



2003-2009 Lexus GX470 3.0 IBP Front Coilover

Front Parts List:

- 2 – 3.0 IBP Front Coilover (33700-124A)
- 2 – Front Reservoir Brackets (25048-130/131)
- 2 – Reservoir Clamps (25042-022)
- 2 – 1/4 X 1" SHCS (CB1501)
- 4 – 1/4 X 1/2" BHCS (CB2420)
- 6 – 3/8 Nylock Nuts (CN2711)
- 10 – 3/8 HD Washers (CW1701)
- 4 – M10-1.25 X 40mm SHCS (CB1804)
- 4 – 3/8 X 3/4" HHCS (CB4702)

Tools Required:

- Floor Jack/Jack Stands
- Metric Wrench/Socket Set
- Standard Wrench/Socket Set

This kit requires the use of an aftermarket upper control arm. Keep in mind that not all aftermarket UCA's are manufactured the same way and it is ultimately up to the installer to check fitment of aftermarket components.

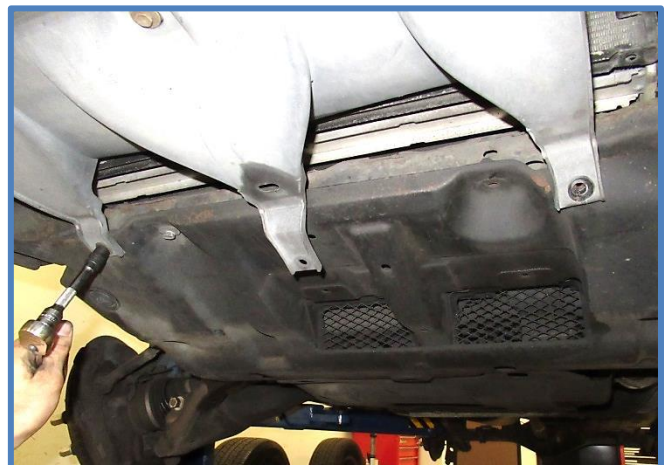
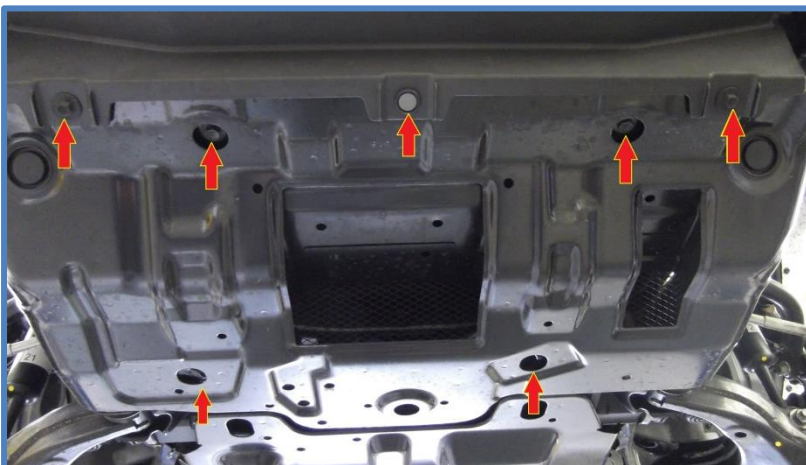
Lexus GX470 OEM PERFORMANCE SERIES



INTERNAL BYPASS
IBP

FRONT: With the vehicle on level ground, set the emergency brake and block the rear tires. Using a floor jack, raise the front end and support the frame rails with jack stands for safety. Remove front tires. **NOTE: Never work under an unsupported vehicle.**

1. Remove the front skid plate. It is held on by 4 bolts. (Some models may also have two bolts and a plastic push pin that attach fascia to the skid plate. Remove those first), then remove the 4 skid plate mounting bolts, remove skid plate and set aside. (These instructions cover a few different vehicles; some steps may vary or may not apply to your vehicle)



IMPORTANT: Read all instructions thoroughly from start to finish before beginning the install. Check parts list and make sure all parts are included in the kit. If the instructions are not properly followed severe frame, driveline and/or suspension damage may result. Check for frame and suspension damage prior to installation.

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2. Remove the bracket and wiring from the top of the shock. Using a 4mm Allen wrench, remove the two screws holding the control module. Unclip wiring harness from bracket and unplug the wires from the main harness. The suspension management system is now disabled but won't affect the vehicles performance otherwise.



3. Remove bracket by holding nut on top of shock then remove the nut above the bracket.



4. Remove ABS sensor wire from the upper control arms using a 10mm socket.



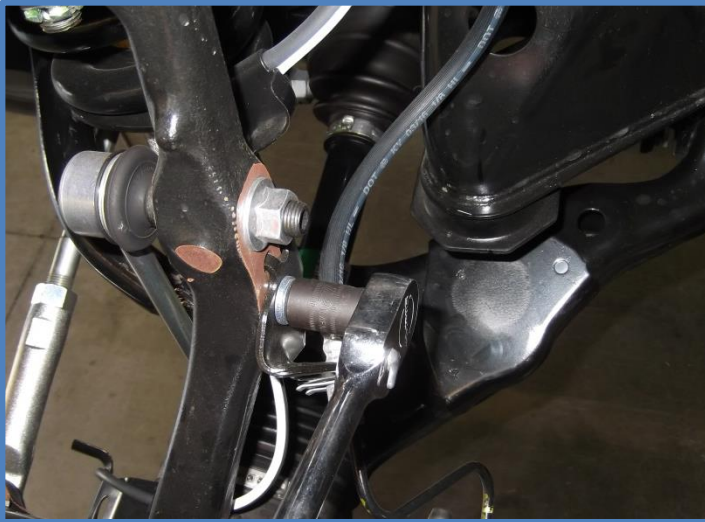
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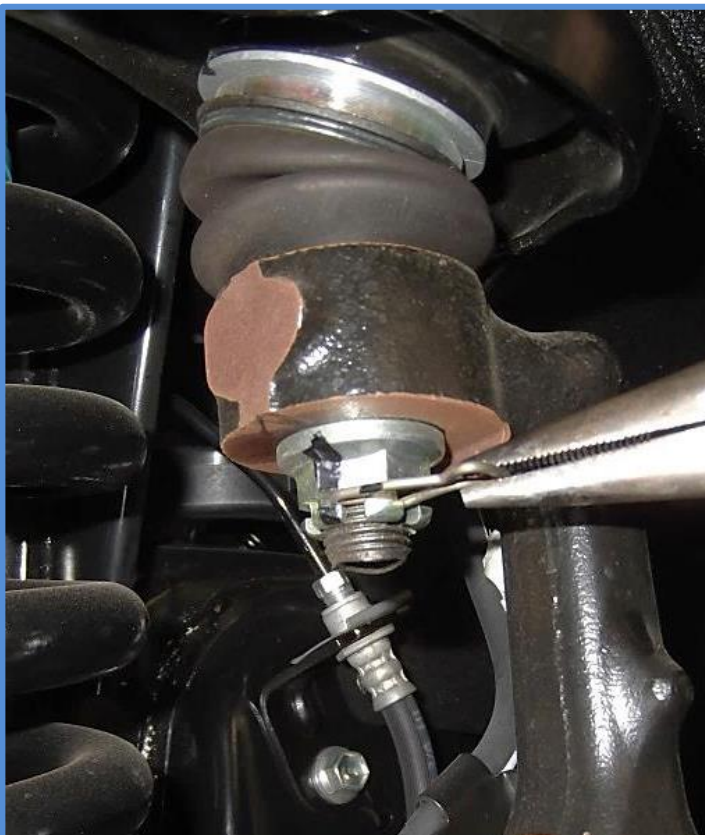
5. Unbolt the ABS/Brake line bracket from the knuckle using a 12mm socket.



6. Disconnect sway bar link by removing the nut using a 17mm wrench or socket. If the sway bar link stud is spinning you may need to hold the stud with a 6mm Allen wrench.



7. Pull the pin from the upper ball joint, loosen nut using a 19mm Socket and separate upper control arm from the steering knuckle.



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8. Pull the cotter pin from the tie rod end, remove nut using a 19mm socket and separate tie rod from steering knuckle



9. Remove lower mounting bolt using a 19mm wrench and socket.



10. Remove the three nuts from the upper mount and remove shock.



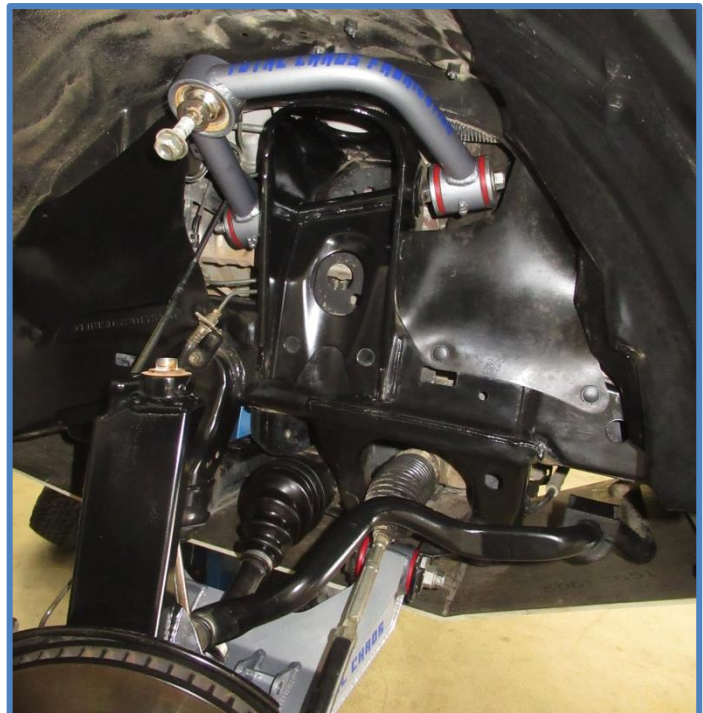
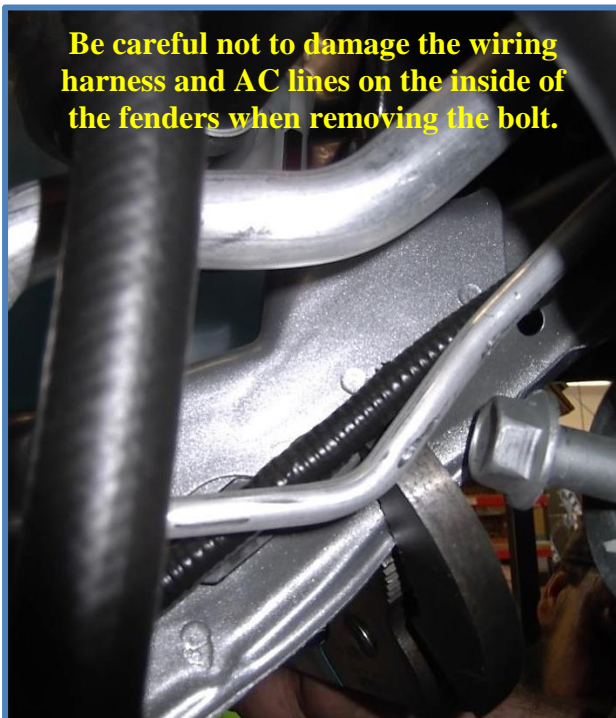
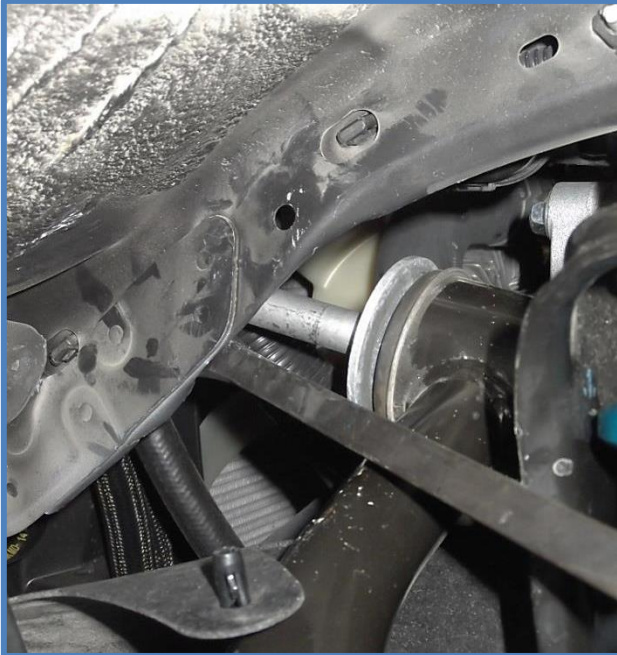
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11. This kit requires the use of an aftermarket Upper Control Arm (UCA). Upper Control Arms are available from many different companies which may vary in shape and design. It is ultimately up to the installer to check clearances with UCA and suspension components. Remove factory UCA's by removing nut from the long through bolt using a 19mm wrench and socket. On Some Toyota and Lexus vehicles it is necessary to pry the fender out to remove the long through bolt. Using a pry bar or large pliers pull the fender out and remove bolt and factory UCA. Install the aftermarket UCA's per the instructions that came with your kit.



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12. This kit also requires the brake and ABS line brackets to be modified (the factory brackets can hit the spring or spring plate when turning). Mark and cut the two tabs off of the brake and ABS line bracket, be very careful to not cut brake lines! Cutting the brackets while the shock is removed is the best time to do this step, trim the brackets now but don't reinstall until step 20. See photos below for cutting bracket.



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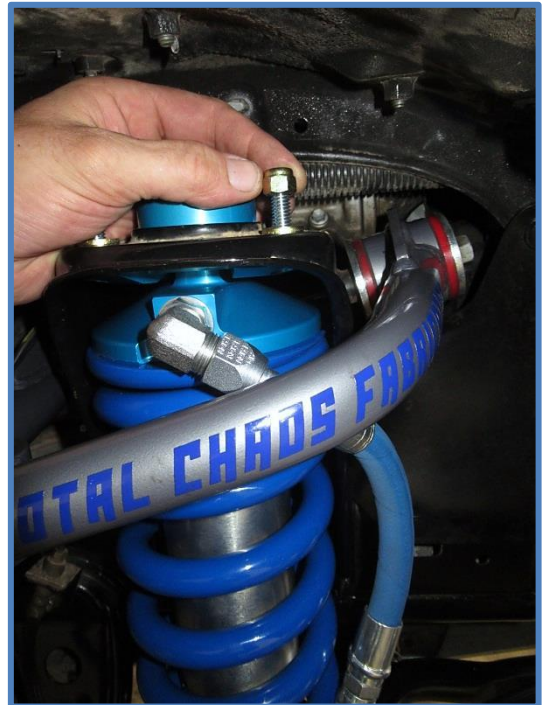
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13. Install the King Shocks by placing the shock in position on the vehicle as shown, be aware the shocks are side specific.

14. Install the factory lower mounting bolt in the lower mount as shown below. Place the washer and nut on the bolt but leave loose for now.



15. Jack up the lower control arm so the upper mounting plate is tight against the upper mount and install the 3/8 HD washers (CW1701) and 3/8 nuts (CN2711).



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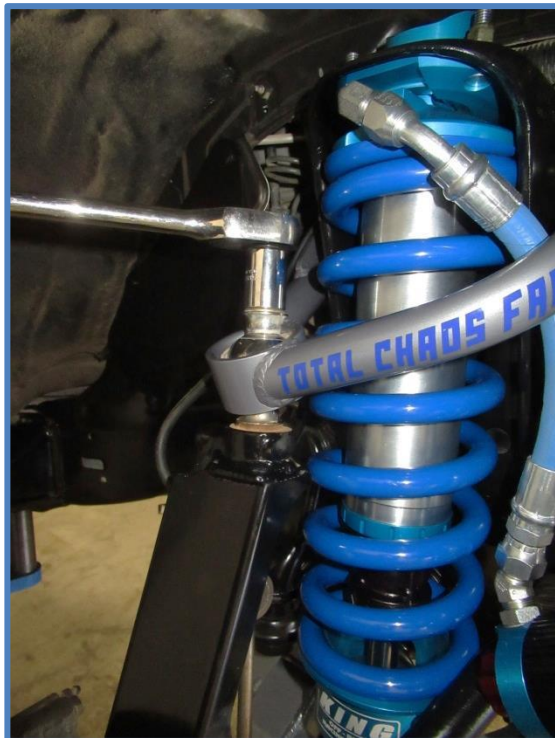
16. Tighten upper mounting nuts to 35 ft-lbs. using a 9/16 wrench or socket.



17. Tighten lower factory bolt to 100 ft-lbs. with a 19mm wrench and socket.



18. Connect the upper control arms using the instructions provided with your UCA kit. Now is a good time to check clearance with the UCA and shock installed, cycle the UCA past the fittings and make sure the UCA does not make contact with hose or fittings. It may be necessary to adjust hose and fittings depending on your set up.



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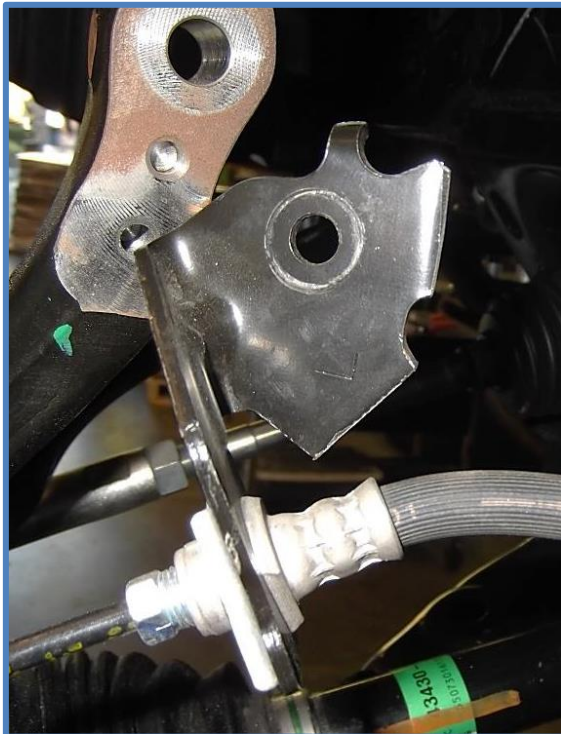


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19. Reconnect tie rod end to the steering knuckle and tighten nut to 67 ft-lbs. Be sure to insert the cotter pin through the castle nut and bend the ends as shown.



20. Reconnecting brake and ABS line brackets: Refer to step 12 for trimming brackets if you haven't already done so. Reinstall the trimmed brake line bracket to the steering knuckle upright using the factory bolt and tighten to 9 ft-lbs.



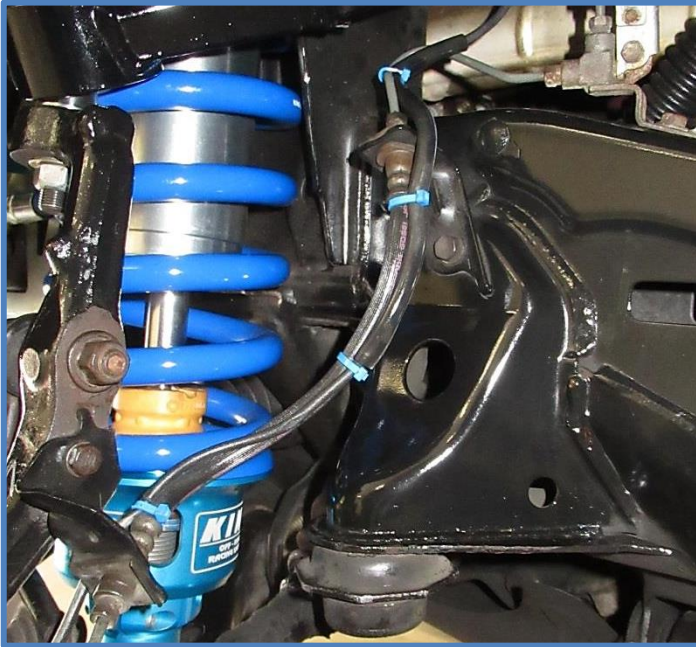
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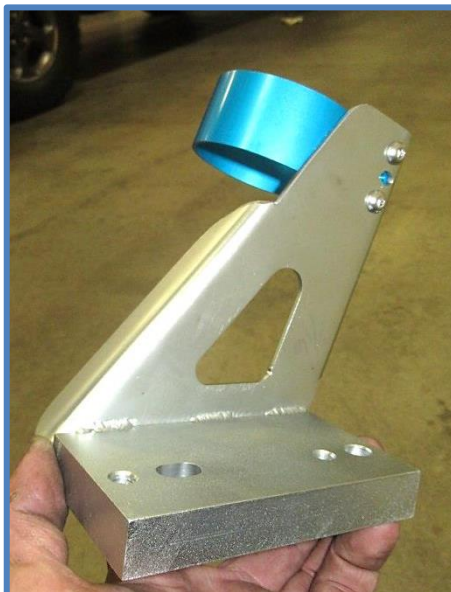
21. Route the ABS line along the brake line as shown below and secure with zip ties provided in the kit. Be sure to leave enough slack so the lines don't stretch while turning and make sure the brake and ABS lines are clear of any moving components.



22. Now remove the sway bar mounting bolts at the frame using a 14mm socket. Do one side at a time.



23. Prepare the reservoir brackets for installation: Install the reservoir clamps onto the reservoir bracket using the 1/4 X 1/2" BHCS (CB2420) provided in the kit. Use red locktite and tighten with a 5/32 Allen wrench.

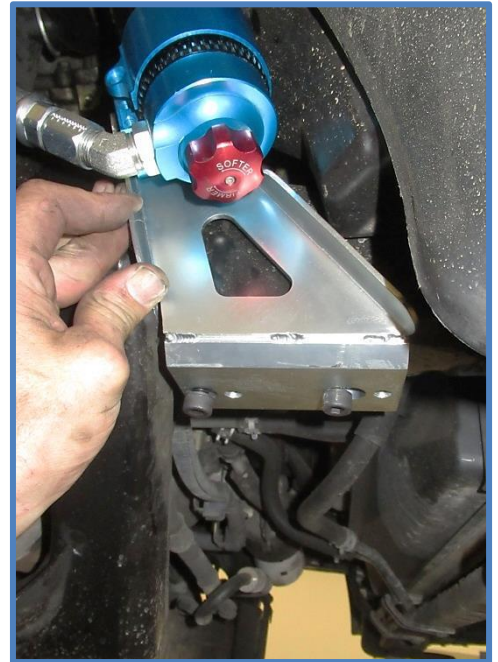


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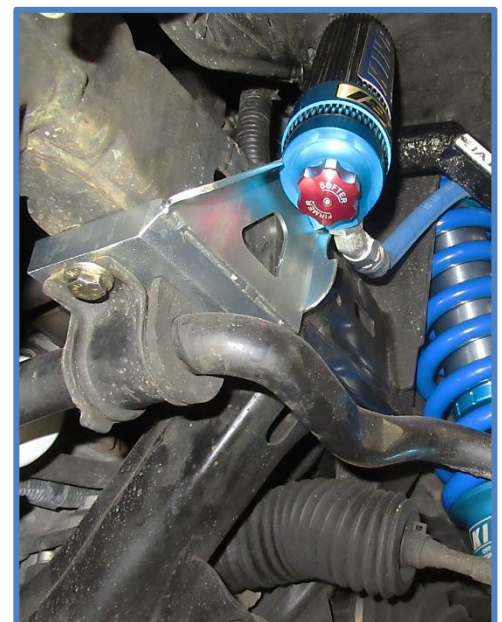
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KING
OFF - ROAD
RACING SHOCKS

24. Place the reservoir in the reservoir bracket as shown below and slide the base of the reservoir bracket between the sway bar and the frame. Use the provided M10-1.25 X 40mm SHCS (CB1804) to mount the reservoir bracket to the existing holes in the frame. Tighten bolts to 30 ft-lbs using an 8mm (or 5/16) Allen wrench.



25. Bolt the sway bar to the bottom of the reservoir bracket using the supplied 3/8 X 3/4" bolts (CB4702). Tighten bolts to 35 ft-lbs. Repeat steps 20-23 on opposite side of vehicle. Reinstall skid plate after both sides are done.



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26. Reinstall the sway bar link to the steering knuckle and tighten nut to 52 ft-lbs.



27. Tighten reservoir clamp with a 3/16 Allen wrench using the supplied 1/4 X 1" SHCS (CB1501)



Check clearance between hose/fittings and control arm. Also check clearance with UCA and coil spring. It may be necessary to adjust hose routing and in some cases it might be necessary to rotate spring so that the uniball cup ends up between the coils at full droop. Clearances are very tight with this kit and some rubbing may occur. Make sure there are no serious clearance issues and that parts are not being damaged. Due to a wide variety of aftermarket modifications it is ultimately up to the installer and/or vehicle owner to determine that the suspension system and all other related components are working together properly.



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DOUBLE CHECK ALL HARDWARE:

Make sure everything is installed correctly and all hardware is tight before reinstalling tires. Install tires, remove jack stands and lower vehicle to the ground. Recheck all hardware and lug nuts after 100 miles and periodically after that as part of routine maintenance.

Alignment is critical:

A professional alignment must be performed before driving this vehicle at highway speeds. Do not attempt to drive your vehicle after this install without having the alignment readjusted to factory specs!

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