



## C1221 Installation Instructions 2014+ Chevy/GM 1500 2/4wd 2" Strut Spacer Lift - MagneRide

### 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@sporttruckusainc.com](mailto:tech-zone@sporttruckusainc.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: 1-2 hours

#### Special Tools Required

None

#### Tire/Wheel Fitment

Tire:

285/70R17

285/65R18

285/55R20

Wheel:

Stock (or equivalent backspacing)

## Kit Contents

Qty	Part		
2	Strut Mount Spacer	1	PASS MagneRide Sensor
1	Bolt Pack - Strut Spacer	1	Bolt Pack - MagneRide Sensor
1	DRV MagneRide Sensor	1	Loctite
		2	Steering Stop

### Important—measure before starting!

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

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

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

## 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 sway bar (15 mm). Save hardware. **Figure 1**



Figure 1

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

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 (18mm). **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. Remove the ABS line from the retaining clips at the frame and upper control arm. **Figure 4A** Using a 10mm wrench, unthread the MagneRide sensor from the stock bracket on the upper control arm and move the sensor arm up out of the way. **Figure 4B** Remove the brake line from the bracket on the upper control arm. A set of locking pliers works best to bend the bracket (the bracket will not be reused). **Figure 4C & 4D** Remove the stock brake line bracket from the upper control arm and save the bolt.



Figure 4A



Figure 4B



Figure 4C



Figure 4D

8. Support the lower control arm with a hydraulic jack and remove the nut from the upper ball joint. **Figure 5** 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 knuckle. Remove the nut and allow the knuckle to swing rearward out of the way. Save the ball joint nut.



Figure 5

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 about 1" of room between the strut bar pin and the lower control arm.



Figure 6

- Using a flat head screw driver, remove the factory nut clips from the strut bar pins. **Figure 7** These will not be reused.



Figure 7

- Locate one of the new provided strut mount spacers. Position the spacer between the strut bar pin and the control arm. The small tabs on the spacer will point up and be positioned on the outside of the strut bar pin. The "U" shaped portion of the spacer will wrap down around the backside of the control arm mount.
- Align the holes in the strut bar pin and the spacer. Install the provided 7/16" x 3-1/2" bolts with washers down through the bar pin and spacer. **Figure 8** Once the bolts are in position, align them with the holes in the control arm and raise the control arm up to seat the assembly together. Fasten the 7/16" bolts with the provided nuts and washers. Torque the 7/16" hardware to 45 ft-lbs.

### Step 12 Important

The bolts must run from the top down for CV shaft clearance. All hardware is located in pack #646.



Figure 8

- With the lower hardware tight, torque the factory upper strut mount nuts to 40 ft-lbs.
- Remove the bumper on the frame below the upper control arm. This will not max out the balljoint at full droop, but removing the bumper eliminates unnecessary stress on the balljoint through droop travel. The strut will still limit down travel just like the OE configuration. **Figure 9**





Figure 9

15. Reattach the upper ball joint to the knuckle. Use the jack to support the lower control arm and torque the upper ball joint nut to 40 ft-lbs.
16. Reattach the steering to the knuckle and torque the factory nut to 44 ft-lbs.
17. Attach the new sensor bracket to the upper control arm with the factory bolt. **Figure 10A** Apply Loctite to the bolt before tightening. Insert the MagneRide sensor through the hole in the bracket and attach using the provided 6mm lock nut. Attach the ABS line and brake line to the side of the bracket using the two provided wire clamps and 1/4" x 1" bolt, 1/4" washer, and 1/4" lock nut. **Figure 10B**

### Step 17 Important

All hardware is located in bolt pack #980.

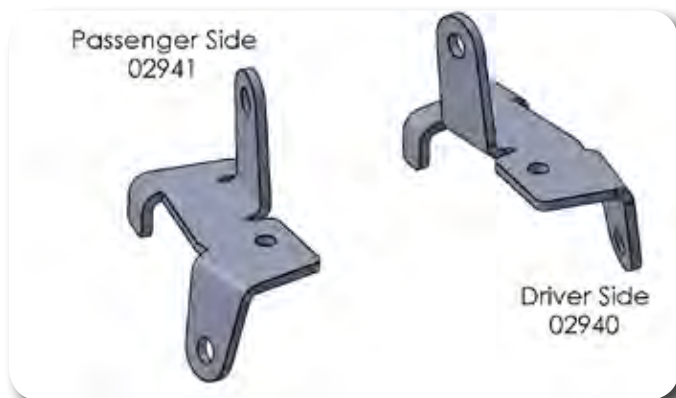


Figure 10A



Figure 10B

## 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.

## Recommend Alignment Specifications

### CASTER

$3.30^{\circ} \pm 1.00^{\circ}$

### CAMBER

$-0.10^{\circ} \pm 0.60^{\circ}$

### TOE

$+0.10^{\circ} \pm 0.20^{\circ}$

18. Repeat installation on the opposite side of the vehicle. When both sides are complete, reattach the sway bar links and tighten hardware until the bushings begin to swell.
19. 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. Typically this is only required on 2014 and newer trucks that have stamped steel upper and lower control arms., or vehicles with wheels and tires out of recommended specifications.
20. Weld steering stop on to lower control arm as shown. (Fig 11)



Figure 11

21. Reinstall the wheels and lower the vehicle to the ground. Torque lug nuts to 140 ft-lbs in a crossing pattern.
22. Check all hardware for proper torque.
23. Check hardware after 500 miles.
24. Adjust headlights.
25. The vehicle will need a complete front end alignment.