



Installation Instructions:

(Part # SB614850)

2007-2013 Toyota FJ
M1 Rear Bumper Kit

NOTE: Carefully read entire instructions thoroughly before attempting to install this part.

Parts Included	Qty	Parts Included	Qty
93-9307 Rear M1 Bumper	1	90-6626 Hardware Pack: Back-Up Lights	2
93-9297 Mount Bracket: Driver	1	1/4"-20 X 3/4" Hex Bolt Gr. 8	2
93-9300 Mount Bracket: Passenger	1	1/4"-20 Nylock Nut	2
90-9302 Step Washer	2	1/4" Hardened Flat Washer	4
93-9305 Center Mount Bracket	1	90-6502 Hardware Pack: Center Bracket	3
93-9548 Trailer Harness Wiring Plug Drop Bracket	1	1/2"-13 X 1 1/4" Hex Bolt Gr. 8	2
S/B612800-03 2 1/2" Clear Back-Up light Kit	1	1/2" Hardened Flat Washer	2
90-7318 Light Mount	2	90-6950 Hardware Pack: Bumper Brackets	1
90-4582 Push Plug	2	1/2"-13 X 4 1/2" Hex Bolt Gr. 8	2
90-6824 Hardware Pack: Trailer Harness Drop Brkt	1	1/2" -13 Stover Nut Gr. C	6
1/4"-20 X 3/4" Hex Bolt Gr. 8	1	1/2" Hardened Flat Washer	8
1/4"-20 Nylock Nut	1	90-6951 Hardware Pack: Bumper Brackets	1
1/4" Flat Washer Gr. 5	2	12mm X 40mm Hex Bolt Gr. 8	4
		12mm Split-Lock Washer	4
		12mm Hardened Flat Washer	4

INSTALLATION:

Step 1: Place masking tape on the areas of the rear fenders and tailgate that can be scratched by removal of the rear bumper.

Step 2: Unplug and remove the OE trailer harness receptacle wiring plug. Save the hardware for reinstallation. (Fig A)



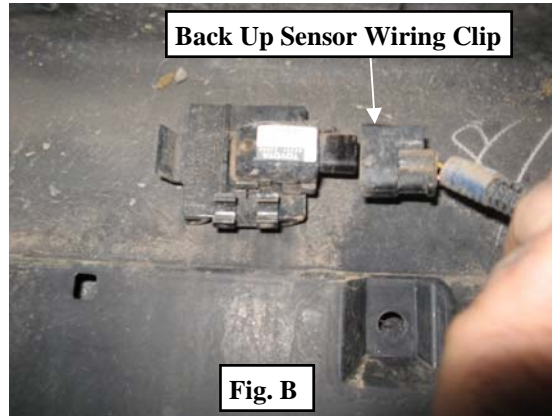
For Technical Support/Warranty Information please call 310-762-9944
Smittybilt, 400 W. Artesia, Compton, CA 90220



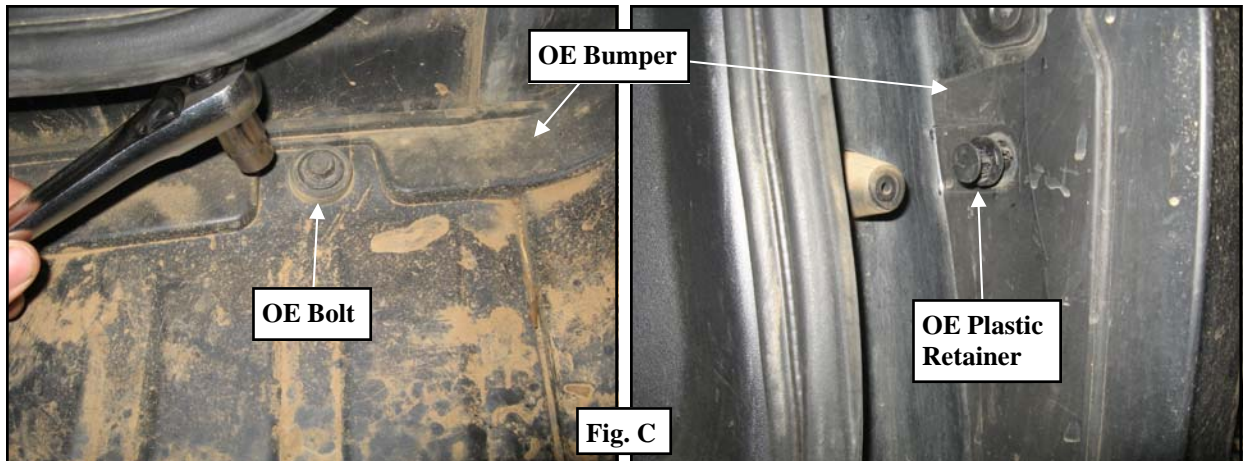
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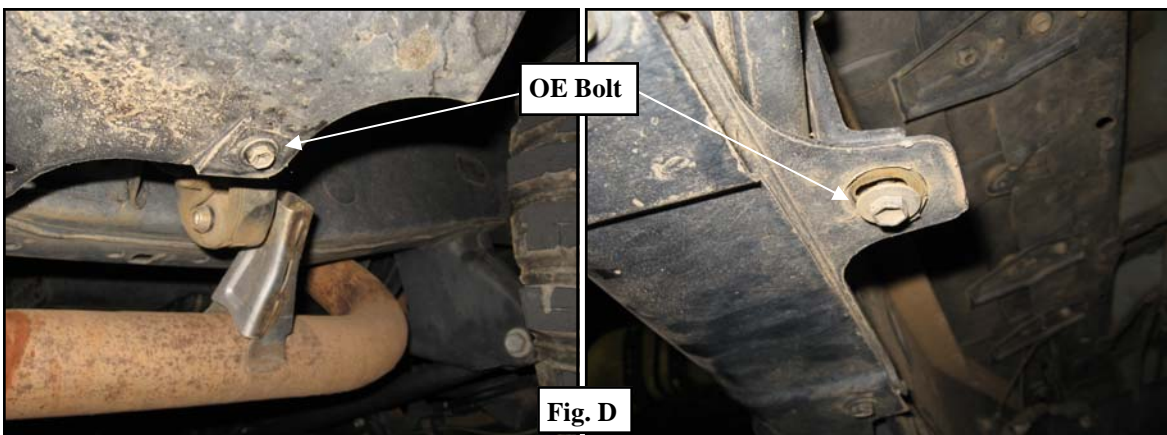
Step 3: Unplug the OE back up sensors wiring clips, if so equipped. (Fig B)



Step 4: Unbolt and remove the (5) OE bolts along the top and (1) plastic retainer on the passenger side. Save the hardware for reinstallation. (Fig C)



Step 5: Unbolt and remove the (4) bottom OE bolts. Save the hardware for reinstallation. (Fig D)

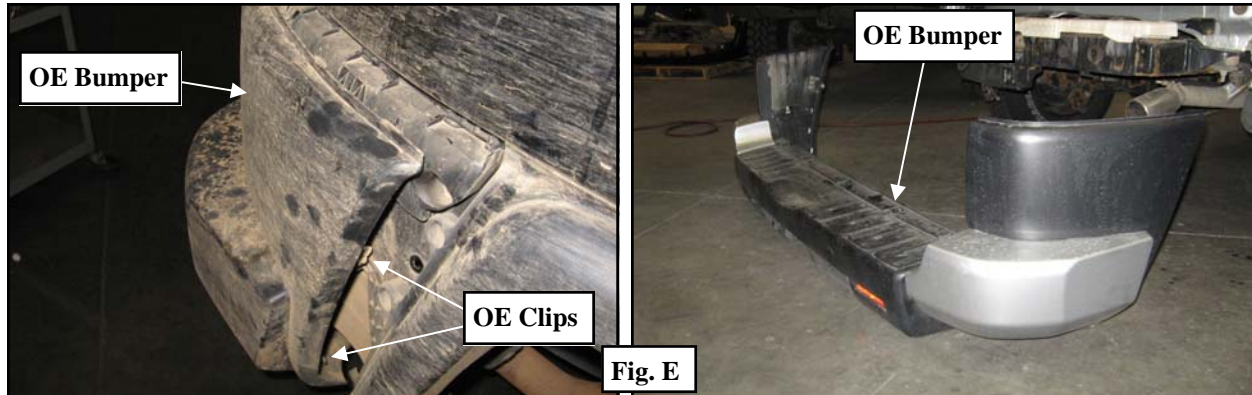




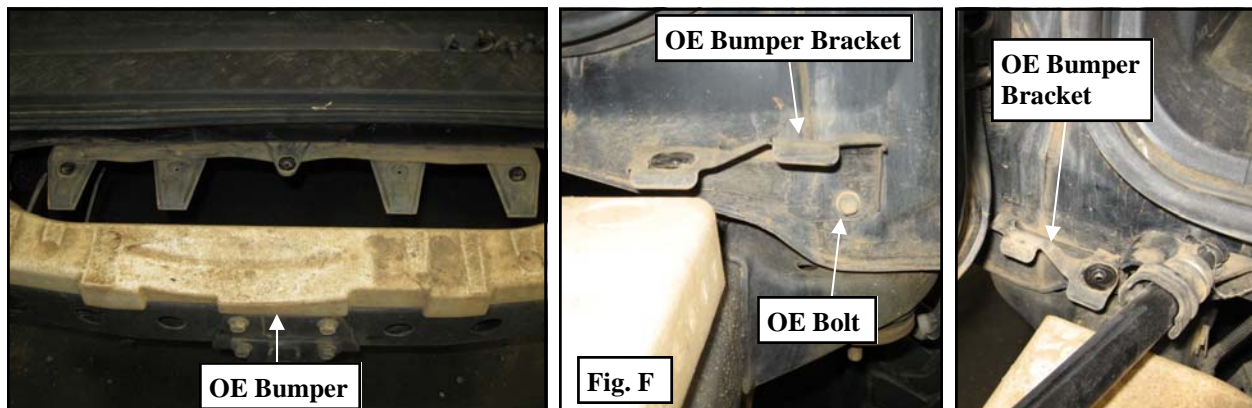
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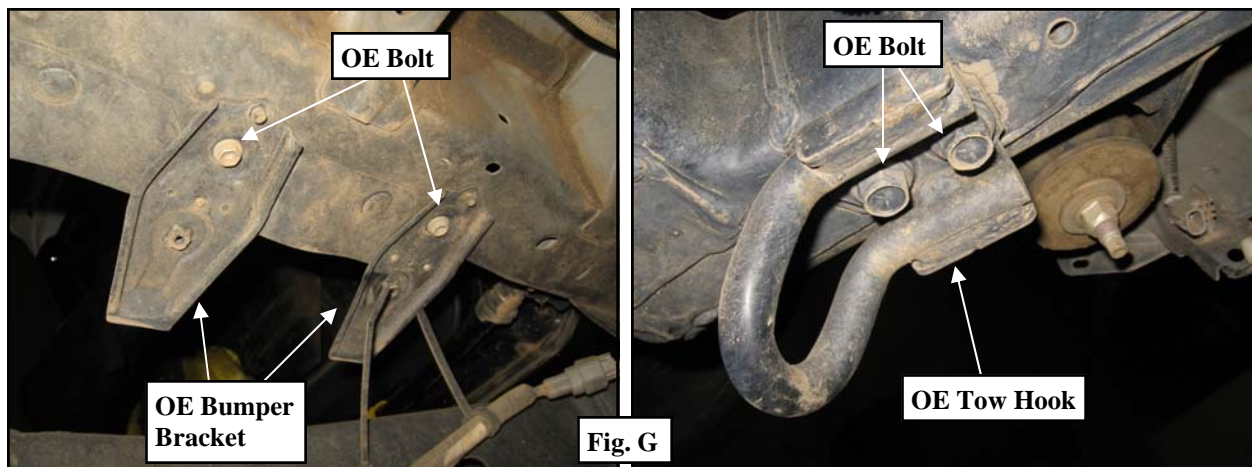
Step 6: Release the (2) remaining plastic clips from each side of the bumper. Carefully, pull back to remove the OE bumper from the vehicle. (Fig E)



Step 7: Remove the Styrofoam inner bumper structure. If equipped, unbolt and remove the (2) OE brackets. (Fig F)



Step 8: Remove the (4) remaining OE brackets and plastic retainer. Remove the OE tow hook from the driver side frame rail. (Fig G)



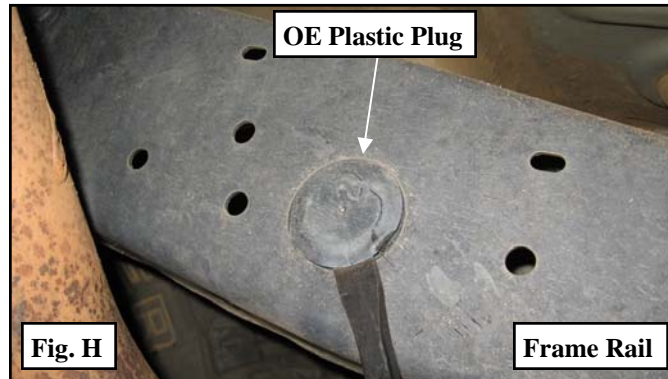
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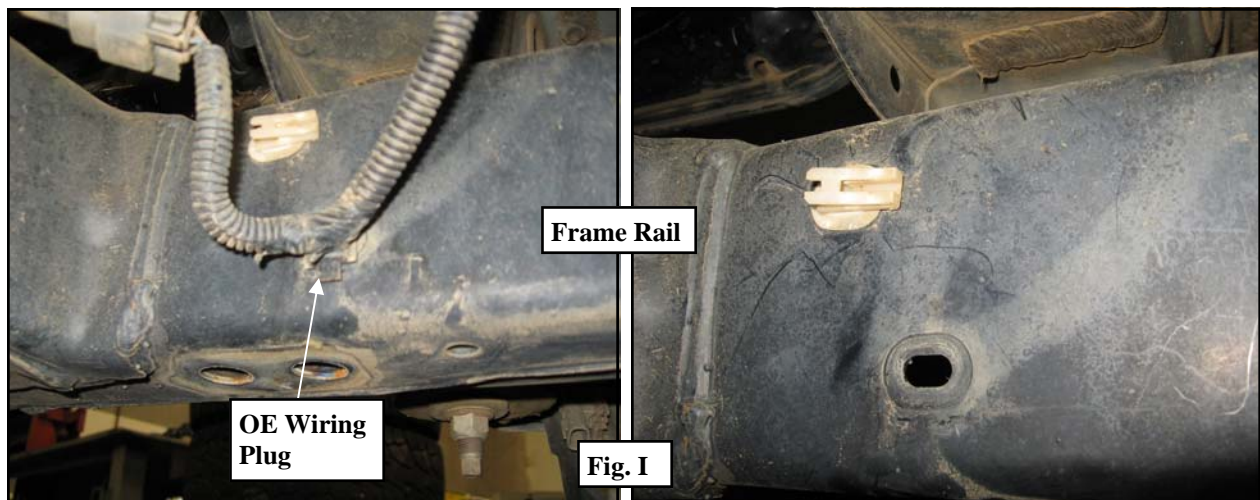
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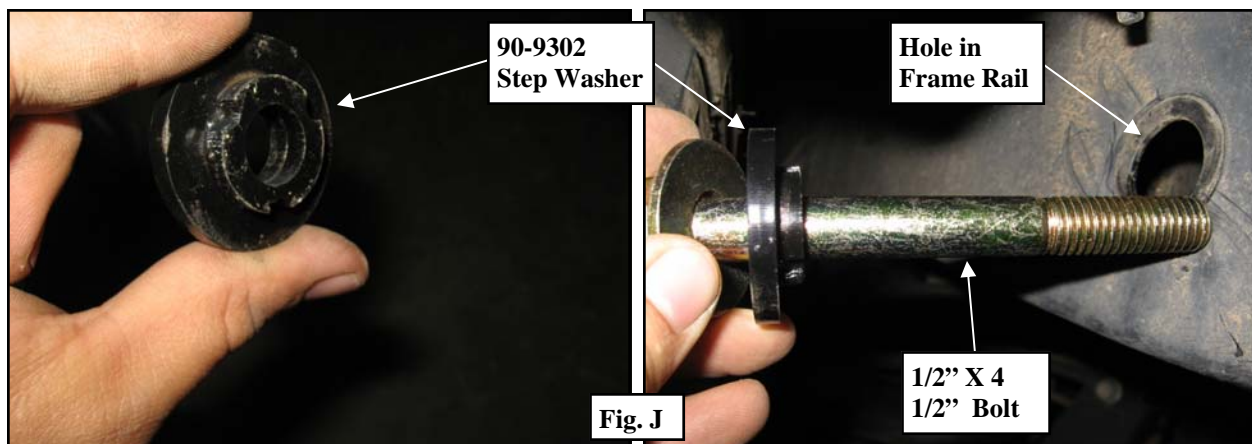
Step 9: Remove the (2 per side) OE plastic plugs (1 in fender well and 1 on opposing side of the frame). (Fig H)



Step 10: Detach the wiring plug and additional clip from the driver side frame rail. (Fig I)



Step 11: Install the (1 per side) step washer (90-9302) in the frame rail where the plastic plug was removed earlier. (Fig J)



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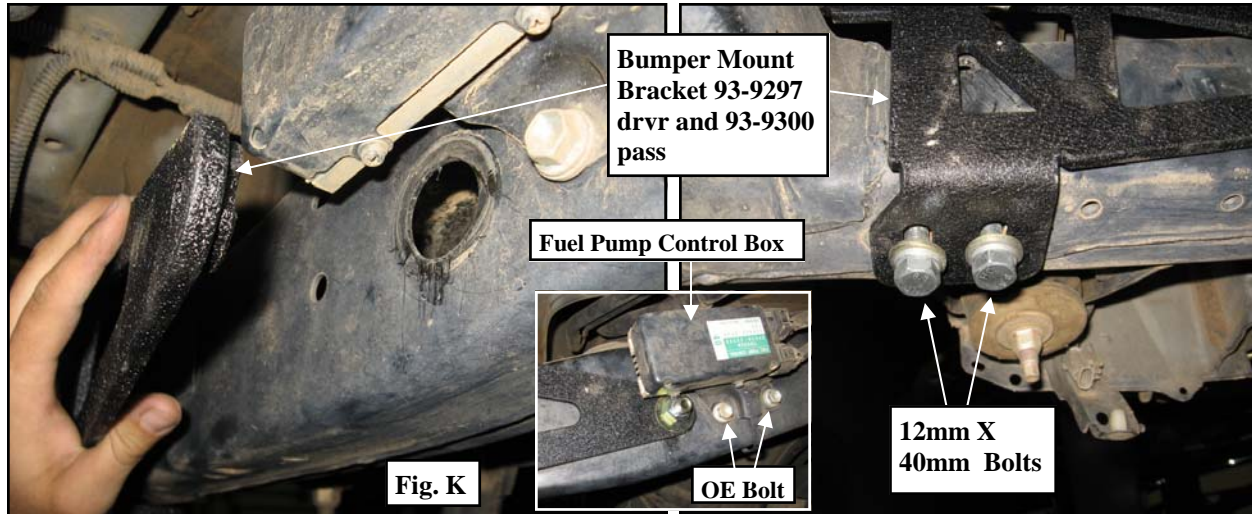
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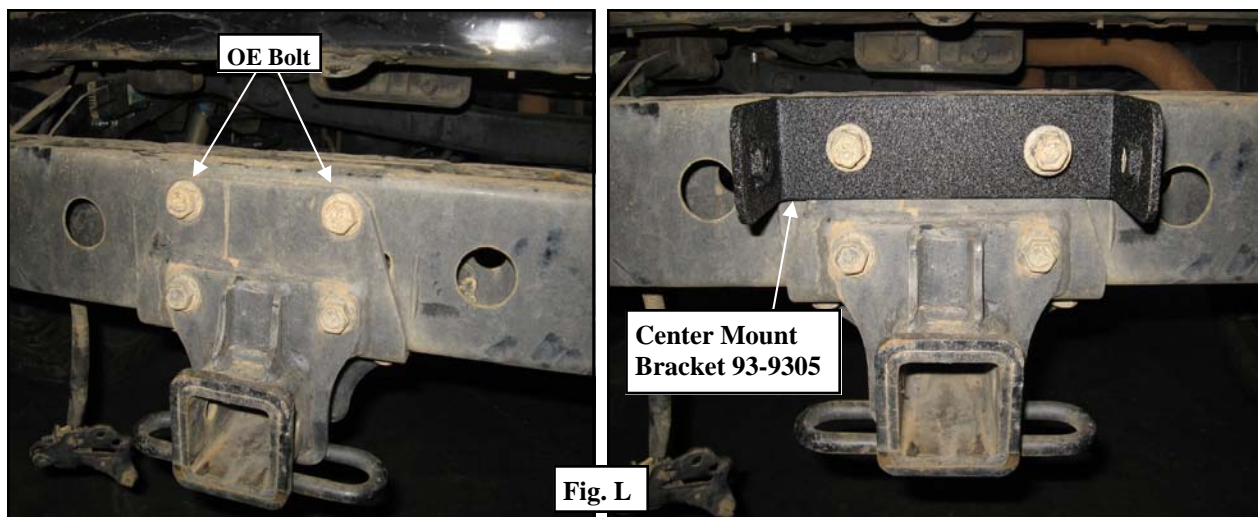
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Step 12: Install bumper mount bracket (93-9297 drv'r and 93-9300 pass) on the inside of the frame rails using the (2 per side front) 1/2" X 4 1/2" bolts and hardware, and (2 per side rear) 12mm X 40mm bolts and hardware. (Fig K)

NOTE: Some model years may be equipped with a fuel pump control box close to the rear bracket mounting hole. The fuel pump control can be moved up out of the way using OE hardware.



Step 13: Remove the (2) OE upper trailer hitch bolts and install the center mount bracket (93-9305) and secure using the previously removed OE bolts. Torque the hardware according to manufacturer's specifications. (Fig L)



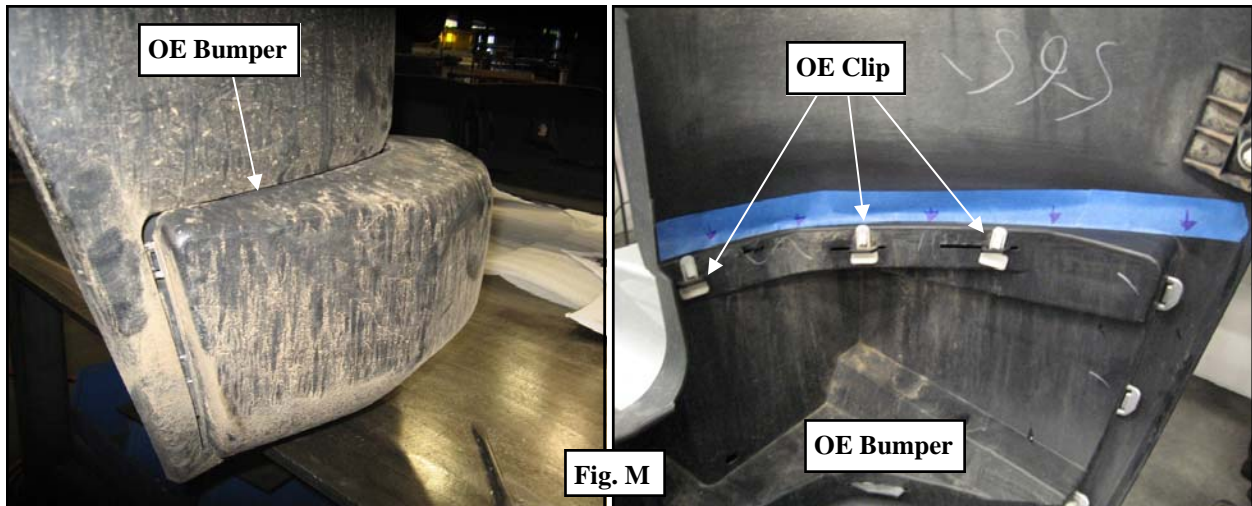
Step 14: Remove the lower plastic corners from the OE bumper by removing the (5 per side) OE clips. (Fig M)



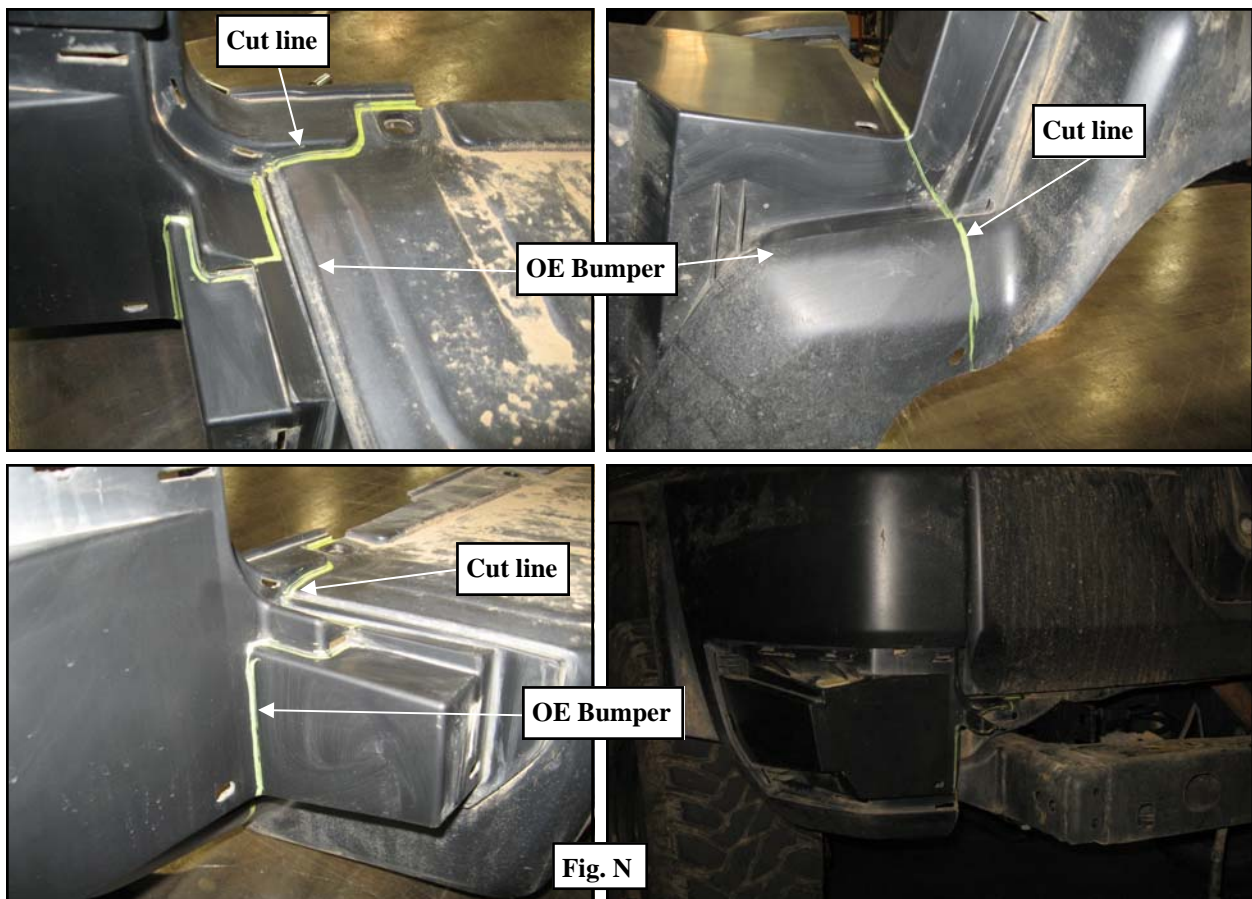
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Step 15: Carefully, cut the plastic corners off the OE bumper. To trim, use the cut lines in the pictures as a guide, mark and trim the OE plastic corners using a razor knife or another suitable cutting tool. (Fig N)





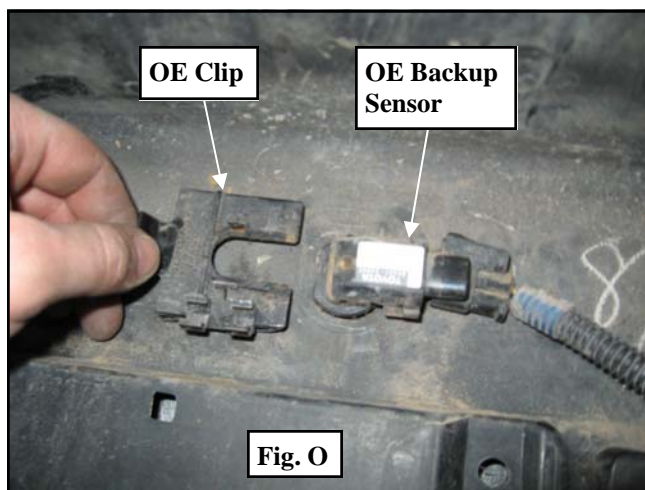
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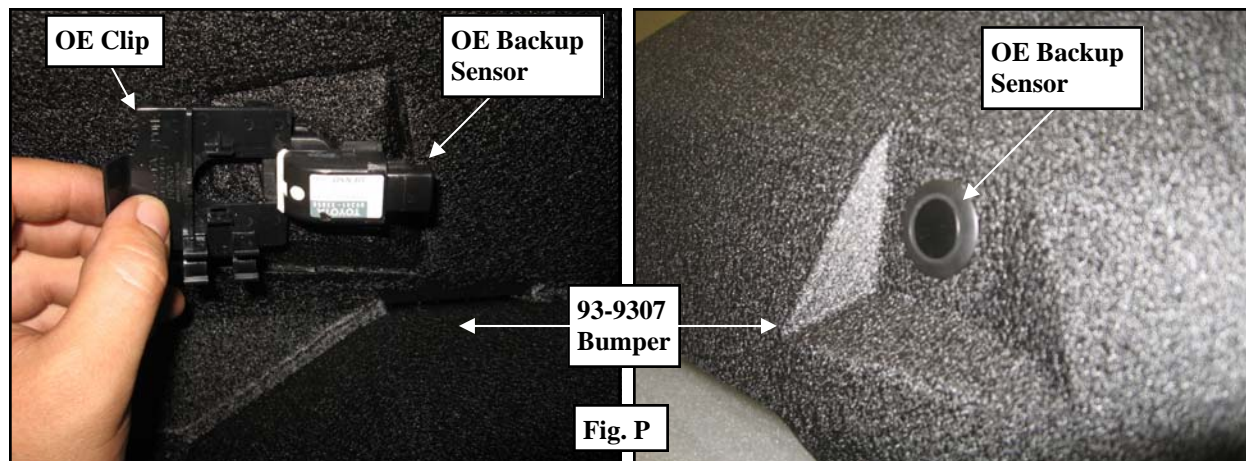
IMPORTANT!: If your vehicle came equipped with back-up sensors, perform steps 16 through 19, one sensors at a time, carefully noting the original orientation in the OE bumper prior to removal.

Step 16: Unclip and carefully remove the back-up sensors from the OE rear bumper, if so equipped. (Fig O)



Step 17: Remove the (2) OE back-up sensor retainers from the OE bumper, if so equipped. (Fig P)

NOTE: Be sure to note the orientation of the back-up sensor retainers in the OE bumper prior to removal.



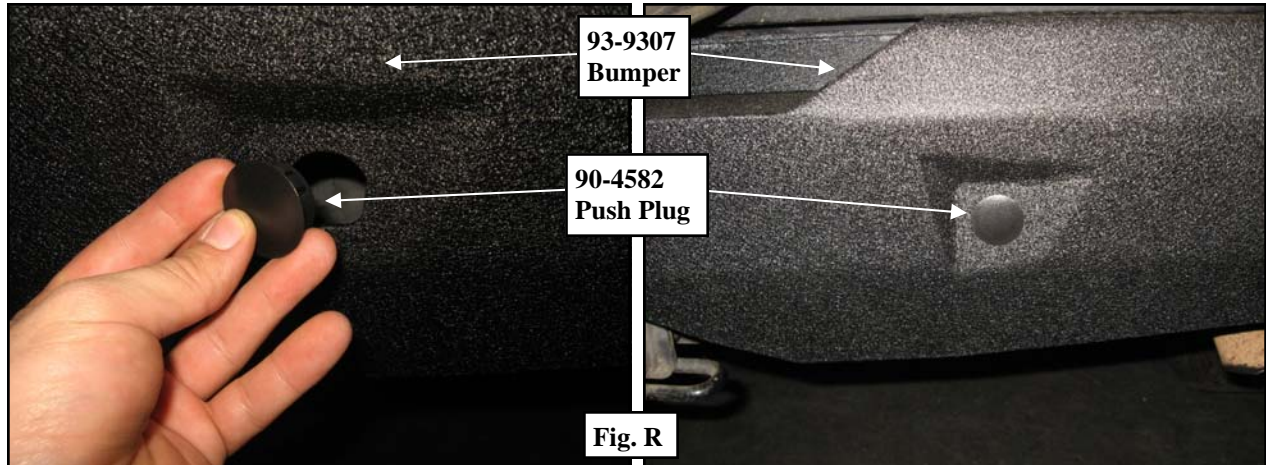
Step 18: Install the (2) back-up sensors into the mounting holes on the M1 rear bumper (93-9307) according to their original orientation in the OE bumper. Secure using the removed OE clips. (Fig R)



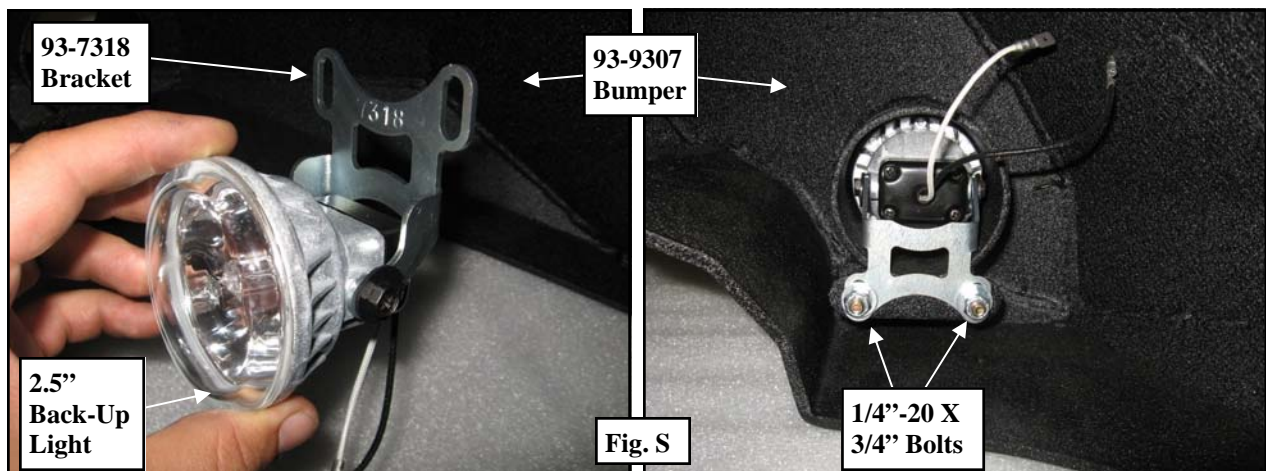
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NOTE: If your vehicle is not equipped with back up sensors, push plugs (90-4582) have been provided.



Step 19: Install the brackets (90-7318) to the 2 1/2" clear back-up lights as a replacement for the included mounting bracket from clear back-up light kit (S/B612800-03). (Fig S)



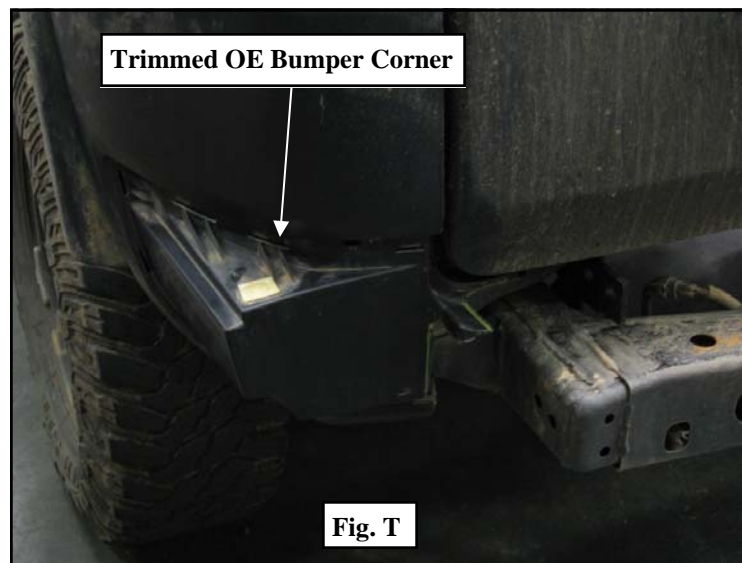
Step 20: Install the back-up lights into the new M1 rear bumper (93-9307) using the supplied (2 per side) 1/4"-20 X 3/4" bolt and hardware. (Fig S)

Step 21: Reinstall the previously trimmed OE bumper corners back into place on the vehicle using the previously removed OE clips. (Fig T)



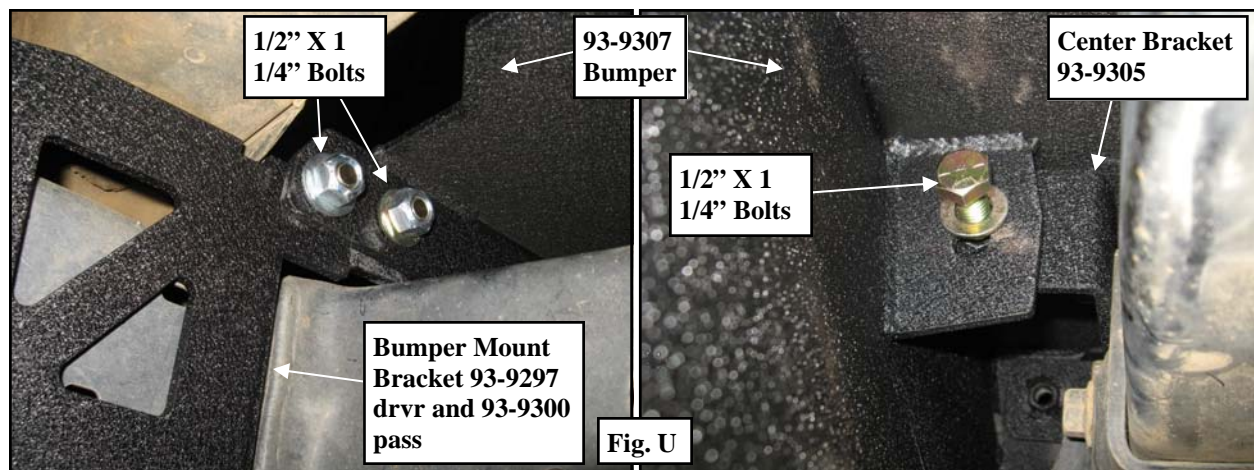
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Step 22: Reconnect the back-up sensors to the wiring harness. Use zip ties to secure the wiring harness to the M1 rear bumper (93-9307).

Step 23: Carefully raise the new M1 rear bumper (93-9307) into position. Slide into place on the inside of the previously installed bumper mounting brackets (93-9297 *drvr* and 93-9300 *pass*) to the frame using the (2 *per side*) supplied 1/2" X 1 1/4" bolts and hardware. Secure the bumper to the previously installed center bracket (93-9305) using the (2) supplied 1/2" X 1 1/4" bolts and hardware. (Fig U)

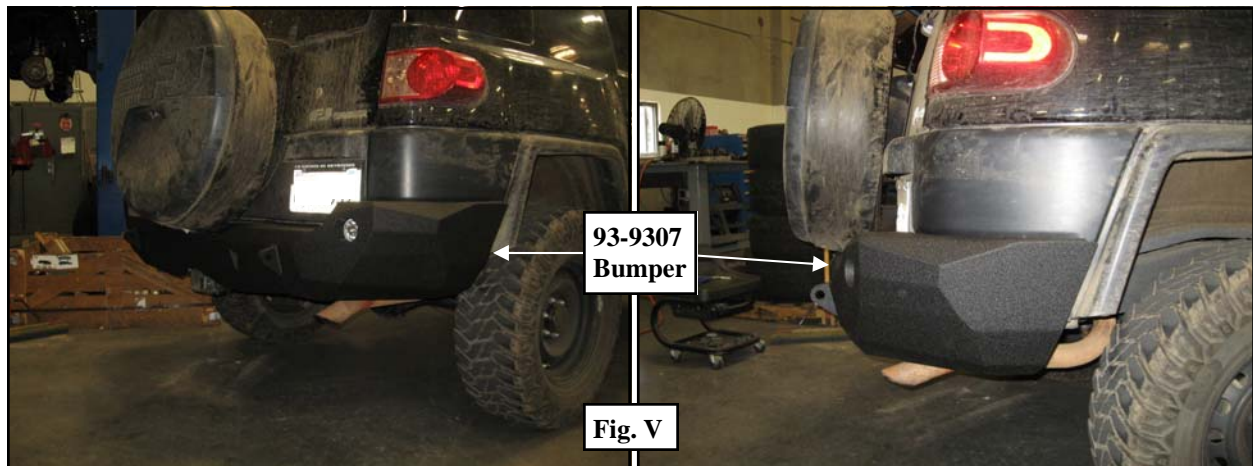


Step 24: Properly align the M1 bumper (93-9307) on the vehicle. Once proper alignment is achieved, torque the 1/2" bumper mounting hardware to 85 ft./lbs. (Fig V)

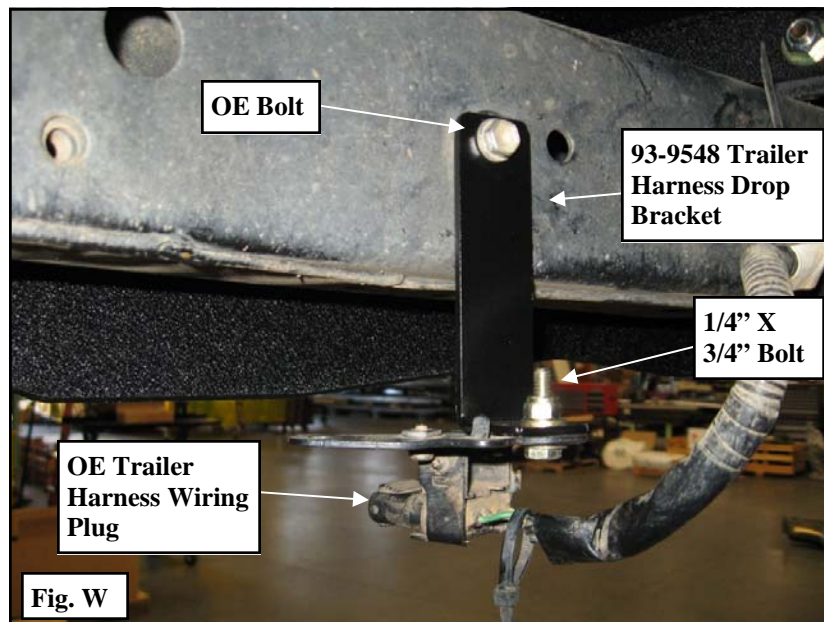


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Step 25: Install the trailer harness receptacle wiring plug drop bracket (93-9548) to the frame using the previously removed OE bolts. (Fig W)



Step 26: Install the trailer harness receptacle wiring plug drop bracket (93-9548) to the frame using the supplied 1/4" X 1 1/4" bolts and hardware. (Fig W)

Step 27: Reinstall the OE trailer harness receptacle wiring plug. (Fig A)

Step 28: Reconnect the rear bumper wiring where previously removed. Use zip ties to secure the wiring harness to the M1 rear bumper (93-9307).

Step 29: Connect the back-up light wiring per instructions, to a switch or in conjunction with auxiliary back-up lights. Test, aim & adjust the lights at this time.

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Step 30: Installation is now complete. (Fig X)



Fig. X

Finished Install



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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
D T L X

Grade 5 Grade 8
 (No. of Marks + 2)

M12-1.25x50 HHCS
D T L X

P

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)



Revised 9.11.13

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Revision Page:

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



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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.

Duration of Limited Warranty

Limited Lifetime Warranty on Stainless Steel Products -

Smittybilt stainless steel products carry the foregoing limited repair or replacement warranty against workmanship and defects in the material so long as the original purchaser retains the original stainless steel parts.

Limited Five (5) Year / 50,000 Mile Pro-Rata Warranty (whichever occurs first) on Dual-Stage Powder Coating Products -

Smittybilt dual-stage powder coated products carry the foregoing limited repair or replacement warranty for a period of (5) years or 50,000 miles (whichever occurs first) from date of purchase against workmanship and defects in the material, provided that any claim submitted after (2.5) years from date of purchase shall, if accepted, be satisfied by Smittybilt offering customer a credit on the purchase of a replacement product equal to fifty percent (50%) of customer's initial purchase price.

Limited Three (3) Year / 36,000 Mile Pro-Rata Warranty (whichever occurs first) on Chrome Products-

Smittybilt chrome products finished carry the foregoing limited repair or replacement warranty for a period of three (3) years or 36,000 miles against workmanship and defects in the material (whichever occurs first) from the date of purchase.

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.

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