



### **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.

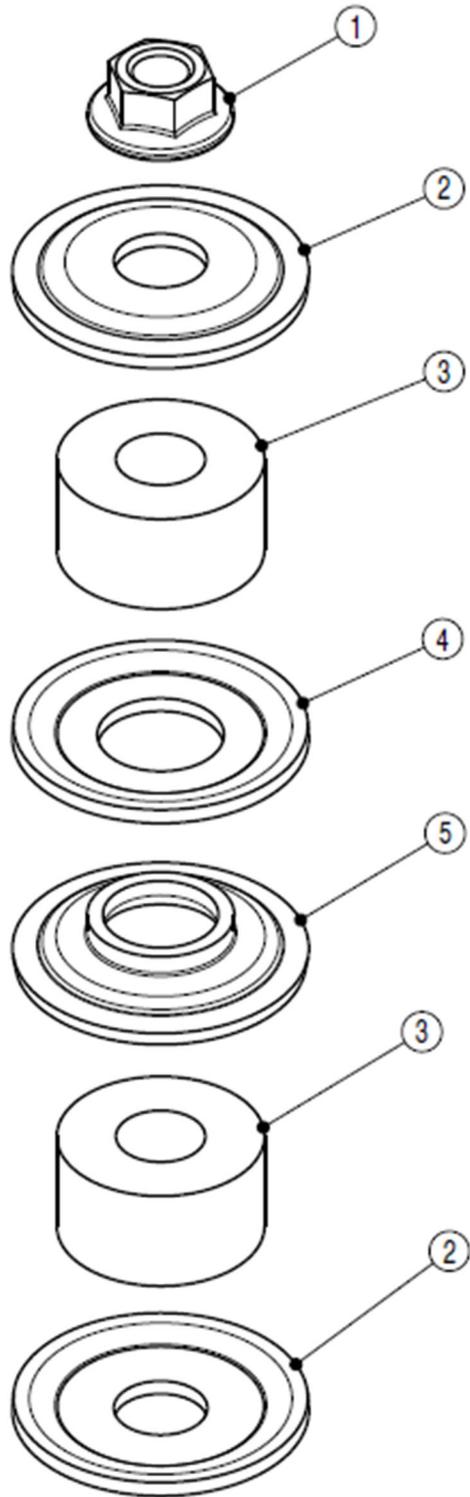
#### ***CAUTION for COILOVER TYPE SUSPENSIONS!!!***

**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-Y750A00 MOUNTING INSTRUCTION



BILL OF MATERIALS		
Item #	Description	Qty
1	Flange Nut, M12x1.25, 18mm Hex Head	1
2	Retaining Washer, 17.8mm ID	2
3	Bushing	2
4	Retaining Washer, 24.1mm ID	1
5	Alignment Washer	1

Figure 1. Bilstein Upper Stem Hardware Kit.

# E4-WM5-Y750A00

## MOUNTING INSTRUCTION

**BILSTEIN**



BILSTEIN B8 5160 Reservoir Shock Absorbers are designed to fit your vehicle's original shock mounts with no modifications. With the exception of the reservoir placement, the B8 5160 shocks are installed in the same manner as a standard replacement shock.

### Rear Shock Installation Procedure:

- A. Remove the existing rear 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 billet aluminum "piggyback" reservoir bracket to mount each reservoir to its shock body. Position reservoirs as depicted in Figures 2 and 3 below so that the angle between the hose port centerlines is roughly 75-90 degrees. Ensure the hose is not rubbing against the shock tube in the static position. The hose fittings are designed to swivel and will allow the reservoir and hose to be easily moved.

**Note: Before mounting the reservoir with the reservoir bracket, apply non-permanent thread locker on the 2 socket head cap screws.**

- C. The reservoir and reservoir bracket should be placed as shown in the locations pictured in Figures 2 and 3.
- D. Tighten the socket head cap screws into the reservoir bracket sufficiently to prevent the reservoir from slipping, but loose enough to allow for small subsequent adjustments of position. The socket head cap screws will be tightened further once the shock/reservoir assembly is installed on the vehicle and the proper reservoir position has been confirmed.

Front of vehicle  
←



**Figure 2. Rear Driver Side**



**Figure 3. Rear Passenger Side**

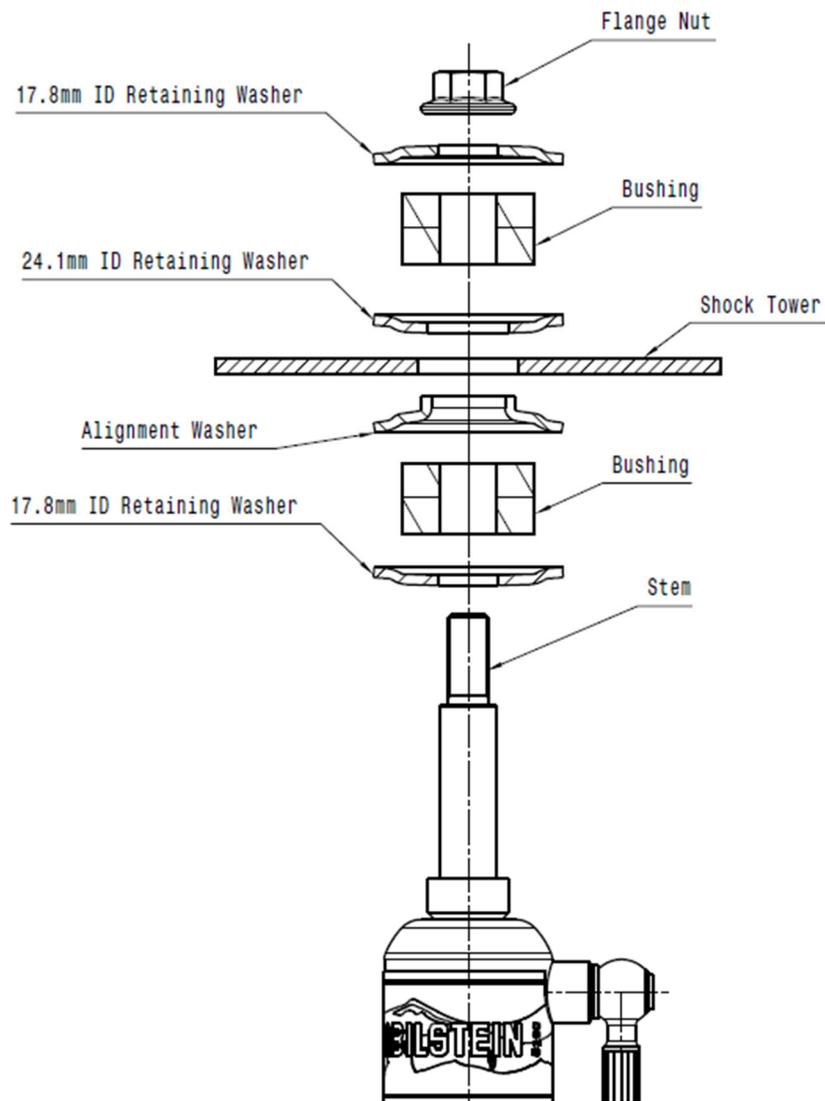
- E. As depicted in Figure 4 on the next page: Slide one of the supplied 17.8mm ID retaining washers (BOM item #2) onto the upper shock stem concave side up, followed by one of the supplied bushings (BOM item #3) and the supplied alignment washer (BOM item #5), concave side down.
- F. Slide the upper shock stem through the chassis mount hole and carefully center the alignment washer (BOM item #5) in the mount hole. Slide the supplied 24.1mm ID retaining washer (BOM item #4) over the shock stem concave side up, followed by the second supplied bushing (BOM item #3). Then slide the second supplied 17.8mm ID retaining washer (BOM item #2) over the shock stem concave side down as shown in Figure 4. Thread the supplied M12x1.25 flange nut (BOM item #1) onto the threaded pin on the shock stem. Using an open end or box end wrench, thread the flange nut down the shock stem until all the gap in the cushions is taken up as shown in Figures 2 and 3. Do not thread the flange nut all the way to the stop point at this time.
- G. Align the lower shock mount in the rear axle attachment point using the OE lower shock bolt, nut and washer that was removed in step A. Make sure the hex head of the bolt is facing the outside of the vehicle. Slide the OE washer over the bolt threads, and tighten the OE nut until the gap between the components and the rear axle attachment point is taken up. Do not torque the bolt/nut at this time (the lower shock mount should still be free to rotate).
- H. Tighten the supplied Flanged Locknut onto the threaded pin on the upper shock stem.  
**Torque the Flanged Locknut to 20 ft-lb (27 Nm).** Use a 6mm Allen key to keep the stem from rotating while torquing the locknut.

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

# E4-WM5-Y750A00 MOUNTING INSTRUCTION



- I. Orient the shock/reservoir assemblies as depicted in Figures 2-3.
- J. Fully tighten the lower shock bolt/nut to the torque specified in the manufacturer's service manual.  
**\*Be sure to lower the vehicle such that its full weight is on the suspension prior to fully tightening the lower shock bolt/nut.\***
- K. Carefully check for any possible dynamic interference between the reservoirs and any other components on the vehicle and then make any necessary adjustments to the reservoir positions. The reservoir mounting locations depicted herein 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 the reservoir is mounted appropriately and if there is any potential for interference.
- L. If no potential interference is found, tighten the reservoir bracket's socket head cap screws to approximately  $6 \pm 1$  ft-lb ( $8 \pm 1$  Nm). This completes the installation.



**Figure 4. Bilstein Upper Stem Hardware Assembly**