

# INSTALLATION GUIDE

**PART NUMBER: 25011**  
**FRONT LOWERING STRUT**  
**GM TRAILBLAZER / ENVOY 2WD / 4WD | 2002-2009**

0" TO -2" HEIGHT ADJUSTABLE LOWERING

300 W. PONTIAC WAY. CLOVIS, CA 93612  
PHONE: 800-445-3767 | EMAIL: [INFO@BELLTECH.COM](mailto:INFO@BELLTECH.COM)

# THANK YOU

Thank you for choosing our high quality Belltech product. We have spent a great deal of time developing our line of products so that you will receive maximum performance with minimal difficulty during installation. Soon your vehicle will be on the road looking and feeling much improved.

**Please take a moment to read all instructions and warnings prior to the installation of your new Belltech product and before operating your vehicle. If you have any questions or concerns regarding any step in the installation process, please do not hesitate to call or email our customer support specialists who are trained to help you through any portion of this process.**

## Before You Begin:

**It is of the utmost importance that you confirm all of the components listed on the parts list is in the kit. You can find this list located on the last page(s) of your instructions. Do not begin installation if any part is missing. Instead, please call our Belltech customer service specialists.**

### **Belltech Customer Support:**

**Phone: 1-800-445-3767**

**Email: [info@belltech.com](mailto:info@belltech.com)**

## Safety Information:

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

Proper use of safety equipment and eye/face/hand protection is absolutely necessary when performing any of the following instructions.

We strive for an exceptional experience for all our valued customers. If for any reason you need assistance with your Belltech products, please do not return the product to the store you purchased from, but rather call our dedicated customer service experts, from 7am to 5pm PST.

We recommend that a qualified mechanic, at a properly equipped facility, perform this installation.

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

## Before Driving Your Vehicle:

It is important to double check all brake hoses, cables, and other components to be sure there is no interference. You must also check for wheel/tire to chassis/body interference. If any issues are found, review your installation instructions to be sure no steps were missed and any problems are corrected.

Make sure your vehicle is aligned immediately following installation.

Check all hardware and re-torque at intervals for the first 10, 100, and 1000 miles.

Some of Belltech's products are designed to improve your vehicle's off-road performance. Leveling/lifting your vehicle may result in an altered center of gravity. It is crucial to use extreme care when operating your vehicle to prevent rollover and/or loss of control.

Any changes in your vehicle's suspension may result in transformed handleability. Please test-drive your vehicle in a remote location so you can become accustomed to the revised driving characteristics.

Perform headlight check and adjustment.

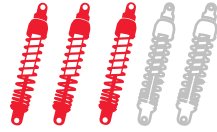
Failure to drive any modified vehicle in a safe manner may result in harm or death.

Never operate your modified vehicle under the influence of drugs, alcohol, or lack of adequate sleep.

Always wear your seatbelt.



**DIFFICULTY:**



**INSTALLATION TIME:**

2-4 Hours + Alignment

## RECOMMENDED TOOLS:

- Properly rated floor jack
- Support stands
- Wheel chocks
- Metric socket wrench set
- Metric wrench set
- Tape measure
- Marking Pen
- Safety glasses
- Rubber mallet

## SPECIALTY TOOLS:

- High quality spring compressor
- Torque wrench up to 150 ft lbs.

## INSTALLATION PREPARATION:

Before beginning the installation process, measure the hub to fender heights for your vehicle and record them in the “Before” section. After your vehicle has been modified, record the new measurements in the, “After” section. This way, you can compare the resulting height to the original. When taking the measurements, measure vertically from the center of the wheel to the inner edge of the fender.

**Before:**

LF: \_\_\_\_\_

RF: \_\_\_\_\_

LR: \_\_\_\_\_

RR: \_\_\_\_\_



**After:**

LF: \_\_\_\_\_

RF: \_\_\_\_\_

LR: \_\_\_\_\_

RR: \_\_\_\_\_

# JACKING, SUPPORTING, AND PREPARING THE VEHICLE

1. Park your vehicle on a smooth, level, concrete or seasoned asphalt surface.
2. Block the rear wheels of the vehicle using wheel chocks. Make sure the vehicle's transmission is in "PARK" (automatic) or 1st gear (manual).
3. Activate the parking brake.
4. Break loose, but do not spin the wheel lug nuts to ease in removal when the wheels are in the air.
5. Lift the front of the vehicle off the ground using a properly rated floor jack. Lift the vehicle so the front tires are approximately 6-8 inches off the ground.
6. Place support stands rated for the vehicles weight. The stands should be positioned in the factory specified locations. (Refer to the owners manual). Prior to lowering the vehicle onto stands, make sure the support stands will contact the chassis. It is very important that the vehicle is properly supported to prevent any harm to ones self or to the vehicle.
7. Lower the vehicle slowly onto the stands.
8. Remove the front wheels.



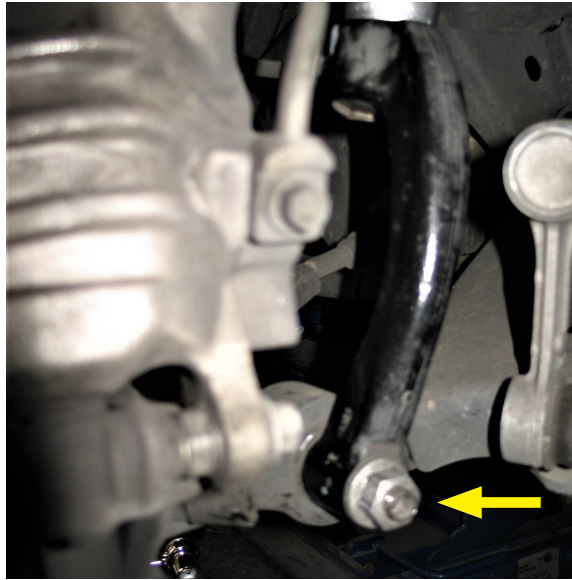
## Technician reminder:

Never work under a vehicle supported only by a jack. It is necessary to place support stands securely under the vehicle in the manufacturer's specified locations unless otherwise instructed.



## OEM STRUT REMOVAL

9. Remove the air filter cover and hose from the engine bay to access the top of the strut tower on the passenger side.
10. Remove the two 18mm nuts that attach the top of the strut assembly to the chassis.
11. Remove the lower 24mm strut yoke mounting bolt.



12. Slide the strut yoke off its retaining pin and remove the strut assembly.



13. To help with the installation of the new strut, use a paint pen to mark a line down the center of the strut assembly for alignment purposes to match the alignment of the top mount and strut yoke during reassembly.
14. Loosen the strut yoke 18mm pinch bolt and nut. Spread the strut yoke at the pinch belt using a flat bladed tool and remove the strut yoke from the strut.

# OEM STRUT DISASSEMBLY

15. Using a proper spring compressor, mount the strut assembly and ensure it is secured before proceeding.

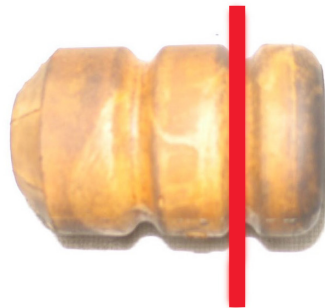


## Technician note:

The installation photograph shown was taken at a professional installation shop. It is important to use a spring compressor to compress the spring before removing the top mount bolt. Failure to do so may result in serious injury.

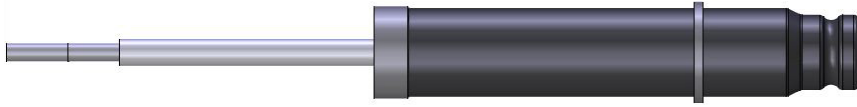


16. Compress the spring until tension is relieved from the strut.
17. Hold the strut shaft from spinning and remove the top center nut from the strut. Support the shock as the nut is removed as it will fall if not supported.
18. Remove the OEM strut from the compressed spring fixture.
19. Remove top mount, upper spring isolator, and bump stop to use with your new Belltech strut later.
20. Cut the OEM bump stop to a height of 1.2 inches, as shown in the example image below.



# BELLTECH STRUT ASSEMBLY

21. The strut is delivered as shown below. Remove the Nyloc nut and vent cap from the top of the Belltech strut to proceed.



### Technician note:

When lowering your vehicle more than -1", OE camber may not be achievable. Ensure proper toe alignment to minimize tire wear.

22. Using the tables below as reference, add the needed lift rings to reach the desired height.

2002-2009 GM TRAILBLAZER / ENVOY 2WD / 4WD		
Height (Inches)	8mm Ring	16mm Ring
+2"	2	3
+1.5"	1	3
+1"	0	3
+.5"	1	2
0"	0	2
-.5"	1	1
-1"	1	0
-1.5"	0	1
-2.0"	0	0



### Technician note:

The table above is designed to use Belltech strut with the OEM coil spring. Combining the Belltech strut with a lowering spring will require adjusting the ring quantities to adjust the total lowered spring height.



23. Place the supplied spring perch onto the new Belltech strut. Do not install the spring perch upside down.



### Installation note:

DO NOT use the OEM bottom spring perch rubber from the OEM strut.



## BELLTECH STRUT ASSEMBLY CONTINUED

24. Place vent cap (black), the desired rings, and the cut OEM bump stop on the strut.



25. With the OEM spring still compressed, slide the new Belltech strut into the OEM spring.



26. Complete the assembly using the OEM spring isolator, top mount, dust boot, and supplied Nyloc nut.

27. Align the top mount with the spring using the original marking made in step 13. Torque the strut rod nut to 33 ft lbs.

28. Insert the Belltech strut into the strut yoke and line it up the marking made in step 13. Torque the pinch bolt to 52 ft lbs.



## BELLTECH STRUT INSTALLATION

29. Mount the strut assembly in the strut tower and the lower control arm yoke pin.



30. Using the original hardware, torque the two strut tower nuts to 33 ft lbs. and torque the lower control arm yoke nut to 82 ft lbs.

31. Confirm the ABS and brake lines are free from interference and in their original positions.

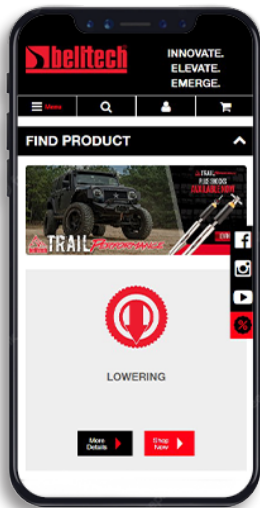
32. Attach the air filter hose and place the cover back on the vehicle.

# FINALIZING THE INSTALLATION

33. Mount the wheels and tighten the lug nuts.
34. Lift the vehicle and remove the support stands.
35. Carefully lower the vehicle onto the flat ground.
36. Torque the lug nuts to 103 ft lbs.
37. Check that all components and fasteners have been properly installed and torqued.
38. Read and perform all tasks in the “Before Driving Your Vehicle” section of page 1 of your instructions.

## THANK YOU FOR CHOOSING BELLTECH.

You are now a part of the Belltech family and we are eager to catch a glimpse of your newly modified vehicle. Give us a shout out and let us know how much you love our product. Don't forget, we offer other Belltech related merchandise for you and your vehicle on our website [www.belltech.com](http://www.belltech.com)



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If you have any questions, concerns, or warranty related issues regarding your Belltech product, please call or email our experienced customer service specialists.

### Belltech Customer Support:

Phone: 1-800-445-3767

Email: [info@belltech.com](mailto:info@belltech.com)

# KIT CONTENTS



25011		
Part number	Description	Qty
25011-001	BELLTECH LOWERING STRUT	1
25003-008	8MM LIFT RING	3
25003-016	16MM LIFT RING	2
25011-002	VENT CAP	1
25012-002	SPRING PERCH	1