



### **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.**

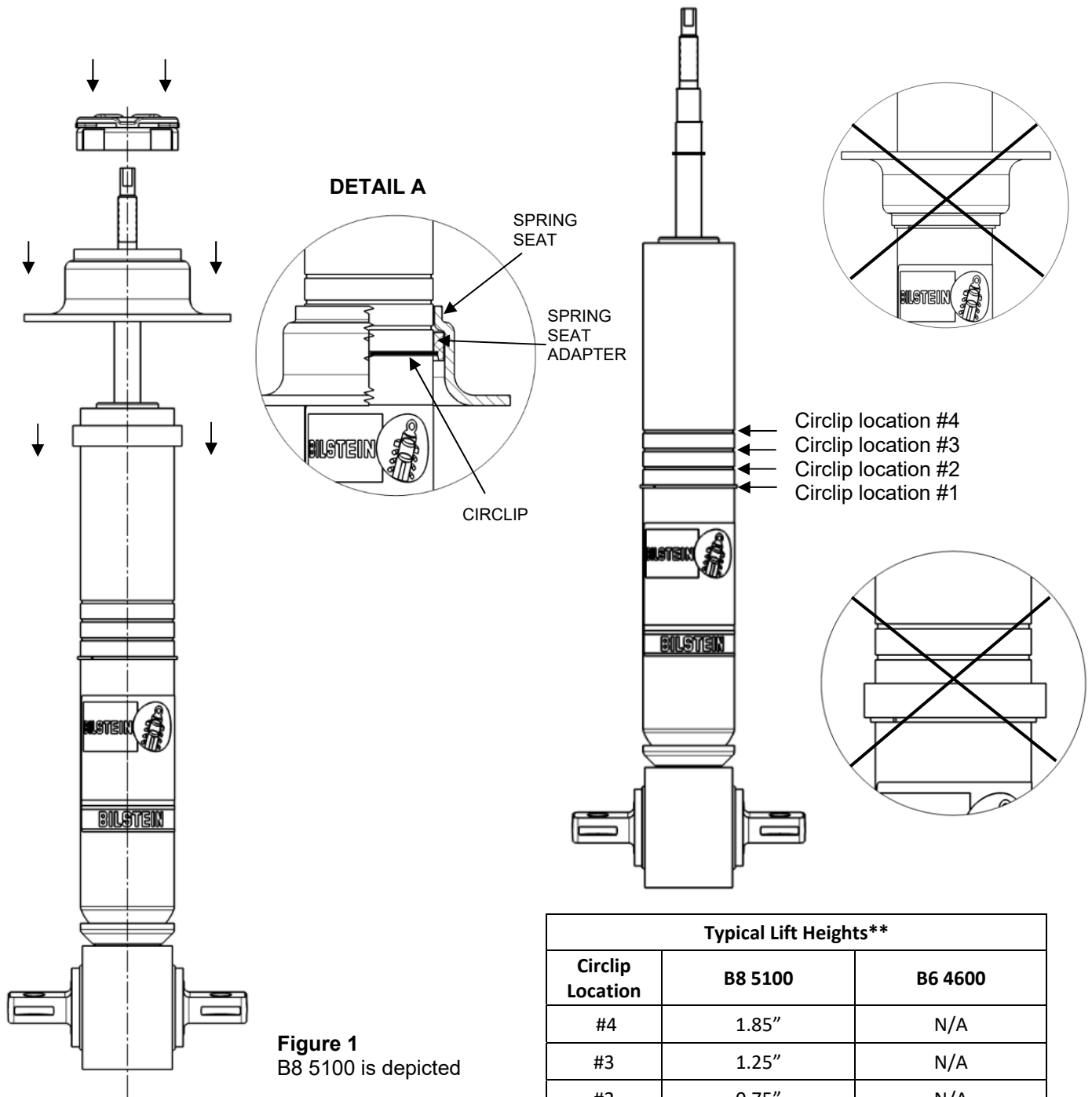
# E-WM05-000097 MOUNTING INSTRUCTION



## IMPORTANT:

### PLACE CIRCLIP IN APPROPRIATE GROOVE TO ADJUST RIDE HEIGHT (B8 5100 ONLY).

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 supplied spring seat adapter and spring seat in the direction shown only. The circlip must fit completely in the groove inside spring seat adapter (DETAIL A). **Improper installation will cause permanent damage to the shock!**



**Figure 1**  
B8 5100 is depicted

Typical Lift Heights**		
Circlip Location	B8 5100	B6 4600
#4	1.85"	N/A
#3	1.25"	N/A
#2	0.75"	N/A
#1	Stock	Stock



\*\* 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 mount relative to the studs on the upper mount (important for reassembly).
- C. Also note the clocking of the coil spring relative to the upper mount (important for reassembly).
- 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 Bilstein B6 4600 or B8 5100 shock absorber module:**

**[Refer to Figure 1 on page 2 for steps E-H]**

- E. Select desired ride height by seating the circlip in the appropriate circlip location (B8 5100 ONLY).
- F. Install the supplied spring seat adapter on to the new Bilstein shock such that the groove inside the spring seat adapter fits over the circlip on the shock body as shown (see DETAIL A). Install the spring seat adapter in the direction shown only (the flat end should be pointing upwards). Improper installation will cause permanent damage to the shock.
- G. Install the supplied spring seat onto the spring seat adapter. Install the spring seat in the direction shown only. Improper installation will cause permanent damage to the shock.
- H. Install the supplied jounce cap on the tube as shown. Tap on to and over the tube with a mallet (be careful to not damage the piston rod chrome during this step).

**[Refer to Figure 2 on page 4 for steps I-M]**

- I. Using an appropriate spring compressor, compress the OE spring and assemble it with the new Bilstein shock.
- J. Include the OE bump stop, dust boot and upper spring isolator in the assembly, as shown.
- K. Install the OE upper mount assembly over the threaded stem on the new Bilstein shock and on top of the spring.
- L. Rotate the shock so the lower mount is aligned with the upper mount studs as noted in step B.
- M. Install the OE upper washer. Then install the supplied new locknut and tighten to 25 Nm (19 lb·ft). Use a 6mm wrench or a crescent wrench to prevent the piston rod from rotating while tightening the locknut.

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

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- N. Release the spring compressor while ensuring that the ends of the coil remain seated in the proper position.
- O. Install the full assembly on to the vehicle and tighten all fasteners to vehicle manufacturer's specifications. Two new locknuts are supplied for the bottom mount, install and tighten to 25 Nm (19 lb·ft). This completes the installation.
- P. Check wheel alignment. If necessary, adjust to the vehicle manufacturer's specifications.

