

7929 Lincoln Ave. Riverside, CA 92504
Phone: 951.689.ICON | Fax: 951.689.1016

PART #	DESCRIPTION
214201	14-UP RAM 2500 4.5" FRONT DUAL RATE SPRING KIT

COMPONENTS INCLUDED	
(1) 218410D 14+ RAM HD FRONT 4.5" DUAL RATE COIL (DRVR) (1) 218410P 14+ RAM HD FRONT 4.5" DUAL RATE COIL (PASS) (2) 605108 3/8-16 X 1.250 BOLT (1) 611068 14-UP RAM HD E-BRAKE RELOCATION KIT	(2) 214008 03+ RAM HD BUMP STOP RETAINER (1) 214108 14+ RAM HD BRAKE BRACKET (DRVR) (1) 214109 14+ RAM HD BRAKE BRACKET (PASS) (2) 217124 14+ RAM 2500 2.13" FRONT BUMP-STOP SPACER
HARDWARE INCLUDED	
611068 E-BRAKE RELOCATION KIT	
(1) 210002 14-UP RAM HD E-BRAKE BRACKET (1) 605101 3/8-16 X 1.000 HHCS (1) 605121 3/8-16 NYLOCK NUT	(2) 605133 3/8 FLAT WASHER (1) 605839 M10-1.5 X 20MM BHCS
TOOLS REQUIRED	
JACK JACK STANDS TORQUE WRENCH 6MM ALLEN WRENCH 9/16" SOCKET / WRENCH	8MM SOCKET / WRENCH 10MM SOCKET / WRENCH 18MM SOCKET / WRENCH 21MM SOCKET / WRENCH 27MM SOCKET / WRENCH
TECH NOTES	
1. FAILURE TO INSTALL (214108, 214109) BRACKETS & USE OF LARGER SHOCKS MAY LEAD TO BRAKE LINE COLLISION CAUSING FAILURE.	
2. ICON 4.5" SPRING KIT (214201) REQUIRES USE OF ICON 4.5" BOX KIT (214205).	
3. THIS SPRING KIT INCLUDES A SWAY BAR DROP BRACKET KIT AND EMERGENCY BRAKE CABLE RELOCATION KIT. THESE ITEMS MUST BE USED TO ALLOW FOR THE INSTALLATION OF ICON'S LONGER REAR SHOCK ABSORBERS.	



WARNING!
** READ ALL INSTRUCTIONS THOROUGHLY FROM START TO FINISH BEFORE BEGINNING INSTALLATION! IF THESE INSTRUCTIONS ARE NOT PROPERLY FOLLOWED SEVERE FRAME, SUSPENSION AND TIRE DAMAGE MAY RESULT TO THE VEHICLE!
** ICON VEHICLE DYNAMICS RECOMMENDS THAT YOU EXERCISE EXTREME CAUTION WHEN WORKING UNDER A VEHICLE THAT IS SUPPORTED WITH JACK STANDS.
** ICON VEHICLE DYNAMICS RECOMMENDS ALL INSTALLATION TO BE PERFORMED BY A PROFESSIONAL SHOP/SERVICE TECHNICIAN. PRODUCT FAILURE CAUSED BY IMPROPER INSTALLATION WILL NOT BE COVERED UNDER ICON'S WARRANTY POLICY.

INSTALLATION

1. Open the hood and disconnect both negative battery terminals using an 8mm socket/wrench.
2. Remove the sway bar links from the sway bar using an 8mm and 18mm socket/wrench. Leave the links connected to the differential. [FIGURE 1]

FIG.1

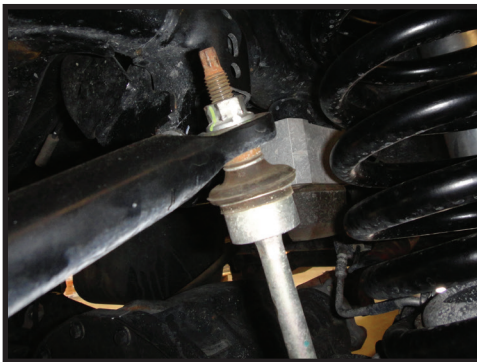


FIG.2



3. Remove the upper track bar bolt from the frame using a 27mm socket/wrench. Use caution as the truck may shift when the bolt is removed. [FIGURE 2]
4. Using a properly rated jack (or properly rated vehicle lift), raise the vehicle and support the frame rails with jack stands. Ensure the jack stands are secure and set properly before lowering the jack. NEVER WORK UNDER AN UNSUPPORTED VEHICLE. Remove the front wheels.

5. Support the axle housing with a heavy duty jack. With the axle supported, remove the lower shock bolt using a 21mm socket/wrench. The differential is extremely heavy and is limited by the shocks, so make SURE that the differential is securely supported by the jack. [FIGURE 3]

FIG.3



6. Slowly lower the jack until the coil springs become loose enough to slide out. Be careful not to damage any brake lines, ABS wires or differential locker wires (Power Wagon only).

7. Slowly lower the axle enough to install the new coil springs.

8. Slide the new springs into place. Make sure the coil marked "D" goes on the DRIVER side, and the coil marked "P" goes on the PASSENGER side. This is critical for proper coil fitment. Be sure the coil isolator is installed on the top of the coil with the locator nipple in the frame hole. [FIGURE 4]

FIG.4



9. Slowly raise the axle just before the springs start to compress. Make sure the springs are properly seated before compressing them.

10. Lift the front axle enough to allow for the installation of the front shocks.

11. Install the supplied brake line tab on the brake line and mount the brake line to the differential using a 10mm socket/wrench. [Torque to factory spec] [FIGURE 5]

FIG.5



12. Pull or pry the stock bump stop out of its pocket.

13. Slide the bump stop retainer plate (214008) up and backwards. It should lock into place and catch the original retaining tabs. [FIGURE 6 & 7]

FIG.6



FIG.7



14. Mount the bump stop spacer (217124) to the frame threading it into the retainer plate using the supplied 3/8" hardware, tighten using a 9/16" socket/wrench. [Torque to 30 ft-lbs] Lightly grease and press the bump stop into the pocket. [FIGURE 8 & 9]

FIG.8



FIG.9



15. Connect the sway bar to the stock sway bar links using an 8mm and 18mm socket/wrench. [Torque to factory spec]

16. Remove the factory emergency brake bracket from the top of the rear differential using a 14mm. Mount the supplied emergency brake cable relocation bracket to the differential using the factory bolt and the supplied (605839) bolt. Tighten using a 14mm and 6mm allen wrench. [FIGURE 10]

FIG.10



17. Install front wheels and lower vehicle back to the ground. [Torque to factory spec]

18. Have the vehicle professionally aligned.

VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.

RETORQUE ALL NUTS, BOLTS AND LUGS AFTER 100 MILES AND PERIODICALLY THEREAFTER.

ICON VEHICLE DYNAMICS LIMITED LIFETIME WARRANTY

ICON Vehicle Dynamics warrants to the original retail purchaser who owns the vehicle on which the product was originally installed. ICON Vehicle Dynamics does not warrant the product for finish, alterations, modifications and/or installation contrary to ICON Vehicle Dynamics instructions. ICON Vehicle Dynamics products are not designed, nor are they intended to be installed on vehicles used in race applications, for racing purposes or for similar activities. (A "race" is defined as any contest between two or more vehicles, or a contest of one or more vehicles against the clock, whether or not such contest is for a prize). This warranty does not include coverage for police or taxi vehicles, race vehicles, or vehicles used for government or commercial purposes. Also excluded from this warranty are sales outside of the United States of America and Canada.

ICON Vehicle Dynamics' obligation under this warranty is limited to the repair or replacement, at ICON Vehicle Dynamics' discretion, of the defective product. Any and all costs of removal, installation or re-installation, freight charges and incidental or consequential damages are expressly excluded from this warranty. Items that are subject to wear are not considered defective when worn and are not covered.

ICON Vehicle Dynamics components must be installed as a complete kit as shown in our current application guide. Any substitutions or exemptions of required components will immediately void the warranty. Some finish damage may happen to parts during shipping and is not covered under warranty.

This warranty is expressly in lieu of all other warranties expressed or implied. This warranty shall not apply to any product that has been improperly installed, modified or customized subject to accident, negligence, abuse or misuse.



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PART #	DESCRIPTION
214205	14-UP RAM 2500 4.5" BOX KIT

COMPONENTS INCLUDED	
(1) 214015 03+ RAM HD SWAY BAR DROP (DRVR) (1) 214016 03+ RAM HD SWAY BAR DROP (PASS) (1) 214103 14+ RAM HD RADIUS ARM DROP (DRVR) (1) 214104 14+ RAM HD RADIUS ARM DROP (PASS)	(2) 214105 14+ RAM 2500 2" REAR COIL SPACER (2) 214112 14+ RAM HD REAR SWAYBAR LINK (2) 217125 14+ RAM 2500 REAR BUMP STOP SPACER (1) 214205H 14+ RAM 2500 4.5" HARDWARE KIT
HARDWARE INCLUDED	
214205H HARDWARE KIT	
(4) 139001 SLEEVE .625 X .508 X 1.625 (2) 214107 14+ RAM HD RADIUS ARM BADGE (2) 217122 14+ RAM HD X MEMBER SHIM (2) 217123 14+ RAM HD TRIPLE NUT TAB (8) 297024 SWAY BAR URETHANE BUSHING (4) 605133 3/8 FLAT WASHER (8) 605203 7/16-14 X 1.000 BOLT (8) 605220 7/16-14 LOCK NUT (16) 605230 7/16 FLAT WASHER	(4) 605312 1/2-13 X 4.500 BOLT (4) 605330 1/2 FLAT WASHER (2) 605814 M18-2.5 X 120MM BOLT (2) 605832 M18 FLAT WASHER (2) 605833 M18 X 2.5 LOCK NUT (4) 605834 M10-1.50 X 70MM BOLT (4) 605835 M12-1.75 X 70MM BUTTON HEAD BOLT (4) 605838 M12-1.75 X FLANGED LOCK NUT
TOOLS REQUIRED	
JACK JACK STANDS TORQUE WRENCH HAMMER DRILL BLACK PAINT 3/8" SOCKET / WRENCH (12PT) 9/16" SOCKET / WRENCH 5/8" SOCKET / WRENCH 3/4" SOCKET / WRENCH	8MM ALLEN WRENCH 8MM SOCKET / WRENCH 10MM SOCKET / WRENCH 12MM SOCKET / WRENCH 13MM SOCKET / WRENCH 15MM SOCKET / WRENCH 16MM SOCKET / WRENCH 17MM SOCKET / WRENCH 18MM SOCKET / WRENCH 21MM SOCKET / WRENCH 24MM SOCKET / WRENCH 27MM SOCKET / WRENCH
TECH NOTES	
<p>1. ICON BOX KIT (214205) MUST BE USED WITH ICON FRONT (214203) TRACK BAR. ICON REAR (214204) TRACK BAR IS RECOMMENDED, BUT NOT REQUIRED.</p> <p>2. FRONT BUMP STOPS AND BRAKE LINE RELOCATION BRACKETS ARE INCLUDED IN (214201) COIL SPRING KIT, WHICH ARE REQUIRED FOR INSTALLATION OF (214205) BOX KIT.</p> <p>3. FOR REAR AIR RIDE EQUIPPED 2500 VEHICLES: ICON KIT (214210) IS REQUIRED. FAILURE TO USE (214210) CAN CAUSE PERMANENT AIR BAG DAMAGE. MAXIMUM SHOCK LENGTH WITH INCLUDED 2.00" LIFT SPACER IS 25.188".</p> <p>4. DO NOT REMOVE REAR SHOCKS FROM AIR RIDE EQUIPPED VEHICLES WITHOUT REMOVING AIR FROM SYSTEM FIRST!</p> <p>5. MODELS EQUIPPED WITH 2 PIECE DRIVESHAFTS WILL REQUIRE A (214211) CARRIER BEARING DROP KIT.</p>	



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INSTALLATION

1. Open the hood and disconnect both negative battery terminals using an 8mm socket/wrench.
2. Remove the sway bar links from the sway bar using an 8mm and 18mm socket/wrench. Leave the links connected to the differential. [FIGURE 1]

FIG.1



FIG.2



3. Remove the sway bar from the frame using a 15mm socket/wrench. Mark the passenger side of the sway bar and take note to prevent the sway bar from being accidentally flipped during reinstallation. [FIGURE 2]

4. Remove the upper track bar bolt from the frame using a 27mm socket/wrench. Use caution as the truck may shift when the bolt is removed. [FIGURE 3]

FIG.3



5. Using a properly rated jack (or properly rated vehicle lift), raise the vehicle and support the frame rails with jack stands. Ensure the jack stands are secure and set properly before lowering the jack. NEVER WORK UNDER AN UNSUPPORTED VEHICLE. Remove the front wheels.

6. Support the axle housing with a heavy duty jack. With the axle supported, remove the lower shock bolt using a 21mm socket/wrench. The differential is extremely heavy and is limited by the shocks, so make SURE that the differential is securely supported by the jack. [FIGURE 4]

FIG.4



7. Slowly lower the jack until the coil springs become loose enough to slide out. Be careful not to damage any brake lines, ABS wires or differential locker wires (Power Wagon only).

8. Lift the axle and reconnect the lower shock mounts so that the shocks will hold the weight of the differential.

9. Remove the transfer case skid plate using a 13mm socket/wrench. [FIGURE 5]

FIG.5



10. Place a jack under one of the radius arms as a safety precaution.

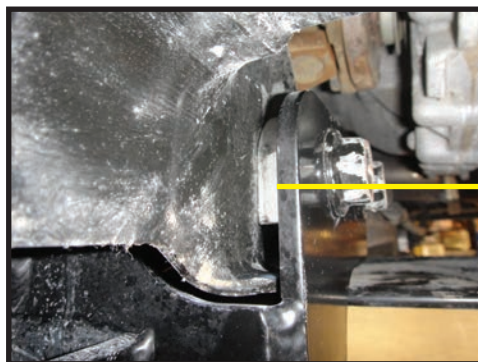
11. Remove the bolts connecting the radius arms to the frame using a 27mm socket/wrench. Use caution as the differential may shift. Rotate the differential backward so that the radius arms rotate out of the frame pockets.

12. Use a jack to support the transmission crossmember, then remove (2) bolts from the driver side of the crossmember using a 24mm socket/wrench. Do not remove all four bolts (driver and passenger) without a support under the crossmember. ICON recommends installing one side at a time.

AIR RIDE NOTE: Discharge the air system via the factory service port (according to the RAM service manual). Remove line from the tank after the system has been discharged. Remove the tank from the frame to allow for installation of the passenger side radius arm bracket. Set tank aside as it will be reinstalled later.

13. Slide the driver's side radius arm drop bracket (214103) up into the radius arm pocket in the frame and line up the holes. Slide the crossmember shim (217122) to fill the gap between the bracket and the back of the crossmember. [FIGURE 6]

FIG.6



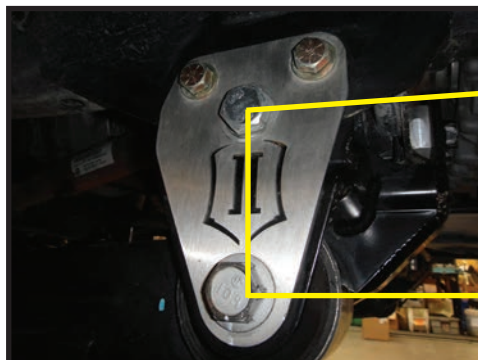
217122

14. Slide the factory bolts through the bracket, shim, and crossmember, leave the nut finger tight for now.

15. With the bracket (214103) loose, install the drill template (214107) using a (605814) bolt through the template, bracket, and a factory bolt through the radius arm hole. Tighten the transmission crossmember bolts using a 24mm socket/wrench [Torque to factory spec]. Torque the factory frame radius arm bolt to 50 ft-lbs as pictured and leave the factory bolt installed loosely in the drop hole. [FIGURE 7]

16. The factory radius arm nut and bolt will be reused to fasten the radius arm. The nut will need the tab ground off so it will fit in the supplied bracket.

FIG.7



TORQUE TO 50 FT-LBS

LEAVE LOOSE, 2 BOLTS MUST BE VERTICAL WITH THE FRAME PRIOR TO DRILLING. THIS IS CRITICAL!

17. Use a centering punch to mark the (2) upper holes in the frame. Remove the drill template and drill the holes out to 17/32". Make sure the drill is perpendicular to the surface of the frame, then continue drilling the holes through the other side of the frame bracket. If there are any burrs from drilling, remove them with a file or deburring tool. Installation of (217123) will be difficult if any burrs are present where the drill punched through.

18. Remove all parts and paint raw surfaces to prevent rust.

19. After the paint has dried, reinstall radius arm drop bracket (214103).

20. Nut plate (217123) is not symmetrical and has a witness mark to notate which end goes towards the front of the vehicle. Hold the nut plate (217123) up through the narrow opening on the inside, underneath the bracket. Make sure that the nut plate is oriented correctly (holes align properly) before installing. Thread the supplied bolts (605312) into the nut plate. Slide the supplied (605814) bolt through the bracket and thread it into the nut plate. Once all of the bolts have a few threads of engagement. [Torque crossmember hardware to factory spec] [Torque nut plate hardware to 75 ft-lbs] (3/4", 24mm, 27mm sockets/wrenches) [FIGURE 8]

FIG.8



21. Repeat steps 12 - 20 on passenger side.

22. Reinstall air tank.

23. Slide the radius arms into the pockets in the drop brackets and fasten using a 27mm socket/wrench. Do not torque bolts yet.

24. Install the transercase skid plate using a 13mm socket/wrench. [Torque to factory spec]

25. Support the axle with a jack and remove the factory shocks using an 18mm and 21mm socket/wrench.

26. Slowly lower the axle enough to install the new coil springs.

27. Slide the new springs into place. Make sure the coil marked “D” goes on the DRIVER side, and the coil marked “P” goes on the PASSENGER side. This is critical for proper coil fitment. Be sure the coil isolator is installed on the top of the coil with the locator nipple in the frame hole. [FIGURE 9]

FIG.9



28. Slowly raise the axle just before the springs start to compress. Make sure the springs are properly seated before compressing them.

29. Lift the front axle enough to allow for the installation of the front shocks.

30. Install the front shocks using the supplied installation instructions. (217803)

31. Remove the factory track bar and replace it with ICON (214203) track bar. Specific installation instructions are included in the (214203) box. [FIGURE 10 AND 11]

FIG.10



FIG.11



32. In the (214201) coil spring box you will find front bump stop spacers and hardware.

33. Remove the brake line tab from the top of the radius arm, then remove the brake line tab from the brake line using a 10mm socket/wrench.

34. Install the supplied brake line tab on the brake line and mount the brake line to the differential using a 10mm socket/wrench. [Torque to factory spec] [FIGURE 12]

FIG.12



35. Pull or pry the stock bumpstop out of its pocket.

36. Slide the bumpstop retainer plate (214008) up and backwards. It should lock into place and catch the original retaining tabs. [FIGURE 13 AND 14]

FIG.13



FIG.14



37. Mount the bumpstop spacer (217124) to the frame threading it into the retainer plate using the supplied 3/8" hardware, tighten using a 9/16" socket/wrench. [Torque to 30 ft-lbs] Lightly grease and press the bumpstop into the pocket. [FIGURE 15 AND 16]

FIG.15



FIG.16



38. Install the sway bar drop brackets (214015 & 214016) to the chassis using the factory hardware and tighten using a 15mm socket/wrench. The open side goes toward the center of the truck. [Torque to factory spec] [FIGURE 17]

FIG.17



39. Mount the sway bar to the drop bracket using the supplied 7/16" hardware with a 5/8" socket/wrench. [Torque to 50 ft-lbs]

40. Connect the sway bar to the stock sway bar links using an 8mm and 18mm socket/wrench. [Torque to factory spec]

41. Install front wheels.

PLACE VEHICLE ON THE GROUND:

42. Tighten the radius arm bolts [Torque to factory spec]. Tightening the radius arm bolts while vehicle is in the air will result in premature bushing wear and will alter ride/handling characteristics.

43. With the vehicle on the ground, center the front axle by adjusting the track bar adjusting collar. Once the differential is centered, turn the adjusting collars until the slits in both the collar and the track bar line up. Tighten the adjusting collar pinch bolts using a 3/8" socket/wrench (12pt), alternating between the two bolts, back and forth 2-3 times in order to evenly apply pressure to secure the collar. [Torque to 45 ft-lbs]

44. This lift will affect caster and steering wheel alignment. Caster can be adjusted using the factory adjustment cams on the radius arm. Point the tires straight ahead, make sure the steering column is not locked, loosen the clamps on the drag link turn buckle and rotate the turn buckle to center the steering wheel. The steering wheel being off center can affect computer sensor readings which will affect traction control. A full alignment must be performed by a professional technician.

REAR SUSPENSION: If not installing ICON (214204) track bar, skip to step 45. If installing on a RAM 2500 equipped with air ride, refer to (214210) instructions.

45. With the vehicle on the ground, disconnect and remove the rear track bar using a 21mm socket/wrench.

46. Using a properly rated jack (or properly rated vehicle lift), raise the vehicle and support the frame rails with jack stands. Ensure the jack stands are secure and set properly before lowering the jack. NEVER WORK UNDER AN UNSUPPORTED VEHICLE. Remove the rear wheels.

47. Disconnect the rear sway bar links from the sway bar and the differential using a 8mm and 18mm socket/wrench, remove links.

48. Using a jack, compress the rear suspension slightly.

49. Remove the rear shocks using an 18mm and 21mm socket/wrench.

50. Lower the differential slowly until the coils become loose.

51. Remove the coils and the coil isolators. **[FIGURE 18] NOTE:** Drilling the factory hole to the proper size *may* be required. If applicable, paint to prevent corrosion.

FIG.18



FIG.19



52. Set the coil spacers (214105) on the lower coil seats. Bolt them to the seats using the existing holes with the supplied 7/16" hardware. Tighten using a 5/8" socket/wrench. [Torque to 50 ft-lbs] **[FIGURE 19]**

53. Set the lower coil isolator on the spacer and set the upper coil spacer on the top of the coil. Then position the coil on the lower coil seat.

54. Lift the axle enough to allow for installation of the rear shocks.

55. Install the new ICON rear shocks according to the included instructions. **[FIGURE 20]**

FIG.20



56. Remove the rear bump stops from the frame using a 16mm socket/wrench.

57. Install the bump stop spacer (217125) using the supplied 10mm hardware and a 17mm socket/wrench. [Torque to 40ft-lbs] **[FIGURE 21]**

FIG.21



58. Grease the supplied (297024) hat bushings for the sway bar links and slide them in. Slide the (139001) sleeve through the bushings.

59. Install the sway bar links with the supplied 12mm hardware using an 8mm allen wrench, and 18mm socket/wrench. [Torque to 65 ft-lbs]

60. Install the rear wheels and lower the vehicle back to the ground. [Torque all lugs to factory spec]

ON THE GROUND:

61. Reinstall factory track bar [Torque to factory spec] Skip to step 62. If you purchased ICON (214204) track bar, skip to step 60.

NOTE: Depending on vehicle options/configurations, the axle can be shifted as much as 1/4" when retaining the stock track bar.

62. Install the ICON rear adjustable track bar (214204) using the factory hardware. Make sure both rod ends have an equal amount of thread engagement, and adjust the length until the bolts can be installed. Tighten using a 21mm socket/wrench. [Torque to factory spec]

63. Center the rear axle by adjusting the rear track bar. Once the differential is centered, check to make sure the rod ends are vertical, then tighten the jam nuts. [Torque to 300 ft-lbs]

64. Loosen all rear link bolts to reset the bushings at the new ride height and then retighten [Torque to factory spec]. Failure to do this will result in premature bushing wear and alter the ride/handling characteristics of the vehicle.

65. Check the torque on all hardware. Drive the truck 1-2 miles and retorque all nuts, bolts and lugs.

VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.

RETORQUE ALL NUTS, BOLTS AND LUGS AFTER 100 MILES AND PERIODICALLY THEREAFTER.

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PART #	DESCRIPTION
214210	14-UP RAM 2500 3.75" REAR AIR RIDE KIT

COMPONENTS INCLUDED	
(2) 217126 14+ RAM 2500 8.88 OAL X 5MX.8 LINKAGE ROD SS	
HARDWARE INCLUDED	
(4) 605840 8MM BALL CUP W M5X.8 THREAD (4) 605841 M5X.8 FINISH NUT GR8.8	(4) 605842 M10-1.50 X 10MM HHCS GR10.9
TOOLS REQUIRED	
JACK JACK STANDS TORQUE WRENCH	8MM SOCKET / WRENCH 13MM SOCKET / WRENCH 15MM SOCKET / WRENCH 17MM SOCKET / WRENCH
TECH NOTES	
<p>1. THIS KIT IS REQUIRED IF INSTALLING (214205) 4.5" KIT ON A 2500 RAM HD EQUIPPED WITH FACTORY AIR RIDE SYSTEM.</p> <p>2. DO NOT REMOVE FACTORY SHOCKS UNTIL ALL AIR IS REMOVED FROM THE BAGS AND COMPRESSOR</p> <p>3. REMOVE ALL AIR FROM SYSTEM USING THE RAM SERVICE MANUAL BEFORE BEGINNING REAR INSTALL OF KIT.</p>	



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INSTALLATION

REAR SUSPENSION:

1. Once all air is removed from the system (according to factory service manual), raise the rear of the truck and support the frame with jack stands. NEVER WORK UNDER AN UNSUPPORTED VEHICLE. Remove rear wheels.
2. Disconnect the rear sway bar links from the sway bar and the differential using an 8mm and 18mm socket/wrench.
3. Disconnect the plastic ball cup from the lower bump stop seat on the axle. Failure to disconnect this link before removing the shock can allow it to over travel and break the sensor or the link. [FIGURE 1]

FIG.1



4. Using a floor jack, raise the rear axle slightly to take the load off of the shocks.
5. Remove the rear shocks using an 18mm and 21mm socket/wrench.

6. After verifying that the airbags are discharged, remove the factory mounting hardware using a 13mm socket/wrench. [FIGURE 2] Once the airbag is unbolted from the lower coil seat it can be moved up out of the way so the (214105) coil spacer can be installed using the supplied hardware with a 5/8" socket/wrench [Torque to 50 ft-lbs]. Drilling may be required to get the supplied hardware to fit into axle seat. [FIGURE 2]

FIG.2



FIG.3



7. Install the rear shocks. If you are not using an proprietary ICON shock, be sure that the shock length does not exceed 25.18" or damage to the air bags will occur. The ICON coil spring (without air ride) 4.5" kit shocks do not work for this kit, they are too long.

8. Install the extended sway bar links supplied in the (214205) 4.5" Box Kit (214207).

9. Partially inflate the airbags with 3 - 5 PSI and place the upper bag mount into it's seat. Failure to do this may cause the airbag to buckle onto itself and damage the bag. If you have over extended the bag by drooping the axle too far or leaving air in the system when unloading them, it may accordion over one side and will need to be deflated and manipulated back onto itself in the center before reinflating.

10. Remove the factory bump stop with a 15mm socket/wrench. Install the supplied ICON bump stop spacer from the (214205) box kit with the factory block as shown. Use the supplied 10x100mm bolts (included in 214210 kit) and washers from the (214205) hardware kit using a 17mm socket/wrench. [Torque to 40ft-lbs] [FIGURE 4]

FIG.4



11. Install supplied air ride height control link. The link is set from ICON at 9.875" cup to cup which should allow the truck to sit level. If you wish to adjust this link longer to increase rear ride height it can be adjusted roughly .25" on each end for a total of 10.375" cup to cup length which equals .50" increase in ride height. The supplied aluminum ball cap has a keeper that must be removed prior to install and then dipped back in after ball is seated on stud.

12. Install wheels and lower vehicle to the ground. [Torque to factory spec]

13. Vehicle will be sitting on the bump stops in the rear. Verify that the airbags are seated in upper mount and all connections for air system are connected and tight.

ON THE GROUND:

14. Start vehicle. Let airbag compressor run to raise the rear end of the vehicle.

15. Once the compressor has stopped and the new ride height is achieved turn off the vehicle.

16. Loosen all (4) suspension link arms at each pivot to let the bushings reset to the new ride height, and then retorquer all links to factory spec. Failure to do this will cause premature bushing wear and can affect ride/handling characteristics.

17. Check the torque on all hardware prior to test driving and check again after 1-2 miles.

VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.

RETORQUE ALL NUTS, BOLTS AND LUGS AFTER 100 MILES AND PERIODICALLY THEREAFTER.

ICON VEHICLE DYNAMICS LIMITED LIFETIME WARRANTY

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ICON Vehicle Dynamics components must be installed as a complete kit as shown in our current application guide. Any substitutions or exemptions of required components will immediately void the warranty. Some finish damage may happen to parts during shipping and is not covered under warranty.

This warranty is expressly in lieu of all other warranties expressed or implied. This warranty shall not apply to any product that has been improperly installed, modified or customized subject to accident, negligence, abuse or misuse.

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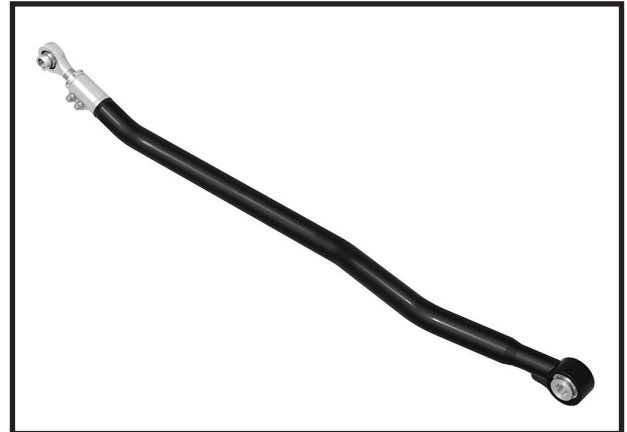
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PART #	DESCRIPTION
214214	19-UP RAM 2500 FRONT ADJUSTABLE TRACK BAR KIT

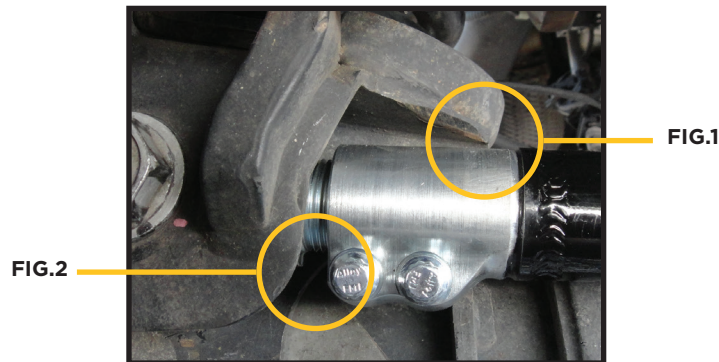
COMPONENTS INCLUDED	
(1) 214421 19+ RAM HD FRONT ADJ TRACK BAR	
HARDWARE INCLUDED	
(2) 217207 HEIM SPACER COM16 X 18MM X 1.600 (1) 217208 HEIM SPACER JMX14 X 18MM X 1.350 (1) 217218 HEIM SPACER JMX14 X 18MM X 1.850 (1) 217520 L-R ADJ SLEEVE 1 1/8-12L / 7/8-14 (1) 295501 COM16T BEARING F1 FIT (1) 295529 JMX14T-772 SP 7/8-14, 4.25 OAL, 2.75 THD	(2) 605145 3/8-16 X 1.000 12PT (1) 605330 1/2 WASHER (1) 605823 M12-1.75 LOCK NUT (1) 605835 M12X1.75 X 70 BUTTON HEAD (2) 605839 M10-1.5 X 20MM BHCS
TOOLS REQUIRED	
TORQUE WRENCH 6MM ALLEN WRENCH 8MM ALLEN WRENCH 27MM SOCKET / WRENCH	36MM SOCKET / WRENCH 42MM WRENCH 3/8" 12 POINT SOCKET / WRENCH 3/4" SOCKET / WRENCH
TECH NOTES	
<p>1. TRACK BAR IS DESIGNED TO BE ADJUSTED ON THE VEHICLE VIA THE THREADED ADJUSTER HOLES. ADJUSTING IT OFF THE VEHICLE BY TURNING ONLY THE ROD END OR ONLY THE ADJUSTER CAN LEAD TO INCORRECT THREAD ENGAGEMENT AND FAILURE. ALWAYS ADJUST USING THE ADJUSTER WITH THE ROD END FIXED. MAXIMUM ADJUSTED LENGTH IS 39.40"</p> <p>2. SOLID MOUNTED ENDS INCREASE STEERING RESPONSE AND IMPROVE VEHICLE FEEDBACK BUT CAN GENERATE INCREASED ROAD NOISE.</p> <p>3. TRACK BAR SHOULD BE ADJUSTED ROUGHLY 1/16" LONGER FOR EACH INCH OF LIFT ASSUMING FACTORY TRACK BAR MOUNTING LOCATION. FINAL NUMBER DETERMINED BY PROFESSIONAL ALIGNMENT.</p> <p>4. ICON DOES NOT RECOMMEND INSTALLING THIS BAR ON NON ICON SUSPENSION SYSTEMS. OTHER MANUFACTURER'S LIFT KITS ABOVE 2.5" LIFT MAY REQUIRE RADIUS ARM DROP BRACKETS OR A TRACK BAR DROP BRACKET. USING ANOTHER MANUFACTURER'S LIFT KIT MAY BIND THE TRACK BAR OR REQUIRE ADJUSTMENTS BEYOND THE SPECIFIED LIMITS.</p> <p>5. OUT OF SPEC CASTER CAN CAUSE RUBBING AND DAMAGE TO VEHICLE COMPONENTS.</p> <p>6. DO NOT EXCEED 2.375" OF ADJUSTMENT FROM THE CENTER OF THE ROD END TO THE EDGE OF THE TRACK BAR PINCH HOUSING. FAILURE CAUSED BY EXCESSIVE ADJUSTMENT WILL NOT BE COVERED UNDER ICON'S WARRANTY POLICY. REFER TO TECH NOTE PHOTO #6.</p>	



WARNING!
<p>** READ ALL INSTRUCTIONS THOROUGHLY FROM START TO FINISH BEFORE BEGINNING INSTALLATION! IF THESE INSTRUCTIONS ARE NOT PROPERLY FOLLOWED SEVERE FRAME, SUSPENSION AND TIRE DAMAGE MAY RESULT TO THE VEHICLE!</p> <p>** ICON VEHICLE DYNAMICS RECOMMENDS THAT YOU EXERCISE EXTREME CAUTION WHEN WORKING UNDER A VEHICLE THAT IS SUPPORTED WITH JACK STANDS.</p> <p>** ICON VEHICLE DYNAMICS RECOMMENDS ALL INSTALLATION TO BE PERFORMED BY A PROFESSIONAL SHOP/SERVICE TECHNICIAN. PRODUCT FAILURE CAUSED BY IMPROPER INSTALLATION WILL NOT BE COVERED UNDER ICON'S WARRANTY POLICY.</p>

INSTALLATION

1. With the vehicle in park and on a level surface remove the factory track bar from the frame and axle using a 27mm.
2. If installing this on an application with increased droop over stock, the passenger side coil seat must be sanded where the adjuster will contact it. ICON recommends cycling the suspension to full droop with shocks installed and sanding until there is no interference. [FIGURE 1]

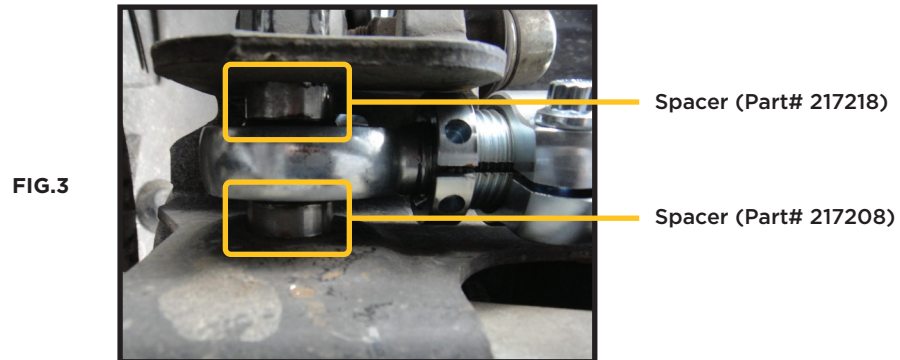


3. If installing on a vehicle that requires the track bar to be at minimum length, sanding for pinch bolt clearance may be required. [FIGURE 2]
4. The ICON track bar comes preassembled from ICON with the parts listed above. The factory track bar length removed in Step 1 from center to center is 38.84".
5. Lay the ICON track bar assembly over the stock track bar and turn the adjuster while holding the rod end fixed until the eye to eye dimensions are close to factory.

6. Install the rod end side into the axle mounting pocket using the 2 spacers (217208, 217218) and the factory hardware (the spacers push the track bar rearward in the frame pocket). Using a 27mm, thread the bolt into the factory nut tab. [Torque to factory spec.]

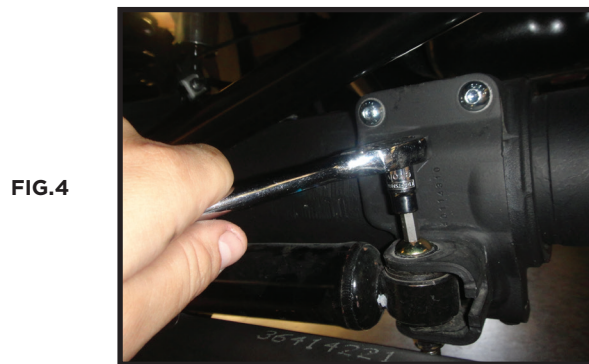
7. Install the uniball side in the frame mounting tabs using the 2 spacers (Part #217207) and factory hardware. [Torque to factory spec.]

8. Verify axle is centered/adjust as needed. Once aligned, apply BLUE thread locker to the pinch bolts in the track bar housing. Tighten the pinch bolts in an opposing pattern at least 3 times. [Torque to 45 ft-lbs] [FIGURE 3]



9. Center the steering wheel if needed by adjusting the drag link adjuster with a 36mm and 42mm. [Torque to factory spec.]

10. If you do not have a bump stop spacer that limits up-travel, replacing the factory stabilizer bolt with the supplied 12mm button head screw is required to keep the track bar from hitting it at full compression. If the factory bump stops failed the track bar can come into contact with the factory bolt. The washer is for the bottom side with the lock nut. [Torque to 50 ft-lbs] [FIGURE 4]



11. If you have low caster, ICON recommends replacing the (2) axle bolts with the supplied (605839) button head bolts for added clearance using a 6mm allen wrench. Vehicles with adequate caster do not have clearance issues. [FIGURE 5 & 6]

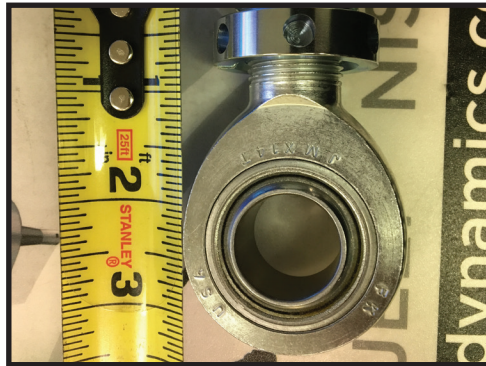


12. Have the vehicle professionally aligned.

VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.

RETORQUE ALL NUTS, BOLTS AND LUGS AFTER 100 MILES AND PERIODICALLY THEREAFTER.

[TECH NOTE #6]



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PART #	DESCRIPTION
216529	14-UP RAM 2500 0" COIL/3" AIR RIDE REAR 2.0 IR ALUMINUM SERIES SHOCK

COMPONENTS INCLUDED	
(1) 214917 14+ RAM 2500 0" REAR 2.0 IR	(1) 611006 9/16 HD STEM BUSHING KIT
HARDWARE INCLUDED	
611006 CONTENTS	
(2) 255200 STEM BUSHING 9/16 ID (2) 254200 9/16 STEM WASHER	(1) 605809 M12-1.25 JAM NUT (1) 605810 M12-1.25 NUT
TOOLS REQUIRED	
FLOOR JACK JACK STANDS TORQUE WRENCH	19MM SOCKET / WRENCH 21MM SOCKET / WRENCH
TECH NOTES	
<p>1. FAILURE TO USE THE SWAY BAR DROP BRACKETS SUPPLIED WITH THE ICON 2.5" DUAL RATE SPRING KIT (PART #214200) WILL CAUSE THE SWAY BAR LINKS TO OVEREXTEND AND WILL CAUSE PERMANENT DAMAGE. THESE BRACKETS ARE ONLY SOLD WITH THE SPRING KIT AND ARE NOT AVAILABLE SEPARATELY.</p> <p>2. THESE REAR SHOCKS REQUIRE THE USE OF ICON'S EMERGENCY BRAKE CABLE RELOCATION KIT (PN: 611068). THIS KIT IS INCLUDED IN ICON'S FRONT COIL SPRING KITS (PN: 214200 & PN: 214201) BUT CAN BE PURCHASED SEPARATELY AS WELL.</p> <p>3. YOUR ICON SHOCK ASSEMBLIES COME FACTORY CHARGED TO 180 PSI. RELEASING NITROGEN PRESSURE MAY LEAD TO SHOCK MALFUNCTION AND REDUCED RIDE QUALITY. FAILURE CAUSED BY LOW NITROGEN PRESSURE IS NOT COVERED UNDER ICON'S WARRANTY POLICY.</p>	



WARNING!
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INSTALLATION

1. Raise vehicle, secure the frame on jack stands high enough so the rear tires are off the ground.
 2. Support the rear axle with a jack and remove the driver side and passenger side rear shocks using a 21mm for the lower mount and 19mm for the upper stem top.
 3. Install the ICON 2.0 Aluminum Series shock using the 254200 stem washer on the stem, followed by a 255200 bushing and then inserting the shock stem into the factory mount. Install the other supplied 255200 bushing and then the other 254200 washer on top of the bushing followed by the taller M12 nut. Install the nut only a few turns so the upper assembly is loose.
 4. With the upper assembly loose, line up the lower mount using the jack to position the axle at the right height to install the factory lower shock bolt with a 21mm.
 5. Repeat the process on the passenger side and remove the vehicle from the jack and jack stands.
- NOTE:** Failure to use the sway bar drop brackets supplied with the ICON 2.5" Dual Rate Spring Kit (part #214200) will cause the sway bar links to overextend and will cause permanent damage.
6. Fasten the supplied 605810 large nut until 4 threads are showing and then install the supplied 605809 thin jam nut to lock it against the tall nut. [Torque the jam nut to 50ft-lbs.]

VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.

RETORQUE ALL NUTS, BOLTS AND LUGS AFTER 100 MILES AND PERIODICALLY THEREAFTER.

2.0 ALUMINUM SERIES TECHNICAL INFORMATION

MAINTENANCE

ICON shock absorbers are a high quality rebuildable race style shock absorber designed for optimal performance. With a unit of this caliber on your vehicle, routine maintenance is required to keep them looking and operating in like new condition. Residual oil and assembly lube may be present at all seal paths from the factory out of the box and is considered normal. Pooling of oil however is not acceptable at any time and one should contact the ICON dealer where purchased.

BELOW ARE GUIDELINES BASED ON HOW YOU USE YOUR VEHICLE BUT YOUR MILEAGE MAY VARY:

STREET USE:

- Send in for factory servicing every 40,000 miles or if a leak develops, ride quality decreases, or they begin to make excessive noise.
- Remove any buildup of road salt, mud, or debris from shocks anytime accrued
- Clean with mild soap and water with each oil change or anytime you notice build up.
- Wax the cylinders yearly with automotive wax to prevent corrosion.
- Check nitrogen pressure yearly. (252004 charge needle assembly available at any ICON distributor)

STREET/DIRT:

- Send in for factory servicing every 15,000 miles or if a leak develops, ride quality decreases, or they begin to make excessive noise.
- Clean with mild soap and water with each oil change, offroad trip, or anytime you notice build up.
- Wax the cylinders yearly with automotive wax to prevent corrosion.
- Check nitrogen pressure each dirt outing. (252004 charge needle assembly available at any ICON distributor)

DIRT USE:

- Send in for factory servicing every 1,000 miles.
- Check nitrogen pressure each outing. (252004 charge needle assembly available at any ICON distributor)
- Remove any buildup of mud or debris from shocks after every outing.

SELF-SERVICE:

- Contact ICON for service kits & tools at (951) 689-4266.

PRODUCT REGISTRATION

Please visit: <http://www.iconvehicledynamics.com/tech-support/registration/> to register your product.

ICON VEHICLE DYNAMICS SHOCK ABSORBER WARRANTY

This shock absorber has a 1 year warranty against any manufacturer's defects. If a shock fails within the initial year of ownership, the shock must be shipped to ICON Vehicle Dynamics for inspection and service. If a shock is inspected and it has been determined the shock failed due to neglect, damage caused by improper installation or any other reason besides "normal wear and tear", the owner of said shock is responsible for all service costs. This includes labor, parts, and shipping.

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PART #	DESCRIPTION
216530	14-UP RAM HD 4.5" FRONT LIFT 2.0 VS IR

COMPONENTS INCLUDED	
(1) 214918 14+ RAM HD 4.5" FRONT 2.0 IR	(1) 611006 9/16 HD STEM BUSHING KIT
HARDWARE INCLUDED	
611006 HARDWARE KIT	
(2) 255200 STEM BUSHING 9/16 ID (2) 254200 9/16 STEM WASHER	(1) 605809 M12-1.25 JAM NUT (1) 605810 M12-1.25 NUT
TOOLS REQUIRED	
JACK JACK STANDS TORQUE WRENCH	19MM WRENCH (X2) 21MM SOCKET / WRENCH
TECH NOTES	
<p>1. YOUR ICON SHOCK ASSEMBLY COMES FACTORY CHARGED TO 180 PSI. RELEASING NITROGEN PRESSURE MAY LEAD TO SHOCK MALFUNCTION AND REDUCED RIDE QUALITY. FAILURE CAUSED BY LOW NITROGEN PRESSURE IS NOT COVERED UNDER ICON'S WARRANTY POLICY.</p> <p>2. ICON 4.5" BOX KIT (214205) IS REQUIRED FOR INSTALLATION OF SHOCKS.</p> <p>3. ICON 4.5" COIL SPRING KIT (218410) IS REQUIRED FOR INSTALLATION OF SHOCKS.</p>	



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**** ICON VEHICLE DYNAMICS RECOMMENDS THAT YOU EXERCISE EXTREME CAUTION WHEN WORKING UNDER A VEHICLE THAT IS SUPPORTED WITH JACK STANDS.**

**** ICON VEHICLE DYNAMICS RECOMMENDS ALL INSTALLTION TO BE PERFORMED BY A PROFESSIONAL SHOP/SERVICE TECHNICIAN. PRODUCT FAILURE CAUSED BY IMPROPER INSTALLATION WILL NOT BE COVERED UNDER ICON'S WARRANTY POLICY.**

INSTALLATION

- Using a properly rated jack, raise the front of the vehicle and support the frame rails with jack stands. Ensure the jack stands are secure and set properly before lowering the jack. NEVER WORK UNDER AN UNSUPPORTED VEHICLE. Remove front wheels.
- Support the front axle with a jack. Loosen the driver side lower shock mount using a 21mm socket/wrench. Loosen the upper shock mount using a 19mm socket/wrench. Slowly lower jack until the stem is free from the upper shock mount and remove shock. [FIGURE 1 & 2]

FIG.1

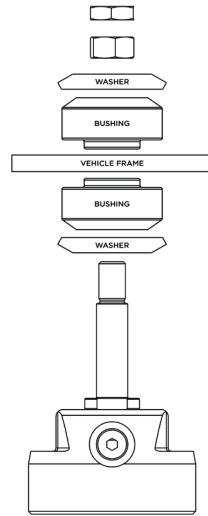


FIG.2



3. Install stem hardware as seen in diagram. Install (605810) tall nut and fasten bushing assembly until 3-4 threads are exposed for the (605809) jam nut. Install (605809) nut and torque to 50 ft-lbs while holding (605810) with a 19mm wrench. Do not overtighten bushing assembly as this can lead to premature bushing wear. Failure caused by incorrect installation of bushings is not covered under ICON's warranty policy.

NOTE: Tightening the upper shock stem nut before installing the lower bolt will increase the difficulty of lower bolt installation due to the way the radius arm swings as the suspension cycles down. Wait to tighten the upper shock stem nut until the lower mount has been installed.



4. Use a jack to raise the axle enough to allow for proper alignment of the lower shock mount. Install factory shock bolt and tighten using a 21mm socket/wrench. [Torque to factory spec] [FIGURE 3]

FIG.3



FIG.4

5. Fasten the supplied (605810) large nut until 2-3 threads are showing and then install the supplied (605809) thin jam nut to lock it against the tall nut. [Torque the jam nut to 50ft-lbs] [FIGURE 4]

NOTE: Over tightening the large stem nut will cause too much bushing preload which will cause premature wear on internal shock components and also effect vehicle ride characteristics.

11. Repeat steps 2-5 on the passenger side.

12. Install wheels and lower vehicle to the ground. [Torque to factory spec]

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MAINTENANCE

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BELOW ARE GUIDELINES BASED ON HOW YOU USE YOUR VEHICLE BUT YOUR MILEAGE MAY VARY:

STREET USE:

- Send in for factory servicing every 40,000 miles or if a leak develops, ride quality decreases, or they begin to make excessive noise.
- Remove any buildup of road salt, mud, or debris from shocks anytime accrued
- Clean with mild soap and water with each oil change or anytime you notice build up.
- Wax the cylinders yearly with automotive wax to prevent corrosion.
- Check nitrogen pressure yearly. (252004 charge needle assembly available at any ICON distributor)

STREET/DIRT:

- Send in for factory servicing every 15,000 miles or if a leak develops, ride quality decreases, or they begin to make excessive noise.
- Clean with mild soap and water with each oil change, offroad trip, or anytime you notice build up.
- Wax the cylinders yearly with automotive wax to prevent corrosion.
- Check nitrogen pressure each dirt outing. (252004 charge needle assembly available at any ICON distributor)

DIRT USE:

- Send in for factory servicing every 1,000 miles.
- Check nitrogen pressure each outing. (252004 charge needle assembly available at any ICON distributor)
- Remove any buildup of mud or debris from shocks after every outing.

SELF-SERVICE:

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