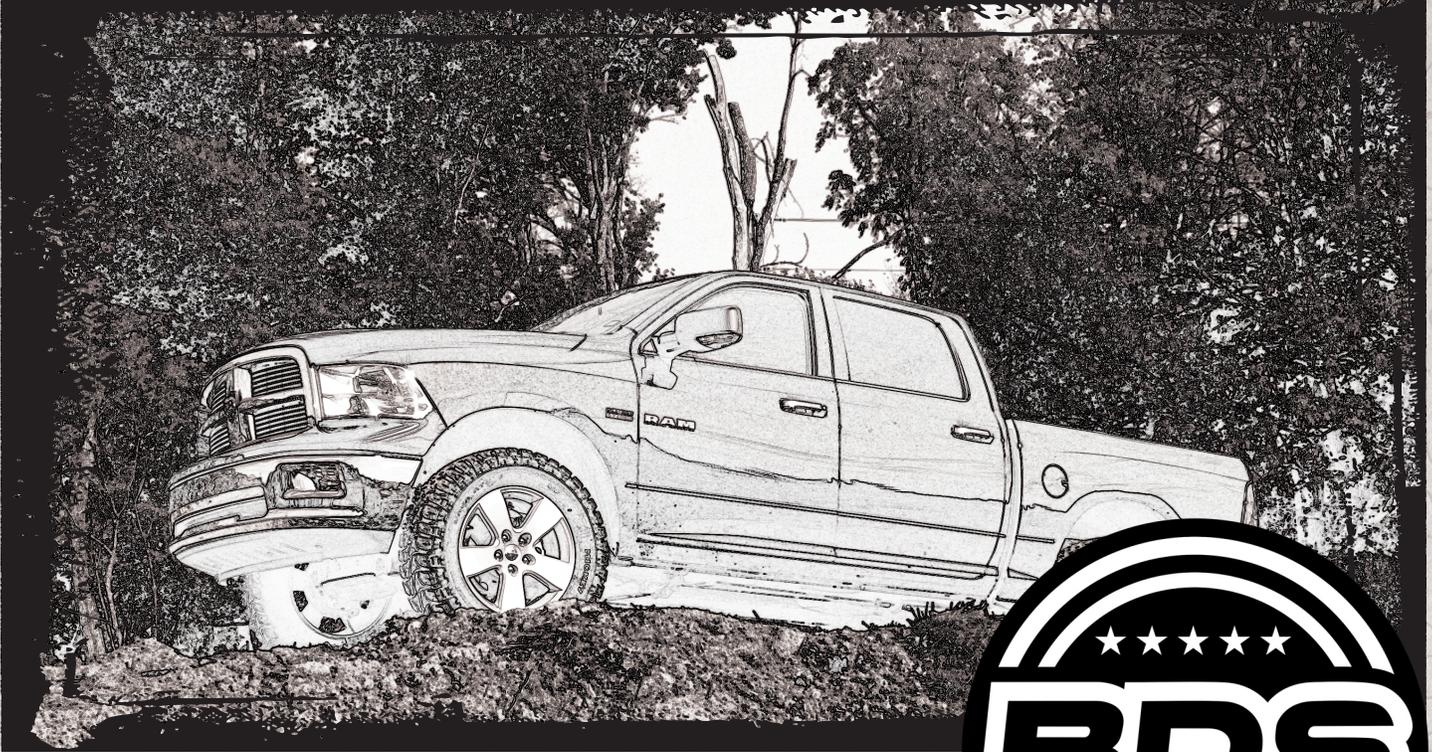


# INSTALLATION GUIDE



Part#: 122252, 122253, 122411



**HARDCORE LIMITED LIFETIME WARRANTY**

**122252/122411 - Upper Control Arm Kit  
(4-6" Lifts)**

**122253 - Upper Control Arm Kit  
(2-3" Lifts)**

**Dodge/ Ram 1500 4WD | 2006-2018 / 2019-2024**

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

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Rev. 011124

# 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

For Models 2006-2018:

Works with stock rims with stock tires, or up to 12.50" wide tires on 17/18/20x9 w/ 4.5"-5" backsparing

For Models 2019+:

Works with stock rims with stock tires, or up to 12.50" wide tires on 18/20x9 w/ 4.5"-5" backsparing



### 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

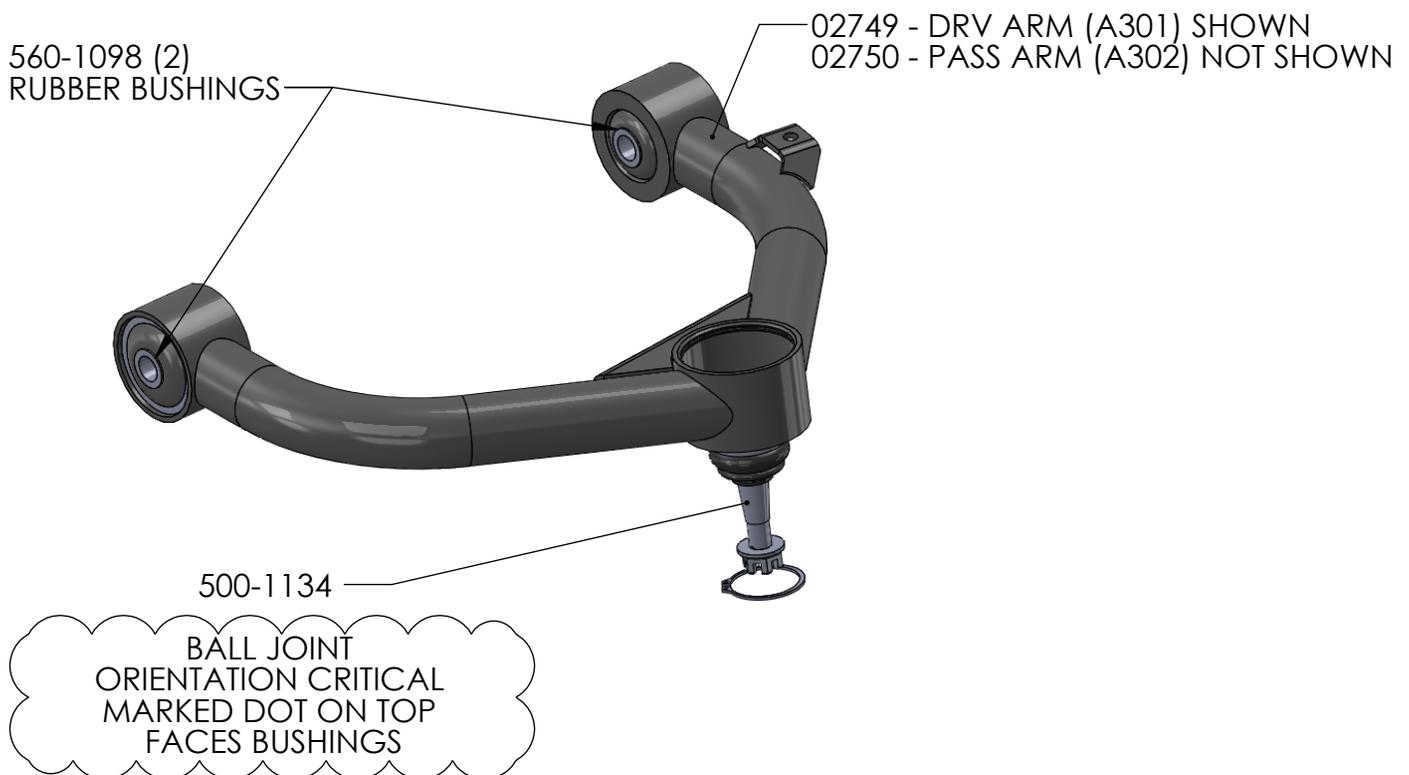
## 122253 Box Kit (2-3" Kits Only)

Part #	Qty	Description
A301	1	Ram 1500 UCA Assembly - Driver
02749	1	Ram 1500 UCA - Driver
500-1134	1	Ball Joint
560-1098	2	Rubber Bushing
BDS222760	1	BDS UCA Decal
A302	1	Ram 1500 UCA Assembly - Passenger
02750	1	Ram 1500 UCA - Passenger
500-1134	1	Ball Joint
560-1098	2	Rubber Bushing
BDS222760	1	BDS UCA Decal
02911	2	Ball Joint Cap
9452K145	2	O-Ring (#139)
45NA53	1	Grease Packet
967	1	Bolt Pack - Brake Line Hardware
	2	Wire Clip
	2	1/4"-20 x 5/8" bolt grade 5 cz
	2	1/4"-20 serrated edge flanged nut
	2	1/4" SAE Clear Zinc Washer

## 122252 / 122411 Box Kit (4-6" Kits Only)

Part #	Qty	Description
A392 or A455	1	Ram 1500 UCA Assembly - Driver
05092 or 05489	1	Ram 1500 UCA - Driver
500-1134	1	Ball Joint
560-1098	2	Rubber Bushing
BDS222760	1	BDS UCA Decal
A393 or A456	1	Ram 1500 UCA Assembly - Passenger
05093 or 05490	1	Ram 1500 UCA - Passenger
500-1134	1	Ball Joint
560-1098	2	Rubber Bushing
BDS222760	1	BDS UCA Decal
02911	2	Ball Joint Cap
9452K145	2	O-Ring (#139)
45NA53	1	Grease Packet
967	1	Bolt Pack - Brake Line Hardware
	2	Wire Clip
	2	1/4"-20 x 5/8" bolt grade 5 cz
	2	1/4"-20 serrated edge flanged nut
	2	1/4" SAE Clear Zinc Washer

### 2-3" LIFT ARMS SHOWN BELOW



# 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

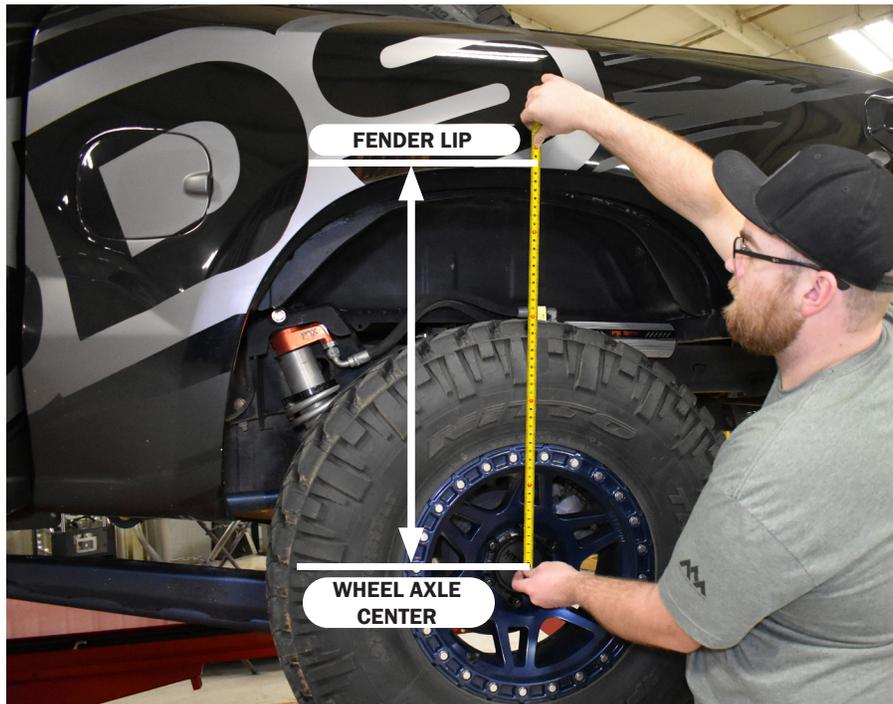
*Left Front* \_\_\_\_\_ *Right Front* \_\_\_\_\_

*Left Rear* \_\_\_\_\_ *Right Rear* \_\_\_\_\_

### AFTER

*Left Front* \_\_\_\_\_ *Right Front* \_\_\_\_\_

*Left Rear* \_\_\_\_\_ *Right Rear* \_\_\_\_\_



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

## TROUBLESHOOTING INFORMATION FOR YOUR VEHICLE

## TECH TIPS

1. This kit is only the upper control arms to fix ball joint range of motion issues common to Ram 1500 trucks when used with spacer kits.
2. BDS122252 will ONLY work with BDS 4" or 6" strut spacer lift systems or BDS 6" Fox Coilover lift systems.
3. BDS122253 will ONLY work with 2-3" spacer lift systems or 2-3" Fox Coilover lift systems. Do not use BDS122253 UCA on 4-6" lift heights.
4. This kit will not fix any driveline vibration. If vibrations or lobing of the CV's is present, the ride height must be lowered to reduce CV angles, otherwise seek options from separate manufacturers (differential drop kits or Porsche 930 inner CV conversion). BDS will NOT cover any associated costs, or issues related to driveline vibrations.
5. Will not work with stock rims with a 12.50" wide tire, tire will rub the UCA at full steering lock. If the stock rim is reinstalled it will need to be with the stock size tire ONLY!
6. For replacement ball joints, order BDS082301. Ball joint is directional and must be installed with the 'dot' facing either inward or outward on the vehicle, otherwise damage may occur.

# INSTALLATION INSTRUCTIONS

## INSTALLATION INSTRUCTIONS

1. Park vehicle on clean, flat, and level surface. Block the rear wheels for safety.
2. Raise the front of the vehicle and support the frame rails with jackstands.
3. Remove the front wheels.
4. Disconnect the ABS wire from the upper control arm.
5. Remove the upper control arm from the vehicle. Do not hit the aluminum steering knuckle with a hammer to dislodge the upper ball joint taper. Chrysler manual recommends #8677 ball joint tool. (Fig 1) Failure to properly disassemble the ball joint may weaken the factory aluminum knuckle and cause premature failure.

## SPECIAL TOOLS

Torque Wrench  
8677 Chrysler Ball Joint Separation Tool (or Equiv)

**FIGURE 1**



## FRONT DISASSEMBLY FOR FOX COILOVER INSTALL ONLY

6. Disconnect the sway bar links from the lower control arm (2019+ model shown). 2006-2018 model disconnect the sway bar from the front side of the control arm. Leave the links attached to the sway bar. Save hardware. (Fig 2)

**FIGURE 2**



7. Disconnect both outer tie rod ends from spindle steering arm. Save hardware.
8. Disconnect both upper control arms from spindle steering arm. Be careful not to damage any electric wires or brake lines.
9. Support the lower control arm with a hydraulic jack. Remove the three strut-to-frame mounting nuts. (Fig 3)

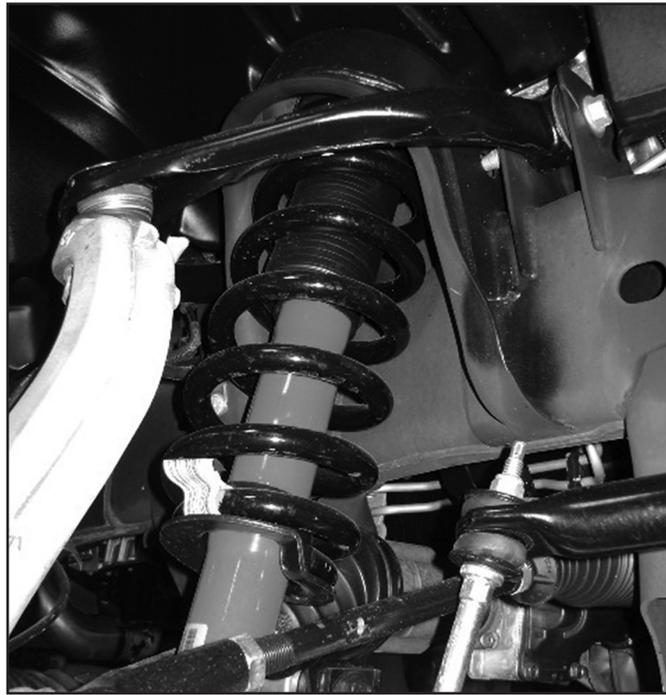
**! Caution** *DO NOT loosen the middle strut nut.*

**FIGURE 3**



10. Remove the (1) bolt and nut connecting the shock to the lower control arm. (Do not discard bolt and nut as it will be used with your new FOX coil-over kit)
11. Remove the stock shock assembly. You may need to use a pry bar to lower the suspension enough to remove the stock shock. Be careful not to damage any brake lines or electrical wires.
12. Disconnect the ABS wire from the upper control arm.
13. Remove the upper control arm from the vehicle. Do not hit the aluminum steering knuckle with a hammer to dislodge the upper ball joint taper. Chrysler manual recommends #8677 ball joint tool. Failure to properly disassemble the ball joint may weaken the factory aluminum knuckle and cause premature failure. (Fig 4)

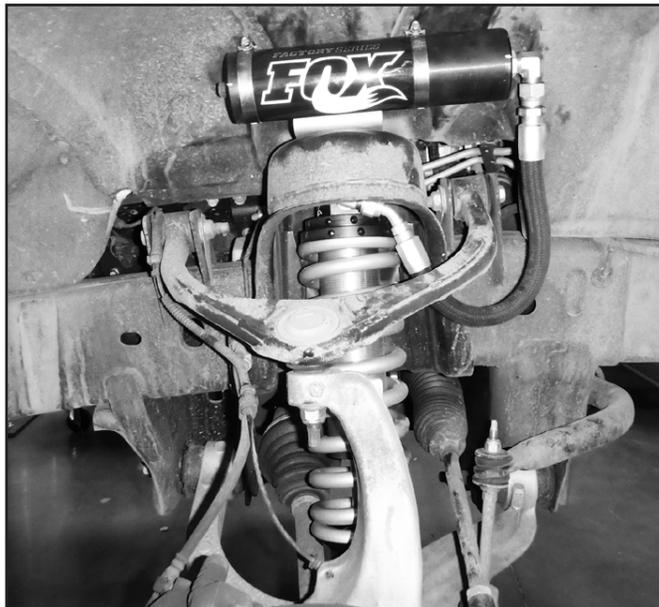
**FIGURE 4**



## **COILOVER INSTALLATION**

14. 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. Connect the top shock hat to the vehicle using the bolts and washers provided or with Performance Series models connect the top shock hat to the vehicle using the nuts and washers provided. Tighten all three bolts/nuts to 24 ft-lbs. (you will need to remove the outer center bolt to install the reservoir bracket in later steps) (Fig 5)

**FIGURE 5**



15. Connect the shock assembly to the lower control arm, reusing the stock bolt and nut. Leave hardware loose.
16. On the external reservoir models, install the reservoir bracket by placing on top of the vehicle coil-over bucket and align the bracket center hole with the outer center hole of the shock top hat, install supplied bolt and torque to 24 ft-lbs.
17. On the external reservoir models, install the reservoir onto reservoir bracket using two supplied clamps. Utilize the slots in the bracket to locate clamps. Do not feed clamps through the slots in the brackets.

## CONTROL ARM INSTALLATION

18. Install new arm with factory hardware and new ball joint nut. Snug, but do not tighten the upper control arms at this time. Final torque will be done with the weight of the vehicle on the wheels.
19. **2006-2011 Model Year:** Tighten the upper ball joint nut to 52 ft-lbs. Install cotter pin, do not loosen to get the cotter pin to install.
20. **2012+ Model Year:** Tighten the upper ball joint nut to 26 ft-lbs plus an additional 180 degrees. Install cotter pin, do not loosen to get the cotter pin to install.

*Note: Arms are side specific. The arms will have the ball joint offset towards the rear of the vehicle. The ABS tab will be towards the 'rear' of the vehicle.*

21. Grease the upper ball joint at this time.
22. Use included grease packet to grease the o-ring, install o-ring onto upper ball joint cap. Press into the upper control arm with the palm of one's hand. (Fig 6)

**FIGURE 6**



23. **2006-2018 Model year trucks (2019+ skip this step):** Attach the ABS wire to the upper control arm with the included 1/4" hardware with rubber coated clamp. Note the rubber grommet on the ABS wire can be slid on the main cable. Use silicone spray to aid in movement of grommet if necessary. Tighten to 18 ft-lbs.
24. **2006-2018 Model year trucks (2019+ skip this step):** At full droop, if the sway bar appears to be bound up, it is recommended to put some 10mm washers below the lower cup washer to slightly straighten the sway bar link (not included in the kit).
25. Reinstall wheels and torque to factory specifications.
26. Cycle the steering to check for adequate ABS slack, adjust as necessary.
27. Lower vehicle to the ground and tighten the upper control arm bushing hardware to 130 ft-lbs.
28. An alignment is now required.
29. Grease the ball joint at regular service intervals.
30. Recheck hardware 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.

## **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.