

IRON ROCK OFF ROAD

XJ Control Arm Installation Instructions
I-877-919-JEEP www.ironrockoffroad.com XJ 84-01 Jeep Cherokee

Parts Checklist:

BOX 1 24x12x12

- ☐ Literature (instructions)
- ☐ Invoice
- ☐ Iron Rock logo decal (2)
- ☐ Ironrockoffroad.com decal (1)
- ☐ Adjustable lower control arm with bend 99071 (2)
 - ☐ LCA Threaded Male End 99070 (2)
 - ☐ 1 1/4-12 Jam Nut (2)
 - ☐ Bushing installed (4)
- ☐ Adjustable front upper control arm 99068 (2)
 - ☐ Front UCA Threaded Male End 99067 (2)
 - ☐ 1-14 Jam Nut (2)
 - ☐ Bushing installed (2)

Installation Instructions

Safety Warning:

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 parts 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
 - ☐ Optional: This is a great time to replace your axle side upper control arm bushings with IRO flex ends.



Front suspension:

1. Locate lower control arms with male threaded ends and jam nuts.
**LCAs w/ optional Flex End upgrade: install flex ends into male ends using the instructions on the last page.
2. Apply a thorough coating of anti-seize compound to male threads, install jam nuts, and thread male end into female end. Adjust length based on the chart above.
3. Locate upper control arms, male threaded ends, and jam nuts.
4. Thoroughly coat male threads with anti-seize compound. Install jam nuts and threaded male end into female end. Adjust length based on the chart above.
5. Lift front of vehicle and support with tall jack stands under the unibody frame.
 - a. *Tip: break lug nuts loose before lifting vehicle.
6. Ensure that vehicle is safely supported.
7. Remove front tires.
8. Loosen all upper and lower control arm bolts (remove nuts but leave bolts for now).
9. Place a floor jack under the front axle for support (do not lift vehicle).
10. Remove lower control arms.
11. Install lower control arms into the Jeep. Bend at axle end hanging down to clear shock mount at full droop. Re-use original fasteners. Do not tighten nuts at this time.
12. Remove upper control arms from the Jeep and install new ones using the inner (shorter length) hole at the axle side. Re-use original fasteners. Do not tighten nuts at this time.

Control Arm Starting Length (Center to Center)				
	3" Lift	4" Lift	5.5" Lift	6.5" Lift
Front UCA (Upper Control Arm)	15-1/4"	15-1/4"	15-1/2"	15-1/2"
Front LCA (Lower Control Arm)	15-1/4"	16-1/4"	16-1/4"	16-1/4"

Adjustments and Caster Check:

13. Raise vehicle and reposition jack stands under the front and rear axles.
14. Temporarily install a tire on one side.
15. Verify that the axle is centered as desired front to rear. Check caster before adjusting.

**A professional alignment is required after installation.

**The caster adjustment listed below will get you close enough to drive to an alignment shop.

16. Using a laser level or string level, set the front axle level to the rear axle (left side and right). Bounce the Jeep up and down to ensure the suspension is in resting position (at exact ride height). Place the angle finder under the axle "C" (or on top of the upper ball joint). Ensure the angle finder is parallel to the Jeep front to rear. This is your caster angle. See chart for desired setting.
17. Adjust control arms to the desired position.
 - To adjust axle front to rear, adjust upper and lower control arms by the same amount. 12 turns equal one inch.
 - To adjust only caster, adjust only the upper control arms (3 turns equals roughly 2 degrees).
 - To adjust both, adjust both at the same time.

***Caster angle may need to be adjusted after a test drive to eliminate driveline vibrations. ***
18. Torque Lower control arm bolts to 120-foot pounds.
19. Torque Upper control arm nuts at axle to 60-foot pounds.
20. Tighten all jam nuts very tight.
21. Install tires and wheels. Torque lug nuts to spec. (Typical specification is 85-115 ft-lbs., depending on your wheels)
22. Recheck all fasteners and torque any remaining loose nuts or bolts to spec.

Caster Angle (Starting point)	
Lift Height	Caster
3	6 degrees
4	5.5 degrees
5.5	4.5 degrees
6.5	3.75 degrees



Safety Inspection:

23. 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.
24. A professional front end alignment is required after installation.

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.



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 zerk 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 zerk 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*

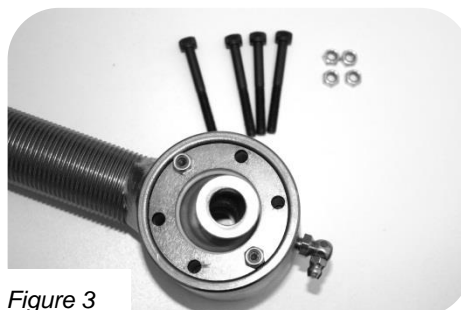


Figure 3

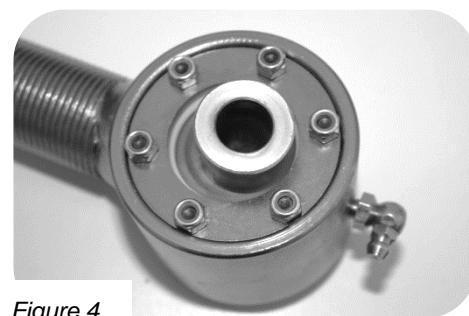


Figure 4