

E4-WM5-Y632A00

MOUNTING INSTRUCTION



This instruction is for both left rear (driver) 25-287820 and right rear (passenger) 25-287837 B8 8100 shocks. A bill of materials of the included mounting part kits is shown on the next page.

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.**

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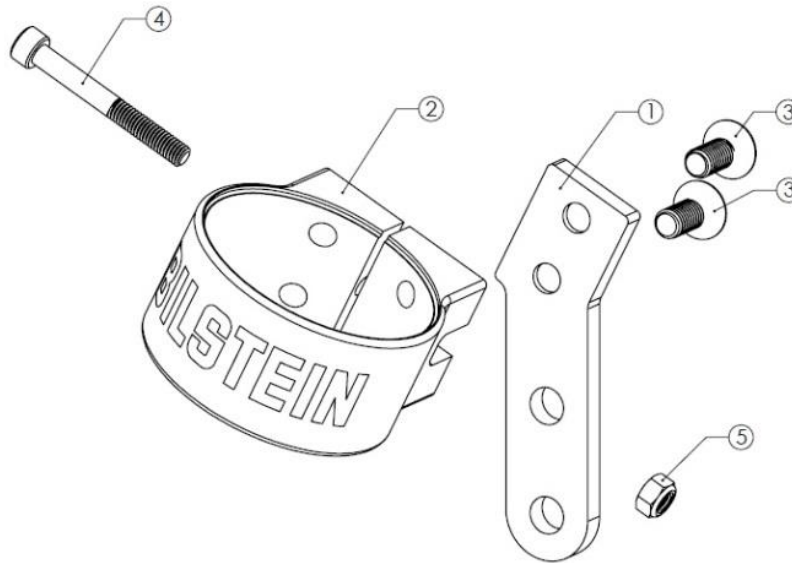
MOUNTING INSTRUCTION



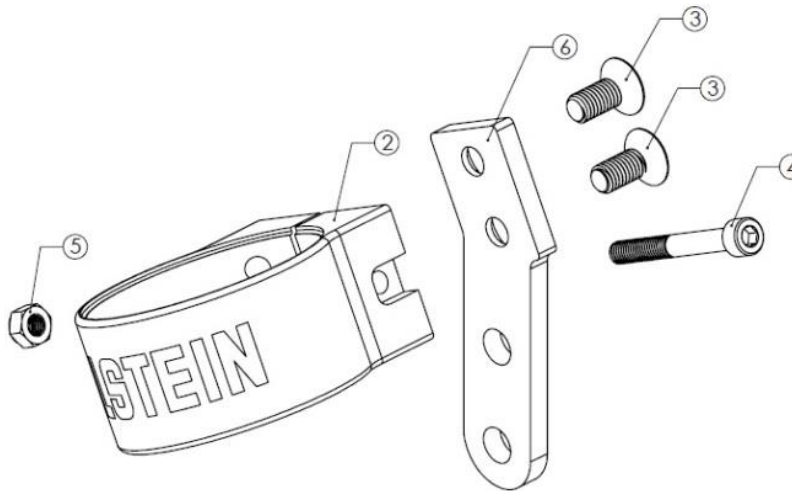
B8 8100 bypass shocks feature a proprietary BILSTEIN zinc plated finish. This finish must be serviced in order to maintain its luster. Particularly in moist climates, a protective coating, such as a wax or lubricating oil should be periodically applied to prevent tarnishing. This finish is not covered under warranty.

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.

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Reservoir Mount Kit for Left Side (25-287820)



Reservoir Mount Kit for Right Side (25-287837)

Item #	Description	Qty. in 25-287820	Qty. in 25-287837
1	Mount Plate; Left Rear	1	-
2	Reservoir Clamp; Ø60mm	1	1
3	Flat Head Screw; M8x1.25; L=18	2	2
4	Socket Head Cap Screw; M6x1; L=50	1	1
5	Nylock; M6x1	1	1
6	Mount Plate, Right Rear	-	1

B8 8100 bypass shock installation procedure:

B8 8100 bypass shocks are corner specific. The step by step procedure is shown with pictures of the left side, and in some cases, pictures of the right. See page 10 for the end result.

- A. Remove the existing shocks from the vehicle following all procedures in the vehicle manufacture'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. Remove the rear lower plastic panel (Figure 1) from the inner fender as well as its accompanying metal mount bracket following all procedures in the vehicle manufacture's service manual. This will expose the two threaded holes in the chassis (Figures 2 & 3) used to secure the reservoir mount assembly to the vehicle. Save the OE M10 bolts/washers used to secure the metal mount bracket to the vehicle chassis. There are two (2) OE M10 bolts/washers on each side of the vehicle (four (4) total).



Figure 1 – Left Rear Lower Plastic Panel

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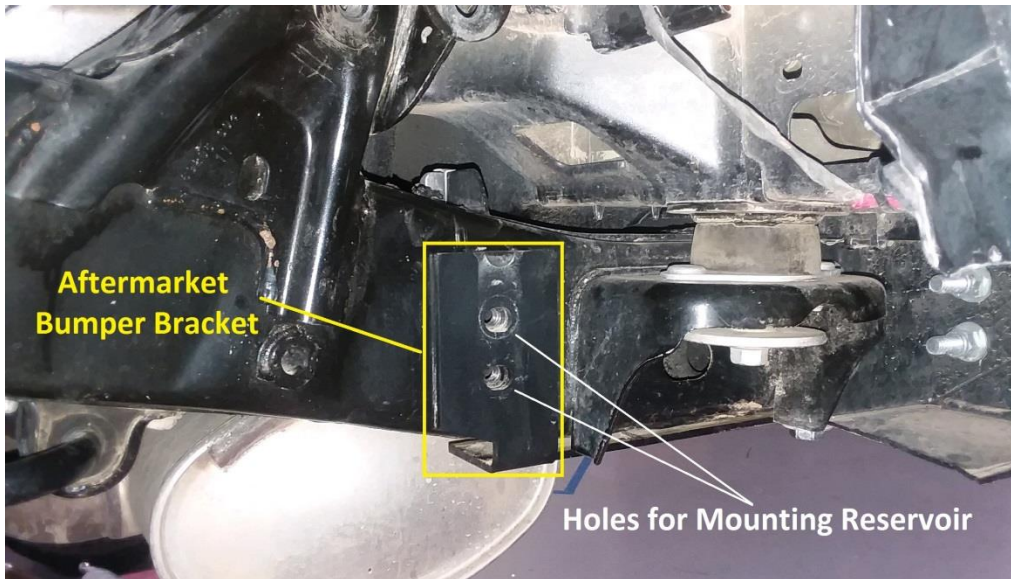


Figure 2 – Left Side Vehicle Chassis (Bracket for Aftermarket Bumper shown)



Figure 3 – Right Side Vehicle Chassis (Bracket for Aftermarket Bumper shown)

- C. Prepare the reservoir mount assembly by applying non-permanent thread locker to two Flat Head Screws (BOM item #3). Mount the Reservoir Clamp (BOM item #2) to the Mount Plate (BOM item #1 for the left side; BOM item #6 for the right side) using the two Flat Head Screws (Figures 4 – 7). Tighten the Flat Head Screws using a 5mm hex.

Torque both Flat Head Screws to 16 ft-lb (22 Nm).

- D. Place the Nylock (BOM item #5) in the slot of the Reservoir Clamp as shown (Figures 4 – 7). Then insert the Socket Head Cap Screw (BOM item #4) into the hole in the Reservoir Clamp, threading it into the Nylock (Figures 4 – 7). Using a 5mm Hex, Tighten the Socket Head Cap Screw only a few turns, leaving it loose enough so the reservoir can be installed a following step of these instructions.

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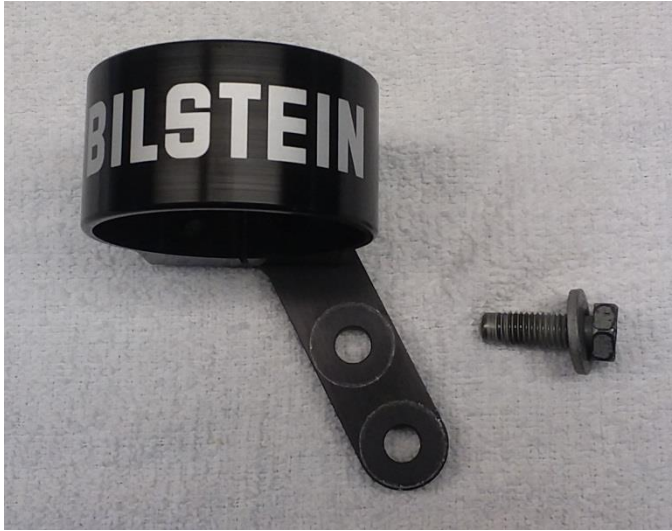
Figures 4 & 5 - Front and Back View of Vehicle Left Side Assembly



Figures 6 & 7 - Front and Back View of Vehicle Right Side Assembly

E. Insert one of the OE M10 bolts/washers saved from step B into the upper hole of the Mount Plate (Figures 8 & 9).

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Figures 8 & 9 - Left Side Assembly Shown

- F. Slide the reservoir through the Reservoir Clamp (Figures 10 & 11). The top of the Reservoir Clamp should be within 20mm of the end of the reservoir. Tighten the Socket Head Cap Screw so that the reservoir bracket assembly doesn't fall off the reservoir.



Figure 10 - Vehicle Left Side



Figure 11 - Vehicle Right Side

- G. Install the shock's upper mount using the OE upper bolt/washer (Figure 12). Do not tighten at this time.



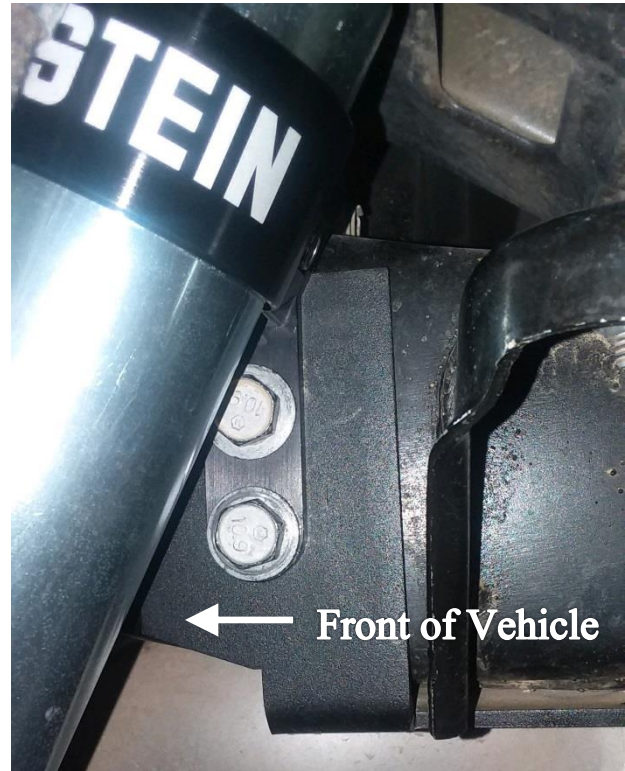
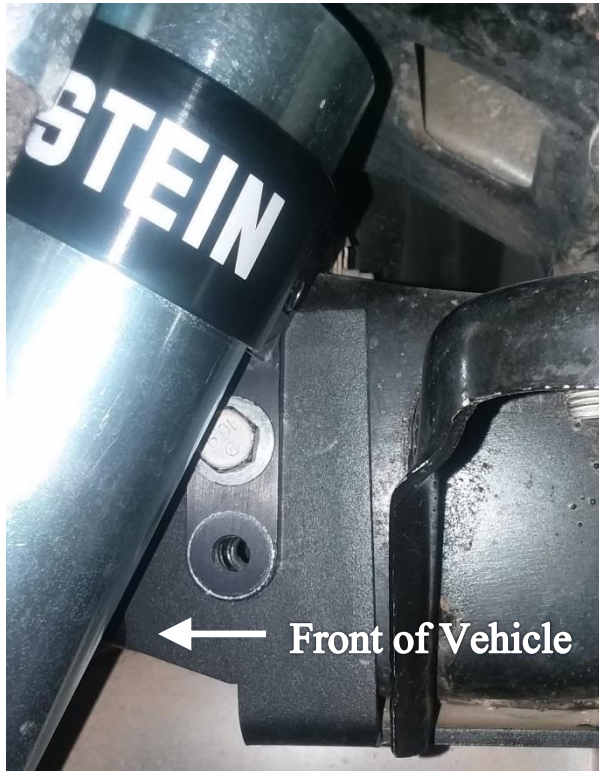
Figure 12 - Vehicle Left Side Upper Mount Shown (Inner Fender Liner removed)

- H. Install the shock's lower mount using the OE lower bolt/washer and nut (Figure 13). Do not tighten at this time.

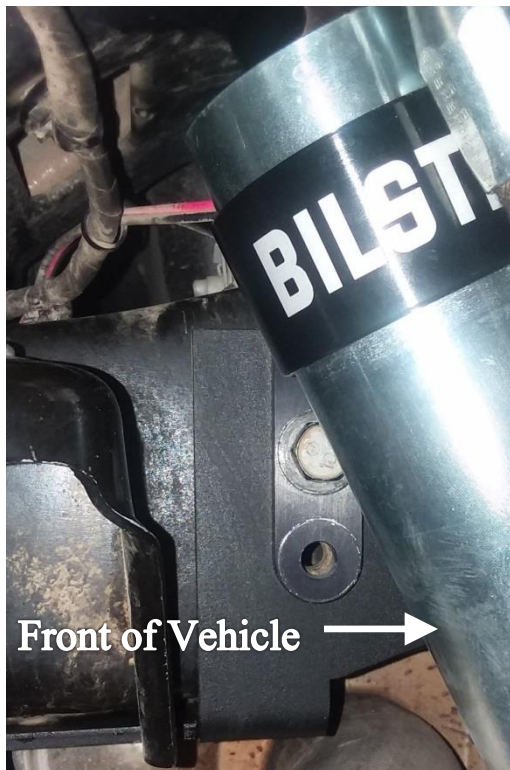


Figure 13 – Lower Mount

- I. Using the same two chassis holes that held the metal mount bracket, secure the Mount Plate for the reservoir to the vehicle chassis using the single OE M10 bolt/washer already installed in the upper hole (Figures 14 – 17). Install the second OE M10 bolt/washer saved from stem B into the lower hole of the mount plate (Figures 14 – 17). Tighten the M10 bolt/washers so the reservoir does not move.



Figures 14 & 15 - Vehicle Left Side



Figures 16 & 17 - Vehicle Right Side

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- J. Using a 5mm Hex, Loosen the Socket Head Cap Screw in the Reservoir Clamp. Adjust the height and angle of the reservoir in the Reservoir Clamp to ensure there is slack in the reservoir hose. The hose should be angled so that it follows a straight path from the reservoir to the shock body, and with enough slack that you can move it back and forth between 20mm – 25mm (3/4" - 1") (Figure 18 & 19). The top of the reservoir tube should be approximately 20mm above the top of the Reservoir Clamp as shown below (Figure 18 & 19). Once positioned correctly, tighten the Socket Head Cap Screw again so the reservoir cannot move.



Figure 18 & 19 – Reservoir Positioning

- K. Loosen the two OE M10 bolts/washers and remove the mount plate from the chassis.

Using a M5 hex, Torque the Socket Head Cap Screw in the Reservoir Clamp to 6 ft-lb (8 Nm).

- L. Apply non-permanent thread locker to the two OE M10 bolts/washers and secure the mount plate to the chassis again.

Torque the OE M10 bolts/washers to 59 ft-lb (80 Nm).

- M. With the vehicle back on the ground, tighten the upper and lower OE fasteners to the vehicle manufacturer's service manual torque specifications.

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Left Side Installed
(Without Inner Fender Liner)



Right Side Installed

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

Rebound – 7 full turns out from fully closed

Compression – 7 full turns out from fully closed

Note: The bypass adjusters allow adjustment up to 10 full turns out from fully closed.

B8 8100 bypass adjustment procedure:

1. Using an Allen key, hold the adjuster screw from rotating. Loosen the jam nut from the bypass adjuster housing. Back it off far enough that you can make the adjustment without the jam nut bottoming out.
2. Rotate the Allen key to make the desired adjustment.

TURN IN (Clockwise) the adjuster screw to **INCREASE** damping

TURN OUT (Counter Clockwise) the adjuster screw to **DECREASE** damping

3. Tighten the jam nut against the bypass adjuster housing while using the Allen key to hold the adjuster screw from rotating.

Make sure the bypass adjuster housing does not loosen during the adjustment process. It may be necessary to hold the bypass adjuster housing with the appropriate wrench while loosening the jam nut.

B8 8100 bypass service:

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

THYSSENKRUPP BILSTEIN OF AMERICA
13225 Danielson St.
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