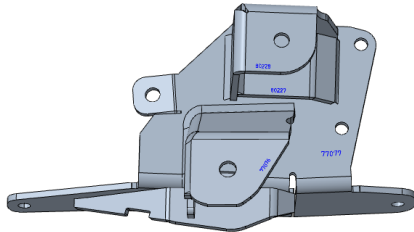


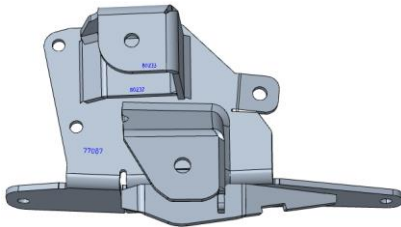
See our website product listing for full color instructions

Parts Checklist:

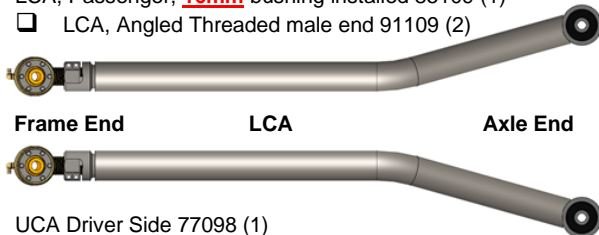
- Iron Rock Off Road Logo Decal 10001 (1)
- Rock-Link decal 13287 (2)
- Ironrockoffroad.com decal (1)
- Long arm mount, driver side 77075 (1)



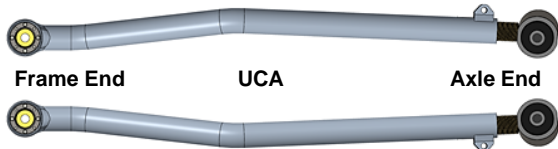
- Long arm mount, passenger side 77085 (1)



- Bolt-on LCA ramp, driver side 77078 (1)
- Bolt-on LCA ramp, passenger side 77088 (1)
- LCA, Driver, **16mm** bushing installed 85110 (1)
- LCA, Passenger, **16mm** bushing installed 85109 (1)
 - LCA, Angled Threaded male end 91109 (2)



- UCA Driver Side 77098 (1)
- UCA Passenger Side 77109 (1)
 - UCA threaded male end **16mm** bushing installed, 91243 (2)



- #65 - Adjustable LCA Clamping Hardware – 10058 (1)**
 - 1/4"-28 x 1-1/8" socket head cap screw (4)
 - 1/4"-28 hex nut, gr8 (4)
- #168 - 2 3/8" 8 Bolt IRO Flex End Hardware – 13261 (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)
 - 1/4"-28 Straight Grease Zerk (1)
- #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)
- #233 - 2 5/8" 6 Bolt IRO Flex End Hardware – 14139 (2)**
 - Inner race 91118 (2)
 - Thrust washer 91119 (2)
 - 2-5/8" Flex End Ball **16mm** bolt 91242 (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)
- #282 – Long Arm Bracket Hardware – 15443 (1)**
 - Bolt Plate 1/2" x 1-1/2" bolt 77090 (4)
 - 1/2 nylock flange nut (4)
 - Fish Wire - 1/2" bolt size, bag 58400 (2)
 - Short M14 Nut Plate 77052 (4)
 - Long M14 Nut Plate 77096 (2)
 - M14 x 35 hex bolt, class 10.9 (6)
 - M14 x 90 hex bolt class 10.9 (2) UCA bolts
 - 9/16" F436 hardened washer (10)
 - M12-1.25 x 45 hex bolt class 10.9 (2)
 - 7/16 F436 hardened washer (2)
 - M16 x 110 hex bolt class 10.9 (2) LCA bolts
 - M16 nylock flange nuts (2)

Install video on



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
 - 1/2" drill bit and drill

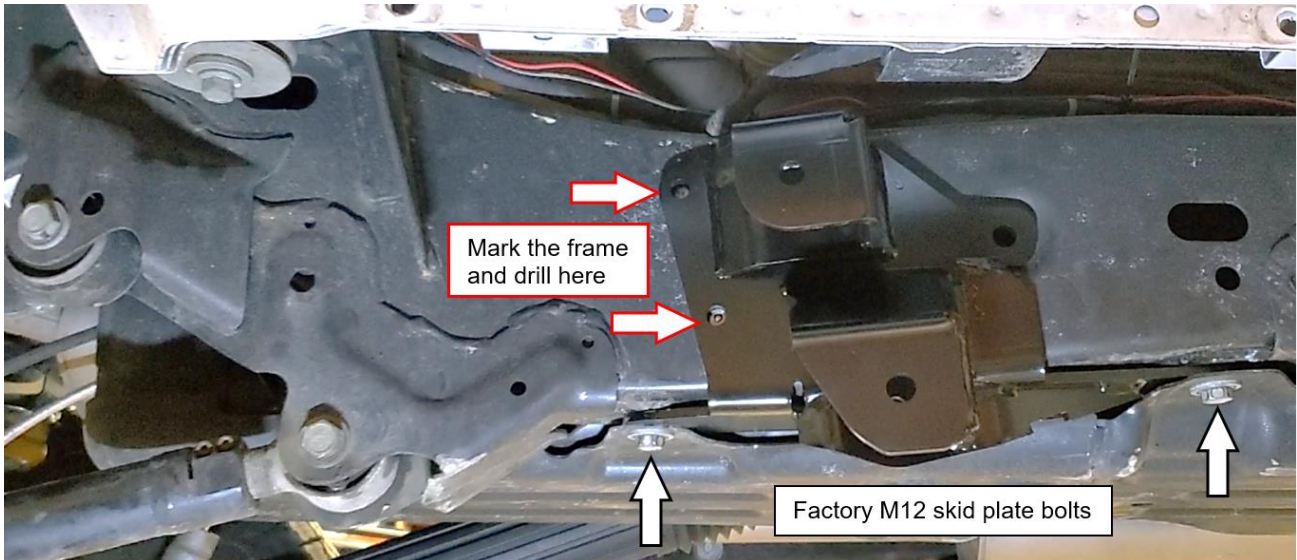
Prepare the parts for installation:

1. **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 #233**, UCAs use 2-3/8" **HK #168**.
2. 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.
3. Install the clamping bolts **HK #65** into the LCAs and **HK #186** into the UCAs, do not fully tighten at this time.

Control Arm Length (Center to Center)	
UCA (Upper Control Arm)	34-1/4"
LCA (Lower Control Arm)	37-1/2"

Installation:

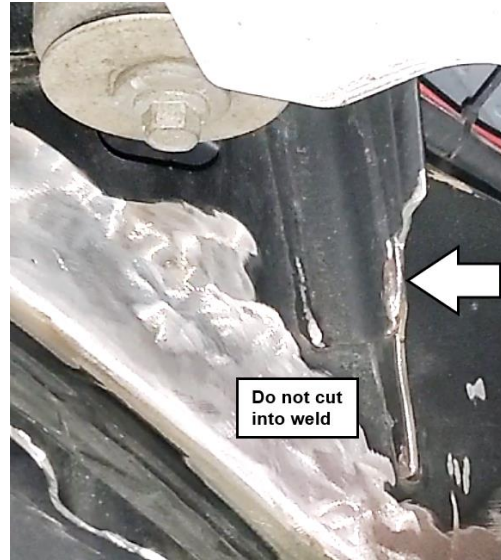
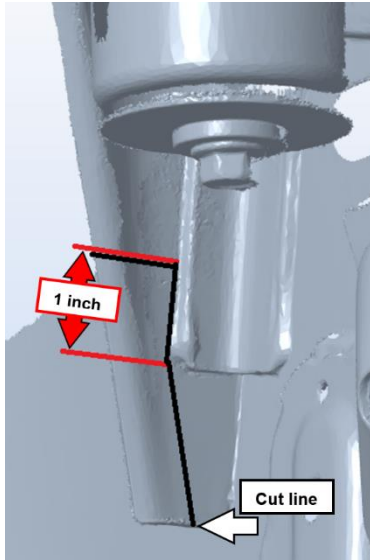
4. Lift rear of vehicle and support with jack stands under frame rails.
5. Support the axle with jack stands.
6. Remove the two factory M12 bolts from the gas tank skid plate. Pry the tank skid down slightly, insert the long arm bracket, and reinstall the bolts.
7. Install the long arm bracket on the opposite side of the frame using the two M12 x 45 bolts from **HK #282**.
8. With the M12 bolts tight, mark the location on the frame where the two holes need to be drilled.



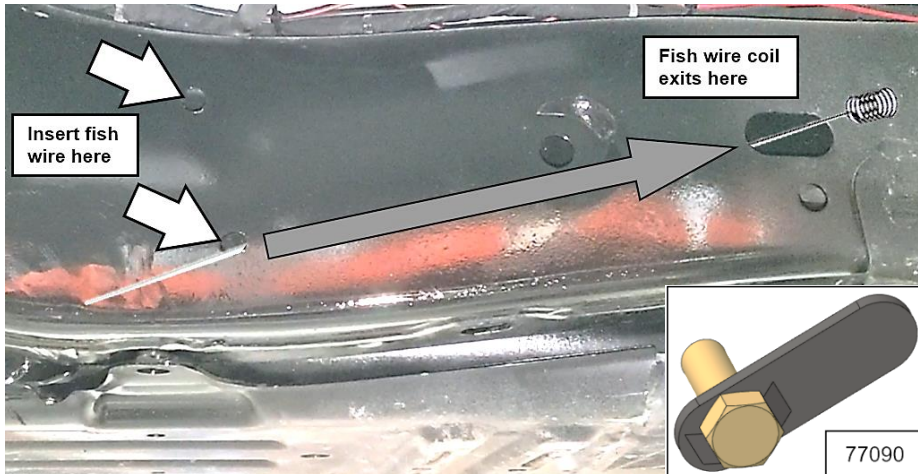
9. Remove the bracket and drill the 1/2" holes through only the outside surface of the frame. Be sure to remove any sharp edges.
10. Reinstall the bracket and check that the bracket aligns with the drilled holes.
*Tip: run the drill through the bracket and frame to ensure perfect hole alignment.
11. Remove the factory upper and lower control arms. Save the M16 nuts and bolts for future use.
12. Cut off the upper and lower control arm mounts from the frame. Remove brackets in pieces. Do not cut into the frame. A combination of grinder, sawzall, hammer and chisel is preferred. Use caution near the fuel tank!



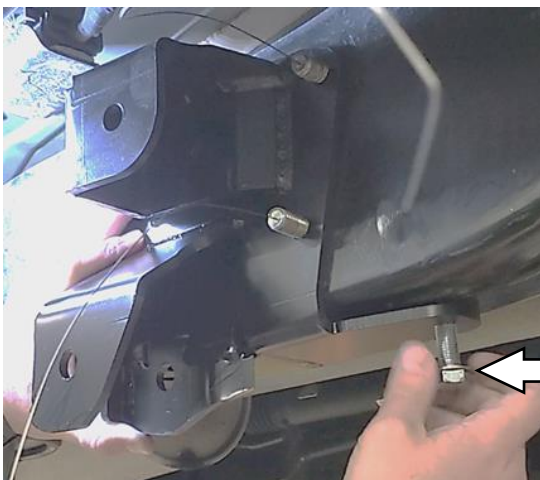
13. Trim the body mount: measure up approximately 1 inch from the bottom of the reinforcement plate and mark a horizontal line. Mark a vertical line beside the weld to the bottom of the reinforcement plate. From the bottom of the reinforcement plate, mark a line parallel to the edge of the body mount bracket. Do not cut into any of the welds on the body mount. Ensure the frame is completely smooth, clean, and ready for painting.



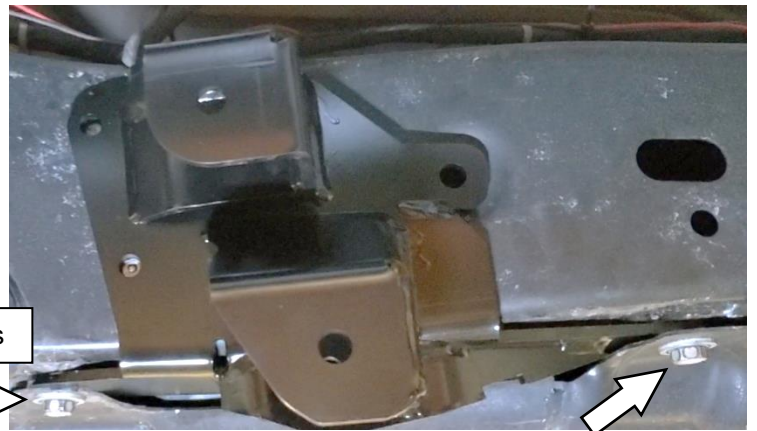
14. With the frame painted and dry locate the Fish Wire in **HK #282**.
 15. Insert the coiled end of the fish wire into one of the drilled holes, pushing the wire forward to the large oval opening in the frame.
 16. Thread a bolt plate 77090 into the coiled end of the fish wire then pull it through the frame and out of the drilled hole. Leave the fish wire attached.



17. **Long Arm Mounting Brackets:** Locate long arm brackets and **HK #282**.
 18. Install the bracket on the frame by putting the tail of a fish wire through its matching hole in the bracket. Use the fish wire to pull the bolt plate into the bracket. Secure the bracket in place with 1/2" nylock flange nuts on the bolt plates and M12 bolts through the bottom of the frame. Torque M12 and 1/2" hardware to 100 ft-lbs.



M12 bolts



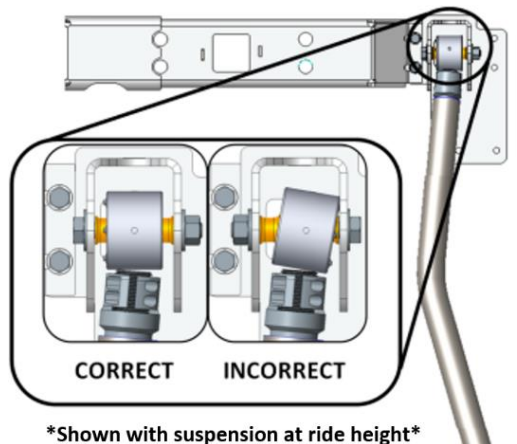
- Align the short M14 nut plate 77052 onto the bottom hole in the bracket. Insert the fish wire into the bottom hole of the bracket and out through the oval hole in the side of the frame. Slide the nut plate onto the fish wire to guide it directly to the bolt hole. Be sure to position the nut plate with the nut on top of the plate. Use a supplied M14 x 35 bolt with F436 washer to secure it in place. Torque to 100 ft-lbs.



- Locate the LCA ramp bracket 77078, 77088, and a short nut plate.
- Place a F436 washer on a M14 x 35 bolt and put it through the smaller hole in the LCA ramp bracket. This is the frame side of the bracket.
- Align the nut plate with the frame hole just below the oval opening in the frame and attach the LCA ramp loosely. The other end of the bracket will be installed with the LCA bolt.
- Locate the long M14 nut plate and a M14 x 35 bolt and F436 washer. Insert the nut plate into the oval opening and align it with the dimpled pocket in the frame and the hole in the long arm bracket. Install the M14 bolt with washer. Torque all M14 hardware to 100 lb-ft.



- Upper Control Arms:** Locate the upper control arms, M14 x 90 bolts, and F436 washers.
- Install the flex end of the UCA into the long arm basket using the M14 bolt, then install the rubber bushing end onto the axle with the original bolt.
- The rubber bushing male end is angled to match the angle of the UCA mount on the axle. The arm is bent down and outward for frame clearance, the clamping bolt points down.
- Torque the UCA bolts at the frame to 120 lb-ft. Do not tighten the axle side rubber bushing bolts at this time.
- Lower Control Arms:** Locate the lower control arms, new M16 bolts, nylock flange nuts, and the factory M16 bolts and nuts.
- Install the flex end at the frame then install the rubber bushing at the axle. Use the new M16 bolt, F436 washer and flange lock nut at the frame. Install the LCA at the frame with the ramp skid bracket in place. The LCAs are bent outward for frame clearance and upward for ground clearance. The flex joint male end is angled to match the angle of the LCA mount on the frame.
- Torque LCA bolts at the frame to 130 lb-ft. Do not tighten rubber bushing bolts at the axle at this time.



Final Torque and Adjustments:

31. Raise vehicle and reposition jack stands under the front and rear axles so that the weight of the vehicle is on the suspension.
32. Temporarily install a tire on one side.
33. Verify that the axle is centered as desired front to rear.
34. Check pinion angle. Bounce the Jeep up and down to ensure the suspension is in resting position (at exact ride height). If your Jeep is equipped with the original driveshaft, (with the rezeppa joints at both ends) matching the pinion angle to the carrier bearing isn't critical. Within 2-3° is ok.
35. Adjust control arms to the desired position.
36. To adjust axle front to rear, adjust lower control arms by the same amount. 12 turns equal one inch.
37. To adjust pinion angle, adjust only the upper control arms (3 turns equals roughly 2 degrees).
38. To adjust both, adjust both at the same time.
39. With the vehicle weight on the suspension, tighten the upper and lower control arm bolts at the axle to 130 lb-ft.
40. Torque the 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.
41. Torque the upper control arm clamping bolts to
42. Install tires and wheels. Torque lug nuts to spec. (Typical specification is 85-115 ft-lbs., depending on your wheels)
43. Recheck all fasteners and torque any remaining loose nuts or bolts to spec.
44. 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:

45. * 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 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

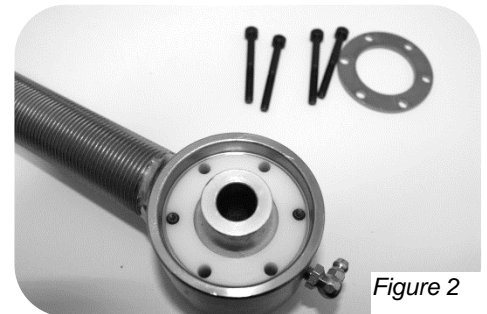


Figure 2



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

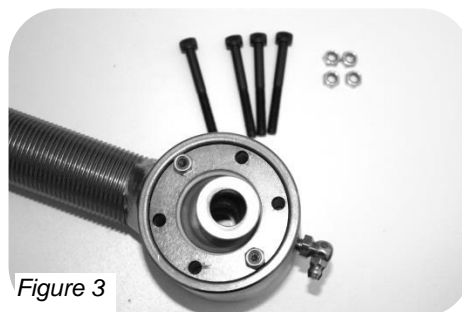


Figure 3

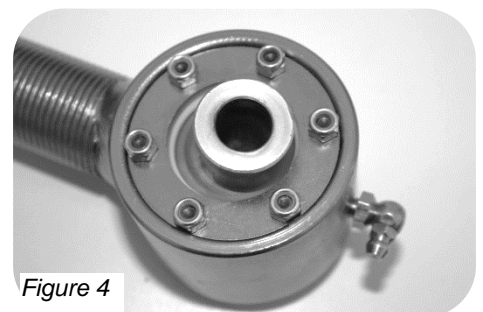


Figure 4

IRON ROCK OFF ROAD

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

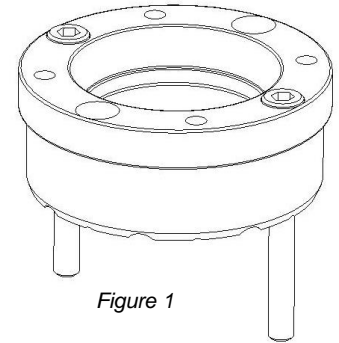
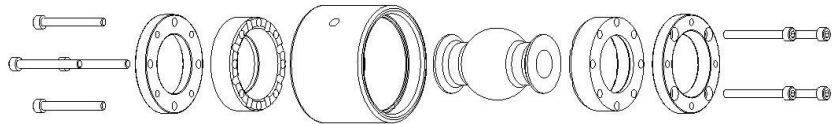
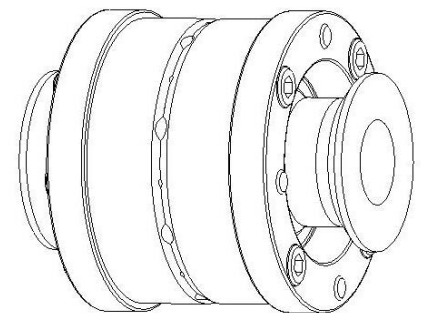


Figure 1

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 65 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 65 in-lbs.



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

