

# E4-WM5-Y366A00 MOUNTING INSTRUCTION



## IMPORTANT!

### PLEASE READ ALL INSTRUCTIONS FIRST!

If in doubt, please contact your local BILSTEIN dealer or our sales department before installation.

When replacing other brands, BILSTEIN shock absorbers should always be installed as a set. Installation of shock absorbers, struts and cartridges requires special tools and expert knowledge. Accordingly, installation of all BILSTEIN products must be performed by a qualified suspension specialist.

Always use a chassis hoist for the installation of BILSTEIN products, and make certain that the raised vehicle is securely attached to the hoist to prevent the vehicle from slipping, falling, or moving during the installation process.

**If you choose to install any BILSTEIN product without the necessary special tools, expertise or chassis hoist, you may subject yourself to the risk of serious bodily injury or death.** If you elect not to use a chassis hoist, at least make sure the vehicle is on level ground, that all tires on the ground during installation are blocked to prevent movement, that at least two tires are on the ground at all times, and that adequately secured safety stands (jack stands) are used to support the chassis. **NEVER** get under the vehicle until you have checked to make sure all of these things are done.

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.**

BILSTEIN suspension products are gas-filled and are highly pressurized. Never place any BILSTEIN product in a vise or use a clamp on any BILSTEIN product; never apply heat near any BILSTEIN product, and 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.**

Do not use impact tools for loosening or tightening fasteners, because this may destroy the screw threads. Self-locking nuts 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 piston rod and seal.

All mounting fasteners for shocks and struts must be securely tightened before tension is placed on the suspension system.

After installing any BILSTEIN product, the suspension caster and camber must be checked and/or adjusted to comply with the vehicle manufacturer's specifications. Also, 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. Also the headlight aim must be checked and adjusted.

Be sure to properly dispose of all old parts.

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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. The front shocks include a brake line relocation bracket to accommodate additional front shock travel.

## Shock Installation Procedure:

- A. Remove the existing shocks from the vehicle following all procedures in the vehicle manufacturer's service manual.
- B. Before installing the shock/reservoir assemblies on the vehicle, use the supplied "piggyback" hardware to mount each reservoir to its shock body. Each reservoir is mounted using two polyurethane isolator blocks and two steel hose clamps. Please note that the position of each reservoir relative to its shock body is different for each corner of the vehicle. These positions are depicted in Figures 1-4. The hose fittings are designed to swivel and will allow the reservoir and hose to be easily moved.

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

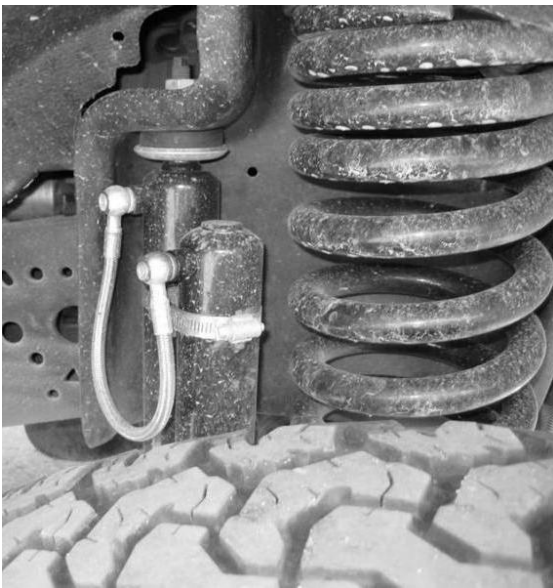


Figure 3. front driver side



Figure 4. front passenger side

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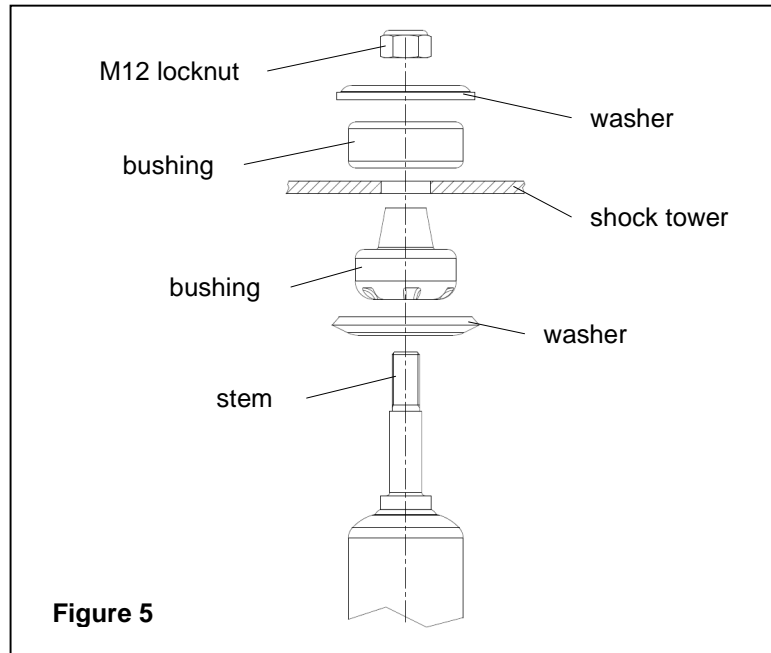
**Figure 3. rear driver side**



**Figure 4. rear passenger side**

- C. The isolator blocks should be spaced approximately 6"-8" apart. The hose clamps should be positioned in line with the isolator blocks.
- D. Tighten the hose clamps sufficiently to prevent the reservoir from slipping, but loose enough to allow for small subsequent adjustments of position. The hose clamps will be tightened further once the shock/reservoir assembly is installed on the vehicle and the proper reservoir position has been confirmed.
- E. Install the complete shock/reservoir assemblies on the vehicle. All original fasteners can be reused with the exception of the upper stem mount hardware for the front shocks, which is supplied new.
- F. If a chassis hoist has been used, be sure to lower the vehicle such that its full weight is on the suspension prior to fully tightening the fasteners.
- G. Please refer to Figure 5 for the proper order of installation of the front upper stem hardware.

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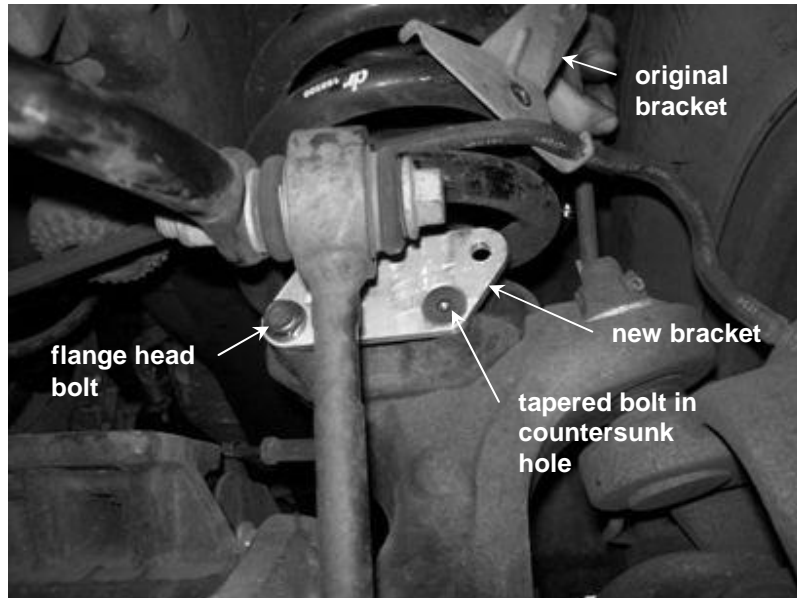


- H. After installing the stem hardware, orient the front shocks as depicted in Figures 1 & 2.
- I. Tighten the locknut on the stem until it bottoms out on the last thread.
- J. Tighten all remaining fasteners to the vehicle manufacturer's service manual torque specifications.
- K. Carefully check for 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 Ford F250/F350 trucks, however, some wheel/tire and or lift kit combinations may create interference problems. It is the responsibility of the installer to determine if the reservoir is mounted appropriately and if there is any potential for interference.
- L. If no potential interference is found, tighten the hose clamps until the reservoirs cannot be manually moved independent of the shock bodies. This completes the shock installation.

## Brake Line Relocation Bracket Installation Procedure:

- A. Remove the front lower brake line brackets from the vehicle following all procedures in the vehicle manufacturer's service manual. These brackets are located directly in front of the lower coil spring mounts. The brackets on both the left and right sides of the vehicle must be removed and relocated to accommodate additional front shock travel.
- B. Using the supplied hardware, install the brake line relocation bracket in the place of the original bracket. Refer to Figure 6. The new bracket should be installed with the countersunk (tapered) hole nearest to the wheel. The new brackets are not specific to the left or right sides of the vehicle. Install the tapered bolt in the countersunk hole and the flange head bolt into the adjacent hole. It is recommended that a non-permanent thread locking compound be used on the threads.
- C. Tighten both bolts to 10 N•m (13 lb•ft).

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**Figure 6**

- D. Attach the original brake line bracket to the new bracket using the remaining supplied bolt and locknut. Refer to Figure 7. The supplied bolt may differ from that depicted in Figure 7. Install the bolt in the outer hole of the bracket. The tang on the original bracket must engage the inner hole on the new bracket.



**Figure 7**

- E. Tighten the nuts to 10 N•m (13 lb•ft). This completes the installation.