



Rusty's Off-Road Products
7161 Steele Station Road
Rainbow City, AL 35906
1-256-442-0607
www.rustysoffroad.com

Rusty's FSJ 3.5-4" Full Size Spring Pack Lift Kit RK-350SP-FS INSTALLATION INSTRUCTIONS

Last Revised: 11/29/2016

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.



For Questions or Suggestions, contact our Tech Department (256-442-0607)

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-LS400F-FS	Rusty's Leaf Springs - FSJ - 4" - Front (pair)	1
RC-LS400R-FS	Rusty's Leaf Springs - FSJ - 4" - Rear (pair)	1
RC-UB-4	Rusty's Dana 44 FSJ Grade 8 U-Bolt	3
RC-UB-5	Rusty's Dana 44 FSJ Differential Grade 8 U-Bolt	2
RB-BL10-UV	Rusty's Brake Line Extension Kit—Front and Rear	1
RX-13	Rusty's RX100 Performance Shock: RX-13	4
(PO1532)	EB1 Hourglass Shock Bushing w/ 1/2" Sleeves Pack (Contents Below)	8
EB1	Hourglass Shock Bushing (Qty:1 Per Pack)	
ES-25	1/2" Shock Bushing Sleeve (Qty:2 Per Pack)	
n/a	Rusty's Warning Label	1
n/a	Rusty's Decal Pack	1



Front Installation

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

- 1.) Raise the front of the vehicle and place jack stands under the frame. Chock the rear tires to prevent any accidental movement.
- 2.) Remove tires and wheels.
- 3.) Remove the factory shocks. Discard the shocks but save the hardware for re-use.
- 4.) Support the axle with a jack. Remove the U-bolts from the axle. Retain the U-bolt Plates for reuse.
- 5.) Free the spring from the axle by jacking the axle up some.
- 6.) Remove the bolts from the front shackle and frame mount to remove the front leaf springs. (**Note:** Be careful when performing this step so that the leaf spring does not fall out.)
- 7.) With the springs removed, inspect all of the hardware and replace if worn or damaged.
- 8.) To install the new Rusty's springs, lube the bolts and position the spring into the frame mount first, then install the spring into the shackles. (**Note:** Do not fully tighten the hardware at this time.)
- 9.) Move the axle into position on the spring by lowering the axle jack. Place the spring center bolt in the axle perch hole.
- 10.) Be sure that the centering pin bolt is properly seated into the axle spring perch.
- 11.) Reinstall the original spring plates with the provided U-Bolts, Washers and Nuts. (Torque: 75 ft.lbs.)
- 12.) Reinstall the tires and wheels to lower the vehicle from the jack stands and rest it on its weight.
- 13.) Now you may tighten up the spring and shackle hardware that we did not fully tighten in step #8. Use the chart below to determine the appropriate torque specifications for the hardware size.

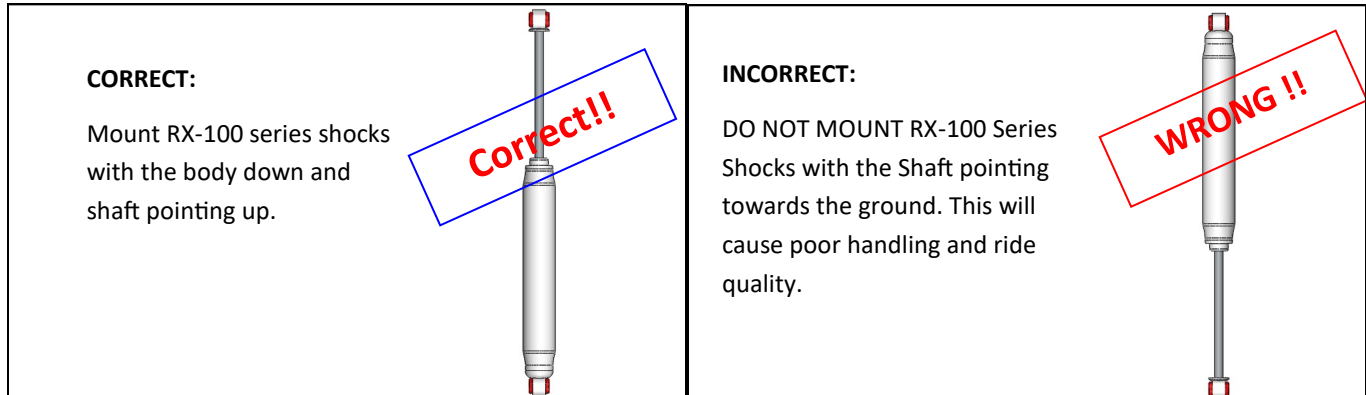
Hardware Size	Torque Specification
7/16"	50 Ft. Lbs.
1/2"	65 Ft. Lbs.
9/16"	85 Ft. Lbs.



Front Installation

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

14.) Install the bushings and sleeves in the new Rusty's shocks. Install them on the vehicle with the factory hardware. Torque the upper and lower bolts to 40-ft.lbs. (Note: Please refer to the illustration below for the correct orientation of the shocks.)



15.) Front Installation Completed!

REAR INSTALLATION INSTRUCTIONS

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

- 1.) Raise the rear of the vehicle and place jack stands under the frame. Chock the rear tires to prevent any accidental movement.
- 2.) Remove tires and wheels.
- 3.) Remove the factory shocks, keeping the hardware and discarding the old shocks.
- 4.) Support the axle with a jack. Remove the U-bolts from the axle. Retain the U-bolt Plates for reuse.
- 5.) 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.)
- 7.) Unbolt the leaf springs at the front frame mounting points and remove the lower rear shackle bolts. (Note: Inspect the hardware once removed and replace if needed.)
- 8.) Remove the factory spring packs and discard.
- 9.) Install the new spring pack; it's a good idea to grease the threads on the spring bolts, mount the frame end first and then the shackle. Jack up axle into position, be sure to align center pins. (**Note:** Do not torque hardware until instructed.)



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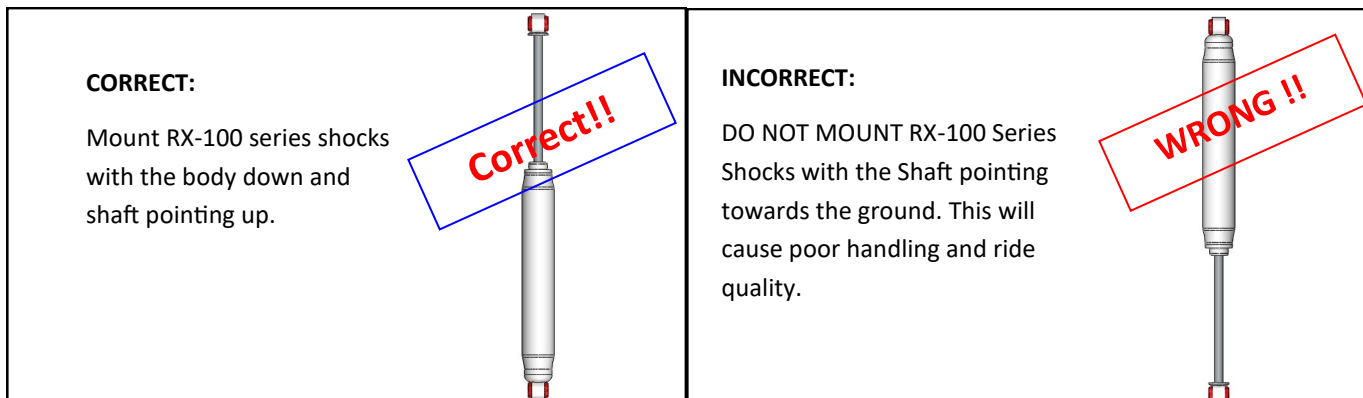
REAR INSTALLATION INSTRUCTIONS

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

10.) Slowly raise the axle up into position and be sure the center pins align with the holes in the axle pads on each side.

11.) 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.)

12.) 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.)



13.) Reinstall the tires and wheels and lower vehicle.

14.) Remove the jack stands and lower the vehicle to the ground.

15.) Tighten the leaf spring and shackle hardware to the torque specifications. (Torque the frame bolts to 100 ft. lbs and shackle bolts to 25 ft. lbs.)

16.) Tighten the lug nuts to the factory torque specifications.

17.) Installation Completed!

RUSTY'S STAINLESS STEEL BRAKE LINE INSTALLATION INSTRUCTIONS:

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

If you purchased the optional Rusty's stainless steel brake lines with your suspension kit you will install them now. (**Fitment Note:** Some FSJ Vehicles equipped with the optional Heavy Duty Towing Package will require 3/16" to 1/4" Brass Thread Adapters in order to install the brake lines.)

- 1.) Make sure that the vehicle is parked on a level surface and can not roll.
- 2.) Remove the factory brake hoses and discard from the vehicle making sure to use the correct size fitting wrench to avoid damaging the corners on the fittings. (**Note:** Be prepared for a mess.)
- 3.) Clean all of the surfaces that the new brake lines will mount to prior to installing the new lines.
- 4.) Install the stainless steel brake lines to your vehicle and tighten the fittings with the correct size fitting wrench.
- 5.) Clean lines and surfaces around lines of any remaining residual brake fluids.
- 6.) Now that all of the brake lines have been replaced you will need to fill the vehicles master cylinder with the correct brake fluid and bleed the brake system. (**Note:** Keep an eye on the amount of fluid in the master cylinder and top off as needed when bleeding the system.)



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 Degrees Positive
- Camber: 0

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