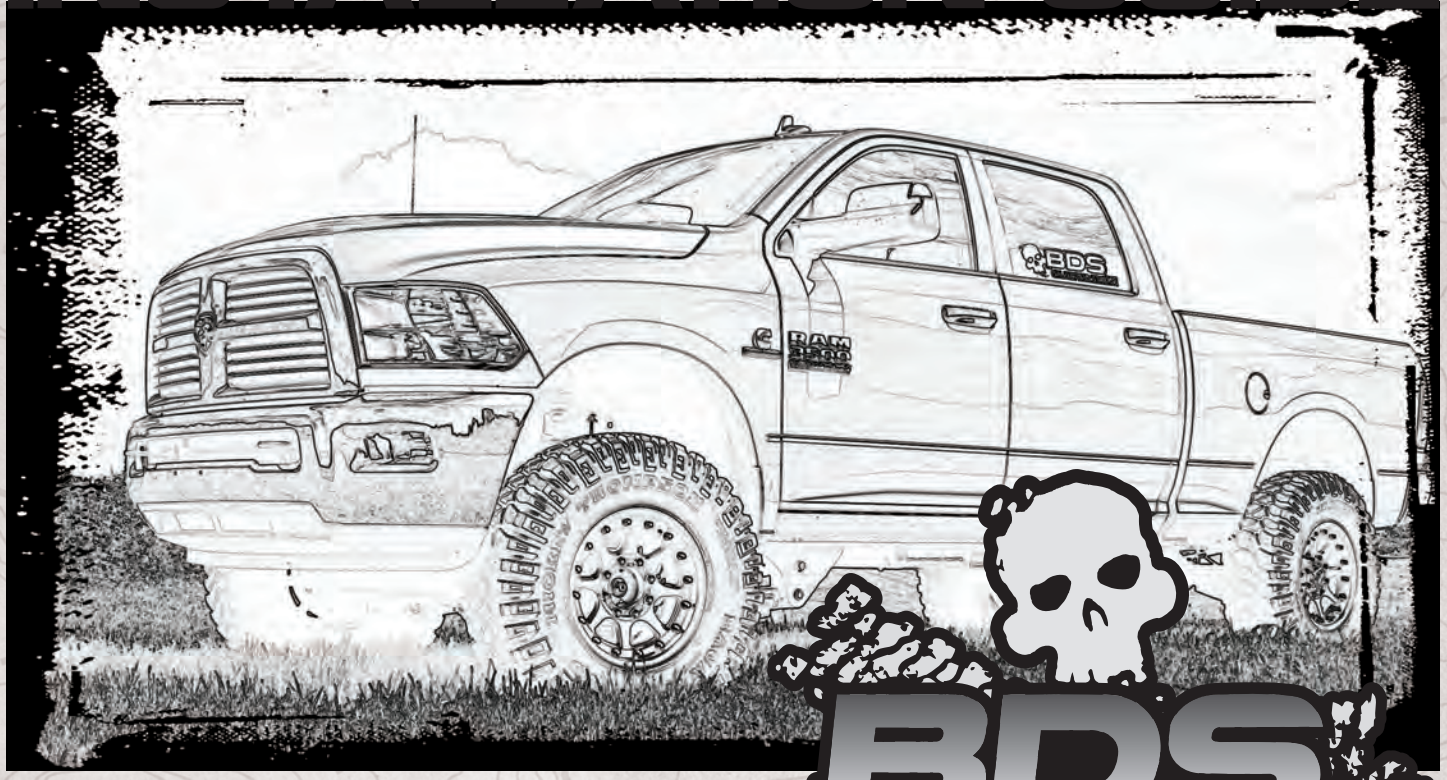
INSTALLATION GUIDE



Part#: 012610

HARDCORE LIMITED LIFETIME WARRANTY

5.5" Gas & 6" Diesel
Radius Arm Drop Bracket Kit

Dodge Ram 3500 4WD Pickup | 2013-18
Dodge Ram 2500 4WD Pickup | 2014-18

491 W. Garfield Ave., Coldwater, MI 49036 • Phone: 517-279-2135

Web: www.bds-suspension.com • E-mail: tech-bds@ridefox.com

Rev. 120221

Read And Understand All Instructions And Warnings Prior To Installation Of System And Operation Of Vehicle.

THANK YOU

Your truck is about to be fitted with the best suspension system on the market today. That means you will be driving the baddest looking truck in the neighborhood, and you'll have the warranty to ensure that it stays that way for years to come. Thank you for choosing BDS Suspension!

BEFORE YOU START

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.

FOR YOUR SAFETY

Certain BDS Suspension products are intended to improve off-road performance. Modifying your vehicle for off-road use may result in the vehicle handling differently than a factory equipped vehicle. Extreme care must be used to prevent loss of control or vehicle rollover. Failure to drive your modified vehicle safely may result in serious injury or death. BDS Suspension Co. does not recommend the combined use of suspension lifts, body lifts, or other lifting devices. You should never operate your modified vehicle under the influence of alcohol or drugs. Always drive your modified vehicle at reduced speeds to ensure your ability to control your vehicle under all driving conditions. Always wear your seat belt.

BEFORE INSTALLATION

- Special literature required: OE Service Manual for model/year of vehicle. Refer to manual for proper disassembly/reassembly procedures of OE and related components.
- Adhere to recommendations when replacement fasteners, retainers and keepers are called out in the OE manual.
- Larger rim and tire combinations may increase leverage on suspension, steering, and related components. When selecting combinations larger than OE, consider the additional stress you could be inducing on the OE and related components.
- Post suspension system vehicles may experience drive line vibrations. Angles may require tuning, slider on shaft may require replacement, shafts may need to be lengthened or trued, and U-joints may need to be replaced.
- Secure and properly block vehicle prior to installation of BDS Suspension components. Always wear safety glasses when using power tools.
- If installation is to be performed without a hoist, BDS Suspension Co. recommends rear alterations first.
- Due to payload options and initial ride height variances, the amount of lift is a base figure. Final ride height dimensions may vary in accordance to original vehicle attitude. Always measure the attitude prior to beginning installation.

TIRES AND WHEELS

FITMENT GUIDE

6"LIFT:

37x13.50 w/ 5.625" Backspacing on 9" wide wheel
37x12.50 w/ 4.5" Backspacing on 9" wide wheel

BEFORE YOU DRIVE

Check all fasteners for proper torque. Check to ensure for adequate clearance between all rotating, mobile, fixed, and heated members. Verify clearance between exhaust and brake lines, fuel lines, fuel tank, floor boards and wiring harness. Check steering gear for clearance. Test and inspect brake system.

Perform steering sweep to ensure front brake hoses have adequate slack and do not contact any rotating, mobile or heated members. Inspect rear brake hoses at full extension for adequate slack. Failure to perform hose check/ replacement may result in component failure. Longer replacement hoses, if needed can be purchased from a local parts supplier.

Perform head light check and adjustment.

Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.

CONTENTS OF YOUR KIT

012610		
Part #	*Qty*	*Description*
082405R	1	Pitman Arm
02446	1	Trackbar bracket
27031	1	Fish Wire
01797	1	1/2" Bolt Tab
01499	1	1/4" Spacer Sleeve
02475	2	Dodge 4-6" brakeline relocation bracket
B561G2	2	5/16"-18 x 1" Type 23 self threading bolt
02470	2	Dodge weld in bung
02471	2	Dodge long machined spacer sleeve
02476	1	Rad arm drop brkt - Driver
02477	1	Rad arm drop brkt - Pass
01253B	1	Sway Bar Drop Bracket
01254B	1	Sway Bar Drop Bracket
95105A169	2	1/2" Rivet nuts
7	2	Spacer Sleeve
99000	2	Cable tie
342701	1	Thread Locker
01642	1	Brake Extension
02322BK	2	Bump Stops
768	1	Bolt Pack - Brake Line
	2	1/4"-20 3/4" bolt grade 5 - clear zinc
	2	1/4"-20 Nylock nut - clear zinc
	4	1/4" USS Washer - clear zinc
799	1	Rivet nut installation bolt pack
	1	1/2"-13 x 2" bolt grade 8
	1	1/2" SAE flat washer
	1	1/2" star washer
	1	9/16"-18 high nut
792	1	Bolt Pack - Track bar Bracket
	1	1/2"-13 x 1-3/4" bolt - grade 8 - yellow zinc
	1	1/2"-13 Prevailing torque nut - yellow zinc
	1	1/2"-13 Nut (non locking) - yellow zinc
	3	1/2"-13 USS Washer - yellow zinc
	1	18mm-2.50 x 80mm bolt - class 10.9 clear zinc
	1	18mm-2.50 Prevailing torque nut - clear zinc
	2	3/4" SAE Washers - Clear zinc
793	1	Bolt Pack - Rad Arm Drop Brackets
	2	5/8"-11 x 5" bolt - grade 8 - yellow zinc
	4	5/8" USS Washer - yellow zinc
	2	5/8"-11 Prevailing torque nut - yellow zinc
	2	3/4"-10 x 5-1/2" bolt - grade 8 - yellow zinc
	4	3/4" SAE Thru hardened washer - yellow zinc
	2	3/4"-10 Prevailing torque nut - yellow zinc
	4	1/2"-13 x 1-1/4" bolt - grade 8 - yellow zinc

012610		
	4	1/2" USS Washer - yellow zinc
422	1	Bolt Pack
	4	3/8"-16 x 1-1/4" bolt grade 8 yellow zinc
	4	3/8"-16 prevailing torque nut yellow zinc
	8	3/8" USS flat washer thru-hardened yellow zinc

032602 (Diesel only)		
Part #	*Qty*	*Description*
032602R	2	6" Diesel Coil

032401 (Gas Only)		
Part #	*Qty*	*Description*
032401R	1	5.5" Gas Coil - Drv
032402R	1	5.5" Gas Coil - Pass

6" KIT 1600H - 3/4 TON RAM 4WD DIESEL

Shown with Fox Shocks

6" KIT 699H - 1 TON RAM 4WD DIESEL

Shown with Fox Shocks

INSTALLATION INSTRUCTIONS

PRE INSTALLATION NOTES:

6.4L Gas models will require exhaust modification to clear the front driveshaft. 5.7L Gas models may require modification - but not in all cases. The vehicle can be driven without the front driveshaft to an exhaust shop for modification and reinstalled after modification.

SPECIAL TOOLS

#1: Pitman arm puller

#2: 11/16" drill (step drill highly recommended)

#3: Welder

MEASURE FIRST

Measure from the center of the wheel up to the bottom edge of the wheel opening:

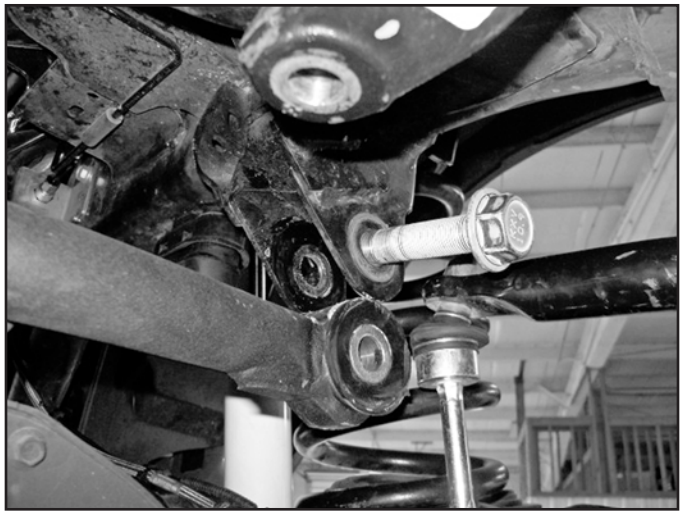
LF_____ RF_____

LR_____ RR_____

RADIUS ARM INSTALLATION INSTRUCTIONS

1. Park vehicle on clean flat and level surface. Block the rear wheels for safety.
2. Disconnect the battery / batteries, welding will be required. Do not weld on the vehicle with the batteries connected.
3. Remove the front trackbar bolt from the frame rail. Retain all hardware. (Fig 1)

FIGURE 1



4. Raise the front of the vehicle and support the frame rails with jackstands. Do not support on the radius arms, they will be removed during the installation.

TRANSFER CASE INDEXING RING / CROSS MEMBER INSTALLATION

5. 6" kits will require the installation of a transmission indexing ring and replacement crossmember. This installation is typically not required on 4" kits, however, in rare circumstances it may be necessary. 6" gas models reference the 122616 instruction sheet. Diesel 6 bolt transfer case models, reference 122623 instructions. Diesel 8 bolt transfer case models reference 122813 instructions.

SUSPENSION DISASSEMBLY

6. Support the front axle with a hydraulic jack.
7. Remove the factory wheels, remove the retaining clips that hold the rotor on and may interfere with aftermarket wheels.
8. Break the jam nuts loose on the adjusting collar of the drag link. (Fig 2)

FIGURE 2

9. Disconnect the tie rod from the pitman arm, do not damage the tie rod boot. Mark the orientation of the pitman arm and remove the pitman arm from the sector shaft. (Fig 3)
10. Disconnect the sway bar mounting hardware from the frame, and allow the sway bar to swing down. Retain all hardware. (Fig 4)

FIGURE 3

FIGURE 4

11. Disconnect the brake line bracket from the top of the radius arm mount on the axle, retain bolt, discard bracket. (Fig 5)
12. Disconnect the factory shock from the lower shock mount. (Fig 6) Lower the front axle and remove the factory coil springs.

FIGURE 5

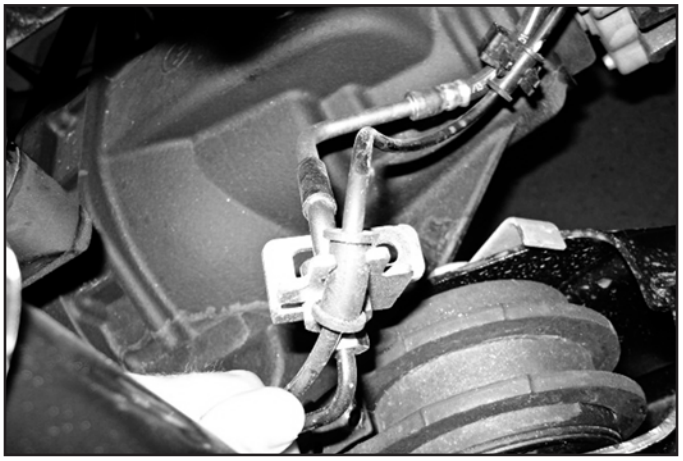
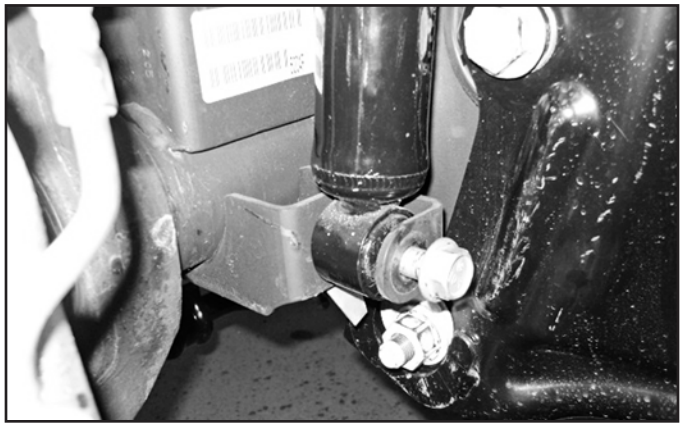


FIGURE 6



13. Raise the front axle and reattach factory shocks with factory bolt. It is not necessary to put the nut tab back on. The shocks will be there to keep the axle secure. Keep a jack under the axle for extra support.

14. Mark the cam at the axle. Remove the passenger's side radius arm. Retain all hardware. It will be necessary to remove the shock bolt and move the shock out of the way to get the upper hardware out. Reinsert the lower shock bolt when the arm is removed.

RADIUS ARM DROP BRACKET INSTALLATION

15. On the passenger's side only. Measure and mark as shown (Fig 7) This small amount of material will need to be removed for clearance to the new radius arm drop bracket. The inside edge of the cut will be flush with the transmission crossmember. The outside edge will be flush with the radius arm mounting plate. Measure up 1/4" and remove this material for clearance.

16. Place the radius arm drop bracket up to the frame rail. Insert ¾" bolt to locate the bracket. Mark the center of the slot on the bottom of the frame rail, mark the center of the top, rear hole on the side of the frame rail. (Fig 8)

FIGURE 7

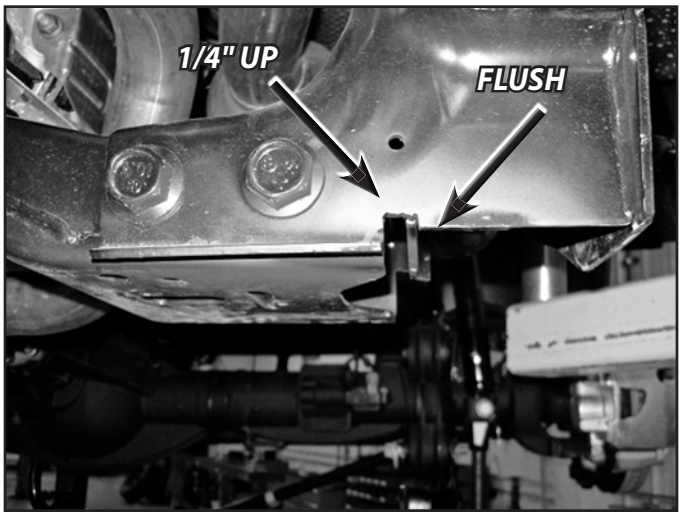
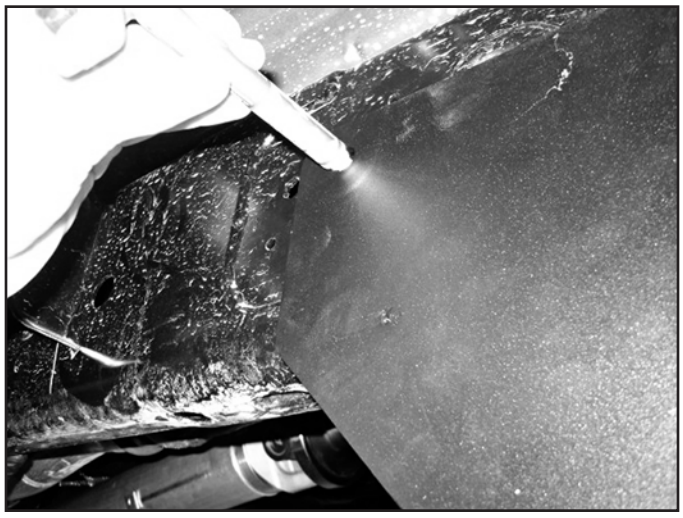
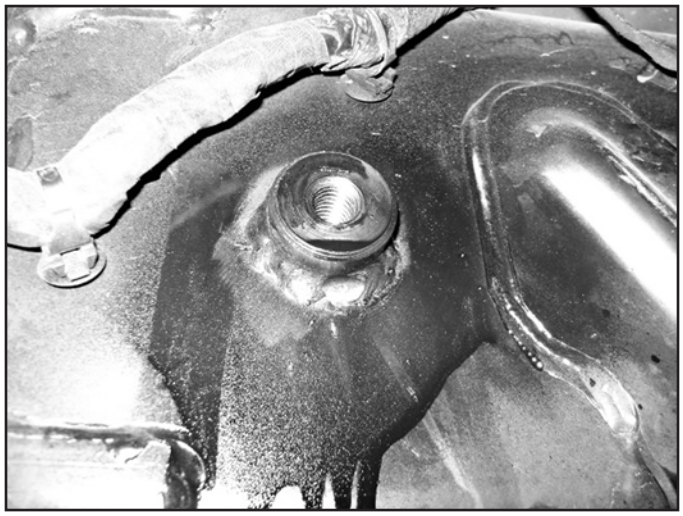


FIGURE 8



17. Remove the bracket and drill the 2 centers to 11/16". Prep the area on the side of the frame rail for welding. Place the weld in bung into the hole and weld the bung into place. (Fig 9)

FIGURE 9



18. Insert the rivet nut into the bottom of the frame rail. Use the hardware (#799) to set the rivet nut into place as shown (Fig 10). See the end of the instruction sheet for detailed rivet nut installation instructions.

FIGURE 10

19. Place the machined sleeve into the existing frame rail hole. Reinstall the bracket with hardware (#793) and sleeve as shown (Fig 11a, 11b, 11c)

FIGURE 11A

FIGURE 11B

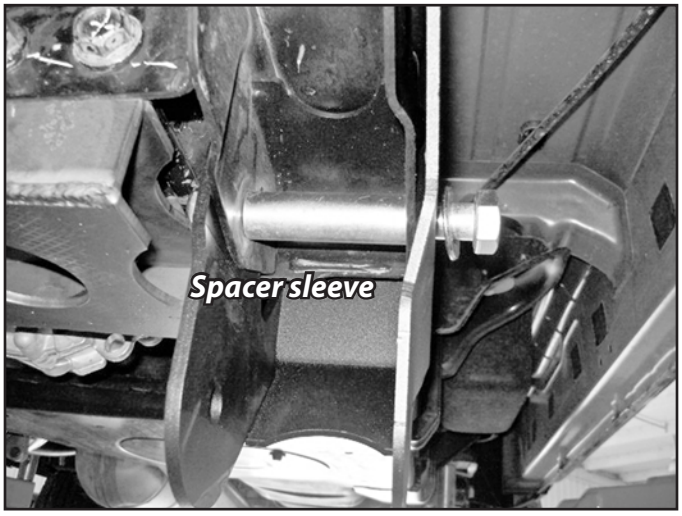


FIGURE 11C

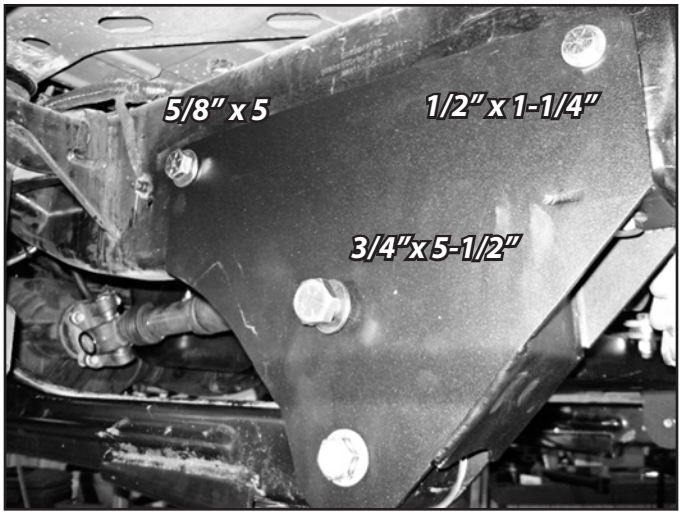


FIGURE 11D

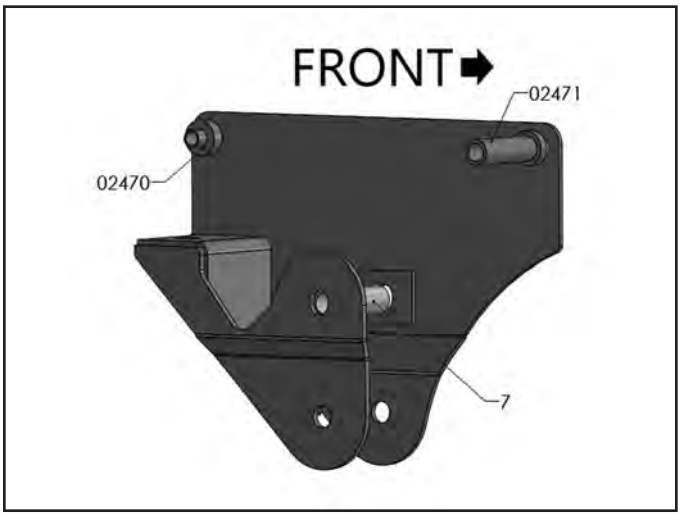
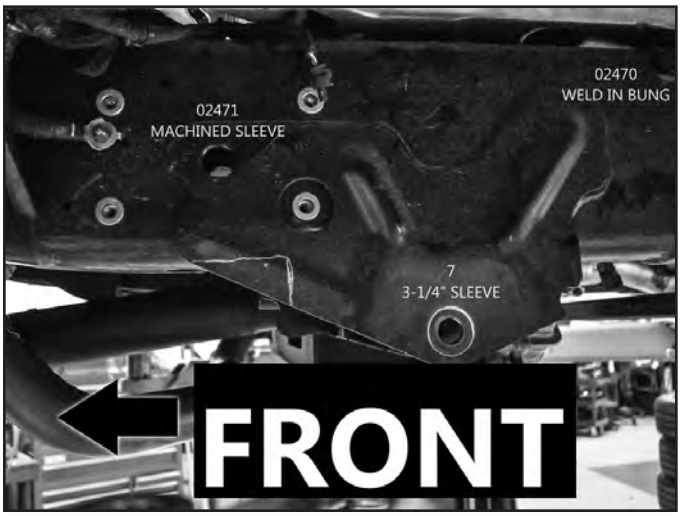


FIGURE 11E



20. With a jack still under the axle, disconnect the radius arm from the driver's side frame bracket. Reinstall the passenger's side radius arm with factory hardware. Rotate the cam to the marked position. Leave hardware slightly loose.
21. Repeat bracket installation procedure on the driver's side.

Tip *The trimming for clearance on the frame bracket is not required on the driver's side.*

22. Reinstall the driver's side radius arm with factory hardware. Rotate the cam to the position marked at the beginning of the installation. Snug all hardware, do not tighten at this time.

BUMP STOP INSTALLATION:

23. Remove the factory bump stops, it is easiest to hit them from side with a hammer to pop them out. (Fig 12)

FIGURE 12

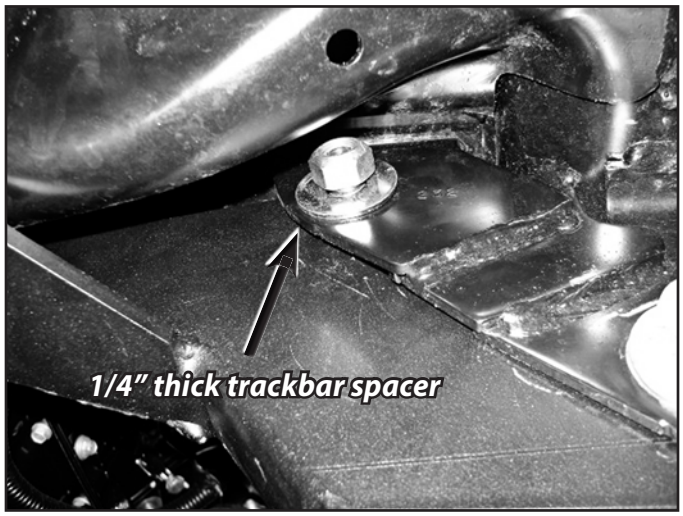
24. Grease new replacement bump stops and raise axle to press the bump stops into position. These will be a tight fit. It is easiest to lift the axle with a jack to compress the bump stops into position. (Fig 13)

FIGURE 13

TRACK BAR BRACKET INSTALLATION

25. Install the trackbar bracket with factory bolt through the original trackbar hole.
26. Clearance the factory hole on the frame crossmember where the trackbar bracket meets to 9/16".
27. The upper slot in the trackbar bracket will align with the hole in the factory trackbar bracket. These holes have variations in their position, and minor grinding of the hole horizontally may be required. Clearance the hole so ½" hardware will fit through it. (Fig 14)

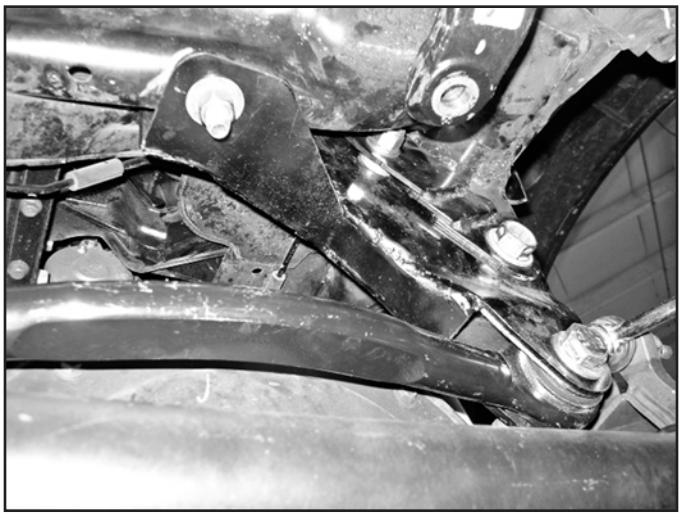
FIGURE 14



28. Fish the bolt tab through the frame rail with the included bolt wire and attach to the trackbar bracket with ½" USS washer and regular nut. Apply loctite to the bolt threads. Attach the upper hole with ½" x 1-3/4 (#792) bolt with spacer washer as shown. (Fig 15a, 15b)

FIGURE 15A

FIGURE 15B



29. Tighten ½" trackbar hardware to 65 ft-lbs. Tighten 18mm factory bolt to 150 ft-lbs.
30. Support front axle and remove the factory shocks. Retain the lower hardware, discard shocks and upper hardware.
31. **5.5" Gas Only:** Lower the axle and install the new coils with factory isolator. The coils are side specific. They are marker "PASS" for passenger side and nothing for driver, install on the correct side of the vehicle. The windings of the coil that are close together will be located at the top (frame mount). Skip to step 34.
32. ***6" Diesel Only***: Lower the axle and install the new coils with factory isolator. The Driver's side coil will install with the isolator tab in the factory hole. The Passenger's side isolator will need to be rotated just over 45 degrees. Cut and place the template up to the factory mount, mark hole center and drill to 1/2". The upper isolator on the passenger's side is shown in the new hole. (Fig 16a, 16b, 16c, 16d) ONLY on the passenger's side.
33. Lower the axle and install the new coils with factory isolator. The Driver's side coil will install with the isolator tab in the factory hole. The Passenger's side isolator will need to be rotated just over 45 degrees. Cut and place the template up to the factory mount, mark hole center and drill to 1/2". The upper isolator on the passenger's side is shown in the new hole. (Fig 16a, 16b, 16c, 16d) ONLY on the passenger's side.

FIGURE 16A

FIGURE 16B

FIGURE 16C - INCORRECT

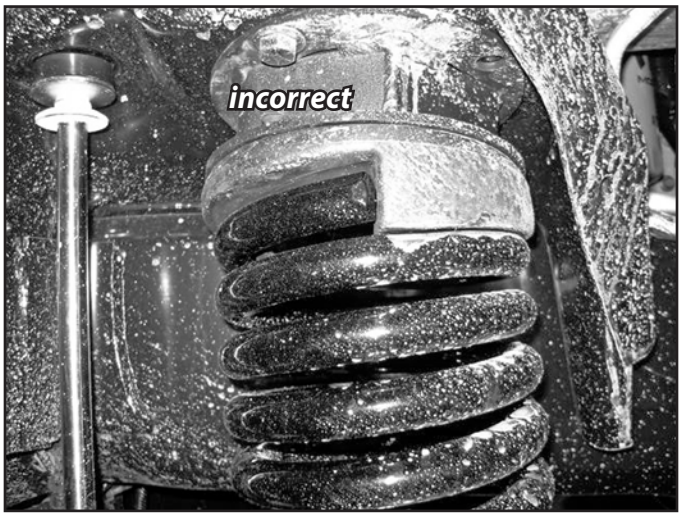
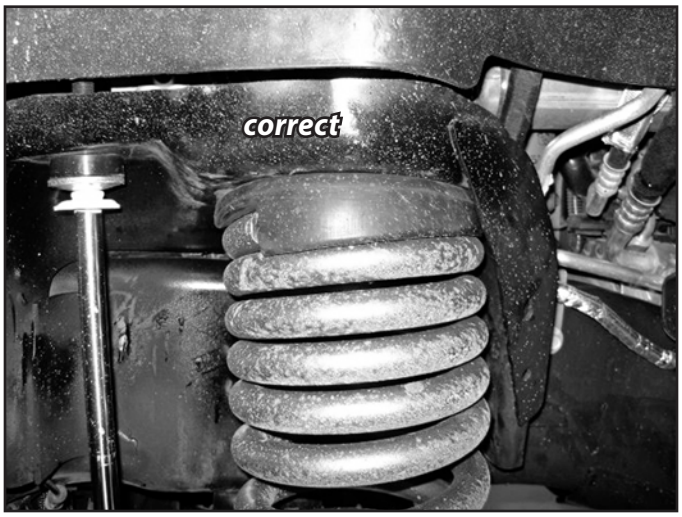


FIGURE 16D - CORRECT



34. Grease and install bushings and sleeves into the shocks. Install new shocks with cup washers, bushings, and ½" nut at the top mount. Tighten the nut until the bushings begin to swell.
35. Attach the lower shock with factory hardware. Tighten hardware to 65 ft-lbs.
36. Disassemble the drag link. Trim the tab from the tie rod end flush with the end of the threads (Fig 17a, 16b). Trim the end of the tab on the drag link to 1-1/4" long (Fig 18).

FIGURE 17A

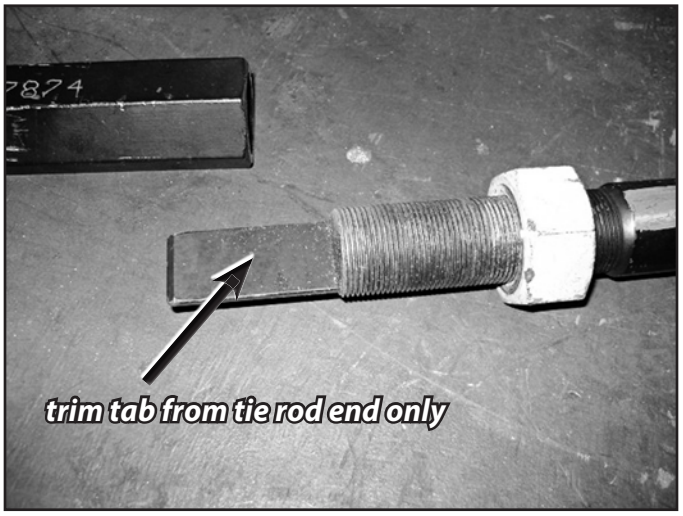
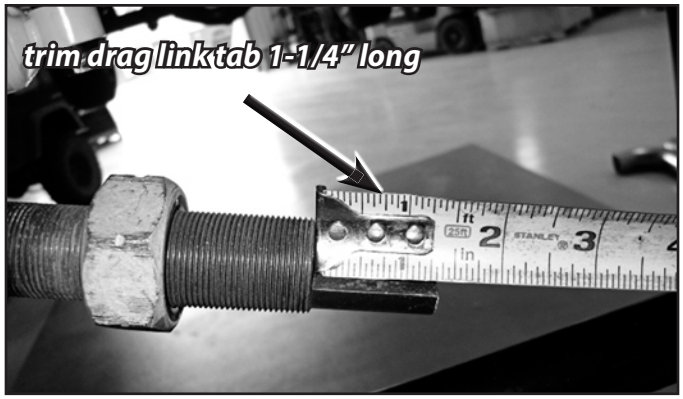


FIGURE 17B

FIGURE 18

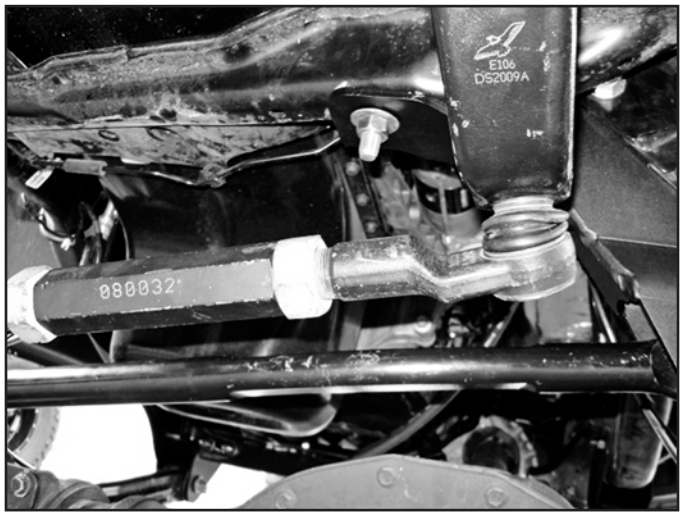


37. Reassemble the drag link, adjust so that there is approximately ¾"~7/8" of thread exposed past the jam nuts and that the tie rod end faces up. (Fig 19)

FIGURE 19

38. Install new pitman arm, use alignment mark made earlier. Loctite factory nut and install with lock washer tighten nut to 225 ft-lbs.
39. Attach drag link to pitman arm with factory nut. Tighten to 65 ft-lbs. (Fig 20)

FIGURE 20



40. Attach brake line relocation brackets to the top side of the axle with the factory bolt and 5/16" self threading bolt into the original locating tab hole. The brake lines will need to have the fittings loosened so they can be rotated and pointed up. Attach the brake line to the bracket with retaining clip. The brackets will need to be offset in towards the 'inside' of the vehicle to give more clearance to the larger body of the shock. It will be necessary to slightly reform the hard line. (Fig 21)

FIGURE 21

41. Install sway bar drop brackets with factory hardware at the frame. The flat side of the bracket will face 'out' and the brackets will offset the sway bar slightly forward. Attach sway bar to drop brackets with 3/8" hardware, tighten all hardware to 35 ft-lbs. (Bolt Pack #422) (Fig 22a, 22b)

FIGURE 22A

FIGURE 22B

42. Install wheels and tighten lug nuts to factory specifications. Lower the vehicle to the ground.
43. Tighten radius arm hardware to 133 ft-lbs Plus 90 deg. 4" Kits: Adjust the radius arm cam to center. 6" kits: Adjust radius arm Cam so the bolt is as far forward as possible. (Fig 23)

FIGURE 23

44. Turn the steering wheel to get the trackbar to align with the bracket. Install new 18mm bolt and tighten to 150 ft-lbs (#792).

REAR INSTALLATION - 3500 MODELS

NOTE: For Ram 2500 rear lift installation, refer to the instructions supplied in the 2500 rear box kit

45. Raise the rear of the vehicle, block the front wheels for safety. Support the frame rails with jackstands.
46. Disconnect e-brake cable and reroute the line to give adequate slack in the cable at full droop, reattach once routed for extra slack. (Fig 24a, 24b)

FIGURE 24A

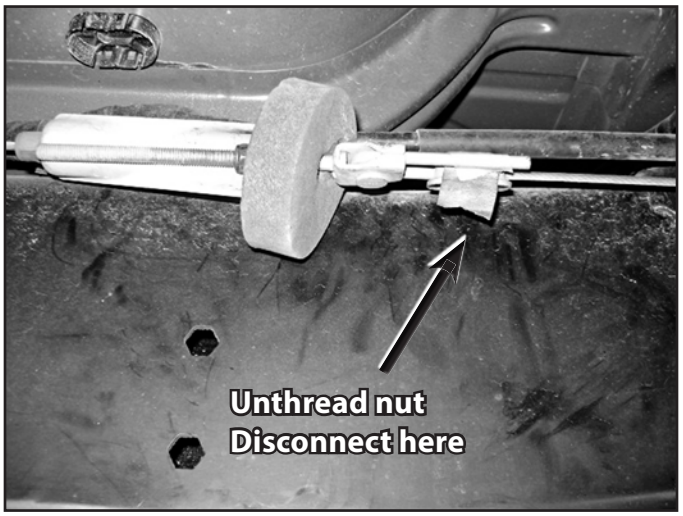


FIGURE 24B

47. Remove the factory shocks, retain all mounting hardware.
48. Disconnect the rear brakeline from the top of the axle to allow additional droop. Retain factory hardware.
49. Support the rear axle with a hydraulic jack. Remove the u-bolts and plates from one side of the vehicle only. Loosen the u-bolts, but do not remove the opposite side.

REPLACEMENT LEAF SPRING ONLY:

50. Lower the axle and remove the stock leaf spring with shackle. Transfer shackle over to new leaf spring and reinstall the entire assembly. Do NOT tighten any of the 3 bolts that attach to the spring or shackle at this time, make sure the shackle bolt is orientated correctly (inside - out). (Fig 25a, 25b)

FIGURE 25A

FIGURE 25B

51. Install new u-bolts and install the nuts, snug but do not tighten at this time.
52. Repeat spring and u-bolt installation on opposite side of the vehicle.
53. Tighten u-bolts snugly at this time, do not torque until the vehicle is on the ground.

REAR BLOCK KIT ONLY:

54. Lower the axle and removed the factory plastic center pin. Replace with new metal pin. The pin will be a press fit. It may be necessary to take a rotary grinding tool to remove the sharp edge from the leaf pack to allow easier installation (Fig 26). install new 5" lift block with the bump stop wing facing into the center of the vehicle. Install new u-bolts and install the nuts, but do not tighten at this time.

FIGURE 26

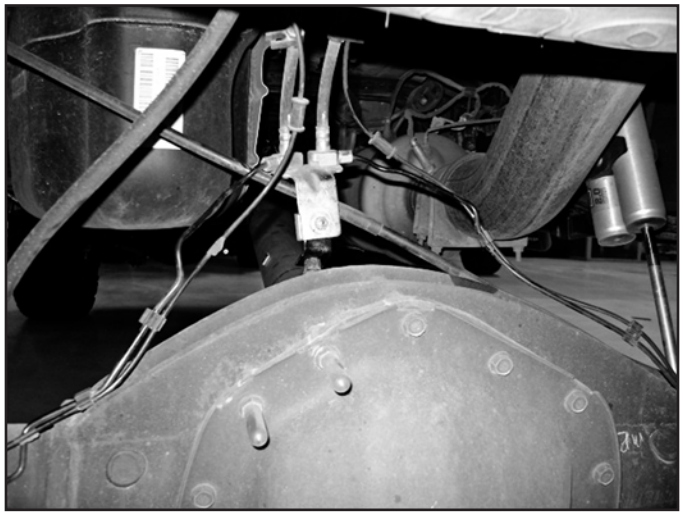
55. Repeat block and u-bolt installation on opposite side of the vehicle.
56. Tighten u-bolts snugly at this time, do not torque until the vehicle is on the ground.

LEAF SPRING OR BLOCK:

57. 6" kits: Install 'L' shaped bracket to the top of the axle with factory hardware. Carefully reform the factory hard lines for adequate routing. Attach brake line bracket to 'L' bracket with 1/4" x 3/4" hardware (#768) (Fig 27a, 27b).

FIGURE 27A

FIGURE 27B



58. Grease bushings and sleeves, install them into both ends of the shocks. Install new shocks with factory hardware. Tighten to 65 ft-lbs. If installing optional Fox shocks, the body will be located at the frame mount.
59. Reinstall wheels, torque to specification. Lower vehicle to the ground and torque u-bolts to 120 ft-lbs.

POST-INSTALLATION

1. Adjust the steering wheel to center with the collar on the drag link. Securely lock off the jam nuts once the wheel is straight. Do not drive the vehicle with the steering wheel off-center or adverse traction control problems may arise.
2. Recheck all hardware, check again at 500 miles, and again at regularly scheduled maintenance intervals. Check brake lines and ABS wires for proper clearance through steering sweep, use zip ties on the ABS wires if necessary. An alignment must now be performed.

RIVET NUT INSTALLATION INSTRUCTIONS

RIVET NUT SIZING

1. Verify the correct size rivet nut for the application based on the thickness of material where the rivet nut is to be installed using the following chart.

Part Number	*Thread Size*	*Body Length (in)*	*Material Thickness (in)*		*Drill Size (in)*
			Min.	*Max.*	
95105A159	*3/8-16*	*.690*	*.027*	*.150*	*17/32*
95105A168	*3/8-16*	*.805*	*.150*	*.312*	*17/32*
95105A169	*1/2-13*	*1.150*	*.063*	*.200*	*11/16*
95105A170	*1/2-13*	*1.300*	*.200*	*.350*	*11/16*

HOLE PREPARATION

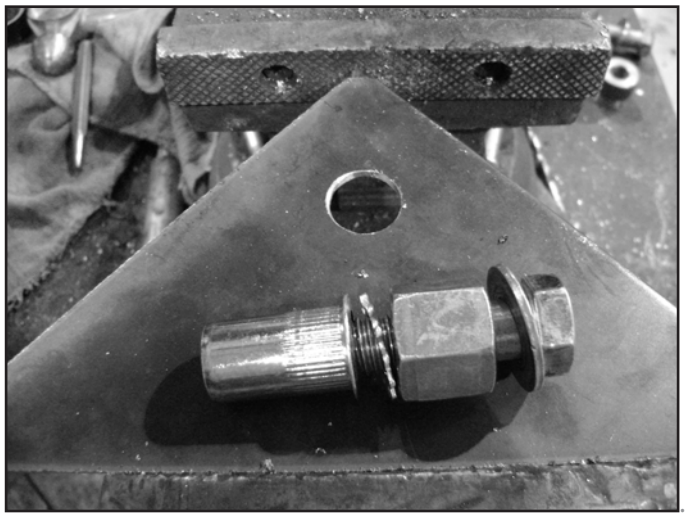
2. Drill hole to appropriate size for rivet nut installation. 1/2" Rivnuts require an 11/16" hole and 3/8" Rivnuts require a 17/32" drill. It is critical that this hole is drilled to the correct size. Remove any burrs that could keep the rivet nut from seating flat against either side of the hole surface.

Tip *If the correct drill size is not available, it is possible to drill the hole to an available smaller size and slowly grind it out to until the rivet nut fits tight.*

RIVET NUT INSTALLATION TOOL ASSEMBLY

3. For a 3/8" rivet nut, place the provided 3/8" SAE flat washer on the 3/8" x 1-1/2" bolt, followed by 7/16" hex nut and then a 3/8" serrated washer. (Fig. 1) Thread this tool assembly into the rivet nut.
4. For a 1/2" rivet nut, place the provided 1/2" SAE washer on a 1/2" x 2" bolt followed by a 9/16" high nut and 1/2" serrated edge lock washer. Thread this tool assembly into the rivet nut as shown. (Fig 1)

FIGURE 1- 1/2" RIVET NUT SHOWN



RIVET NUT INSTALLATION

5. Place the installation tool with the rivet nut threaded on the end into the appropriately sized hole.
6. For a 3/8" rivet nut, hold the nut closest to the rivet nut still with an 5/8" wrench and tighten the 3/8" bolt with a 9/16 wrench to set the rivet nut. Be sure to hold the rivet nut flush to the surface and square to the hole as it is tightened. (Fig. 2)

   Tip *If available, an impact gun is recommended for tightening the bolt to ensure the rivet nut remains square to the hole and to ease holding the nut from spinning.*

7. For a 1/2" rivet nut, hold the nut closest to the rivet nut still with an 7/8" wrench and tighten the 1/2" bolt with a 3/4" wrench to set the rivet nut. Be sure to hold the rivet nut flush to the surface and square to the hole as it is tightened. (Fig. 2)

FIGURE 2 - 1/2" RIVET NUT SHOWN

TORQUE SPECIFICATIONS

8. 3/8" rivet nuts will approach 40 ft. lbs for maximum grip strength. Do not exceed 45 ft-lbs when setting the rivet nut.
9. 1/2" rivet nuts will approach 90 ft lbs for maximum grip strength. Do not exceed 100 ft-lbs when setting the rivet nut.

Tip *Note: If using the recommended impact gun, use caution to not exceed the recommended torque specifications.*

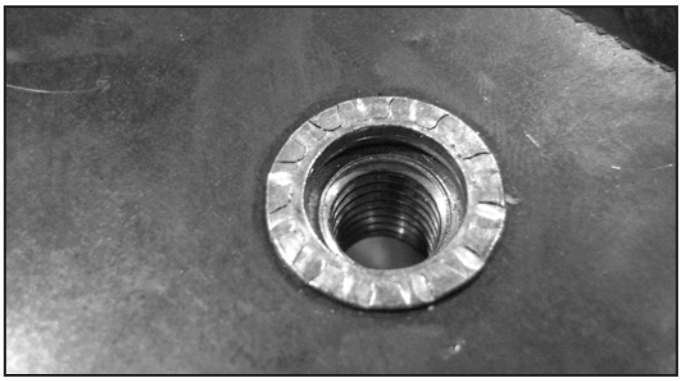
RIVET NUT TOOL REMOVAL

10. Once the center bolt is tightened, remain holding the nut from spinning with the wrench and loosen the center bolt to remove the installation tool.

Caution *It is very important to hold the nut as the bolt is loosened because the grip of the star washer will try to spin the rivet nut and ruin the installation.*

11. Verify proper installation by checking for consistent rivet nut deformation to see the threads are square and centered to the rivet nut. (Fig. 3)

FIGURE 3



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TIME TO HAVE SOME FUN

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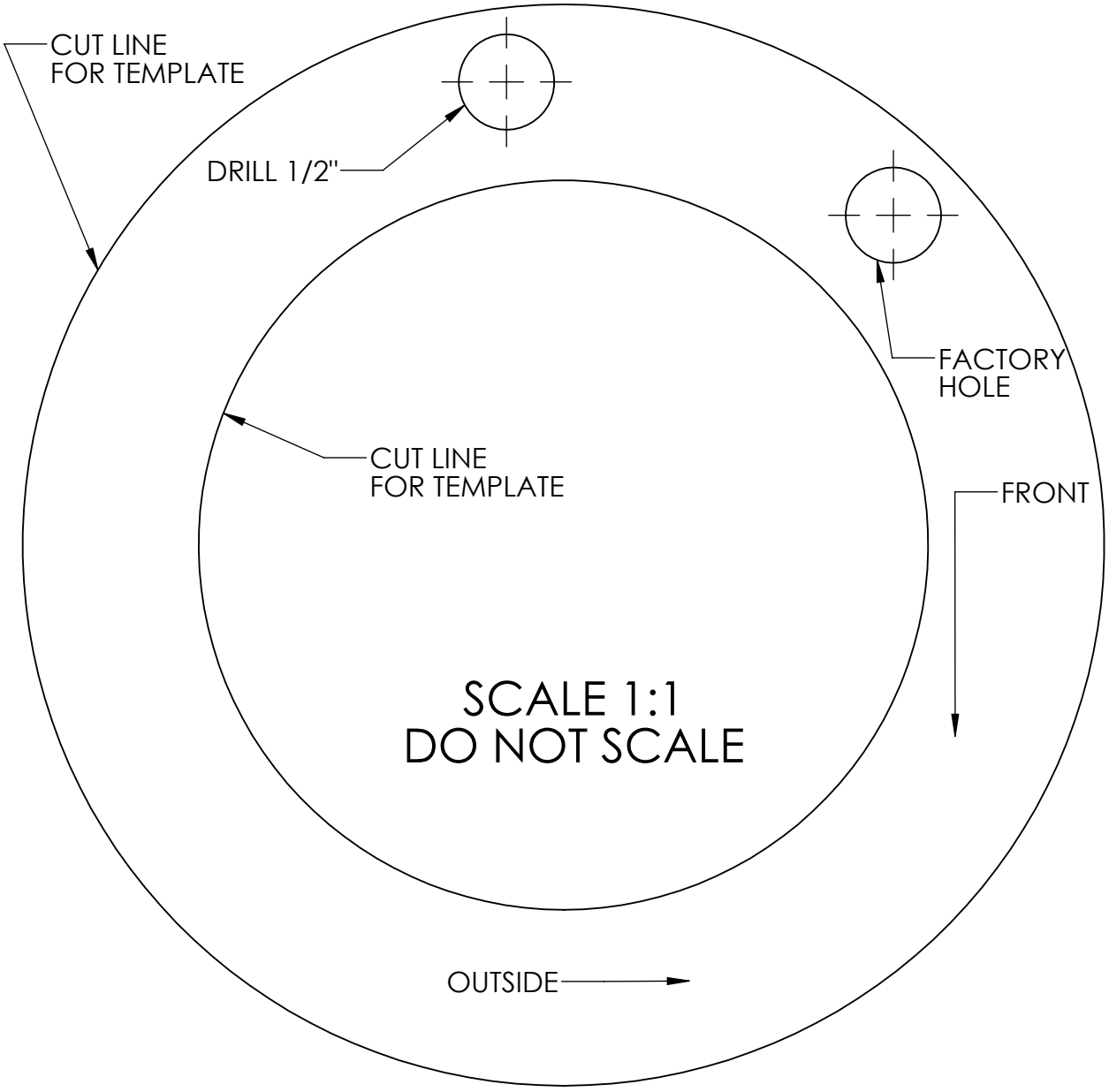

CUT LINE
FOR TEMPLATE
DRILL 1/2"
FACTORY
HOLE
CUT LINE
FOR TEMPLATE
FRONT
SCALE 1:1
DO NOT SCALE
OUTSIDE

INSTALLATION GUIDE

Part#: 012259, 012258, 012458

BDS SUSPENSION

HARDCORE LIMITED LIFETIME WARRANTY

2.5" & 4.5" Rear Coil Spring & 2.5" Spacer Kits

Dodge 2500 Pickup | 2014

Rev. 050919

491 W. Garfield Ave., Coldwater, MI 49036 • Phone: 517-279-2135

Web: www.bds-suspension.com • E-mail: tech-bds@ridefox.com

Read And Understand All Instructions And Warnings Prior To Installation Of System And Operation Of Vehicle.

THANK YOU

Your truck is about to be fitted with the best suspension system on the market today. That means you will be driving the baddest looking truck in the neighborhood, and you'll have the warranty to ensure that it stays that way for years to come. Thank you for choosing BDS Suspension!

BEFORE YOU START

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.

FOR YOUR SAFETY

Certain BDS Suspension products are intended to improve off-road performance. Modifying your vehicle for off-road use may result in the vehicle handling differently than a factory equipped vehicle. Extreme care must be used to prevent loss of control or vehicle rollover. Failure to drive your modified vehicle safely may result in serious injury or death. BDS Suspension Co. does not recommend the combined use of suspension lifts, body lifts, or other lifting devices. You should never operate your modified vehicle under the influence of alcohol or drugs. Always drive your modified vehicle at reduced speeds to ensure your ability to control your vehicle under all driving conditions. Always wear your seat belt.

BEFORE INSTALLATION

Special literature required: OE Service Manual for model/year of vehicle. Refer to manual for proper disassembly/reassembly procedures of OE and related components.

Adhere to recommendations when replacement fasteners, retainers and keepers are called out in the OE manual.

Larger rim and tire combinations may increase leverage on suspension, steering, and related components. When selecting combinations larger than OE, consider the additional stress you could be inducing on the OE and related components.

Post suspension system vehicles may experience drive line vibrations. Angles may require tuning, slider on shaft may require replacement, shafts may need to be lengthened or trued, and U-joints may need to be replaced.

Secure and properly block vehicle prior to installation of BDS Suspension components. Always wear safety glasses when using power tools.

If installation is to be performed without a hoist, BDS Suspension Co. recommends rear alterations first.

Due to payload options and initial ride height variances, the amount of lift is a base figure. Final ride height dimensions may vary in accordance to original vehicle attitude. Always measure the attitude prior to beginning installation.

BEFORE YOU DRIVE

Check all fasteners for proper torque. Check to ensure for adequate clearance between all rotating, mobile, fixed, and heated members. Verify clearance between exhaust and brake lines, fuel lines, fuel tank, floor boards and wiring harness. Check steering gear for clearance. Test and inspect brake system.

Perform steering sweep to ensure front brake hoses have adequate slack and do not contact any rotating, mobile or heated members. Inspect rear brake hoses at full extension for adequate slack. Failure to perform hose check/ replacement may result in component failure. Longer replacement hoses, if needed can be purchased from a local parts supplier.

Perform head light check and adjustment.

Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.

CONTENTS OF YOUR KIT

Spacer Box Kit		
Part #	*Qty*	*Description*
02497	1	Rear Track Bar Bracket
145	1	Track Bar Bracket Sleeve (2-1/8" long)
02496	2	Rear Coil Spacer
422	1	Bolt Pack
	4	*3/8"-16 x 4" bolt*
	4	*3/8" USS flat washer*
	8	*3/8"-16 Prevailing torque nut*
02499	2	Rear Bump Stop
911112	2	15" Sway Bar Link
SB58BK	4	Hourglass Bushing - EB1
62147	4	5/8" x 12mm ID x 1-.3/8" Sleeve
674	1	Bolt Pack
	1	*9/16"-12 x 4" bolt*
	2	*9/16" SAE Thru-hardened washer*
	1	*9/16"-12 Prevailing torque nut*
	1	*3/8"-16 x 1-1/2" bolt*
	1	*3/8" SAE Washer*
	1	*3/8"-16 Serrated edge flanged nut*
	1	*7/16"-14 x 1-1/2" bolt*
	2	*7/16" SAE thru hardened washer*
	1	*7/16"-14 Prevailing torque nut*
	4	*10mm-1.50 x 80mm bolt*
	4	*10mm washer*
	4	*12mm-1.75 x 65mm bolt*
	8	*7/16" USS washer - clear zinc*
	4	*12mm-1.75 Prevailing torque nut - clear zinc*

Coil Spring Box Kit		
Part #	*Qty*	*Description*
02497	1	Rear Track Bar Bracket *(or)*
02707	1	4.5" Dual Drilled Track Bar Bracket
145	1	Track Bar Bracket Sleeve (2-1/8" long)
032209	2	2.5" Rear Coil Spring or
032409	2	4.5" Rear Coil Spring
02499	2	Rear Bump Stop
911112	2	15" Sway Bar Link
SB58BK	4	Hourglass Bushing - EB1
62147	4	5/8" x 12mm ID x 1-.3/8" Sleeve
674	1	Bolt Pack
	1	*9/16"-12 x 4" bolt*
	2	*9/16" SAE Thru-hardened washer*
	1	*9/16"-12 Prevailing torque nut*
	1	*3/8"-16 x 1-1/2" bolt*
	1	*3/8" SAE Washer*
	1	*3/8"-16 Serrated edge flanged nut*
	1	*7/16"-14 x 1-1/2" bolt*
	2	*7/16" SAE thru hardened washer*
	1	*7/16"-14 Prevailing torque nut*
	4	*10mm-1.50 x 80mm bolt*
	4	*10mm washer*
	4	*12mm-1.75 x 65mm bolt*
	8	*7/16" USS washer - clear zinc*
	4	*12mm-1.75 Prevailing torque nut - clear zinc*

INSTALLATION INSTRUCTIONS

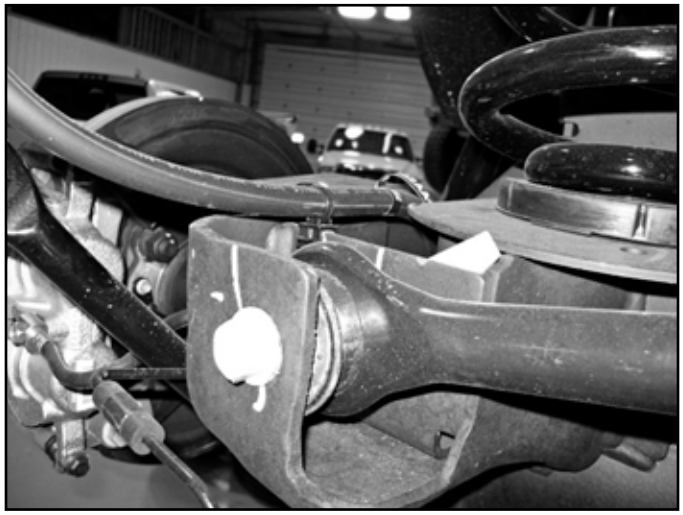
1. Park vehicle on clean flat and level surface. Block front wheels for safety.
2. Disconnect the rear trackbar from the axle, retain all hardware. (Fig 1)

SPECIAL TOOLS

1/2" Drill

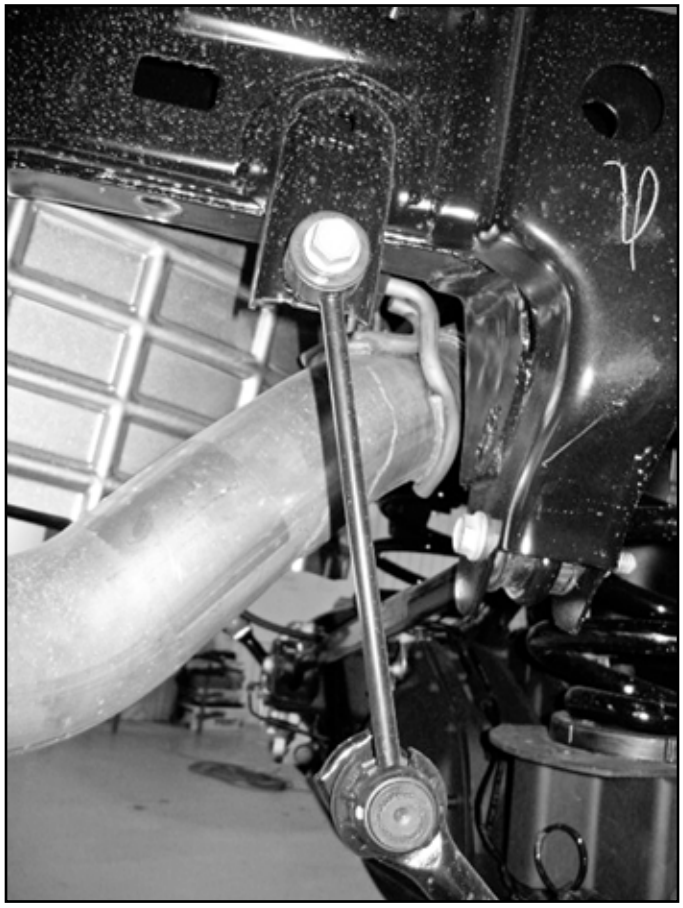
Tip: You made need to detach the vent hose clip from the track bar bracket to prevent the nut tab from puncturing the vent hose.

FIGURE 1



3. Raise rear of vehicle and support frame rails with jack stands.
4. Remove the rear wheels.
5. Support the rear axle with a hydraulic jack.
6. Disconnect the rear sway bar links from the frame and sway bar. (Fig 2)

FIGURE 2



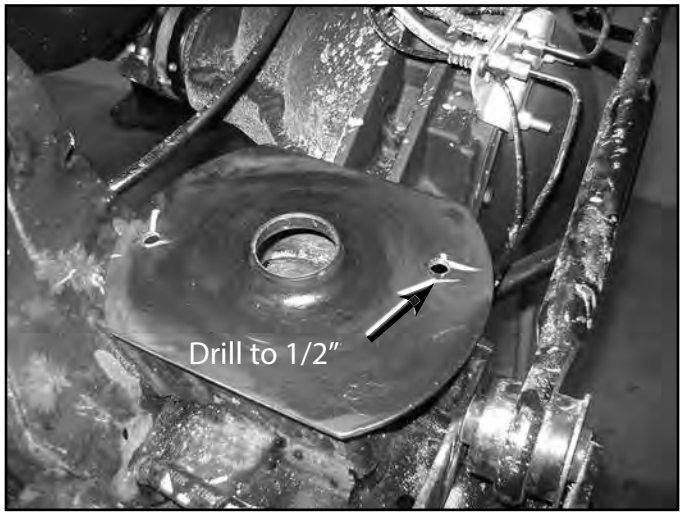
7. Disconnect the rear shocks and lower the axle, retain hardware. On the driver's side it is easiest to access the top hardware by cutting the inner fender well as shown. This trim procedure is not required but greatly aids in removal and installation of the shock. (Fig 3a, 3b)
8. Remove the rear coil springs and upper and lower coil spring retainers.

FIGURE 3A

FIGURE 3B

9. Locate the holes in the rear lower coil mount. Clearance the rear most hole on the driver's side to 1/2" to accept larger hardware, the remaining 3 holes will accept 3/8" hardware. (Fig. 4)

FIGURE 4



10. Install the rear coil spacers with 3/8" hardware (BP 422) except at Driver's Rear location, this will attach with the trackbar hardware. If installing coil spring option, skip this step. Tighten 3/8" hardware to 35 ft-lbs.

Tip *The coil spacers are designed to center on the factory coil cup. Due to some OE variance, the spacers may sit up slightly on the corner of the cup. Once the weight of the vehicle is on the coil spacers, they will fully seat on the axle.*

11. Install the trackbar bracket to the axle (Note: 4.5" rear kit will have a dual drilled trackbar - NOT SHOWN), hardware is located in bolt pack 674. First loosely attach the bracket using the 7/16" hardware though coil spacer and lower coil mount. Next, place the 2-1/8" long sleeve (145) and place it inside the track bar bracket at the factory track bar bolt location using the factory track bar bolt and nut tab. Using the 3/8" x 1-1/2" bolt, washer, and flange nut attach the bracket through the bottom hole. (Fig. 5a, 5b)

FIGURE 5A

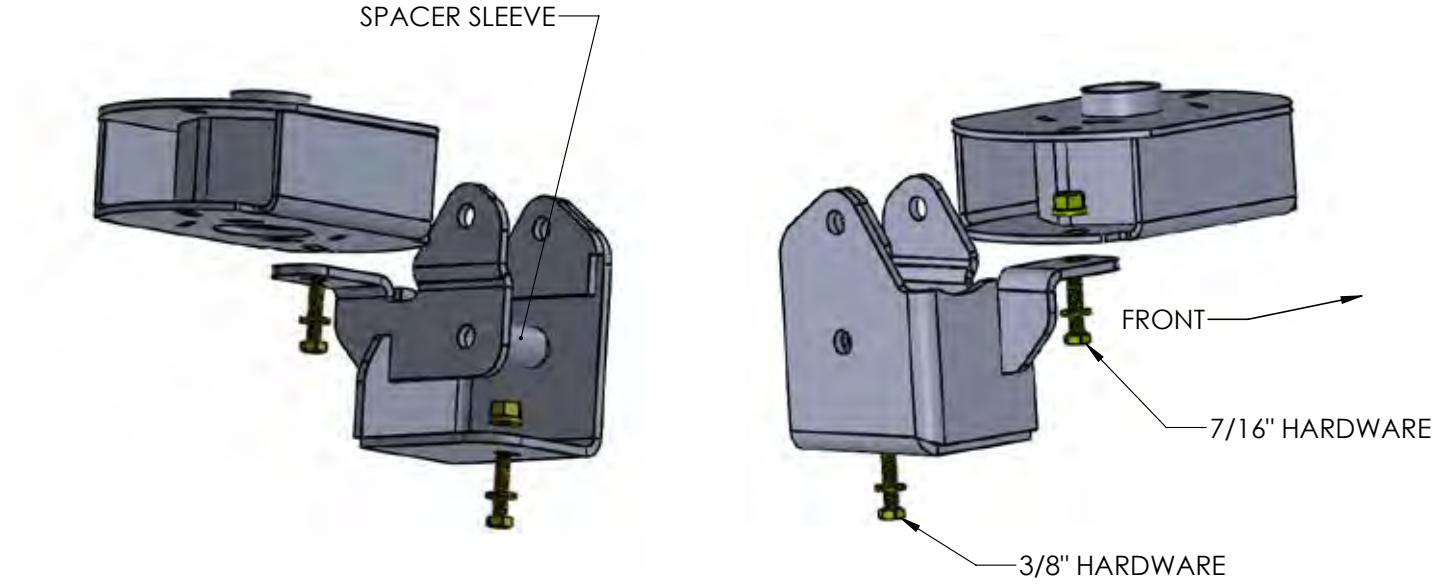
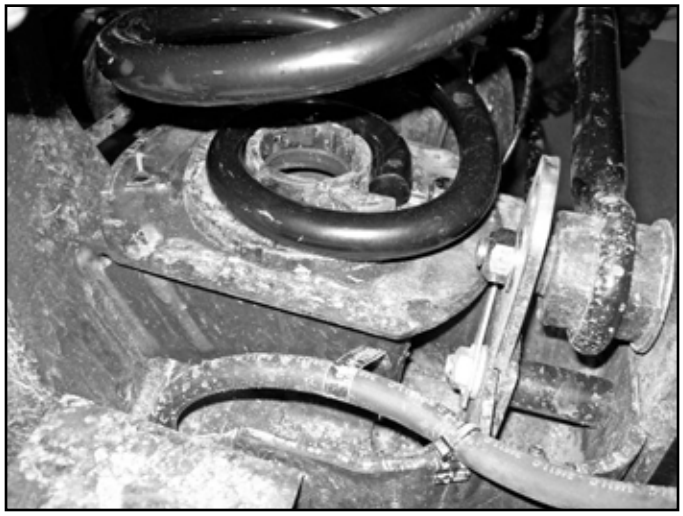


FIGURE 5B

12. Tighten trackbar bracket hardware as follows: 14mm factory hardware 95 ft-lbs, 7/16" hardware 45 ft-lbs, 3/8" hardware 35 ft-lbs,
13. Reinstall factory coils with OEM isolators on the spacers, or install new coil springs with OEM isolators. New coil springs will require the transfer of the plastic wrap from the factory coils to the new coils. The plastic spring wrap will eliminate any possible noise from the progressive coils. Raise axle and ensure that the isolators are centered over the factory mounts. Orientate the coils so that the lower locating tab is at the rear of the vehicle. This will give maximum clearance to the trackbar hardware. (Fig 6)

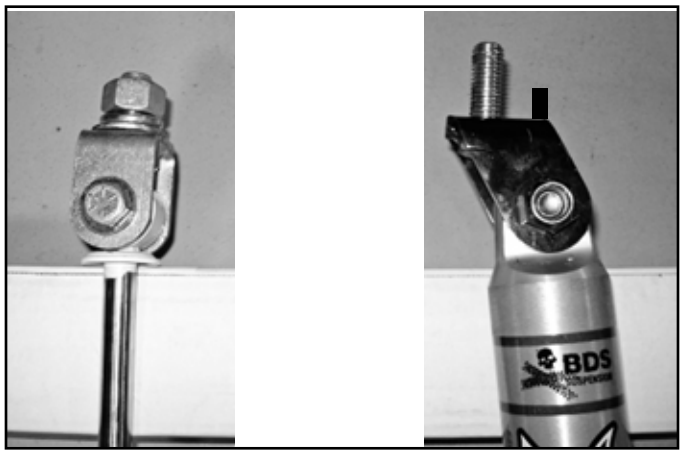
FIGURE 6



14. ***2.5" and 4.5" Rear Kit BDS NX2 Shock Installation:*** BDS NX2 (Silver Body) shocks will require a stem eliminator bracket to be installed and tightened on the shock before installation. The hardware is in bolt pack 946 included in the shock box. (Fig. 7 on left)

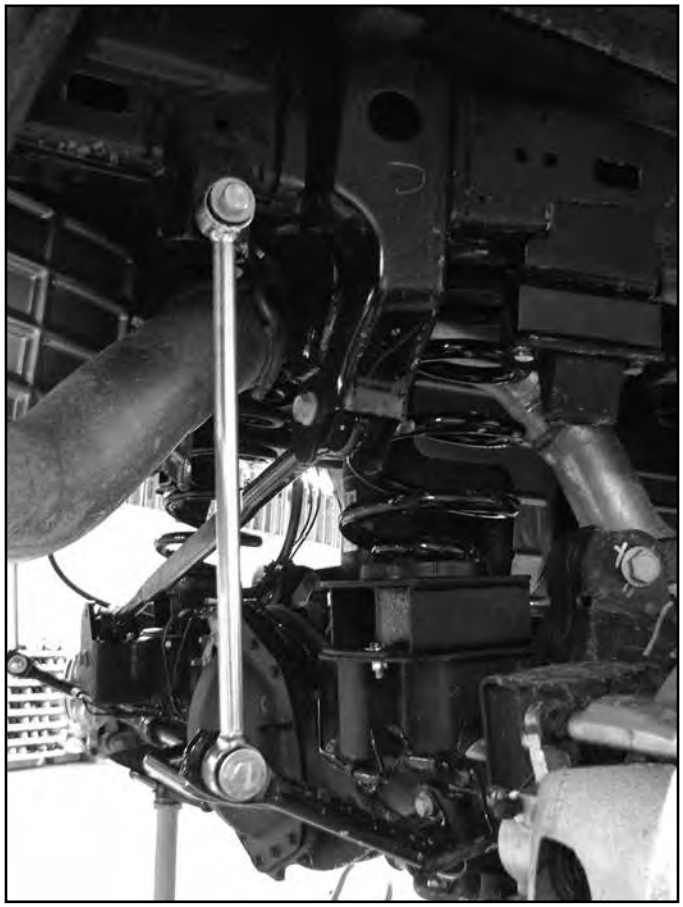
    2.5" and 4.5" Rear Kit Fox Shock Installation: Fox shocks will require an offset stem eliminator bracket and bolt pack 946. These parts can be found in the shock box. The eye of the shock will need to be offset to the REAR of the vehicle to give the shock body clearance to the frame rail hole. Locate the OE frame hole towards the rear of the vehicle from the original stem mounting hole. Enlarge this hole using a 3/8" drill bit to fit to the tab on the offset bracket. Verify shock clearance to the frame opening, in may be necessary to slightly enlarge the opening due to variances in trucks, however this is highly unlikely. (Fig. 7 on Right)

FIGURE 7



15. Grease bushings and sleeves and install into sway bar links. Install sway bar links with new 12mm hardware. (BP 674). Tighten to 45 ft-lbs. (Fig 8)

FIGURE 8



16. Remove the factory bump stops. Install bump stop drop brackets with new 10mm hardware (BP 674). Install so the small holes are to the inside. Tighten to 35 ft-lbs. (Fig 9a, 9b)

FIGURE 9A

FIGURE 9B

17. Reinstall wheels, if installing aftermarket wheels it is recommended to remove all of the rotor retaining clips to allow the wheel to sit flush against the rotor. Tighten to factory specifications.
18. Lower vehicle to the ground.
19. Attach trackbar to the new bracket with 9/16" x 4" hardware (BP 674). It may be necessary to have an assistant push on one side of the truck slightly to get the holes aligned. Tighten to 95 ft-lbs. 4.5" rear kits with dual drilled trackbar will use the upper hole.
20. Recheck all hardware for proper torque, check again after 500 miles.

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INSTALLATION GUIDE

Part#: 122623

BDS SUSPENSION

HARDCORE LIMITED LIFETIME WARRANTY

Transfer Case Indexing Ring Kit

Dodge 2500 | 2014-18
Dodge 3500 | 2013-18

Rev. 091021

491 W. Garfield Ave., Coldwater, MI 49036 • Phone: 517-279-2135
E-mail: tech-bds@ridefox.com

Read And Understand All Instructions And Warnings Prior To Installation Of System And Operation Of Vehicle.

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BEFORE YOU DRIVE

Check all fasteners for proper torque. Check to ensure for adequate clearance between all rotating, mobile, fixed, and heated members. Verify clearance between exhaust and brake lines, fuel lines, fuel tank, floor boards and wiring harness. Check steering gear for clearance. Test and inspect brake system.

Perform steering sweep to ensure front brake hoses have adequate slack and do not contact any rotating, mobile or heated members. Inspect rear brake hoses at full extension for adequate slack. Failure to perform hose check/ replacement may result in component failure. Longer replacement hoses, if needed can be purchased from a local parts supplier.

Perform head light check and adjustment.

Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.

CONTENTS OF YOUR KIT

Transmission Crossmember Kit		
Part #	*Qty*	*Description*
02488	1	2013 Dodge transmission x-member
02489	1	2013 Dodge Transmission mount
02490	4	2013 Dodge Transmission Spacers (1/4" thick)
099002	2	Push In Zip Tie
099000	4	Zip Tie
944	1	Bolt Pack
	6	*1/2"-13 x 2" bolt - grade 5 - yellow zinc*
	12	*1/2" SAE Washer - yellow zinc*
	6	*1/2"-13 Prevailing torque nut - yellow zinc*

Indexing Ring		
Part #	*Qty*	*Description*
A238	1	Indexing Ring Assembly
02296	1	Drive Shaft Spacer
932	1	Bolt Pack - Front Drive Shaft Spacer
	1	loc-tite
950	1	Bolt Pack
	6	*10mm-1.50 x 30mm FHSCS (flat head socket cap screw)*
	6	*3/8"-24 hex nut*
	6	*3/8" NAS Spec. Washer*

TROUBLESHOOTING INFORMATION FOR YOUR VEHICLE

TECH TIPS

1. BDS Suspension recommends upgrading the transmission output shaft on vehicles with larger tires that will see heavy loads from other upgrades such as gearing, or performance tunes especially in high payload, heavy towing, or competition pulling applications.
2. The front driveshaft dual cardan may need clearanced on vehicles with a large amount of lift. Use a rotary grinding with carbide bit to eliminate any possible interference.
3. Cannot be used on 8-bolt t-case models.
4. Designed to be used with 6" to 8" of lift.
5. Index ring alone may not eliminate all front driveline vibrations, caster cams at the axle may need to be adjusted to eliminated 4wd vibrations in rare circumstances.

INSTALLATION INSTRUCTIONS

Tip *The transmission output seal and transfer case input shaft have been redesigned from previous version trucks. There is no longer a need for a seal extension with replacement seal. Do NOT remove the transmission output seal!*

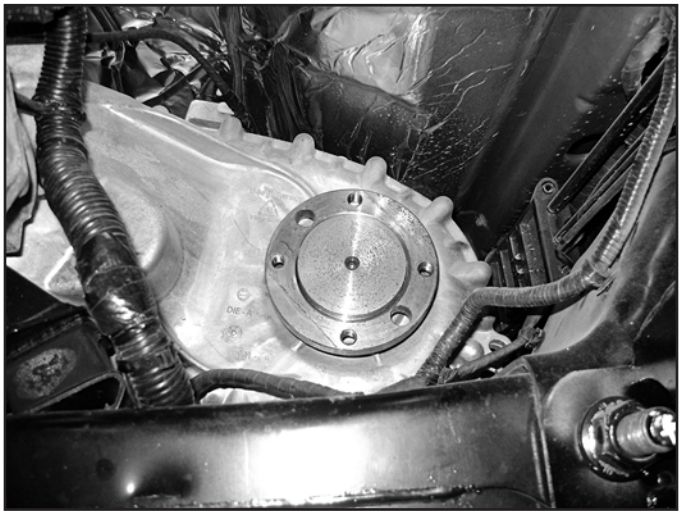
SPECIAL TOOLS

Transmission jack is highly recommended

1. Park vehicle on clean, flat, and level surface. Block the rear wheels for safety.
2. Remove the transfer case skid plate if equipped, it will not be reinstalled.
3. Remove the rear driveshaft, retain hardware. Disconnect the front driveshaft from the transfer case. (Fig 1a, 1b)

FIGURE 1A

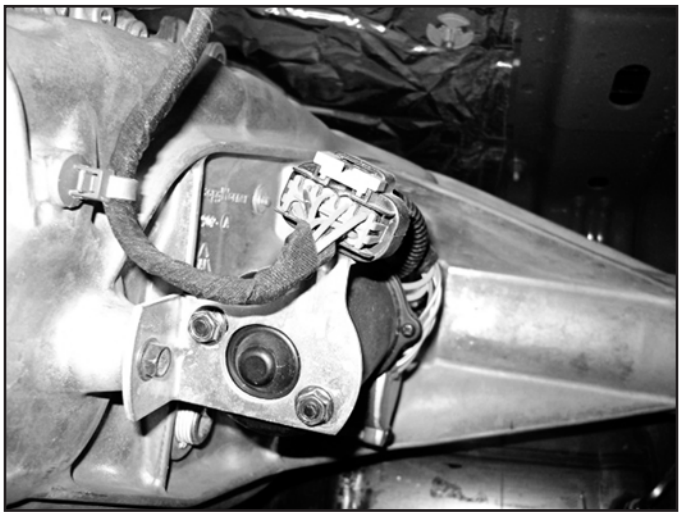
FIGURE 1B



4. Disconnect the wire harness that controls the transfer case. (Fig 2a, 2b)

FIGURE 2A

FIGURE 2B

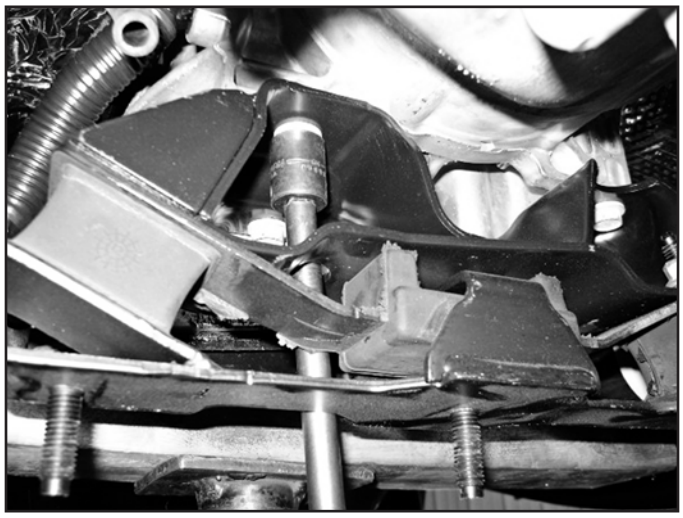


5. Disconnect the breather vent tube from the top of the transfer case.
6. Remove the 3 nuts that hold the transmission mount to the transmission crossmember. (Fig 3)

FIGURE 3

7. Support the transmission with a jack.
8. Remove the transmission crossmember and retain hardware.
9. Remove the mounting brackets that hold the transmission to the crossmember. (Fig 4)

FIGURE 4



10. Manual shift transfer cases: Disconnect the shift linkage from the transfer case, retain all hardware.
11. Remove the 6 nuts that hold the transfer case to the transmission and remove the transfercase from the vehicle. Use extra caution as the transfer case is very heavy.
12. Remove the 6 studs by double nutting the studs. Place new indexing ring up to the transfer case. Attach with 10mm flat head allen bolts (BP #950). Note there is a specific orientation and the indexing ring will need to be rotated to get the proper hole alignment. (Fig 5a, 5b, 5c)

FIGURE 5A

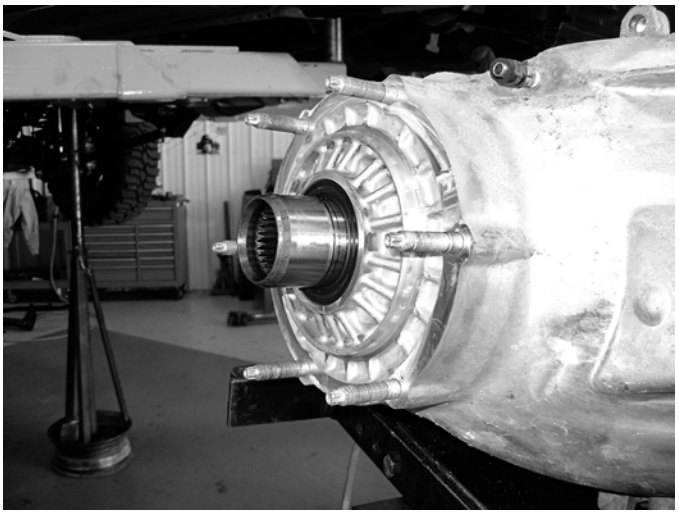


FIGURE 5B

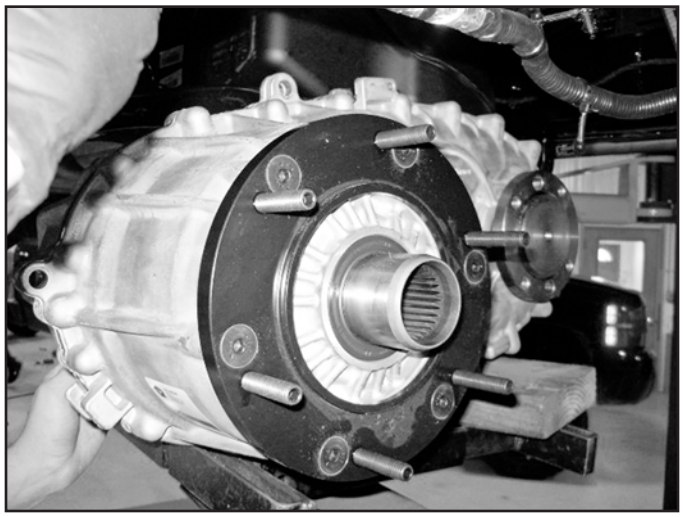


FIGURE 5C

13. Reinstall the transfer case and tighten with 3/8" fine thread nuts with washers. Loc-tite and tighten to 45 ft-lbs. Note: This torque applies with the loc-tite still slightly damp and acting as a lubricant. The max recommended torque is 55 ft-lbs when rechecking hardware.
14. Disconnect the wire harness on the frame rail, reroute the wires to the transmission / transfer case above the front driveshaft. (Fig 6a, 6b)

FIGURE 6A

FIGURE 6B

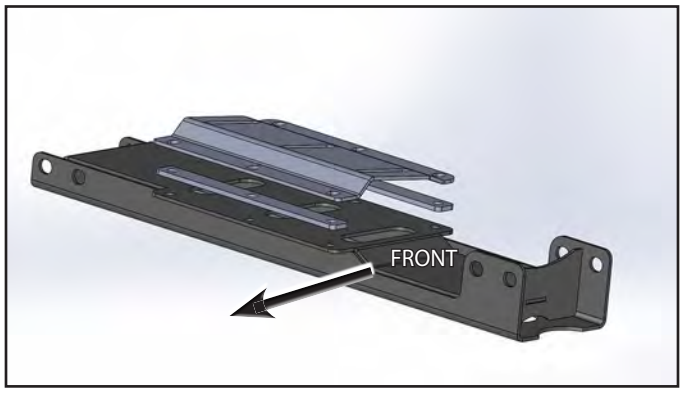
Tip *Before hooking up the front driveshaft, now is a great time to grease the nearly impossible to access grease fitting on the front dual cardan joint. A needle adaptor on a grease gun is required. This fitting is required to be serviced at every oil change interval. Ensure that this maintenance is not skipped!*

15. Reattach the front driveshaft with driveshaft spacer to the transfer case with new 7/16" hardware with loc-tite on the threads. Tighten to 75 ft-lbs. (Fig 7)

FIGURE 7

16. Reinstall the transmission mount with factory hardware.
17. Loosely install new base with the factory nuts (3 plc), the taller end of the bracket will face towards the front of the vehicle. (Fig 8)

FIGURE 8



18. Install new crossmember with factory bolts. If this installation is combined with a BDS 4-link kit the nuts will not be put on at this time, and will need to be installed with the 4-link brackets. Otherwise tighten to 150 ft-lbs.
19. There are spacers included with this kit to shim the height of the mount. It is recommended to start with two stacked for 6" kits and one plate for 8" kits, adjustments (removing / adding) may need to be made if driveline issues become present. Attach the bracket to cross-member with ½" hardware (6 places). Lower transmission to the mount and tighten the (3) nuts to 35 ft-lbs, ½" hardware 65 ft-lbs. (Fig 9)

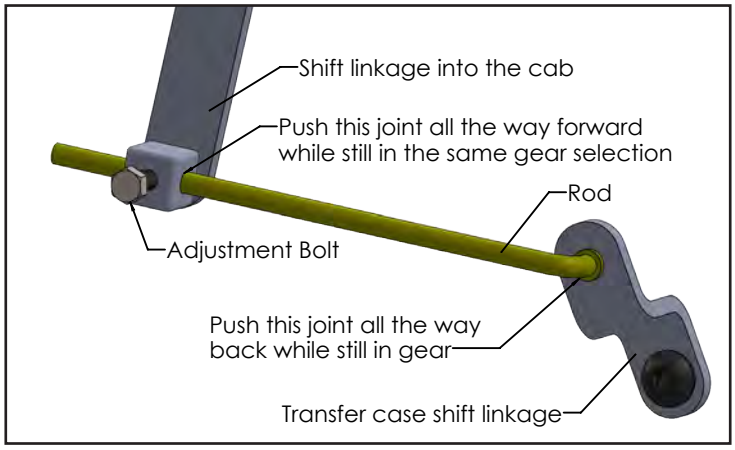
FIGURE 9

20. Attach the wiring to the transmission crossmember with Christmas tree zip ties and secure wires with the other zip ties to retain all wires to keep them clear of any rotating parts or exhaust..
21. Manual Shift Transfer Case: Reconnect the shift linkage to the transfer case. The adjuster may need to be loosened to allow the shift lever to rotate and line up with the linkage on the transfer case (Fig 9A). Additional adjustment may be necessary to get proper engagment in all gear ranges.

FIGURE 10

22. When adjusting the shift linkage, it is best to keep the shift linkage in 2wd. Loosen the bolt attaching the rod to the shifter lever going into the cab of the truck (Fig. 9B).
23. Push the transfer case shifter linkage towards the back of the truck, making sure it is still in the correct position (2wd). Next push the shifter linkage going into the cab all the way forward while still making sure it is reading the correct position in the cab (2wd). Tighten the shifter linkage bolt to tighten down the shifter linkage to the rod connecting to the transfer case shifter linkage (Fig 9B). Additional adjustment may be necessary to get proper engagement in all gear ranges.

FIGURE 11



24. Reinstall rear driveshaft with factory hardware with loc-tite on threads. Tighten to 75 ft-lbs.
25. Recheck all hardware for proper torque. Check again after 500 miles and at regularly scheduled maintenance intervals.

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