



Installation manual
 4" performance suspension system
 1981 - 1996
 Ford F150 or Bronco
 New part # 24814
 Old part # F4XRB
 sj042108rev.01

Part # 24814
1981 - 1996 Ford F150 or Bronco
4" performance suspension system

<u>Part #</u>	<u>Description</u>	<u>Qty.</u>
F2XRB-01	DS extended radius arm	1
F2XRB-02	PS extended radius arm	1
F2XRB-03	DS extended radius arm relocation bracket	1
F2XRB-04	PS extended radius arm relocation bracket	1
F401	Front axle pivot relocation bracket (large)	1
F402	Rear axle pivot relocation bracket (small)	1
F405	Front sway bar relocation brackets	2
F406	Front axle pivot relocation support bracket	1
F4XRBNB	Hardware bag	1
F4XRB-NB1	Hardware bag	1
FBLNB2	Brake line relocation kit	1
24814INST	Instruction manual	2
MIRRORHANGER	Rear view mirror hanger	1
WARNINGDECAL	Warning decal	1
DECAL	Window sticker	1

Congratulations on your selection to purchase a Tuff Country EZ-Ride Suspension System. We at Tuff Country EZ-Ride Suspension are proud to offer a high quality product at the industries most competitive pricing. Thank you for your confidence in us and our product.

If you desire to return your vehicle to stock, it is the customers responsibility to save all stock hardware.

The Tuff Country EZ-Ride Suspension product safety label that is included in your kit box must be installed inside the cab in plain view of all occupants.

Please see the end of the installation manual for a picture of the hard parts that are included in this suspension system.

Important customer information:

Tuff Country EZ-Ride Suspension highly recommends that a qualified or a certified mechanic performs this installation.

It is the responsibility of the customer/installer to wear safety glasses at all times when performing this installation.

It is the customers/installers responsibility to read and understand all steps before installation begins. If you have any questions or concerns, please contact our technical department @ (801) 280-2777. Also, the OEM manual should be used as a reference guide.

This vehicles reaction and handling characteristics may differ from standard cars and/or trucks. Modifications to improve and/or enhance off road performance may raise the intended center of gravity. Extreme caution must be utilized when encountering driving conditions which may cause vehicle imbalance or loss of control. DRIVE SAFELY! Avoid abrupt maneuvers: such as sudden sharp turns which could cause a roll over, resulting in serious injury or death.

It is the customers responsibility to make sure that a re-torque is performed on all hardware associated with this suspension system after the first 100 miles of installation. It is also the customers responsibility to do a complete re-torque after every 3000 miles or after every off road use.

After the original installation, Tuff Country EZ-Ride Suspension also recommends having the alignment checked every 6 months to ensure proper tracking, proper wear on tires and front end components. Tuff Country EZ-Ride Suspension takes no responsibility for abuse, improper installation or improper suspension maintenance.

Limited lifetime warranty

Notice to all Tuff Country EZ-Ride Suspension customers: It is your responsibility to keep your original sales receipt! If failure should occur on any Tuff Country EZ-Ride Suspension component, your original sales receipt must accompany the warranted unit to receive warranty. Warranty will be void if the customer can not provide the original sales receipt. Do not install a body lift in conjunction with a suspension system. If a body lift is used in conjunction with any Tuff Country EZ-Ride Suspension product, your Tuff Country EZ-Ride Suspension WARRANTY WILL BE VOID. Tuff Country Inc. ("Tuff Country") suspension products are warranted to be free from defects in material and workmanship for life if purchased, installed and maintained on a non-commercial vehicle; otherwise, for a period of twelve (12) months, from the date of purchase and installation on a commercial vehicle, or twelve thousand (12,000) miles (which ever occurs first). Tuff Country does not warrant or make any representations concerning Tuff Country Products when not installed and used strictly in accordance with the manufacturer's instructions for such installation and operation and accordance with good installation and maintenance practices of the automotive industry. This warranty does not apply to the cosmetic finish of Tuff Country products nor to Tuff Country products which have been altered, improperly installed, maintained, used or repaired, or damaged by accident, negligence, misuse or racing. ("Racing is used in its broadest sense, and, for example, without regards to formalities in relation to prizes, competition, etc.) This warranty is void if the product is removed from the original vehicle and re-installed on that or any other vehicle. This warranty is exclusive and is in lieu of any implied warranty of merchantability, fitness for a particular purpose or other warranty of quality, whether express or implied, except the warranty of title. All implied warranties are limited to the duration of this warranty. The remedies set forth in this warranty are exclusive. This warranty excludes all labor charges or other incidental of consequential damages. Any part or product returned for warranty claim must be returned through the dealer of the distributor from whom it was purchased. Tuff Country reserves the right to examine all parts returned to it for warranty claim to determine whether or not any such part has failed because of defect in material or workmanship. The obligation of Tuff Country under this warranty shall be limited to repairing, replacing or crediting, at its option, any part or product found to be so defective. Regardless of whether any part is repaired, replaced or credited under this warranty, shipping and/or transportation charges on the return of such product must be prepaid by the customer under this warranty.

Important information that needs to be read before installation begins:

The stock wheels will work in conjunction with this suspension system. But if new wheels are going to be purchased, Tuff Country recommends a medium offset wheel be used. Tuff Country recommends a 33x12.50 tire package. If larger than a 33x12.50 tire is installed on your vehicle in conjunction with part # 24814; Tuff Country assumes no liability and the warranty will be VOID.

Part # 24814/F4XRB does not include the front coil springs or anything to complete the rear end of the vehicle. Part # 24811/F4CL is the part # for the front coil springs and needs to be ordered as a septate part #. Also, part # 24813/F4RD is the part # for the rear end and needs to be ordered as a septate part #.

Tuff Country highly recommends installing an after-market pitman arm once part # 24814/F4XRB has been installed. If you have not already ordered your new pitman arm, please contact Tuff Country or your local Tuff Country dealer and order part # 70200/FSA.

Tuff Country EZ-Ride Suspension packages (2) sets of instruction sheets with this box kit. (1) is for the installer and (1) is for the customer. The (1) for the customer has some post installation procedure literature and it is the installers responsibility to make sure that the customer receives a copy of the installation manual along with the literature.

Before installation begins, Tuff Country EZ-Ride Suspension highly recommends that the installer performs a test drive on the vehicle. During the test drive, check to see if there are any uncommon sounds or vibrations. If uncommon sounds or vibrations occur on the test drive, uncommon sounds or vibrations will be enhanced once the suspension system has been installed. Tuff Country EZ-Ride Suspension highly recommends notifying the customer prior to installation to inform the customer of these issues if they exist.

New longer front and rear shocks are needed after this suspension system has been installed and the front and rear shocks need to be ordered as a separate part #. If you have not already ordered your front and rear shocks, please feel free to contact Tuff Country or your local Tuff Country dealer and order your front and rear shocks. Tuff Country recommends installing a 20" fully extended nitrogen gas shock in the front, 23" fully extended cellular shock in the front for the auxiliary shock and a 26" fully extended nitrogen gas shock in the rear.

Make sure to use thread locker or loctite on all new and stock hardware associated with the installation of this suspension system.

Special note: Before installation begins, it is the customers/installers responsibility to make sure that all parts are on hand. If any parts are missing, please feel free to call one of our customer service representatives @ (801) 280-2777.

Hardware bag F4XRBNB includes:

<u>Description</u>	<u>Quantity</u>
716112B (7/16" x 1 1/2" bolt)	4
716UN (7/16" unitorque nut)	4
38WA (3/8" USS flat washer)	8
12112B (1/2" x 1 1/2" bolt)	14
12UN (1/2" unitorque nut)	14
716WA (7/16" USS flat washer)	28

Hardware bag F4XRB-NB1 includes:

<u>Description</u>	<u>Quantity</u>
PB2408 (poly bushing)	4
S10081 (.875" x .563" x 2.080" sleeve)	2
CAM-01 (9/16" x 3 1/2" cam bolt)	2
CAM-02 (cam washer)	8
CAM-03 (9/16" x 4" cam bolt)	2
916UN (9/16" unitorque nut)	4
SERT (sert fittings)	2
LUBE (poly lube pack)	2

Hardware bag FBLNB2 includes:

<u>Description</u>	<u>Quantity</u>
BLR013 (front brake line bracket)	2
BLR014 (rear brake line bracket)	1
5161B (5/16" x 1" bolt)	3
516UN (5/16" unitorque nut)	3
14WA (1/4" USS flat washer)	6
ECLIP (e-clip)	3

Recommended tools selection:

- Cut off wheel
- Torque wrench
- Standard socket set
- Standard wrench set
- Metric socket set
- Metric wrench set
- Tape measure
- Hydraulic floor jacks
- Air chisel

Special note: Before installation begins, it is the customers/installers responsibility to make sure that all parts are on hand. If any parts are missing, please feel free to call one of our customer service representatives @ (801) 280-2777.

Please follow instructions carefully:

Before installation begins, measure from the center of the hub, to the bottom of the fender well, and record measurements below.

Pre-installation measurements:

Driver side front: _____

Passenger side front: _____

Driver side rear: _____

Passenger side rear: _____

At the end of the installation take the same measurements and compare to the pre-installation measurements.

Post-installation measurements:

Driver side front: _____

Passenger side front: _____

Driver side rear: _____

Passenger side rear: _____

Front end installation:

1. To begin installation, block the rear tires of the vehicle so that the vehicle is stable and can't roll backwards. Safely lift the front of the vehicle and support the vehicle with a pair of jack stands. Place a jack stand on both the driver and the passenger side. **Special note: Place the jack stands on the body mounts, this will allow for the new extended radius arms to be installed.** Next, remove the front wheels and tires from both sides.

2. Working on the driver side, remove the stock shock from the stock upper and lower mounting location. Save the stock lower mounting hardware. The upper mounting hardware and shock may be discarded. **Special note: Some vehicles come stock with multiple shocks in the front end.** Repeat procedure on the passenger side. **Special note: New longer front shocks are needed after this suspension system has been installed and the front shocks need to be ordered as a separate part #.** If you have not already ordered your front shocks, please feel free to contact Tuff Country or your local Tuff Country dealer and order your front shocks. Tuff Country recommends installing a 20" fully extended nitrogen gas in the front and a 23" fully extended cellular shock in the front for the auxiliary shock.



3. Working on the driver side, remove the stock sway bar from the frame mounting location. Save the stock hardware. Repeat procedure on the passenger side.



4. Working on the driver side, remove the stock sway bar end link from the stock axle location. Save the stock hardware. Repeat procedure on the passenger side. Set the stock sway bar aside.



5. Place a pair of hydraulic floor jacks under the front driver and passenger side twin eye beam axles. Carefully raise up on the hydraulic floor jacks until they come into contact with the front twin eye beam axles. Also, place a pair of hydraulic floor jacks under the driver and passenger side stock radius arms. Carefully raise up on the hydraulic floor jacks until they come into contact with the stock radius arms.

6. Working on the front driver side twin eye beam axle, remove the stock mounting hardware that connects the front twin eye beam axle to the stock bracket. The stock hardware may be discarded.



7. Working on the front driver side twin eye beam axle bracket, remove the stock bracket from the stock location. Save the stock hardware but the the stock bracket may be discarded.



8. Working on the rear passenger side twin eye beam axle, remove the stock mounting hardware that connects the rear axle to the stock location. Save the stock hardware.



9. Working on the driver side stock radius arm bracket, remove the stock hardware or the stock rivets that connect the bracket to the frame rail. The stock hardware and rivets may be discard. Repeat procedure on the passenger side. **Special note: Using a die grinder and making a cross cut on the rivets then using a air chisel will help make the removal of the rivets easier.**



10. Make sure that the hydraulic floor jacks are supporting the front and rear twin eye beam axles and the stock radius arms.



11. Locate the new front twin eye beam relocation bracket and the stock hardware. Install the new front relocation bracket to the stock location and secure using the stock hardware. Make sure to use thread locker or loctite and torque to **85 ft lbs.**





12. Locate the new front twin eye beam axle pivot support bracket. Also, locate (2) 1/2" x 1 1/2" bolts, (4) 7/16" USS flat washers and (2) 1/2" unitorque nuts from hardware bag F4XRBNB. Install the new support bracket to the newly installed front twin eye beam axle pivot bracket using the new 1/2" x 1 1/2" bolts and hardware. Make sure to use thread locker or loctite and torque to **75 ft lbs.**



13. Using the new support bracket as a guide, carefully drill (2) 1/2" holes into the stock front cross member. **Special note: Take special care not to drill into the cooling lines that wrap around the front cross member.** Locate (2) 1/2" x 1 1/2" bolts, (4) 7/16" USS flat washers and (2) 1/2" unitorque nuts from hardware bag F4XRBNB. Secure to newly installed front twin eye beam axle support bracket to the stock front cross member using the new 1/2" x 1 1/2" bolts and hardware. Make sure to use thread locker or loctite and torque to **75 ft lbs.**



14. Locate (1) 9/16" x 3 1/2" cam bolt, (2) cam washers and (1) 9/16" unitorque nut from hardware bag F4XRB-NB1. Carefully raise up on the hydraulic floor jack that is supporting the driver side front twin eye beam axle until it slides up into the newly installed bracket. Secure the axle to the new bracket using the new cam bolt and hardware. Make sure to use thread locker or loctite and torque to **85 ft lbs.** **Special note: For now, place the cam washer in the center position.**



15. Locate the new rear twin eye beam axle pivot relocation bracket and the stock hardware. Install the new rear twin eye beam axle pivot relocation bracket into the stock location and secure using the stock hardware. Make sure to use thread locker or loctite and torque to **75 ft lbs.** **Special note: Make sure that the new twin eye beam axle pivot relocation bracket is seating square into the stock location.**



16. Using the new rear twin eye beam bracket as a guide, carefully drill (2) 1/2" holes into the stock cross member. **Special note: Drilling from the front of the vehicle to the back will make this step easier. Also, take special care not to drill into the cooling lines that wrap around the rear cross member.**



17. Locate (2) 1/2" x 1 1/2" bolts, (4) 7/16" USS flat washers and (2) 1/2" unitorque nuts from hardware bag F4XRBNB. Secure the new rear twin eye beam axle pivot relocation bracket to the cross member using the new 1/2" x 1 1/2" bolts and hardware. Make sure to use thread locker or loctite and torque to **75 ft lbs.**



18. Locate (1) 9/16" x 3 1/2" cam bolt, (2) cam washers and (1) 9/16" unitorque nut from hardware bag F4XRB-NB1. Carefully raise up on the hydraulic floor jack that is supporting the passenger side rear twin eye beam axle until it slides up into the newly installed bracket. Secure the axle to the new bracket using the new cam bolt and hardware. Make sure to use thread locker or loctite and torque to **85 ft lbs.** **Special note: For now, place the cam washer in the center position.**



19. Working on the driver side, remove the stock coil clip from the stock location and save the stock hardware and coil clip. Now remove the stock hardware that connects the stock coil spring to the stock front twin eye beam axle. Save the stock nut and coil washer. Remove and discard the stock coil spring. Repeat procedure on the passenger side. **Part # 24814/F4XRB does not include the front coil springs. Part # 24811/F4CL is the part # for the front coil springs and they need to be ordered as a septate part #. If you have not already ordered your new front coil springs, please contact Tuff Country or your local Tuff Country dealer and order the new front coil springs.**



20. Working on the driver side, remove the stock lower coil spring/sway bar bracket and set aside. Repeat procedure on the passenger side.



21. Working on the driver side, remove the top stock bolt that connects the stock radius arm to the stock front driver side twin eye beam axle. Save the stock bolt. Repeat procedure on the passenger side.



22. Working on the driver side, remove the bottom stock bolt that connects the stock radius arm to the stock front driver side twin eye beam axle. Save the stock bolt. Repeat procedure on the passenger side.



23. Working on the driver side, remove the (2) stock bolts that connect the lower shock bracket to the stock front twin eye beam axle. Save the stock hardware and bracket. Repeat procedure on the passenger side.



24. Working on the driver side, remove the stock radius arm from the stock location and discard. Repeat procedure on the passenger side.



25. Working on the driver side, place a reference mark in the middle of the rear stock radius arm bracket hole that was attached to the frame rail. **Special note: this is the hole that is under the body mount bushing.** Repeat procedure on the passenger side.



26. Working on the driver side, measure from the line that was scribed in step # 25 towards the rear of the vehicle 15" and scribe another line. **Special note: Check and double check to make sure that this measurement is correct. If this measurement is not correct, once the new bracket and new extended radius arms are installed the front axles may be sitting to far forward or to far back.** Repeat procedure on the passenger side.



27. Working on the driver side, remove the stock nut that connects the stock transfer case cross member to the stock frame rail. Save the stock hardware. Repeat procedure on the passenger side.



28. Locate the new driver and passenger side extended radius arm relocation bracket. Working on the driver side and using a pair of vise grips, clamp the new driver side extended radius arm relocation bracket to the stock frame rail making sure that the rear hole in the new bracket is centered with the marked that was scribed in step # 26. Repeat procedure on the passenger side. **This photo is showing the driver side extended radius arm relocation bracket.**



29. Working on the driver side and using the new extended radius arm bracket as a guide, carefully drill (4) 1/2" hole into the frame rail. **Special note: there will be (2) holes on the side of the frame rail and (2) on the bottom of the frame rail. Also, take special care not to drill into any wires or hoses that could be running down the inside of the stock frame rail.** Repeat procedure on the passenger side. **This photo is showing the driver side extended radius arm relocation bracket.**



30. Locate (8) 1/2" x 1 1/2" bolts, (16) 7/16" USS flat washers and (8) 1/2" unitorque nuts from hardware bag F4XRBNB. Also, locate the stock transfer case cross member nuts that were removed. Working on the driver side, secure the new driver side extended radius arm relocation bracket to the stock frame rail using the new 1/2" x 1 1/2" bolts and hardware. Make sure to use thread locker or loctite and torque to **75 ft lbs.** Now install the stock transfer case cross member nut into the stock location. Make sure to use thread locker or loctite and torque to **55 ft lbs.** **These photos are showing the driver side extended radius arm relocation bracket.** Repeat procedure on the passenger side.



31. Locate the new driver and passenger side extended radius arms. Locate (2) sert fittings from hardware bag F4XRBNB1. Install the new sert fittings into the eyelet ends of the new extended radius arms. **Take special care not to damage the sert fitting during installation.**



32. Locate (4) PB2408 poly bushings, (2) S10081 sleeves from hardware bag F4XRBNB1. Install the bushings and sleeves into the eyelet ends of the new extended radius arms. **Special note: Make sure to use a lithium or moly base grease prior to inserting the bushings and sleeves into the new extended radius arms. This will help increase the life of the bushings as well as prevent squeaking.**



33. Locate the stock lower shock bracket and hardware. Also, locate the top stock bolt that connected the stock radius arm to the stock front twin eye beam axle. Working on the driver side, install the new driver side radius arm to the stock front twin eye beam using the lower shock bracket and the stock hardware. Make sure to use some thread locker or loctite. Torque the top stock bolt to **145 ft lbs.** and the shock bracket hardware to **45 ft lbs.** **Special note: A good way to tell the difference between the new driver and passenger side extended radius arms is when they are installed, they will angle towards the center of the vehicle then out to the new extended radius arm relocation**

brackets. Repeat procedure on the passenger side.



34. Locate the bottom stock bolt that connected the stock radius arm to the stock front twin eye beam. Working on the driver side, secure to newly installed driver side extended radius arm to the bottom of the stock front twin eye beam using the stock hardware. Make sure to use thread locker or loctite and torque to **145 ft lbs.** Repeat procedure on the passenger side.



35. Locate (2) 9/16" x 4" cam bolts, (4) cam washers and (2) 9/16" unitorque nuts from hardware bag F4XRB-NB1. Working on the driver side, install the newly installed driver side extended radius arm into the newly installed driver side extended radius arm relocation bracket and secure using the new cam bolts and hardware. Make sure to add some thread locker or loctite and torque to **95 ft lbs.** **Special note: For now, place the cam washer in the center position.**



Repeat procedure on the passenger side. **These photos are showing the driver side extended radius arm and the extended radius arm relocation bracket.**



36. Locate the stock lower coil spring/sway bar brackets. Working on the driver side, install the stock lower coil spring/sway bar bracket into the stock location. Repeat procedure on the passenger side.



Part # 24814/F4XRB does not include the front coil springs. Part # 24811/F4CL is the part # for the front coil springs and they need to be ordered as a septate part #. If you have not already ordered your new front coil springs, please contact Tuff Country or your local Tuff Country dealer and order the new front coil springs.

37. Locate the new front coil springs. Also, locate the stock lower coil spring washer and hardware. Working on the driver side, install the new coil spring into the stock location and secure using the stock hardware. **Do not tighten at this point.** Repeat procedure on the passenger side.



38. Locate the stock upper coil clip and hardware. Working on the driver side, secure the new coil spring into the stock location and secure using the stock coil clip and hardware. Make sure to use thread locker or loctite and torque to **14 lbs.** Repeat procedure on the passenger side. Move back to the driver and passenger side stock hardware holding the new coil spring into the stock lower location and add some thread lock or loctite and torque to **145 ft lbs.**



39. Locate the stock sway bar and the stock sway bar lower hardware. Working on the driver side, install the stock sway bar end link into the stock location and secure using the stock hardware. **Do not tighten at this point.** Repeat procedure on the passenger side. Let the stock sway bar hang.



40. Locate the new driver and passenger side sway bar relocation brackets. Also, locate the stock upper frame sway bar mounting hardware. Working on the driver side, secure the new sway bar relocation bracket to the stock location using the stock hardware. Do not tighten at this point.

41. Locate (4) 7/16" x 1 1/2" bolts, (8) 3/8" USS flat washers and (4) 7/16" unitorque nuts from hardware bag F4XRBNB. Working on the driver side, swing the stock sway bar up and secure it to the newly installed sway bar relocation brackets. Secure using the new 7/16" x 1 1/2" bolts and hardware. **Do not tighten at this point.** Repeat procedure on the passenger side. Once the sway bar has been attached to the new sway bar relocation brackets, add some thread locker or loctite to the stock and new bolts and torque the stock and new bolts on the driver and passenger side to **38 ft lbs.** **Special note: If you are not able to attach the stock sway bar to the newly installed sway bar relocation brackets, this step may need to be done once the completion of the installation is completed and the weight of the vehicle is on the ground.**



42. Move back to the stock lower sway bar end link mounting hardware and add some thread locker or loctite on both the driver and passenger side and torque to **65 ft lbs.**

Tuff Country highly recommends installing an aftermarket pitman arm once part # 24814/F4XRNB has been installed. If you have not already ordered your new pitman arm, please contact Tuff Country or your local Tuff Country dealer and order part # 70200/FSA.

43. Working on the stock pitman arm, remove the stock cotter pin and castle nut. Save the stock hardware. Carefully remove the stock tie rod from the stock pitman arm. **Special note: Take special care not to damage the stock tie rod dust boot. If the stock tie rod dust boot looks damaged, it would be a good time to replace it.**

44. Remove the stock hardware that connects the stock pitman arm to the sector shaft on the stock steering box. Save the stock hardware. Using a pitman arm puller, carefully remove the stock pitman arm from the stock location. The stock pitman arm may be discarded.

45. Locate the new pitman arm. Locate the stock hardware that connected the stock pitman arm to the sector shaft on the stock steering box. Install the new pitman arm into the stock location and secure using the stock hardware. Make sure to use thread locker or loctite and torque to **145 ft lbs.**

46. Locate the stock cotter pin and castle nut that connected the stock tie rod to the stock pitman arm. Install the stock tie rod to the newly installed pitman arm and secure using the stock hardware. Torque the castle nut to **65 ft lbs.** Now install the stock cotter pin to the stock tie rod and castle nut. **Special note: If you are not able to install the stock cotter pin because the hole in the tie rod does not line up with the castle nut, DO NOT loosen, tighten the castle nut until the stock cotter pin can be installed.**



47. Slight adjustments may need to be done to the outer tie rods so the vehicle can be driven to an alignment shop. If this is the case on the vehicle that you are working on, loosen the stock hardware on the adjusting sleeve and using a pair of pliers, adjust the toe close enough so that the vehicle can be driven.



48. Locate the new front shocks. **New longer front shocks are needed after this suspension system has been installed and the front shocks need to be ordered as a separate part #. If you have not already ordered your front shocks, please feel free to contact Tuff Country or your local Tuff Country dealer and order your front shocks. Tuff Country recommends installing a 20" fully extended nitrogen gas shock in the front and a 23" fully extended cellular shock in the front for the auxiliary shock.** Working on the new shocks, install the new bushings and proper sleeves that are packaged with the new shocks into the eyelet end of each new shocks. If the vehicle that you are working on has the auxiliary shock, no sleeve will be installed in the eyelet of the shock, it will just be the bushing only. **Special note: Make sure to use a lithium or moly base grease prior to installing the new bushings and sleeves into the eyelet of the new shocks. This will help with the life of the bushings as well as prevent squeaking.** Locate the stock lower shock mounting hardware. Also, locate the new upper stem mount hardware that was packaged with the new shocks. Working on the driver side, install the new shocks into the stock location using the stock lower hardware and the new upper hardware. Make sure to use thread locker or loctite and torque the bottom hardware to **65 ft lbs.** and the upper hardware to **18 ft lbs.** Repeat procedure on the passenger side. **Special note: Tuff Country highly recommends installing shock boots onto the new shocks. If shocks boots are not installed, damage may occur to the piston of the new shock. If you have not already ordered your new shocks boots, please contact Tuff Country or your local Tuff Country dealer and order**

some new shock boots. Tuff Country offers, dark blue, light blue, gray, black, red or yellow shock boots.

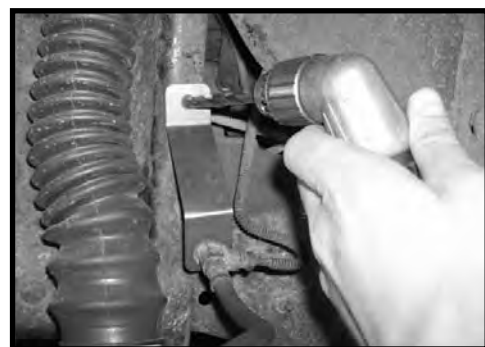
Special note: This kit comes with a front and rear brake line relocation kit. Sometimes the brake line relocation kit is not needed. Check the stock brake lines and if they are too tight, then the new front and rear brake line relocation kit will need to be installed. If the brake line relocation kit does not need to be installed, please skip to step # 54.

49. Working on the driver side, carefully remove the stock e-clip from the stock brake line. The stock e-clip may be discarded. Repeat procedure on the passenger side.



50. Working on the driver side, carefully pull the hard line out so that the new front brake line relocation bracket can be installed. Repeat procedure on the passenger side. **Special note: Take special care not to damage the stock brake line when performing this step.**

51. Locate the new front brake line relocation brackets from hardware bag FBLNB2. Working on the driver side, slide the open end of the new brake line over the stock brake line. Now measuring from the stock brake line hole up 2 1/2", carefully drill a 5/16" hole into the stock shock/coil spring bucket. Repeat procedure on the passenger side.



52. Locate (2) 5/16" x 1" bolt, (4) 1/4" USS flat washers and (2) 5/16" unitorque nuts from hardware bag FBLNB2. Working on the driver side, secure the new front brake line relocation to the previously drilled hole using the new 5/16" x 1" bolt and hardware. Make sure to use thread locker or loctite and torque to **12 ft lbs.** Repeat procedure on the passenger side.



53. Locate (2) e-clips from hardware bag FBLNB2. Working on the driver side, install the new e-clips to the stock brake line on the back side of the newly installed brake line relocation bracket. Repeat procedure on the passenger side. **Special note: Once the completion of the suspension system has performed and the weight of the vehicle is on the ground, check to make sure that the stock brake line does not rub on the inside of the tire.**



54. If you have not already done so, remove all the hydraulic floor jacks from under the vehicle. Check and double check to make sure that all steps have been performed properly and check again. Install the tires and wheels and carefully lower the vehicle to the ground.

55. If you were not able to install the stock sway bar to the newly installed sway bar relocation brackets, perform this step now that the weight of the vehicle is on the ground.

Front end installation completed!

Rear end installation:

Part # 24814/F4XRB does not include anything to complete the rear end of the vehicle. Part # 24813/F4RD is the part # for the rear end and needs to be ordered as a separate part #.

56. To begin installation, carefully block the front tires and wheels so that the vehicle can not roll forward. Safely lift the rear of the vehicle and support the vehicle with a pair of jack stands. Place a jack stand on both the driver and the passenger side. Next, remove the rear wheels and tires from both sides.

57. Working on the driver side, remove the stock shock from the stock location. The stock shock may be discarded but save the stock upper and lower hardware. Repeat procedure on the passenger side.

58. Working on the driver side, remove the stock sway bar end link from the stock sway bar. Save the stock hardware. Repeat procedure on the passenger side.



59. Place a pair of hydraulic floor jacks under the rear differential. Carefully raise up on the hydraulic floor jacks until they make contact with the rear differential.

60. Working on the driver side, remove the stock u-bolts from the stock location. The stock u-bolts and hardware may be discarded. Save the stock upper u-bolt plate. Repeat procedure on the passenger side.



61. Carefully lower down on both hydraulic floor jacks at the same time allowing enough room for the new rear add-a-leaves to be installed. Working on the driver side, remove the stock block from the stock location and set aside. Repeat procedure on the passenger side.

62. Working on the driver side and using a pair of "C" channel vise grips, clamp the stock rear springs together. Place one towards the front of the stock centering bolt and one towards the rear. Special note: Make sure not to clamp the stock over load. Repeat procedure on the passenger side.



63. Carefully remove the stock centering bolt from the stock location and discard. **Special note: Once the stock centering bolt has been removed, the stock over load will fall out. Save the stock over load.** Repeat procedure on the passenger side.



64. Locate the new rear add-a-leaves. Also, locate the new 3/8" centering bolts and nuts from hardware bag CB38. Working on the driver side, install the new add-a-leaf between the stock spring and the stock overload. Secure using the new 3/8" centering bolt and nuts. Tighten the new centering bolt until all the springs come together and torque to 40 ft lbs. **Special note: Tuff Country does not recommend using an air gun to tighten the nut all the way down. Once the springs are starting to come together, Tuff Country recommends using a hand wrench to finish tightening the nut. If an air gun is used to tighten the centering bolt all the way down, the centering bolt may strip causing the springs to come apart.** Repeat procedure on the passenger side.



65. Working on the driver side and using a die grinder, carefully cut off the excess thread from the new centering bolt. Repeat procedure on the passenger side.



66. Locate the stock blocks. Working on the driver side, install the stock block into the stock location. Repeat procedure on the passenger side. Carefully raise up on both hydraulic floor jacks that are holding the rear axle until the stock blocks make contact with the stock springs.



67. Locate (4) 9/16" x 3 1/2" x 10 1/2" round u-bolts. Locate (8) 9/16" u-bolt high nuts and (8) 9/16" u-bolt harden washers from hardware bag 916NW. Also, locate the stock upper u-bolt plate. Working on the driver side, secure the axle to the stock spring using the new u-bolts, u-bolt hardware and stock u-bolts plates. Torque to 110 ft lbs. Repeat procedure

on the passenger side.



68. Locate the new rear shocks. **New longer rear shocks are needed after this suspension system has been installed and the rear shocks need to be ordered as a separate part #. If you have not already ordered your rear shocks, please feel free to contact Tuff Country or your local Tuff Country dealer and order your rear shocks. Tuff Country recommends installing a 26" fully extended nitrogen gas shock in the rear.** Working on the new shocks, install the new bushings and proper sleeves that are packaged with the new shocks into each eyelet of the new shocks. **Special note: Make sure to use a lithium or moly base grease prior to installing the new bushings and sleeves into the eyelets of the new shocks. This will help with the life of the bushings as well as prevent squeaking.**

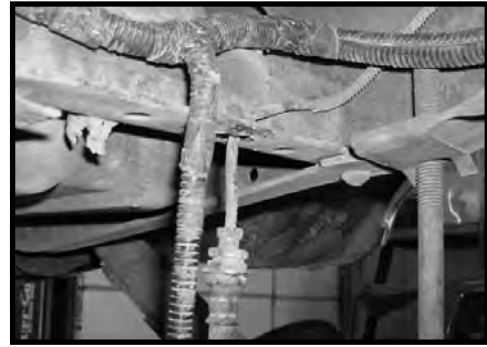
69. Locate the stock upper and lower shock mounting hardware. Working on the driver side, install the new shocks into the stock location using the stock upper and lower hardware. Make sure to use thread locker or loctite and torque both the upper and lower hardware to **65 ft lbs**. Repeat procedure on the passenger side. **Special note: Tuff Country highly recommends installing shock boots onto the new shocks. If shock boots are not installed, damage may occur to the piston of the new shock. If you have not already ordered your new shocks boots, please contact Tuff Country or your local Tuff Country dealer and order some new shock boots. Tuff Country offers, dark blue, light blue, gray, black, red or yellow shock boots.**

70. Remove both hydraulic floor jacks from under the vehicle.

Special note: This kit comes with a front and rear brake line relocation kit. Sometimes the brake line relocation kit is not needed. Check the stock brake lines and if they are too tight, then the new front and rear brake line relocation kit will need to be installed. If the brake line relocation kit does not need to be installed, please skip to step # 74.

71. Working on the driver side, remove the stock e-clip that is holding the stock brake line to the stock location. The stock e-clip may be discarded.

72. Carefully pull the stock brake line downward, pulling the line through the stock hole.



73. Locate the new rear brake line relocation bracket, (1) 5/16" x 1" bolt (2) 1/4" USS flat washers, (1) 5/16" unitorque nut and (1) e-clip from hardware bag FBLNB2. Slide the open end of the new brake line over the stock brake line. Push the new bracket up on the cross member and carefully drill a 5/16" hole into the cross member. Secure the new brake line into the previously drilled hole and secure using the new 5/16" x 1" bolt and hardware. Make sure to use thread locker or loctite and torque to **12 ft lbs**. Now install the new e-clip into the stock location.



74. Locate the stock sway bar end link hardware. Working on the driver side, secure the stock sway bar end link to the stock sway bar using the stock hardware. Make sure to add some thread locker or loctite and torque to **32 ft lbs**. Repeat procedure on the passenger side.

75. Check and double check to make sure that all steps were performed properly and check again.

76. Install the tires and wheels and carefully lower the vehicle to the ground.

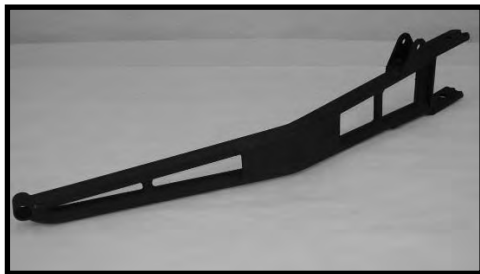
Congratulations, installation complete!

Special note: After the completion of the installation, Tuff Country EZ-Ride Suspension recommends taking the vehicle to an alignment shop and having a proper front end alignment performed.

Tuff Country EZ-Ride Suspension recommends that a complete re-torque is done on all bolts associated with this suspension system. It is the customers responsibility to make sure that a re-torque is performed on all hardware associated with this suspension system after the first 100 miles of installation. It is also the customers responsibility to do a complete re-torque after every 3000 miles or after every off road use. Neglect of following these steps could cause brackets to come loose and cause serious damage to the suspension system and to the vehicle.

Tuff Country EZ-Ride Suspension packages (2) sets of instruction sheets with this box kit. (1) is for the installer and (1) is for the customer. The (1) for the customer has some post installation procedure literature and it is the installers responsibility to make sure that the customer receives a copy of the installation manual along with the literature.

If you have any questions or concerns, please feel free to contact Tuff Country or your local Tuff Country dealer.



F2XRB-01 / Qty. 1
DS extended radius arm



F2XRB-02 / Qty. 1
PS extended radius arm



F2XRB-03 / Qty. 1
DS extended radius arm
relocation bracket



F2XRB-04 / Qty. 1
PS extended radius arm
relocation bracket



F401 / Qty. 1
Front axle pivot relocation
bracket (large)



F402 / Qty. 1
Rear axle pivot relocation
bracket (small)



F405 / Qty. 2
Front DS & PS sway
bar relocation bracket



F406 / Qty. 1
Front axle pivot
relocation support bracket