

Rusty's XJ Cherokee 3" Add-a-Leaf Kit RK-300AL-XJ INSTALLATION INSTRUCTIONS

Last Revised: 1/10/18

Introduction:

Rusty's recommends that this installation be performed by a certified automotive technician or a person with professional mechanical knowledge. Installing this kit without this expertise may jeopardize the handling and safety of the vehicle.

Read instructions several times before starting. Be sure you have all the needed parts and know where they install. Read each step completely as you go. Exhaust modifications may be necessary. Prior to drilling or cutting, check behind the surface being worked on for any wires, lines, or hoses that could be damaged. After any drilling or cutting, remove burrs and grind smooth any surfaces. An inclinometer or similar tool may be needed to measure driveshaft angles before and after the installation.

Warning:

- It is the owners' responsibility to inspect all Rusty's products for proper torque specs to prevent loosening of components.
- Seat belts and shoulder harnesses should be worn at all times.
- Re-check all bolts and nuts after the first 100 miles and after any off-road usage during the first 300 miles.
- Although all of our products are made from the highest quality materials possible, they are not a substitute for Safe and Careful driving. In other words, have good safe on-road / off-road sense. Know the terrain, the speed limitations, and any obstacles that may lie ahead. Please remember to preserve our right to enjoy public land through the proper use of off-road vehicles.

Before Starting Installation:

1. Carefully Read all warnings and instructions completely before beginning.
2. Verify all parts have been received in this kit by checking the parts list on page#2 of this document.
3. Only install this kit on the vehicle for which it is specified.
4. Park the vehicle on a clean, dry, flat, level surface and block the tires so the vehicle cannot roll in either direction.
5. Be certain the vehicle is safely secured on jack stands or a vehicle lift prior to working around or under a vehicle. Never rely on a jack alone to support a vehicle's weight; use appropriately rated stands to support the vehicle's frame and any other heavy components.

Parts List:

Note: Please be sure that you have all the provided parts listed below before continuing with the installation.

<u>Part #</u>	<u>DESCRIPTION:</u>	<u>Quantity</u>
RC-CS300-XJ OR RC-CS305-XJ	Rusty's 3" Front Coil Springs (Pair) OR Rusty's 3" HD Front Coil Springs (Pair)	1 OR 1
RC-2123	Rusty's 3.5" Full-Length Add-A-Leaf (Pair) (Contents Below)	1
KK-9	Rusty's Leaf Spring Clip	2
CB0504	5/16"-24 x 4" Length Centering Pin	2
CB0504	5/16"-24 Grade 8 Nut	2
RX-27	Rusty's RX100 Performance Shock: RX-27 (Contents Below)	2
	(Bushing Packs: PO1318 & PO1314)	
RX-26	Rusty's RX100 Performance Shock: RX-26 (Contents Below)	2
	(Bushing Packs: PO1313 & PO1532)	
RB-BL10-UV-R	Rusty's Rear Brake Line Extension Bracket	1
RC-UB-2 OR RC-UB-3	Rusty's Dana 35/44 Grade 8 U-Bolt OR Rusty's Chrysler 8.25 Grade 8 U-Bolt	4 OR 4

Front Installation Instructions

Note: Save all factory components and hardware for reuse, unless noted.

1. Raise vehicle and place jack stands under the frame. Chock the rear tires to prevent any accidental movement.
2. Remove the tires and wheels.
3. Remove the factory shocks at the top inside of the fender well and at the bottom, don't discard hardware. The hardware will be reused.
4. Unbolt the sway bar links on both sides, don't discard hardware. The hardware will be reused.
5. Support the front axle with the floor jack.
6. Remove the bolt at the axle end of the track bar.



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Front Installation Instructions (Continued)

7. Remove the front lower control arm bolts on both drivers and passenger's side. If replacing the control arms remove the rear bolt and remove the arm.
8. On each side, remove the bolt that holds the spring keeper clip, it's located on the lower coil spring mount.
9. Remove the factory coil springs from the vehicle. Lower the jack used to support axle if needed to remove the coil springs. (Note: If using a coil spring compressor, take special care.)
10. Set the new coil springs into place and reinstall the factory coil spring retainer clips you removed in step 7. (Torque to 10 ft. lbs.)
11. Raise the front lower control arm up into position and install bolts before unloading the coils. (Torque to 85 ft. lbs.)
12. Position the new coils into place. Install the factory spring keeper clip. (Torque to 10 ft. lbs.)
13. Install the new Rusty's front shocks into their upper mounting position with the supplied hardware. (Torque to 17 ft. lbs.) (Note: It is a good idea to take a wire brush and clean any excess paint from the threads on the stud to prevent the nut from tighten properly.)
14. Install the lower end of the shock to the axle using the factory hardware. (Torque to 20 ft. lbs.)
15. Reinstall the factory sway bar links at this time using factory hardware. (**Note:** If you purchased Rusty's Forged Adjustable Sway Bar Quick-Disconnects install them at this time using the supplied instructions.)
16. Install tires and wheels.
17. Jack up the vehicle and remove the jack stands in order to lower the vehicle back to the ground.
18. Unlock the steering wheel and have an assistant rotate the steering wheel in order to line the track bar back to its axle side mounting point.
19. Reinstall the factory bolt removed in step 6. (Torque to 35 ft. lbs.)

Rear Installation Instructions

20. Raise vehicle and place jack stands under frame. Chock the rear tires to prevent any accidental movement.
21. Remove the tires and wheels.
22. Remove the factory shocks at the top inside the fender well and at the bottom, do not discard. The hardware will be reused.
23. Remove the clip that fastens the rear brake line to the factory bracket. Pull the brake line towards the axle until it drops out of the factory bracket.
24. Attach the rear brake line extension bracket using the smaller hole location to the factory brake line location with the supplied hardware. (**Note:** Make sure that the side of the bracket with the larger hole location points towards the ground.)



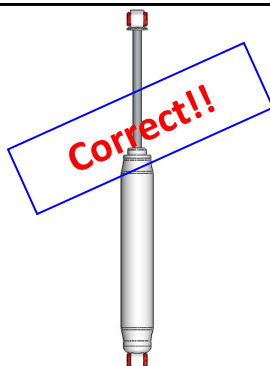
Rear Installation Instructions (Continued)

Note: Save all factory components and hardware for reuse, unless noted.

25. Attach the bracket line to the installed rear brake line extension bracket in the reverse method of how you removed it from the factory mounting point and secure with the factory clip
26. Support the rear axle with a floor jack.
27. Unbolt the U-bolts and carefully lower the axle by lowering the floor jack slowly. Retain the U-bolt plates for reuse. (**Note:** Use caution, not to overextend the rear brake line.)
28. Using a chisel, cutoff wheel, saw, or similar tool, remove the leaf spring retaining straps that align the leafs in the spring pack. They are located on both the front and rear portion of the springs.
29. Position a C-clamp near the spring centering pin and tighten it to hold the spring pack together. Remove or cut off the spring centering pin if it is seized. Carefully loosen the clamp to relieve the pressure in the spring pack in a controlled manner.
30. Position the Rusty's add-a-leaf in the spring pack. It should be placed directly under the main leaf, or under the next longest leaf in the spring pack. All of the shorter leafs should be placed under the add-a-leaf in order of descending length. The long side of the new leaf will go towards the rear of the vehicle.
31. Align the centering pin holes in each leaf and use a C-clamp to clamp the pack together. (**Note:** Do not use the centering pin to compress the leaf pack.) Position the pin so that the head is pointed downward and install the supplied new centering pin in the aligned holes. Lube the threads and slowly tighten the nut; do not over tighten the pin as it will strip easily.
32. Slowly raise the axle up into position and be sure the center pins align with the holes in the axle pads on each side.
33. Position the supplied U-bolts and factory spring plates into position. Install a flat washer followed by the nut then tighten the hardware. (Torque to 75 ft. lbs.)
34. Install the supplied new leaf spring retaining straps on the front or rear portion of the leaf springs near where the original ones were located.
35. Install the bushings and sleeves in the new Rusty's shocks. Install them on the vehicle with the factory hardware. (Torque upper bolts to 18 ft. lbs. and lower bolts to 40 ft. lbs.) (**Note:** Please note the orientation of the rear shocks.)

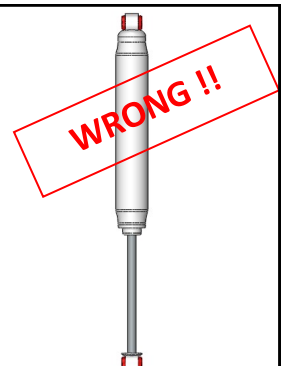
CORRECT:

Mount RX-100 series shocks with the body down and shaft pointing up.



INCORRECT:

DO NOT MOUNT RX-100 Series Shocks with the Shaft pointing towards the ground. This will cause poor handling and ride quality.



Rear Installation Instructions (Continued)

Note: Save all factory components and hardware for reuse, unless noted.

36. Reinstall the tires and wheels and lower vehicle.
37. Remove the jack stands and lower the vehicle to the ground.
38. Tighten the lug nuts to the factory torque specifications.
39. Installation Completed!

Final Notes:

At this point there should be no parts left but installing the stickers. The vehicle will need to have an alignment as soon as possible, if you don't you may get the "death wobble", poor tire wear or just a bad handling vehicle.

Alignment Recommended Specifications

- Toe: Should be set at 0 to 1/32" Toe Out
- Castor: 7.5 Degrees Positive
- Camber: 0

WARNING

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