QA1

GO DRIVE IT.

QA1 64-70 FORD MUSTANG UPPER CONTROL ARM

INSTALLATION INSTRUCTIONS: 52703, 52705

WELCOME TO QA1!

OUR COMMITMENT

Congratulations on your purchase of this high-quality QA1 64-70 Ford Mustang Upper Control Arm assembly. It is 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 upper 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 64-70 Ford Mustang Upper 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 Upper Control Arm assembly procedure.

Check your order as soon as possible upon delivery. QA1 has provided parts list tables and images, as shown on pages 4 through 7. Compare your order's contents against the tables. Call your authorized dealer immediately if you discover anything missing from your order.

This kit uses fasteners to assemble and install. Welding is not required.

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.

ABOUT THIS MANUAL

PURPOSE

These instructions outline the QA1 64-70 Ford Mustang Upper Control Arm kit.

This system is designed to work only with QA1 coilover shocks.

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 Wrench Set
- SAE Socket Set
- Torque Wrench (lb-ft)
- Coil spring compressor
- Drill and drill bits

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.

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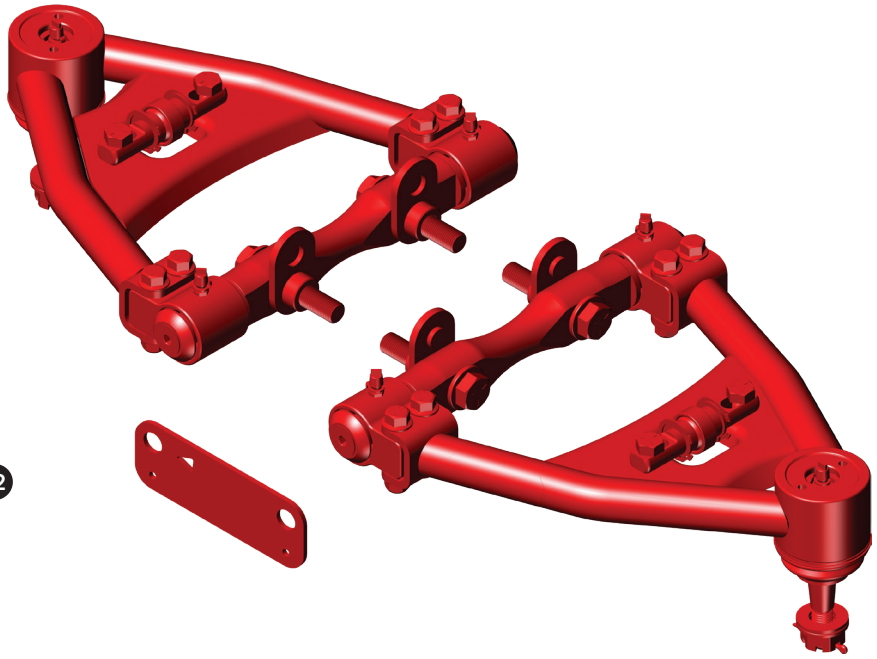
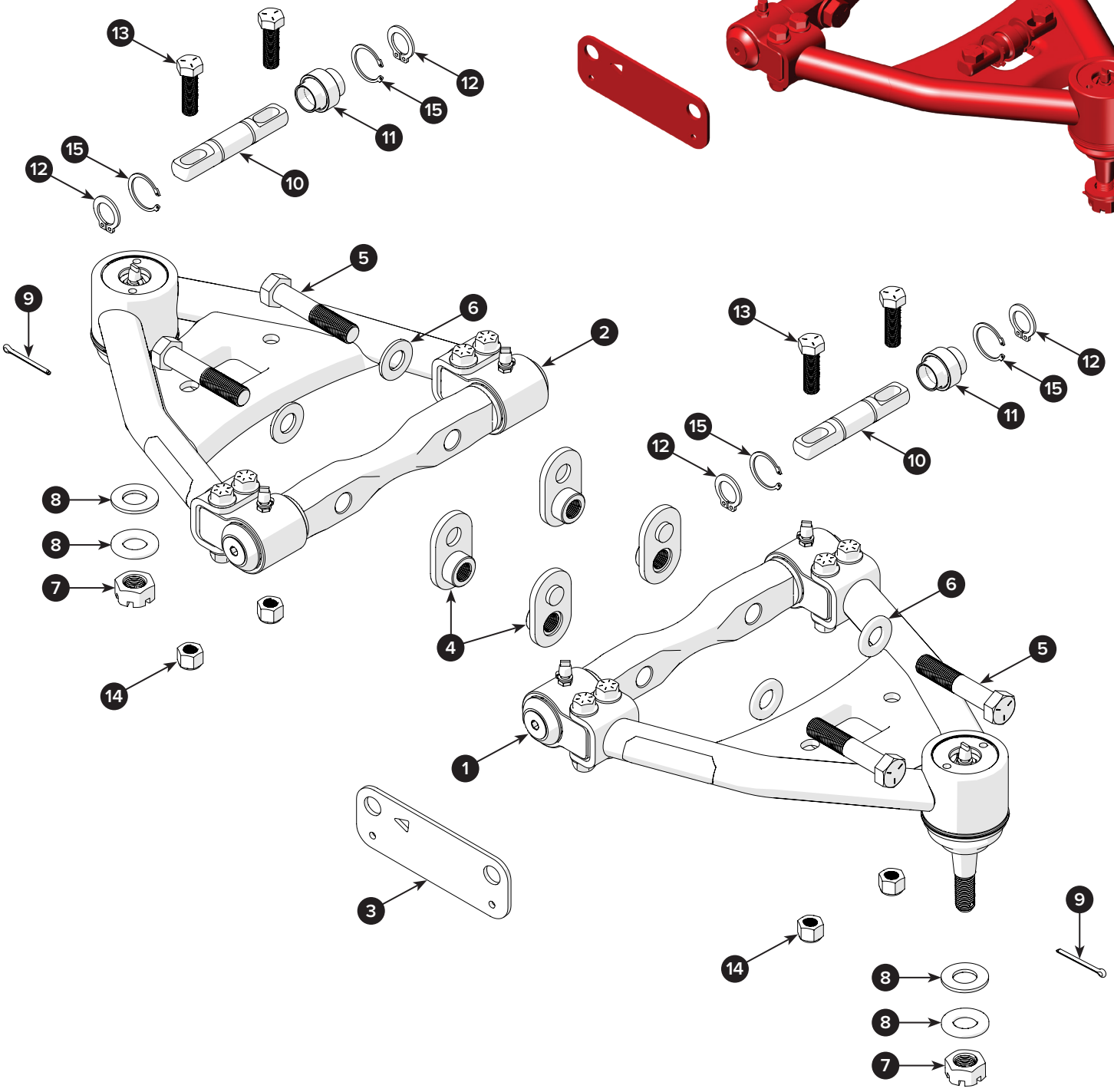
ALIGNMENT ADJUSTMENT 25
WARRANTY 26

52703 64-66 FORD MUSTANG UPPER CONTROL ARM KIT





52703 64-66 FORD MUSTANG UPPER CONTROL ARMS w/INSTALL KIT 7039-485				
POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
1	7720-549	UCA, LH w/3.25” CTC CROSS SHAFT	1	—
2	7720-550	UCA, RH w/3.25” CTC CROSS SHAFT	1	—

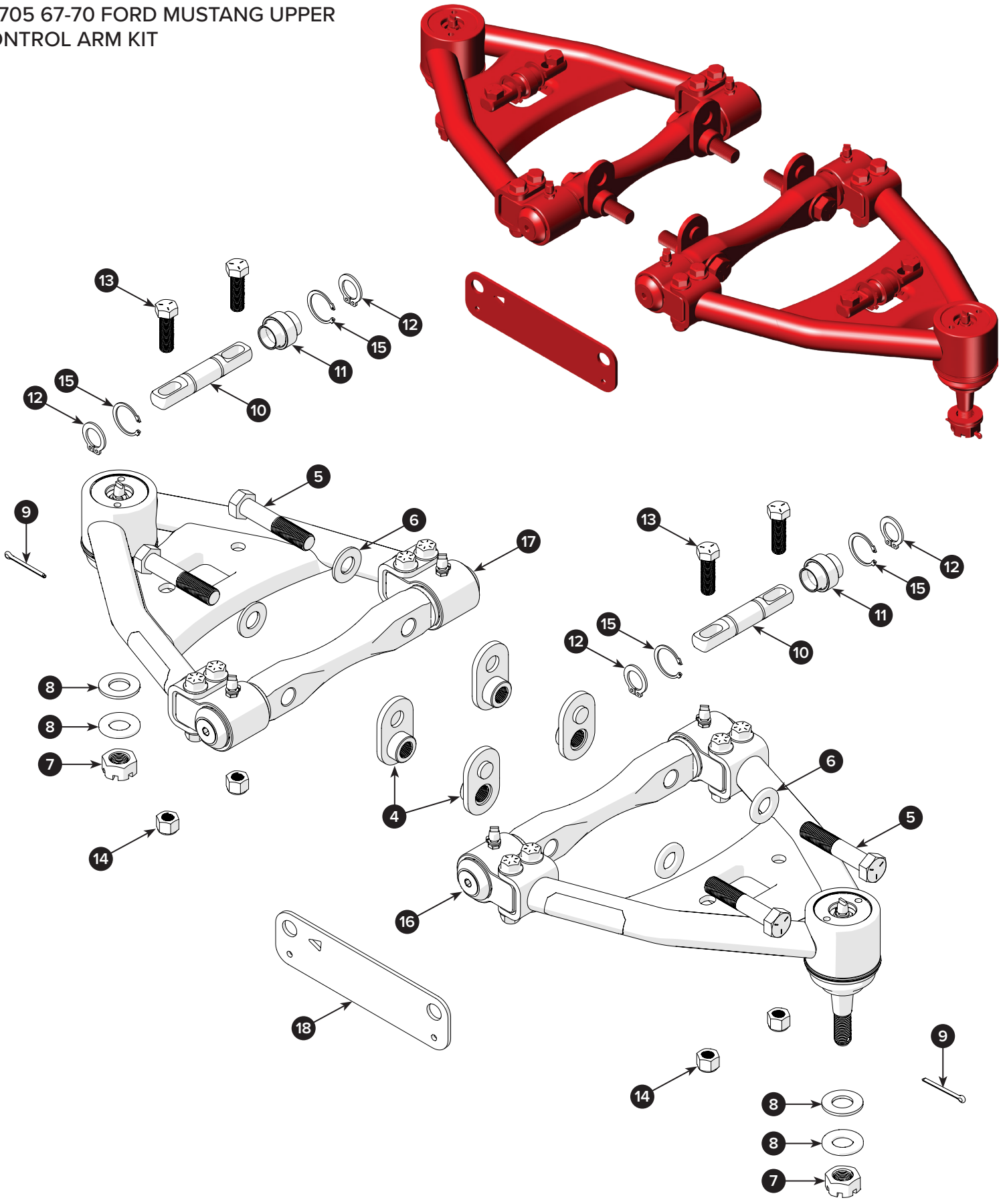
64-70 FORD MUSTANG UPPER CONTROL ARM INSTALL KIT 7039-485 w/HARDWARE KIT 7039-481				
POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
3	99030642	DRILL TEMPLATE, UPPER CONTROL ARM	1	—
4	9014-592	NUT PLATE, UCA MOUNT	4	—

64-70 FORD MUSTANG UPPER CONTROL ARM HARDWARE KIT 7039-481				
POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
5	9012-108	BOLT, HEX 1/2-20 X 2.5”, GRADE 5, ZINC	4	75 LB-FT
6	9005-228	WASHER, FLAT 1/2” SAE	4	—
7	9014-582	NUT, SLOTTED 9/16-18	2	65 LB-FT
8	9005-255	WASHER, FLAT 9/16” SAE	4	—
9	9035-172	PIN, COTTER 7/64” X 1-1/4”	2	—

64-70 FORD MUSTANG UPPER CONTROL ARM HARDWARE KIT BAR355K				
POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
10	9035-149	PIN, CROSS .625” X 3.5”	2	—
11	SIB10T-102	BEARING, 5/8” ID X 1” OD X 1” WIDE	2	—
12	9007-103	RETAINING RING, EXTERNAL .625”	4	—
13	9012-104	BOLT, HEX 3/8-24 X 1.25”	4	35 LB-FT
14	9014-108	NUT, NYLOCK 3/8-24	4	—
15	9007-117	RETAINING RING, INTERNAL 1.00”	4	—

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.

52705 67-70 FORD MUSTANG UPPER CONTROL ARM KIT



52705 67-70 FORD MUSTANG UPPER CONTROL ARMS w/INSTALL KIT 7039-484				
POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
16	7720-549	UCA, LH w/4.75” CTC CROSS SHAFT	1	—
17	7720-550	UCA, RH w/4.75” CTC CROSS SHAFT	1	—

64-70 FORD MUSTANG UPPER CONTROL ARM INSTALL KIT 7039-484 w/HARDWARE KIT 7039-481				
POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
18	7791-178	DRILL TEMPLATE, UPPER CONTROL ARM	1	—
4	9014-592	NUT PLATE, UCA MOUNT	4	—

64-70 FORD MUSTANG UPPER CONTROL ARM HARDWARE KIT 7039-481				
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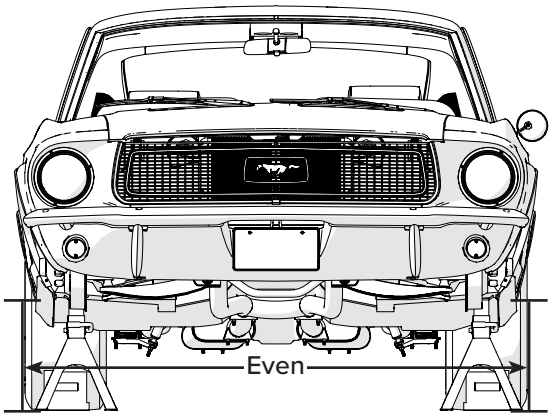
Note: The part positions listed above will be called out in this installation manual as a visual reference to their respective positions during the installation procedure. Refer to these pages during the installation. Count and compare all parts and fasteners to the list above. If parts are missing, contact QA1 at sales@qa1.net.

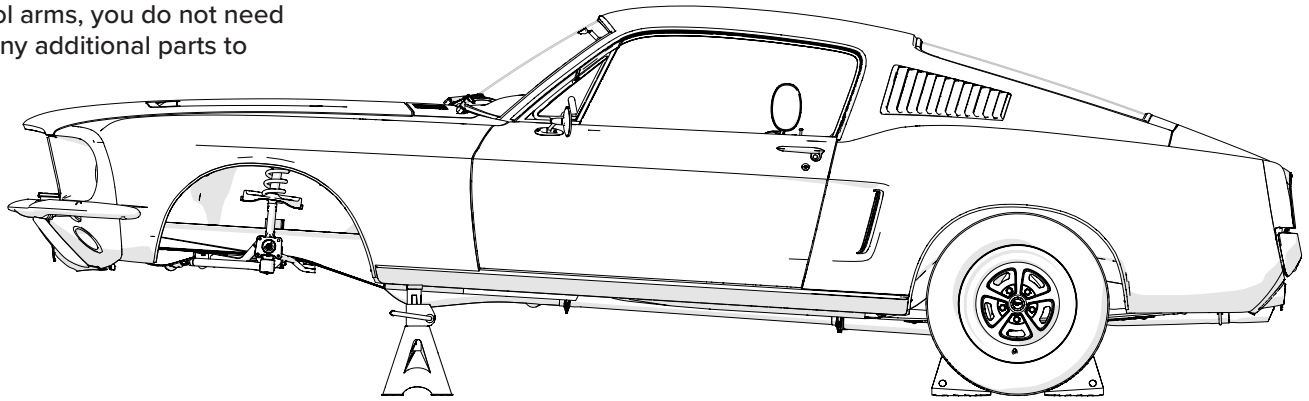
Installer's Note: *The design of the QA1 upper control arm requires the use of only QA1 coilovers in conjunction with these control arms.*

This instruction set begins with the replacement procedure for the front driver's side of the vehicle. The process to replace the passenger side upper control arm is identical.



1 Lift the front of the vehicle and securely support it with jack stands.

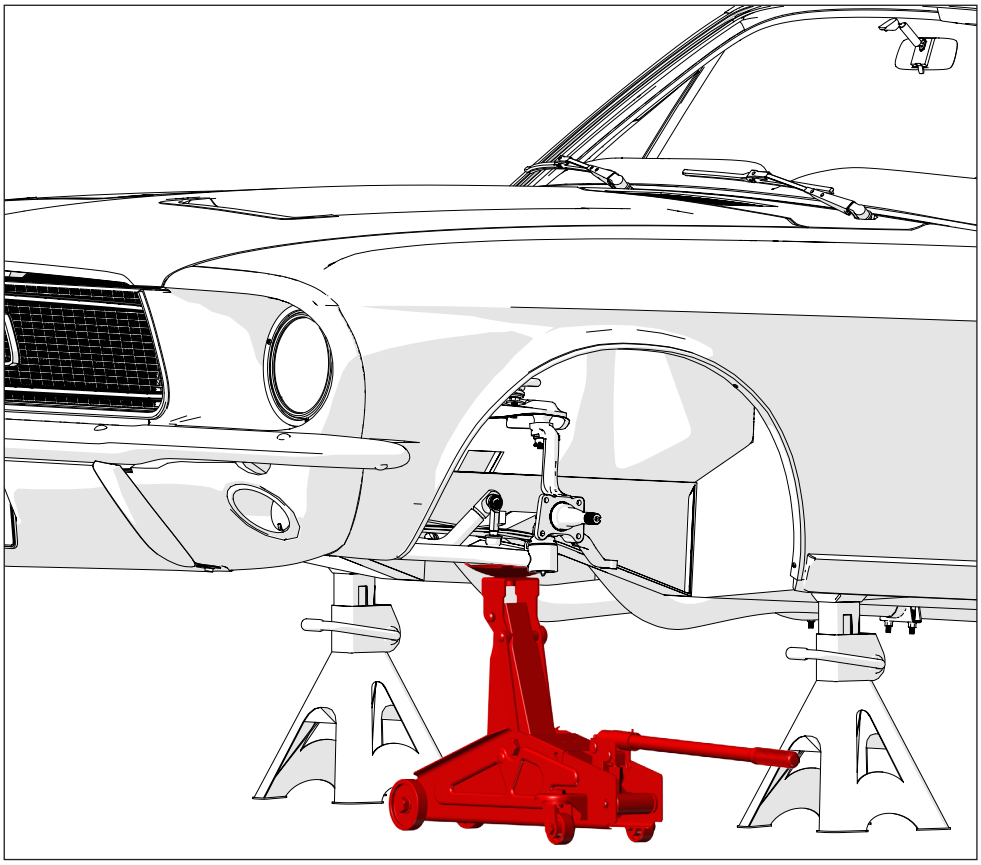
Next, remove the lug nuts and wheels from both the left and right sides of the front of the vehicle to begin the installation of the QA1 upper control arms. If you have already replaced the lower control arms, you do not need to remove any additional parts to continue.



Installer's Note: *The image on the right displays the QA1 lower control arm and sway bar kits. Subsequent images will also feature these kits.*

2 First, use a floor jack to lift the lower control arm and relieve the pressure from the suspension.

Note: The floor jack must remain under the lower control arm until step 8.



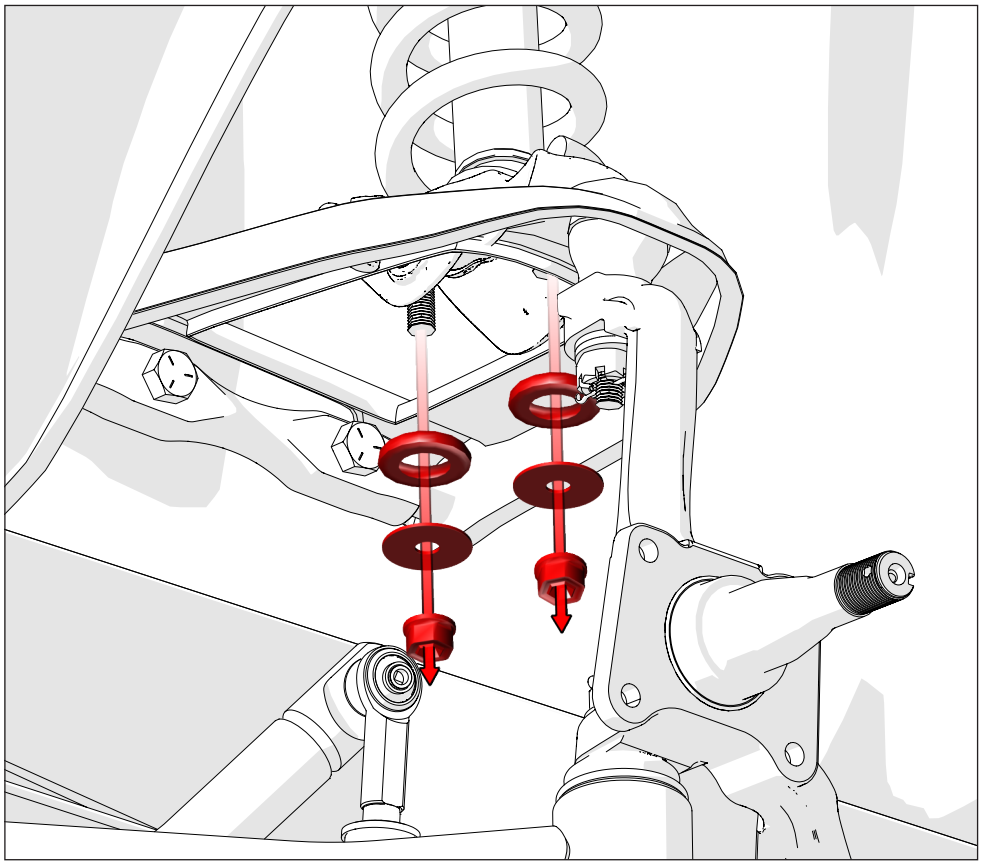
Installer's Note: *The factory shocks cannot be used with the QA1 upper control arm.*

3 First, remove the nuts, shock washers, and rubber shock isolators from the shock T-bar and coil spring trunnion fastened to the upper control arm.

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

PRO BUILD TIP

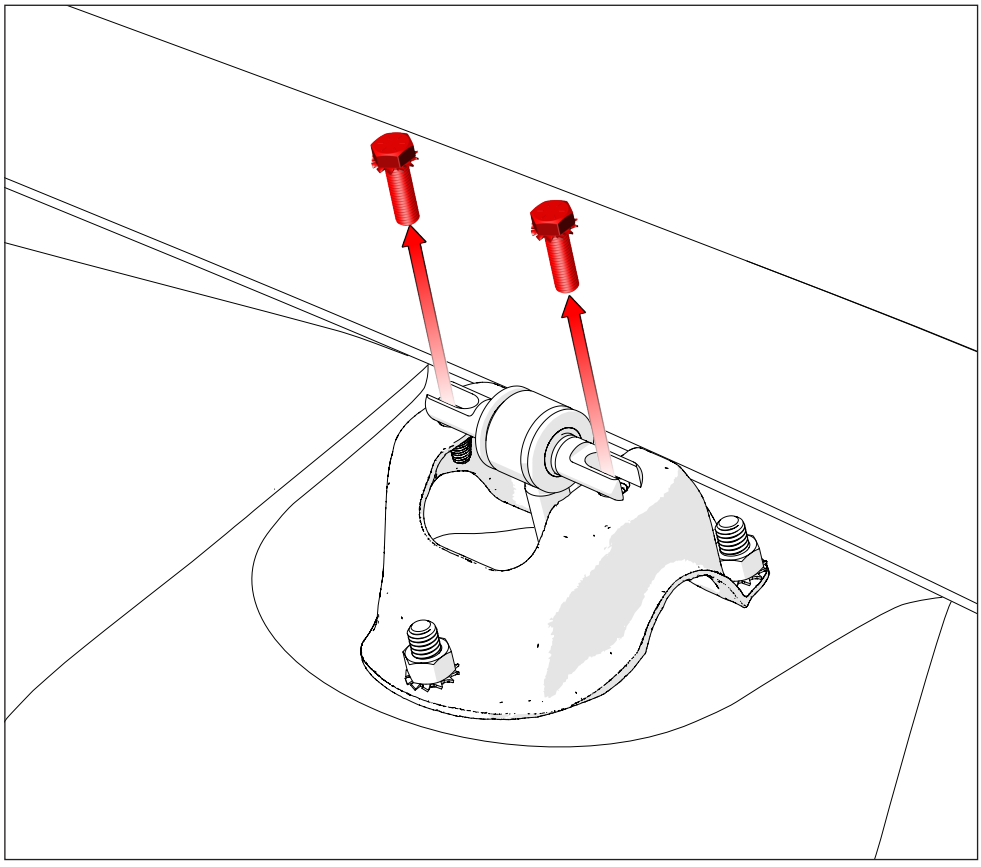
To make upper control arm installation easier, disconnect the sway bar from the lower control arm if it is installed.



4 Open the hood to access the inner fenders and the shock tower tops.

Then, remove the two bolts and washers from the shock tower top (LH shown).

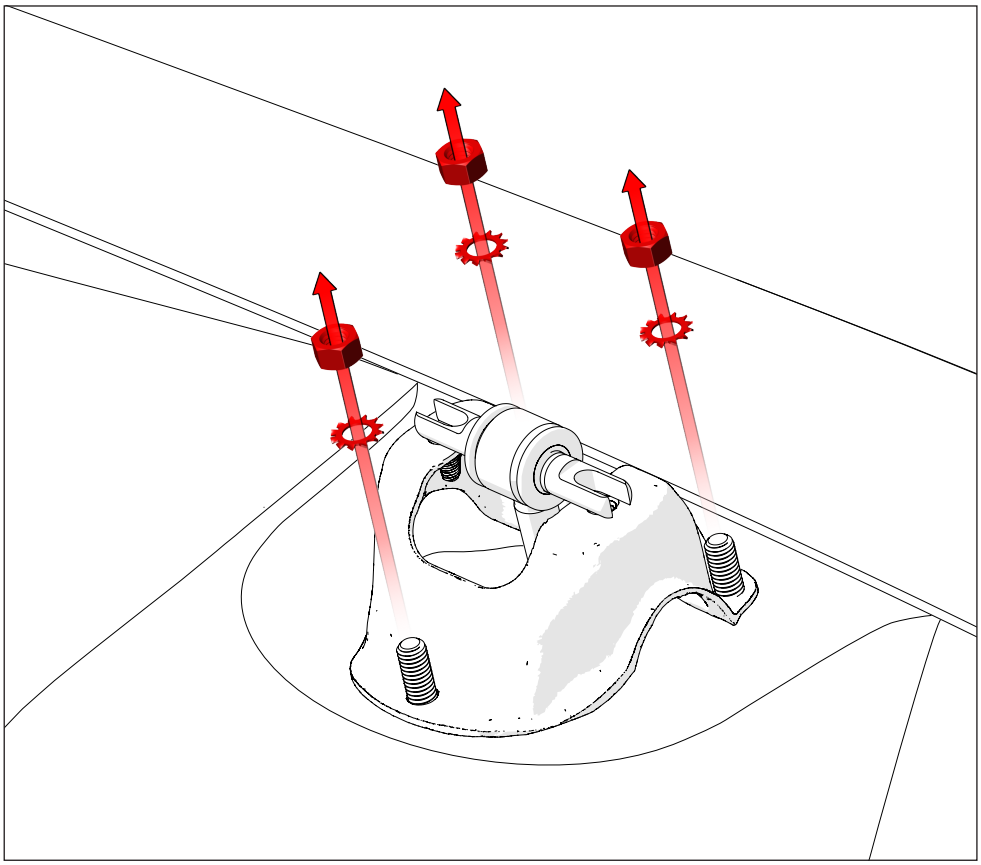
Discard the hardware, as it will not be reused.



5 Next, remove the three shock tower nuts and washers from the inner fender.

Save this shock hardware as it will be reused.

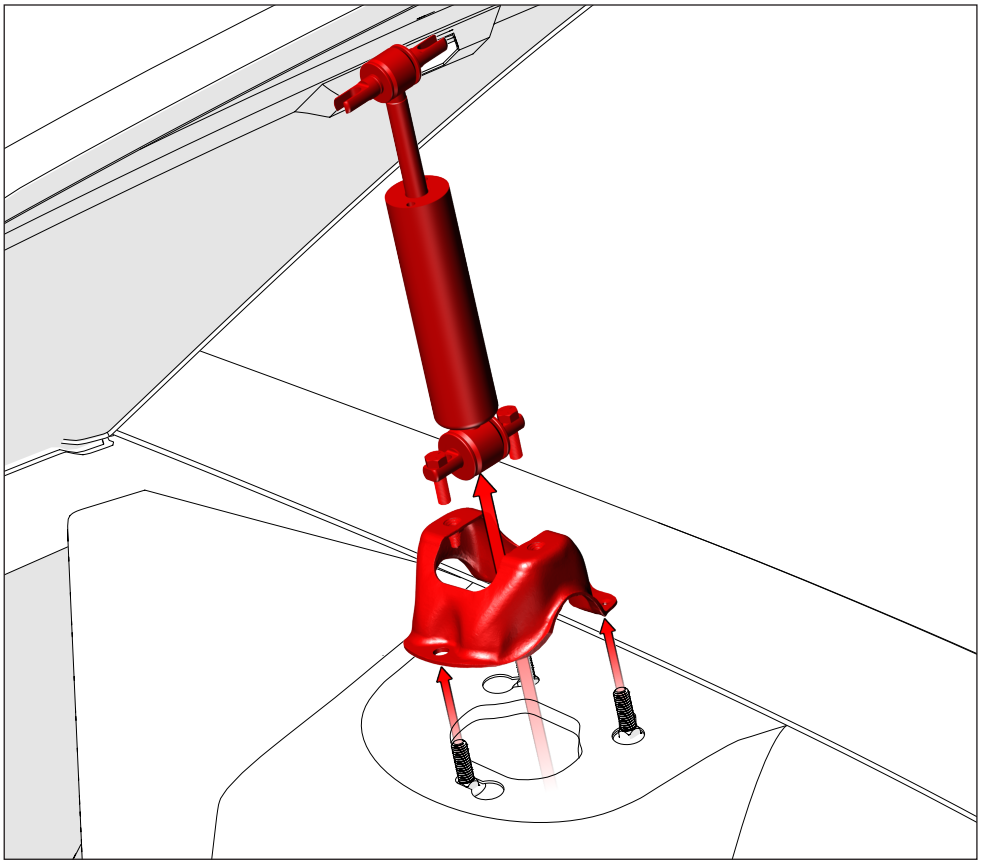
Note: Replace the nuts and washers if they are corroded or if there is damage present.



6 Then, pull the shock assembly out through the inner fender.

Now, remove the shock tower top from the inner fender and the carriage bolts.

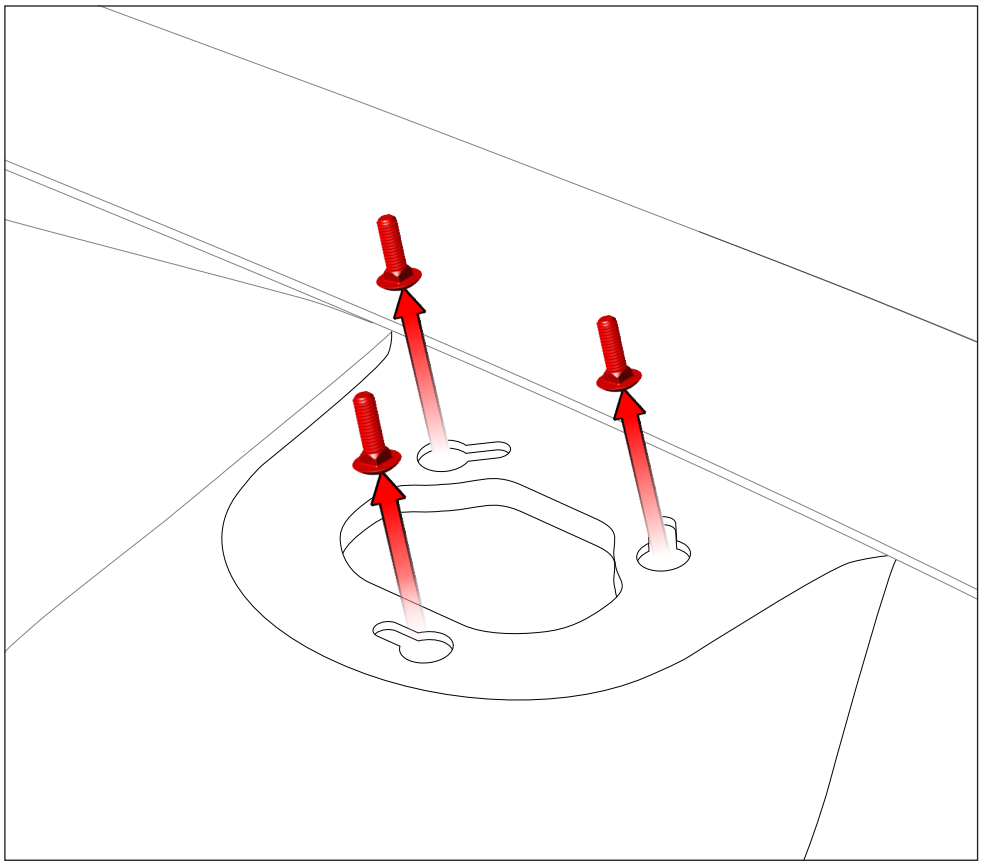
Discard the shock assembly and shock tower top, as they will not be reused.



7 Finally, remove the shock tower carriage bolts from their respective slots in the inner fender.

Set aside the bolts as they will be reused.

Note: Replace these carriage bolts if they are corroded or if there is thread damage present.



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

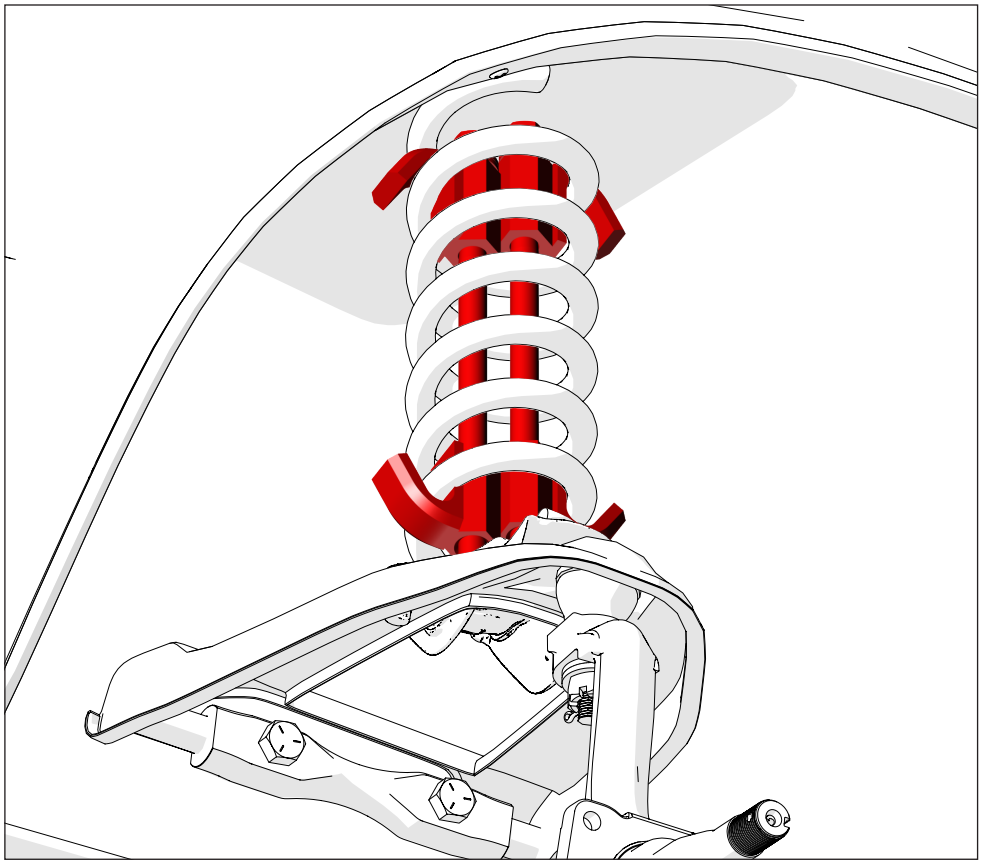
These springs store a significant amount of potential energy, and due to the possible risk of injury associated with removing coil springs, QA1 recommends the use of coil spring compressors for best safety practices.

8 With the shock removed, insert a coil spring compressor inside the coil spring from the top opening of the inner fender.

Compress the spring until the bottom of the spring can be easily moved on the upper control arm's spring trunnion.

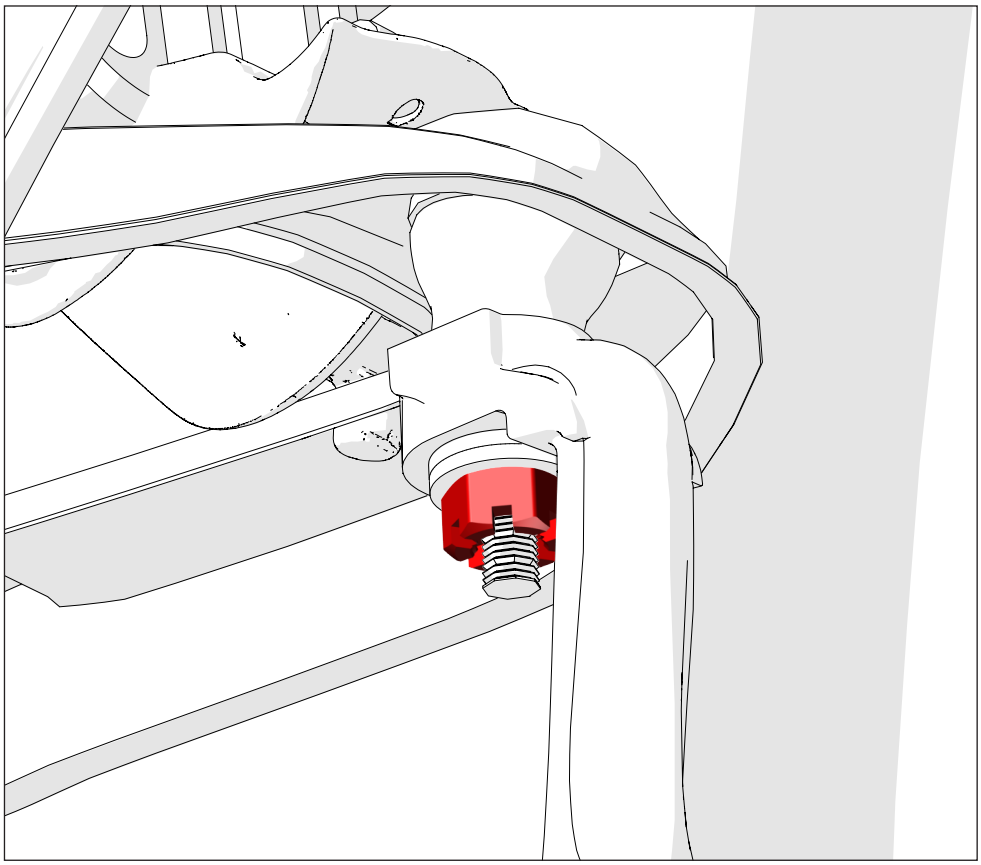
Next, lower the floor jack to relieve any stored energy and pressure from the upper control arm to the coil spring.

Finally, with the spring compressed, remove the two bolts that hold the lower spring saddle to the upper control arm.



9 Remove and discard the cotter pin, if one is present.

Then, loosen but do not remove the nut from the upper control arm's ball joints.



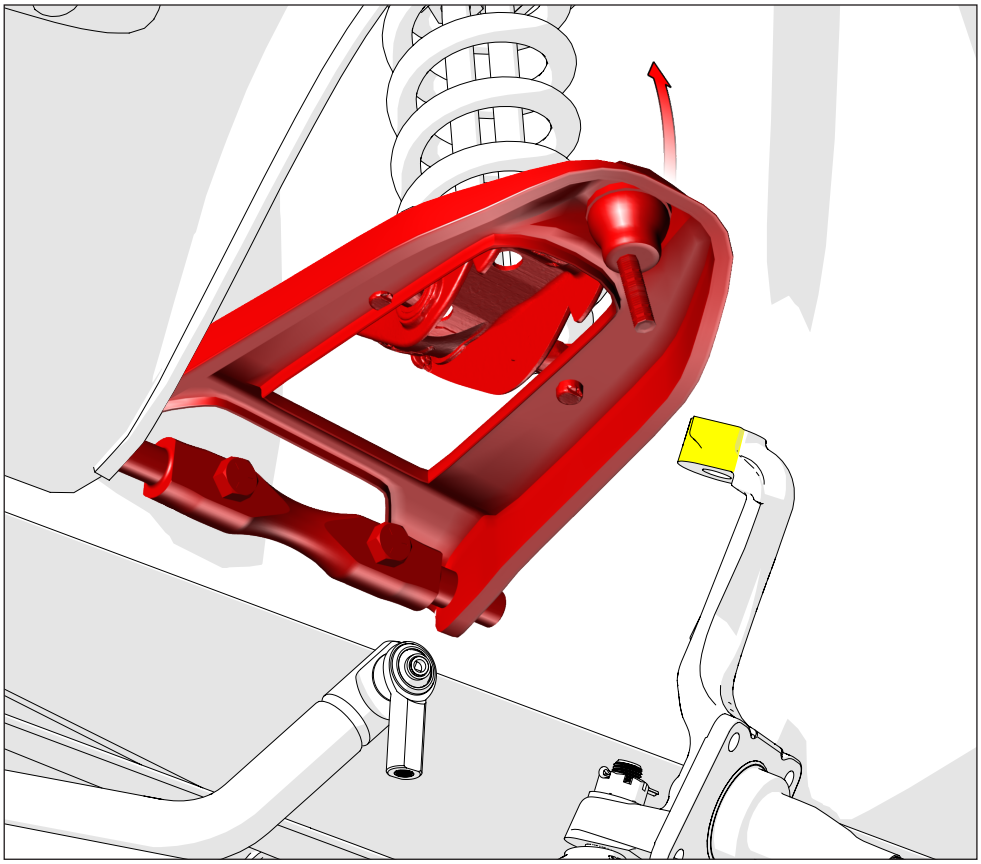
10 To release the ball joint from the steering knuckle, use a hammer to strike the upper part of the knuckle near the ball joint (highlighted in yellow). A ball joint separator may be used if needed.

Lift the control arm up and off the steering knuckle, then remove and discard the nut.

Next, clean any dirt, grease, or rust around the ball joint hole (marked in blue) to make sure the knuckle's surfaces are as smooth as possible.

Inspect the knuckle for any cracks, deformities, or excessive wear on the inner edges of the ball joint hole.

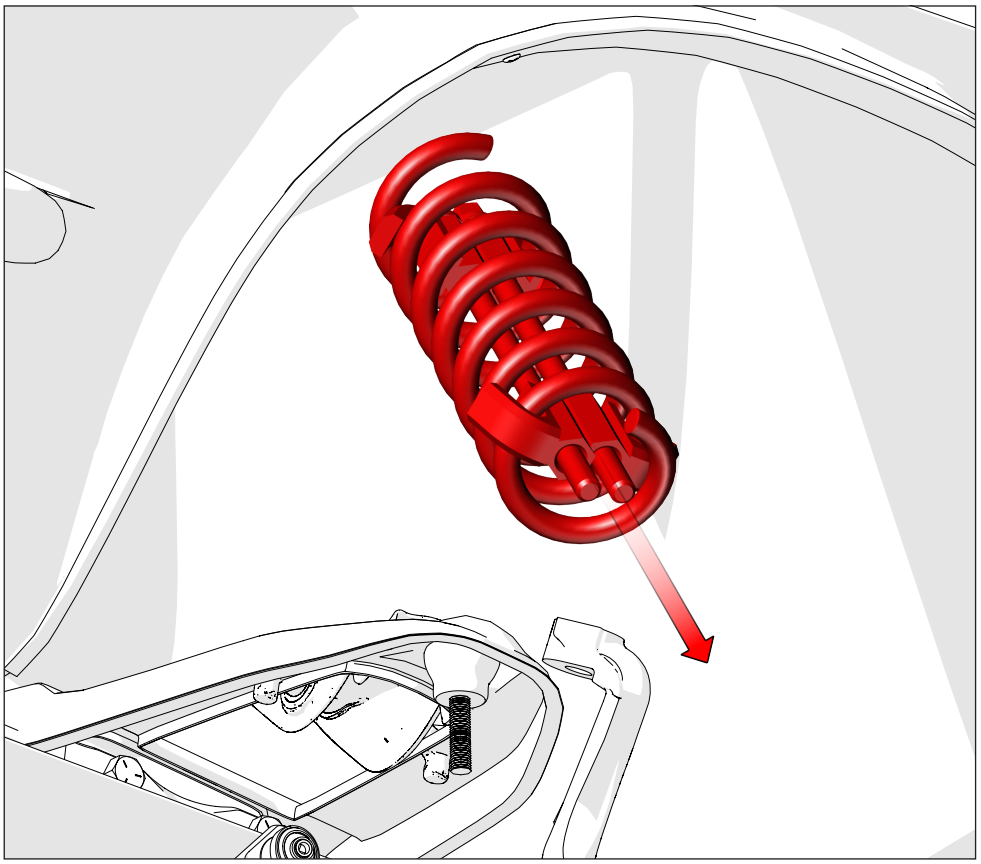
Examine the taper of the ball joint hole to ensure that the tapered surfaces are smooth and uniform, with no signs of uneven wear or damage.



11 Now, safely remove the compressed coil spring from the inner fender.

Carefully remove and set aside the upper spring isolator (not shown). It will be reused for the QA1 coilover.

Note: If the isolator is damaged, discard it and use a new one.



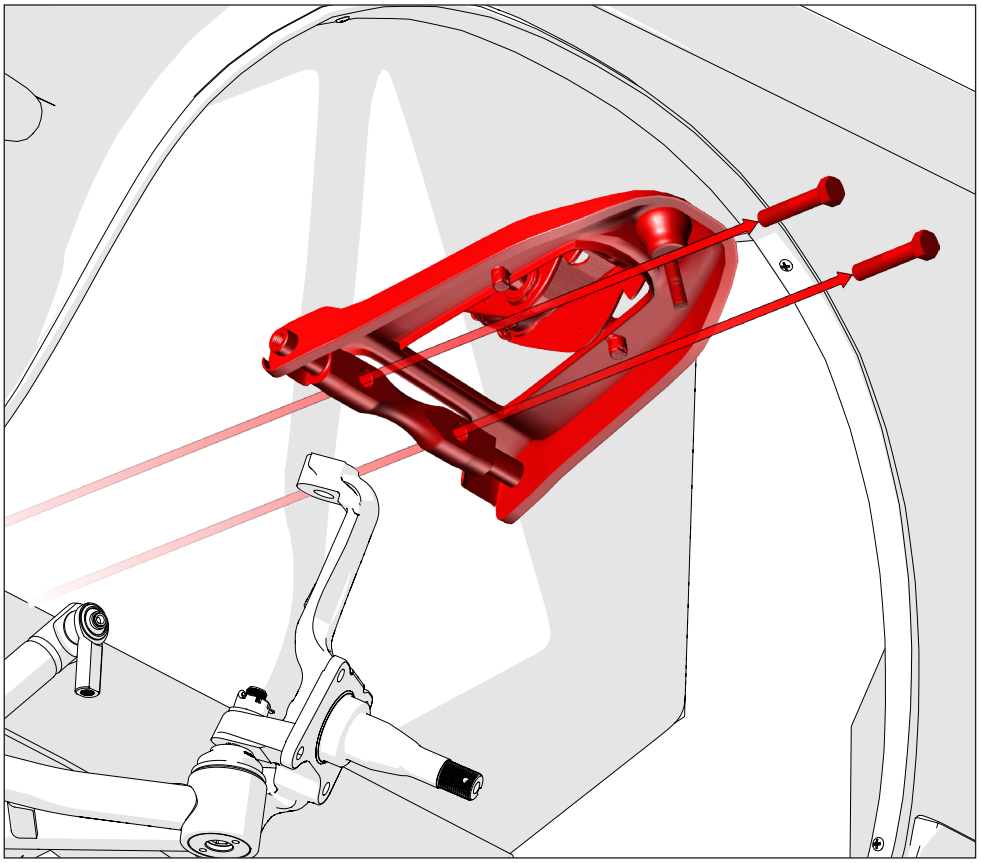
12 Loosen the control arm bolts and nuts.

Remove all shims (not shown) from behind the factory control arm's cross shaft. Retain the shim stacks for reinstallation during step 15.

Note: The vehicle must be aligned after upper control arm installation, with some of the shims removed.

Now remove the control arm nuts and bolts, then the control arm.

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



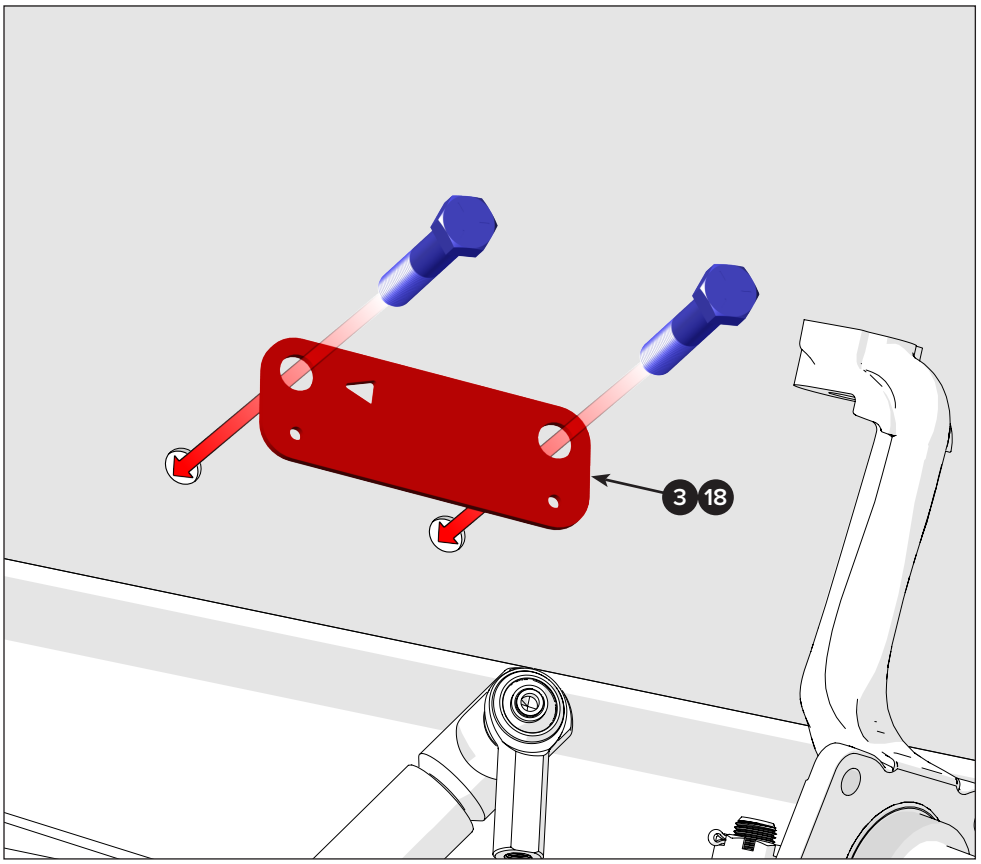
Installer's Note: *The upper control arm installation shown is for the 64-66 Mustangs that use the 3.75" cross shaft bolt spread. The 67-70 Mustang UCA installation is identical but uses the 4.25" cross-shaft and drill template.*

Skip steps 13 through 15 if you have already completed the Arning/Shelby drop, or if your car is a Shelby GT model. For these cars, it is possible that the included nut plates will not fit the holes properly due to differences in drop amounts.

13 Remove all rust from the area where the shims touched the inner fender. Look for cracks around the mount area, as these often occur. Repair any cracks before you proceed.

Align the large holes on the upper control arm drill template (positions 3 or 18) with the factory cross shaft holes. Make sure the arrow on the template points to the front of the vehicle for correct hole alignment.

Insert the factory bolts (marked in blue) through the template and into the inner fender.



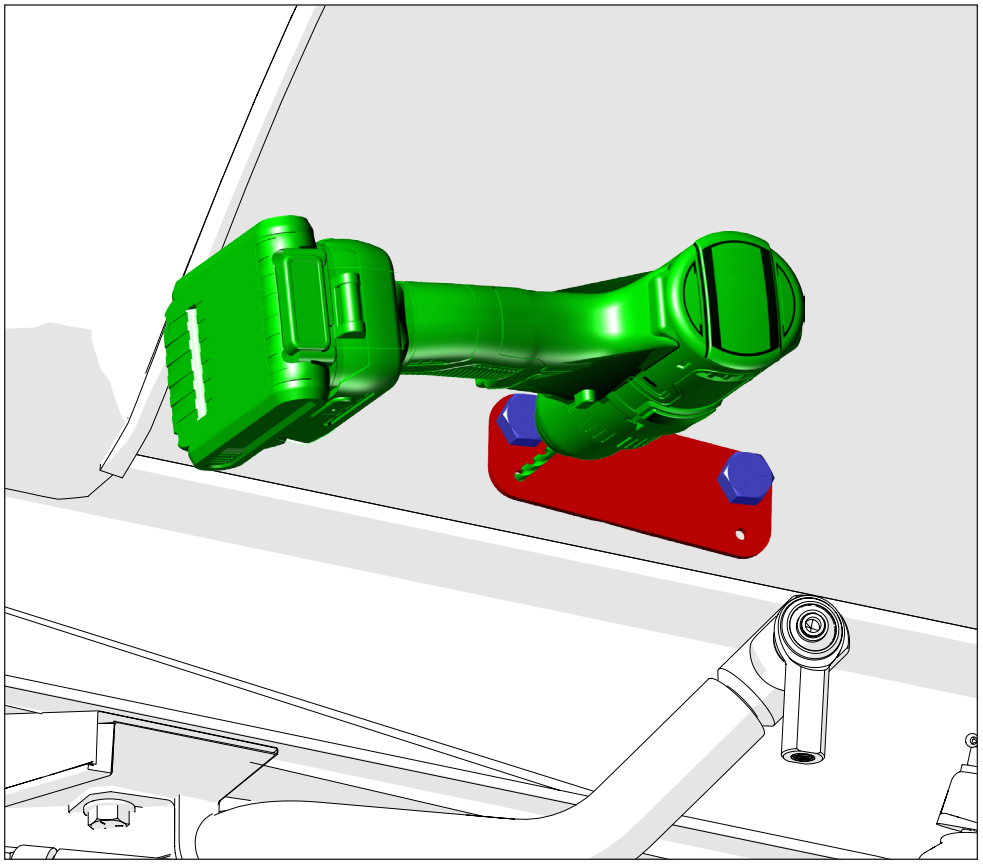
14 Fit a drill with a 5/32" bit.

Then, insert the drill bit into the smaller hole on the template and drill a pilot hole.

Repeat this process for the second pilot hole.

Once both pilot holes are drilled, remove the template and set it aside, as it will be used for the passenger side later.

Note: While it is not required, you can use factory nuts to secure the upper control arm (UCA) bolts.

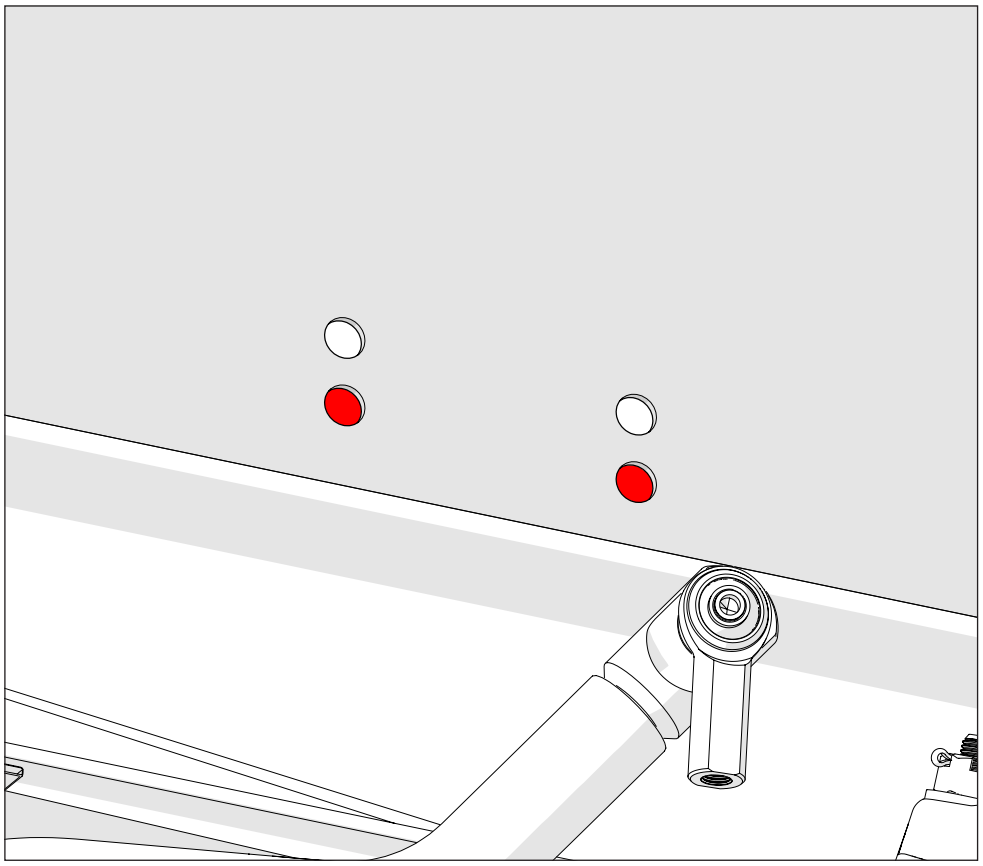


15 Now, switch to a 17/32” or 9/16” bit to enlarge the pilot holes to their final size (shown in red).

Note: Make sure that the new 1/2” bolts can easily pass through the drilled holes. If the bolts bind, use the drill and bit to enlarge the holes slightly.

Finally, remove any drilled metal burrs from both sides of the inner fender.

If there is bare metal from rust removal, prime and paint the inner fender before you proceed.

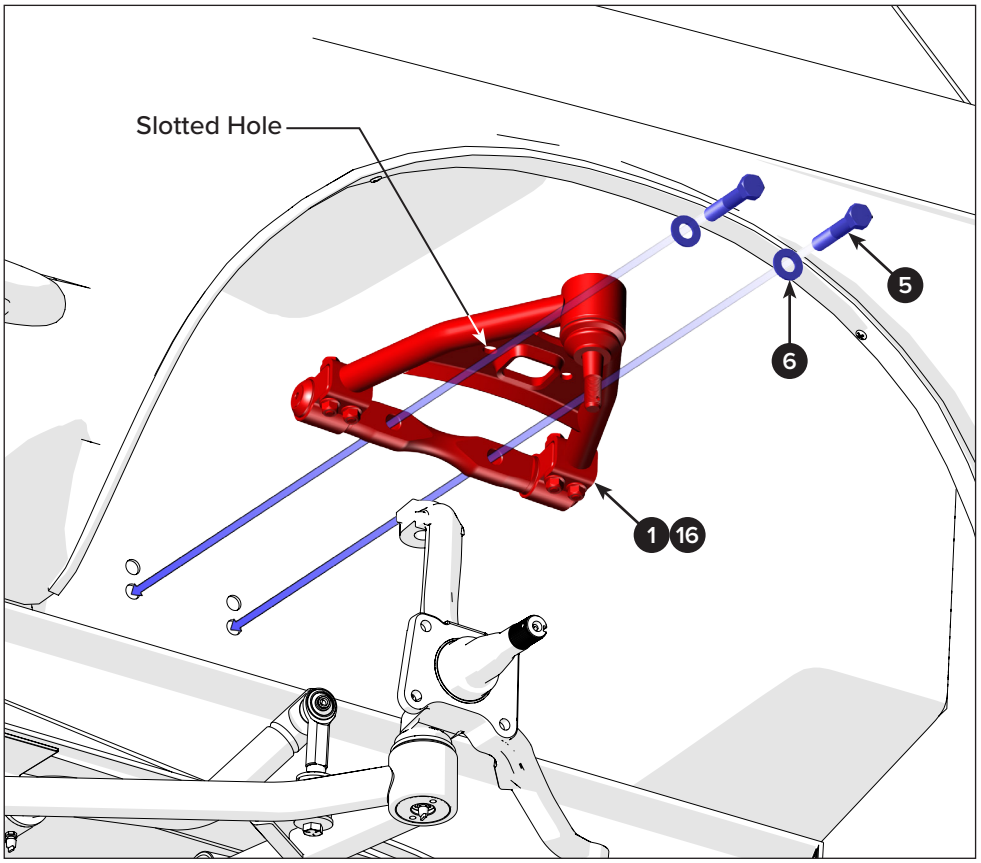


Installer’s Note: *The shock mount plate on the UCA has a slotted hole and a round hole. The slotted hole must point toward the front of the vehicle.*

16 Once the inner fender has been modified and painted, proceed to attach the left-hand QA1 upper control arm (1 or 16) to the vehicle.

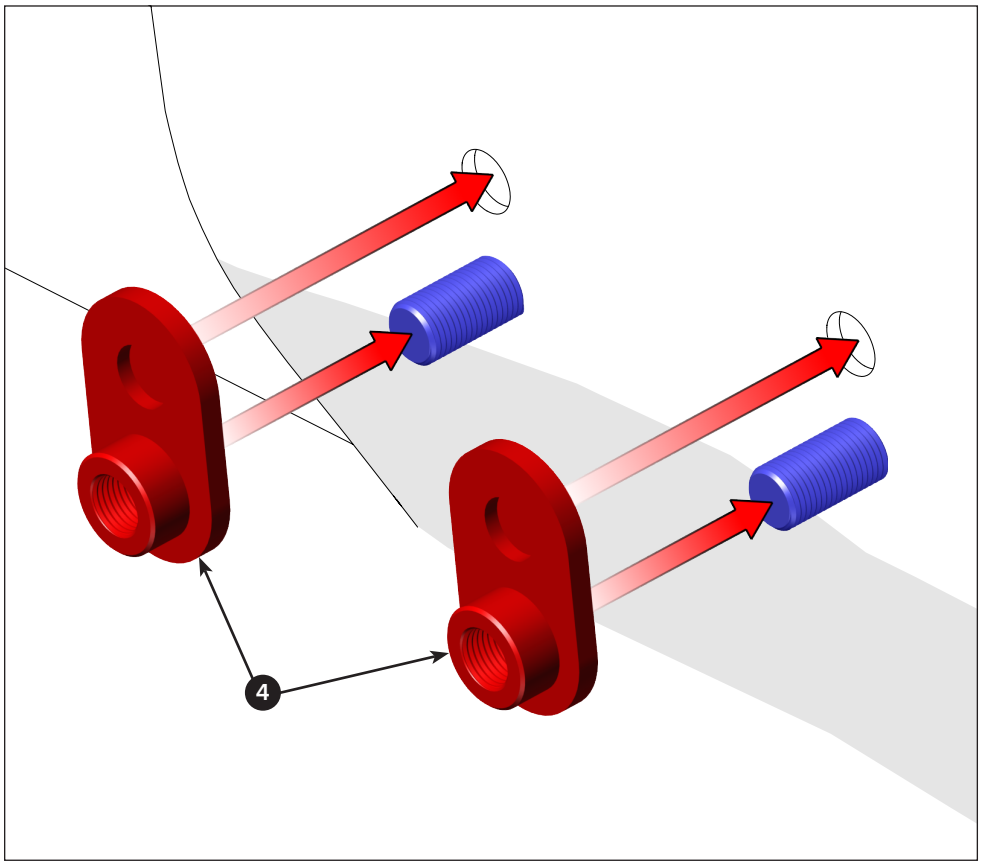
Insert two 1/2” x 2.50” bolts (5) and flat washers (6) (shown in blue) through the mount holes in the UCA cross shaft, and into the lower set of newly-drilled inner fender holes.

Note: The shock mount plate on the UCA has a slotted hole and a round hole. The slotted hole must point toward the front of the vehicle.



17 From inside the engine bay, put a nut plate (4) onto each of the upper control arm bolts (shown in blue).

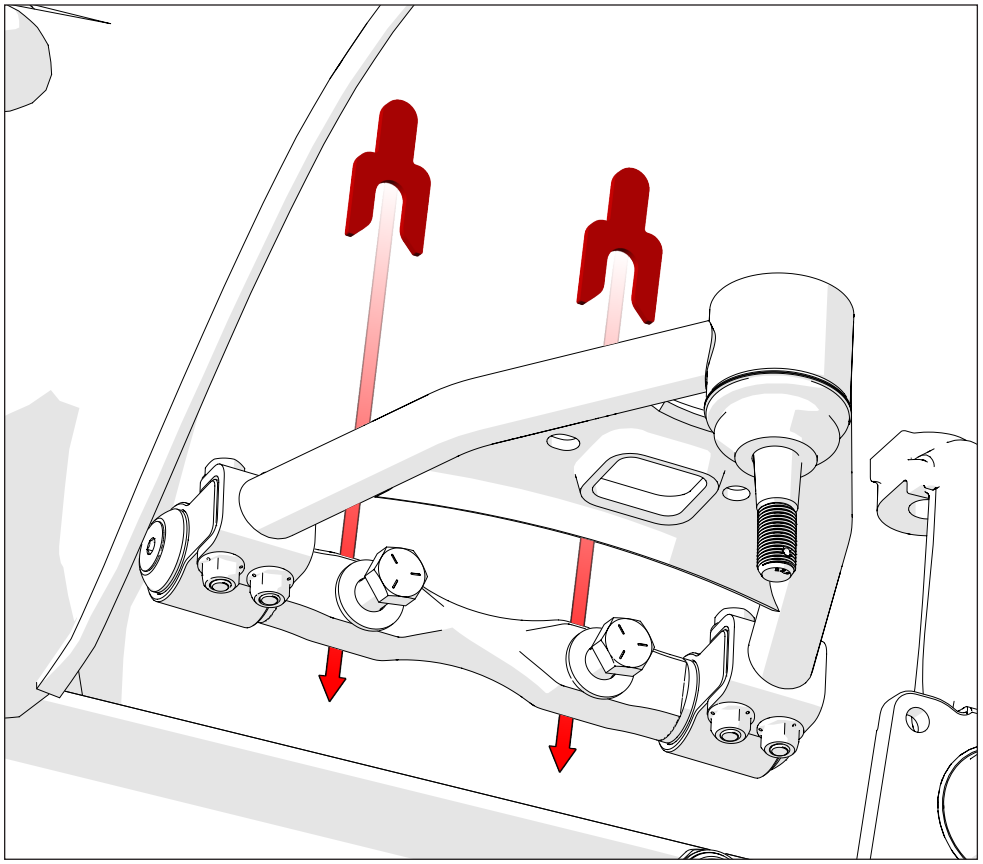
The bosses on the nut plates fit into and must full engage, the old factory inner fender bolt holes.



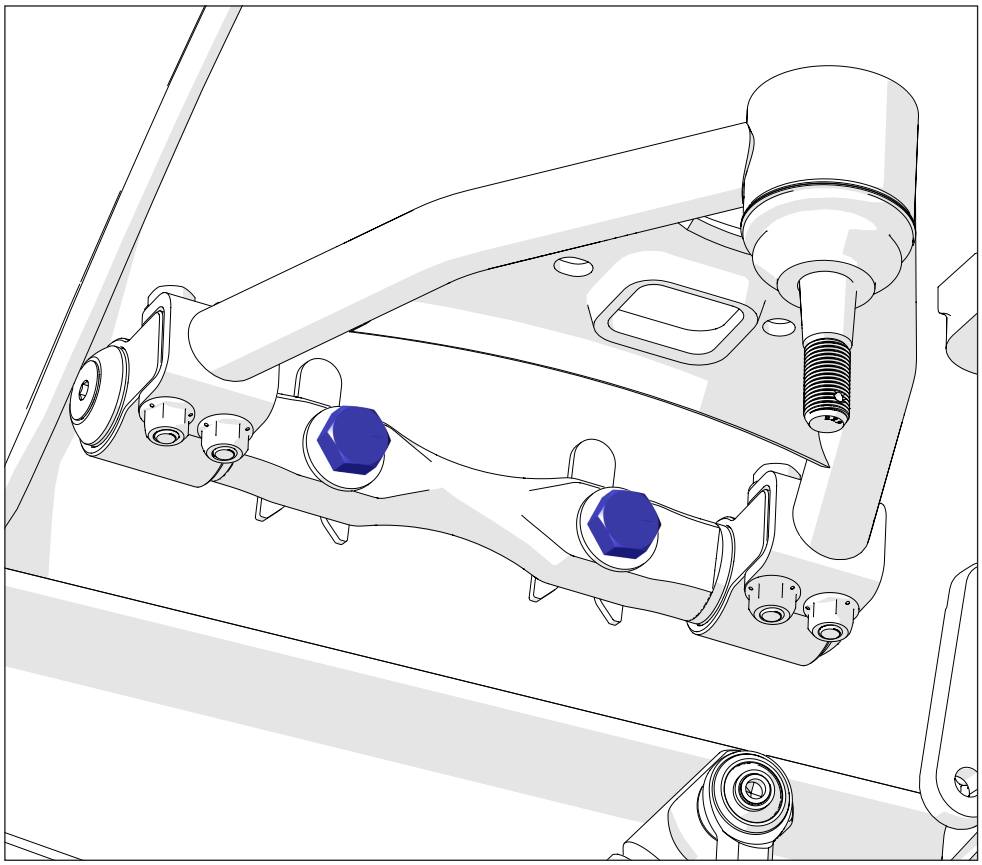
Installer's Note: *Upon completion of the UCA installation, the vehicle must be aligned to the specifications provided in step 35.*

18 Slide the alignment shims removed during step 12.

Note: Install the original shims to return the camber to approximately its original value.



19 Torque the UCA bolts (shown in blue) to 75 lb-ft.

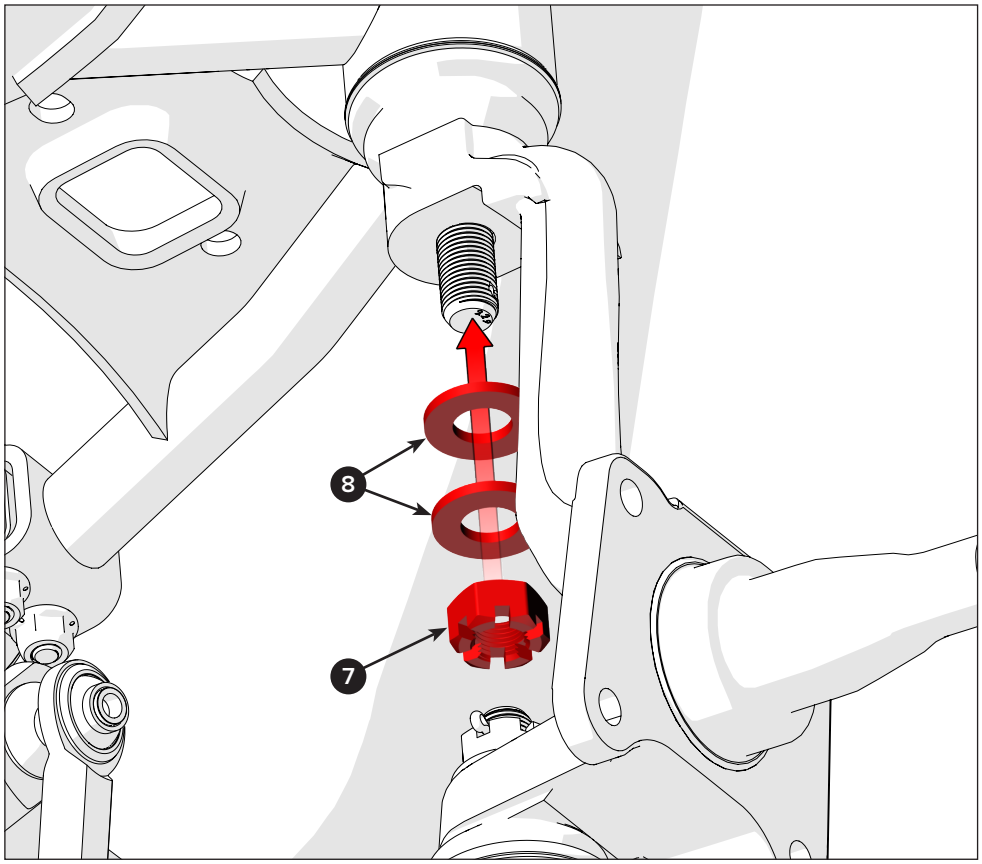


20 Lower the upper control arm and insert the ball joint stud into the top of the steering knuckle.

Next, attach the ball joint to the knuckle with a 9/16” flat washer (8) and a 9/16” castle nut (7).

Note: The upper control arm kit includes four 9/16” flat washers.

Most applications will require only one washer. However, if the cotter pin hole in the ball joint stud extends beyond the slots in the castle nut, you must use two washers. The cotter pin must fully lock into place within the castle nut.



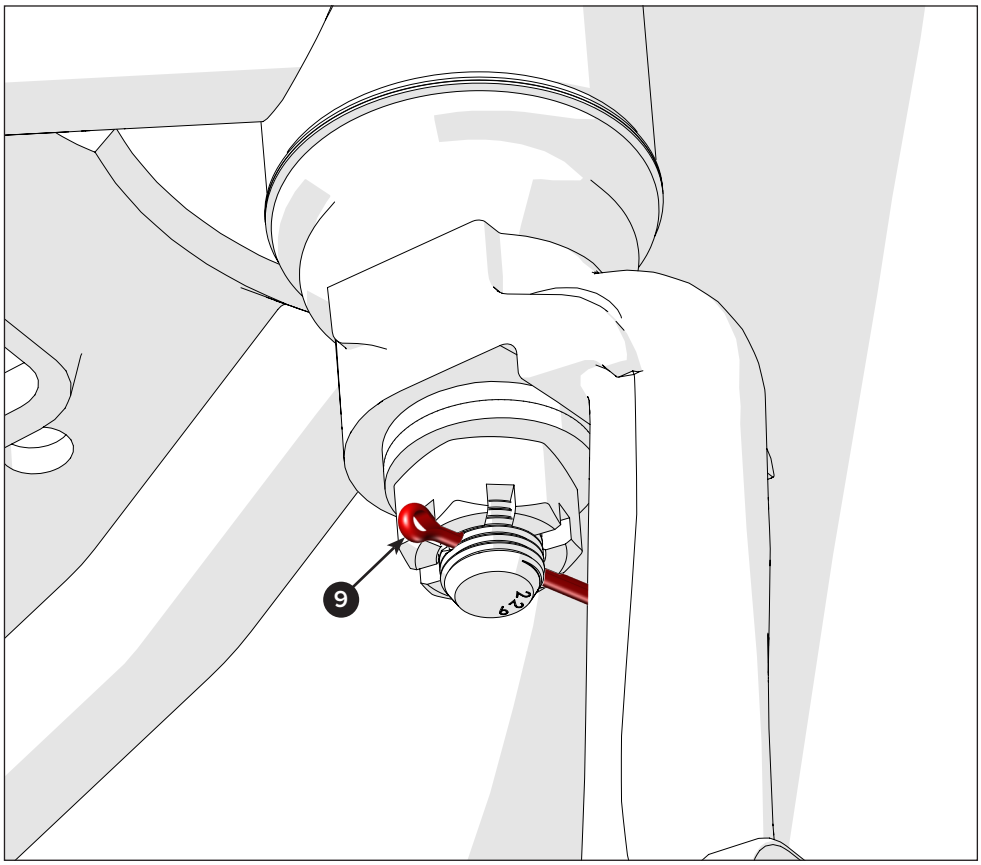
21 Torque the castle nut to 65 lb-ft., then to the next available castle nut slot until the cotter pin hole is accessible.

Do not loosen the nut to align the cotter pin hole!

Insert a cotter pin (9) and bend the ends to hold it in place.

Repeat steps 2 through 21 to install the right-hand upper control arm.

With the upper control arm installation completed, attach the sway bar to the lower control arm if it was disconnected during step 3.



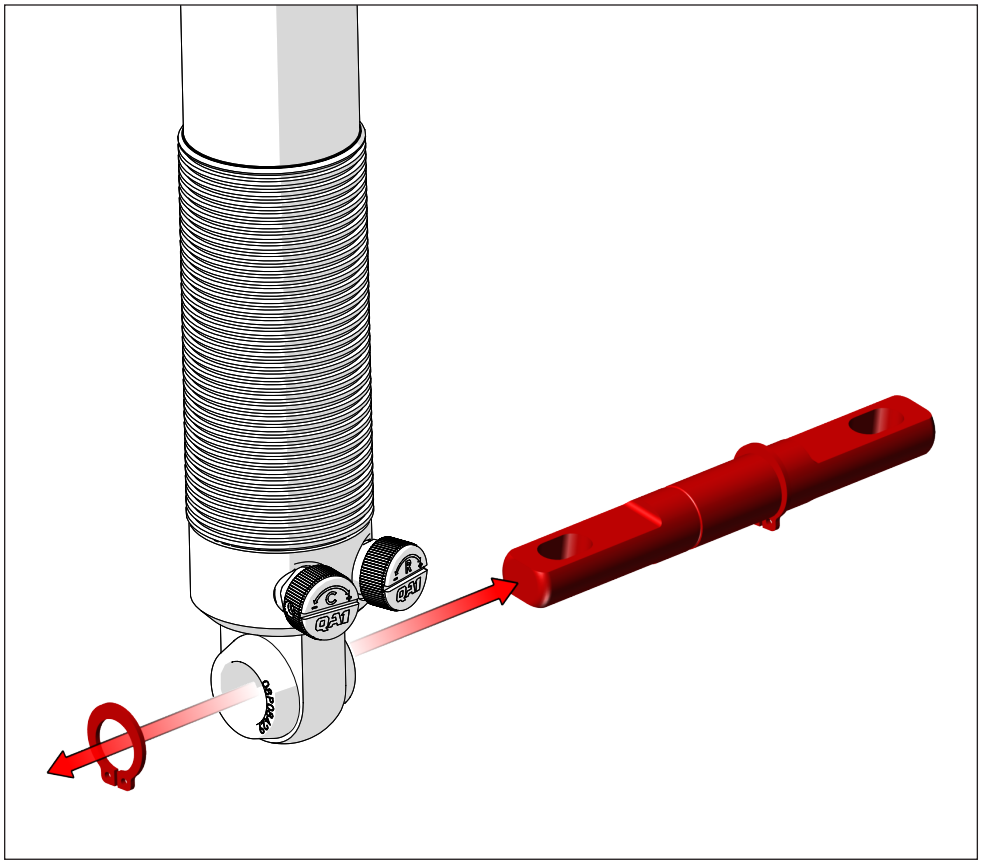
Installer's Note: *The QA1 Mustang coilover shocks included in your system are designed to fit directly with the factory control arms. They will require modifications to fit on the QA1 upper control arms.*

This UCA arm kit includes all the necessary parts to adapt the shocks for use with the QA1 upper control arms. The steps that follow will provide instructions to make that conversion.

22 First, remove one outer retaining ring with an external snap-ring pliers.

Then, push the cross pin out of the urethane bushing.

Discard the cross pin and retaining rings, as they will not be reused.

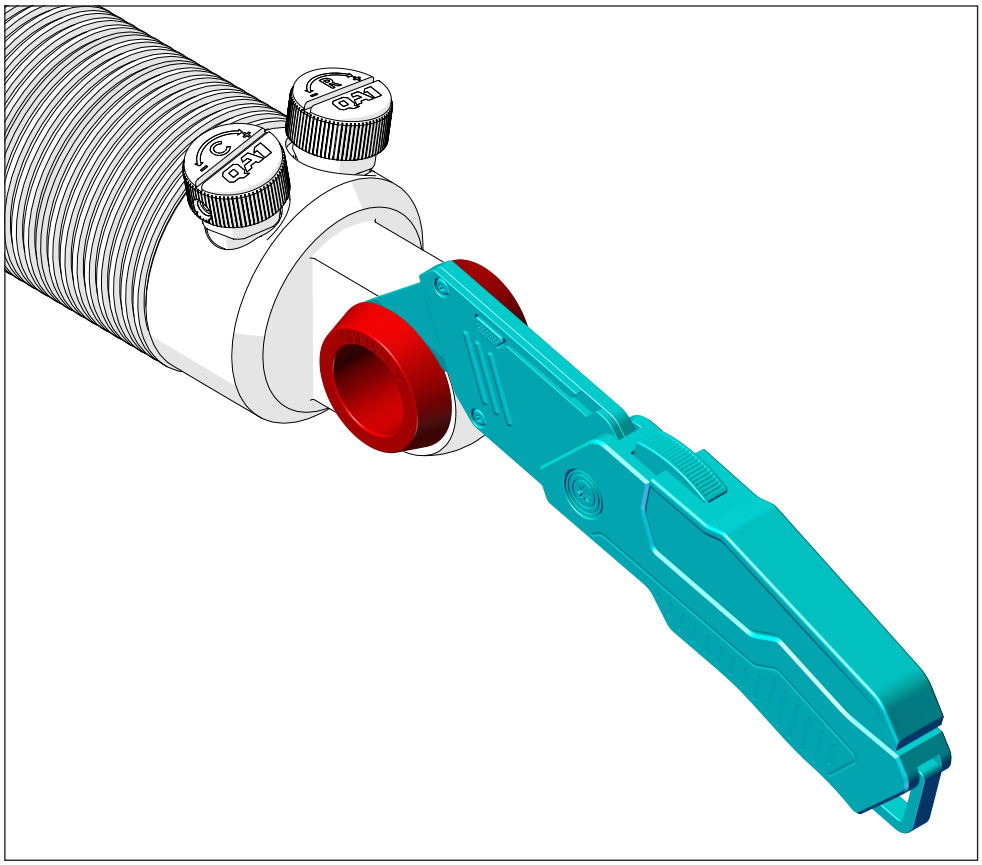


23 First, remove the urethane bushing from the lower shock eyelet. This bushing is machine-pressed into the shock base and is difficult to remove by hand.

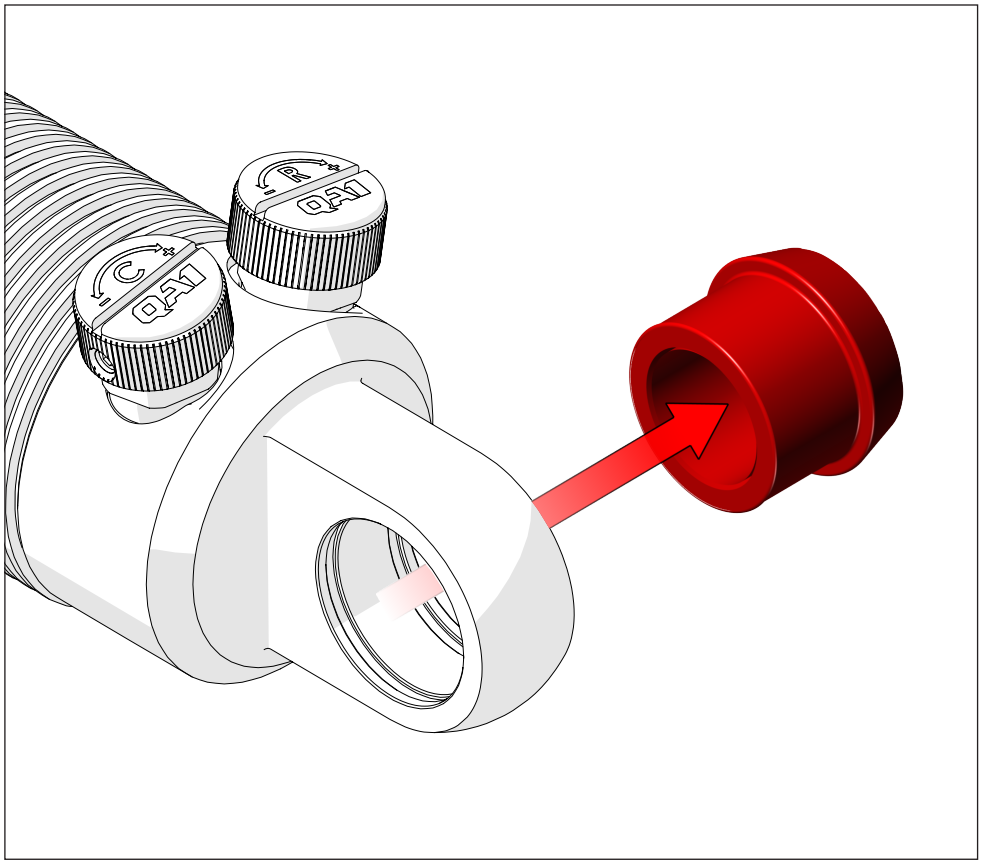
To make the process easier, QA1 recommends a box cutter (shown in teal) or a similar cutting tool with a fresh, sharp blade.

Carefully cut through one side of the bushing as close to the shock base as possible.

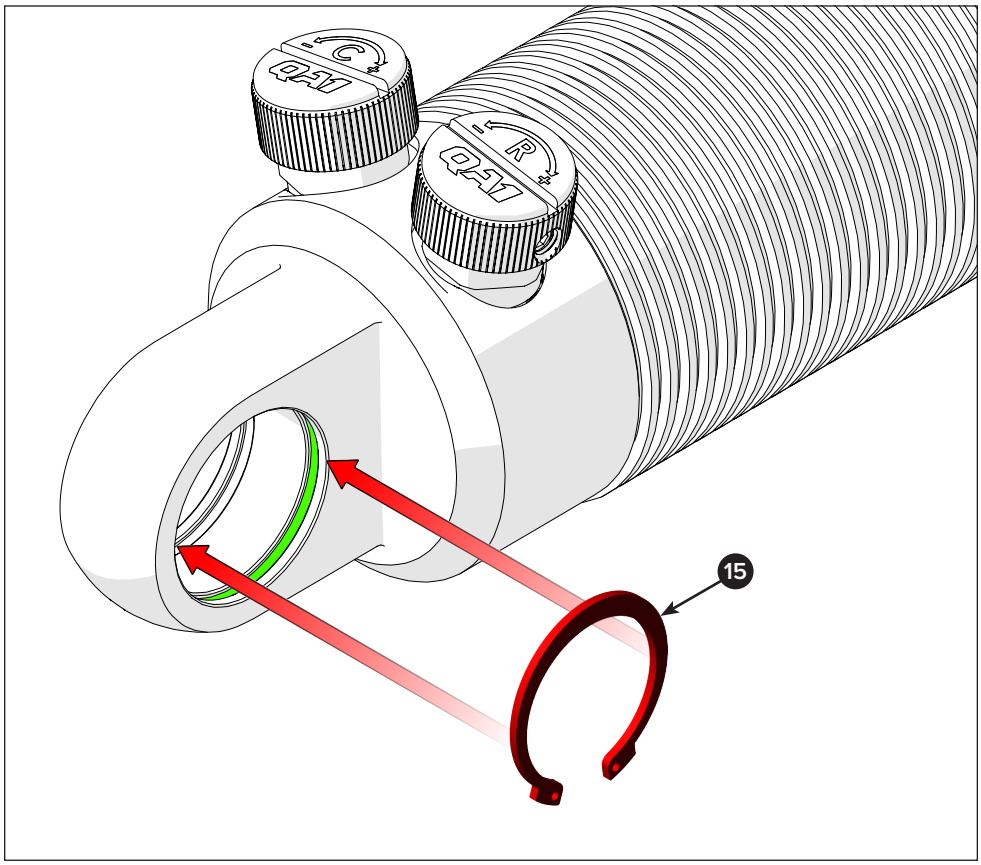
Note: To avoid damage to the anodized finish, keep the blade parallel to the shock base and apply firm pressure as it cuts through the bushing.



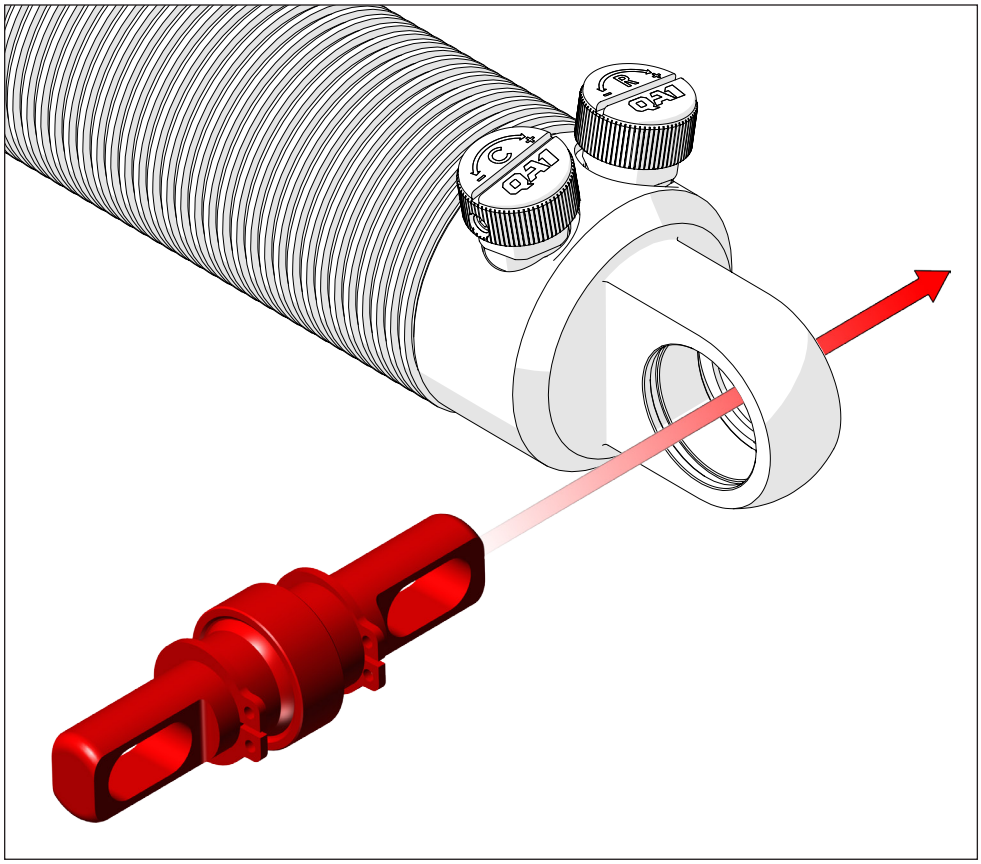
24 Remove the remaining bushing from the shock eyelet. Discard it, as it will not be reused.



25 Fit one internal retaining ring (15) into the ring groove (marked in green) in the shock base.



26 Now, insert the cross pin assembly into the bore in the shock base until it fully contacts the retaining ring.

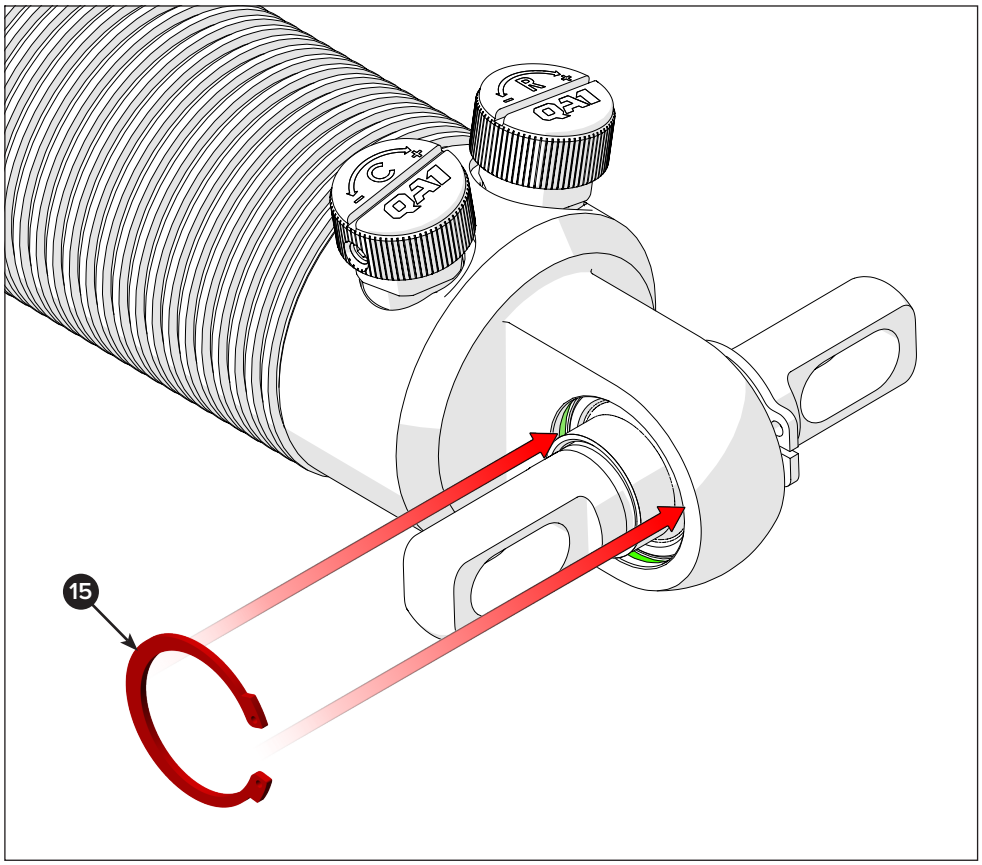


27 Next, insert the second internal retaining ring (15) into the ring groove of the shock base (indicated in green).

Note: This retaining ring has a tight fit. Use a rubber mallet and a drift pin to make sure it is fully seated in the groove.

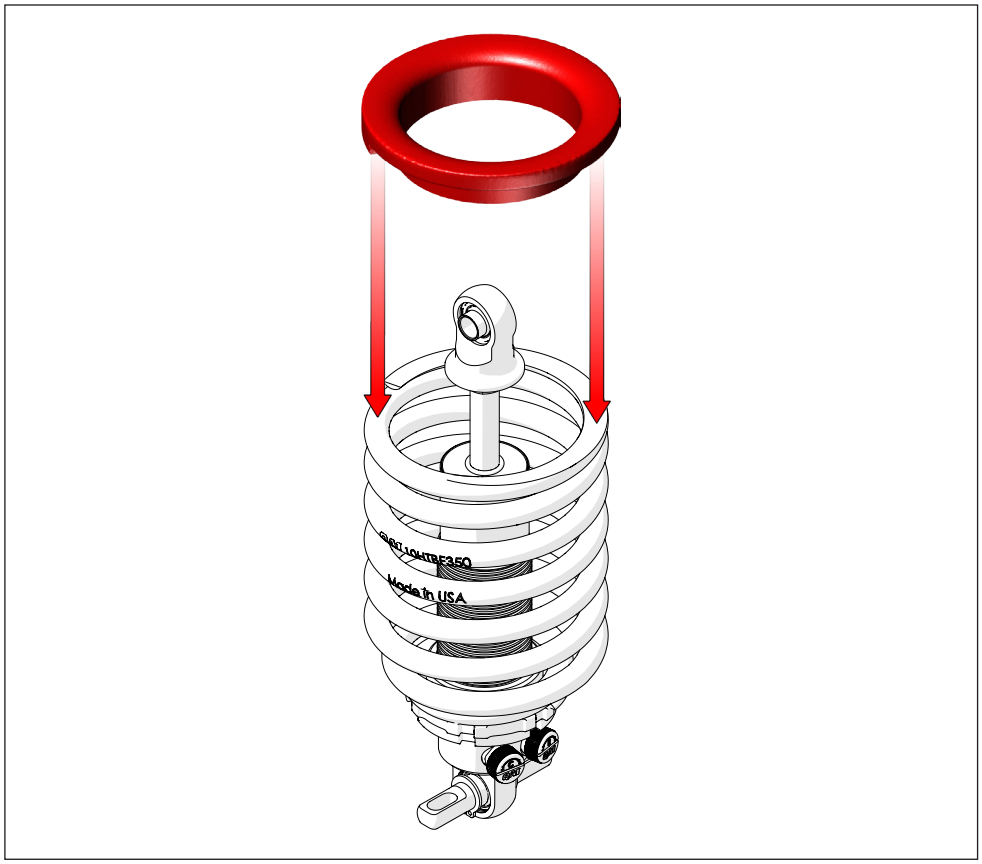
Repeat steps 22 through 27 to modify the other shock assembly.

Once you have completed the modifications to the shocks, refer to the included assembly instructions (9919-255) that come with your Mustang shock kit.

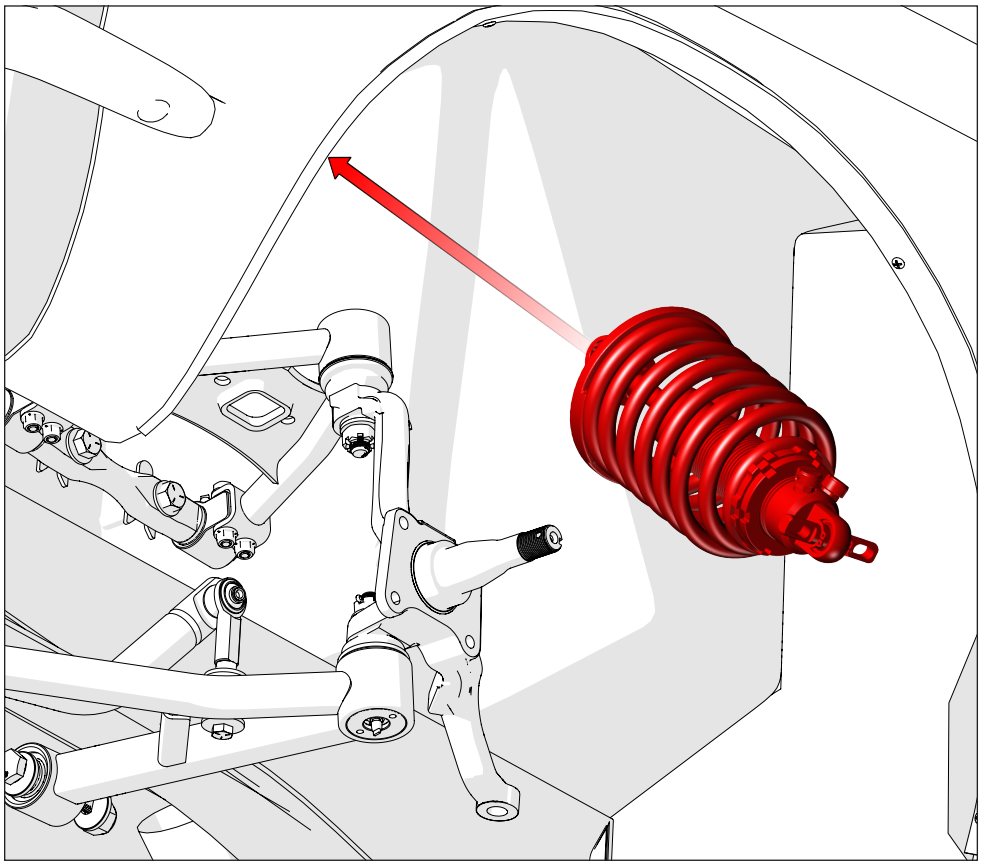


28 After the shocks have been assembled as shown in assembly instructions 9919-255, place the spring isolator, which was removed during step 11, on top of the coil spring.

Make sure to align the notch in the isolator with the spring's top.

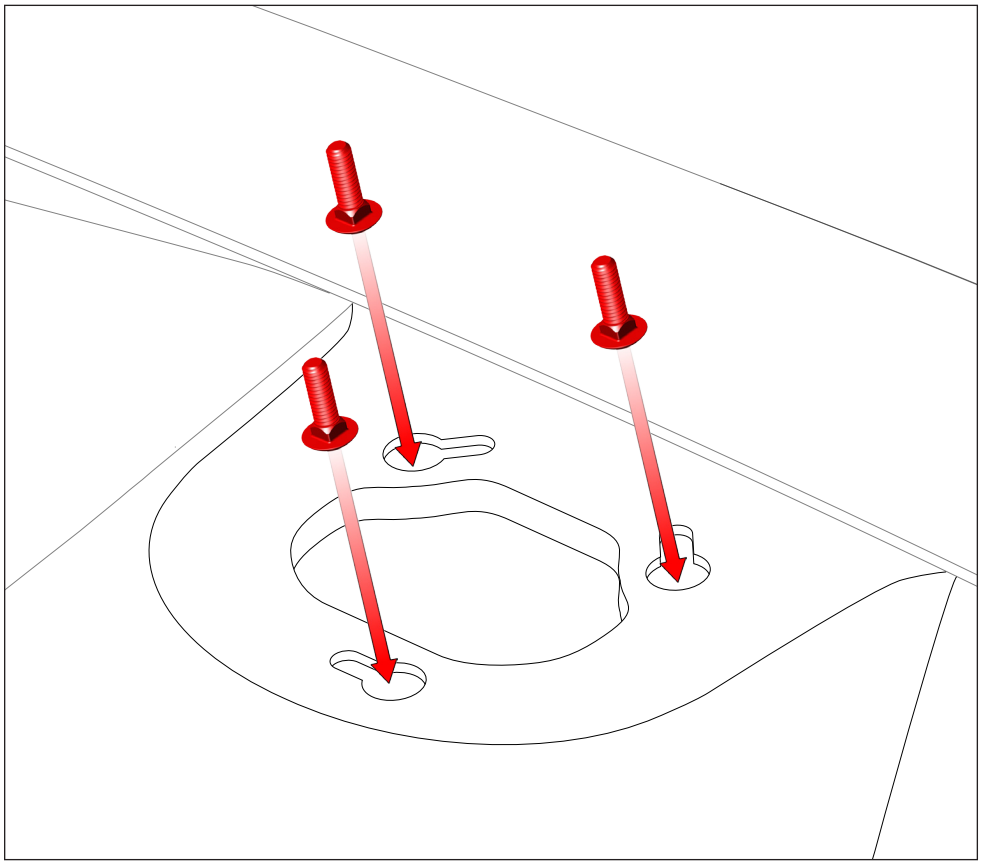


29 Now, insert the top of the shock assembly through the shock opening in the inner fender (not shown).



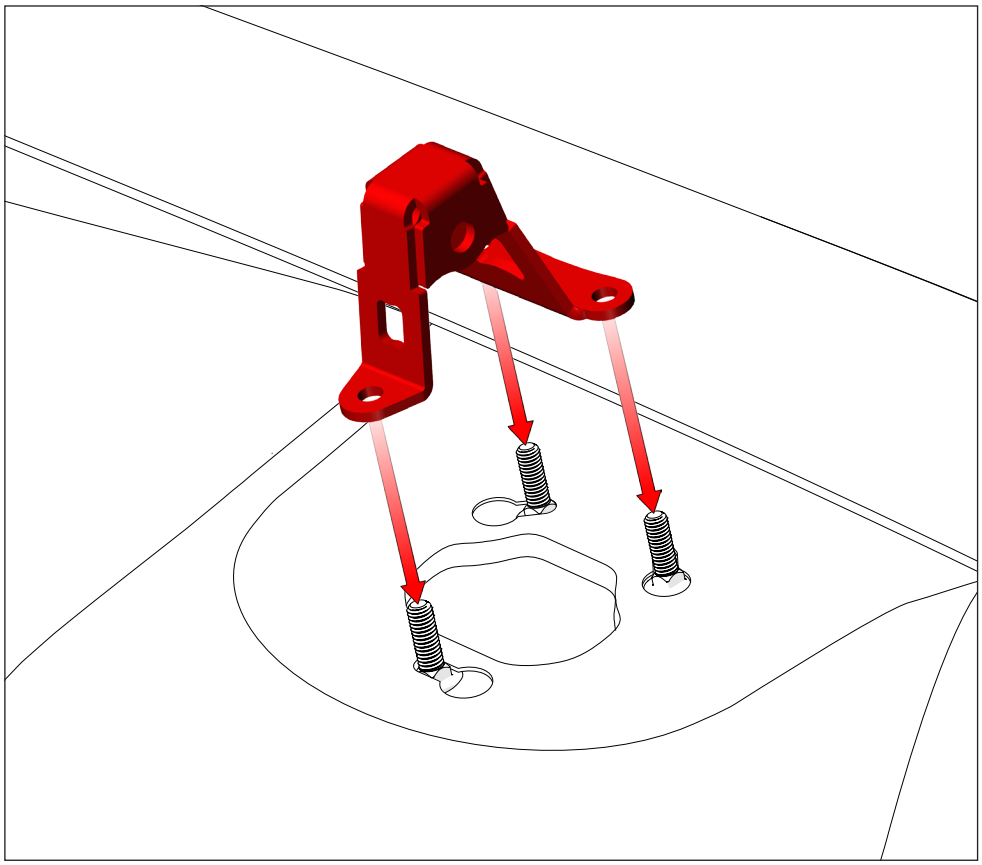
30 Next, install the shock tower carriage bolts removed during step 7 into the slots in the inner fender.

Push the bolts into the small ends of the slots until they are fully engaged.



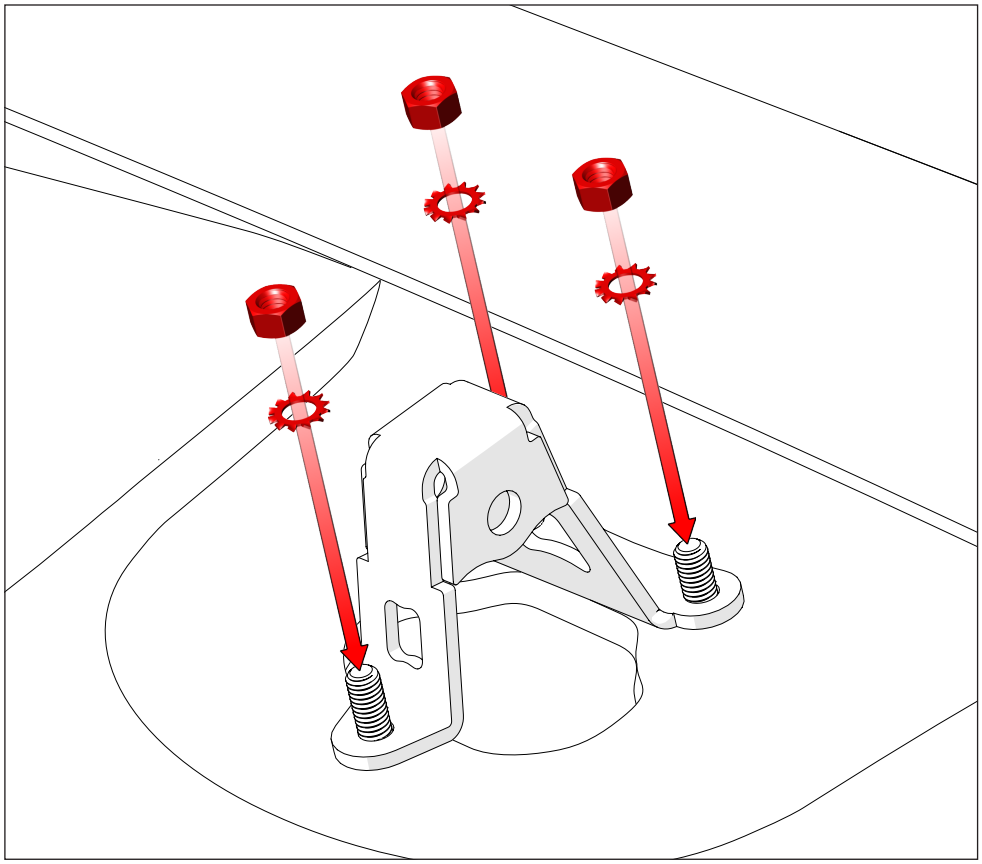
Installer's Note: *Refer to the parts list in the Mustang coilover installation instruction 9919-255 to complete the shock installation from here to step 33.*

31 First, put the new QA1 shock tower onto the studs.



32 After that, put the washers and nuts removed during step 5 onto the carriage bolts.

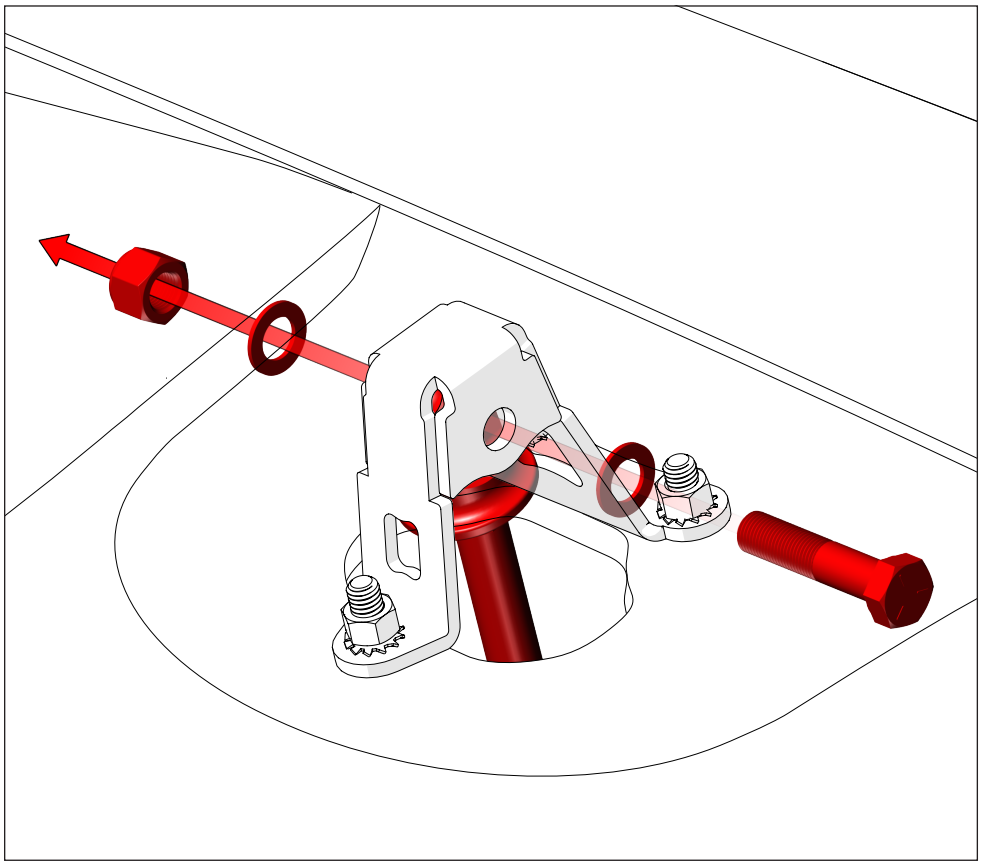
Torque the nuts to 26 lb-ft.



33 Next, insert the top of the shock assembly through the shock opening in the inner fender.

Attach the shock to the shock tower with one 1/2” x 2.25” bolt, two flat washers, and one 1/2” Nylock nut.

Torque the bolt to 50 lb-ft.

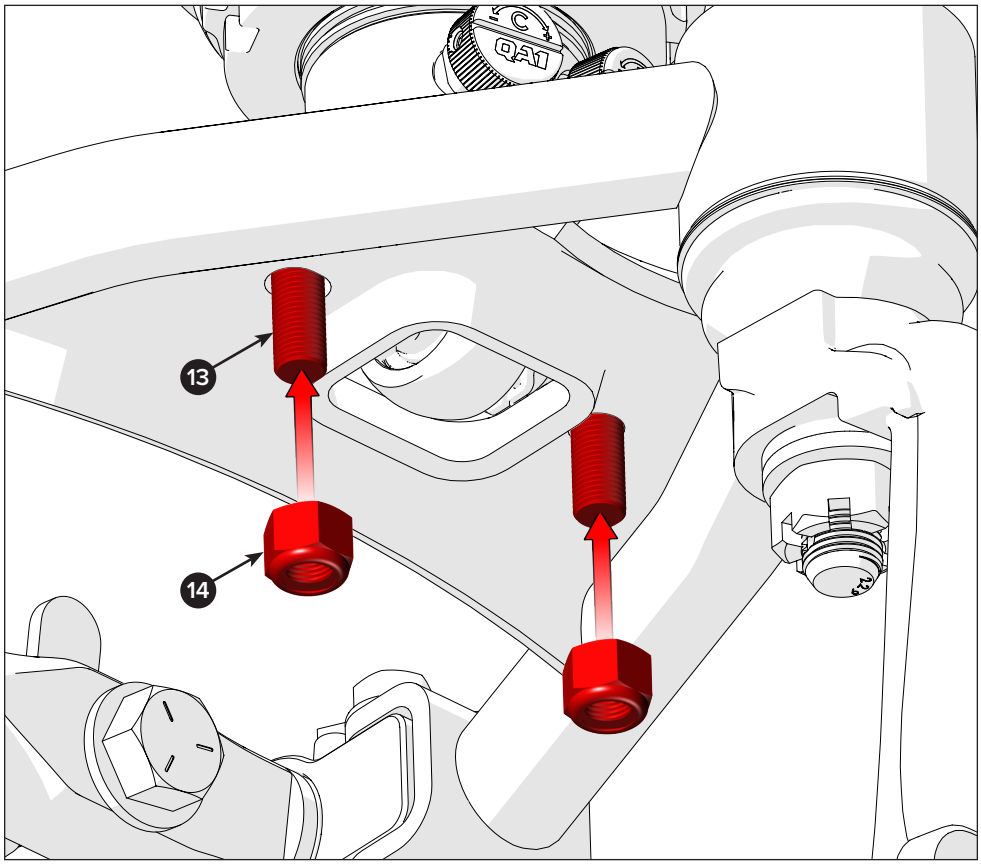


34 Align the slots on the lower shock T-bar with the holes on the upper control arm.

Insert two 3/8” x 1.25” hex bolts (13) through the T-bar and control arm.

Attach the bolts with two 3/8” Nylock nuts (14) and torque them to 35 lb-ft.

Repeat steps 28 through 34 to install the RH shock assembly.



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.

1964-1970 FORD MUSTANG ALIGNMENT SPECIFICATIONS				
CASTER		CAMBER	TOE	
3° MIN*	5° MAX	0.5° ± 0.5°	0.10° MIN	.30° MAX

*3° is the recommended caster setting for Mustangs with manual steering.

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

These alignment specifications apply specifically to 64-66 and 67-70 Mustangs equipped with QA1 upper and lower control arms.

The QA1 LCAs come assembled and set to a factory specification, but they are adjustable.

64-66 Mustang: Only the LCA's front axial ball joint is adjustable. The jam nut (13) must be torqued to 75 lb-ft once adjustments have been completed.

67-70 Mustang: LCAs are adjusted at the axial ball joint and with the use of camber bolts at the pivot bushing. The jam nut (13) and camber bolt must each be torqued to 75 lb-ft once adjustments have been completed.

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

DISCLAIMER / WARRANTY

QA1 warrants the products to be free from defects in material and workmanship for one year from the date of sale to the original purchaser. QA1 makes no other warranty of any kind, expressed or implied.

QA1 shall have no obligation under the preceding warranty where the defect results from improper or abnormal use, your negligence, vehicle accident, inappropriate or incorrect installation or maintenance, nor when the product has been repaired or altered in any way. QA1's liability in the case of defective products subject to the preceding warranty shall be limited to the repair or replacement of the defective products at QA1's option.

The user understands and recognizes that racing parts, specialized street rod equipment, and all parts and services sold by QA1 are exposed to many varied conditions due to the manner in which they are installed and used. It is the user's responsibility to determine the proper use or application of QA1 products.

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Motorsports are inherently risky; therefore, no warranty or representation is made as to the product's ability to protect the user from injury or death. The user is fully aware and assumes that risk.

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