

# IRON ROCK OFF ROAD

## KJ Control Arm Set Instructions

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

### Parts Checklist:

- Iron Rock Off Road logo decal (1)
- Rear adjustable a-arm with bushings installed 92133B (1)
- KJ A-arm male end 92162 (1)
- KJ A-arm axle mount bracket 76013 (1)

#### #127 - 2 5/8" 6 Bolt IRO Flex Joint Hardware A-Arm (1)

- Inner race 91118 (2)
- Thrust washer 91119 (2)
- Ball 91117 (1)
- 10-32 x 1-3/4" Socket Head Cap Screw (6)
- 10-32 Nylock Nut (6)
- 90 Degree 1/4"-28 Grease Zerk Fitting (1)

#### #67 - Adjustable A-arm Hardware (1)

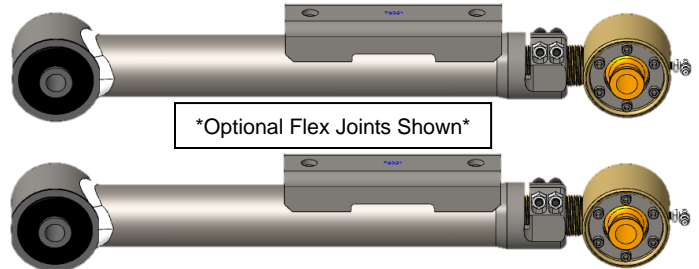
- 1 1/2-12 jam nut (1)
- M14 x 35 cl10.9 hex bolt (3)
- M14 x 100 cl10.9 hex bolt (1)
- M14 cl10.9 hex nut (1)
- 1/2" USS washer (5)

~Optional~

#### #176 - WJ/KJ A-Arm Chassis Flex Joint Hardware (2)

- Inner race 91160 (2)
- Top End Cap 91158 (1)
- Bottom End Cap 91159 (1)
- Ball 91161 (1)
- 10-32 x 1-1/2" Socket Head Cap Screw (6)
- 90 Degree 1/4"-28 Grease Zerk Fitting (1)

- KJ Adjustable rear lower control arm 76019 (2)
- KJ LCA Rubber bushing male end 99070 (2)
- Optional:** KJ LCA Flex Joint male end 92186 (2)



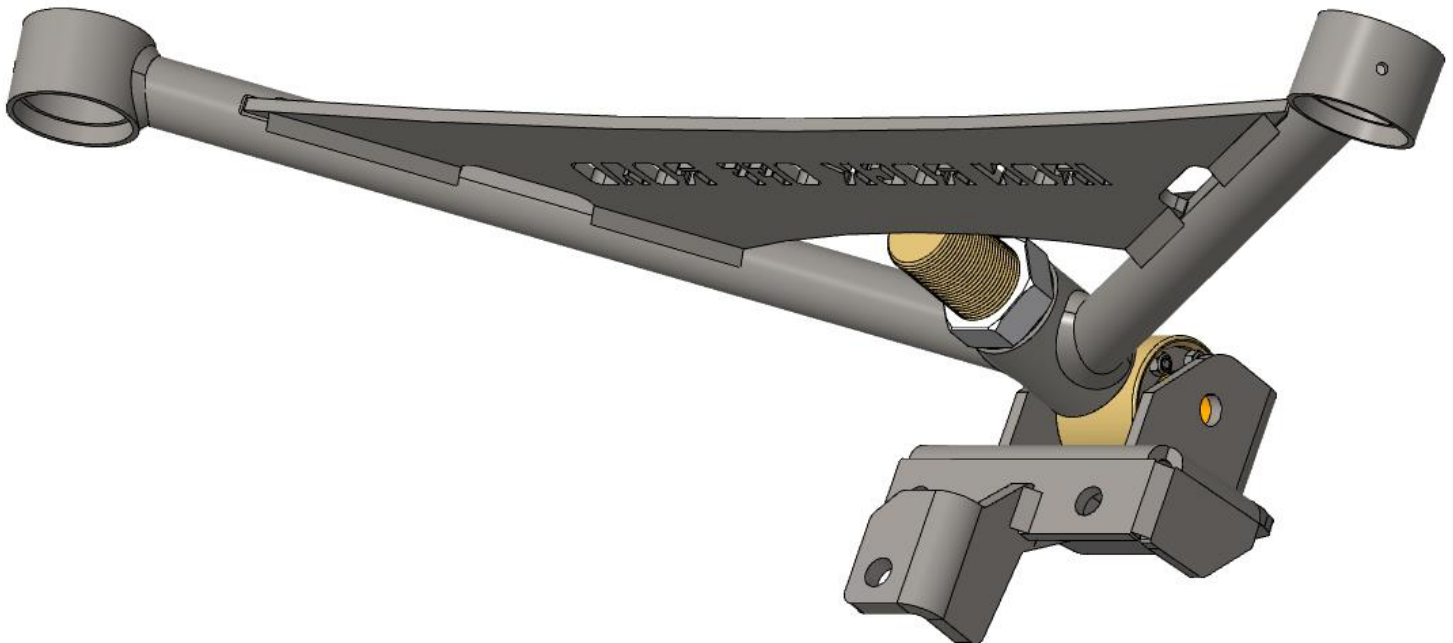
#### #65 - Adjustable LCA Clamping Hardware (1)

- 1/4"-28 x 1-1/8" socket head cap screw (4)
- 1/4"-28 hex nut, gr8 (4)

~Optional~

#### #127 - 2 5/8" 6 Bolt IRO Flex Joint Hardware (2)

- Inner race 91118 (2)
- Thrust washer 91119 (2)
- Ball 91117 (1)
- 10-32 x 1-3/4" Socket Head Cap Screw (6)
- 10-32 Nylock Nut (6)
- 90 Degree 1/4"-28 Grease Zerk Fitting (1)



## **Installation Instructions:**

### **Safety Warning: \*\*\*Important! Read before installation. \*\*\***

We 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 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
  - Angle finder
  - Propane or MAPP gas torch
  - High strength thread locker

### **Prepare the parts for installation:**

#### **If you purchased the A-Arm:**

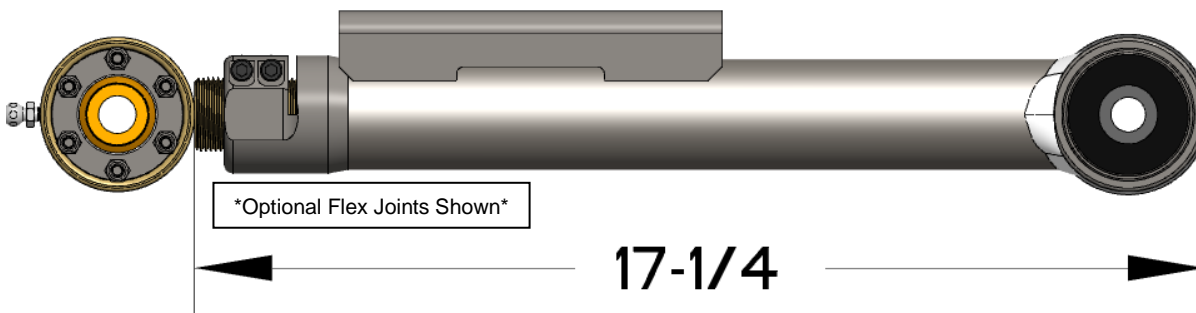
1. Locate the A-Arm threaded male end and HK #127. Assemble flex joint using the attached instructions.
2. **If you purchased A-Arm Flex Joints:** Locate HK #176. Assemble flex joints into arm using the attached instructions. (\*Flex Joints Optional\*)
3. Apply anti-seize compound to the male threads and thread male end all the way into the A-Arm as a starting point. Thread 1-1/2" jam nut all the way onto the male threads from the inside of the A-Arm.



#### **If you purchased the LCAs:**

4. Locate the LCA threaded male ends and HK #127. Assemble flex joint using the attached instructions. (\*Flex Joints Optional\*)
5. Apply anti-seize compound to the male threads and adjust the length to 17-1/4" as a starting point.
6. Locate HK #65. Install clamping bolts loosely into the control arm. Do not tighten at this time.

**\*It may be helpful to measure from the right edge of the bushing tube to the right edge of the flex end tube to get a more accurate measurement.**



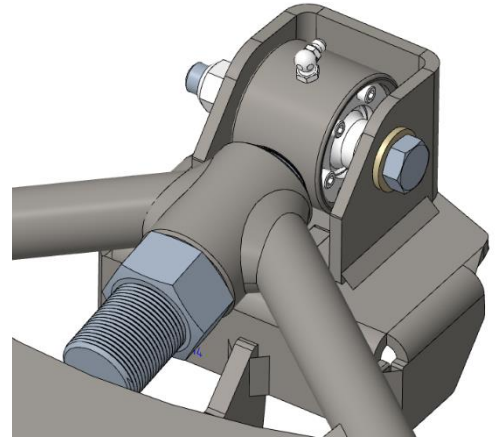
### **Rear Suspension:**

7. Lift rear of vehicle and support with tall jack stands under the unibody frame.  
\*\*Tip: break lug nuts loose before lifting vehicle.
8. Ensure that the vehicle is safely supported.
9. Remove rear tires.
10. Place a floor jack under the center of rear axle for support (do not lift vehicle).
11. Disconnect sway bar from LCAs.
12. Remove lower control arms.
13. Install lower control arms with adjusting threads at uniframe side and sway bar mount on top. Do not tighten bolts at this time.

14. Lower the axle and allow the suspension to droop as much as possible.
15. Disconnect all parking brake cables and from the a-arm.
16. Place a jack stand under the pinion to keep the axle from rotating.
17. Remove the a-arm from the vehicle and a-arm ball joint bracket from the axle (no need to separate them).

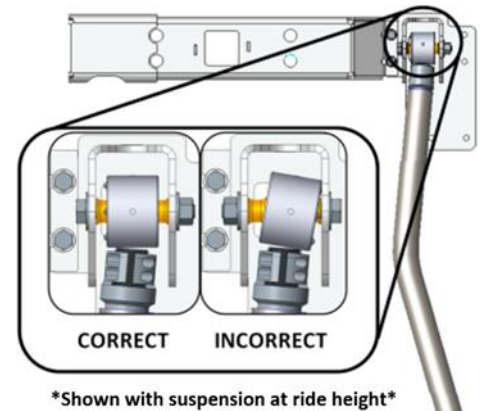
**\*\*The factory ball joint bracket bolts on the axle have thread locker on them, heating them with a torch may be needed to remove them.**

18. Locate a-arm mounting bracket and hardware kit 67. Install the bracket on top of the axle with provided hardware. Use high strength thread locker and a washer on each bolt. Torque bolts to 100-foot pounds.
19. Install the a-arm, with the text facing up (legible from top side), into the factory mounts on the unibody side.
20. Install the a-arm to the axle bracket with the long M14 bolt, washer, and nylock nut.
21. Torque the two M12 bolts to 80-foot pounds, and rear flex end mounting bolt to 120-foot pounds.
22. Grease flex end grease zerk.
23. Reinstall the sway bar onto the LCAs using the original hardware.
24. Use cable ties to secure parking brake cables to the A-Arm.



### **Final Adjustments and Final Torque:**

25. Place jack stands under the rear axle and lower vehicle onto the jack stands.
26. With the weight of the vehicle on the springs measure the pinion angle.
27. Adjust the length of the a-arm as needed to achieve desired pinion angle. For taller lift heights, the lower control arms may also need to be lengthened. Ideally, the pinion angle should match the angle of the t-case output when using the OEM driveshaft.
28. Ensure the flex end is parallel with the mount then tighten the A-Arm jam nut very tight.
29. With the weight of the vehicle on the springs, torque any loose bolts to spec.
30. Torque all lower control arm nuts to 135-foot pounds.
31. 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.
32. Torque any remaining loose bolts to spec.
33. Install tires and place the vehicle on the ground.
34. Torque lug nuts to spec. (85-115-foot pounds depending on your wheels)



### **Final Inspection:**

35. 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.
36. Re-torque all fasteners 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 & KJ 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 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.



Figure 1

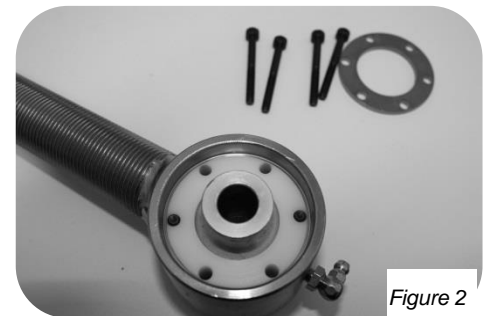


Figure 2



*\*Reference Only\* Complete joint shown fully assembled without housing*

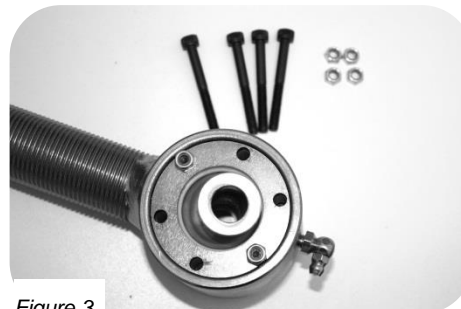


Figure 3



Figure 4

# IRON ROCK OFF ROAD

A-Arm Flex End

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

Assembly Instructions

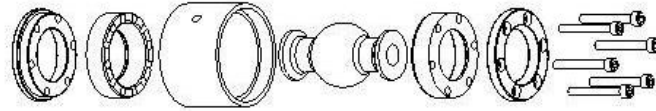
## Fitment:

Fits All Iron Rock Off Road WJ/KJ A-Arms.  
Does not fit OEM or other brand A-Arms.

## Parts Checklist:

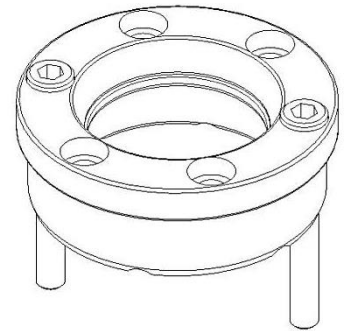
### #176 – WJ/KJ A-Arm Flex End Hardware (1)

- Top End Cap 91158 (1)
- Bottom End Cap 91159 (1)
- Race 91160 (2)
- Ball 91161 (1)
- 10-32 x 1-1/2" Socket Head Cap Screw (6)
- 90 Degree 1/4"-28 Grease Zerk Fitting (1)



## Before you begin:

- o Read and understand installation instructions.
- o Contact Iron Rock Off Road with any questions before, during, or after installation.
- o **Ensure that all parts are present and in good condition per attached shipping checklist!**
- o Have these tools handy:
  - o 5/32 Allen head socket
  - o Inch-lb. torque wrench
  - o #3 (.2130) drill bit
  - o 1/4-28 Hand tap



## Assembly:

1. Remove existing rubber bushing including the outer sleeve.
  - a) Remove built in washer using a pry bar.
  - b) Use either a drill bit, Sawzall, or torch to remove the rubber portion of the bushing and the center sleeve.
  - c) Slice the outer sleeve of the rubber bushing with a Sawzall and remove from a-arm.
2. Drill and tap the bushing tube as shown with the 1/4-28 tap for the grease zerk.
3. Insert two 10-32 socket head cap screws into unthreaded end cap and one plastic race. Spherical bore of race facing away from end cap.
4. 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.
5. Apply a thin coating of multi-purpose grease to the mating surfaces of the ball and both races.
6. Place the ball in the race (inside the flex end). The ball should perfectly fit the contour of the race.
7. 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.
8. Insert the second end cap on top of the flex end housing, threading the bolts into the holes.
9. Insert the remaining four cap screws through the remaining holes and thread into the end cap.
10. Snug up all of the bolts fairly tight.
11. Torque bolts evenly starting at one bolt using a crisscross pattern, like torquing lug nuts. Torque all six bolts to 70 in/lbs., then to 85 in/lbs.
12. Install 90 Degree grease zerk fitting so that it is easily accessed in the vehicle.
13. Grease flex end until grease comes out of the races around the ball.
14. Re-torque bolts to 85 in-lbs. after 5 minutes.

