

# E4-WM5-Y680A00

## MOUNTING INSTRUCTION



### **IMPORTANT! READ THIS FIRST!**

Installation of shock absorbers 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 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 suspension products are gas-filled and are highly pressurized.

- Never place any BILSTEIN product in a vise or use a clamp on any BILSTEIN product.
- Never apply heat near any BILSTEIN product.
- 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 piston rod and seal.
- All mounting fasteners for shocks and struts 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.

### **CAUTION!!!**

**Before disassembling the front 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.**

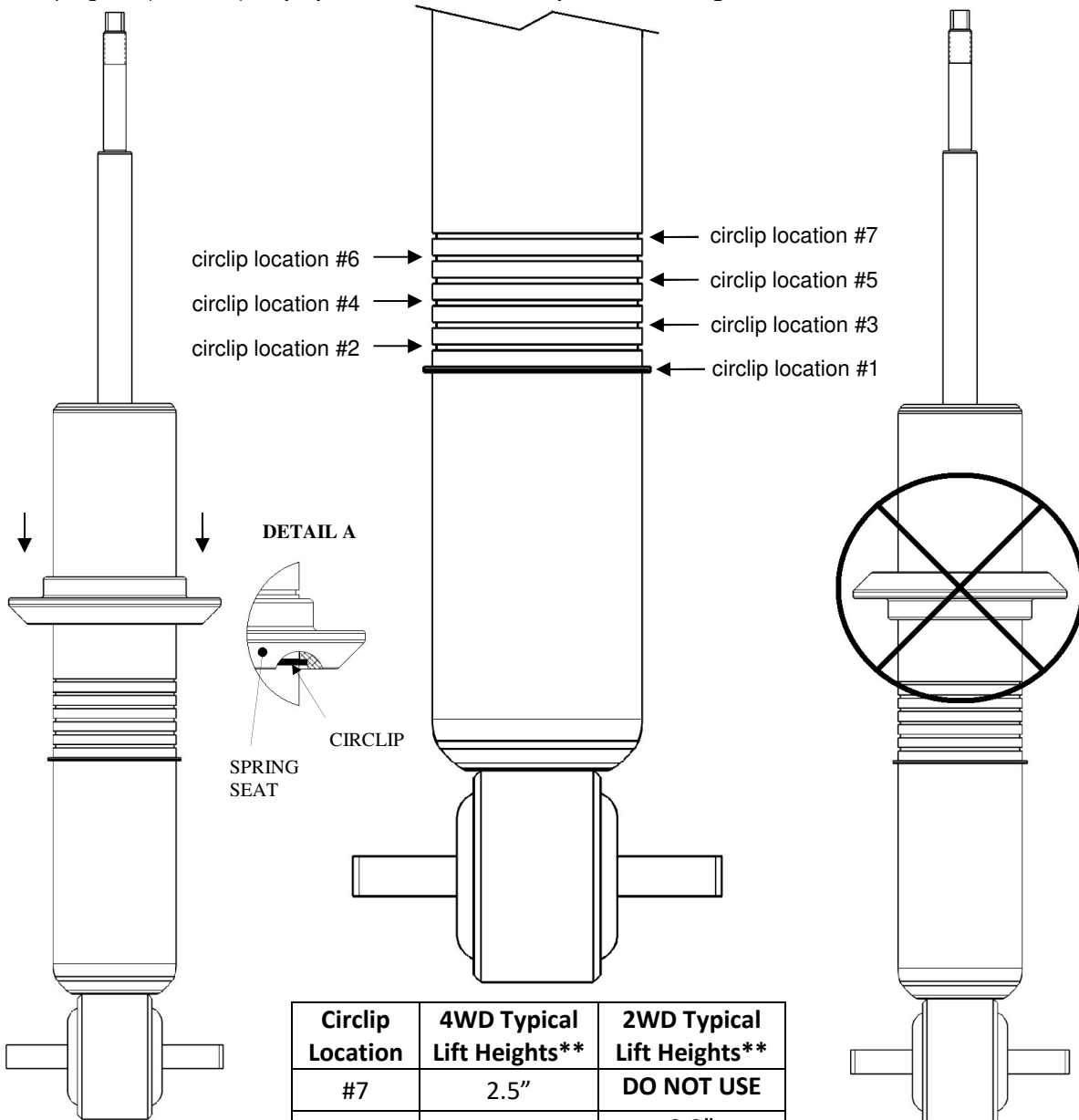
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## IMPORTANT:

### 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!**



Circlip Location	4WD Typical Lift Heights**	2WD Typical Lift Heights**
#7	2.5"	DO NOT USE
#6	2.0"	2.9"
#5	1.6"	2.4"
#4	1.2"	2.0"
#3	0.8"	1.6"
#2	0.4"	1.1"
#1	Stock	0.7"

**Figure 1: Circlip Location & Lift Heights**

# E4-WM5-Y680A00

## MOUNTING INSTRUCTION



\*\* 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.

### Instructions for disassembly of OE shock absorber module:

- A. Remove the existing shock and spring unit from the vehicle following all procedures in the vehicle manufacturer's service manual.
- B. Note the clocking of the lower T bar mount relative to the studs on the upper mount (important for reassembly and installation).
- C. Using an appropriate spring compressor, compress the spring until it can be rotated freely by hand. Then, disassemble the shock and spring unit.
- D. Remove OE dust boot shroud from OE jounce bumper & dust boot assembly by pulling, and twisting, the dust boot away from the jounce bumper cap, as shown in Figure 2 below.

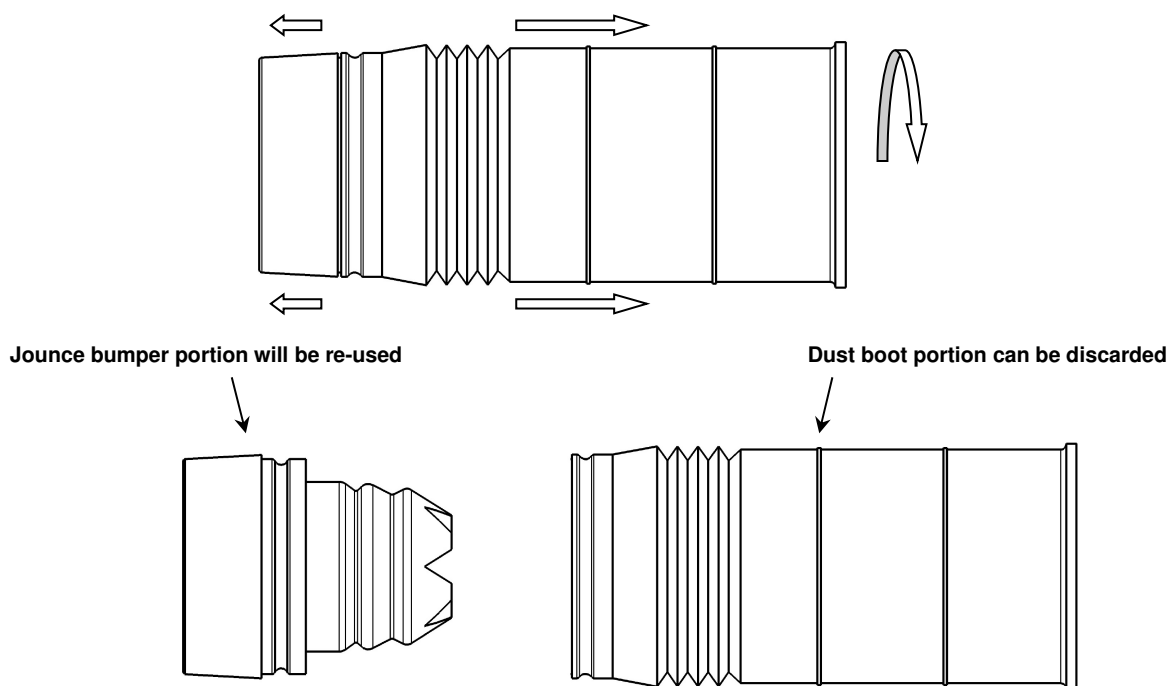


Figure 2: OE Jounce Bumper

# E4-WM5-Y680A00

## MOUNTING INSTRUCTION



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

- A. Select desired lift height by seating the circlip in the appropriate circlip location (see page 2).

### [Refer to Figure 3 on page 5 for steps E-L]

- B. Install the supplied spring seat onto the shock body as shown. Ensure that the groove inside the spring seat fits over the circlip on the shock body (see DETAIL A on page 2). Improper installation will cause permanent damage to the shock.
  - C. Temporarily remove the supplied rod adapter from the Bilstein shock. Then, slide the OE jounce bumper onto the piston rod and force it on to the working portion of the piston rod. (Make sure to leave enough room for the rod adaptor to slide into the slot at the top of the jounce bumper cap.)
  - D. Re-install the supplied rod adapter onto the stem of the rod. It should rest inside of the top of the jounce bumper cap.
  - E. Using an appropriate spring compressor, compress the supplied coil spring enough to safely assemble it with the new Bilstein shock.
  - F. Press the OE spring isolator together with the OE top mount and install over the threaded stem.
  - G. Rotate the supplied Bilstein spring until the end of the top coil is seated into the ramp of the OE spring isolator.
  - H. Rotate the shock so the lower T bar mount is aligned with the upper mount studs as noted in step B.
  - I. Install the provided new locknut and tighten to 27 N·m (20 lb·ft).
- \*\*\*\*DO NOT USE AN IMPACT WRENCH TO TIGHTEN THE NUT!\*\*\*\***
- J. Rotate the shock so that the lower mount is aligned with the upper mount studs as noted in step B.
  - K. Slowly release the spring compressor while ensuring that the end of the top coil remains seated in the OE rubber isolator.
  - L. Install the assembly on to the vehicle and tighten all fasteners to the vehicle manufacturer's specifications- with exception to the lower T bar bolts. Install the supplied lower T bar bolts down through the T bar and control arm. Then install the supplied flange lock nuts on to the T bar bolts and tighten the lock nuts to 90 N·m (66 lb·ft). Do not re-use the original lock nuts.
  - M. Check wheel alignment. If necessary, adjust to the vehicle manufacturer's specifications. This completes the installation.

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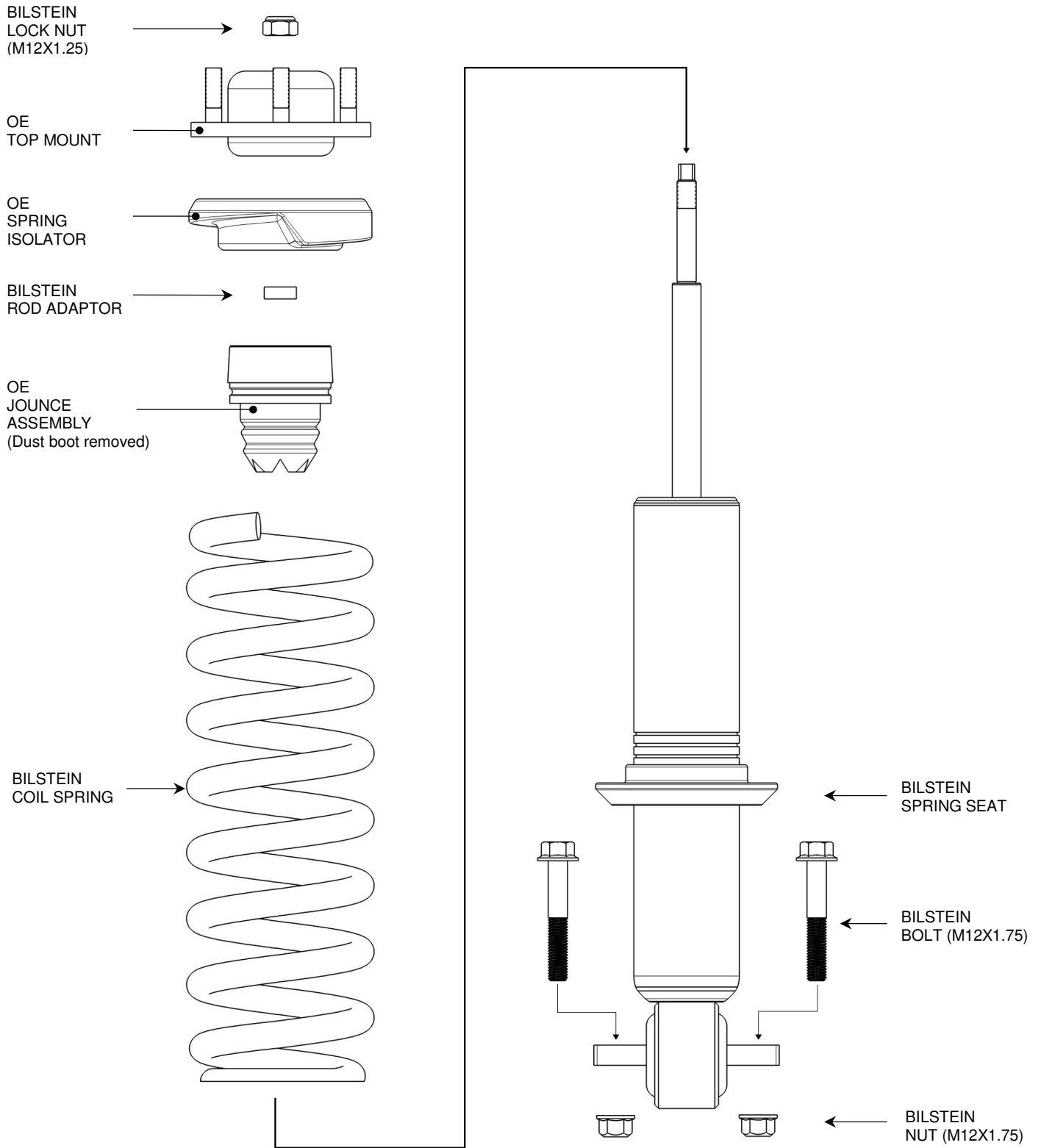


Figure 3: Shock Assembly