

# INSTALLATION GUIDE



Part#: 028301



**HARDCORE LIMITED LIFETIME WARRANTY**

## 2-3" Coilover Suspension System

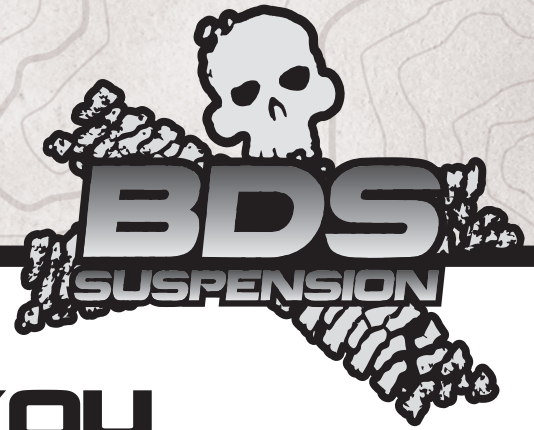
Toyota Tacoma 4WD | 2005-2020

Rev. 032322

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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.

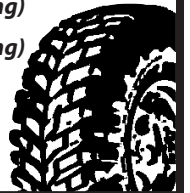
### TIRES AND WHEELS

*285/75/R16 w/ 4.5" backspacing (minor trimming)*

*285/70/R17 w/ 4.5" backspacing (minor trimming)*

*265/75/R16 w/ stock backspacing*

*265/70/R17 w/ stock backspacing*



### 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

## BDS028301 - Front Box Kit

| Part #   | Qty | Description                                  |
|----------|-----|--|
| A264     | 1   | Upper Control Arm - Driver's Side            |
| A265     | 1   | Upper Control Arm - Passenger's Side         |
| 02911    | 2   | Ball Joint Cap                               |
| 9452K145 | 2   | O-Ring                                       |
| 967      | 1   | UCA Bolt Pack                                |
|          | 2   | 1/4"-20 x 5/8" Bolt                          |
|          | 2   | 1/4" SAE Washer                              |
|          | 2   | 1/4"-20 Serrated Edge Flanged Nut            |
|          | 2   | Wire Clamp                                   |
| 45NA53   | 1   | Grease Packet                                |
| 01413    | 2   | Differential drop                            |
| 73       | 4   | 1-1/4" x 5/16" x 7/8" Sleeve                 |
| 878      | 1   | Bolt Pack                                    |
|          | 2   | 1/2"-13 x 6" Bolt, Grade 8, Yellow Zinc      |
|          | 2   | 1/2"-13 Serrated Edge flange Nut, Clear Zinc |
|          | 4   | 5/16" USS Washer, Clear Zinc                 |
|          | 4   | 8mm-1.25 x 40mm Bolt, Class 8.8, Clear Zinc  |

## BDS018217 - Rear Add-A-Leaf Box Kit

| Part #      | Qty | Description                                 |
|-------------|-----|---|
| 114202R     | 2   | Rear Add-A-Leaf                             |
| 01113       | 4   | U-Bracket                                   |
| 104         | 4   | .500 x .049 x 2.563 Sleeve                  |
| 603         | 1   | AAL Bolt Pack                               |
|             | 8   | 5/16" USS Washer                            |
|             | 4   | 3/8"-16 x 3-1/2" Bolt, Grade 5              |
|             | 4   | 5/16"-18 x 1" slotted head countersunk Bolt |
|             | 4   | 5/16"-18 Prevailing Torque Nut              |
|             | 4   | 3/8"-16 Prevailing Torque Nut               |
| 380412FCP   | 2   | 3/8" x 4-1/2" Center Pin and Nut            |
| N96FH-B     | 8   | 9/16 Fine High Nut- Black                   |
| W96S-B      | 8   | 9/16 SAE Flat Washer-Black                  |
| 962120700QB | 4   | 9/16" x 2-1/2" x 7" U-Bolt                  |

# INSTALLATION INSTRUCTIONS

## SPECIAL TOOLS

|                        |
|------------------------|
| Cut-off tool           |
| 8" C-clamps            |
| 35mm socket - optional |

### FRONT INSTALLATION

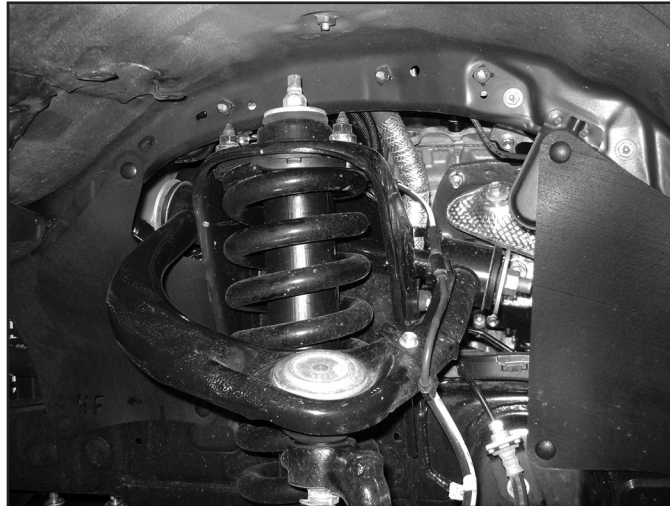
1. Park the vehicle on a clean, flat surface and block the rear wheels for safety.
2. Measure from the center of the wheel up to the bottom edge of the wheel opening and record below:

LF \_\_\_\_\_ RF \_\_\_\_\_

LR \_\_\_\_\_ RR \_\_\_\_\_

3. Raise the front of the vehicle and support with jack stands under the frame rails, behind the suspension.
4. Remove the front wheels.
5. Remove front skid plate/ splash guard.
6. Disconnect the sway bar links from steering knuckle. Remove the (4) bolts that secure the sway bar to the vehicle frame. Move sway bar forward to allow clearance for shock removal/installation. Retain all hardware.
7. Disconnect both outer tie rod ends at the knuckle.
8. Disconnect the ABS wire from the upper control arm (Fig. 1).

**FIGURE 1**



9. It is recommended to disconnect the ABS wire from the clips on the inside of the fenderwell to prevent over-extending of the ABS wire. Do not allow the brake line to hold the steering knuckle assembly in place.
10. Loosen the ball joint nut connecting the upper control arm to the knuckle and dislodge taper taking care not to damage threads.
11. Support the steering knuckle with a bungee strap or other means. Be careful not to overextend the inner CV axle joint.

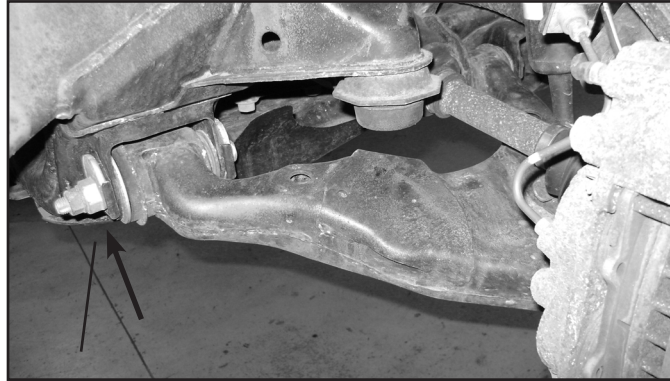


*It is recommended to loosen the CV axle nut and dislodge the shaft from the knuckle to avoid damage to the axle shaft joints.*

12. Remove the upper control arm from vehicle. The inner fenderwell sheet metal may need to be slightly formed to get the bolt to be removed easily. Reference factory service manual if necessary.

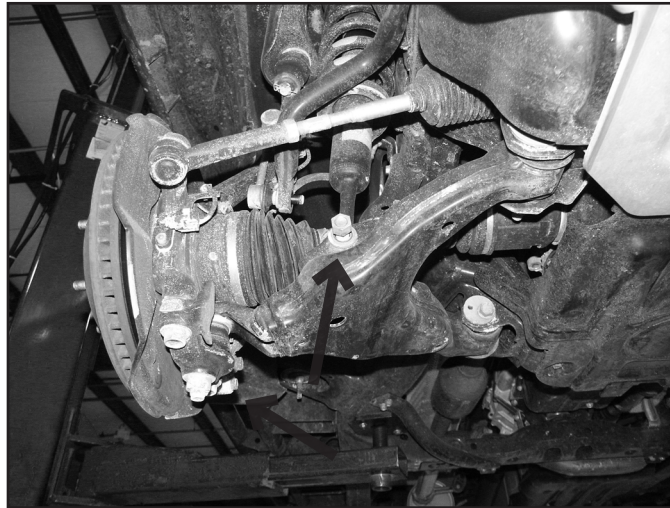
13. Locate the lower alignment cam bolts. (Fig. 2) Loosen the bolts (2 per arm - 4 total). This will allow the bushings to rotate freely.

**FIGURE 2**



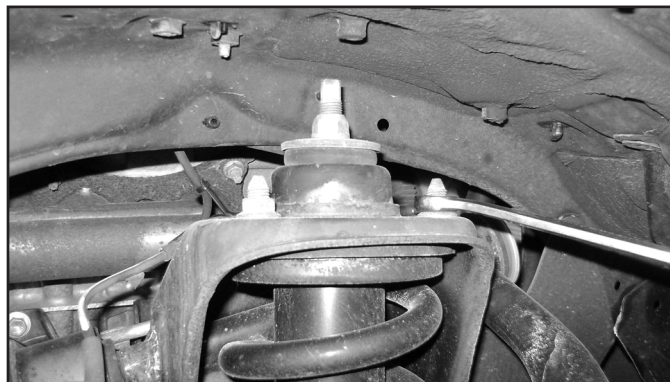
14. Remove the lower strut mount bolt at the lower control arm. (Fig. 3) Save hardware.

**FIGURE 3**



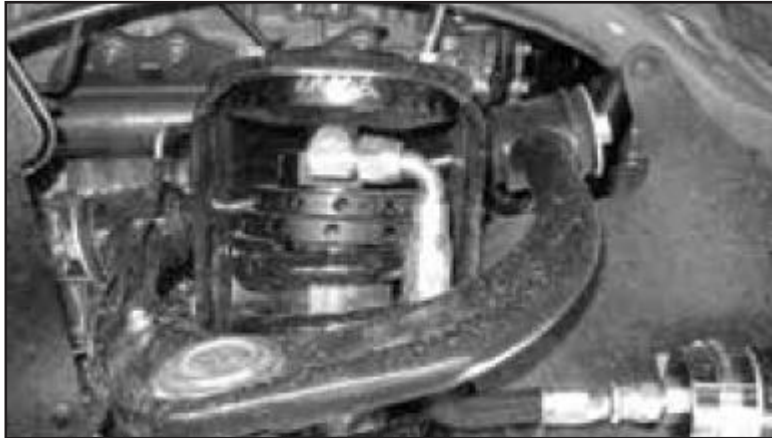
15. Locate the 3 upper strut mount nuts. (Fig 4) Remove the nuts and remove the strut from the vehicle. **Do not** remove the center strut rod nut. It is under extreme pressure. Save nuts. Remove the strut from the vehicle by lowering it straight down.

**FIGURE 4**



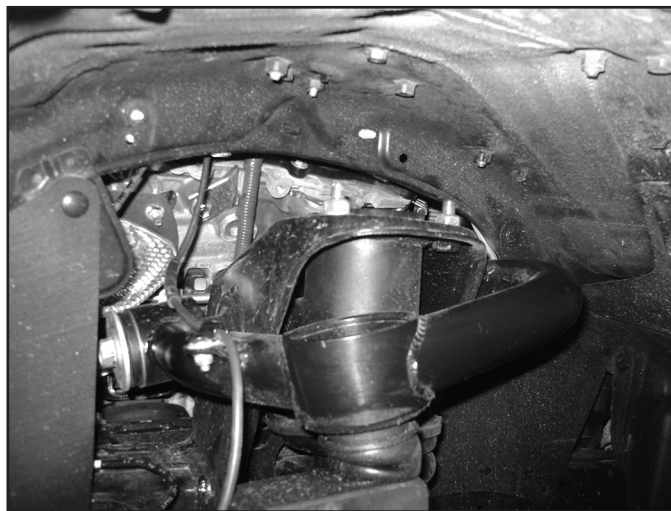
16. Install the new FOX coil-over assembly. Make sure that the remote reservoir hoses (if applicable) are facing outward and towards the front of the vehicle (Fig.5). Connect the top shock hat to the vehicle with the provided washers and bolts or nuts (Depending on shock model). Tighten all three bolts or nuts to 24 ft-lbs.

**FIGURE 5**



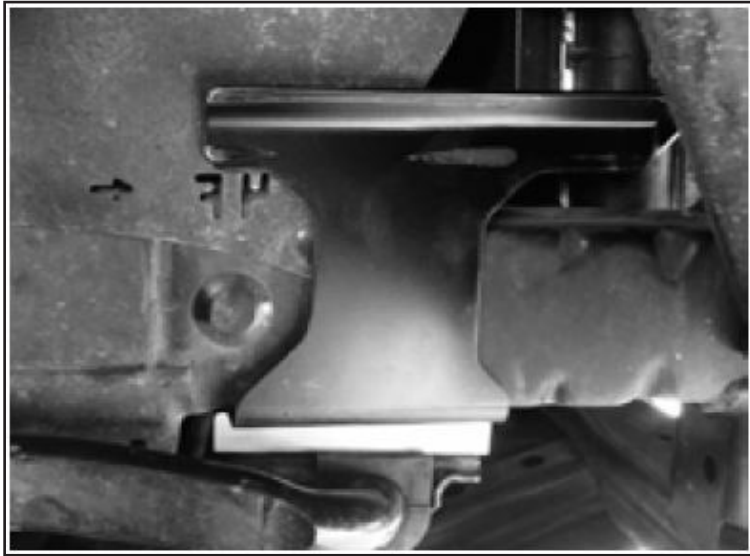
17. Connect the shock to the lower control arm using stock bolt and nut. On 2.5 Factory Series models install longer spacer towards the front of the vehicle. Snug, but do not torque bolt.
18. Install the new upper control arm with factory hardware. Snug, but do not torque bolts.
19. Attach the new upper control arm ball joint to the steering knuckle at this time with new hardware. Tighten ball joint hardware to 81 ft-lbs. Install cotter pin.
20. GREASE BALL JOINT at this time! Install the o-ring on cap with grease from the included grease packet to aid installation. Install cap. Cap must be removed to access grease fitting for future maintenance.
21. Remove the factory ABS mounting bracket from the ABS line. Attach the ABS wire to the control arm with new 1/4" hardware with new wire clip. Tighten to 15 ft-lbs. (Fig 6)

**FIGURE 6**



22. On 2.5 Factory Series coil-over shocks, install new sway bar relocation spacers to existing sway bar mounting location with the stock bolts. On external reservoir models install bracket between the new sway bar relocation spacer and vehicle frame, orient bracket so that longer top edge is toward front of vehicle (Fig. 7) Slide bracket against side of vehicle frame. Torque to 37 ft-lbs.

**FIGURE 7**



23. On external reservoir models, mount the reservoir onto the reservoir bracket with the supplied hose clamps. Utilize the slots in the bracket to locate the clamps. Do not feed the clamps through the slots in the brackets. (Fig. 8)

**FIGURE 8**



24. Connect the sway bar to both spindles and torque to 52 ft-lbs.
25. Reinstall the outer tie rod ends and torque to 41 ft-lbs.
26. If the CV nut was loosened, torque to 173 ft-lbs.
27. Check that the suspension has proper clearance by steering completely in both directions
28. Repeat steps on the opposite side of the vehicle.

### **DIFFERENTIAL DROP INSTALLATION**

29. Support the front differential with a hydraulic jack.
30. Remove the (2) M14 bolts securing the differential to the frame.

31. Lower the differential with hydraulic jack far enough to allow insertion of 1" spacer.
32. Install the provided 1" aluminum spacers in the gap. Install the original cup washer on the new 1/2" x 6" bolts. (Fig. 9)

**FIGURE 9**

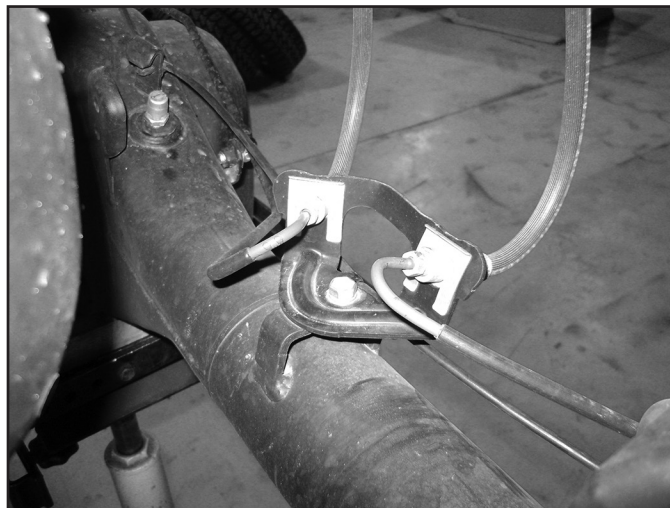


33. Install the serrated flange nuts on top of the factory cross member. DO NOT reuse factory hardware. Tighten to 65 ft lbs.
34. Reinstall the factory skid plate with factory hardware to the crossmember under the radiator. attach the skid plate to the rear differential crossmember with the supplied 8mm x 40mm bolts and 5/16" USS washers. Be sure to install the (4) provided spacers to lower the skid plate and avoid interference with differential. Tighten to 25 ft-lbs.
35. With both sides assembled, install the wheels and lower the vehicle to the ground. Torque lug nuts to 83 ft-lbs.
36. Bounce the front of the vehicle to settle the suspension. Torque the lower control arm cam bolts to 100 ft-lbs. Torque the lower strut hardware to 61 ft-lbs. Torque the upper control arm hardware to 85 ft-lbs.

## REAR INSTALLATION

37. Block the front wheels and raise the rear of the vehicle. Support the frame rails with jack stands.
38. Remove the rear wheels.
39. Support the rear axle and remove the rear shocks. Save the lower mounting hardware.
40. Disconnect the brake line bracket from the rear axle (Fig 10).

**FIGURE 10**





41. Disconnect the emergency brake line bracket from the leaf spring clamp. Retain hardware. (Fig 11)

**FIGURE 11**



42. If necessary, the brake line can also be temporarily disconnected from the frame (Fig.12).

**FIGURE 12**



43. Remove the factory U-bolts and lower the rear axle. Loosen the u-bolts on the opposite side of the vehicle, but do not completely remove them. This will allow the axle to flex for easier installation of the rear AAL (Fig. 13).

**FIGURE 13**



44. On the leaf pack, there should be 4 spring clamps. Locate the 2 inner most clamps.
45. Make a cut on each side of both clamps so that the top can be removed. This will allow for the leaf spring pack to be disassembled (Fig. 14,15).

**FIGURE 14**

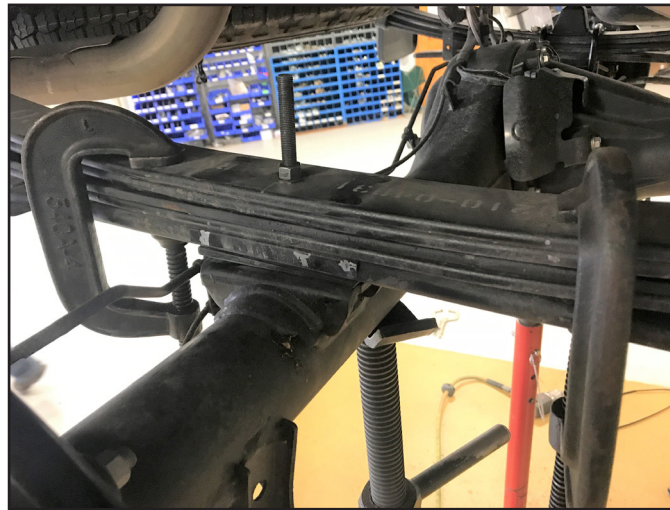


**FIGURE 15**



46. With the top of both clamps removed, secure the leaf pack together with a c-clamp on either side of the center pin (Fig. 16).

**FIGURE 16**



47. Loosen center pin nut and remove pin from the bottom.
48. Slowly loosen c-clamps and remove the bottom leaves from the main leaf pack.
49. Remove the two factory alignment clamps from the bottom leaf using an air chisel.

50. Install the new leaf spring alignment clamps using the 5/16" hardware from bolt pack 603 (Fig. 17).

**FIGURE 17**



51. Install the add-a-leaf into the leaf pack using the following procedure. First reinstall the factory shim onto the new provided center pin (if applicable). Then, stack the leaves that were removed onto the pin followed by the new add-a-leaf. The leaf pack should be assembled like a pyramid, with the longest leaf on top and the shortest leaf on the bottom. Reinstall the leaf springs and new center pin stack onto the vehicle. Ensure the small side of the shim is towards the front of the vehicle.
52. Use the center pin to align all leaves, but do not use the center pin to tighten the pack. Use c-clamps instead to prevent stripping the center pin. After the pack is together and aligned, tighten the new center pin nut. Cut off any extra pin above the nut (Fig. 18).

**FIGURE 18**



53. Install the supplied sleeves between the leaf alignment clamps using the 3/8" x 3-1/2" bolts, nuts and washers. Torque to 26 ft-lbs.
54. Align the center pin head with the locating hole on the axle tube spring pad.

55. Install new u-bolts with OE top plate and bottom plate. Use provided new washers and nuts (Fig. 19).

**FIGURE 19**



56. Repeat add-a-leaf installation on opposite side of vehicle.  
57. Re-install emergency brake line brackets to both the frame and leaf spring clamp.  
58. Re-attach the brake line bracket to the rear axle.  
59. Install new shocks with new upper hardware and OE lower hardware.

**Remote reservoir models only: Follow steps 55-58**

60. Make sure passenger side hose is facing towards the **rear** of vehicle, driver side facing outward and towards **front** of vehicle (Fig. 20).

**FIGURE 20**



61. Install shock in upper and lower mounts.  
62. Install the remote reservoir bracket with the three holes downward towards the bottom of vehicle frame. For passenger side, locate left outer hole on bracket approximately 25" from center of shock toward rear of frame and 1.5" up from bottom edge of frame (Fig. 21). Mark the hole and drill a 7/32" pilot hole, secure the reservoir bracket to the frame with one of the supplied 1/4" self tapping screws. Drill and secure right outer hole, making sure bracket is level with frame.

**FIGURE 21**



63. For driver's side locate left outer hole on bracket approximately 24.5" from center of shock toward front of vehicle and 2" up from bottom of frame (location is on angled area of vehicle frame). Drill and secure left outer hole, then position bracket so that it is level with the angled part of frame. Drill and secure right outer hole.
64. Reinstall wheels and torque lug nuts to 83 ft-lbs.
65. Lower vehicle to ground and torque u-bolts to 110 ft-lbs.

## **POST-INSTALLATION**

66. Check all hardware for proper torque.
67. The vehicle will need a complete front end alignment.
68. Adjust headlights.
69. Check hardware after 500 miles.
70. Grease ball joint by removing cap at 3,000 mile increments.



### **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.