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30851 - JK 3" Coil Spring Lift Kit INSTALLATION INSTRUCTIONS

IMPORTANT: Warrior recommends that this kit be installed by a certified technician. While these instructions are complete, a thorough professional knowledge of disassembly and reassembly procedures, as well as post-installation checks is important. Installing this system without this knowledge and expertise may compromise the operating safety of the vehicle.

Before beginning this installation, take a look at the end of the install instructions. You will find a torque specification chart. Reference this chart when tightening any bolts. This chart is located toward the end of the step-by-step instructions and before any illustrations.

RECOMMENDED TIRE SIZE: For on road use only, the kit will clear and steer a 35x12.50 tire with a wheel that has a 4.75" backspace. For off-road use we recommend a 33x12.50 tire.

KIT CONTENTS:

| Description | Qty | Description | Qty |
|--------------------------------|-----|----------------------------|-----|
| Installation Sheet | 1 | JK 3" RR SWAY BAR END LINK | 1 |
| 60508 - 60.5M SHOCK | 2 | REAR BRAKELINE BRACKET KIT | 2 |
| 60509 - 60.5M SHOCK | 2 | 1/4 x 1 Bolt NC Zinc G5 | 2 |
| BLACK SHOCK BOOT | 4 | 1/4 Reg Hex Nut | 2 |
| BLACK ZIP TIE | 4 | 1/4 Lockwasher | 2 |
| WARRIOR SHOCK DECAL | 4 | 1/4 USS - Flatwasher | 6 |
| LARGE OVAL WARRIOR DECAL | 2 | JK 3" FRONT COIL | 2 |
| JK FT LOWER CONTROL ARM KIT | 1 | JK 3" REAR COIL | 2 |
| JK RR LOWER CONTROL ARM KIT | 1 | 2 1/2" USS - Flatwasher | 2 |
| JK FT TRACK BAR RELOCATION BKT | 1 | 3/8 x 1 Bolt NC Zinc G5 | 2 |
| JK RR TRACK BAR RELOCATION BKT | 1 | 3/8 Flatwasher Zinc-USS | 2 |
| JK 3" FT SWAY BAR END LINK | 1 | 3/8 Locknut 2 Way NC Zinc | 2 |

FRONT END INSTALLATION - *Phase 1: Teardown*

1. Ensure the parking brake is set and block the rear tires. Start by raising the front of the vehicle by the front axle and supporting the vehicle at the frame with jack stands. Make sure to get it raised fairly high, so there is plenty of room to lower the axle for changing out the springs. Lower the jack so that the frame is resting on the stands, but keep it holding the axle up so that the tires are not touching the ground. Once it is raised, remove the front tires.
2. You should now be able to raise and lower the axle with the floor jack. If while raising the axle you start to lift the vehicle off of the jack stands, you're raising the axle too far. You can now begin removing factory suspension components.
3. Unbolt and remove the factory anti-sway bar end links.
4. Unbolt and remove the factory shocks.
5. Unbolt the axle end of the steering stabilizer and leave it hanging from the end mounted to the steering linkage.
6. Unbolt the panhard bar (aka track bar) from the axle end and leave it hanging from the end mounted to the frame.
7. Unbolt the bracket holding the soft brake lines to the frame. This will allow the axle freedom to travel during installation.
8. Lower the axle as far down as possible. You should have enough room now to remove the front coil springs.
9. Raise the axle up to give yourself room to access the lower control arm bolts.
10. Unbolt and remove the lower control arms.

FRONT END INSTALLATION - *Phase 2: Assembly*

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1. Locate your new control arms in the kit. Identify which is driver side and which is passenger side. Your kit will come with 4 control arms. The two longer control arms with bends in them are the front two that you will need here. With the end of each control arm closest to the bend being the front and the bends pointing inward, the grease zerks in the rear should point downward. If you get the two control arms mixed up, your zerks will point upward and you will not be able to access the zerk for greasing the arms.
2. Re-using the factory hardware, bolt your new control arms into place. You may need to adjust the axle up or down with the floor jack to get your bolt holes to line up, as your new arms are 5/16" longer than the factory arm.
3. At this point it is easiest to install your new track bar relocation bracket now. **Follow the instructions included with your front track bar relocation kit to complete this step.** You can lower the axle down low to get best access to the areas where you will need to drill holes. Once you've completed this process, disconnect your track bar from the bracket and let it hang freely once again. You will re-attach it at the end of the assembly.
4. Lower the axle as low as possible and install the new coil springs. Of the 4 springs you receive in the kit, the two narrow taller springs are for the front. There are no left or right designations on these springs. Slide them into place and rotate them clockwise until the very end of the coil butts up against the positioning notch in the coil bucket on the axle. Raise the axle to hold the springs in place.
5. Locate your new anti-sway bar end links. Your kit will have included two pairs of different lengths. The shorter of the two pairs are the front pair. Bolt these into place using the factory hardware at the lower end, and the new supplied hardware at the upper end.
6. Locate your new front shocks and shock boots. Assemble the boots to the shocks using the included zip ties, and adhere the supplied shock decals to the body of the shock. These shocks will have a loop mount on the bottom and a stem mount on the top. Re-use the factory bottom bolt and the new supplied stem hardware to bolt these into place.
7. Bolt the brake line brackets you removed in the first phase back into place.
8. Re-attach your track bar to the relocation bracket you installed in step 3.
9. Re-attach your steering stabilizer in its factory location.
10. You have now completed the front suspension installation. Double check to ensure that every bolt is securely tightened, then re-install your tires, remove the jack stands, and lower the vehicle back onto the ground.

REAR END INSTALLATION - Phase 3: Teardown

1. For best results, put the vehicles transfer case into 4-HI, then make sure the vehicle is in first gear, and block the front tires. Start by raising the rear of the vehicle by the rear axle and supporting the vehicle at the frame with jack stands. Make sure to get it raised fairly high, so there is plenty of room to lower the axle for changing out the springs. Lower the jack so that the frame is resting on the stands, but keep it holding the axle up so that the tires are not touching the ground. Once it is raised, remove the rear tires.
2. You should now be able to raise and lower the axle with the floor jack. If while raising the axle you start to lift the vehicle off of the jack stands, you're raising the axle too far. You can now begin removing factory suspension components.
3. Under the Jeep, there is a metal bracket securing the parking brake cables to the body to support the slack. You will need to remove this bracket entirely, and it will not be re-used.
4. Unbolt and remove the factory anti-sway bar end links.
5. Unbolt and remove the factory shocks.
6. Unbolt the panhard bar (aka track bar) from the axle end and leave it hanging from the end mounted to the frame.
7. Unbolt the bracket holding the soft brake lines to the frame.
8. Lower the axle as far down as possible. You should have enough room now to remove the rear coil springs.
9. Raise the axle up to give yourself room to access the lower control arm bolts.
10. Unbolt and remove the lower control arms.

REAR END INSTALLATION - Phase 4: Assembly

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1. Locate your rear control arms. These are the shorter straight pair of control arms. Left and right sides are interchangeable, so you just need to be sure the zerks are pointing a direction where you will be able to access them. Bolt these arms into place re-using the factory mounting hardware. You may need an assistant to push down on the axle pinion to get your bolt holes to line up, as your new arms are 3/16" longer than the factory arm.
2. Locate your rear coil springs. Slide these into place, and using the supplied 2" washer and bolt/nut, secure the coil spring to the axle. These washers act as a retainer, so the spring cannot fall out of place.
3. Raise the axle to hold the coil springs in place on the upper frame end rubber isolators. Make sure these are lining up properly as you raise the axle.
4. Locate your rear panhard bar relocation kit. **Follow the instructions included with this kit to install the bracket.**
5. Locate your new anti-sway bar end links. Re-use the axle end hardware to bolt them into place, and then the new supplied hardware to bolt the upper end in place.
6. Locate your rear shocks, and assemble the boots and decals as you did to the fronts in step 6 of phase 2.
7. On the rear, we use a brake line extension bracket to lower the brake lines, locate this kit. Your brake line bracket that you unbolted earlier, will bolt to this bracket with supplied hardware, and then the bracket will bolt into the factory location.
8. You have now completed the rear suspension installation. Double check to ensure that every bolt is securely tightened, then re-install your tires, remove the jack stands, and lower the vehicle back onto the ground.

INSTALLATION FINISH CHECKS - Phase 5: Final Prep

1. It is very important that everything be double checked before driving the vehicle. Start by going thru every bolt removed and installed, as well as the new bolts added and check for tightness. This chart makes a good reference for how tight bolts should be.

| STANDARD BOLT TORQUE SPECIFICATIONS | | | | | | |
|-------------------------------------|--------------|--------------|---------------|--------------|--------------|--------------|
| INCH SYSTEM | | | METRIC SYSTEM | | | |
| | Grade 5 | Grade 8 | Bolt Size | Class 9.8 | Class 10.9 | Class 12.9 |
| 5/16 | 15 Ft – Lbs | 20 Ft – Lbs | M 6 | 5 Ft – Lbs | 9 Ft – Lbs | 12 Ft – Lbs |
| 3/8 | 30 Ft – Lbs | 35 Ft – Lbs | M 8 | 18 Ft – Lbs | 23 Ft – Lbs | 27 Ft – Lbs |
| 7/16 | 45 Ft – Lbs | 60 Ft – Lbs | M10 | 32 Ft – Lbs | 45 Ft – Lbs | 50 Ft – Lbs |
| | 65 Ft – Lbs | 90 Ft – Lbs | M12 | 55 Ft – Lbs | 75 Ft – Lbs | 90 Ft – Lbs |
| 9/16 | 95 Ft – Lbs | 130 Ft – Lbs | M14 | 85 Ft – Lbs | 120 Ft – Lbs | 145 Ft – Lbs |
| 5/8 | 135 Ft – Lbs | 175 Ft – Lbs | M16 | 130 Ft – Lbs | 165 Ft – Lbs | 210 Ft – Lbs |
| | 185 Ft – Lbs | 280 Ft – Lbs | M18 | 170 Ft – Lbs | 240 Ft – Lbs | 290 Ft – Lbs |

2. Grease all zerks. Your new control arms have a zerk at each end (8 total). Make sure to grease each one.
3. Check all wheels for tightness. It is very easy to miss tightening a wheel.
4. Adjust your draglink for steering wheel straightness. The rod connecting your pitman arm to your passenger steering knuckle has an adjuster, held tight by two nuts. You can loosen these nuts and then simply spin the adjuster. Take some time to get it as straight as possible. If the steering wheel is not pointing straight when the wheels are pointing straight, the ESP system in your vehicle may malfunction, causing strange braking issues while driving. (Note: This will not damage your vehicle, but will continue until the adjustment is made properly) It is strongly suggested that you immediately take your vehicle to a shop for a professional alignment.
5. Test drive to check for any vibrations and looseness. If you experience any issues in this regard, return to your shop immediately and re-check all bolts and nuts.



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Figure 1- Front LCA



Figure 2 - Illustrates orientations of bend in Front LCA



Figure 3 - Shows end of coil rotated into notch

Figure 4 - Shows Front Coil in place

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Figure 5 - Front Sway Bar End Links

Figure 6 - Front Sway Bar End Links installed

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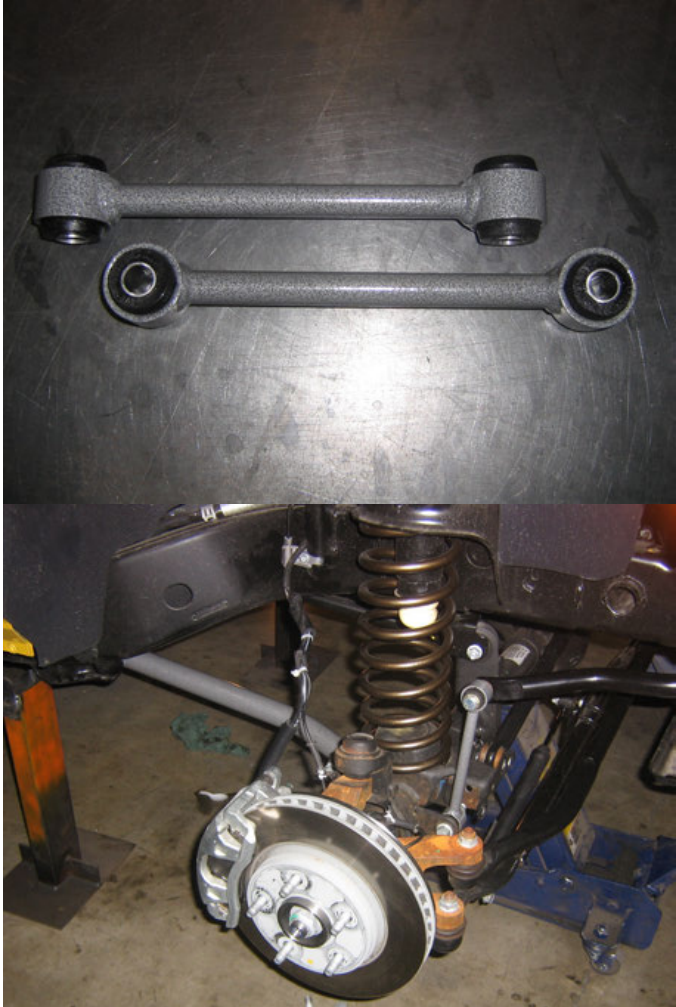


Figure 7 - Rear End Teardown

Figure 8 - Rear Lower Control Arms

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Figure 9 - Rear Springs Installed



Figure 10 - Rear Sway Bar End Links

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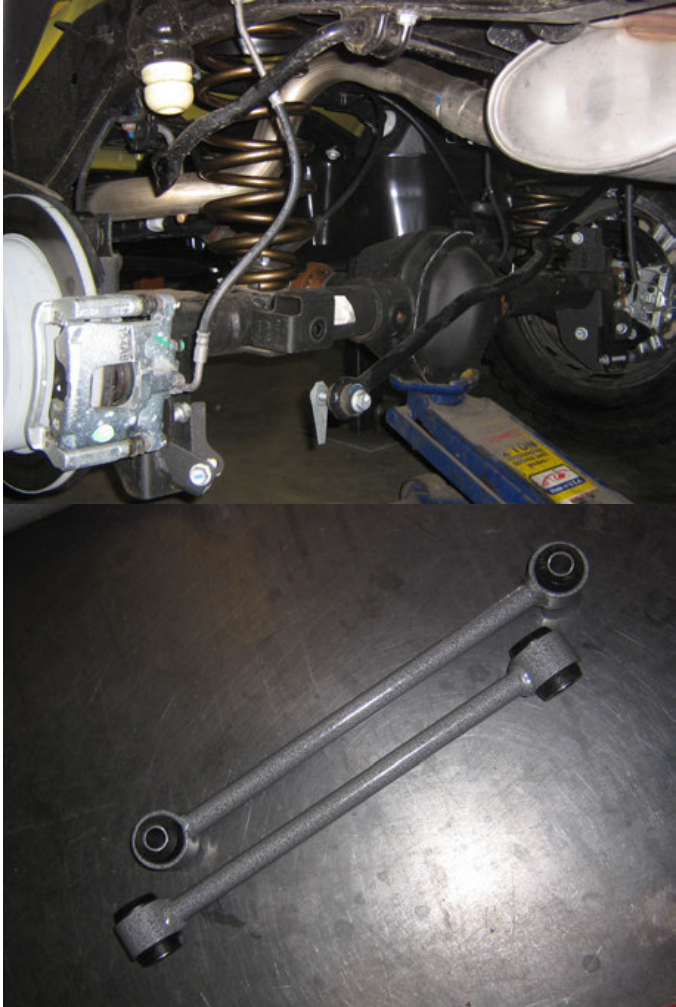
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