

ROUGH COUNTRY

SUSPENSION SYSTEMS®

921500100

FORD 2005-22 F-250 Vertex Coilover Conversion

Thank you for choosing Rough Country for all your vehicle needs.

Please read instructions before beginning installation. Check the kit hardware against the kit contents shown below. Be sure you have all needed parts and know where they go.

If question exist, please call us @1-800-222-7023. We will be happy to answer any questions concerning this product.

Check all fasteners for proper torque. Check to ensure for adequate clearance between all components.

Periodically check all hardware for tightness.

KIT CONTENTS:

Upper Coil Over Mount x2
Lower Coil Over Mount x2
Brake Line Relocation Bracket x2
Driver Vertex x1
Passenger Vertex x1
Front Shocks x2

TOOLS NEEDED:

10mm Wrench or Socket
18mm Wrench or Socket
21mm Wrench or Socket
22mm Wrench or Socket
7/16 Wrench or Socket
9/16 Wrench or Socket
30mm Socket
Drill Motor
.406 Drill Bit
Reciprocating Saw
Sander
Color Match Frame Paint
Paint Pen
Jack Stands
Jack

HARDWARE INCLUDED:

3/8-16 x 1.25 Hex Head Bolt x8
3/8" Washer x8
3/8-16 Flange Lock x8
14mm-2.0 x 40mm x2
14mm Lock Washer x2
14mm Flat Washer x10
14mm-2.0 x 75mm x4
14mm-2 Nylock Nut x4
1/4-20 x 1 Hex Head Bolt x6
1/4-20 Nylock Nut x6
1/4" Flat Washer x6

Torque Specs:

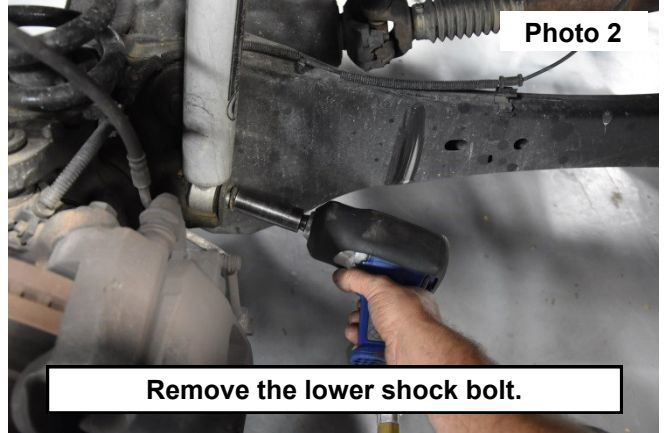
Size	Grade 5	Grade 8	Size	Class 8.8	Class 10.9
5/16"	15 ft/lbs	20ft/lbs	6MM	5ft/lbs	9ft/lbs
3/8"	30 ft/lbs	35ft/lbs	8MM	18ft/lbs	23ft/lbs
7/16"	45 ft/lbs	60ft/lbs	10MM	32ft/lbs	45ft/lbs
1/2"	65 ft/lbs	90ft/lbs	12MM	55ft/lbs	75ft/lbs
9/16"	95 ft/lbs	130ft/lbs	14MM	85ft/lbs	120ft/lbs
5/8"	135ft/lbs	175ft/lbs	16MM	130ft/lbs	165ft/lbs
3/4"	185ft/lbs	280ft/lbs	18MM	170ft/lbs	240ft/lbs



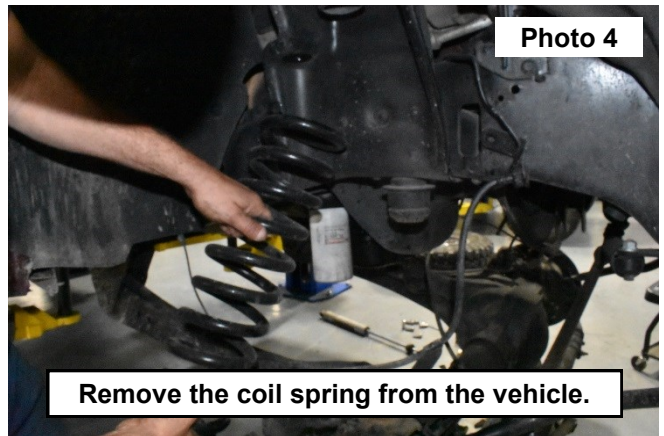
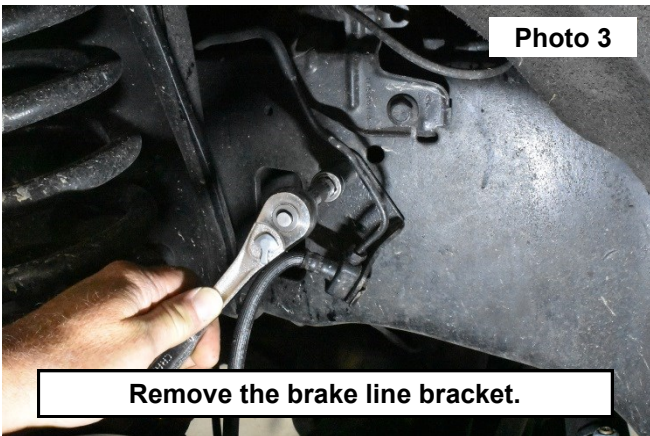


INSTALLATION INSTRUCTONS

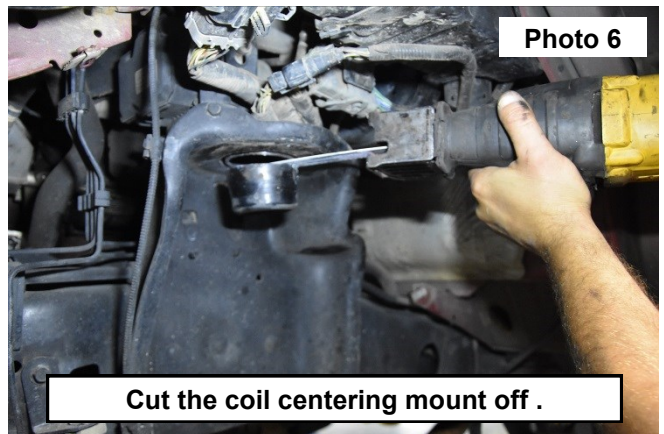
1. Lift up the front of the vehicle using a jack, place jack stands under the frame and lower the vehicle.
2. Remove the wheels and tires from the vehicle.
3. Support the axle using a jack and remove the front sway link nut from each side of the vehicle using an 18mm socket. **See Photo 1.**
4. Remove the trackbar bolt and bar from the frame mount using a 30mm socket.
5. Remove the brake line bracket from the axle mount using a 10mm socket.
6. Disconnect the abs line from the radius arm.
7. Remove the lower shock bolt using an 21mm socket. **See Photo 2.**
8. Remove the upper shock hard ware using a 21mm wrench, then remove the shock from the vehicle.



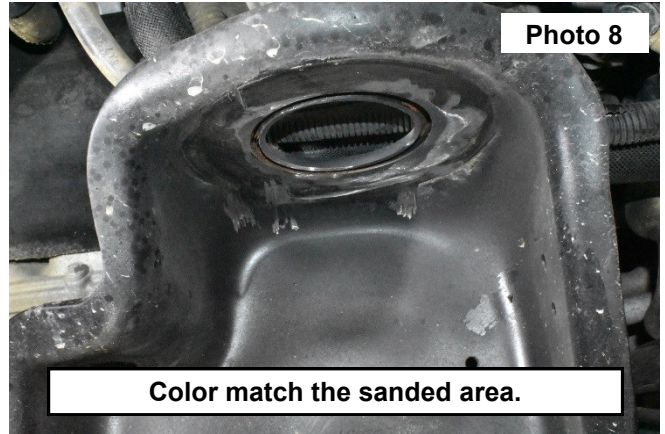
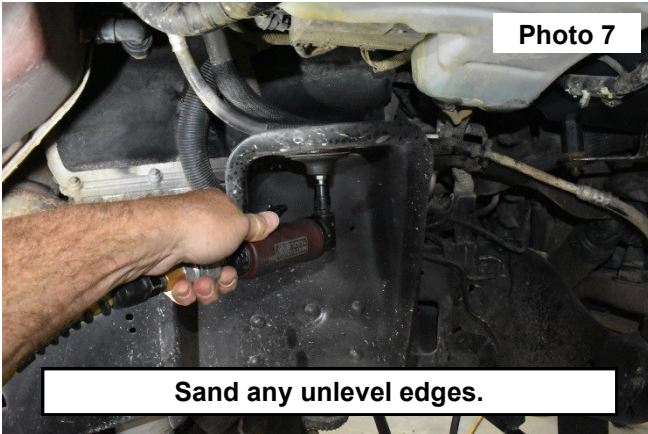
9. Remove the brake line bracket from the frame using a 10mm socket. **See Photo 3.**
10. Lower the jack down and remove the coil spring from the vehicle. **See Photo 4.**



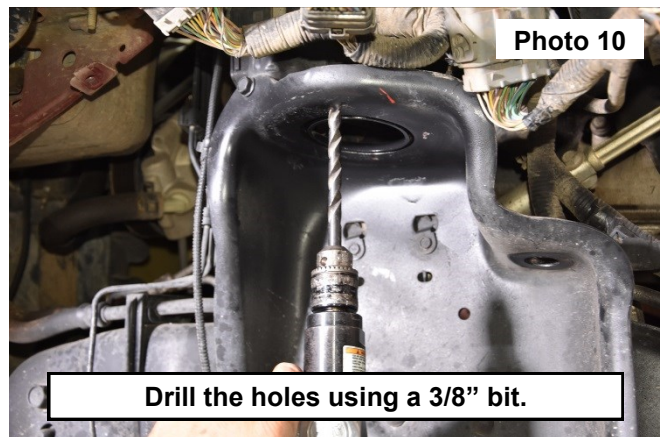
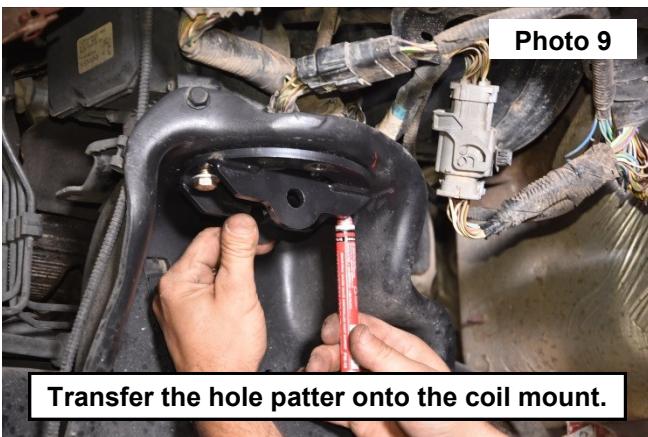
11. Remove the coil spring isolator. **See Photo 5.**
12. Cut along the top of the coil spring mount, removing the coil spring centering mount. Using a reciprocating saw. **See Photo 6.**



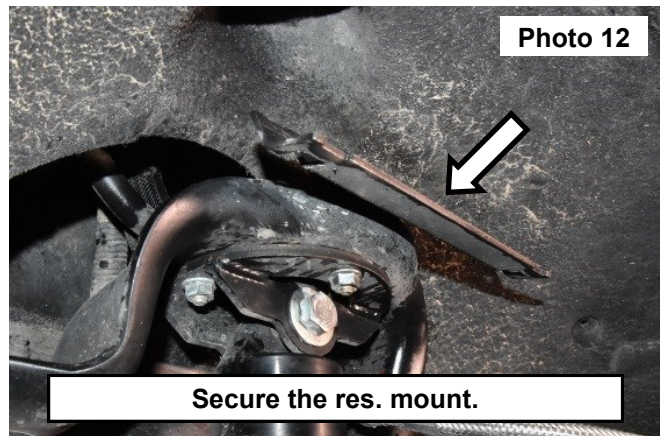
13. Sand the trimmed are flush with the coil mount and touch any sanded areas with color match spray paint. **See Photos 7 and 8.**



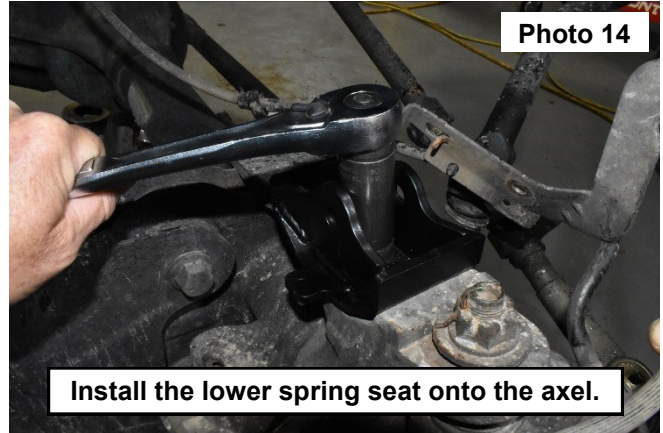
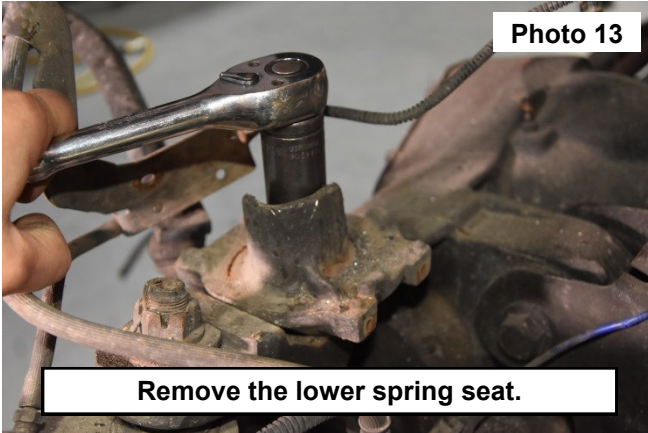
14. Using a paint pen to transfer the hole orientation of the coil mount. **See Photo 9.**
15. Use a 13/32" bit to drill each marked hole in the coil mount. **See Photo 10.**



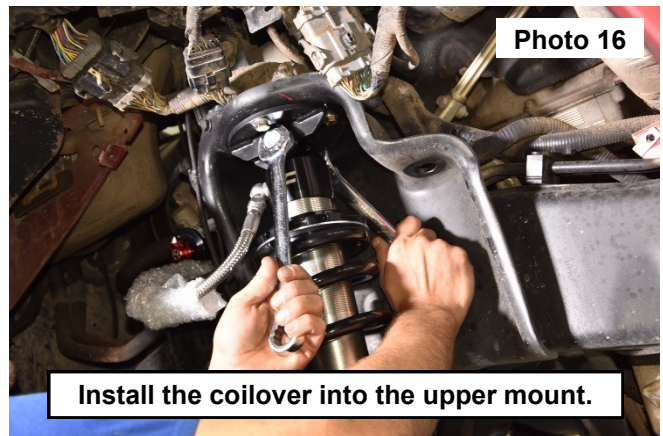
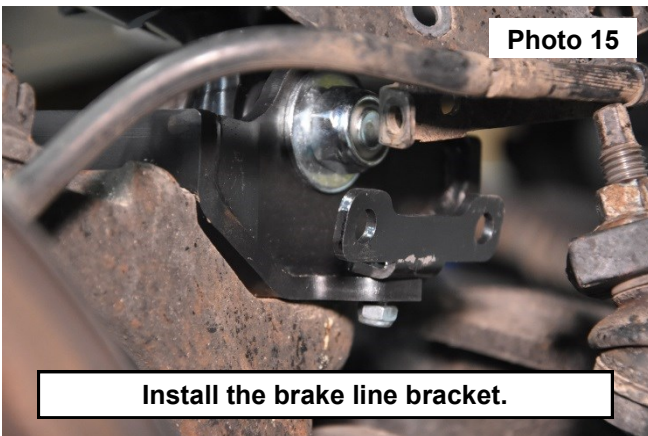
16. Install (2) of the supplied 3/8-16 bolts, and (2) 3/8" Washers into the upper bracket and place the coil over mount to the bottom of the coil seat. **See Photos 11 and 12.**
17. Secure the brackets using (2) of the supplied 3/8 Flange locks nuts. Tighten using a 9/16 wrench and socket.



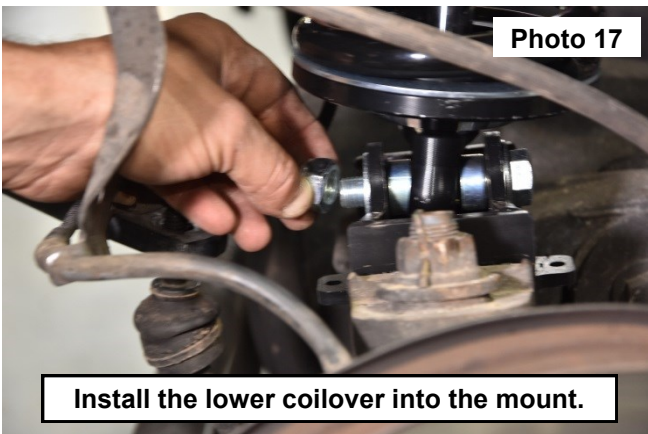
18. Remove the lower spring seat using a 21mm socket. **See Photo 13.**
19. Install the lower spring seat onto the axel. Then secure using (1) 14mm hex head bolt (1) 14mm Lock washer and (1) 14mm Flat washer. Tighten using a 22mm socket. **See Photo 14.**



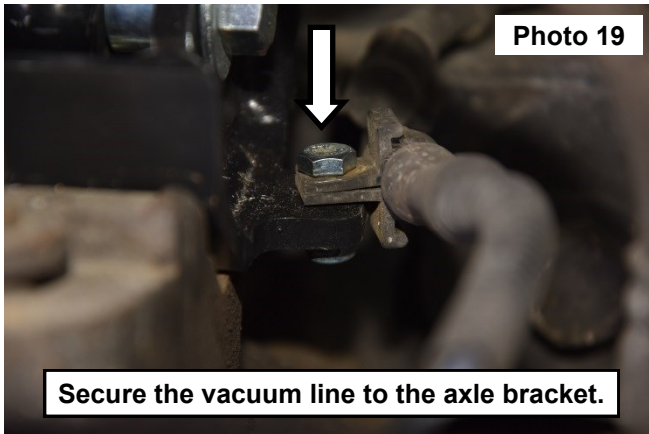
20. Install brake line bracket to front side of the axle mount using (1) 1/4-20 x 1" Hex head bolt (2) 1/4" Flat washers and (1) 1/4-20 Hex nut. Tighten the bracket parallel with the axle bracket using a 7/16 wrench and socket. **See Photo 15.**
21. Install the Vertex Coilover into the upper mount. Secure using (1) 14mm x 40mm Hex head bolt (2) 14mm Washers and (1) 14mm-2.0 Nylock nut. Tighten using a 22mm wrench and socket. **See Photo 16.**



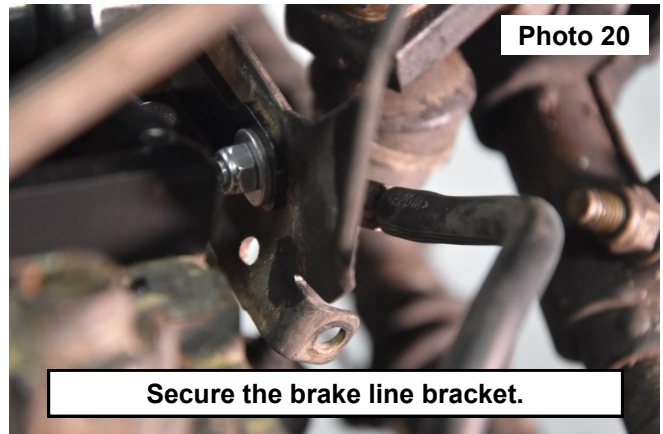
22. Raise the axle up and install the lower coilover mount into the bracket. Secure using (1) 14mm x 40mm Hex head bolt (2) 14mm Washers and (1) 14mm-2.0 Nylock nut. Tighten using a 22mm wrench and socket. **See Photo 17.**
23. Place the reservoir onto the mount and secure using (2) clamps around the mount and reservoir. Tighten using a flat bit driver. **See Photo 18.**



24. Secure the vacuum line to the rear of the axle bracket using (1) 1/4-20 x 1" Hex head bolt(2) 1/4" Flat washers and (1) 1/4-20 Hex nut. Tighten the bracket parallel with the axle bracket using a 7/16 wrench and socket. **See Photo 19.**
25. Secure brake line bracket to front bracket installed onto the axle bracket using (1) 1/4-20 x 1" Hex head bolt(2) 1/4" Flat washers and (1) 1/4-20 Hex nut. Tighten the bracket using a 7/16 wrench and socket. **See Photos 20 and 21.**

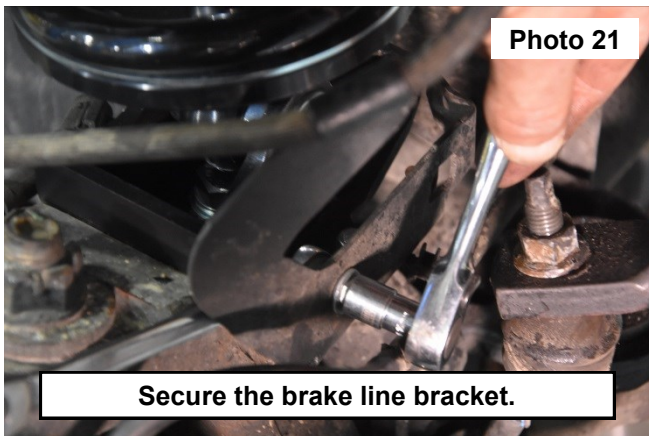


Secure the vacuum line to the axle bracket.

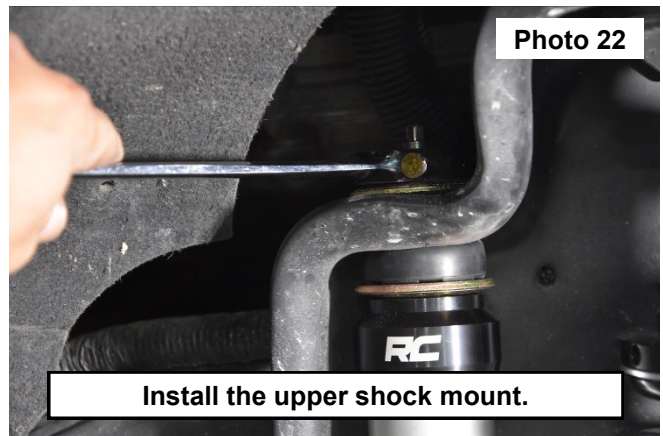


Secure the brake line bracket.

26. Install upper shock mount using the bushing stack supplied. Tighten the nut using a 22mm socket. **See Photo 22.**

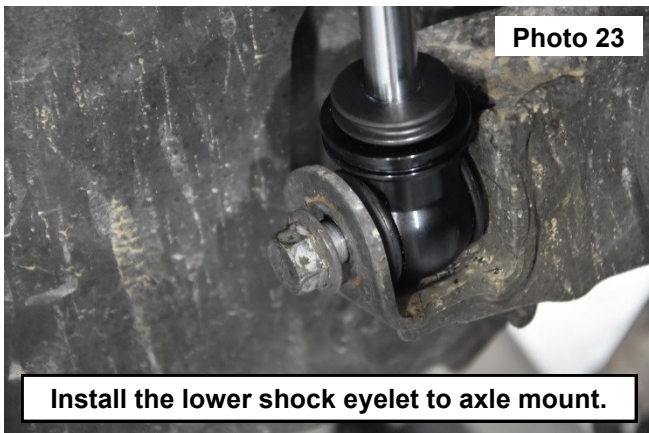


Secure the brake line bracket.

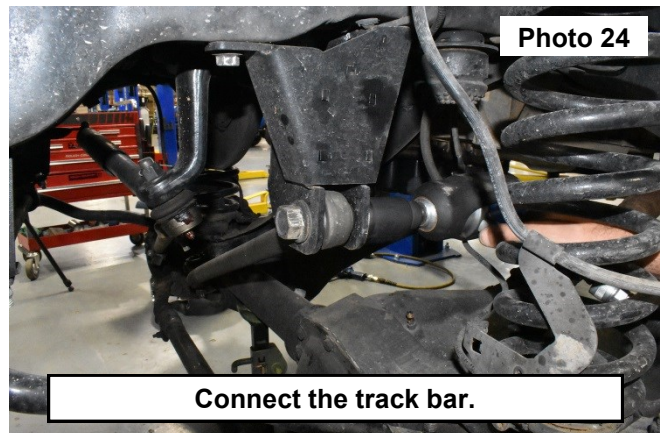


Install the upper shock mount.

27. Install lower shock eyelet into axle mount. Secure using OE bolt, tightening using an 19mm socket. **See Photo 23.**
28. Install the wheels and tires, remove the vehicle from the jack stands and lower onto the ground.
29. Connect the track bar into the frame mount, securing with the OE bolt. Tighten using a 30mm socket. **See Photo 24.**



Install the lower shock eyelet to axle mount.



Connect the track bar.

30. Connect the sway links to the sway bar and secure using the OE nuts. Tighten using a 18mm socket.
31. Install the brake line into the frame mount using the OE bolt. Tighten using a 10mm socket.

By purchasing any item sold by Rough Country, LLC, the buyer expressly warrants that he/she is in compliance with all applicable, State, and Local laws and regulations regarding the purchase, ownership, and use of the item. It shall be the buyers responsibility to comply with all Federal, State and Local laws governing the sales of any items listed, illustrated or sold. The buyer expressly agrees to indemnify and hold harmless Rough Country, LLC for all claims resulting directly or indirectly from the purchase, ownership, or use of the items.



ROUGH COUNTRY

SUSPENSION SYSTEMS®

2017-22 F250 SUPERDUTY 3" LIFT KIT

Thank you for choosing Rough Country for your suspension needs.

Rough Country recommends a certified technician installs this system. In addition to these instructions, professional knowledge of disassemble/reassembly procedures as well as post installation checks must be known. Attempts to install this system without this knowledge and expertise may jeopardize the integrity and/or operating safety of the vehicle.

Please read all the instructions before beginning the installation. Check the kit hardware against the parts list. Be sure you have all the needed parts and understand where they go. Also please review the tools needed list and make sure you have needed tools.

PRODUCT USE INFORMATION

▲WARNING As a general rule, the taller a vehicle is the easier it will roll. Seat belts and shoulder harnesses should be worn at all times. Avoid situations where a side rollover may occur.

Braking performance and capabilities are decreased when significantly larger/heavier tires and wheels are used. Take this into consideration while driving. Also, speedometer recalibration is necessary when larger tires are installed.

Do not add, alter, or fabricate any factory or after-market parts which increase vehicle height over the intended height of the Rough Country product purchased. Mixing component brands, lifts, and/or combining body lift with suspension lifts voids all warranties. Rough Country makes no claims regarding lifting devices and excludes any and all implied claims. We will not be responsible for any product that is altered.

This 3" suspension system was developed for **35x12.50x17** tire on an 8" wheel.

This 3" system comes standard with a 4" block and u-bolt set-up for the rear to give the truck a level look. Personal preference, OE options, and aftermarket add-ons may require additional lifting options. **On vehicles with dual rear wheels the use of blocks and longer u-bolts is not recommended and should not be installed.**

▲NOTICE NOTICE TO DEALER AND VEHICLE OWNER

Any vehicle equipped with any Rough country product must have the "Warning to Driver" decal installed on the sun visor / dash. The decal is to act as a constant reminder for whoever is operating the vehicle of its unique handling characteristics. **INSTALLING DEALER**—It is your responsibility to install the warning decal and to forward these installation instructions on too the vehicle owner for review and to be kept in the vehicle for its service life.

Tools Needed:

10mm Socket
18mm Socket
18mm Wrench
19mm Socket
19mm Wrench
21mm Socket
21mm Wrench
23mm Socket
24mm Socket
30mm Socket
Jack Stands
Floor Jack
Wheel Chocks
1 1/8" Socket
1 1/8" Wrench
Reciprocating Saw
Tap Measure

Torque Specs:

Size	Grade 5	Grade 8	Size	Class 8.8	Class 10.9
5/16"	15 ft/lbs	20ft/lbs	6MM	5ft/lbs	9ft/lbs
3/8"	30 ft/lbs	35ft/lbs	8MM	18ft/lbs	23ft/lbs
7/16"	45 ft/lbs	60ft/lbs	10MM	32ft/lbs	45ft/lbs
1/2"	65 ft/lbs	90ft/lbs	12MM	55ft/lbs	75ft/lbs
9/16"	95 ft/lbs	130ft/lbs	14MM	85ft/lbs	120ft/lbs
5/8"	135ft/lbs	175ft/lbs	16MM	130ft/lbs	165ft/lbs
3/4"	185ft/lbs	280ft/lbs	18MM	170ft/lbs	240ft/lbs



2017-2022 Models - Kit Contents:

Kit Boxes Containing:

9461 or 9462– Front Coil Springs

Kit Boxes containing

- 2-Radius Arm Drop Brackets
- 2-660793 Front Shock
- 2-660804 Rear Shock
- 2-142731 Front Shock Mounting Kit
- 1-Dr Brake Line Bracket
- 1-Pass Brake Line Bracket
- 1-1502BAG2
- 1-1486BAG1

1502BOX2:

- 2-4" Blocks
- 4-5/8" x 3 1/8" x 13 1/2" U-Bolts

50220BOX1:

- 1-Track Bar Bracket
- 4-5/8" x 3 5/8" x 13 1/2" U-Bolts
- 1-5/8BAG
- 1-50220BAG

Kit Bags Containing:

1502BAG2:

- 2-14mm x 130mm Bolts

1486BAG1:

- 4-3/4" x 5" Bolts
- 4-3/4" Nuts
- 8-3/4" Washers
- 4-Crush Sleeves

5/8BAG x 1:

- 4-5/8" Nylock Nuts
- 4-5/8" Flat Washers

50220BAG:

- 2-Cam Plates for track bar bracket

Kit Picture



FRONT INSTALLATION INSTRUCTIONS

1. Place the vehicle on a level surface and chock the rear wheels.
2. Jack up the front of the vehicle and support with jack stands on the frame rail.
3. Remove the front wheels and tires. Support the axle with a floor jack.
4. Remove the stock shock absorber from the upper mount using a 19mm wrench and the lower mount using a 18mm wrench. Retain the lower shock mounting bolt for reuse.
5. Remove the track bar from the frame as shown in **Photo 1** using a 21mm and 30mm socket / wrench and retain the factory hardware. Remove the factory track rod bracket using a 21mm socket and install the new track rod bracket in the factory location using the factory hardware. **See Photo 2.** Torque to 120 ft-lbs. using a 21mm socket.

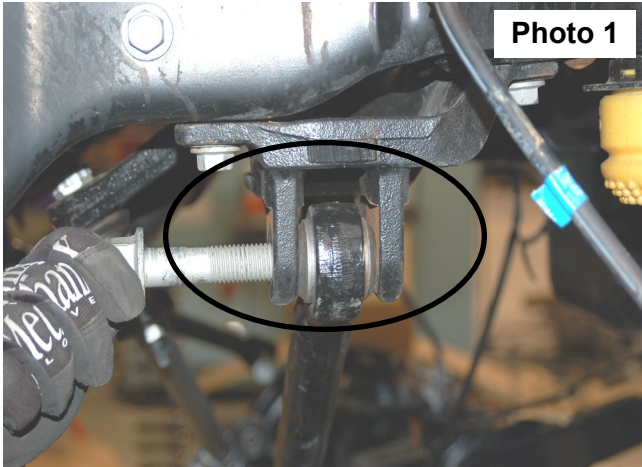


Photo 1

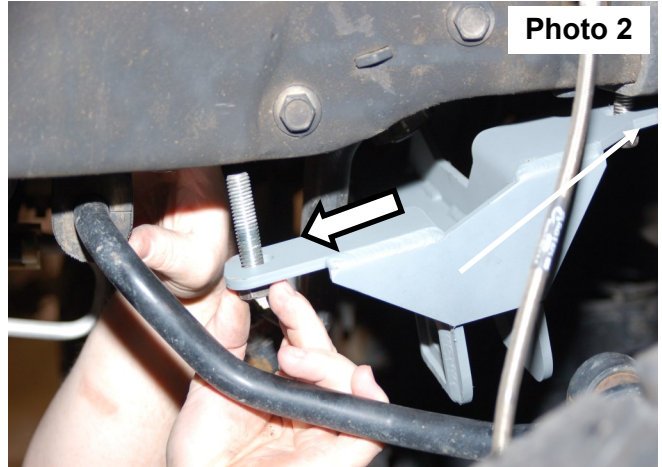


Photo 2

6. Remove lower sway bar nut on the axle using a 21mm wrench to allow the axle to move downward for the installation of the new coil.
7. Using the floor jack, lower the axle to allow for the coil spring to be removed from the coil mount. Take notice of the position of the coil wraps on the top and bottom spring in the mount. The coil will be reinstalled in the same position. **See Photo 3.**
8. Remove the brake line bracket as shown using a 10mm wrench. **See Photo 4.**



Photo 3

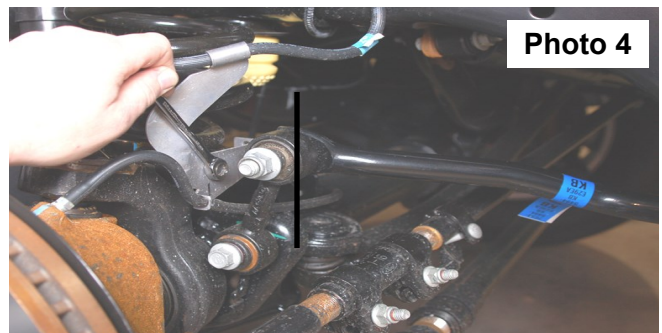


Photo 4

9. Using a 1 1/8" wrench, and socket remove the bolt holding the radius arm to the frame.
10. Using a measuring tape, mark 3/4" from the end of the factory radius arm as shown and trim using a reciprocating saw. This area is trimmed for clearance on the crush sleeve. **See Photo 5.**
Insert the radius arm drop bracket into the stock location. **See Photo 6.**
11. Insert the supplied crush sleeves in the bracket as shown in **Photo 7** and secure using the 3/4" x 5" bolts, washers & nuts. Torque to 339 ft-lbs. using a 1 1/8" wrench & socket .(2 Per side).

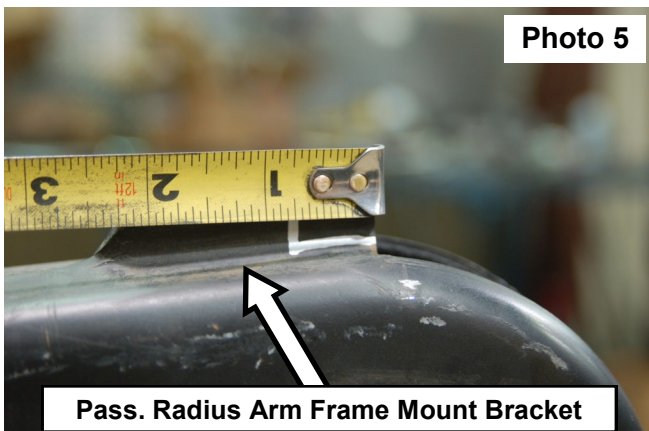


Photo 5

Pass. Radius Arm Frame Mount Bracket

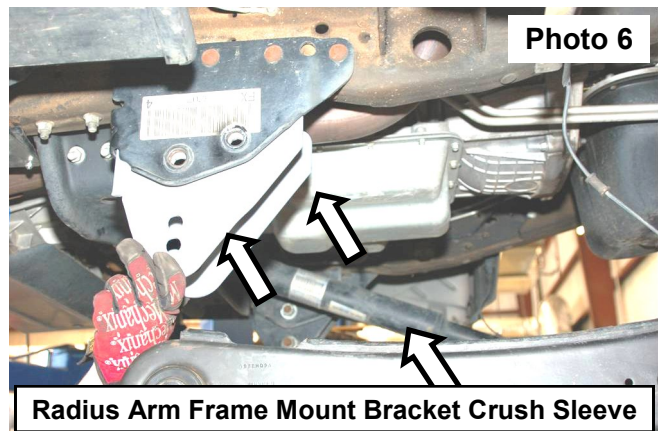


Photo 6

Radius Arm Frame Mount Bracket Crush Sleeve

12. Reinstall the stock radius arm in the new bracket in the upper hole with stock hardware. **See Photo 8.** Leave loose. Do not tighten the radius arm to bracket at this time.
13. Install the new coil springs and slightly compress the coils springs in the mount using the floor jack. Reinstall the sway bar nut using a 21mm wrench & socket.

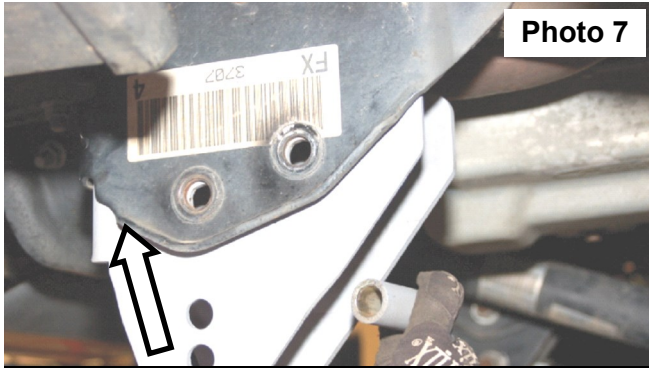


Photo 7

Radius Arm Frame Mount Bracket Crush Sleeve



Photo 8

Radius Arm Frame Mount Bracket with Radius Arm Reinstalled

14. Using the factory hardware install the supplied brake line relocation bracket on the coil seat. Torque to 15 ft-lbs. using a 13mm socket. **See Photo 9.**
15. Install the factory brake line bracket on the supplied relocation bracket using the supplied 5/16" x .75" bolt washer and flange nut. Torque to 15 ft-lbs. using 1/2" wrench and socket. **See Photo 10**
16. Install the front shock, use stock hardware on the lower mount and use the supplied bushing kit on the upper mount. Torque the lower bolt to 88 ft-lbs. using a 18mm socket, tighten the top until the bushing bulges, using a 19mm

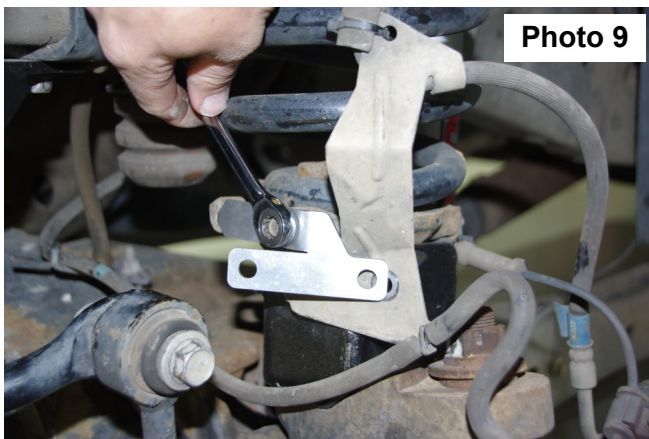


Photo 9

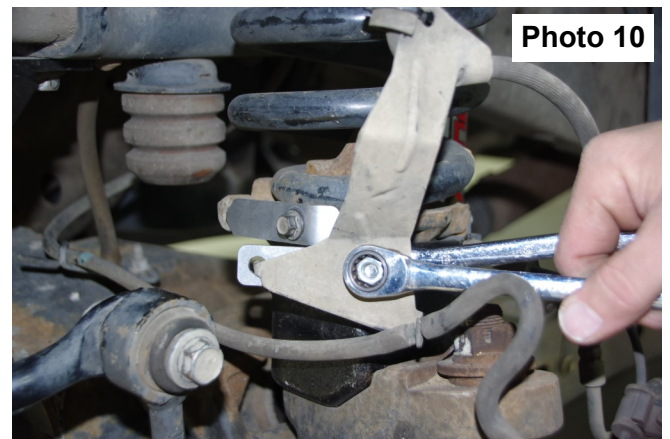


Photo 10

wrench.

17. Install the wheels/tires. Jack up the vehicle and remove jack stands. Lower the vehicle to the ground
18. Position the cam washer as shown in **Photo 11** and swing up the frame end of the track rod. Install in the frame mount using the stock hardware, Torque to 270 ft-lbs. using a 30mm socket and wrench. **Note: It may be necessary to have another person turn the vehicle as it sits still to align the track rod with the mount.**
19. Torque the radius arm in the new bracket to 270 ft-lbs. using a 1 1/8" wrench & socket.

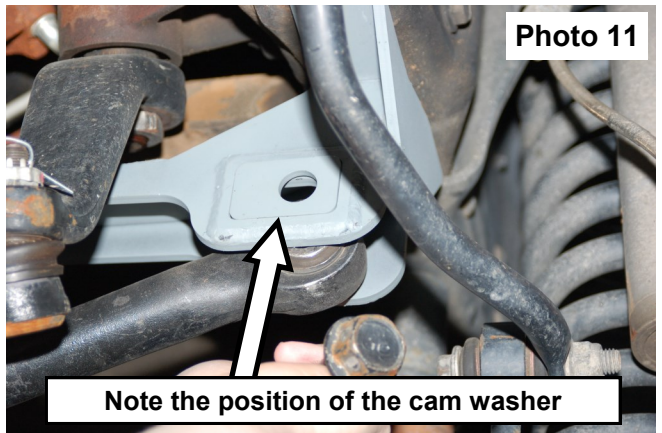


Photo 11

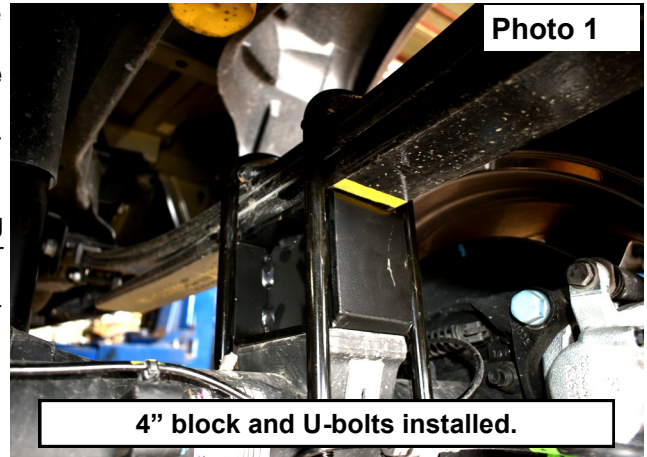
Note the position of the cam washer

Note the position of the cam washer



REAR INSTALLATION

1. Chock front wheels and jack up the rear of the vehicle. Secure with jack stands on the frame rail.
2. Place a floor jack under the rear differential. Using a 18mm wrench for the upper, and 19mm and 15mm wrench for the lower, remove the stock shock absorbers, retain the stock hardware for reuse.
3. Remove the stock u-bolts using a 24mm socket. Use the floor jack to lower the axle assembly to allow for the lifted block installation
4. Install the Rough Country block in between the leaf spring pack and the axle. The block being installed has a taper, the short end of the block should be towards the center of the truck. **Photo 1** shows proper block placement. Jack up the axle and align the pins in the blocks and axle seat.
5. **Only install the 4" block, the stock block will not be used.**
6. Secure with the new u-bolts and torque evenly to 120ft lbs using a 24mm socket using a "X" pattern.
7. Locate shock number **660804**. Install using factory mounting pin on upper and factory bolt on lower shock mount. Tighten using a 18mm wrench for the upper and a 18mm & 15mm wrench for the bottom.
8. Install the wheels and tires. Jack up the vehicle with the floor jack to remove the jack stands.
9. Lower the vehicle to the floor.



POST INSTALLATION INSTRUCTIONS

1. Check all fasteners for proper torque. Check to ensure there is adequate clearance between all rotating, mobile, fixed and heated members. Check steering gear for interference and proper working order. Test brake system
2. Perform steering sweep. Check to ensure brake hoses have sufficient slack and will not contact rotating, mobile, or fixed members, adjust lines/brackets to eliminate interference and maintain proper working order. Failure to perform inspections may result in component failure
3. Readjust headlights to factory settings
4. Have vehicle aligned by a certified alignment professional.
5. All components must be retightened after 500 miles, and every three thousand miles after installation