

# E4-WM5-Y690A00

## MOUNTING INSTRUCTION



### IMPORTANT! READ THIS FIRST!

Installation of shock absorbers or other suspension components requires special tools and expert knowledge. Accordingly, installation of all BILSTEIN products must be performed by a professional automotive suspension technician.

When replacing other brands, BILSTEIN shock absorbers or other suspension components should always be installed as a set. All BILSTEIN products must only be used for the specific, intended application as indicated in the application guide. **Any use of any BILSTEIN product other than for its intended use may result in serious bodily injury or death.**

Always use a chassis hoist for the installation of BILSTEIN products and make certain that the raised vehicle is securely attached to the hoist and/or supported to prevent the vehicle from slipping, falling, or moving during the installation process.

**If you install any BILSTEIN product without the necessary special tools, expertise, and chassis hoist, you may subject yourself to the risk of serious bodily injury or death.**

BILSTEIN shock absorbers are gas-filled and are highly pressurized.

- Never place any BILSTEIN shock absorbers in a vise or use a clamp on any BILSTEIN shock absorber.
- Never apply heat near any BILSTEIN shock absorber.
- Never attempt to open or repair any BILSTEIN product, in order to prevent **serious bodily injury or death.**

Any attempt to misuse, misapply, modify, or tamper with any BILSTEIN suspension product voids any warranty and **may result in serious bodily injury or death.**

While installing any BILSTEIN product:

- Do not use impact tools for loosening or tightening fasteners, because this may destroy the screw threads.
- Self-locking fasteners must only be used **once!**
- Reuse original equipment components only if they are in good condition, otherwise replace them with new components.
- Never remove the slight film of oil on the shock absorber piston rod and seal.
- All mounting fasteners for shock absorbers and other suspension components must be securely tightened before tension is placed on the suspension system, unless otherwise specified in the manufacturer's service manual or in this instruction.

After installing any BILSTEIN product:

- The suspension caster and camber must be checked and/or adjusted to comply with the vehicle manufacturer's specifications.
- The (load dependent) brake compensator and the anti-lock brake system must be checked and/or reset to comply with the vehicle manufacturer's specifications.
- The headlight aim must be checked and adjusted. Or, if applicable, adaptive headlights must be checked and recalibrated to comply with the vehicle manufacturer's specifications.
- If applicable, any/all Advanced Driver Assistance Systems (ADAS) must be checked and recalibrated to comply with the vehicle manufacturer's specifications.

### **CAUTION for COILOVER TYPE SUSPENSIONS!!!**

**If disassembling a coilover type suspension, refer to the vehicle manufacturer's service manual for proper procedures. The coil spring is preloaded and must be compressed with a spring compressor to release load before the upper mount is disassembled. Failure to follow the vehicle manufacturer's procedures may cause serious injury or death, and may damage the vehicle.**

### **IMPORTANT!!!**

**This BILSTEIN product may or may not be compatible with non-BILSTEIN aftermarket products and/or vehicle modifications. It is the responsibility of the professional automotive suspension technician performing the installation to identify any non-OEM components and/or modifications on the vehicle that may interact with the suspension system. These must be evaluated for any potential physical static or dynamic interference with and/or effect on the function of this BILSTEIN product.**

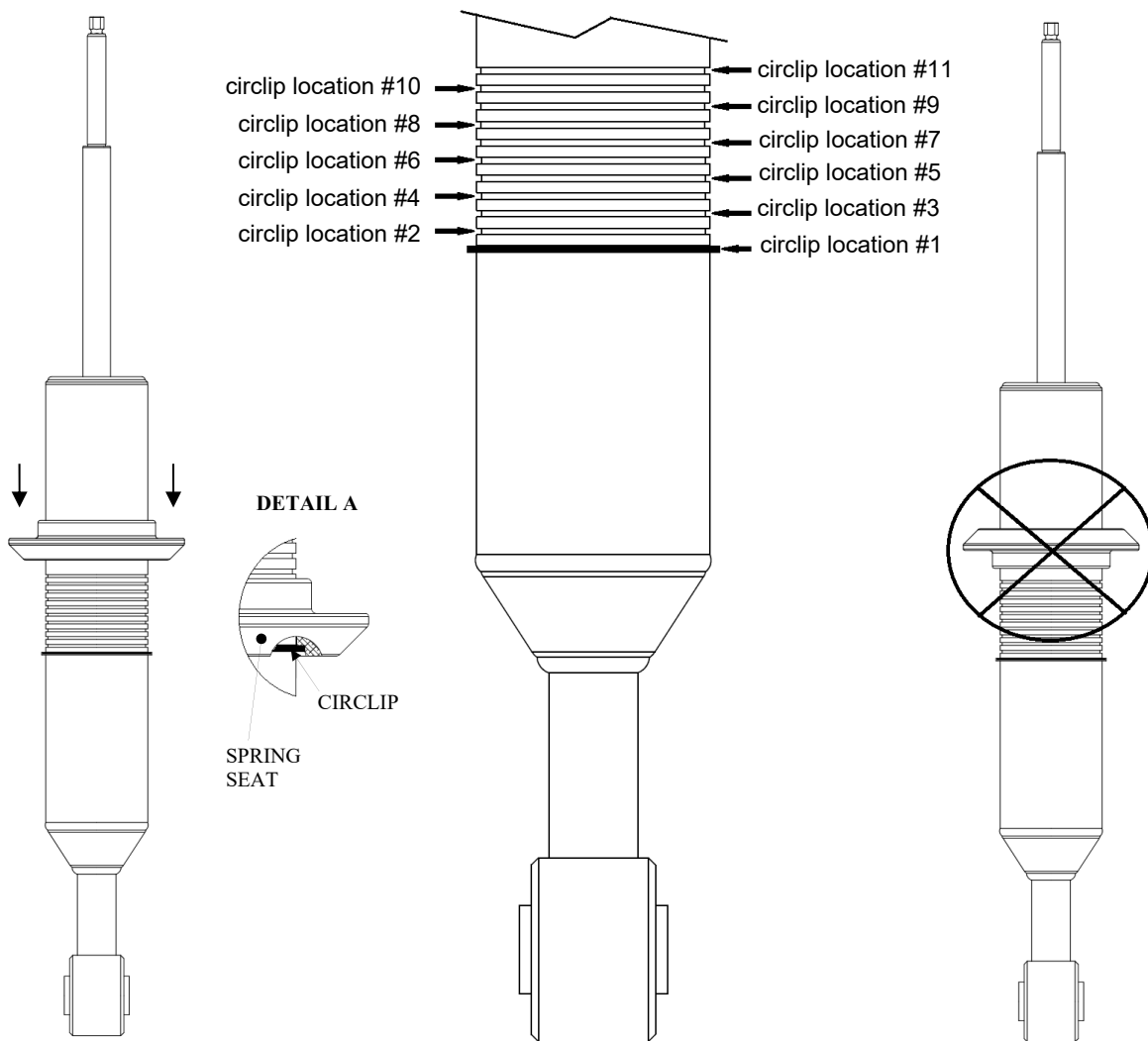
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## IMPORTANT:

### PLACE CIRCLIP IN APPROPRIATE GROOVE TO ADJUST RIDE HEIGHT.

Use appropriate tools to move the circlip. Ensure that the circlip is fully seated in the groove after moving it (you should be able to rotate it manually in the groove). Install the spring seat in the direction shown only. The circlip must fit completely in the groove inside spring seat (DETAIL A). **Improper installation will cause permanent damage to the shock!**



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<b>B8 6112 Typical lift heights**</b>							
<b>Tacoma '16+</b>							
<b>Circlip Location</b> Driver side / Passenger side	<b>4x4 V6, Double Cab, 6' or 5' Bed</b>	<b>4x4 V6/4cyl, Access Cab</b>	<b>4x2 V6, Double Cab, 6' Bed</b>	<b>4x2 V6, Double Cab, 5' Bed</b>	<b>4x2 V6, Access Cab</b>	<b>4x2 4cyl, Access Cab</b>	<b>TRD PRO</b>
#11 / #9	2"	Do not use	Do not use	Do not use	Do not use	Do not use	1.1"
#10 / #8	1.7"	1.8"	1.7"	2"	2.2"	Do not use	0.8"
#9 / #7	1.4"	1.5"	1.4"	1.7"	1.9"	Do not use	0.4"
#8 / #6	1"	1.1"	1"	1.3"	1.5"	2"	stock
#7 / #5	0.7"	0.8"	0.7"	1"	1.2"	1.7"	Do not use
#6 / #4	0.4"	0.5"	0.4"	0.7"	0.9"	1.4"	Do not use
#5 / #3	stock	stock	stock	0.4"	0.6"	1.1"	Do not use
#4 / #2	Do not use	Do not use	Do not use	Do not use	Do not use	Do not use	Do not use
#3 / #1	Do not use	Do not use	Do not use	Do not use	Do not use	Do not use	Do not use

<b>B8 6112 Typical lift heights**</b>					
	<b>Tacoma '05-'15</b>			<b>FJ Cruiser '07-'09</b>	<b>4Runner '03-'09</b>
<b>Circlip Location</b> Driver side / Passenger side	<b>4x4 V6, Double/Access Cab, 6' or 5' Bed</b>	<b>Prerunner V6, Double/Access Cab, 6' or 5' Bed</b>	<b>TRD PRO</b>	<b>4x4</b>	<b>4x4 V6</b>
#11 / #9	2.5"	Do not use	0.5"	Do not use	Do not use
#10 / #8	2.2"	2.5"	stock	Do not use	Do not use
#9 / #7	1.8"	2.2"	Do not use	Do not use	Do not use
#8 / #6	1.5"	1.8"	Do not use	3.4"	3.4"
#7 / #5	1.2"	1.5"	Do not use	3.1"	3.1"
#6 / #4	0.9"	1.2"	Do not use	2.8"	2.8"
#5 / #3	Do not use	Do not use	Do not use	2.5"	2.5"
#4 / #2	Do not use	Do not use	Do not use	2.2"	2.2"
#3 / #1	Do not use	Do not use	Do not use	1.9"	1.9"

**DO NOT USE CIRCLIP SETTINGS THAT ARE NOT RECOMMENDED FOR YOUR VEHICLE**

Additional lift heights / applications are listed on the next page.

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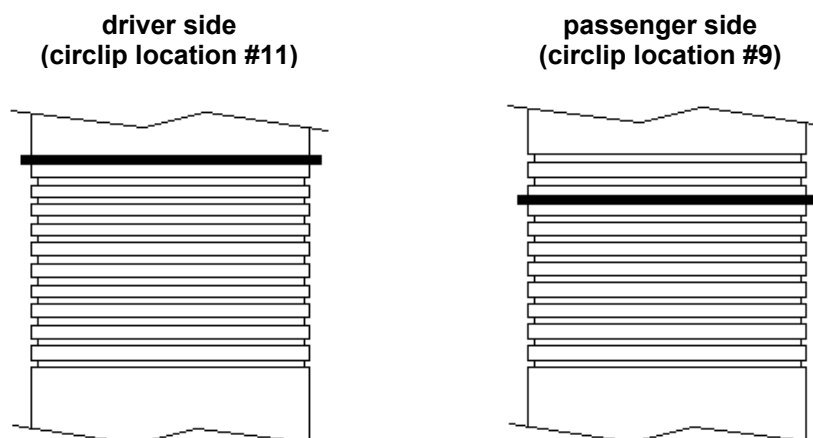
B8 6112 Typical lift heights**			
Circlip Location	4Runner '03-'09		GX470 '03-'09
	4x4 V8	4x2 V6	
#11	Do not use	Do not use	Do not use
#10	Do not use	Do not use	Do not use
#9	Do not use	Do not use	3.2"
#8	3.6"	Do not use	2.9"
#7	3.3"	Do not use	2.6"
#6	3"	Do not use	2.3"
#5	2.6"	Do not use	2"
#4	2.3"	3.7"	1.6"
#3	1.9"	3.3"	1.3"
#2	1.6"	2.9"	1"
#1	1.3"	2.5"	0.6"

\*\* Lift heights indicated are typical. Actual lift height is influenced by which factory suspension the vehicle is equipped with and its condition; optional equipment and accessories on your vehicle, and other vehicle modifications such as replacement coil springs, wheel and tire combinations, etc. Modifying/lifting the suspension to your vehicle may raise its center of gravity and may make it more susceptible to loss of control and/or rollover, which may result in death or serious injury. We strongly recommend that you offset the loss of rollover resistance as much as possible by increasing tire track width, and that you equip the vehicle with a functional roll bar and cage system. Wear seat belts and shoulder harnesses at all times, and avoid situations where a side rollover may occur.

On the models listed below, it is recommended that the **driver side circlip is installed two positions higher than the passenger side circlip.**

- All Tacoma '05-'15 and '16+
- FJ Cruiser 4x4 '07-'09
- 4Runner 4x4 V6 '03-'09

For example, to achieve the highest lift setting of 2" on a '16+ Tacoma 4x4 V6, Double Cab, 6' or 5' Bed, the circlips should be installed as follows:



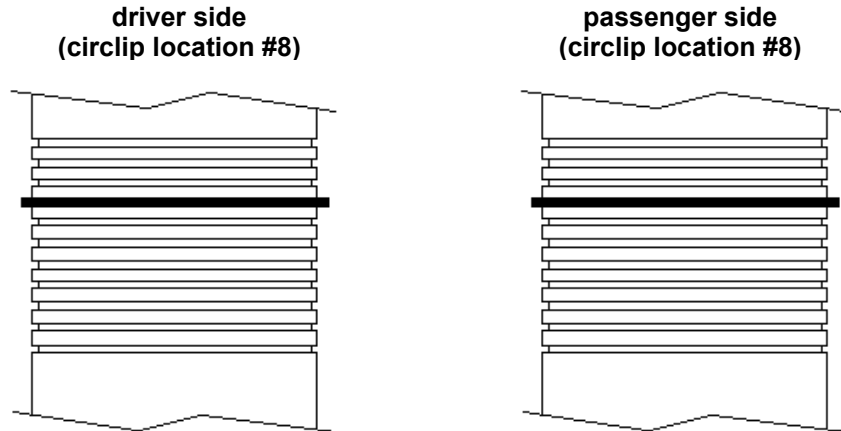
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On the models listed below, it is recommended that the **driver side circlip** is installed in the **same position as the passenger side circlip**.

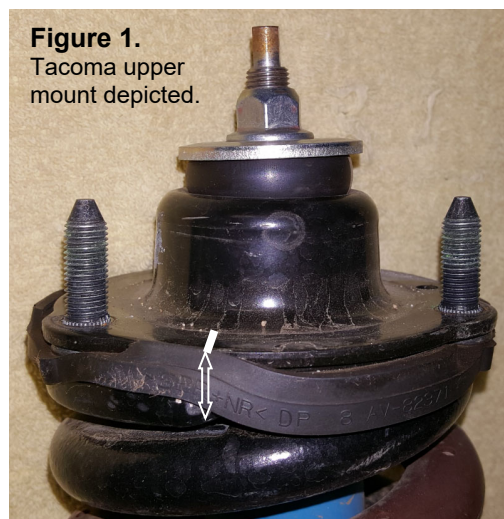
- 4Runner 4x4 V8 '03-'09
- 4Runner 4x2 V6 '03-'09
- GX470 '03-'09

For example, to achieve the highest lift setting of 3.6" on a 4Runner 4x4 V8 '03-'09, the circlips should be installed as follows:



## Instructions for disassembly of OE shock absorber module:

- Remove the existing shock and spring unit from the vehicle following all procedures in the vehicle manufacturer's service manual.
- Note the clocking of the lower mount bushing relative to the studs on the upper mount (important for reassembly).
- Also note the clocking of the suspension spring relative to the upper mount. It is recommended to mark the upper mount (on the metallic area) as shown in Figure 1 to indicate the position of the end of the top coil (important for reassembly).



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- D. Using an appropriate spring compressor, compress the spring until it can be rotated freely by hand. Then, disassemble the shock and spring unit.

### Instructions for assembly of B8 6112 shock absorber module:

- E. Select desired lift height by seating the circlip in the appropriate circlip location (see pages 2-5).

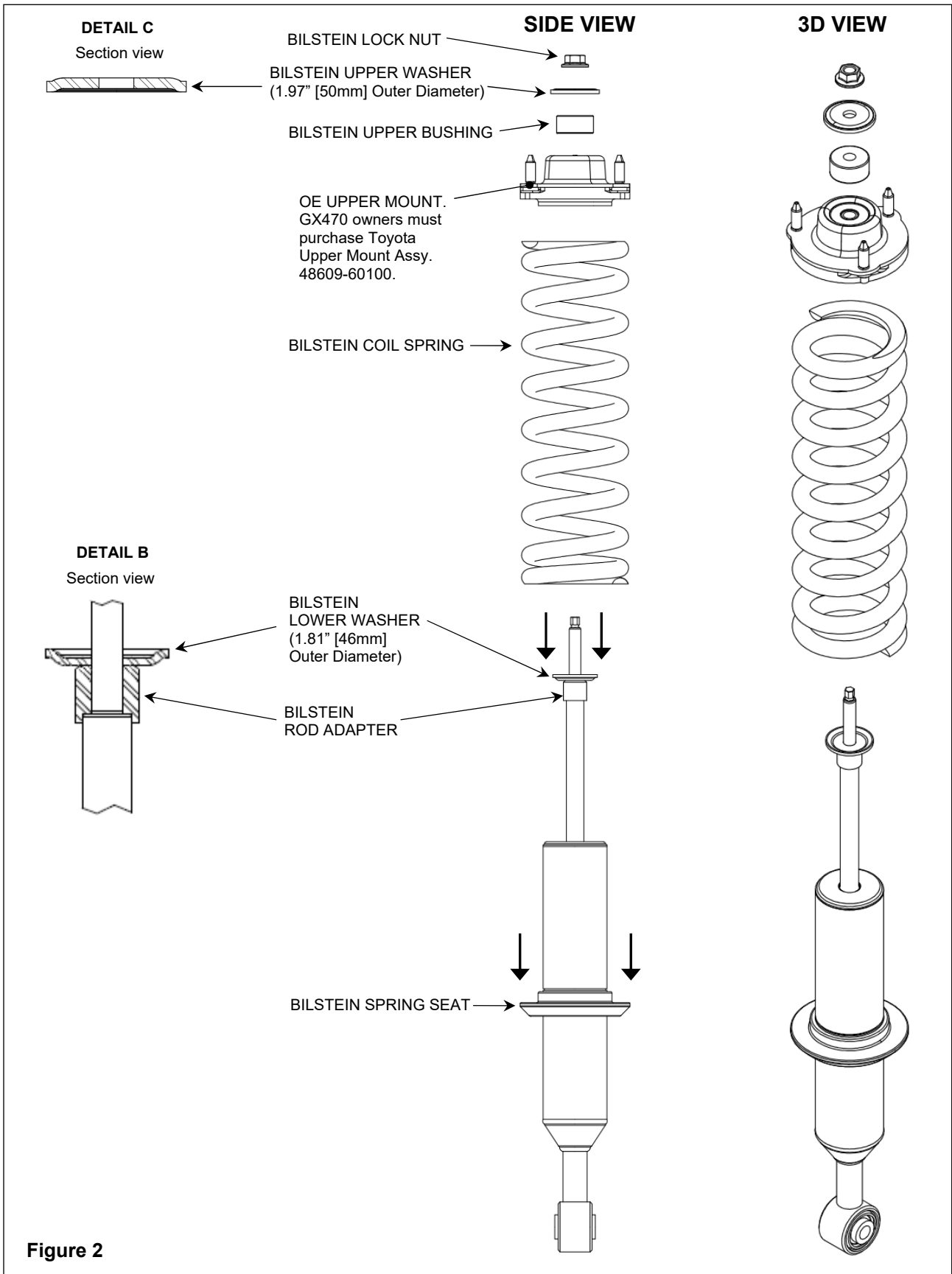
### [Refer to Figure 2 on page 7 for steps F-L]

- F. Install the supplied spring seat on to the new Bilstein shock such that the groove inside the spring seat fits over the circlip on the shock body as shown on page 2. Install the spring seat in the direction shown only. The circlip must fit completely in the groove inside the spring seat (see DETAIL A on page 2). Improper installation will cause permanent damage to the shock.
- G. Install the supplied rod adapter (counter bore side down) onto the stem of the rod as shown. Ensure that the rod adapter is oriented correctly (see Figure 2 Detail B).
- H. Install the supplied lower washer (concave side up) onto the stem of the rod as shown. Ensure that the lower washer is oriented correctly (see Figure 2 Detail B).
- I. Using an appropriate spring compressor, compress the supplied coil spring and assemble it with the new Bilstein shock. Refer to Figure 2 for the order of the remaining components.
- J. Verify OE lower bushing is still glued underneath OE upper mount. Then install the OE upper mount over the threaded stem on the new Bilstein shock and on top of the spring. **Note that GX470 owners must purchase Toyota Upper Mount Assy. 48609-60100** (this part number is valid as of 3/26/20). Rotate the upper mount so that the end of the top coil is aligned with the mark on the upper mount made in step C. Rotate the shock so that the lower mount is aligned with the upper mount studs as noted in step B.
- K. Install the supplied upper bushing and supplied upper washer (concave side down) onto the stem of the rod as shown. Ensure that the upper washer is oriented correctly (see Figure 2 Detail C).
- L. Install the provided new locknut and tighten to 27 N·m (20 lb·ft). Use an 8mm wrench to keep the piston rod from rotating while torquing the locknut.

\*\*\*\***DO NOT USE AN IMPACT WRENCH TO TIGHTEN THE LOCKNUT!**\*\*\*\*

- M. Slowly release the spring compressor while ensuring that the lower mount bushing remains aligned with studs on the upper mount.
- N. Install the module assembly on to the vehicle and tighten all fasteners to vehicle manufacturer's specifications.
- O. Check wheel alignment and adjust to the vehicle manufacturer's specifications. This completes the installation.

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**Figure 2**