

IRON ROCK OFF ROAD

**JK 3.5" Benchmark Series
Lift Kit Instructions**

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

Parts Checklist:

- 3.5" Front coil spring 96027 (2)
- 3.5" Rear coil spring 96028 (2)
- JK 0-8" front track bar 80000 (1)
- Track bar threaded male end 92004 (1)
- Front sway bar link 10.75" center to center 92146 (2)
- Rear sway bar link 10" center to center 80138 (2)
- Rear Track Bar Bracket 80064 (1)
- JK Rear Bump Stop Spacer 2.5" 80058 (2)
- JK Rear Coil Spring Retainer 80061 (2)
- JK Rear Sway Bar Spacer 99077 (2)
- JK Rear Sway Bar Relocation Plate 80137 (2)
- JK LCA Front Right 80011 (1)
- JK LCA Front Left 80012 (1)
- LCA Threaded Male End 91109 (2)
- #12 - Rear Sway Bar Spacer Hardware (1)**
 - 3/8 USS Flat Washer (4)
 - M10 x 60 hex bolt cl10.9 (4)
- #65 - Adjustable LCA Clamping Hardware (1)**
 - 1/4"-28 x 1-1/8" socket head cap screw (4)
 - 1/4"-28 hex nut, gr8 (4)
- #127 - 2 5/8" 6 Bolt IRO Flex End Hardware (2)**
 - Inner race 91118 (2)
 - Thrust washer 91119 (2)
 - 2-5/8" Flex End Ball 91117 (1)
 - 10-32 x 1-3/4" Socket Head Cap Screw (6)
 - 10-32 Nylock Nut (6)
 - 1/4"-28 90° Grease zerk Fitting (1)
- #162 - JK Brake hose bracket front or rear (1)**
 - Brake hose bracket 80017 (2)
 - M6 x 18 hex bolt (2)
 - M6 hex nut (2)
 - 1/4" USS washer (2)
- #166 - Front Track Bar Hardware (1)**
 - Track bar bushing half M20919 (4)
 - Track bar bushing sleeve 80003 (2)
 - Track Bar clamp 95044 (1)
 - 5/16-18 x 2 carriage bolt gr5 (1)
 - 5/16-18 hex flange nut (1)
- #195 - JK Rear Coil Retainer Hardware (1)**
 - Coil Spring Retainer Plate 85029 (2)
 - Upper Retainer Nut Plate 80146 (2)
 - 7/16 Flag nut with bend 80063 (2)
 - 7/16-14 x 2" hex bolt, gr8 (2)
 - 7/16-14 x 1" Hex head bolt, gr8 (2)
 - 7/16 SAE washer (2)
- #196 - JK Rear Track Bar Bracket Hardware (1)**
 - M14 x 80 hex bolt cl10.9 (1)
 - M14 nylock flange nut (1)
 - Spacer sleeve 80003 (1)
 - 3" U-bolt 80071 (2)
 - 3/8" serrated flange nut (4)
- #197 JK 0-3.5" SS Rear Brake Line Set 13838 (1)**
 - Rear brake hose LEFT 88160 (1)
 - Rear brake hose RIGHT 88161 (1)
 - Brake hose mounting brkt 88275 (2)
 - #10 x 1 self-drilling screw (2)
 - Brake Hose clip BQ3052 (2)
 - Copper washer BQ1016 (4)

- #199 JK Rear Bump Stop Spacer Hardware (1)**
 - 5/16-18 x 3/4 Serrated flange bolt, gr8 (4)
 - 5/16-18 Serrated flange nut (4)
- #201 - Sway Bar Link Hardware (2)**
 - 3/4" hourglass bushing 94025 (4)
 - 12mm sway bar bolt sleeve 92038 (4)
 - M12 x 65 Hex bolt cl 10.9 (2)
 - M12 Nylock nut (2)
 - 7/16 USS washer (4)
- #220 - Rear Sway Bar Link/Relocation Hardware (1)**
 - 3/4" hourglass bushing 94025 (4)
 - 12mm sway bar bolt sleeve 92038 (2)
 - 1/2" short sway bar bolt sleeve 80140 (2)
 - 7/16 USS flat washer (12)
 - 1/2-13 x 1-1/2 hex bolt, gr8 (2)
 - 1/2-13 x 2-1/2 button head bolt (2)
 - M12 x 60 hex head bolt cl10.9 (2)
 - M12 nylock nut (2)
 - 1/2-13 Nylock flange nut, gr8 (4)

Shocks

- Trail Tamer HD Hydro**
 - Front shock 79001 (2)
 - Rear shock 79005 (2)
- Doetsch Upgrade (Optional)**
 - Front shock DT 8350 (2)
 - Rear shock DT 8371 (2)
- #165 - JK Shock Hardware (1)**
 - Rear barpin GS-403261 (2)
- Bilstein Upgrade (Optional)**
 - Front shock 33-230351 (2)
 - Rear shock 33-104652 (2)
- #164 - JK Bilstein Shock Hardware (1)**
 - Rear barpin GS-403261 (2)
 - 12mm shock sleeve 404739 (4)



Before you begin:

- ***Ensure that all parts are present and in good condition using above shipping checklist. ***
- Read and understand all installation instructions.
- Tools required:
 - Floor jack and jack stands
 - Basic hand tools
 - Torque wrenches capable of 70-85 in-lb and 75-130 ft-lb
 - File or angle grinder
 - Anti-seize compound
 - Multipurpose grease
 - Oil drain pan

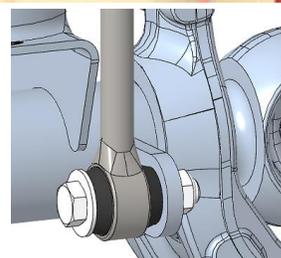
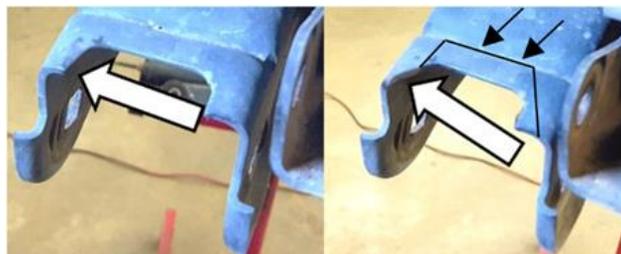
Prepare the parts for installation:

1. **Shocks:** Locate rear shocks and hardware kits.
2. Grind the outer corners on one end of the barpins to ease installation if needed.
3. Grease and install the barpins into the top side of the rear shocks. Clamp the barpin vertically in a bench vise and lower the shock onto the barpin while rotating the shock back and forth. Be sure to grease the barpin and the shock bushing.
4. **Track Bar:** Locate front track bar, track bar hardware kit #166 and track bar threaded male end.
5. Lubricate track bar bushings and bushing sleeves with multi-purpose grease and install into track bar and track bar threaded male end.
6. Slip clamping bracket onto adjusting end of track bar with the opening down and insert the 5/16 carriage bolt from rear and nut facing forward.
7. Thread the track bar male end into the track bar and adjust to 32-3/4" as a starting point. Length may need adjustment after a test drive.
8. Tighten the clamping bracket. Make sure the bracket opens downward, and nut faces forward.
9. **Front Lower Control Arms:** Use a light coat of anti-seize and thread the male ends into the control arms and adjust to 23-1/2" as a starting point.
10. Using the instructions on the last page assemble the flex ends into the threaded male ends.
11. Install the 1/4-28 clamping bolts into the control arms, do not fully tighten at this time.
12. **Sway Bar Links:** Grease and install the hourglass bushings into the links.
13. Grease and install the sway bar link bolt sleeves into the bushings. All sleeves are the same (12mm I.D.).



Front installation:

14. Lift front of vehicle and support with jack stands under frame rails.
**Tip: break lug nuts loose before lifting vehicle.
15. Remove front wheels
16. Remove front sway bar links.
17. Support front axle with jack stands and remove shocks.
18. Remove brake line brackets from frame rail.
19. Remove front track bar.
20. Loosen the upper control arm bolts at the frame and the axle (do not remove).
21. Remove factory lower control arms.
22. Remove coil springs.
23. Grind both of the sharp corners inside the lower control arm mounts. See photo. Jeeps with long shocks can gain flex by grinding up to the crease in the LCA bracket.
24. Install new lower control arms using the factory hardware. Do not tighten bolts at this time.
The bend goes up for ground clearance and in for tire clearance. The rubber bushing goes to the axle and the flex end at the frame.
25. Install brake hose extension bracket on frame in factory location using factory bolt.
26. Reinstall brake hose on new bracket using provided bolt and nut in hardware kit #162.
Re-route ABS wires as needed to allow full suspension droop.
27. Install new coil springs.
28. Install new shocks.
29. Install new front sway bar links. Use bolts from hardware kit #201 for the top and reuse the original bolt for the lower.
30. Install new front track bar, threaded end to axle side. The clamp hangs down, nut facing front.
31. Reinstall front wheels.
32. Lower vehicle onto ground.



Rear installation:

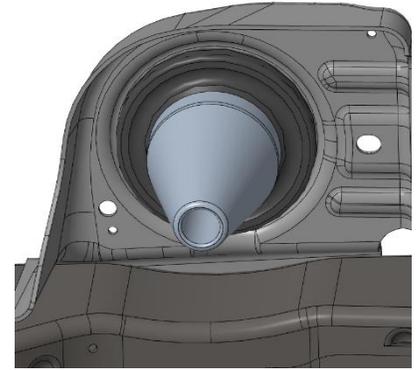
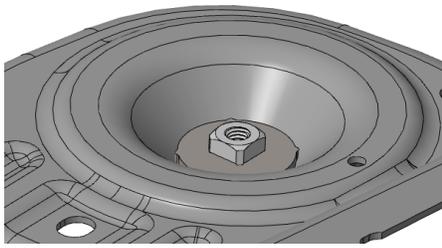
33. Lift rear of vehicle and support with jack stands under frame rails.
**Tip: break lug nuts loose before lifting vehicle.
34. Remove rear wheels.
35. Remove sway bar link bolts at axle.
36. Support the rear axle with jack stands and remove shocks.
37. Remove coil springs.
38. Disconnect track bar from the axle.
39. Loosen the upper and lower control arm bolts at the frame and the axle (do not remove).

Retainer Cone Installation:

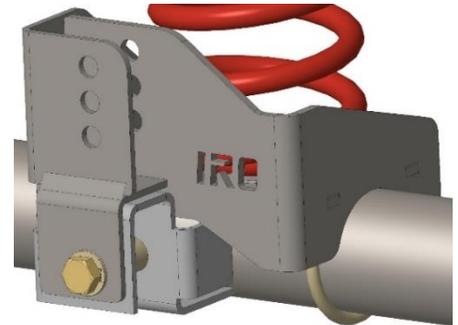
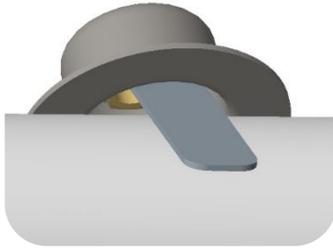
40. Position the nut plate on top of the coil spring mount with the nut facing up.



41. Place the upper isolator on top of the retainer cone then place it up onto the coil spring mount. Secure with 7/16 x 2" bolt and washer.
42. Tighten until the isolator starts to deform and tightening effort increases sharply.



43. Install the springs into the Jeep by positioning them over the retainer cones and lower spring mounts on the axle.
44. Insert the 7/16 flag nut into the lower spring mount from the bottom side and align it with the hole in the lower spring mount.
45. Insert the retainer plate into the spring. Add a small amount of anti-seize to the 7/16 x 1" bolt and torque to 54 lb-ft.

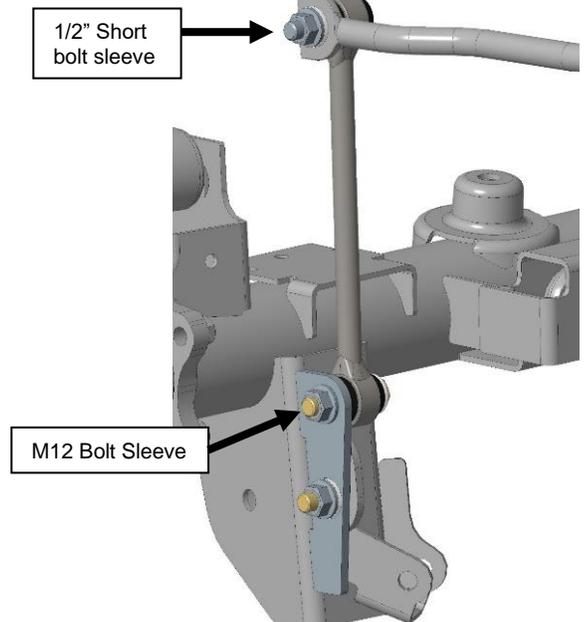
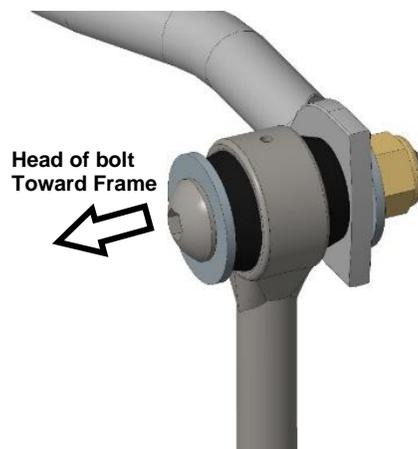
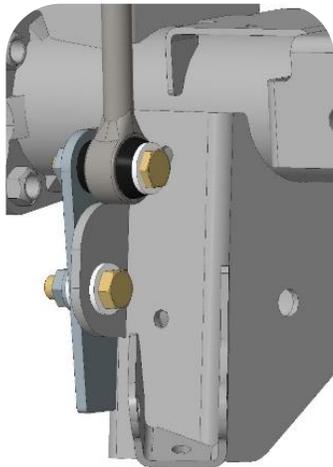


46. Install new rear track bar bracket over factory track bar bracket. Secure with U-bolts, 3/8" serrated flange nuts, M14 x 80 bolt, nylock nut and spacer sleeve from hardware kit #199.
47. Reinstall track bar into rear track bar bracket (middle hole) using the factory track bar bolt and flag nut. *Be careful of track bar to exhaust clearance. The two may contact if bumpstops are too short.
48. Place an oil drain pan under the brake caliper and hose. Remove rear brake hose from the frame and caliper then remove the brake hose bracket.
49. Install new brake hose bracket on the frame in the original hole using the factory hardware. Angle the bracket to line up with the brake line and use the self tapping screw to secure it.
50. Attach the new braided brake hose to the caliper with the factory bolt and new copper washers.
51. Tighten the brake line into the braided hose. **While tightening, it is critical to orient the new braided brake hose inward to avoid moving suspension parts and the tire, secure it to the bracket with the clip provided.**



Re-route ABS wires as needed to allow full suspension droop.

52. Install rear bump stop spacers using hardware kit #199. The slant should point forward.
53. Install rear sway bar drop spacers on the frame: Loosen one side of the sway bar, do not remove the bolts, then remove bolts from the opposite side and install the spacer using hardware kit #12.
54. Install rear sway bar relocation brackets on the outside of the original sway bar mount using 1/2 x 1-1/2 bolts from hardware kit #220.
55. Assemble new rear sway bar links using hardware kit #220. Grease and install the hourglass bushings into the links then grease and install one 1/2" short bolt sleeve and one M12 long bolt sleeve into each rear sway bar link. The short bolt sleeve is for the top of the sway bar link.
56. Use the M12 x 60 hex head bolts for the bottom of the sway bar links. Use the 1/2 x 2-1/2 button head bolts for the top of the sway bar link. See photos.



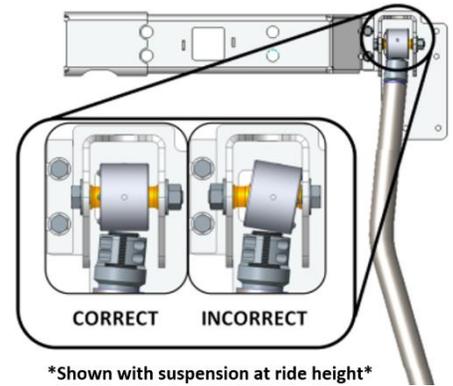
57. Install new shocks.
58. Reinstall rear wheels.
59. Lower vehicle onto ground.

Final Torque and Adjustments:

60. The draglink **must** be adjusted to center the steering wheel before driving the vehicle. Failure to do so will cause an error with the factory traction control system and will result in odd handling and decreased performance. This can be done at home, but a professional alignment is recommended.
61. Torque lug nuts to factory spec. (Typical specification is 85-115 ft-lbs., depending on your wheels)
62. With the vehicle weight on the suspension, tighten all lower control arm bolts to 130 lb-ft. Tighten front upper control arm bolts to 75 lb-ft.
63. Tighten rear upper control arm bolts to 130 lb-ft.
64. Ensure flex ends are parallel with control arm mounts then torque lower control arm clamping bolts to 140 in-lb. Be sure to go back and forth between both bolts several times to ensure even clamping.
65. 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 lines, axle vent hoses, and ABS wires. Reposition as needed by bending the brackets, relocating, or extending hoses and wiring.

Final Safety Warning:

66. * Re-torque all fasteners after 100 miles, and frequently inspect all safety critical suspension components. It is the responsibility of the installer to be sure all fasteners are properly tightened after installation and to ensure the owner knows his/her ongoing responsibility. It is the responsibility of the owner of the vehicle to be sure all safety critical components are inspected frequently, especially after off road or other demanding use.



IRON ROCK OFF ROAD

2-5/8" IRO Flex End (6 bolt)
Assembly Instructions

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

Fits All Iron Rock Off Road Long Arm Systems, WJ A-Arms, and Build Your Own Flex End Assemblies.

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!**
- Have these tools handy:
 - 5/32" Allen head socket
 - 3/8" open end wrench
 - Inch-lb. torque wrench
 - Multipurpose grease/grease gun

Parts Checklist:

- Outer housing, weld on (may already be attached to your existing control arm)

#127 - 2-5/8" IRO Flex End (6 bolt)

- 2-5/8" flex end race 91118 (2)
- Thrust washer 91119 (2)
- 2-5/8" flex end ball 91117 (1)
- #10-32 nylock nut (7)
- #10-32 x 1-3/4" socket head cap screw (6)
- 90° 1/4"-28 grease zerker fitting (1)

Assembly:

1. Insert two #10-32 socket head cap screws into one thrust washer and one plastic race. Spherical bore of race facing away from thrust washer. (Figure 1)
2. Install this small assembly into the flex end housing. The races are a light press fit, use a wide punch and hammer to assist you if needed.
3. Apply a thin coating of multi-purpose grease to the mating surfaces of the ball and both races.
4. Place the ball in the race (inside the flex end). The ball should perfectly fit the contour of the race. (Figure 2)
5. Insert the other race onto the ball so that the spherical bore is contacting the ball. Once again, the races are a light press fit, use a hammer and wide punch if needed. (The two screws should be through one washer and both races at this point)
6. Insert the second thrust washer on top of the flex end housing, sliding the bolts through the holes. (Figure 3)
7. Start nylock nuts on the two bolts that are in the flex end assembly. Hold the nut and turn the bolt.
8. Insert the remaining four cap screws through the remaining holes and install nuts. (Figure 4)
9. Snug up all of the bolts fairly tight.
10. Torque bolts evenly, starting at one bolt and continuing using a crisscross pattern. Torque all six bolts to 70 in-lbs., then to 85 in-lbs.
11. Install 90° grease zerker fitting so that it is easily accessed in the vehicle.
12. Grease flex end until grease comes out of the races around the ball.
13. Re-torque bolts to 85 in-lbs. after 5 minutes.



Figure 1



Figure 2



Reference Only Complete joint shown fully assembled without housing

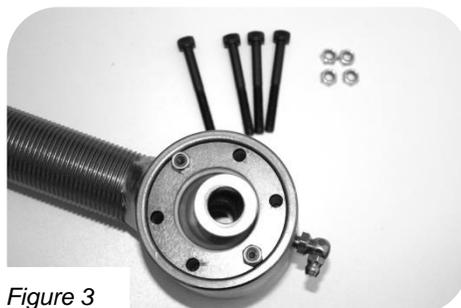


Figure 3



Figure 4