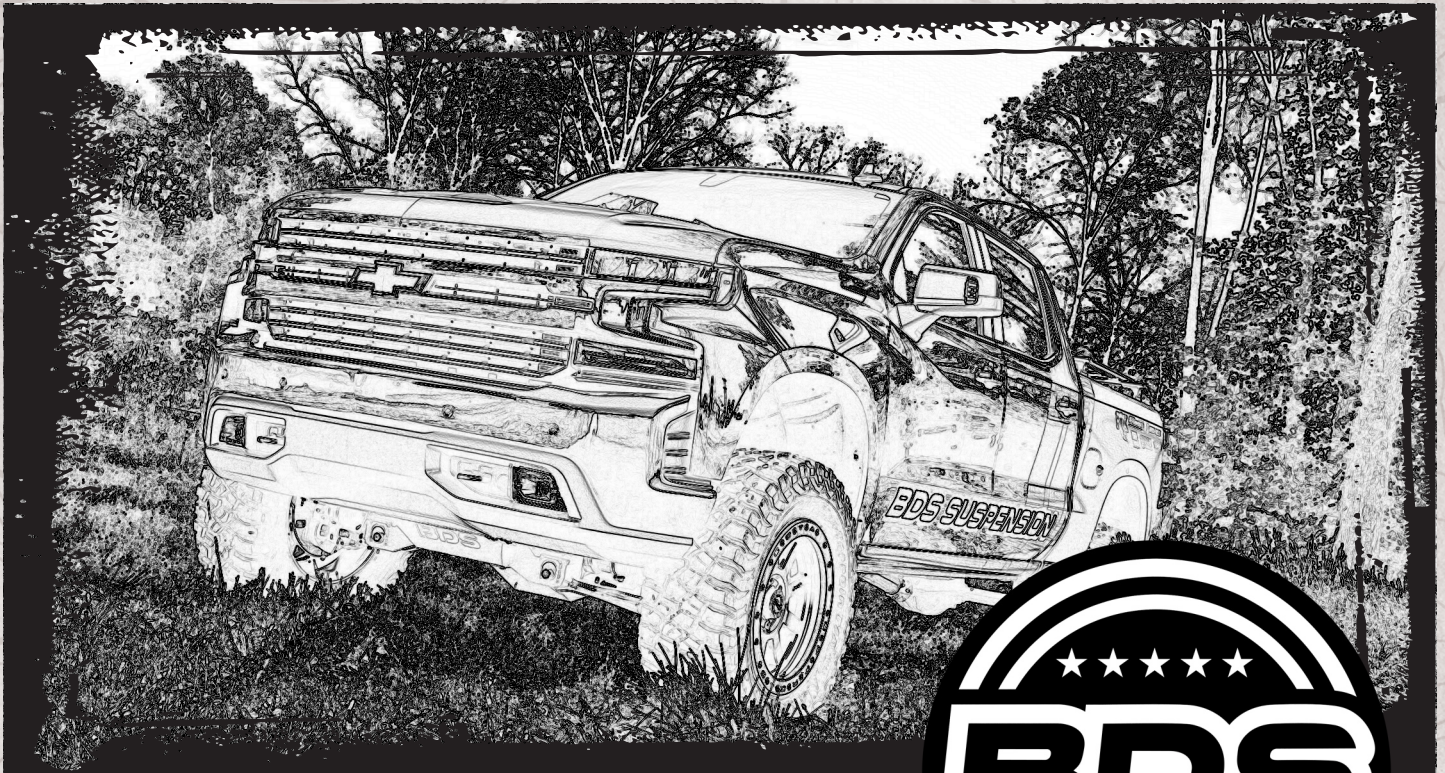


# INSTALLATION GUIDE



Part#: 121633



**HARDCORE LIMITED LIFETIME WARRANTY**

## **4" & 6" Coilover Suspension Systems**

**Chevy/GMC 1500 4WD Pickup | 2019-2022**  
**Chevy/GMC 1500 AT4 / Trail Boss 4WD Pickup | 2019-2022**

Rev. 082423

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# 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](http://560plus.com) for more information.

### TRACTION CONTROL

In an effort to reduce the risk of rollover crashes the National Highway Traffic Safety Administration (NHTSA) established the Federal Motor Vehicle Safety Standard (FMVSS) No. 126 requiring all new passenger vehicles under 10,000 lbs GVWR include an electronic stability control (ESC) system as standard equipment. Effective August 2012 this law requires aftermarket products to be compliant with these same standards.



### 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

121633 Box Kit		
Part #	Qty	Description
03740	1	Reservoir Mount - DRV
03741	1	Reservoir Mount - PASS
03742	2	ABS BRKT
342701	1	Thread Locker
099000	3	Nylon Cable Tie
874	1	Bolt Pack
	3	Wire Clamp (Fastenal #0708759)
	2	1/4"-20 x 3/4" Bolt, Grade 5, Clear Zinc
	2	1/4"-20 Prevailing Torque Nut, Clear Zinc
	4	1/4" SAE Washer, Clear Zinc
	2	12mm-1.75 Nylock Nut, Clear Zinc (Extra Hardware)

## TIRES AND WHEELS 6" FITMENT GUIDE

### Chevy

35" x 12.50 on 17x8, 17x9, 18x9 w/4.5" BS  
 35" x 12.50 on 20x9 or 22x9 w/4.5"-6.25" BS  
 37" x 12.50 on 20x9 or 22x9 w/ 5.5" - 6.25" BS

### GMC

295/70 on 17x8, 17x9, 18x9 w/4.5" BS  
 295/65 on 20x9 w/4.5"-6.25" BS  
 35" x 12.50 on 20x9 or 22x9 w/5.5"-6.25" BS

\*See troubleshooting notes  
 \*Trimming may be required



## TIRES AND WHEELS 4" FITMENT GUIDE

### Chevy

33" x 12.50 on 17x8, 17x9, 18x9 w/4.5" BS  
 33" x 12.50 on 20x9 or 22x9 w/4.5"-6.25" BS  
 35" x 12.50 on 20x9 or 22x9 w/ 5.5" - 6.25" BS

### GMC

295/65 on 17x8, 17x9, 18x9 w/4.5" BS  
 295/60 on 20x9 w/4.5"-6.25" BS  
 35" x 12.50 on 20x9 or 22x9 w/5.5"-6.25" BS

\*See troubleshooting notes  
 \*Trimming may be required



## TROUBLESHOOTING INFORMATION FOR YOUR VEHICLE

1. Coilovers will provide closer to 4.5" and 6.5" lift.
2. 4" and 6" Coilovers lift will work with TrailBoss or AT4 Models. 4" Coilover will net 2" of lift over a stock Trail Boss or AT4. 6" Coilovers will net 4" of lift over a stock Trail Boss or AT4.
3. All aftermarket wheels should be test fit prior to mounting the tire to ensure proper clearance to the brake caliper. Some wheel profiles will not clear the brake caliper. These can be test fitted before the vehicle is lifted.
4. 17" wheels with 4.5" backspacing should be test fit prior to mounting the tire to ensure proper clearance to the steering knuckle/tie rod.
5. Stock 20" Wheels (6.25" Backspacing) can be installed, stock 17" or 18" Wheels CAN NOT be installed.
6. Will NOT work with MagneRide / Adaptive Ride Equipped Vehicles.
7. If coilovers are installed on a Diesel model, an additional 1/2" of preload must be added to the coilover to achieve stated ride height.

**TECH  
TIPS**

# PRE INSTALLATION

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## 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* \_\_\_\_\_



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**\*\*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

## MEASURE FIRST

Measure and record ride heights before and after installation per the instructions on page 4.

## SPECIAL TOOLS

36mm Socket - Hub Nut (Optional)

## FRONT DISASSEMBLY

*If upgrading to coilovers with a 4" or 6" kit already installed, follow these instructions.*

*If installing coilovers along with a 4" or 6" kit, skip ahead to step 10*

1. Park the vehicle on a clean, flat surface and block the rear wheels for safety.
2. Disconnect the positive and negative battery cables from the battery.
3. Raise the front of the vehicle with a hydraulic jack and support the frame with jack stands. Remove the wheels.
4. Working on one side of the vehicle at a time, remove the ABS line and brake sensor from the retaining clips at the frame and upper control arm. Disconnect the brake line bracket from the steering knuckle (Figure 1A & B). Save hardware. Allow for adequate slack for installing the coilovers.

**FIGURE 1A**



**FIGURE 1B**



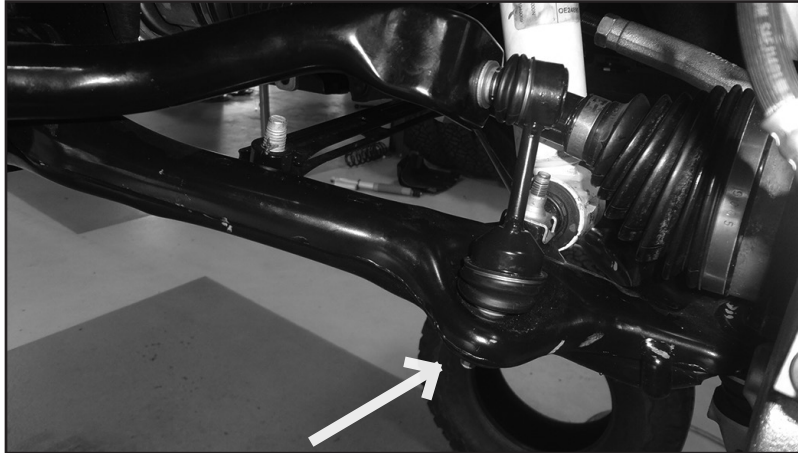
5. Remove the tie rod end nut. Disconnect the tie rod from the knuckle (Figure 2). **Aluminum Knuckle:** Avoid striking the knuckle, typically the taper unseats more easily and gently hitting the end of the tie rod end will unseat the taper. A pickle fork can also be used. Save the mounting nut.

**FIGURE 2**



- Remove the sway bar links nut from the lower control arms (Figure 3). Save the hardware.

**FIGURE 3**



- Remove the upper ball joint nuts and thread back on by hand a couple of turns (Figure 4). **Aluminum Knuckles:** Avoid striking the knuckle to release the taper, a pickle fork or pry bar can be used to apply a splitting force. Gently hit the end of the ball joint to get it to release. If you do resort to hitting the knuckle avoid re-use and discard.

**FIGURE 4**



- Support the lower control arm with a jack. Remove the upper ball joint nut and the lower strut mount bolts (Figure 5). Save upper ball joint nut, the lower strut mount bolts will not be reused. Swing the knuckle assembly backwards so that the strut assembly can be removed. Do not allow the CV joints to pull apart and check for adequate slack in any ABS, brake sensor, or brake lines.

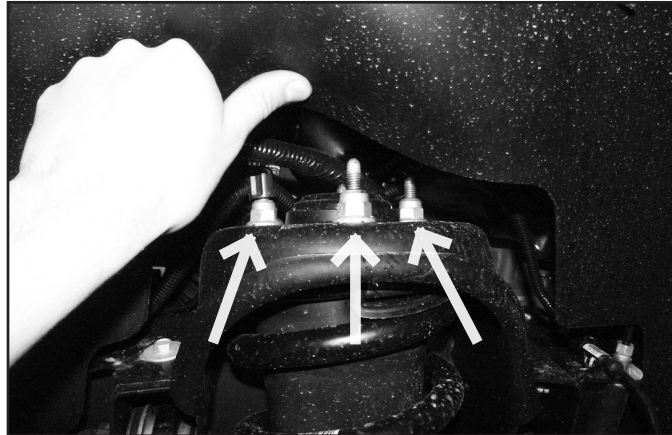
**FIGURE 5**





9. Remove the three upper strut mounting nuts (Figure 6) and remove the strut from the vehicle. DO NOT remove the center strut rod nut, it is under extreme pressure. Hardware will not be reused.

**FIGURE 6**



10. Install the new coilover assembly to the appropriate frame mount with the provided nuts (Figure 7). Leave hardware loose.

**FIGURE 7**



*Note: Be sure that the coilover is oriented properly in the vehicle. See Figure 9 & 10 for reservoir mounting orientation*

11. Attach the coilover to the lower control arm with the provided bolts and thread locker (Figure 8, 9, 10).

**FIGURE 8**



**FIGURE 9 (WITH DSC RESERVOIR - PASSENGER SIDE)**

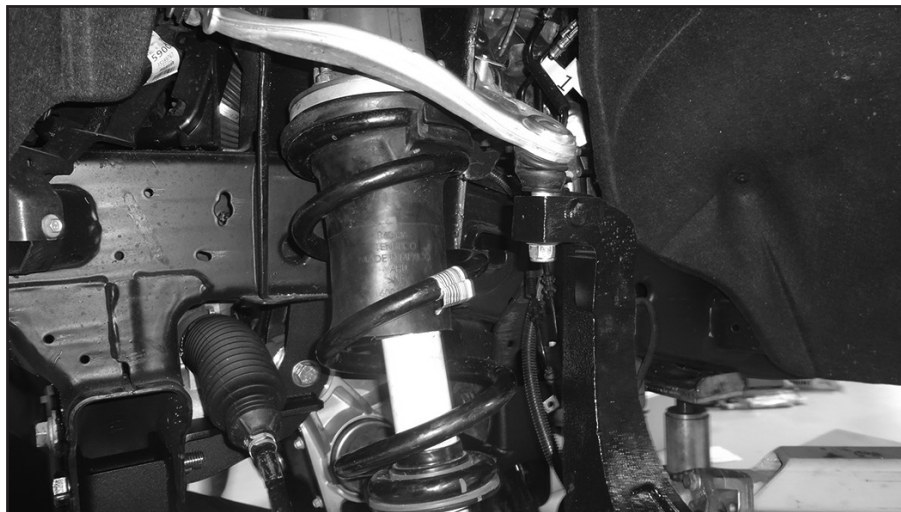


**FIGURE 10 (NON DSC RESERVOIR - DRIVER SIDE)**



12. Torque the upper coilover nuts to 35 ft-lbs. and lower coilover mounts with thread locker applied to 37 ft-lbs.
13. Attach the knuckle to the upper control arm with the original upper ball joint nut (Figure 11).

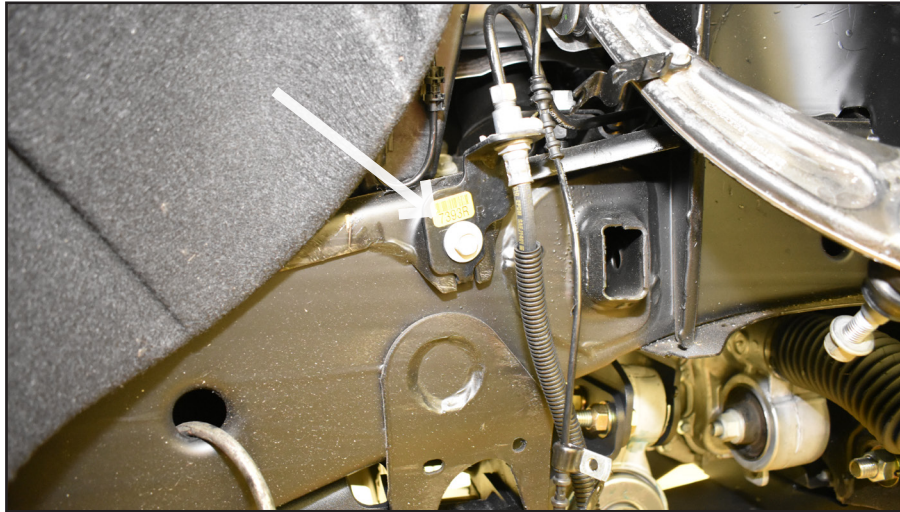
**FIGURE 11**



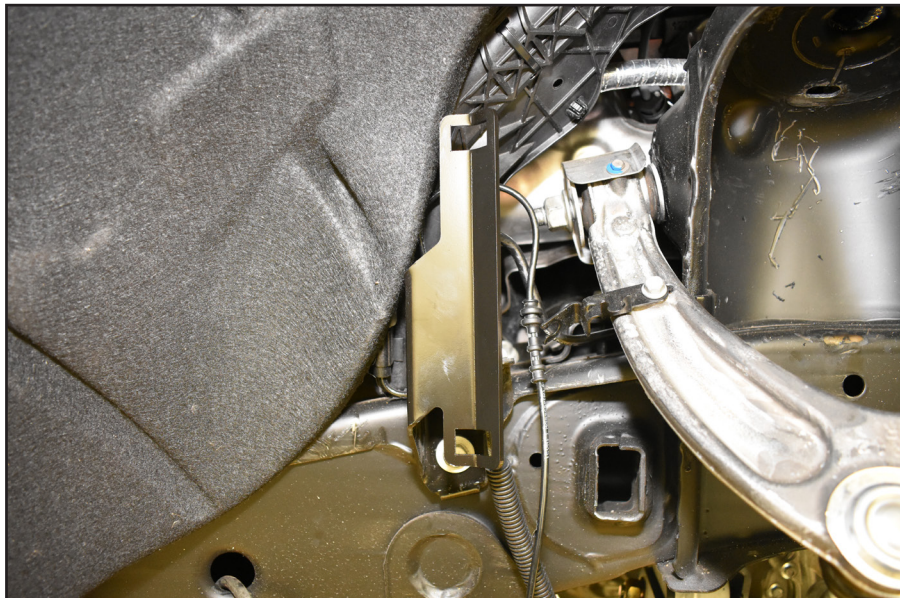


14. Torque the upper ball joint nut to 26 ft-lbs and then a final pass of 60-75 degrees per the factory specification. If the CV axle nut was removed, torque the CV axle nut to 185 ft-lbs.
15. Remove the bolt attaching the brake line bracket to the frame (Figure 12). Install the side specific reservoir bracket with the factory bolt to the frame (Figure 13).

**FIGURE 12**



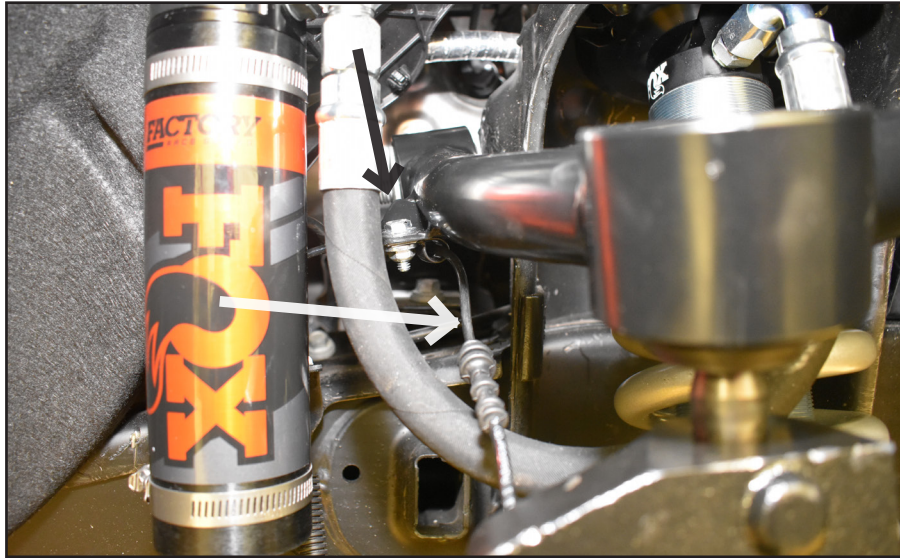
**FIGURE 13 - PASSENGER SIDE SHOWN**



16. Run the ABS lines and brake sensor wire **above** the reservoir hose (Figure 14 - white arrow). Attach the reservoir to the reservoir bracket using the provided clamps.

*Note: The factory inner fender may need to be trimmed to provide clearance to the DSC knobs on DSC coilovers.*

**FIGURE 14**

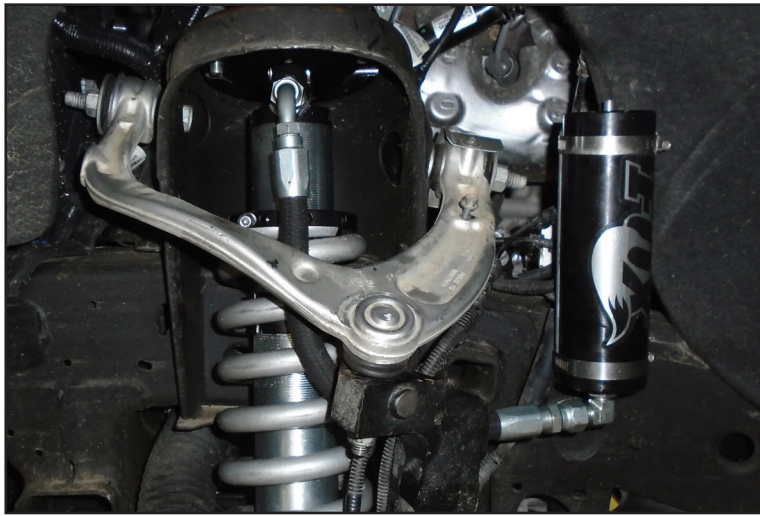


**FIGURE 15A (WITH DSC RESERVOIR -PASSENGER SIDE)**





**FIGURE 15B (NON DSC RESERVOIR - DRIVER SIDE)**

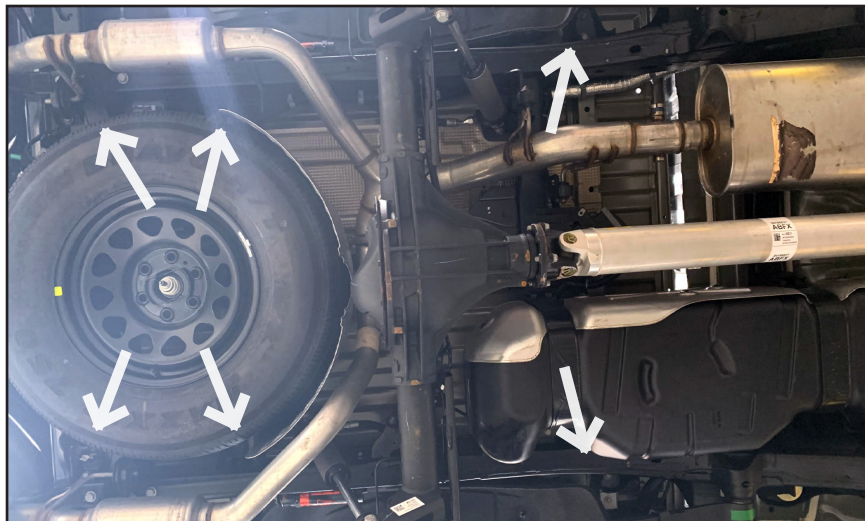


17. Attach the ABS wire and brake sensor wire will attach directly to the UCA (Figure 14 - black arrow), using the provided wire clamps and 1/4" hardware from bolt pack 874.
18. If the sway bar link was removed from the lower control arm, torque the sway bar link to the lower control arm to 74 ft-lbs.
19. Connect the steering tie rod ends to the knuckles and torque to 44 ft-lbs.
20. Install the wheels/tires and lower the front of the vehicle to the ground. Torque lug nuts to 140 ft-lbs.
21. Bounce the front of the vehicle to settle the suspension. Center the cams and torque the lower control arm mounting bolts to 133 ft-lbs with a final pass of 90-105 degrees per the factory specification. If the upper control arm bolts were loosened during the installation, torque the bolts to 89 ft-lbs with a final pass of 45-60 degrees per the factory specification.
22. Check differential and CV shafts for clearance in all areas including those cut for clearance.
23. Check all hardware for proper torque.

## 2.5 REAR SHOCK INSTALLATION

24. For remote reservoir applications, FOX highly recommends raising the rear of the bed of the vehicle  $\frac{3}{4}$ " to prevent damage to the reservoir during the installation of the rear shocks. The reservoirs can be installed without raising the bed, however it is difficult and can cause cosmetic damage to the remote reservoirs on the shocks.
25. On 70-inch, short bed models, the bed is attached to the frame of the vehicle using (6) six bolts, (4) four rear bolts and (2) two front bolts (Fig. 21). Longer beds may have more bolts attaching the bed to the frame

**FIGURE 21**



26. Remove the rear bolts attaching the bed of the truck to the frame. DO NOT discard bolt bolts, as they will be used to reinstall the bed (Fig. 22).

**FIGURE 22**



27. Loosen the (2) most forward bolts of the bed. **DO NOT** remove. These bolts keep the bed aligned while you lift the rear of the bed to slide the reservoirs between the bed and the frame rail (Fig. 23).

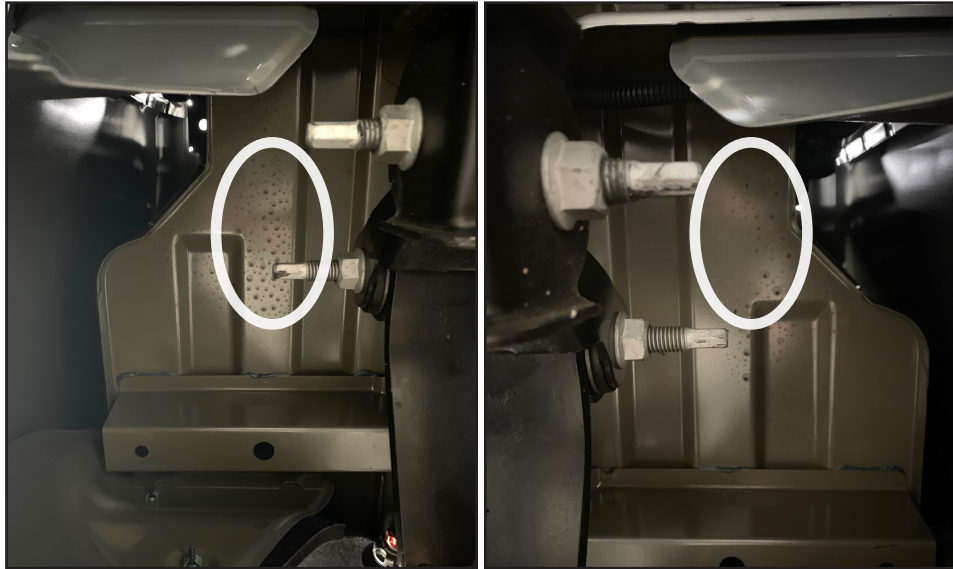
**FIGURE 23**



28. Once bed bolt removal is complete, slowly lift the rear of the bed from underneath the bed plate (Fig. 24). Lift the bed  $\frac{3}{4}$ " from the frame rail (Fig. 25). **DO NOT** lift the bed from underneath the bedside as this may cause damage to the bedside. Be sure to check that the bed does not contact the cab of the truck as this could cause damage to the bed and the cab of the vehicle (Fig. 26).



**FIGURE 24**



**FIGURE 25**



**FIGURE 26**



29. Make sure to identify which shock goes on the correct side (Fig. 27). The driver side is shown on the left and the passenger side is shown on the right.

**FIGURE 27**



30. Once the rear of the bed has been lifted off the frame, you can now slide the remote reservoirs between the bed (Fig. 28).

**FIGURE 28**



31. Once the reservoirs have been slid between the frame and the bed of the vehicle, slowly lower and reattach the bed to the vehicle using the OEM hardware. Torque the box hardware to 63 ft-lbs.
32. Using the OEM hardware install the upper and lower portions of the shocks on both sides of the vehicle. Tighten the upper and lower shock hardware to 70 ft-lbs.
33. You must trim the fender liners on both sides of the vehicle as shown in Figure 29 for the reservoirs to fit correctly. The suggested shape of the trimming follows the curvature of the forward most fender liner, continues just below the 2 screws and then back to the rear of the fender liner.

**FIGURE 29**



34. The remote reservoirs mount to the vehicle using supplied mounting brackets toward the back of the vehicle in the wheel arch (Fig. 30). The left image in Figure 29 is the driver side and right image is the passenger side.

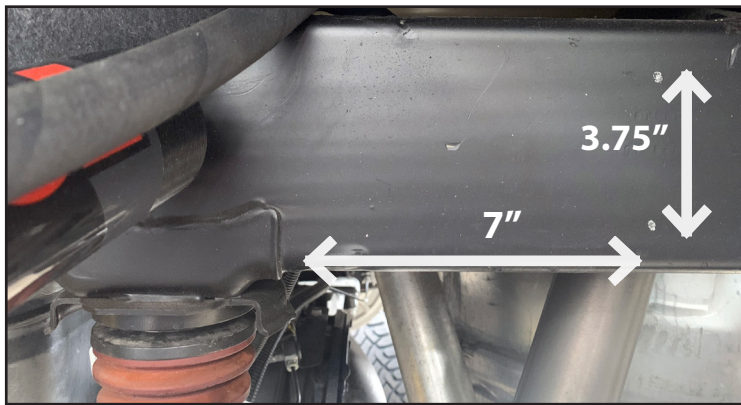
**FIGURE 30**



35. To install the rear reservoir brackets, you must drill a 7/32" hole that is 7" away from the edge of the OEM bump stop mount toward the rear of the vehicle and 3-3/4" above the bottom of the frame rail (Fig. 31).



**FIGURE 31**



36. Install the bracket using one of the  $\frac{1}{4}$ " self-tapping screws to partially install the reservoir bracket. Ensure that you mount the bracket so that the forward most hole is the side that has the screw installed (Fig. 32).

**FIGURE 32**



37. Using the bracket as a guide, drill a  $\frac{7}{32}$ " hole through the rear most hole of the reservoir bracket. Install the remaining  $\frac{1}{4}$ " self-tapping screw to fully install the reservoir bracket. There should be (2) two self-tapping screws in each bracket (Fig. 33).

**FIGURE 33**



38. Repeat reservoir installation steps on both sides of the vehicle.
39. Using two supplied billet clamps and screws, mount the reservoir to the brackets. Utilize the slots in the bracket to locate clamps. Do not feed the clamps through the slots in the brackets. Torque the (4) four socket head cap screws to 19 in-lbs. (Fig. 34). Repeat on both sides of the vehicle.

**FIGURE 34**



## **POST INSTALLATION**

40. Double check all fasteners for proper torque.
41. Check all moving parts for clearance.
42. Complete a full radius turning check to ensure that no interference occurs.
43. Align headlights
44. Double check the brake lines for adequate slack at full wheel travel.
45. Complete a vehicle alignment.
46. Check all fasteners after 500 miles.



## **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](http://bds-suspension.com/bar) and post them on the BDS Fan Page on Facebook at [facebook.com/BDSSuspensions](https://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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## **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.