Recoil Bar Rebuild Kit

Part #: 079906, 079907

Rev.050721

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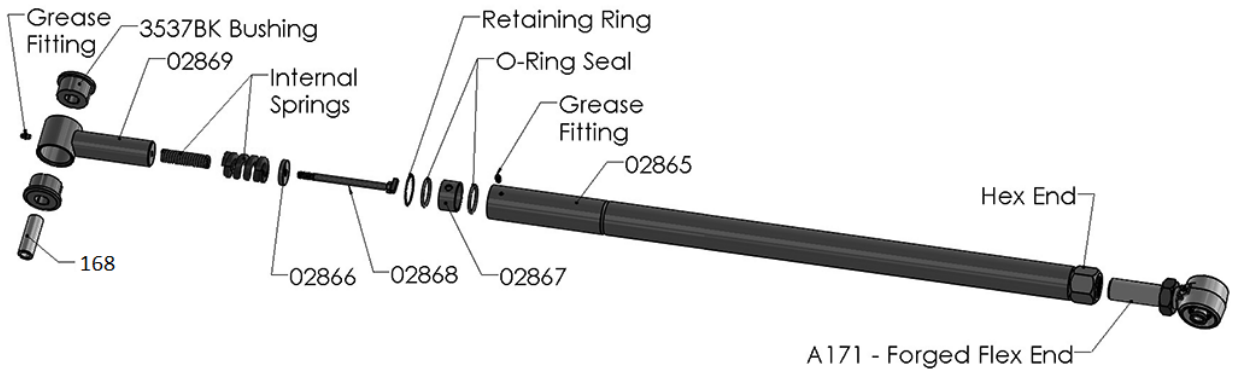
SAFETY WARNING

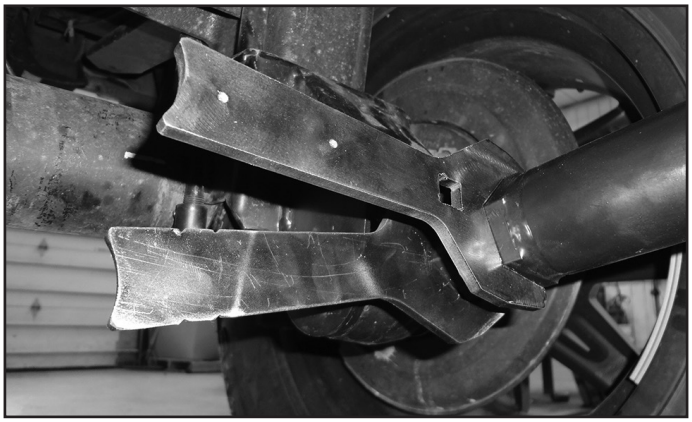
BDS Suspension Co. recommends this system be installed by a professional technician. In addition to these instructions, professional knowledge of disassembly/ reassembly procedures and post installation checks must be known.



TRACTION BAR REMOVAL

1. Loosen the jam nut at the axle end with the two wrenches provided in the original recoil bar kit. Utilize a 1/2" rachet or breaker bar in the wrench if needed.

FIGURE 1

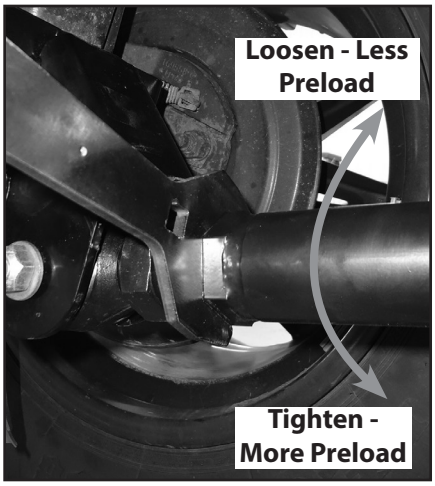


2. Utilizing the wrenchs, loosen the Recoil Traction Bar by spinning it counter clockwise in order to reduce the input the Recoil Traction Bar has on the suspension system. *At this point the dual coil spring setup are in contact and there is no preload in the springs.*

FIGURE 2

Box Kit 079906		
Part #	*Qty*	*Description*
02867	1	UHMW Bushing
3537	2	Bushing
9452K63	2	O-Ring
168	1	Sleeve
91985A231	1	Retaining Ring

Box Kit 079906		
Part #	*Qty*	*Description*
02867	1	UHMW Bushing
9452K63	2	O-Ring
91985A231	1	Retaining Ring
A386	1	Recoil End



3. Once the load on the supsension has been removed. Loosen and remove the recoil bars from the axle bracket and frame bracket. Retain all hardware.

TRACTION BAR REBUILD

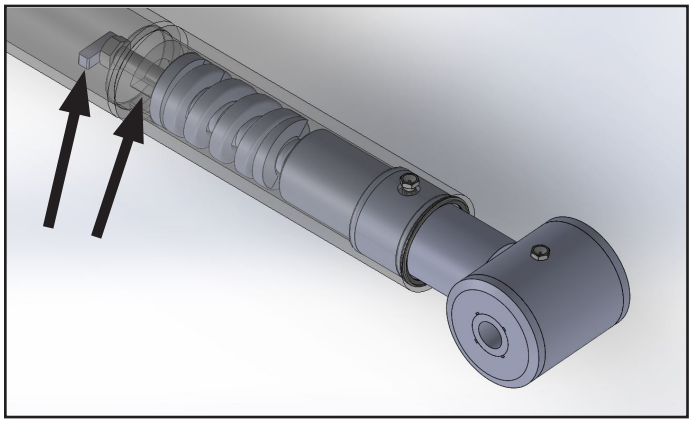
4. Place the recoil bar in a vice or clamp it down to a work bench with the frame end hanging off.

FIGURE 3

5. Using a screwdriver or prybar inserted in the eye pull while rotating the recoil bar. There is a keyed slot you have to align with a key for it to be removed.

FIGURE 4

FIGURE 5



6. Set the end to the side once removed, this will be rebuilt later.
7. Remove the internal snap ring along the outter edge of the tube. A small screw driver or pick along with a needle noise plyers works the best.

FIGURE 6

8. Remove the outter O-ring and and grease zerk.
9. Using a knife or chissel cut the white plastic bushing for easy removal. ensure not to damage the outter snap ring/o-ring groove or greae zerk threads.

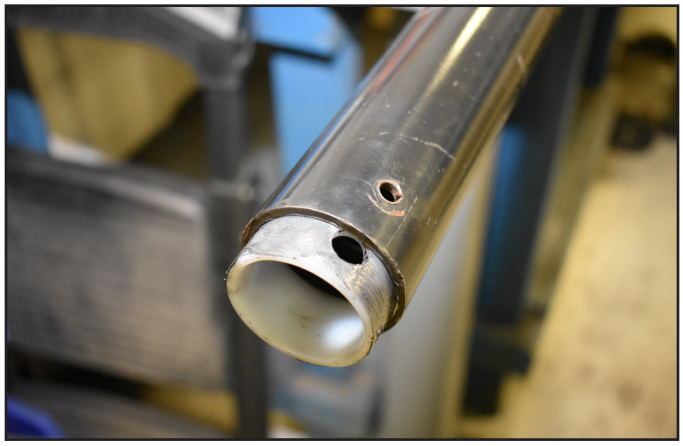
FIGURE 7

10. Remove the inner O-ring.
11. Using a wire wheel or wire brush along with a small screw driver or pick and clean out the inside of the tube.
12. Grease up one of the new O-rings and insert it into the end of the tube push against the back lip.

FIGURE 8

13. Rub some grease on the outside and inside of the new plastic bushing line up the hole with the grease fitting hole and insert it. Using a blunt chissel or punch by lightly tap it to secure it against the innner o-ring.

FIGURE 9

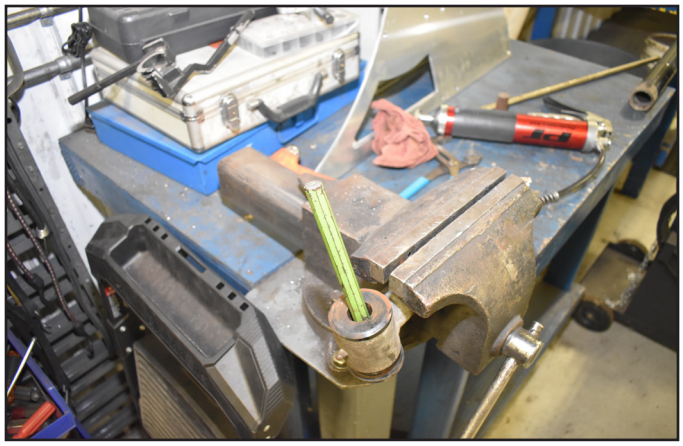


14. Grease and place the other new O-ring on the outside. Then insert the new retaining clip into the end of the tube and ensure it securely placed on the inside of the outter lip of the tube.

TRACTION BAR END REBUILD (079906 ONLY)

15. In the end that was removed earlier. Push out the sleeve and bushings. A press or chissel/punch and hammer work well. Ensure you don't damage the sealing surface of the rod.

FIGURE 9



16. Grease the new bushings and sleeve and insert them into the eye. A large rubber or wooden mallet works best.

FIGURE 9

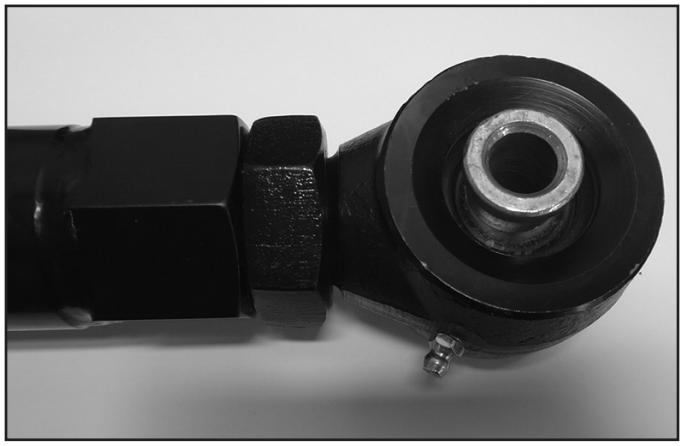
REASSEMBLY

17. Thread the grease zerk back into the tube this will prevent the plastic bushing from spinning
18. Grease the rod surface of the end and align the tab on the bolt with the slot in the tube. Push the tub back in some slight twisting may be needed to align it properly. The total length should be approximilty 59-3/4" if seated properly.

TRACTION BAR INSTALLATION

19. Check that the jam nut on the Forged Flex End (A171) is threaded in as far as it can go on the shaft of the Forged Flex End. Make sure the Forged Flex End is completely threaded into the Traction Bar (02865) up to the jam nut as shown in Figure 2.

FIGURE 2

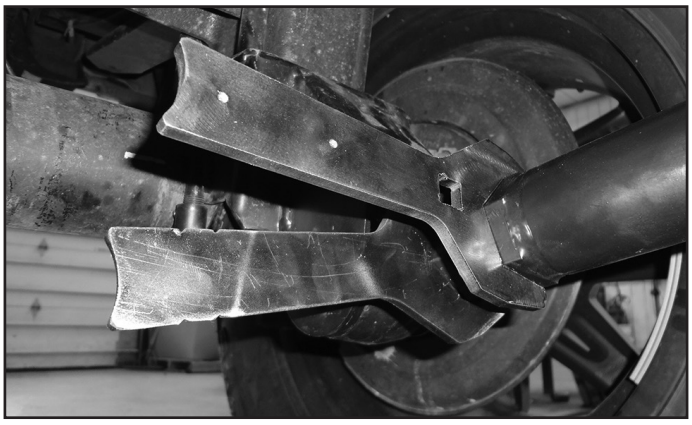


20. Attach the Traction Bar to the axle bracket with the original hardware. Install the traction bar so that the Forged Flex End (A171) is mounted to the axle bracket. Leave mounting hardware loose at this time
21. Reattach the Recoil Traction Bar to the frame bracket with the original hardware, leave hardware loose. Mark the hole location for the skid plate support bracket on the bottom of the fuel tank skid plate.
22. Torque the 9/16" hardware for the Recoil Traction Bar at the frame and axle brackets to 90 ft-lbs.
23. Grease all bushings and the Recoil Traction Bar before use. Do not over grease the Recoil Traction Bar, it is recommended to grease the Recoil Traction Bar one pump of grease every 10,000 miles.
24. Check all hardware for proper torque.
25. Check hardware after 500 miles.

TRACTION BAR ADJUSTMENT

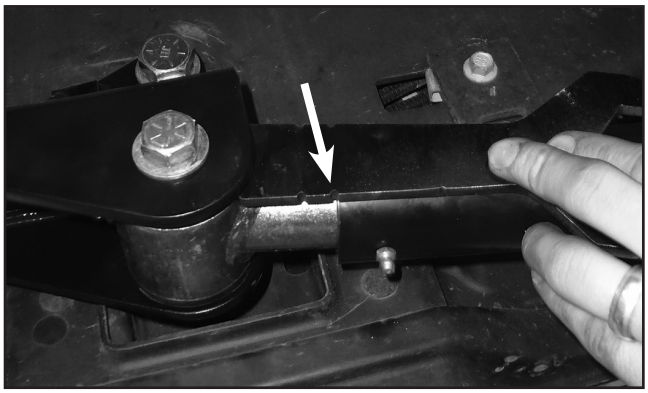
26. Loosen the jam nut at the axle end with the two provided wrenches. Utilize a 1/2" rachet or breaker bar in the wrench if needed.

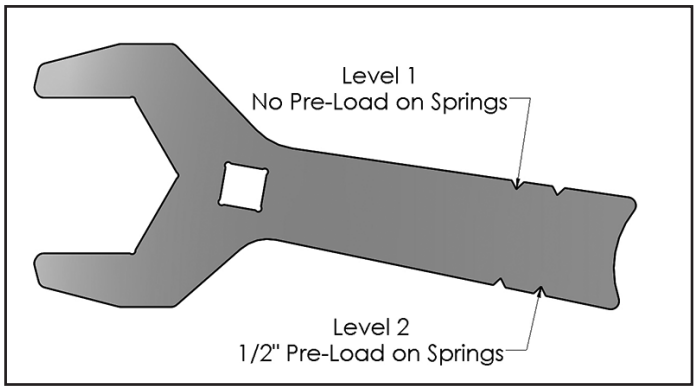
FIGURE 1



27. Use the levels on the wrench to gauge how much force is inputted into the Recoil Traction Bar. The wrench is designed to be used at the traction bar slider end as shown in Figure 6. Make sure the wrench is pressed firmly against the bushing / tube for an accurate measurement.

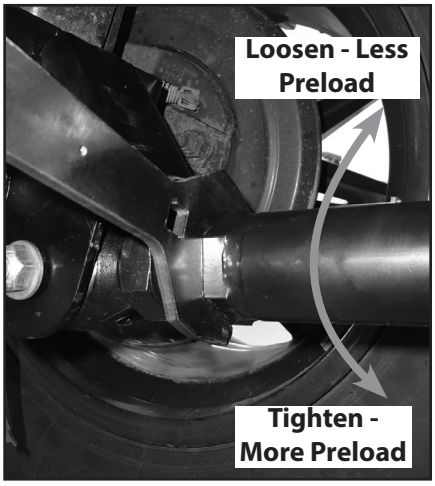
FIGURE 2 **FIGURE 3**





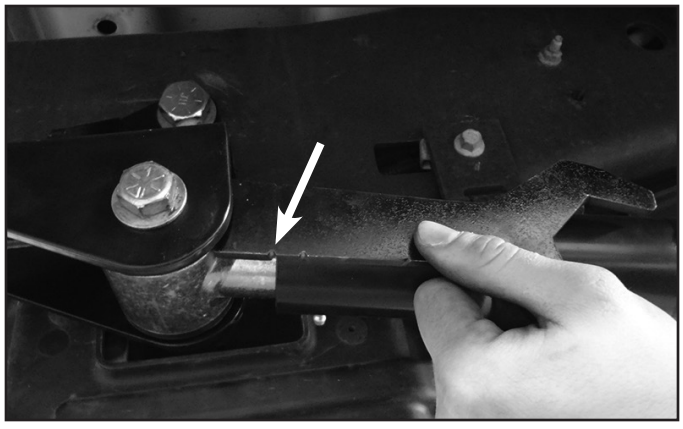
28. Utilizing the Levels on the wrench, spin the Recoil Traction Bar either clockwise to add more force into the dual coil springs setup to reduce axle wrap, or loosen the Recoil Traction Bar by spinning it counter clockwise in order to reduce the input the Recoil Traction Bar has on the suspension system. *Note: Depending upon lift height, the Recoil Traction Bar may need to unthreaded from the Forged Flex End until the First Level is reached on the wrench. At this point the dual coil spring setup are in contact and there is no preload in the springs.*

FIGURE 4



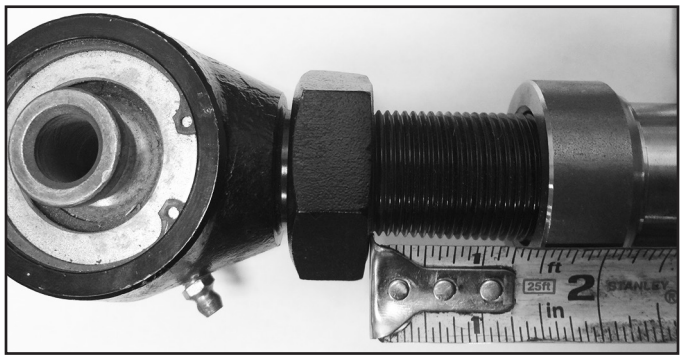
29. It is recommended when pulling or hauling heavy weights that Recoil Traction Bar be set at a minimum of the Second Level on the Jam Nut Wrench to help reduce axle wrap. The Second Level is 25% of the maximum force the springs output. The maximum amount of force that can be preloaded in the spring is 12 full rotations of the Recoil Traction Bar when starting at the First Level. This equals 1" of total preload in the dual coil spring setup in the Recoil Traction Bar. At this point, the dual coil spring setup creates a solid link between the frame and axle when in compression. DO NOT tighten the Recoil Traction Bar past this amount.

FIGURE 5



30. After the desired force is set, lock off the jam nut with the two provided Jam Nut Wrenches and repeat this process on the other Recoil Traction Bar. *Note: Never unthread the forged flex end past 1-1/2" of adjustment. This can cause thread damage and weaken the joint. See Figure 10.*

FIGURE 6



31. The dual coil spring setup is utilized to always create contact between both ends of the Recoil Traction Bar. Having dual coil spring setup allows the Recoil Traction Bar system to not affect suspension performance at a lower force as seen at the First Level, allowing greater articulation and less affect on the suspension system. As the Recoil Traction Bar is adjusted and the dual coil spring setup is compressed, a higher force is exerted on the axle in order to reduce axle wrap. Each Level below corresponds to the levels on the wrench, representing different amounts of force in the Recoil Traction Bar system. *Note: It is recommended to never fully compress the spring past the 1" of compression. This can be measured 1" from the First Level on the Jam Nut Wrench.*

FIGURE 7