TRAIL FORTRESS

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Rough Country 57230 Installation Instructions

4-Inch Lift Kit with N3 Shocks for 2011–2014 Ford F-150 2WD

Part number: 57230

trailfortress.com/rough-country-4-inch-lift-kit-57230

Scan for fitment, price and install help

92157200A

ROUGH COUNTRY SUSPENSION SYSTEMS®

1572BAG2

09-UP F150 2WD 4” LIFT KIT

THANK YOU FOR CHOOSING ROUGH COUNTRY FOR YOUR SUSPENSION NEEDS.

Rough Country recommends a certified technician install 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 instructions before beginning installation. Check the kit hardware against the parts list. Be sure you have all needed parts and know where they go. Also please review 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. We strongly recommend, because of rollover possibility that seat belts and shoulder harnesses should be worn at all times. Avoid situations where a side rollover may occur.

Generally, braking performance and capability are decreased when larger/heavier tires and wheels are used. Take this into consideration while driving. Do not add, alter, or fabricate any factory or after-market parts to increase vehicle height over the intended height of the Rough Country product purchased. Mixing component brands is not recommended.

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. If questions exist we will be happy to answer them concerning the design, function, and correct use of our products.

⚠NOTICE The 4”suspension system was developed using a 33X12.50/18 tire with 18 x 9 wheel with 4 1/2” backspace. When using a stock wheel the maximum tire width is 11 1/2”. The lifts were designed to lift the front to level the vehicle. Due to manufacturing, dimension variances, and inflation all tire and wheel combinations should be tested prior to installation on all oversized / wider then stock tires We recommend a wheel not exceeding 8" in width be used with a minimum backspacing of 4.5" to a maximum of 5".

⚠NOTICE 2011 and newer vehicles will require the EPAS (Electronic Power Assist Steering) plugs to be disconnected prior to beginning installation of this kit. See installation instructions. Failure to disconnect these plugs may result in damage to the EPAS module resulting in an error message being displayed, which will require replacement of the EPAS module

⚠NOTICE NOTICE TO DEALER AND VEHICLE OWNER

Any vehicle equipped with any Rough Country product should have a “Warning to Driver” decal installed on the inside of the windshield or on the vehicle’s dash. The decal should act as a constant reminder for whoever is operating the vehicle of its unique handling characteristics.

Tools Needed:

5mm Allen Wrench	Floor Jack
8mm Allen Wrench	Jack stands
8mm wrench /socket	Reciprocating Saw
10mm wrench /socket	Hammer
12mm Wrench	9/16 wrench /socket
13mm wrench / socket	1 1/16” Wrench
15mm wrench /socket	Drill
16mm wrench /socket	41/64” Drill Bit
17mm wrench /socket	11/32” Drill Bit
18mm wrench /socket	
19mm wrench /socket	
21mm wrench /socket	
22mm wrench /socket	
24mm wrench /socket	
30mm wrench /socket	

Torque Specs:

Size	Grade 5	Grade 8
5/16”	15 ft/lbs	20 ft/lbs
3/8”	30 ft/lbs	35 ft/lbs
7/16”	45 ft/lbs	60 ft/lbs
9/16”	95 ft/lbs	130 ft/lbs

	Class 8.8	Class 10.9
10MM	32ft/lbs	45ft/lbs
18MM	170ft/lbs	240ft/lbs

trailfortress.com/rough-country-4-inch-lift-kit-57230

KIT CONTENTS

Kit Includes:

1598Box1:
- 1-Driver Side Knuckle (A)

1598Box5:
- 1-Pass Side Knuckles (B)

1573Box1:
- 1-Fr Cross-Member (C)
- 1-Rr Cross-Member (D)

1572Box3:
- 2-Sway Bar Brackets (E)
- 2-Front Brake Line Brackets (F)
- 1-Rear E-brake Bracket (G)
- 1-Rear Brake Line Bracket (H)
- 2-Rear Blocks (I)
- 2-Rear Shocks (J)
- 2-Fr Strut Spacers (K)
- 4-9/16" x 11" U-bolts (L)

1573Bag1 Containing:

For Rr / RrCross-Member:
- *2-18mm x 160mm Bolts*
- *4-18mm Flat Washers*
- *2-18mm Lock Nuts*

For Front Lower Control Arms:
- *4-18mm x 160mm Cam Bolts*
- *4-Flat Washers*
- *4-18mm Lock Nuts*

1573Bag:

For Front Brake Line Bracket:
- *2-5/16" x 3/4" Bolt*
- *4-5/16" Flat Washer*
- *2-5/16" Lock Nut*

For Sway Bar Brackets:
- *4-3/8" x 1' Bolts*
- *8-3/8' Flat Washers*
- *4-Lock Nuts*

(2) 1598BAG8:

For 2010 Models with 16mm Caliper bolts
- *2-5/16" thick washers*

10MMStud Bag Containing:

For Front Strut Spacers:
- *6-10mm Self Clinch Studs*
- *6-10mm Lock Washer*
- *6-10mm Hex Nuts*

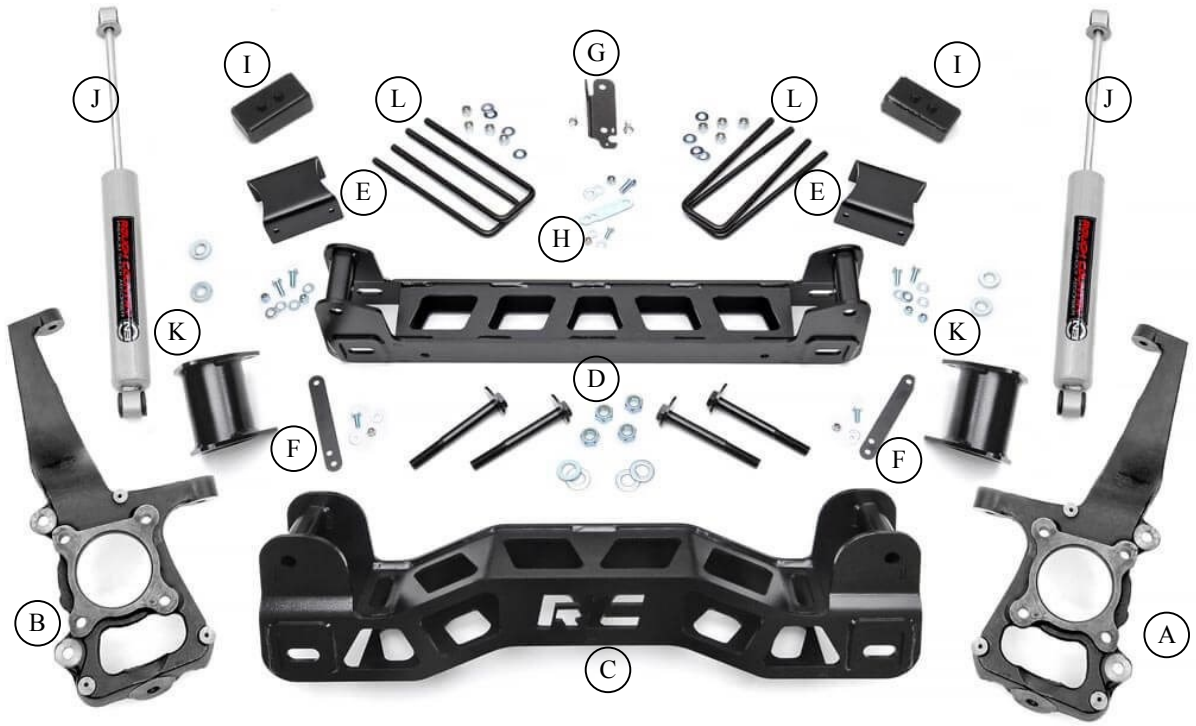
1598Bag3 Containing:

For Rear Brake Line Brkt:
- *1-3/8" x 1' Bolt*
- *2-3/8" Flat Washers*
- *1-3/8" Lock Nut*

For Rear E-brake Bracket:
- *1-7/16" x 1" Bolt*
- *2-7/16" Flat Washers*
- *1-7/16" Lock Nut*
- *1-5/16" x 3/4" Bolt*
- *2-5/16" Flat Washers*
- *1-5/16" Lock Nut*

For Rear Blocks:
- *4-9/16" Axle U-Bolts*
- *8-9/16" Nuts*
- *8-9/16" Flat Washers*
- *4-3/8" Spring U-Bolts*
- *8-3/8" Nuts*
- *8-3/8" Flat Washers*

***9/16"*U-Bolt Bag For Blocks:**
- *4-7/16" x 3" U-Bolts*
- *8-7/16" Nuts*
- *8-7/16" Washers*



INSTALLATION INSTRUCTIONS

1. Chock the rear wheels and jack up the front of the vehicle.
2. Place jack stands under the frame rails and lower onto jack stands.
3. Remove the wheels/tires using a 21mm socket.
4. Remove the skid plate with a 13mm socket. **See Photo 1.** On 2011 and newer models, remove the EPAS (Electronic Power Assist Steering) Plugs as shown. **See Photo 2.** **<u>This must be done BEFORE installation is started.</u>**

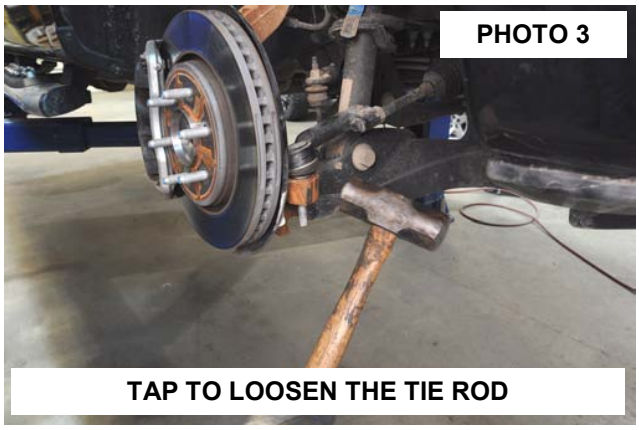


REMOVE SKID PLATE BOLTS

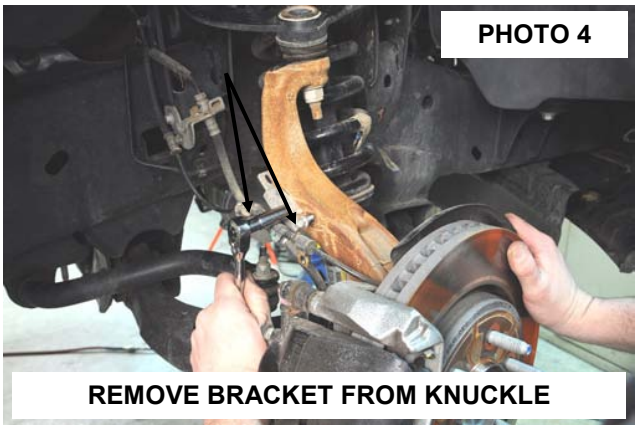


REMOVE EPAS PLUGS

5. Remove tie-rod end using a 21mm wrench. Using a hammer hit the side of the knuckle to pop tie-rod out. **Photo 3.**
6. Remove the ABS and brake line bracket from the knuckle using a 8mm wrench for the ABS wire and a 10mm wrench for the brake line bracket. Retain hardware for reuse. **See Photo 4.**



TAP TO LOOSEN THE TIE ROD

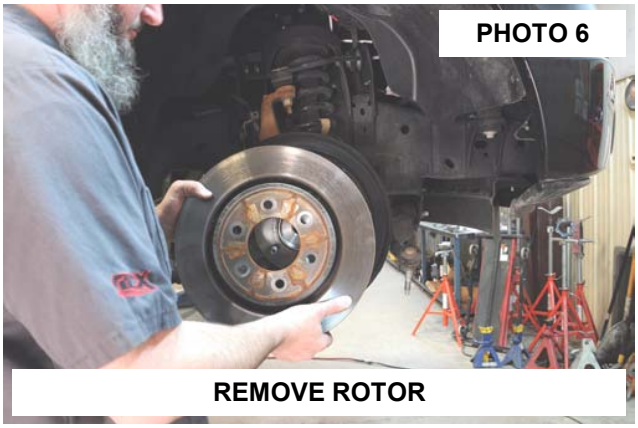


REMOVE BRACKET FROM KNUCKLE

7. Using a 19mm socket & 21mm wrench, remove brake caliper as shown in **Photo 5**.
8. Hang caliper out of way. Do not let caliper hang by brake hose as this will damage hose. Retain factory hardware for reuse and remove the rotor. **See Photo 6.**



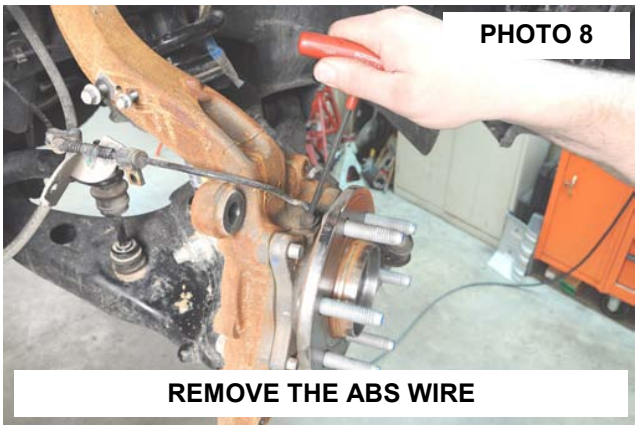
REMOVE THE CALIPER FROM KNUCKLE



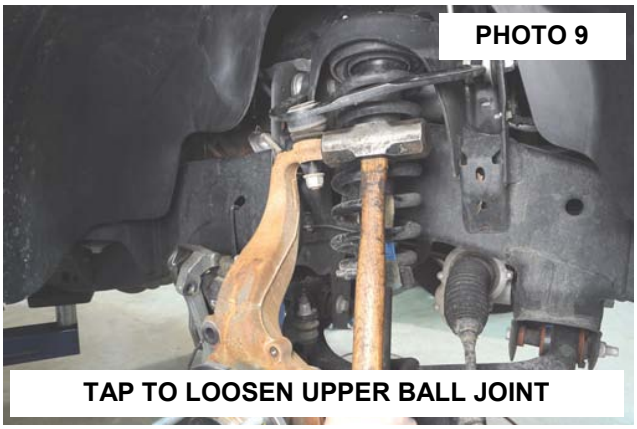
REMOVE ROTOR

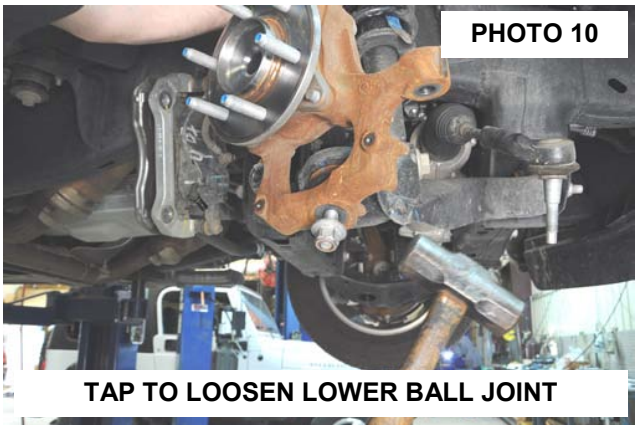
9. Remove the dust shield using a 8mm socket. **See Photo 7.**
10. Remove the ABS wire from the bearing assembly using a 5mm allen wrench. **See Photo 8.**



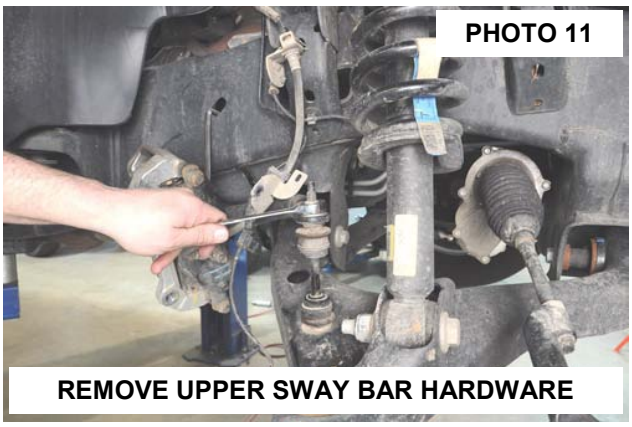


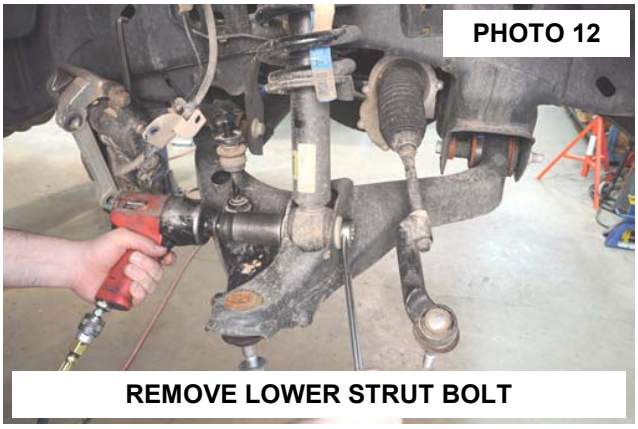
11. Loosen the upper ball joint nut using a 21mm wrench. Tap lightly with a hammer to release ball joint from knuckle. **See Photo 9.**
12. Loosen the lower ball joint using a 24mm wrench. Tap lightly with a hammer to release ball joint from knuckle. **See Photo 10.**



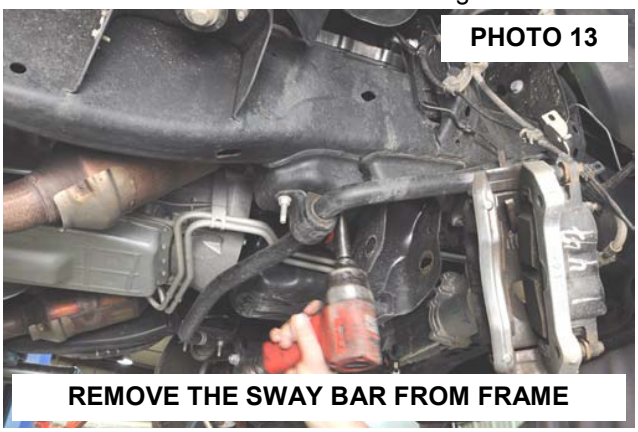


13. Remove the upper and lower ball joint nuts and remove the knuckle from the vehicle.
14. Remove the sway bar links from the sway bar using a 19mm wrench. Retain hardware for reuse. **See Photo 11.**
15. Remove the lower strut bolt using a 30mm socket and 1 –1/16” wrench. **See Photo 12.** Retain hardware for reuse.

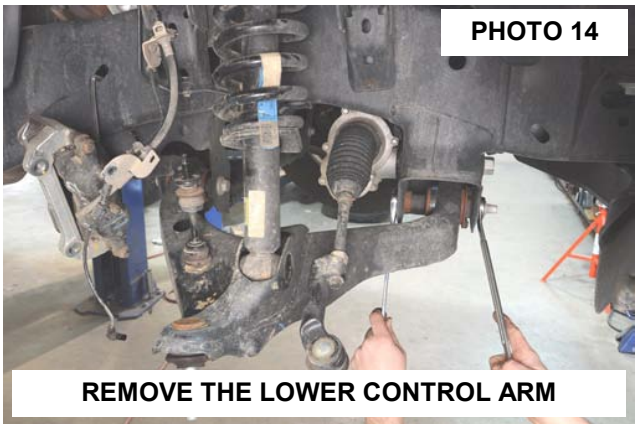




16. Remove the sway bar from the frame mount using a 15mm socket. *Please note the position that the sway bar is installed from the factory to make sure it is reinstalled correctly.* Retain hardware for reuse. **See Photo 13.**
17. Remove the lower control arm using a 21mm and 1-1/16" wrench. Retain hardware for reuse. **See Photo 14.**



REMOVE THE SWAY BAR FROM FRAME



REMOVE THE LOWER CONTROL ARM

18. Remove the strut from the upper mount using a 15mm socket / wrench. Retain hardware for reuse. **See Photo 15.**
19. Remove the bearing from the stock knuckle with a 18mm socket. **See Photo 16.**



REMOVE THE UPPER STRUT MOUNT

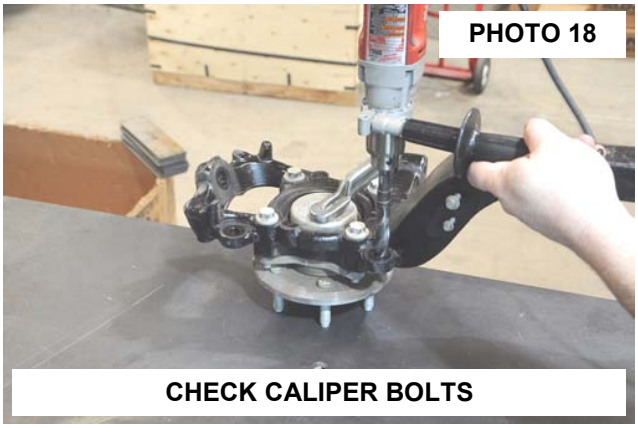


REMOVE FACTORY BEARING

20. Lay the new supplied lifted knuckle on the bearing and insert the factory bolts. Tighten with a 18mm socket. **See Photo 17.**
21. Depending on the brake caliper bolt size, the knuckle may need to be drilled. If the stock bolt is 16mm the caliper mounting location will need to be enlarged using a 41/64" drill bit**. Trial fit the stock caliper bolts to make sure the caliper needs to drilled before drilling. See Photo 18.**



INSTALL BEARING IN NEW KNUCKLE



CHECK CALIPER BOLTS

22. Install the front and rear cross-member using the factory hardware. **See Photo 19**. Do not tighten at this time.
23. Install the sway bar drop brackets using the factory nuts and a 15mm wrench. **See Photo 20**.

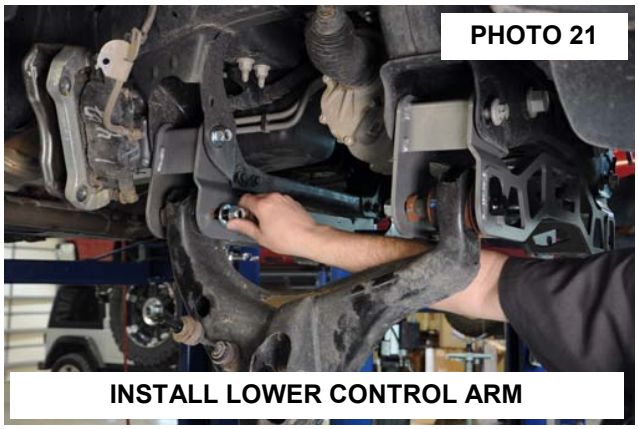


INSTALL CROSS MEMBERS

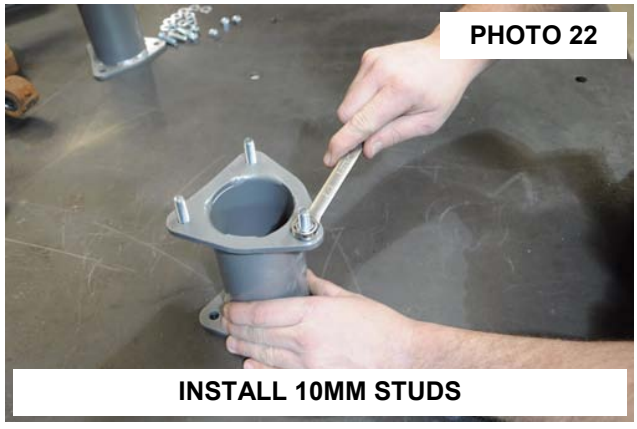


INSTALL SWAY BAR BRACKETS

24. Install the lower control arms using the supplied 18mm x 160mm cam bolts, washers and nuts. **See Photo 21**.Do not tighten at this time.
25. Install the supplied 10mm studs in the strut spacers on the end with the smallest holes. Use a 17mm wrench or socket to pull the stud into place as shown in **Photo 22**.

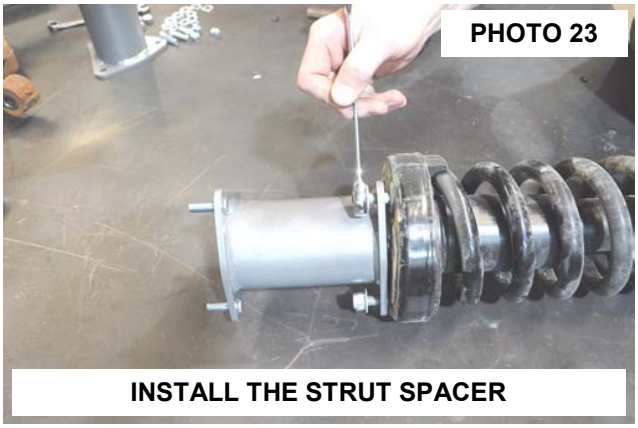


INSTALL LOWER CONTROL ARM

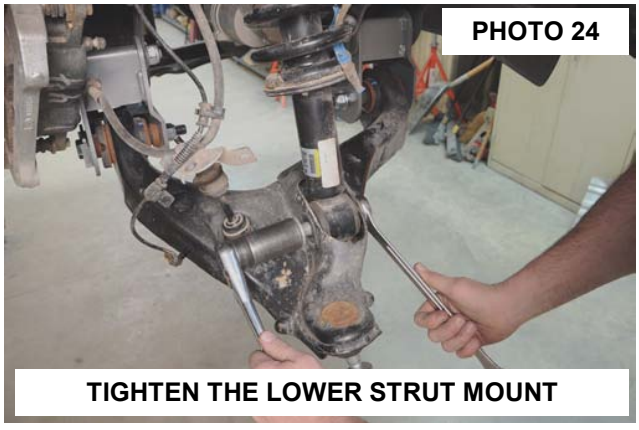


INSTALL 10MM STUDS

26. Using the stock hardware, install the strut spacers on the struts. Tighten using a 15mm socket. **See Photo 23.**
27. Install the strut with strut spacers installed in the stock upper mount. Secure with supplied 10mm nuts, washers and lock washers. Do not tighten at this time.
28. Install the lower strut in the lower control arm using the factory hardware. Tighten using a 30mm and 1-1/16” wrench. **See Photo 24.**
29. Tighten upper strut mount hardware using 17mm wrench.



INSTALL THE STRUT SPACER



TIGHTEN THE LOWER STRUT MOUNT

30. Using a 10mm wrench remove the brake line bracket from the driver and pass side frame. **See Photo 25.**
31. On the passenger side remove the brake line from the two factory clips.
32. Install the new brake line bracket on the driver and passenger side with the stock hardware. **See Photo 26.**

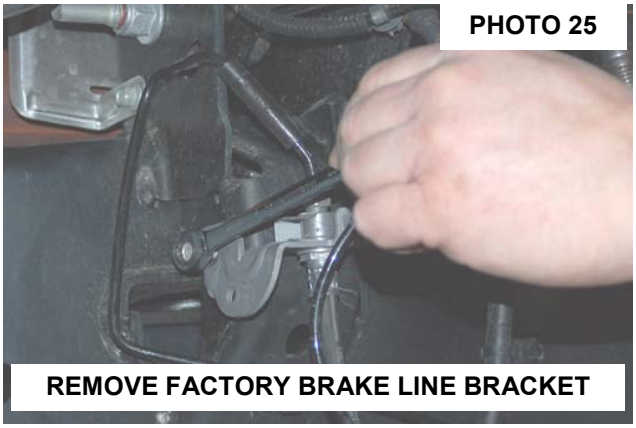


PHOTO 25
REMOVE FACTORY BRAKE LINE BRACKET


PHOTO 26
REMOVE THE STEEL LINE FROM MOUNTS

33. On the driver side, pull slightly on the brake line to allow the line to be installed on the new bracket. Secure the brake line to the new bracket with the supplied 5/16” x 3/4” bolt, washers and nut. **See Photo 27.**
34. Install the factory passenger side brake line in the new bracket using the supplied 5/16’ x 3/4” bolt, washer and nuts. **See Photo 28.**


PHOTO 27
INSTALL BRAKE LINE BRAKCET

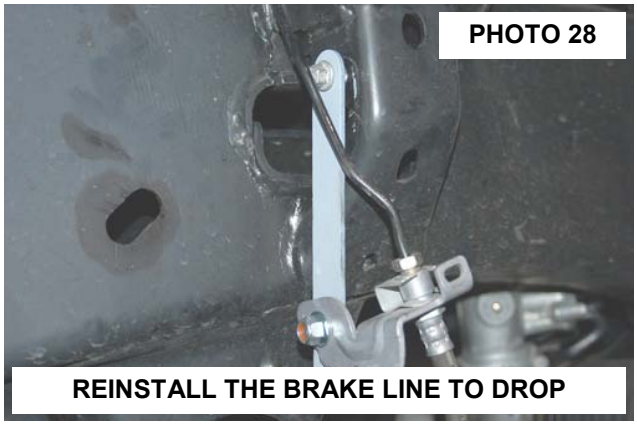


PHOTO 28
REINSTALL THE BRAKE LINE TO DROP

35. Install the sway bar body on the sway bar links located on the lower control arms. Install nut to hold the sway bar in place but do not tighten at this time. **See Photo 29.**
36. Swing up the sway bar and install on the sway bar drop brackets using the supplied 3/8” x 1” bolts, washers and nuts. Tighten using a 9/16” on the sway bar drop hardware and 18mm wrench on sway bar links on the lower control arms. **See Photo 30.**

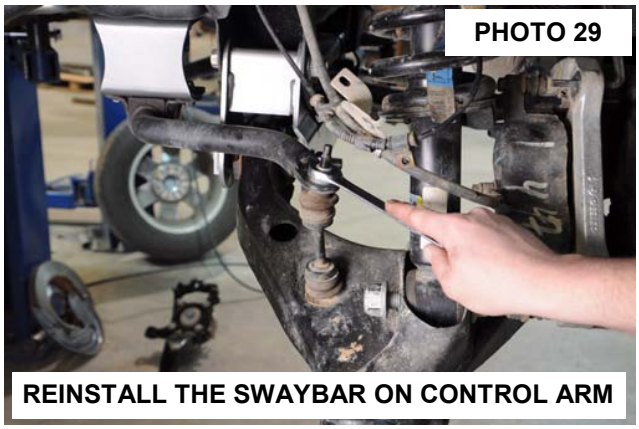
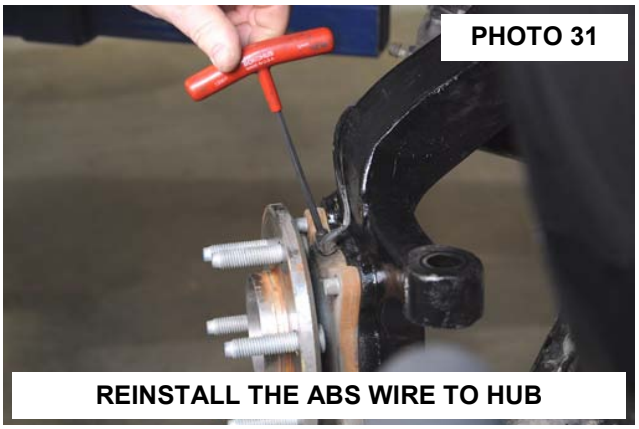
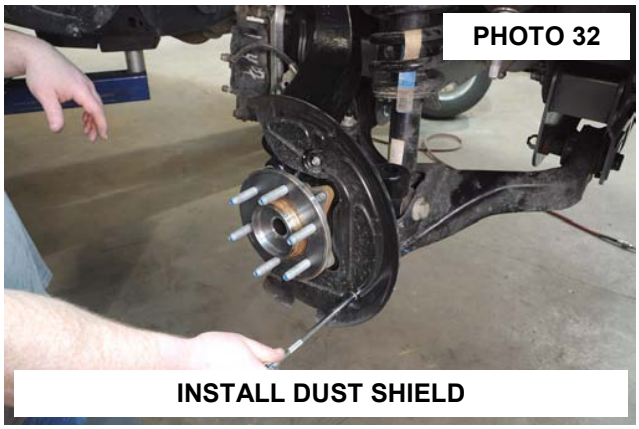


PHOTO 29
REINSTALL THE SWAYBAR ON CONTROL ARM


PHOTO 30
REINSTALL THE SWAYBAR ON BRACKETS

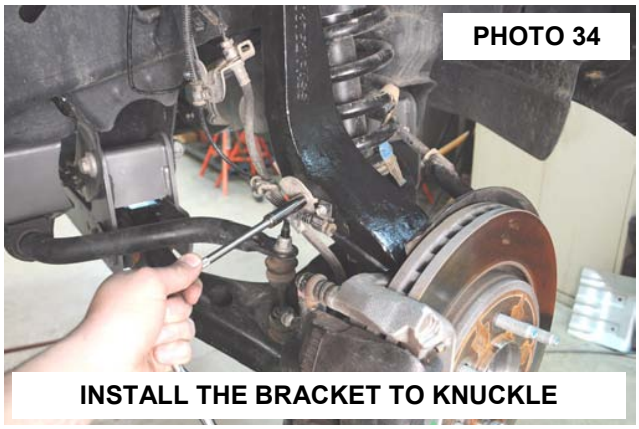
37. Install the new knuckles using the stock hardware on the lower ball joints, making sure the half shafts are installed in the bearing assembly. Tighten using 24mm and a 12mm wrench. **Do not use air impact on the upper and lower ball joint, tighten with hand tools.**
38. Install the knuckle on the upper ball joint with the stock hardware and tighten using a 21mm and a 10mm wrench. **Do not use air impact on the upper and lower ball joint, tighten with hand tools.**
39. Install the ABS wire on the bearing assembly using a 5mm allen wrench. **See Photo 31.**
40. Install the dust shield with stock bolts and a 8mm socket. **See Photo 32.**





41. Install the rotor and caliper on the knuckle with the stock hardware using a 19mm or 21mm wrench. **On models with 16mm caliper hardware it will be necessary to use the qty 4, two per side 5/16" thick washers on the head of the caliper bolts. Failure to use these washers on the 16mm bolts will allow the caliper bolt to protrude on the rotor side and can cause clearance issues**. Tighten hardware. **See Photo 33.**
42. Install brake line bracket with factory bolts. Make sure the ABS wire are out of harms way. Using the supplied zip tie, secure the vacuum hose and ABS wire to the knuckle neck. **See Photo 34.**





43. Install the tie rod end in the knuckle and tighten using a 21mm and 10mm wrench. **See Photo 35. Do not use air impact on the upper and lower ball joint, tighten with hand tools.**
44. Install the tires and wheels using a 21mm socket. Remove the jack stands and lower the truck to the ground.
45. Install the two connectors on the rack and pinion.
46. Tighten the lower control arm bolts using a 1-1/16" wrench and socket. **Torque to 200 ft/lbs.**



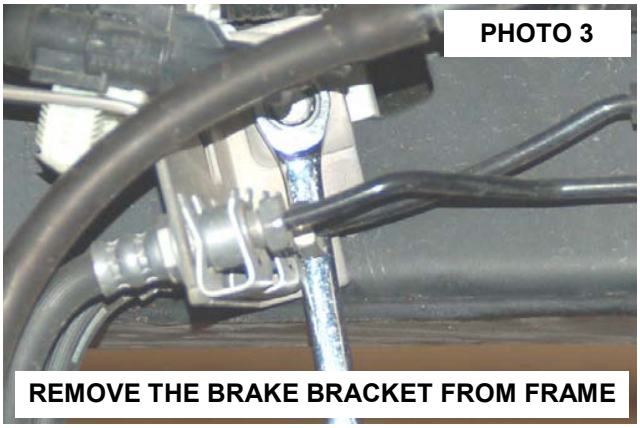
REAR INSTALLATION

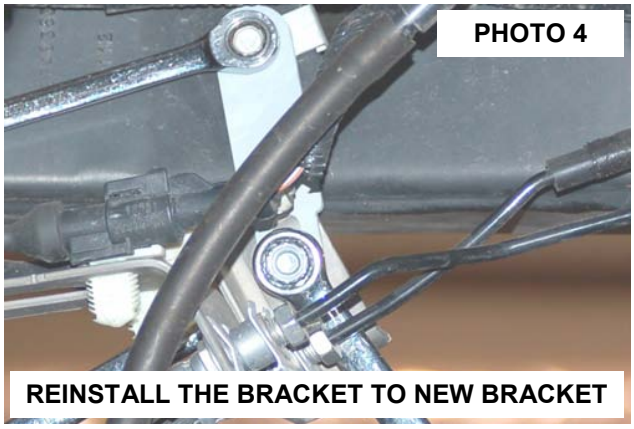
1. Chock the front tires and jack the rear the rear end up. Put jack stand under the frame rail and lower truck onto jack stands.
2. Remove tires and wheels using a 21mm socket.
3. Remove rear shocks from the upper and lower mount using 18mm and a 15mm wrench. **See Photo 1 & 2.** Retain the stock hardware.



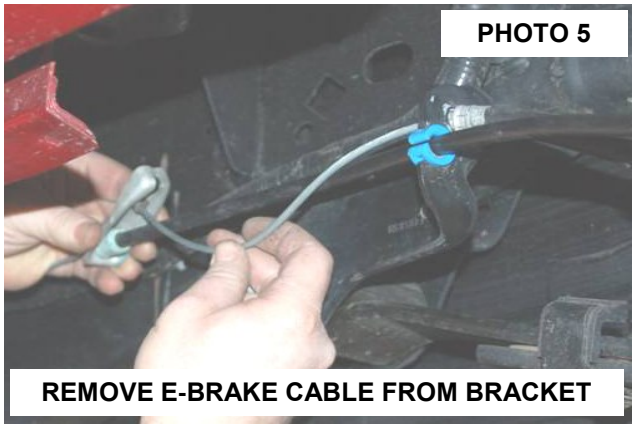


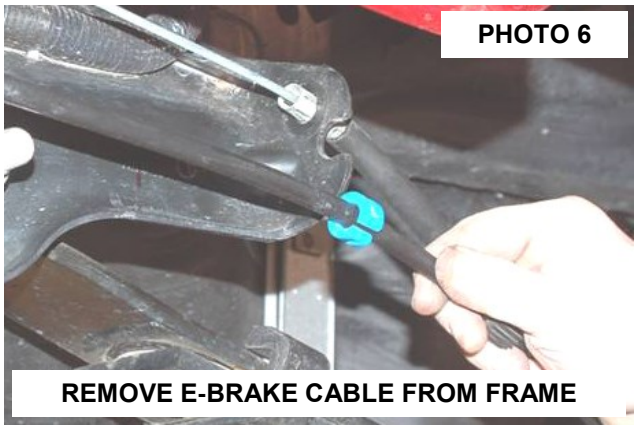
4. Using a 10mm wrench, remove the brake line assembly on the inner driver side frame rail. **See Photo 3.**
5. Install the brake line extension bracket on the frame using the stock hardware and tighten using a 10mm wrench. **See Photo 4.**
6. Install the brake line assembly to the new bracket using the supplied 3/8” x 1” bolt, washers and nut. Tighten using a 9/16” socket and wrench**. See Photo 4.**



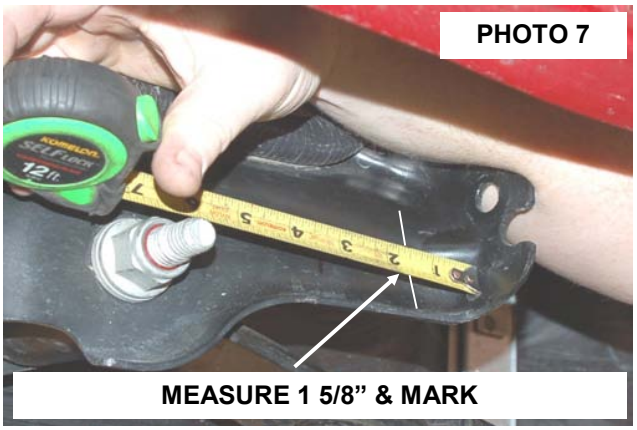


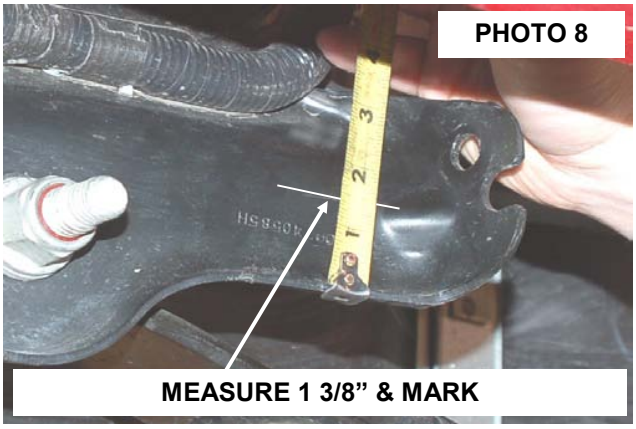
7. Separate the e-brake cable as shown on the drivers side and remove the e-brake cables from the frame mount as shown in **Photo 5 & Photo 6.**





8. To install the new e-brake bracket measure from the rear measure 1 5/8” and from the bottom measure up 1 3/8” and mark hole to be drilled. **See Photo 7 & 8.**



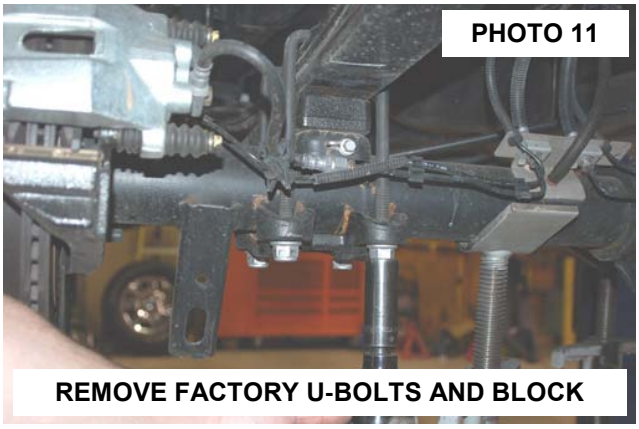


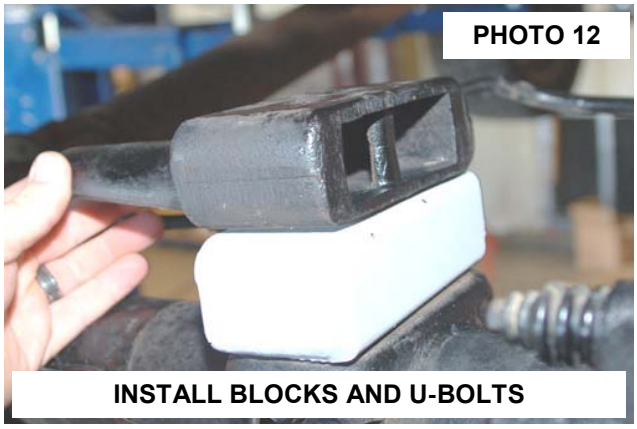
9. Drill hole using a 11/32” drill bit**. See Photo 9.**
10. Install the new bracket as shown with the supplied 7/16” x 1” bolt, washers, nut in the factory hole and 5/16” x 3/4” bolt, washer and nut in the drilled hole. **See Photo 10.** Tighten using a 19mm and 13mm socket / wrench.





11. Using a jack support the rear end and remove U-bolts using a 21mm socket and remove the factory blocks. **See Photo 11.**
12. Install the supplied block under the factory block, align the block pin holes on the axle and raise the axle into place. **See Photo 12.**





13. Install the axle u-bolts and tighten using a 22mm socket.

14. Install the new shock absorbers in the upper and lower mounts using the stock hardware. Tighten using a 18 and 15mm wrench. ***Note* the body of the shock goes toward the axle mount.**
15. Install the tire and wheels.
16. Raise up the rear of the vehicle and remove the jack stands. Lower the vehicle to the ground.
17. Install the e-brake cable in the new mount and reattach the e -brake cables on the frame. **See Photo 13.**

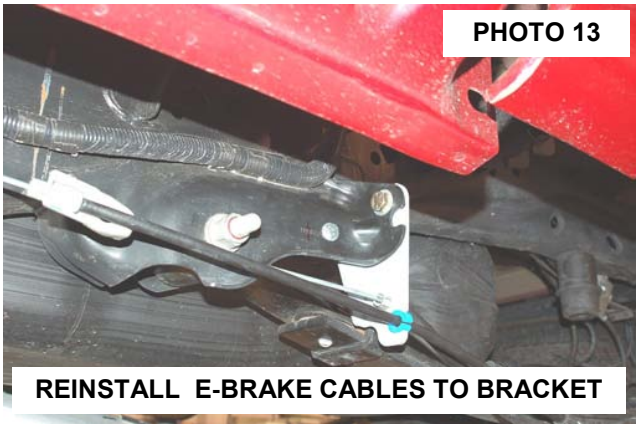


PHOTO 13

REINSTALL E-BRAKE CABLES TO BRACKET

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. Re-torque all nuts, bolts, and especially u-bolts after the first 100 miles, again after another 100 miles and then check periodically thereafter
6. All components must be retightened after 500 miles, and every three thousand miles after installation.

By purchasing any item sold by Rough Country, LLC, the buyer expressly warrants that he/she is in compliance with all applicable Federal, 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.