E4-WM5-Y727A00
MOUNTING INSTRUCTION

Upper Control Arms, part # 51-322335

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.

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.

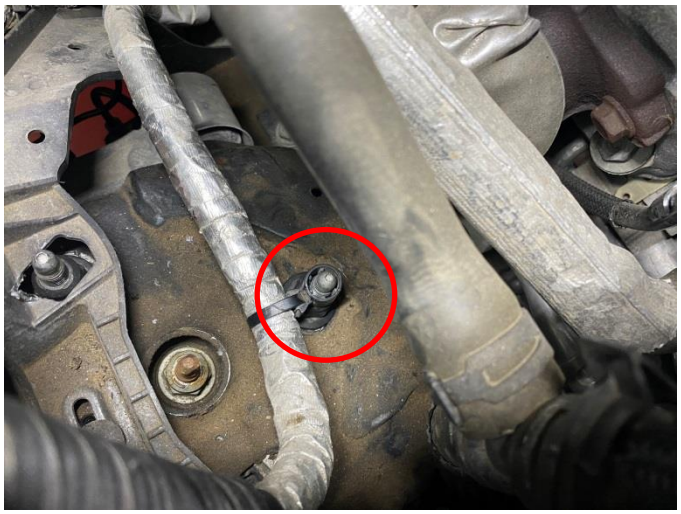
BILSTEIN Upper Control Arms are compatible with direct fit replacement shocks and coilovers only. Not compatible with lift spacers. May not be compatible with some aftermarket spindles. If using aftermarket spindles, installer must check clearance between control arm and spindle throughout full suspension travel. BILSTEIN is not responsible for any damages caused due to insufficient clearance with aftermarket spindles.

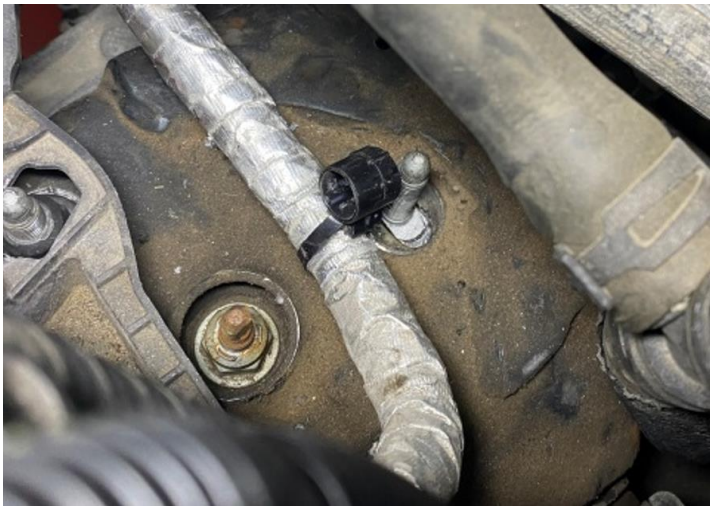
Bill of Materials – 51-322335		
Item #	**Description**	**Qty**
1	**B4-BB2-Z062A08; GM 1500; '19+; FL; UCA**	**1**
2	**B4-BB2-Z062A09; GM 1500; '19+; FR; UCA**	**1**
3	**B4-KT1-Z458A00, contents include:**	**1**
	Bushing	8
	Sleeve	4
	Grease Packet	2
4	**B4-KT1-Z478A00, contents include**	**1**
	Washer	4
5	**B4-KT1-Z439A00, contents include:**	**1**
	Zerk Fitting	4
	Brake Line Clamp	2
	Button Head Screw	2
	Nyloc Nut	2
6	**B4-KT1-Z481A00, contents include:**	**1**
	Castle Nut	2
	Cotter Pin	2

Removal of OE Upper Control Arms (always follow service manual specifications)

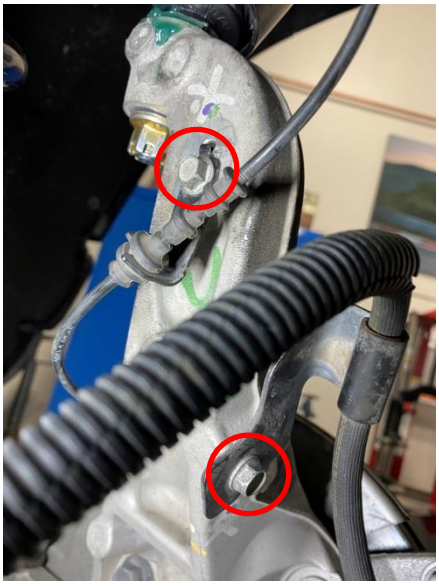
NOTE: All images are of the right (passenger) side of the vehicle unless otherwise stated.

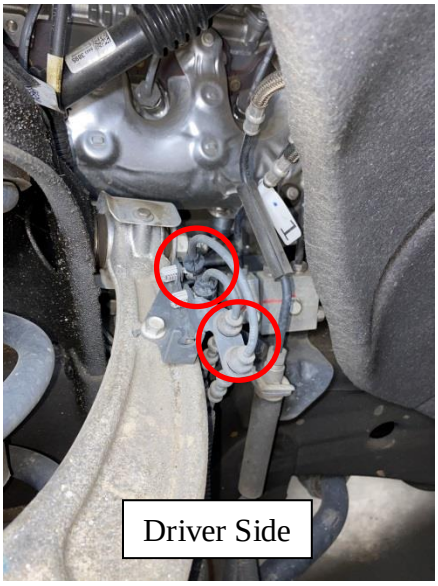
A. With the vehicle on the ground, lift the hood and locate the wiring harness clipped to the top hat nut on the passenger side between the engine and inner fender. Remove the wiring harness clip then use an 18mm deep socket with a long extension and ratchet to remove the inner top hat nut.

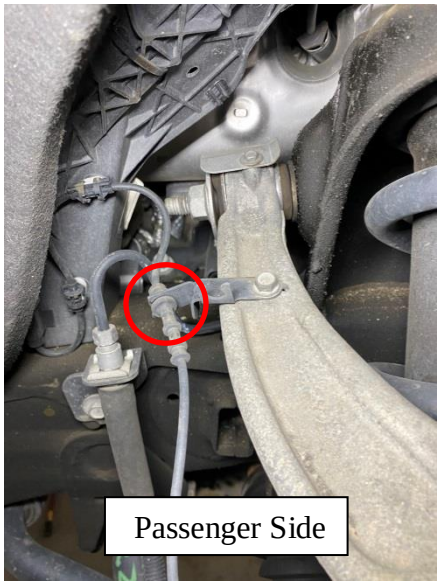




B. Secure vehicle on hoist.
C. Remove the front wheels.
D. Using a 10mm socket, remove the ABS line and brake line bracket from the back of the steering knuckle, then remove the ABS line from the ABS line bracket on the upper control arm. Driver side has 2 ABS lines and 4 clips to remove. Passenger side has 1 ABS line and 1 clip.







E. Use a 21mm deep socket to remove nut from tie rod end. Then use a tie rod separator to remove the tie rod from the knuckle.

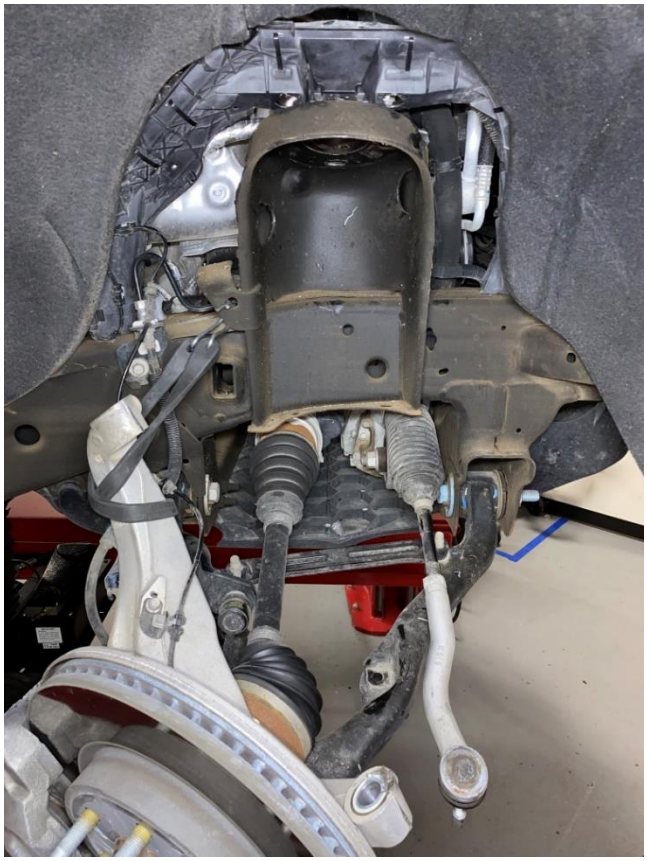
F. Using an 18mm wrench, loosen upper ball joint nut until flush with the end of the stud. Using a ball joint puller, separate the spindle from the ball joint stem.


G. Remove the upper ball joint from the spindle and carefully secure the spindle using a bungee to avoid tension on the brake line and ABS line.

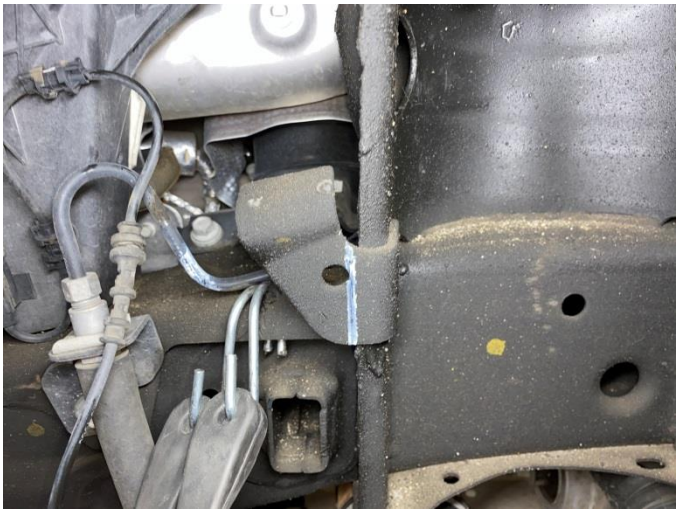

H. Using a 15mm socket/wrench, remove the two bolts securing the shock to the lower control arm.

I. Careully wedge a pry bar between the shock tower and the plastic wiring harness bracket to gain access to the top hat nuts, then remove the top hat nuts using an 18mm wrench.

J. Remove the shock for access to the upper control arm bolts. Using a 21mm socket and 21mm wrench, remove the upper control arms.



K. The upper control arm droop limiting bracket will need to be removed from the frame on both sides. Start by marking the cut line as shown below. Then using a cut-off wheel, carefully cut the tab off of the frame. (Note: Be sure to paint or seal any bare metal surface after cutting to prevent corrosion.)



Preparation of Bilstein Upper Control Arms

L. Thoroughly clean and dry the UCA and provided bushings.
M. Following the Bushing Assembly Instructions provided in the kit, use a shop press or vice to dry press the bushings into the UCAs.

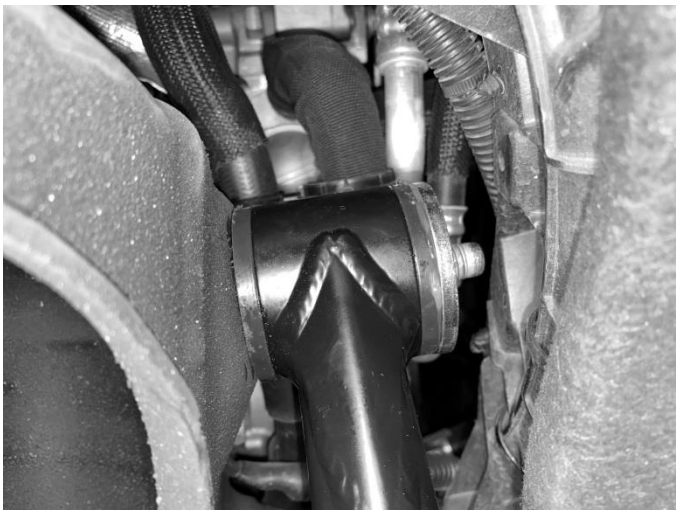
N. Apply the supplied grease to the bushing inside diameter.

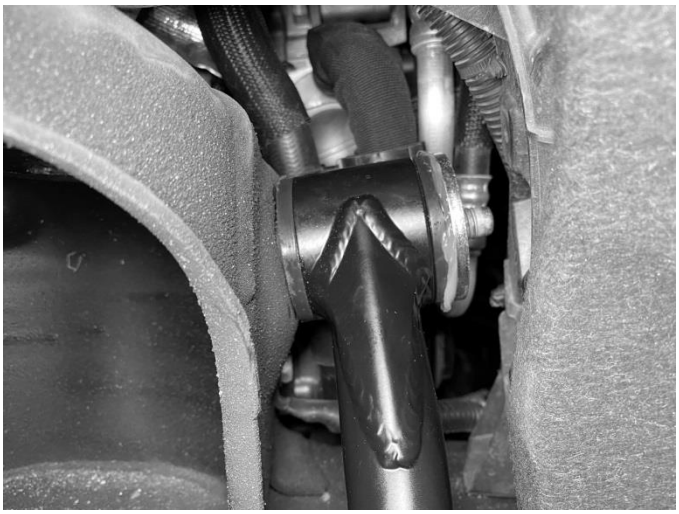
O. Press the steel sleeves into the bushings and apply more grease to outside faces of the bushings and sleeves.

P. Install the 4 provided 90° zerk fittings into the threaded holes on the bottom of each bushing eye-ring ensuring they face outboard for easy access during service.
DO NOT OVER TORQUE ZERK FITTINGS. OVER TORQUING CAN RESULT IN DAMAGE TO FITTINGS.

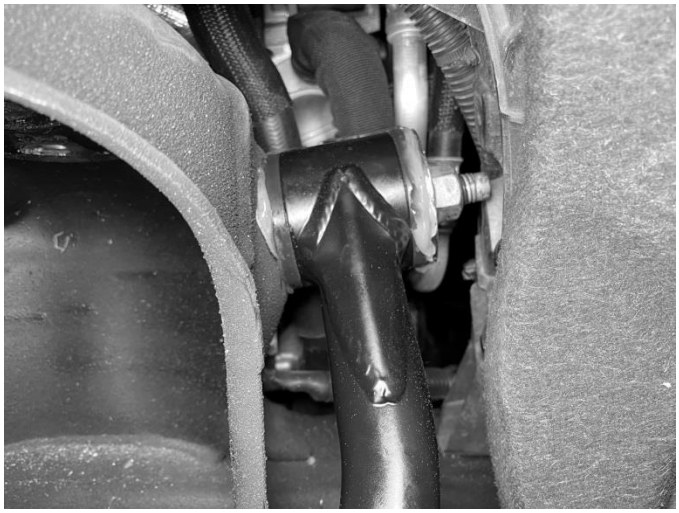
Installation of Bilstein Upper Control Arms

Q. Using the two supplied washers and the OE UCA bolts & nuts that were removed in step J, install the UCA onto the vehicle with the supplied washer on the outside of the UCA bushings. Before fastening flange nut to UCA bolt, use a grease gun to apply Prothane Super Grease to the zerk fitting until grease squeezes out from the seams. Repeat for all four UCA bushings. (Make sure to do this step before fastening flange nuts to UCA bolts. Failure to keep UCA bolts loose while adding grease will cause damage to the bushing.) Wipe off the excess grease.

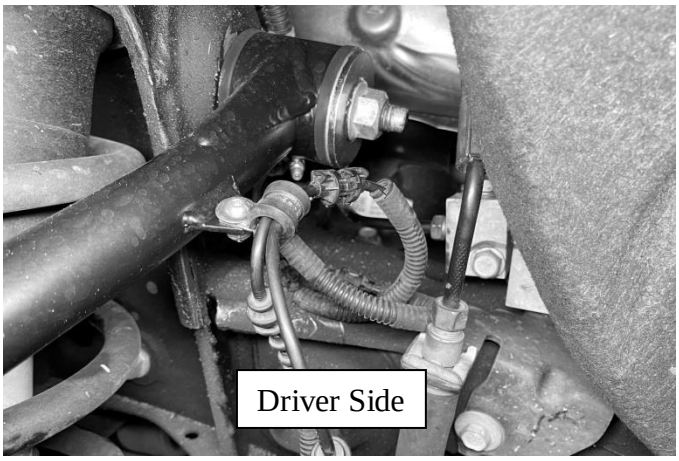


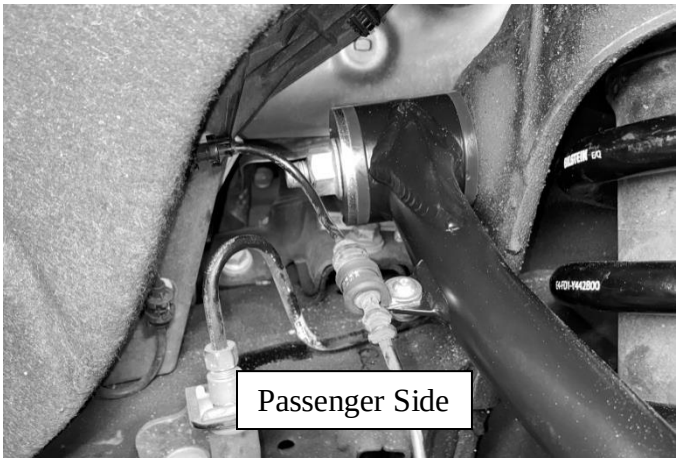


R. Apply non-permanent thread locker to the UCA bolts and install the flanged nuts. Torque bolts to 122 Nm (90 ft. lbs.).



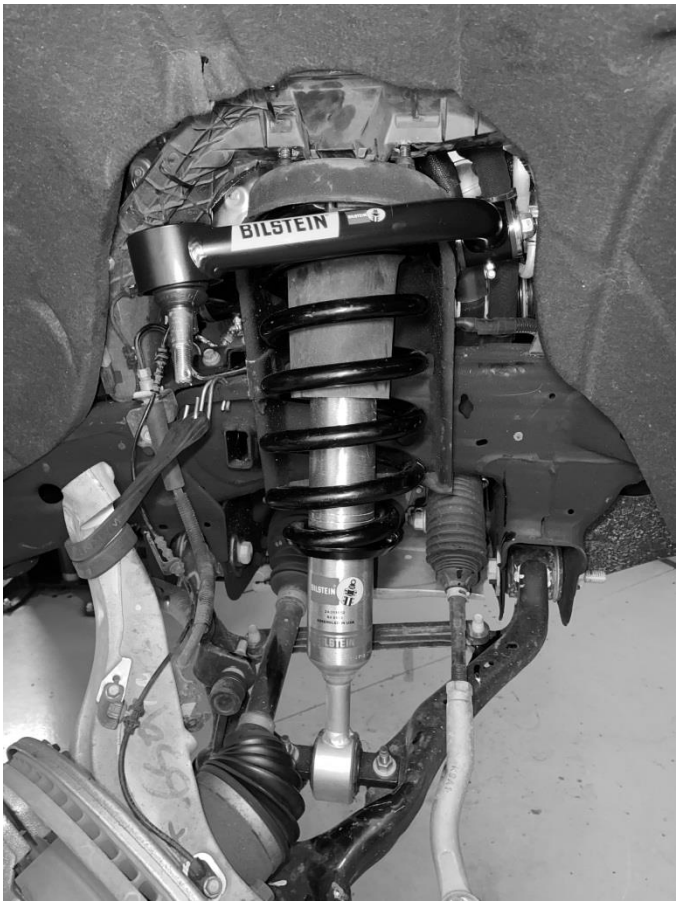
S. Open the provided ABS line clamp and fit over the ABS line. The driver side has 2 lines and passenger side has 1, they should be installed as shown below. Mount the clamp to the Bilstein UCA mounting tab using the screws, washer and nuts provided.





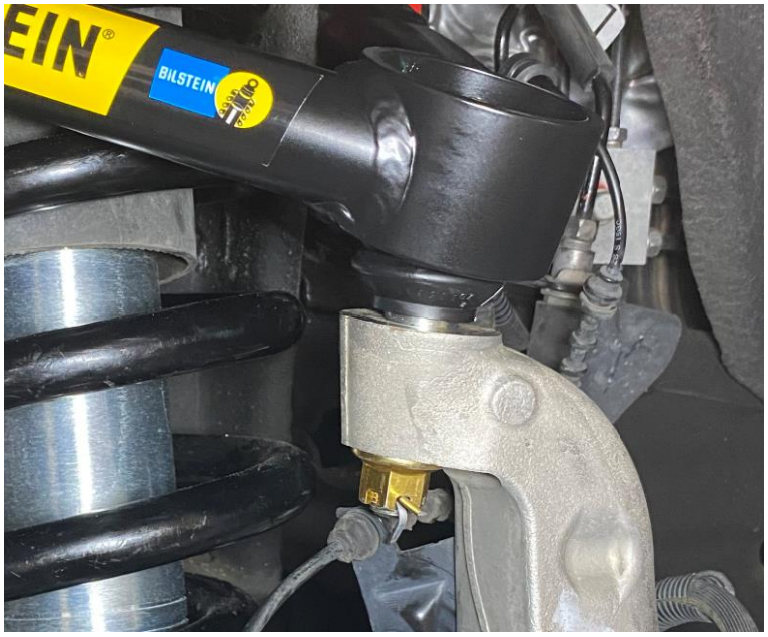
T. At this point, cycle the UCA through its range of motion to verify ABS line clearance and confirm line has enough slack. If there is any contact or not enough slack, adjust position as needed.

U. Reinstall the shock and spring assembly. Secure 3 top mount nuts using an 18mm wrench and lower mount using 15mm socket. Torque to OE specifications according to the manufacturer service manual.

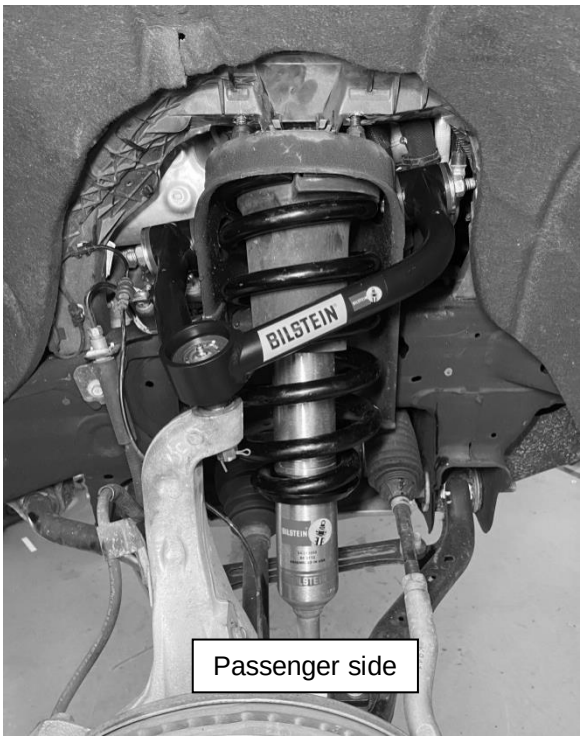


v. Install UCA ball joint on the spindle and secure using castle nut provided. Torque castle nut to 110 Nm (81 ft.lbs.). Continue to tighten the castle nut to the next available slot (no more than 60°). Never back off the slotted nut to achieve alignment with the hole in the stud. Install and spread the cotter pin.

w. Using a grease gun, apply Prothane Super Grease to the zerk fittings of the ball joints (do not over grease the joint or the ball joint boot will be damaged). Fill with grease until the boot starts to expand and the bottom of the boot sleeve seats against the spindle, and then add a little more. Do not fill to the point where the boot starts to look like a balloon.



x. Reinstall the tie rod end to the spindle using a 21mm wrench and 10mm wrench. Then using a 10mm wrench, reinstall the brake line bracket and ABS line bracket to the rear of the spindle.



Y. Install wheels and torque to factory specification.
Z. Check alignment and perform alignment if needed.

Maintenance

A. A break in period of 50 miles is required for bushings and ball joints to settle, which may result in some creaking noises through this period. After a 50 mile break in period, re-torque all bolts to their required torque.
B. To increase the life span of the bushings and ball joint, make sure to grease them through their grease zerk fittings over time (remember to loosen UCA bolts before greasing and do not over grease the ball joint, which could damage the ball joint boot);
   - To loosen UCA bolts, repeat steps A – J to gain access to UCA bolts. (UCA does not need to be removed, just loosened to allow grease to flow through bushing.)
   - Make sure to clean the zerk fittings of any dirt and debris using compressed air or soap and water.
   - Loosen the UCA bolts and use a grease gun to apply Prothane Super Grease until significant resistance is felt or grease is squeezing out of the seems of the bushings.
   - Repeat step R.
   - Repeat steps W-Z.
C. Make sure to inspect the bushings and uniball periodically for any unusual wear or damage. If parts have excessive wear or damage, make sure to replace parts with a BILSTEIN replacement bushing kit.