Use this only as a guide for hardware without a called out torque specification in the instruction manual.

<b>Bolt Torque and ID</b>						
Decimal System			Metric System			
<i>All Torques in Ft. Lbs. Maximums</i>						
Bolt Size	Grade 5	Grade 8	Bolt Size	Class 9.8	Class 10.9	Class 12.9
5/16	15	20	M6	5	9	12
3/8	30	45	M8	18	23	27
7/16	45	60	M10	32	45	50
1/2	65	90	M12	55	75	90
9/16	95	130	M14	85	120	145
5/8	135	175	M16	130	165	210
3/4	185	280	M18	170	240	290



G= Grade (Bolt Strength)  
 D= Nominal Diameter (Inches)  
 T= Thread Count (Threads per Inch)  
 L= Length (Inches)  
 X= Description (Hex Head Cap Screw)

P= Property Class (Bolt Strength)  
 D= Nominal Diameter (Millimeters)  
 T= Thread Pitch (Thread Width, mm)  
 L= Length (Millimeters)  
 X= Description (Hex Head Cap Screw)



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## Notes and Disclaimers

### Product cleaning and maintenance instructions

Stainless Steel Finish – Aluminum polish may be used to polish small scratches and scuffs on the finish. Mild soap, window or glass cleaner may be used to clean the finish. Dual state powder coat finish – Mild soap, window or glass cleaner may be used to clean the finish. In order to protect the finish, you may wax your product on a regular basis with pure carnauba automotive wax. Do not use any types of soap, polish or wax that contains abrasive that could damage the finish. Textured coated finishes should be cleaned with a mild soap on a damp sponge. Do not apply polish or wax that requires to be removed by means of buffing. This type of wax is commonly used at car wash facilities. Chrome Finish – Mild soap, window or glass cleaner may be used to clean the finish. In order to protect the finish, you should wax your product on a regular basis with pure carnauba automotive wax. Do not use any types of soap, polish or wax that contains abrasive that could damage the finish.

### Limited Warranties

Smittybilt's products are covered under the following limited warranties only. Note that the duration of the limited warranty differs according to the material and finish of the product purchased. Subject to the duration and conditions of the limited warranty stated below, Smittybilt warrants to the original retail purchaser that its products are free from defects in material and workmanship. All other warranties and representations express or implied, are hereby disclaimed, including fitness for merchantability and buyer's intended use or purpose. All parts are sold "AS IS" except for the limited warranties granted herein. Buyer assumes all risks as to the selection, suitability and performance of all goods and products selected. This limited warranty does not cover damage or impairment in any part due to misuse, improper installation, accident or contact with on-road or off-road hazards, product modification, improper or inadequate cleaning and/or maintenance. Smittybilt is not responsible for items damaged during shipping. This warranty is not transferable from the original buyer. For the original Buyer to be eligible for the limited warranty coverage, the Buyer must provide proof of purchase. Smittybilt strongly recommends returning the warranty registration card. Customer's remedy hereunder shall be limited only to repair or replacement (at Smittybilt's option) of any defective part(s) returned to Smittybilt at customer's expense. The determination of whether or not a returned part is defective or subject to coverage under the limited warranties stated herein shall be made at Smittybilt's sole discretion. To assure product quality, Smittybilt reserves the right to change product design, material, specification and finishes without prior notice to customers. This limited warranty gives you specific legal rights and you may also have other rights, which may vary from state to state. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply as to you. Also, some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. Smittybilt reserves the right to discontinue product lines and substitute products or provide other remedies than those listed in this limited warranty for those discontinued products.

### Warning

Rollover and other types of vehicle accidents may result in serious injury or death to you, your passengers and others sharing the road. Smittybilt accessories are decorative and are not intended to reduce or avoid injury or damage in the event of an accident. The weight and location of Smittybilt accessories may affect your vehicles' handling, stability and performance, creating an increased risk of accident or rollover. Before installing any accessory, check state laws and assure that the accessory will not obscure any lights or interfere with proper operation on your vehicle's safety equipment. Consult your owner's manual and the Smittybilt instructions, or additional safety information. Smittybilt products, nor the warnings contained herein, are not a substitute for your safe driving. Don't drink and drive, always use seat belts and don't drive faster than conditions permit.



**WARNING: Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)



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