

# IRON ROCK OFF ROAD

**JT 5" Benchmark Series  
Lift Kit Instructions**

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

## Parts Checklist:

- Iron Rock Off Road Logo Decal 10001 (1)
- Ironrockoffroad.com decal (1)
- 5" Front coil spring 96040 (2)
- 5" Rear coil spring 96042 (2)
- JT 0-8" front track bar 77016 (1)



- Front Track bar threaded male end, joint installed 77013 (1)
- JT 0-8" rear track bar 77031 (1)
- Track bar threaded male end 92004 (1)
- Front sway bar link 8.75" center to center 92145 (2)
- Rear sway bar link 11.25" center to center 92147 (2)
- JT LCA Front 77064B (2)
  - 16mm Bushing Installed
- LCA Front Male End, 92186 (2)
- JT LCA Rear 77064B (2)
  - 16mm Bushing Installed

## #65 - Adjustable LCA Clamping Hardware (2)

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

## #233 - 2 5/8" 6 Bolt 16mm Flex End Hardware (4)

- Inner race 91118 (2)
- Thrust washer 91119 (2)
- 2-5/8" Flex End Ball 16mm 91242 (1)
- 10-32 x 1-3/4" Socket Head Cap Screw (6)
- 10-32 Nylock Nut (6)
- 1/4"-28 90° Grease zerker Fitting (1)

## #235 - Front Track Bar Hardware (1)

- Track bar bushing half 80014 (2)
- Track bar bushing sleeve 80003 (1)
- Track Bar clamp 95044 (1)
- 5/16-18 x 2 carriage bolt gr5 (1)
- 5/16-18 hex flange nut (1)

## #236 - Rear Track Bar Hardware (1)

- Track bar bushing half 80014 (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)

## Shocks

### Trail Tamer HD Hydro

- Front shock 79004 (2)
- Rear shock 79005 (2)

### #255 - JT Shock Hardware (1)

- Front Upper Shock Sleeve 79012 (2)
- Front Upper Shock Mount Spacer 79013 (4)
- Rear Shock Sleeve, M14 79014 (4)
- Rear Shock Bushing, 94025-BK-01 (4)
- M12 x 70 Hex bolt cl 10.9 (2)
- M12 Nylock nut (2)
- 7/16 USS washer (4)

### Doetsch Upgrade (Optional)

- Front shock DT 8299 (2)
- Rear shock DT 8371 (2)

### #255 - JT Shock Hardware (1)

- Front Upper Shock Sleeve 79012 (2)
- Front Upper Shock Mount Spacer 79013 (4)
- Rear Shock Sleeve, M14 79014 (4)
- Rear Shock Bushing, 94025-BK-01 (4)
- M12 x 70 Hex bolt cl 10.9 (2)
- M12 Nylock nut (2)
- 7/16 USS washer (4)

### Bilstein Upgrade (Optional)

- Front shock 33-185552 (2)
- Rear shock 33-104652 (2)

### #231 - JL Bilstein Shock Hardware (1)

- 12mm X 1.49" Shock Sleeve 79008 (4)

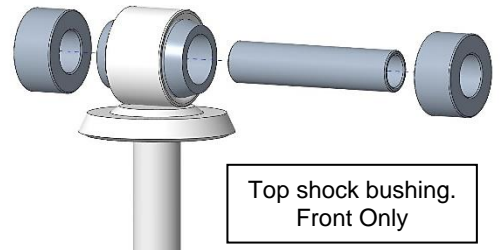
### #255 - JT Shock Hardware (1)

- Front Upper Shock Sleeve 79012 (2)
- Front Upper Shock Mount Spacer 79013 (4)
- Rear Shock Sleeve, M14 79014 (4)
- Rear Shock Bushing, 94025-BK-01 (4)
- M12 x 70 Hex bolt cl 10.9 (2)
- M12 Nylock nut (2)
- 7/16 USS washer (4)



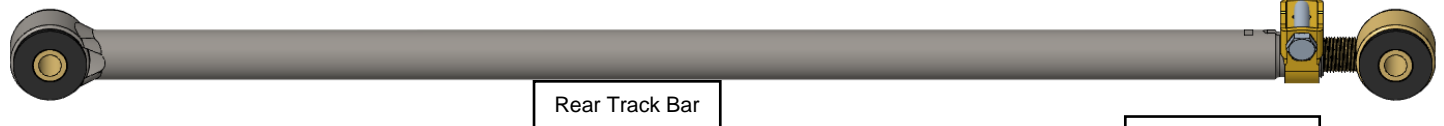
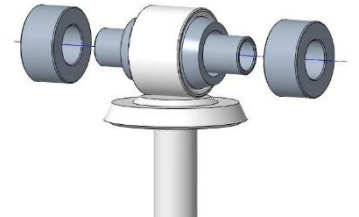
## Before you begin:

- \*\*\*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
  - Medium thread locker
  - Anti-seize compound
  - Multipurpose grease
  - 7/16" drill bit and drill

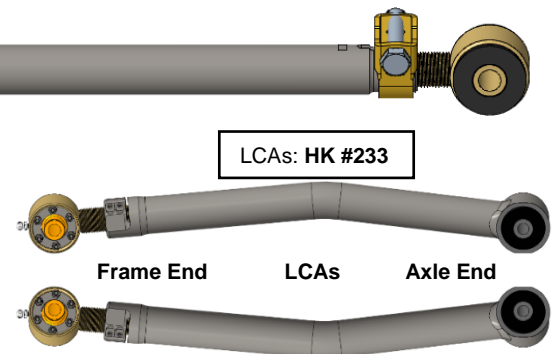


## Prepare the parts for installation:

1. **Front Shocks:** Locate the front shocks (shorter) and **HK #255**.
2. Grease and install the long sleeve into the top bushing of the front shocks. The long sleeve should be approximately in the center of the bushing.
3. Grease and install the short shock sleeves (included with shocks) into the bottom bushing.
4. **Rear Shocks:** Locate the rear shocks (longer) and **HK #255**.
5. Remove the bushings from the included shocks.
6. Grease and install the new shock bushings.
7. Grease and install the new M14 shock sleeves.
8. **Track Bars:** Locate front track bar, **HK #235** and track bar threaded male end with joint installed.
9. Locate rear track bar, **HK #236** and track bar threaded male end.
10. Lubricate track bar bushings and bushing sleeves with multi-purpose grease and install into track bars.
11. Slip clamping bracket onto adjusting end of track bar with the opening up and insert the 5/16 carriage bolt from rear and nut facing forward.
12. Apply anti-seize and thread the track bar male end into the track bar and adjust to length listed in the chart as a starting point.
13. Tighten the clamping bracket.



14. **Control Arms:** Use a light coat of anti-seize and thread the male ends into the control arms and adjust to the lengths listed in the chart as a starting point.
15. Using the instructions on the last page assemble the flex ends into the threaded male ends.
16. Install 1/4" clamping bolts (**HK #65**) in the lower control arms, do not tighten at this time.
17. **Sway Bar Links:** Grease and install the hourglass bushings into the links. **HK #201**
18. Grease and install the sway bar link bolt sleeves into the bushings. All sleeves are the same (12mm I.D.).



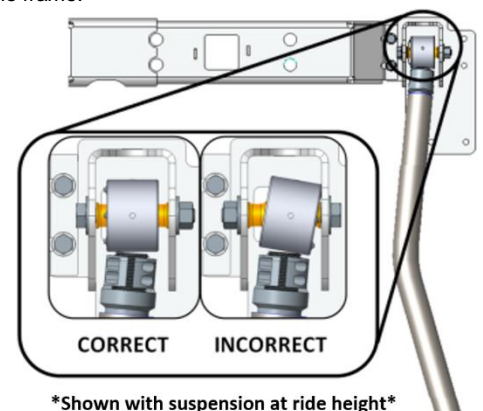
## Front installation:

19. Lift front of vehicle and support with jack stands under frame rails.
  - \*\*Tip: break lug nuts loose before lifting vehicle.
20. Remove front wheels
21. Remove front sway bar links.
22. Support front axle with jack stands and remove shocks.
23. Remove front track bar.
24. Remove factory lower control arms.
25. Loosen factory upper control arms.
26. Remove coil springs.
27. Install new lower control arms using the factory hardware. Do not tighten bolts at this time.
  - The bend goes up for ground clearance. The rubber bushing goes to the axle and the flex end at the frame.
28. Install new coil springs.
29. Install new shocks with a new M12 x 70 bolt at the bottom. **HK #255**
30. Install new front sway bar links.
31. Install new front track bar, threaded end to axle side. The clamp faces up, nut facing front.
32. Lower vehicle onto jack stands.

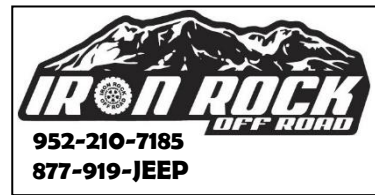
Track Bar & Control Arm Length (Center to Center)	
Front LCA (Lower Control Arm)	24-1/4"
Rear LCA	23-1/2"
Front Track Bar	33-7/8"
Rear Track Bar	33-3/4"

## 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 links.
36. Support the rear axle with jack stands and remove shocks.
37. Remove track bar.
38. Remove coil springs.
39. Loosen factory upper control arms.
40. Remove factory lower control arms.
41. Install new lower control arms using the factory hardware. Do not tighten bolts at this time.



- Clamping bolts facing up, flex end at the frame, grease zerks pointed down.
- 42. Install new springs.
- 43. Install new shocks.
- 44. Install new track bar, adjustable end at the frame.
- 45. Install new sway bar links.
- 46. Lower vehicle onto jack stands.



**Final Torque and Adjustments:**

- 47. 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.
- 48. Check that axles are centered side to side and adjust track bars as needed.
- 49. Raise vehicle and reposition jack stands under the front and rear axles.
- 50. Temporarily install a tire on one side.
- 51. Verify that the axle is centered as desired front to rear. Check caster before adjusting.
- 52. Check caster angle. 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.
- 53. Adjust control arms to the desired position.
- 54. To adjust axle front to rear, adjust upper and lower control arms by the same amount. 12 turns equal one inch.
- 55. To adjust only caster, adjust only the upper control arms (3 turns equals roughly 2 degrees).
- 56. To adjust both, adjust both at the same time.

Caster Angle (Starting point)	
Lift Height	Caster
2.5"	7°
3.5"	6.5°
4" or more	5°



**Caster angle may need to be adjusted after a test drive to eliminate driveline vibrations.**

- 57. With the vehicle weight on the suspension, tighten front lower control arm bolts to 130 lb-ft. Tighten front upper control arm bolts to 75 lb-ft.
- 58. Tighten rear upper and lower control arm bolts to 130 lb-ft.
- 59. Install wheels and torque lug nuts to factory spec. (85 to 115 ft-lbs)
- 60. 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.
- 61. 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:**

\* 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 16mm Bolt Assembly Instructions

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

This flex end is ONLY for the front LCAs of the Wrangler JL & Gladiator JT and rear LCAs & UCAs on the Gladiator JT.  
This flex end uses a larger 16mm through bolt. Do not confuse it with HK #127

### 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)

#### #233 - 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 16mm 91242 (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

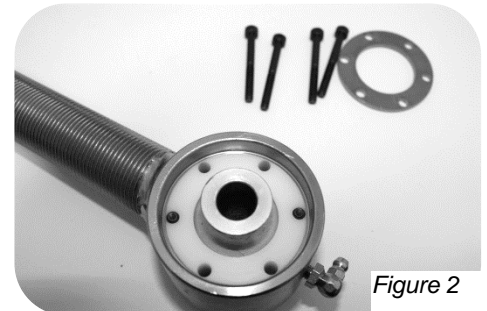


Figure 2



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

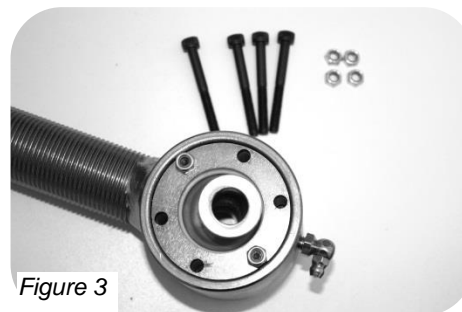


Figure 3

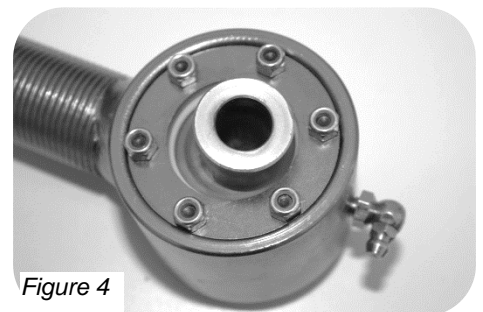


Figure 4