



## C2352 Installation Instructions 2019-2020 Chevy/GMC 1500 2/4wd 3.5" Strut Spacer / Preload Adventure Series Lift

### Read and understand all instructions and warnings prior to installation of product and operation of vehicle.

Zone Offroad Products 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. Minimum tool requirements include the following: Assorted metric and standard wrenches, hammer, hydraulic floor jack and a set of jack stands. See the "Special Tools Required" section for additional tools needed to complete this installation properly and safely.

#### » PRODUCT SAFETY WARNING

Certain Zone 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. Zone Offroad Products 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.

#### » TECHNICAL SUPPORT

[www.zoneoffroad.com](http://www.zoneoffroad.com) may have additional information about this product including the latest instructions, videos, photos, etc.

Send an e-mail to [tech-zone@ridefox.com](mailto:tech-zone@ridefox.com) detailing your issue for a quick response.

888.998.ZONE Call to speak directly with Zone tech support.

#### » PRE-INSTALLATION NOTES

1. Special literature required: OE Service Manual for model/year of vehicle. Refer to manual for proper disassembly/reassembly procedures of OE and related components.
2. Adhere to recommendations when replacement fasteners, retainers and keepers are called out in the OE manual.
3. 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.
4. 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.
5. Secure and properly block vehicle prior to installation of Zone Offroad Products. Always wear safety glasses when using power tools.
6. If installation is to be performed without a hoist, Zone Offroad Products recommends rear alterations first.
7. 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.

#### Difficulty Level

easy 1 2 **3** 4 5 difficult

Estimated installation: 3-4 hours

#### Special Tools Required

Strut Compressor

Cut Off Wheel / Reciprocating Saw

Welder (Optional)

#### Tire/Wheel Fitment

Wheel / Tire:

5.5" MAX Backspacing due to UCA Clearance

35/12.50 18x9, 20x9; 5.5" BS (Chevy)

33/12.50 18x9, 20x9; 5.5" BS (GMC)

295/60 20x9; 5.5" BS (GMC)

295/60 20x9, 5.5-4.5" BS (Chevy)

305/55 20x9, 5.5-4.5" BS (GMC & Chevy)

295/65 18x9, 5.5-4.5" BS (GMC & Chevy)

295/70 17x9, 5.5-4.5" BS (GMC & Chevy)

## Kit Contents

Qty	Part	Qty	Part
2	Top Strut Mount Spacer	1	Driver Side Upper Control Arm Assembly
2	Preload Spacer	1	Passenger Side Upper Control Arm Assembly
1	Wheel Spacer	2	Ball Joint Cap
1	863 Bolt Pack	2	O-Rings
4	7/16"-14 x 2-1/2" Bolt	2	Cotter Pins
4	7/16"-14 Prevailing Torque Nut	2	Steering Stop
8	7/16" SAE Washer	1	874 Bolt Pack
6	10mm-1.50 x 60mm Bolt	3	3/8" x 0.28" ID hold Wire coated clamp
6	10mm-1.50 x 55mm Bolt	2	1/4"-20 x 3/4" Bolt
12	10mm-1.50 Prevailing Torque Nut	2	1/4"-20 Prevailing Torque Nut
12	3/8" USS Washer	4	1/4" SAE Washer
2	2" Rear Block	2	12mm Nylock Nut (Extra Hardware)
4	9/16" x 2-1/2" x 10" U-Bolts		
8	9/16" High Nuts		
8	9/16" Washer		

### Important—Measure Before Starting!

Measure from the center of the wheel up to the bottom edge of the wheel opening

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

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

## » FRONT INSTALLATION INSTRUCTIONS

1. Park the vehicle on a clean, flat surface and block the rear wheels for safety.
2. Raise the front of the vehicle and support the frame rails with jack stands.
3. Remove the front wheels.
4. Disconnect the front driver's and passenger's side sway bar links from the lower control arm. Save hardware. **Figure 1**

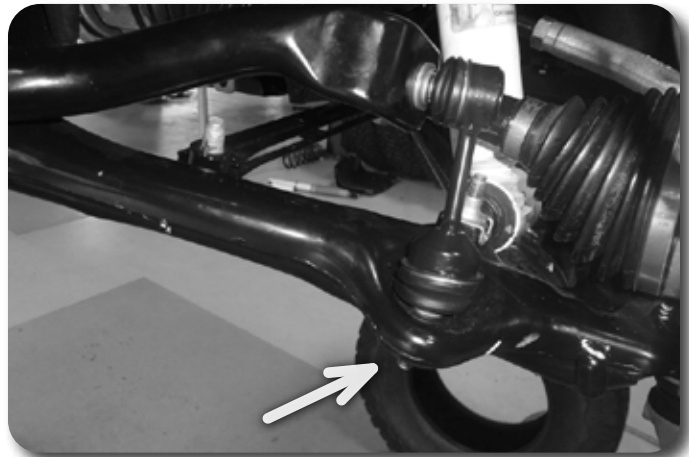


Figure 1

*Perform the following installation steps on one side at a time.*

### Step 5 Note:

For the passenger side inner nut it may be easier to access the nut through the engine bay.

5. Remove the wire retaining clips from the strut studs and loosen but do not remove the three upper strut mount nuts at the frame. **Figure 2** Do not loosen- the center strut rod nut.



Figure 2

6. Remove the nut from the steering tie rod end. **Figure 3** Thread the nut back on a couple of turns by hand. Strike the knuckle near the tie rod end to dislodge the rod end taper from the knuckle. Remove the nut and the tie rod end from the knuckle. Save nut.



Figure 3

7. Unclip the ABS wire from the knuckle for additional slack. **Figure 4**

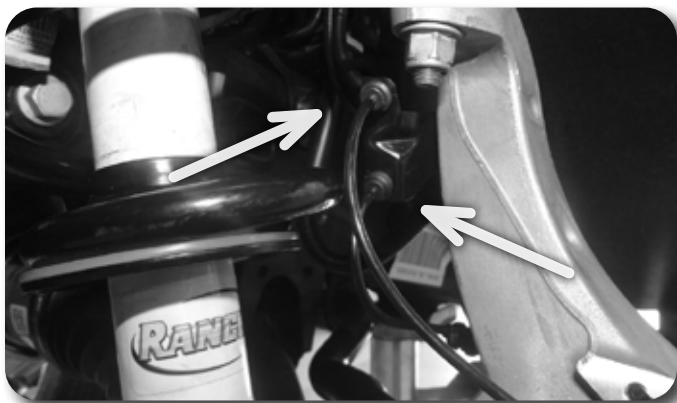


Figure 4

8. Support the lower control arm with a hydraulic jack and remove the nut from the upper ball joint. **Figure 5A** Thread the nut back on a couple of turns by hand. Strike the knuckle near the upper ball joint to dislodge the rod end taper from the

### Step 8 Note:

A strap can be used to hold the knuckle back in order to prevent the CV axle from pulling out of the inner joint.

knuckle. Remove the nut and allow the knuckle to swing rearward out of the way **Figure 5B**. Discard the ball joint nut.

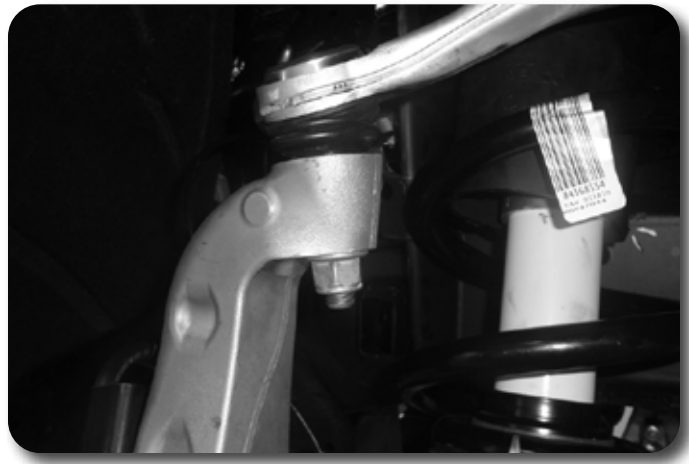


Figure 5A

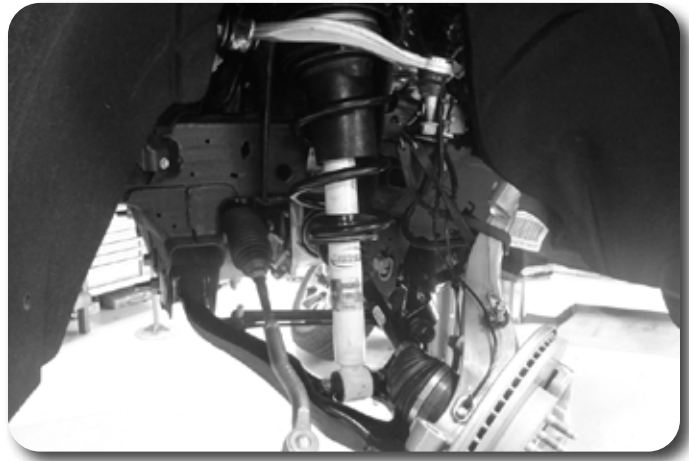


Figure 5B

9. Remove the two lower strut bar pin bolts. **Figure 6** The bolts will not be reused. Lower the control arm with the jack so there is enough room to remove the factory strut.



Figure 6

10. Remove the three nuts attaching the strut to the frame **Figure 7**. Remove the strut from the vehicle. **DO NOT** remove the center strut rod nut. Discard the nuts, they will not be reused.



Figure 7

11. Remove the ABS wire / brake sensor wire from the upper control arm. Remove the upper control arm from the vehicle by removing the two bolts attaching the upper control arm to the strut bucket / frame **Figure 8**. Save hardware.



Figure 8

12. Cut the factory droop limiter from the side of the strut bucket as shown in **Figure 9**.



Figure 9



13. Install the new upper control arm to the vehicle using the factory hardware with the bolts running from the inside out Figure 10. Snug up hardware.



Figure 10

14. Attach the ball joint on the new upper control arm to the knuckle. Snug up hardware, but do not tighten down.
15. Set the ride height from the fender lip to the center of the hub at 25-3/4" and tighten the control arm hardware to 89 ft-lbs with the first pass and a final pass of 45-60 degrees. This will ensure the rubber bushings are tightened to the right position and not put preload in the rubber bushings.

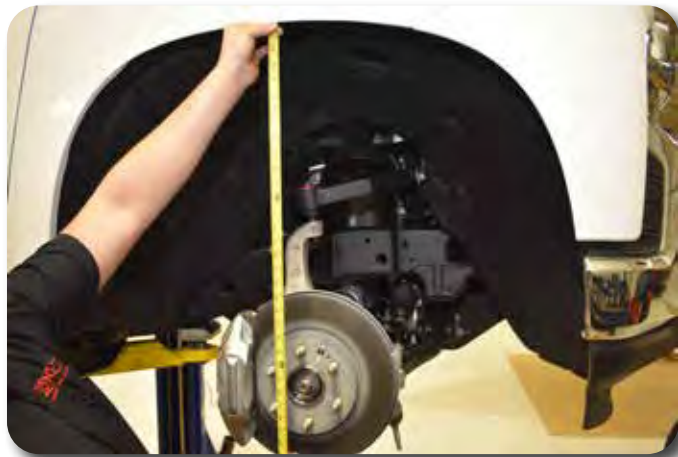


Figure 11

## » STRUT DISSASSEMBLY

16. The strut assembly must be disassembled for installation of the preload spacer. Place alignment marks on the upper strut mount, isolator, spring, strut body, and lower coil seat **Figure 12**.



Figure 12

17. Using an appropriate strut compressor, compress the coil spring and remove the upper strut nut.

**! Caution** *Coil Spring is under extreme pressure. Improper removal/installation of coil spring could result in serious injury or death. Use only a high-quality spring compressor and carefully read and follow the manufacturer's instructions*

18. Remove the factory 10mm studs that are pressed into the upper strut mount **Figure 13**.



Figure 13

19. Install the preload spacer along with the new 10mm x 55mm bolts into the recessed hex on the bottom of the preload spacer. Install the preload spacer on to the upper strut mount. The bolt holes will only line up one way **Figure 14**.

### Step 18 Note:

The studs will not be reinstalled. A hammer and vice can be used to knock out the studs. Be careful not to damage the aluminum upper strut mount

### Step 19 Note:

The 10mm x 55mm bolts are the shorter of the two 10mm bolts provided



Figure 14

20. Install the coil spring plastic isolator on to the preload spacer Figure 15. The plastic isolator can only install one way.



Figure 15

21. Reassemble the strut assembly lining up the marks made in the previous step. Be sure to reinstall all of the factory components including the rubber isolator onto the plastic isolator and bump stop Figure 16. Do not remove the assembly from the strut compressor at this time.



Figure 16



**! Caution** *Coil Spring is under extreme pressure. Improper removal/installation of coil spring could result in serious injury or death. Use only a high-quality spring compressor and carefully read and follow the manufacturer's instructions*

22. Due to lower bar pin angle in the strut, the top hat of the strut assembly must be rotated 180 degrees. Compress the coil spring slightly and rotate the upper plate 180 degrees **Figure 17A & B.**



Figure 17A Before



Figure 17B After

23. Install the 10mm x 60mm bolts into the holes on the bottom of the strut spacer into the recessed hex openings **Figure 18.**

**Step 23 Note:**

The 10mm x 60mm bolts are the longer of the two 10mm bolts provided



Figure 18

24. Install the strut spacer onto the strut with the provided washers and nuts. Figure 19 Torque the nuts to 35 ft-lbs. The spacer will only install one way.



Figure 19

25. Remove the nut clips from the lower mount of the strut Figure 20.



Figure 20

## » FRONT ASSEMBLY

26. Remove the upper ball joint from the knuckle. Save hardware. Make sure the knuckle is supported so it does not pull out the CV.
27. Reinstall the strut into the vehicle using the provided 10mm nuts and washers at the upper mount **Figure 21**. Leave the hardware loose.



Figure 21

### Step 27 Note:

Do not tighten the upper strut nuts at this time, it will make it easier to install the lower strut spacer.

28. Reinstall the lower mount with the 7/16" hardware. Run the bolts from top down to provide clearance to the CV shaft **Figure 22**. Torque the lower mount hardware to 37 ft-lbs.



Figure 22

29. With the lower hardware tight, torque the upper strut mount nuts to 40 ft-lbs.
30. Reattach the upper ball joint to the knuckle **Figure 23**. Use the jack to support the lower control arm and torque the upper ball joint nut to 26 ft-lbs with the first pass and 60-75 degrees on the final pass. Use the provided smaller cotter pin for the upper ball joint castle nut.

### Step 30 Note:

Do not loosen the upper ball joint nut to line up the hole for the cotter pin. Use the provided 3/32" (Smaller diameter) cotter pin.



Figure 23

31. Reattach the tie rod to the knuckle and torque the factory nut to 44 ft-lbs.
32. Repeat installation on the opposite side of the vehicle. When both sides are complete, reattach the sway bar links and tighten hardware to 60 ft-lbs.
33. Reattach the brake wire / ABS wires to the factory position on the knuckle **Figure 24**. Use the provided wire clamps and 1/4" bolt to attach the brake wire / ABS wire to the upper control arm. Check for enough slack in the wires and adjust as necessary.



Figure 24

34. Reinstall the front wheels and lower the vehicle to the ground. Torque lug nuts to 140 ft-lbs in a crossing pattern.
35. Make sure the upper ball joint is greased at regular maintenance intervals (3-5,000 miles). The grease fitting can be accessed using a flathead screwdriver and removing the cap from the ball joint cup.
36. The provided wheel spacer can be used if the stock spare tire needs to be installed.
37. Due to stock control arm clearance and certain size wheel and tire combinations, a steering stop may be required. These are only needed when the tire hits the upper control arm at full lock. Prep the lower control arm for welding, remove paint. Disconnect the battery in the truck to protect electronics.
38. Weld steering stop on to lower control arm as shown. **Figure 25**





Figure 25

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## » REAR INSTALLATION INSTRUCTIONS

1. Block the front wheels. Safely raise the rear of the vehicle and support with jack stands just ahead of the front leaf spring frame mount.
2. Remove the wheels.
3. Support the rear axle with a floor jack.
4. Remove the 3 bolts attaching the rear brake line / ABS bracket to the top of the rear differential **Figure 26**. Save hardware for later installation.



Figure 26

5. Support the center of the axle with a hydraulic jack. Remove the factory shocks from the axle and frame. Save hardware and discard shocks.
6. With the axle still well supported remove the passenger's side U-bolts. The factory U-bolts will not be reused.
7. Lower the axle just enough to install the new provided lift block between the axle and the spring. Position the block so that the shorter side of the block is towards



## Post-Installation Warnings

1. 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.
2. 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.
3. Perform head light check and adjustment.
4. Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.

the front of the vehicle. It may be necessary to loosen the driver's side U-bolts slightly to allow the axle to lower far enough to install the block.

8. Using the support jack, raise the axle so that the axle, spring and block are all touching. Install the new provided U-bolts, nuts and washers allow with the factory U-bolt plate. Snug U-bolts but do not tighten.
9. Repeat the installation on the driver's side of the vehicle. Pay special attention to all of the brake lines and wires. Do not allow them to get over-extended.
10. Locate the new rear shocks. Install the provided bushings and steel sleeves into the eyes of the shocks. Lubricating the bushings and sleeves with some grease will make installation easier.
11. Install the new shocks with stock hardware and torque upper and lower bolts to 65 ft-lbs. The axle mounting tabs may need to be bent open slightly to allow for clearance of the larger diameter shocks.
12. Reattach the rear brake line / ABS bracket to the top of the rear differential using the factory hardware.
13. Install wheels and tires. Torque lug nuts to 140 ft-lbs. Lower vehicle.
14. Bounce the rear of the vehicle to settle the suspension. Torque leaf spring u-bolts to 100-120 ft-lbs.

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## » POST INSTALLATION INSTRUCTIONS

15. Check all hardware for proper torque.
16. Check hardware after 500 miles.
17. Adjust headlights.
18. The vehicle will need a complete front end alignment.