



## INSTALLATION INSTRUCTIONS

150206BK /150206TP/ 150206TPS

4" KIT

### 14-16 GM1500 SILVERADO / SIERRA 2WD / 4WD

#### Cast Steel Control Arms Only

**Thank you for being selective enough to choose our high quality BELLTECH PRODUCT. We have spent many hours developing our line of products so that you will receive maximum performance with minimum difficulty during installation**

Note: Confirm that all of the hardware listed in the parts list is in the kit. **Do not** begin installation if any part is missing. Read the instructions thoroughly before beginning this installation.

**Warning: DO NOT** work under a vehicle supported by only a jack. Place support stands securely under the vehicle in the manufacturer's specified locations unless otherwise instructed.

**Warning: DO NOT** drive vehicle until all work has been completed and checked. Torque all hardware to specified values.

Reminder: Proper use of safety equipment and eye/face/hand protection is absolutely necessary when using these tools to perform procedures!

Note: It is very helpful to have an assistant available during installation.

Note: Please refer to component and hardware list before beginning installation to insure all necessary pieces have been supplied and packaged.

#### **Exceptional Customer Experience Guarantee:**

**STOP!** We strive for an exceptional experience for all of our valued customers. If, for any reason, you need assistance with your Belltech products, *please do not return the products to the store or website you purchased from.*

#### **RECOMMENDED TOOLS:**

- Properly rated floor jack and support stands
- Wheel chocks
- Torque wrench up to 200 ft/lbs range
- Standard and Metric socket wrench set
- Standard and Metric wrench set
- Tape measure
- Dead blow hammer
- Marking pen
- Safety Glasses
- Reciprocating Saw with metal cutting blades

**BOX 1: LK1002**

<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QUANTITY</b>
<b>153201-104</b>	Differential Short Spacer	2
<b>150200-105</b>	Differential Tall Spacer	2
<b>150200-202</b>	U-bolt	4
<b>150200-201</b>	Lift Block	2
<b>150207-100D</b>	Upper Control Arm - Driver's Side	1
<b>150207-100P</b>	Upper Control Arm - Passenger Side	1
<b>150200-109</b>	Skid Plate	1
<b>150200-100-HW</b>	Bushing Kit	2
<b>150200-777</b>	<b>Hardware Kit</b>	1
<b>150200A-777</b>	<b>Hardware Pack: Strut Hardware</b>	1
	110279 M10 x1.5 - 60mm Bolt	4
	110280 M10 x 1.5 Nylock	4
	110239 M10 Washer	8
<b>150200B-777</b>	<b>Hardware Pack: Upper Control Arm Bracket</b>	1
	110278 1/4-20 Flange Nut	2
<b>150200C-777</b>	<b>Hardware Pack: Differential Drop Hardware</b>	1
	110276 M12 x 1.75 - 110 Hex Bolt	4
	110277 M12 x 1.75 Flanged Nut	4
<b>150200D-777</b>	<b>Hardware Pack: U-Bolt</b>	1
	110240 9/16"-18	8
	110241 9/16" Washer	8
<b>150200-109A-95</b>	<b>Skid Plate Retaining Washer</b> (NOT NEEDED FOR THIS KIT)	1
<b>9999-001</b>	<b>Loctite 271 - Red Threadlocker</b>	1

## KIT PREPERATION:

Before beginning the install process, measure the hub to fender heights for your vehicle so you can compare the resulting height to the original. Measure vertically from the center of the wheel to the inner edge of the fender. Record the results here:

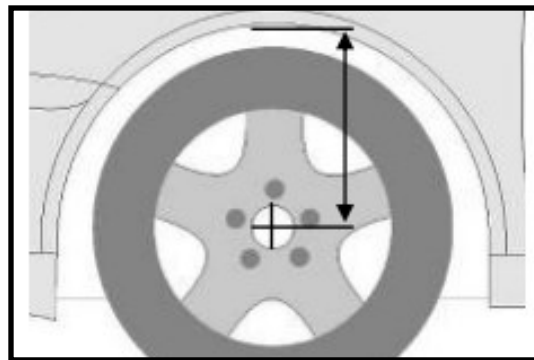
LF: \_\_\_\_\_ RF: \_\_\_\_\_ LR: \_\_\_\_\_ RR: \_\_\_\_\_

Park the vehicle on a smooth, level concrete or seasoned asphalt surface and activate the parking brake. Block the rear wheels of the vehicle with appropriate wheel chocks; making sure the vehicle's transmission is in 1st gear ( manual) or “ Park” (automatic).

It is very important that the vehicle is properly supported during this installation to prevent personal injury and chassis damage. Make sure that the support stands are properly placed prior to performing the following procedures. We **DO NOT RECOMMEND** using wheel ramps while performing this installation.

## FRONT REMOVAL / INSTALLATION

1. Jack up the front of the vehicle. Place jack stands under the frame rails and lower onto jack stands letting the front suspension hang.
2. Remove the wheels. **(PHOTO 1)**
3. Using a 21mm wrench, remove the tie-rod nut. Strike the side of the mount with a dead-blow hammer to dislodge the tie rod end. A 10mm wrench may be needed if the ball joint is spinning. **(PHOTO 2)**
4. Place a jack underneath the lower control arm to support the assembly and loosen the top and bottom control arm bolts to allow the control arms to move more easily. Do not remove these bolts at this moment.
5. Remove the ABS sensor wire from the plastic clip. Remove the bracket from the control arm using a 10mm wrench. **(PHOTO 3)** Note: The rotor and caliper can be removed for easier access.
6. Remove and unplug the ABS sensor wire from the spindle as using a 5mm Allen. **(PHOTO 4)**



7. Using a 15 mm wrench and socket, disconnect the sway bar. **(PHOTO 5)**
8. Support the spindle while removing the upper ball joint nut using an 18mm wrench. Strike the spindle on the designated bosses to help separate the upper control arm from the spindle. Be careful, the upper control arm could be under tension. **(PHOTO 6)**
9. Remove the factory strut by removing the three top bolts using a 18mm socket and the lower two bolts using a 15mm socket. Keep the top hardware. The lower hardware will be replaced.
10. Mark the orientation and remove the upper control arm cam bolts using a 21mm wrench and socket. Remove the upper control arms from the frame. **(PHOTO 7)**
11. Install the new control arms after assembling the bushings as shown in the image **(FIGURE 1)**. Use grease liberally and coat all contact surfaces. Ensure that the washers are centered on the sleeves for proper functioning.
12. Install the upper control arm, and adjust to previous settings. Do not tighten the bolts yet. **(PHOTO 8)**

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#### **For Sway Bar Installation:**

Please refer to the instructions provided with the XXXX sway bar kit. All hardware is provided.

#### **For Strut Spacer Installation:**

Please refer to the included instructions for strut spacer 150210-120. All required hardware is provided.

#### **For Trail Performance Strut Installation:**

Please refer to the instructions for setting ride height included within the strut 28019.

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13. Attach the upper ball joint to the spindle using the supplied nut. Torque to 85 ft-lbs.
  14. Reinstall all the brake line brackets, ABS harness and sensor. The provided 1/4-20 flange nuts within the 150200B-777 packet will allow for the ABS line to mount on the newly installed control arms stud.
  15. Reinstall the outer tie rod to the spindle using the factory hardware. Torque to 65 ft-lbs.
  16. Reconnect the sway bar end links back to the lower control arm and sway bar using factory hardware.

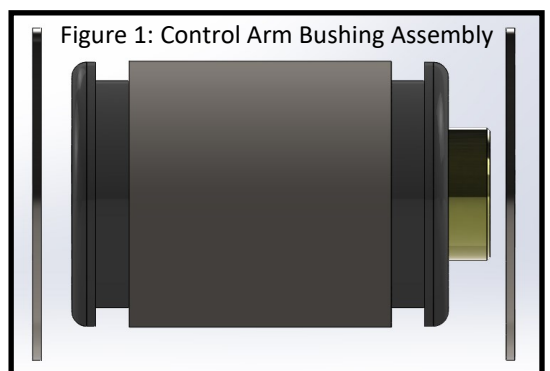


Figure 1: Control Arm Bushing Assembly



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15. Reinstall the outer tie rod to the spindle using the factory hardware. Torque to 65 ft-lbs.
16. Reconnect the sway bar end links back to the lower control arm and sway bar using factory hardware. Torque to 35 ft-lbs.
17. Remove the plastic gravel guard from the crossmember, then support the differential with an appropriate jack. **(PHOTO 9)**
18. Remove the crossmember located underneath the differential, this will allow for more room to work, as the differential will need to be trimmed to prevent interference with the crossmember. **(PHOTO 10)**
19. Trim the differential to create a tolerance between it and the crossmember using a reciprocating saw or angle grinder. Reference the image for a visual reference. Your vehicle may need more, or less trimming. **(PHOTO 11)**
20. Locate and loosen the 4 21mm Bolts that fix the differential to the frame. Reference images A-D on the last page for detailed locations and the following 2 steps for the differential spacers.
21. Continue by removing one bolt at a time, with enough space to slide each spacer between axle mounts and frame, making sure to reinsert and thread in the new supplied M12 hardware found in 150200C-777 before removing the next bolt. The longer spacers will mount towards the front of the vehicle while the shorter, wider spacers will mount towards the rear.
22. When all four spacers and bolts have been reinstalled. Torque the bolts to 50 ft-lbs.
23. Test fit the crossmember. If it interferes with the differential refer back to step "18". Reinstall the crossmember using factory hardware.



24. Mount plastic skid shield and skid plate using OEM hardware to the front two mounting locations and the rear mounting location on the OEM crossmember. **(PHOTO 12)**

25. Be sure to torque upper and lower control arms to 120ft\*lbs and 150ft\*lbs respectively.

### **REAR INSTALLATION**

26. Chock the front wheels to prevent the vehicle from moving while the rear end is lifted

27. Jack up the rear of the vehicle from the differential

28. Place jack stands under the frame rails and lower the vehicle onto the jack stands carefully.

29. Remove the wheels.

30. Remove the factory shock absorbers using a 21mm wrench & socket. The factory hardware will be reused. **(PHOTO 13)**

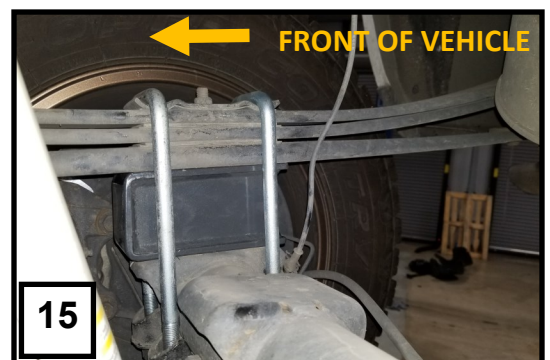
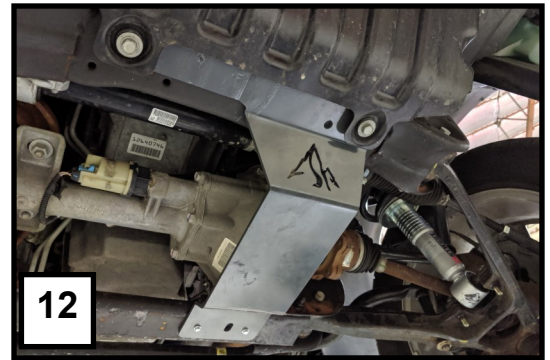
31. Remove the factory u-bolts by evenly undoing the nuts using a 21mm socket, then remove the factory blocks. Slowly lower the axle using the floor jack to allow for the new 3" block to be installed. **(PHOTO 14)**

32. Install the block on the factory spring pad with the flat part of the block on the spring and the tapered end towards the front. Jack up the axle to meet the springs, making sure to align the center pin.

33. With the floor jack applying slight pressure to the rear axle to keep the pin aligned, install the new supplied u-bolts and tighten in a crossing pattern, using a 7/8" socket. **(PHOTO 15)**

34. Locate the new shock absorbers, and install the shock absorbers in the factory mounting locations using the factory hardware. Tighten using a 21mm wrench & socket. **(PHOTO 16)**

35. Install the tires/wheels.





## Post Install

Check that all components and fasteners have been properly installed, tightened and torqued.

Check brake hoses, and other components for any possible interference.

Torque lug nuts to OEM ( factory) specifications.

Test drive the vehicle in a remote location so that you can become accustomed to the altered driving characteristics and handling. Be aware that the vehicle will handle substantially different now that it has been modified.

We recommend the vehicle be taken to a qualified wheel alignment facility to be realigned to factory specifications after completing the install.

Installation is complete. Check ALL of the hardware and re-torque at intervals for the first 10, 100, 1000 miles.

Figure A: Driver's Side Front Spacer

Figure B: Passenger's Side Front Spacer

Figure C: Driver's Side Rear Spacer

Figure D: Passenger Side Rear Spacer.

