

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. 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.



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

NOTE: The brake line spacer hardware kit #B4-XB1-Z096A02 is included in the left rear shock #25-242379. DO NOT install shock #25-242379 or #25-242539 without this kit.

- 1. Remove the existing rear shocks from the vehicle following all procedures in the vehicle manufacturer's service manual.
- 2. Install rear brake line spacer.
 - a) Remove hard brake line clamp at the far left side of the axle housing and discard (circle #1).



- b) Remove bolt holding the flexible hose bracket found on top of the axle housing (circle #2)
- c) Place brake line spacer between bracket and axle housing as shown. Install supplied bolt and **Torque to 8 N•m (80 kgf•cm, 69in•lbf)**

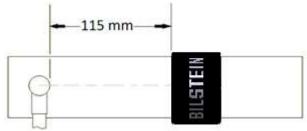




- d) Install supplied hard brake line clamp and install bolt on axle housing.
 Torque bolt to 8 N•m (80 kgf•cm, 69in•lbf)
- 3. Install the lower end of the shock absorber with the bolt, nut and washer. Temporarily hand tighten.
- **4.** Install the new supplied lower washer, lower cushion, and support washer onto the shock stem. Refer to figure 3.
- 5. Pull down on shock body and insert stem into shock mount.
- **6.** Rotate shock body so that the hose bung is facing outward and indexed perpendicular to the vehicle frame.
- **7.** Install the new supplied upper cushion, upper retainer, and nut onto the shock stem. Refer to figure 3.

Torque nut to 20 Nem (204 kgfecm, 15ftelbf)

- 8. Slide reservoir brackets onto reservoirs as shown below.
 - a) Place one drop of Blue Loctite® into threaded hole.
 - b) Insure there is 115mm of reservoir shown between the bracket and the hose bung.



c) Rotate reservoir body so that the hose bung is facing outward and indexed perpendicular to the vehicle frame. Refer to figure 1 and 2.

Torque reservoir bracket pinch bolt to 8 Nem (80 kgfecm, 69inelbf)

- 9. Mount reservoirs to the frame. Refer to figure 4a and 4b.
 - a) Place one drop of Blue Loctite® into threaded holes.
 - b) Locate boss of reservoir bracket into frame datum hole to the right of the shock absorber.
 - c) Lower spare tire 15 inches for better access to fasteners on driver's side.
 - d) Install mount plate, split washers and bolts as shown in figure 4a and 4b.

 Torque reservoir bracket mount plate bolts to 27 N•m (275 kgf•cm, 20ft•lbf)
- 10. Fully tighten the rear shock absorber lower bolt.

Torque to 98 N·m (1,000 kgf·cm, 72ft·lbf)

- 11. 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 (with the exception of the reservoir bracket bolts)
- 12. Carefully check for any possible dynamic 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 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.





Figure 1. rear driver side



Figure 2. rear passenger side



