

Installation Instructions



Chevy 1500 2019-21 Orion Front Bumper SB612923



WITH OVER-RIDER



WITHOUT OVER-RIDER

Shown with optional winch, 20" and 6" light bars not included, sold separately



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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

Metric Socket and Wrench Set

Torque Wrench

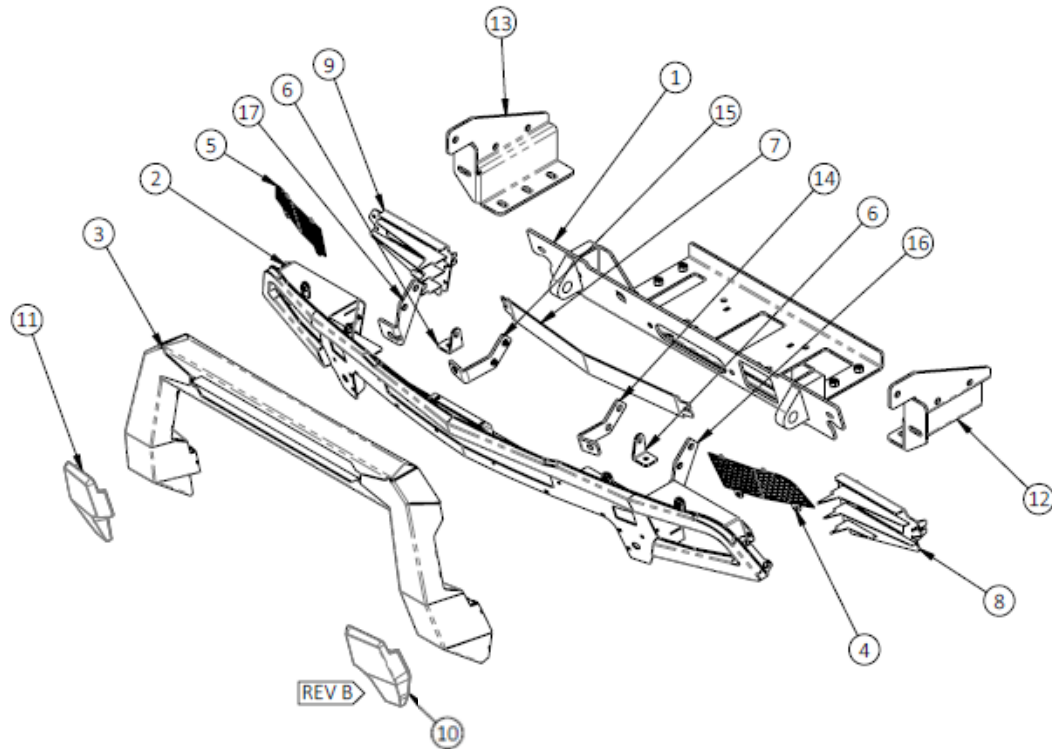
Blue Loctite* or Similar Thread-locker Compound

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Box Contents & Technical Information



SB612923 Bumper Assembly

BUBBLE	DESCRIPTION
1	WINCH CRADLE
2	BUMPER FACIA
3	OVERRIDE
4	POCKET MESH, DRIVER
5	POCKET MESH, PASS
6	LIGHT MOUNT
7	LIGHT BAR PLATE
8	LIGHT POCKET, DRIVER
9	LIGHT POCKET, PASS
10	BUMPERETTE, DRIVER
11	BUMPERETTE, PASS
12	MOUNTING BRACKET, DRIVER
13	MOUNTING BRACKET, PASS
14	INNER FRAME BRACKET, DRIVER
15	INNER FRAME BRACKET, PASS
16	OUTER FRAME BRACKET, DRIVER
17	OUTER FRAME BRACKET, PASS



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Box Contents & Technical Information

Hardware Packs

PART #	DESCRIPTION	QTY.	USE
90-612923-01	HARDWARE PACK	1	LIGHT POCKET
	M6(1.0) X 16 HEX BOLT GR10.9 BLACK ZINC	6	
	M6 FL WSHR DIN 125 BLACK ZINC	6	
90-612923-02	HARDWARE PACK	1	FACIA PERIMETER
	M6(1.0) X 22 HEX BOLT GR10.9 BLACK ZINC	6	
	M6 FL WSHR DIN 125 BLACK ZINC	6	
90-612923-03	HARDWARE PACK	1	BUMPER/OVERRIDER
	M12(1.75)X30 HHCS GR10.9 BZNC	4	
	M12 FL WSHR DIN 125 BZNC	4	
90-612923-04	HARDWARE PACK	1	LICENSE PLATE
	M6(1.0)X20 HHCS GR8.8 BZNC	2	
	M6 FL WSHR DIN 125 BLACK ZINC	4	
	M6(1.0) NYLOCK NUT, GR 10.9 BLACK ZINC	2	
90-612923-05	HARDWARE PACK	1	LIGHT BAR MOUNT
	M10(1.5)X30 HHCS GR10.9 BZNC	2	
	M10 FL WSHR DIN 125 BZNC	4	
	M10(1.5) NYLOCK NUT, GR 10.9 BLACK ZINC	2	
90-612923-06	HARDWARE PACK	1	LIGHT BAR PLATE
	M6 FL WSHR DIN 125 BLACK ZINC	2	
	M6(1.0) NYLOCK NUT, GR 10.9 BLACK ZINC	2	
90-612923-07	HARDWARE PACK	1	OUTER MESH
	M6 FL WSHR DIN 125 BLACK ZINC	4	
	M6(1.0) NYLOCK NUT, GR 10.9 BLACK ZINC	4	
90-612923-08	HARDWARE PACK	1	WINCH CRADLE
	M12(1.75) X 35 HEX BOLT GR10.9 BLACK ZINC	8	
	M12(1.75) X 100 HEX BOLT GR10.9 BLACK ZINC	4	
	M12(1.75) NYLOCK GR 10.9 BZNC	6	
	M12(1.75)X30 HHCS GR10.9 BZNC	2	
	M12 FL WSHR DIN 125 BZNC	20	
90-612923-09	HARDWARE PACK	1	FACIA PLUG
	85985K480 RIGID PLASTIC LOCKING PLUG	1	
90-612923-10	HARDWARE PACK	1	FRAME BRACE
	M12(1.75) X 35 HEX BOLT GR10.9 BLACK ZINC	4	
	M12(1.75)X30 HHCS GR10.9 BZNC	2	
	M12 FL WSHR DIN 125 BZNC	6	



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Installation Instructions: Disassembly

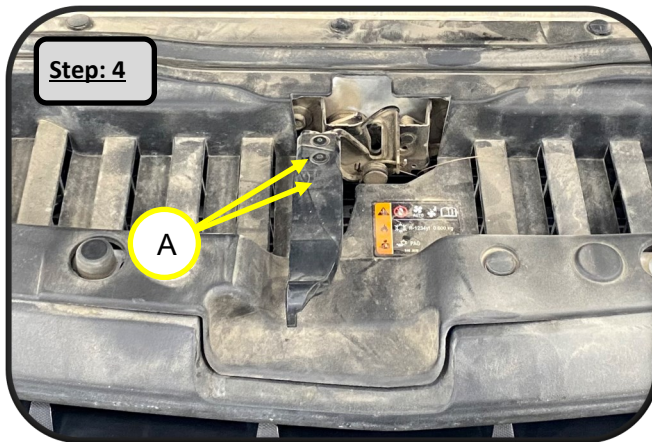
Step 1: Check box contents

Open the box containing your new Orion 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.

Step 2: Apply the parking brake and chock all 4 tires.

Step 3: Open the hood and disconnect the battery.



Step 4: Remove the hood release lever

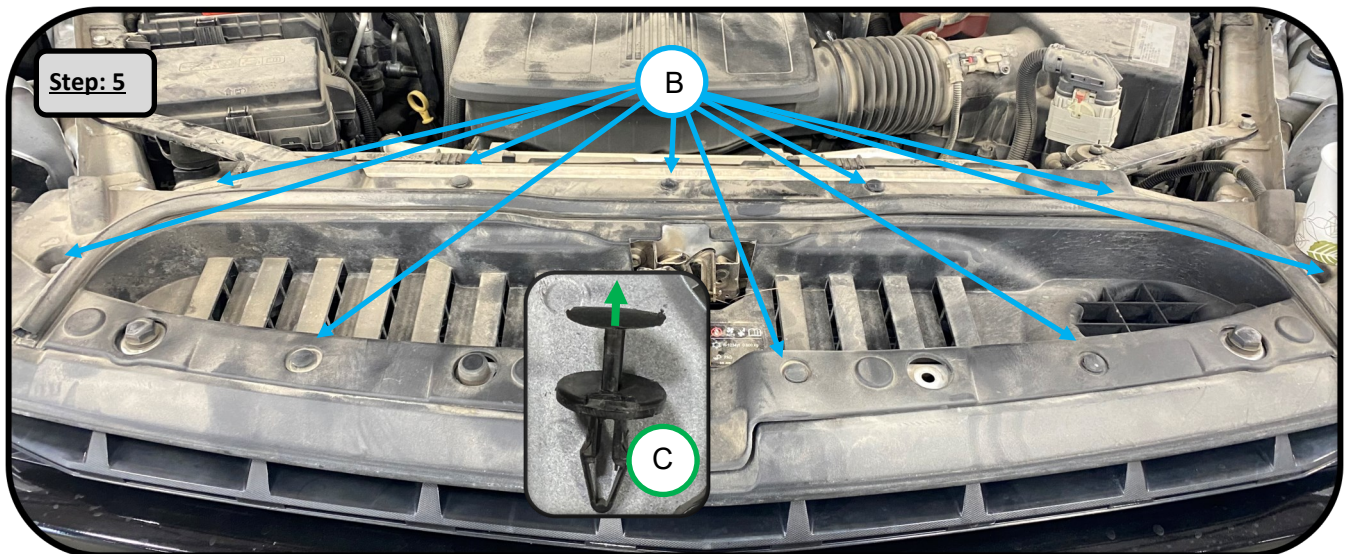
Locate and remove the (2) Torx screws securing the plastic lever to the latch (**Fig A.**) Remove the lever and set aside for future re-installation

Step 5: Remove the Engine Fresh Air Intake.

Locate the (10) plastic rivets that secure the Intake to the grille and radiator supports.

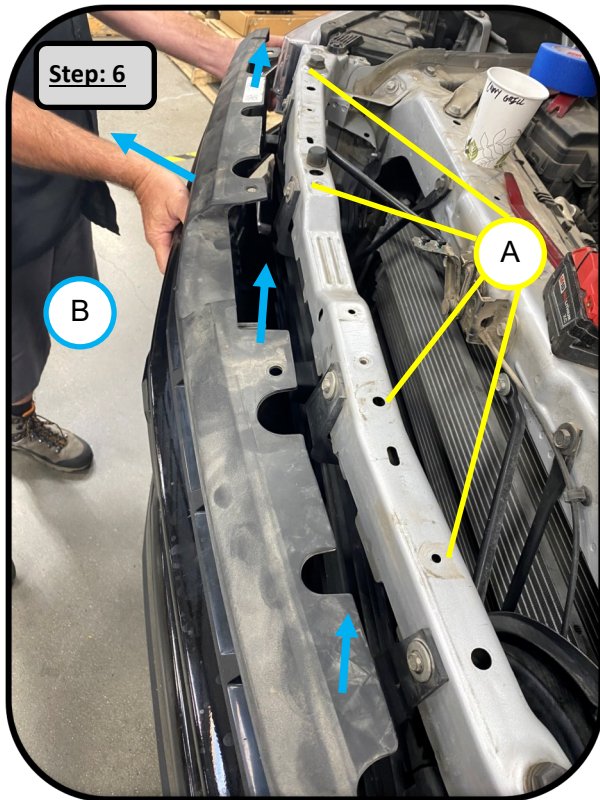
(**Fig B.**)

Remove them by prying up the center cap to disengage the locking tab (**Fig C.**), then remove the plastic rivet.



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Installation Instructions: Disassembly



Step 6: Removing the grille.

NOTE: It is advised that you have an extra set of hands for the next few steps!

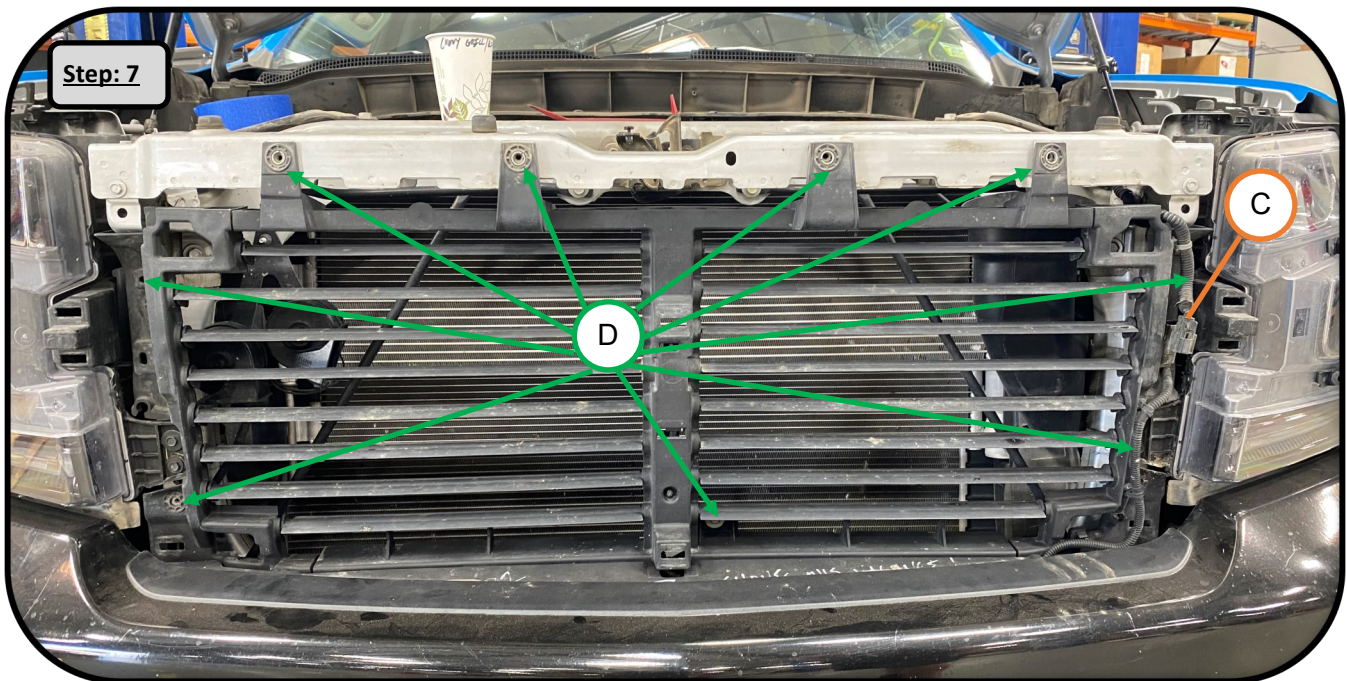
Tape off the headlights and fenders to avoid scratches. With a 10mm socket, remove the (4) screws securing the top of the grille to the support (**Fig A.**) Save the screws for re-installation.

Lift up the top of the grill off of the support to release the alignment pins. Starting on either side, with a firm grip on the outer middle area, pull sharply outwards to release the clips holding the grille to the support frame (**Fig B.**) Set aside for re-installation.

Step 7: Removing the louvres.

Unplug the wiring harness (**Fig C.**) and unclip it from the top of the louvres.

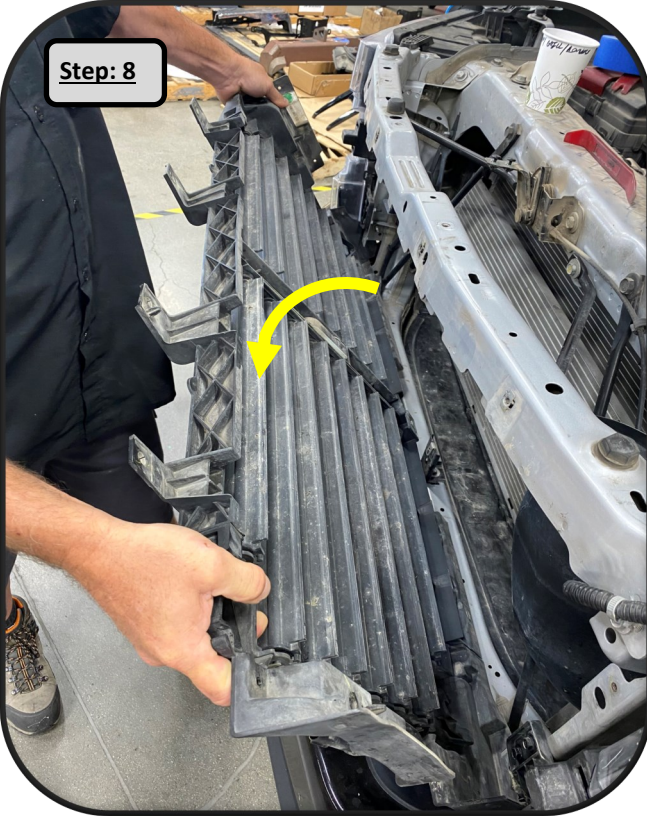
Next, with a 10mm socket remove the (9) screws securing the louvres to the frame support (**Fig D.**) Save the screws for re-installation.



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Installation Instructions: Disassembly

Step: 8



Step 8: Make sure the harness is unclipped from the louvres and rotate the louvre assembly down 90*

Step 9: With the louvre assembly laying down, starting on either side, pull the corner slightly down and out (**Fig A.**) to clear the other brackets, then up, (**Fig B.**) repeat this on the other side. Set the assembly aside for re-installation

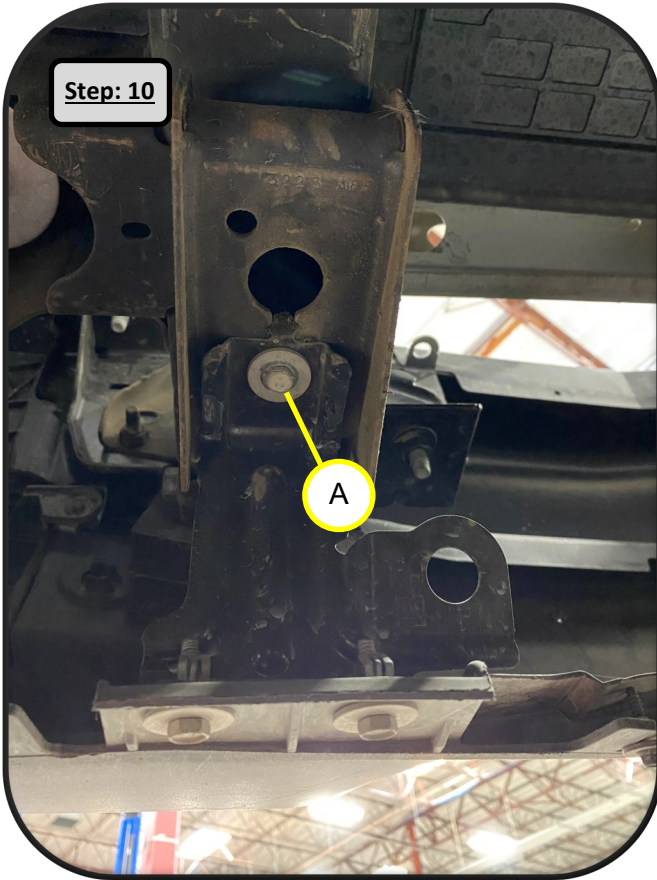
Step: 9



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Installation Instructions: Disassembly

Step: 10



Step 10: Underneath the bumper, starting on either side, with a 13mm socket, remove the bolt (**Fig A.**) securing the lower bumper support to the frame gusset . Repeat on other side.

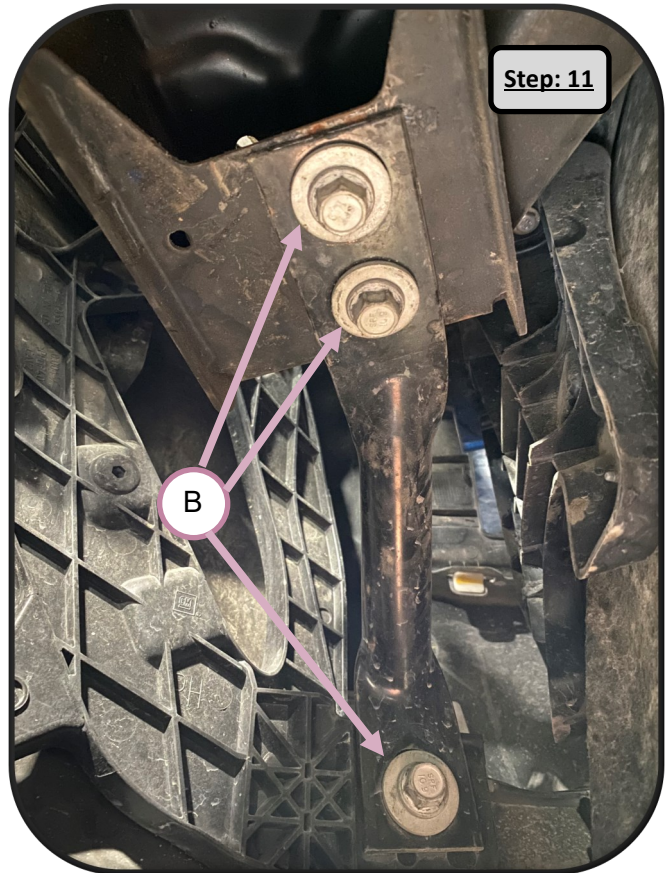
Note: it is not necessary to remove the other (2) bolts on the bottom of this bracket

Step 11: Starting on either side, remove the outer bumper support bars using an 18mm socket (**Fig B.**) repeat this on the other side.

If your vehicle is equipped with a plastic skid plate, remove it and set aside.

Note: these will not be re-used.

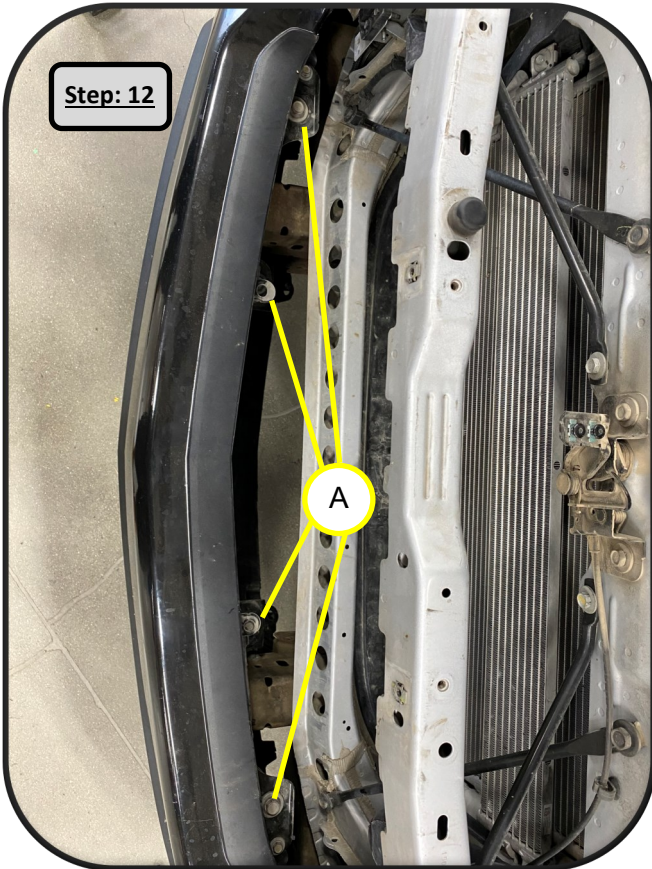
Step: 11



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Installation Instructions: Disassembly

Step: 12



Step 12: If your bumper is equipped with parking sensors, follow the harness and disconnect it from the vehicle. On the top side of the bumper, remove the (4) larger bolts, with a 18mm socket, **(Fig A.)** Carefully remove the bumper from the vehicle and place it on a shipping blanket or something similar to prevent scuffs or scratches.

Step 13: Starting on either side, remove the OE tow hooks using an 18mm socket and wrench **(Fig B.)** repeat this on the other side. These will not be re-used

Note: DO NOT remove the OE mounting plates from the frame horns.

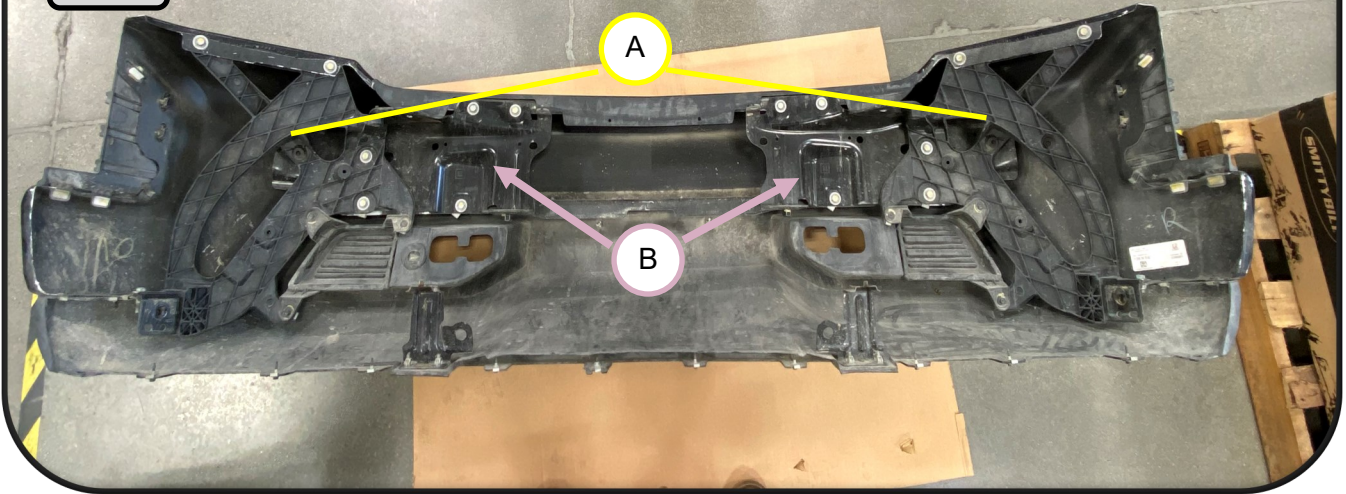
Step: 13



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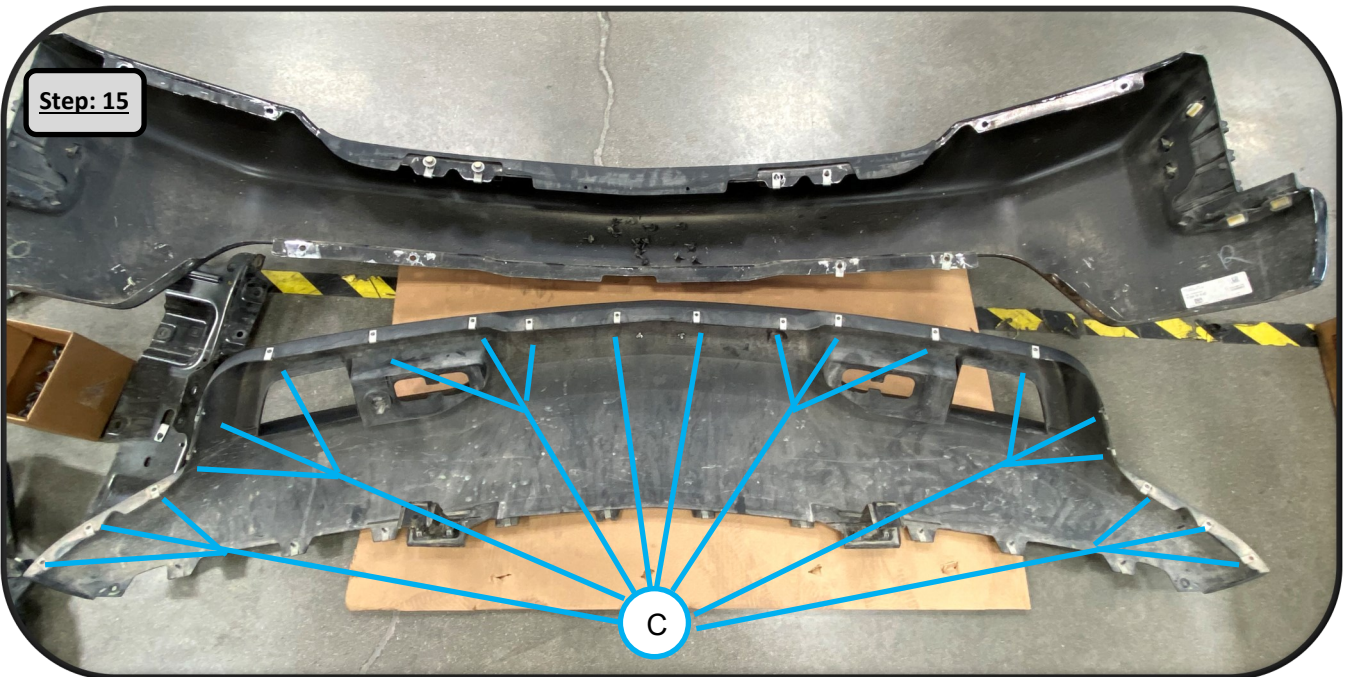
Installation Instructions: Disassembly

Step: 14



Step 14: With a 13mm socket, remove the plastic support structures (**Fig A.**), the bumper mounting brackets (**Fig B.**) and OE fog lights if equipped. If equipped with parking sensors, these and the harness stay in the bumper. The mounting brackets and (4 qty) OE bolts will be re-used for install

Step: 15

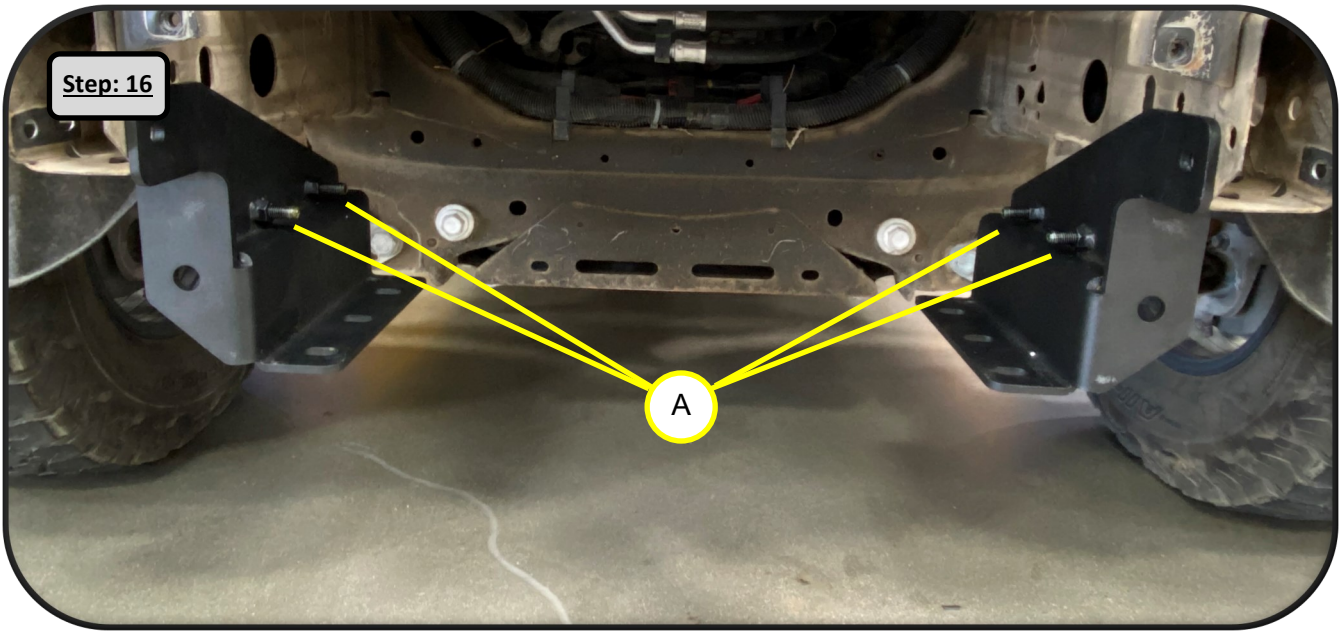


Step 15: With a 7mm socket or wrench, remove the (20 qty) screws (**Fig C.**) securing the lower valance to the bumper . The lower valance will not be re-used.



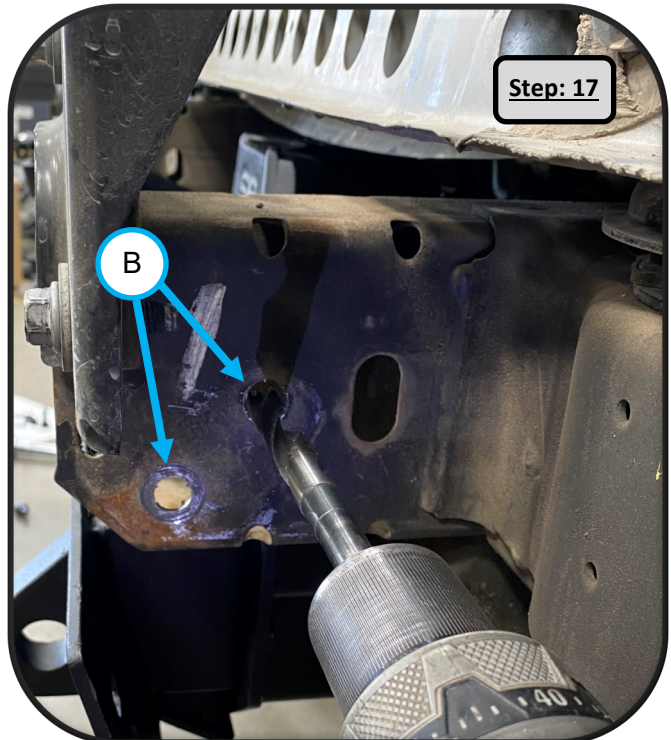
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Installation Instructions: Bracket Installation



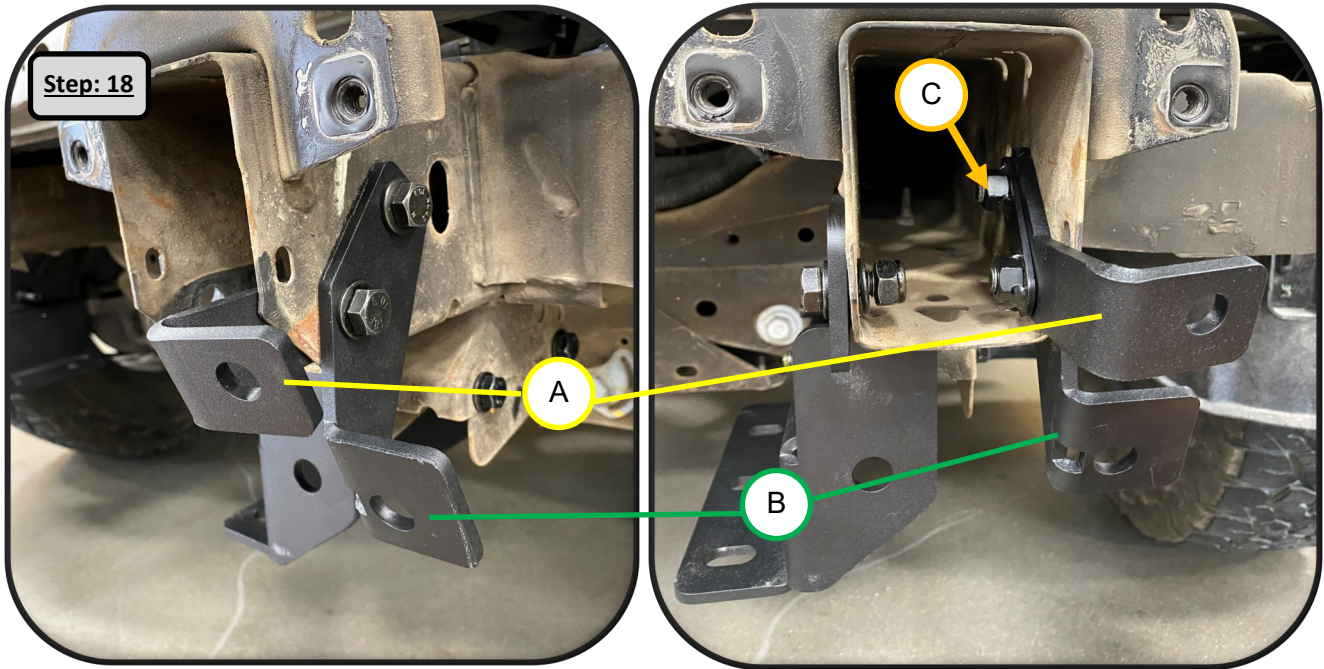
Step 16: Locate the new Orion Mounting Brackets and Hardware Pack 612923-08. Install the brackets as shown, to the inside of the frame rails using (2 qty) M12x1.75x100mm bolts, (4 qty) M12 washers, and (2 qty) M12 locknuts, through the lower frame gussets. **(Fig A.)** Tighten the hardware just snug for now.

Step 17: Starting on the outside of either frame rail, enlarge the (2 qty) OE holes shown **(Fig B.)** With a drill and 9/16" bit.
Repeat on the outside of other frame rail.



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Installation Instructions: Bracket Installation

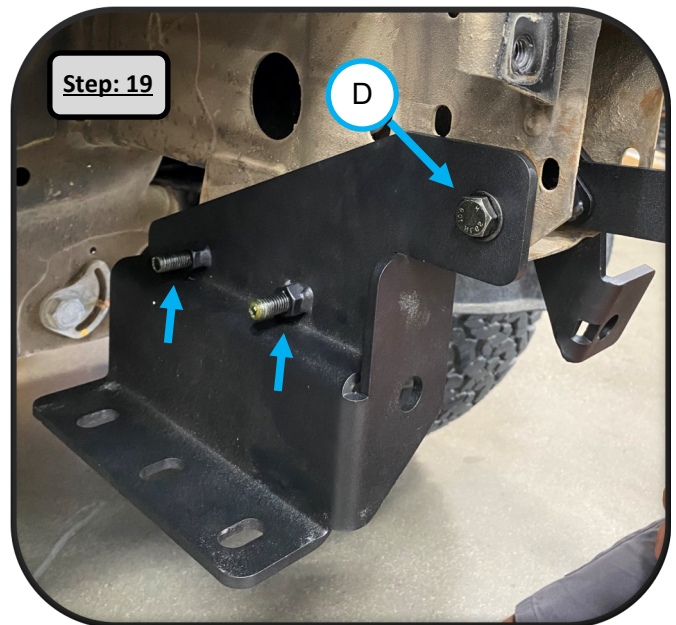


Step 18: Starting on the drivers side, locate the Inner (**Fig A.**) and Outer (**Fig B.**) Frame Brackets, these will be installed using the previously enlarged holes using (2qty) M12x1.75x35 bolts, washers, and (1qty) nut plate (**Fig C.**) Make sure these install as shown with the tabs facing outwards. Tighten the hardware only a few turns as need to be adjustable later on.

Repeat this on the passenger side.

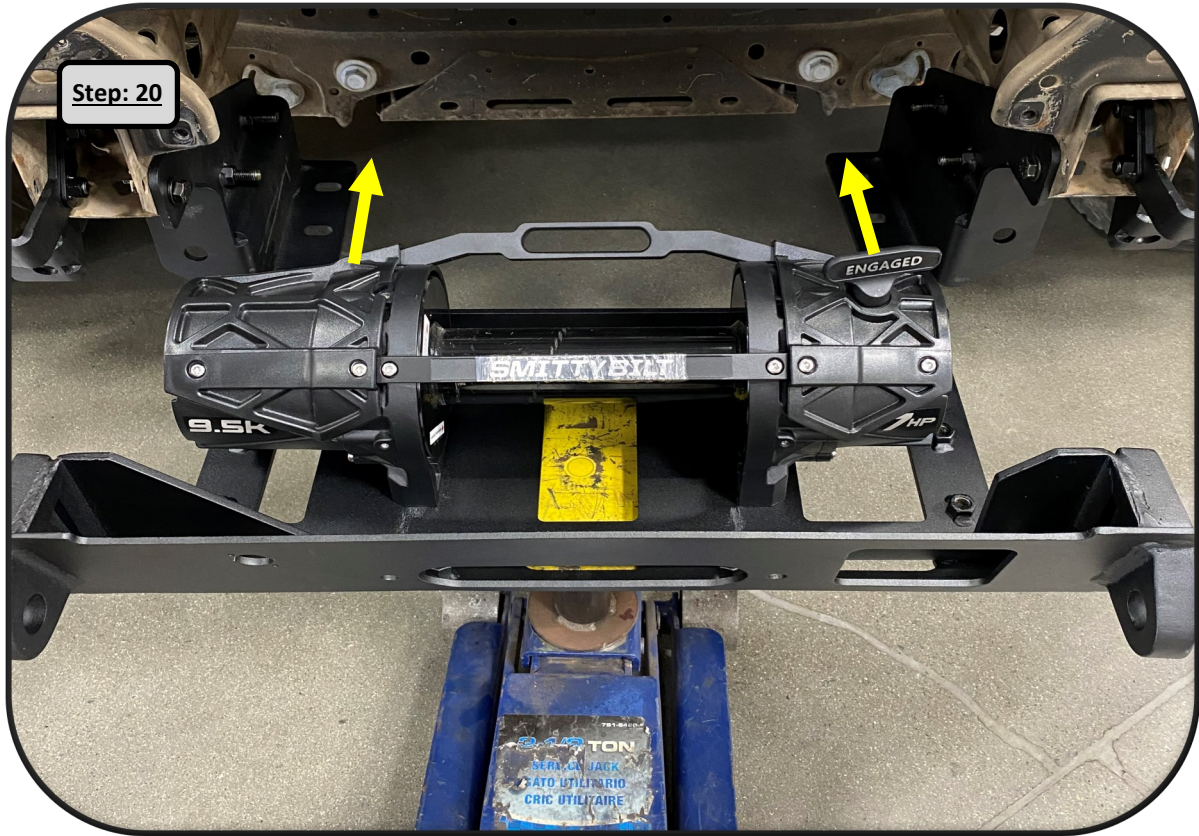
Step 19: Install an M12x1.75x30 bolt, washers, and lock nut thru the Winch Cradle Mounting Plate as shown (**Fig D.**) Tighten this bolt and the previously installed mounting bolts to **75ft-lbs.**

Repeat this on the passenger side.

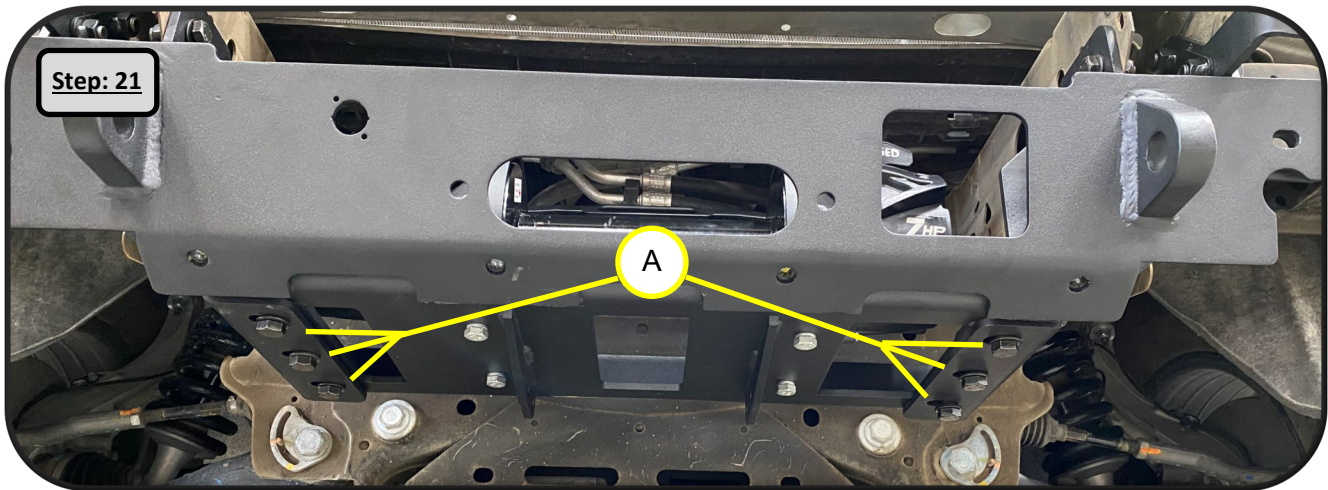


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Installation Instructions: Winch Cradle Install



Step 20: Locate the Winch Cradle. If installing a winch, do so now following the suppliers instructions. Using a rolling floor jack and the assistance of a friend, slide the winch cradle into position on top of the Mounting Brackets.



Step 21: Install (6 qty) M12x1.75x35 bolts and washers through the bottom of the Mounting Brackets into the Winch Cradle. (**Fig A.**) Leave these loose as you may need the adjustability later in the install.



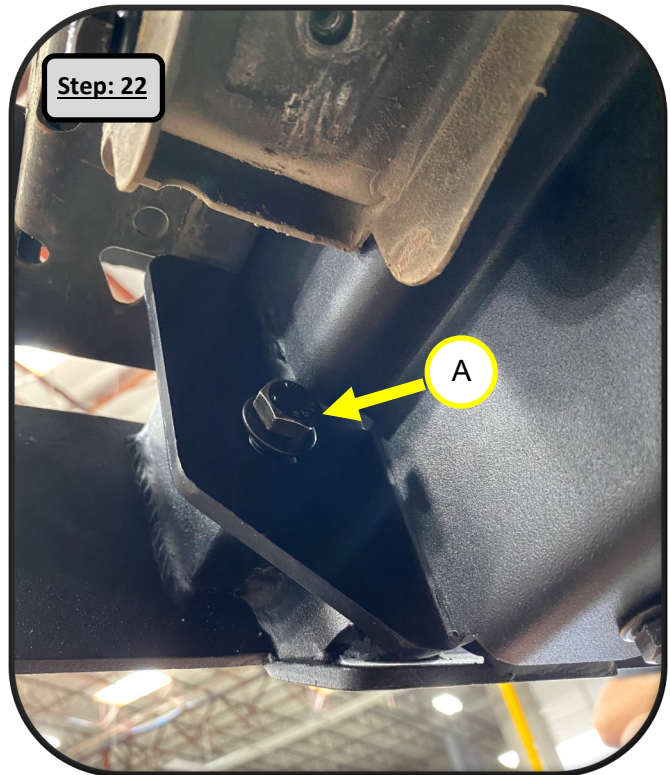
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Installation Instructions: Winch Cradle Install

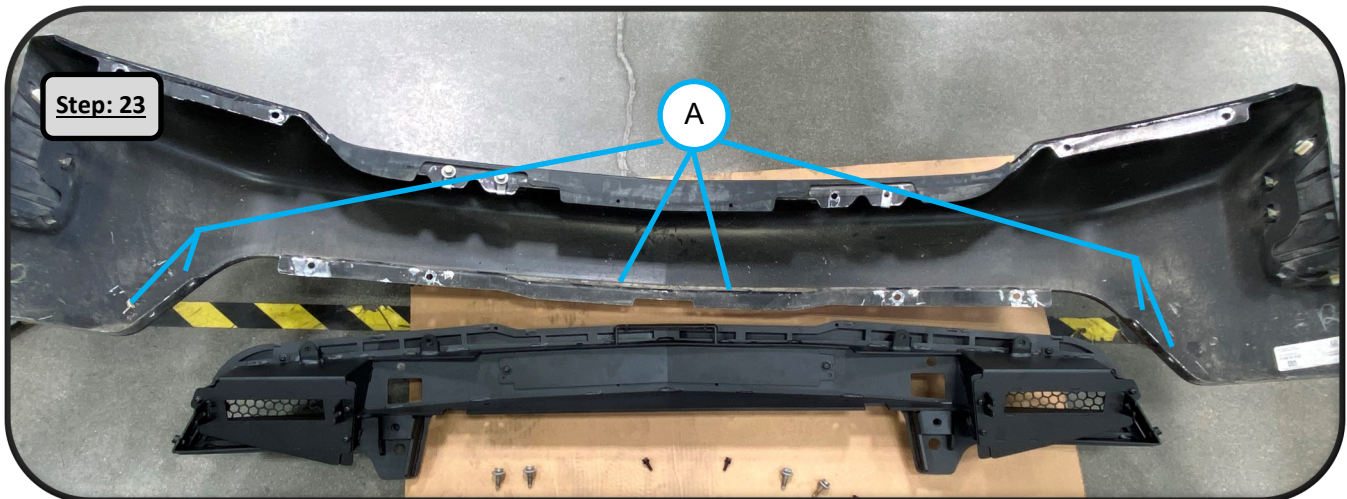
Step 22: Starting on either side, install an M12x1.75x35 bolt and washer through the back of the Mounting Bracket (**Fig A.**) into the back of the D-ring on the Winch Cradle.

Repeat on opposite side.

Leave these bolts loose for now as you may need to adjust the Winch Cradle later.



Installation Instructions: Facia installation

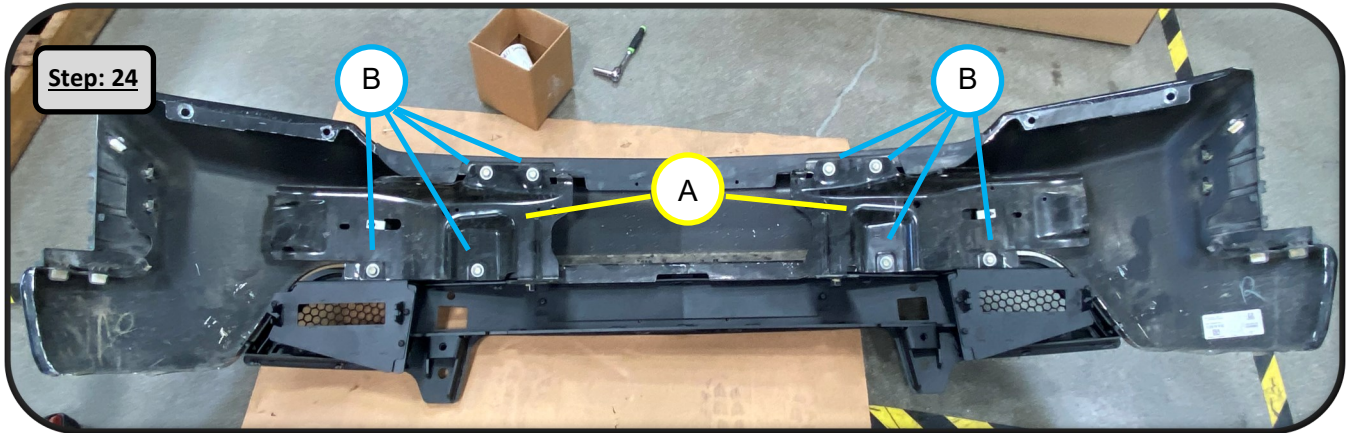


Step 23: Locate the new Bumper Facia and the OE bumper, lay them on a packing blanket or something similar to prevent scratches. Loosely attach the Facia to the bottom of the OE bumper with (6 qty) M6x1.0x22 screws and washers. When all the screws are in and you are satisfied with fitment, tighten these screws to **9ft-lbs.**

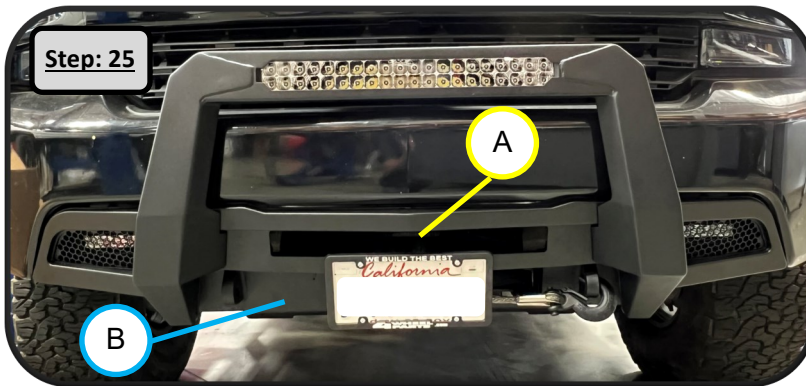


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Installation Instructions: Facia installation



Step 24: Locate the OE mounting brackets (**Fig A.**) previously removed in *Step 14 (Fig B)* Install the mounting brackets using (8qty) OE 8mm bolts (**Fig B.**) The top (4qty) bolts re-use the factory clip nuts, while the lower (4qty) bolts screw into the new facia. Tighten these and torque to **23ft-lbs**



Step 25: If you purchased light bars install them now using the hardware and instructions provided by the supplier and mounting brackets provided with this bumper.

- For mounting 6" light bars in the outer pockets of the Facia, use the welded in brackets.
- For mounting a 20" light bar in the middle of the Facia, install the provided Light Mount Brackets with the provided M10x1.5x30 bolts, washers, Nylock nuts, and install the light.
- For mounting a 20" light bar to the Over Rider, mount the light to the welded in brackets, route the cord down either side and out thru the bottom access hole. This access hole aligns with the access hole in the bumper Facia.

Note: If a winch was installed, it is recommended that a light bar not be installed in the facia to allow access to the winch controls (**Fig A.**) or a pigtail for the control box (*purchased separately, see page 19*) can be installed and secured through the provided hole next to the right side D-ring. (**Fig B.**) If you aren't installing a winch or light bars, a plastic plug and black out cover are provided in the kit



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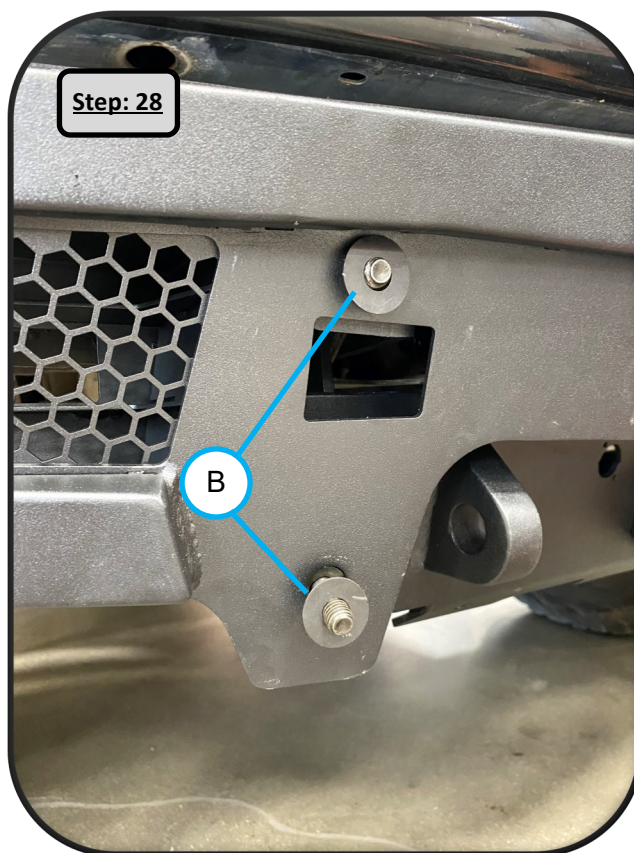
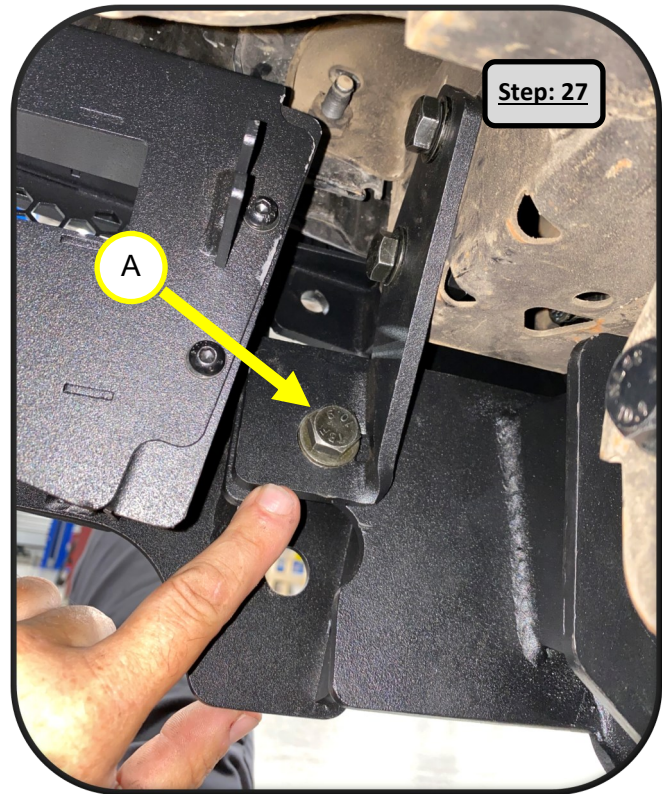
Installation Instructions: Bumper Re-Installation

Step 26: Using *Step 12: (Fig A.)* as a guide, re-install the bumper assembly back on to the OE frame mounts, being careful not to scratch the painted fenders. Re-install the (4 qty) bolts through the bumper mounts to the frame mounts loosely as you may need to adjust it.

Note: These next few steps can be a little tricky, as you may have wiggle the winch cradle and bumper, in order for the mounting holes to align.

Step 27: Underneath the bumper, starting on either side, install an M12x1.75x30 bolt and washer through the Outer Frame Bracket (**Fig A.**) loosely into the middle threaded hole in the back of the Facia.

Repeat this on opposite side



Step 28: Again, behind the bumper, starting on either side, install (2 qty) M12x1.75x30 bolts and washers through the upper Frame Bracket and lower hole in the back of the Facia (**Fig B.**) On the outside, place a fender washer (Located in a separate hardware bag with 4qty) on each bolt and coat the threads with Blue Loctite* or similar thread locker.

Repeat this on opposite side



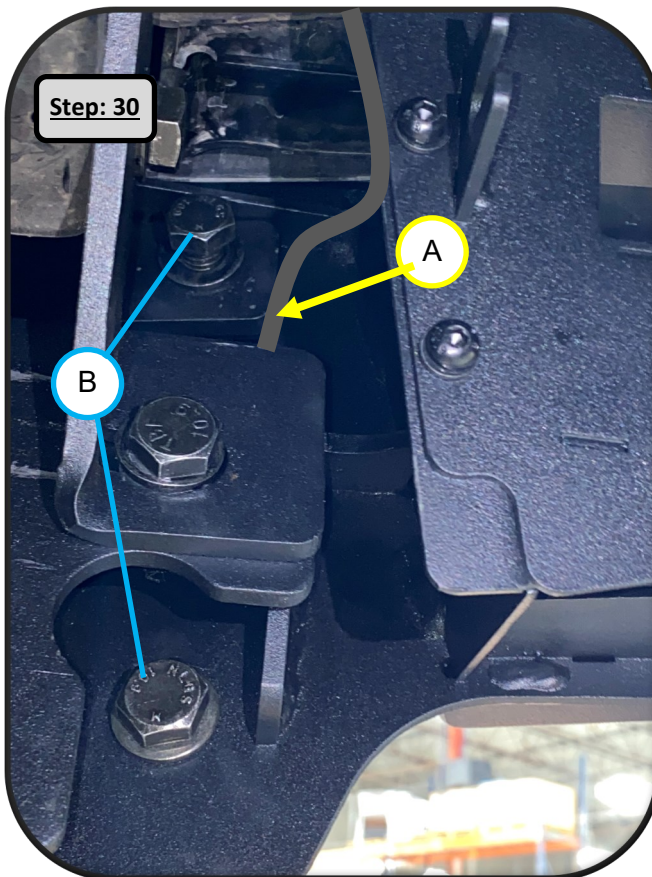
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Installation Instructions: Bumperette/Over Rider Install

Note: If installing the Over Rider, skip to Step 30.

Step 29: Locate the Bumperettes, starting on either side, carefully hold the corresponding Bumperette up to the previously installed bolts/washers. Gingerly thread the bolts (**Fig B.**) into the threaded bungs in the Bumperette being careful not to drop the fender washers. (a wobble socket and extension is very helpful for this operation) With both bolts installed, tighten just finger tight and

Repeat on opposite side.



Step 30: With the help of a friend, hold the Over Rider up to the bumper being careful not to bump the previously install bolts/washers. Fish the light bar power cord through the corresponding access hole in the Facia (**Fig A.**) and gingerly thread the mounting bolts (**Fig B.**) into the threaded holes in the Over Rider. (a wobble socket and extension is very helpful for this operation) When all (4 qty) bolts are installed, tighten them just snug.



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Installation Instructions: Tightening/Torquing The Hardware

Step 31: Take a minute to adjust and center the bumper to the vehicle. When you are satisfied, start by tightening the (2 qty) bolts behind the D-rings in Step 22 (Fig A.) Next tighten the (6 qty) bolts attaching the winch cradle to the Mounting Brackets in Step 21 (Fig A.) Once this is done, go back and torque these bolts to **75ft-lbs.**

Step 32: Tighten the Frame Brackets from Step 18 (Figs A&B.) Double check the hardware in the lower frame gussets from Step 16 (Fig A.) and torque these to **75ft-lbs.**

Step 33: From Step 29 & 30, If you installed the Bumperettes, Tighten and torque the mounting bolts to **15ft-lbs.** being careful not to strip the threaded bungs out of the plastic.

If you installed the Over Rider, tighten then torque the mounting bolts to **45ft-lbs.**

Step 34: On the top side of the Bumper, tighten the (4 qty) OE mounting bolts from Step 12 and Step 26 torque these to **45ft-lbs.**

Installation Instructions: Louvre and Grille Re-installation

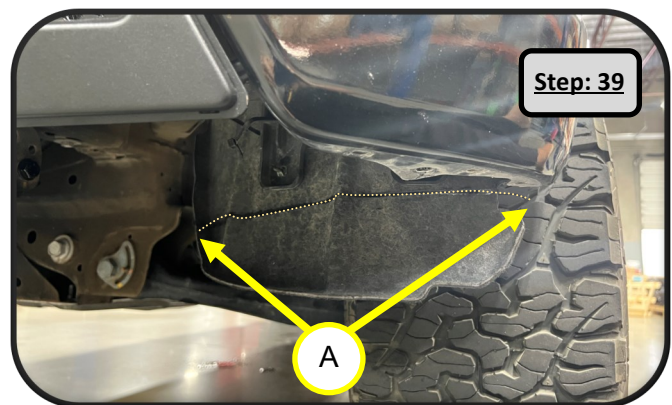
Step 36: Using Steps 9, 8, and 7 as a guide, re-install the OE louvres and secure with the OE hardware. Tighten and torque these to **9ft-lbs.** Re-install and reconnect the wiring harness.

Step 37: Using Step 6 as a guide, re-install the grille by hanging it on the support, make sure the alignment pins are hooked, then align the push clips and press it into place. Re-install the (4 qty) OE mounting screws and torque these to **9ft-lbs.**

Step 38: Use Step 5 as a guide, re-install the Fresh Air Intake with the OE push rivets and re-install the Hood Release lever using the OE Torx screws. Tighten these snug.

Step 39: Finally, starting on either side, mark and trim with a vibrating tool or cutoff wheel, the front of the Inner Fender Liner in a straight line from the edge of the bumper to frame. **(Fig A.)**

Repeat this on the opposite side.



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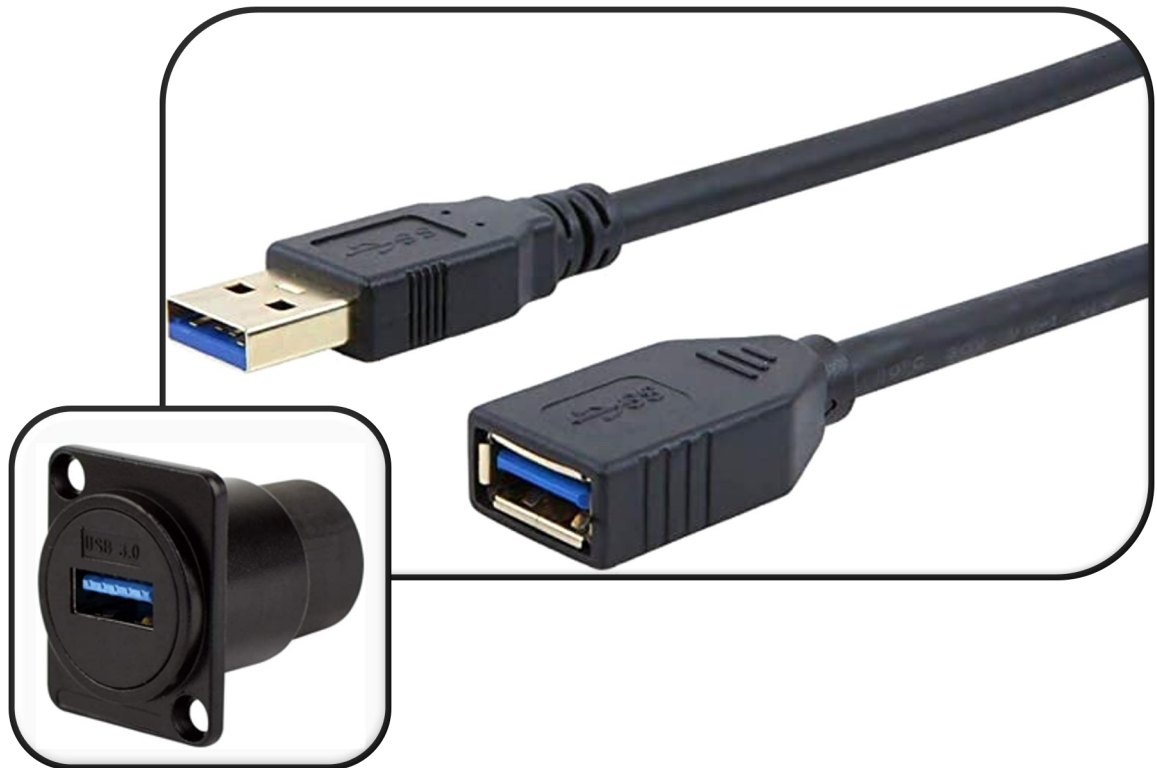
Installation Instructions: Wiring Options

Step 10: Completing the Installation

Now that the Bumper has been installed, run the wiring and install the switches per the suppliers instructions.

Remove the protective tape, your install is complete.

From Step 25: Below, are some suggestions, *(depending on your winch brand needs)* for wiring a remote access point for the Winch Controller, that are available through Amazon and other retailers.

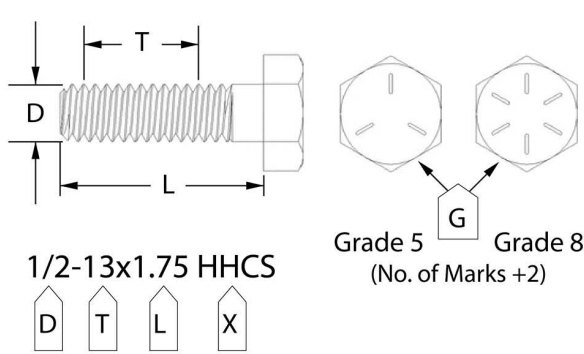


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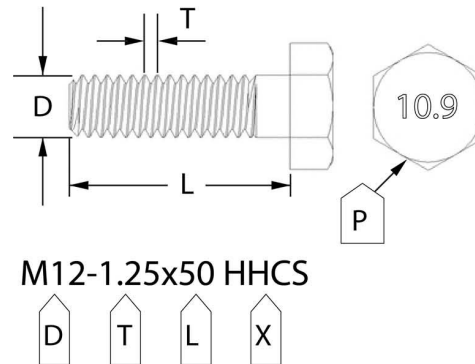
Bolt Torque Specifications

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

Bolt Torque and ID						
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



For Technical Support / Warranty Information please call 800-776-0767 EXT 1317
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