



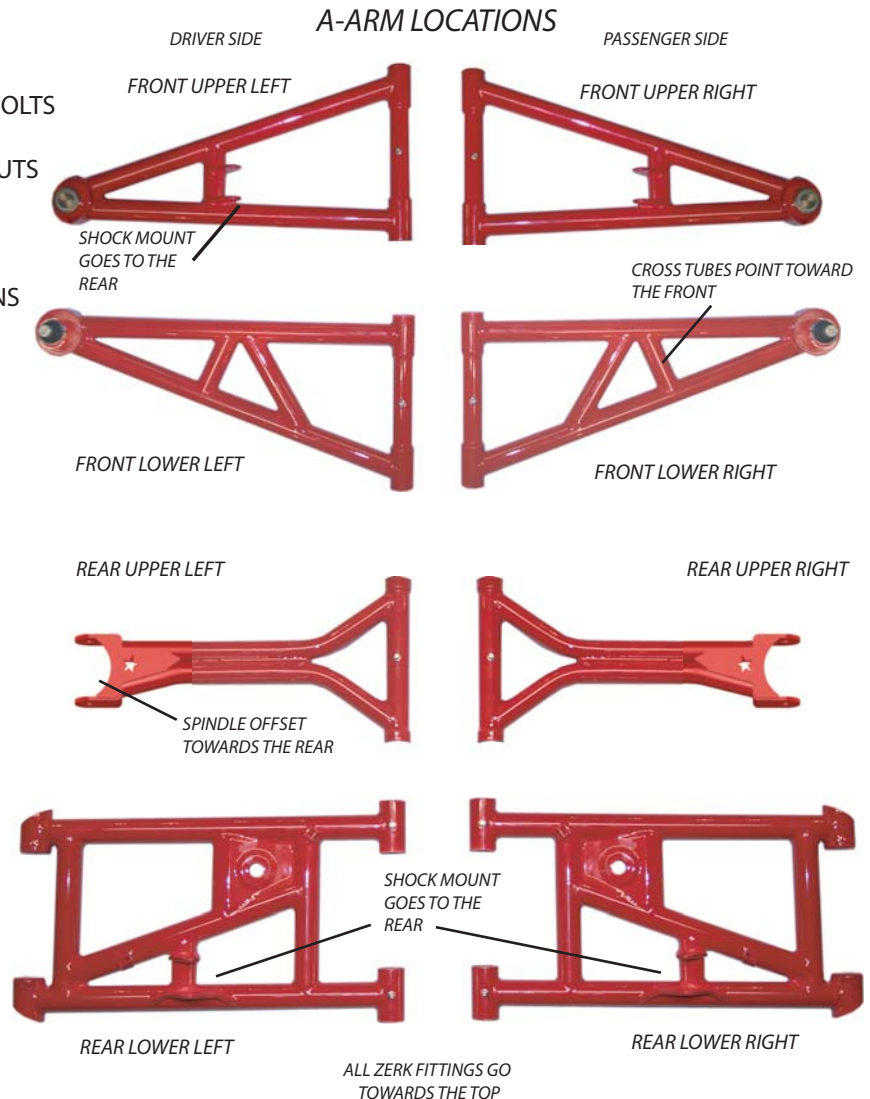
RZR MTS SUSPENSION SYSTEM INSTALLATION INSTRUCTIONS

PARTS INCLUDED:

- | | |
|-------------------------------|----------------------------|
| 2 - FRONT UPPER A-ARMS | 2 - REAR UPPER A-ARMS |
| 2 - FRONT LOWER A-ARMS | 2 - REAR LOWER A-ARMS |
| 6 - COTTER PINS | 2 - 10MM x 180MM HEX BOLTS |
| 2 - 1/2" JAM NUTS | 2 - 10MM x 60MM BOLTS |
| 2 - TIE ROD EXTENDERS | 6 - 10MM NYLON LOCK NUTS |
| 6- LONG NYLON CV BOOT STRAPS | 8 - 10MM FLAT WASHERS |
| 8- SHORT NYLON CV BOOT STRAPS | 10 - GREASE FITTINGS |
| 2- LONG STEEL CV BOOT STRAPS | 1 - AXLE KIT |
| 1- FRONT BRAKE LINE KIT | 1 - AXLE KIT INSTRUCTIONS |
| 1- REAR BRAKE LINE KIT | |

TOOLS NEEDED:

- | | |
|--|--------------------|
| Floor jack and/or jack stands | DOT 3 brake fluid |
| 13mm wrench and socket | Brake bleeding kit |
| 14mm wrench and socket | |
| 15mm wrench and socket | |
| 17mm wrench and socket | |
| 27mm socket | |
| 3/8 ratchet | |
| Dead blow hammer | |
| High quality water proof grease w/ gun | |
| 17mm deep socket | |
| Short 3/8 extension | |
| External snap ring pliers | |
| Needle nose pliers | |
| Diagonal pliers (cutters) | |
| Impact wrench or large breaker bar | |
| Flat blade screw driver | |
| 8mm allen wrench | |
| #25 torx socket | |



BEFORE YOU START:

The installation of these a-arms is going to take the better part of a day for an installer that is mechanically inclined. Before you get started, please know that the tires might rub the fenders at full compression depending on what tires you use. We recommend using 25" tires and aluminum wheels with the minimum amount of offset for the best in performance. The factory shocks will work, but will give less than desirable performance. We recommend using aftermarket shocks that have been valved and sprung to specifications that are for +4 sized a-arms. If you already have aftermarket shocks for your stock a-arms, they will work, but depending on your performance requirements, they will probably need to be re-valved and sprung to compensate for the extra amount of leverage the longer a-arms develop. Depending on the Axle Kit you specified, please see the supplement instructions on how to properly install your new axles. The following pages will outline how to install your new MTS A-Arm kit.

We also recommend removing the front sway bar for better suspension performance and steering. We have included two bolts with nylon lock nuts and washers to use on the front lower shock mounts.

CLEANING/ MAINTAINING:

Use soap and water to clean, taking care not to use high pressure pointed at the pivot points. You will want to periodically grease the pivot points with fresh grease using the supplied grease fittings. You will want to periodically check all hardware for tightness.



RZR MTS SUSPENSION SYSTEM INSTALLATION INSTRUCTIONS

FRONT SUSPENSION

1. The first thing you need to do is jack up the front end of your RZR and rest it securely on jack stands. Make sure the RZR is very stable once you have the tires off the ground, as you are going to be applying significant force to remove and install hardware. You also need to remove the black front plastics using the #25 torx bit, and unplug the lights.
2. Remove the front wheels using a 14mm socket and impact wrench.
3. Remove the cotter pins, and using a 27mm socket and impact wrench, remove the axle nuts.
4. Remove the brake calipers using a 15mm wrench or socket. Remove the front brake lines from the master cylinder located above the driver side front a-arms.
5. Pull off the wheel hubs.
6. Remove the cross bolts that hold the ball joints into the spindle using a 13mm socket and wrench.
7. Pull the lower a-arm away from the spindle, and pull the spindle away from the upper a-arm.
8. Let the lower a-arms drop towards the floor and grasp the axle with a quick pulling motion to slide the entire shaft from the differential. It might take some force to pull the axles from the differential, but they should pop out by hand.
9. Remove the front cowling/bumper plastic (black front end) from the chassis so you can slide out the a-arm bolts. Don't forget to un-plug the headlights before removing plastics.
10. Now you can remove the bolts that hold the shocks to the chassis and a-arms, and remove the bolts that hold the a-arms to the chassis using a 15mm wrench and socket. You will be re-using these bolts and nuts for installation of the new MTS a-arms.
11. Remove the inner pivot tubes, and bushings from the stock a-arms, and install them into the new a-arms just as they were on the stock a-arms. You will also need to remove the ball joints from the stock a-arms and install them into the new a-arms. Using the external snap ring pliers, remove the snap ring, then using a hammer, tap on the ball joints. They should pop out from the stock a-arms fairly easily. If not, you can use a socket and a vice to drive them out. Install them into the new a-arms and install the snap ring. Make sure the snap ring is fully seated into the groove. You might need to grind or trim off some of the powdercoat on the a-arm to get the snap rings to fully seat.
12. Now take the new front lower a-arms and slide them into the chassis with the spacers (*see supplement instructions*) set to the desired caster, and re-use the same bolts and nuts that held the stock a-arms on. Tighten the bolts to approx. 35 ft lbs., and grease the zerk fittings until you see grease coming out from between the a-arm and the chassis as they hang down towards the ground. The zerk fittings should be pointing up if you installed the arms into the correct positions.
13. Remove the factory tie-rod ends and install the tie-rod extenders with the 1/2" jam nuts, then thread on the OEM tie rod ends. The threads are left handed, so you will need to loosen them in the opposite direction you normally would.
14. Take the Front Upper A-Arms and slide them into position using the OEM bolts. Tighten the bolts to approx. 35 ft lbs. Now, you can grease the zerks as you did on the lowers.
15. Now, you can install the shocks using the OEM hardware. Now, the a-arms are held up, so you can easily install the front axle shafts. Do not tighten the shock bolts until the Rhino is sitting on the ground again.
16. Now, you can install the front axle shafts. Line the differential spud up into the differential and make sure the splines engage correctly, then tap on the end of the axle with a dead blow hammer to seat them into position. Make sure not to harm the threads on the axle shaft.
17. The next step is to slide the spindle onto the axle shaft. Then you can attach the spindle to the upper and lower A-Arms and install the cross bolts. You can also attach the tie-rod end into the spindle. Don't worry about the length of the tie rod yet, as you will adjust that later.
18. Install the wheel hub and brake rotor into the spindle, and install the large axle nuts, tightening them to about 150 ft lbs.
19. Install the brake calipers.
21. Install the new front brake lines (longer one goes to passenger side) using the new bolts and crush washers. The brake lines need to be clipped into position on the a-arms using the small clips that are welded to the a-arms. Close the clamps down after making sure the brake lines don't get stretched or pinched at full droop, and the steering wheel turned lock to lock.
22. Install the front wheels and lower the front end down to the ground.
23. Now, is the time to tighten the shock bolts to about 35 ft lbs.
24. Install the black front plastics opposite of how you removed them.
25. After the first ride or so, you will want to check the tightness of all hardware and tighten as required. After the castle nuts have been rechecked, you can install the cotter pins.



RZR MTS SUSPENSION SYSTEM INSTALLATION INSTRUCTIONS

REAR SUSPENSION

25. The rear suspension is pretty self explanatory. The new parts go in just like the old ones come out with a few exceptions. Jack up the rear end and place it on jack stands.
26. Remove the rear tires.
27. Remove the axle nuts just as you did on the front end. Remove the calipers and brake lines. Take off the wheel hubs. Remove the bolts through the spindle up-rights using a 15mm wrench and socket and pull off the spindles.
28. Remove the bolts on the upper a-arms and remove the upper a-arms.
29. Pull out the axle shafts, just like you did on the front end.
30. Remove the sway bar end links from the lower a-arms.
31. Remove the shocks and bolts. They will be reused on the new arms.
32. Now, loosen the lower a-arm bolts and remove the lower a-arms.
33. Remove the pivot tubes and bushings from the stock a-arms and install them on the new a-arms just like you did on the front.
34. Take the new lower a-arms and position them into the mounts on the chassis. Reusing the same hardware, tighten the bolts to about 35 ft lbs. Grease the pivot points until you see grease coming out between the bushings and chassis. Wipe off all excess grease.
35. Now, connect the sway bar end links to the new a-arms and tighten them down. Install the new brake lines. The rear lines attach to a junction block underneath the driver seat towards the rear of the car. Route the brake lines as shown in Fig. 1.
36. Now, it is time to install the rear axle shafts. They go in just like the fronts.
37. Install the upper a-arms using the OEM hardware and grease the joints as you did on the lowers. Tighten the bolts to about 35 ft lbs.
38. Slide the spindle upright onto the axle shaft, using the new 10mm hex bolts and nylon lock nuts and washers, secure the spindle to the lower a-arms, and re-use the OEM hardware for the upper a-arms.
39. Slide on the wheel hub. Tighten the hub nuts to 150 ft lbs. Install the calipers. Attach the brake lines to the calipers. Cycle the suspension through the travel to see the movement of the brake lines. Tighten the bolts to make sure the lines don't get caught up or bound as suspension moves up and down. Once you have the lines fit, use a flat blade screwdriver to push down on the lip of the clamp to secure the line so it can't move.
40. Install the shocks using the OEM hardware. Do not tighten the bolts until the RZR is back on the ground. Now would be a good time to secure the shock reservoirs if they are equipped.
41. Put the RZR back on the ground. Tighten the shock mount bolts to about 35 ft lbs.
42. Double check to make sure you tightened all fasteners completely, front and rear.
43. Bleed the brakes. It will help to use a brake bleeding vacuum tool to help speed the process since there is a lot of air that needs to be bled from the whole system.

Fig. 1



SETTING THE TOE

1. To set the toe of the front suspension, make sure your steering wheel is straight. With the RZR on the ground at ride height, you will want to take a measurement from the inside edge of the wheel to the chassis on both sides. Adjust the tie-rods so the measurement is the same. This step insures the wheels are straight with the steering wheel.
2. Next you are going to measure for the amount of toe in. Toe in is a personal preference. We recommend about an 1/8" to 1/4" of toe-in for normal riding conditions. Basically the measurement on the front of the tire needs to be 1/8" shorter than the rear of the tire. To take a measurement, you want to be at the middle of the tire as far as height is concerned and either on the wheel or very close to the wheel for your measurements. The wheel is the best to use, because it is the most consistent. You might want to have a friend help you to take the measurements. Once you have the toe set where you want it, tighten all the jam nuts without rotating the heim joint or tie-rod extender. Make sure all steering hardware is tight. Retake your measurements to make sure nothing moved.

AFTER YOUR INITIAL RIDE

After your initial ride, things are going to seat and adjust themselves slightly, so you want to make sure and go back and tighten all hardware. Also, make sure to tighten the main axle nuts to the proper spec. Now is a good time to install the cotter pins into the axle nuts, and the tie rod end bolts.



RZR MTS QUICK CASTER SET UP DETAILS

FRONT LOWER A-ARMS

WHAT DOES IT DO?

Quick Caster is a feature that lets you adjust how easily your vehicle will steer. The more caster you add, the stiffer the steering wheel will turn. The less caster you add, the easier the steering wheel will turn. To adjust the settings, there are 2 black delrin spacers that are supplied to be installed on each of the front lower a-arms. The locations of the spacers dictate the caster setting.

DRIVING TYPE

HIGH SPEED DESERT RACING, DUNES

GENERAL RIDING, SHORT COURSE RACING, TIGHTER TRAILS

LOWER SPEED, TIGHT TRAILS, SHORT COURSE RACING
CRUISING THE NEIGHBORHOOD

HIGH POSITION

If you want the most control at high speeds over rough terrain to keep the car going in a straight line, and lessen the chance of the steering wheel popping out of your hands, you want to set the caster in the high position.

MEDIUM POSITION (like stock)

If you want a little easier steering, and don't need as much control at high speeds over rough terrain, you want to set the caster in the medium position. This position will be used by the majority of riders.

LOW POSITION

If you want the easiest steering possible with the most maneuverability, you want to set the caster in the low position.

Please note, these are just suggestions, each driver will have different preferences. There is no right or wrong here, its all in how you want your car to handle.

Below are close up views of the driver side front lower a-arm mounted to the chassis

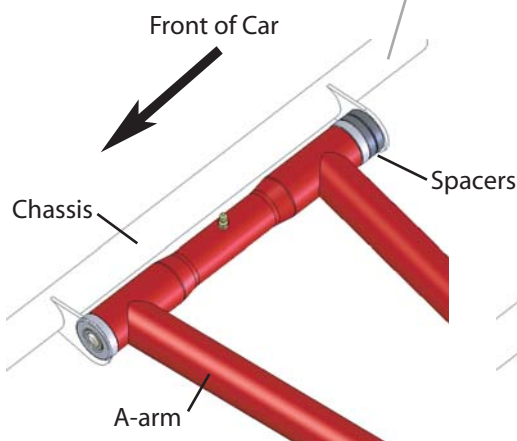


Actual Caster Settings: + or - 1 Degree
(measured at ride height in Degrees)

High: 6.9 Positive
Medium: 4.9 Positive
Low: 2.9 Positive

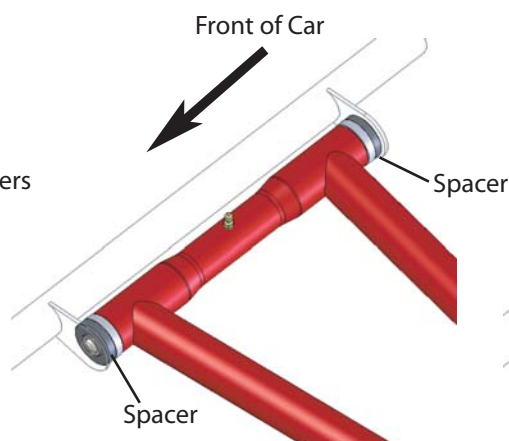
HIGH POSITION

SPACERS TOWARDS REAR OF CAR



MEDIUM POSITION

SPACERS FRONT AND REAR



LOW POSITION

SPACERS TOWARDS FRONT

