



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.

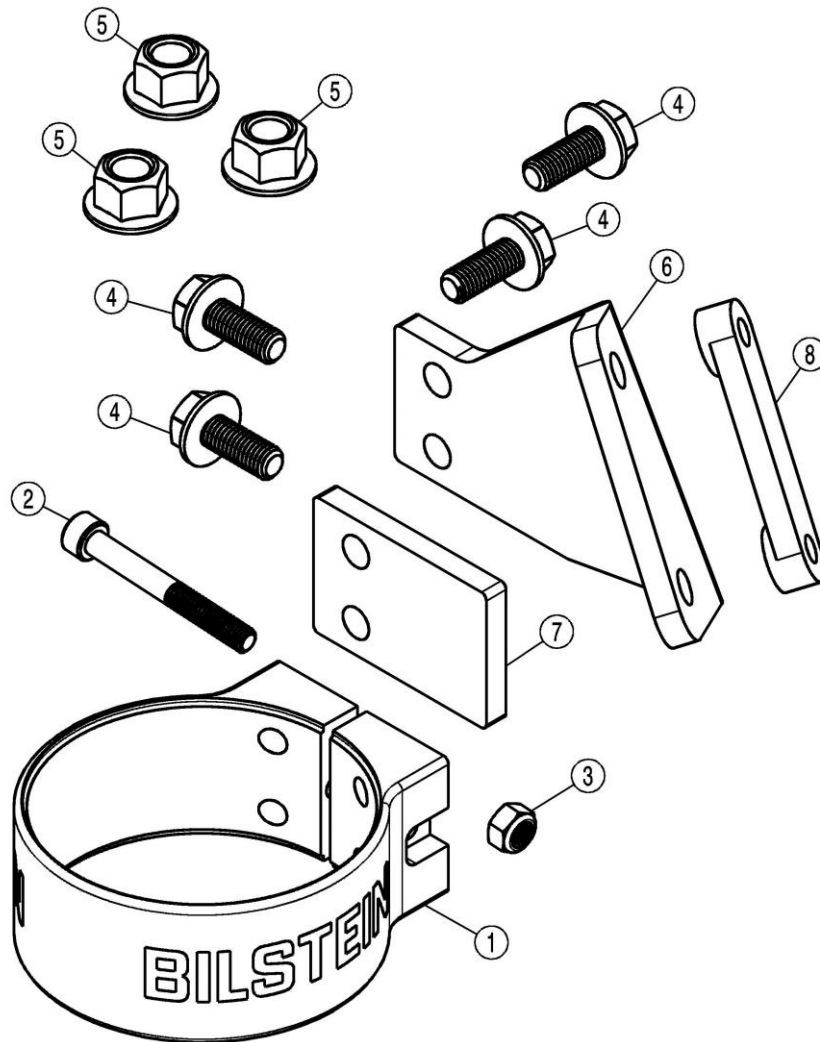
IMPORTANT!!!

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.

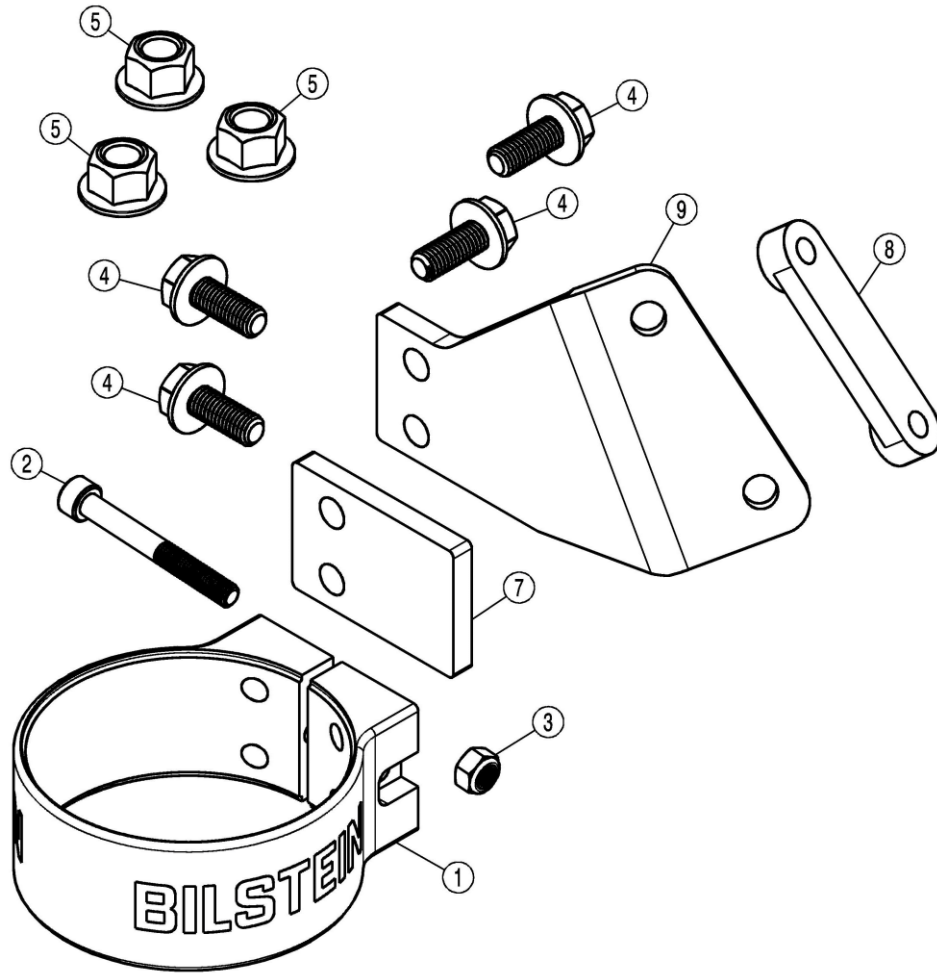
E-WM05-0000089
MOUNTING INSTRUCTION



This instruction is for both left rear (driver) 41-314326 and right rear (passenger) 41-314333 B8 8112 shocks. A bill of materials of the included mounting part kits is shown on the next two pages.



| Bill of Materials- LEFT REAR | | |
|-------------------------------------|---|------------|
| Item # | Description | Qty |
| 1 | Reservoir Clamp | 1 |
| 2 | Socket Head Cap Screw; M6x1; L=50mm | 1 |
| 3 | Nylock; M6x1 | 1 |
| 4 | Flange Head Cap Screw; M8x1.25; L=20mm | 4 |
| 5 | Flange Locknut; M10x1.5 | 3 |
| 6 | Reservoir Support Plate; Left | 1 |
| 7 | Spacer, Reservoir Bracket | 1 |
| 8 | Reservoir Support; Threaded Insert; M8x1.25 | 1 |



| Bill of Materials- RIGHT REAR | | |
|--------------------------------------|---|------------|
| Item # | Description | Qty |
| 1 | Reservoir Clamp | 1 |
| 2 | Socket Head Cap Screw; M6x1; L=50mm | 1 |
| 3 | Nylock; M6x1 | 1 |
| 4 | Flange Head Cap Screw; M8x1.25; L=20mm | 4 |
| 5 | Flange Locknut; M10x1.5 | 3 |
| 9 | Reservoir Support Plate; Right | 1 |
| 7 | Spacer, Reservoir Bracket | 1 |
| 8 | Reservoir Support; Threaded Insert; M8x1.25 | 1 |

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It is normal to hear a slight audible clicking noise during compression and rebound strokes in the B8 8112 shocks, most notably during low velocity events. This is due to the internal pistons engaging each other creating the position sensitive compression and rebound zones.

Note: the shocks depicted herein differ in appearance from the supplied components.

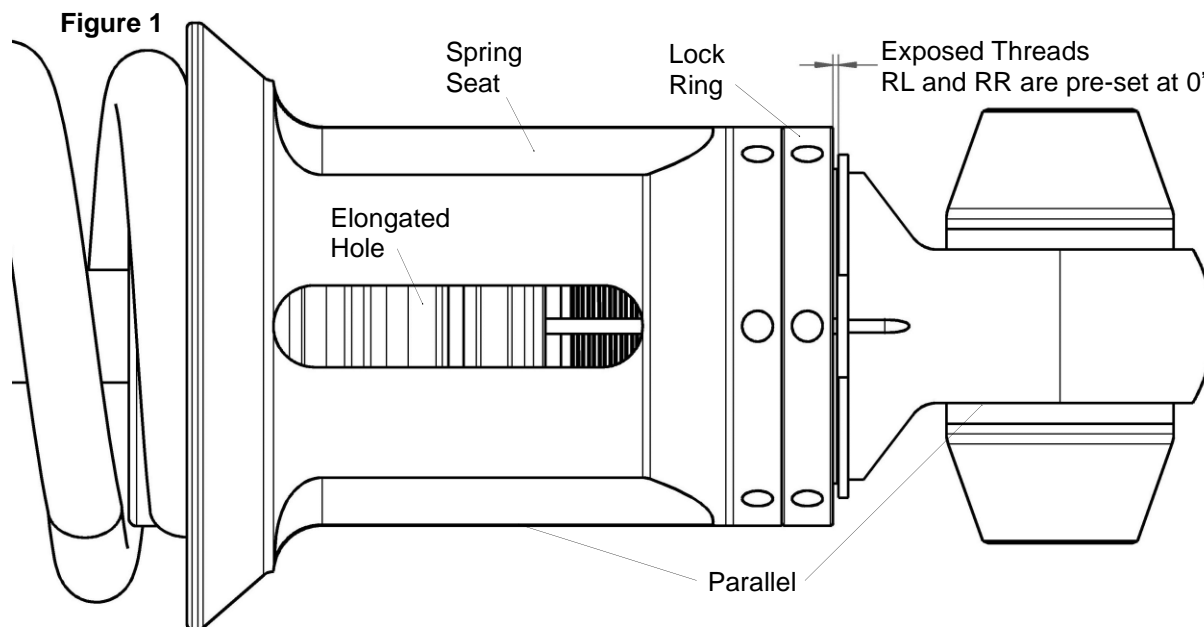
B8 8112 shock installation procedure:

- A. Remove the fender liner to access the shock module's upper mount hardware.
- B. Remove the existing shock module from the vehicle following all procedures in the vehicle manufacturer's service manual. Save the lower shock bolt and nut as they will be used later.
- C. Before installing the B8 8112 shocks on the vehicle check if they are set at the desired lift height. The pre-set lift heights can be different depending on the wheelbase and trim level. Use the table below to determine if the pre-set lift height is what is desired:

| With Sasquatch package | | Badlands trim Level (Without Sasquatch package) | | Without Sasquatch package/ Without Badlands trim Vehicles NOT equipped with factory yellow Bilstein ESCV shocks. | |
|------------------------|--------|--|--------|--|--------|
| 4 Door | 2 Door | 4 Door | 2 Door | 4 Door | 2 Door |
| 0.5" | 1.0" | 1.6" | 2.1" | 2.7" | 2.8" |

- D. If the above-mentioned pre-set lift height is not what is desired proceed to Step E. Otherwise, skip to Step L.
- E. Break the spring seat lock ring loose with the supplied spanner wrench. Refer to Figure 1 on the next page.
- F. Note the clocking of the lower mount relative to the upper mount studs. Also note the spring seat clocking to the lower mount (important for reassembly).
- G. Using an appropriate spring compressor, compress the spring until it can be rotated freely by hand. Then, spin the spring seat up or down depending on what the desired lift height is. Both sides should be adjusted to the same position (there is no need to correct for any inherent vehicle lean). See the lift height tables below for a few points of reference between the amount of exposed thread and estimated lift height. This is for stock weight vehicles.

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DO NOT EXCEED MAX LIFT HEIGHT LISTED FOR YOUR VEHICLE

| B8 8112 Typical Lift Heights** | | | | | | |
|--------------------------------|------------------------|------------|---|------------|--|------------|
| Exposed Threads | With Sasquatch package | | Badlands trim Level (Without Sasquatch package) | | Without Sasquatch package/ Without Badlands trim Vehicles NOT equipped with factory yellow Bilstein ESCV shocks. | |
| | 4 Door | 2 Door | 4 Door | 2 Door | 4 Door | 2 Door |
| 11/16" | Do not use | Do not use | Do not use | Do not use | Do not use | Do not use |
| 1/2" | 1.1" | 1.7" | 2.2" | 2.9" | 3.3" | Do not use |
| 1/4" | 0.8" | 1.3" | 1.9" | 2.5" | 3.0" | Do not use |
| 0" | 0.5" | 1.0" | 1.6" | 2.1" | 2.7" | 2.8" |

** Lift heights indicated are typical. Actual lift height is influenced by which factory suspension the vehicle is equipped with and its condition; optional equipment and accessories on your vehicle, and other vehicle modifications such as replacement coil springs, wheel and tire combinations, etc.

Modifying/lifting the suspension to your vehicle may raise its center of gravity and may make it more susceptible to loss of control and/or rollover, which may result in death or serious injury. We strongly recommend that you offset the loss of rollover resistance as much as possible by increasing tire track width, and that you equip the vehicle with a functional roll bar and cage system.

Wear seat belts and shoulder harnesses at all times, and avoid situations where a side rollover may occur.

NOTE: You may need to exceed the recommended spring seat adjustment range (exposed thread dimension) for your vehicle (if there is added weight from a steel bumper, winch, armor, etc.), however do not exceed 1/2" of exposed threads. This is important to ensure there is always sufficient spring travel.

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- H. Before finalizing the desired lift height, position the flats on the spring seat so they are parallel with the flats on the eye ring, refer to Figure 1.
- I. Once the desired lift height is set, tighten the lock ring against the spring seat using the supplied spanner wrench.

Torque the lock ring against the spring seat to approximately 37 ft-lb (50 Nm).

- J. Rotate the lower shock mount so it is aligned with the upper mount studs as noted in step F.
- K. Slowly release the spring compressor.
- L. Install the Reservoir Support; Threaded Insert (BOM item #8) into the section of the frame as shown below. This is easiest and most accessible before installing the shock module.



- M. Install the Reservoir Support Plate (BOM item #6 for the Rear Left, BOM item #9 for the Rear Right). Use two of the M8 Flange Head Cap Screws (BOM item #4) to secure the Reservoir Support Plate to the frame and through the Reservoir Support; Threaded Insert. Apply non-permanent thread locker and while holding the Reservoir Support Plate tight to the frame rail, **torque the Flange Head Cap Screws to 16 ft-lb (22 Nm).**

Rear left depicted



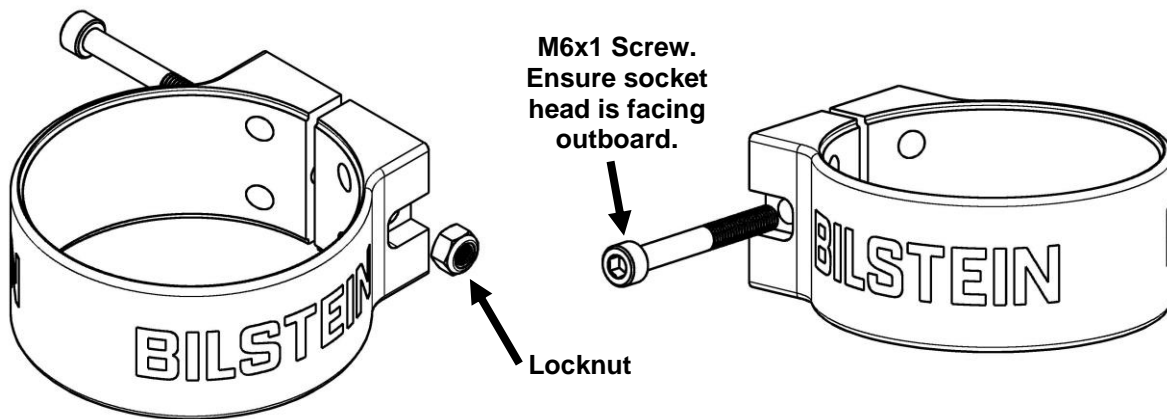
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- N. Install the module onto the vehicle as shown in the image below. Use the three Flange Locknuts (BOM item #5) and a 15mm socket to attach the upper mount (3 per side). Leave reservoir hanging temporarily.
Torque supplied upper mount nuts to 33 ft-lb (45 Nm).



- O. Attach the lower shock mount with the OE shock bolt and nut that were removed in Step B (1 per side). **Torque lower OE shock bolt and nut to service manual specification.**
- P. Install the M6x1 Socket Head Cap Screw (BOM item #2) and the M6 locknut (BOM item #3) on the Reservoir Clamp (BOM item #1) as shown below. Ensure the M6x1 Socket Head Cap Screw is facing outboard of the assembly so this is accessible after installation on the vehicle. Hand tighten for now allowing the reservoir to slide freely in and out of the Reservoir Clamp.

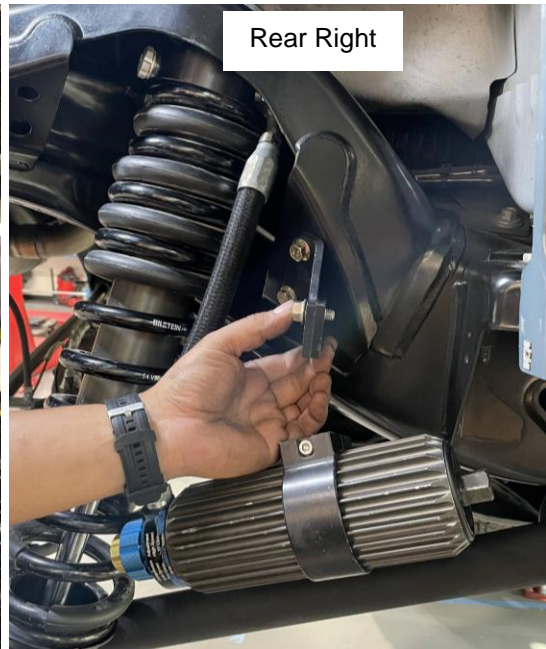


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- Q. Slide the Reservoir Clamp Assembly from step P over the reservoir. Apply non-permanent thread locker on the end of the remaining supplied M8 Flange Head Cap Screws (BOM item #4). Then place these screws (2 per side) through the holes in the supplied reservoir support plate (BOM item #6 and #9) and trough the Reservoir Bracket Spacer (BOM item #7). Thread into the threaded holes in the supplied reservoir clamp (BOM item #1) as shown in the depictions below using a 13mm socket (2 per side).

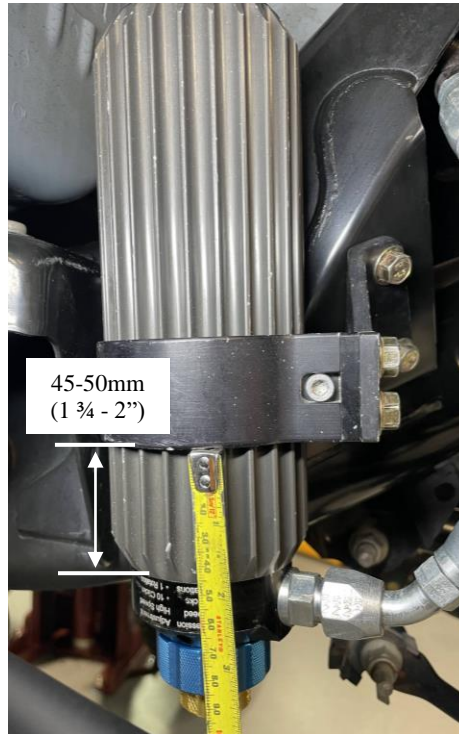
Torque supplied M8 Flange Head Cap Screws to 18 ft-lb (25 Nm).



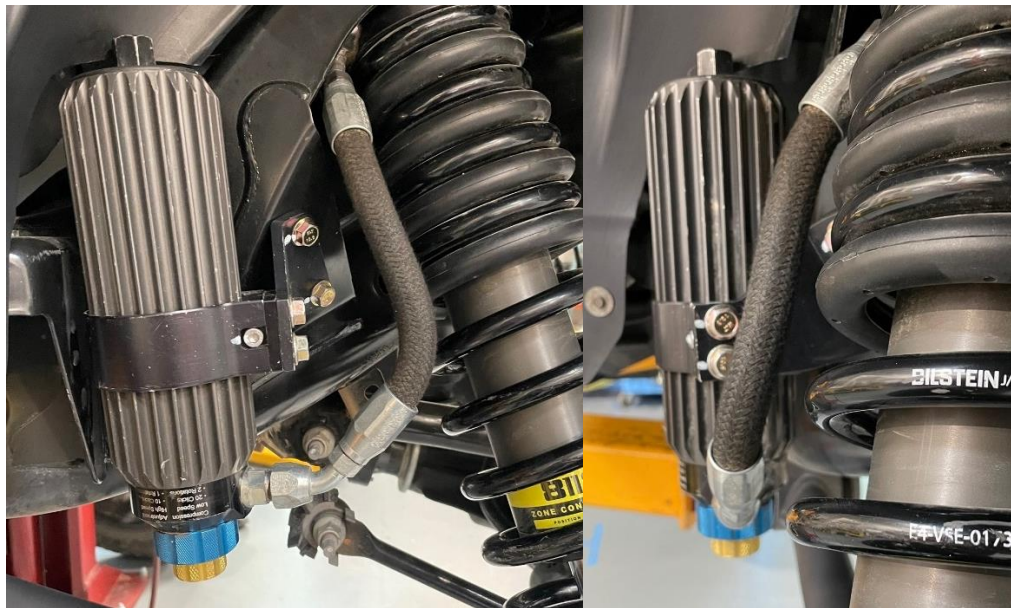
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- R. Position the reservoir in the reservoir clamp so that the clamp is approx. 45-50mm (1 ¾ - 2") from the end of the reservoir tube as shown below.



- S. Ensure the reservoir is clocked so the hose fitting on the reservoir is pointed towards the rear of the vehicle. This is important to avoid any contact with the coil spring or wheel.



- T. Tighten the Socket Head Cap Screw that was partially threaded in on Step P with a 5mm hex key.
Torque Socket Head Cap Screw to 6 ft-lb (8 Nm).

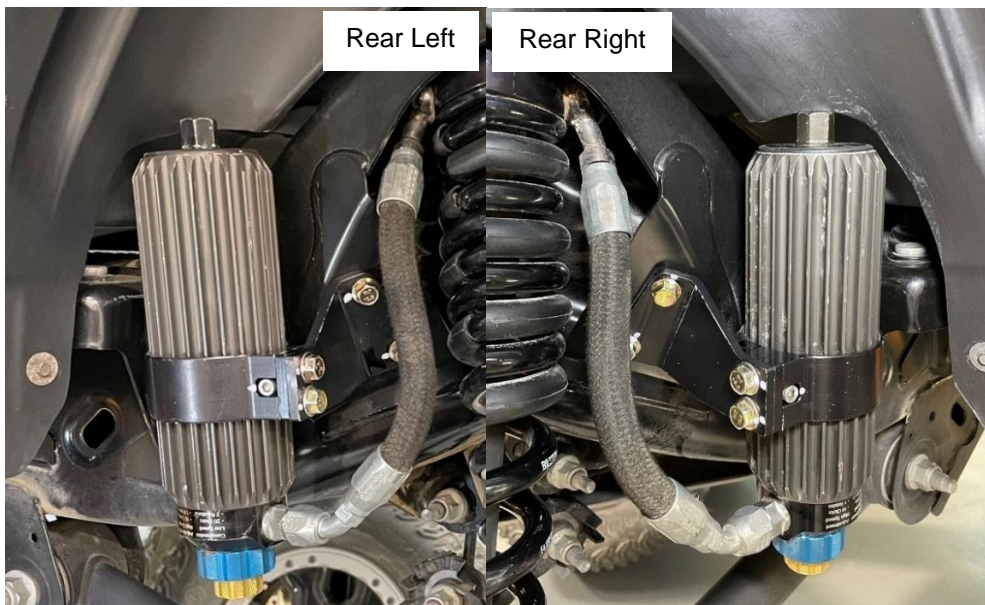
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- U. The fender liners will need to be trimmed slightly in order to avoid contact with the reservoirs. Install the fender liners and mark the location shown below to guide where to trim. Once marked, remove the liners and trim the corners on the marked line.



- V. Re-attach and torque the fender liners according to service manual specifications.



- W. Check wheel alignment and adjust to vehicle manufacturer's specifications. This completes the installation.

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Final rear left (driver) B8 8112 shock installed on vehicle:



Final rear right (passenger) B8 8112 shock installed on vehicle:



B8 8112 service:

For service of your B8 8112 shocks, please contact:

THYSSENKRUPP BILSTEIN OF AMERICA
Toll Free: 1-800-537-1085
bilsteinus.com



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

Zone Control JCO (Jounce Cut-off) Adjustment

These dampers also come equipped with an adjuster for the JCO (jounce cut-off) system. This blue adjuster knob is located on the mount cap above the coil spring. The **FULL FIRM** setting for the adjuster knob is achieved when the knob is turned all the way **CLOCKWISE**. The **FULL SOFT** setting for the adjuster knob is achieved when the knob is turned all the way **COUNTER-CLOCKWISE**. To make JCO adjustments, simply turn the adjuster knob clockwise for more bottom out control and counter-clockwise for less bottom out control. The adjustment will not affect the ride quality when the vehicle is in the main damping zone at regular ride height.

The JCO adjuster factory setting is:

- 6 clicks counter-clockwise from fully firm.
(10 total settings are available which translates to 9 clicks; 1 rotation)



JCO (Jounce Cut-off) Adjuster