Parts Checklist:

BOX 1 24x12x12

- ❑ 4" Front springs 96006 (2)
- ❑ 4" Rear springs 96007 (2)

BOX 2 36x8x8

- ❑ Instructions
- ❑ Iron Rock Off Road logo decal (1)
- ❑ WJ Adjustable Front Track Bar 92001 (1)
  - ❑ Track bar male threaded end 92004 (1)
- ❑ Rear sway bar link, 13.5" center to center 92148 (2)
- ❑ Front Sway Bar Link, 11.25" center to center 92147 (2)
- ❑ WJ 4 hole transfer case drop spacers 92026 (2)
- ❑ A-arm spacer 92023 (1)
- ❑ Adjustable lower control arm bushing/bushing installed 11124 (2)

#1 - Front Track Bar Hardware (1)

- ❑ Track bar bushing half M20919 (4)
- ❑ 12mm track bar bushing sleeve 92035 (2)
- ❑ 7/8-14 Jam Nut (1)

#2 - Rear Sway Bar Link Hardware (1)

- ❑ 3/4" hourglass bushing M00393 (4)
- ❑ 12mm sway bar bolt sleeve 92038 (2)
- ❑ 10mm sway bar bolt sleeve (2)
- ❑ M10 x 60 sway bar link bolt 92037 (2)
- ❑ M10 X 1.5 hex nut (2)
- ❑ 7/16 USS washer (2)

#3 – Shocks Hardware (1)

- ❑ 12mm shock bolt sleeve 404739 (2)
- ❑ 7/16" washer (6)
- ❑ 5/16 x 1 hex bolt (4)
- ❑ 5/16-18 hex nut (4)
- ❑ 5/16 washer (8)

#4 - Front Sway Bar Link Hardware (1)

- ❑ 3/4" hourglass bushing M00393 (4)
- ❑ 12mm sway bar bolt sleeve 92038 (4)

#5 - T-Case Drop Hardware (1)

- ❑ M10 x 150mm class 10.9 bolt (4)
- ❑ 3/8" USS washer (4)

#19 – A-arm Spacer Hardware (1)

- ❑ M14 x 80 cl10.9 hex bolt (3)
- ❑ 1/2" USS washer (3)

#66 – LCA Spacers Hardware (3)

- ❑ Lower control arm bushing spacer 90194 (2)

~Optional~

- ❑ Adjustable lower control arm bushing installed (flex end) 13734 (2)

#127 - 2 5/8" 6 Bolt IRO Flex End 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 ¼"-28 Grease Zerk Fitting (1)

Shocks

- ❑ ***IRO Hydro***
  - ❑ Front Shock SL2650F (2)
  - ❑ Rear Shock LL2676F (2)
- ❑ ***Doetsch Upgrade (Optional)***
  - ❑ Front shock DT 8352 (2)
  - ❑ Rear shock DT 8299 (2)
    - ❑ ***#9 – DT Shocks (1)***
      - ❑ Front Shock barpin 403827 (2)
- ❑ ***Bilstein Upgrade (Optional)***
  - ❑ Front shock 33-185606 (2)
  - ❑ Rear shock 33-185552 (2)
    - ❑ ***#17 - Bilstein Shocks (1)***
      - ❑ Front barpin 403876 (2)
      - ❑ 12mm Shock sleeve 404739 (4)
      - ❑ SBL U-bracket 99000 (2)
      - ❑ 1/2 x 1 1/2 Hex bolt, gr8 (2)
      - ❑ 1/2 Hex nut, gr8 (2)
      - ❑ 1/2 Flat washer (2)
      - ❑ 1/2 Lock washer, gr8 (2)
      - ❑ 7/16 USS Flat Washer (6)
      - ❑ M12x60 Hex bolt, cl10.9 (2)
      - ❑ M12 Hex nut, cl10.9 (2)

Installation Instructions:

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

Installing a suspension lift kit raises the center of gravity of the vehicle. This increases the possibility of a rollover accident. Avoid sudden maneuvers at high speed and avoid all situations where a side rollover may occur. In addition larger tires decrease braking performance, please drive accordingly. We recommend a tire and wheel combination that makes the vehicle's track width wider (wheels with less backspacing). This will lower the center of gravity and add stability. 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 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

Figure 1

Prepare the parts for installation:

1. Locate hardware kit 3 and the rear shocks.
2. Grease and install the 5/8" I.D. shock bushings included with the shocks.
3. Grease and install the four 12mm shock bolt sleeves (two from hardware kit 3, two included with the shocks). The rear shocks use 12mm sleeves at the top and bottom.
4. Grease and install barpins into the lower end of the front shocks as shown in **figure 1**.
5. Leave the rest of the hardware in the bag for future use.
6. Locate the front track bar, male end, and hardware kit 1.
7. Install the jam nut onto the threaded male end of the track bar.
8. Apply anti-seize and thread male end into track bar.
9. Grease and install the track bar bushings.
10. Grease and install the track bar bolt sleeves.
11. Pre-adjust the track bar to a length of 32.75" center to center as a starting point. Do not tighten jam nut at this time.
12. Locate the rear sway bar links (13.5" center to center) and hardware kit 2.
13. Grease and install the hourglass bushings.
14. Grease and install the sway bar link bolt sleeves. Each link gets one 12mm I.D. sleeve and one 10mm I.D. sleeve.
15. Leave the rest of the hardware in the bag for future use.
16. Locate the front sway bar links (11.25" center to center) and hardware kit 4.
17. Grease and install the hourglass bushings.
18. Grease and install the sway bar link bolt sleeves. All sleeves are the same (12mm I.D.).
19. Locate front lower control arms, adjust length to 15-7/8" as a starting point.

Front suspension:

20. Lift front of vehicle and support with tall jack stands under the unibody frame.
    **Tip: break lug nuts loose before lifting vehicle.
21. Ensure that vehicle is safely supported.
22. Remove front tires.
23. Place a floor jack under the center of the front axle for support (do no lift vehicle).
24. Remove front shocks.
25. Remove the track bar.
26. Remove front sway bar links.
27. Loosen all upper control arm bolts (do not remove). *Note: Bushing damage will occur if you skip this step.
28. Remove Lower control arms.
29. With the axle hanging as low as possible, remove coil springs and lower spring isolators.
30. Snap the spring isolators into the new springs.
31. Install new springs in vehicle being careful to align isolator pin with the hole in the spring bucket.
32. Install lower control arms with adjusting threads at uniframe side.
    **Lower control arm length may need to be adjusted based on front driveshaft and desired caster angle. **
33. Install new lower control arms with spacers on the outboard side of the bushings, 2 at each axle bushing, 1 at each unibody bushing. Do not tighten bolts at this time.
34. Install new front shocks using provided bolts, washers, and nuts. Tighten upper stud mount nuts just enough to slightly compress the bushings. Overcompressing these bushings will result in damage to the bushings and premature bushing failure.
35. Install new sway bar links. Re-use the existing bolts and nuts. Torque all four nuts to 78 foot pounds.
36. Install track bar with the adjustable end at the frame. Torque both bolts to 80-foot pounds. Do not tighten jam nut at this time.
37. Any remaining loose bolts will be tightened after installing the rear suspension.

Rear Suspension:

38. Lift rear of vehicle and support with tall jack stands under the unibody frame.
    **Tip: break lug nuts loose before lifting vehicle.
39. Ensure that the vehicle is safely supported.
40. Remove rear tires.
41. Place a floor jack under the center of rear axle for support (do not lift vehicle).
42. Remove rear shocks.
43. Remove Sway bar links.
44. Loosen lower control arm bolts (do not remove).
45. Allow suspension to droop as much as possible.
46. Remove coil springs.
47. Locate a-arm spacer block and hardware kit 19.
48. Raise rear axle up to a comfortable position to access the 3 a-arm retaining bolts on top of the differential.
49. Place a jack stand under the pinion to keep the axle from rotating.
50. Remove the 3 a-arm bolts on top of the differential.
51. Install the a-arm spacer between the a-arm and the top of the differential using supplied hardware.
52. Torque a-arm spacer bolts to 100 ft. lbs.
53. Install new coil springs being careful to align the spring to the isolator.
54. Raise rear axle and install new shocks.
55. Install sway bar links using existing upper bolt and the new lower bolt, washer, and nut. Torque to 78 ft. lbs. (upper bolt) and 50 ft. lbs. (lower bolt).

Transfer case drop kit:

56. Locate the transfer case drop spacers and hardware kit 5.
57. Place a floor jack under the center of the transmission/transfer case crossmember for support.
58. On one side remove the 4 bolts that hold the crossmember to the unibody.
59. Lower the crossmember away from the unibody enough to install the spacer.
60. Install the spacer using the 2 long existing bolts and the 2 new bolts and washers.
61. Repeat for the other side.
62. Torque bolts to 50-foot pounds.

Final Torque:

63. With the weight of the vehicle on the springs, torque any loose bolts to spec.
64. Torque all front lower control arm nuts to 135-foot pounds.
65. Torque upper control arm nut at axle to 60-foot pounds.
66. Tighten track bar jam nut very tight.
67. Tighten control arm jam nuts very tight.
68. Torque any remaining loose bolts to spec.
69. Install tires and place the vehicle on the ground.
70. Torque lug nuts to spec. (85-115-foot pounds depending on your wheels)

Final Inspection:

71. 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.
72. Re-center steering wheel by adjusting the drag link (longer) until the steering wheel is centered.
73. Check if front tires are centered side to side under the vehicle. Adjust the length of the front track bar as needed.

* A professional front end alignment is recommended after installation.

We recommend the following alignment settings:
Caster: +3.75 to +5.75 (+4.5 is preferred if possible)
Toe-in: .20 degrees (1/16” to 1/8” at the tire)

- Re-torque all fasteners after 100 miles, and frequently inspect all safety critical suspension components.

Steering Shimmy Elimination Checklist

Note: Steering Shimmy is also known as “death wobble” or speed wobble. It is a violent shaking of the vehicle caused by the front tires turning side to side repeatedly until you slow down. It usually occurs after hitting a bump or pothole a various speeds above 30MPH. If you experience this steering shimmy just **remain calm, you still have steering and braking control**. Just gently apply the brakes and slow down until the shimmy disappears.

Safety Warning: Some of these adjustments will reduce steering shimmy, but also reduce steering stability and steering responsiveness. Test drive carefully after every modification, if you feel any modification is unsafe do not proceed. Keeping your vehicle safe to drive is the responsibility of the person making the adjustments and the driver. The driver must notice any unsafe actions of the vehicle and correct the problem immediately (e.g. wandering or unresponsive steering). Iron Rock Off Road promotes these modifications for low speed off road use only, some of these modifications may not be safe for use on public or private roads, especially at highway speeds. We recommend working with an experienced alignment shop that has the ability, knowledge, and experience to keep your vehicle safe to drive at highway speeds.

- ❑ Check all tie rod ends for wear and replace as needed.
- ❑ Adjust toe-in to exactly zero. Note: a slight toe-in is preferred for stability, toe out will reduce steering shimmy. See safety warning at the top of this sheet.
- ❑ Adjust caster to 3.0 to 5.5 degrees (more caster will improve stability; less caster will reduce steering shimmy). See safety warning at the top of this sheet.
- ❑ Check steering stabilizer including bushings, replace if condition is less than perfect. We have researched extensively and found the best steering stabilizers available with the least amount of free play.
- ❑ Balance tires and put the best balanced tires in front. The front tires MUST be dynamically balanced, meaning they must have wheel weights on both the inner and outer rim flanges as directed by the balancing machine. If you don’t like hammer-on weights on the outer flange either for appearance reasons or because of frequent rock damage, then use stick-on weights for the outer weights – in this case function must precede form…don’t balance ‘statically’ with weights just on the inner rim edge. If a tire/wheel requires more than 6 ounces of total balance weights (inner and outer combined), do not use it on the front axle.
- ❑ Check all suspension bushings for wear and loose fasteners including control arms and track bar. Any rubber bushing with cracks, or where the rubber is separating from the steel should be replaced.
- ❑ Check steering gearbox for wear and adjust or replace as needed.
- ❑ Check wheel bearings for wear.
- ❑ Check ball joints for wear.
- ❑ Install dual steering stabilizer kit.
- ❑ Reduce tire air pressure (try 29psi for OEM size tires, less for larger tires). Note: Reducing air pressure too far can cause tires to overheat and blowout at highway speeds. See safety warning at the top of this page.
- ❑ Check vehicle stance. Hub to fender measurements should be minimum ¼” higher in the rear (like OEM stance) for maximum stability (this transfers weight to the front tires). Measure on a level surface with normal cargo and ½ tank of gas for maximum accuracy.

IRON ROCK OFF ROAD

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

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

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° ¼"-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 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.

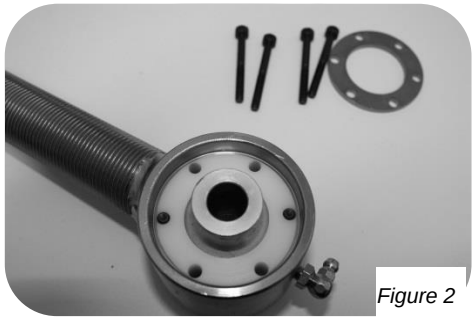

Figure 2

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

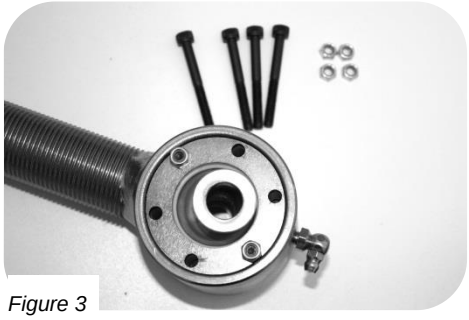

Figure 3

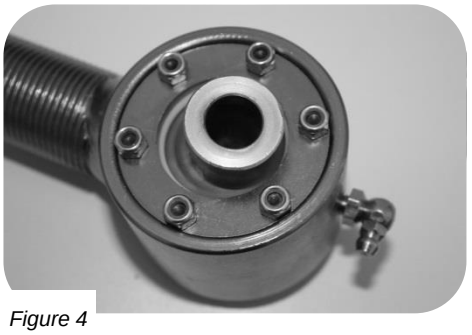

Figure 4