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Rough Country 770S Installation Instructions

6-Inch Lift Kit with N3 Shocks for 2007-2009 Toyota FJ Cruiser

Part number: 770S

trailfortress.com/rough-country-6-inch-lift-kit-770s

Scan for fitment, price and install help

92177000A

ROUGH COUNTRY SUSPENSION SYSTEMS®

1770BAG12

TOYOTA FJ CRUISER 2007-2009 6" SUSPENSION 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 Kit Contents. Be sure you have all the needed parts and understand where they go. If questions exist please call 1-800-222-7023. 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. We strongly recommend, because of rollover possibility, that the vehicle be equipped with a functional roll-bar and cage system. 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/heaver tires and wheels are used. Take this into consideration while driving. Also, speedometer recalibration is necessary when larger tires are installed.

Do no 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.

The 6" suspension system was developed for Maximum tire size of 35x12.50x17 on an after market wheel with 4.5/8" of back spacing and 8" wide wheel. **Clearance of the body mount is required**. Failure to clearance mount could result in tire and body damage. See body mount section.

A helpful tip is to leave all fasteners loose until the installation of all components is completed. This will allow the brackets to line up without using force. At that time tighten all fasteners to specs.

NOTICE TO DEALER AND VECHICLE OWNER

⚠NOTICE

Any vehicle equipped with any Rough country product must have the "Warning to Driver" decal installed on the sun visor or 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.

Kit Contents

9294	Rear Coil Springs
1770Box1	Front and Rear Cross Member, Bump-stop brackets,1770Bag1, 1770Bag2
1770Box2	Driver and Passenger Side Knuckle
1770Box3	Front and Rear Skid Plates 1770Bag2, hardware in 1770 Bag6
1770Box4	Pass Diff Bracket, Driver Diff Bracket Strut Spacers, Sway Bar Brackets, Sway Bar Links, Rear Upper Arms Rear Shocks, 770Bag3, 1770Bag4, 1 770Bag5, 1770Bag6, 3/8" Bag
1770Box5	Rear Track Bar 1170Bag7

Tools Needed

- 10mm Wrench
- 12mm Wrench
- 12mm Socket
- 14mm Wrench
- 14mm Socket
- 17mm Wrench
- 17mm Socket
- 19mm Wrench
- 19mm Socket
- 22mm Socket
- 22mm Wrench
- 35mm Socket
- 5mm Allen Wrench
- 12mm Allen Wrench
- Jack Stands
- Floor Jack

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
1/2"	65 ft/lbs	90 ft/lbs
9/16"	95 ft/lbs	130 ft/lbs
5/8"	135 ft/lbs	175 ft/lbs
3/4"	185 ft/lbs	280 ft/lbs

Size	Class 8.8	Class 10.9	Class 12.9
M6	5 ft/lbs	9 ft/lbs	12 ft/lbs
M8	18 ft/lbs	23 ft/lbs	27 ft/lbs
M10	32 ft/lbs	45 ft/lbs	50 ft/lbs
M12	55 ft/lbs	75 ft/lbs	90 ft/lbs
M14	85 ft/lbs	120 ft/lbs	145 ft/lbs
M16	130 ft/lbs	165 ft/lbs	210 ft/lbs

Parts List

1770BOX1		
Qty	**Part #**	**Description**
1	94003301	Front Cross member
1	94003302	Rear Cross member
1	1770Bag1	Front cross member kit bag
1	1770Bag2	Rear cross member kit bag

1770BOX2		
Qty	**Part #**	**Description**
1	94003310	Driver side knuckle
1	94003303	Passengers side knuckle

1770BOX3		
Qty	**Part #**	**Description**
1	94003304	Front skid plate
1	94003313	Rear skid plate

1770BOX4		
Qty	**Part #**	**Description**
1	94003305	Passenger side diff bracket
1	94003306	Driver side diff bracket
2	94003307	Strut spacer
2	94003314	Sway bar bracket
2	94003012	Rear sway bar links
2	94003322	Rear upper control arms
2	660554	Rear shocks
2	94003312	Bump stop extensions
2	142973	Shock bushings (top)
2	140169	Shock bushings (bottom)
1	1770Bag3	Diff mounting bag
1	1770Bag4	Sway bar bracket bag
1	1770Bag5	Brake line bag
1	1770Bag6	Strut/Skid plate bag
1	3/8” Stud Bag	Fr Strut Spacer Fasteners

1770BOX5		
Qty	**Part #**	**Description**
1	94003309	Rear track bar
1	1770Bag7	Track bar bag

9294		
Qty	**Part #**	**Description**
2	91929400	Rear coil spring

1770BAG1		
Qty	**Part #**	**Description**
2	90506002	.750-10 Lock nut
4	81051	.750 flat washer
2	90505810	.750-10 x4.5” Bolt

1770BAG2		
Qty	**Part #**	**Description**
4	90500343	14mm Flat washer
2	90500339	14mm-2 x 130mm Bolt
2	90500392	14mm-2 Lock nut

1770BAG3		
Qty	**Part #**	**Description**
2	90605907	.5625x .750 x2.41 Sleeve
4	90602105	Bushing
1	90500341	14mm-1.50 x 25mm Bolt
1	90500342	12mm-1.25 x 35mm Bolt
1	90500390	.562 Flat washer
1	970-0686	.50 Flat washer
2	90500378	.562-12 x3.5” Bolt
4	90500390	.562 Flat washer
2	90509301	.562-12 Lock Nut
1	81007	Bushing

1770BAG4		
Qty	**Part #**	**Description**
4	81055	.312 Flat washer
4	81072	.375-16 Nut
4	81057	.375 Lock washer
4	90500316	.375-16 x 1” Bolt

1770BAG5		
Qty	**Part #**	**Description**
2	94004415	Brake line brackets
2	960-0559	.3125 Flat washer
2	90500324	.312-18 Lock nut
2	90500326	.312-18 x.75 Bolt
1	94003319	Rear brake line bracket
1	90500316	.375-16x1” Bolt
2	90500304	.375 Flat washer
1	90500314	.375-16 Lock nut

Parts List (cont)

1770BAG6		
Qty	**Part #**	**Description**
6	81078	.375-16 Lock nut
2	90606703	.125 x 2” Cotter pin
4	90606701	.093 x 1” Cotter pin
6	90500302	.375-16 x 1.25” bolt
8	94003315	Upper control arm spacer
2	94003318	Bump stop stud

1770BAG7		
Qty	**Part #**	**Description**
4	90601002	Track bar bushing
2	94003316	Track bar sleeve

1770BAG9		
Qty	**Part #**	**Description**
6	90500270	3/8” x 1” Fr Bump-stop bolt

1770BAG11		
Qty	**Part #**	**Description**
2	90500367	8MM Lock Nut
4	81083	Stud Bushings
4	403298	Cup Washers
2	403646	Sleeves
2	90504840	12mm x 65mm Bolts
2	90504750	12mm Flange Lock Nut
2	81046	Flat Washer

FRONT INSTALLATION INSTRUCTIONS

1. Prior to installing this kit, with the vehicle on the ground, measure the heights of your vehicle. This measurement can be recorded from the center of the wheel straight up to the top of the inner fender lip. Record the measurements. LF:_____, RF:_____, LR:_____, RR:_____.
2. Place the vehicle in park on a smooth and level surface. Place the floor jack under the front cross member of the vehicle and raise the vehicle. Place jack stands under the frame rails behind the front wheel wells and lower the frame onto the stands. Remove the jack, set emergency brake and chock rear wheels.
3. Remove the front wheels.
4. Remove the front skid plate and skid plate support bracket using a 12mm socket. Retain stock hardware for re-use. **See PHOTO 1**.
5. Using a 12mm socket, unbolt the brake line bracket from the knuckle. Retain factory hardware for reuse. **See PHOTO 2**.

PHOTO 1



PHOTO 2



6. Using a 12mm socket, unbolt the brake line bracket from the frame. Retain factory hardware for reuse. **See PHOTO 3**.
7. Remove the ABS bracket from the knuckle using a 12mm socket. Retain factory hardware for reuse. **See PHOTO 4.**

PHOTO 3

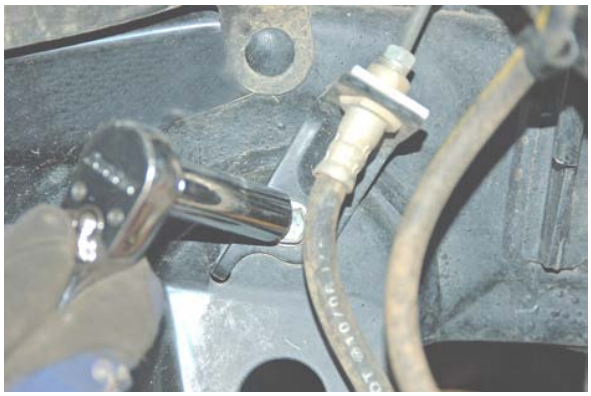


PHOTO 4

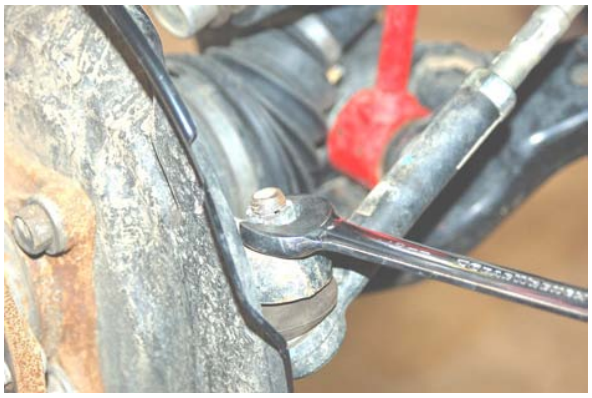


8. Using a 10mm socket remove the ABS bracket from the upper control arm.
9. Remove the ABS sensor from the knuckle using a 5mm allen wrench. Retain factory hardware for reuse. **See PHOTO 5**.
10. Using a 19mm wrench, remove the outer tie rod end nut and separate from the knuckle. Retain stock nut for reuse. **See PHOTO 6**.

PHOTO 5



PHOTO 6



11. Using a 17mm socket, remove the sway bar links from the knuckle. **See PHOTO 7**
12. Using a 17mm socket, remove the brake caliper, and rotor. **DO NOT** let the caliper hang from the brake line. If allowed to hang, damage may occur to the brake lines. Use a zip tie or wire to hang the caliper to the frame, out of harms way.
13. **(4WD Model)** Using a flat screwdriver remove the dust cap from the knuckle.
14. **(4WD Model)** Remove the cotter pin and pal nut from the axle. Using a 35mm socket, remove the axle retaining nut. Retain stock hardware for re-use. **See PHOTO 8**.

PHOTO 7

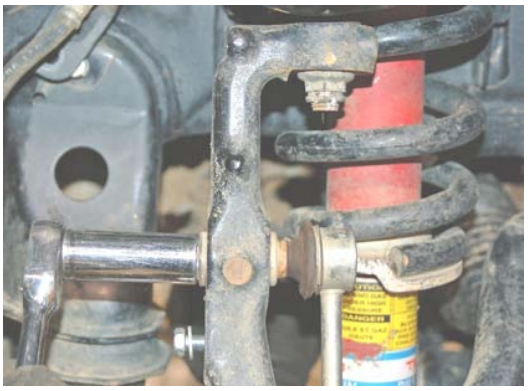


PHOTO 8



15. **(4WD Model)** Using 2 hammers as shown in **PHOTO 9**, remove the CV shaft from the knuckle. **Do not directly strike the end of the axle-shaft.** Using zip ties or wire, be sure to support the CV axle before removing the lower control arm. **Do not allow the axle to hyper-extend or damage to the CV axle may occur.**
16. Using a 17mm wrench, remove the 4 bolts that hold the hub flange and dust cover to the knuckle. Remove the hub, and cover. Retain stock hardware. **Note**: You will not be able to remove the bolts from the hub assembly after the hub is removed from the knuckle. **See PHOTO 10.**

PHOTO 9



PHOTO 10



17. Remove the upper ball joint nut from the upper control arm using a 19mm wrench. Separate the ball joint from the knuckle by striking the knuckle with a large hammer to dislodge the ball joint Retain the stock nut for re-use. **See PHOTO 11**.
18. Using a 19mm socket, remove the 2 bolts as shown in Photo 12 from the lower ball joint bracket. . Retain stock hardware. Remove the knuckle. **See Photo 12.**

PHOTO 11



PHOTO 12



(4WD Model) Secure axle up, don't allow the CV to pop out. **See Photo 13.**

19. Unbolt the sway bar frame mount brackets using a 14mm socket. Remove the sway bar. Retain stock hardware. **See PHOTO 14.**

PHOTO 13



PHOTO 14



20. Using a 14mm wrench, remove the 3 bolts holding the strut to the top of the strut tower. Using two 19mm wrenches, remove the lower strut bolt. Remove the strut from the vehicle and retain stock hardware . **See PHOTO 15**.
21. Remove the lower control arm bolts using a 19mm socket and wrench. Remove the arms from the vehicle and retain stock hardware for reuse.
22. Repeat steps 3-21 on opposite side of vehicle
23. **(2WD Model skip to step 28)** Support differential with stands.
24. Remove the factory front differential support bolts using a 22mm socket. Retain factory hardware **See PHOTO 16.**

PHOTO 15



PHOTO 16



25. Using a 19mm socket remove the 2 factory bolts from the passengers side diff bracket, and 3 factory bolts from the drivers side diff bracket. Retain factory hardware. **See PHOTO 17**. **& 18**

PHOTO 17



PHOTO 18



26. Remove the rear differential bracket using a 12mm allen socket and a 17mm wrench. Retain factory hardware. **See PHOTO 19 & 20**.

PHOTO 19



PHOTO 20



27. Using the bushing from 1770bag3, place the bushing in the top hole of the cross member as shown in **PHOTO 21**. Bolt the differential mount to the diff with the factory hardware and secure the bracket to the frame using the supplied 12mm x 35mm bolt in 1770bag3.
28. Install the front cross member into the front mounting pockets using the supplied 3/4” x 4 1/2” bolts washers and nuts from 1770bag1. **See PHOTO 22.**

PHOTO 21



PHOTO 22



29. Install the rear cross member into the rear mounting pockets using the supplied 14mmx130mm bolt from 1770 bag2.
30. **(2WD Model skip to step 34)** Using the 14mmx25mm bolt and washer from 1770bag3, bolt the differential to the tab on the front cross member as shown in **PHOTO 23**.
31. Insert the bushings and sleeves from 1770bag3 into the passenger diff bracket, as shown in **PHOTO 24.**

PHOTO 23



PHOTO 24



32. Using the 9/16" x 3 1/2"" bolts, washers and nuts, from 1770bag3, bolt the passengers side diff bracket to the front and rear cross member as shown in **PHOTO 25**.
33. Using the factory hardware install the bolts in the bottom of the bracket into the differential as shown in **PHOTO 26**.

PHOTO 25

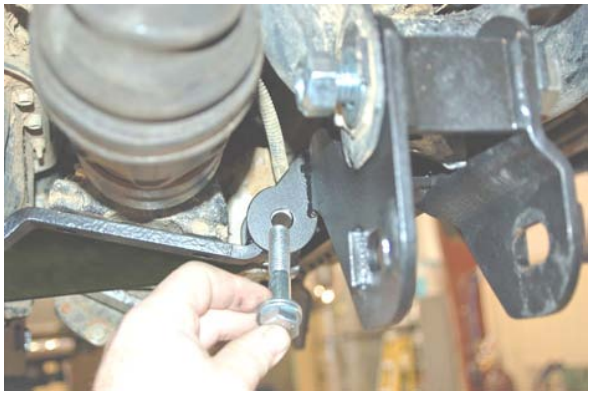


PHOTO 26

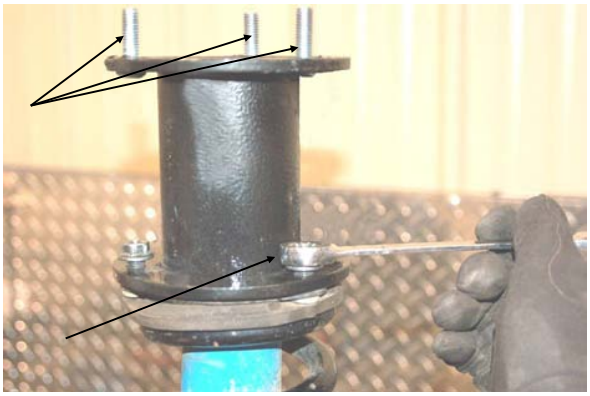


34. Using the factory hardware, reinstall the lower control arms as shown in **PHOTO 27.**
35. Locate the supplied 3/8" stud extensions. Using a 9/16" socket snug self clinching stud in the new spacer. **The stud should clinch with about 35-45 ft/lbs of torque. Do not over torque the nut.**
36. Place the strut extension on top of the factory strut. Due to the flange of the factory nut being too large to install back on the factory strut bolts, use the 3/8" nuts from 1770bag6.**See PHOTO 28.** Tighten the nuts to 30ft. lbs. using a 14mm wrench. The stock strut nuts will install on top of the new strut spacer.

PHOTO 27



PHOTO 28



37. Place the top of the strut assembly back into the factory position. Be sure that it is turned where you can get the factory bolt through the bottom of the strut eye. **See PHOTO 29**.
38. Using the factory hardware, bolt the bottom of the strut to the lower control arm. **See PHOTO 30**.

PHOTO 29



PHOTO 30



39. Inspect the seal on the factory knuckle, if the seal is in good condition, using a hammer and punch carefully remove the factory seal and reinstall into the new Rough Country knuckle. If factory seal is torn or dry rotted, replace with a new seal. **See PHOTO 31**.
40. Using the stock hardware and a 19mm wrench, install the Rough Country knuckle to the upper control arm. **(4WD Model)** This will keep the knuckle in place to allow for CV shaft install and not overextend the CV axle. **See PHOTO 32**.

PHOTO 31



PHOTO 32

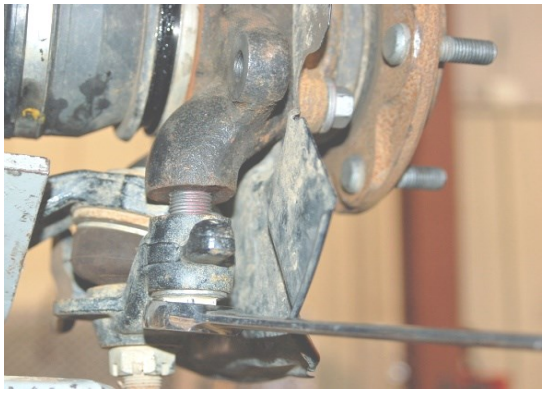


41. **(4WD Model)** Reinstall the factory CV shaft through the new knuckle. **See PHOTO 33.**
42. Using the factory hardware reinstall the knuckle to the lower control arm using a 19mm wrench. A jack may be needed to get the knuckle up to the arm. **See PHOTO 34.**
43. Reinstall the factory rotor.
44. Using the factory hardware and a 17mm wrench, reinstall the brake caliper.

PHOTO 33



PHOTO 34



45. Using a 5mm allen wrench and factory hardware, reinstall the ABS sensor to the knuckle. **See PHOTO 35**.
46. Reinstall the ABS bracket to the knuckle using factory hardware and a 12mm socket. **See PHOTO 36.**

PHOTO 35

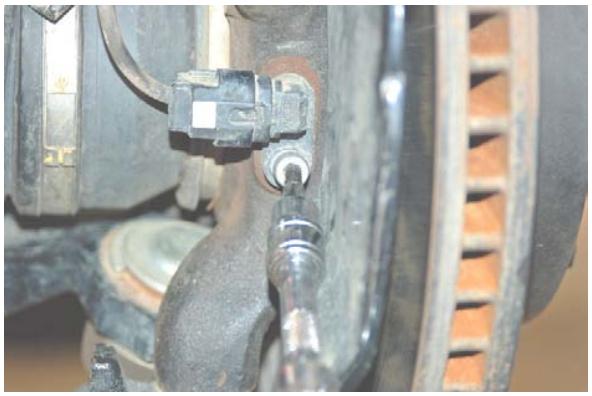


PHOTO 36

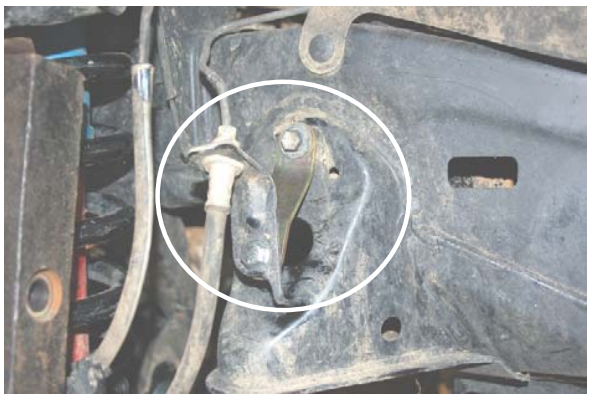


47. Reinstall the brake line bracket back to the knuckle using factory hardware and using a 12mm wrench. **See PHOTO 37**.
48. **(4WD Model)** Using a 35mm socket reinstall the factory axle nut, torque to 174ft. lbs. Reinstall the factory cotter pin and pal nut.
49. **(4WD Model)** Reinstall the factory dust cap.
50. Using a 12mm wrench install the new brake line bracket using the stock hardware for the stock hole and the supplied 5/16" bolts, nuts and washers from 1770bag5. **See PHOTO 38**.

PHOTO 37



PHOTO 38



51. Using a 19mm wrench, reinstall the outer tie rod to the knuckle using stock hardware.
52. Using a 19mm socket and wrench torque the lower strut bolt to 100ft. lbs.
53. Repeat steps 35-52 on the opposite side.
54. Insert the 3/8" nuts from 1770bag4 into the sway bar relocation bracket as shown in **PHOTO 39**.
55. Place bracket into the original sway bar mounting location, using the stock bolts and a 14mm socket, bolt the factory bolts back into the factory holes. **See PHOTO 40**.

PHOTO 39

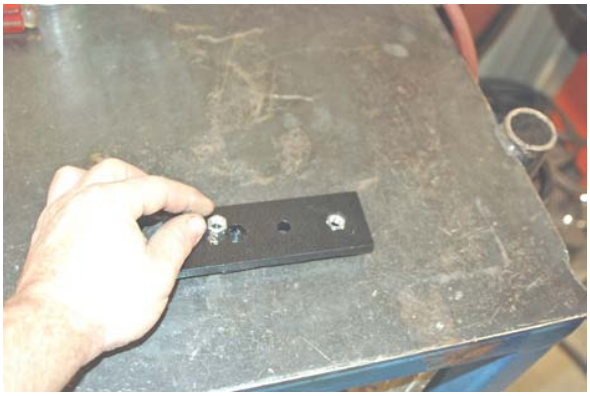


PHOTO 40



56. Using the 3/8” bolts, washers and lock washers from 1770bag4, bolt the sway bar to the new bracket. **See PHOTO 41.**
57. Using a 9/16” socket, bolt the stock front sway bar link to the sway bar and knuckle using the stock hardware. **See PHOTO 42**.

PHOTO 41



PHOTO 42



58. Attach the bottom skid plate to the rear cross member with the 3/8” bolts from 1770bag6 using a 9/16” socket. **See PHOTO 43**.
59. Attach the front skid plate to the front cross member, overlapping the bottom skid plate lip, using the 3/8” bolts from 1770bag6. Tighten using a 14mm socket. **See PHOTO 44**.

PHOTO 43



PHOTO 44



60. Attach the top of the front skid plate to the factory location, using the factory hardware. **See PHOTO 45.**
61. Locate the factory drain plug from the stock skid plate and install into the new bottom skid plate. **See PHOTO 46**.

PHOTO 45



PHOTO 46

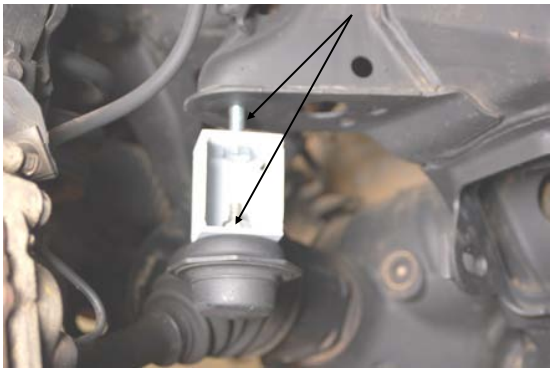


62. Using a 3” adjustable wrench, or strap wrench, remove the factory bump stop. **See PHOTO 47.**
63. Bolt the factory bump stop onto the new bracket using the supplied 10mm lock nut. Tighten nut using a 17mm wrench. **See PHOTO 48**.
64. Install the new bump-stop and bracket on the frame with the supplied 10mm x 35mm bolt using a 17mm wrench.

PHOTO 47



PHOTO 48

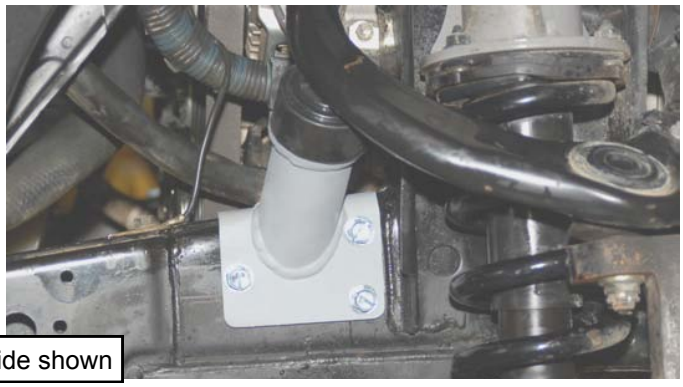


65. On both sides of the vehicle, check the routing of the brake lines and the ABS wiring harness. There must be no pinching, rubbing, or stretching of either component. At full droop, cycle the steering from lock to lock while observing the movements of these components. Recheck periodically.
66. If installing a tire larger than a 33x12.50, skip to the next section. Cutting of the body mount must be completed for larger than 33” tires.
67. Reinstall the wheels and lower to the ground. Torque the lug nuts to the factory specifications.
68. With the vehicle on the ground, using a 19mm wrench torque the lower A arm cam bolts to 100ft.lbs.
69. Recheck all hardware for proper installation and torque at this time.
70. Locate and install the new upper control arm bump-stop bracket / bump-stop on the frame behind the upper control arm as shown in **PHOTO 49**. Mark and drill with a 11/32” drill bit. Reinstall bracket on frame with supplied 3/8” x 1” self tapping bolts and tighten. **See PHOTO 50**. Repeat for opposite side.

PHOTO 49



PHOTO 50



Passenger side shown

Body Mount Modification Instructions

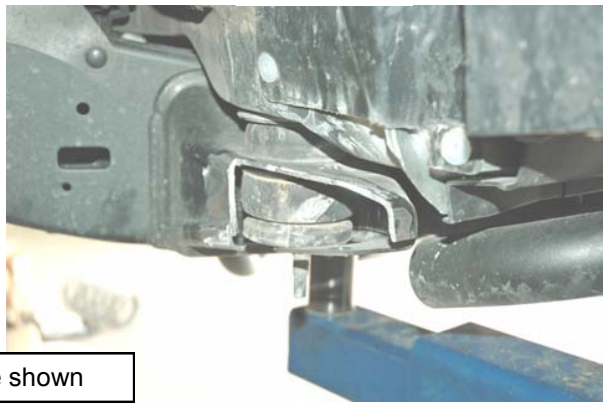
1. If you are planning on running a 35x12.50, tire or a rim that is wider than 8” the body mount will need to be trimmed to keep the tire from rubbing.
2. Working from the driver side, mark the body mount 5 1/4” from the face of the frame. Mark 1” from the back end of the mount back as shown in **PHOTO 51**.
3. Use a sawzall, or cutoff wheel and cut the marked area from the mount. Next sand and clean the area on the mount. Paint area to halt rusting. If you wish to cap the mount, you can grind the excess metal off the piece that was cut off to fit back into place. **See PHOTO 52**.
4. If welding cap, take care not to heat the area excessively. Too much heat could damage the body mount bushing. Weld in and paint after it has cooled.
5. Repeat on the opposite side.

PHOTO 51



Driver side shown

PHOTO 52



REAR INSTALLATION INSTRUCTIONS

1. Block the front tires and raise the rear of the vehicle. Support the frame with jack stands forward of the rear control arms.
2. Remove the rear wheels.
3. Be sure to support the rear axle while the shocks and springs are being removed with jack stands.
4. Using a 17mm wrench, remove the shocks on both sides of the vehicle. It may be necessary to slightly raise the axle to unload the shocks for removal. **See PHOTO 53**.
5. Using a 19mm wrench and socket, remove the rear track bar from the axle and frame mount. Retain stock hardware for re-use. **See PHOTO 54**.

PHOTO 53



PHOTO 54



6. Using a 12mm wrench for the top and a 17mm wrench for the bottom, remove the rear sway bar link. Retain stock hardware for re-use. **See PHOTO 55**.
7. Using a 19mm socket and wrench, loosen the lower control arm.
8. Remove the factory rear coil spring by allowing the axle to drop slightly with a floor jack to unload the coils
9. Using a 17mm socket and wrench, remove the upper control arm.
10. Install using the stock hardware and a 17mm socket and wrench, install the new upper control arms into the stock location with the offset to the top to allow clearance for the fuel tank as shown in **PHOTO 56.**

PHOTO 55



PHOTO 56



11. Install the new Rough Country coil spring into the stock location. Be sure the coil seats properly into the bottom coil pocket. **See PHOTO 57**.
12. Insert the bushings and sleeves from 1770bag7 into the new rear track bar.
13. Using a 19mm socket and stock hardware, install the new rear track bar in the original frame mount. **See PHOTO 58.**

PHOTO 57



PHOTO 58

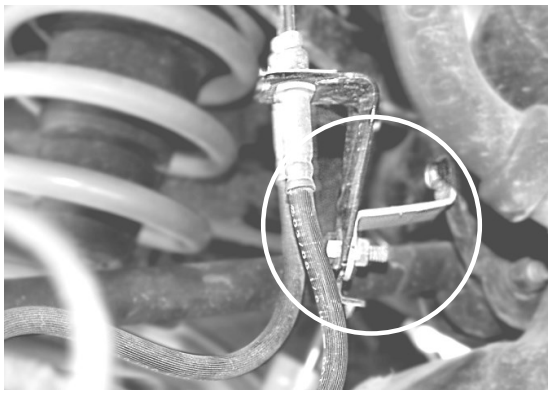


14. Using a 13mm wrench, install the upper sway bar link on the sway bar. **See Photo 59.**
15. Insert the sleeves in 1770bag11 in the eyelet and install using the supplied 12mm x 65mm Bolts & lock nuts. Tighten using a 19mm socket. **See Photo 59.**
16. Using a 17mm socket and stock hardware, install the new rear shocks into the stock location
17. Install the new rear brake line bracket using the stock hardware and 3/8” bolts, washers and nuts from 1770bag5 as shown in **PHOTO 60**.
18. Torque all hardware to specs at this time to ensure that everything is tight. Check for adequate clearance on all repositioned brake lines.

PHOTO 59



PHOTO 60



19. Reinstall the wheels and lower vehicle the ground. Torque the lug nuts according to the wheel manufacturers recommendations.
20. With the vehicle on the ground, install the new rear track bar in the original frame mount using a 19mm socket and stock hardware.

POST INSTALLATION INSTRUCTIONS

1. Have a qualified alignment center realign front end.
2. Install Warning to Driver decal on sun visor.
3. Re-torque all nuts, bolts and especially u-bolts after the first 100 miles, again after another 100 miles and then check periodically thereafter.
4. All components must be retightened after 500 miles, and every three thousand miles after installation
5. Adjust headlights to proper settings.



Thank you for choosing Rough Country for your suspension needs.