

E4-WM5-Y719A00

MOUNTING INSTRUCTION



IMPORTANT! READ THIS FIRST!

This instruction is for both left (driver) rear 25-324075 and right (passenger) rear 25-281873 B8 8100 shocks. A bill of materials of the included mounting part kits is shown on the next page.

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.

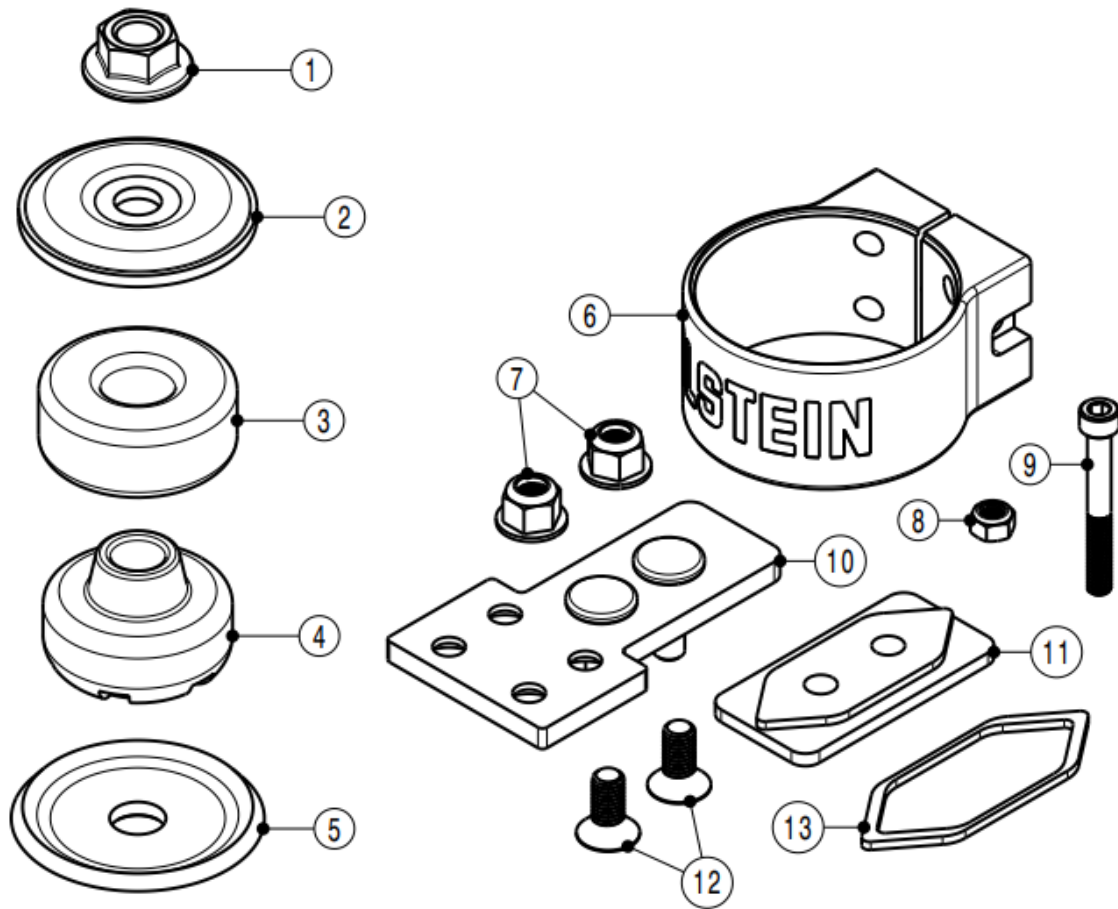
CAUTION for COILOVER TYPE SUSPENSIONS!!!

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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Bill of Materials		
Item #	Description	Qty.
1	Flange Locknut; M12x1.25	1
2	Upper Washer	1
3	Upper Bushing	1
4	Lower Bushing	1
5	Lower Washer	1
6	Reservoir Clamp	1
7	Flange Locknut M8x1.25	2
8	Nylon Insert Locknut; M6x1	1
9	Socket Head Cap Screw; M6x1; L=50mm	1
10	Support Plate Assembly	1
11	Support Bracket	1
12	Flat Head Cap Screw, M8x1.25, L=18mm	2
13	Extension Ring	1

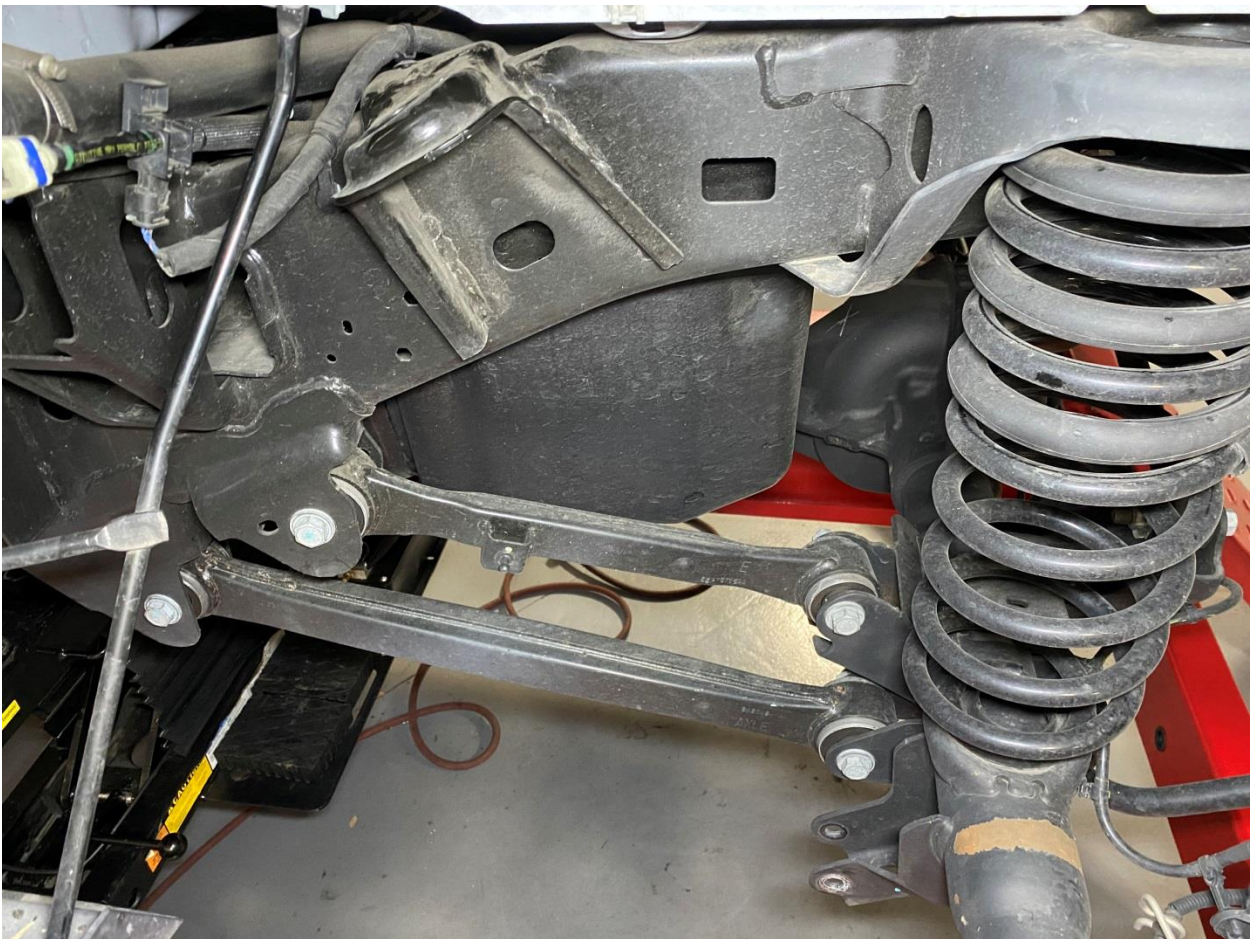
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B8 8100 shock installation procedure:

B8 8100 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. The right side is a mirror image of the left. Skip to page 10 and 11 to see the final result for both sides.

- A. Remove the fender liner in the front of the wheel well and save all mount hardware for use at end of installation.
- B. Remove the existing shock from the vehicle following all procedures in the vehicle manufacturer's service manual. Inspect the OE upper and lower mount hardware 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 on any of these components, purchase the required replacement OE components.

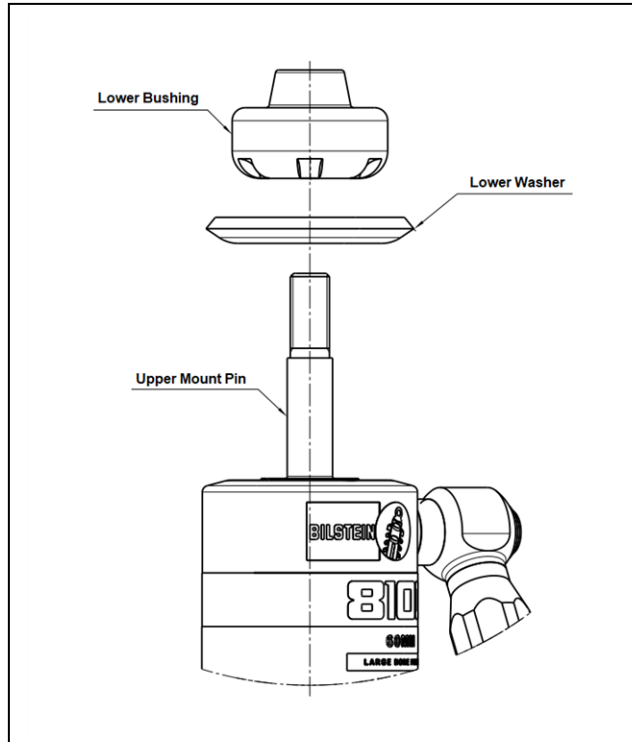


Left (Driver) Rear

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- C. Slide the lower washer (BOM item #5) and the lower bushing (BOM item #4) over the threaded mount pin on the shock body as shown below. Verify the lower washer is installed concave side up.



- D. With the above complete, slide the threaded pin on the shock body through the chassis mount and carefully center the lower bushing (BOM item #4) in the mount hole. Slide the upper bushing (BOM item #3) over the threaded mount pin, followed by the upper washer (BOM item #2). Verify the upper washer is installed concave side down. Thread the M12x1.25 flange nut (BOM item #1) onto the threaded pin on the shock body. Using an open end or box end wrench, thread the flange nut down the threaded pin until all the gap in the bushing and cushion is taken up as shown below. Do not torque the nut at this time.



Left (Driver) Rear

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Left (Driver) Rear



Right (Passenger) Rear

- E. For the left rear, orient the banjo hose fitting on the working tube so it is clocked 30 degrees back from directly forward as shown above. Allow the reservoir to hang for now (Note: the picture above shows the reservoir installed but it should not be at this point in the instruction).
- F. For the right rear, orient the banjo hose fitting on the working tube so it is clocked 30 degrees back from directly forward as shown above. Allow the reservoir to hang for now (Note: the picture above shows the reservoir installed but it should not be at this point in the instruction).
- G. Align the lower shock mount in the rear axle mount clevis using the OE lower shock bolt that was removed in Step B (1 per side). Make sure the hex head of the bolt is facing outboard. Slide the OE washer over the bolt threads, and tighten the OE flange nut until the gap between the components and the rear axle mount clevis is taken up as shown below. Do not torque the bolt and flange nut at this time (the lower mount hardware should still be free to rotate).

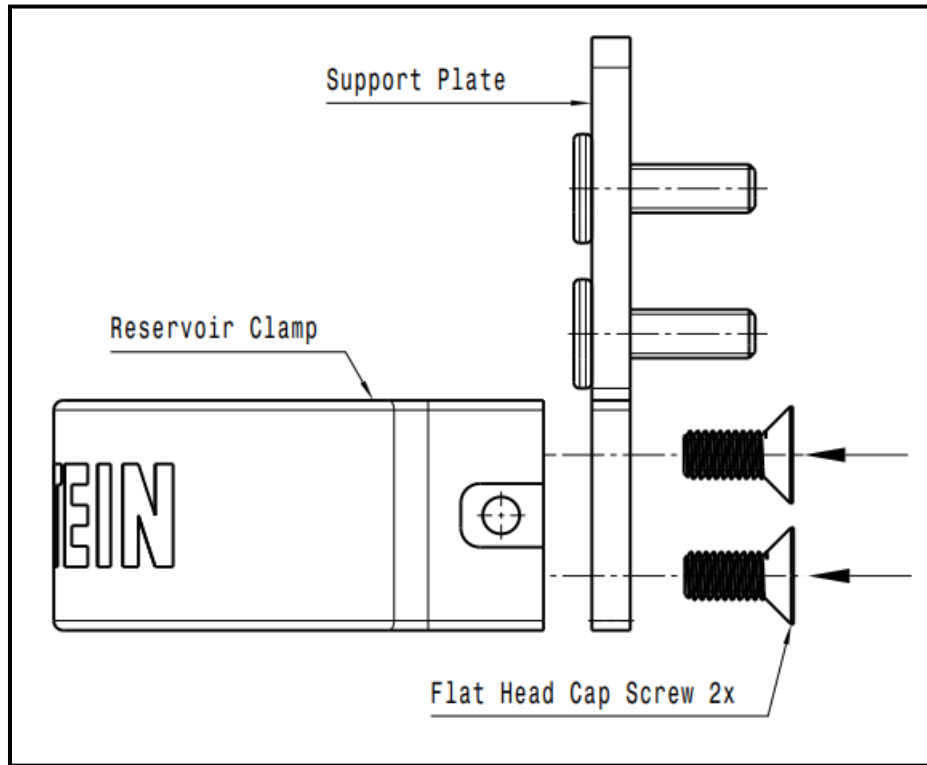


Left (Driver) Rear

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- H. Prepare the reservoir support plates as shown below. Attach the reservoir clamp (BOM item #6) to the support plate (BOM item #10) using the two M8x1.25 flat head cap screws (BOM item #12). Apply a non-permanent thread locker and **torque Flat Head Cap Screws to 18 ft-lb (25 Nm)**.



- I. Place the M6 nylon insert locknut (BOM item #8) in the slot on the backside of the reservoir clamp (BOM item #6). Then, install the M6x1 socket head cap screw (BOM item #9) through the hole in the reservoir clamp (BOM item #6) and into the locknut. Ensure the locknut is located on the inside of the assembly with the screw head facing outboard as you will need access to the screw head once the assembly is on the vehicle. Thread the socket head cap screw in a few turns for now but leave loose enough so the reservoir can be installed in the next step.



Left (Driver) Rear

Right (Passenger) Rear

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- J. Slide the reservoir into the reservoir clamp and gently tighten the socket head cap screw (BOM item #9) using a 5mm Allen wrench. Only tighten it enough to prevent slipping (do not torque at this time).



Left (Driver) Rear

- K. The reservoir will be mounted to the oval slot on the vehicle's frame, forward of the wheel well (see circle in image below). Locate the support bracket (BOM item #11) and position in the slot as shown below.



Left (Driver) Rear

*** Please refer to the following instructions for vehicles with larger mount slot:**

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- L. Some vehicles have a larger mount slot than others and the included extension ring (BOM item #13) will be needed. Fit the extension ring (BOM item #13) over the support bracket (BOM item #11) and insert in the slot as shown below.



- M. Mount the reservoir and support plate assembly (BOM item #10) through the frame slot and support bracket (BOM item #11). Secure in place with the supplied M8x1.25 flange locknuts (BOM item #7) and a 13mm wrench. **Torque the M8x1.25 flange locknuts to 18 ft-lb (25 Nm).**



Left (Driver) Rear

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- N. Adjust the reservoir so the banjo hose fitting is positioned as shown and the reservoir clamp is approx. 110mm from the bottom of the reservoir. Tighten the clamp using a 5mm Allen wrench and **torque to 6 ft-lb (8 Nm)**.



Left (Driver) Rear

Final Shock Mounting:

- O. After mounting the reservoir, ensure the main shock body is still oriented in the position described in Steps E and F.
- P. Once the shock body is oriented properly, tighten the Flange Locknut (BOM item #1) that was installed onto the threaded pin on the shock body in Step D. **Torque the Flange Locknut to 34 ft-lb (45 Nm)**.
- Q. 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.***
- R. Carefully check for any possible dynamic interference the shock bodies, reservoir hoses and reservoirs may have with any other components on the vehicle. Make any necessary adjustments to the shock alignment and/or reservoir position. The mounting locations depicted are appropriate for this application; however, some aftermarket components such as tires and/or lift kit combinations may create interference problems. It is the responsibility of the installer to determine if there is a potential for interference.

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Final left (driver) rear 25-324075 B8 8100 shock installed on vehicle:



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

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Final right (passenger) rear 25-281873 B8 8100 shock installed on vehicle:



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

S. Re-install the fender liner that was removed in Step A. Installation is now complete.

B8 8100 service:

For service of your B8 8100 shocks, please contact:

THYSSENKRUPP BILSTEIN OF AMERICA
Toll Free: 1-800-537-1085
bilsteinus.com