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Xterra & Frontier Front Bumper - Installation Instructions:

Thank you for purchasing a ShrockWorks product. We are confident you will enjoy it for many years and find it to be superior in fit, quality and especially durability. If at any time during the installation you have any questions, please give us a call. We also welcome your feedback and suggestions via phone or email on all of our products.

Tools Required :

- 17mm wrench or socket wrench (to install new bumper)
- Various wrenches and screw drivers to remove stock bumper
- 3/8" Drill bit & Drill (optional)

Parts Included

- | | |
|--------------------------------------|-------------------------|
| - Bumper | - 4 3/8" x 3 1/2" Bolt |
| - Qty 6 - M10 x 1.25 30mm long bolts | - 4 3/8" Fender washers |
| - Qty 6 - M10 Lock Washers | - 4 3/8" SAE Washers |
| - Qty 6 - 3/8" Flat washers | - 4 3/8" Lock Washers |
| | - 4 3/8" Nuts |

Finishing bare/unpainted bumper (skip to next section if you ordered it powder coated)

1. You must paint or powder coat the bumper before installing to prevent rust.
2. Clean it thoroughly with a solvent like acetone, prime and paint.
3. We recommend Dupli-Color brand Black primer and semi-gloss black paint. It is available at most auto parts store like AutoZone and Napa. The spray pattern from the tip is almost like a paint gun and gives a great finish. Other colors are also available. Dupli-Color Gunmetal Gray is a pretty close match to the factory grey plastic. Hammerite brand black paint is also an excellent choice. It is more of a dark grey color than true black though.
4. Let the paint dry hard before attempting installation.

Installation Steps

1. Remove the stock bumper. There are a lot of little bolts and clips on there. Just keep removing them until you get it off.

Install Winch (skip if not installing a winch at this time):

1. If you will be installing a winch or lights, it is easiest to bolt them onto the bumper before installing the bumper on the truck.
2. Optional - On Warn winches and some other models, you can remove the cap the clutch lever is attached to via several small allen head screws and rotate it clockwise 90deg. This will have the clutch lever pointing directly down once installed which will make accessing it a little easier.
3. Bolt the winch onto the bumper. The lower two bolts will pass through the fairlead into the winch. **Make certain there is a clear path through the fairlead so the rope will not be able to rub on the bumper when pulling to the side, up, or down.** If this were to happen, it could cut the wire rope and result in a very dangerous situation.
4. *Integrated solenoid winches* – The solenoid will point toward the radiator. There is plenty of clearance b/t it and the radiator and fan.
5. *Detached solenoid winches* – Route the wires from the solenoid through the large round hole in the frame bracket and attach them to the winch. You will have to remove them from the winch to do this. Be sure to label them so you can re-install them properly. Once the bumper is installed, you can find a suitable mounting location for the solenoid.
6. If you purchased the Warn winch remote extension, drop one end through the hole in the top of the bumper and plug it into the solenoid. Secure the other end to the bumper with two small bolts. See **Figure 1**

Bumper Installation

1. Have a friend or two lift the bumper into place while one of you gets the bolts started into the threads on one side. Use one washer and lock washer per bolt.
2. LEAVE the single bolts on the tip of the frame rails loose until alignment of the bumper is completed.

3. Use a floor jack to lift the bumper up to the desired height on one side. See **FIGURE 2** Leave about 3/4" between the bumper and the body to allow for body flex without contacting the bumper. Leave 1" for body lift vehicles. Tighten the two side bolts on the side you just lifted **ONLY** enough to hold it in place, but not fully.
4. Lift the other side with the jack to the desired height, tighten the two side bolts just enough to hold the bumper in place.
5. Go back and re-adjust the height of the side you lifted first if necessary.
6. Now rotate the bumper until the side wings are sitting flat with lip on the fender. See **FIGURE 3** NOTE, if you tightened the bolts on the end of the frame already, you will not be able to rotate the bumper, loosen them up.)
7. Once you are happy with the alignment, tighten the four bolts on the sides fully (55 ft-lbs.) If you don't have a torque wrench, just get them good and tight without stripping the threads.
8. Once the four side bolts are fully tightened, you can tighten the two on the ends of the frame rails. These do not need to be real tight, snug or about 30ft-lbs is fine.

Drilling & extra bolts

1. This step is optional for non-body lift Xterras. It is required for body lifted Xterras and 2001+ Frontiers. For std. Xterras it is recommended for people installing a winch or planning to use the recovery points.
2. Using a 3/8" (or slightly larger) drill bit, drill through the two 3/8" round holes per side on the bumper See **FIGURE 4**. Drill through both sides of the frame. Insert provided 3/8"x3.5" bolts and washers, large one on the frame side. Tighten to 45-ft-lbs. The holes are located such that this will not crush the frame.

Optional Skid plate installation

1. Attach bolts w/ nuts, washers and lock washers to front edge of bumper under the SHROCKWORKS logo. Leave hand tight.
- 2.) Drill hole marked in Figure 4 as "Skid Plate Hole". Drill it through one side of the frame. This will make the hole in the bumper the correct size for the supplied self-tapping bolt. If you have problems, drill through both sides of the frame and use a 3 1/2"x 5/16" (not supplied) bolt with nut and washers on the other side of the frame.

FIGURE 1

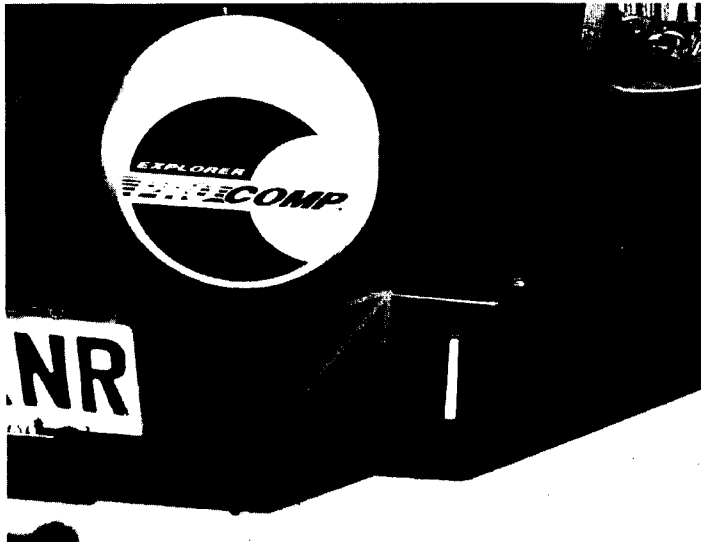


FIGURE 2



FIGURE 3



FIGURE 4

