

# IRON ROCK OFF ROAD

## XJ 5.5" Short Arm Lift Kit Installation Instructions

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

XJ 84-01 Jeep Cherokee

### Shipping Checklist:

#### \*Box 1\* 33x17x8

- Instructions
- Iron Rock Decal 10001 (2)
- Front sway bar links 10.75" center to center 92146 (2)
- XJ 1.75" transfer case drop spacer 91018 (2)
- IRO boomerang shackle 91110 (2)
- U-Bolt set - specific to customer vehicle:
  - Optional: Ford 8.8 91093 (4 U-bolts)
    - 9/16-20 high nut (8)
    - 9/16 hardened flat washer (8)
  - Optional: Dana 35/44 91094 (4 U-bolts)
    - 1/2-20 high nut (8)
    - 1/2 hardened flat washer (8)
  - Optional: Chrysler 8.25 91095 (4 U-bolts)
    - 1/2-20 high nut (8)
    - 1/2 hardened flat washer (8)
- #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)
- #14 - XJ 1.75" T-case Drop Hardware (1)
  - 3/8 USS Flat Washer (4)
  - M10 x 70 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)
- #72 - Leaf Spring Bushing Hardware (1)
  - Main eye bushing M20774 (4)
  - Shackle bushing M20775(4)
  - Main eye bushing sleeve 91071 (2)
  - Shackle bushing sleeve 91070 (2)
- #134 - IRO Shackle Hardware (1)
  - IRO shackle bushing M02247 (4)
  - IRO bushing sleeve 91100 (2)
  - 1/4" Straight grease zerks (2)
- #274 - XJ Rear Shock Spacer Hardware (1)
  - Spacer 99170 (2)

### Shocks

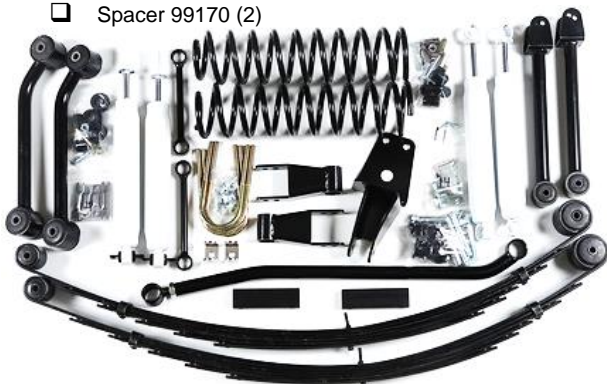
- Trail Tamer HD Hydro
  - Front Shock 79002 (2)
  - Rear Shock 79004 (2)
- Doetsch Upgrade (Optional)
  - Front shock DT 8386 (2)
  - Rear shock DT 8299 (2)
- #15 - Shock Hardware (1)
  - 2.5" long front barpin 403876 (2)
  - 2.75" long rear barpin 404127 (2)
- Bilstein Upgrade (Optional)
  - Front Shock 33-230375 (2)
  - Rear Shock 33-186559 (2)
- #15 - Shock Hardware (1)
  - Front barpin 2.5" 403876 (2)
  - Rear barpin 2.75" 404127 (2)

### \*Box 2\*

- XJ/ZJ double shear track bar bracket 91015 (1)
- Double adjustable track bar 92305 (1)
- Double adjustable track bar male end 92297 (1)
- Double adjuster, track bar 91235 (1)
- #277 - XJ Double Adjustable Track Bar Hardware (1)
  - Track bar bushing half 80014 (4)
  - 12mm track bar bushing sleeve 92035 (1)
  - 7/16" I.D. track bar bushing sleeve 92036 (1)
  - Track bar clamp 92303 (2)
  - M12-1.75 x 80 hex bolt (2)
  - M12-1.75 hex nut (2)
  - 7/16" x 2-1/2" hex bolt, gr8 (1)
  - 7/16" Track Bar Flag Nut 91230 (1)
  - 7/16" USS flat washer (5)
- Front spring 96029 (2)
- Optional: Fixed control arms
  - Bent fixed length 16.25" center to center 99072 (2)
    - Bushings installed
  - Fixed length 15.25/15.5" with 99074 (2)
    - Bushings installed
- Optional: Adjustable control arms
  - Adjustable short UCA 99068 (2)
    - Front UCA male end 99067 (2)
    - Bushings installed
    - 1-14 jam nut (2)
  - Bent adjustable short LCA 99169 (2)
    - LCA male end 99070 (2)
    - Bushings installed
    - 1 1/4-12 jam nut (2)

### Unboxed

- XJ 3.5" leaf spring 90149 (2)



# **Installation Instructions:**

## **\*\*\*Safety Warning: Read before installing product\*\*\*:**

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 backsacing). 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 and lug nuts 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:

## **Front suspension:**

1. Lift front of vehicle and support with tall jack stands under the unibody frame.

\*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 and uniframe mounting bracket. No need to separate them.
7. Loosen all upper 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. Remove one lower control arm.
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. Install new lower control arm, do not tighten bolts at this time. If needed, remove other side lower control arm to allow enough movement to install the new longer control arm. Be sure to have a jack under the axle and beware that the axle can shift or move with both control arms removed. Use a floor jack and ratcheting straps as needed to position axle.
14. Install second coil spring being careful to align the spring to the spring bucket on the axle.
15. Remove upper control arms and install new upper control arms. Do this one at a time if possible. Do not tighten bolts at this time. For fixed length control arms with 2 mounting holes on the axle end, use the hole that provides a shorter control arm length. Orientation of the control arm does not matter.
16. Locate track bar, track bar male threaded end, track bar bracket, double adjuster, and **HK #277**. Install clamps onto the double adjuster.
17. Apply anti-seize to all the threads then thread the track bar and male end into the double adjuster. Ensure the ends are equally threaded into the double adjuster then adjust the length to 33-1/2" center to center as a starting point.
18. Apply multi-purpose grease to both poly bushings and both inner bushing sleeves. Install bushings then sleeves into the track bar. The sleeve with the larger hole goes into frame side. (Longer end)

<b>Control Arm Length Starting Point (Center to Center)</b>	
Front LCA (Lower Control Arm)	16-1/4"
Front UCA (Upper Control Arm)	15-3/8"



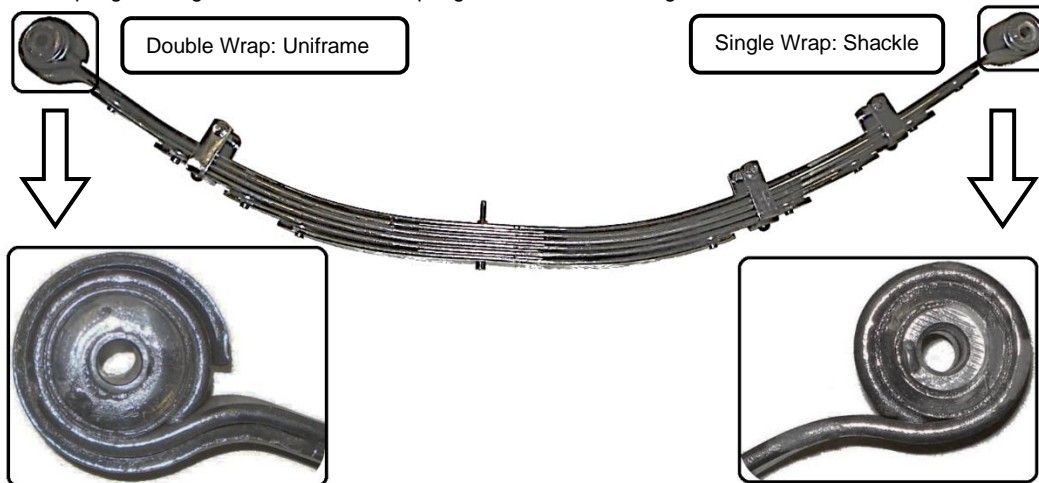
19. Install the track bar bracket onto the unibody with the factory bolts. Loosely attach the bracket with the upper two bolts, then align the lower bolt mounting holes. Install the lower mounting bolts and torque all track bar bracket hardware to 92 ft-lb.
20. **\*\*\*NOTE:** If the unibody is rusty, the seam behind the factory bracket may have swelled making installation of the lower mounting bolts difficult. Using a ratchet strap to pull the bracket to align the holes or smoothing the seam with a hammer is recommended.
21. Install track bar with short end at axle. Use new 7/16 x 2-1/2 bolt, washer, and flag nut at axle side. Torque to 74 ft-lb. M12 x 80 bolt, nut, and washers at uniframe side. Torque to 80 ft-lb. Use steering wheel or a ratchet strap to help line up the holes.
22. 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.
23. Locate hardware kit 11.
24. On one side, remove the bolt that holds the brake hose to the unibody.
25. Any rusted, worn, cracked, or damaged rubber or steel brake line should be replaced.



26. 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.
27. Using two adjustable wrenches bend brake line bracket mounting surface so brake line points out toward the brake caliper. See photo.
28. Mark location and drill a 1/4" hole for the brake line locating tab.
29. Fasten brake line to unibody using provided self-drilling sheet metal screw.
30. Repeat for other side.
31. Install front tires.
32. Raise vehicle from jack stands and place jack stands under the axle.
33. Install coil spring clamps.
34. With the vehicle's weight on the suspension, torque upper control nuts to 60 ft-lbs.
35. Torque lower control arm nuts to 120 ft-lbs.
36. Torque track bar bolt to 60 ft-lbs.
37. Torque lug nuts to spec.
38. Torque any other loose bolts to spec.

### **Rear Suspension:**

39. Lift rear of vehicle and support with tall jack stands under the unibody frame.  
\*Tip: break lug nuts loose before lifting vehicle.
40. Ensure that the vehicle is safely supported.
41. Remove rear tires.
42. Remove rear shocks.
43. Allow suspension to droop as much as possible.
44. Remove retaining clip from rear brake line at the unibody.
45. Push the brake line forward until it can be pulled down out of the bracket.
46. Install rear brake line bracket using 5/16 x 1" bolt, nut, and 2 washers from hardware kit #30. Bracket should be oriented to extend the brake line down and back.
47. 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 at this time.
48. Install brake line retaining clip.
49. Place a floor jack under one side of the rear axle for support (do not lift vehicle).
50. Remove front leaf spring bolt at unibody.
51. Remove rear leaf spring bolt at shackle.
52. Remove rear shackle bolt at unibody.
53. Remove the u-bolts.
54. Allow axle to droop and remove leaf spring and shackle.
55. Grease and install leaf spring shackle bushings into the shackle.
56. Install leaf spring shackle into unibody. IRO text facing rearward. Do not tighten bolt at this time.
57. Install new leaf spring bushings and install new leaf springs. Use lower mounting hole in shackle.



58. Install front bolt and rear bolts but do not tighten yet.
59. Clean any debris from axle seating surfaces.
60. 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.
61. Repeat for passenger side.
62. Torque u-bolts to 90 ft-lbs.
63. Grease lower shock studs, 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.
64. Apply anti-seize to upper bolts and install rear shocks using original hardware. Torque upper shock barpin bolts to 17 ft-lbs.
65. Install rear tires.
66. Lower vehicle from jack stands.
67. With the vehicle on the ground, torque any loose bolts to spec. including leaf spring/shackle bolts, and lug nuts.

### **Transfer Case Drop Kit:**

68. Place a floor jack under the driver's side of transfer case crossmember for support.
69. Remove bolt and nut that hold the t-case crossmember to the unibody.

70. 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.
71. Install spacer using new bolts and washers from **HK #14**. Torque to spec.
72. Repeat for passenger side.

### **Adjustments and Safety Inspection:**

73. 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.
74. Ensure axle is centered. Orient track bar clamps to not interfere with any other components. Tighten track bar clamps to 60 ft-lbs.
75. A professional front end alignment is required after installation. Your toe-in will be affected and may cause unpredictable steering and accelerated tire wear. We recommend 1/8" toe-in and 5 to 7.5 degrees positive caster.
  - \*Re-torque u-bolts to 90-100 ft/lbs. after 100 miles and again after 500 miles.
  - \*Re-torque all fasteners after 100 miles, and frequently inspect all safety critical suspension components.
  - \*Re-torque lug nuts after 100 miles.



# IRON ROCK OFF ROAD

**XJ Polyurethane Leaf Spring  
Bushing Installation**

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

## **Shipping Checklist:**

### **Hardware Kit # 72**

- Instructions
- Main Eye Leaf Spring Bushings (4) – M20774
- Leaf Spring Shackle Bushings (4) – M20775
- Main Eye Bushing Sleeve (2)
- Shackle Bushing Sleeve (2)



## **Installation Instructions:**

### **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.

### **Bushing Installation:**

1. Locate main eye bushings (M20774) and main eye bushing sleeves (M20775) 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. Mimic the main eye installation for the shackle bushings using shortest sleeves and thinner flange bushing halves.