QA1

GO DRIVE IT.

QA1 LOWER CONTROL ARMS 99-06 CHEVROLET SILVERADO 1500/GMC SIERRA 1500, 2007 SILVERADO 1500 CLASSIC/SIERRA 1500 CLASSIC—INSTALLATION INSTRUCTIONS: 52627

WELCOME TO QA1!

OUR COMMITMENT

Congratulations on your purchase of this high-quality QA1 99-06 SILVERADO 1500/SIERRA 1500, 2007 SILVERADO 1500 CLASSIC/SIERRA 1500 CLASSIC lower control arm assemblies. They are engineered to the highest standards, utilizes the finest materials, and is built with exceptional craftsmanship and attention to detail.

While we understand your eagerness to start your build, please remember that your safety is our utmost priority. Always use an approved and appropriately rated jack, jack stand, or automotive lift, and take all necessary safety precautions to ensure the job is completed safely and correctly.

Before you start, read and understand all instructions thoroughly. With hand tools and essential equipment, you can do the main assembly and setup of your new control arms in your home garage, but if you feel unsure of your abilities during the assembly or installation and need some help or have any uncertainties, please seek the assistance of a qualified mechanic or automotive repair shop.

If you have any product questions or need guidance, please don't hesitate to call and speak with QA1 technical support at 952-985-5675.

Remember, we're here to support you every step of the way and are committed to ensuring your assembly and installation process is successful and enjoyable. We wish you all the best!

BEFORE INSTALLATION

Before you begin the QA1 99-06 SILVERADO 1500/SIERRA 1500, 2007 SILVERADO 1500 CLASSIC/SIERRA 1500 CLASSIC lower control arm installation, read and understand these instructions carefully. If instructions are not correctly followed, personal injury, equipment, or product damage can result.

Products that have been installed are not eligible for returns. To prevent mistakes, thoroughly read these instructions before you start the shock assembly procedure.

Check your order as soon as possible upon delivery. QA1 has provided parts list tables and images, as shown on pages 4 and 5. Compare your order's contents against the tables. Call your authorized dealer immediately if you discover anything missing from your order.

This kit requires no welding to assemble and install.

It is important to wear the appropriate personal protective equipment (PPE). However, the responsibility does not end there. Follow the manufacturer's instructions for safe use when working with power tools, and be cautious and responsible in your work. Make sure to ventilate combustible vapors and remove any nearby flammable materials.

ABOUT THIS MANUAL

PURPOSE

These instructions outline the installation of the QA1 99-06 SILVERADO 1500/SIERRA 1500, 2007 SILVERADO 1500 CLASSIC/SIERRA 1500 CLASSIC lower control arms. These control arms are designed to work with QA1 coilover assemblies. An upper control arm kit and a conversion mount bracket for the shock uppers are available and installation instructions are included with those kits.

ITS CONTENTS

The information that follows is described in this instruction set:

- Required tools and supplies.
- Safety, hazard, and warning rules.
- Product overview and included parts.
- Installation and the setup procedures required for use.

Pages with images will have paragraphs and sentences with callout numbers that refer to their respective images, steps, and parts.

Procedures, once described in the text, are generally not repeated. When it is necessary to refer to another procedure, the page and step reference will be given.

REQUIRED TOOLS AND SUPPLIES

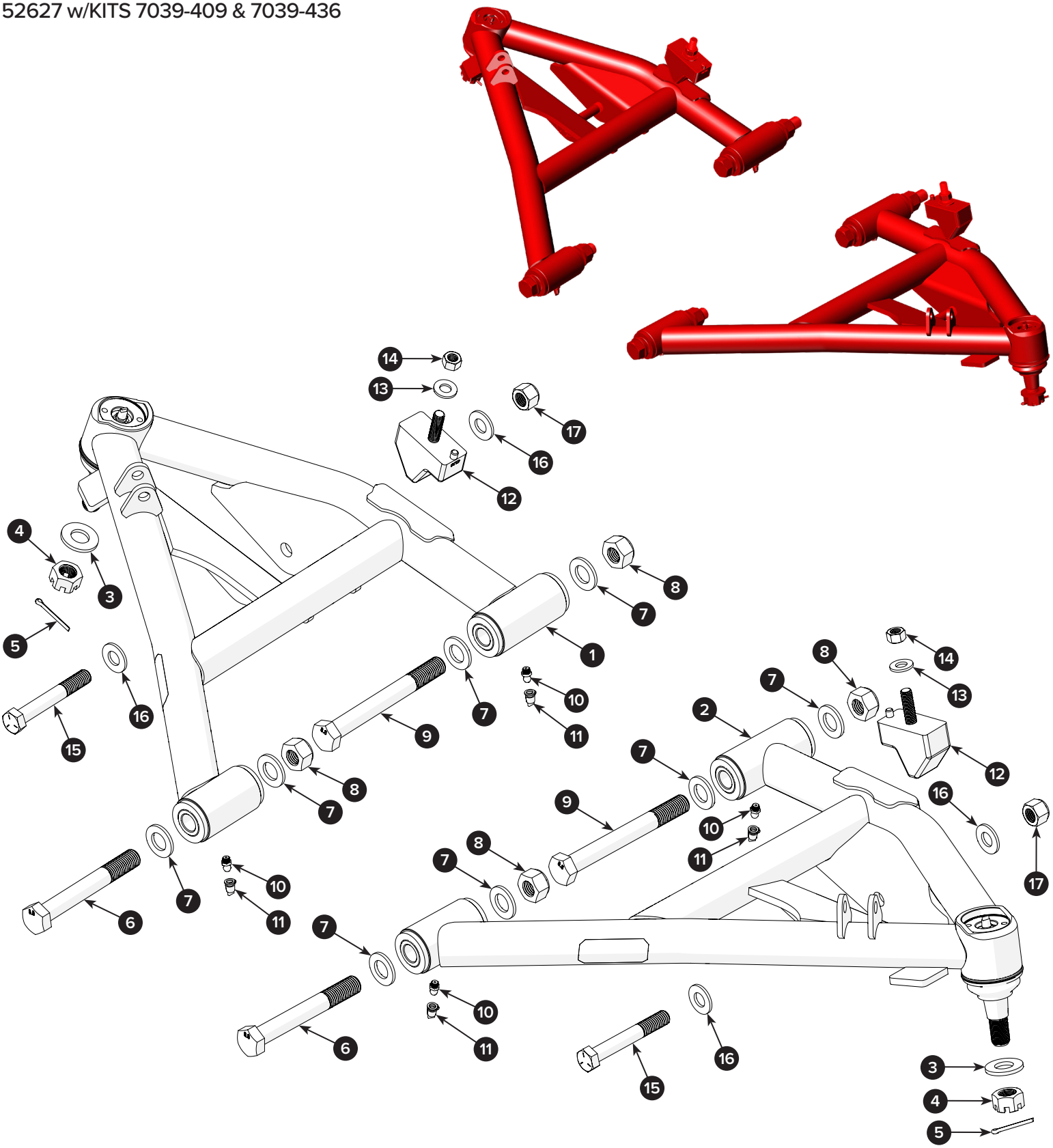
- Floor Jack
- Jack Stands
- SAE and Metric Wrench Set
- SAE and Metric Socket Set
- Torque Wrench (lb-ft)
- Anti-Seize Lubricant

SAFETY FIRST

- Work on your vehicle in an appropriate location.
- Park your car on a level surface.
- Use wheel chocks to prevent vehicle roll.
- Check your owner's manual for the correct jack lift points.
- Always support your vehicle with jack stands.
- Wear personal protection like safety glasses, gloves, and a fine particle respirator mask.
- Never use compressed air to clean brake or metal grinding dust from the brake, suspension components, frame, or rear axle housing.
- Grind metal only in a well-ventilated area, and wear a respirator until the dust has settled and the work area air has been cleared.
- Dispose of damaged or old parts in accordance with local laws. Do not throw any hazardous waste in the trash.
- Follow the manufacturer's instructions for safe use when working with power tools, and be cautious and responsible in your work.

CONTENTS

99-06 SILVERADO 1500/SIERRA 1500, 2007 SILVERADO 1500 CLASSIC/SIERRA 1500 CLASSIC UPPER CONTROL ARMS
52627 w/KITS 7039-409 & 7039-436



1999-2007 SILVERADO/SIERRA LOWER CONTROL ARM ASSEMBLIES				
POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
1	7720-548	LOWER CONTROL ARM, RH	1	—
2	7720-547	LOWER CONTROL ARM, LH	1	—

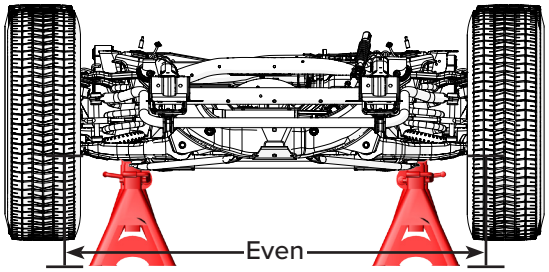
1999-2007 SILVERADO/SIERRA LOWER CONTROL ARM BALL JOINT STUD KIT 7039-409				
POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
3	2000055	WASHER, FLAT 5/8” SAE, HARDENED	2	—
4	2000143	NUT, HEX, SLOTTED, 5/8-18* (SEE NOTE)	2	75 lb-ft
5	9005-280	PIN, COTTER, 7/64” x 1-1/4”	2	—

1999-2007 SILVERADO/SIERRA LOWER CONTROL ARM INSTALL KIT 7039-436				
POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
6	N/A	BOLT, HEX, M16-2.0 x 120 mm	2	140 lb-ft
7	9005-234	FLAT WASHER, M16, 30 mm O.D. x 3 mm DIN	8	—
8	9014-252	NUT, NYLOCK, M16-2.0	4	—
9	N/A	BOLT, HEX, M16-2.0 x 140 mm	2	140 lb-ft
10	9023-119	FITTING, ZERK 1/4-28, STRAIGHT	4	—
11	9023-116	CAP, GREASE ZERK	4	—
12	9047-120	BUMPER, COMPRESSION, 12.1” x 2.4” x 1.8”	2	—
13	9005-256	FLAT WASHER,	2	—
14	9014-333	NUT, NYLOCK	2	12 lb-ft
15	9012-271	BOLT, HEX, 1/2-13 x 3.5”	2	75 lb-ft
16	9005-225	WASHER, FLAT 1/2” SAE	4	—
17	9014-520	NUT, NYLOCK, 1/2-13	2	—

*Part Position 4: Torque to specification, then turn the castellated nut to the next available slot.

Note: The part positions listed above will be called out in this installation manual as a visual reference to their respective positions during the installation procedure. Refer to these pages during the installation. Count and compare all parts and fasteners to the list above. If parts are missing, contact QA1 at sales@qa1.net.

Installer's Note: *This instruction set shows only the frame and chassis of the 99-06 Silverado/Sierra pickup truck. The body has been removed for visual clarity.*

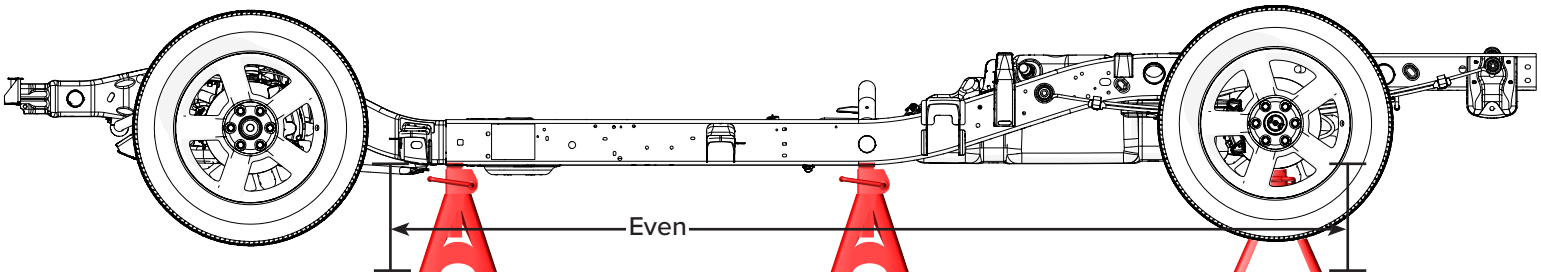


1 Use a floor jack and lift the vehicle at its designated lift points.

To access the front and rear suspension, set the vehicle on jack stands (shown) or a hydraulic lift under the frame as shown.

Note: Jack stands must be level and evenly positioned for safe vehicle load. Adjust the jack stands as necessary.

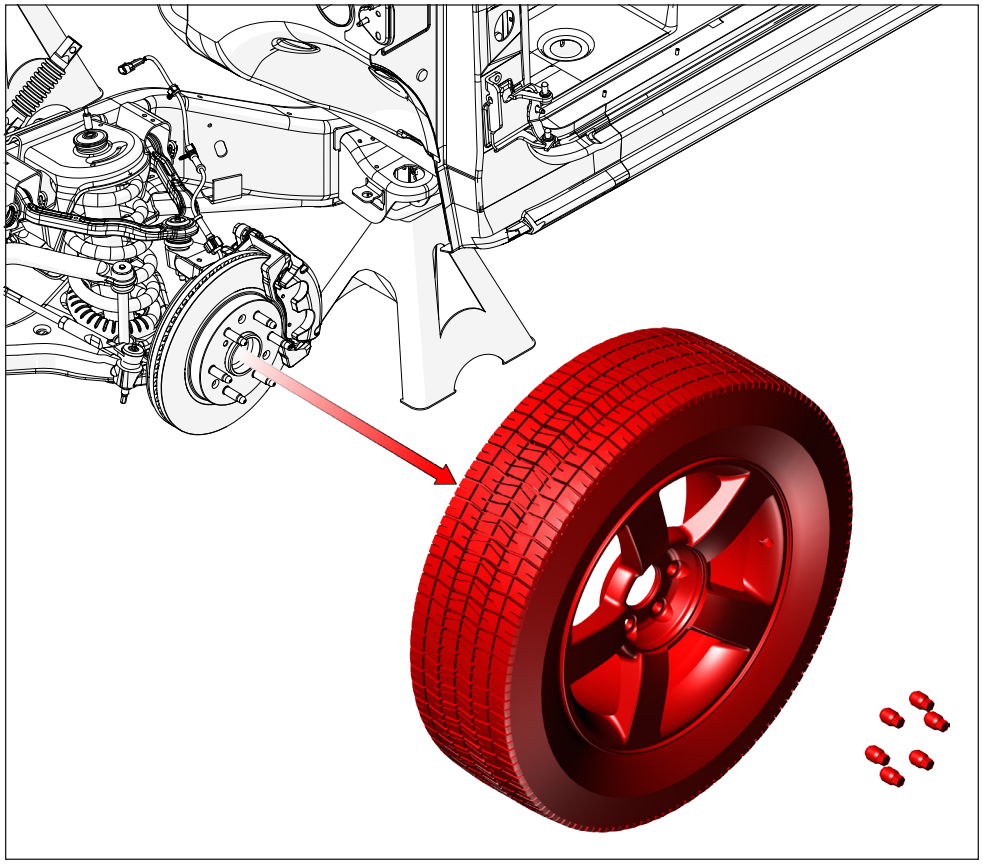
In this image, a jack stand is also shown under the rear differential.



Installer's Note: *This instruction set starts on the vehicle's front driver side.*

The passenger side lower control arm replacement procedure is identical.

2 Remove the left and right side lug nuts and wheels from the front of the vehicle.



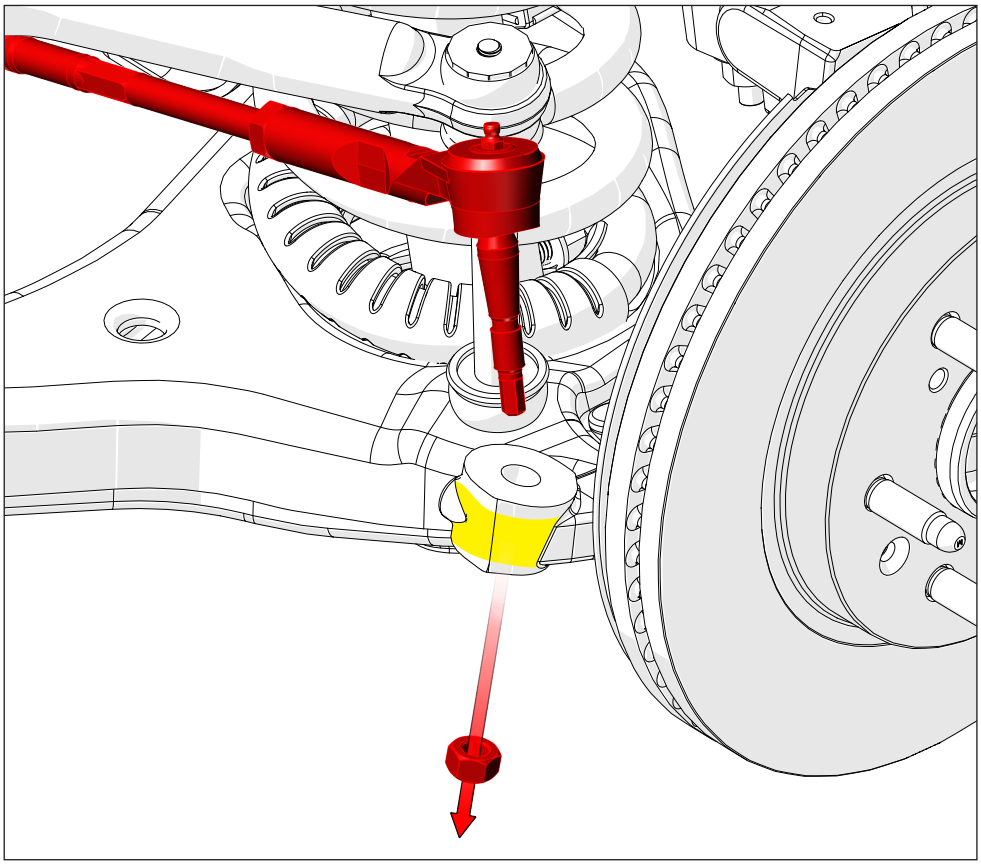
3 The front tie rod end must be disconnected from the steering knuckle.

First, use a hammer to strike the lower part of the spindle near the tie rod end (marked in yellow) to release the tie rod from the spindle.

Note: A tie rod separator tool can be used if needed.

Next, remove the nut from the tie rod end link and set it aside. It will be used during the reassembly procedure.

Lift the tie rod end off from the steering knuckle.

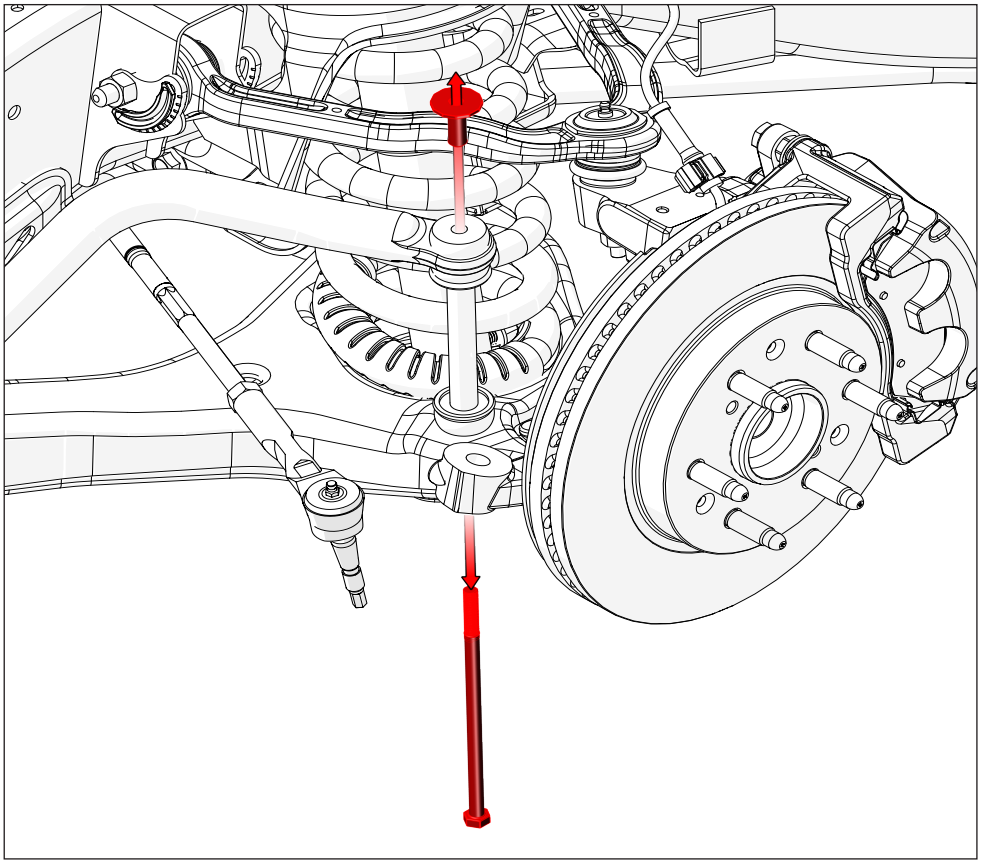


4 Disconnect the sway bar from both lower control arms to facilitate the removal and installation of the shocks.

Remove the nuts and the long sway bar bolts from the end links and discard them. They will not be reused.

Note: To use the original equipment (OE) sway bar with the QA1 lower control arms, you will need to purchase the QA1 sway bar end link kit (1681-117), sold separately. Contact QA1 Sales to order.

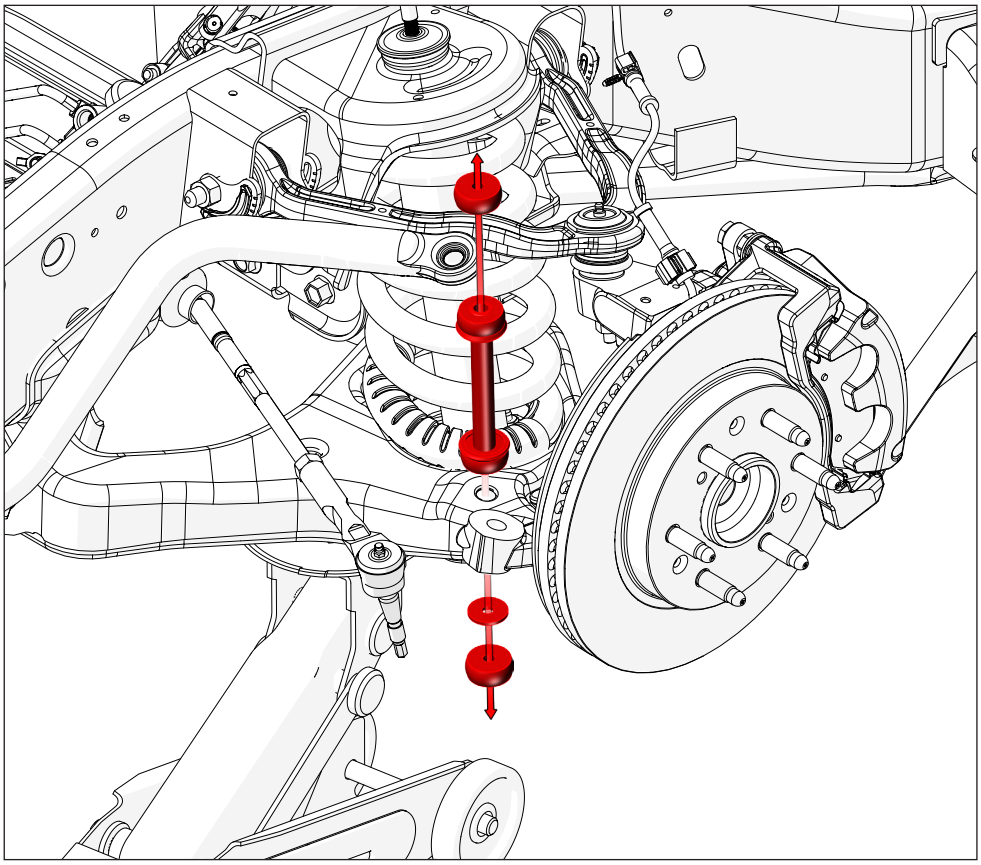
Alternatively, QA1 also offers the QA1 Sway Bar Kit 52869 for the 1999-2007 Silverado/Sierra.



5 First, use a floor jack to lift the lower control arm and relieve the pressure from the sway bar assembly.

Next, remove the sway bar links and discard them, as they will not be reused.

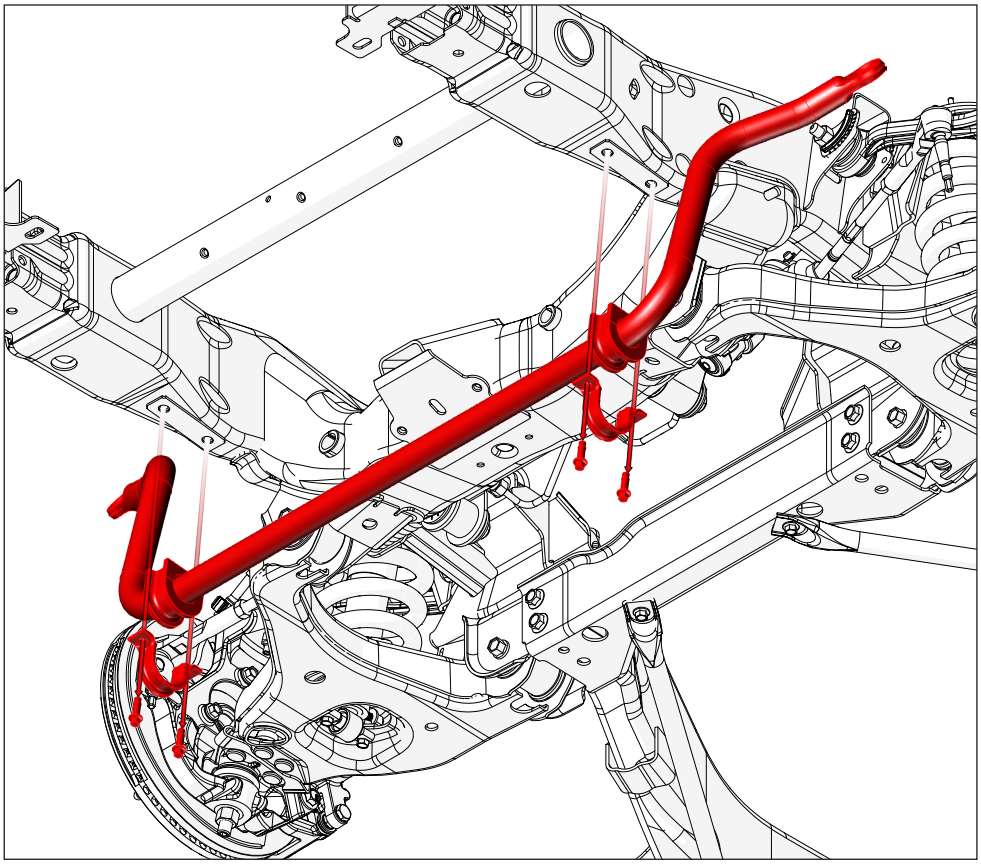
Note: The floor jack must remain under the lower control arm until step 18.



6 Then, disconnect the sway bar mounts from the frame.

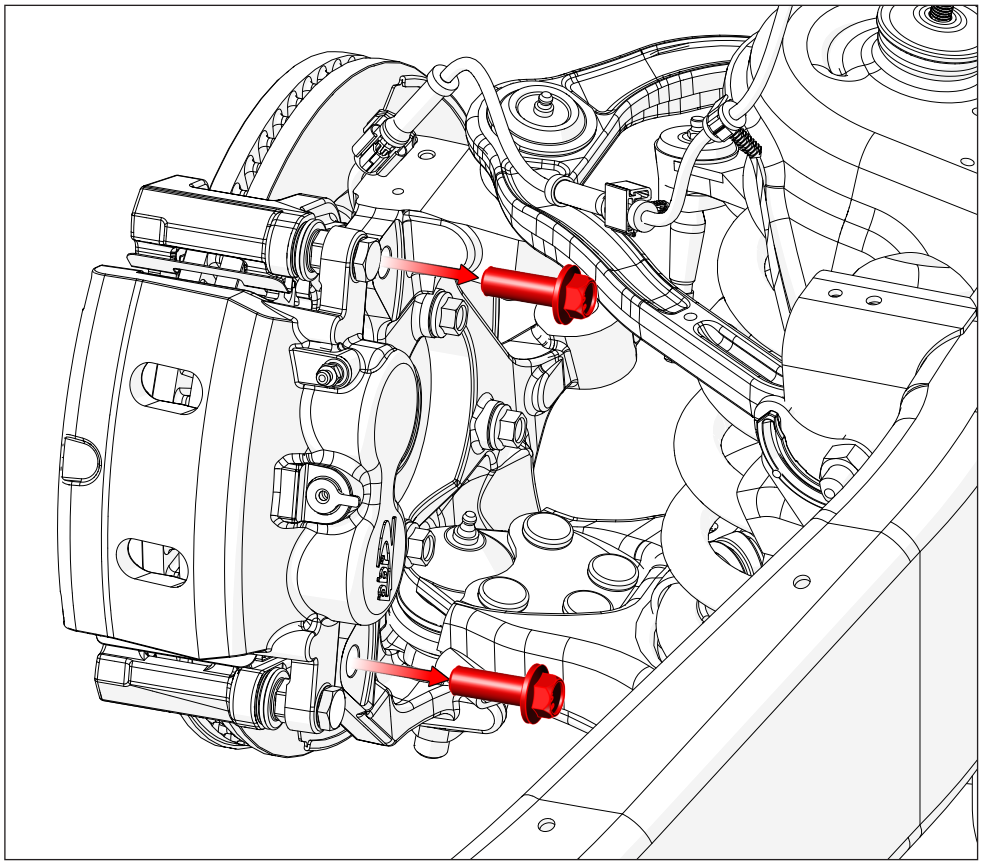
Finally, discard the sway bar and all mounting parts, as they will not be reused.

Note: The QA1 Front Sway Bar Kit 52869 is a option to add a sway bar to your vehicle.



Installer's Note: *From here to step 32, the disassembly and reassembly procedures can be performed one side at a time.*

7 First, remove the bolts that secure the caliper bracket to the knuckle, and set them aside for reuse during assembly.



8 First, disconnect the brake hose bracket from the steering knuckle (procedure not shown).

Next, detach the hose bracket from the upper control arm (procedure not shown).

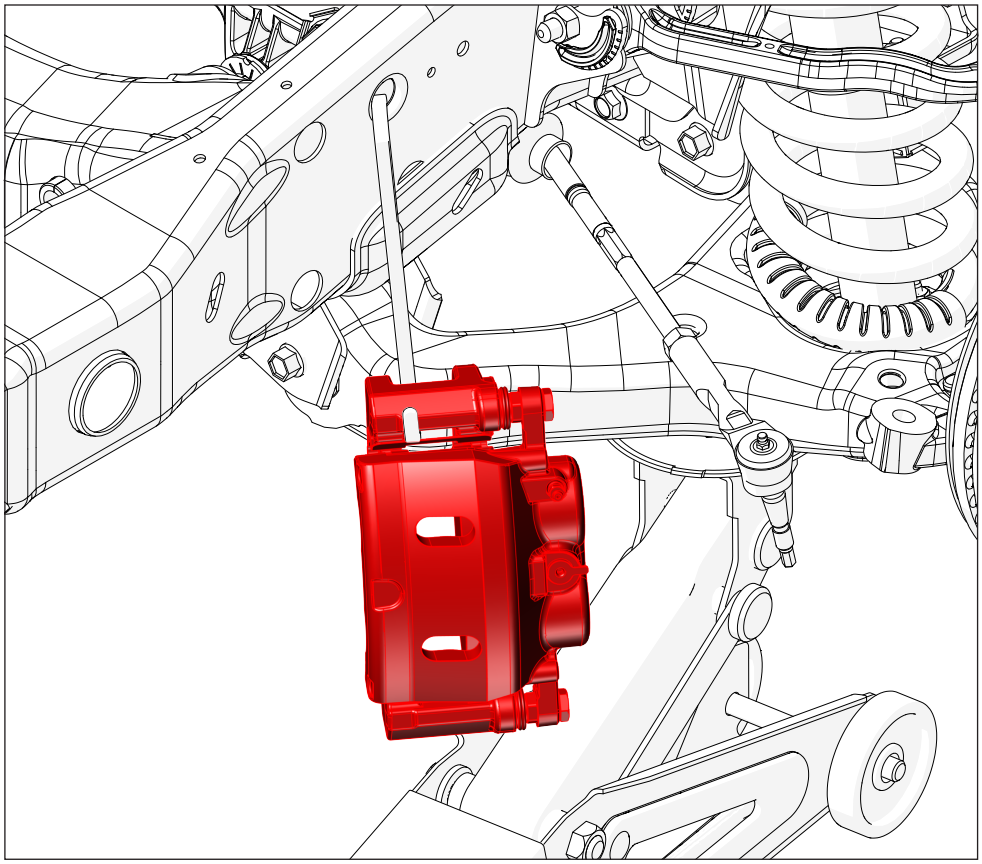
Put the fasteners safely aside, as they will be reused.

After that, remove the caliper assembly from both the knuckle and the rotor.

Finally, safely hang the caliper assembly from the frame.

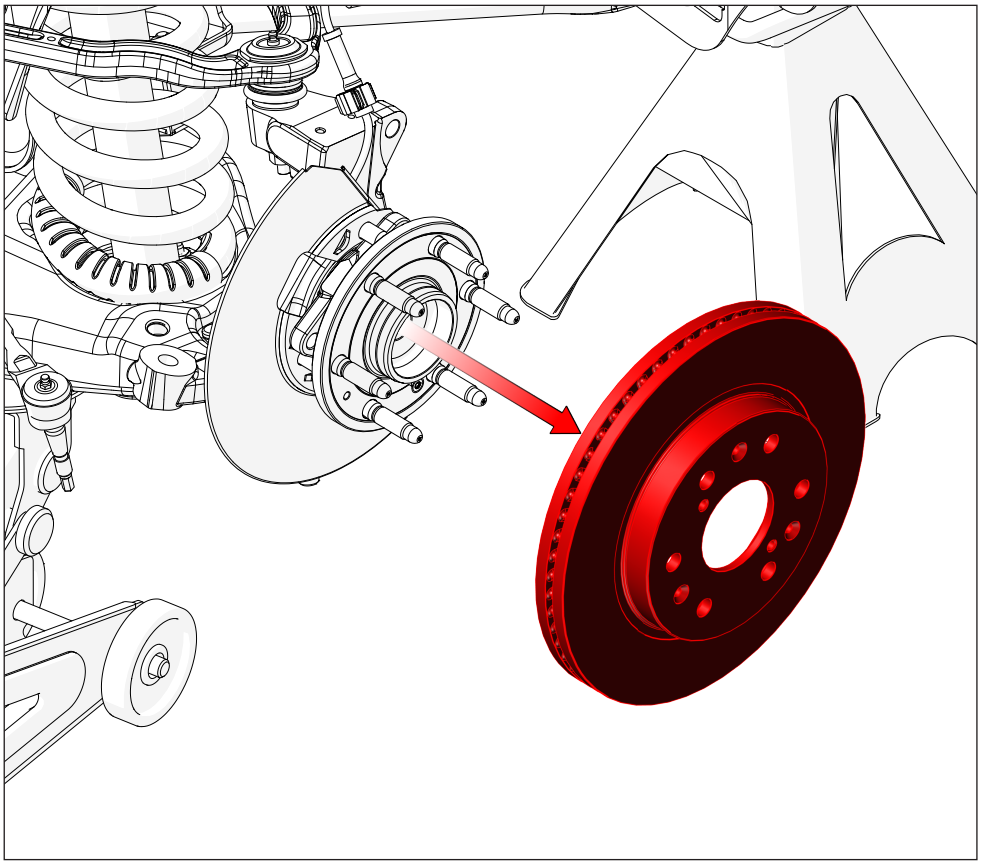
Note: Make sure the caliper is suspended close enough to the knuckle to avoid strain on the brake hose and prevent damage.

Alternatively, the brake hose can be disconnected from the brake caliper. This method will require new crush washers, banjo bolts, and brake bleeding for safe braking operation.



9 Pull the brake rotor off the hub and set it aside. It will be reused during the assembly procedure.

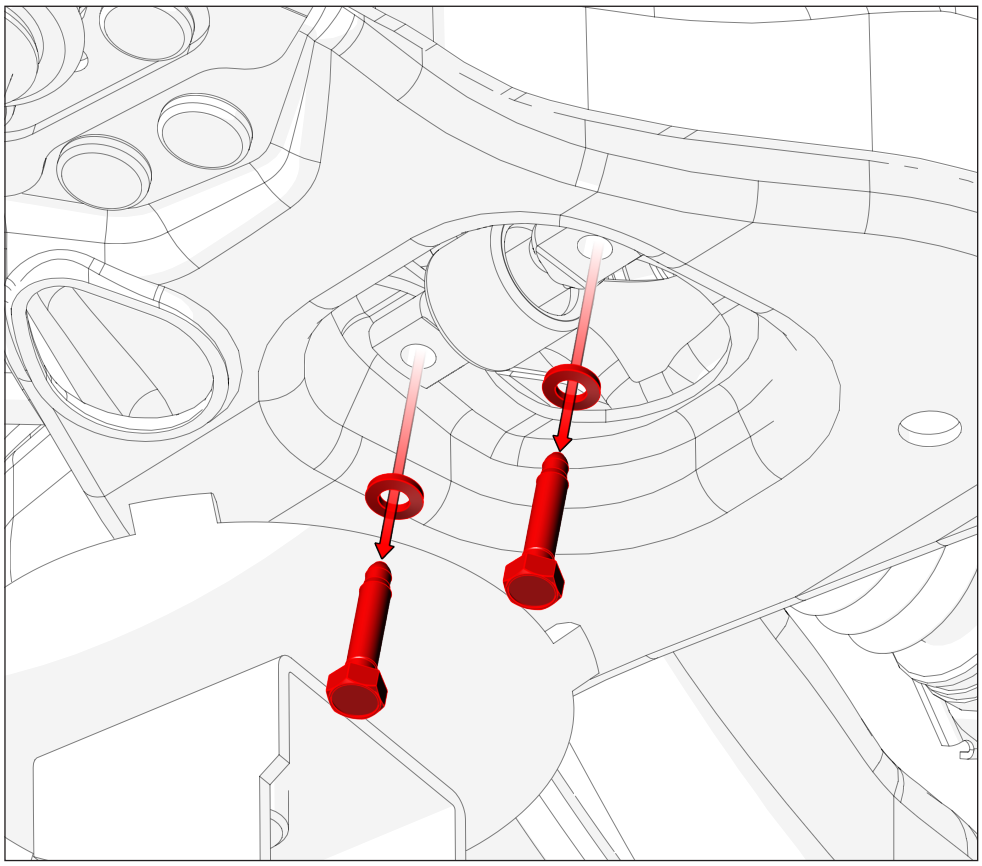
Note: Now is a good time to examine the rotor for damage or wear. Replace it if necessary.



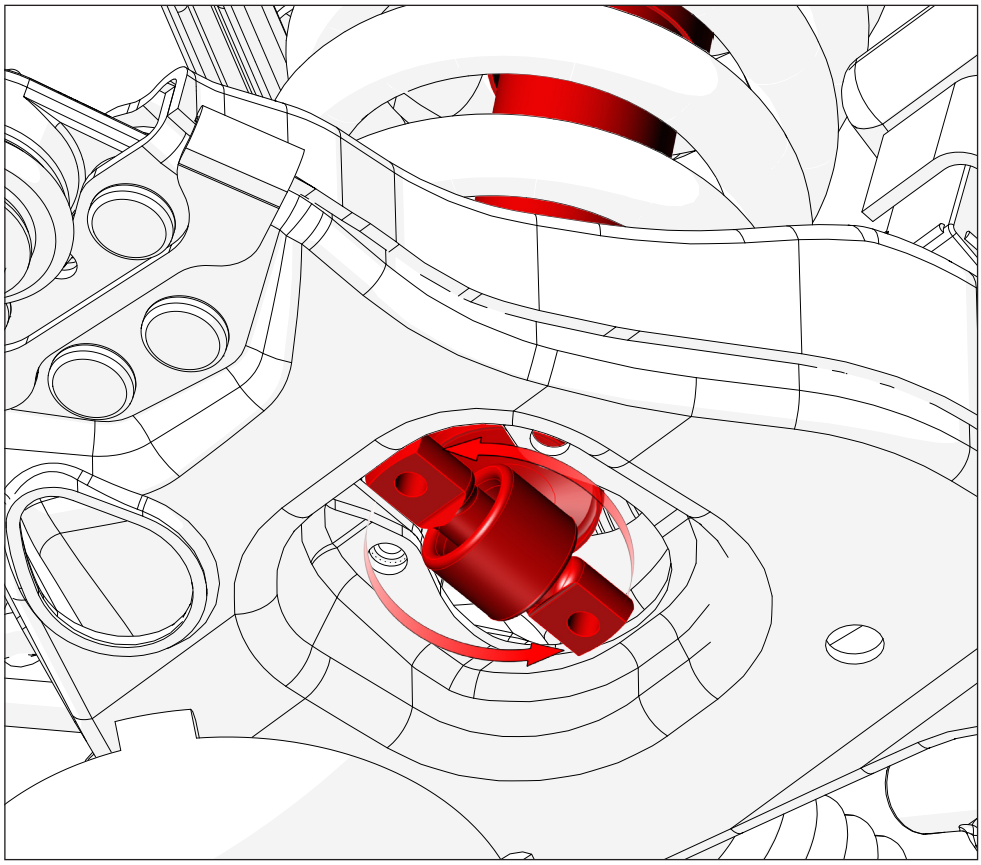
Installer's Note: *The factory shocks cannot be used with the QA1 lower control arm.*

10 Remove the bolts and flat washers from the bottom of the shock's T-Bar.

Note: Discard the hardware as it will not be reused.



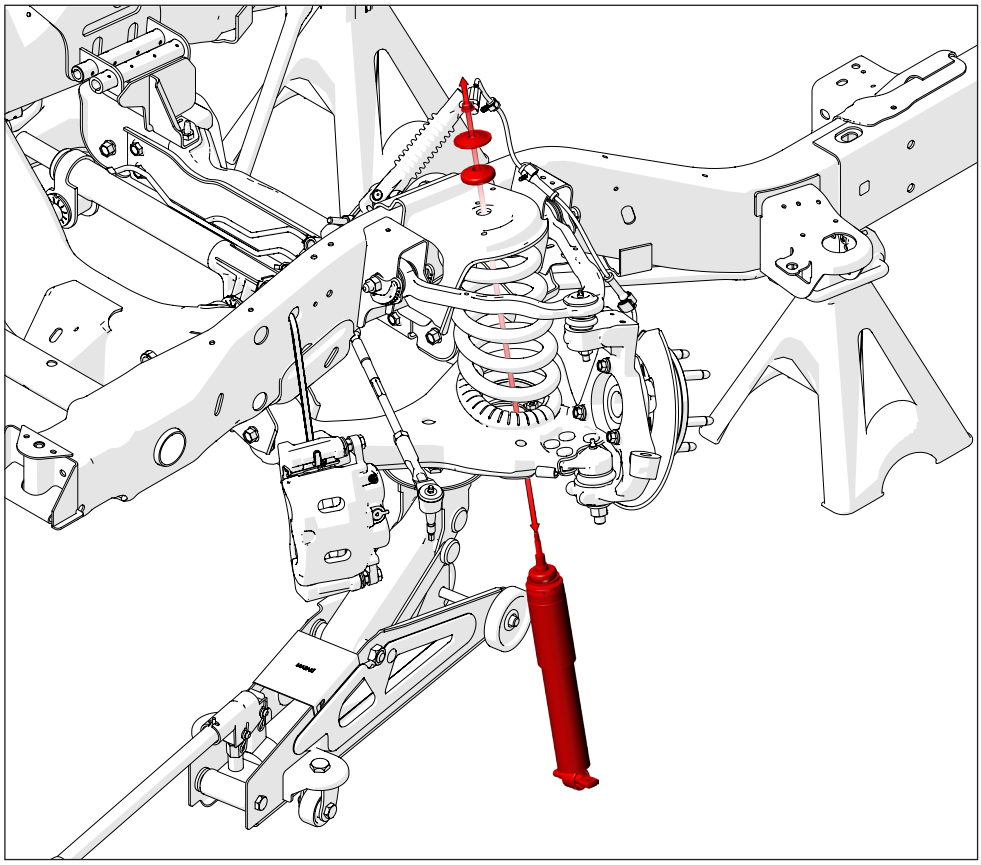
11 To disconnect the shock from the lower control arm, rotate the shock's T-Bar 90 degrees so that it fits through the opening in the lower control arm.



12 Remove the shock nut, washer, and isolator from the shock top.

Now pull the shock assembly out from the upper shock mount and through the lower control arm.

Note: Discard the shock and mounting hardware, as it will not be reused.

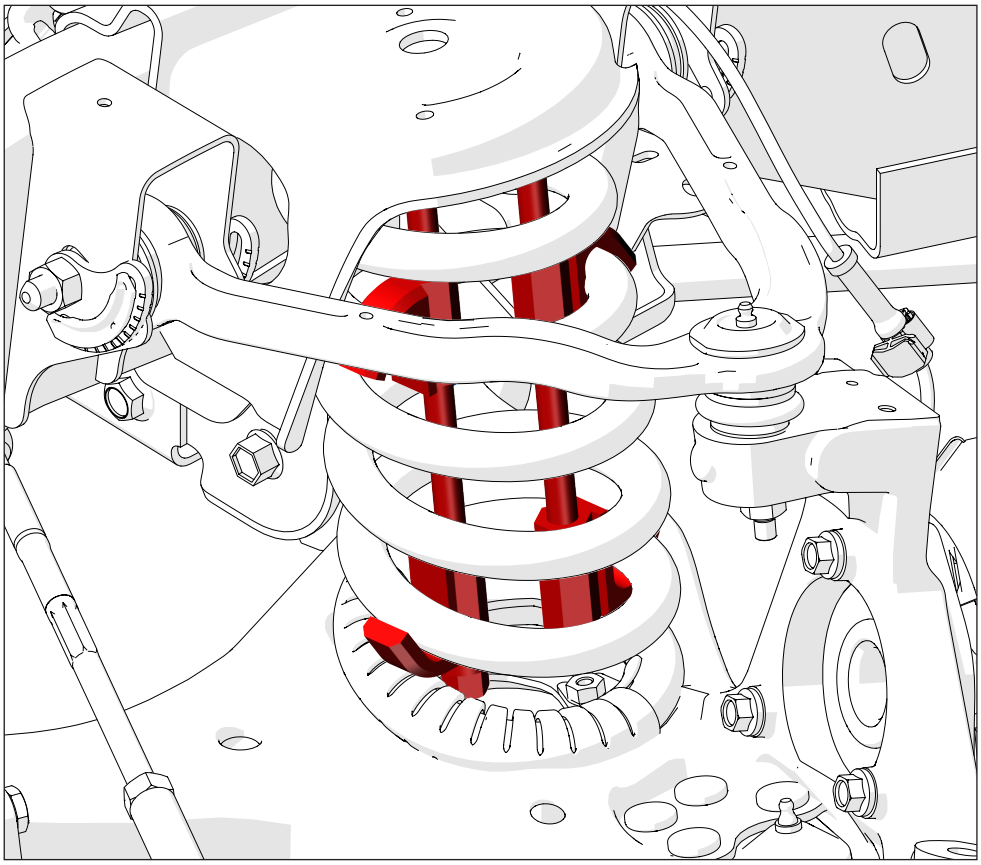


Installer's Note: *A coil spring compressor is a tool used to safely compress coil springs, as found in vehicle suspension systems.*

These springs store a significant amount of potential energy, and due to the possible risk of injury associated with removing coil springs, QA1 recommends the use of coil spring compressors for best safety practices.

13 With the shock removed, insert coil spring compressors inside the coil spring.

Compress them evenly until the coil spring can be easily turned on the lower control arm's spring perch.



14 First, disconnect the ABS wire (marked in green) from the frame and upper control arm.

Then, loosen the nut on the upper control arm ball joint, but do not remove it completely.

Next, use an appropriate tool to detach the upper ball joint from the spindle.

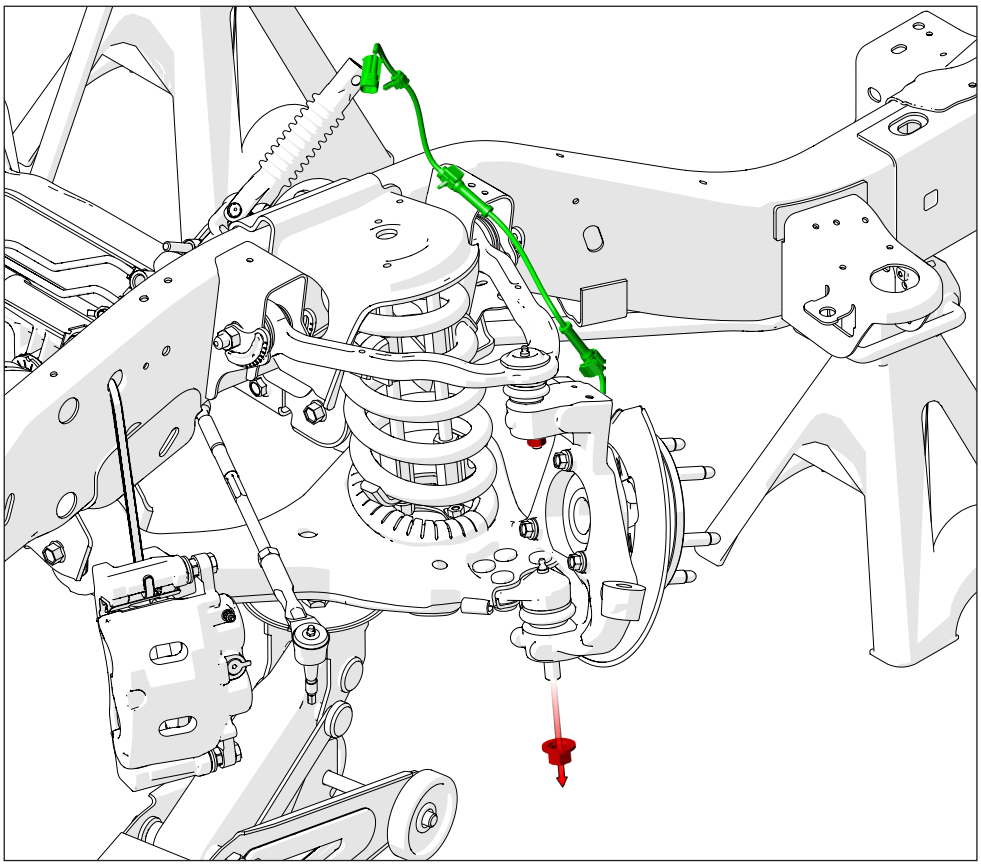
After that, remove the nuts from the lower control arm ball joint.

Use a suitable tool to release the lower ball joint from the spindle as well.

Support the knuckle and then remove the nut from the lower ball joint.

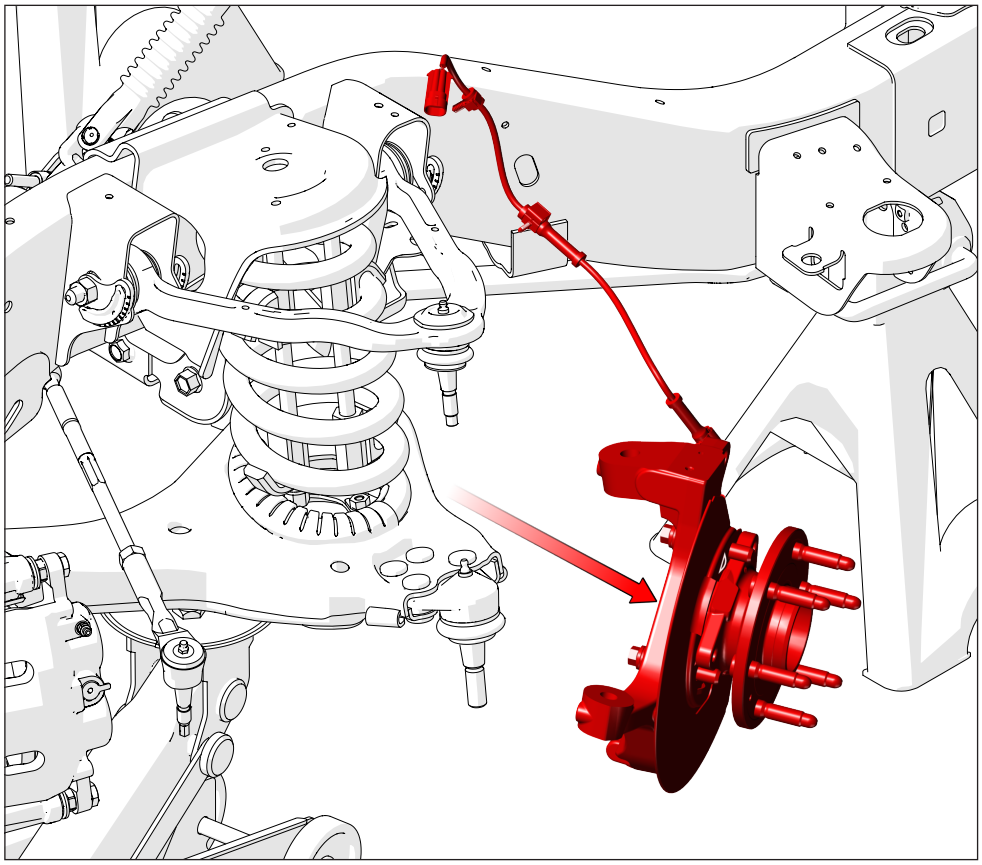
Note: Discard the LCA's ball joint nut and flat washer, as they will not be reused.

If the upper control arm is replaced, the removed hardware can also be discarded.

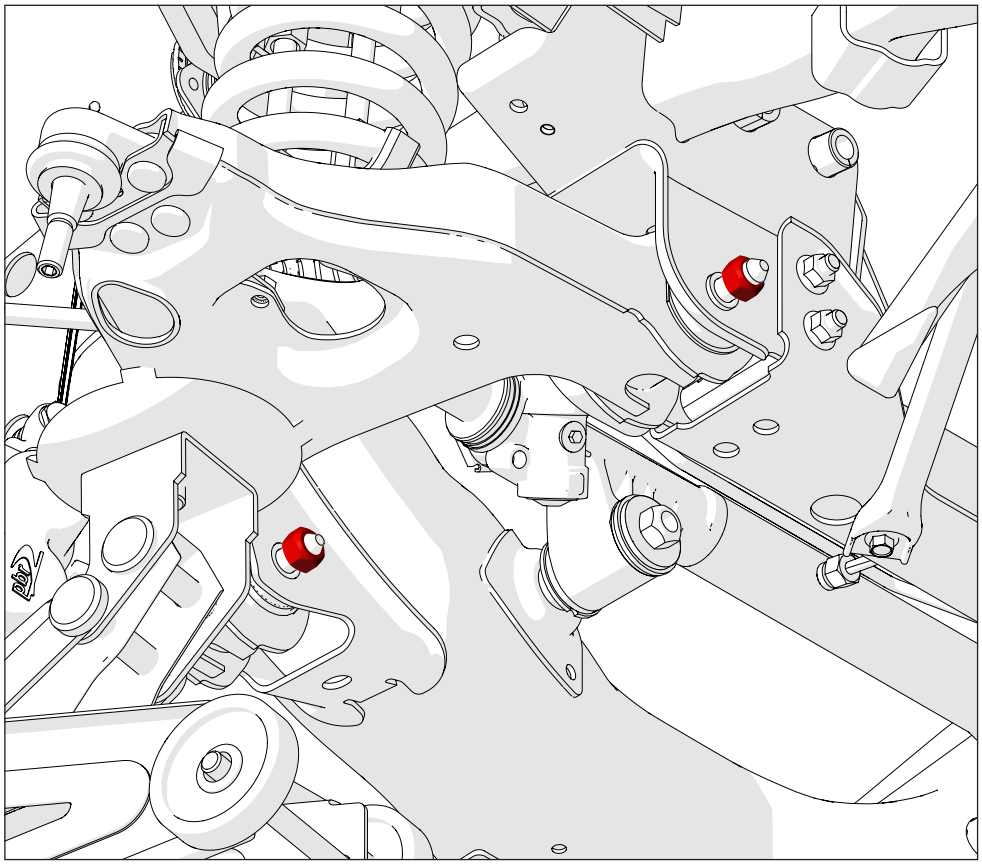


15 Finally, remove the steering knuckle assembly from the ball joints connected to the upper and lower control arms.

Note: Safely set the steering knuckle assembly aside, as it will be reused during the assembly process.

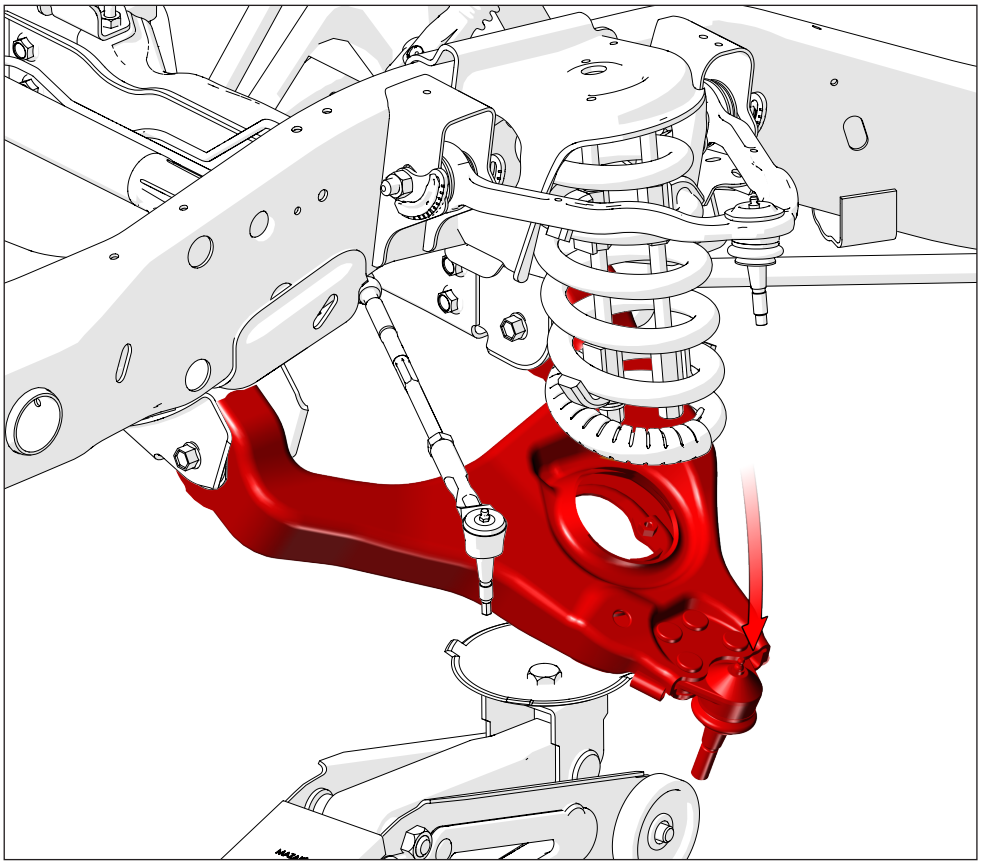


16 To ease the movement of the lower control arm, loosen but do not remove the lower control arm's nuts and washers from the frame.



17 Slowly lower the floor jack and let the control arm rotate down.

Caution: Exercise care when the floor jack is lowered. The coil spring may still be under pressure.



Installer's Note: *The factory springs cannot be used with the QA1 lower control arm.*

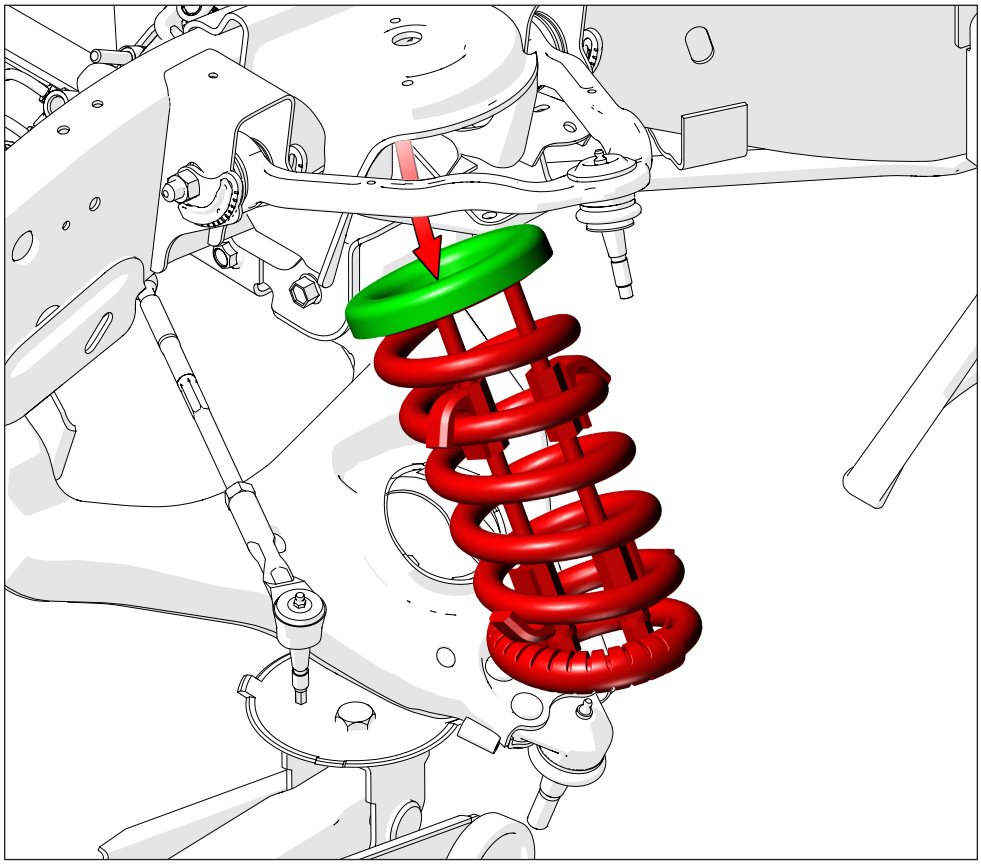
18 Remove the spring and the upper spring isolator (marked in green) from the upper shock mount.

With the coil spring removed, push the floor jack aside, as it will not be used for the rest of the left-hand installation procedure.

If the QA1 GS/GD517 Pro Coil Shock System will be used, retain the upper spring isolator for reuse.

If the QA1 GS/GD518 Coilover Front Suspension System will be used, discard the upper spring isolator, as it will not be reused.

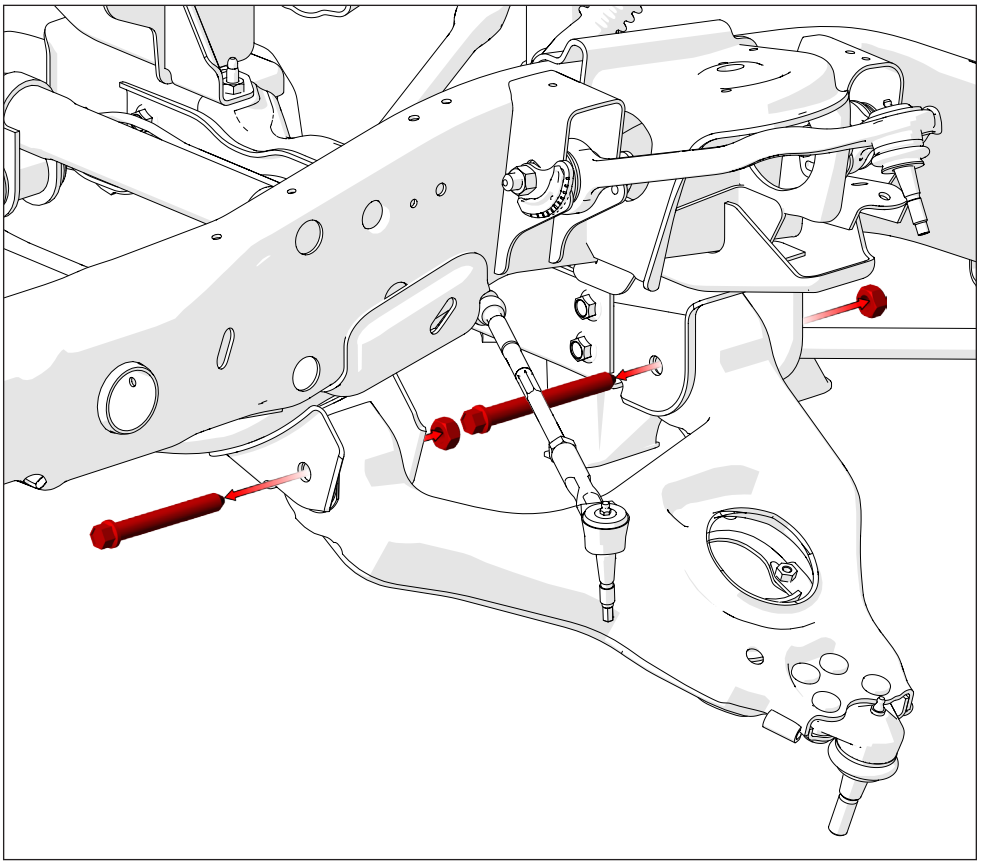
Note: Carefully remove the spring compressors and discard the spring, as it will not be reused.



19 Remove the nuts from the lower control arm.

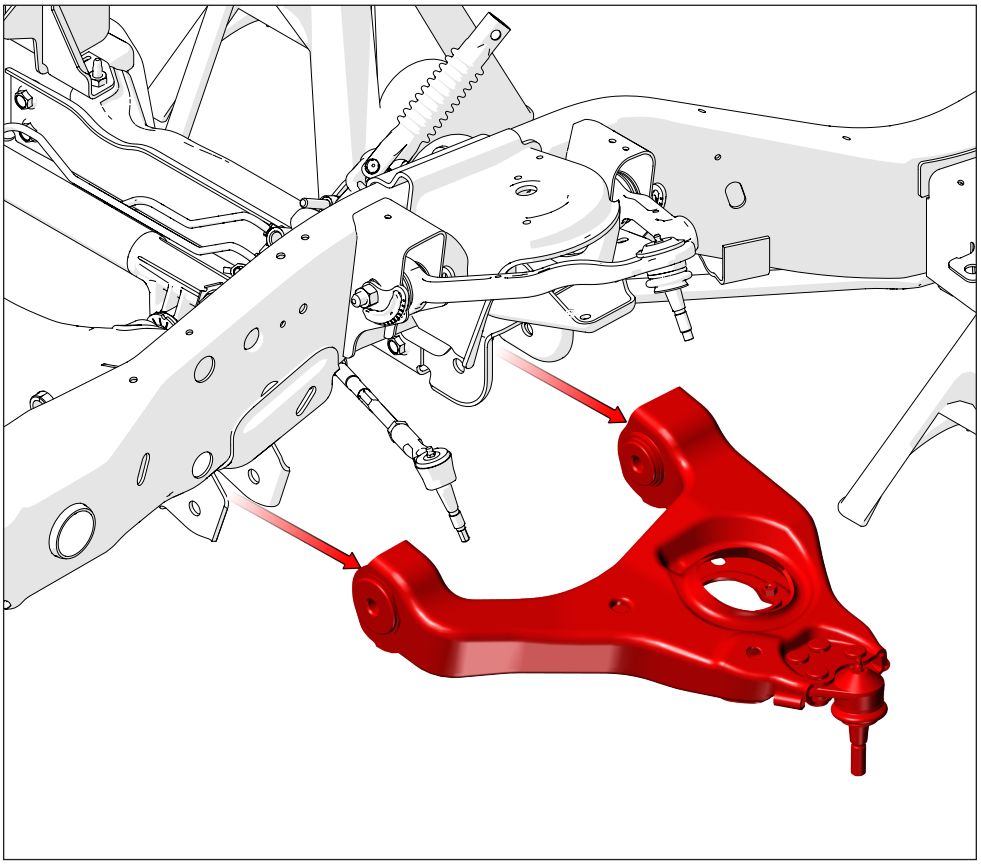
Now, pull out the bolts from the frame to release the LCA. Use a hammer and tap the bolts out if they are stuck.

Note: Discard the LCA and control arm hardware, as they will not be reused.



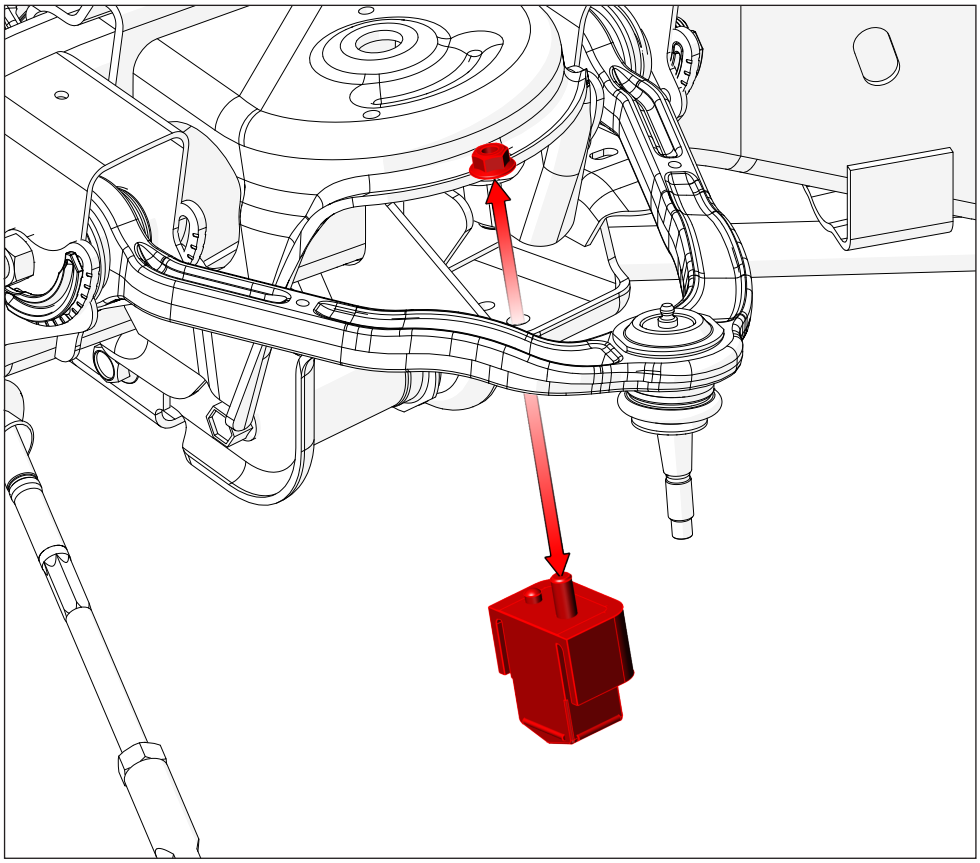
20 Pull the LCA from the frame.

Note: Discard the LCA, as it will not be reused.



21 Remove the nut and factory bump stop from the stop's frame perch.

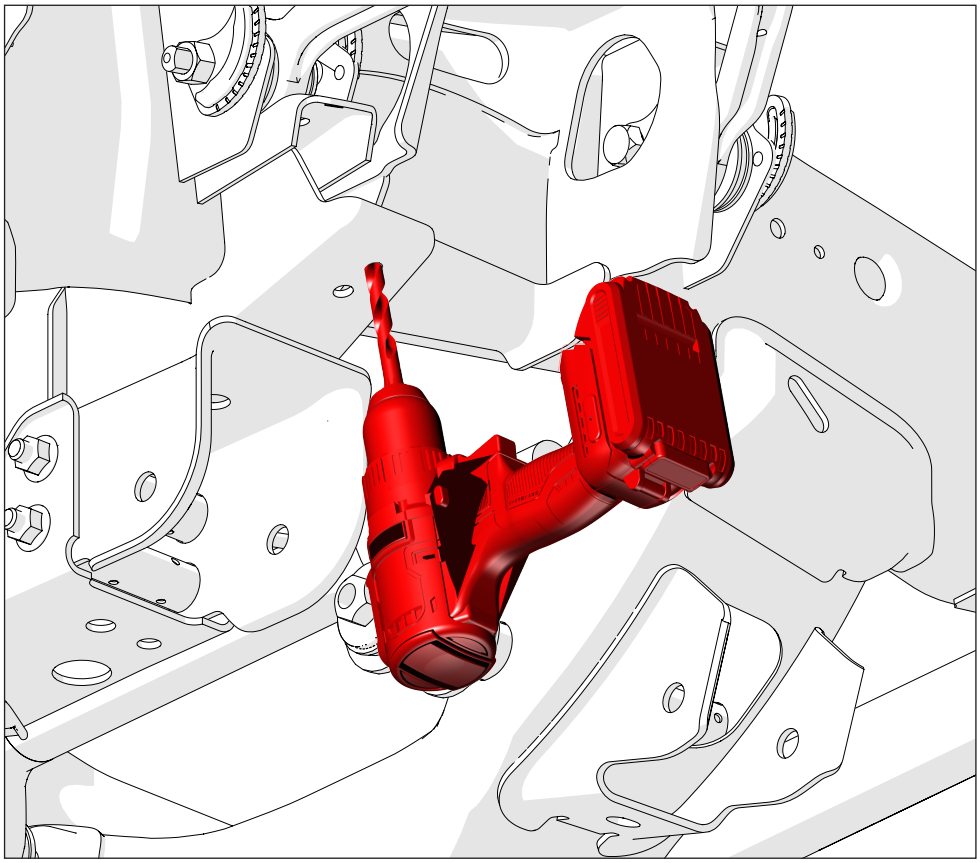
Note: Discard the bump stop and nut, as they will not be reused.



Installer's Note: *The right-hand bump stop mount has a small hole that must be drilled larger for the new QA1 bump stop.*

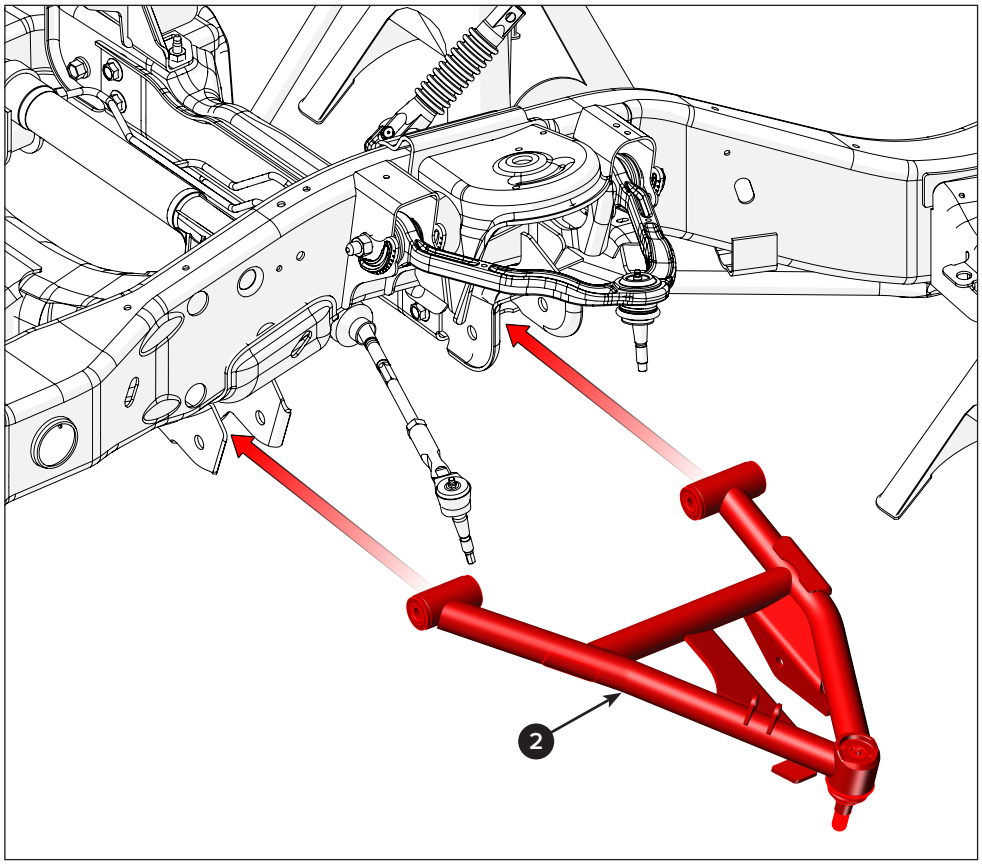
22 Put a 3/8" drill bit into a drill and drill the RH bump stop hole in the bump stop mount bracket.

Refer to QA1 shock instructions 9919-264 for more information.



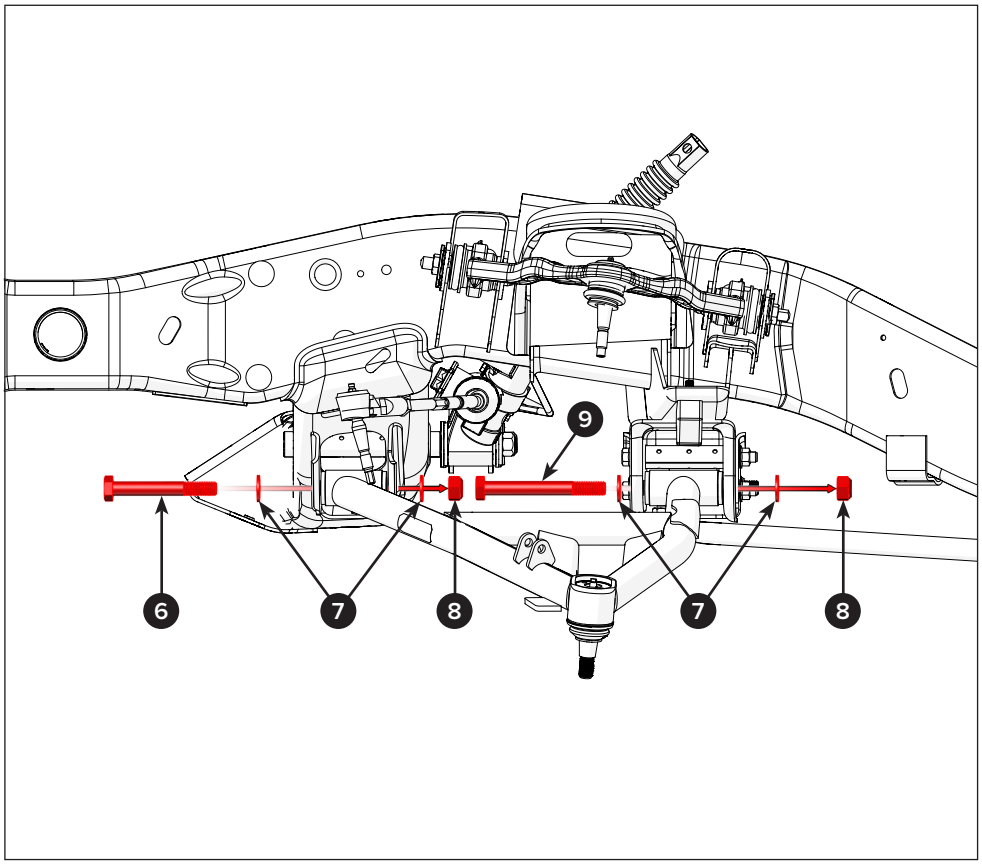
23 Put the new QA1 LH lower control arm (2) into the frame pockets as shown.

Make sure the holes in the frame align with the LCA bushings.



24 Fasten the LCA to the frame with one front bolt (6), one rear bolt (9), four flat washers (7), and two Nylock nuts (8).

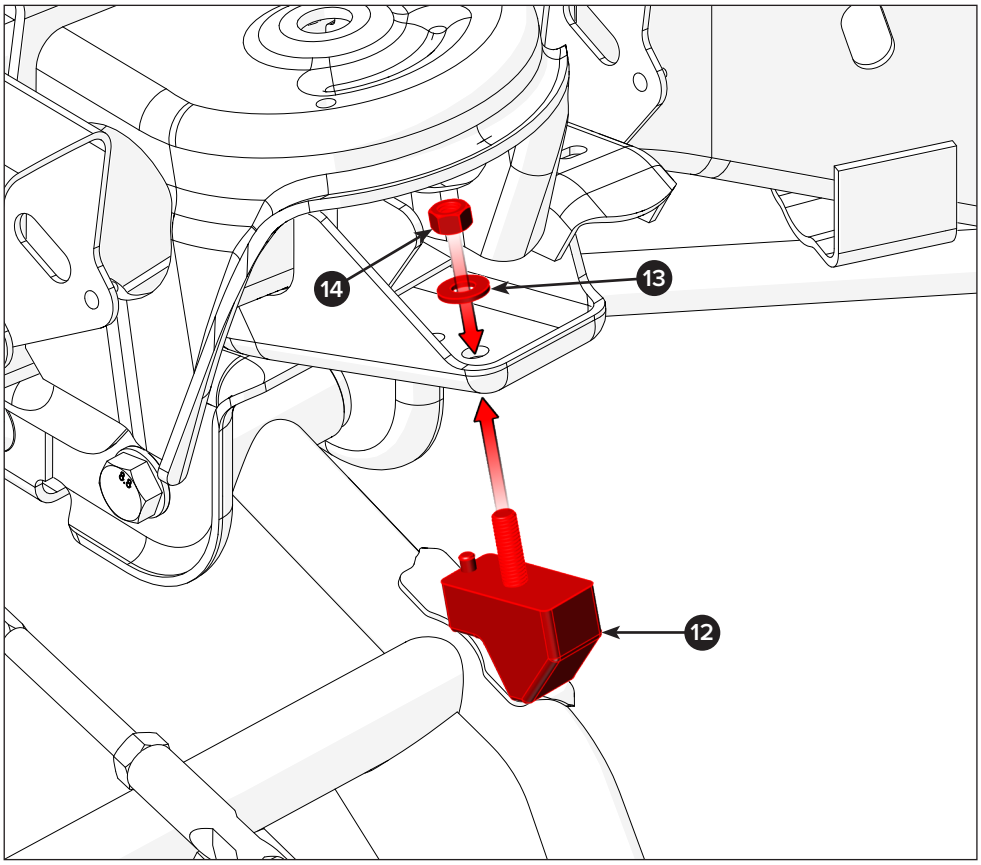
Torque the fasteners to 140 lb-ft



Installer's Note: *The upper control arm has been removed for visual clarity only.*

25 Position the bump stop (12) through the bottom of the mount.

Fasten the bump stop with a flat washer (13) and Nylock nut (14).



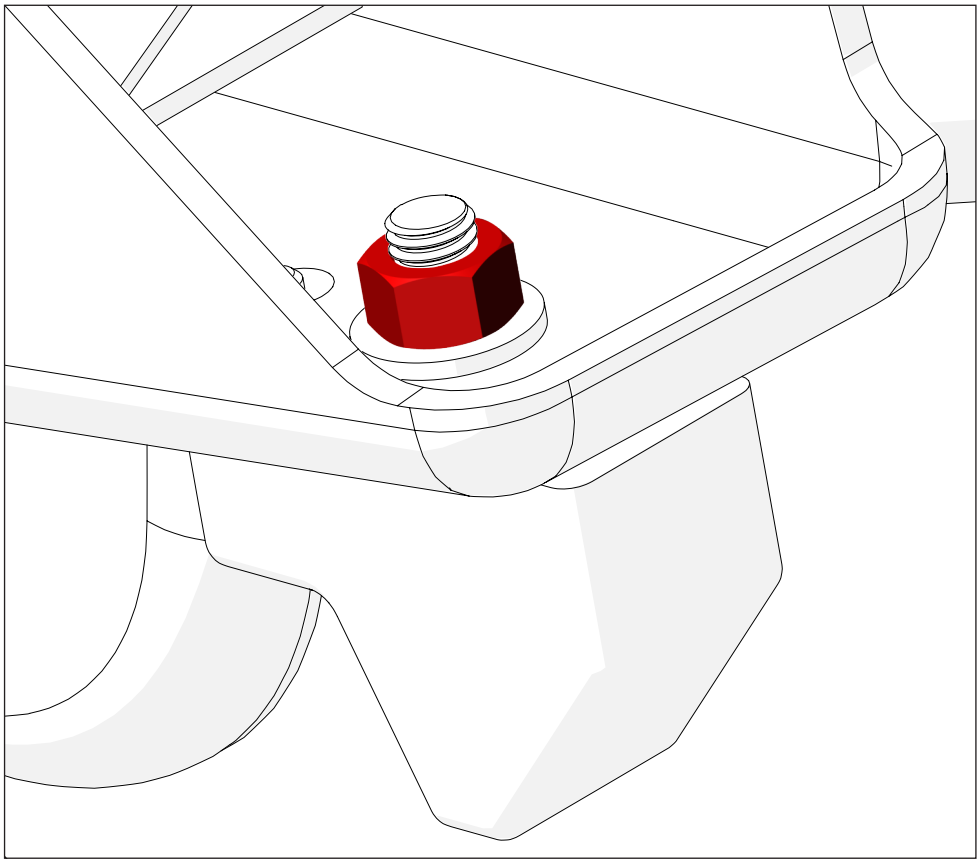
26 Torque the bump stop nut to 12 lb-ft.

Stop here to install the QA1 GS510 (single adjustable) or the GD510 (double adjustable) front coilover suspension.

Refer to the QA1 Coilover Conversion instructions 9919-350 included with your coilover kit.

Once installed, proceed to step 27 of these installation instructions.

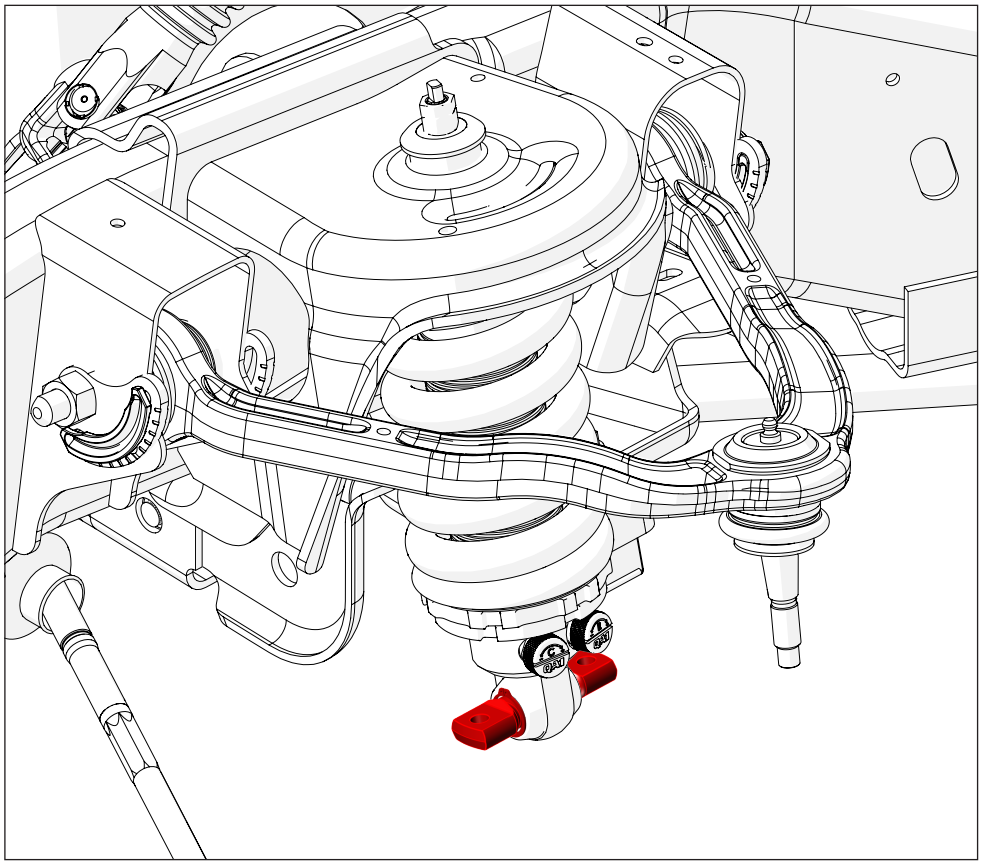
If your vehicle has the QA1 GS/GD517 Pro Coil Shock System, proceed to step 27.



Installer's Note: *If your vehicle has the QA1 GS/GD517 Pro Coil Shock System, you must retrofit the bottom T-Bar mount to accommodate the new lower control arm.*

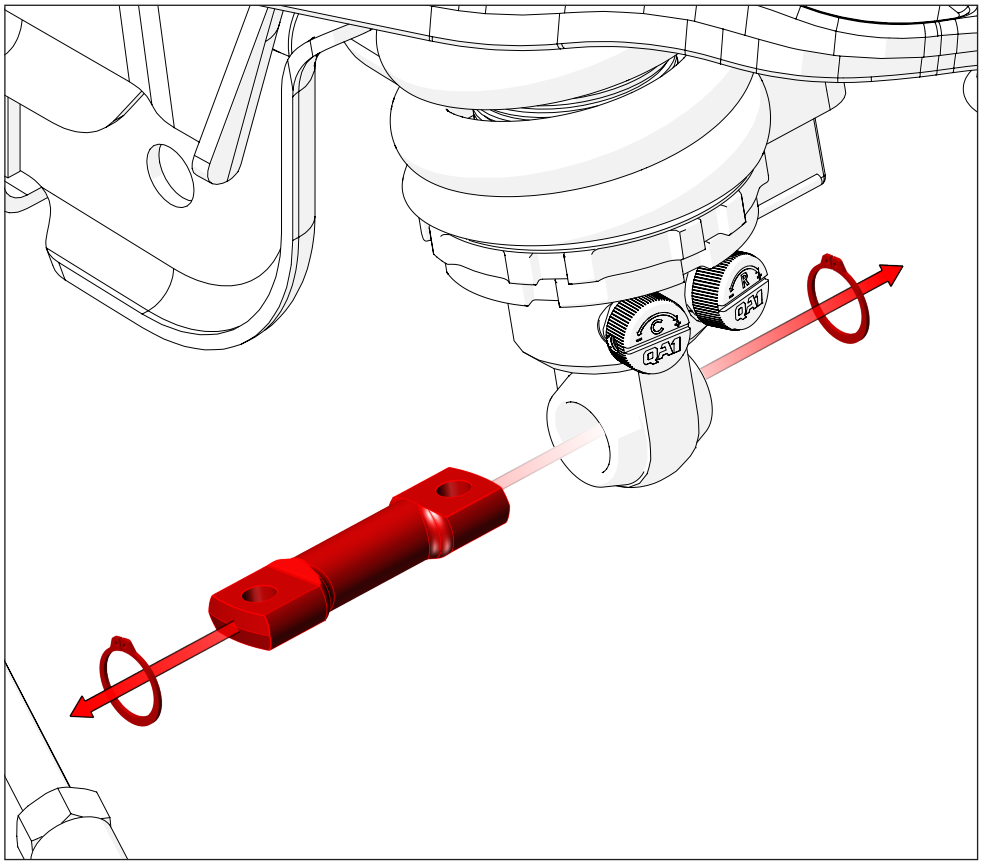
Use the QA1 Pro Coil Sleeve Conversion Kit for this retrofit procedure, part number 9033-559.

27 First, remove the Circlips from the bottom T-Bar.



28 Then, remove the T-Bar from the lower shock bushing.

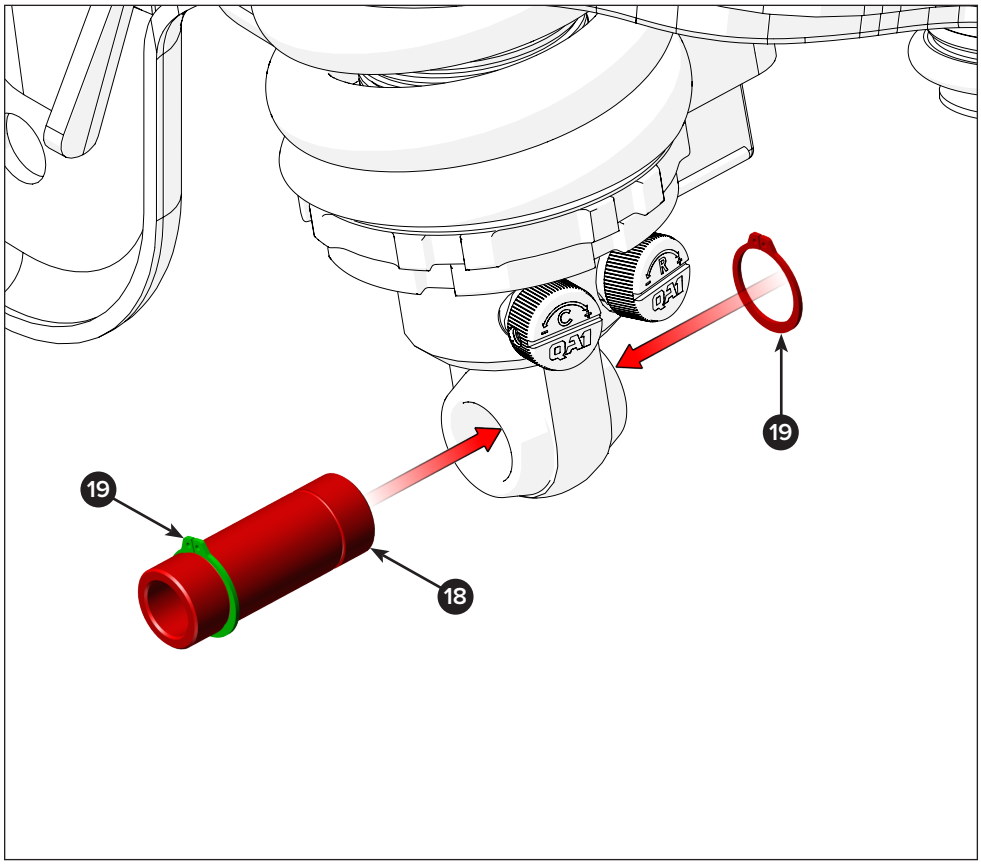
Note: Discard the T-Bar and Circlips, as they will not be reused.



29 Push one clip (19), marked in green, on the sleeve (18) until it clicks into place.

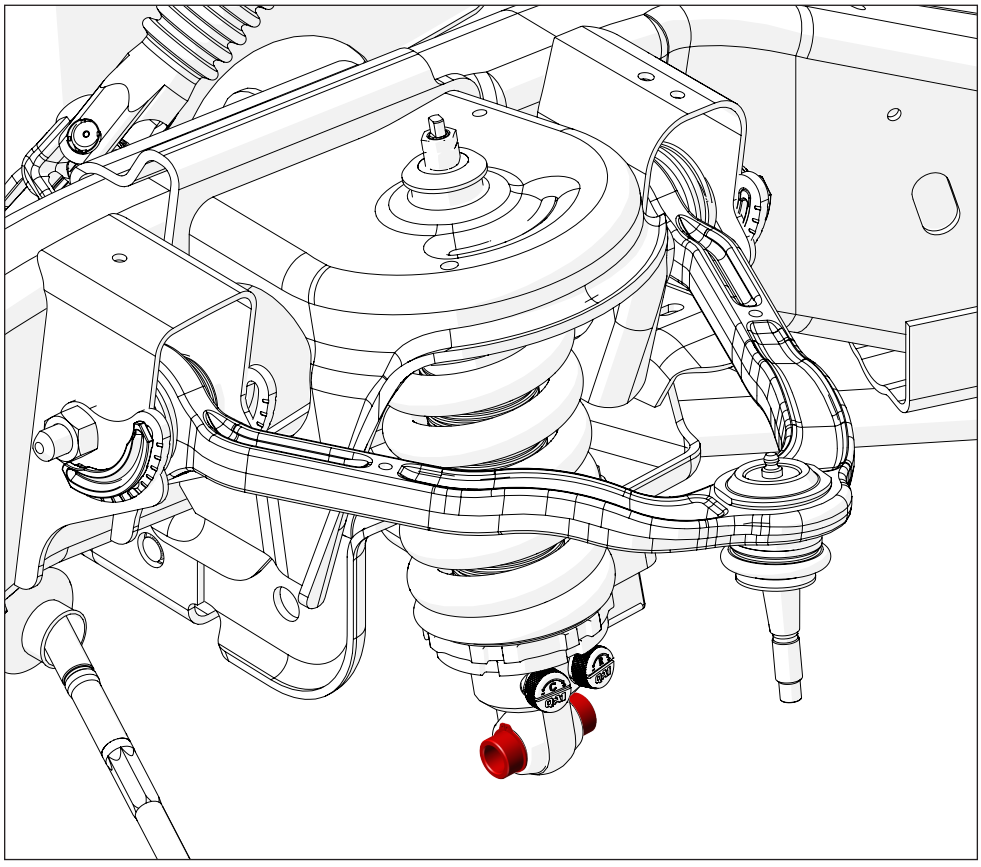
Then, insert the sleeve into the shock bushing until the clip fully contacts the bushing.

Next, attach the second clip (19) on the opposite side of the bushing.

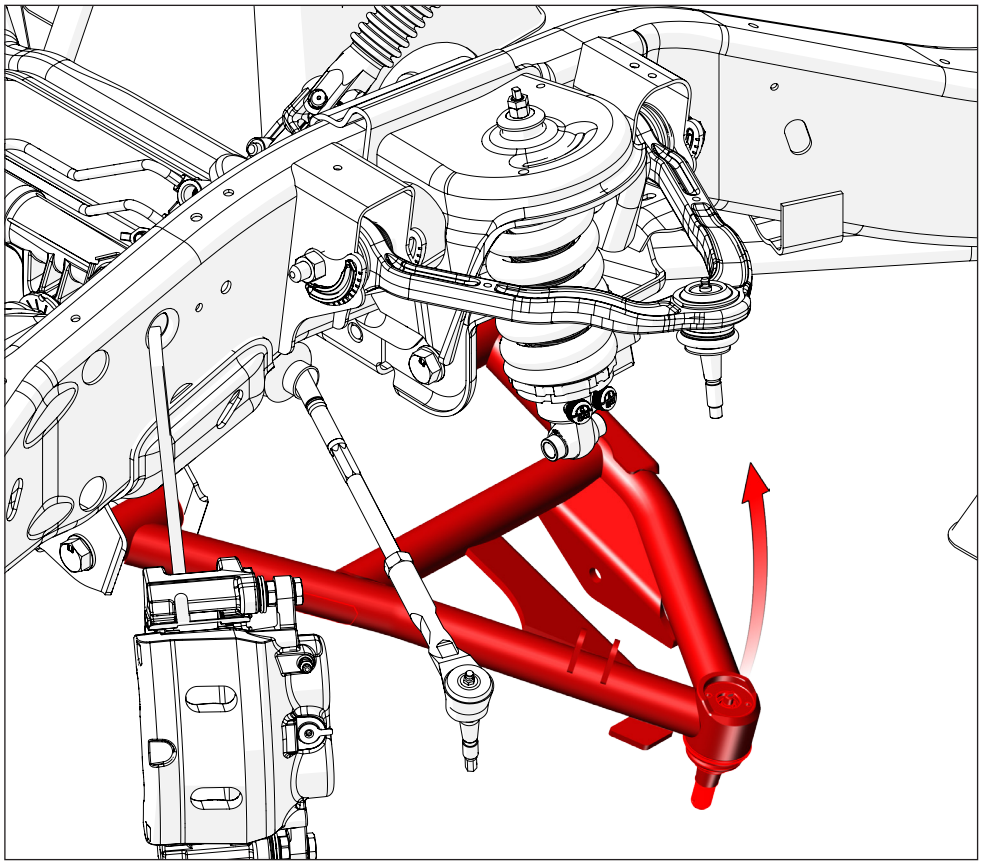


30 Make sure the sleeve and Circlips are fully seated.

Repeat this procedure for the RH QA1 shock fit with a T-Bar.



31 Push the lower control arm upward until the shock mount sleeve aligns with the mount holes in the LCA.



32 Attach the shock to the LCA with a bolt (15), two flat washers (16), and a Nylock nut (17), then torque the nut to 75 lb-ft.

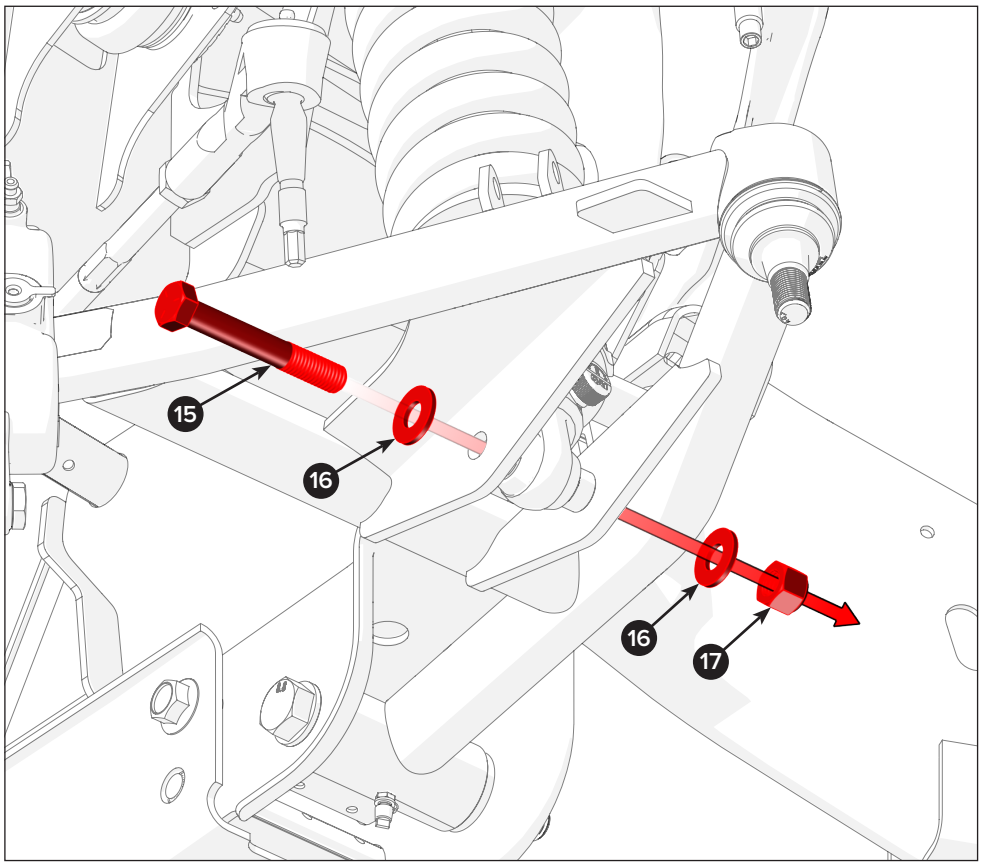
To keep the factory upper control arm, reinstall the steering knuckle removed during step 15. Place the ball joint into the spindle, then install the castle nut and torque it to 45 lb-ft.

Note: If the notches on the castle nut do not line up with the cotter pin hole, tighten the nut to the next available position. Do not loosen the nut to align the cotter pin hole!

Reinstall the brake rotor, caliper, brake hose, and ABS wire. Torque the hardware to the specifications found in a shop manual.

Finally, put the wheels back on, set the ride height, tighten the coil-over lock nut, and align the vehicle to QA1 specifications.

Note: Proceed to instruction 9919-348 to replace the factory upper control arm with a QA1 version.



Installer's Note: *The QA1 upper and lower control arms are designed to increase both caster and negative camber.*

It is essential to inform the alignment shop of this modification since they typically align vehicles to factory specifications.

33 Finally, align the vehicle according to QA1's specifications.

These alignment specifications apply specifically to Silverados and Sierras equipped with QA1 upper and lower control arms.

Note: Vehicles with different control arm configurations may not be able to meet these alignment standards.

1999-2007 SILVERADO/SIERRA ALIGNMENT SPECIFICATIONS				
CASTER		CAMBER	TOE	
5° MIN	7° MAX	0.00° to -1.0°	0.10° MIN	.20° MAX

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