

E4-WM5-Y647A00

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 qualified suspension specialist.

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 choose to install any BILSTEIN product without the necessary special tools, expertise or chassis hoist, you may subject yourself to the risk of serious bodily injury or death. If you elect not to use a chassis hoist, at least make sure the vehicle is on level ground, that all tires on the ground during installation are blocked to prevent movement, that at least two tires are on the ground at all times, and that adequately secured safety stands (jack stands) are used to support the chassis. **NEVER** get under the vehicle until you have checked to make sure all of these steps are performed.

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 the vehicle is operated.

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!!!

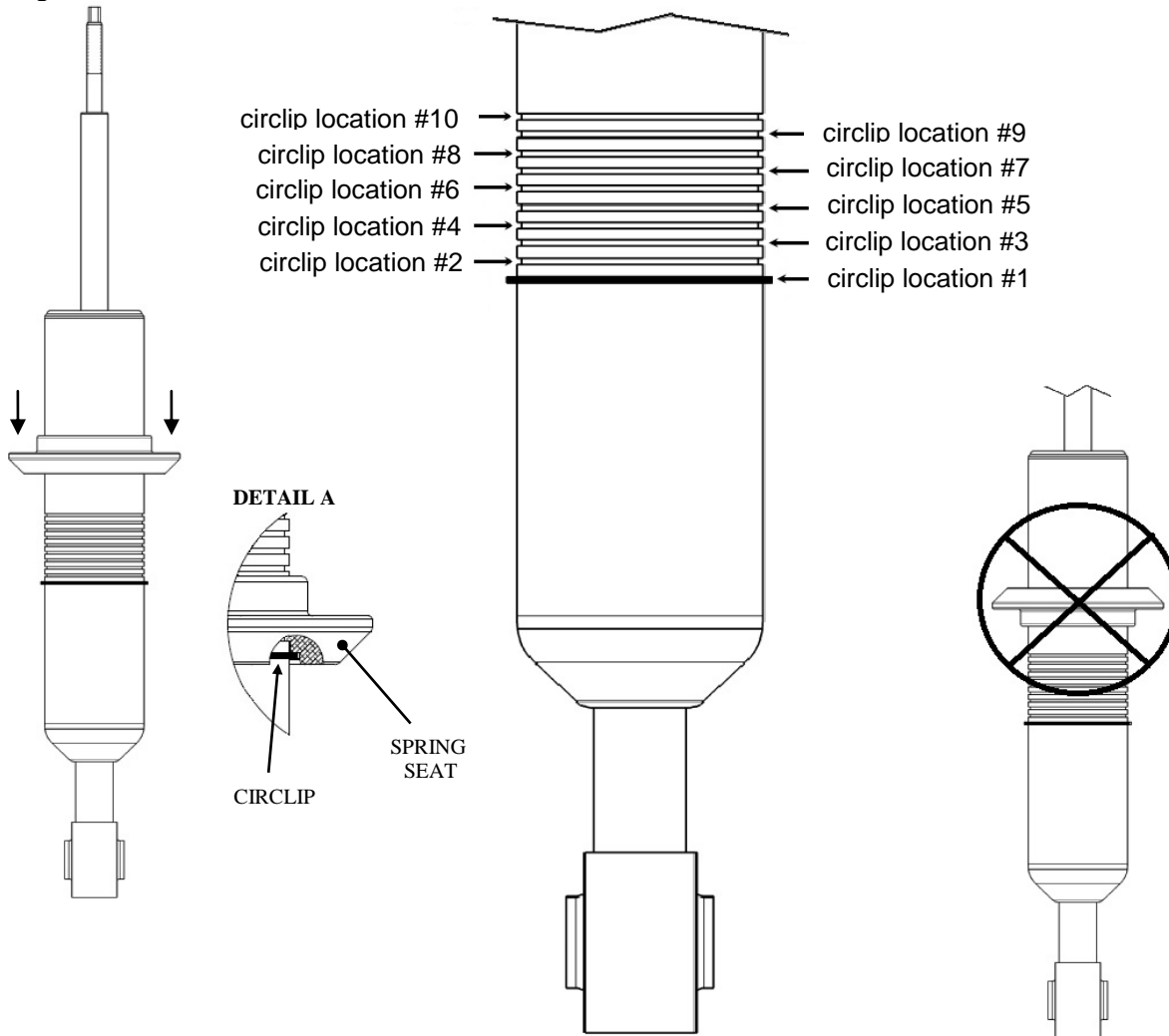
Before disassembling the front suspension, refer to the vehicle manufacturer's Service Manual for proper procedures. The coil spring is preloaded and must be compressed with a spring compressor to release load before the upper mount is disassembled. Failure to follow the vehicle manufacturer's procedures 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!**



B8 6112 Typical Lift Heights**

Circlip Location (Driver side / Passenger side)	Crew/Extended Cab 4WD 3.6L V6	Crew/Extended Cab 2WD 3.6L V6	Crew/Extended Cab 4WD 2.8L Diesel
#10 / #8	2.75"	DO NOT USE	1.5"
#9 / #7	2.4"	2.0"	1.2"
#8 / #6	2.1"	1.7"	0.9"
#7 / #5	1.8"	1.5"	0.6"
#6 / #4	1.5"	1.2"	0.3"
#5 / #3	1.2"	0.9"	Stock
#4 / #2	0.9"	0.6"	DO NOT USE
#3 / #1	0.6"	0.3"	DO NOT USE

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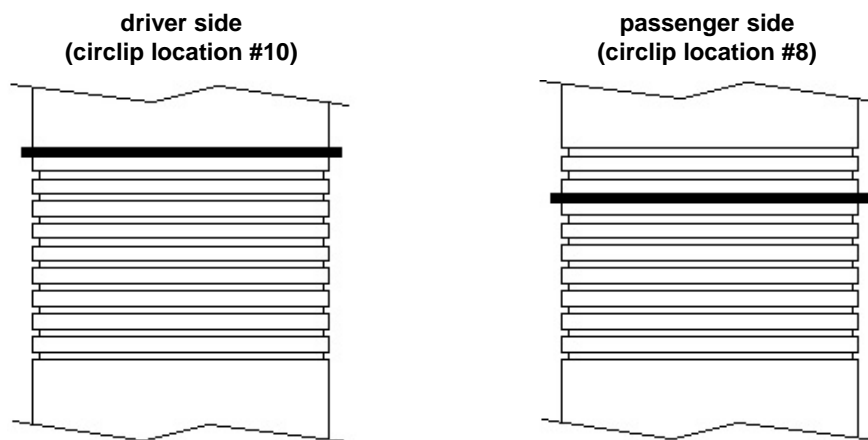


** Ride heights indicated are typical. Actual ride height is influenced by which factory suspension the vehicle is equipped with and its condition; optional equipment and accessories on your vehicle, and other vehicle modifications such as replacement coil springs, wheel and tire combinations, etc.

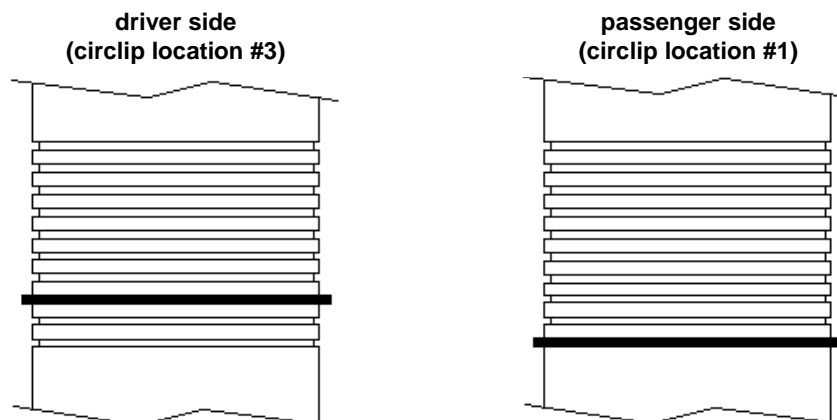
Modifying/lifting the suspension to your vehicle may raise its center of gravity and may make it more susceptible to loss of control and/or rollover, which may result in death or serious injury. We strongly recommend that you offset the loss of rollover resistance as much as possible by increasing tire 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 ALL models, it is recommended that the **driver side circlip is installed two positions higher than the passenger side circlip** to provide a level stance to your vehicle:

For example, to achieve the highest lift setting of 2.75" on 4WD 3.6L V6 or 1.5" on 4WD 2.8L Diesel models, the circlips should be installed as shown below (highest lift setting of 2" on 2WD 3.6L V6 models is achieved at circlip locations #9/#7, not shown):



To achieve the lowest lift setting of 0.6" on 4WD 3.6L V6 or 0.3" on 2WD 3.6L V6 models, the circlips should be installed as shown below (Stock ride height on 4WD 2.8L Diesel models is achieved at circlip locations #5/#3, not shown):



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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 bushing relative to the studs on the upper mount (important for reassembly).
- C. 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:

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

[Refer to Figure 1 on page 5 for steps E-K]

- E. Install the supplied spring seat onto the shock body as shown on page 2. Ensure that the groove inside the spring seat fits over the circlip on the shock body [see page 2 (DETAIL A)]. Improper installation will cause permanent damage to the shock.
- F. Install the OEM lower retaining washer onto the stem of the rod as shown with the concave side down towards the shock.
- G. Using an appropriate spring compressor, compress the supplied coil spring enough to safely assemble it with the new Bilstein shock.
- H. Place OEM upper mount onto the top of the spring and install the Bilstein unit into the spring up through the center of the OEM upper mount. Make sure to install the supplied coil spring with the correct orientation. The 'UP' arrow on the top coil should be pointed to the OEM upper mount. The coil spring is an asymmetrical design and must be installed in this orientation only.
- I. Install OEM upper retaining washer as shown with the concave side up.
- J. Install supplied lock nut and tighten to 25 Nm (19 lb-ft).

******DO NOT USE AN IMPACT WRENCH TO TIGHTEN THE NUT! ******

- K. Rotate the shock so that the lower mount is aligned with the upper mount studs as noted in step B.
- L. Slowly release the spring compressor.
- M. Install the module assembly on to the vehicle and tighten all fasteners to vehicle manufacturer's specifications.
- N. Check wheel alignment and adjust to the vehicle manufacturer's specifications.
- O. This completes the installation

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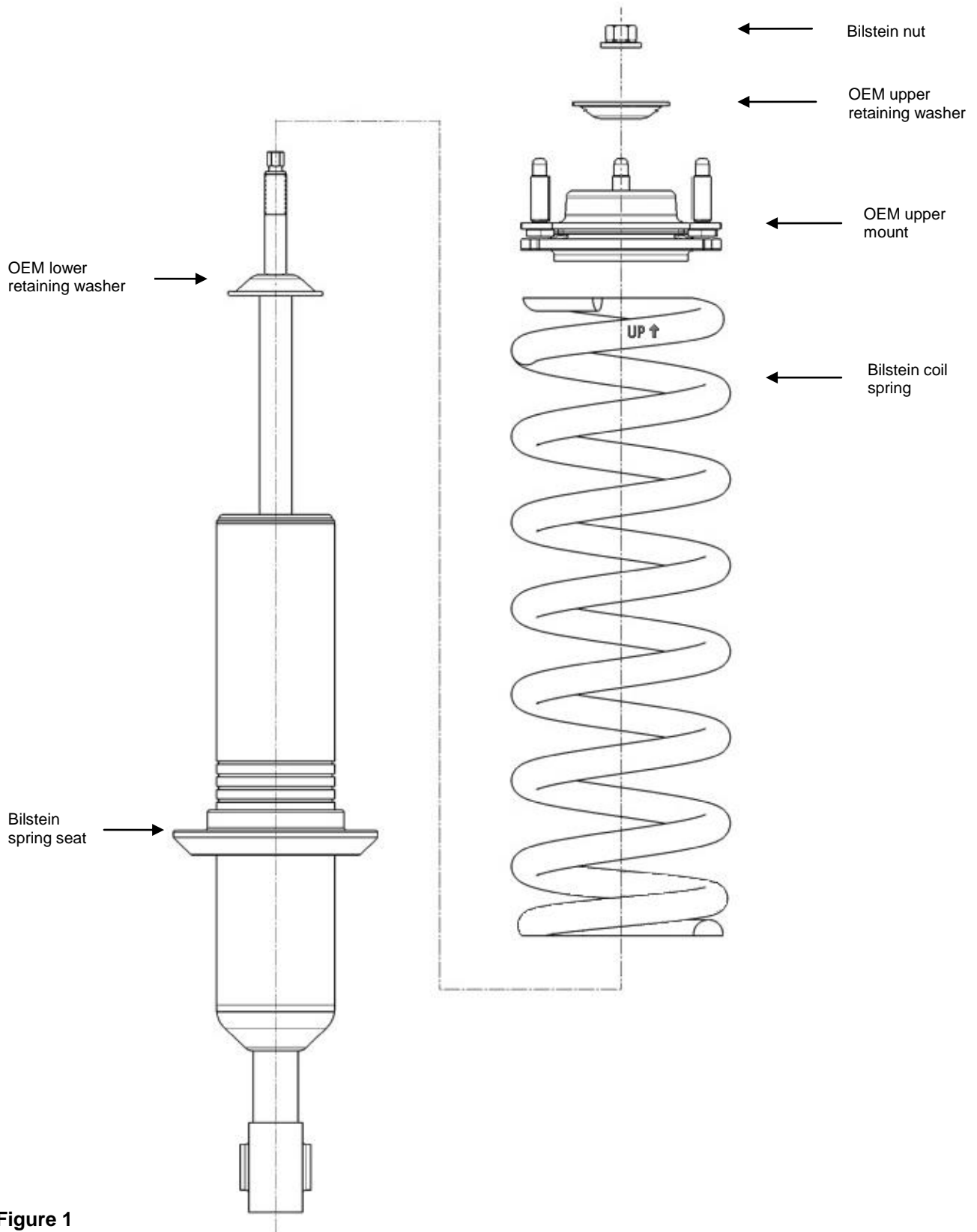


Figure 1