INSTALLATION GUIDE

Part#: 028311

HARDCORE LIMITED LIFETIME WARRANTY

3" Coilover Lift System

Toyota Tundra | 2022

Rev. 051524

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.

FACTORY PROTECTION PLUS

Visit 560plus.com for more information.

TIRES AND WHEELS

No Trimming*
295/65 R20 Tire w/ 6-7/8 BS (OE TRD Wheel)
285/65 R20 Tire or 285/75 R18 w/9" Wide 6-1/8" BS Wheel
295/60 R20 Tire or 295/70 R18 w/9" Wide 5-1/2" BS Wheel
305/55 R20 Tire or 305/65 R18 w/9" Wide 5" BS Wheel

Trimming**
325/60 R20 Tire w/9" Wide 6-1/8" BS Wheel
35/12.50 R20 Tire or 35/12.50 R18 w/9" Wide 5-1/2" BS Wheel
295/65 R20 Tire or 305/70 R18 or 285/75 R18w/9" Wide 5" BS Wheel

* Wheel and Tire combination was tested through normal driving conditions within alignment specs with no rubbing or trimming needed.

**Wheel and Tire combination was tested through normal driving conditions within alignment specs and some or all the following were required: removal of mud flap, fender liner being trimmed or fastened further back, body mount bump being cut off or ground down

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.

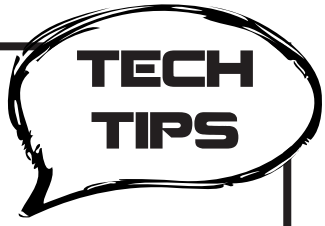
Perform head light check and adjustment.

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

CONTENTS OF YOUR KIT

BDS028311 Front Box Kit		
Part #	Qty	Description
B1613	1	Bag Kit
387	1	Bolt Pack
M02855	4	3/4" ID x 1-3/16" OD Half Bushing
99	2	3/4 x .090 x 2.62 Sleeve
05298	1	Driver Front Diff Drop
05299	1	Passenger Front Diff Drop
BDS038156 Rear Coil Spring Kit		
B1614	1	Bag Kit
386	1	Bolt Pack
01499	2	02-05 Dodge 6in Kit 1/4in Spacer
01716	1	Radiator Relocation Bracket
038307R	2	Rear Coil Spring - 1.75"
BDS222780	2	BDS Logo Decal

TROUBLESHOOTING INFORMATION FOR YOUR VEHICLE



1. Will not work on TRD Pro models.
2. Arms are designed to work with Fox Coilovers that require upper control arms and may not work with all aftermarket spacer lifts / lift kits (Will work with BDS 3" Lift). The ball joint has been re-indexed to allow for max range of motion with 2"-3" lifts.
3. Ball joint cap must be removed for maintenance of ball joint. Remove cap to access grease zerk. Grease at regular maintenance intervals
4. For replacement ball joints, order BDS088200. Ball joints are not directional..

IMPORTANT

It is required that ride height measurements be taken before and after installation. Measure from the **WHEEL AXLE CENTER** up to the **FENDER LIP** of the wheel opening. Do this for all 4 wheels. Record measurements below.**

BEFORE

*Left Front*_____ *Right Front*_____

*Left Rear*_____ *Right Rear*_____

AFTER

*Left Front*_____ *Right Front*_____

*Left Rear*_____ *Right Rear*_____

***These ride heights will be required if you have any ride height concerns after installation. Please be prepared to provide these to Technical Support.*

INSTALLATION INSTRUCTIONS

SPECIAL TOOLS

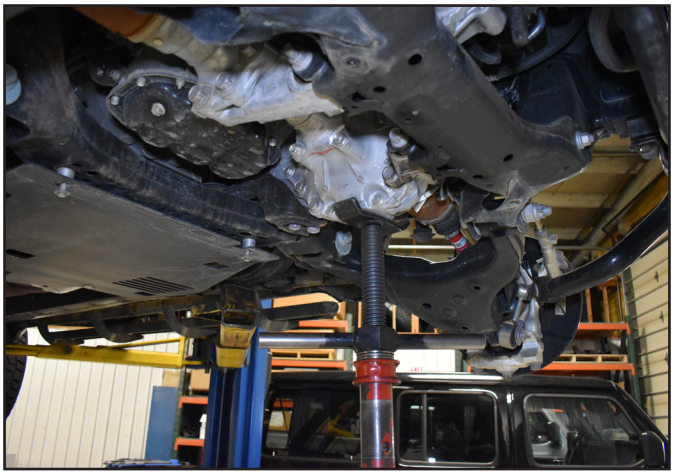
Large Punch

1. Park the vehicle and a clean, flat surface and block the rear wheels for safety.
2. Raise the front of the vehicle and support the frame with jack stands behind the lower control arms.
3. Remove the front wheels.

DIFFERENTIAL DROP INSTALLATION

4. Remove the front lower skid plate (if equipped).
5. Loosen the rear mount Nut
6. Support the front differential with a hydraulic jack/screw jack. (Fig. 1)

FIGURE 1



7. Remove the 2 front bolts attaching the differential to the front cross member. Retain hardware for reuse. (Fig. 2 & 3)

FIGURE 2

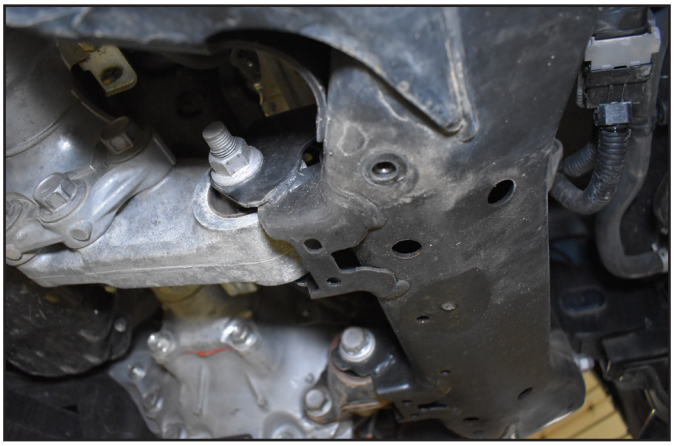
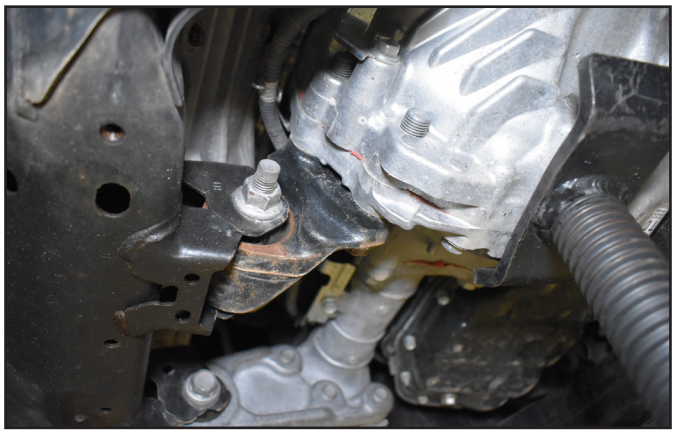
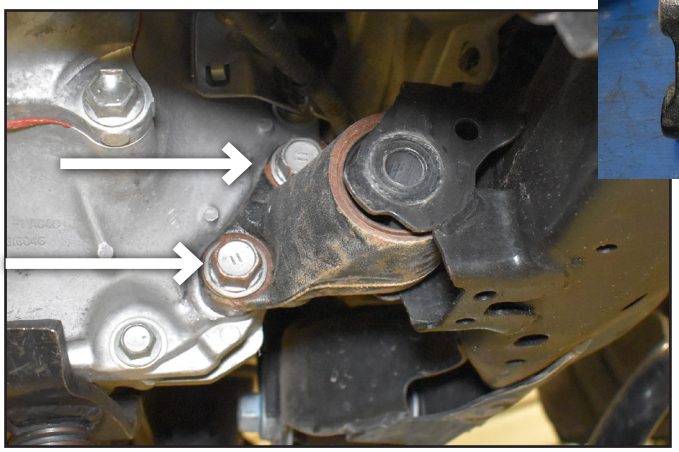


FIGURE 3



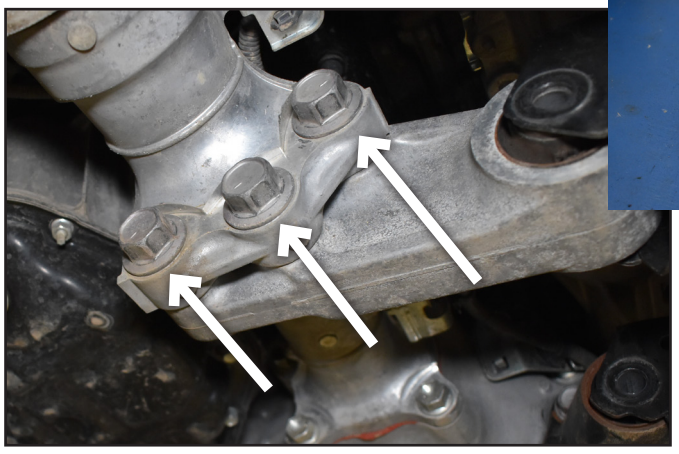
8. Remove 2 - Driver side differential bracket bolts. Remove bracket and discard. (Fig. 4)

FIGURE 4



9. Remove 3 - Passenger side differential bracket bolts. Remove bracket and discard. (Fig. 5)

FIGURE 5



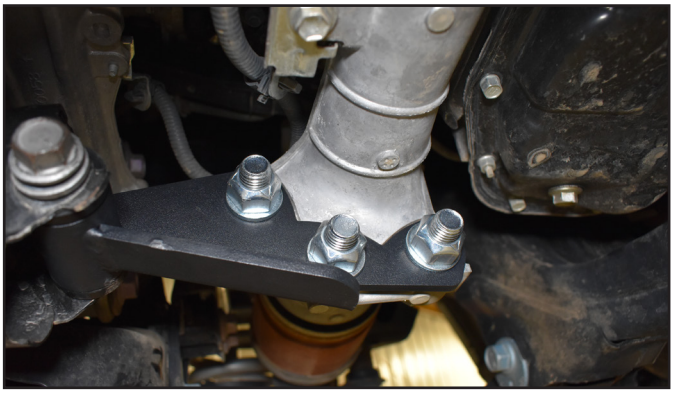
10. Install bushings and sleeves into replacement brackets using bench mounted vice. (Fig. 6)

FIGURE 6

11. Fit passenger side differential bracket into the crossmember, re-using OE hardware. Align the 3 bolt holes and install the 3 provided M-16 bolts, 6 washers and 3 nuts, from the outside - in. Fig. 7 & 8 Note: It will be necessary to leave hardware loose until both sides are installed.

FIGURE 7

FIGURE 8



12. Fit driver side differential bracket into the crossmember, re-using OE hardware. Align the 2 bolt holes and install the 2 provided bolts, 2 washers through the diff. bracket (Fig.9) and through the 2 provided gold spacer washers (Fig. 10) and into the 2 thread holes in the differential.

FIGURE 9

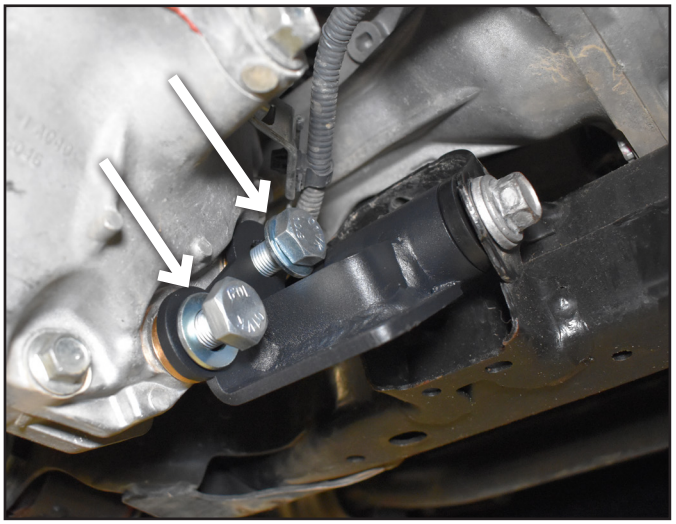
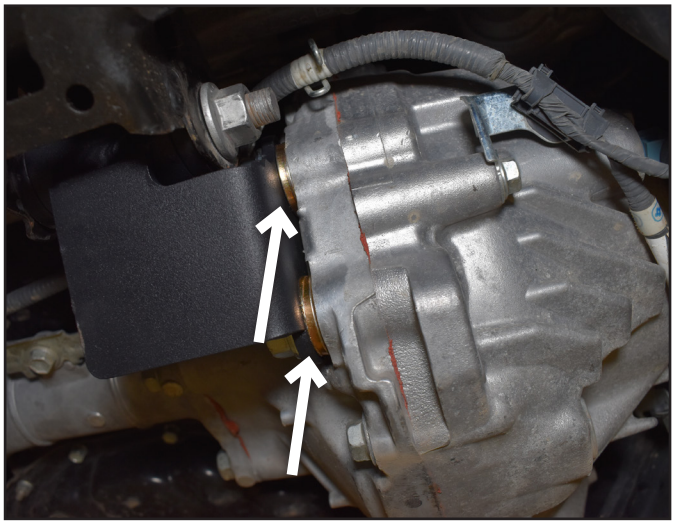
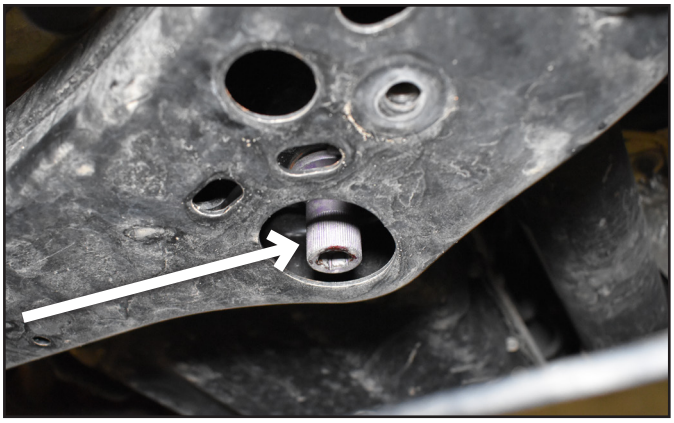


FIGURE 10



Note: It may be necessary to loosen the upper differential mount to allow enough diff. slack to align mounting holes in the bushing sides of the mounts. Fig. 11

FIGURE 11



13. With all hardware installed tighten to spec.

Tighten in the following order:

3x Front Pass Side bolts 111 ft-lbs

2x Front Drv Side Bolts 92 ft-lbs

2x Rear Mount bracket Bolts 133 ft-lbs

1x Rear Crossmember Nut 74 ft-lbs

2x Front crossmember bolts torque to 92 ft-lbs

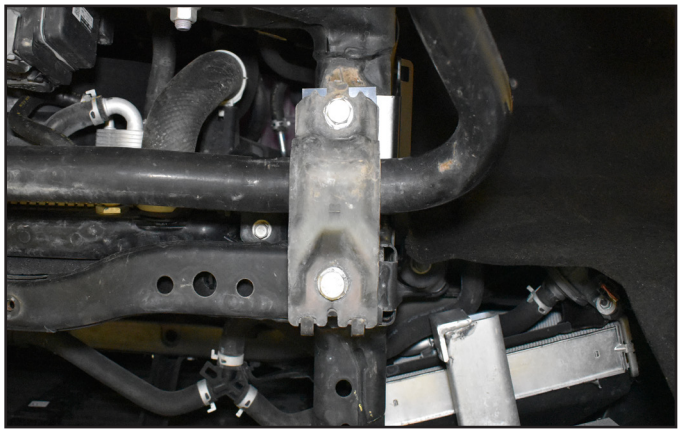
FRONT UPPER CONTROL ARM INSTALLATION

SEE BDS128254 INSTRUCTIONS

SWAYBAR DROP & RESERVOIR BRACKET INSTALLATION

14. Remove sway bar bracket bolts and washers. Hint loosen the other side if needed. (Fig. 12)

FIGURE 12



15. Install the bottom spacer loosely to hold the bracket in place. (Fig. 13) Install the top spacer and Coilover Reservoir bracket. Torque all 4 bolts to 55 ft-lbs (Fig. 14) ***Note: CO Res. Bracket needs to be installed in between the frame and drop spacer.***

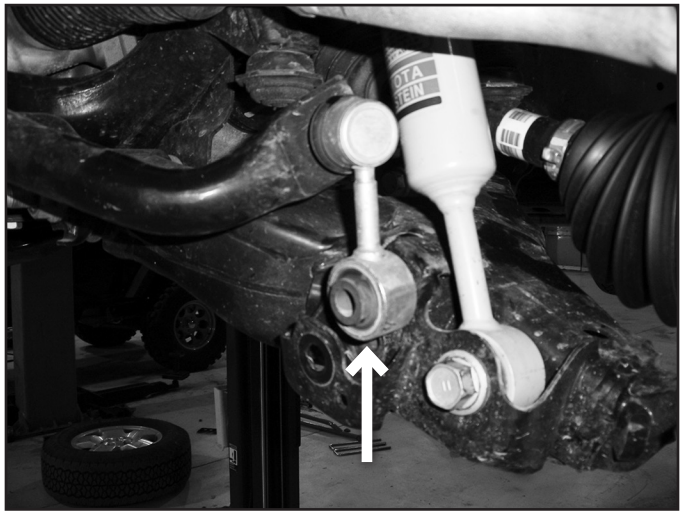
FIGURE 13

FIGURE 14

FRONT COIL OVER INSTALLATION

16. Disconnect the sway bar links from the lower control arm (Fig 15). Retain hardware.

FIGURE 15

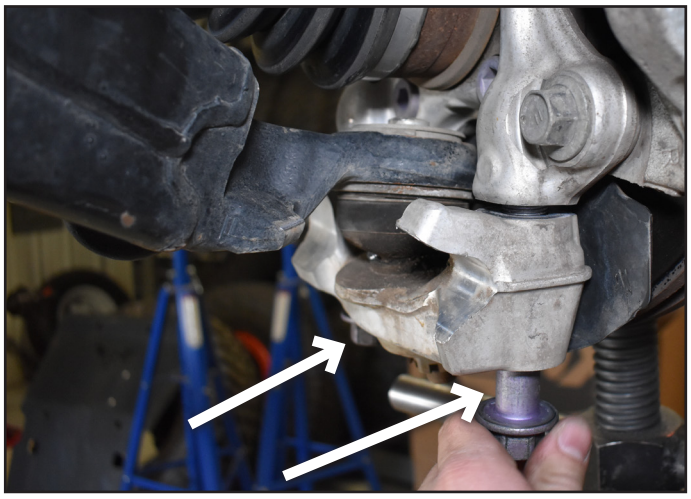


17. Support the lower control arm with a hydraulic jack
18. Loosen the lower control arm cam bolts. This will allow the lower control arm to swing out of the way.

    Note: The front mount requires that the bolt head be turned not the nut, it will help if you remove the skid plate, but it is not necessary.

19. Remove the 2 bolts that attach the lower control arm to the lower ball joint (Fig 16).

FIGURE 16



20. Remove the lower strut bolt (Fig 17).

    Do not discard bolts, as they will be used with your new FOX coil-over assembly, depending on model.

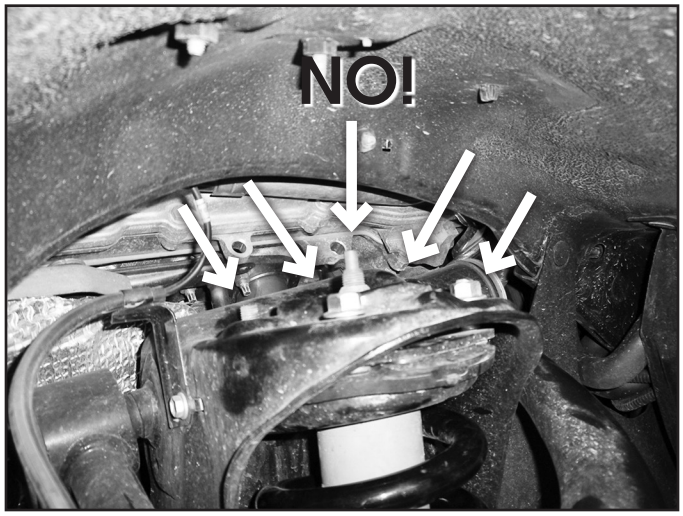
FIGURE 17

21. Lower the jack and allow the lower control arm to swing down.

22. Locate the driver's and passenger's top strut mounting nuts (Fig 18). Remove the four nuts that hold each strut to the frame. Remove the strut from the vehicle by lowering it straight down.

⚠ *CAUTION: DO NOT remove the center strut nut. It is under extreme pressure. Remove the strut from the vehicle by lowering it straight down.*

FIGURE 18



COILOVER INSTALLATION

Perform the following steps one side at a time, starting with the passenger's side.

23. Install the new coil-over assembly. With remote reservoir models make sure that the hoses are facing outward and towards the front of the vehicle. Feed the reservoir up first, (Fig.19) then the coilover. Connect the coilover hat to the vehicle using the 4 nuts provided. (Fig.20) Leave hardware loose. Proper installation will look like Fig. 21.

FIGURE 19

FIGURE 20

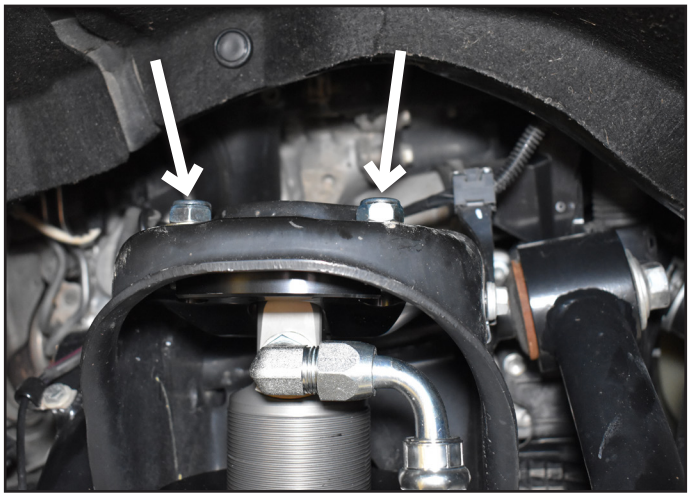
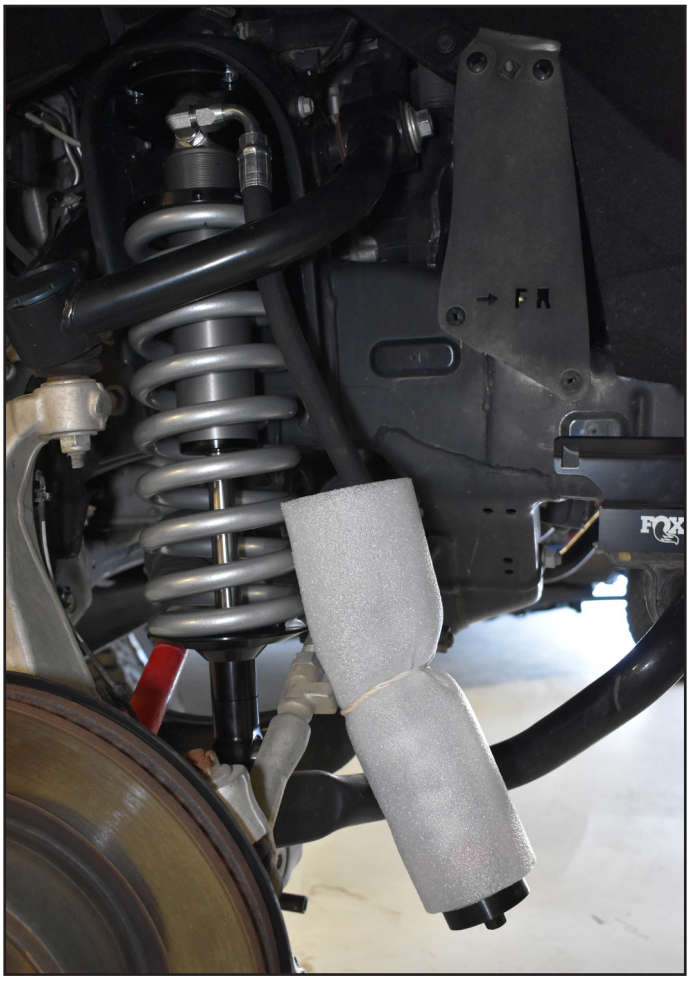


FIGURE 21



NOTE: The reservoir bracket will be installed during the sway bar drop spacer installation.

24. To mount the lower coilover to the LCA, use a jack to lift the LCA assembly giving drive axle clearance of the shock bolt, and assisting in alignment of the coilover bolt hole with the LCA mount hole as shown in (Figures 22, 23 and 24)Connect the shock to the lower control arm with the longer spacers toward the front of the vehicle reuse the factory lower bolt and nut. Torque to 122 ft-lbs. . ***Note: The drive axle can come out during disassembly so it may be necessary to relocate the drive axle as the LCA is lifted.***

FIGURE 22

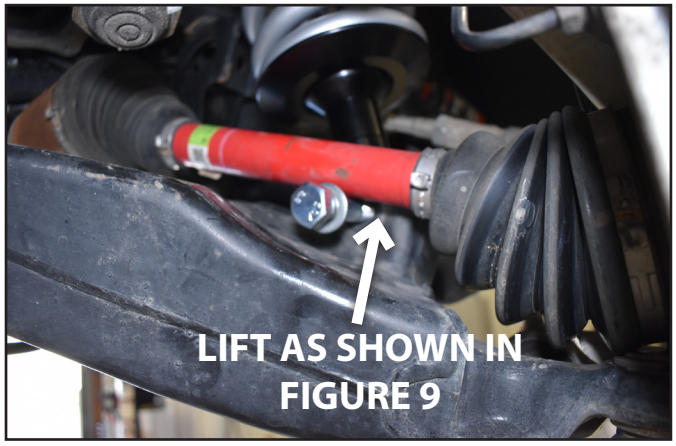


FIGURE 23

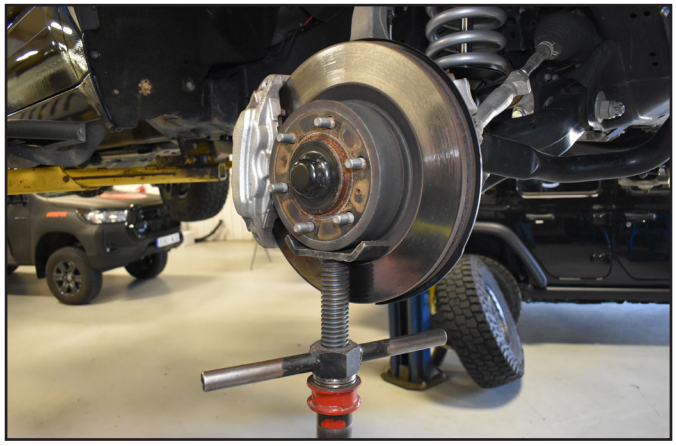
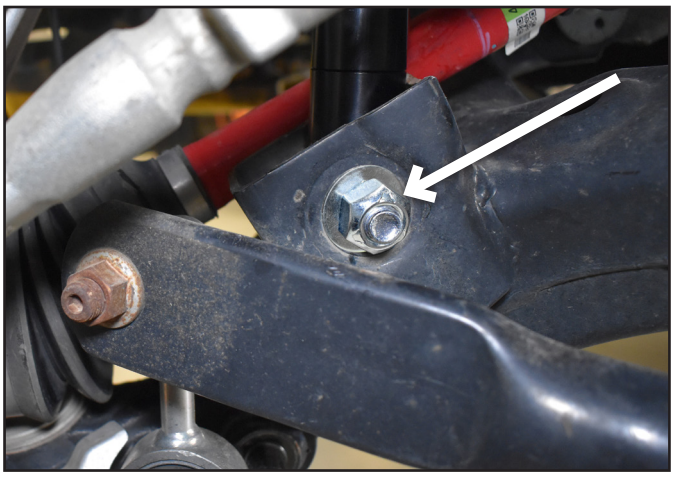


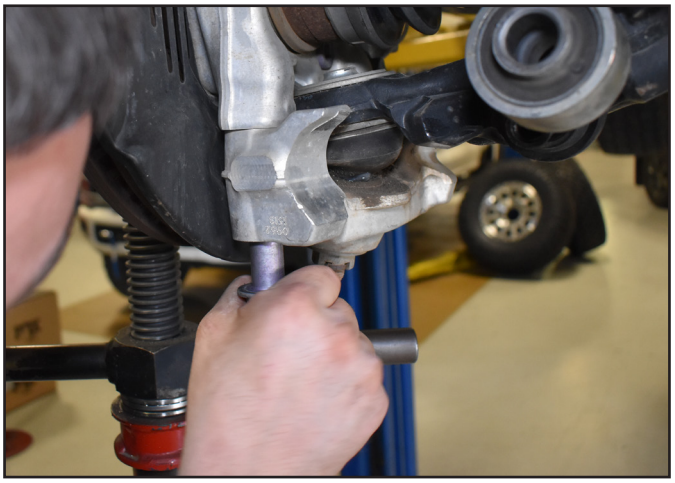
FIGURE 24



25. Tighten all four bolts or nuts on the top shock hat hardware to 24 ft- lbs.
26. Attach the LCA to the lower ball joint with the OE bolts. Use thread locker on the threads. Torque hardware to 192 ft-lbs. (Fig. 25)

    Note: Use a jack to slightly compress the coilover if necessary.
27. Repeat procedure on the driver's side.

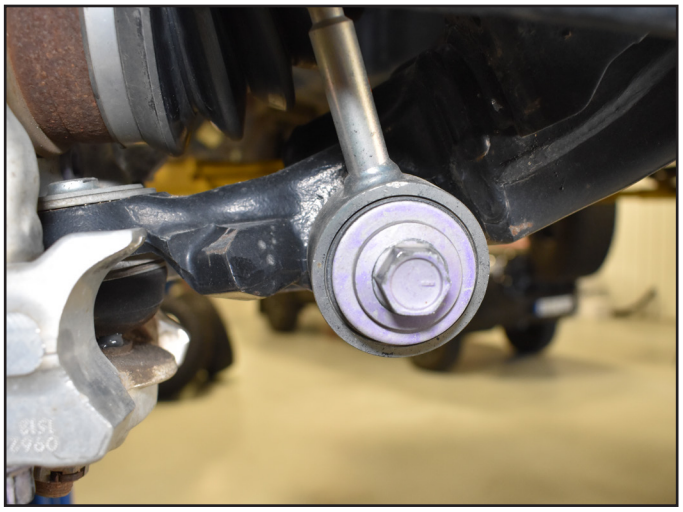
FIGURE 25



28. Re-Install the sway bar link to the LCA. TIP: Use a large punch to align the link cup to the mounting peg on the LCA. Torque to 111 ft-lbs (Fig. 26 & 27)

FIGURE 26

FIGURE 27



29. Install coilover reservoir to the reservoir brackets using the provided clamps. (Fig. 28)

FIGURE 28

FINAL FRONT INSTALLATION

30. Install the wheels and lower the vehicle to the ground. Torque lug nuts to factory specifications.
31. Lower vehicle to the ground and bounce the front of the vehicle to settle the suspension.
32. Torque the upper control arm bushing hardware to 136 ft-lbs.
33. Torque the lower control arm cam bolts to 207 ft-lbs. Adjust and tighten the lower cam bolts. Have an assistant help adjust the toe before driving the vehicle to an alignment shop. A front end alignment MUST be performed.

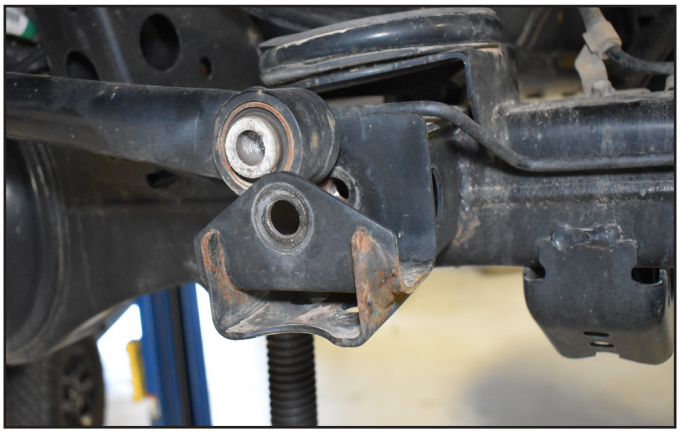
REAR COIL SPRING INSTALLATION

34. Using a Jack, jack up the rear of the vehicle and support the frame with jack stands. (Fig. 29)

FIGURE 29

35. Disconnect rear track bar. (Fig. 30)

FIGURE 30

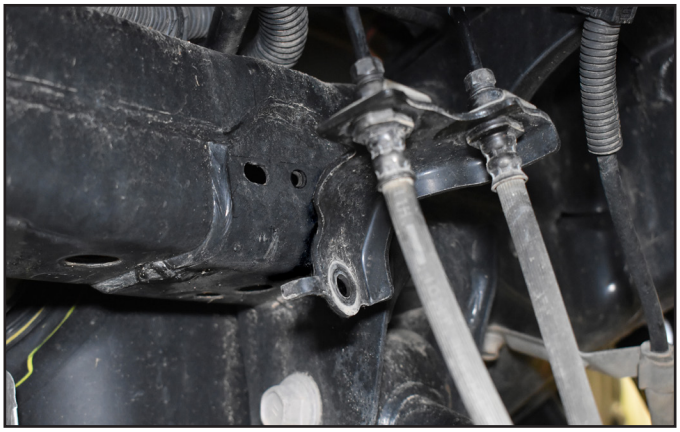


36. Disconnectrear sway bar links. (Fig. 31)

FIGURE 31

37. Disconnect and remove OE shock.
38. Remove OE bump stop bracket.
39. Disconnect brake line brackets. Retain all hardware for re-use. (Fig. 32)

FIGURE 32



40. Remove OE springs, one side at a time. Set the new springs next to the OE springs. Remove rubber insulator sleeves and internal bump stops from the OE spring and install on the new spring in the same orientation. (Fig. 33 & 34)

FIGURE 33

FIGURE 34

41. With the isolators and bump stop transferred to the new spring, install into the top spring well (Fig. 35) and axle bed. Rotate spring to index into the correct alignment.(Fig. 36) Repeat on the other side. ***TIP: Lowering the jack slightly will allow more room to install the taller spring.***

FIGURE 35

FIGURE 36

REAR BRAKE LINE DROP BRACKET INSTALLATION

42. Install the rear brake line drop bracket. Install the drop bracket to the crossmember using the factory hardware. Connect the brake line bracket to the drop bracket using the provided hardware. (Fig. 37)

FIGURE 37

REAR SHOCK INSTALLATION

PLEASE REFER TO THE FOX SHOCK INSTALLATION GUIDE FOR THE REAR SHOCK INSTALLATION.

43. Reconnect rear sway bar links. Torque to 55 ft lbs.
44. Reconnect track bar. Torque to 103 ft-lbs
45. Lower vehicle back to the ground.

POST INSTALLATION

46. Check all hardware (front and rear) for proper torque.
47. Reconnect the battery (if disconnected).
48. Adjust headlights
49. Recheck all fasteners after 500 miles and at regular 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.

TIME TO HAVE SOME FUN

Thank you for choosing BDS Suspension.

For questions, technical support and warranty issues relating to this BDS Suspension product, please contact your distributor/installer before contacting BDS Suspension directly.