

Rusty's JL Wrangler 3" Advanced Kit RK-300A-JL INSTALLATION INSTRUCTIONS

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-CS3655-JL	Rusty's Coils - JL 3" Front (Driver/Passenger) (Pair)	1
RC-9179	Rusty's JL/JT Bow Correction Lower Coil Spring Isolators (Pair)	1
RC-CS3765-JL	Rusty's Coils - JL 3" Rear (Driver/Passenger) (Pair)	1
RC-9179	Rusty's JL/JT Bow Correction Lower Coil Spring Isolators (Pair)	1
RC-CA411-JL	Rusty's Adjustable Front Lower Control Arms (JL) (Pair)	1
RC-CA421-JL	Rusty's Adjustable Front Upper Control Arms (JL) (Pair)	1
RC-CA412-JL	Rusty's Adjustable Rear Lower Control Arms (JL) (Pair)	1
RC-CA422-JKJL	Rusty's Adjustable Rear Upper Control Arms (JL) (Pair)	1
RC-TB7500-JL	Rusty's Front Track Bar Mount Brace - JL Wrangler	1
RC-TB480-JL	Rusty's Track Bar - Adjustable Front (JL)	1
RC-TB490-JL	Rusty's Track Bar - Adjustable Rear (JL)	1
RC-SB480-JL	Rusty's Sway Bar - Front Extended Links (JL)	1
RC-SB490-JL	Rusty's Sway Bar - Rear Extended Links (JL)	1
RC-BL10-JL	Rusty's Front Brake Line Extension Brackets (JL)	1

Parts List:

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

Optional RX-100 Shock Fitment Chart

<u>Part #</u>	<u>DESCRIPTION:</u>	<u>Quantity</u>
RX-123	Rusty's RX100 Performance Shock: RX-123 (Each) ***FRONT***	2
RX-118	Rusty's RX100 Performance Shock: RX-118 (Each) ***REAR***	2

Optional RX-800 Monotube Performance Shock Fitment Chart

<u>Part #</u>	<u>DESCRIPTION:</u>	<u>Quantity</u>
RX-821	Rusty's RX800 Performance Shock: RX-821 (Each) ***FRONT***	2
RX-818	Rusty's RX800 Performance Shock: RX-818 (Each) ***REAR***	2

Front Installation Instructions

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

1. Raise the vehicle with a jack and place jack stands under the frame rails behind the front lower control arm mounting points. Chock the rear tires to prevent any accidental movement.
2. Lower the vehicle carefully with the jack to the jack stands.
3. Remove the tires and wheels.
4. Support the front axle with the floor jack.
5. Remove the bolts that attaches the front track bar to the axle and frame mounting points with the use of a 21mm socket and wrench. Retain hardware for reuse.
6. Remove the factory front shocks from the vehicle at the top of the inside of the fender well with the use of a 18mm wrench and at the bottom mounting points with the use of a 18mm socket and wrench. Retain hardware for reuse.
7. Remove the front sway bar links at the axle and sway bar mounting points with the use of a 18mm socket and wrench. Retain hardware for reuse.
8. Disconnect the brake line brackets on the lower control arms with the use of a 15mm wrench.
9. Disconnect the front axle differential actuator from the housing to prevent damaging when lowering the front axle housing.
10. Disconnect the front axle differential vent hose from the differential housing with the use of needle nose pliers.
11. Lower the front axle slowly with the jack used to support the axle until the front coil springs become un-seated.
12. Remove the factory coil springs from the vehicle by slowly lowering the jack used to support the front axle until the coil springs can be removed. If using a coil spring compressor use caution.
13. Remove the factory coil spring isolators from the axle coil spring mounts and replace with the supplied Rusty's JL/JT Bow Correction Lower Coil Spring Isolators.
14. With the front axle supported use 21mm and 24mm wrenches to remove the mounting hardware for the factory front lower control arms at the lower control arm axle and frame mounts. Retain factory hardware, as it will be reused.
15. With the use of a 18mm wrench loosen the upper control arm hardware located at both the frame and axle mounts but do not completely remove until instructed. To gain access to the front upper control arm frame side hardware you will need to remove the factory heat shields with the use of a 10mm socket. Retain heat shields and hardware to be reused.

Front Installation Instructions (Continued)

16. Adjust the supplied Rusty's JL Wrangler Adjustable Front Upper Control Arms to the specified length in the chart below for your suspension height. (**Note:** The length of the control arms could need to be adjusted when the vehicle is being aligned as this is just an approximate starting length and can vary.)

Front Upper Control Arm Length Chart	
3" Suspension Lift	20-3/8" Center of Hole to Center of Hole

17. Install the supplied Rusty's JL Wrangler Adjustable Front Upper Control Arms by replacing one of the factory upper control arms at a time using the supplied 1/2" hardware at the frame and the factory hardware at the axle. Position the control arms so that the fixed end is mounted at the axle mount and the adjustable end is mounted at the frame mounting point. (**Note:** Make sure to position the upper control arms so that the bend is angled inward to the center of the vehicle.)

18. Adjust the supplied Rusty's JL Wrangler Adjustable Front Lower Control Arms to the specified length in the chart below for your suspension height and install with the factory hardware. (**Note:** The length of the control arms could need to be adjusted when the vehicle is being aligned as this is just an approximate starting length and can vary.) **Refer to the diagram on page# 12 for the correct installation orientation of the front lower control arms.**

Front Lower Control Arm Length Chart	
3" Suspension Lift	24-3/8" Center of Hole to Center of Hole

19. Install the supplied Rusty's JL Front Track Bar Mount Brace at this time and the fixed end supplied front adjustable track bar with the use of the supplied instructions packaged with the Rusty's JL Front Track Bar Mount Brace. (**Note:** Do not attach the axle end of the track bar until instructed, temporarily hold the adjustable end up out of the way with a strap or bungee cord.)

20. Install the supplied front coil springs in the same manner that the factory coil springs were removed and slowly raise the front axle to seat the coil springs. In some cases a coil spring compressor could be needed to install the coil springs. (Note: Use caution when raising the front axle not to lift the vehicle off of the jack stands.)

21. Reinstall tires and wheels.

22. Jack up the vehicle and remove the jack stands in order to lower the vehicle back to the ground.

Front Installation Instructions (Continued)

23. Reconnect the brake line brackets to the Rusty's JL Wrangler Adjustable Front Lower Control Arms using the supplied hardware.



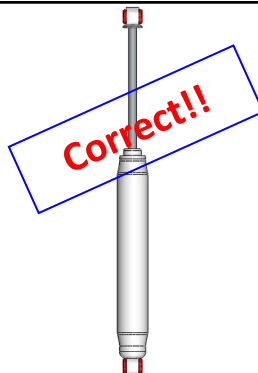
24. Install the supplied Rusty's Front Brake Line Extension Brackets where the front brake lines are attached to the frame with the use of the supplied hardware as well as the use of the factory hardware.



25. Assemble the bushings and sleeves in the front shock absorbers and install if purchased. Reference the Shock Fitment Location Chart to determine the location of the purchased shocks. (**Note:** If you purchased our RX-100 Series Shocks, make sure that the white body is installed body down and shaft pointing up as pictured below. If you upgraded to RX-800 or RX-900 shocks, you can mount them in any orientation you prefer. Install the shocks using the original hardware and torque to factory specifications.)

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.



Front Installation Instructions (Continued)

26. Install the supplied Rusty's JL Front Extended Sway Bar Links or Rusty's JL Front Quick Disconnects (optional) at this time.
27. Complete the installation process of the front track bar at this time. The adjustable end of the trackbar bolts to the axle mount and the fixed end should be mounted to the frame. Leave the adjustable end unbolted. Center the front axle under the vehicle, and once centered, adjust the trackbar to fit.
28. Before bolting to the axle, you will need to center the body over the axle. Look at the front of the vehicle to see if the axle is centered, if not unlock the steering wheel. Turn the steering wheel to shift the body over the axle until centered. Once centered lock the steering wheel and adjust the adjustable end of the track-bar to the proper length and fasten to the axle mount with the factory hardware. Torque to 75 lb.-ft.
29. Once satisfied with the control arm and track bar lengths apply Loctite and tighten the jam nuts to the correct torque values provided on page# 11.
30. Reattach the front axle vent tube, axle differential actuator, and any other wiring or hoses that were disconnected to complete the installation process.
31. Front Installation is now completed!

Rear Installation Instructions

32. Raise rear of the vehicle with a jack and place jack stands under the frame rails behind the rear lower control arm mounting points. Chock the rear tires to prevent any accidental movement.
33. Lower the vehicle carefully with the jack to the jack stands.
34. Remove the tires and wheels.
35. Support the rear axle with the floor jack.
36. Remove the factory rear trackbar by removing the hardware at the frame and axle mount with the use of a 21mm socket and wrench. Retain hardware for reuse.
37. Remove the factory rear shocks at the top of the inside of the fender well and at the bottom mounting points with the use of a 18mm socket. Retain hardware for reuse. (**Note:** If necessary to remove rear upper shock hardware, remove the rear lower inner fender liner by removing the 3 bolts with the use of a 8mm socket.)
38. Unbolt the rear sway bar links at the axle and sway bar mounting points with the use of a 18mm socket and wrench. Retain hardware for reuse.
39. Lower the rear axle slowly with the jack used to support the axle until the rear coil springs are able to be removed.
40. Remove the factory coil springs from the vehicle by slowly lowering the jack used to support the rear axle until the coil springs can be removed. If using a coil spring compressor use caution.
41. With the rear axle supported use 21mm wrench to remove the mounting hardware for the factory rear lower control arms at the lower control arm axle and frame mounts. Retain factory hardware, as it will be reused.
42. With the use of a 21mm wrench loosen the upper control arm hardware located at both the frame and axle mounts but do not completely remove until instructed. Retain hardware to be reused.
43. Adjust the supplied Rusty's JL Wrangler Adjustable Rear Upper Control Arms to the specified length in the chart below for your suspension height. It is strongly suggested to adjust each end of the upper control arm equally so that the same amount of thread is exposed. (Note: The length of the control arms could need to be adjusted when the vehicle is being aligned as this is just an approximate starting length and can vary.)

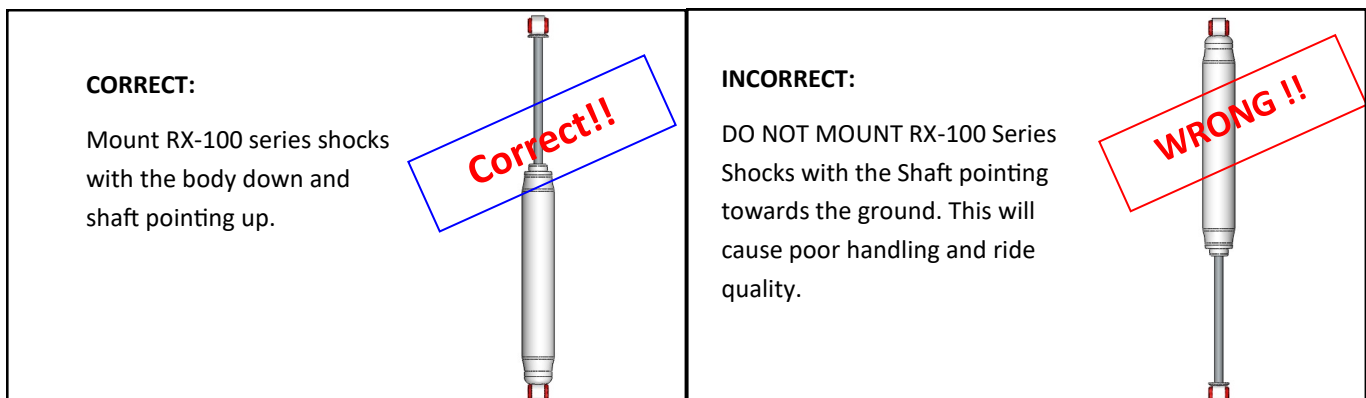
Rear Upper Control Arm Length Chart	
3" Suspension Lift	17-3/8" Center of Hole to Center of Hole

Rear Installation Instructions

44. Install the supplied Rusty's JL Wrangler Adjustable Rear Upper Control Arms by replacing one of the factory upper control arms at a time using the factory hardware. Position the control arms so that the bend is pointed upward if looking at the control arm from the side of the vehicle. Position the control arms so that the adjustable end is mounted to the frame side and the fixed end at the axle side.
45. Adjust the supplied Rusty's JL Wrangler Adjustable Rear Lower Control Arms to the specified length in the chart below for your suspension height and install with the factory hardware. (Note: The length of the control arms could need to be adjusted when the vehicle is being aligned as this is just an approximate starting length and can vary.)

Rear Lower Control Arm Length Chart	
3" Suspension Lift	20-1/8" Center of Hole to Center of Hole

46. Adjust the supplied Rusty's JL Wrangler Adjustable Rear Lower Control Arms to the specified length in the chart below for your suspension height and install with the factory hardware. (Note: The length of the control arms could need to be adjusted when the vehicle is being aligned as this is just an approximate starting length and can vary.) Position the control arms so that the adjustable end is mounted to the frame side and the fixed end at the axle side.
47. Install the supplied rear coil springs in the same manner that the factory coil springs were removed and slowly raise the rear axle to seat the coil springs. In some cases a coil spring compressor could be needed to install the coil springs. (**Note:** Use caution when raising the axle not to lift the vehicle off of the jack stands.)
48. Assemble the bushings and sleeves in the rear shock absorbers and install if purchased. Reference the Shock Fitment Location Chart on page 4 to determine the location of the purchased shocks. (**Note:** Make sure that the white body is installed body down and shaft pointing up as pictured below if you purchased our RX-100 Series Shocks. If you upgraded to RX-800 or RX-900 shocks, you can mount them in any orientation you prefer. Install the shocks using the original hardware and torque to factory specifications.)



Rear Installation Instructions

49. Install the supplied Rusty's JL Rear Extended Sway Bar Links at this time.
50. Reinstall the tires, remove the jack stands and lower the vehicle to the ground. Torque lug nuts to factory specifications.
51. Bolt the supplied rear track bar to the axle using the factory hardware with a 21mm wrench. The adjustable end of the track bar bolts to the frame end. Leave the adjustable end unbolted. Using a ratchet strap to center the rear axle under the vehicle, then center and adjust the track bar to fit. Take measurements to ensure that the body is centered.
52. Adjust the end of the track bar to line up with the frame mount and secure it using the factory hardware with the use of a 21mm wrench. Torque both ends of the track bar to 75 Ft. lbs. Firmly tighten the jam nut.
53. Double-check all hardware used for installation for proper clearances and torque to the correct torque values provided on page# 11.
54. **IMPORTANT NOTE:** Once installation of this lift kit is complete, the drag link **MUST** be adjusted to center the steering wheel **BEFORE** the vehicle is driven. Failure to do so will cause the Vehicle Stability Program not to function properly, odd vehicle handling, and poor performance.
55. Adjust the front drag link to in order to center the steering wheel by loosening the two bolts on the drag link adjustment collar and then and rotating the adjustment collar until the steering wheel is centered.
56. Retighten the two bolts on the drag link adjustment sleeve.
57. Readjust headlights to proper specs.
58. A professional front end alignment is required. If necessary, the vehicle can be driven to a local alignment shop, but the alignment should be performed as soon as possible.
59. Re-torque all fasteners after 500 miles and recheck after 1000 miles. Visually inspect all hardware components and re-torque fasteners during routine vehicle service.
60. Installation is now complete. Cycle the steering lock-to-lock and double-check all of the components for proper operation, clearances, and torque.

Torque Specification Chart

Front Lower Control Arm Torque Values	
Axle Side: 117 ft.lb.	Frame Side: 117 ft.lb.
Front Upper Control Arm Torque Values	
Axle Side: 80 ft.lb.	Frame Side: 85 ft.lb.
Rear Lower Control Arm Torque Values	
Axle Side: 117 ft.lb.	Frame Side: 117 ft.lb.
Rear Upper Control Arm Torque Values	
Axle Side: 120 ft.lb.	Frame Side: 120 ft.lb.
All Control Arm Jam Nuts	
Tighten Control Arm Jam Nuts to 250-275 ft.lb.	

Front Track Bar Torque Values	
Axle Side: 110 ft.lb.	Frame Side: 110 ft.lb.
Rear Track Bar Torque Values	
Axle Side: 110 ft.lb.	Frame Side: 110 ft.lb.
All Track Bar Jam Nuts	
Tighten Control Arm Jam Nuts to 195-220 ft.lb.	

Shock Hardware Torque Values	
Axle Side: 55-60 ft.lb	Axle Side: 55-60 ft.lb
Sway Bar Hardware Torque Values	
Axle Side: 55-60 ft.lb	Axle Side: 55-60 ft.lb

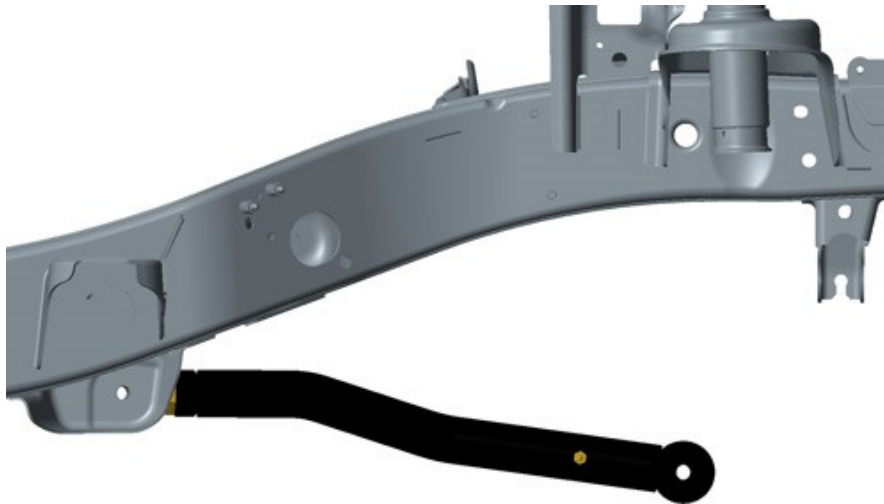
Rusty's Front Lower High Clearance Control Arms

JL Wrangler / JT Gladiator

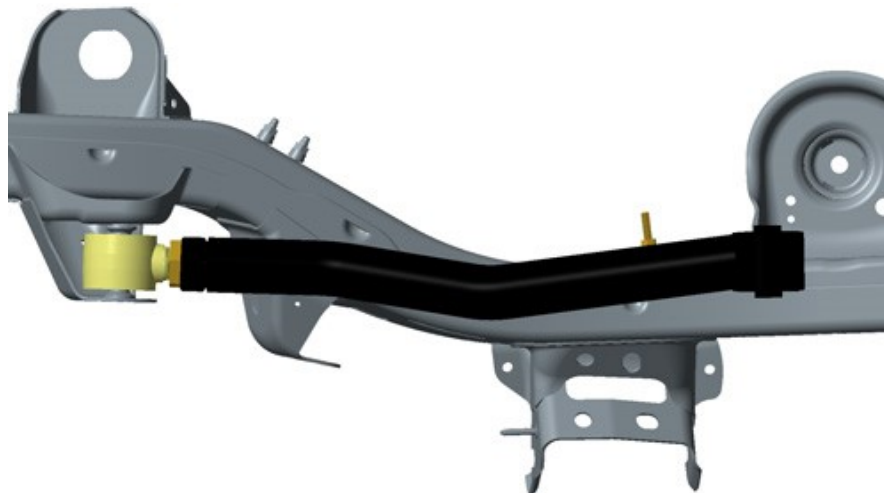
RC-CA211HC-JLJT / RC-CA411HC-JLJT

IMPORTANT NOTE:

It is important to install the front lower control arms as shown in the diagrams below. Make sure that the brake line stud is pointed outward and the bends match the diagrams.



Passenger
Side View
Front of Vehicle
→



Passenger
Bottom View
Front of Vehicle
→

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: 6-7 Degrees Positive
- Camber: 0

WARNING

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