

# E4-WM5-Y661A00

## MOUNTING INSTRUCTION



### 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.

### **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.**

**B8 8100 bypass shock installation procedure:**

**B8 8100 bypass shocks are corner specific. The step by step procedure is shown with pictures of both sides. See page 4 for the end result.**

- A. Use a jack stand to support the rear axle so there is minimal tension on the rear shock. Remove the existing shocks from the vehicle following all procedures in the vehicle manufacturer's service manual. Inspect the OE upper bolts/washers, as well as the OE lower bolts/washers and nuts for any excessive wear. If damage or excessive wear is present in any of these components, purchase the required replacement OE components.



- B. Secure the upper shock mount to the frame using the two OE upper mounting bolts removed in step A. Hand tighten both bolts ensuring the shock is centered in the frame. Do not torque at this time.



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- C. Install the lower shock mount using the OE bolt and nut removed in step A. Hand tighten the bolt and nut. Do not torque at this time.



- D. Fully extend the suspension and confirm shock is oriented correctly as shown below. Ensure there is adequate clearance from all moving parts including the sway bar.



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- E. Lower the vehicle onto the ground, ensuring the shock still has adequate clearance from all moving parts and torque all shock mounting hardware to the factory service manual specification.



- F. If shocks have insufficient clearance due to aftermarket components, it may be necessary to remove aftermarket parts or reposition the bypass tube orientation (refer to the following section for bypass orientation relocation procedure).



- G. When the optimal position is achieved with or without adjustments, torque the upper and lower mount to manufacturer's specification.

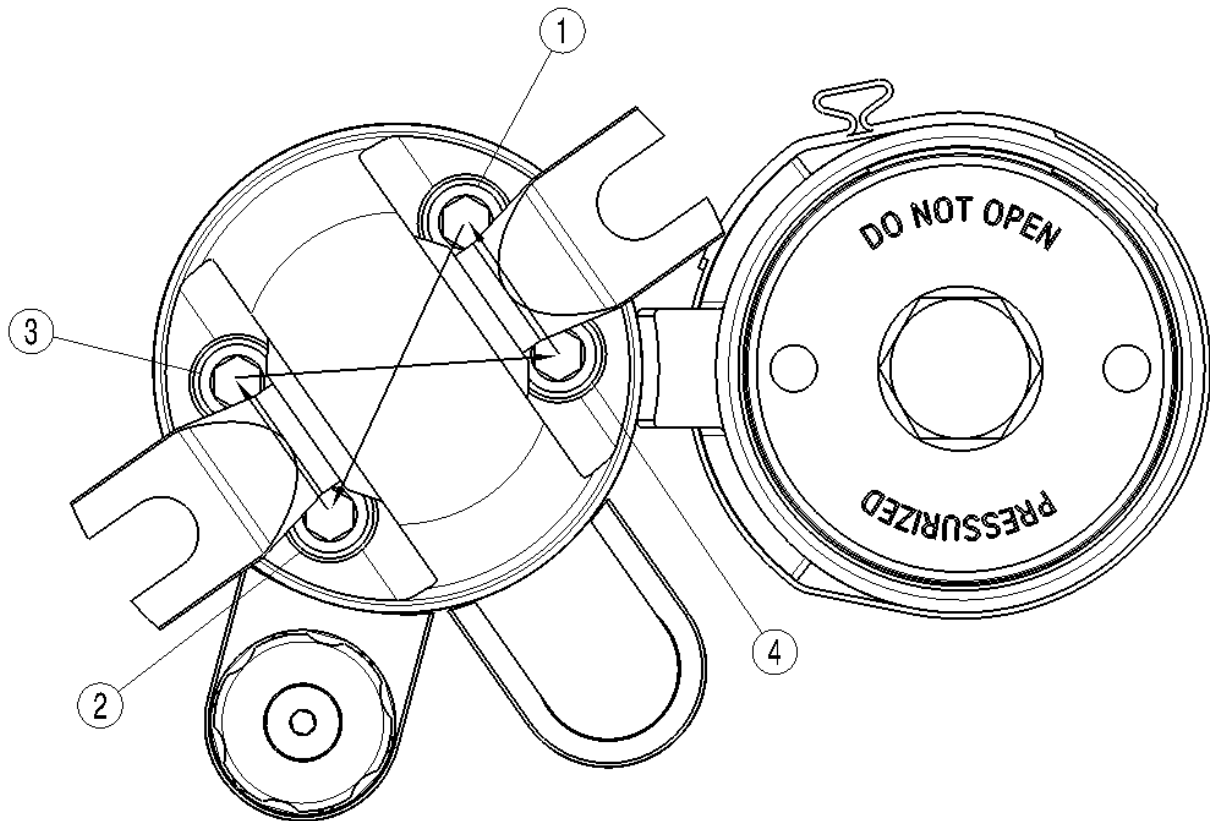
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BILSTEIN Bypass shocks allow the user to rotate the end cap for the best possible clearance on their vehicle.

## Bypass Tube Positioning Procedure:

1. Depressurize the shock reservoir.
2. Loosen the four socket head cap screws that clamp the top end cap to the tube. Be sure to only loosen the screws a turn or two. \*Do not remove the screws.\*
3. Rotate the top end cap to the desired angle for optimum tube positioning.
4. Lightly tighten the screws so the top end cap maintains the desired angle.
5. Remove one screw, apply Loctite Threadlocker Red 271, or equivalent, and reinstall. Repeat this for the remaining three screws.
6. Torque the screws to 28 N\*m (250 lb\*in). Make sure to torque them in the following pattern shown below
7. Pressurize the shock reservoir with nitrogen to 13.8bar (200psi).



Note: The shocks depicted herein may differ slightly in appearance from the supplied components.

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It is normal to hear a slight audible clicking noise during compression and rebound strokes in the B8 8100 bypass shocks, most notably during low velocity events. This is due to the internal check pistons opening and closing to create the externally adjustable compression and rebound zones.

B8 8100 bypass shocks allow the user to tune the damping for the best possible ride quality and performance of their vehicle. The shocks offer multiple zones of compression and rebound damping, depending upon the bypass configuration. The factory setting is:

Rebound – 4 full turns **COUNTER-CLOCKWISE** from fully firm

Compression – 5.5 full turns **COUNTER-CLOCKWISE** from fully firm

*\*note: 4 clicks equals 1 full turn*

**Note: The bypass adjusters allow adjustment up to 10 full turns counter-clockwise from fully firm.**

## **B8 8100 bypass adjustment procedure:**

Rotate the blue and red adjuster knobs to make the desired adjustment.

Turn the adjuster knob **CLOCKWISE** to **INCREASE** damping

Turn the adjuster knob **COUNTER-CLOCKWISE** to **DECREASE** damping

## **B8 8100 bypass service:**

For service of your B8 8100 bypass shocks, please contact:

THYSSENKRUPP BILSTEIN OF AMERICA

Toll Free: 1-800-537-1085

bilsteinus.com