

# IRON ROCK OFF ROAD

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

**KJ 2.5" Benchmark  
Lift Kit Instructions**

## Parts Checklist:

- ☐ Iron Rock Off Road Logo Decal 10001 (1)
- ☐ Ironrockoffroad.com decal (1)
- ☐ 2.5" Front Driver Spacer 76004 (1)
- ☐ 2.5" Front Passenger Spacer 76016 (1)
- ☐ 2.5" Rear Spacer 76008 (2)
- ☐ Rear adjustable a-arm with bushings installed 92133B (1)
- ☐ 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)

### #264 - KJ/KK Front Spacer Hardware (1)

- ☐ M12 Hex Nut (2)
- ☐ M12 Nylock Nut (8)

## Shocks

- ☐ Trail Tamer HD Hydro
  - ☐ Rear Shock 79003 (2)
- ☐ Doetsch Upgrade (Optional)
  - ☐ Rear shock DT 8265 (2)
- ☐ Bilstein Upgrade (Optional)
  - ☐ Rear shock 33-186542 (2)

-Optional-

### #176 - WJ 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)

## Note:

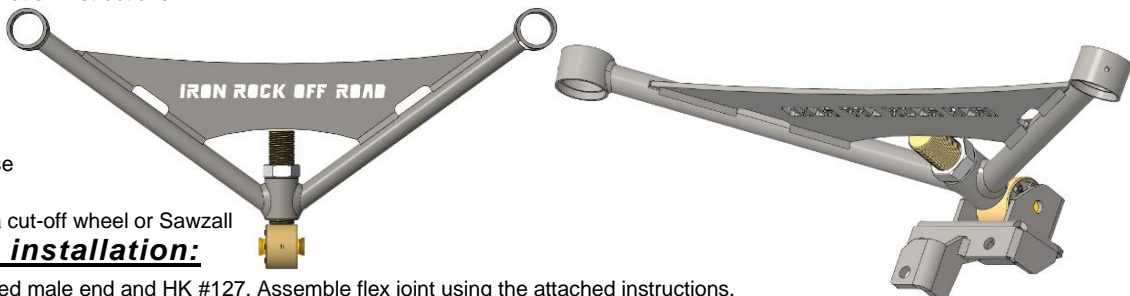
\*\*\*A professional alignment is required after installation of this lift kit. \*\*\*

## 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
  - ☐ Jack stands
  - ☐ Basic hand tools
  - ☐ Torque wrench
  - ☐ Multi-purpose grease
  - ☐ Angle finder
  - ☐ Angle grinder with a cut-off wheel or Sawzall

## Prepare the parts for installation:

- ☐ Locate the A-Arm threaded male end and HK #127. Assemble flex joint using the attached instructions.
- ☐ **If you purchased A-Arm Flex Joints:** Locate HK #176. Assemble flex joints into arm using the attached instructions. (\*Flex Joints Optional\*)
- ☐ 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.
- ☐ **Shocks:** Locate rear shocks and hardware kits. Grease and install the sleeves into the bushings.





## **Front installation:**

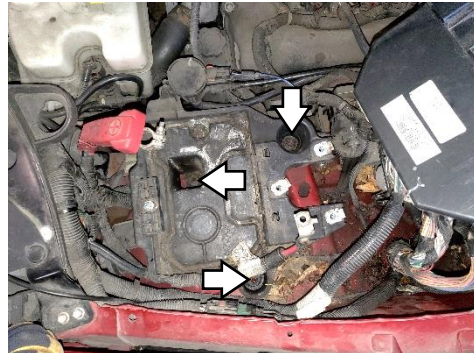
1. **Under the hood:** Disconnect the air box clamps and the hose connected to the air box lid.
2. Remove the lower portion of the air box by pulling up and popping it out of its rubber mounts.
3. This will give you access to the nuts securing the strut assembly to the body. Do not loosen at this time.



4. Disconnect the battery terminals and remove the battery.
5. Open the fuse box and disconnect the positive cable.
6. Release the retaining clips holding the fuse box and position the fuse box out of the way.



7. Remove the bolts holding the fuse box bracket, then remove the fuse box bracket.
8. Remove the nuts securing the battery tray then remove the battery tray.



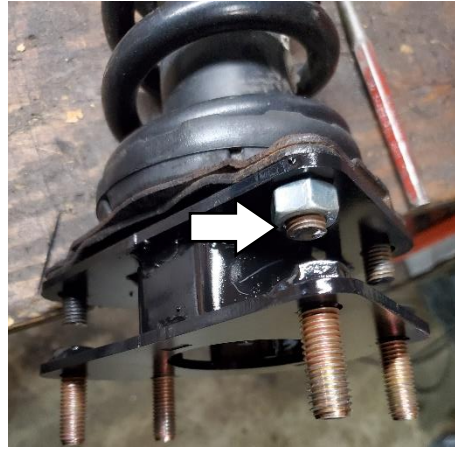
9. This will give you access to the nuts securing the strut assembly to the body. Do not loosen at this time.
10. **Under the Jeep:** Lift front of vehicle and support with jack stands under frame rails.  
\*\*Tip: loosen lug nuts loose before lifting vehicle.

11. Remove front wheels
12. Disconnect the sway bar links from the lower control arms.
13. Disconnect the tie rod ends at the knuckle.
14. Disconnect the upper ball joint from the knuckle.
15. Loosen the bolt holding the strut clevis to the lower control arm.
16. Remove the clamping bolt from the strut clevis.
17. Support the lower control arm with a jack and remove the nuts securing the strut assembly to the body.
18. Lower the jack and allow the suspension to droop as much as possible.
19. Remove the bolt holding the strut clevis to the lower control arm.
20. Using a pry bar, remove the strut clevis from the strut and remove the strut from the vehicle.





21. **Prepare the struts:** With the strut on a workbench, thread the supplied M12 nut (not a lock nut) onto a mounting stud.
22. Measure from the bottom of the nut 3/4" and mark the stud for cutting.
23. With the nut threaded onto the stud, cut the stud at your mark.
24. Remove the nut and check the cut length with the spacer.
25. There should be a couple threads sticking out beyond the nut.
26. Repeat the steps to cut all the mounting studs.



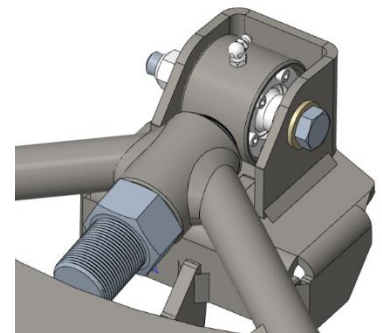
27. **Spacer Installation and Reassembly:** With all the studs cut to length, install the spacer onto the strut using the M12 lock nuts.
28. Reinstall the strut into the Jeep using the original nuts.
29. Reinstall the clevis onto the bottom of the strut. Be careful to align the clevis with the mounting boss on the strut. Ensure the clevis is clamped onto the strut in the same location as it was before.
30. Reinstall the lower clevis bolt through the control arm.
31. Use a jack to raise the knuckle and reinstall the upper ball joint in the knuckle.
32. Reinstall the tie rod onto the knuckle.
33. Reinstall the sway bar links onto the lower control arms.
34. Reinstall the air box, battery tray, fuse box, and battery. Reconnect the battery terminals.
35. Reinstall front wheels.
36. Lower vehicle onto ground.
37. Torque lug nuts to factory spec.

\*Typical specification is 85-115 ft-lbs., depending on your wheels\*

\*\*Please note that the vehicle lift height may appear taller than advertised until the vehicle is driven.

### **Rear installation:**

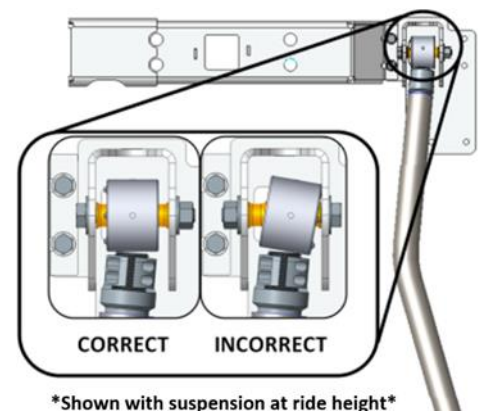
38. Lift rear of vehicle and support with jack stands under frame rails.
- \*\*Tip: break lug nuts loose before lifting vehicle.
39. Remove rear wheels.
40. Support the rear axle with jack stands and remove shocks.
41. Allow the axle to droop as much as possible and remove coil springs and lower isolators.
42. Install isolators onto the coil spacers, place the spacers on the axle, then reinstall the springs.
43. Install the new shocks using the original hardware.
44. Disconnect all parking brake cables from the a-arm.
45. Place a jack stand under the pinion to keep the axle from rotating.
46. 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.**
47. 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.
48. Install the a-arm, with the text facing up (legible from top side), into the factory mounts on the unibody side.
49. Install the a-arm to the axle bracket with the long M14 bolt, washer, and nylock nut.
50. Torque the two M12 bolts to 80-foot pounds, and rear flex end mounting bolt to 120-foot pounds.
51. Grease flex end grease zerk.
52. Use cable ties to secure parking brake cables to the A-Arm.



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

53. Place jack stands under the rear axle and lower vehicle onto the jack stands.
54. With the weight of the vehicle on the springs measure the pinion angle.
55. Adjust the length of the a-arm as needed to achieve desired pinion angle. Ideally, the pinion angle should match the angle of the t-case output when using the OEM driveshaft.
56. Ensure the flex end is parallel with the mount then tighten the A-Arm jam nut very tight.
57. With the weight of the vehicle on the springs, torque any loose bolts to spec.
58. Torque any remaining loose bolts to spec.
59. Reinstall rear wheels.
60. Lower vehicle onto ground.
61. Torque lug nuts to factory spec.

\*Typical specification is 85-115 ft-lbs., depending on your wheels\*



\*Shown with suspension at ride height\*

**Final Safety Warning:**

62. \* 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

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*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)



Figure 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 2



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

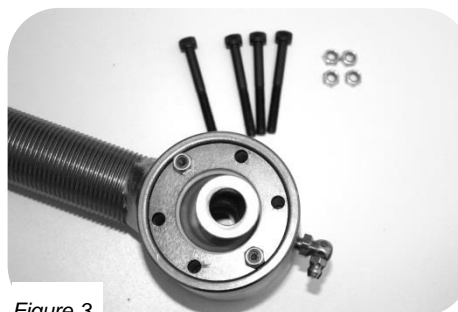


Figure 3

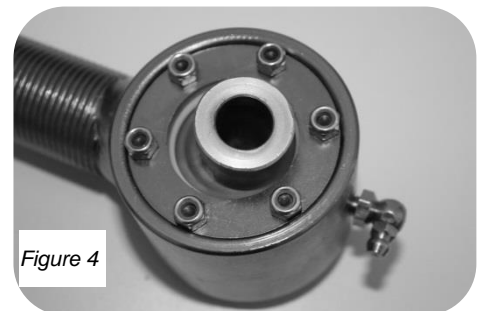


Figure 4

# IRON ROCK OFF ROAD

A-Arm Flex End

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Assembly Instructions

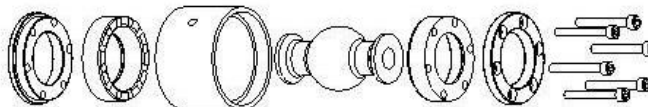
## Fitment:

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.

