

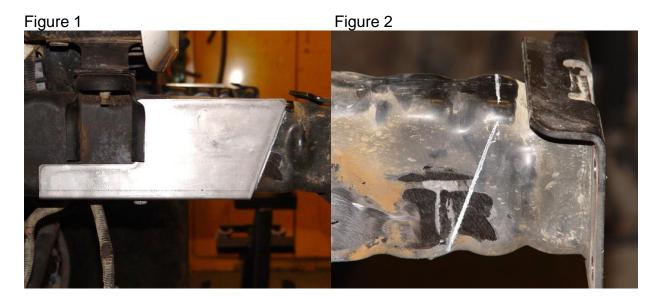
TNT Customs JK Guardian Front Bumper

Please observe proper shop safety procedures when performing this install. Use proper eye and hearing protection as required and use safe jack stands/supports, placed appropriately for supporting the vehicle while you work on it if needed.

STEP 1: Begin by removing your factory front bumper and swaybar. (2012 Models will require a vacuum pump relocation bracket in order to install TnT Guardian bumper)

STEP 2: The factory front frame crossmember will need to be removed from the frame rails. Be sure to follow proper shop safety procedures when cutting it from the frame rails.

STEP 3: Once the crossmember is removed and the frame rails are ground smooth. Locate the cut templates provided with your bumper. Place the template on the frame as shown in Figure 1. Hold the template in place using your current swaybar bolts or the 10MM bolts supplied in your hardware kit. Scribe or mark a line across the front edge of the top and the angle down the side. Repeat on other side. See Figure 2.



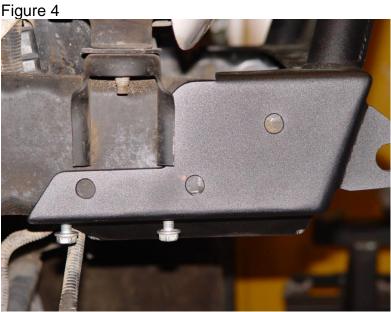
STEP 4: Using the marks made in Step 3 as your cut guide, use an appropriate cutting tool and cut the front of the frame rails off so that the frame rail looks like the image

shown in Figure 3. Use a grinder and clean the ends of the frame rails to remove any burrs or sharp edges.

Figure 3



STEP 5: Locate your new TnT Guardian Front Bumper and carefully slide it over the end of the frame rails to insure proper fitment. Slide the bumper all the way onto the frame rails and install the two swaybar bolts that are located on the bottom of each of frame rail and tighten. Using the bumper as your guide, mark the center of the three mounting holes located on each side of the bumper. Once holes have been marked, remove bumper.



STEP 6: With the bumper removed, drill all six mounting holes through the frame rails using a ½" drill bit.

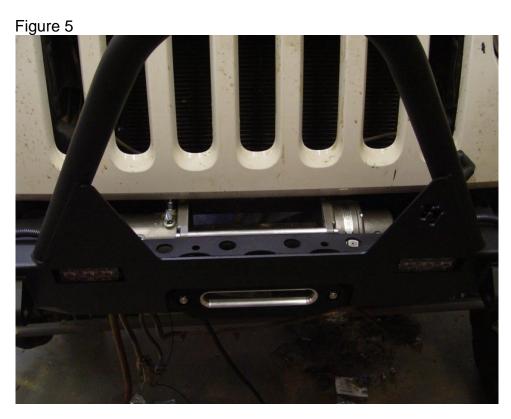
Winch Installation

Your winch's solenoid will need to be mounted independently of the winch; a solenoid mount has been included with your bumper that may be used. Verify during winch installation whether or not factory solenoid leads can be reused, if not, verify that all

terminals can be reached with winch installed in case longer solenoid leads are needed. If terminals cannot be accessed after install, longer leads should be made and installed before final installation of winch and bumper.

STEP 7: The winch needs to be installed prior to final installation of the bumper. Remove solenoid if mounted to the winch and install winch into bumper using the directions and hardware supplied with the winch. (*Note: TnT recommends installing your fairlead before installing the winch as the bolts for the fairlead are easier to reach without the winch in place. The supplied 7/16" bolts may be used for the fairlead)*

STEP 8: (Note: The winch/bumper combination can be extremely heavy. TnT recommends having additional help when completing this step!) Once winch installation is complete, reinstall bumper and winch onto your JK. Verify that your winch's "clutch" can be properly engaged/disengaged. Some winches may require slight trimming of the grill for proper clutch lever clearance. (Do not install mounting bolts at this time as bumper may need to be moved out for final wiring to be completed.)



STEP 8: Locate the solenoid mount provided with your bumper and install it as shown in Figure 6 using the 3/8" Buttonhead bolts, washers and nuts provided in your hardware kit. Mount your solenoid to the bracket using the hardware provided with your solenoid.



STEP 9: Finish wiring winch and solenoid.

STEP 10: Attach bumper to the frame using the ½" bolts, washers and nuts provided in your hardware kit.

STEP 11: Locate the ³/₄" thick spacers provided with your bumper. Using the 10mm x 1.5" bolts provided in your hardware kit remount your factory swaybar with the spacers mounted between the swaybar and the bumper then reconnect swaybar. Tighten all mounting bolts.

Optional Light Kit

(Note: When wiring LED's, the factory fog light circuit and wiring can be used on models that came equipped with fog lights. New wiring and switch will need to be installed on all other models. LED's draw very little amperage so a relay is not required.

Step 1: Locate the LED's ordered with the bumper. In the included hardware there are 4 - #8 U-nuts, with threads facing down, slide two over the tab that comes pre-mounted to the light.

Step 2: Mount lights to the bumper using the existing holes above the rectangle cutouts and the provided #8 x $\frac{1}{2}$ " screws. Aim the lights accordingly and tighten the screws located on the sides of the brackets.

Step 3: If equipped with factory fog lights, cut wires several inches before factory lights so that the factory harness plug can be retained when wiring up new LED lights. Using a test light, determine which wire is power and which wire is ground, splice new lights into the factory harness using appropriate wiring connectors.

Components:

- JK Guardian Front Bumper
- Left & Right Cut guides

Hardware

- 6 1/2" X 3.5" bolts
- 12 1/2" Washers
- 6 1/2" Nuts
- 2 3/8" x 1" Buttonhead bolts
- 2 3/8" washers
- 2 3/8" nylock nuts
- 2 7/16" x 1" bolts
- 2 7/16" nylock nuts
- 4 10mm x 1.5" bolts
- 4 10mm washers
- $2 \frac{3}{4}$ " spacers

Optional Light Kit

- 2 LED Lights
- 4 #8 U-nuts
- 4 #8 x ½" screws