



**INSTALLATION MANUAL**

**FOR**

**SAVVY KRAWLER LITE FRONT & REAR BUMPERS**  
**SD0010A & SD0012A & SD0007A**



**Dear customer:** Thank you for purchasing our Bumper System for your Jeep Vehicle. We are sure you will be happy with this system after your installation is complete. Please take your time during the installation and be sure to do it correctly. Completely read the directions before starting your installation so you know what to expect. If you have any questions, call **(801-876-9599)**.

**Note: BE SURE TO CHECK ALL FASTENERS FOR PROPER TORQUE BEFORE TEST DRIVE. RECHECK AFTER 500 MILES AND BE SURE TO CHECK PERIODICALLY.**

### **WARNING**

- Properly block and secure vehicle prior to installation.
- Always wear safety glasses when using power tools.
- SAVVY recommends the use of Loctite on all hardware, unless noted otherwise.
- Read and understand all instructions, warnings and safety precautions in these instructions and your owner's manual before attempting to install these components.
- Proper installation of SAVVY products requires knowledge of recommended procedures for disassembly/assembly of OE vehicles and components. Access to OE shop manuals and special tools are required. Attempting to install this kit without knowledge of these procedures may affect the safety of your vehicle and or the performance of these components. SAVVY strongly recommends that this system be installed by a certified mechanic with off road experience.

### **Tool Disclaimer**

The installation of your vehicle's bumpers will require the use of power tools to safely and successfully complete the modifications. For your convenience, we have prepared a small list of tools which are either required or helpful for the installation of your JK Front/Rear Bumpers. Always use trustworthy tools.

- Angle Grinder with cutoff wheel / Sawzall
- 1/8", 1/2", 3/8" drill bit & Center Punch
- Socket set / box wrenches (1/4" – 1")

## **FRONT OF VEHICLE (Perform all Steps for the System You Are Installing)**

- 1) Make sure vehicle is on a level, hardworking surface. Ensure emergency brake is engaged.
- 2) Remove plastic skid plate, if applicable. Start disassembling the front bumper by removing all eight 12 mm bolts holding the bumper to the two frame horns.
- 3) Once the front bumper has been removed, you will see the exposed steel frame horns (shown below). Realize that the bolts can be slightly corroded, and some bolts may be hard to get to. We recommend using a 12mm socket wrench to remove all eight bolts. Use a breaker bar and/or penetrating fluid if this is difficult.



- 4) Once the frame is visible, the next step is to relocate the vacuum pump, so it does not interfere with your winch mounting plate. The first step is to disconnect the vacuum hoses and power cable. Next, grab a 10mm box wrench or socket to take the two fasteners off. Save the nuts and bolts for reuse.



- 5) Note that you may need to use vice grips around **this washer** to break the nut. The pump can now be removed and placed somewhere out of the way for the time being.



- 6) Loosen the four bolts holding your sway bar on and let it drop to the floor. This will make getting to the back side of the bracket you're about to cut more manageable.
- 7) Grab your favorite cutting tool. For this installation we will be using an air powered hand saw with a 4" cutting wheel attachment. We will now be removing the vacuum pump bracket from the side of the frame. The two cuts you need to make are straightforward, shown below, and will take about five minutes. We recommend using a pry bar to break the bracket loose after the cuts have been made.

Unmount Sway Bar



Front of bracket cut location



Rear of bracket cut location



*\*Note\* Reinstall sway bar after bracket has been removed*

- 8) The next step is to install the winch mounting plate. With the pump bracket removed, you should be able to easily slide the plate into the inner frame. You may wish to use two bolts to hold the plate in position. Snug the X2 front bolts to lightly hold winch plate in place to complete the next step. Next, drill the two bolt holes for the winch mounting plate on the sides.
- 9) We recommend loosely mounting your plate and center punching where the two side bolts will go through. Refer to the pictures on the next page to see how we drilled our side mounting holes.



Winch mount plate positioning

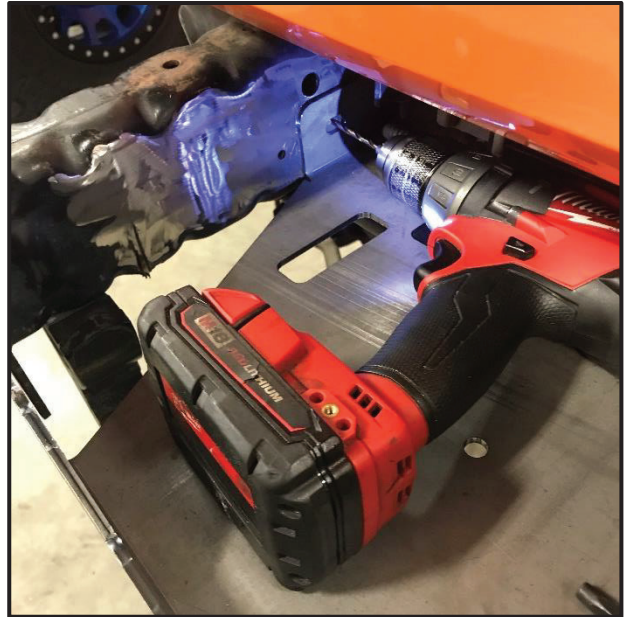


10) We will now drill the holes for the 1/2" X 13 X 3.5" long bolts. Your end hole ID will 1/2."

The easiest method is to mount the plate by itself, center punch the hole, and then step up your drill bits until the holes are completed.



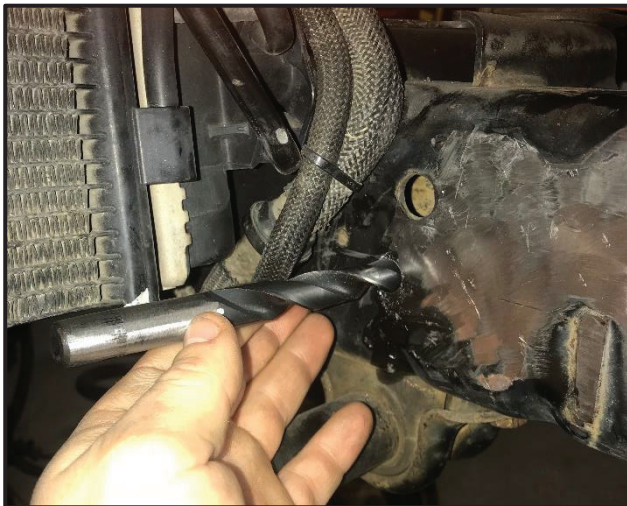
Loosely Mounted Plate



Drilling 1/8" Pilot Hole

11) Remove your winch mounting plate and drill a 1/2" hole through both the inside and outside frame rails.

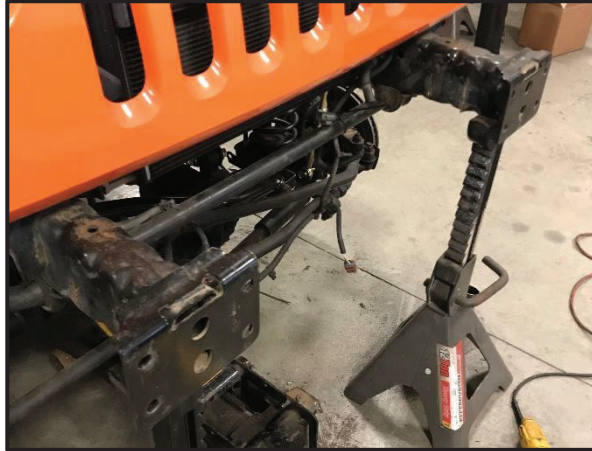
1/2" drill bit through for bolt



Drill through outside frame hole



- 12) If you are planning to cut off your crash bar, now is the time to do it. We recommend the use of a Sawzall and an angle grinder with a cutoff wheel. Cut the welds, smooth the metal surface, and apply a finish coat of your choice. (i.e. black chassis primer and paint).



Crash Bar Delete

- 13) Remount your winch mounting plate and sway bar. Insert two  $\frac{1}{2}$ " x 3.5" bolts into the outside of the frame into the winch mounting plate holes with a  $\frac{1}{2}$ " washer before the head of the bolt. Place your second washer on the inside of the winch plate then the nylock nut. Do not tighten hardware completely until the bumper is attached, but keep it snug enough to ensure the winch plate is aligned with the frame horn holes and will not shift as you fit up your bumper.



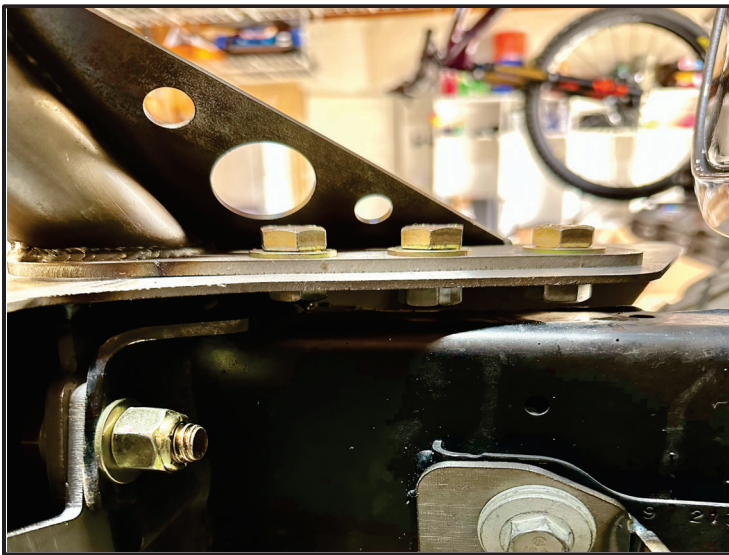
Inside Bolt Sequence



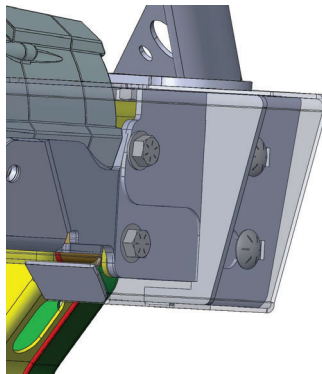
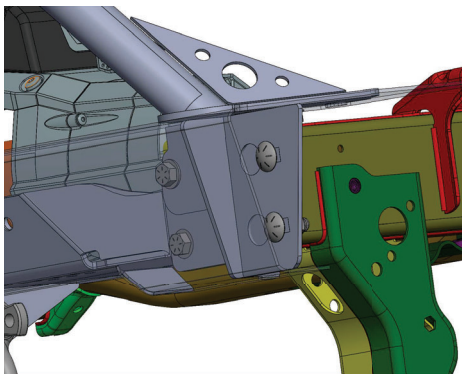
- 14) Insert the vacuum pump into the winch mounting plate and tighten down with the two bolts that came with the vehicle. We recommend you route the vacuum pump hose clamps between the sway bar and under the winch plate, and around the bolt. This will prevent binding. We recommend using a zip tie to secure the vacuum pump lower hose connection.



- 15) **HOOP OPTION:** If your kit included a front bull bar, it is time to bolt it in. Use six  $\frac{1}{2}$ " x 1.0" bolts to mount the new hoop. Make sure washers are on the top (see RIGHT SIDE PIC BELOW). On the bottom use the  $\frac{1}{2}$ " small jam nut on the front bolt that sits above frame horn and the X2 flange nuts on the back two bolts. Use red or blue loctite on the front " $\frac{1}{2}$ " jam nut.



- 16) Attach your front bumper with the remaining X2  $\frac{1}{2}$ " bolts and X4  $\frac{1}{2}$ " carriage bolts. Insert the carriage bolts into the slotted holes and use the retaining rings to hold the bolts in the bumper to install on the frame. (SEE BELOW)





- 17) Ensure all hardware is tight – place eight (8) washers with locking nuts on the bumper studs. Tighten the inner bolts before the outer. After, make sure the side winch bolts are tightened to completion. You can now install the fairlead which will bolt through the bumper face into the winch plate.

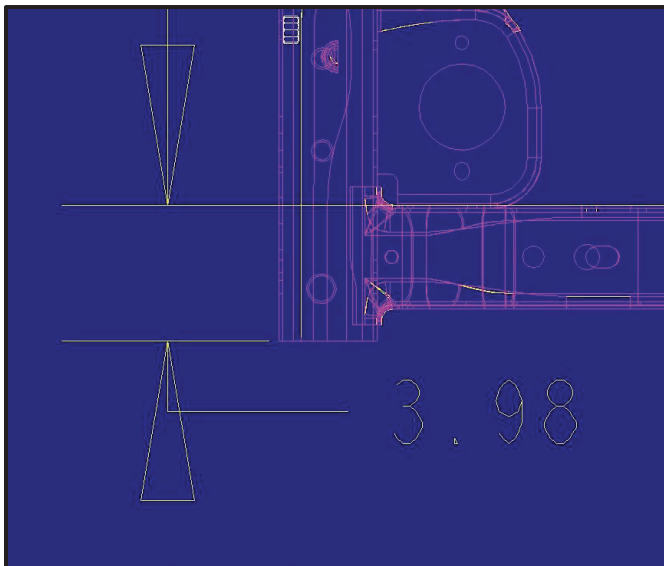
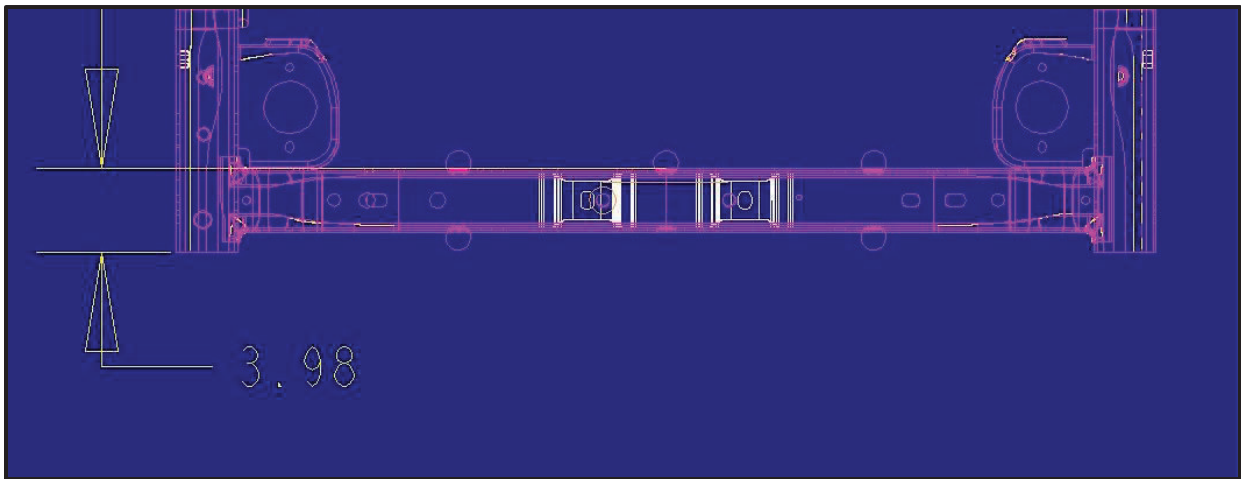


**Your SAVVY front bumper is complete. Add fairlead and winch of your choice!**



## REAR OF VEHICLE

- 1.) Remove your rear bumper from your Jeep. If you have a trailer hitch, use an 18mm wrench and socket to take the four through bolts out of the bracket and remove. There are another four bolts along the backside of the frame rail (16mm) as well as four bolts on the side of the frame rails (two on each side - 16mm also).
- 2.) Lay out your frame chop rear bumper kit. You should have a bumper skin, a steel understructure plate, and two welded frame horn inserts.
- 3.) After your rear bumper has been removed, it is time to start your frame chop. This process involves cutting the ends of your frame rails and cross member with a reciprocating saw. For proper clearance, we recommend cutting a max of 4" in from the end of the rail. Basically, cut between the cross member and body mount bracket.



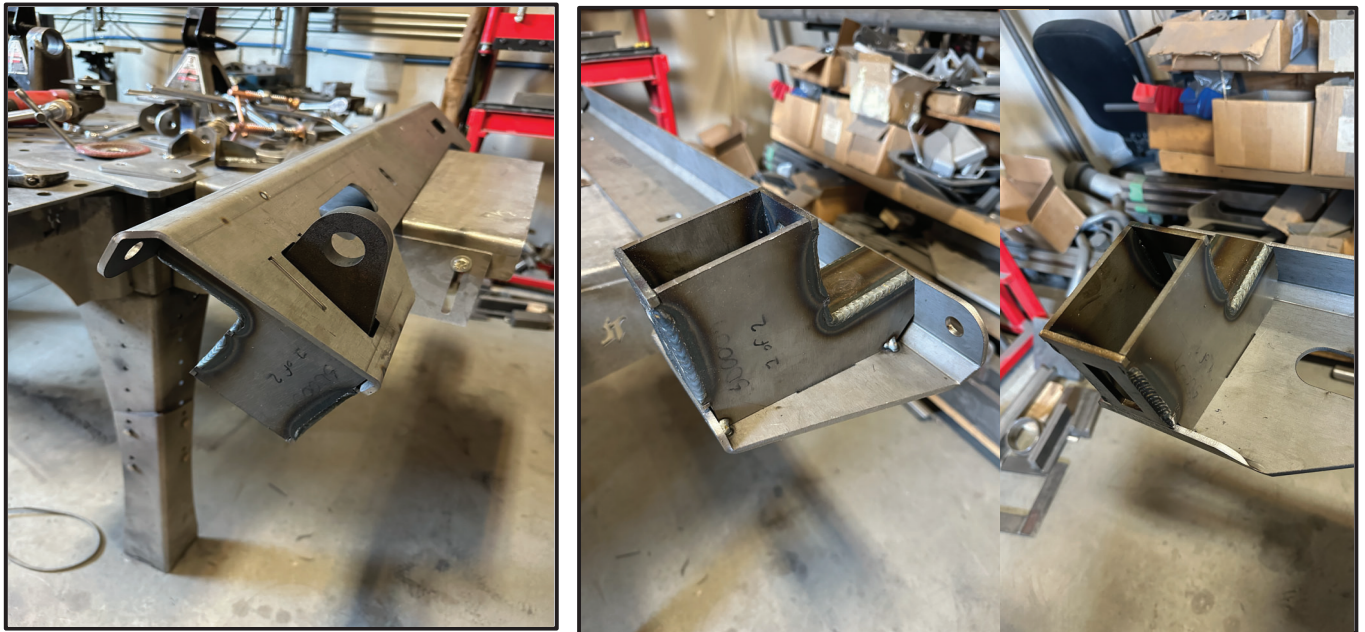
Mark the top of the frame rail with a straight edge along the back edge of the cross member. The easiest way to cut your frame is with a reciprocating saw. Use a mid-range metal cutting blade for this operation.

Note\*\* Cutting past 4" could cause the top bumper surface to come into contact with the body. If you cut as directed, there will be a 1/4" to 3/8" gap between the bumper skin and the body of your jeep. **DOUBLE CHECK THE FRAME INSERTS AND MOCH UP SPACING BEFORE FULLY WELDING.**





- 4.) You are ready to insert the inner frame rails into your vehicle. Take both frame inserts and place them inside the frame rails. Push them back as far as you can and get ready to weld. You may want to use a fire-resistant blanket around the painted body of your Jeep.
- 5.) Make sure the understructure plate will line up correctly with the orientation of your frame inserts. Tack the frame inserts with the plate on top, if you wish. Lay down a  $\frac{3}{16}$ " –  $\frac{1}{4}$ " weld along the circumference of the frame rail insert. The final product should resemble the welded inserts in the pictures below.



- 6.) We highly recommend that you paint any exposed steel areas at this time using black spray paint – specifically black roll bar & chassis paint, or another black durable paint & primer. Tape off your Jeep body with newsprint and spray any the exposed areas with exception to the contact surface between the understructure plate and frame inserts.
- 7.) Paint the understructure plate black if you desire. Place your steel understructure plate on the vehicle. Use the two tow hooks to guide your bumper understructure plate into position. This will require the use of a rubber mallet. Keep the top faces parallel. If the structure doesn't go on easily, then the bottom edge is most likely catching.
- 8.) Weld another line along the contact surface of the two outer contact surfaces. Weld the inner contact surfaces the best you can, but a single vertical weld should be strong enough.
- 9.) Repaint the understructure paint black to avoid rusting. Install flush mount pods into aluminum bumper skin at this time. Then place the aluminum bumper skin over the understructure plate carefully. This may require the use of a mallet depending on tolerancing.







- 10.) Take six (4) of the ½” carriage bolts supplied with your bumper and place them into the holes. Place a ½” washer and ½” locknut on the backside of each, tighten all six loosely before tightening them completely. There is no specific tightening sequence – Just tighten the two face bolts to completion before tightening the four top and bottom bolts.



**Your SAVVY rear bumper install is complete!**

**IF YOU HAVE ANY QUESTIONS OR  
ISSUES, PLEASE CALL 801-876-9599**