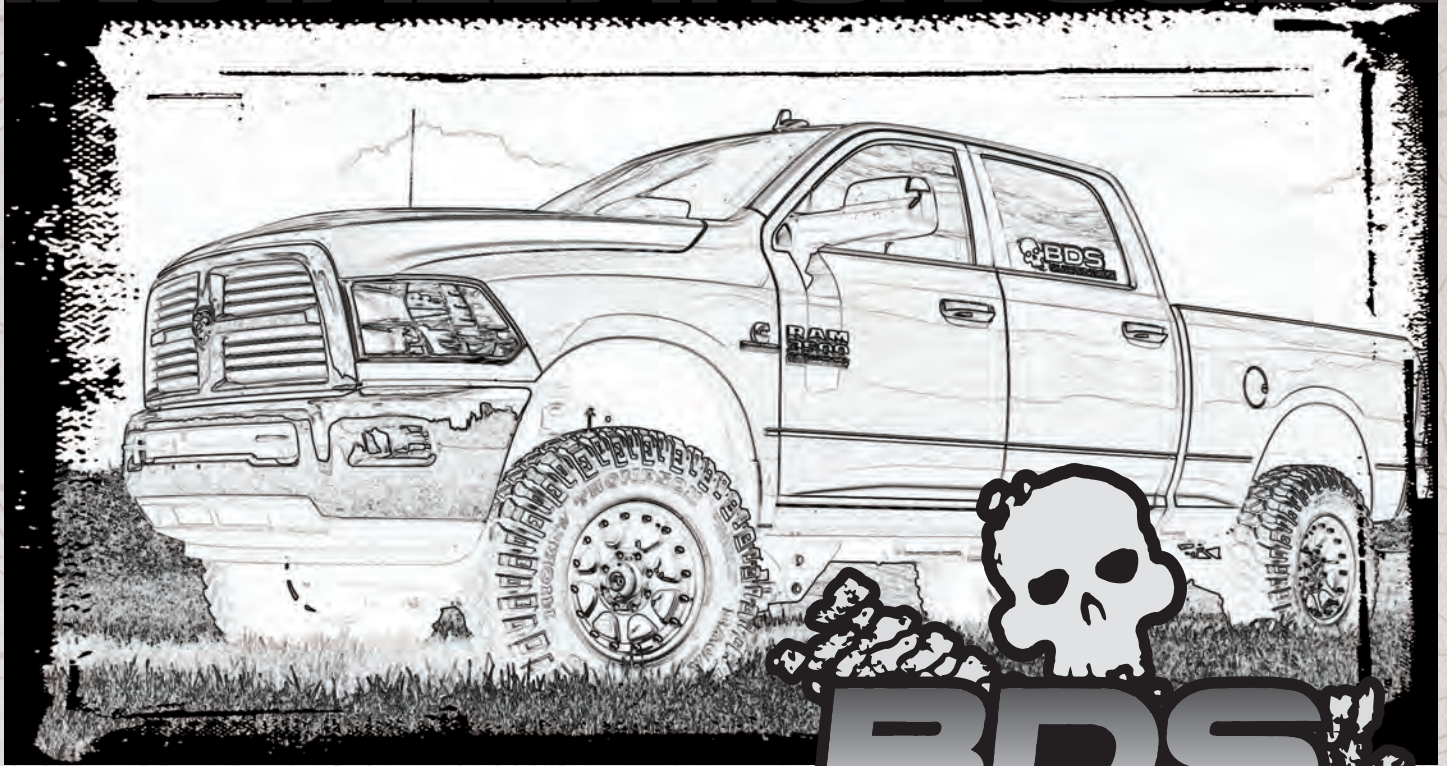


INSTALLATION GUIDE



Part#: 012615



HARDCORE LIMITED LIFETIME WARRANTY

6" Radius Arm Suspension System

Dodge Ram 2500 4WD Pickup | 2014-2018

Dodge Ram 3500 4WD Pickup | 2013-2018

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

Rev. 101022

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.

TIRES AND WHEELS

FITMENT GUIDE

6" Lift:

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

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



CONTENTS OF YOUR KIT

012615

| 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 |
| 03855 | 1 | Brake Bracket - Drv |
| 03856 | 1 | Brake Bracket - Pass |
| 99000 | 2 | Cable Tie |
| 342701 | 1 | Loctite |
| 02322BK | 2 | Bump Stop |
| 01253B | 1 | Sway Bar Drop - Drv |
| 01254B | 1 | Sway Bar Drop - Pass |
| 03964 | 1 | Ram 2500/3500 Radius Arm Cam Plate |
| 792 | 1 | Bolt Pack - Trackbar 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 |
| 495 | 1 | Bolt Pack - Brake Line Brackets |
| | 2 | 1/4" USS Washer, Clear Zinc |
| | 2 | 5/16"-18 Nylock Nut, Clear Zinc |
| 422 | 1 | Bolt Pack - Sway Bar Drop |
| | 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 Washer, Yellow Zinc |
| 358 | 1 | Bolt Pack - Sway Bar Drop |
| | 2 | 18mm-2.50 x 140mm Bolt, Class 10.9, Clear Zinc |
| | 4 | 18mm Washer, Clear Zinc |
| | 2 | 18mm-2.50 Prevailing Torque Nut, Clear Zinc |

032401

| Part # | Qty | Description |
|---------|-----|---------------------------------|
| 032401R | 1 | Front 5.5" Driver Coil - Gas |
| 032402R | 1 | Front 5.5" Passenger Coil - Gas |

032602

| Part # | Qty | Description |
|---------|-----|-------------------------|
| 032602R | 2 | Front 6" Coils - Diesel |

122321

| Part # | Qty | Description |
|--------|-----|---|
| A243 | 2 | Dodge Ram 2500/3500 Radius Arm |
| 02802 | 2 | BDS Badge |
| 995 | 1 | Bolt Pack |
| | 4 | 1/8" x 0.251-0.312 18-8 Stainless Steel Blind Rivet |

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:

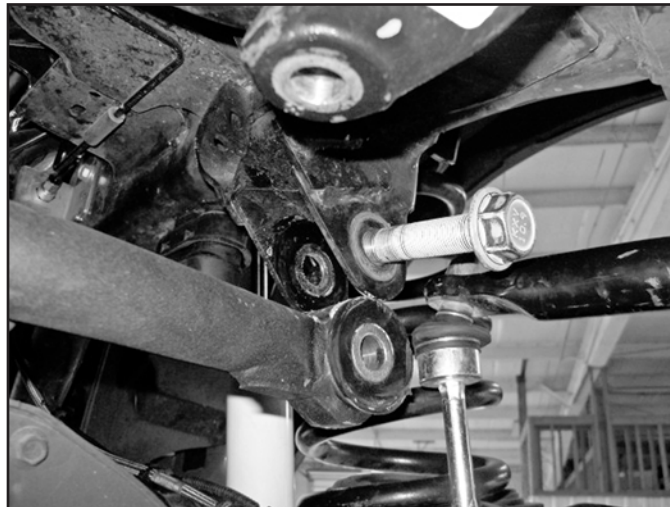
LF _____ RF _____

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

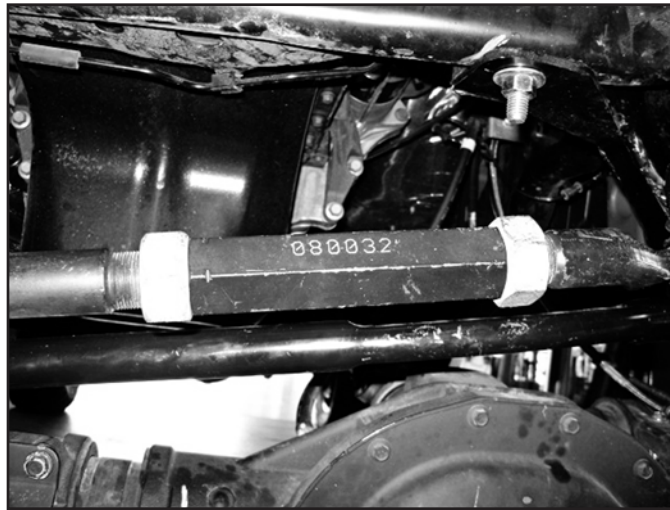


4. Raise the front of the vehicle and support the frame rails with jackstands. Do not support on the radius arms, they will be removed during the installation.

SUSPENSION DISASSEMBLY

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

FIGURE 2



8. 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)

FIGURE 3



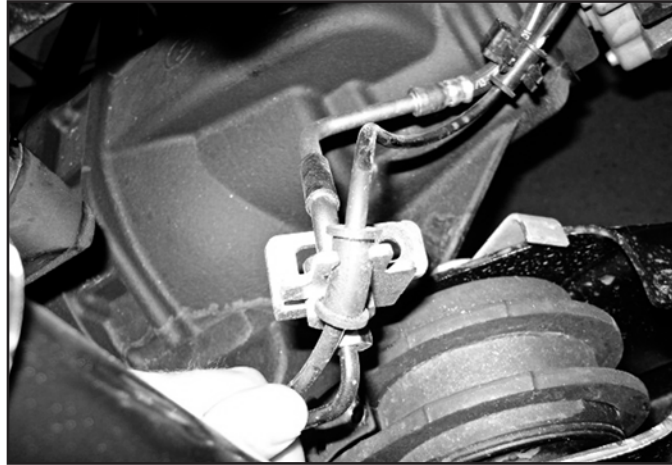
9. Disconnect the sway bar links from the sway bar. Disconnect the sway bar mounting hardware from the frame, and remove sway bar. Retain all hardware. (Fig. 4)

FIGURE 4



10. Disconnect the brake line brackets from the top of the radius arm mount on both sides of the axle, retain bolts, discard brackets. (Fig. 5)

FIGURE 5



11. Disconnect the factory shocks from the lower shock mount. (Fig. 6) Lower the front axle and remove the factory coil springs.

FIGURE 6



12. 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.

RADIUS ARM INSTALLATION:

13. Working on one side of the vehicle at a time, remove the factory 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.
14. Replace the radius arm with the new one, both sides are the same. Reattach with factory hardware at the frame and upper axle mount. Replace the cam bolt with the 18mm bolt supplied in bolt pack 358 and provided cam plates. Insert the cam plates so the bolt is as far forward as possible. (Fig 8A Passenger side shown) Note: This will provide more caster than the factory cam bolts allow. Remove one of the opposing bolts at the axle to allow the axle to rotate while supporting it with a jack. (Fig 8B)

FIGURE 8A

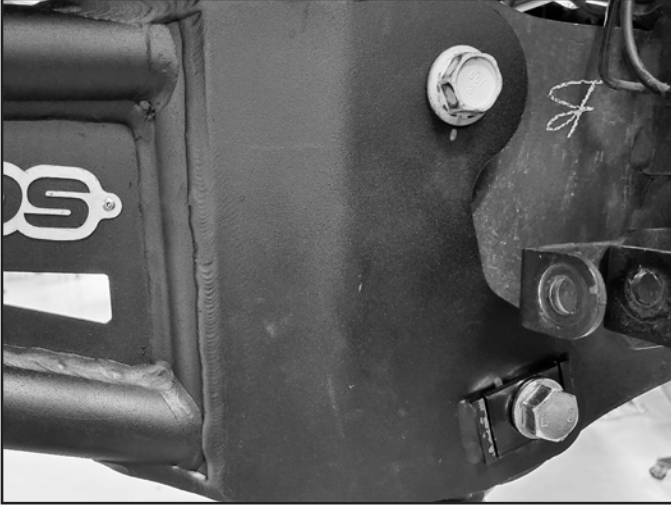


FIGURE 8B



15. Repeat radius arm installation on opposite side.
16. Tighten the upper bolt at the axle to 258 ft-lbs. Tighten lower cams to 258 ft-lbs. Do not tighten the pivot bushing hardware at the frame at this time.

BUMP STOP INSTALLATION:

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

FIGURE 12



18. 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)

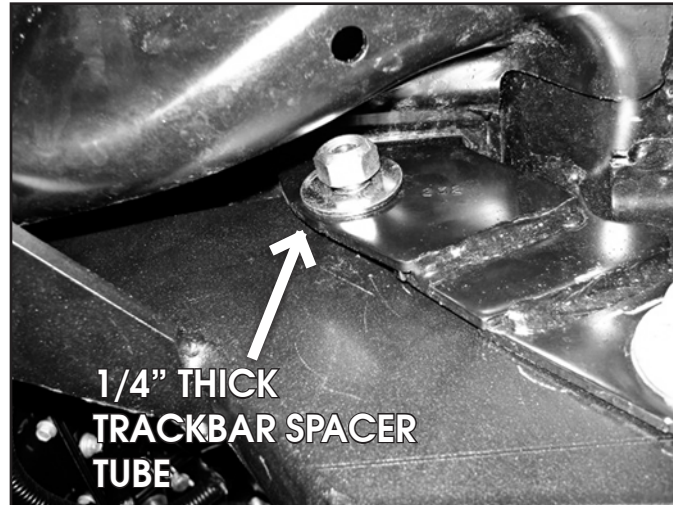
FIGURE 13



TRACK BAR BRACKET INSTALLATION

19. Install the trackbar bracket with factory bolt through the original trackbar hole.
20. Clearance the factory hole on the frame crossmember where the trackbar bracket meets to $9/16"$.
21. 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 $1/2"$ hardware will fit through it. (Fig. 14)

FIGURE 14



22. Fish the bolt tab through the frame rail with the included bolt wire and attach to the trackbar bracket with $1/2"$ USS washer and regular nut. Apply loctite to the bolt threads. Attach the upper hole with $1/2" \times 1-3/4"$ (#792) bolt with spacer washer as shown. (Fig. 15A, 15B)

FIGURE 15A

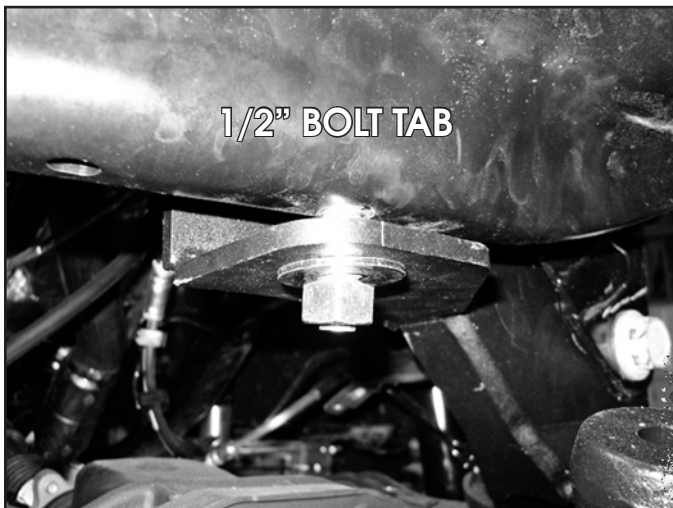


FIGURE 15B



23. Tighten $1/2"$ trackbar hardware to 65 ft-lbs. Tighten 18mm factory bolt to 150 ft-lbs.
24. Support front axle and remove the factory shocks. Retain the lower hardware, discard shocks and upper hardware.

COIL BUCKET MODIFICATION AND COIL/SHOCK INSTALL

25. **6" Diesel:** Lower the axle and install the new coils with factory isolator. The end of the spring with the windings closer together will go at the top, do not install upside down. The passenger's side upper mount will need to be reindexed. There is a template at the end of the instruction sheet. Cut this out and place over the passenger's side upper mount, mark the center of the hole, and drill to 1/2". The hole should now be directly to the 'Rear' of the vehicle. Install isolator with the new coil spring. Ensure that coils are seated properly, have someone help if necessary. (Fig 11a, 11b, 12a, 12b)

FIGURE 12A



FIGURE 12B



FIGURE 13A



FIGURE 13B



26. **5.5" Gas:** Lower the axle and install the new coils with factory isolator. The end of the spring with the windings closer together will go at the top, do not install upside down. The passenger's side upper mount will need to be reindexed. There is a template at the end of the instruction sheet. Cut this out and place over the passenger's side upper mount, mark the center of the hole, and drill to 1/2". The hole should now be directly to the 'Outside' of the vehicle. Install isolator with new coil spring. Ensure that coils are seated properly, have someone help if necessary. (Fig 14a, 14b, 15a, 15b)

FIGURE 14A



FIGURE 14B

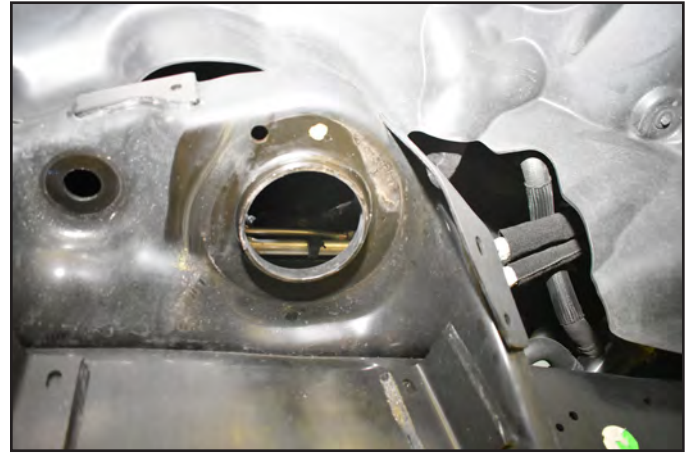
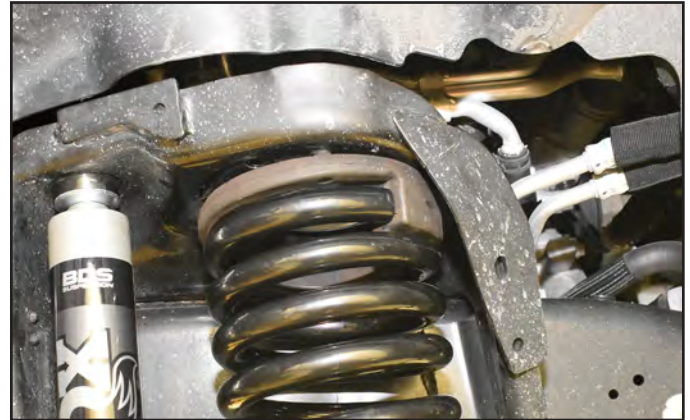


FIGURE 15A



FIGURE 15B



27. Grease and install bushings and sleeves into the shocks. Install new shocks with cup washers, bushings, and 1/2" nut at the top mount. Tighten the nut until the bushings begin to swell.
28. Attach the lower shock with factory hardware. Tighten hardware to 65 ft-lbs.

29. Disassemble the drag link. Trim the tab from the tie rod end flush with the end of the threads. (Fig 17A, 17B). Trim the end of the tab on the drag link to 1-1/4" long (Fig. 17c).

FIGURE 17A



FIGURE 17B

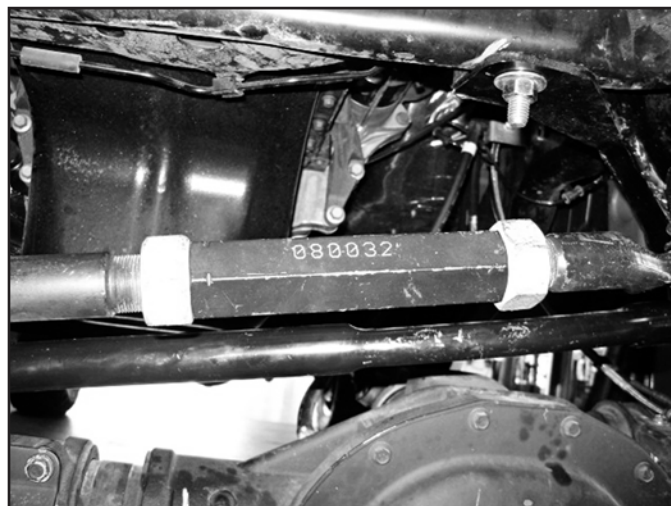


FIGURE 17C



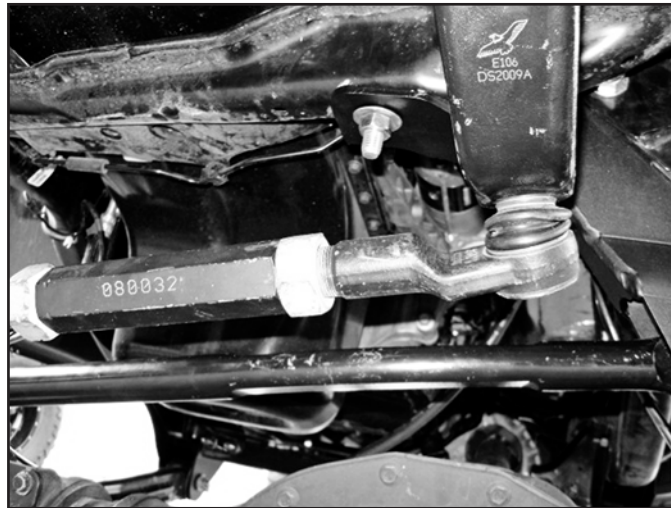
30. Reassemble the drag link, adjust so that there is approximately 3/4"~7/8" of thread exposed past the jam nuts and that the tie rod end faces up. (Fig. 18)

FIGURE 18



31. Install new pitman arm, use alignment mark made earlier. Loctite factory nut and install with lock washer tighten nut to 225 ft-lbs.
32. Attach drag link to pitman arm with factory nut. Tighten to 65 ft-lbs. (Fig. 19)

FIGURE 19



33. Mount the brake line relocation bracket to the factory brake line mount location at the frame with factory hardware, torque to 9ft-lbs. Mount the brake line to the relocation bracket using the provided hardware (Bolt pack 495), torque to 101in-lbs. (Fig. 20 Driver Side shown, Fig. 21 Passenger side)

FIGURE 20



FIGURE 21



34. Install the sway bar drop brackets with factory hardware to the frame. The flat side of the bracket will face "out" and the brackets will offset the sway bar slightly forward. Attach the sway bar to the drop brackets with 3/8" hardware (Bolt Pack 422), tighten factory hardware to 43 ft-lbs and 3/8" hardware to 37 ft-lbs. (Fig. 22, 23)

FIGURE 22



FIGURE 23



35. Reconnect the sway bar links with the factory hardware, torque to 60ft-lbs

36. PLEASE SEE INDEX RING KIT INSTRUCTIONS AT THIS TIME.

37. PLEASE SEE REAR KIT INSTRUCTIONS AT THIS TIME.

38. Install wheels and tighten lug nuts to factory specifications. Lower the vehicle to the ground.
39. Tighten radius arm hardware to 133 ft-lbs Plus 90 deg.
40. Turn the steering wheel to get the trackbar to align with the bracket. Install new 18mm bolt and tighten to 150 ft-lbs (#792).

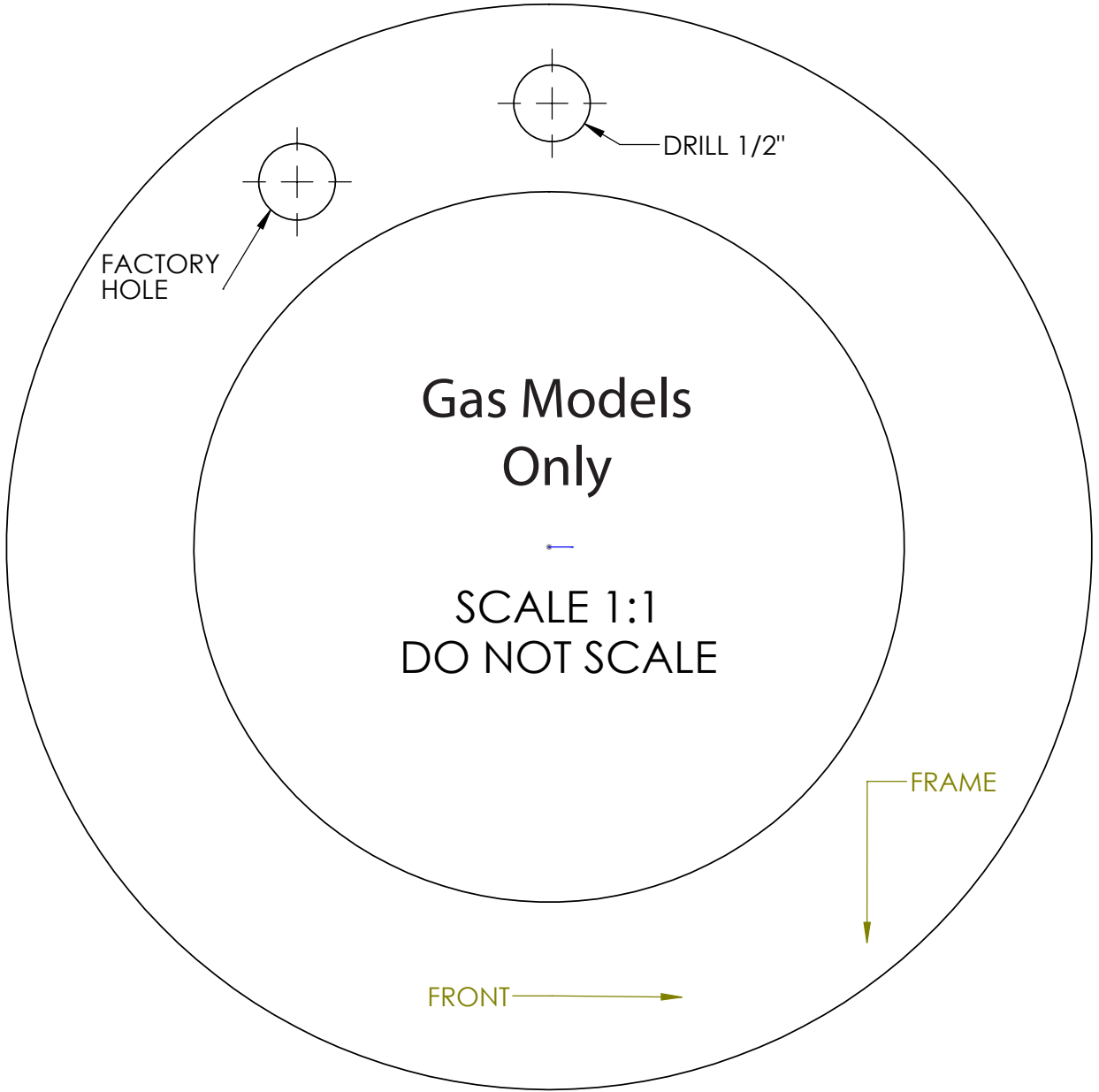
POST-INSTALLATION

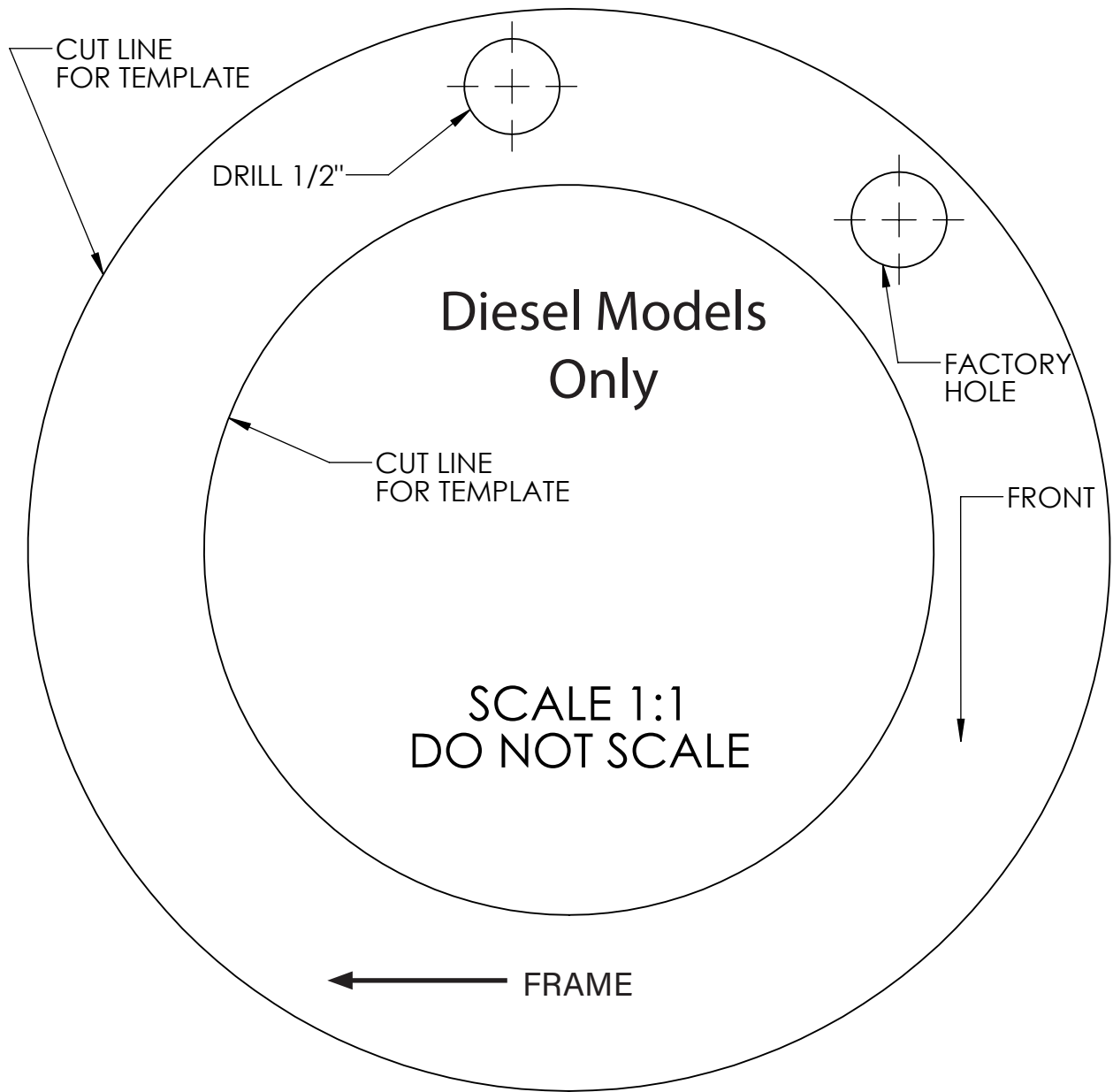
1. Adjust the steering wheel to center with the collar on the drag link. Securely lock off the jam nuts once the wheel is straight. Do not drive the vehicle with the steering wheel off-center or adverse traction control problems may arise.
2. Recheck all hardware, check again at 500 miles, and again 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.



WE WANT TO SEE YOUR RIDE!

Grab photos of your BDS-equipped truck in action and send them in for a chance to be featured. Send it in to our Bad Ass Rides customer gallery at bds-suspension.com/bar and post them on the BDS Fan Page on Facebook at facebook.com/BDSSuspensions. Don't forget about your BDS swag! BDS offers t-shirts, hoodies, decals and more available on the BDS website or through your local BDS distributor.





INSTALLATION GUIDE



Part#: 122623

HARDCORE LIMITED LIFETIME WARRANTY

Transfer Case Indexing Ring Kit

Dodge 2500 | 2014-18

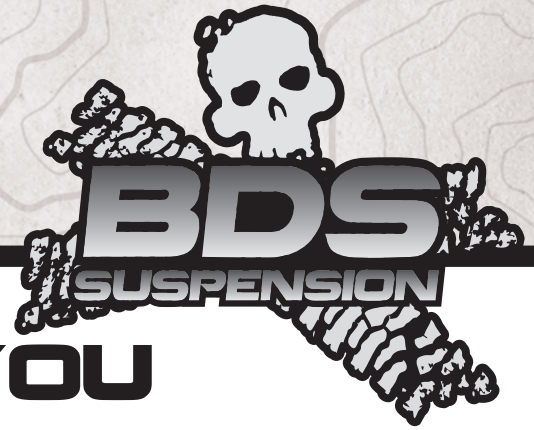
Dodge 3500 | 2013-18

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.



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.

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.

FOR YOUR SAFETY

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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

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.

**TECH
TIPS**

INSTALLATION INSTRUCTIONS

INSTALLATION INSTRUCTIONS

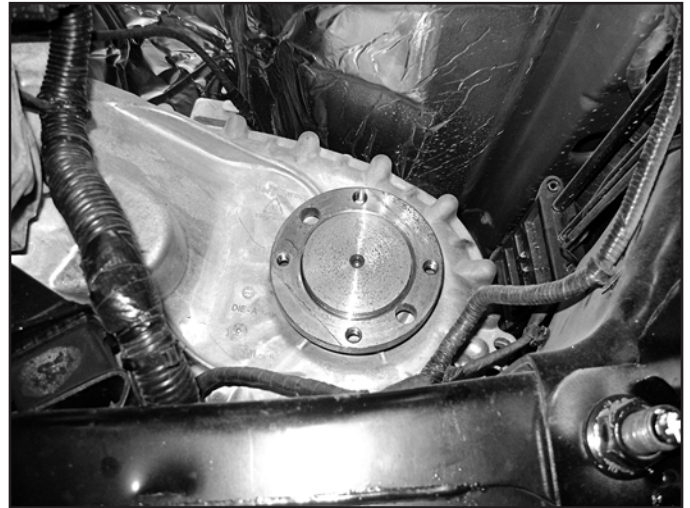
 **Tip** *The transmission output seal and transfer case input shaft have been redesigned from previous version trucks. There is no longer a need for a seal extension with replacement seal. Do NOT remove the transmission output seal!*

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

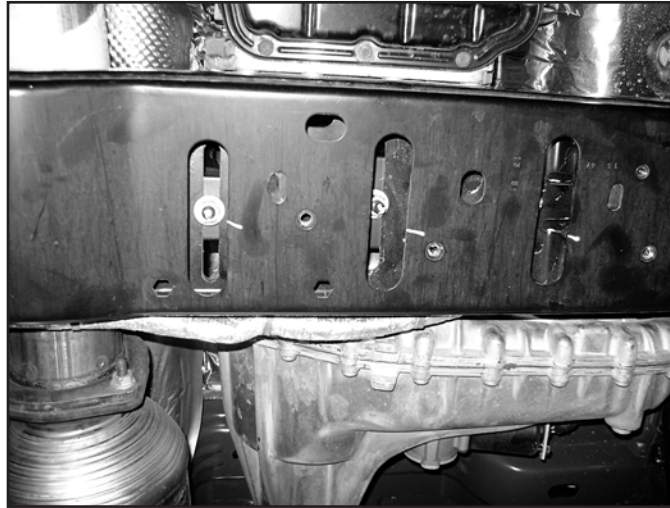


FIGURE 2B



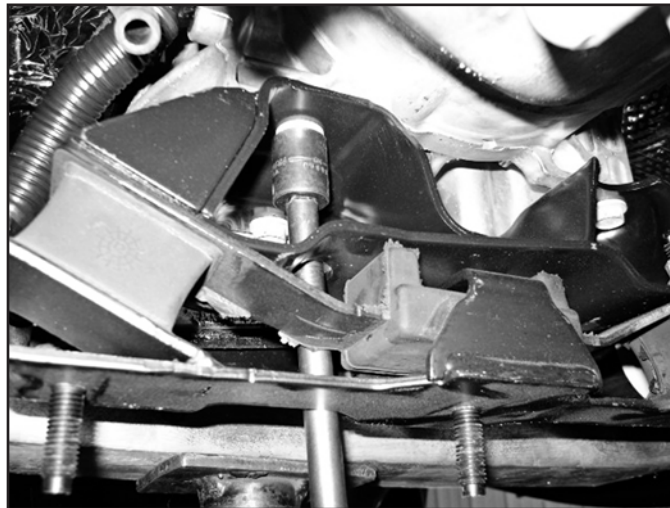
5. Disconnect the breather vent tube from the top of the transfer case.
6. Remove the 3 nuts that hold the transmission mount to the transmission crossmember. (Fig 3)

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 transfer case 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

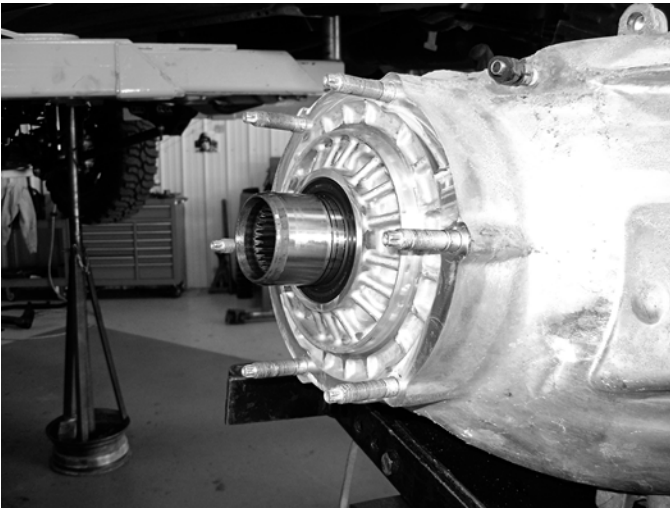


FIGURE 5B

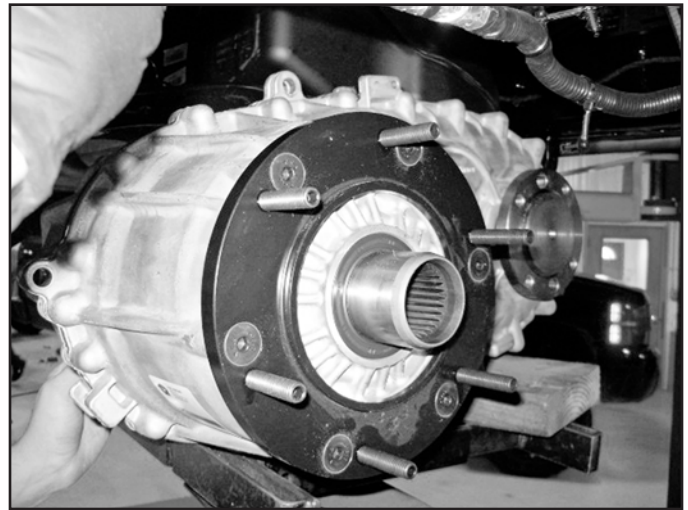


FIGURE 5C




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!

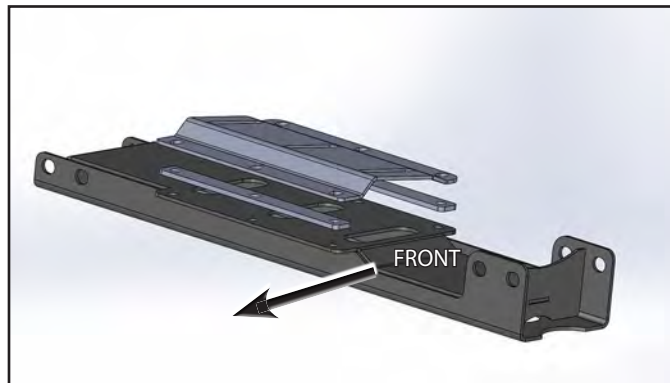
15. Reattach the front driveshaft with driveshaft spacer to the transfer case with new 7/16" hardware with loc-tite on the threads. Tighten to 75 ft-lbs. (Fig 7)

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 crossmember with 1/2" hardware (6 places). Lower transmission to the mount and tighten the (3) nuts to 35 ft-lbs, 1/2" hardware 65 ft-lbs. (Fig 9)

FIGURE 9



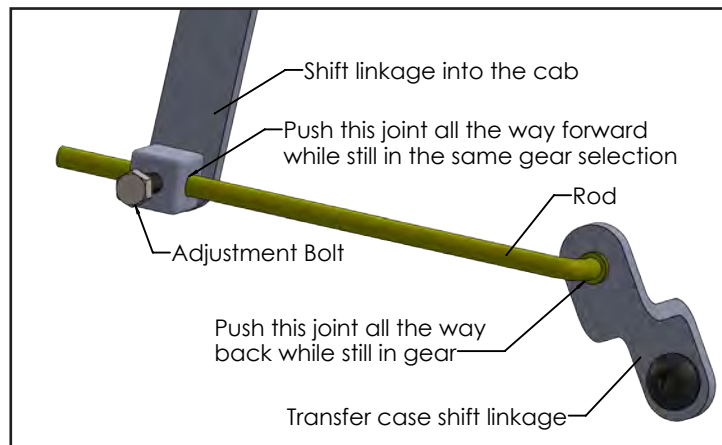
20. Attach the wiring to the transmission crossmember with Christmas tree zip ties and secure wires with the other zip ties to retain all wires to keep them clear of any rotating parts or exhaust..
21. Manual Shift Transfer Case: Reconnect the shift linkage to the transfer case. The adjuster may need 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 engagement 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.



WE WANT TO SEE YOUR RIDE!

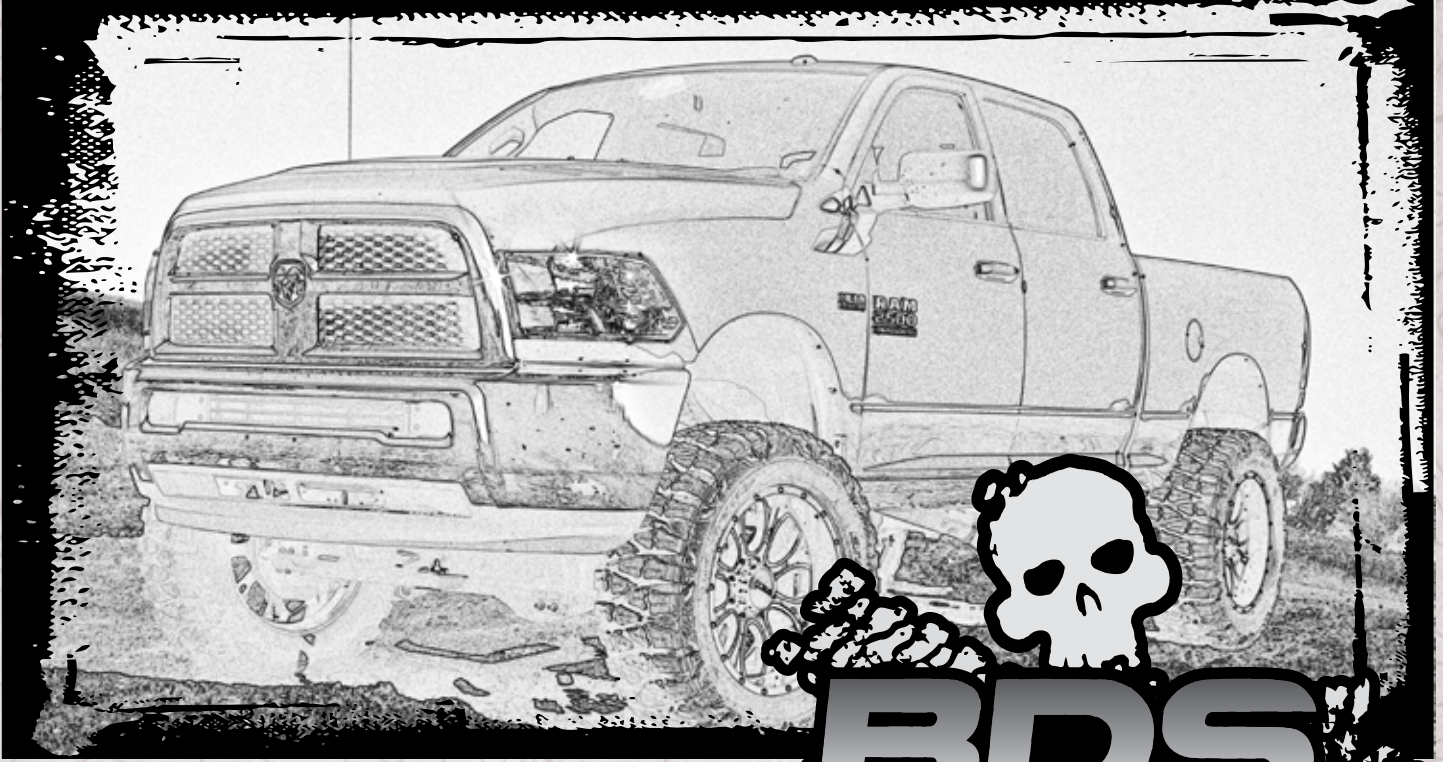
Grab photos of your BDS-equipped truck in action and send them in for a chance to be featured. Send it in to our Bad Ass Rides customer gallery at bds-suspension.com/bar and post them on the BDS Fan Page on Facebook at facebook.com/BDSSuspensions. Don't forget about your BDS swag! BDS offers t-shirts, hoodies, decals and more available on the BDS website or through your local BDS distributor.

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INSTALLATION GUIDE



Part#: 012257, 012359, 012529



HARDCORE LIMITED LIFETIME WARRANTY

2.5", 3.5" & 5" Rear Air Ride Lift Systems

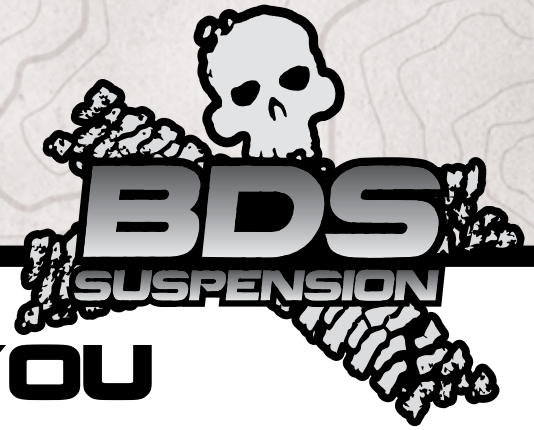
Dodge 2500 Pickup | 2014-16

Rev. 091318

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.



Visit 560plus.com for more information.

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

| Rear Air Bag Spacer Box Kit (012257, 012359, 012529) | | |
|--|-----|--|
| Part # | Qty | Description |
| 02497 | 1 | Rear Track Bar Bracket |
| 145 | 1 | Track Bar Bracket Sleeve (2-1/8" long) |
| 02496 | 2 | 2.5" Air Bag Spacer (012257 only) |
| 02963 | 2 | 3.5" Air Bag Spacer (012359 only) |
| 02964 | 2 | 5" Air Bag Spacer (012529 only) |
| 159 | 3 | Air Tank Spacer |
| 464 | 1 | Bolt Pack - Air Tank Spacer |
| | 3 | 8mm x 65mm Bolt |
| | 3 | 5/16" SAE flat washer |
| 422 | 1 | Bolt Pack |
| | 4 | 3/8"-16 x 4" bolt |
| | 4 | 3/8" USS flat washer |
| | 8 | 3/8"-16 Prevailing torque nut |
| | 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 |

TROUBLESHOOTING INFORMATION FOR YOUR VEHICLE

1. When installing this rear air ride system in conjunction with a 4-Link or radius arm drop bracket system. Use the provided air tank spacers in this box kit to provide.



**TECH
TIPS**

INSTALLATION INSTRUCTIONS

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

SPECIAL TOOLS

1/2" Drill



Tip

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

FIGURE 1



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



Tip

Once the nut is loose on the sway bar, use a 8mm socket to tighten the stud and hold the nut with an 18mm wrench as shown in Fig2B

FIGURE 2A



FIGURE 2B



8. Loosen the air fittings at the valve block on the passenger side frame rail to allow the air to bleed from the rear bags (Fig 3).
9. Disconnect the ride height linkage from the axle using a clip tool (Fig 4).

FIGURE 3



FIGURE 4



10. 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 5a, 5b).



Tip

Tip: You may also remove the inner fender liner if you prefer not to cut and need easier access to the shock nut.

FIGURE 5A



FIGURE 5B

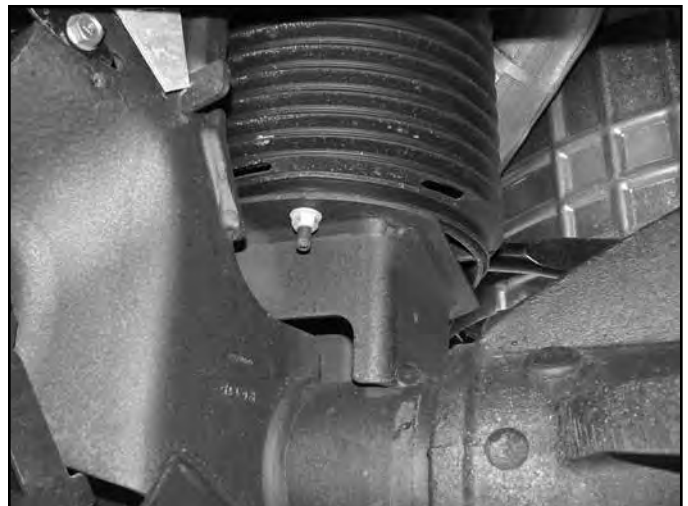


11. Remove the air bag to axle mounting nuts; 2 per side.

FIGURE 6A



FIGURE 6B



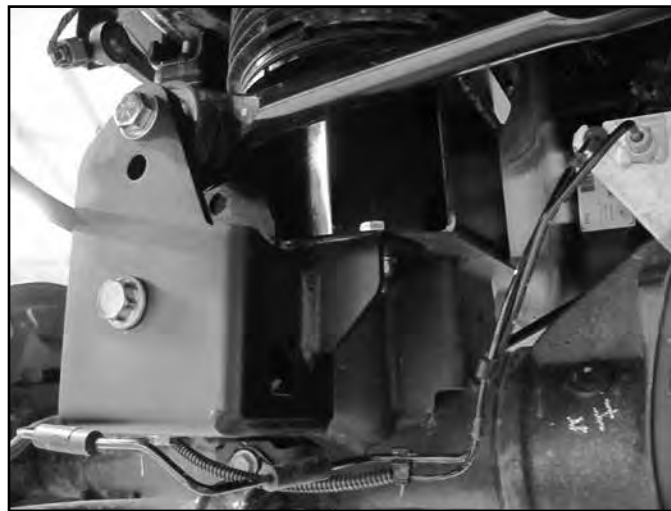
12. Locate the holes in the rear lower air bag mount. Clearance the rear most hole on the driver's side to 1/2" to accept larger track bar hardware, the remaining 3 holes will accept 3/8" hardware. (Fig. 7)

FIGURE 7



13. Install the rear air bag spacers with 3/8" hardware (BP 460) except at Driver's rear location, this will attach with the trackbar hardware. Tighten 3/8" hardware to 35 ft-lbs.
14. Install the trackbar bracket to the axle. First loosely attach the bracket using the 7/16" hardware through 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. 8)

FIGURE 8



15. Tighten trackbar bracket hardware as follows: 14mm factory hardware 95 ft-lbs, 7/16" hardware 45 ft-lbs, 3/8" hardware 35 ft-lbs. Do not install track bar at this time, it will be installed w/ the weight of the vehicle on the suspension.
16. Attach the air bags to the air bag spacers using the factory nuts. An additional nut 8mm nut is provided in bolt pack 460 if not installed from the factory on the driver's side. (Fig 9)

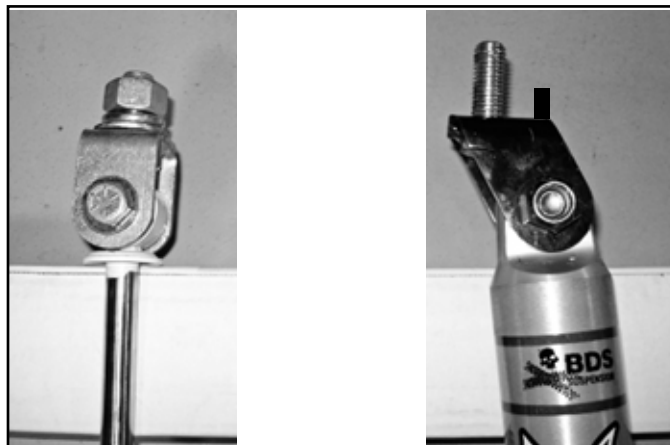
FIGURE 9



17. **3.5" - 5" Kit BDS NX2 Shock Installation:** BDS (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. 10 on Left)

3.5" - 5" Kit Fox Shock Installation: Fox shocks will require an offset stem eliminator bracket and bolt pack 946. 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, it may be necessary to slightly enlarge the opening due to variances in trucks, however this is highly unlikely. (Fig. 10 on Right)

FIGURE 10



18. Grease bushings and sleeves and install into sway bar links. Install sway bar links with new 12mm hardware. (BP 795). Tighten to 45 ft-lbs. (Fig 11)

FIGURE 11



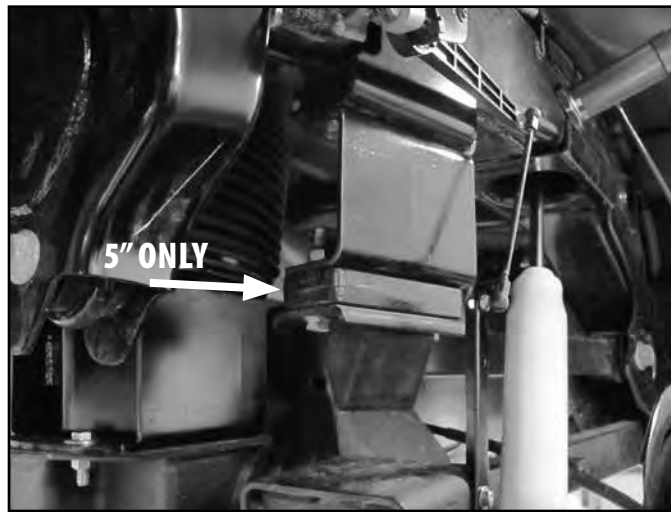
19. Remove the factory bump stops. from the vehicle.

FIGURE 12



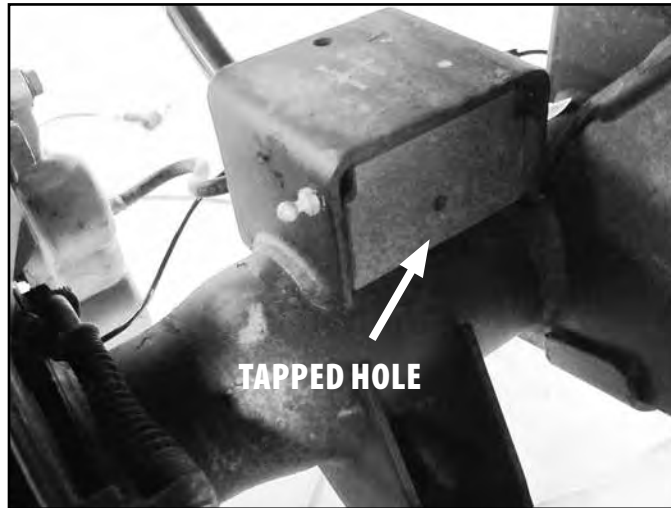
20. **2.5-3.5" Bump Stop Installation:** Install the bump stop drop brackets with new 10mm hardware to the frame (BP 458). Install so the gusseted side faces in and offsets the bumpstop towards the center of the vehicle. Using the provided 10mm bolts, nuts, and washers, attached the bump stop directly to the bottom of the drop bracket. The factory spacer will not be used. Tighten to 35 ft-lbs. (Fig 13)
21. **5" Bump Stop Installation:** Install the bump stop drop brackets with new 10mm hardware to the frame (BP 458). Install so the gusseted side faces in and offsets the bumpstop towards the center of the vehicle. Using the stock bolts and provided nuts and washers, install the bump stop WITH the factory bump stop spacer to the bottom of the drop bracket. (Fig 13)

FIGURE 13



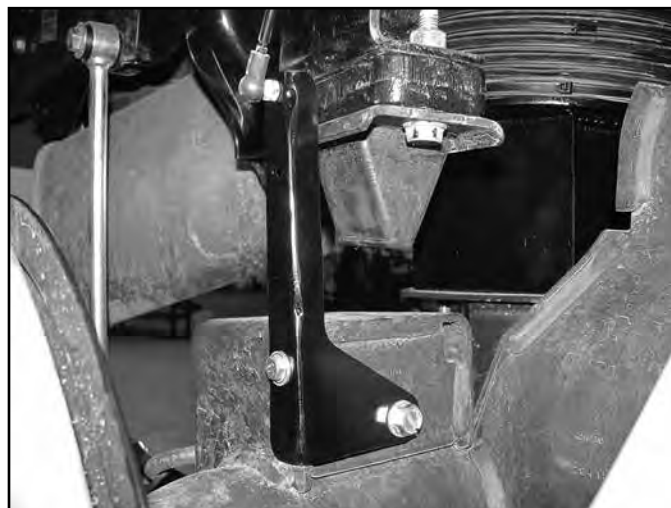
22. Remove ride height sensor linkage stud from the axle (Fig 14).
23. Using the supplied 3/8" self tapping bolt (BP460), thread the holes in front of the bump stop pads (Fig. 14).

FIGURE 14



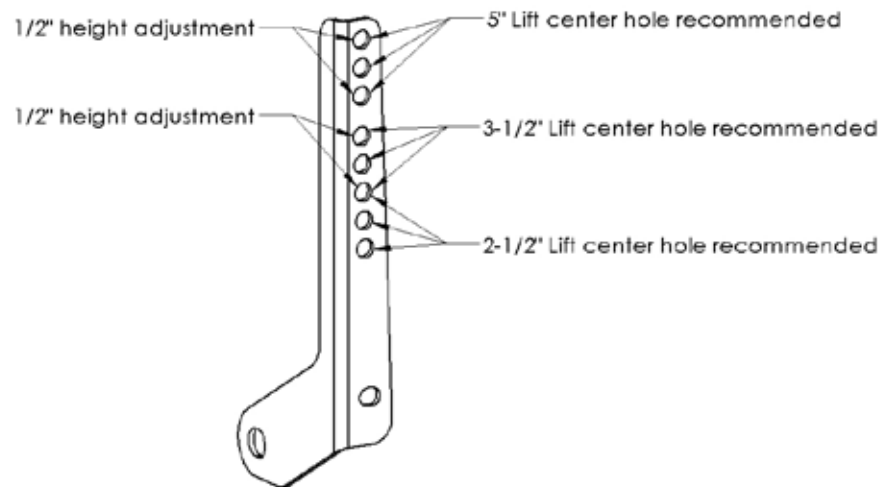
24. Fasten the sensor relocation brackets to the axle with the 3/8" self tapping bolt and provided 6mm bolt and washer (BP 460)

FIGURE 15



25. Attach the factory linkage stud to the linkage bracket with the provided nylock nut (BP460). Use the following image as a guide for your desired ride height. Pop the linkage rod back onto the stud.

FIGURE 16



26. If installing a lift with 4-link bracket or radius arm relocation bracket. This box kit contains 3 air tank spacers (159) and bolts to provide bracket clearance. Remove the 3 factory mounting bolts. Insert the spacers between the tank mounts and frame and tighten with the provided hardware (BP 464).
27. 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.
28. Lower vehicle to the ground. Ensure the air bags are seated correctly at the frame.
29. Tighten the air fittings at the valve block loosened in Figure 3. The torque spec is 53 in-lbs. Do not overtighten as this could lead to damage to the threads.
30. Cycle the key to the ignition on position until the rear air bags are inflated to the set ride height.
31. Attach trackbar to the new bracket with 9/16" x 4" hardware (BP 459). 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. 2.5"-3.5" kits use the lower hole, 5" rear kits use the upper hole.
32. Recheck all hardware for proper torque, check again after 500 miles.



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