UNDERDOG RACING DEVELOPMENT

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URD Traction Bar Installation

Introduction:

Thank you for choosing the URD Traction Bar for two wheel drive street trucks. More models coming soon!

This bar is a true bolt on installation with no welding or modifications to the vehicle. It can be installed by anyone with moderate mechanical skills using regular hand tools in your own driveway. However, you will find it more involved then it looks here. It is best that you plan this install for a time when you will have sufficient time to complete it.

You will need a way to lift the truck off of the ground and to support it with a vehicle hoist or jack stands in such a way that it will be safe for you to work under the truck.

URD has worked very hard to bring you this traction bar and to have it constructed in such a way that it will stand up to the abuse you will give it and provide may years of trouble free service.

As with any URD product, if you have any questions or problems with the install contact URD tech support by email Gadget@GadgetOnline.com .

If you have a pre 2005 V6 2 wheel drive truck, the muffler my need to be replaced or modified so the bar will fit. The SRunner has a larger muffler then most of the 2 wheel drive trucks and there is a clearance problem that will need to be corrected prior to installation of the Traction Bar.

Most aftermarket performance mufflers can be easily installed in such a way to provide sufficient clearance. You may want to install the front and differential brackets and then go to a muffler shop and have them fabricate a muffler installation to give you the needed clearance. Installing the brackets first will give the muffler shop a good measure on how to install the muffler.

This is not a problem with the 2005 X-Runner. The bar clears the muffler just fine.

Please read the entire install guide before you start the install.

If you found that there is a part of the install that was unclear please let us know so we can update this install guide to make it easier for the next person. Also, if you think another picture is needed to make things clearer, please take one and email it to Gadget@GadgetOnline.com .

Thanks!

Pre-installation:

1. Unpack the traction bar assembly from the shipping box.

2. Completely assemble the traction bar assembly off of the truck before you start the install to make sure you understand how it goes together and you have all of the parts needed.

3. Once you have the bar completely assembled off of the truck and are sure you understand how it is assembled then proceed with the rest of installation.

Installation:

This is an improper method of lifting the vehicle!

1. Lift the truck from the ground to provide sufficient working room under it. Use a vehicle hoist or jack stands to safely support it and make sure it is safe BEFORE you crawl under it. It is important that the rear axle be supporting the weight of the truck so it will be in the same position as it would be if the tires are on the ground.

2. Dry fit the front mount before you attempt the rest of the install. This can be a bit of a puzzle and you must figure it out before you proceed with the rest of the install.

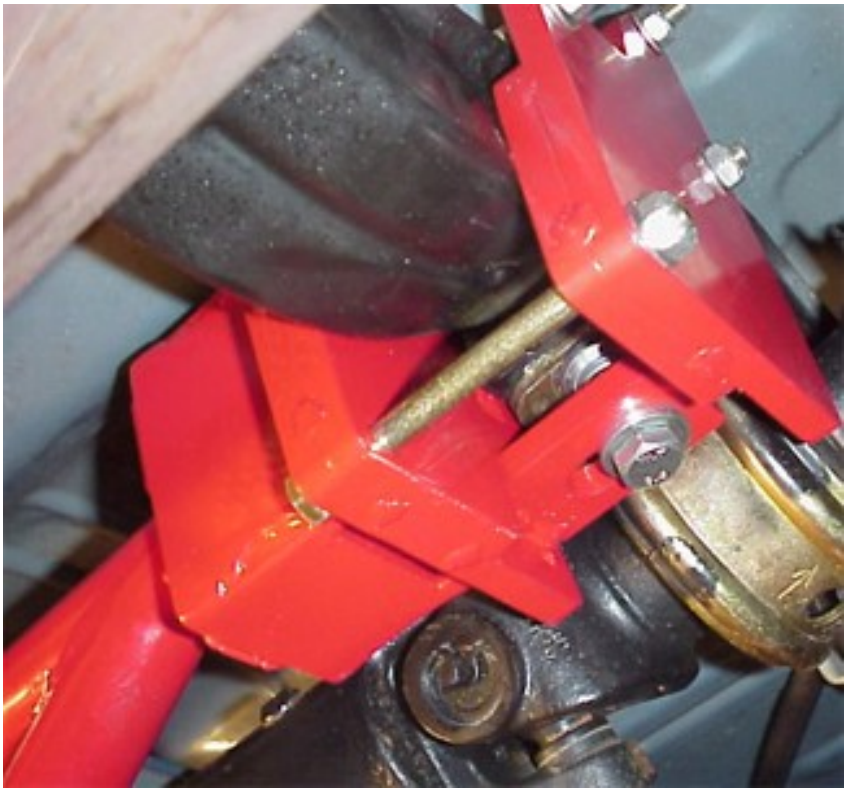
Pre 2005 Trucks

The pre 2005 trucks use a different front mount from the 2005 and later trucks. The front bracket bolts to the frame cross member that supports the propeller shaft carrier bearing.

The pre 2005 trucks use a two-piece bracket. The curved part of the bracket faces up toward the truck body. One of the bolts on the side closest to the propeller shaft will pass through the carrier bearing mounting bracket. You may need to loosen the carrier bearing bolt. The forward half of the front bracket that goes on the front side of the cross member will sit on the lip of the carrier bearing support.

Once you are satisfied with how the front mount is installed remove it. It will be installed later.

2005 and Later Trucks



On the 2005 and later trucks the carrier bearing support bolt will support the bracket. It must be removed and the longer supplied one used in its place. Loosely install the bracket on the carrier bearing bolt.

There are 4 cross bolts. The longest one goes in the very top. The one closest to the propeller shaft goes through the hole in the stock bearing support bracket. The cross bolts use a thread jamming nut to prevent them from coming loose. The cross bolts should not be over tightened or you could crush the cross member. It is not a boxed cross member like the earlier trucks. Once you see that it is squeezing the cross member tight that is tight enough. There should be a few threads of the cross bolt showing on the exit side of the nut.

Once your are satisfied on the installation, remove the front mount, It will be installed later.

3. Drain the rear differential. It is best that you let it drain over night if possible. Always be sure make sure you can remove the fill port before you drain the diff so you can be sure you can refill it.

This is the old style diff bracket. You can see that it goes over the top of the diff.

This is the new 4 stud style bracket. It does not go over the top of the diff.

4. Dry fit the rear diff bracket. There have been two versions of the bracket. You will need to dry fit it to determine which studs will need to be removed and replaced with the supplied studs. Once the studs have been identified, remove the nuts on those studs.

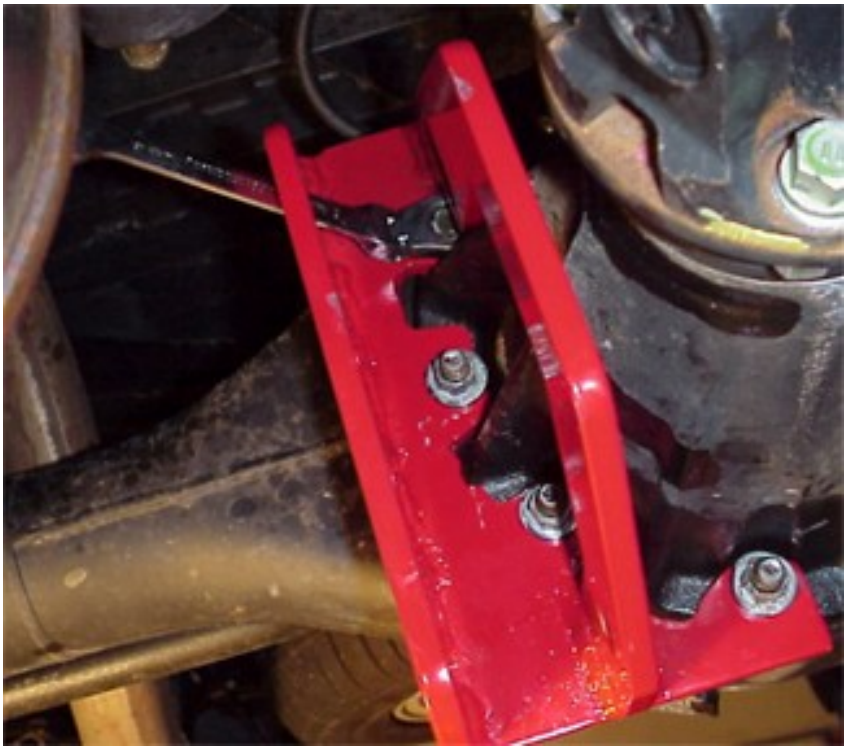
5. Now, use the double nut technique or use a stud wrench to remove the studs.

   The double nut technique is to use two nuts on the stud. Put both of them on the stud so that the second one is on just far enough to get the stud to come flush with the nut. Then take two wrenches and tighten the nuts against each other to lock them to the stud. If you get them tight enough, you can use a wrench on the studs back it out of the housing.

6. Install the new studs using the same double nut technique. The studs should have a short threaded end and a long threaded end. The short end goes in the differential housing. Place a small amount of RTV or other suitable thread sealant to seal the threads so the diff fluid will not leak out of the threads. Tighten the studs down until they are snug.

   If you have the 4 stud style bracket, the shorter stud will go on the top.

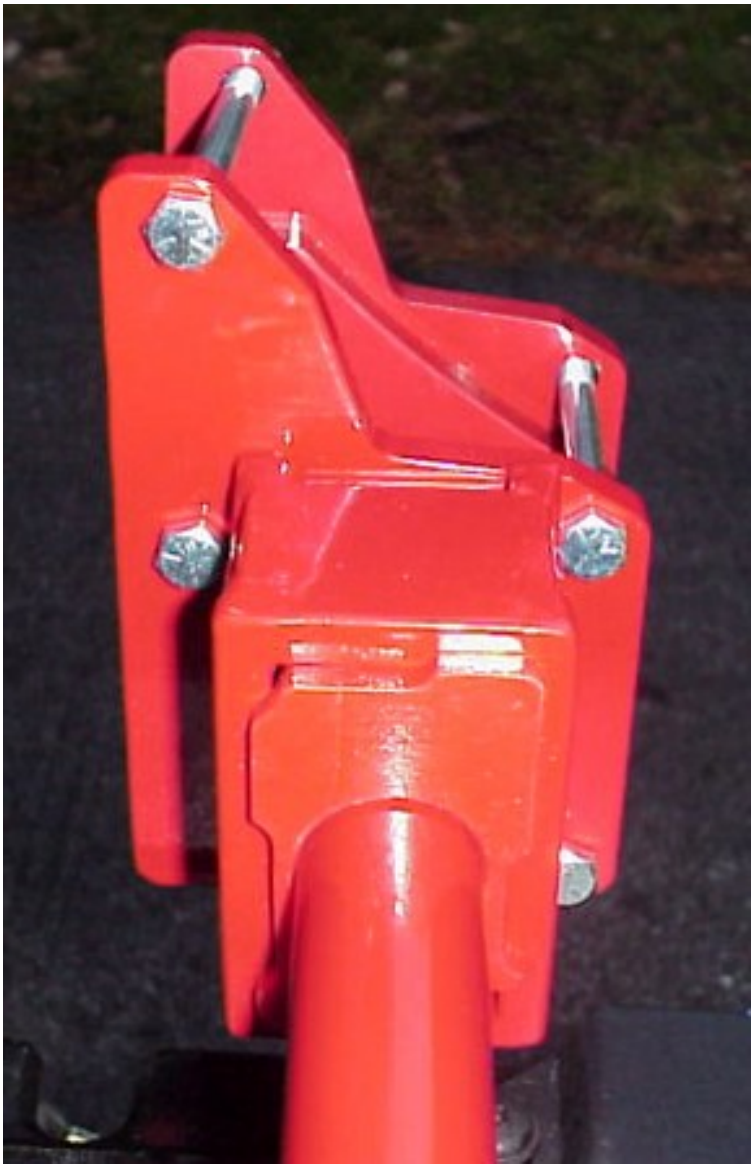
7. Notice the recesses machined into the differential around the stud holes. In these recesses you will place the machined style washers. These washers must fit inside the machined recesses. The bracket will rest on these washers and they will hold the bracket slightly off of the differential. DO NOT OMIT THIS STEP.



Slid the differential bracket over the studs. If you have the 4 stud style bracket, you will need to start the top nut before the others. Install the washers and nuts on the studs. Tighten to factory specifications in your shop manual (97 4Runner diff stud torque is 18 Lb-ft). There is one nut on each style differential bracket that will be real hard to get a wrench on it to tighten it. A crowfoot type wrench on a socket extension works well for this one pesky nut.

8. Assemble the bushings in the torque bar. Using a little bit of lube like WD-40 makes things easier.

9. Install the adjustment turnbuckle in the torque bar and make sure the jam nuts are loose.



This is the X-Runner front mount on the nose of the torque bar prior to installation.

10. Place the front mount and bushing on the nose of the torque bar. You must put the front mount on the bar when the bar is installed. If you install the front bracket first you will not be able to get the bar into it when it is installed. Don't waste time trying…

11. Lube the rear bushings and install the bar in the rear bracket. The turnbuckle goes down so the curved part facing up will clear a frame cross member. Adjust the turnbuckle adjustment to get the bottom hole to line up. Install the large mounting bolts in the rear diff. They go from the outside toward the diff.

    The 5 bolt style bracket uses a nut on the top bolt and the bottom bolt uses a threaded hole in the bracket its self and no nut is used. Do not tighten anything now.

12. Install the front bracket. Use the turnbuckle adjustment to move the front bracket into the proper position. Bolt it into place and tighten all the nuts and bolts just like you did in the pre-installation of the front bracket.

13. Now tighten all the rear bolts. Then set the tension on the torque bar to your liking with the turnbuckle. THIS MUST BE DONE WITH THE WEIGHT OF THE TRUCK ON THE REAR AXLE. The best place to start is to find the neutral position of the adjustment where there is no tension on the torque bar. Then adjust it so there is a small amount of tension upward on the front mount. Under acceleration, this is the direction the torque will move the torque bar. From there, you can set the tension anyway you want, but most leave it right there. Now tighten ALL the jam nuts on the turnbuckle are tightened. If you do not properly tighten the jam nuts, there will be an excessive amount of stress placed on the threads and can cause damage to them.

14. Double check your work. Make sure all the nuts and bolts are tightened down. Check for proper clearance between the front mount and the vehicle body.

15. Replace the drain plug and refill the differential with proper gear lube and install the fill plug.

16. Test drive the truck and then raise it and inspect everything.

17. Go smoke the tires…