

Installation Instructions:

(Part # S/B76851) 84-01 Jeep XJ Rear Bumper w/Tire Gate

Parts Included Qty		Parts Included	Qty
S/B76851-01		90-4560 WHEEL MOUNT STUD: 1/2"-20	3
93-9357 XJ TIRE CARRIER BUMPER	1	90-4219 LUG NUTS: 1/2"-20	3
90-6865 HARDWARE PACK: Rear Bumper	1	90-6705 HARDWARE PACK: Wheel Mount E	Brkt 2
1/2" X 1 1/2" HEX BOLT GR. 8	6	1/2" X 1 1/2" HEX BOLT GR. 8	2
1/2" HARDENED FLAT WASHER	6	1/2" SAE HARDENED FLAT WASHER	4
1/4" X 1" SELF DRILLING SCREW	2	1/2" STOVER NUT	2
1/2" X 1" HEX BOLT GR. 8	1	90-6913 HARDWARE PACK: Wheel Mount	
1/2" X 1 1/4" HEX BOLT GR. 8		3/8" X 1" HEX HEAD BOLT GR. 8	5
1/2" HARDENED FLAT WASHER		3/8" STOVER NUT	5
93-7807 SIDE MOUNT BRACKET DRIVER		3/8" HARDENED FLAT WASHER	10
93-7811 SIDE MOUNT BRACKET PASSEGER	1	90-6914 HARDWARE PACK: Main Pin	1
00-7814 NUT PLATE DRIVER		1/2" X 6 1/2" HEX BOLT GR. 8	1
90-7816 NUT PLATE PASSENGER		1/2" USS FLAT WASHER	1
93-7869 REAR BODY PANEL: DRIVER 1		90-6915 HARDWARE PACK: Light Tab	1
93-7870 REAR BODY PANEL: PASS	1	3/8" X 1" HEX HEAD BOLT GR. 8	2
90-6869 HARDWARE PACK: Rivets	1	3/8" STOVER NUT	2
90-4332 1/8" x .375" RIVIT	16	3/8" USS FLAT WASHER	4
		90-6916 HARDWARE PACK: Cam Wheel	1
90-4537 STRIKER PIN	1	3/8" X 3/4" BLACK ALLEN HEAD BOLT	1
90-6931 HARDWARE PACK: STRIKER PIN	1	90-6917 HARDWARE PACK: Trail Jack	1
7/16"-14 HEX NUT PLATED Gr. 8	1	93-9288 TRAIL JACK MOUNT	2
73-04300034 7/16" SAE GRADE 8 FLAT	1	020110 U-BOLT: 5/16" X 2 1/2" X 3 3/16"	2
S/B76851-02		5/16" NYLOCK NUT	4
93-9378 XJ TIRE CARRIER GATE	1	5/16" SAE FLAT WASHER	4
90-4536 MAIN PIN	1	1/2" X 1 1/4" GR. 8 HEX BOLT	2
90-9516 CAM WHEEL	1	1/2" USS GR.8 FLAT WASHER	2
93-9182 LIGHT TAB	2	1/2" SPLIT LOCK WASHER	2
93-9183 WHEEL MOUNT STATIONARY BRACKET	<u> </u>	S/B76896-03 GERRY CAN STRAP	1
93-9187 WHEEL MOUNT ADJUSTABLE BRACKET	' 1	90-6766 HARDWARE PACK: Gate Bumpers	1
90-9285 MAIN PIN NUT PLATE 1		90-4263 TIRE GATE RUBBER BUMPER	2
90-9287 STAINLESS PIN WASHER	2		



<u>Step 1</u>: Unbolt and remove the factory rear bumper and hardware from the vehicle. Save the hardware for reinstallation.

NOTE: Be sure to unclip the factory light wiring harnesses if equipped

<u>Step 2:</u> On the driver's side of the vehicle, remove the guard covering the fuel tank filler hoses. (Fig A)



<u>Step 3:</u> On the passenger side of the vehicle, remove the (2) OE bolts that secure the OE exhaust hanger to the tail pipe. (Fig B)



<u>Step 4:</u> On the both sides of the vehicle, insert the nut plates (90-7814 drvr and 90-7816 pass) into the holes in the rear body panel near the OE rear bumper mounting bolt holes. Align the holes in the nut plates with the (3) lower mounting holes in the body. (Fig C) *NOTE: Be sure that the nuts on the nut plates are facing up*.





<u>Step 5:</u> Install the frame mounting brackets (93-7807 drvr and 93-7811 pass) to the body. Secure using the (3 per side) supplied 1/2" X 1 1/2" bolts and 1/2" SAE washers, through bottom holes, into the previously installed nut plates. Install the (4 per side) previously removed OE bolts in the rear facing holes. Center the heads of the bolts in the slots in the brackets and tighten them down. (Fig D)

NOTE: Adjustment of these brackets may be needed for perfect alignment of the bumper.



<u>Step 6:</u> Measure the distance between the frame mounting brackets. The measurement should be slightly less than **34**". If not, readjust the mounting brackets at this time. (**Fig E**)





<u>Step 7:</u> Install the striker pin (90-4537) into the XRC rear bumper (93-9357) using the supplied 7/16" nut and washer. Torque the 7/16" hardware to 55 ft./lbs. (Fig F)



Step 8: Install the tire gate rubber bumpers (90-4263) to the XRC rear bumper (93-9357) (Fig F)

Step 9: NOTE: This step might require 2 people. Raise the new XRC rear bumper (93-9357) up into place and align the bumper mounting holes with holes on the bumper mounting brackets. Secure using the supplied (3 per side) 1/2" X 1 1/4" bolts and 1/2" USS washers. (Fig G)





Step 9: Level the bumper and torque all mounting hardware according to the chart on page 15 or manufacturers specifications.

Step 10: On the driver's side of the vehicle, reinstall the guard covering the fuel tank filler hoses using the (2) supplied 1/4- 14" X 1" self tapping screw. (Fig H)



Step 11: On the passenger side of the vehicle, reinstall the (2) OE bolts that secured the OE exhaust hanger to the tail pipe. (Fig B)

<u>Step 12:</u> Install the remaining 1/2" X 1" bolt as load bolt on the hitch. Doing this will reduce noise when operating the vehicle.

<u>Step 13</u>: Remove the rear fender moldings, glue, or riveted tabs in the area to be armored.



Step 14: Raise and test fit the driver side rear fender skin (93-7869 drvr and 93-7870 pass) to the rear fender. Center the rear fender skin in the middle of the rear fender. Use the top edge of the rear fender skin to position the panel along the contour of the body line.

IMPORTANT!: Pay special attention to its alignment with the rear body skin.

<u>Step 15:</u> With the rear fender skin held firmly in place, starting in the upper corners <u>ONLY</u>, drill out the corner holes, using a **1/8**" drill bit . (Fig. J)



<u>Step 16:</u> Remove the rear fender skin and put sealant on the back to keep out dirt and water. (Fig. J)



Step 17: Reinstall the rear fender skin and rivet the upper corners in place using the supplied 1/8" X 3/8" rivets (90-4332). You may now proceed with drilling and riveting the rest of the holes in the rear fender skin. (Fig. K)



<u>Step 18</u>: Grease the hole in the tire gate (93-9357), the main pin (90-4536), the surface the gate sits on, and the location that the adjustment cam rides on. (Fig E)

Step 19: Carefully raise and install the tire gate (93-9378) into the mounting pocket in the rear bumper. Insert (1) stainless pin washer (90-9287) under the tire gate. If there is additional room you may insert an additional stainless pin washer (90-9287) to close the gap. (Fig L)



Step 20: Slide the main pin (**90-4536**) down through the hole in the rear bumper, stainless pin washer(s), tire gate, and into the lower bumper. Do not tighten at this time. (Fig M) *NOTE: The pin will be installed with the reduced shoulder on top.*





Step 21: Close the tire gate. Install the cam wheel (**90-9516**) over the main pin shoulder. Install the **1/2"X 6 1/2"** bolt and washer through the main pin into the (**90-9285**) main pin nut plate. Do not tighten at this time. (Fig N)



Step 22: Using the vehicle spare tire as a guide, set the adjustable wheel mount adjustable bracket (**93-9187**) on the backside of the rim mounting surface. Determine the bolt pattern by matching up the corresponding holes. Mark the holes that apply to your bolt pattern. (Fig L) *NOTE: The wheel mount plate is fully adjustable to accommodate multiple bolt patterns for future axle upgrades.*

<u>Step 23:</u> Install the wheel mount studs (90-4560) into the adjustable wheel mount plate. *NOTE: The studs may be pressed into place or drawn in by tightening the washer and nut.*

Step 24: Assemble the wheel mount bracket (adjustable bracket 93-9187 & stationary bracket 93-9183) using the supplied (5) 3/8" X 1" bolts and hardware. Leave the bolts loose at this time. Lay the spare tire face down on the ground and install the wheel mount bracket temporarily onto the spare tire. (Fig. O)



Step 25: With the spare tire face down, lay a ruler or a flat bar across the tire and adjust the wheel mount bracket assembly until the base makes contact with the ruler or flat bar. Torque the wheel mount bracket assembly bolts according to the chart on page 15. (Fig. P) *NOTE: The assembled bracket may not line up perfectly with the straight edge.*



<u>Step 26:</u> Install the wheel mount bracket assembly onto the tire gate assembly using the (4) supplied 1/2" X 1 1/2" hardware. Torque 1/2" hardware to 80 ft./lbs. (Fig. Q)

NOTE: The size of the spare tire will determine the mounting height of the bracket. If possible, it is better to have the tire fit tighter against the straight edge/tire gate to avoid excess vibration.

TIP: For off-road applications, raise the tire position for more departure angle. For street driven applications, lower the tire position for greater rear window vision.



<u>Step 27</u>: Very carefully, close the tire gate assembly and watch for tire gate clearance over top of the bumper. *NOTE: Be careful not to scratch the top of the bumper*.

Step 28: Install the spare tire to the tire mount bracket assembly using the supplied (3) 1/2"-20 lug nuts (90-4219). Torque to 65 ft,/lbs.



<u>Step 29:</u> Install the (1 per side) light tabs (93-9182) to the mounting holes in the tire gate. Secure using the (1 per side) supplied 3/8" X 1" bolts and hardware. (Fig. R)





<u>Step 30:</u> If you are installing a trail jack, secure the jack mounting brackets (93-9288) to the upper tube of the tire gate using the (2) 5/16" U-bolts and hardware. (Fig. S)



<u>Step 31:</u> Install the trail jack to the previously installed jack mounts using the (2) supplied 1/2" X 1 1/4" bolts and washers. Check that the tire gate assembly opens fully and that the jack does not contact the body of the jeep. Torque the 5/16" U-bolt hardware to 25 ft./lbs and the 1/2" hardware to 55 ft./lbs. (Fig. T)



<u>Step 32</u>: If you are installing a gas can, install the gas can with the spout facing toward the outside of the tire gate, using the supplied Gerry can strap. Lace the Gerry can strap through the tire gate slots according to figure U. (**Fig. U**)



<u>Step 33:</u> With the tire gate fully loaded, adjust the cam wheel (90-9516) to make sure gate closes properly. Using a 3/8" ratchet, insert the ratchet into the cam wheel and rotate the cam wheel until it lifts the weight of the gate. Inspect and ensure the latch and striker mate properly. Once the striker and latch are aligned properly, install the 3/8" X 3/4" black Allen head bolt through the window in the cam wheel to lock it in place. Torque the 3/8" bolt to 18 ft./lbs. (Fig. P)



Step 34: Torque the previously installed 1/2" X 6 1/2" bolt to 80 ft./lbs. (Fig. V)



Step 35: Installation of the rear bumper and tire gate is now complete. (Fig. W)





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 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.



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	Grade8	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	60			
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			
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G = Grade (Bolt Strength)P = Prop erty Class (Bolt Strength)D = Nominal Diameter (Inches)D = Nominal Diameter (Millimeters)T = Thread Count (Threads per Inch)T = Thread Pitch (Thread Width, mm)L = Length (Inches)L = Length (Millimeters)X = Description (Hex Head Cap Screw)X = Description (Hex Head Cap Screw)									



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.



Atlas tire swing adjustment Part#76896 +76851 2007-2016 Wrangler JK, 84-01 Cherokee XJ

The goal for adjusting the tire swing is to have the striker pin line up with the center of the latch while also having the latch in the highest position possible. If latch is set too low, it will be difficult to open the tire swing using the tire swing latch handle. Always use caution when adjusting tire swing , take care to avoid bumper to tire swing contact during setup. Use a piece of cardboard between swing and bumper for protection.

When adjusting tire swing, there are 3 adjustments that can be made. All 3 may need to be adjusted for the smoothest operation.

- 1. Cam wheel (used for major adjustments)
- 2. Latch
- 3. Striker pin

<u>Step 1</u>: Loosen latch , raise to highest position and snug bolts.

Step 2: Loosen striker pin and raise to the highest position and tighten striker pin .

<u>Step 3</u>: Adjust cam wheel so that latch lines up as close to center as possible with the striker pin. Tighten cam wheel bolt and re-install cam wheel retainer bolt.

<u>Step 4</u>: If everything lines up and operates smoothly, re-check torque on all fasteners and re-install cam cover if equipped.

Step 5A: If striker is slightly below the center of the latch, loosen latch bolts and realign latch and tighten hardware. Re-check operation.

<u>Step 5B</u>: If striker is slightly above center of latch, loosen striker pin and align with center of latch. Tighten hardware and check operation.

Step 5C: If striker is centered on latch and is difficult to open tire swing .

- 1. Latch may be too close to striker pin. If putting pressure on the tire allows for the latch to operate easier, latch is too close to striker pin. Loosen latch and move away from striker pin.
- 2. Latch may be set too low, re-adjust striker , latch and cam so the latch will sit slight higher up.

NOTE: Periodically lube latch mechanism with Break-Free CLP or other high quality lube/protectant.



Atlas tire swing adjustment Part#76896 +76851 2007-2016 Wrangler JK, 84-01 Cherokee XJ

For major adjustments of overall tire swing height adjust cam wheel by rotating it with 3/8" ratchet wrench or breaker bar. **NOTE:** Images are for illustration purposes and may vary depending on year, make, and model. Adjustment remains the same.





Latch is adjustable in two dimensions. Up+ down and in+out.

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Striker pin can be adjusted up and down for fine tuning. <u>Note</u>: Always use Loctite on striker pin threads.



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Incorrect. Latch sitting too high. Center line of striker pin does not line up with center line of latch.



Correct. Center line of latch and striker pin line up.





Atlas tire swing adjustment Part#76896 +76851 2007-2016 Wrangler JK, 84-01 Cherokee XJ

**Make sure end of striker pin does not contact tire swing.

**Make sure latch teeth sit on round part of striker pin.

**Adjust by adding or removing flat washer between striker pin and bumper.

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