

IRON ROCK OFF ROAD

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

JK 4.5" ROCK-LINK Lift Kit Instructions

Parts Checklist:

- ☐ Iron Rock Off Road Logo Decal 10001 (1)
- ☐ Rock-Link decal 13287 (2)
- ☐ Ironrockoffroad.com decal (1)
- ☐ 4.5" Front coil spring 96049 (2)
- ☐ 4.5" Rear coil spring 96050 (2)
- ☐ Rear Track Bar Bracket 80064 (1)
- ☐ JK Rear Bump Stop Spacer 2.5" 80058 (2)
- ☐ JK Front Bump Stop Spacer 2.75" 80049 (2)
- ☐ JK Rear Coil Spring Retainer 80061 (2)
- ☐ Rear sway bar link 10" center to center 80138 (2)
- ☐ JK Rear Sway Bar Spacer 99077 (2)
- ☐ JK Rear Sway Bar Relocation Plate 80137 (2)

☐ #12 - Rear Sway Bar Spacer Hardware (1)

- ☐ 3/8 USS Flat Washer (4)
- ☐ M10 x 60 hex bolt c10.9 (4)

☐ #21 - JK Front Coil Retainer Hardware (1)

- ☐ Top plate, thin, no notch 80162 (2)
- ☐ 1/4" thick spacer, one notch 80163 (2)
- ☐ Thin spacer, two notches 80164 (2)
- ☐ 1/4" USS washer (2)
- ☐ 5/16 x 1" Hex head bolt, gr8 (2)
- ☐ 5/16-18 Serrated flange nut (2)

☐ #195 - JK Rear Coil Retainer Hardware (1)

- ☐ Coil Spring Retainer Plate 85029 (2)
- ☐ Upper Retainer Nut Plate 80146 (2)
- ☐ 7/16 Flag nut with bend 80063 (2)
- ☐ 7/16-14 x 2" Hex head bolt, gr8 (2)
- ☐ 7/16-14 x 1" Hex head bolt, gr8 (2)
- ☐ 7/16 SAE washer (2)

☐ #196 - JK Rear Track Bar Bracket Hardware (1)

- ☐ M14 x 80 hex bolt, c10.9 (1)
- ☐ M14 nylock flange nut (1)
- ☐ Spacer sleeve 80003 (1)
- ☐ 3" U-bolt 80071 (2)
- ☐ 3/8" serrated flange nut (4)

☐ #197 - JK 0-3.5" SS Rear Brake Line Set 13838 (1)

- ☐ Rear brake hose LEFT 88160 (1)
- ☐ Rear brake hose RIGHT 88161 (1)
- ☐ Brake hose mounting brkt 88275 (2)
- ☐ #10 x 1 self-drilling screw (2)
- ☐ Brake Hose clip BQ3052 (2)
- ☐ Copper washer BQ1016 (4)

☐ #198 - JK 0-3.5" SS Front Brake Line Set 13839 (1)

- ☐ Front brake hose LEFT 88158 (1)
- ☐ Front brake hose RIGHT 88159 (1)
- ☐ Brake hose mounting brkt 88275 (2)
- ☐ #10 x 1 self-drilling screw (4)
- ☐ Brake Hose clip BQ3052 (2)
- ☐ Copper washer BQ1016 (4)

☐ #199 - JK Rear Bump Stop Spacer Hardware (1)

- ☐ 5/16-18 x 3/4 Serrated flange bolt, gr8 (4)
- ☐ 5/16-18 Serrated flange nut (4)

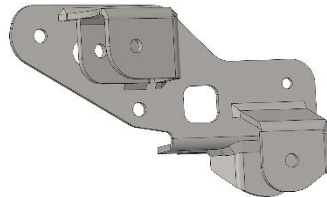
☐ #200 - JK Front Bump Stop Spacer Hardware (1)

- ☐ 1/2-13 x 2-1/2 Hex head bolt, gr8 (2)
- ☐ 1/2 USS flat washer (2)

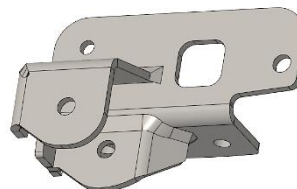
☐ #220 - Rear Sway Bar Link/Relocation Hardware (1)

- ☐ 3/4" hourglass bushing 94025 (4)
- ☐ 12mm sway bar bolt sleeve 92038 (2)
- ☐ 1/2" short sway bar bolt sleeve 80140 (2)

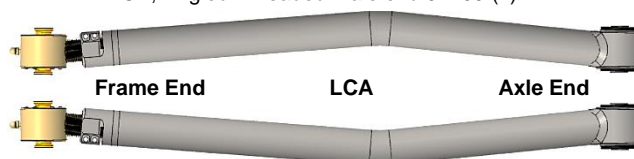
- ☐ 7/16 USS flat washer (12)
- ☐ 1/2-13 x 1-1/2 hex bolt, gr8 (2)
- ☐ 1/2-13 x 2-1/2 button head bolt (2)
- ☐ M12 x 60 hex head bolt c10.9 (2)
- ☐ M12 nylock nut (2)
- ☐ 1/2-13 Nylock flange nut, gr8 (4)
- ☐ Front Long arm mount, passenger side 80205 (1)



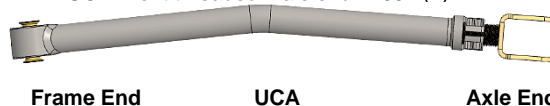
- ☐ Front Long arm mount, driver side 80204 (1)



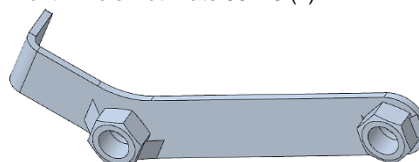
- ☐ Front LCA, bushing installed 80216 (2)
- ☐ LCA, Angled Threaded male end 91109 (2)



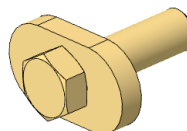
- ☐ Front UCA Passenger Side 80213 (1)
- ☐ UCA Front threaded male end 77054 (1)



- ☐ Front 2 Hole Nut Plate 80219 (1)



- ☐ Front Bolt Plate 80244 (2)



☐ #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)

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

- ☐ Inner race 91118 (2)
- ☐ Thrust washer 91119 (2)
- ☐ 2-5/8" Flex End Ball 91117 (1)
- ☐ 10-32 x 1-3/4" Socket Head Cap Screw (6)
- ☐ 10-32 Nylock Nut (6)
- ☐ 1/4"-28 90° Grease zerk Fitting (1)

☐ **#168 - 2 3/8" 8 Bolt IRO Flex End Hardware (1)**

- ☐ Inner race 91139 (2)
- ☐ Thrust washer 91138 (2)
- ☐ 2-3/8" Flex End Ball 91140 (1)
- ☐ 8-32 x 1-1/2" Socket Head Cap Screw (8)
- ☐ 90 Degree 1/4"-28 Grease Zerk Fitting (1)

☐ **#279 - Long Arm Bracket Hardware - 15438 (1)**

- ☐ One-Bolt Nut Plate 77052 (2)
- ☐ M14 x 35 hex bolt, class 10.9 (5)
- ☐ M14 x 90 hex bolt, class 10.9 (1)
- ☐ M14 x 100 hex bolt, class 10.9 (2)
- ☐ M14 nylock flange nut class 10.9 (3)
- ☐ 9/16 F436 hardened washer (8)
- ☐ 7/16 Serrated flange nut (2)



☐ JK 0-8" front track bar 80000 (1)

☐ **~Standard Track Bar~**

- ☐ Front Track bar threaded male end, 92004 (1)

#166 - Front 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)

☐ **~Optional Premium Track Bar Upgrade~**

- ☐ Track bar threaded male end, Flex Joint 77128 (1)

☐ **#306 - JL/JT Track Bar Flex Joint - Male End (1)**

- ☐ Inner race (plastic) 91113 (2)
- ☐ Washer (steel) 77127 (2)
- ☐ Ball 91142 - M14 bolt (1)
- ☐ #5-40 x 1-1/8" Socket head cap screw (9)
- ☐ 3/32" Hex L key, high torque (hex plus) (1)

#254 - Track Bar Flex End Hardware - 14mm (1)

- ☐ Inner race (plastic) 91113 (2)
- ☐ End cap (steel) 91112 (2)
- ☐ Ball 91142 - M14 bolt (1)
- ☐ #5-40 x 1 1/4" Socket head cap screw (9)
- ☐ 3/32" Hex L key, high torque (hex plus) (1)

#281 - Track Bar Clamp Hardware (1)

- ☐ Track Bar clamp 95044 (1)
- ☐ 5/16-18 x 2 carriage bolt gr5 (1)
- ☐ 5/16-18 hex flange nut (1)

☐ JK 0-8" rear track bar 80005 (1)



☐ **~Standard Track Bar~**

- ☐ Track bar threaded male end 92004 (1)
- #107 - Rear Track Bar Hardware (1)**
- ☐ Track bar bushing sleeve 80003 (2)
 - ☐ Track bar bushing 80014 (4)
 - ☐ 7/8-14 Hex jam nut (1)

☐ **~Optional Premium Track Bar Upgrade~**

- ☐ Track bar threaded male end, Flex Joint 77128 (1)

☐ 7/8-14 Hex jam nut (1)

☐ **#306 - JL/JT Track Bar Flex Joint - Male End (1)**

- ☐ Inner race (plastic) 91113 (2)
- ☐ Washer (steel) 77127 (2)
- ☐ Ball 91142 - M14 bolt (1)
- ☐ #5-40 x 1-1/8" Socket head cap screw (9)
- ☐ 3/32" Hex L key, high torque (hex plus) (1)

#254 - Track Bar Flex End Hardware - 14mm (1)

- ☐ Inner race (plastic) 91113 (2)
- ☐ End cap (steel) 91112 (2)
- ☐ Ball 91142 - M14 bolt (1)
- ☐ #5-40 x 1 1/4" Socket head cap screw (9)
- ☐ 3/32" Hex L key, high torque (hex plus) (1)

~Standard Front Sway Bar Links~

- ☐ Front Sway Bar Link, 10.75" center to center 92146 (2)

#201 - Sway Bar Link Hardware (1)

- ☐ 12mm sway bar bolt sleeve 92038 (4)
- ☐ 3/4" hourglass bushing 94025 (4)
- ☐ M12 x 65 Hex bolt cl 10.9 (2)
- ☐ M12 Nylock nut (2)
- ☐ 7/16 USS washer (4)



~Optional Front Sway Bar Disconnect Upgrade~

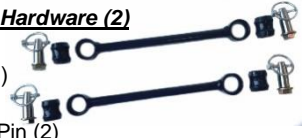
- ☐ Front Sway Bar Link, 10.75" center to center 92146 (2)

#268 - Sway Bar Disconnect Bushings (1)

- ☐ Poly Bushing 94025 (4)

#266 - JK Sway Bar Disconnect Hardware (2)

- ☐ Disconnect Pin 94028 (2)
- ☐ 1/2-20 x 1" Hex Bolt, gr8 (2)
- ☐ 1/2 F436 Hard Washer (2)
- ☐ 1/4" x 1-1/4" Spring Lynch Pin (2)



- ☐ JK LCA Rear, Bushing Installed 80010B (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)



- ☐ **Standard** - LCA Rubber Bushing Male End, Straight 99070B (2)

- ☐ **Optional** - LCA Flex Joint Male End, Straight 92186 (2)

☐ **#127 - 2 5/8" 6 Bolt IRO Flex End Hardware (2)**

- ☐ Inner race 91118 (2)
- ☐ Thrust washer 91119 (2)
- ☐ 2-5/8" Flex End Ball 91117 (1)
- ☐ 10-32 x 1-3/4" Socket Head Cap Screw (6)
- ☐ 10-32 Nylock Nut (6)
- ☐ 1/4"-28 90° Grease zerk Fitting (1)

- ☐ **Standard** - JK Rear UCA w/ Rubber Bushing 80196B (2)

- ☐ UCA Rear Male End 80023B (2)



☐ **#186 - UCA Clamping Hardware 13312 (1)**

- ☐ 3/8-16 X 1-1/4 Hex bolt gr8 (2)
- ☐ 3/8-16 Nylock flange nut gr8 (2)
- ☐ 3/8 Mil spec washer (2)

~Optional Flex Joint Upgrade~

- ☐ **Optional** - JK Rear UCA w/ Flex Joint 80022 (2)

- ☐ UCA Rear Male End 80023B (2)



☐ **#186 - UCA Clamping Hardware 13312 (1)**

- ☐ 3/8-16 X 1-1/4 Hex bolt gr8 (2)
- ☐ 3/8-16 Nylock flange nut gr8 (2)
- ☐ 3/8 Mil spec washer (2)

☐ **#168 - 2 3/8" 8 Bolt IRO Flex End Hardware (2)**

- ☐ Inner race 91139 (2)
- ☐ Thrust washer 91138 (2)
- ☐ 2-3/8" Flex End Ball 91140 (1)
- ☐ 8-32 x 1-1/2" Socket Head Cap Screw (8)
- ☐ 90 Degree 1/4"-28 Grease Zerk Fitting (1)

Shocks

☐ **Trail Tamer HD Hydro (Standard)**

- ☐ Front shock 79002 (2)
- ☐ Rear shock 79005 (2)

☐ **Doetsch Upgrade (Optional)**

- ☐ Front shock DT 8386 (2)
- ☐ Rear shock DT 8371 (2)

#165 – JK Shock Hardware (1)

- ☐ Rear barpin GS-403261 (2)

☐ **Bilstein Upgrade (Optional)**

- ☐ Front shock 33-230375 (2)
- ☐ Rear shock 33-104652 (2)

#164 – JK Bilstein Shock Hardware (1)

- ☐ Rear barpin GS-403261 (2)
- ☐ 12mm shock sleeve 404739 (4)

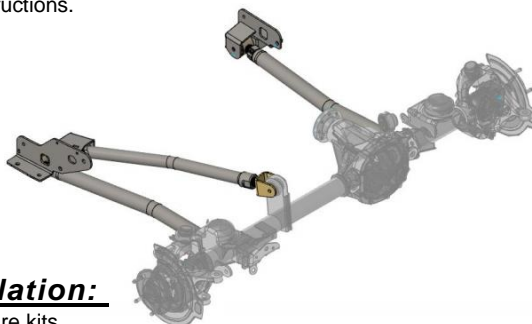


Safety Warning: *Important! Read before installation. *****

We recommend 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:

- ☐ ***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 wrench
 - ☐ Angle grinder, Sawzall
 - ☐ Anti-seize compound.
 - ☐ Multipurpose grease
 - ☐ Tape measure
 - ☐ 9/16" drill bit and drill



Prepare the parts for installation:

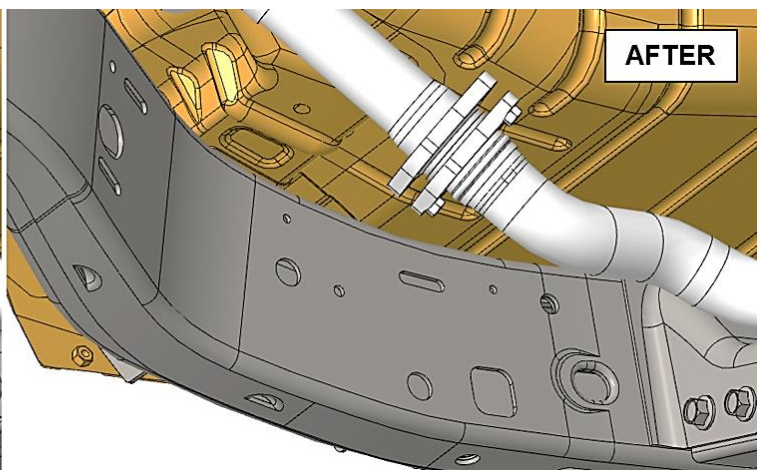
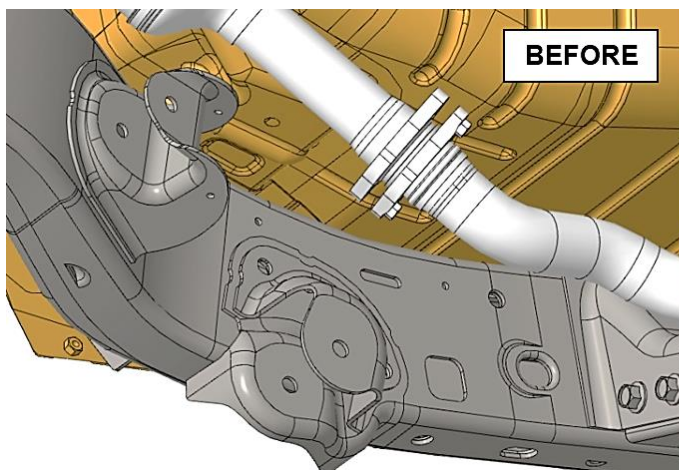
1. **Shocks:** Locate rear shocks and hardware kits.
2. Grind the outer corners on one end of the barpins to ease installation.
3. Grease and install the barpins into the top side of the rear shocks. Clamp the barpin vertically in a bench vise and lower the shock onto the barpin while rotating the shock back and forth. Be sure to grease the barpin and the shock bushing.
4. **Front Track Bar:** Locate front track bar, **HK #166** and track bar threaded male end. If you upgraded to the Premium Track Bar, refer to the instructions at the end of this document.
5. Lubricate track bar bushings and bushing sleeves with multi-purpose grease and install into track bar and track bar threaded male end.
6. Slip clamping bracket onto adjusting end of track bar with the opening down and insert the 5/16 carriage bolt from rear and nut facing forward.
7. Use a light coat of anti-seize then thread the track bar male end into the track bar. Adjust to the length in the chart as a starting point. Length may need adjustment after a test drive.
8. Tighten the clamping bracket. Make sure the bracket opens rearward, and nut faces down.
9. **Adjustable Control Arms:** Using the instructions on the last pages, assemble the flex ends into the threaded male ends or arms. LCAs use 2-5/8" **HK #127**, UCAs use 2-3/8" **HK #168**.
10. Use a light coat of anti-seize then thread the male ends into the control arms and adjust to the lengths in the chart as a starting point.
11. Install the clamping bolts **HK #65** into the LCAs and UCAs, do not fully tighten at this time.

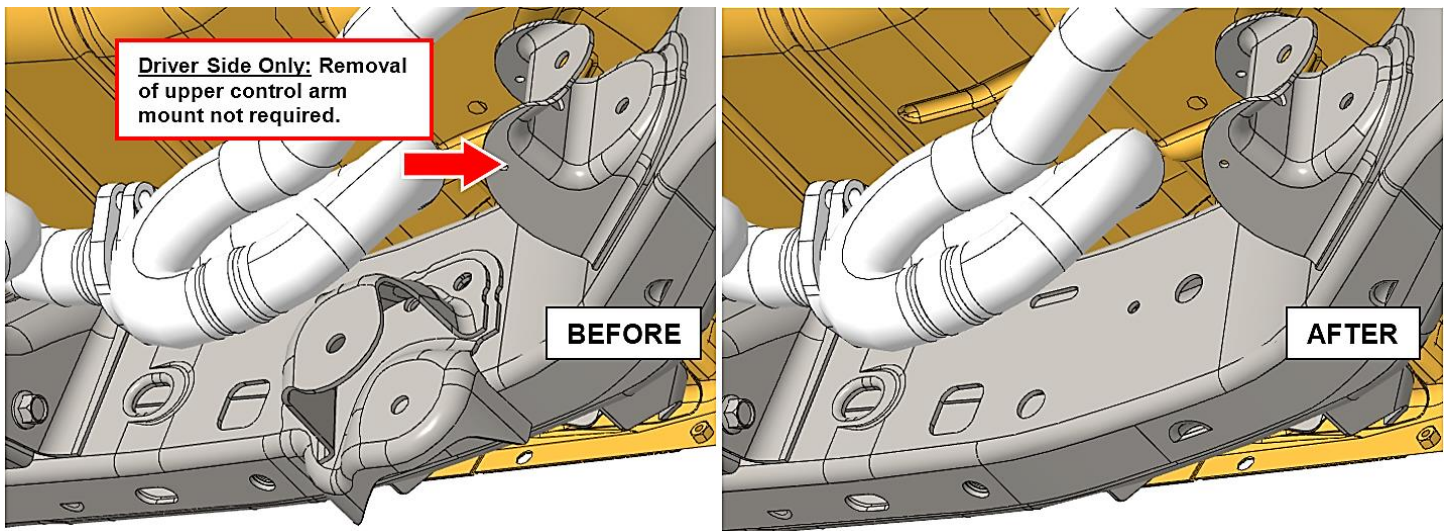


Front installation:

12. Lift front of vehicle and support with jack stands under frame rails.
**Tip: break lug nuts loose before lifting vehicle.
13. Remove front wheels.
14. Remove front sway bar links.
15. Support the axle with jack stands and remove shocks.
16. Disconnect brake line from bracket on frame rail and cap the line.
17. Remove the front brake lines and brake hose brackets.
18. Remove front track bar.
19. Remove coil springs.
20. Remove the factory T-Brace from the frame. Save the M12 bolts for future use.
21. Remove the factory upper and lower control arms.
22. Cut off the front upper and lower control arm mounts from the frame. Do not cut into the frame. Ensure the frame is completely smooth, clean, and ready for painting. Remove the brackets in pieces. A combination of grinder, sawzall, hammer, and chisel is preferred.

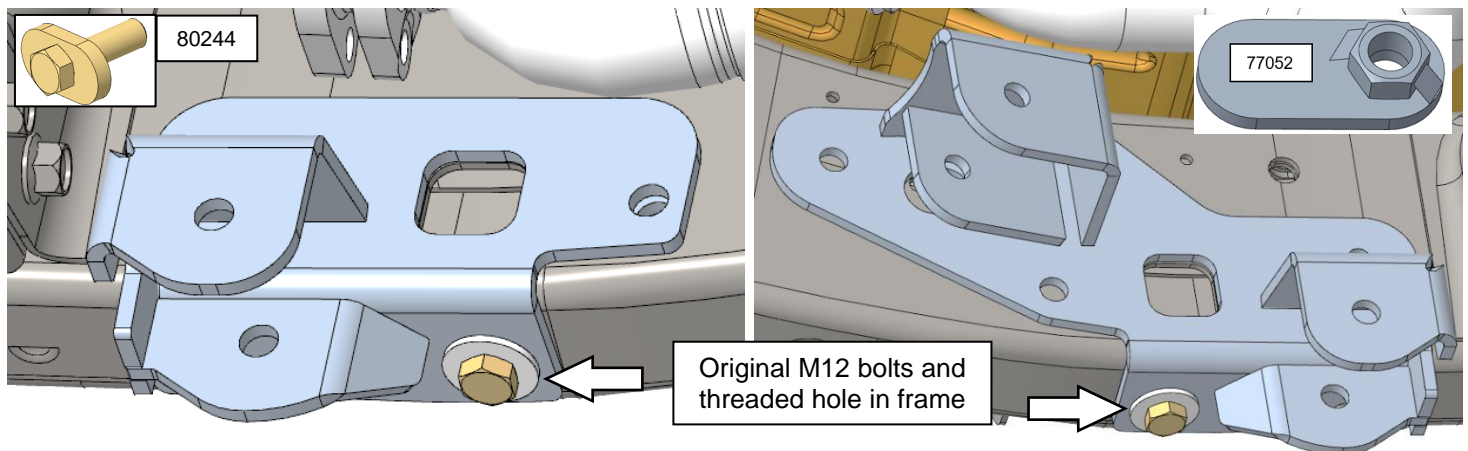
Track Bar & Control Arm Length (Center to Center)	
Front UCA (Upper Control Arm)	29-1/2"
Front LCA (Lower Control Arm)	32-3/4"
Rear UCA	18"
Rear LCA	20-3/8"
Front Track Bar	32-3/4"
Rear Track Bar	40-1/4"





23. **Long Arm Mounting Brackets:** Locate long arm brackets and **HK #279**.

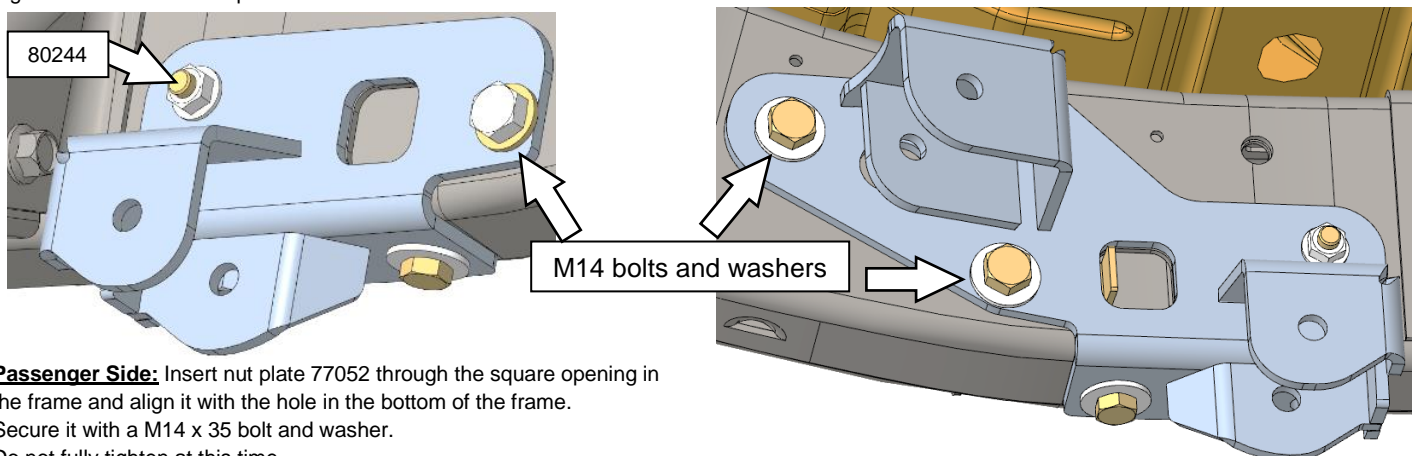
24. Align the long arm mounting brackets on the frame by installing the OEM M12 bolts through the bracket and into the threaded hole in the frame.



25. **Driver Side:** Insert nut plate 77052 through the square opening in the frame and align it with the hole in the side of the frame. Secure it with a M14 x 35 bolt and washer. Repeat for the hole in the bottom of the frame. Do not fully tighten at this time.

26. Insert bolt plate 80244 through the outside of the frame using needle nose pliers or a socket on an extension. Place it the hole in the upper part of the bracket. Secure the bolt plate with a 7/16 serrated nut. Do not fully tighten at this time.

27. Tighten all hardware. Torque the M14 and M12 hardware to 100 ft-lbs. 7/16" hardware to 60 ft-lbs.



28. **Passenger Side:** Insert nut plate 77052 through the square opening in the frame and align it with the hole in the bottom of the frame. Secure it with a M14 x 35 bolt and washer. Do not fully tighten at this time.

29. Insert the two-hole nut plate 80219 through the square opening in the frame and align it with the holes in the side of the frame. Secure it with two M14 x 35 bolts and washers. Do not fully tighten at this time.

30. Insert bolt plate 80244 through the outside of the frame using needle nose pliers or a socket on an extension. Place it in the hole in the upper part of the bracket. Secure the bolt plate with a 7/16 serrated nut. Do not fully tighten at this time.

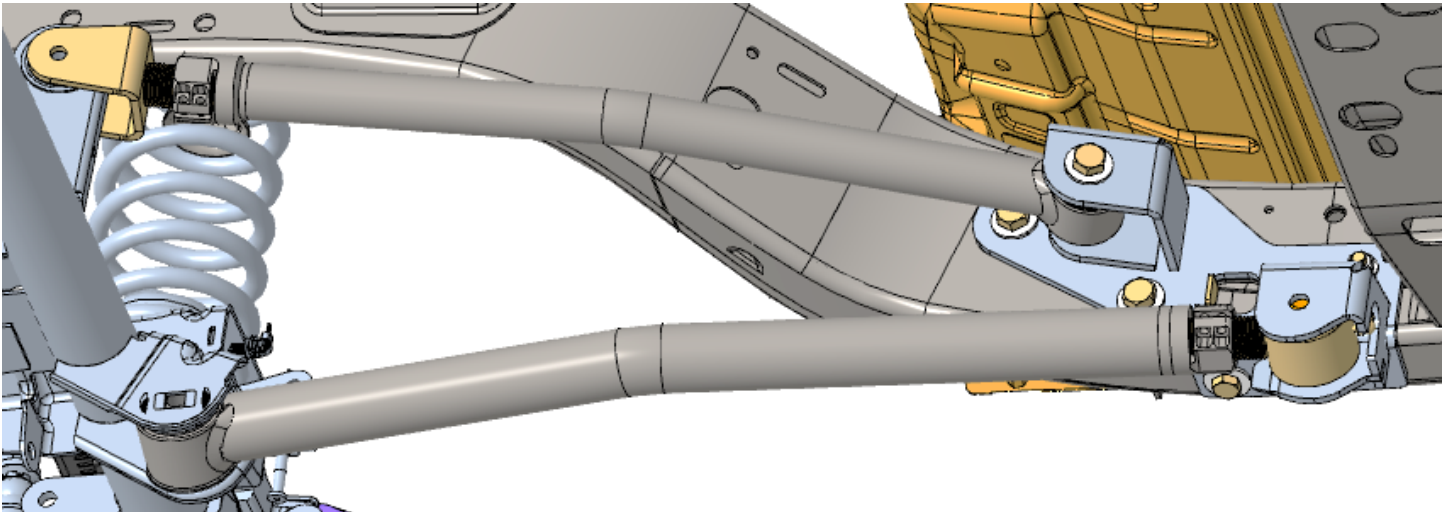
31. Tighten all hardware. Torque the M14 and M12 hardware to 100 ft-lbs. 7/16" hardware to 60 ft-lbs.

32. **Upper Control Arm:** Locate the upper control arm and M14 x 90 bolt, washer, and flange lock nut.

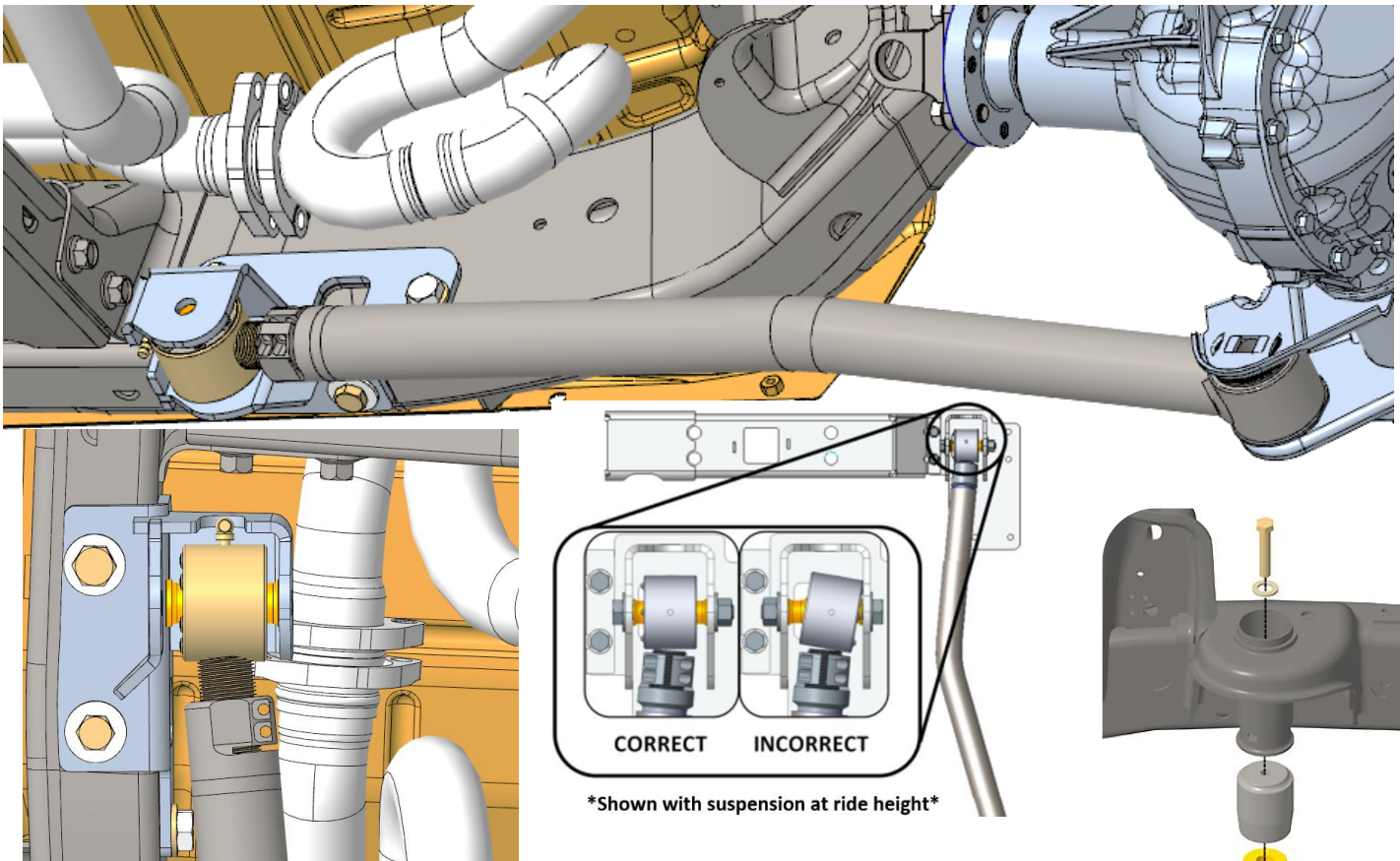
33. Install the flex end of the upper control arm into the long arm mounting bracket then install the fork end onto the axle.

34. The arm is bent for frame and exhaust clearance; the clamping bolt points down.

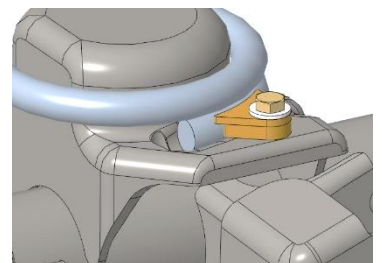
35. Secure the upper control arm with the M14 x 90 bolt, washer, and flange lock nuts at the long arm bracket.
36. Use the factory M12 bolt and nut at the axle end. Torque the M14 bolts to 120 lb-ft. Do not tighten the M12 bolts at this time.



37. **Lower Control Arms:** Locate the lower control arms and the factory lower control arm bolts.
38. Install the rubber bushing at the axle then install the flex end at the frame. The LCAs are bent inward for tire clearance.
39. Torque bolts at the frame to 130 lb-ft. Do not tighten bolts at the axle at this time.
40. Ensure that the lower control arm flex ends are oriented. Install front upper bump stop extension using HK #200. See picture.



41. Install new coil springs.
 42. **Front lower coil retainers:** place the 1/4" thick spacer (one notch) against the spring on the lower spring mount near the end of the coil spring.
- **The driver's side retainer mounts behind the spring, the passenger's side retainer mounts in front of the spring.****
43. Using the spacer as a guide, mark the location of the bolt hole with a permanent marker.
 44. Remove the spacer and drill an 11/32" hole.
 45. Install the spacer and top plate with the provided 5/16 x 1" bolt, washer and nut.
- **The top plate should not sit flat on the spacer.****
46. Repeat steps 4-8 for the opposite side spring mount.
- **The driver's side retainer mounts behind the spring, the passenger's side retainer mounts in front of the spring.****
47. Install new brake hose bracket on frame in factory location using factory bolt and a self drilling screw.



48. Install new brake hose on new bracket using **HK #198**.

Before tightening flare nut, be sure to twist brake hose into the best orientation to keep the hose away from the tire, spring, and shock.

49. **Re-route ABS wires as needed to allow full suspension droop.**

50. Install new shocks.

51. Assemble and install new front sway bar links using **HK #201**. Grease and install the hourglass bushings into the links then grease and install the sway bar link bolt sleeves into the bushings.

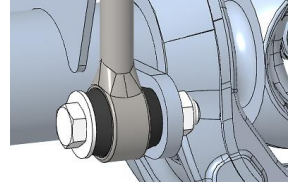
52. If you upgraded to IRO Sway Bar Disconnect system, refer to the instructions at the end of this document.

53. All front sway bar sleeves are the same (12mm I.D.). Use bolts from **HK #201** for the top bolt and reuse the original bolt for the lower.

54. Install new front track bar with threaded end to axle side. The clamp hangs down, bolt facing front.

55. Reinstall front wheels.

56. Lower vehicle onto ground.



Rear installation:

57. Lift rear of vehicle and support with jack stands under frame rails.

**Tip: break lug nuts loose before lifting vehicle.

58. Remove rear wheels.

59. Remove sway bar links.

60. Remove coil springs.

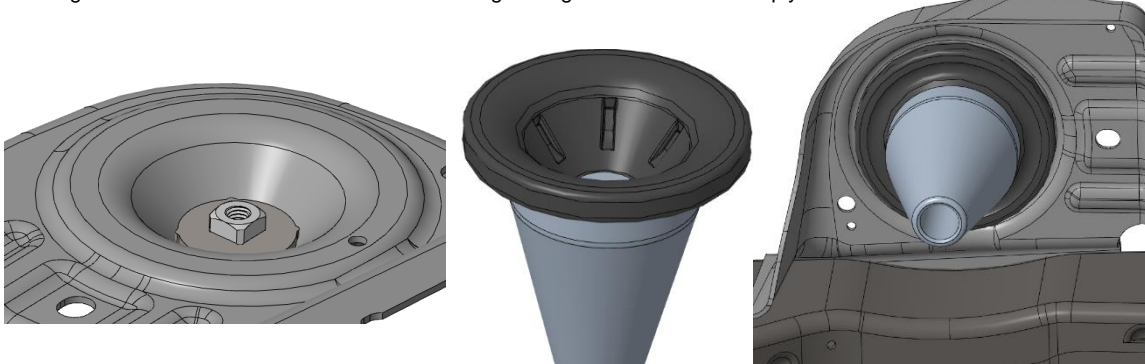
61. Remove the rear track bar.

62. Support the rear axle with jack stands and remove shocks.

63. **Retainer Cone:** Position the nut plate on top of the coil spring mount with the nut facing up.

64. Place the upper isolator on top of the retainer cone then place it up onto the coil spring mount. Secure with 7/16 x 2" bolt and washer.

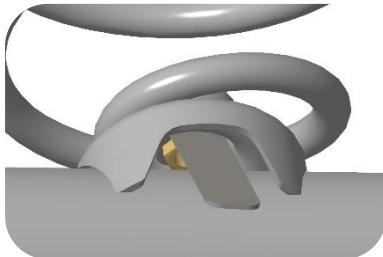
65. Tighten until the isolator starts to deform and tightening effort increases sharply.



66. Install the springs into the Jeep by positioning them over the retainer cones and lower spring mounts on the axle.

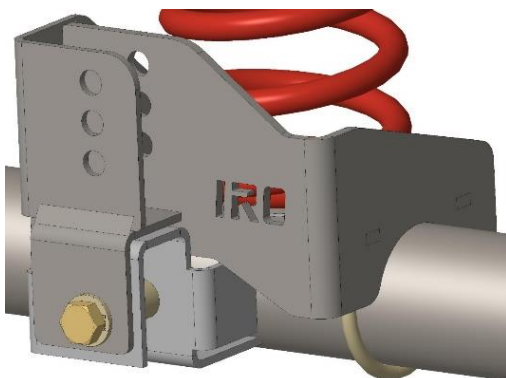
67. Insert the 7/16 flag nut into the lower spring mount from the bottom side and align it with the hole in the lower spring mount.

68. Insert the retainer plate into the spring. Add a small amount of anti-seize to the 7/16 x 1" bolt and torque to 54 lb-ft.



69. Install new rear track bar bracket over factory track bar bracket. Secure with U-bolts, 3/8" serrated flange nuts, M14 x 80 bolt, nylock nut and spacer sleeve from **HK #199**.

70. Install new track bar into rear track bar bracket (middle hole) using the factory track bar bolt and flag nut. Tighten jam nut very tight.

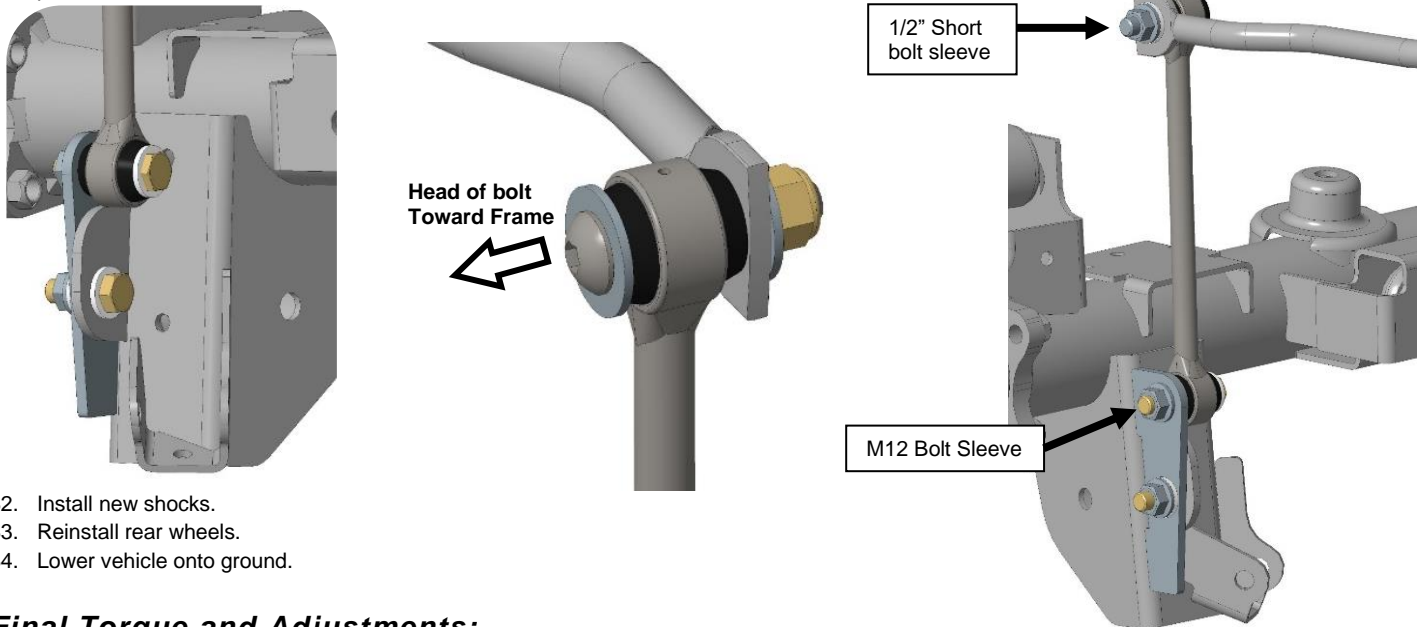


71. Remove rear brake hose from the frame and caliper then remove the brake hose bracket.

72. Install new brake hose bracket on the frame in the original hole using the factory hardware as shown. Angle the bracket to line up with the brake line and use the self tapping screw to secure it.
73. Attach the new braided brake hose to the caliper with the factory bolt and new copper washers.
74. Tighten the brake line into the braided hose. Orient the new braided brake hose inward to avoid moving suspension parts and the tire, secure it to the bracket with the clip provided.

Re-route ABS wires as needed to allow full suspension droop.

75. Remove factory lower control arms and install new lower control arms using the factory hardware. Clamping bolts facing down, male end at the frame, grease zerk pointed down.
76. Remove factory upper control arms and install new upper control arms using the factory hardware. Clamping bolt facing in, male end at the frame.
77. Install rear bump stop spacers using **HK #199**. The slant should point forward.
*For ease of installation: it is recommended that the rear axle be set at ride height and the upper control arm bolts be torqued before install of the rear bump stop spacers.
78. Install rear sway bar drop spacers on the frame: Loosen one side of the sway bar, do not remove the bolts, then remove bolts from the opposite side and install the spacer using **HK #12**.
79. Install rear sway bar relocation brackets on the outside of the original sway bar mount using 1/2 x 1-1/2 bolts from **HK #220**.
80. Assemble new rear sway bar links using **HK #220**. Grease and install the hourglass bushings into the links then grease and install one 1/2" short bolt sleeve and one M12 long bolt sleeve into each rear sway bar link. The short bolt sleeve is for the top of the sway bar link.
81. Use the M12 x 60 hex head bolts for the bottom of the sway bar links. Use the 1/2 x 2-1/2 button head bolts for the top of the sway bar link. See photos.



82. Install new shocks.
83. Reinstall rear wheels.
84. Lower vehicle onto ground.

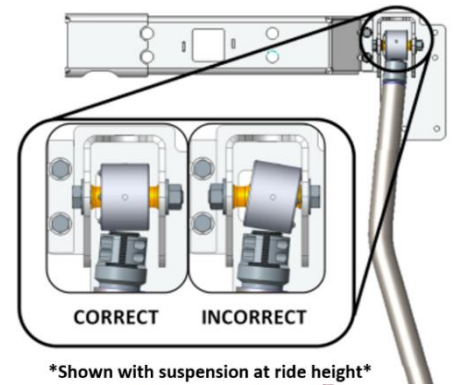
Final Torque and Adjustments:

85. Raise vehicle and reposition jack stands under the front and rear axles.
86. Temporarily install a tire on one side.
87. Verify that the axle is centered as desired front to rear. Check caster before adjusting.
88. 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.
89. Adjust control arms to the desired position.
90. To adjust axle front to rear, adjust upper and lower control arms by the same amount. 12 turns equal one inch.
91. To adjust only caster, adjust only the upper control arms (3 turns equals roughly 2 degrees).
92. 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°



93. **Caster angle may need to be adjusted after a test drive to eliminate driveline vibrations.**
94. With the vehicle weight on the suspension, tighten the upper control arm bolt to 90 lb-ft. and lower control arm bolts at the frame to 130 lb-ft.
95. Torque the upper and lower control arm clamping bolts to **140 in-lb.** Be sure to go back and forth between both bolts to ensure even clamping.
96. Install tires and wheels. Torque lug nuts to spec. (Typical specification is 85-115 ft-lbs., depending on your wheels)
97. With the axles positioned front to rear and caster set, check the axle position left to right. Adjust the track bars to center the axles under the vehicle. Tighten jam nut very tight.
98. With the vehicle weight on the suspension, check steering wheel alignment. 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.

99. Recheck all fasteners and torque any remaining loose nuts or bolts to spec.
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:

100. * 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**

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:

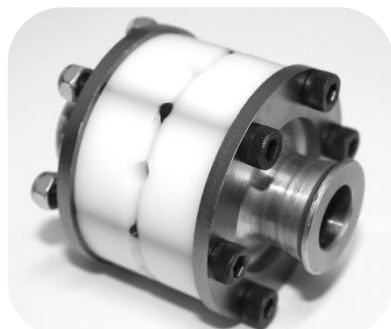
1. Insert two #10-32 socket head cap screws into one thrust washer and one plastic race. Spherical bore of race facing away from thrust washer. (Figure 1)
2. Install this small assembly into the flex end housing. The races are a light press fit, use a wide punch and hammer to assist you if needed.
3. 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*

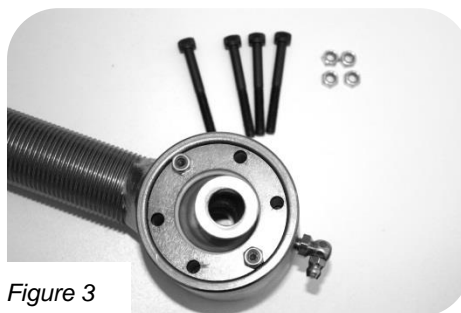


Figure 3



Figure 4

IRON ROCK OFF ROAD

2-3/8" IRO Flex End (8 bolt)
Assembly Instructions

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

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:
 - 9/64" 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)

#168 - 2-3/8" IRO Flex End (8 bolt)

- ☐ Inner race 91139 (2)
- ☐ Thrust washer 91138 (2)
- ☐ Ball 91140 (1)
- ☐ #8-32 x 1-1/2" socket head cap screw (8)
- ☐ 1/4"-28 90° grease zerk fitting (1)
- ☐ 1/4"-28 straight grease zerk fitting (1)

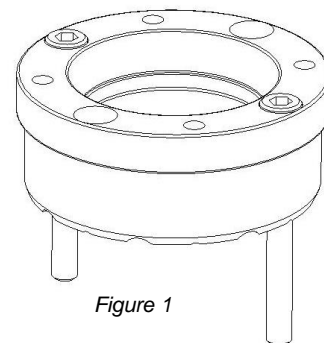
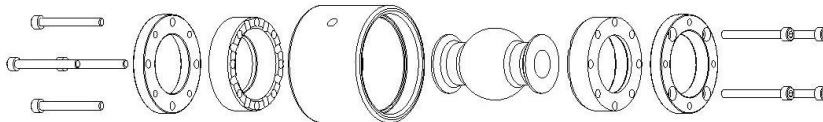
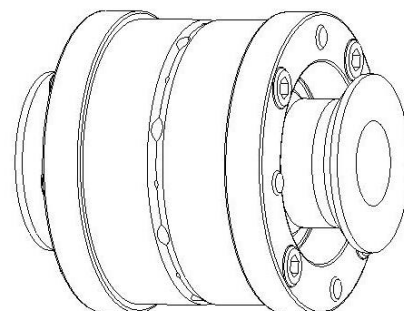


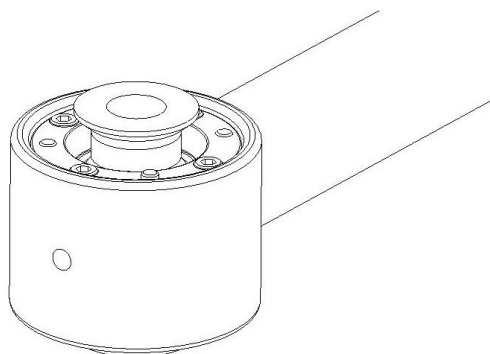
Figure 1

Assembly:

1. Insert two #8-32 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.
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, aligning the bolts with the threaded holes.
7. Start threading the two bolts into the threaded holes of the thrust washer. Do not fully tighten at this time.
8. Insert the remaining cap screws through the remaining holes and get them started in the threaded washer.
9. Snug up all of the bolts fairly tight. Go back and forth, rechecking each bolt several times to ensure even clamping
10. Torque bolts evenly starting at one bolt using a crisscross pattern, like torquing lug nuts. Torque all eight bolts to 50 in-lbs., then to 55 in-lbs.
11. Install 90° grease zerk fitting so that it is easily accessed in the vehicle.
12. Use a grease gun to grease the flex end through the zerk fitting. This will be difficult due to the tight tolerances in the flex joint assembly.
13. Re-torque bolts to 55 in-lbs.



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



IRON ROCK OFF ROAD

Track Bar Flex End Assembly Instructions

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

Parts Checklist:

#122 - Track Bar Flex End Hardware - 12mm (1)

- ☐ Inner race (plastic) 91113 (2)
- ☐ End cap (steel) 91112 (2)
- ☐ Ball 91104 - M12 bolt (1)
- ☐ #5-40 x 1 1/4" Socket head cap screw (9)
- ☐ 3/32" Hex L key, high torque (hex plus) (1)

#254 - Track Bar Flex End Hardware - 14mm (1)

- ☐ Inner race (plastic) 91113 (2)
- ☐ End cap (steel) 91112 (2)
- ☐ Ball 91142 - M14 bolt (1)
- ☐ #5-40 x 1 1/4" Socket head cap screw (9)
- ☐ 3/32" Hex L key, high torque (hex plus) (1)



Safety Warning:

Installation and assembly of this part requires knowledge of steering and suspension systems. Failure to precisely adhere to installation procedure may cause a part failure resulting in vehicle damage and serious injury or death. This part only fits Iron Rock Off Road track bars in good condition. Iron Rock Off Road makes no claims that this part will fit track bars from other manufacturers. Improper fitment may cause a part failure resulting in vehicle damage, serious injury, or death.

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 Ensure that you have high strength threadlocker (such as red Loctite) and multi-purpose grease.

Fitment:

This kit replaces the poly bushings and inner sleeve in your Iron Rock Off Road track bar. This part only fits track bars manufactured by Iron Rock Off Road after 2009 with an inside diameter of 1.510", a width of 1.250", and a radiused inside corner.

*****To verify fitment: Remove the track bar from your vehicle, remove the poly bushings, clean the parts, and verify the following is true: *****

- ☐ The plastic races fit tight inside the inside bore.
- ☐ Both end caps fit the inside bore with just a bit of "wiggle room".
- ☐ Both end caps slide in freely until the flat shoulder rests firmly against the end of the outer tube.
- ☐ The overall width of the outer tube is 1.250". This can be measured with a caliper or verified after flex end is fully assembled. Once fully assembled (bolts torqued to spec.) the shoulders of the end caps should rest firmly against the ends of the outer tube. At the same time, the ball should fit tight inside the assembly. It should require a tool (such as a screwdriver) to pivot or rotate the ball. The ball should pivot smoothly with even resistance in any position.



If any of those steps cannot be verified, please contact us to order a new track bar.

Bolt size: This bushing replacement assembly is only available to fit a 12mm & 14mm bolt at this time. Those with a 10mm fastener may wish to upgrade to 12mm hardware for more strength (drill your bracket and install a 12mm bolt).

Assembly:

1. Verify fitment per the "Fitment" section above.
2. Insert four socket head cap screws into one end cap and one race. (Race should have spherical bore facing away from end cap.)
3. Install this small assembly into the track bar outer bushing tube. The races are a light press fit, use a wide punch and hammer to assist you if needed.
4. Apply a thin coat of multi-purpose grease to the ball and the spherical mating surface of the races. Coat both mating surfaces but leave no excess grease that would interfere with the threadlocker adhesive on the bolts.
5. Place the ball into the race inside the housing. The ball should fit the contour of the race perfectly.
6. Insert the other race on top of 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 four screws should be through one end cap and both races at this point.)
7. Apply a generous coating of high strength threadlocker (such as red Loctite) to all 8 screws (including the ones already installed).
8. Install the second end cap, aligning the screws with the tapped holes. When completed 4 screws will be inserted from each side.
9. Insert the last four screws and tighten them all snug.
10. Torque screws in sequence using a crisscross pattern, like torquing lug nuts. Tighten all 8 screws evenly in small steps. Take your time and do not rush. Tighten all 8 screws to 20 in/lbs.



IRON ROCK OFF ROAD

Sway Bar Disconnect Link Instructions

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

Parts List:

#268 – Sway Bar Disconnect Bushings (1)

- ☐ Poly Bushing 94025 (4)

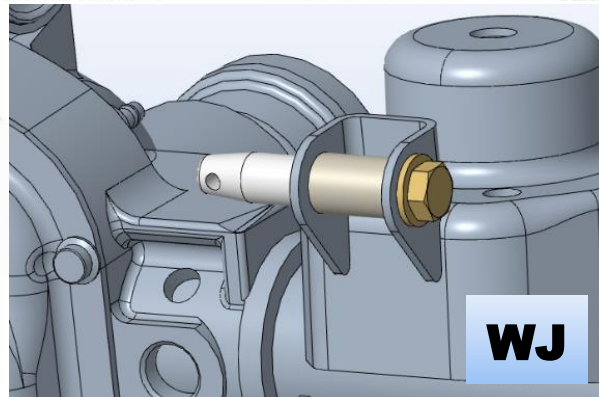
WJ ~Optional~

#267 – WJ Sway Bar Disconnect Hardware (1)

- ☐ Disconnect Pin 94028 (2)
- ☐ Spacer Sleeve 94032 (2)
- ☐ 1/2-20 x 2-1/2" Hex Bolt, gr8 (2)
- ☐ 1/2 F436 Hard Washer (2)
- ☐ 1/4" x 1-1/4" Spring Lynch Pin (2)

#288 – WJ Sway Bar Disconnect Sleeves (1)

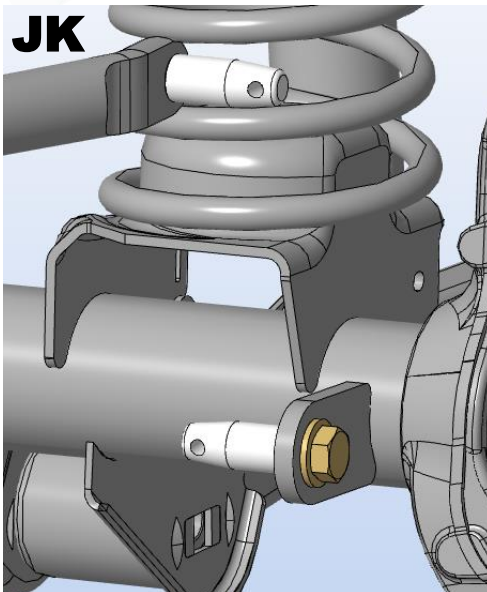
- ☐ 12mm bushing sleeve 92038 (2)



JK ~Optional~

#266 – JK Sway Bar Disconnect Hardware (2)

- ☐ Disconnect Pin 94028 (2)
- ☐ 1/2-20 x 1" Hex Bolt, gr8 (2)
- ☐ 1/2 F436 Hard Washer (2)
- ☐ 1/4" x 1-1/4" Spring Lynch Pin (2)



XJ ~Optional~

#287 – XJ Sway Bar Disconnect Hardware (1)

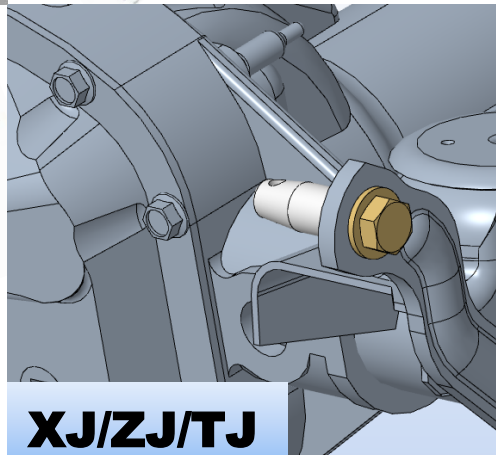
- ☐ Disconnect Pin 94028 (2)
- ☐ 1/2-20 x 1" Hex Bolt, gr8 (2)
- ☐ 1/2 F436 Hard Washer (2)
- ☐ 1/4" x 1-1/4" Spring Lynch Pin (2)
- ☐ 12mm bolt sleeve 92038 (2)
- ☐ M12 x 70 cl10.9 hex bolt (2)
- ☐ M12 cl10.9 hex nut (2)
- ☐ 1/2 x 1 1/2" gr8 hex bolt (2)
- ☐ 1/2 gr8 lock washer (2)
- ☐ 1/2 gr8 hex nut (2)
- ☐ U-Bracket 99000 (2)



TJ & ZJ ~Optional~

#286 – TJ & ZJ Sway Bar Disconnect Hardware (1)

- ☐ Disconnect Pin 94028 (2)
- ☐ 1/2-20 x 1" Hex Bolt, gr8 (2)
- ☐ 1/2 F436 Hard Washer (2)
- ☐ 1/4" x 1-1/4" Spring Lynch Pin (2)
- ☐ 12mm bolt sleeve 92038 (2)
- ☐ M12 x 60 hex bolt, cl10.9 (2)
- ☐ M12 hex nut, cl10.9 (2)
- ☐ M10 x 30 hex bolt, cl10.9 (2)
- ☐ 3/8" USS washer (2)
- ☐ M10 hex nut, cl10.9 (2)
- ☐ U-Bracket 99000 (2)



Installation Instructions:

Safety Warning: *Important! Read before installation. *

We recommend 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 frequently.

Notes:

- ☐ Do not operate vehicle with only one side of the sway bar connected. Both sides of the sway bar must either be disconnected or both sides must be connected.

Before you begin:

- ☐ Read all safety warnings.
- ☐ Read and understand installation instructions.
- ☐ Contact Iron Rock Off Road with any questions before, during, or after installation. 952-210-7185
- ☐ **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 (wrenches, sockets, etc.).
 - ☐ Multi-purpose grease

Prepare for installation:

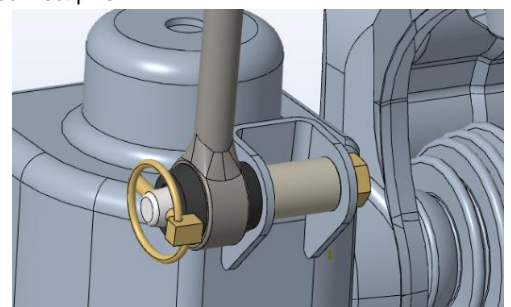
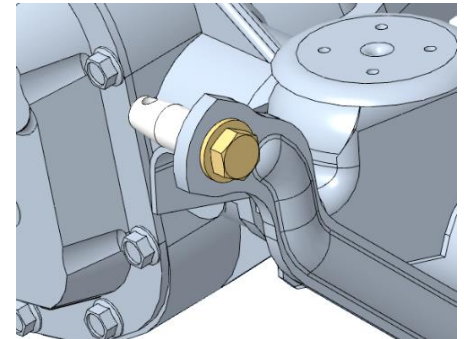
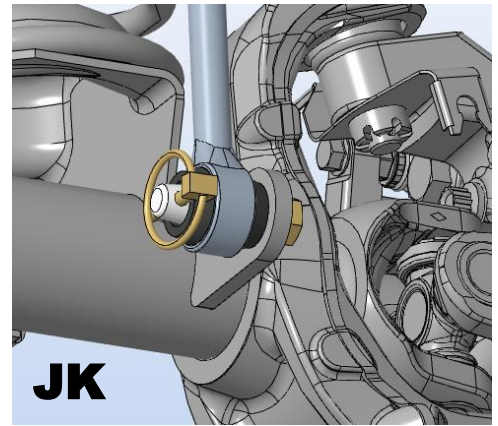
1. Locate the front sway bar links, bushings, and bolt sleeves.
2. Grease and install the hourglass bushings.
3. Grease and install the sway bar link inner sleeves in only one end of each link.
4. Raise the vehicle and secure on jack stands under the frame.
5. Remove the front tires.
6. Disconnect the original front sway bar links from the axle and sway bar.

XJ Installation:

7. Locate front sway bar links, two u-brackets, and **HK #287**.
8. Install sway bar link u-brackets to the sway bar using 1/2 x 1-1/2" grade 8 hex bolts, lock washers, and nuts. Brackets mount to the bottom of the sway bar with the bolt facing up and the lock washer and nut on top of the sway bar. Rotate the bracket so it is offset away from the center of the vehicle. Align brackets, torque bolts to 80 ft-lbs.
9. Install sway bar links driver's side first using provided M12 x 60mm class 10.9 hex bolt and nut through the u-bracket with the nuts toward the outside of the vehicle. Tighten all bolts to 78 ft-lbs.
10. Install the disconnect pin on the axle, pin pointing in-board. Use the 1/2" x 1" bolt with a washer.
Tip: Before tightening determine your desired orientation for the retaining pin.
11. Hold the disconnect pin in your desired orientation and torque the bolt to 70lb-ft.
12. Apply grease to the disconnect pin and slide the sway bar link onto the disconnect pin.
13. Secure the sway bar link in place using the spring lynch pin.
***NOTE:** The spring lynch pin should take some effort to install. This is done on purpose to keep the link secure and noise free.
14. Reinstall tires and torque lug nuts to spec.
15. Lower vehicle to the ground.
16. With the vehicle back on the ground, pull the spring pins and slip the sway bar links off the disconnect pins.
17. Swing the sway bar links up to the sway bar then swing the sway bar up to its highest position.
18. Flex the suspension and steer fully left and right. Check for possible interference between the tires and sway bar.
19. Reconnect the sway bar links to the axle.
20. For ease of installation and best performance, re-grease the sway bar bushings periodically.

ZJ and TJ Installation:

21. Locate front sway bar links, two u-brackets, and **HK #286**.
22. Install sway bar link u-brackets to the sway bar using M10 x 30 hex bolts nuts and washers. Brackets mount to the bottom of the sway bar with the bolt facing up and the washer and nut on top of the sway bar. Align brackets with offset holes pushing the brackets toward the outside of the vehicle. Torque to 60 ft-lb.
23. Install sway bar links driver's side first using provided M12 x 60mm class 10.9 hex bolt and nut through the u-bracket with the nuts toward the outside of the vehicle. Tighten all bolts to 78 ft-lb.
24. Install the disconnect pin on the axle, pin pointing in-board. Use the 1/2" x 1" bolt with a washer.
Tip: Before tightening determine your desired orientation for the retaining pin.
25. Hold the disconnect pin in your desired orientation and torque the bolt to 70lb-ft.
26. Apply grease to the disconnect pin and slide the sway bar link onto the disconnect pin.
27. Secure the sway bar link in place using the spring lynch pin.
***NOTE:** The spring lynch pin should take some effort to install. This is done on purpose to keep the link secure and noise free.
28. Reinstall tires and torque lug nuts to spec.
29. Lower vehicle to the ground.
30. With the vehicle back on the ground, pull the spring pins and slip the sway bar links off the disconnect pins.
31. Swing the sway bar links up to the sway bar then swing the sway bar up to its highest position.
32. Flex the suspension and steer fully left and right. Check for possible interference between the tires and sway bar.
33. Reconnect the sway bar links to the axle.
34. For ease of installation and best performance, re-grease the sway bar bushings periodically.

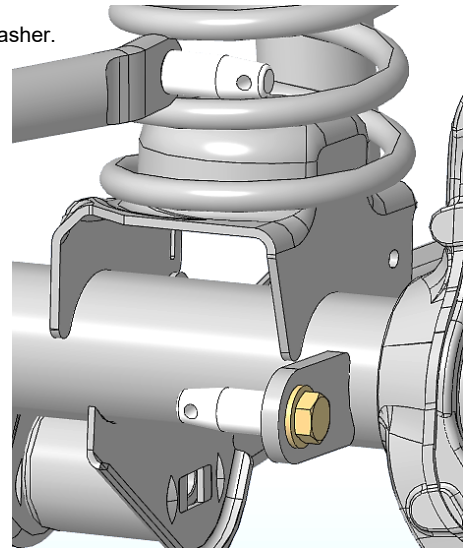


WJ Installation:

35. Install the sway bar links onto the sway bar using the original hardware.
36. Install the disconnect pin on the axle, pin pointing in-board, spacer sleeve inside the mount.
Use the 1/2" x 2-1/2" bolt with a washer.
Tip: Before tightening determine your desired orientation for the retaining pin.
37. Hold the disconnect pin in your desired orientation and torque the bolt to 70lb-ft.
38. Install the new bushings into your sway bar links using plenty of multi-purpose grease.
39. Reinstall your sleeves into the top of the sway bar link bushing using multi-purpose grease.
40. Reinstall your sway bar link onto the sway bar and torque the bolts to 70lb-ft.
41. Apply grease to the disconnect pin and slide the sway bar link onto the disconnect pin.
42. Secure the sway bar link in place using the spring pin.
*NOTE: The spring pin should take some effort to install. This is done on purpose to keep the link secure and noise free.
43. Reinstall tires and torque lug nuts to spec.
44. Lower vehicle to the ground.
45. With the vehicle back on the ground, pull the spring pins and slip the sway bar links off the disconnect pins.
46. Swing the sway bar links up to the sway bar then swing the sway bar up to its highest position.
47. Flex the suspension and steer fully left and right. Check for possible interference between the tires and sway bar.
48. Reconnect the sway bar links to the axle.
49. For ease of installation and best performance, re-grease the sway bar bushings periodically.

JK Installation:

50. Use a 1/2" drill bit to slightly enlarge the bolt hole in the sway bar. Only a very minor amount of material will be removed.
51. Install the disconnect pin on the axle, pin pointing in-board. Use the 1/2" x 1" bolt with a washer.
52. Install the disconnect pin on the sway bar, pin pointing out-board. Use the 1/2" x 1" bolt with a washer.
Tip: Before tightening determine your desired orientation for the retaining pin.
53. Hold the disconnect pin in your desired orientation and torque the bolts to 70lb-ft.
54. Install the bushings into the sway bar links using plenty of multi-purpose grease.
55. Apply grease to the disconnect pins and slide the sway bar link onto the disconnect pins.
*NOTE: Twist the passenger side link onto the lower pin first, then slide it onto the upper pin.
It is a snug fit with the factory track bar bracket, but it is achievable.
56. Secure the sway bar link in place using the spring pins.
*NOTE: The spring pin should take some effort to install. This is done on purpose to keep the link secure and noise free.
57. Reinstall tires and torque lug nuts to spec.
58. Lower vehicle to the ground.
59. With the vehicle back on the ground, pull the spring pins and slip the sway bar links off the disconnect pins.
60. Swing the sway bar up to its highest position.
61. Flex the suspension and steer fully left and right. Check for possible interference between the tires and sway bar.
62. Reconnect the sway bar links to the axle.
63. For ease of installation and best performance, re-grease the sway bar bushings periodically.



Final Safety Warning:

***Both sides of the sway bar must be disconnected. Do not operate vehicle with only one side of the sway bar connected.**

Re-torque all fasteners after 100 miles, and frequently inspect all safety critical suspension components. It is the responsibility of the installer to ensure 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.

