## **Installation Instructions**



Atlas Rear Bumper with Tire Gate 2007-2018 Jeep Wrangler JK/JKU S/B76896





## Introduction

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







**Atlas Front Bumper** 

JK/JKU SRC Side Armor

Waypoint™ 55L Fridge

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## Important Notes Before Starting



### **IMPORTANT NOTE**

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

Photos may vary from your vehicle. Installation will remain the same.



### **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					
Hex Key Set	Wire Stripper/Cutter	13mm Wrench			
Socket Set	Electrical Tape	3/8 Drive Rachet			
Torque Wrench	Drill	1/2" Drill Bit			



# **Box Contents & Technical Information**



## **IMPORTANT NOTE**

This kit is composed of 2 boxes. 76896-01 and 76896-02. Be sure both boxes are present prior to beginning installation.

76896-01 Box Components



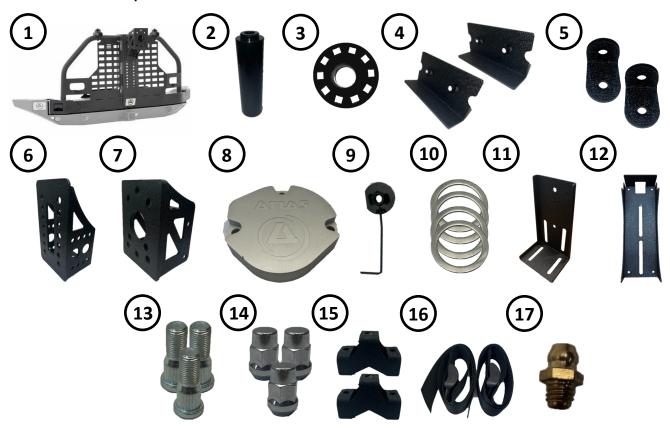
ID	Part Description	QTY
1	93-9191 Atlas Rear Bumper	1
2	M12-1.75x40mm Hex Head Bolt	4
3	M12-1.75x120mm Hex Head Bolt	4
4	M12-1.25 Nut	4
5	M12 Flat Washer	10
6	M12 Split Lock Washer	8
7	M12 Large O.D. Flat Washer	4

<sup>\*</sup>Hardware not actual size.



# Box Contents & Technical Information

#### 76896-02 Box Components



ID	Part Description	QTY
1	93-9215 - Tire Gate	1
2	90-4536 - Main Pin	1
3	90-9214 - Cam Wheel	1
4	90-3925 - Bumper Frame Nut Plate	2
5	93-9182 - Light Tab	2
6	93-9183 - Stationary Wheel Mount Bracket	1
7	93-9187 - Adjustable Wheel Mount Bracket	1
8	90-4552 - Billet Cam Wheel Cap	1
9	90-9285 - Main Pin Nut Plate	1
10	90-9287 - Stainless Pin Washer	4
11	93-9241 - Lower 3rd Brake Light Bracket	1
12	93-5567 - Upper 3rd Brake Light Bracket	1
13	90-4560 - Wheel Mount Stud - 1/2"-20	3
14	90-4219 - Lug Nut - 1/2"-20	3
15	90-9288 - Trail Jack Mount	2
16	76896-03 - Jerrycan Strap Pair	1
17	S/BZERK - Zerk Fitting	1

ID	Part Description	QTY
	Main Pin: M12-1.75x160mm Hex Head Bolt	1
	Main Pin: M12 Large O.D. Washer	1
	Cam Wheel: M8-1.25x15mm Allen Head Bolt	1
	3rd Brake Light: M6-1.0x20 Allen Head Bolt	2
	3rd Brake Light: M6 Flat Washer	4
	3rd Brake Light: M6-1.0 Nylock Nut	2
	Billet Cam Wheel Cap: M8-1.25x25mm	3
	Wheel Mount Bracket: M12-1.75x35mm Hex Head Bolt	2
	Wheel Mount Bracket: M12 Flat Washer	4
	Wheel Mount Bracket: M12-1.75 Nylock Nut	2
	Wheel Mount: M10-1.5x30mm Hex Bolt	5
	Wheel Mount: M10-1.5 Nylock Nut	5
	Wheel Mount: M10 Flat Washer	10
	Light Tab: M10-1.5x30mm Hex Head Bolt	2
	Light Tab: M10-1.5 Nylock Nut	2
	Light Tab: M10 Flat Washer	4
	90-6917 - Trail Jack Mount Hardware	1

<sup>\*</sup>Hardware not actual size.



# Installation Instructions: Atlas Rear Bumper



#### Step 1:

Unbolt and remove the factory **OE** rear bumper, tire carrier, and hitch from the vehicle. Unclip the 3rd brake light wiring harness. Then, unbolt the 3rd brake light housing from the vehicle.



### Step 2:

Install the (2) Bumper Frame Nut Plates (90-3925) into the rear frame rails and align the nuts with the outer slots in the frame.



#### Step 3:

Drill out the (4) holes in the center of the frame crossmember to 1/2".

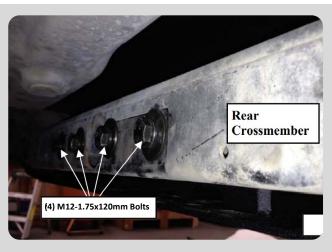


# Installation Instructions: Atlas Rear Bumper



#### Step 4:

With the help of a second person, carefully raise the Atlas Bumper (93-9191) up and against the outside of the frame rails. Secure the Atlas Bumper to the previously installed Bumper Frame Nut Plates using (4) of the supplied M12-1.75x40mm Bolts, (4) M12 Split Lock Washers, and (4) M12 Flat Washers. Leave the hardware loose.



#### Step 5:

Install the (4) supplied M12-1.75x120mm Bolts and (4) M12 Flat Washers through the rear crossmember and into the bumper hitch.



#### Step 6:

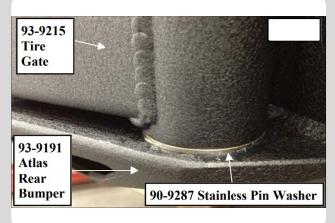
Use the window access under the hitch to install the (4) M12 Flat Washers and (4) M12-1.75 Nylock Nuts. Then, adjust bumper until happy with alignment. Torque down all the installed hardware per the specs on Page 17 of this manual.





#### Step 7:

The bumper install is now complete. Next, grease the hole in the **Tire Gate (93-9215)**, the **Main Pin (90-9214)**, the surface of the bumper the tire gate sits on, and the location where the **Cam Wheel (90-9214)** rides on.



#### Step 8:

With the help of a second person, carefully raise and install the **Tire Gate** (93-9215) into the mounting pocket in the **Rear Bumper** (93-9191). Install (2) **Stainless Pin Washers** (90-9287) one above and one under the **Tire Gate**. If there is addition room, you may insert 1 or 2 additional **Stainless Pin Washer(s)** above and/or below to close the gap.

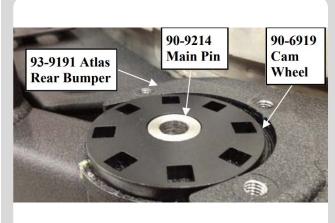


#### Step 9:

Slide the Main Pin (90-9214) down through the hole in the Rear Bumper (93-9191), Stainless Pin Washers (90-9287), Tire Gate (93-9215), and into the lower hole in the bottom of the Rear Bumper.

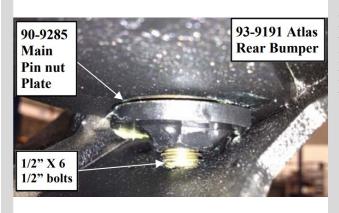
Note: The pin will be installed with the reduced shoulder on top.





#### Step 10:

Close the Tire Gate (93-9215). Install the Cam Wheel (90-6919) over the Main Pin (90-9214) shoulder. Install the supplied M12-1.75x160mm Bolt and M12 Large OD Flat Washer through the Main Pin down to the bottom hole in the Rear Bumper (93-9191).



### **Step 11:**

Fish the Main Pin Nut Plate (90-9285) in through the access hole in the Rear Bumper. Thread the M12 Bolt through the threads in the Main Pin Nut Plate. Do not tighten the hardware yet. Leave the wire on the Main Pin Nut Plate on for now.



#### **Step 12:**

Using the vehicle's spare tire as a guide, set the **Adjustable Wheel Mount Bracket (93-9187)** bolt pattern, by pressing the bracket up to the back of the mounting surface of the wheel and marking the holes on the **Adjustable Wheel Mount Bracket**.

Note: This Adjustable Wheel Mount Bracket is fully adjustable to accommodate multiple bolt patterns for possible future axle upgrades.

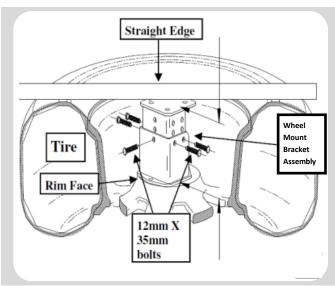




### **Step 13:**

Install all (3) Wheel Mount Studs (90-4560) into the Adjustable Wheel Mount Bracket (93-9187) by pressing them in with a press or a vice. A mallet can also be used to hit them into place. If using a mallet, be careful not to damage the powder-coat on the bracket.

Note: Do NOT install these Wheel Mount Studs by tightening them down. This will strip the studs and/or bracket.

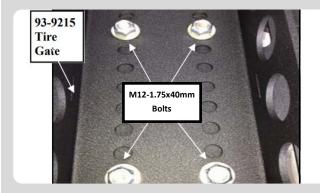


#### Step 14:

For proper alignment, use a straight edge on the backside of the tire. Line the **Stationary Bracket** up with the straight edge as shown. Assemble the wheel mount bracket (**Adjustable Bracket** (93-9187) and **Stationary Bracket** (93-9183)) inside the wheel using the supplied (5) M12-1.75x35mm Bolts, (10) M12 Flat Washers, and (5) M12-1.75 Nylock Nuts.

Torque bolts to spec found on Page 17.

Note: If possible, it is better to have the tire fit tighter against the straight edge/ tire gate to avoid excess vibration.



#### **Step 15:**

Install the Wheel Mount Bracket Assembly (93-9187 and 93-9183) to the Tire Gate (93-9215) using the included (4) M12-1.75x40mm Bolts, (8) M12 Flat Washers, and (4) M12-1.75 Nylock Nuts.

Tip: For off-road applications raise the tire position for more departure angle. For street driven applications, lower the tire position for better rear window visibility.





### Step 16:

Install the spare tire to the wheel mount bracket using the supplied (3) 1/2"-20 Lug Nuts (90-4219). Torque to 65ft/lb.



#### **Step 17:**

If using a third brake light, install the **Third Brake Light Upper Bracket (93-5567)** into the **Third Brake Light Lower Bracket (93-9241)** as shown. Secure using the supplied (2) M6-1.0x20mm Bolts, (4) M6 Flat Washers, and (2) M6-1.0 Nylock Nuts through the slots.



#### **Step 18:**

Remove the (2) OE screws from the OE plastic third brake light assembly. Install the OE front plastic panel and lens into the new third brake light assembly (93-5567 and 93-9241) using the (2) previously removed OE screws.





### **Step 19:**

Secure the third brake light bracket (93-5567 and 93-9241) assembly to the top of the Tire Gate (93-9215) using the supplied (2) M10-1.5x30mm Bolts, (4) M10 Flat Washers, and (2) M10-1.5 Nylock Nuts.



#### Step 20:

Extend the **OE** third brake light wiring harness to the passenger side hinge, then up **Tire Gate (93-9215)**. This can be done simply by cutting and splicing 18 gauge wire to extend the cable to the appropriate length. It is recommended to have this done by an experienced automotive electrician.

Note: If using lights, now would be a good time to install them. Use the included light tabs (93-9182) and M10 hardware to mount any pair of 2" cube lights to the Tire Gate in the spaces shown. Install per the manufacturer's instructions.



#### **Step 21:**

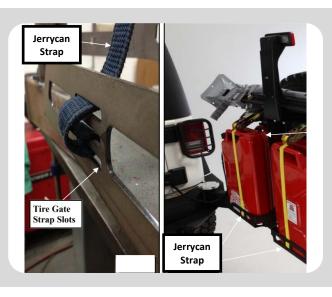
If you are installing a Trail Jack, secure the (2) **Jack Mounting Brackets (93-9288)** to the upper tube of the **Tire Gate (93-9215)** using the supplied (2) M8 U-bolts and hardware.





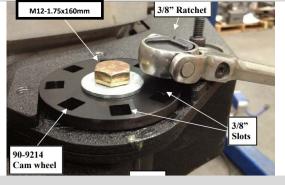
### **Step 22:**

Install the Trail Jack to the previously installed Jack Mounting Brackets (93-9288) using the supplied (2) M12-1.75x30mm Bolts and Washers. Check that the Tire Gate (93-9215) opens fully and that the Trail Jack does not contact the body of the Jeep®. Torque the M8 U-bolt hardware to 25 ft/lb and the M12 hardware to 55 ft/lb.



#### Step 23:

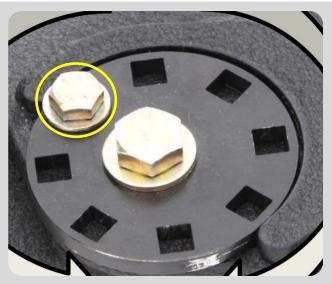
If you are installing a gas cans, install the gas cans with the spouts facing toward the outside of the Tire Gate (93-9215), using the supplied Jerrycan Straps (76896-03). Lace the Jerrycan Strap through the Tire Gate slots as shown.



#### Step 24:

With the **Tire Gate (93-9215)** fully loaded, adjust the **Cam Wheel (90-9214)** 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.





### **Step 25:**

Once the striker and latch are aligned properly, install the M8-1.25x15mm Allen head bolt through the window in the cam wheel to lock it in place. Torque the M8 bolt to 18 ft/lb. Torque the previously installed M12-1.75x160mm Bolt to 80 ft/lb.



### Step 26:

Install the Billet Cam Wheel Cap (90-4552) using the (3) supplied M8-1.25x25mm Allen Head Bolts. Torque cap bolts to 10 ft/lb.

Be sure to grease the carrier using the included zerk fitting.

Be sure to view all the regular maintenance information on Page 16.



#### Step 27:

Installation is now complete.



# Installation Instructions: Tire Gate Adjustments

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
- Step 1: Loosen latch, raise to highest position and snug bolts.
- Step 2: Loosen striker pin and raise to the highest position and tighten striker pin.
- Step 3: 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.
- Step 4: 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 re-align latch and tighten hardware. Re-check operation.
- Step 5B: 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 the 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 slightly higher up.

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

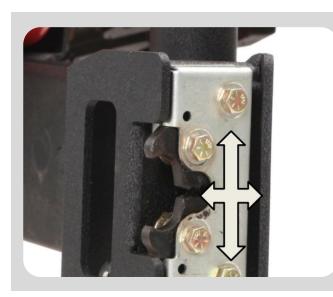


# Installation Instructions: Tire Gate Adjustments



### **Cam Wheel Adjustments:**

For major adjustments of the overall tire swing height, adjust the Cam Wheel by removing the Billet Cam Wheel Cap and the M8-1.25x15mm Bolt and rotate it using a 3/8" Ratchet or Breaker Bar.



### **Latch Adjustments:**

The latch can be adjusted both up and down as well as in and out. This can be done by loosening the **(4) Latch Bolts** and adjusting as needed.



#### Striker Pin:

The **Striker Pin** can be adjusted up and down for fine tuning. To adjust loosen the end of the **Striker Pin** while holding the retaining nut (located on the backside of the bumper).

Note: Add thread-locker to the threads of the Striker when adjusting.



## Installation Instructions: Tire Gate Adjustments





#### **Latch and Striker Alignment:**

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

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



#### **Latch and Striker Alignment:**

- 1. Make sure the end of the striker pin does not contact the tire swing.
- 2. Make sure the latch teeth sit on the round part of the striker pin.
- 3. Adjust by adding or removing flat washers between the striker pin and the bumper.

#### Regular Maintenance:

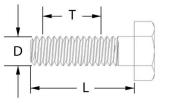
- Grease the **Tire Gate** pivot point every 4-6 months.
- 2. Lubricate the **Latch** with CLP Break-free or other high quality lubricant regularly.
- Be sure to adjust the **Tire Gate** when adding or removing weight to be sure not to damage the finish of the **Bumper** and/or **Tire Gate**.
- 4. Wash the **Bumper** and **Tire Gate** regularly using mild car wash soap. To protect the finish, wax regularly with carnauba automotive wax.
- 5. Do not use any abrasive brushes or chemicals on the finish.
- 6. Retorque all installed hardware 500 miles after installation and regularly thereafter.

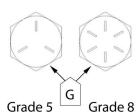


# **Bolt Torque Specifications**

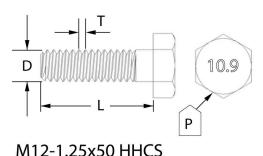
Use this only as a guide for hardware without a called out torque specification in the instruction manual.

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





(No. of Marks +2)



Χ

1/2-13x1.75 HHCS

S - I - (D - I) - C - - - - I - )

D= Nominal Diameter (Inches)

G= Grade (Bolt Strength)

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 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 was that contains abrasive that could damage the finish.

#### **SMITTYBILT ADVANTAGE WARRANTY**

#### LIMITED-LIFETIME WARRANTY FOR STRUCTURAL COMPONENTS

#### **5-YEAR FINISH WARRANTY**

Smittybilt Automotive Products, LLC (SAP) warrants to the original purchaser that (a) the physical components (e.g., metal components, welds, etc.) of any SAP **Atlas Bumper with Tire Gate** will be free of defects in material and workmanship for the lifetime of the product from the date of purchase of the bumper with tire gate, and (b) the finish will be free of defects in material and workmanship for a period of 5-years from the original date of purchase. This warranty applies only to the original purchaser of the bumper with tire gate and is non-transferable. To obtain any warranty service, you must provide SAP with a proof of purchase and date of purchase that is acceptable to SAP, such as a copy of your purchase receipt.

This warranty does not cover labor of part replacement of the bumper and/or tire gate. SAP will, at its sole discretion, provide replacement part(s) for a defective bumper and/or tire gate or component, provided this is done within the warranty period. To request assistance under warranty, one must call or email using the phone number or email at the bottom of this page. This warranty does not apply (1) wearable components; or (2) if the bumper and/or tire gate has/have been damaged, including, but not limited to: abuse, misuse, collision, modification, misapplication, improper installation, or improper service. This warranty is void if any SAP serial number has been removed or defaced; or if the bumper and/or tire gate are used for any commercial, industrial, or rental applications. This warranty only applies to bumper with tire gate bought, sold, and used within the Untied States or Canada unless otherwise specifically agreed in writing by SAP.

THE WARRANTY SET FOURTH ABOVE IS THE ONLY WARRANTY. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANT ABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ANY IMPLIED WARRANTY WHICH BY LAW MAY NOT BE EXCLUDED IS LIMITED TO A DURATION OF ONE (1) YEAR FROM THE DATE OF ORIGINAL RETAIL PURCHASE OF THE PRODUCT. No SAP dealer, agent, or employee is authorized to make any modification, extension or addition to this warranty. SAP SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, DOWN TIME OR LOSS OF USE) UNDER ANY LEGAL THEORY, EVEN IF SAP WAS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Some states do not allow the exclusion of implied warranties or the exclusion or limitation of liability for incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights. You may also have other rights that vary from state to state. SAP reserves the right to change product design without notice. In situations in which SAP has changed a product design, SAP shall have no obligation to upgrade or otherwise modify previously manufactured products. For warranty inquires contact SAP at:

Smittybilt Automotive Products, LLC

**Customer Service Department** 

Call 1-800-776-0767 or Email info@smittybilt.com



WARNING: Cancer and Reproductive Harm www.P65Warnings.ca.gov

