



### **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.**

## **Shock Installation Procedure:**

**Vehicle application:** JL Wrangler '18+

**Lift height(s):** 2-3" and 3-4.5"

**Axle:** Rear left (driver) and rear right (passenger)

**Product:** B8 8100 DSA

**\*Installation of B8 8100 shocks requires the use of aftermarket wheels with a maximum of 4.5" backsourcing to ensure clearance between the tire and shocks.\***

BILSTEIN 8100 Series Reservoir Shock Absorbers are designed to fit your vehicle's original shock mounts with no modifications. With the exception of reservoir placement, the 8100 Series shocks are installed in the same manner as a standard replacement shock.

- A. Remove the existing rear shocks from the vehicle following all procedures in the vehicle manufacturer's service manual.
- B. Position reservoir for driver side as depicted in Figures 1 and 2. Position reservoir for passenger side as depicted in Figures 3 and 4. The reservoir should be placed in the location pictured below. With correct placement, shocks should be offset outboard at the top mount.



**Figure 1 - Rear Driver Side**



**Figure 2 - Rear Driver Side**



Figure 3 - Rear Passenger Side



Figure 4 - Rear Passenger Side

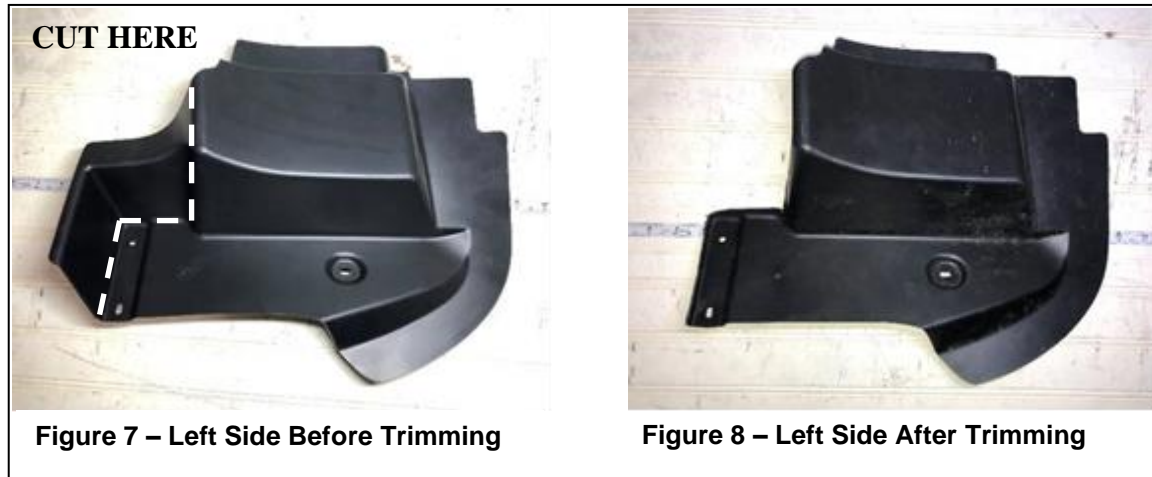
- C. Install the complete shock/reservoir assemblies on the vehicle. All original fasteners can be reused.
- D. The rear closeout panel must either be completely removed from the bumper or trimmed for reservoir clearance. For trim process, proceed on with the instructions. If removing, skip to step G.
- E. Remove the rear closeout panels located behind the rear bumper on both sides.
- F. Trim the rear closeout panel for reservoir clearance as depicted in figures 5 thru 8. Then reinstall closeout panel and verify sufficient clearance from shock.



Figure 5 - Right Side Before Trimming



Figure 6 - Right Side After Trimming



- G. Be sure to lower the vehicle such that its full weight is on the suspension prior to fully tightening the fasteners to manufacturer's specification.
- H. Carefully check for any possible interference between the reservoirs and any other components on the vehicle. The reservoir mounting locations depicted herein are appropriate for most Jeep Wrangler JL vehicles, however, some wheel/tire and or lift kit combinations may create interference problems. It is the responsibility of the installer to determine if there is any potential for interference.
- I. Tighten all remaining fasteners to the vehicle manufacturer's service manual torque specifications.
- J. Installation is complete.

## **Dual Speed Reservoir Adjustment**

These dampers come equipped with independent high and low speed compression damping adjusters located on the reservoir. The high speed is the blue knob and is labeled as such, and the low speed is the gold knob and is labeled as such. The **FULL FIRM** setting for each adjuster knob is achieved when the knob is turned all the way **CLOCKWISE**. The **FULL SOFT** setting for each adjuster knob is achieved when the knob is turned all the way **COUNTER-CLOCKWISE**. To make high or low speed adjustments, simply turn each knob individually until the desired level of control is achieved. To stiffen the ride, turn the knobs clockwise. To soften the ride, turn the knobs counter-clockwise.

The factory setting of these adjusters are as follows:

- High Speed (blue knob) – 6 clicks counter-clockwise from fully firm.  
(10 total settings are available which translates to 9 clicks; 1 rotation)
- Low Speed (gold knob) – 13 clicks counter-clockwise from fully firm.  
(20 total settings are available which translates to 19 clicks; 2 rotations)

**Please note: It's normal for the high speed (blue) knob to become significantly more difficult to turn when progressing to the firmer end of the adjustment range; particularly during the last 3 to 4 settings/clicks. This increased difficulty is a result of the increasing preload of the high speed valve stack shims. To aid in ease of adjustment at the firmest end of the high speed range, it's optional to use Bilstein wrench part # E-XS01-0000004. This is included in most kits and if not, available separately. Additionally, it's normal for the clicks on the high speed (blue) knob to become less pronounced at the firmer end of the adjustment range.**



**Dual Speed Reservoir Adjuster**