# INSTALLATION INSTRUCTIONS



# 25011 **ADJUSTABLE STRUT**

#### 02'-07' GMC ENVOY & TRAILBLAZER RAISING AND LOWERING STRUT

#### **IMPORTANT NOTE**

THIS KIT GIVES YOU THE OPTION OF A 0" TO 2" DROP AS WELL AS A 1" TO 2" LIFT IN 0.5" INCREMENTS.

#### **CONGRATULATIONS!**

You were selective enough to choose a BELLTECH PRODUCT. We have spent many hours developing our line of products so that you will receive maximum performance with minimum difficulty during installation

Confirm that all of the hardware listed in the parts list is in the kit. DO NOT begin this 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 the vehicle until all work has been completed and checked. Torque all hard ware to values specified.

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 the installation process.

Note: We **DO NOT RECOMMEND** using wheel ramps while performing this installation.

Note: On some vehicles when using the full 2" drop it might not be possible to get the vehicle into OE camber specifications.

## **RECOMMENDED TOOLS:**

- Blocks and Wheel chocks
- Properly rated floor jacks and support stands
- Ratcheting Socket Wrench
- Combination Wrench

Safety Glasses

- •Torque wrench: 0-75 lb ft. range
- •Floor jack and Jack Stands
- •Torque Wrench 10-75 lb ft. range

#### KIT INSTALLATION

- 1a. Open the hardware kit and remove all of the contents. Refer to the parts list to verify that all parts are present.
- **1b.** 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).
- 1c. Using a properly rated floor jack, lift the FRONT wheels of the vehicle off the ground. Place support stands, rated for the vehicle's weight and in the factory specified locations. Refer to the vehicle Owner's Manual. Prior to lowering the vehicle onto the stands, make sure the supports will securely contact the chassis.

**1d.** 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.

**1e.** Remove front wheels.

# REMOVING THE O.E.M. FRONT STRUT

2a. Locate the top mount bolts of the front spring/strut assembly.

**2b.** Using a wrench, remove all the mounting nuts that attaches the top of the spring/strut assembly to the chassis.

**2c.** As you did for the top mounts, remove the bottom mounting bolt of the shock yoke.



2d. Slide shock yoke off its retaining pin and remove the strut assembly.



- **2e.** To ease the installation of the new strut, mark a white line down the center of the assembly for alignment purposes to match the alignment of the top mount and shock yoke.
- **2f.** Loosen the shock absorber pinch bolt and nut. Spread the shock yoke at the pinch belt using a flat bladed tool and remove the shock yoke from the strut.
- ! Coil springs may be under tension. Springs under tension store a great amount of energy. Use caution during the following steps to avoid personal injury and/or damage to vehicle. Be careful not to damage the brake hoses.

### PRE-ASSEMBLY OF THE STRUT

The installation pictures shown have been done at a professional installation shop. It is important to use a spring compressor to compress the spring before removing the top mount bolt or serious injury may occur.

**3a**. Mount the entire spring/strut assembly in a spring compressor fixture. Compress the spring.



- **3b.** Using a wrench, remove the top mount.
- **3c.** Remove the top spring perch dust cover and bumpstop.
- 3d. Cut the OEM bumpstop to a height of 1.2 inches



**3d.** Install your required spacers for the desired height onto the BELLTECH shock. It may be necessary to remove the vent cap before removing and adding spacers.

# SEE TABLE ON PAGE 6 FOR CORRECT NUMBER OF SPACERS TO INSTALL FOR DESIRED HEIGHT FOR YOUR VEHICLE

**3f.** Assemble the new BELLTECH height adjustable strut using the BELLTECH vent disc, OEM spring, new BELLTECH spring seat, cut OEM bump stop and the OEM top mount that includes the boot and the spring isolator. Insert the BELLTECH shock into the shock yoke and line it up the marks made in step 2e. Tighten the pinch bolt to OEM recommended specifications.

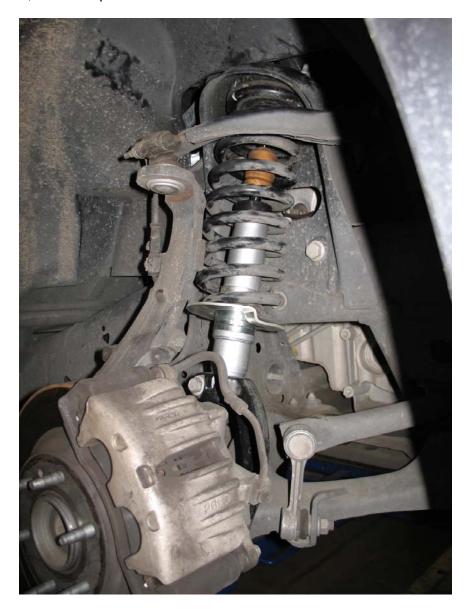




# **RE-ASSEMBLY OF THE FRONT SHOCK/SPRING**

**4a.** Re-install the new assembly, the shock/spring the same way the O.E.M. shock/spring was removed. You will re-use the OEM nuts to install the new BELLTECH strut.

4b. In reverse order, follow Steps 2d thru 2a.



#### FINALIZING THE INSTALLATION

All hardware being fastened to the vehicle's original fastening points should be torqued to the factory specifications (Reference Service Manual for Specifications). To prevent chassis damage, never overtorque the hardware.

- **5a.** Check that all components and fasteners have been properly installed, tightened and torqued.
- **5b.** Check brake hoses and other components for any possible interference.
- 5c. Reinstall wheels.
- **5d.** Lift the vehicle and remove the support stands. Carefully lower the vehicle to the ground. Torque wheels to factory specifications.
- **5e.** Immediately test-drive the vehicle in a remote location so that you can become accustomed to the revised driving characteristics and handling. Be aware that the vehicle will handle substantially different now that it has been modified.
- **5f.** Installation is complete. Check all of the hardware and re-torque at intervals for the first 10, 100, 1000 miles.

PART NUMBER	DESCRIPTION	QTY
25011	SHOCK	1
25003-016	16mm SPACER	3
25003-008	8mm SPACER	2
25011-002	Vent Cap	1
25012	BELLTECH Spring Perch	1

### **SPACER TABLES**

			NUMBER OF RING TO PUT ON STRUT					
ITEM NO.	PART NO.	ITEM	HEIGHT	HEIGHT	OEM	HEIGHT	HEIGHT	
		DESCRIPTION	LOWERING	LOWERING	HEIGHT	LIFTING 1"	LIFTING 2"	
			2" 50.8mm	1" 25.4mm	0" 0MM	25.4mm	50.8mm	
1	25003-016	16mm (0.63in)	0	1	2	3	3	
		Ring						
2	25003-008	8mm (0.315in)	0	0	0	0	2	
		Ring						

NOTE: If a half inch increment height, between -2 and +2 inches, is desired add one 25003-008 ring to the shock from the next lowest increment from the table above. For example if a 1.5 inch drop is desired place one 25003-008 ring on the shock (one more ring than -2 inch drop).