

IRON ROCK OFF ROAD

XJ 4" Short Arm Lift Kit Installation Instructions

1-877-919-JEEP www.ironrockoffroad.com

XJ 84-01 Jeep Cherokee

Parts Checklist:

BOX 1 24x12x12

- ☐ Iron Rock logo decal (2)
- ☐ Ironrockoffroad.com decal (1)
- ☐ XJ 4" front spring 96012 (2)
- ☐ 8.75" Front sway bar link 92145 (2)
- ☐ XJ 1" transfer case drop spacer 90165 (2)
- ☐ XJ Boomerang shackle 91110 (2)
- ☐ U-Bolt set - specific to customer vehicle:
 - ☐ Optional: for 8.8 91093 (4 U-bolts)
 - ☐ 9/16-20 high nut (8)
 - ☐ 9/16 hardened flat washer (8)
 - ☐ Optional: for Dana 35/44 91094 (4 U-bolts)
 - ☐ 1/2-20 high nut (8)
 - ☐ 1/2 hardened flat washer (8)
 - ☐ Optional: for Chrysler 8.25 91095 (4 U-bolts)
 - ☐ 1/2-20 high nut (8)
 - ☐ 1/2 hardened flat washer (8)

- ☐ **#274 - XJ Rear Shock Spacer Hardware (1)**
Spacer 99170 (2)

Shocks

☐ Trail Tamer HD Hydro

- ☐ Front shock 79001 (2)
- ☐ Rear shock 79004 (2)

☐ Optional: Doetsch Upgrade

- ☐ Front shock DT 8350 (2)
- ☐ Rear shock DT 8299 (2)

#15 Shock Hardware (1)

- ☐ 2.5" long front barpin 403872 (2)
- ☐ 2.75" long rear barpin 404127 (2)

☐ Optional: Bilstein Upgrade

- ☐ Front shock 33-230351 (2)
- ☐ Rear shock 33-186542(2)

#15 - Shock Hardware (1)

- ☐ 2.5" long front barpin 403872 (2)
- ☐ 2.75" long rear barpin 404127 (2)

☐ #10 Front Sway Bar Link Hardware (1)

- ☐ 3/4" hourglass bushing 94025 (4)
- ☐ 12mm sway bar bolt sleeve 92038 (4)
- ☐ M12 x 70 cl10.9 hex bolt (2)
- ☐ M12 cl10.9 hex nut (2)
- ☐ 1/2 x 1 1/2" gr8 hex bolt (2)
- ☐ 1/2 gr8 lock washer (2)
- ☐ 1/2 gr8 hex nut (2)
- ☐ Sway bar link u-bracket 99000 (2)

☐ #11 Front Brake Line Relocation Hardware (1)

- ☐ 1/4 x 1" Self drilling sheet metal screw (2)

☐ #12 - Rear Sway Bar Spacer Hardware (1)

- ☐ 3/8 USS Flat Washer (4)
- ☐ M10 x 60 hex bolt cl10.9 (4)

☐ #30 - Rear Brake Line Bracket Hardware (1)

- ☐ 5/16 x 1" hex bolt (1)
- ☐ 5/16 washer (2)
- ☐ 5/16 hex nut (1)
- ☐ XJ rear brake line drop bracket 91089 (1)

☐ #134 XJ Shackle Hardware (1)

- ☐ Shackle bushing M02247 (4)
- ☐ Shackle bushing sleeve 91100 (2)
- ☐ 1/4-28 straight grease zerker (2)

BOX 2

- ☐ IRO Full Length Add-a-Leaf 96013 (2 Leafs)
 - ☐ Upper leaf clamp 96021 (4)
 - ☐ Lower leaf clamp 96022 (4)
 - ☐ 5/16-24 x 4 Center pin (2)
 - ☐ 5/16-24 hex nut (2)

~Optional Parts~

- ☐ XJ 3.5" leaf spring (90149) (2)
- ☐ Bushing installation instructions

#72 - Leaf Spring Bushing Hardware (1)

- ☐ Front bushing M20774 (4)
- ☐ Rear bushing M20775(4)
- ☐ Front bushing sleeve 91071 (2)
- ☐ Rear bushing sleeve 91070 (2)



Installation Instructions

Safety Warning:

Installing a suspension lift kit raises the center of gravity of the vehicle. This increases the possibility of a rollover accident. Avoid sudden maneuvers at high speed and avoid all situations where a side rollover may occur. In addition, larger tires decrease braking performance, please drive accordingly. We recommend a tire and wheel combination that makes the vehicle's track width wider (wheels with less backspacing). This will lower the center of gravity and add stability. We also recommend that this system be installed by a qualified professional. Knowledge of suspension component function is necessary for safe installation and post installation inspections. Be sure to re-torque all suspension components after the first 100 miles of use, and frequently inspect all safety critical suspension components.

Before you begin:

- ☐ Read all safety warnings.
- ☐ Read and understand installation instructions.
- ☐ Check all steering and suspension components for wear and replace as needed.
- ☐ Contact Iron Rock Off Road customer service with any questions before, during, or after installation.
- ☐ Ensure that all parts are present and in good condition using the included shipping checklist.
- ☐ Be sure you have the following tools and supplies:
 - ☐ Floor jack and jack stands
 - ☐ Basic hand tools
 - ☐ Multi-purpose grease (all poly bushings should be greased before installation)
 - ☐ Anti-seize compound
 - ☐ A coil spring compressor makes installation easier but is not required.
 - ☐ Hand Drill
 - ☐ 1/2" drill bit
 - ☐ Letter "T" drill bit (.358" diameter)
 - ☐ 7/16-14 Course Thread Hand Tap

Front suspension:

1. Lift front of vehicle and support with tall jack stands under the unibody frame.
 - a. *Tip: break lug nuts loose before lifting vehicle.
2. Ensure that vehicle is safely supported.
3. Remove front tires.
4. Remove front shocks.
5. Remove front sway bar links.
6. Remove track bar bolt at axle end only (do not loosen the "tie rod end" at the uni-frame).
7. Loosen all upper and lower control arm bolts (do not remove).
8. Place a floor jack under the driver's side of front axle for support (do not lift vehicle).
9. If not using a coil spring compressor, unbolt the driver's side lower control arm at unibody.
10. Remove the coil spring clamp (at the axle).
11. Lower axle as far as needed to remove coil spring.
12. Install new spring in vehicle being careful to align the spring to the spring bucket on the axle.
13. Re-install lower control arm at unibody, do not tighten bolt at this time.
14. Repeat for passenger side of vehicle.
15. Install new front shocks using provided bolts, washers, and nuts. Tighten upper stud mount nuts just enough to slightly compress the bushings. Over compressing these bushings will result in damage to the bushings and premature bushing failure.
16. Locate front sway bar links (8.75" center to center), 2 u-brackets, and **HK #10**.
17. Install sway bar link u-brackets to the sway bar using 1/2 x 1 1/2" grade 8 hex bolts, lock washers, and nuts. Brackets mount to the bottom of the sway bar with the bolt facing up and the lock washer and nut on top of the sway bar. Align brackets with offset holes pushing the brackets toward the outside of the vehicle. Torque nuts to 80 ft-lbs.
18. Lubricate sway bar link bushings and bushing sleeves with multi-purpose grease and install into sway bar links.
19. Install sway bar links passenger side first using provided M12 x 70mm hex bolt and nut through the u-bracket with the nuts toward the outside of the vehicle, and the original bolt, nut, and washer at the axle. Torque all nuts to 78 ft-lbs.
20. Drill a new hole for the track bar. On the axle side, with the track bar removed, measure from the center of the existing hole 3/4" straight over toward the driver's side, mark, center punch, and drill with a 7/16" drill bit.
21. Install track bar in the new hole, do not tighten at this time.
22. Locate **HK #11**.
23. On one side, remove the bolt that holds the brake hose to the unibody.
24. Any rusted, worn, cracked, or damaged rubber or steel brake line should be replaced.
25. Pull brake line down as far as possible without over-stressing or causing a kink in the line. *Note: Your brake line may appear different from the photo. Do not pull too far and damage the brake line.
26. Using two adjustable wrenches bend brake line bracket mounting surface so brake line points out toward the brake caliper. See photo.
27. Mark location and drill a 1/4" hole for the brake line locating tab.
28. Fasten brake line to unibody using provided self-drilling sheet metal screw.
29. Repeat for other side.



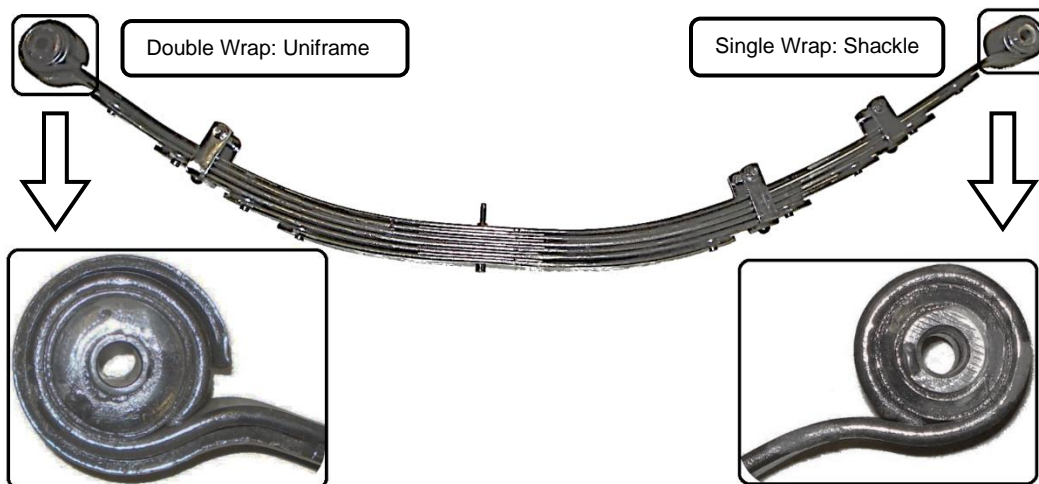
30. Install front tires.
31. Raise vehicle from jack stands and place jack stands under the axle.
32. Install coil spring clamps.
33. With the vehicle's weight on the suspension, torque upper control nuts to 60 ft-lbs.
34. Torque lower control arm nuts to 120 ft-lbs.
35. Torque track bar bolt to 60 ft-lbs.
36. Torque lug nuts to spec.
37. Torque any other loose bolts to spec.

Rear Suspension:

38. Lift rear of vehicle and support with tall jack stands under the unibody frame.
*Tip: break lug nuts loose before lifting vehicle.
39. Ensure that the vehicle is safely supported.
40. Remove rear tires.
41. Remove rear shocks.
42. Allow suspension to droop as much as possible.
43. Remove retaining clip from rear brake line at the unibody.
44. Push the brake line forward until it can be pulled down out of the bracket.
45. Install rear brake line bracket using 5/16 x 1" bolt, nut, and 2 washers from **HK #30**. Bracket should be oriented to extend the brake line down and back.
46. Gently bend the steel brake line into its new location in the bracket. Be very careful to not create a crack or a kink. Any rusted, worn, cracked, or damaged rubber or steel brake line should be replaced.
47. Install brake line retaining clip.

If replacing leaf springs: (if installing add-a-leaf kit proceed to step 58)

48. Starting with the driver's side: place a floor jack under the driver's side of the rear axle for support (do not lift vehicle).
49. Remove leaf spring bolts at unibody and shackle.
50. Remove the U-bolts.
51. Allow axle to droop and remove leaf spring.
52. Install new leaf spring bushings and install new leaf springs. (See attached Poly Leaf Spring Bushing instructions)
53. Install front bolt and rear bolts but do not tighten yet.



54. Clean any debris from axle seating surfaces.
55. Raise the axle up to the leaf spring, make sure the center pin drops into the axle and the axle seats flat against the leaf spring. Install U-bolts.
56. With the vehicles weight on the suspension, torque U-bolts to 90 ft-lbs. and re-torque after 100 miles.
57. Repeat for passenger side.

If installing add-a-leaf kit:

58. Starting with the driver's side, remove U-bolts.
59. Allow axle to droop and remove leaf spring clamps and center pin to take apart the leaf spring pack. Note orientation of leaves.
60. Install the new highly arched leaf in the spring pack (directly under main leaf in the #2 spot) with the long end of leaf towards the rear of the vehicle. Use a c-clamp or two to help install the new center pin.
61. Tighten leaf spring centering pin.
62. Use a c-clamp or two to help install new leaf spring clamps.
63. Clean any debris from axle seating surfaces.
64. Raise the axle up to the leaf spring, make sure the center pin drops into the axle and the axle seats flat against the leaf spring. Install U-bolts and torque to 90 ft-lbs. Be sure to re-torque U-bolts after first 100 miles of use.
65. Repeat for passenger side.
66. Install spacer from **HK #274** on lower rear shock stud then install rear shocks with shock shafts facing up. Torque lower bolts to 46 ft-lbs., and upper barpin bolts to 17 ft-lbs.
67. Install rear tires.
68. Lower vehicle from jack stands.
69. With the vehicle on the ground, torque any loose bolts to spec. including leaf spring bolts and lug nuts.

Transfer Case Drop Kit:

70. Place a floor jack under the driver's side of transfer case crossmember for support.
71. Remove bolt and nut that hold the t-case crossmember to the unibody.
72. Lower t-case crossmember away from unibody and remove threaded stud from unibody. If you do not have a stud puller, you can install 2 nuts and tighten one against the other then remove using a box end wrench on the inner nut.
73. Install spacer using new bolts and washers from **HK #12**. Torque to spec.
74. Repeat for passenger side.

Adjustments and Safety Inspection:

75. Check all components for clearance for suspension to fully cycle up and down and wheels to turn lock to lock. Pay special attention to brake line length and location of all brake lines, axle vent hoses, and ABS wires. Reposition as needed.
A professional front end alignment is required after installation. Your toe-in will be affected and may cause unpredictable steering and accelerated tire wear.
Recommended caster setting: +3.75 to +6.0 (+4.5 degrees is recommended unless a different setting is required for proper driveshaft running length)
Recommended toe in setting: 0 degrees

* Re-torque all fasteners, including lug nuts, after 100 miles, and frequently inspect all safety critical suspension components.





Before you begin:

- Read and understand installation instructions.
- Contact Iron Rock Off Road with any questions before, during, or after installation.
- **Ensure that all parts are present and in good condition per attached shipping checklist.**
- You will need basic wheel bearing multi-purpose grease and a brush.

Shipping Checklist:

Hardware Kit # 72

- ☐ Instructions
- ☐ Main Eye Leaf Spring Bushing M20774 (4)
- ☐ Leaf Spring Shackle Bushing M20775 (4)
- ☐ Main Eye Bushing Sleeve 91071 (2)
- ☐ Shackle Bushing Sleeve 91070 (2)

Installation Instructions:

Bushing Installation:

1. Locate main eye bushings (M20774) and main eye bushing sleeves (91071) and separate from other parts.
2. Liberally apply grease to the inside of the leaf spring main eye bushing opening.
3. Apply grease to bushing halves on mating surface and sleeves.
4. Press one bushing half into main eye bushing opening.
5. Press the other bushing half into the main eye bushing opening on the opposite side of the first half.
6. Apply grease to the bushing sleeve and slide it into the two bushing halves.
7. Repeat the bushing and sleeve installation for the shackle bushings using shortest sleeves and thinner flange bushing halves.

