



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!!!

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.

E4-WM5-Y708A00

MOUNTING INSTRUCTION



BILSTEIN 5160 Series Reservoir Shock Absorbers are designed to fit your vehicle's original shock mounts with no modifications. With the exception of reservoir placement, the 5160 Series shocks are installed in the same manner as a standard replacement shock. However, due to the extended down travel of the front shocks, **2-2.5" coil spring spacers are required**. These can be obtained from many lifted/off-road truck accessory retailers. **The 2-2.5" coil spring spacers are not required for Power Wagon models.**

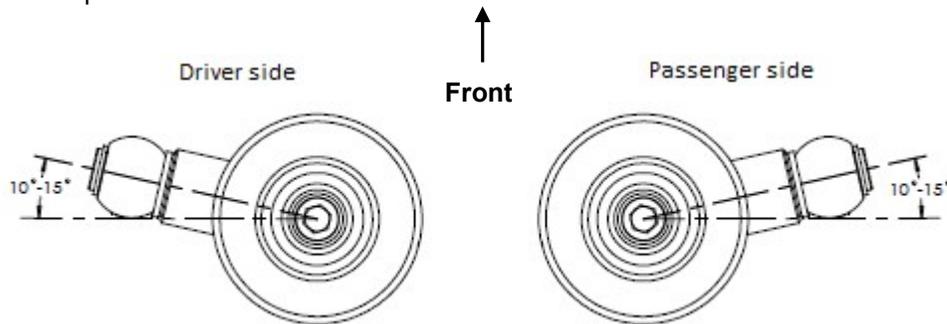
Note: The shocks and hardware depicted herein may differ slightly in appearance from the supplied components.

In order to complete the installation, the following tools in addition to common hand tools will be required:

- Drill
- Size 7 drill bit (.201")
- 1/4"-20 tap and tap wrench
- Centerpunch and/or marker
- Tape measure

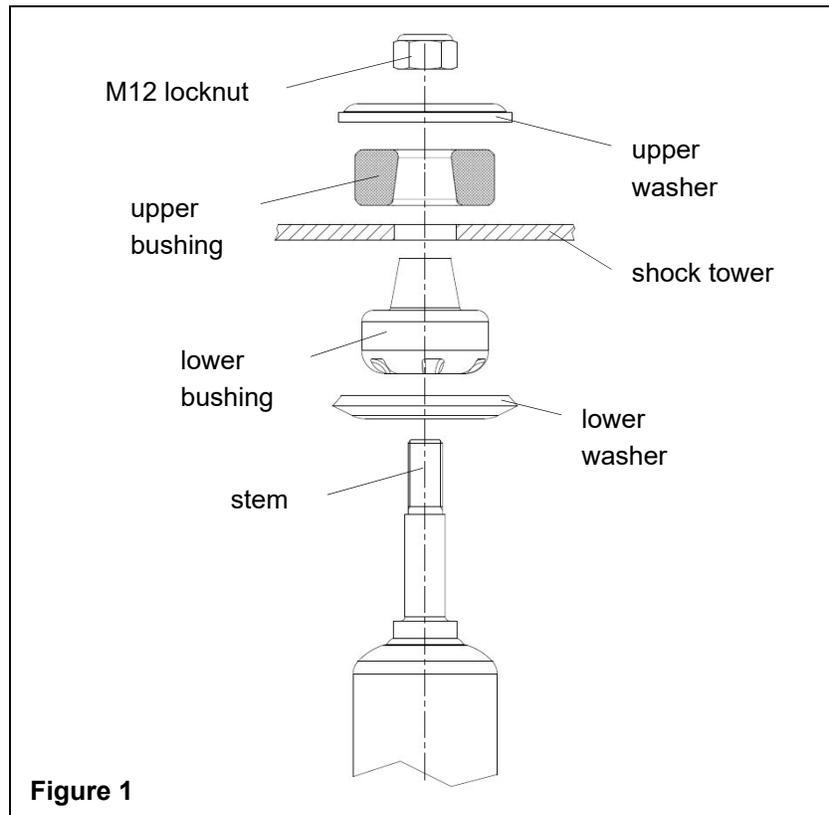
Front Shock Installation Procedure:

- Remove the existing front shocks from the vehicle following all procedures in the vehicle manufacturer's service manual. Depending on your vehicle, removing inner fender wells may simplify installation.
- Install the front shock in the original location and attach the lower mount. Orient the shock body so the hose port centerline is approx. 10-15 degrees forward of facing directly out. The figure below shows the correct hose port orientation:



- Using the supplied stem mounting hardware, install the lower washer and bushing on the shock stem then reinstall the shock tower. Please refer to Figure 1 for the proper order of installation of the stem hardware.
- Install the upper bushing, washer, and locknut. Be sure to lower the vehicle such that its full weight is on the suspension prior to fully tightening the fasteners.
- Tighten the lower mount fasteners to the vehicle manufacturer's service manual torque specification. Tighten the locknut on the stem and torque to 45 Nm (34 ft lb). Use a 6mm allen key to prevent the stem from rotating while torquing the locknut.

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



Front Reservoir Bracket Installation Procedure:

- A. The front reservoir brackets are recommended to be installed on the outer frame rail, to the rear of the shock bodies. Each front shock includes a bracket kit.
- B. Each bracket kit includes two 1/4"-20 screws and two split washers. The frame rail must be drilled and tapped in order to install the screws.
- C. Figure 2 depicts the recommended bracket position. The driver side is shown.

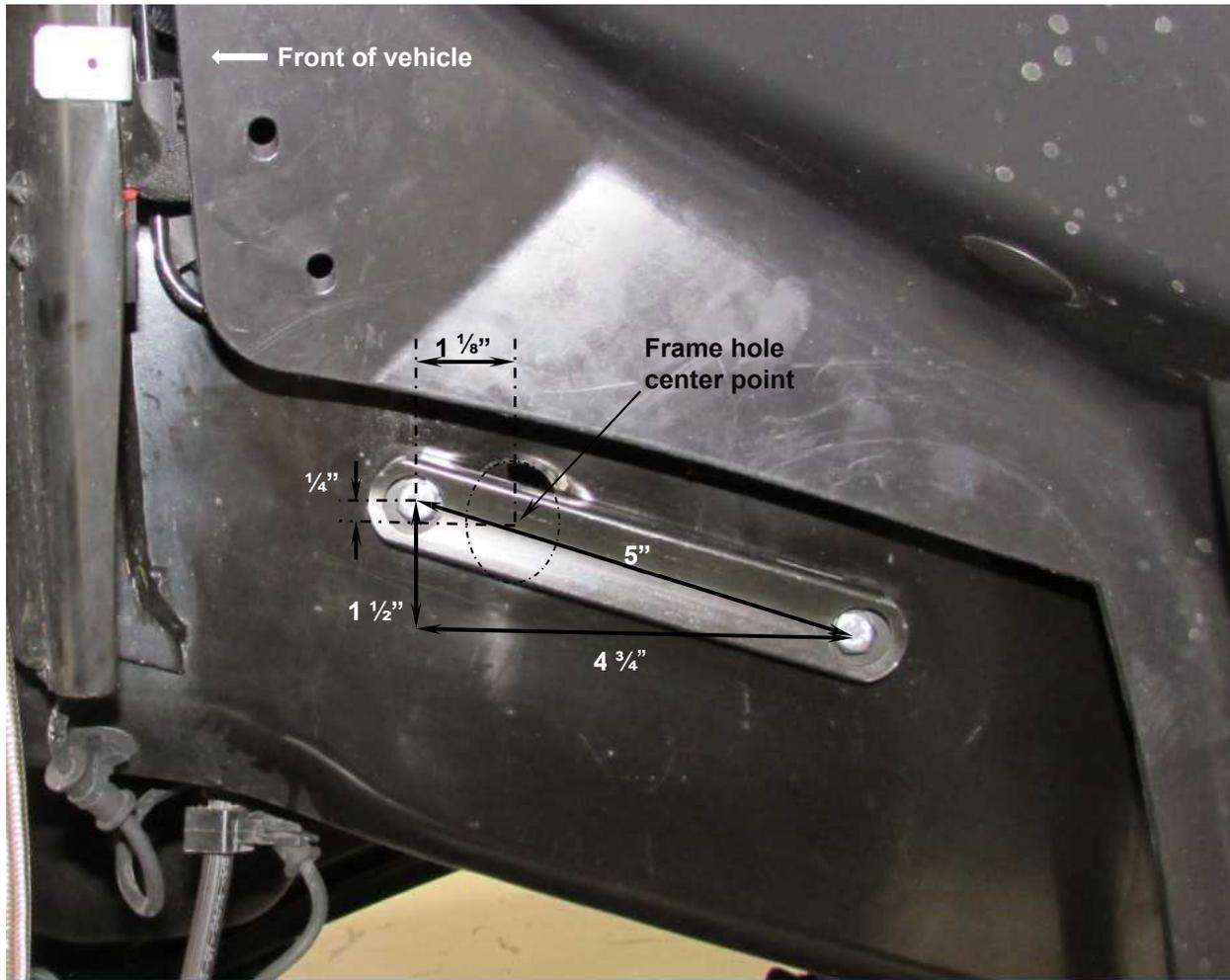


Figure 2. driver side

- D. Using the tape measure, marker, and/or centerpunch, mark a point on the side of the frame rail approximately $\frac{1}{4}$ " above and $1\frac{1}{8}$ " forward of the frame hole center point. Mark a second point on the frame approximately $1\frac{1}{2}$ " below and $4\frac{3}{4}$ " rearward of the first hole. The marks should then be approximately 5" apart.
- E. Hold the bracket up to the frame to ensure that the marks are on center with the holes in the bracket.
Note: The hole centers in the bracket are exactly 5" apart and are slightly oversize to allow for some variance in hole spacing on the frame.
- F. Using the size 7 drill bit, drill a hole in the side of the frame rail at each of the points marked. It is recommended to drill a smaller pilot hole first to prevent the larger bit from wandering. Be sure to keep the drill bit as perpendicular as possible to the side of the frame rail. It is also recommended to use cutting oil to drill the frame.
- G. Tap the holes using the $\frac{1}{4}$ "-20 tap. Be sure to keep the tap as perpendicular as possible to the side of the frame rail. It is recommended to use cutting oil to tap the threads in the frame. Clean out the chips and oil after tapping.

E4-WM5-Y708A00 MOUNTING INSTRUCTION



- H. Using the provided 1/4"-20 bolts and split washers, install the reservoir bracket onto the frame. The concave side of the bracket must face outward. It is recommended that a non-permanent thread locking compound be used on the threads.
- I. Torque both bolts to 10 lb•ft (13.6 N•m).
- J. Using the provided hose clamps, slide the open bands through the thin slots on the sides of the bracket.
- K. Secure the reservoir to the bracket using the hose clamps. The hose fittings are designed to swivel to allow the reservoir and hose to be more easily positioned. Figure 3 depicts the reservoir installed.
Note: Once reinstalled, the inner fender wells may interfere with a portion of the reservoir and/or hose fitting. The inner fender wells can be trimmed as necessary.
- L. Tighten the hose clamps until the reservoir cannot be manually rotated.



Figure 3. driver side

- M. Carefully check for any possible interference between the reservoirs and any other components on the vehicle, then make any necessary adjustments to the reservoir positions. The reservoir mounting locations depicted herein are appropriate for most Ram trucks for which this kit is intended, however, some wheel/tire and/or lift kit combinations may create interference problems. It is the responsibility of the installer to determine if the reservoirs are mounted appropriately and if there is any potential for interference.

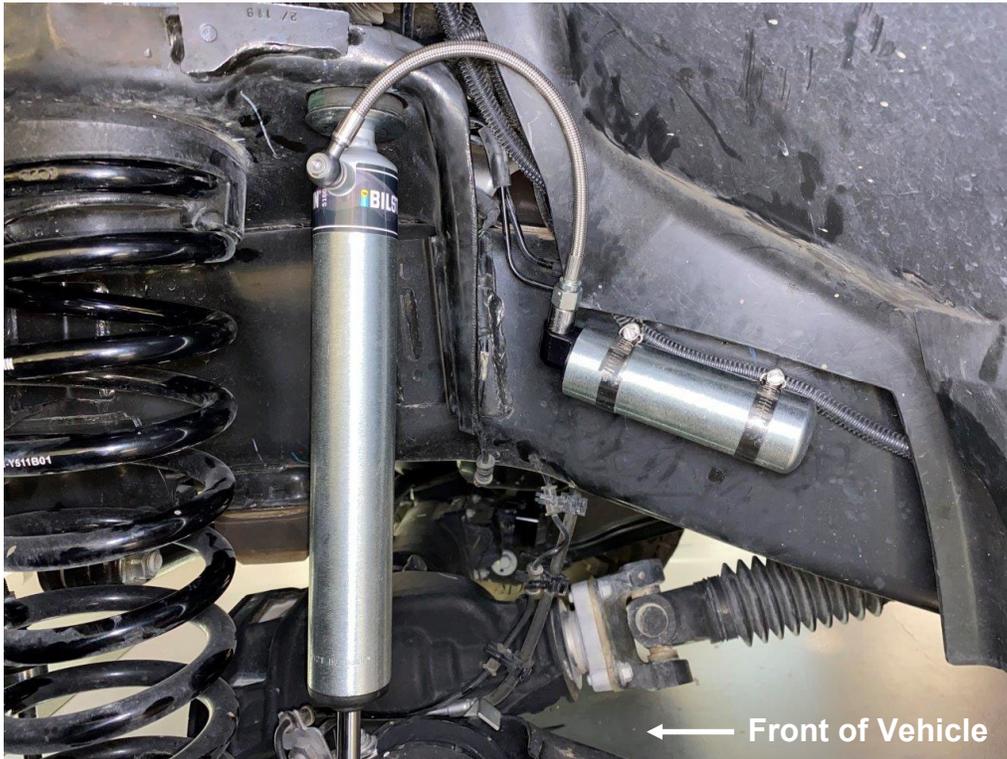


Figure 4. driver side

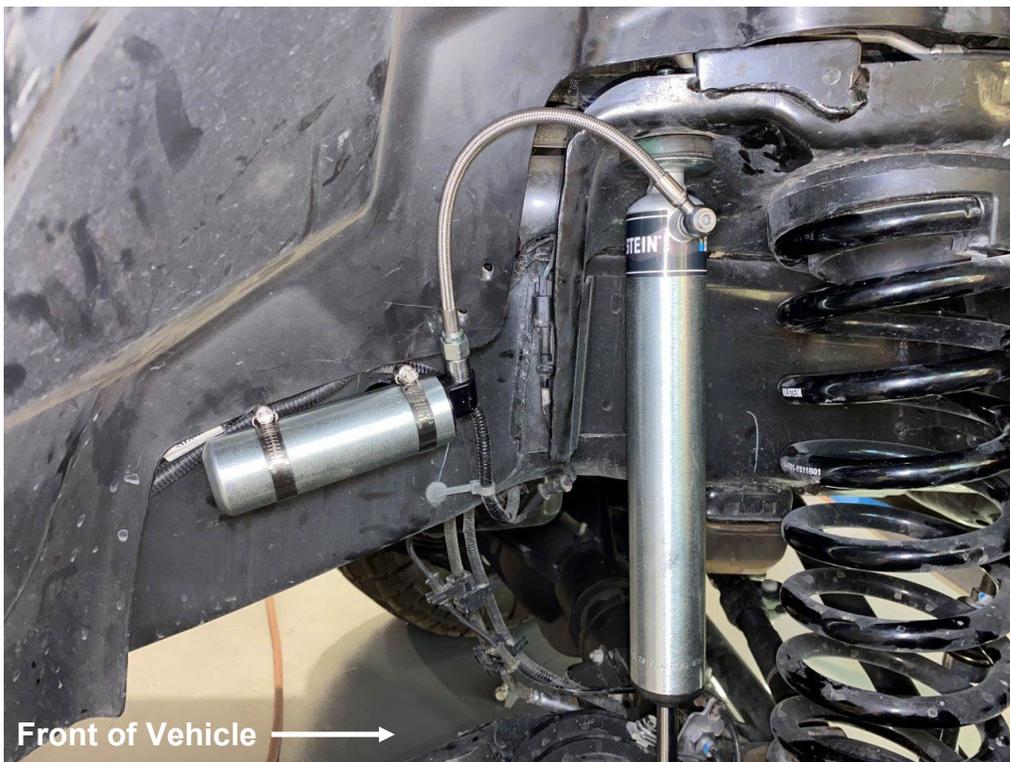


Figure 5. passenger side

E4-WM5-Y708A00 MOUNTING INSTRUCTION



- N. On 2019+ models, secure the right front (passenger side) ABS line to the hard brake line as shown below with a zip tie and trim excess zip tie length after installation. Do not tighten the zip tie to the point where it's pinching the ABS line, just enough so it holds the ABS line out of the way. Be careful to not damage the ABS line during this process.

