

E4-WM5-Y315A01

MOUNTING INSTRUCTION



IMPORTANT!

PLEASE READ ALL INSTRUCTIONS FIRST!

In case of doubt, please contact your local BILSTEIN dealer or our sales department before installation.

When replacing other brands, BILSTEIN shock absorbers should always be installed as a set. Installation of shock absorbers, struts and cartridges requires special tools and expert knowledge. Accordingly, installation of all BILSTEIN products must be performed by a qualified suspension specialist.

Always use a chassis hoist for the installation of BILSTEIN products, and make certain that the raised vehicle is securely attached to the hoist 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 things are done.

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.**

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, and 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.**

All mounting fasteners for struts must be securely tightened before tension is placed on the suspension system. Make sure that the bump stop and dust cover are correctly and properly fastened.

Do not use impact tools for loosening or tightening fasteners, because this may destroy the screw threads. Self-locking nuts must only be used **once!**

Suspension springs are **PRELOADED!** The suspension spring must be compressed with the assistance of an appropriate strut vise and spring compressor. The top mount must not be removed until the preload pressure is no longer present and the spring can be moved by hand, **or serious bodily injury or death may result.**

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.

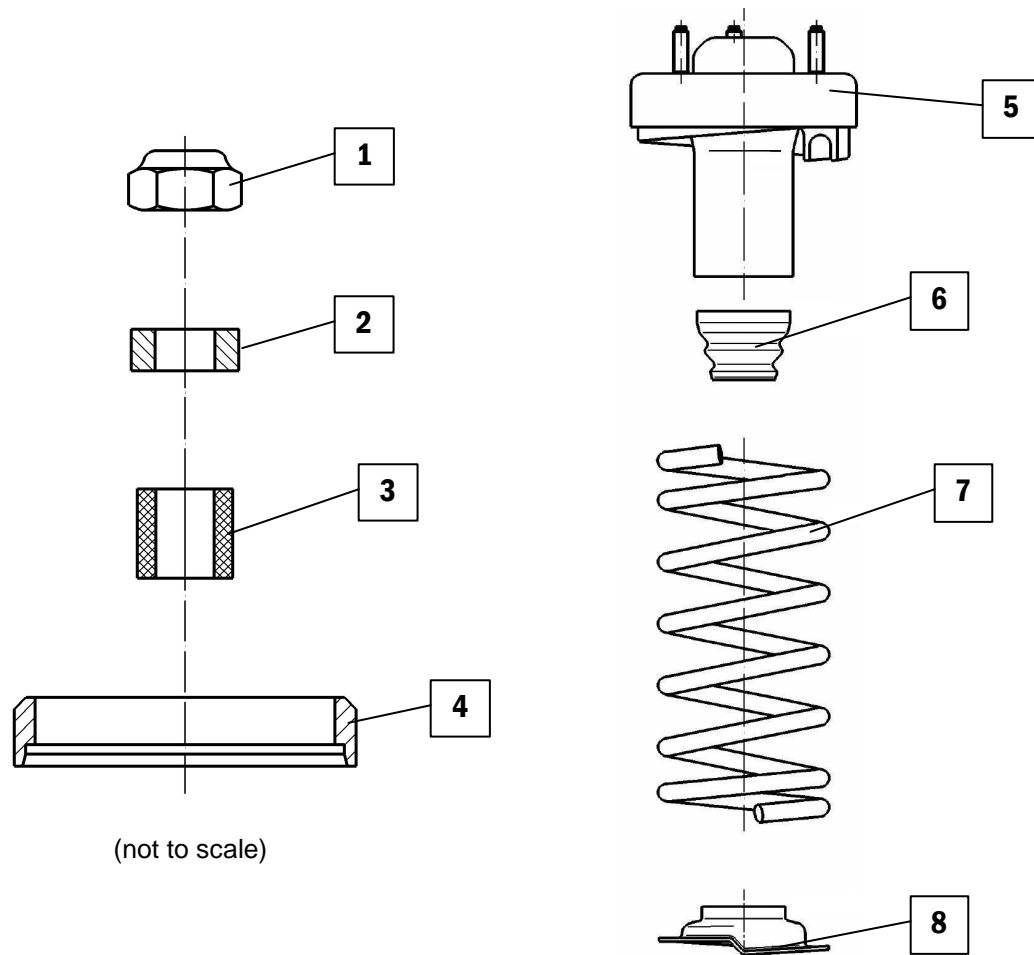
After installing any BILSTEIN product, the suspension caster and camber must be checked and/or adjusted to comply with the vehicle manufacturer's specifications. Also, the (load dependent) brake compensator and the anti-lock brake system must be checked and/or reset to comply with the vehicle manufacturer's specifications. Also the headlight aim must be checked and adjusted.

Be sure to properly dispose of all old parts.

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- A. Remove the shock and spring unit from the vehicle following all procedures in the vehicle manufacturer's service manual. Note the position of the studs in the upper mount relative to the lower mount bearing (important for reassembly).
- B. Using an appropriate spring compressor, compress the coil spring until it can be rotated freely by hand. Then disassemble the shock and spring unit.
- C. Refer to Figure 1 to identify which original parts must be re-used.



Parts supplied by Bilstein:

- 1. M10 Locknut
- 2. Steel spacer
- 3. Rubber sleeve
- 4. Spring seat support

Original parts to be reused:

- 5. Upper mount (with isolator and dust cover)
- 6. Bump stop
- 7. Coil spring
- 8. Spring seat

Figure 1

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IMPORTANT: For front shocks only, determine the appropriate circlip location for the vehicle. Refer to Figure 2. For F150 applications, leave the circlip in the lower position as supplied. For Expedition applications, relocate circlip on the shock body to the upper groove. You should be able to rotate the circlip manually in the groove. Failure to locate the circlip correctly will result in incorrect ride height!

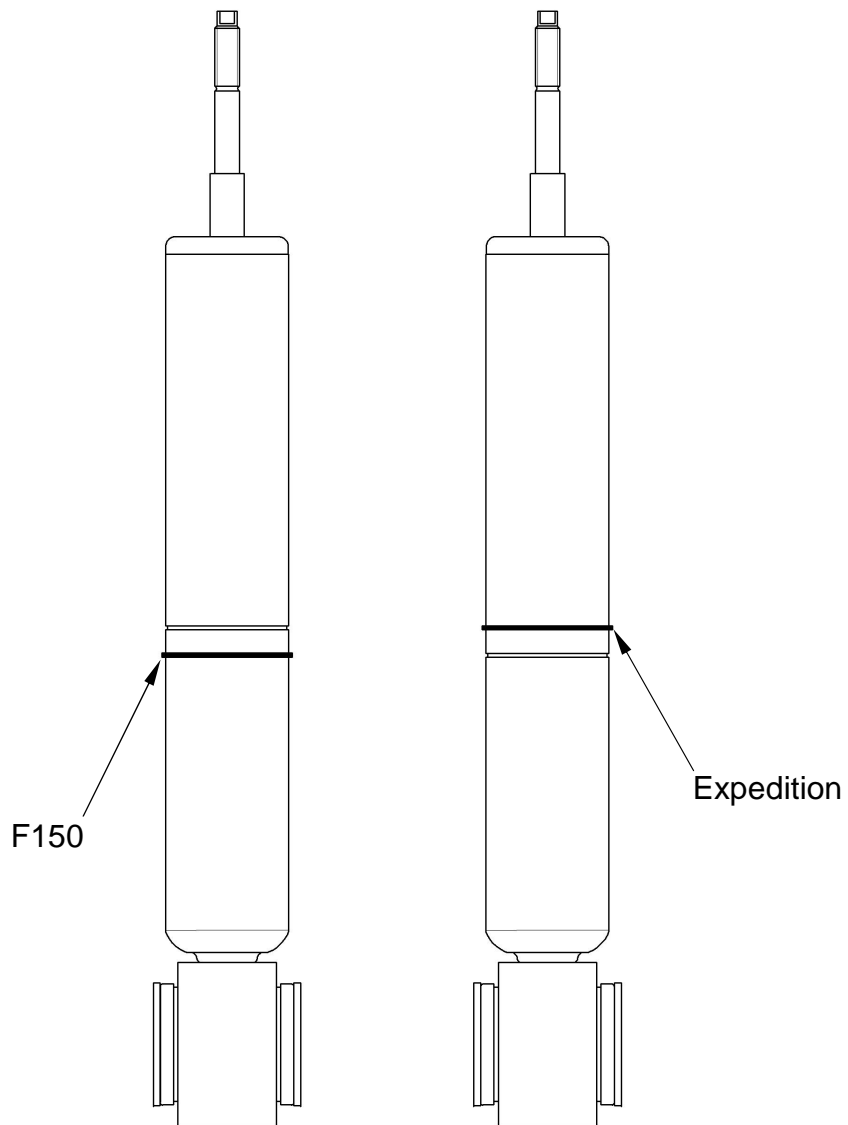


Figure 2

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Refer to Figure 3 for steps D through H.

- D. Install the spring seat support (4) on to the shock body (with the tapered end up) such that the groove inside the spring seat support fits over the circlip on the shock body. Install the spring seat support in the direction shown only. The circlip must fit completely in the groove inside spring seat support (see detail). Improper installation will cause permanent damage to the shock!
- E. Install the original spring seat (8) on to the shock and over the spring seat support (4) in the direction shown only.
- F. Install the rubber sleeve (3) over the piston rod. Push it on to the chromed part of piston rod (see detail).
- G. Install the bump stop (6) over the piston rod.
- H. Install the steel spacer (2) over the piston rod, above the rubber sleeve.

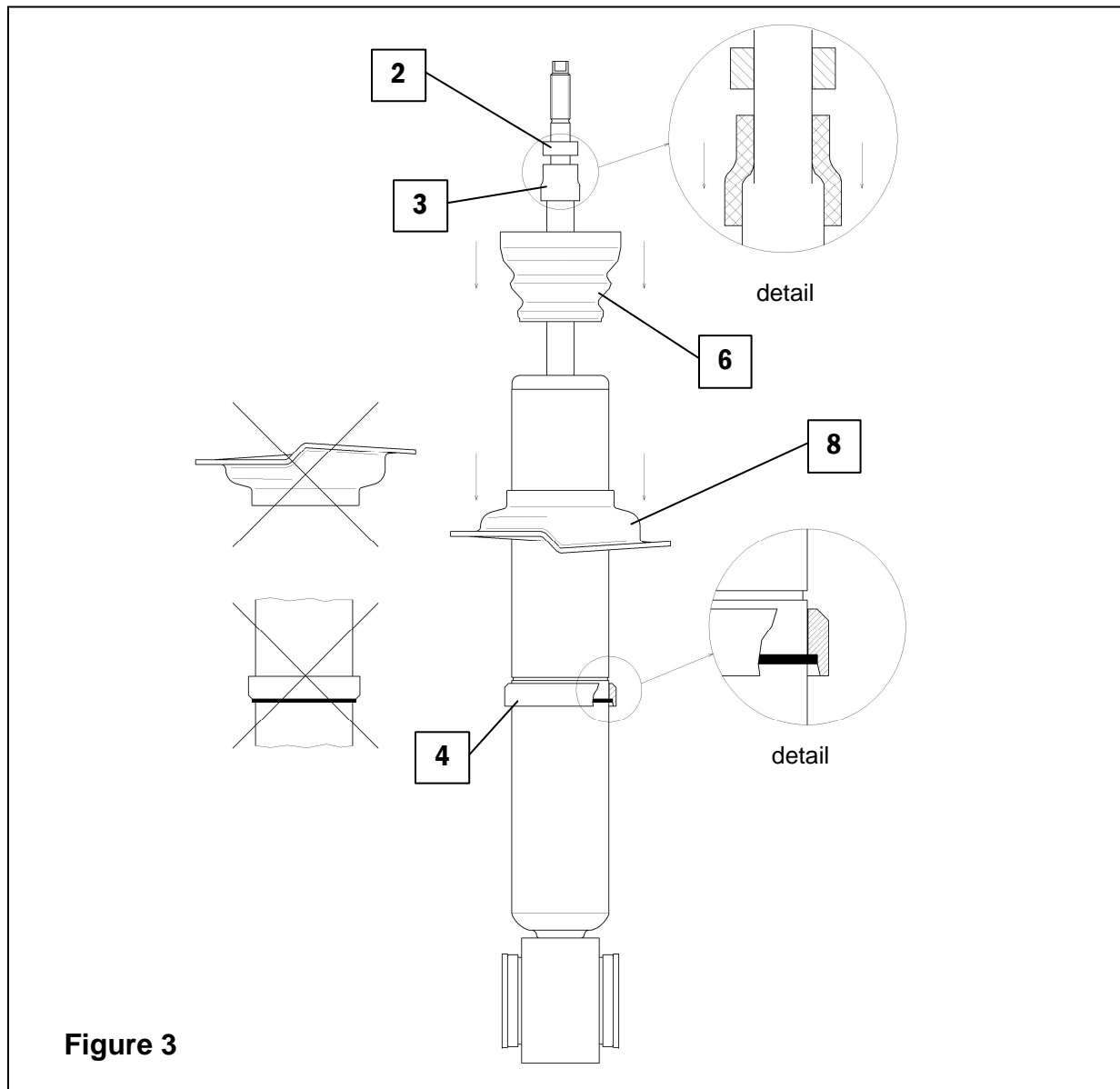


Figure 3

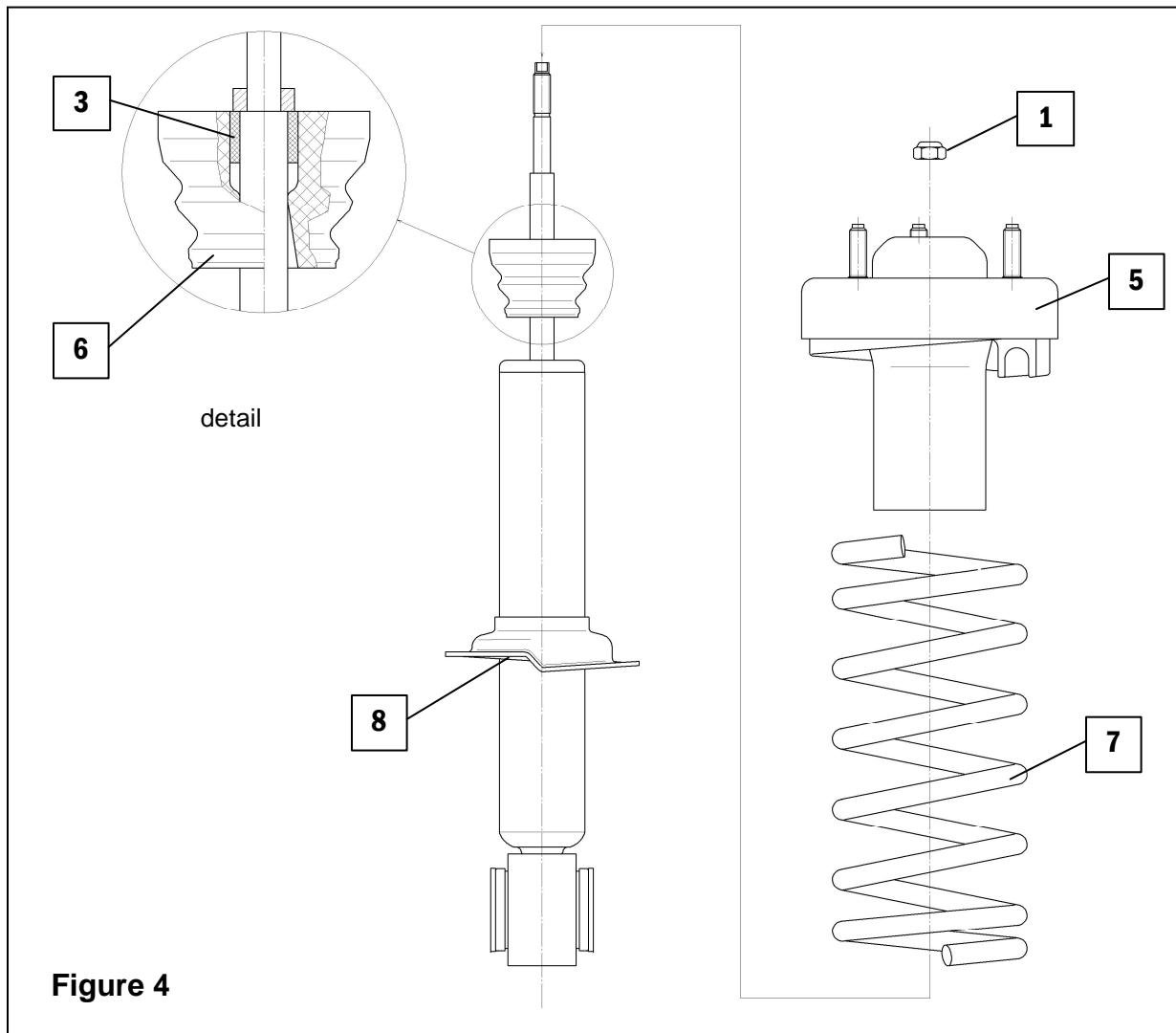
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Refer to Figure 4 for steps I through M.

- I. Fit the bump stop (6) over the rubber sleeve (3) as shown (see detail).
- J. Using an appropriate spring compressor, compress the coil spring (7) and install it on the shock absorber. Align the lower coil end with end of the ramp on the spring seat (8).
- K. Install the upper mount (5) over the piston rod end and on to the top of the coil spring. Rotate the upper mount so that its studs are in their original position relative to the lower mount bearing (as noted in step A). Align the upper coil end of the coil spring with the rubber isolator in the upper mount.
- L. Install the M10 locknut (1) and tighten to 25 N·m (19 lb·ft).
- M. Release the spring compressor while ensuring that the ends of the coil spring remain aligned with the spring seat (8) and upper mount (5).



- N. Install assembly on to the vehicle and tighten all fasteners to vehicle manufacturer's specifications. This completes the installation.
- O. Check wheel alignment. If necessary, adjust to the vehicle manufacturer's specifications.