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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!!!

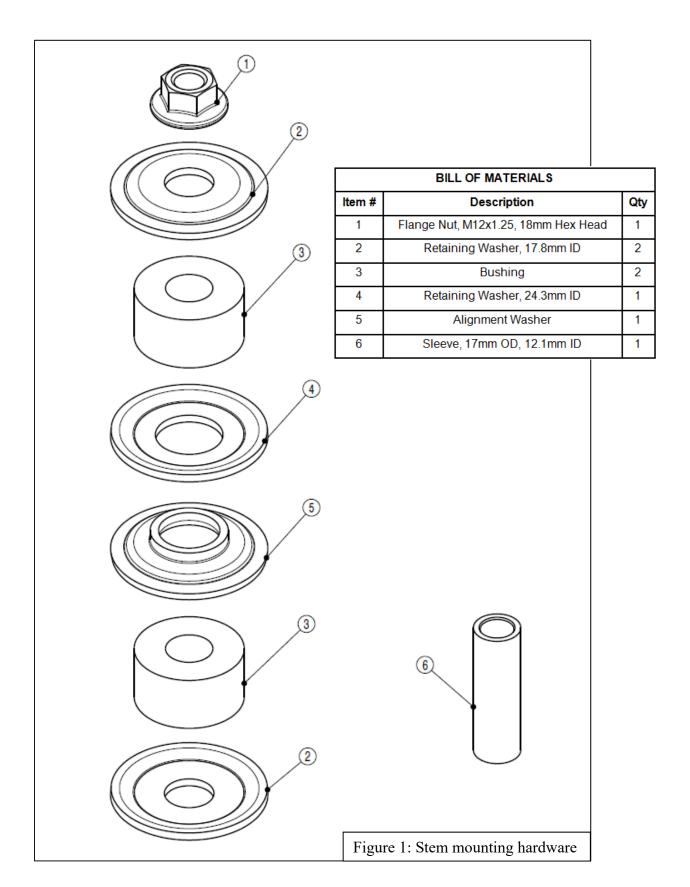
If disassembling a coilover type suspension, refer to the vehicle manufacturer's service manual for proper procedures. The coil spring is preloaded and must be compressed with a spring compressor to release load before the upper mount is disassembled. Failure to follow the vehicle manufacturer's procedures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

IMPORTANT!!!

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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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Shock Installation Procedure:

- A. Remove the existing shock from the vehicle following all procedures in the vehicle manufacturer's service manual. Inspect the OE lower shock bolt, washer and flange nut for any damage or excessive wear. If these components are in good condition, save them for reuse later. If damage or excessive wear is present in any of these components, purchase the required replacement OE components.
- B. As depicted in **Figure 1:** slide the 17mm OD sleeve (BOM item #6) over the threaded pin on the piston rod. Then slide one of the retaining washers concave up (BOM item #2), one of the bushings (BOM item #3) and the alignment washer (BOM item #5) over the 17mm OD sleeve (BOM item #6).
- C. Slide the threaded pin of the piston rod through the chassis mount and carefully center the alignment washer (BOM item #5) in the mount hole. Slide the first retaining washer (BOM item #4) over the threaded pin concave up, followed by the second upper bushing (BOM item #3). Then slide the second retaining washer (BOM item #2) over the threaded pin concave down as shown in **Figure 1**. Thread the M12x1.25 flange nut (BOM item #1) onto the threaded pin. Using an open end or box end wrench, thread the flange nut down the threaded pin until all the gap in the cushions is taken up as shown below. Do not thread the flange nut all the way to the stop point at this time.
- D. Align the lower shock mount in the rear axle attachment point using the OE lower shock bolt that was removed in step A (1 per side). Make sure the hex head of the bolt is facing the outside of the vehicle. Slide the OE washer over the bolt threads, and tighten the OE flange nut until the gap between the components and the rear axle attachment point is taken up. Do not torque the bolt and flange nut at this time (the lower shock mount should still be free to rotate).
- E. Tighten the Flanged Locknut onto the threaded pin. Torque the Flanged Locknut to 20 ft-lb (27 Nm). Use a 7mm wrench to keep the pin from rotating while torqueing the locknut.

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

- F. Fully tighten the lower shock bolt to the torque specified in the manufacturer's service manual.
 - *If a chassis hoist has been used, be sure to lower the vehicle such that it's full weight is on the suspension prior to fully tightening the lower shock bolt.*



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