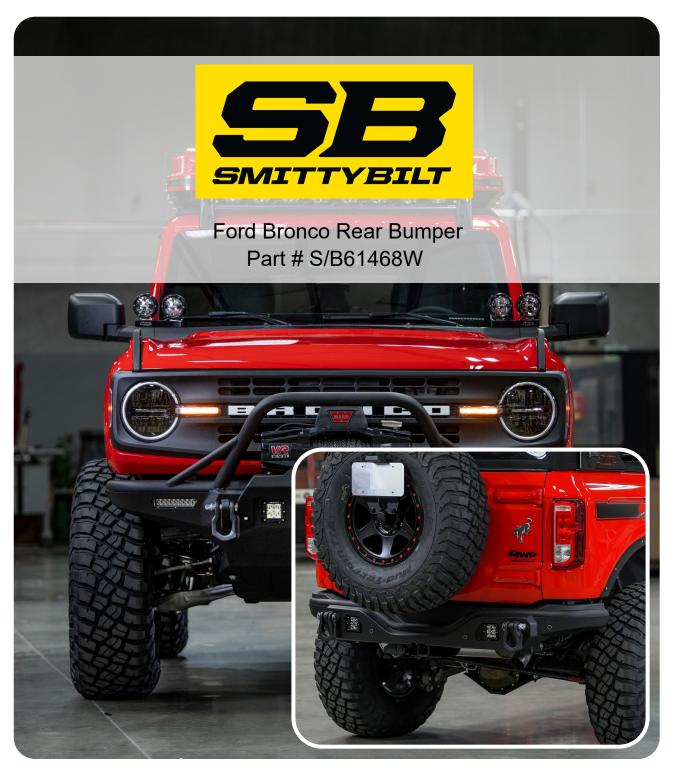
Installation Instructions





Introduction

Thank you for choosing Smittybilt accessories for your Ford Bronco. If you would like to view our full range of available accessories, please visit us at www.smittybilt.com







Ford® and Bronco® are registered trademarks of Ford Motor Company.

Important Notes Before Starting



IMPORTANT NOTE

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

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

TOOLS REQUIRED		
Pick or Flat Head Screwdriver	17mm Socket	2X 10mm Wrench
Socket Wrench	18mm Socket	Non-Marring Pry Tool
Torque Wrench	19mm Socket	OE Spare Tire Key
4mm Hex Bit Socket	22mm Socket	Optional: Black Vinyl or Black Tape
13mm Socket	19mm Wrench	Optional: Zip Ties



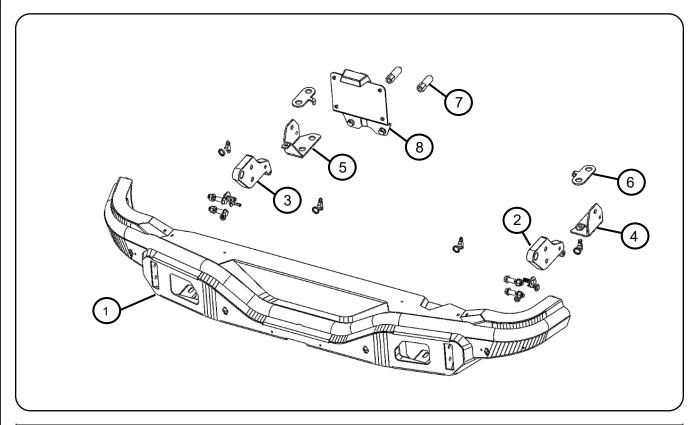
WARNING

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.



Box Contents



S/B61468W BOX CONTENTS				
ITEM NO.	PART NO.	DESCRIPTION		
1	84-12305	BRONCO REAR BUMPER WELDMENT		
2	84-44184	D-RING - PASSENGER	1	
3	84-44185	D-RING - DRIVER	1	
4	84-12335	D-RING FRAME SUPPORT PLATE - PASSENGER	1	
5	84-12336	D-RING FRAME SUPPORT PLATE - DRIVER		
6	84-12337	FRAME MOUNT SHIM	2	
7	31-44186	M12X1.5MM EXTENSION WHEEL LUG	2	
8	84-12338	LICENSE PLATE RELOCATION BRKT WELDMENT	1	
9	90-44187	LICENSE PLATE LIGHT WIRE HARNESS EXT.	1	
N/A	(SEE NEXT PAGE)	HARDWARE PACK	5	



Hardware Packs

90-60815 BUMPER MOUNT HARDWARE PACK CONTENTS			
QTY	PART NO.	DESCRIPTION	
2	1005AA9090	M8X1.25X35 HHCS GR10.9 CZ	
2	91100A160	M8 OVRSZD WSHR 8.4mm ID, 24mm OD, 1.8-2.2 THKN CZ	
2	91310A623	M10X1.5X20 HHCS GR10.9 CZ	
2	91166A280	M10 FLAT WSHR GR8.8 CZ	
4	1005AA1800	M12X1.75X60 HHCS GR10.9 CZ	
8	91166A290	M12 FLAT WSHR DIN125 CZ	
4	42GH78	M12X1.75 NYLOCK GR10.9 CZ	
2	1005AA2000	M14X2.0X35 HHCS GR10.9 CZ	
2	91100A250	M14 OVERSIZED WASHER 14X44MM 2.7-3.3MM THKN CZ	

90-60816 LICENSE PLATE HARDWARE PACK CONTENTS					
QTY	PART NO.	DESCRIPTION			
4	94645A205	M6X1 NYLOCK GR10.9 CZ			
8	91166A250	M6 FLAT WASHER CZ			
2	1005AA1300	M12X1.5X30 HHCS GR10.9 CZ			
2	1005AA1400	M12 FLAT WSHR DIN125 CZ			
4	1005AA1200	M6X1X20 BHCS GR10.9 CZ			
2	91100A160	M8 OVERSIZED WASHER 8.4MM ID 24MM OD 1.8-2.2 THKN CZ			
		STEEL			

90-60817 SENSOR COMPRESSION HARDWARE PACK CONTENTS			
QTY PART NO. DESCRIPTION			
4	94645A205	M6X1 NYLOCK GR10.9 CZ	
8	91166A250	M6 FLAT WASHER CZ	
4	1005AA1900	M6X1X40 HHCS GR10.9 CZ	

90-60818 SENSOR ASSEMBLY PARTS CONTENTS			
QTY	PART NO.	DESCRIPTION	
4	96-12344	SPRING COMPRESSION PLATE	
4	90-44201	SENSOR COMPRESSION SPACER	
4	90-44200	LOCKING PANEL PLUG 13/16 HOLE DIAM .016125 MAT'L THKN	
4	90-44213	BRONCO SENSOR FOAM SPACER PAD	



Installation Instructions: Getting Started



IMPORTANT NOTE

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



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.



Step 0: Disconnect Vehicle Battery

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

Step 1: Check Box Contents

Open the box containing your Ford Branco Rear Bumper, check all parts against the Bill of Materials outlined in the first pages of these instructions.

If anything is missing, contact Smittybilt Technical Support immediately.



Installation Instructions: OEM Rear Bumper



Step 2: Disconnect Rear Wire Harness

Unplug rear bumper wire harness from **both** the Driver and Passenger side. Locate the retaining tab on the connector at the inner bumper corner, press to release and pull connector out.

Wire harness connector location shown at (a).

Bumper wire harness connector shown at (b).



C

Step 3: Remove Bumper Frame Bolts

Starting at the Driver side frame rear corner, use an **18mm Socket** and **Socket Wrench** to remove 2X OE M12 bolts (*c*) securing the rear bumper to frame.

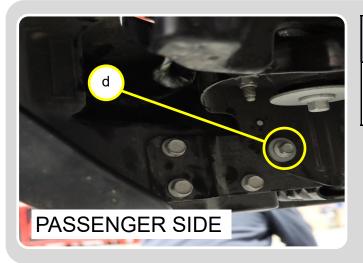
Repeat step on passenger side.



Retain hardware for use at Step 12.



Installation Instructions: OEM Rear Bumper





IMPORTANT NOTE

2 people are required for this step, one to hold bumper while the other removes the bolts.

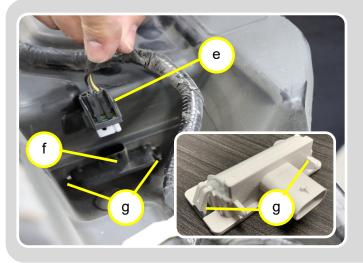
Step 4: Remove Body Bolts

Using a **13mm Socket** and **Socket Wrench**, remove 2X M8 screws securing the rear bumper to the frame body mount (one on each side) (*d*). Place OE bumper on a work surface for next steps.



Optional Step

While bumper is removed, black vinyl (not provided in kit) can be applied to corners (as shown dashed in yellow) to enhance the corner appearance of non-black vehicles, once bumper is reinstalled.



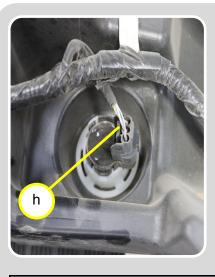
Step 5: Remove OE License Plate Light

Unplug license plate light from bumper wire harness by locating retaining tab on connector then press and pull to release (e).

Remove license plate light (f) from bumper by pressing tabs on back of light housing and push outwards from inside of bumper (press tab and push at g).



Installation Instructions: OEM Rear Bumper





Step 6: Remove Parking Sensors from OE Bumper

Unplug backup sensors from bumper wire harness. Locate retaining tab on connector (h) and press and pull to release.

Using a **Pick** or **Flat Head Screwdriver**, carefully insert tool between sensor and sensor bracket (*i*) and push sensor inwards from the front.

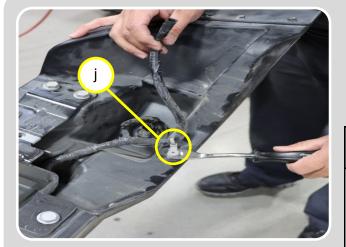


IMPORTANT NOTE

Make note of which sensors go where. During re-installation they must go in their respective location, it is recommended to label as follows:

Driver side outer, Driver side inner.

Passenger side outer, Passenger side inner .



Step 7: Remove Wire Harness

(OEM Rear Bumper back side) Using a **Non- Marring Pry Tool**, remove wire harness from bumper by prying all the plastic clips securing the wire harness to the bumper (*j*).



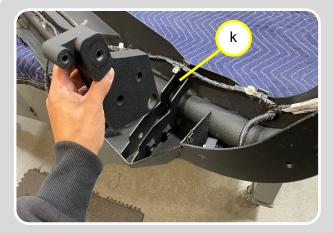
IMPORTANT NOTE

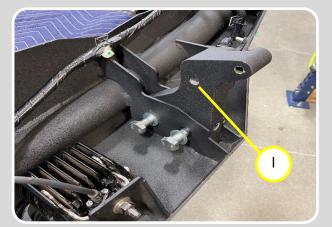
NOTE: Depending on OE bumper and vehicle trim level, interior bumper metal structure may need to be removed for wire harness removal. Inspect bumper and remove as necessary.

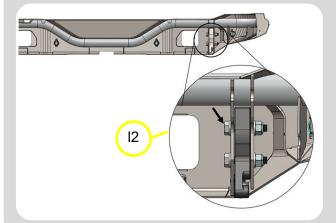
NOTE: it is recommended to label Driver- Side and Passenger-Side of harness for easier re-installation.



Installation Instructions: S/B Bumper Inner Section







Step 8: Install D-Rings INTO Rear Bumper

Locate:

1X PN: 84-12305 (Rear Bumper Weldment) 1X PN: 84-44185 (Driver Side D-Ring) 1X PN: 84-44184 (Passenger Side D-Ring) 1X PN: 90-60815 (Bumper Mount Hardware Pack)

Slide D-Ring through bumper D-Ring pocket (k). Using a 19mm Socket, 19mm Wrench and a Ratcheting Wrench, properly install 2X M12x1.75x60mm Hex Head Bolts, 4X M12 Flat Washers, 2X M12 Nylock Nuts.



IMPORTANT NOTE

Leave D-rings loose so they are able to slide between the mount plates. Do not fully tighten until Step 12. Tightening these bolts too soon can lead to improper fitment on vehicle.

Ensure the D-Rings are installed with the flat sides facing the center of the bumper (*l*), the Hex Head Bolts also facing the center, the Nylocks facing the corner of the bumper, and Washers on either side of D-ring (*l*2).

Repeat step on passenger side.

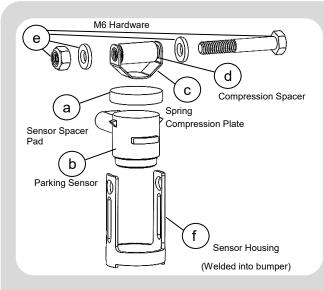


IMPORTANT NOTE

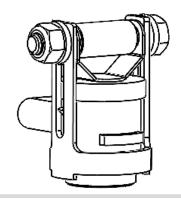
*Pre-production part shown, production part may vary from images.

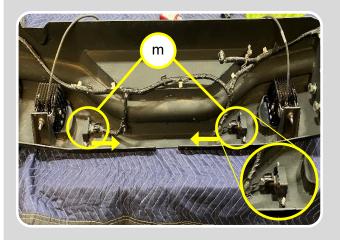


Installation Instructions: S/B Bumper Inner Section



Fully Assembled Sensor





Step 9: Install OE Parking Sensors in Rear Bumper

Locate:

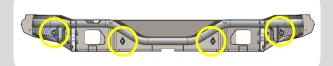
1X PN: 90-60817 (Sensor Assembly Parts

Pack) pack and

1X PN: 90-61818 (Sensor Compression

Hardware Pack)

Repeat the following instructions in the 4X parking sensor locations shown below:



- 1) Install 1X Sensor Spacer Pad (a) onto the Parking Sensor (b).
- 2) Install the Parking Sensor (b) into the Sensor Housing (f). (Ensure sensor is installed in same location as labeled from OE: Driver Side Outer, Driver Side Inner, Passenger Side Outer, or Passenger Side Inner). *Refer to images with labels (m) & (n) for sensor plug direction.
- 3) Install Spring Compression Plate (c) to top of Parking Sensor.
- 4) Install Compression Spacer (d) to bumper Sensor Housing and hand-install 1X M6(1.0) X 40mm Hex Head Screw, 2X M6 Washers, 1X M6 Nylock Nut.

Once assembled, use 2X **10mm Wrenches** to carefully tighten until *(c)* is securely clamped to *(d)*. Confirm sensor is secured.

Ensure that the center section sensor connectors are facing towards the center of the Bumper (*m*).

(Continued next page)



Installation Instructions: S/B Bumper Inner Section



Step 9: (Continued)

The corner sensor connectors should be facing outwards (n).



IMPORTANT NOTE

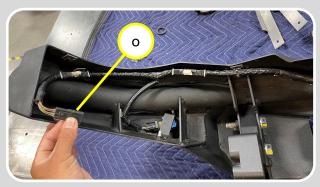
Do not over tighten, sensor can be damaged.

*Pre-production part shown, production part may vary from images (images for reference only).



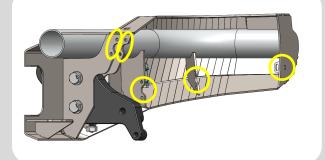
Step 10: Install OEM Bumper wire harness to bumper

Plug respective connectors into parking sensors. Leave license plate light unplugged until use in later steps. Ensure that the wire harness connector with more cables is situated on the Passenger side (o).



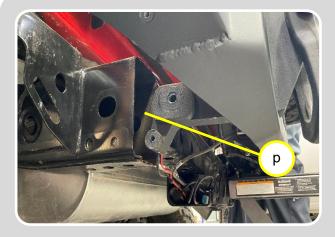
Provided wire harness mount locations can be used to route and secure harness.

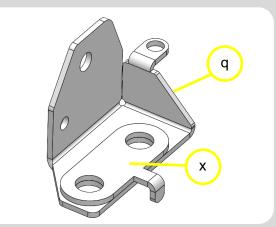
Optional, but recommended: Use **Zip Ties** to hold wires in place in provided locations.

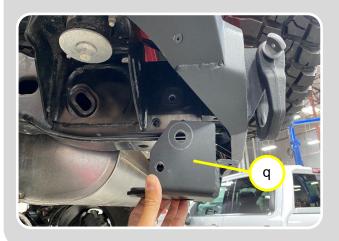




Installation Instructions: S/B Bumper







Step 11: Install Bumper on to Vehicle

Locate:

PN: 84-12336 (D-Ring Frame Support plate,

Driver)

PN: 84-12335 (D-Ring Frame Support Plate,

Passenger)

2X PN: 84-12337 (Frame Mount Shim) PN: 90-60815 (Bumper Mount Hardware

Pack).

The following hardware goes in the locations shown on the next page:

(r) 1X M12x1.75x35mm hex head bolt, 1X M12 oversized washer

(s) 1X M10x1.5x20mm hex head bolt, 1X M10 washer

(t) 1X M8x1.25x35mm, 1X M8 Washer

(u) 2X M12 OEM bolts previously removed at Step 3.



IMPORTANT NOTE

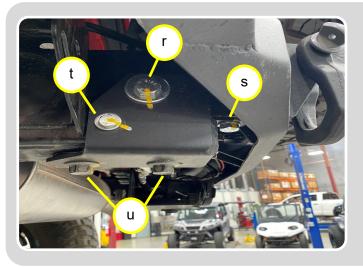
2 people are required for this step.

Install bumper to vehicle by sliding the D-Ring into frame pocket (p). Place 1X 84- 12337 (Frame Mount Shim) (x) on each Frame Support Plate (84-12336 & 84-12335) (q) Secure the bumper to frame using D-Ring support plate (q) on the outside corner of frame. Have one person hold the bumper while another secures the hardware.

(Continued next page)



Installation Instructions: S/B Bumper



Step 11: (Continued)

Apply **medium strength thread locker** to t, r, s, and u and assemble.

Use a 19mm,18mm, 17mm, 13mm Socket and Socket Wrench to secure hardware.

Loosely tighten for the moment.

Repeat this entire step on the passenger side.

Step 12 : Align and Torque Bumper

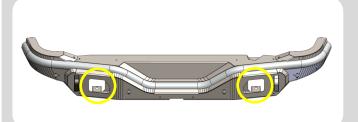
Align your Rear Bumper to vehicle and properly torque all hardware from Step 8 & Step 11. Use a 19mm, 17mm, 13mm, Socket and Torque Wrench.

It is recommended to reach through the provided light pocket to torque the D-ring bolts holding the D-rings to the bumper.



IMPORTANT NOTE

Refer to page 20 of instructions for torque specifications.



Step 13: Install Pod Lights

Install pod lights in provided 2X locations shown. Refer to the light manufacturer's instructions for installation.

2X Oversized washers have been included in **PN:** 60816 (License Plate HWPK, may be required pending selected manufacturer of pod lights.



Installation Instructions: Rear Cargo Area



0

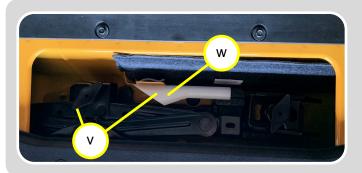
IMPORTANT NOTE

Two people are recommended to lift tire from spare tire mount. Retain tire and lug nuts for reinstallation at a later step.

Step 14: Remove Spare Tire

This step is optional, but highly recommended for ease of wire harness install.

Using the **OE Tire Removal Key** and **Socket Wrench** remove 3X lug nuts from spare tire. Refer to the vehicle owner's manual for correct removal procedure.



Step 15: Remove OE Jack and Tools

Remove OEM jack and tools (v) from the jack storage compartment in the rear cargo area. Remove the small drain plug (w).

Step 16: Pull Light Wire Harness Through Drain Hole

Once drain plug is removed, locate PN 90-44187 (License Plate Light Wire Harness Extension). Fish female end of wire through drain hole in the jack storage compartment. Exit heat shield below vehicle rearwards towards bumper.



Step 17: Install License Plate Harness Extension

Connect female end of provided harness (x) to OE connector for license plate on OE bumper wire harness (y).



Installation Instructions: Rear Cargo Area



Step 18: Remove Rear Cargo Area Trim

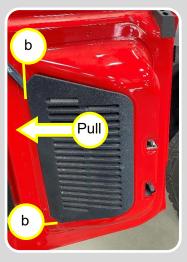
Remove the plastic floor center edge trim (z) using a **Non-Marring Pry Tool** by prying one of the corners up and removing trim.



Step 19: Insert Wire Harness

Insert the license plate light wire harness behind quarter panel by using a **Non-Marring Pry Tool** to pry between the quarter panel and swing gate rubber seal. Do this all the way up to tailgate wire harness exit.





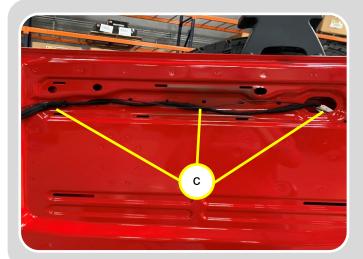
Step 20: Remove Tailgate Plastic Cover

Using a Non-Marring Pry Tool, pry panel from the bottom and pull downwards to release (a).

Remove remaining plastic trim by prying left side of the panel (b) and pulling to the left.



Installation Instructions: Swing Gate



Step 21: Install Wire Harness

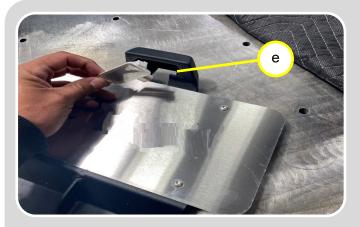
From inside face of tailgate, insert license plate light wire harness extension, following the OEM tailgate wire harness (c).





Step 22: Pull Wire Harness Extension Through

From inside the tailgate, fish wire harness up and above interior structure of tailgate (d). Direct wire towards vents behind spare tire mount on exterior of tailgate. Exit one of the vents and through spare tire as shown. Carefully pull wire approximately until approximately 25 inches of wire is exposed.



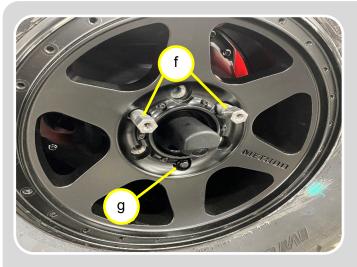
Step 23: Install License Plate Light

Locate PN: 84-12338 (License Plate Relocation Bracket). Install OEM license plate light previously removed at step 5 and install light to license plate relocation bracket (e). Insert light plug-end first and push into place until tabs engage.

Note that if light ever needs to be removed, insert a small flat head screwdriver to back-side opening of license plate bracket, and release tabs on both sides of light. Push through to remove.



Installation Instructions: Spare Tire Carrier



Step 24: Install Lug Extensions to Spare Tire

2X PN: 31-44186 (M12X1.5mm Extension Wheel Lug)

If tire was not removed in Step 14, only remove and replace top 2 lugs for this step.

Using a **22mm Socket, OE Spare Tire Key**, and **Torque Wrench**, Install spare tire to tire carrier and secure. Use the 2X wheel lug extensions on the top lugs (f). Use 1X OE Wheel Lug on the bottom lug (g).



IMPORTANT NOTE

2 people are recommended to lift tire onto spare tire carrier.

Refer to page 20 of instructions for torque specifications.



Step 25: Install License Plate to Relocation Bracket

Locate PN: 90-60816 (License Plate Hardware Pack). Install license plate to license plate relocation bracket using 4X M6x1.0x20mm Button Head Cap Screws, 4X M6 Nylock Nut and 8X M6 Washers in the locations shown. Secure using 4mm Hex Bit Socket and 10mm Wrench.



IMPORTANT NOTE

Refer to page 20 of instructions for torque specifications. If using a plastic license plate frame, adjust torque accordingly to not damage frame.



Installation Instructions: Swing Gate



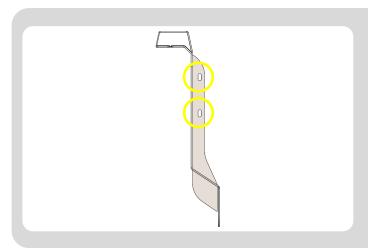
Step 26: Install Liense Plate Bracket to Vehicle

Install License Plate Relocation Bracket to the wheel lug extensions. Apply Medium Strength Threadlocker to 2X M12x1.5x30mm Hex Head Bolts from PN: 90-60816 (License Plate Hardware Pack). Install with 2X M12 Flat Washers using a 19mm Socket and Torque Wrench.



IMPORTANT NOTE

Refer to page 20 of instructions for torque specifications.



Step 27: Connect License Plate Light

Fish wire harness from Step 22 through spare tire and connect to license plate light. Pull excess wire harness into tailgate.

Optional: holes are provided on back side of license plate bracket (as shown) to secure wire to bracket using zip ties.



Step 28: Secure Wire Harness

Optional, but recommended:

Use **Zip Ties** to fasten license plate wire harness to OE tailgate wire harness to prevent damage to harness when opening and closing tailgate. Trim excess zip tie when finished.



Installation Instructions: Final Steps



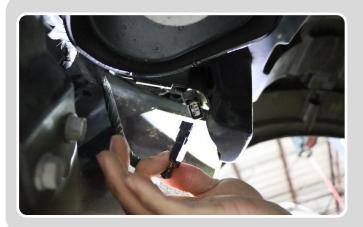






Step 29: Re-install All Plastic Trims

Reinstall plastic covers removed in Steps 18, 19, and 20. Store OEM jack, jack tools to OEM Jack Storage Compartment and replace Jack Storage Compartment Cover removed in Step 15.



Step 30: Reconnect Wire Harness Plugs

Reconnect driver side and passenger side wire harness plugs that were disconnected in Step 2.



Step 31: Complete Installation

Re-plug in battery and turn on vehicle. Confirm functionality of parking sensors and license plate light prior to use.

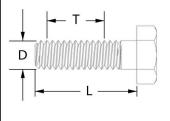
Installation is now complete



Bolt Torque Specifications

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

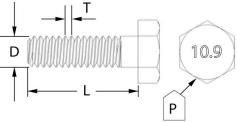
Bolt Torque and ID						
Decimal System			Metric System			
	All Torques in Ft. Lbs. Maximums					
Bolt Size	Grade 5	Grade 8	Bolt Size	Class 9.8	Class 10.9	Class 12.9
5/16	15	20	M6	5	9	12
3/8	30	45	M8	18	23	27
7/16	45	60	M10	32	45	50
1/2	65	90	M12	55	75	90
9/16	95	130	M14	85	120	145
5/8	135	175	M16	130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



1/2-13x1.75 HHCS

Crode 5 G Crode 8

Grade 5 Grade 8 (No. of Marks +2) M12-1.2



M12-1.25x50 HHCS

T
L
X

G= Grade (Bolt Strength)

D= Nominal Diameter (Inches)

Χ

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)



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 was 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 was 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 was 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.









