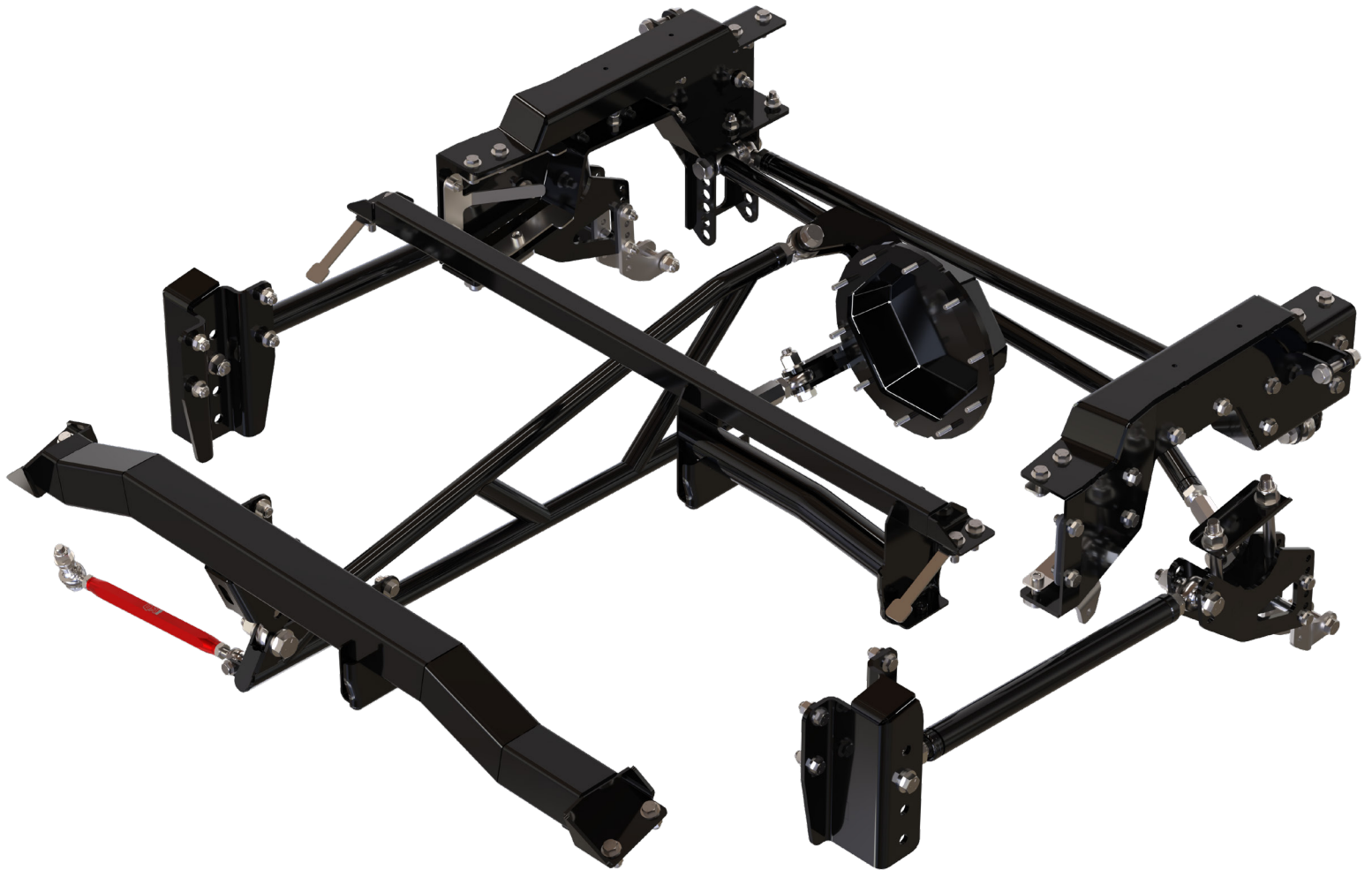


QA1
GO DRIVE IT.



R145-200 SHOWN

QA1 TORQUE ARM 99-06 CHEVROLET SILVERADO 1500/GMC SIERRA 1500, 2007 SILVERADO 1500 CLASSIC/SIERRA 1500 CLASSIC—INSTALLATION INSTRUCTIONS: R145/6-200/R245/6-200

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 torque arm kit. 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 torque arm kit 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 torque arm kit 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 torque arm kit 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 does not require 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 torque arm kit. This torque arm is designed to work with QA1 coilover shocks and the 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
- Cut-Off Tool or Plasma Cutter
- Torque Wrench (lb-ft)

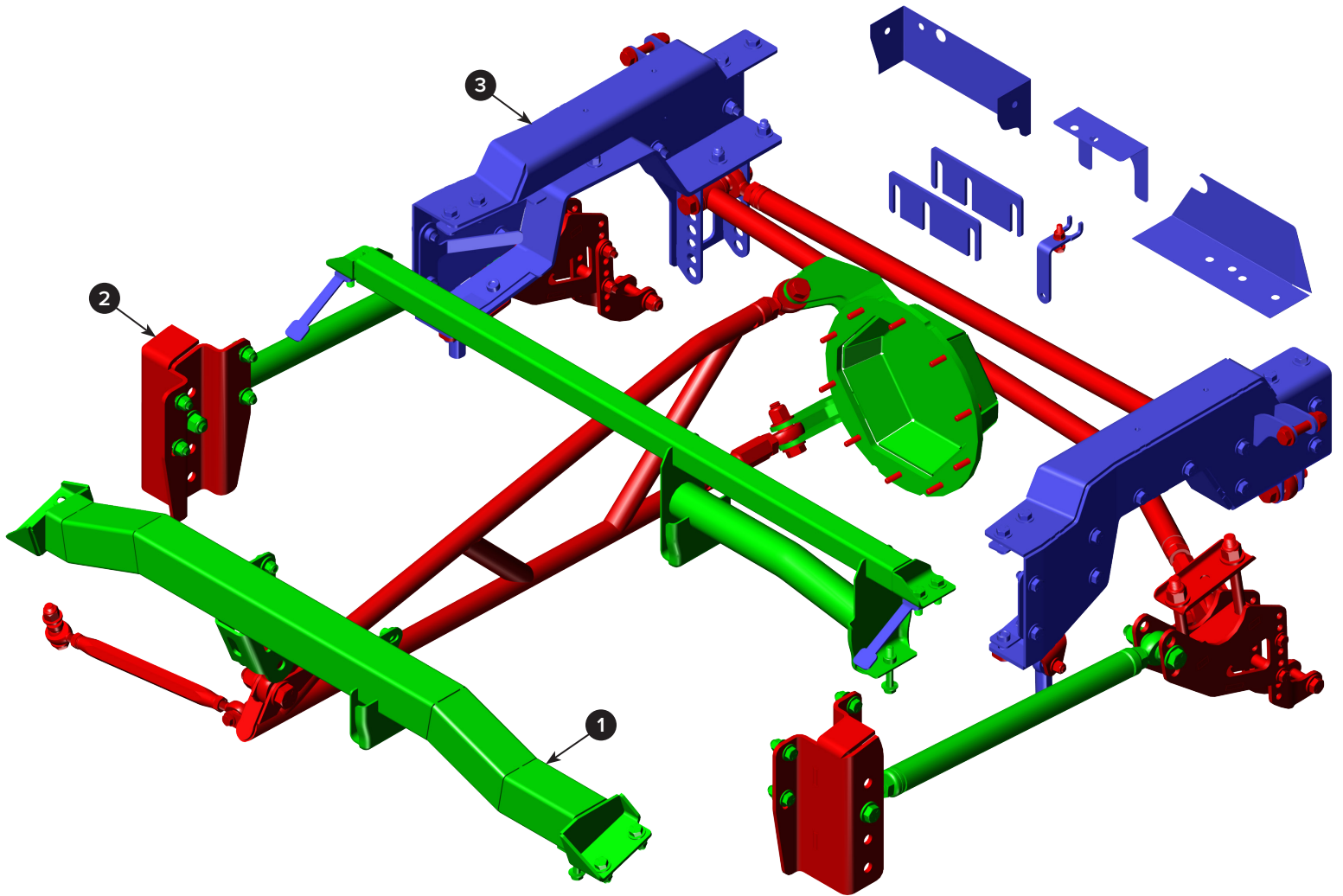
SAFETY FIRST

- 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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99-06 SILVERADO 1500/SIERRA 1500, 2007 SILVERADO 1500
CLASSIC/SIERRA 1500 CLASSIC—SHORT BED TORQUE ARM
R145-200/R245-200 OVERVIEW

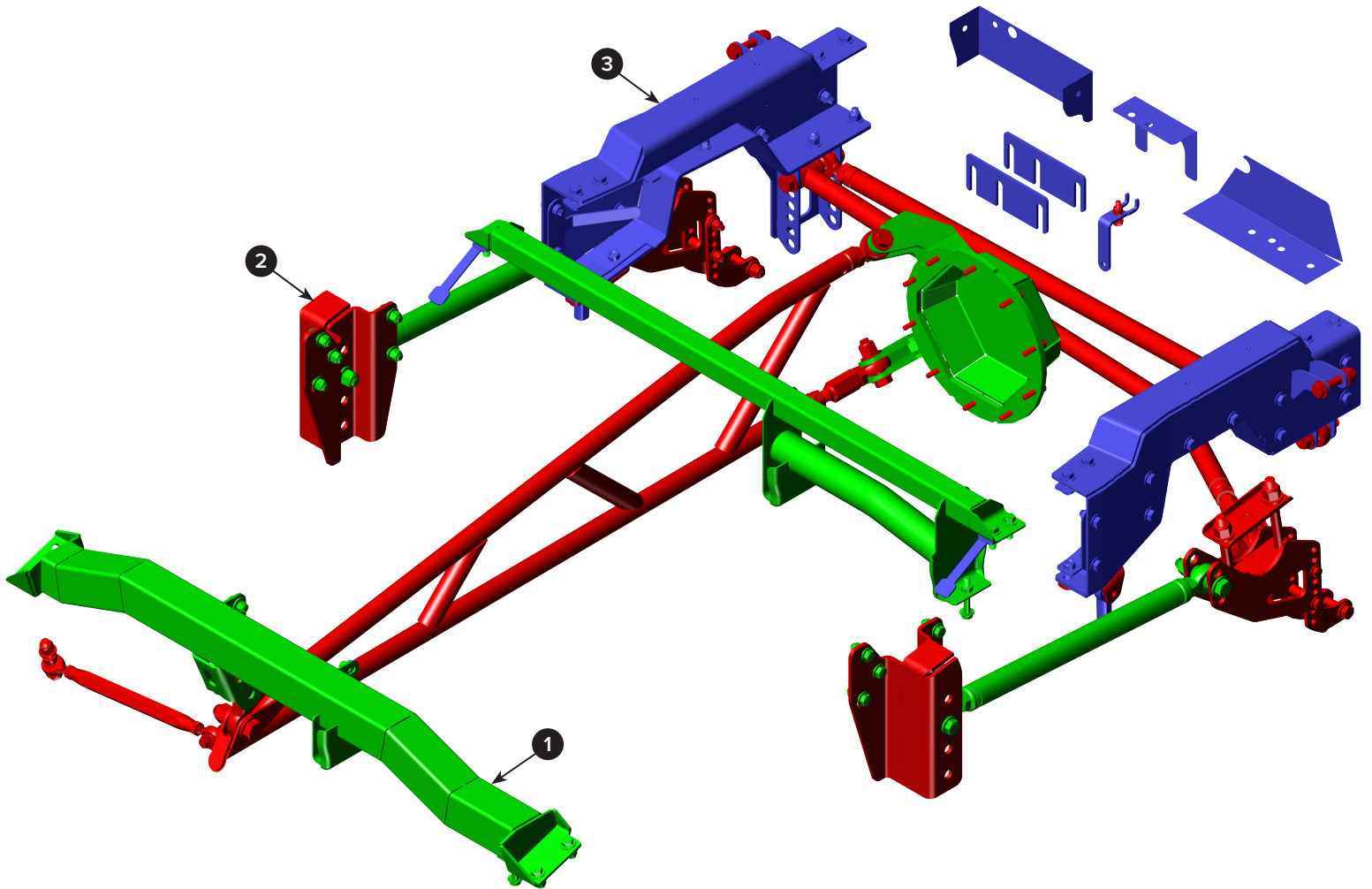


1999-2007 SILVERADO/SIERRA, SHORT BED TORQUE ARM, R145/245

POSITION	PART #	DESCRIPTION	QTY	REFER TO PAGE
1	RX45-1	X-MEMBER, T-ARMS w/INSTALL & HARDWARE KITS	1	8-9
2	RX45-2	TA, PH BAR, AXLE MOUNT w/INSTALL & HARDWARE KITS	1	10-15
3	RX45-4	FRAME NOTCH w/INSTALL & HARDWARE KITS	1	18-19



99-06 SILVERADO 1500/SIERRA 1500, 2007 SILVERADO 1500
CLASSIC/SIERRA 1500 CLASSIC—LONG BED TORQUE ARM
R146-200/R246-200 OVERVIEW

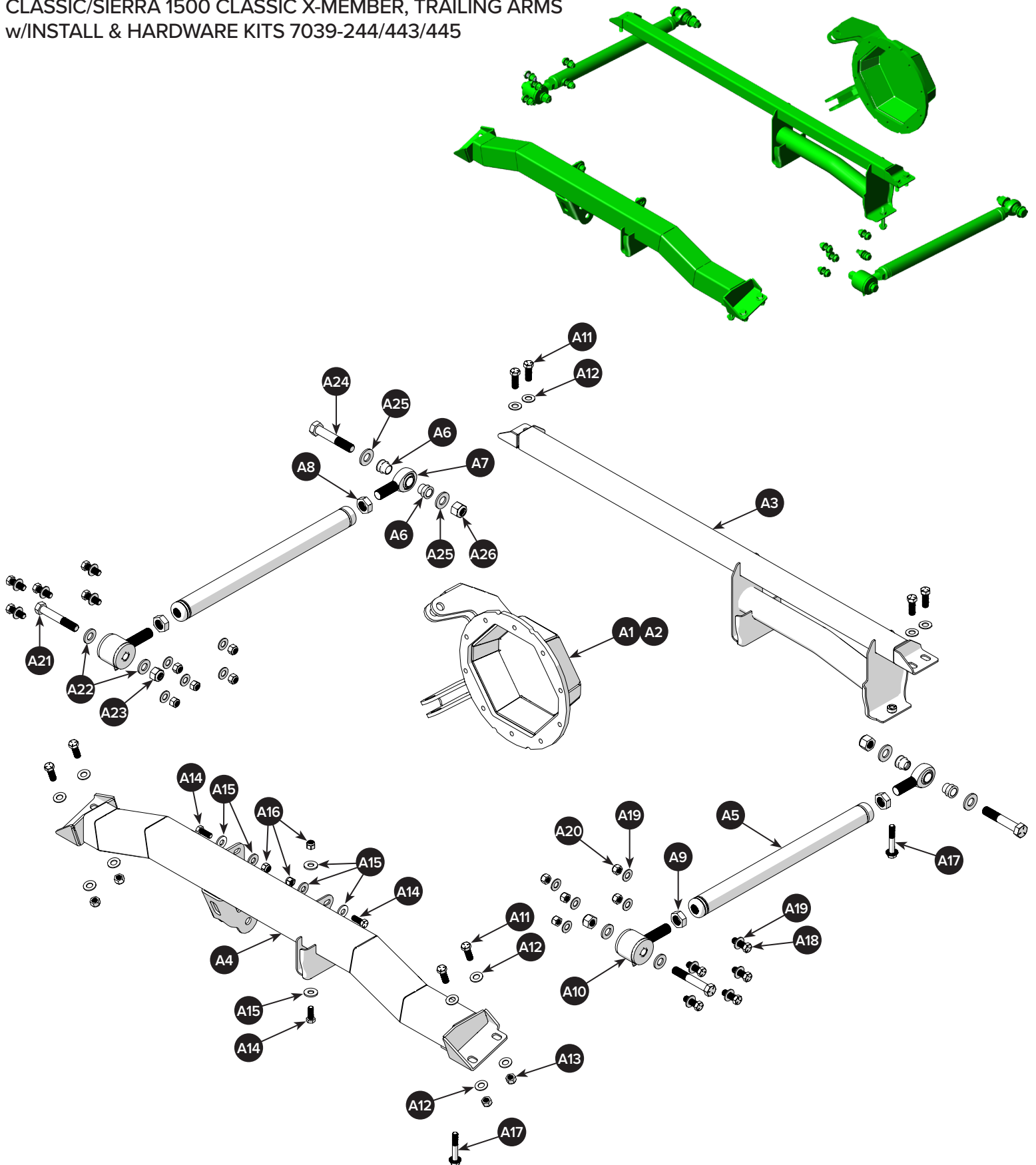


1999-2007 SILVERADO/SIERRA, LONG BED TORQUE ARM, R146/246

POSITION	PART #	DESCRIPTION	QTY	REFER TO PAGE
1	RX45-1	X-MEMBER, T-ARMS w/INSTALL & HARDWARE KITS	1	8-9
2	RX45-3	TA, PH BAR, AXLE MOUNT w/INSTALL & HARDWARE KITS	1	10-15
3	RX45-4	FRAME NOTCH w/INSTALL & HARDWARE KITS	1	16-19



99-06 SILVERADO 1500/SIERRA 1500, 2007 SILVERADO 1500 CLASSIC/SIERRA 1500 CLASSIC X-MEMBER, TRAILING ARMS w/INSTALL & HARDWARE KITS 7039-244/443/445



1999-2007 SILVERADO/SIERRA, SWB/LWB, X-MEMBERS & TRAILING ARMS, RX45-1

POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
A1	9037-828	WELDMENT, GM 10 BOLT, TA MOUNT	1	—
A2	9093-137	DECAL, QA1 1.367" X 3.250" (NOT SHOWN)	1	—
A3	9637-921	WELDMENT, GAS TANK CROSS MEMBER	1	—
A4	9637-920	WELDMENT, TORQUE ARM CROSS MEMBER	1	—
A5	9037-760	WELDMENT, TRAILING ARM	2	—

1999-2007 SILVERADO/SIERRA, SWB/LWB, TRAILING ARM INSTALL KIT 7039-244

POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
A6	SG12-106	HIGH MISALIGNMENT SPACER, SS	4	—
A7	XML12	ROD END (X) ENDURA ALLOY HT	2	—
A8	JNL12S	NUT, JAM 3/4-16 LH	2	—
A9	JNR12S	JAM NUT, STEEL 3/4-16 RH	2	—
A10	NA	PANHARD SHORT END ASSEMBLY	2	—

1999-2007 SILVERADO/SIERRA, SWB/LWB, TRAILING ARM & GAS TANK X-MEMBER HARDWARE KIT 7039-443

POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
A11	NA	BOLT, HEX 7/16-14 X 1.25"	8	49 lb-ft
A12	9005-243	WASHER, FLAT 7/16" SAE	12	—
A13	NA	NUT, NYLOCK 7/16-14	4	—
A14	9012-229	BOLT, HEX 3/8-16 X 1"	3	31 lb-ft
A15	9005-256	WASHER, FLAT 3/8" SAE	6	—
A16	NA	NUT, NYLOCK 3/8-16	3	—
A17	NA	BOLT, HEX FLANGE NON-SERRATED, M10-1.5 X 70mm	2	30 lb-ft

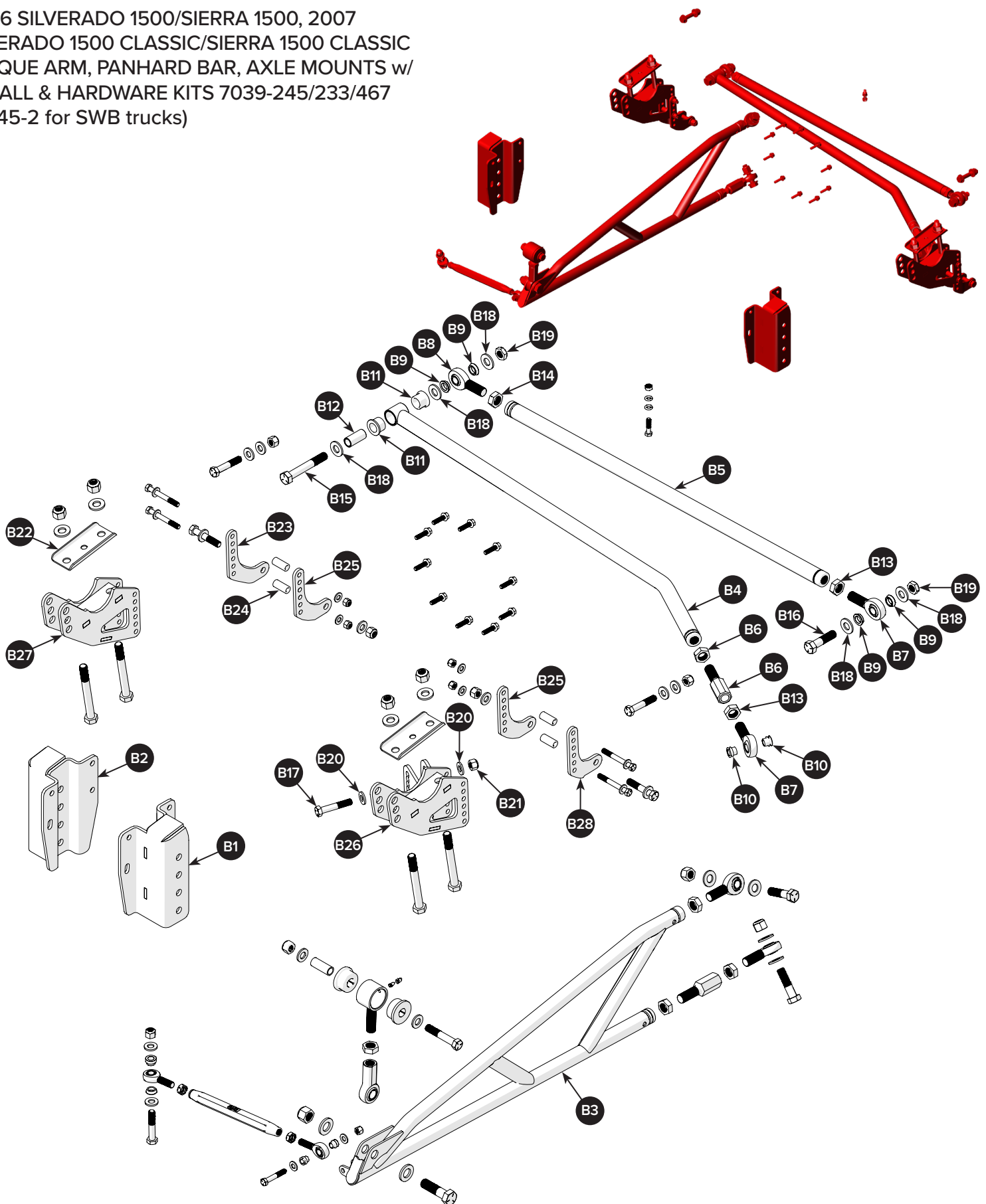
1999-2007 SILVERADO/SIERRA, SWB/LWB, TRAILING ARMS & MOUNTS HARDWARE KIT 7039-445

POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
A18	NA	BOLT, HEX 7/16-14 X 1.25"	10	49 lb-ft
A19	9005-243	WASHER, FLAT 7/16" SAE	20	—
A20	NA	NUT, NYLOCK 7/16-14	10	—
A21	NA	BOLT, HEX, 9/16-12 X 3.5"	2	109 lb-ft
A22	9005-255	WASHER, FLAT 9/16" SAE	4	—
A23	NA	NUT, NYLOCK, 9/16-12	2	—
A24	NA	BOLT, HEX 5/8-11 X 3.5"	2	128 lb-ft
A25	9005-257	WASHER, FLAT 5/8" SAE	4	—
A26	NA	NUT, NYLOCK 5/8-11	2	—

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.



99-06 SILVERADO 1500/SIERRA 1500, 2007
SILVERADO 1500 CLASSIC/SIERRA 1500 CLASSIC
TORQUE ARM, PANHARD BAR, AXLE MOUNTS w/
INSTALL & HARDWARE KITS 7039-245/233/467
(*RX45-2 for SWB trucks)



1999-2007 SILVERADO/SIERRA, SWB, TORQUE ARM & AXLE MOUNTS, RX45-2*

POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
B1	9637-922	WELDMENT, TRAILING ARM MOUNT, LH (SWB)	1	—
B2	9637-923	WELDMENT, TRAILING ARM MOUNT, RH (SWB)	1	—
B3	9037-829	WELDMENT, TORQUE ARM (SWB)	1	—

1999-2007 SILVERADO/SIERRA, SWB/LWB, PANHARD BAR, RX45-2/3

POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
B4	9637-918	WELDMENT, PANHARD BAR	1	—
B5	9637-919	WELDMENT, BRACE BAR	1	—

1999-2007 SILVERADO/SIERRA, SWB/LWB, PANHARD BAR INSTALL KIT 7039-245, RX45-2/3

POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
B6	AS12-12	LINKAGE ADJUSTER STEEL 3/4-16	1	—
B7	XMR10-12	ROD END (X) ENDURA ALLOY HT	2	—
B8	XML10-12	ROD END (X) ENDURA ALLOY HT	1	—
B9	SG104	SPACER ROD END SS	4	—
B10	SG10-84	HIGH MISALIGNMENT SPACER, .625" OD	2	—
B11	9032-395	BUSHING, .875	2	—
B12	9033-457	SLEEVE .625" ID X 0.875" OD X 1.75"	1	—
B13	JNR12S	JAM NUT, STEEL 3/4-16 RH	2	—
B14	JNL12S	NUT, JAM 3/4-16 LH	1	—

1999-2007 SILVERADO/SIERRA, SWB/LWB, PANHARD BAR HARDWARE KIT 7039-233, RX45-2/3

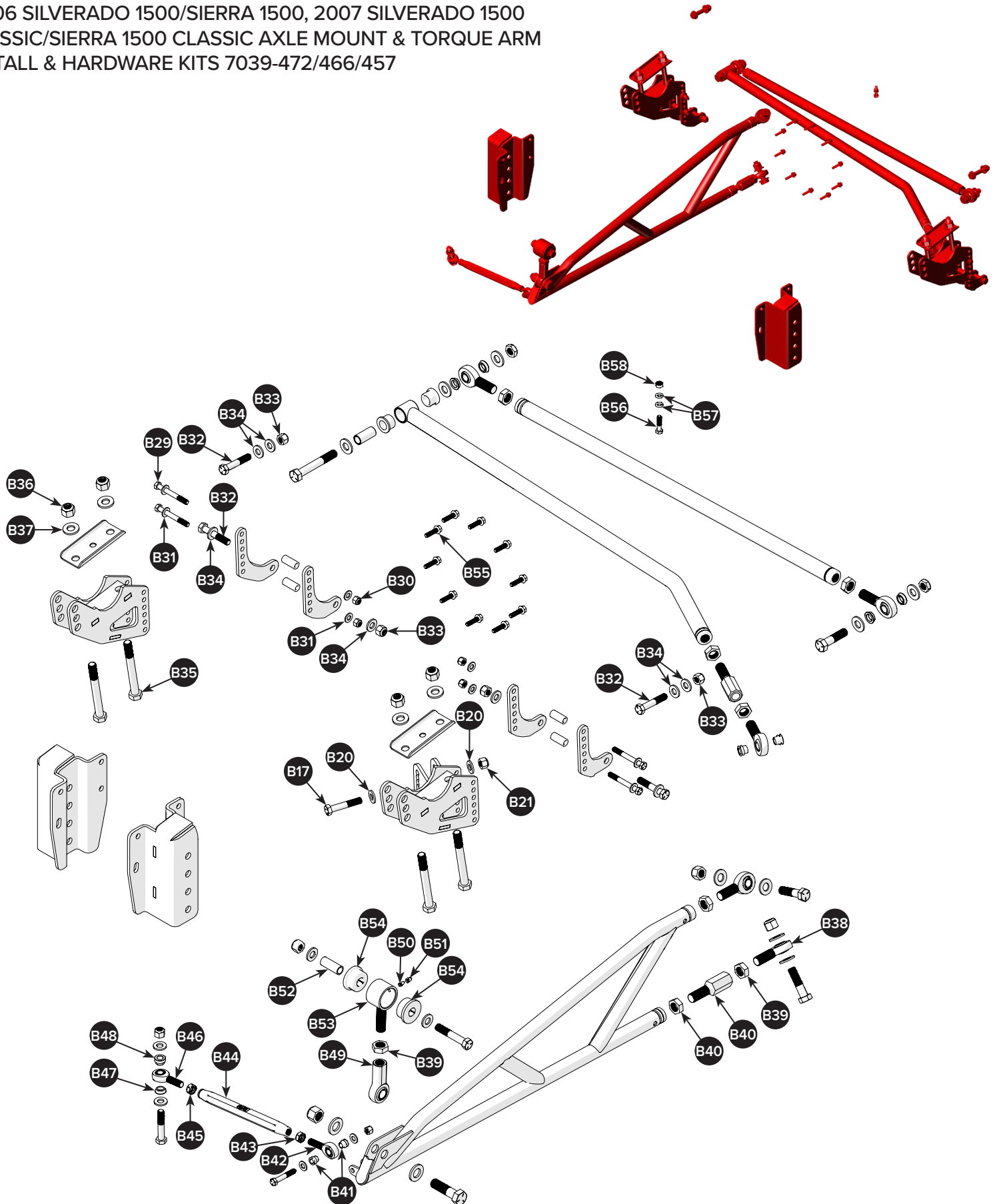
POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
B15	NA	BOLT, HEX 5/8-11 X 4.25"	1	128 lb-ft
B16	NA	BOLT, HEX 5/8-11 X 2.5"	1	128 lb-ft
B17	NA	BOLT, HEX 1/2-13 X 2.75"	1	50 lb-ft
B18	9005-257	WASHER, FLAT 5/8" SAE, GRADE 5	5	—
B19	NA	NUT, NYLOCK JAM 5/8-11	2	—
B20	9005-228	WASHER, FLAT 1/2" SAE, GRADE 5	2	—
B21	9014-520	NUT, NYLOCK 1/2-13	1	—

1999-2007 SILVERADO/SIERRA, SWB/LWB, AXLE MOUNT INSTALL KIT 7039-467, RX45-2/3

POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
B22	9037-727	PLATE, TOP MOUNT, AXLE PAD	2	—
B23	9037-655	BRACKET, SHOCK MOUNT, RIGHT, BOLT ON	1	—
B24	9033-561	SLEEVE, .385" ID X .625" OD X 1.375"	4	—
B25	9037-1210	PLATE, SHOCK MOUNT, FLAT, BOLT ON	2	—
B26	9037-759	WELDMENT, DRIVER SIDE AXLE MOUNT	1	—
B27	9037-718	WELDMENT, PASSENGER SIDE AXLE MOUNT	1	—
B28	9037-654	BRACKET, SHOCK MOUNT, LEFT, BOLT ON	1	—



99-06 SILVERADO 1500/SIERRA 1500, 2007 SILVERADO 1500
CLASSIC/SIERRA 1500 CLASSIC AXLE MOUNT & TORQUE ARM
INSTALL & HARDWARE KITS 7039-472/466/457



1999-2007 SILVERADO/SIERRA, SWB/LWB, AXLE MOUNT HARDWARE KIT 7039-472, RX45-2/3

POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
B29	9012-312	BOLT, HEX 3/8-16 X 3.25"	4	31 lb-ft
B30	NA	NUT, NYLOCK 3/8-16	4	—
B31	NA	WASHER, FLAT 3/8" SAE	8	—
B32	NA	BOLT, HEX 1/2-13 X 2.75"	4	50 lb-ft
B33	9014-520	NUT, NYLOCK 1/2-13	4	—
B34	NA	WASHER, FLAT 1/2" SAE	8	—
B35	NA	BOLT, HEX 5/8-11 X 5.5"	4	128 lb-ft
B36	NA	NUT, NYLOCK 5/8-11	4	—
B37	NA	WASHER, FLAT 5/8" SAE	4	—

1999-2007 SILVERADO/SIERRA, SWB/LWB, TORQUE ARM INSTALL KIT 7039-466, RX45-2/3

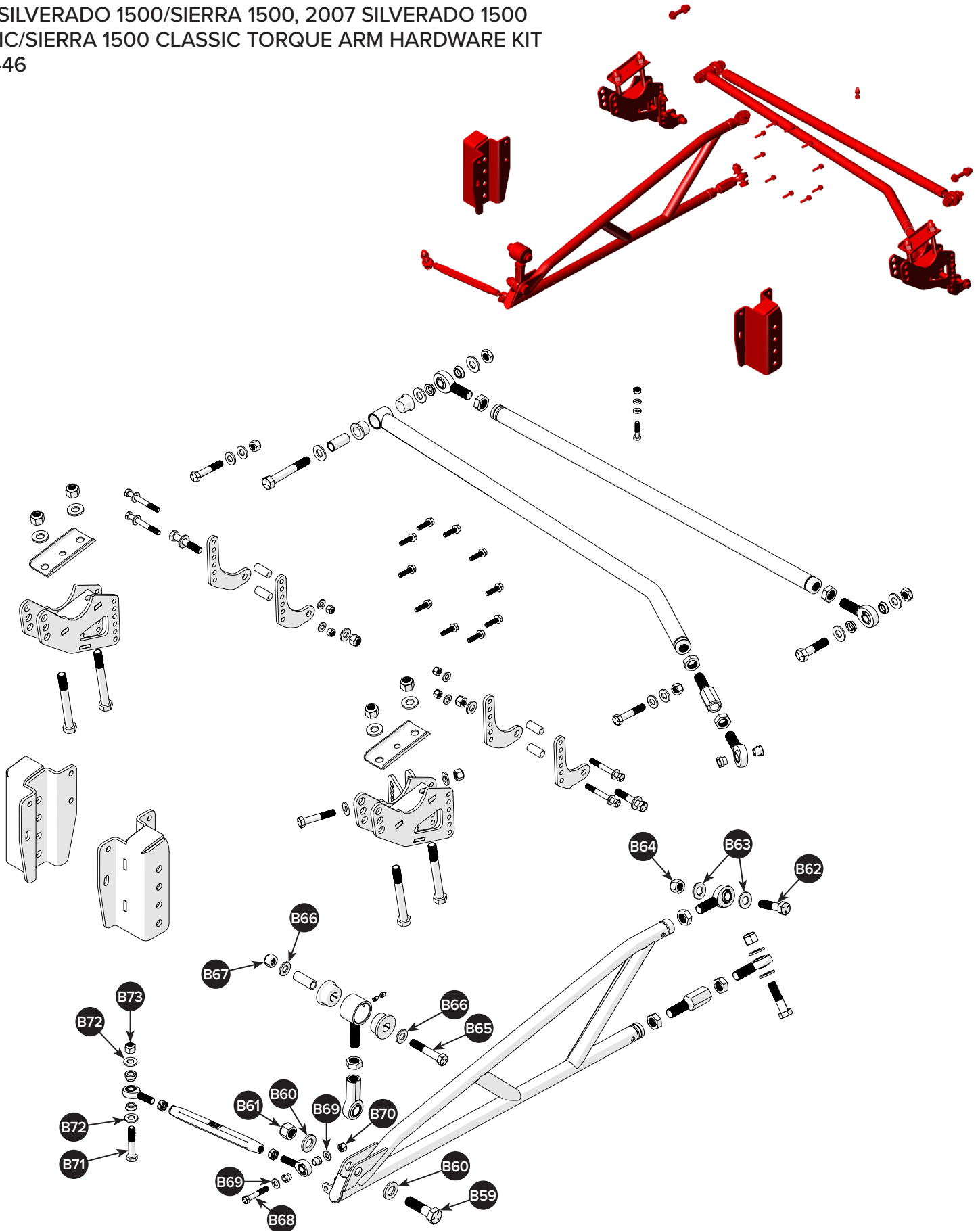
POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
B38	XMR10-12	ROD END (X) ENDURA ALLOY HT	2	—
B39	JNR12S	JAM NUT, STEEL 3/4-16 RH	3	—
B40	AS12-12	LINKAGE ADJUSTER STEEL 3/4-16	1	—
B41	SG8-64	HIGH MISALIGNMENT SPACER, .5" OD	2	—
B42	XML8	ROD END (X) ENDURA ALLOY HT	1	—
B43	JNL8S	JAM NUT, STEEL 1/2-20 LH	1	—
B44	9033-477	SLEEVE, .875"HEX ALUMINUM ANODIZED, 10"	1	—
B45	JNR8S	JAM NUT, STEEL 1/2-20 RH	1	—
B46	XMR8	ROD END (X) ENDURA ALLOY HT	1	—
B47	SG84	SPACER, ROD END SS	1	—
B48	SG88	SPACER ROD END SS, 1/2" ID	1	—
B49	XFR12	ROD END (X) ENDURA ALLOY HT	1	—
B50	9023-119	FITTING, ZERK 1/4-28, STRAIGHT	1	—
B51	9023-116	CAP, GREASE ZERK	1	—
B52	9033-317	SLEEVE, .563" ID X .75" OD X 1.88"	1	—
B53	7039-157	PANHARD SHORT END SUB-ASM	1	—
B54	9032-169	BUSHING, POLY 2-PIECE .75" ID, BLACK	2	—

1999-2007 SILVERADO/SIERRA, SWB/LWB, DIFFERENTIAL COVER HARDWARE KIT 7039-457, RX45-2/3

POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
B55	NA	BOLT, HEX FLANGE NON-SERRATED, M8-1.25 X 30mm	10	23 lb-ft
B56	NA	BOLT, HEX M8-1.25 X 35mm	1	16 lb-ft
B57	NA	WASHER, FLAT M8	2	—
B58	9014-433	NUT, NYLOCK M8-1.25	1	—



99-06 SILVERADO 1500/SIERRA 1500, 2007 SILVERADO 1500
CLASSIC/SIERRA 1500 CLASSIC TORQUE ARM HARDWARE KIT
7039-446

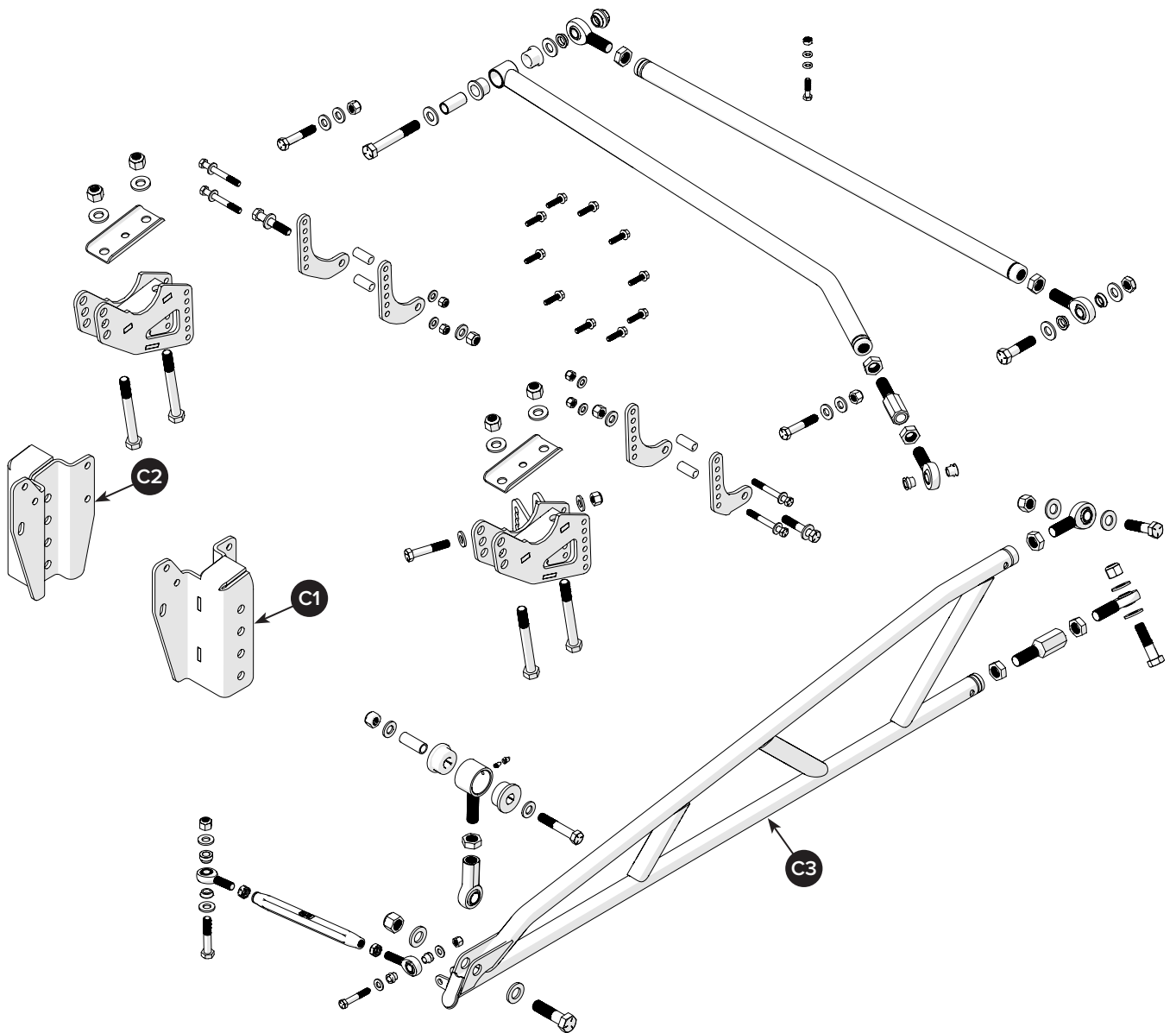
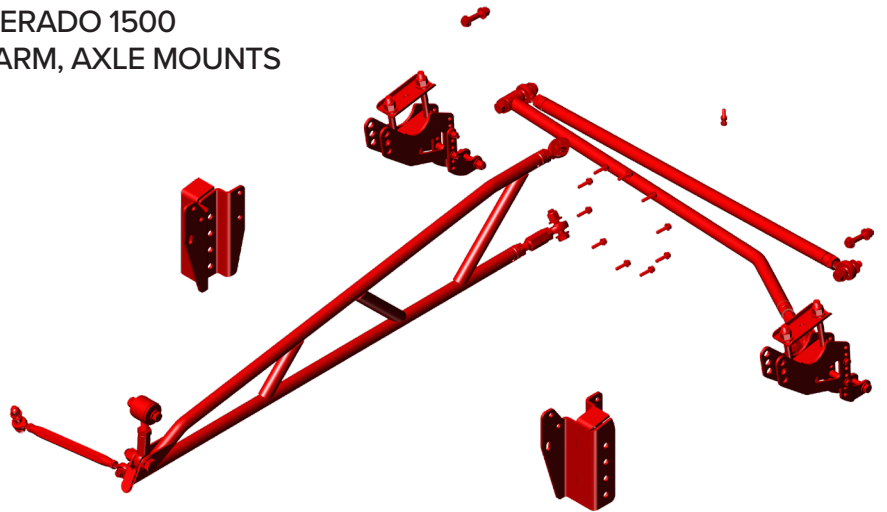


1999-2007 SILVERADO/SIERRA,SWB/LWB, TORQUE ARM HARDWARE KIT 7039-446, RX45-2/3

POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
B59	NA	BOLT, HEX 3/4-10 X 2.75"	1	227 lb-ft
B60	NA	WASHER, FLAT 3/4" SAE	2	—
B61	NA	NUT, NYLOCK 3/4-10	1	—
B62	NA	BOLT, HEX 5/8-11 X 2.5"	2	128 lb-ft
B63	9005-257	WASHER, FLAT 5/8" SAE	4	—
B64	NA	NUT, NYLOCK 5/8-11	2	—
B65	NA	BOLT, HEX, 9/16-12 X 3.25"	1	109 lb-ft
B66	9005-255	WASHER, FLAT 9/16" SAE	2	—
B67	NA	NUT, NYLOCK, 9/16-12	1	—
B68	NA	BOLT, HEX 3/8-16 X 2.25"	1	31 lb-ft
B69	9005-256	WASHER, FLAT 3/8" SAE	2	—
B70	NA	NUT, NYLOCK 3/8-16	1	—
B71	NA	BOLT, HEX 1/2-13 X 2.75"	1	75 lb-ft
B72	9005-228	WASHER, FLAT 1/2" SAE	2	—
B73	9014-520	NUT, NYLOCK 1/2-13	1	—



99-06 SILVERADO 1500/SIERRA 1500, 2007 SILVERADO 1500
CLASSIC/SIERRA 1500 CLASSIC, LWB, TORQUE ARM, AXLE MOUNTS
(For LWB trucks)



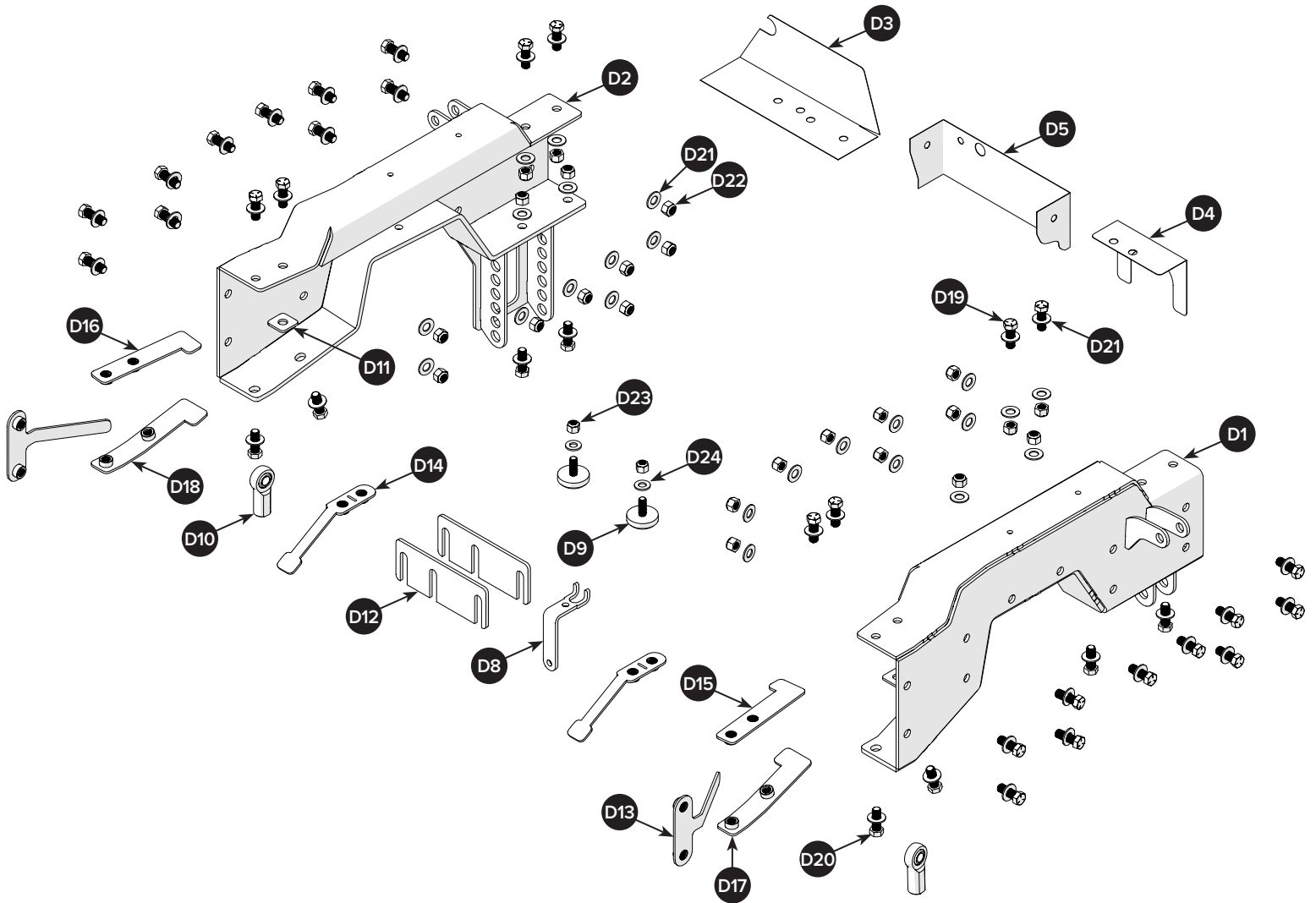
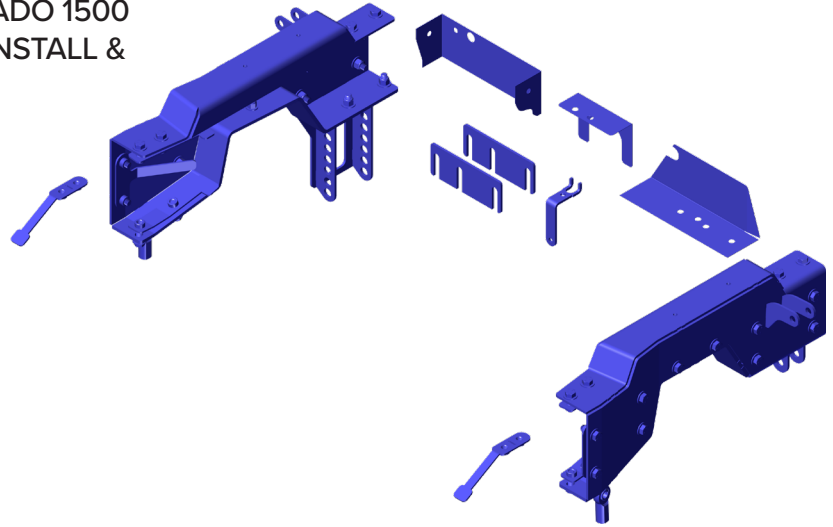
1999-2007 SILVERADO/SIERRA, LWB, TORQUE ARM & AXLE MOUNTS, RX45-3

POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
C1	9637-924	WELDMENT, TRAILING ARM MOUNT, LH	1	—
C2	9637-925	WELDMENT, TRAILING ARM MOUNT, RH	1	—
C3	9637-917	WELDMENT, TORQUE ARM	1	—

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.



99-06 SILVERADO 1500/SIERRA 1500, 2007 SILVERADO 1500 CLASSIC/SIERRA 1500 CLASSIC FRAME NOTCH w/INSTALL & HARDWARE KITS 7039-468/444



1999-2007 SILVERADO/SIERRA, SWB/LWB, FRAME NOTCH, RX45-4

POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
D1	9637-926	WELDMENT, FRAME NOTCH, LH	1	—
D2	9637-927	WELDMENT, FRAME NOTCH, RH	1	—
D3	9037-1232	TEMPLATE, FRAME NOTCH	1	—
D4	9037-1233	TEMPLATE, GAS TANK CROSSMEMBER	1	—
D5	9037-1234	TEMPLATE, VAPOR CANISTER	1	—
D6	9093-133	DECAL, CONTINGENCY- 8" QA1 LOGO (NOT SHOWN)	2	—
D7	9919-344	INSTRUCTIONS, REAR TORQUE ARM (NOT SHOWN)	1	—

1999-2007 SILVERADO/SIERRA, SWB/LWB, FRAME NOTCH INSTALL KIT, 7039-468

POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
D8	9039-516	BRACKET, REAR BRAKE LINE RELOCATION	1	—
D9	9047-114	BUMP STOP, FLAT 1.625" OD X .688" TALL	2	—
D10	XFR8	ROD END (X) ENDURA ALLOY HT	2	—
D11	9039-521	PLATE, FRAME NOTCH SPACER, TOP	2	—
D12	9039-522	PLATE, FRAME SPACER, 99-00	2	—
D13	9039-515	NUT PLATE, FRAME NOTCH, FRONT	2	—
D14	9039-492	NUT PLATE, GAS TANK CROSSMEMBER	2	—
D15	9039-510	NUT PLATE, FRAME NOTCH, UPPER, LH	1	—
D16	9039-504	NUT PLATE, FRAME NOTCH, UPPER, RH	1	—
D17	9039-559	NUT PLATE, SWAY BAR, LH	1	—
D18	9039-558	NUT PLATE, SWAY BAR, RH	1	—

1999-2007 SILVERADO/SIERRA, SWB/LWB, FRAME NOTCH HARDWARE KIT, 7039-444

POSITION	PART #	DESCRIPTION	QTY	TORQUE SPECIFICATION
D19	NA	BOLT, HEX 7/16-14 X 1.25"	32	49 lb-ft
D20	NA	BOLT, HEX 7/16-14 X 1.75"	4	49 lb-ft
D21	9005-243	WASHER, FLAT 7/16" SAE	60	—
D22	NA	NUT, NYLOCK 7/16-14	24	—
D23	9014-333	NUT, HEX 3/8-16	2	10 lb-ft
D24	9005-239	WASHER, SPLIT LOCK 3/8"	2	—

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, suspension, and bed of the 99-06 Silverado/Sierra pickup truck. The cab has been removed for visual clarity.

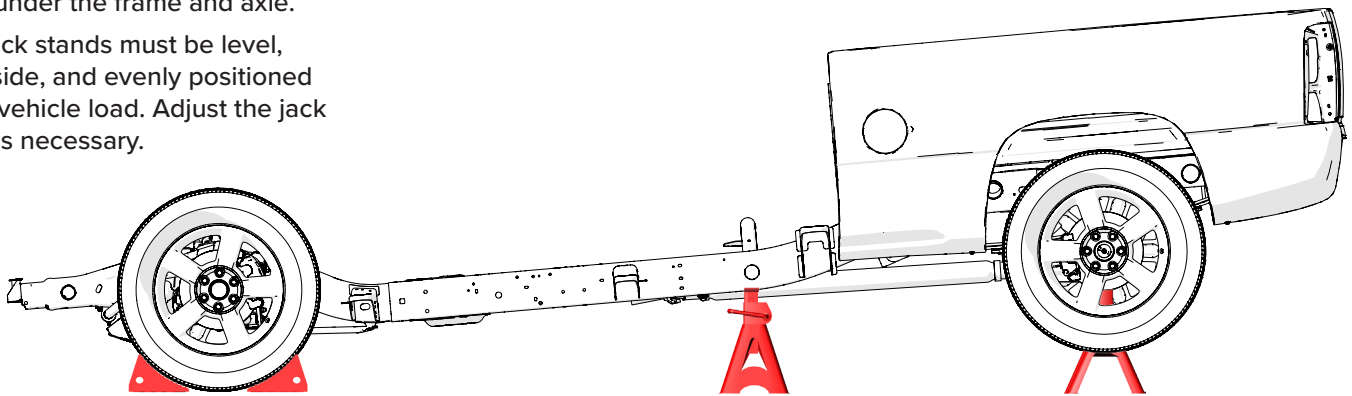
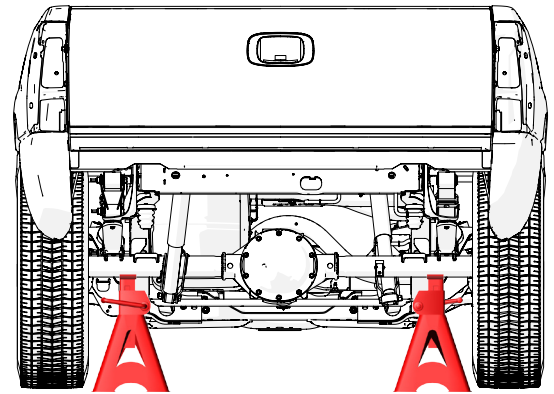
1

Install this kit on a hard, even surface. The vehicle's front can remain on the ground.

Chock the front tires to prevent an accidental vehicle roll, then use a floor jack and lift the vehicle at its designated rear lift points.

To access the rear suspension, set the vehicle on jack stands (as shown) under the frame and axle.

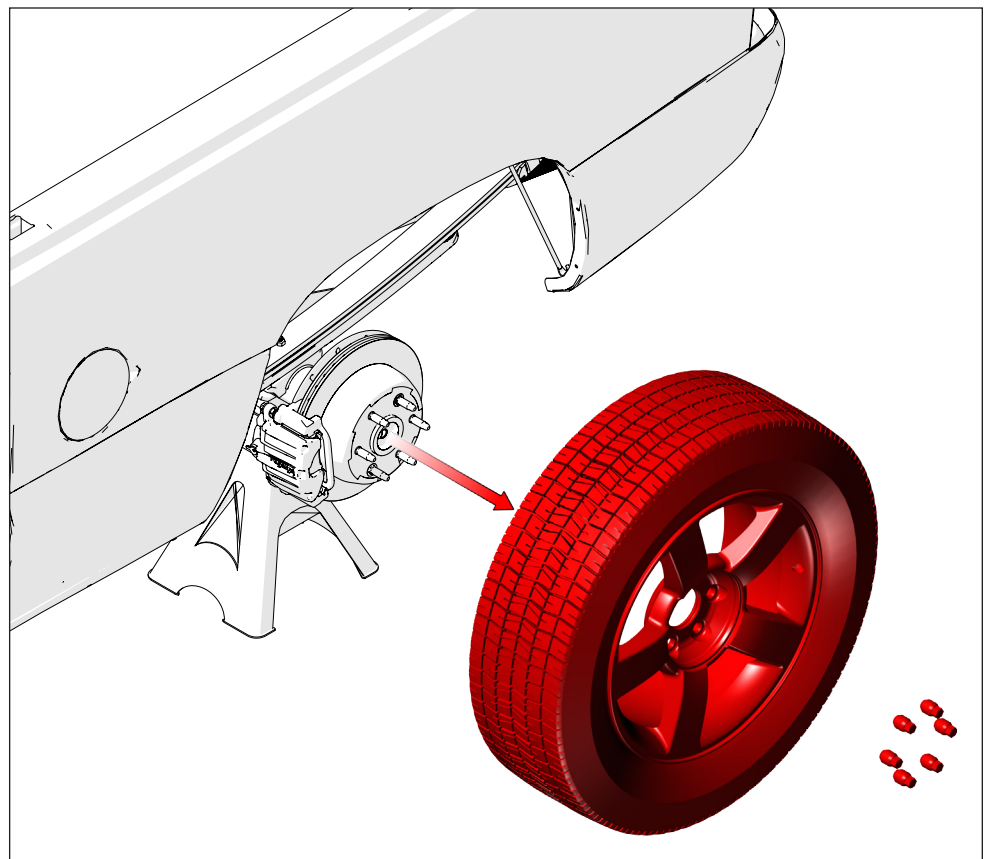
Note: Jack stands must be level, side-to-side, and evenly positioned for safe vehicle load. Adjust the jack stands as necessary.



Installer's Note: These instructions begin on the rear driver's side of the vehicle, though both sides must be disassembled for the torque arm installation.

2

First, remove the rear wheels from both sides of the vehicle.

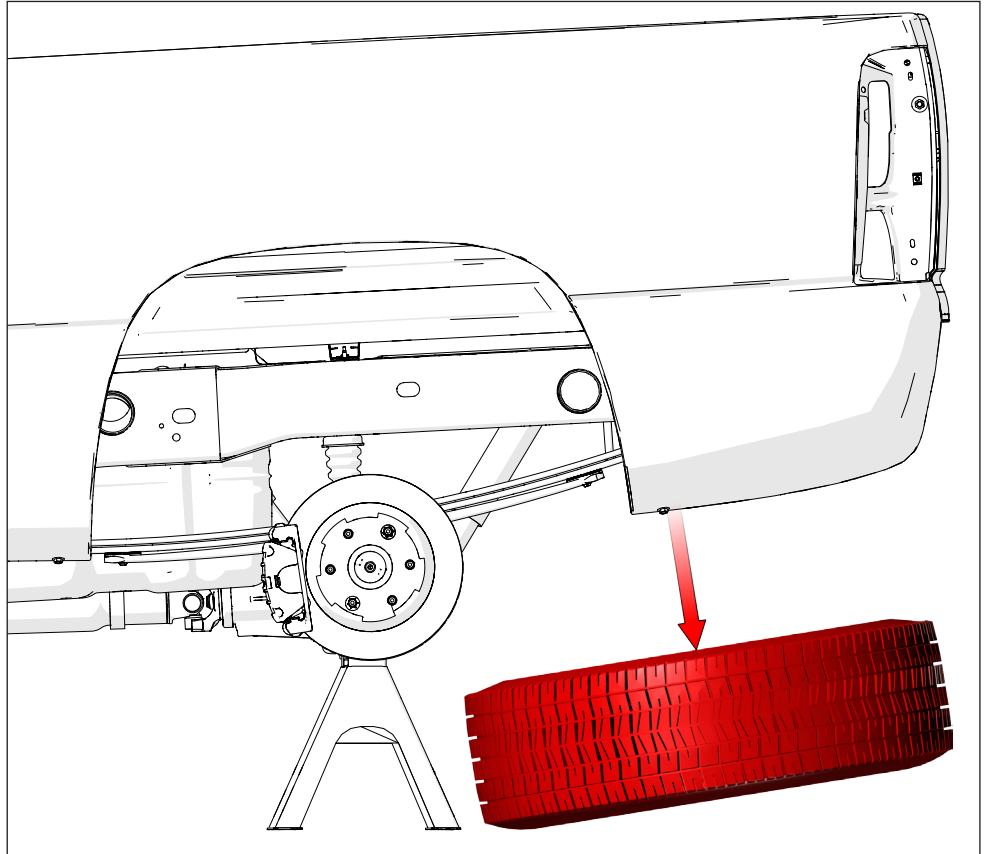


Installer's Note: The truck's bed must be removed to install the torque arm kit.

Due to the bed's weight, have assistance to lift and carry the bed safely.

QA1 recommends that a minimum of four people lift and move the short bed, and six people move the long bed.

Steps 3-5 illustrate the short bed, though the long bed follows the same procedures.



3

First, remove the spare tire, if equipped.

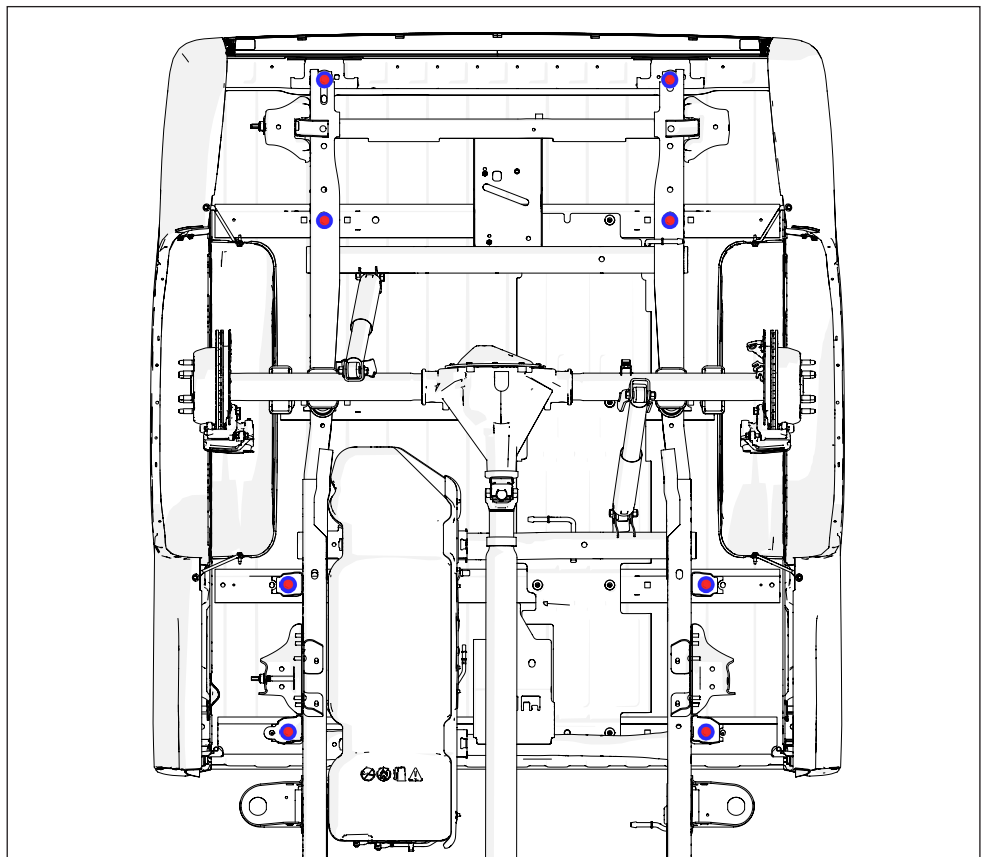
Note: The spare tire cannot be reinstalled without extensive modification after the torque arm has been installed.

4

Open the fuel access door and remove the three Torx screws to disconnect the fuel filler neck from the left-hand bedside panel. Those screws are the top two and the one at the bottom.

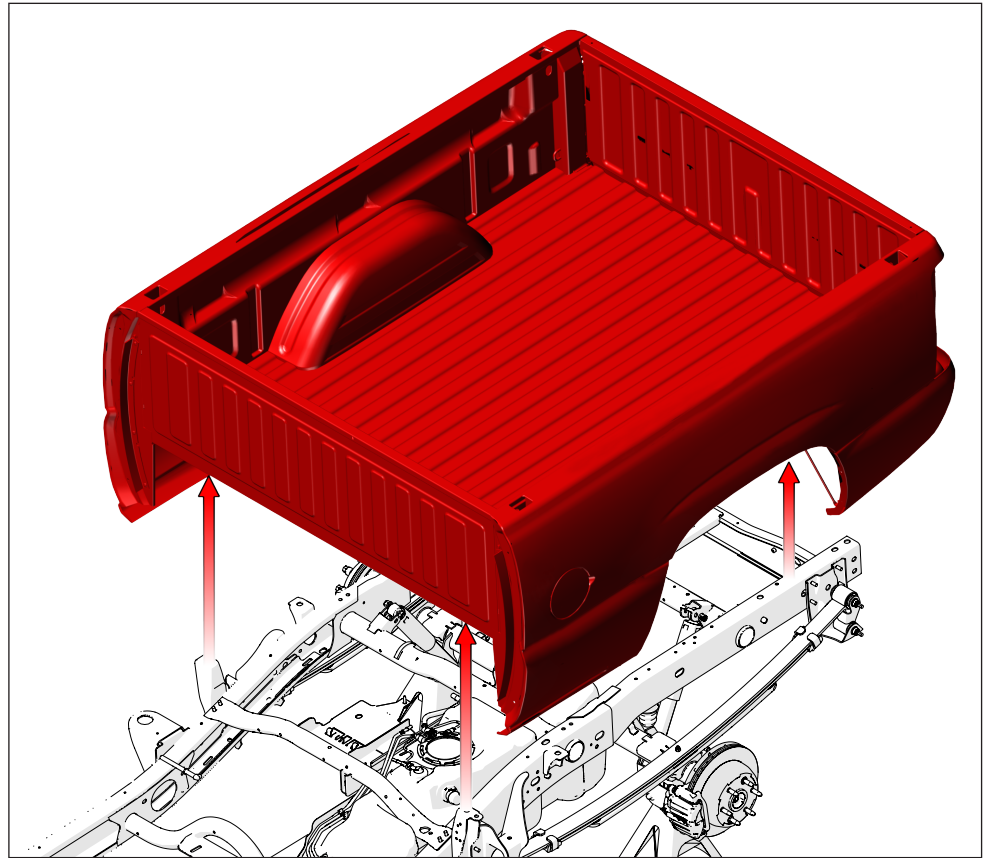
Remove the truck bed mount bolts (A) as marked in red/blue.

Note: Retain the hardware if it will be reused. Discard the hardware if new bolts will be used.



5 With the aid of additional people, evenly lift the bed off the frame rails.

Put the bed in a safe area, as it will be trimmed and reinstalled during step 91.

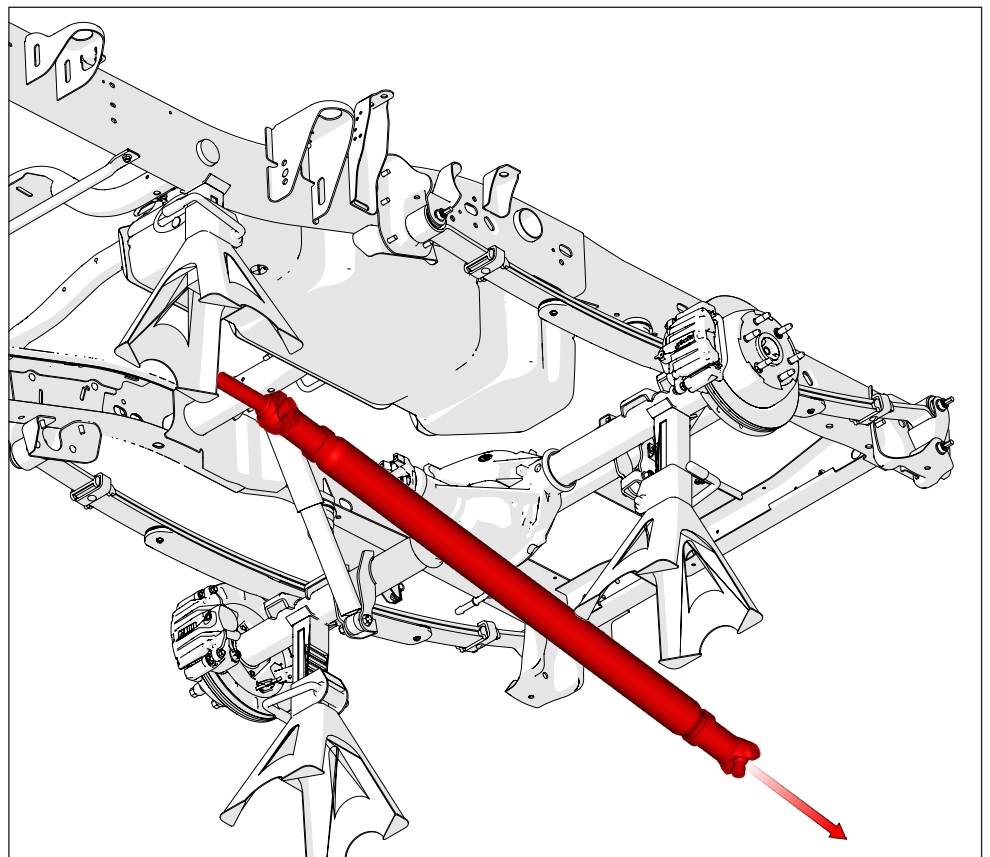


6 Now, disconnect the driveshaft at the rear axle's pinion yoke.

Then, gently slide the driveshaft out from the transmission's tailshaft.

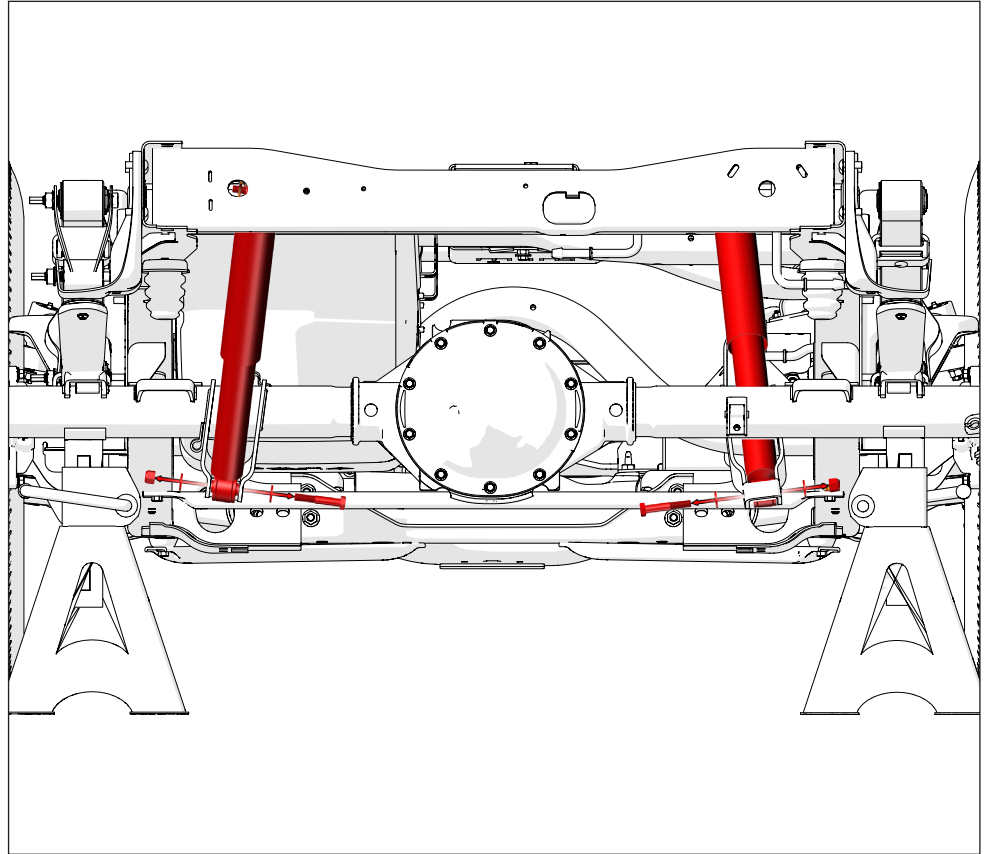
Once out, put the driveshaft in a safe area.

Disconnect the muffler and tailpipe (not shown), and put them aside.



- 7** Remove both rear shocks from the shock mounts on the axle.

Discard the shocks and hardware, as they will not be reused.



Installer's Note: The rear axle can be removed as a complete assembly or as separate parts.

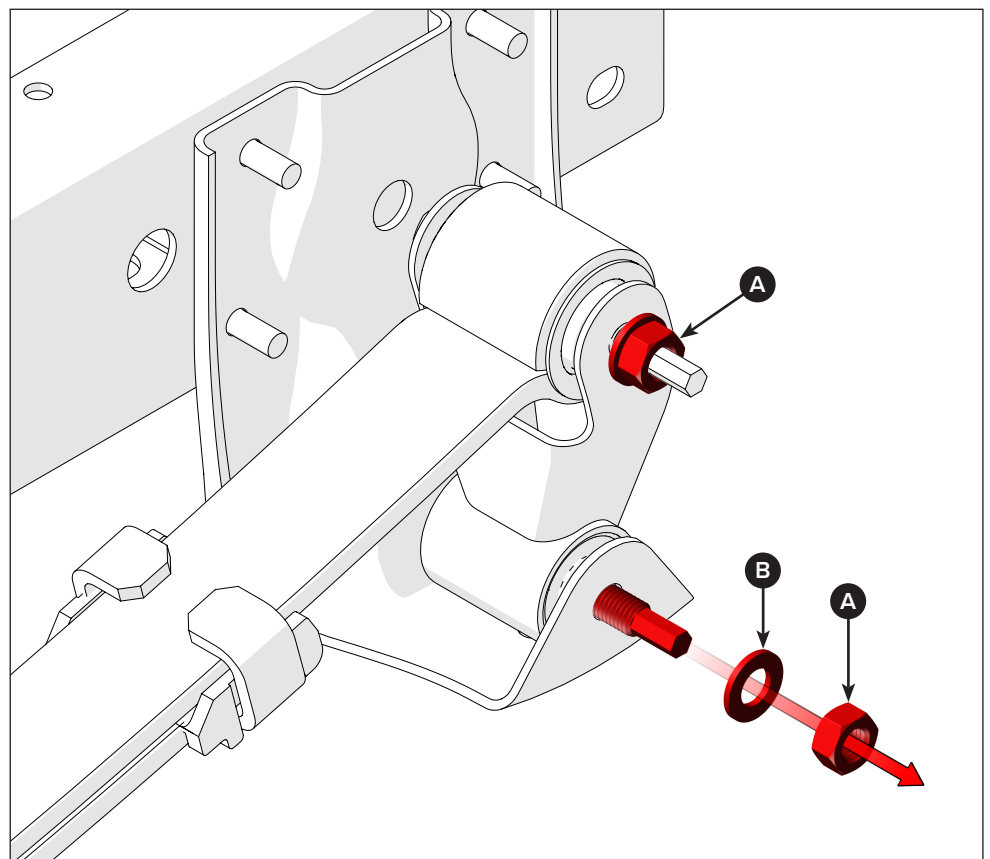
These instructions outline the disassembly process to create a lighter assembly that can be easily handled by one person.

- 8** First, loosen and remove the nut (A) and washer (B) from the lower side of the rear spring shackle.

Discard the nut and washer, as they will not be reused.

Next, loosen, but do not remove, the nut (A) from the upper side of the spring shackle.

Note: The torque arm kit includes coilover shocks and replaces the factory leaf springs. There is no need to keep the old factory springs or hardware.



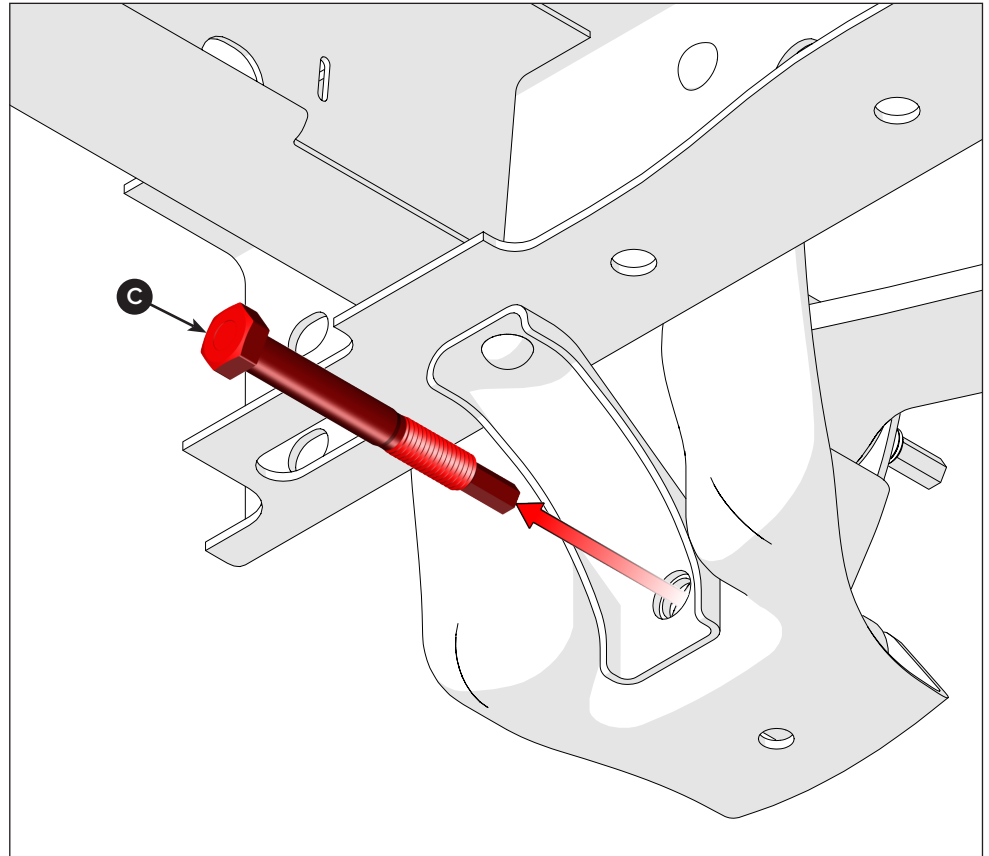
9

Remove the lower shackle bolt (C) and discard it, as it will not be reused.

In some instances, the bolt will be rusted in place. Use concentrated heat to help loosen all rust.

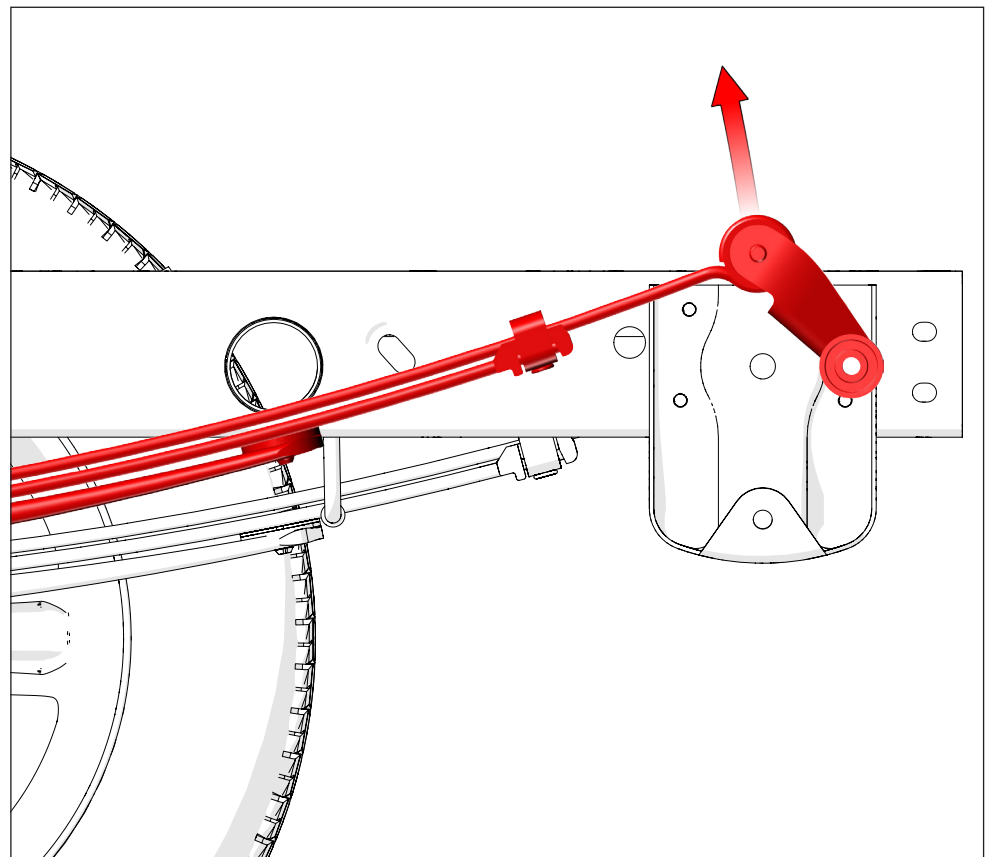
Note: If the bolt is trapped between the back of the spring perch and a frame member, remove the bolt as far as it will go, then cut it.

Repeat the bolt removal process and cut again if necessary. Continue until the bolt is entirely removed.

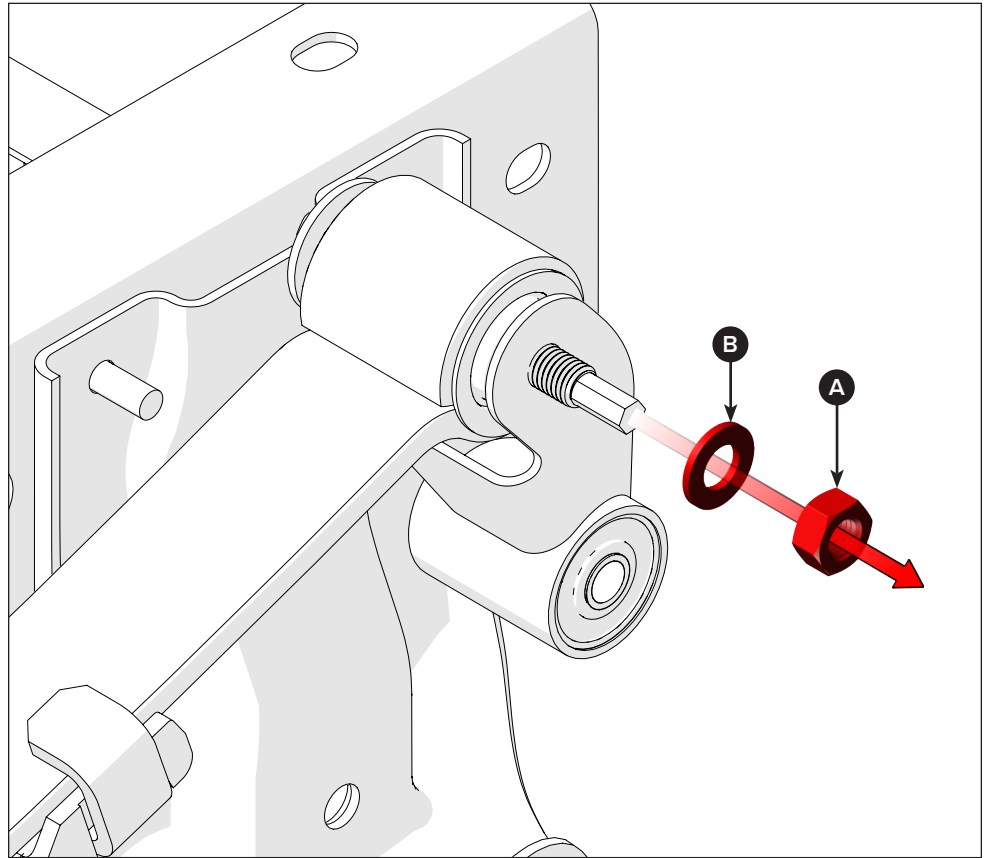


10

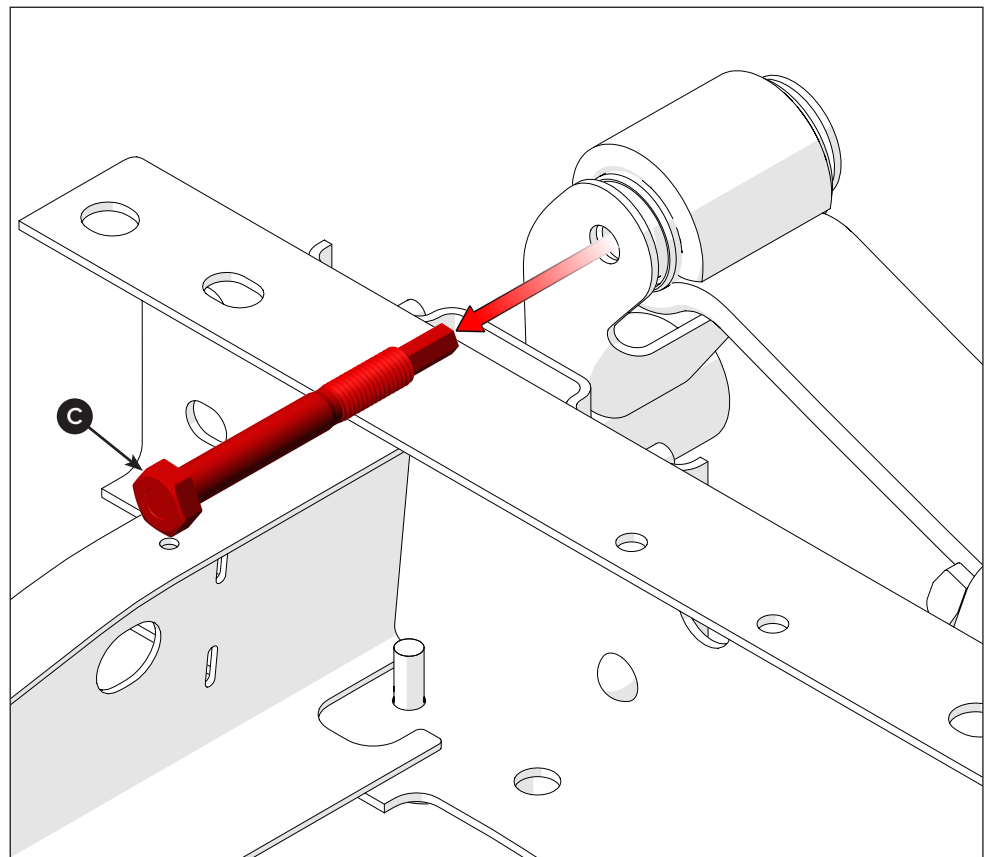
With the shackle's bottom bolt removed, push the spring and shackle upward until the upper shackle bolt head clears the top of the frame.



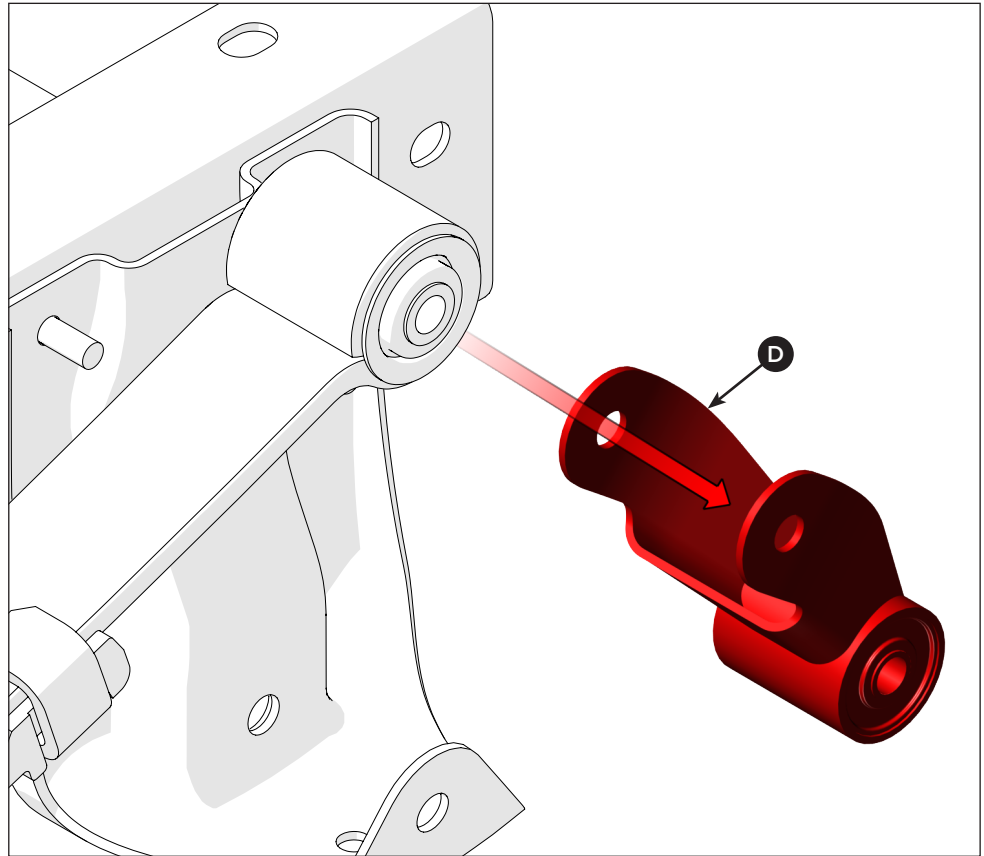
- 11 Now, remove the nut (A) and washer (B) from the upper shackle mount.



- 12 Drive out the upper shackle bolt (C) and discard it, as it will not be reused.



- 13** Once the shackle bolt is removed, pull the factory spring shackle (D) away from the spring eyelet. Discard the shackle, as it will not be reused.

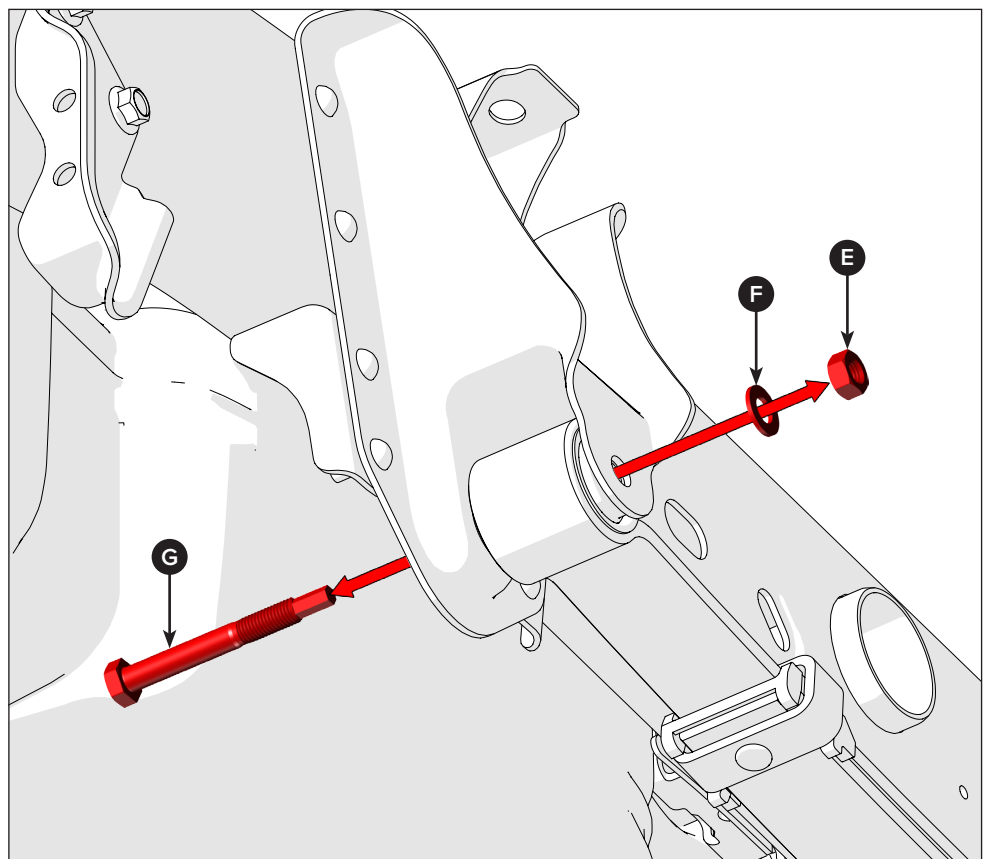


- 14** Remove the nut (E), washer (F), and bolt (G) from the front spring mount. Discard these fasteners, as they will not be reused.

Repeat steps 8 through 14 to disconnect the right side leaf spring from the frame. Both sides must be free from the frame to continue.

Note: The factory bolt is trapped between the frame and the fuel tank. To remove these bolts, the fuel tank can be removed, or the bolt cut with the tank in place.

Refer to steps 16 through 19 for the fuel tank removal procedure.



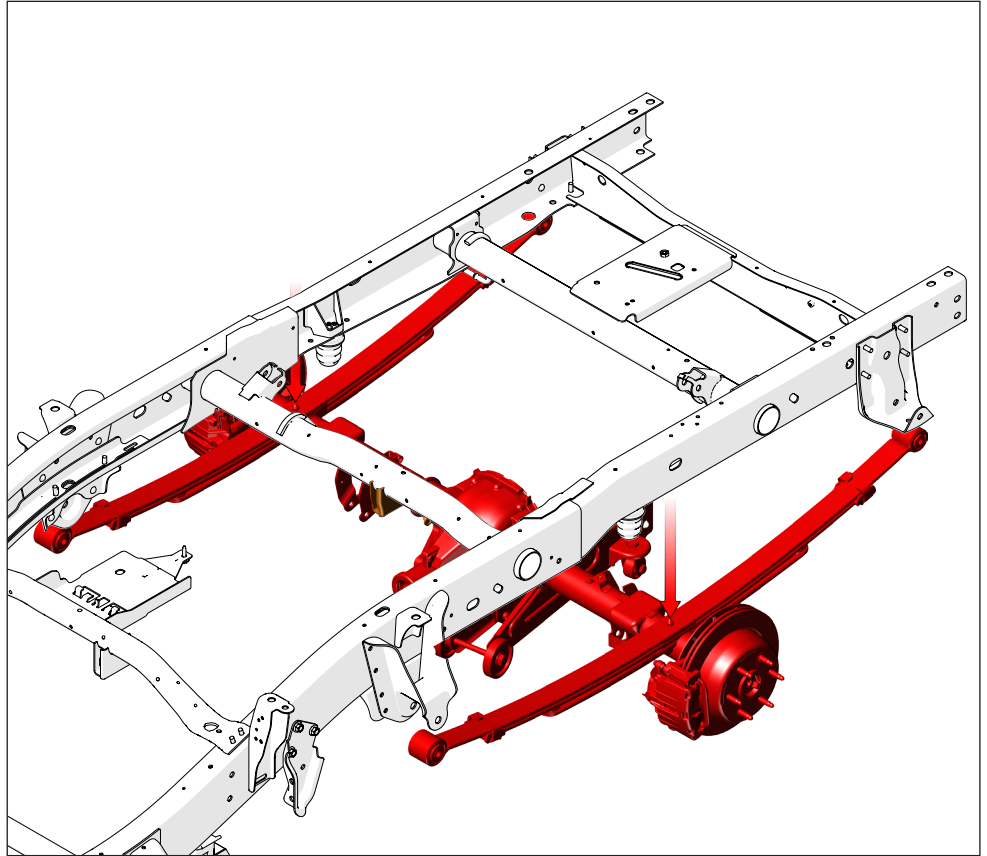
15

Place a floor jack under the center housing of the rear axle and raise it enough to support the axle's weight.

Remove the jack stands under the axle.

With the left and right leaf springs disconnected from the frame, use the floor jack to lower the rear axle with springs.

Pull the axle assembly out from underneath the vehicle. Put it in a safe area, as it will be modified in steps 51 through 58.



Warning: Gasoline is highly volatile and flammable, and can easily form explosive air/vapor mixtures at room temperature.

Gasoline ignites quickly and burns with force. And its vapors can explode. Keep gasoline away from heat, sparks, and flames.

Before you remove the fuel tank, isolate the area from sources of ignition, as gasoline vapor is heavier than air and can travel a considerable distance.

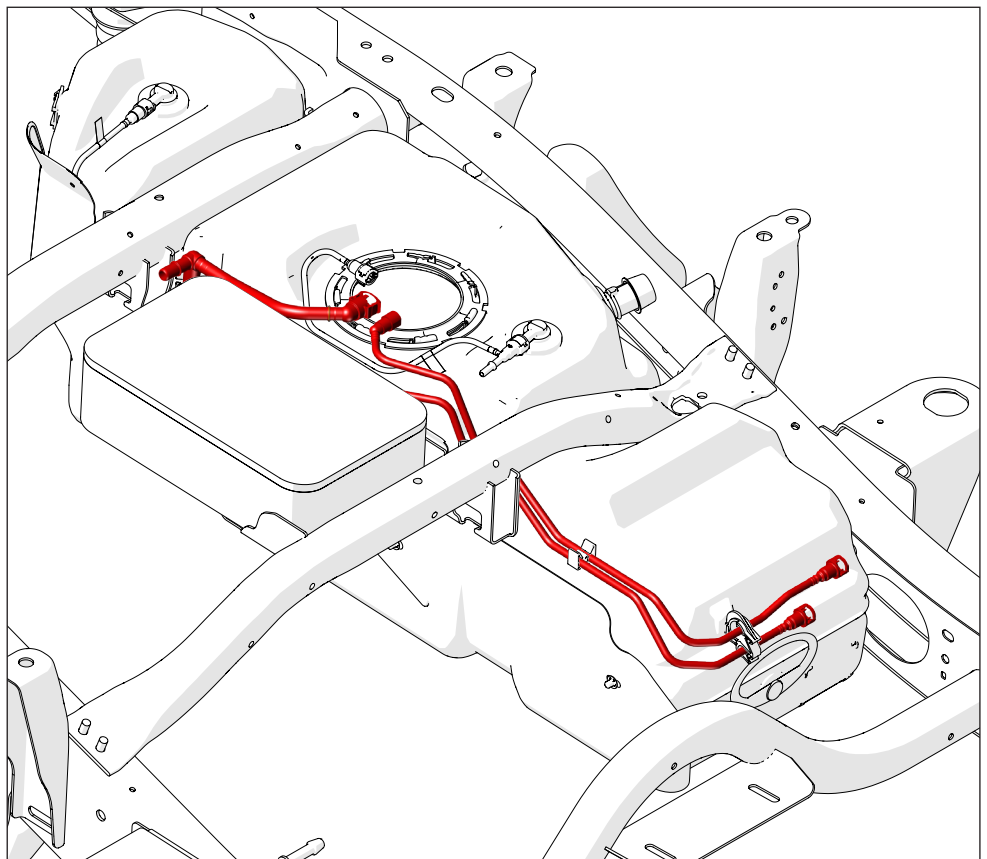
If clothing is wet from gasoline, remove it and soak it in water as quickly as possible.

16

First, make sure to drain the tank into a fuel-approved container.

Then, disconnect the fuel and EVAP lines from the fuel tank and vapor storage canister.

Disconnect the electrical connector at the EVAP solenoid.



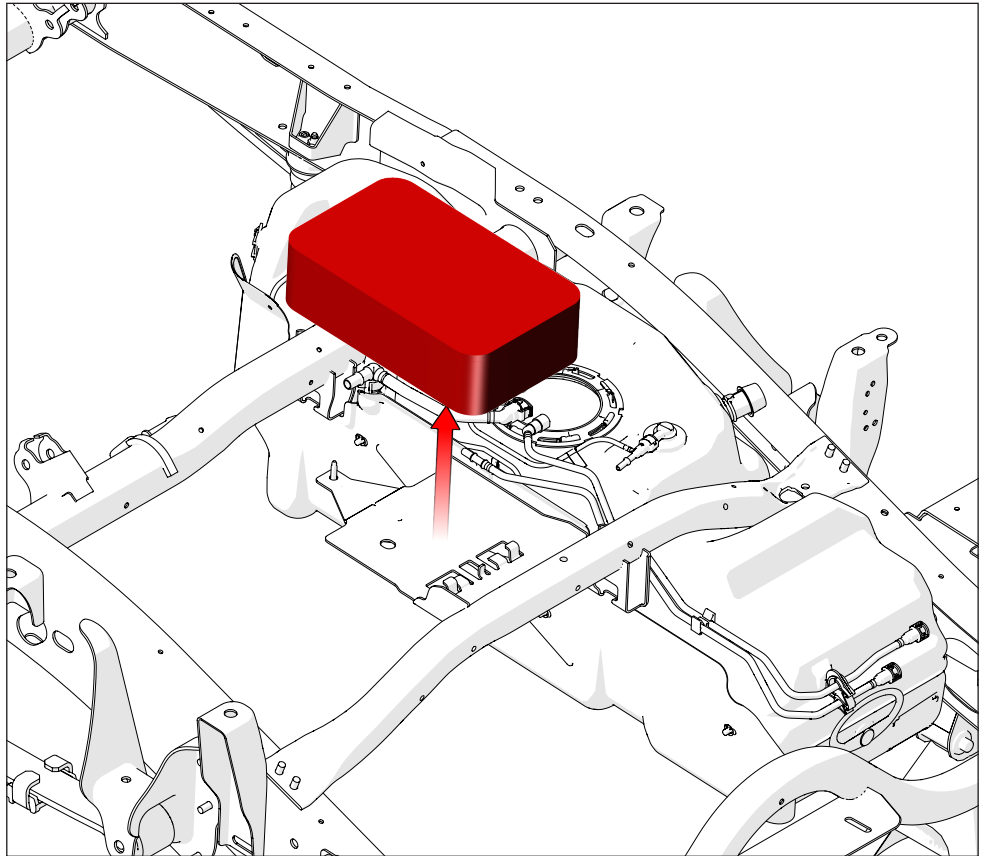
17

Now, remove the fuel vapor storage canister that is attached to the frame.

Note: Early models use a clip bracket that is bolted to the frame, while later models use a canister mount that is part of the fuel tank crossmember.

Once removed, put the canister in a safe area, as it will be reinstalled.

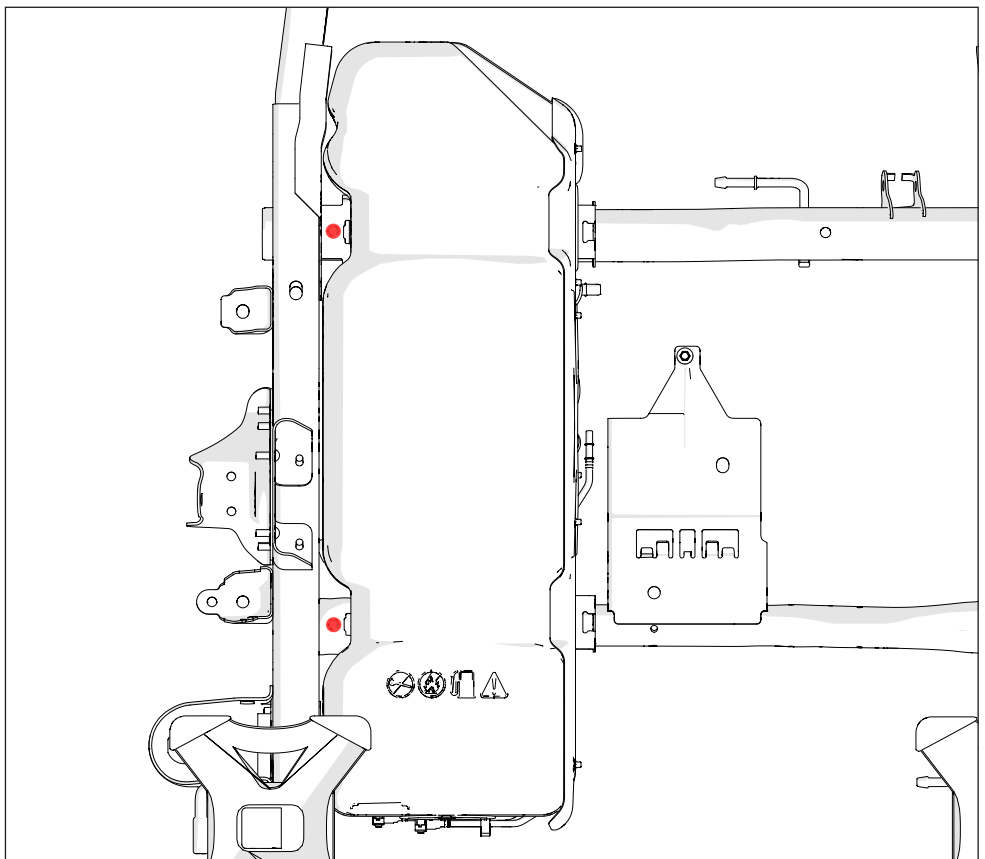
Note: Fuel vapor storage canisters are designed to manage fuel vapors, not liquid fuel. If the canister contains liquid gasoline, replace the canister.



18

Now, remove the two bolts (marked in red) that attach the fuel tank straps to the frame.

Remove the tank straps and put them aside. They will be reused.



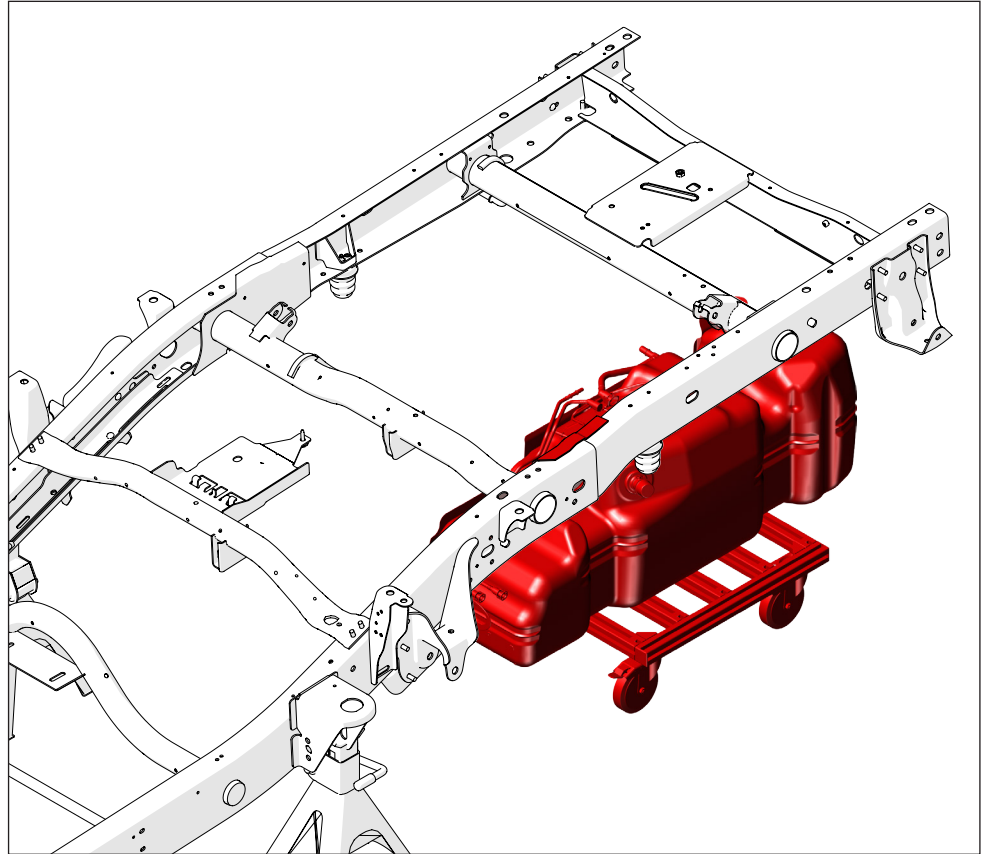
19

Slowly lower the fuel tank.

Move the tank out from under the vehicle and place it in a safe, ventilated area.

Note: Damage can occur to the fuel tank if it is dragged or slid on a floor.

QA1 recommends the use of a dolly or skate to move the tank.



Installer's Note: Steps 20 and 21 show the mounts on the short bed frame.

20

To prevent damage to the parking brake cable, first disconnect the cable from the left side frame rail.

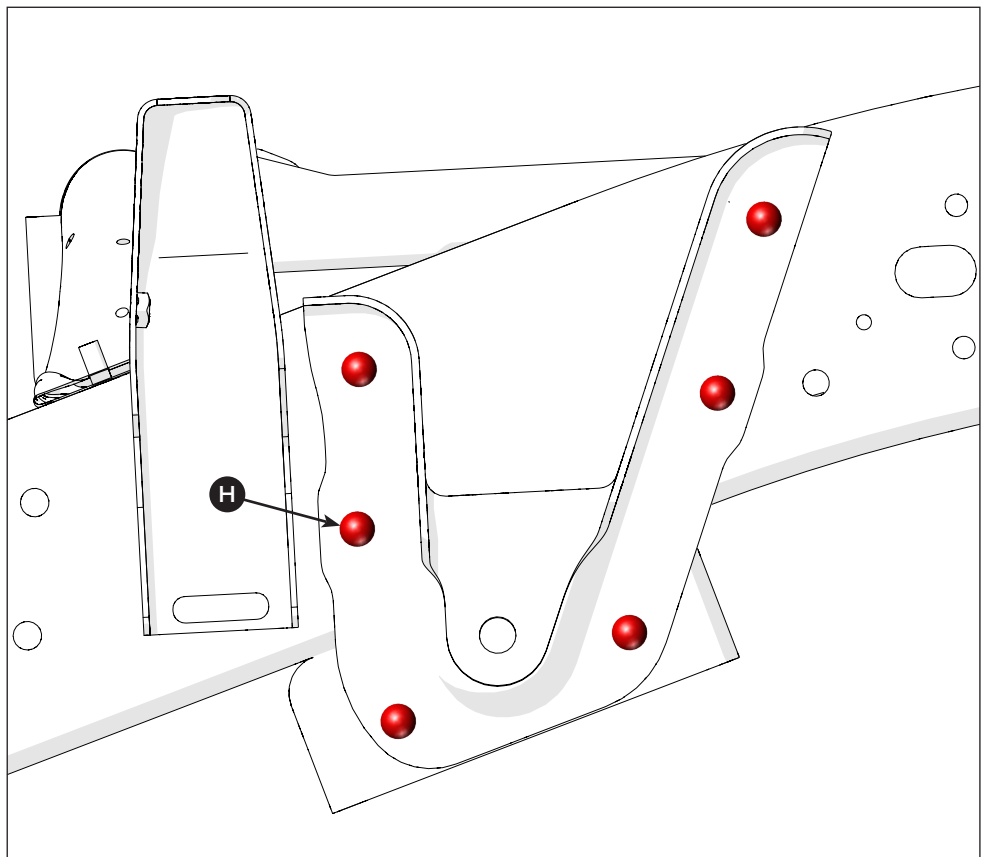
Move the cable out of the way to avoid damage during rivet removal.

The rivets can be removed with a drill and bit, or a cut-off tool and air chisel.

Drill method: Use a cut-off tool to cut cross slots into each rivet head, then use a drill and bit to drill out the rivets (H) from the front spring bracket.

Air chisel method: Use a cut-off tool to cut cross slots into each rivet head, then use a cold chisel bit to cut off the rivet heads (H) from the front spring bracket.

Use a pointed air chisel bit to drive the rivet body from the frame.



- 21** Remove and discard the front spring mount (I1) and all removed rivets, as none of these parts will be reused.

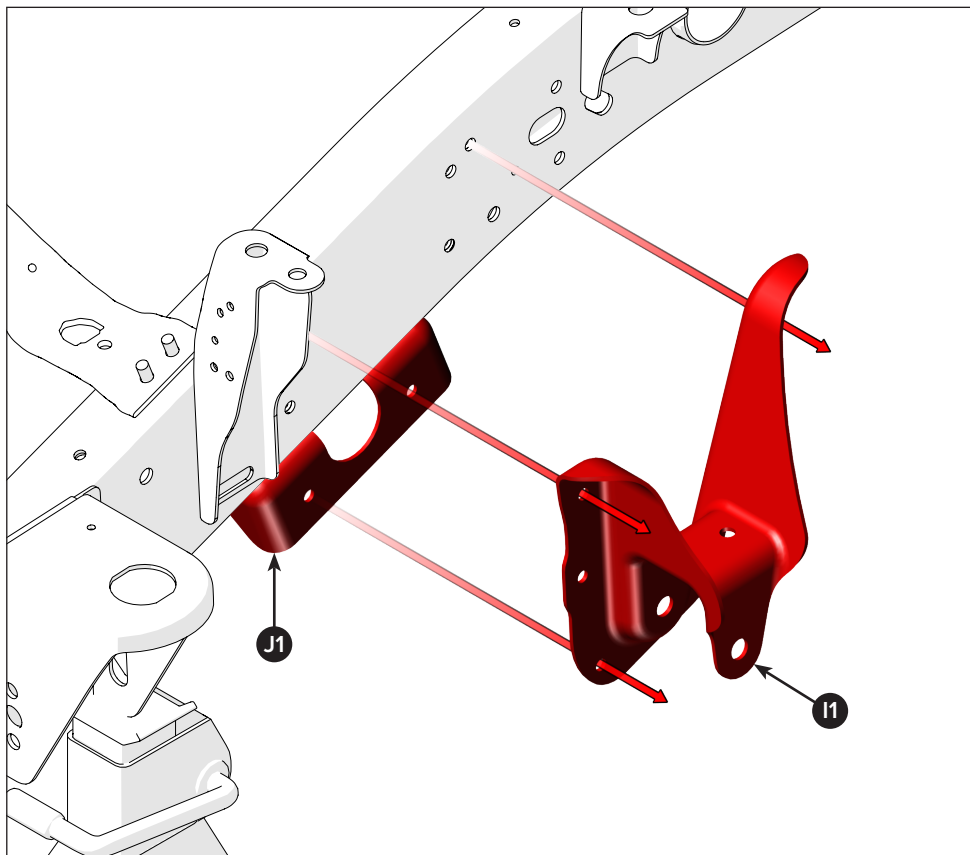
Repeat steps 20 and 21 to remove the right-side front spring mount.

Note: The lower front spring mount brackets (J1) will no longer be used, but can be removed or left in place.

To remove them, the bottom rivets (not shown) must be removed, similar to the procedure in step 20.

Note: The rear spring mounts do not have to be removed from the frame, but can be if desired.

Use either of the methods described in step 20, then discard the mounts and rivets.



Installer's Note: Steps 22 and 23 show the mounts on the long bed frame.

- 22** To prevent damage to the parking brake cable, first disconnect the cable from the left side frame rail.

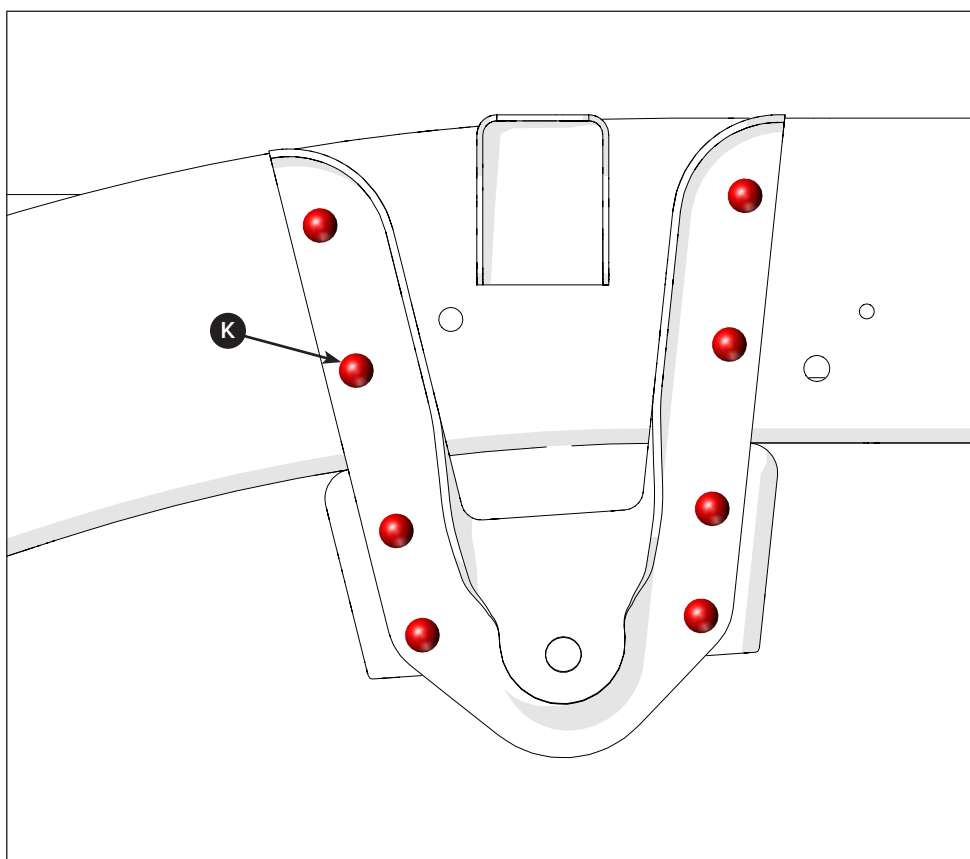
Move the cable out of the way to avoid damage during rivet removal.

The rivets can be removed with a drill and bit, or a cut-off tool and air chisel.

Drill method: Use a cut-off tool to cut cross slots into each rivet head, then use a drill and bit to drill out the rivets (H) from the front spring bracket.

Air chisel method: Use a cut-off tool to cut cross slots into each rivet head, then use a cold chisel bit to cut off the rivet heads (K) from the front spring bracket.

Use a pointed air chisel bit to drive the rivet body from the frame.



23 Remove and discard the front spring mount (I2) and all removed rivets, as none of these parts will be reused.

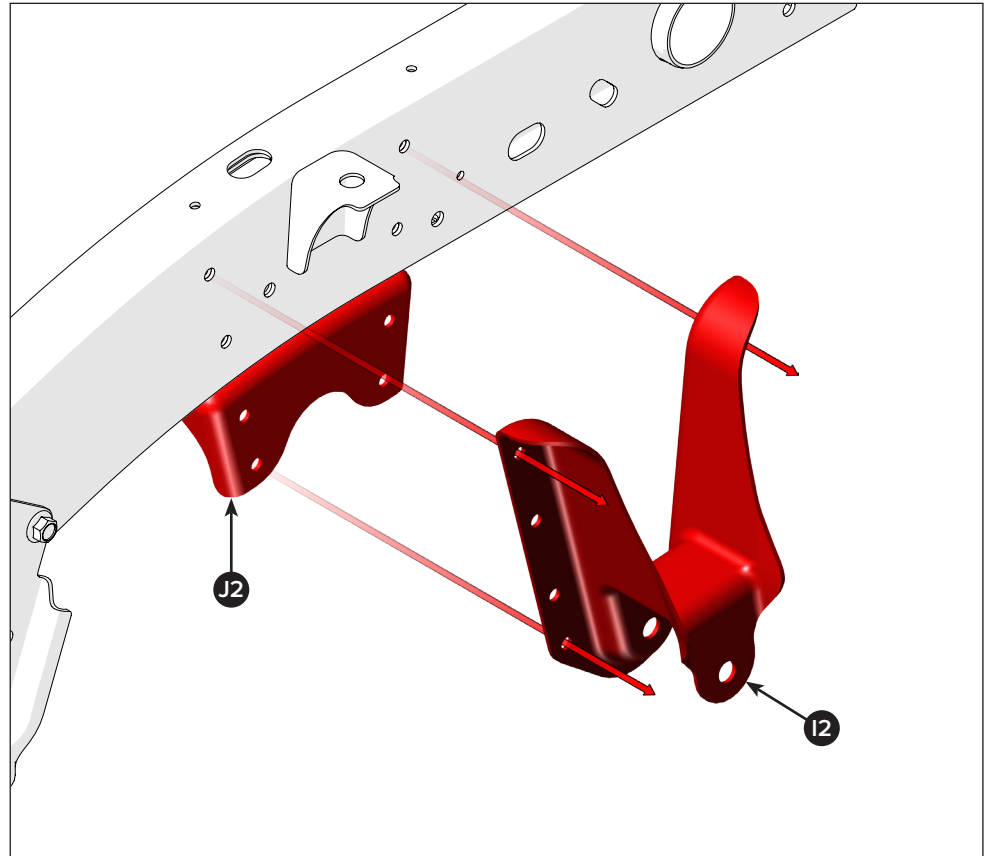
Repeat steps 22 and 23 to remove the right-side front spring mount.

Note: The lower front spring mount brackets (J2) will no longer be used, but can be removed or left in place.

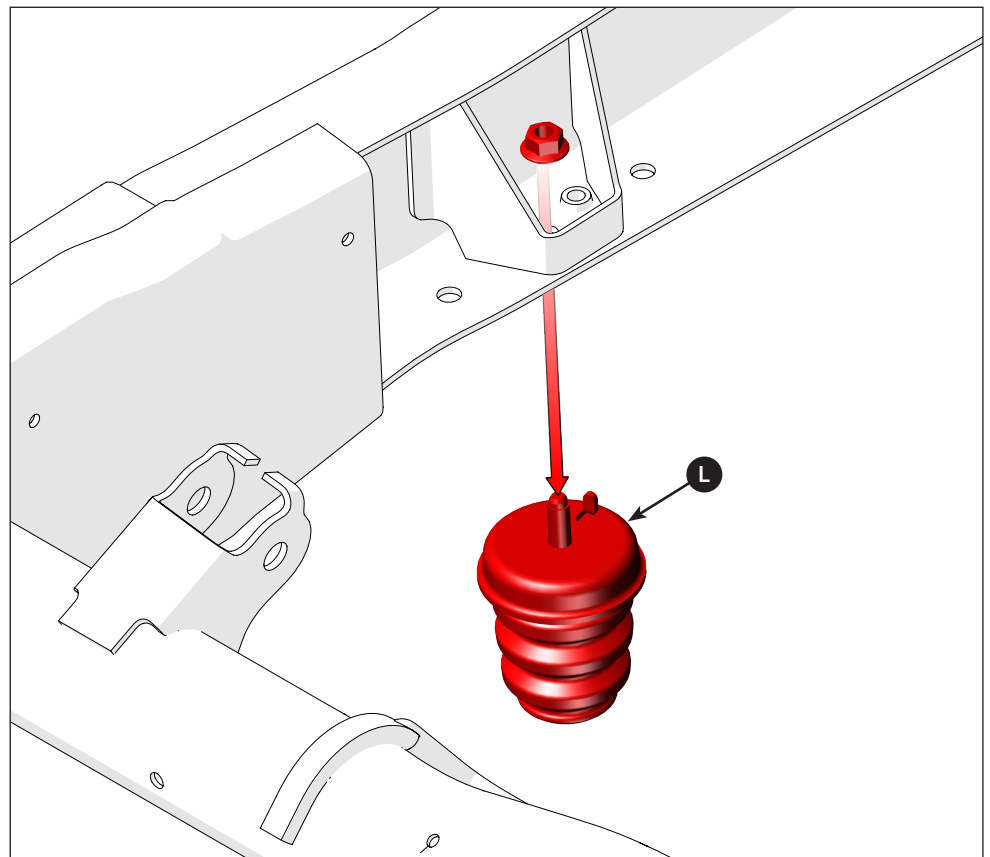
To remove them, the bottom rivets (not shown) must be removed, similar to the procedure in step 22.

Note: The rear spring mounts do not have to be removed from the frame, but can be if desired.

Use either of the methods described in step 22, then discard the mounts and rivets.

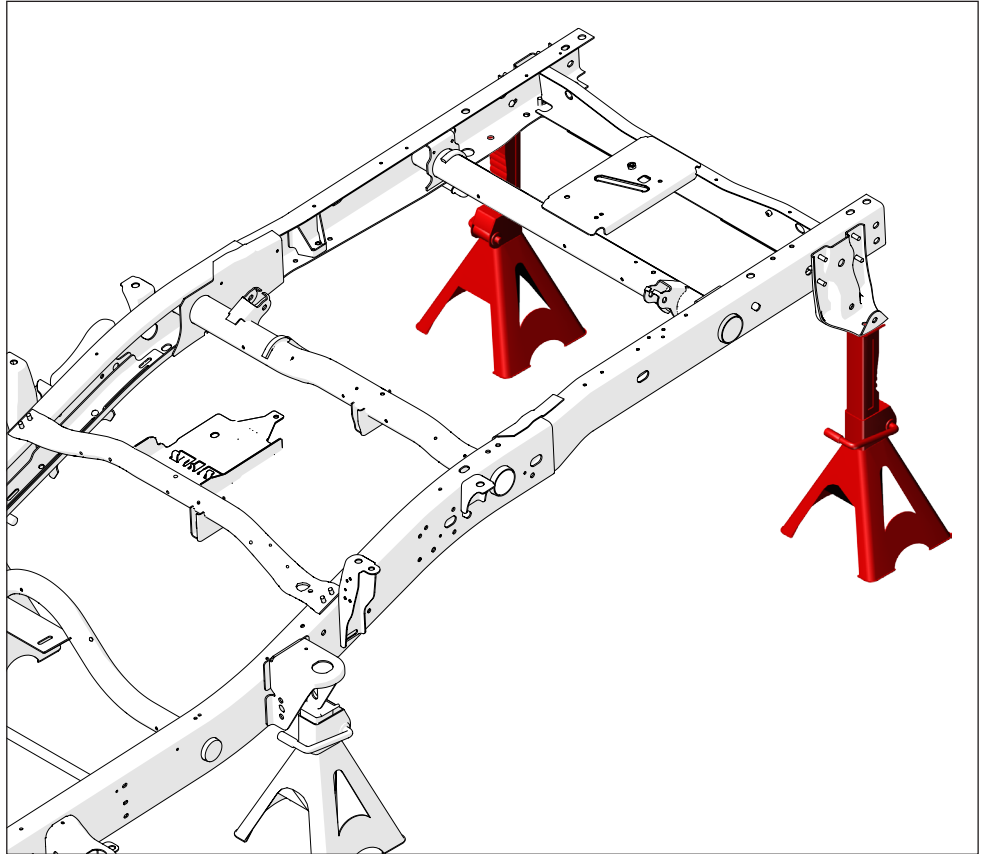


24 Remove and discard the left and right side bump stops (L) and nuts, as they will not be reused.



25 Use jack stands to support the end of the frame.

This step is necessary to make sure it remains in its original position before the frame is cut in step 26.



Installer's Note: The back of the frame can become weak and distort if both frame rails are cut simultaneously.

As such, cut only one frame rail, then fully install the C Notch assembly before you proceed with the other.

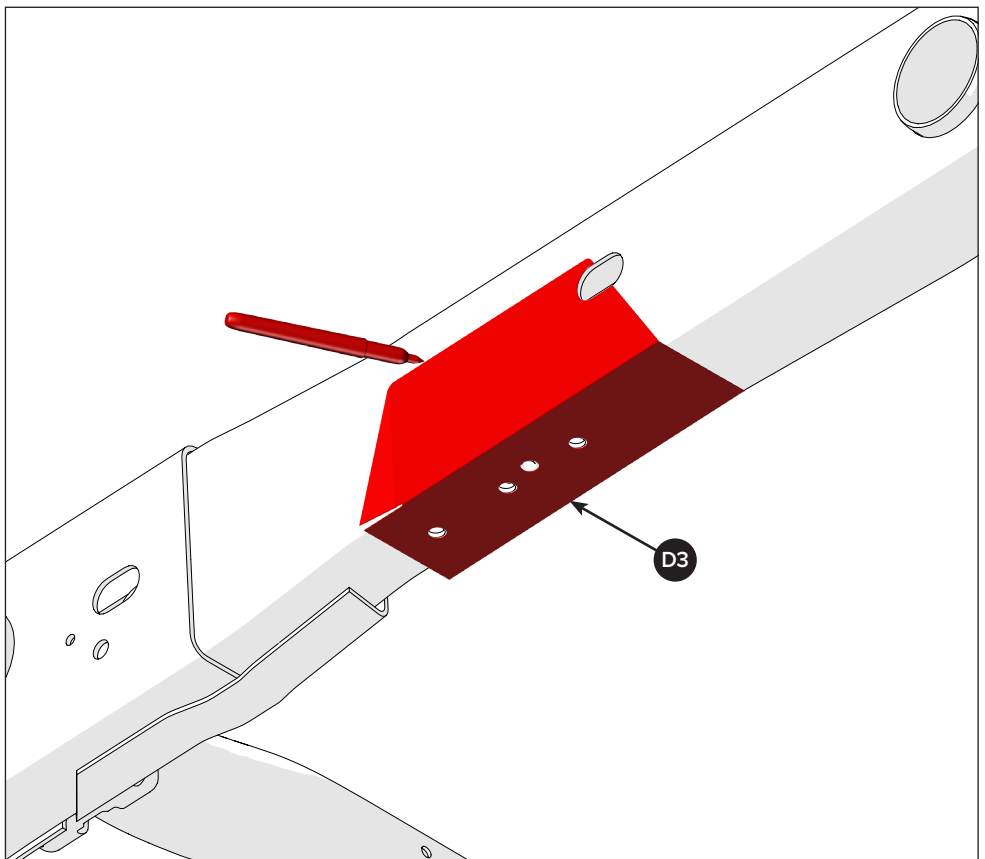
26 Put the frame notch template (D3) from the Frame Notch Kit RX45-4. The template must align with the holes in the bottom of the frame rail and the oval slot on the outer side of the frame rail.

With the template aligned, use a marker and trace along the outside edge of the template.

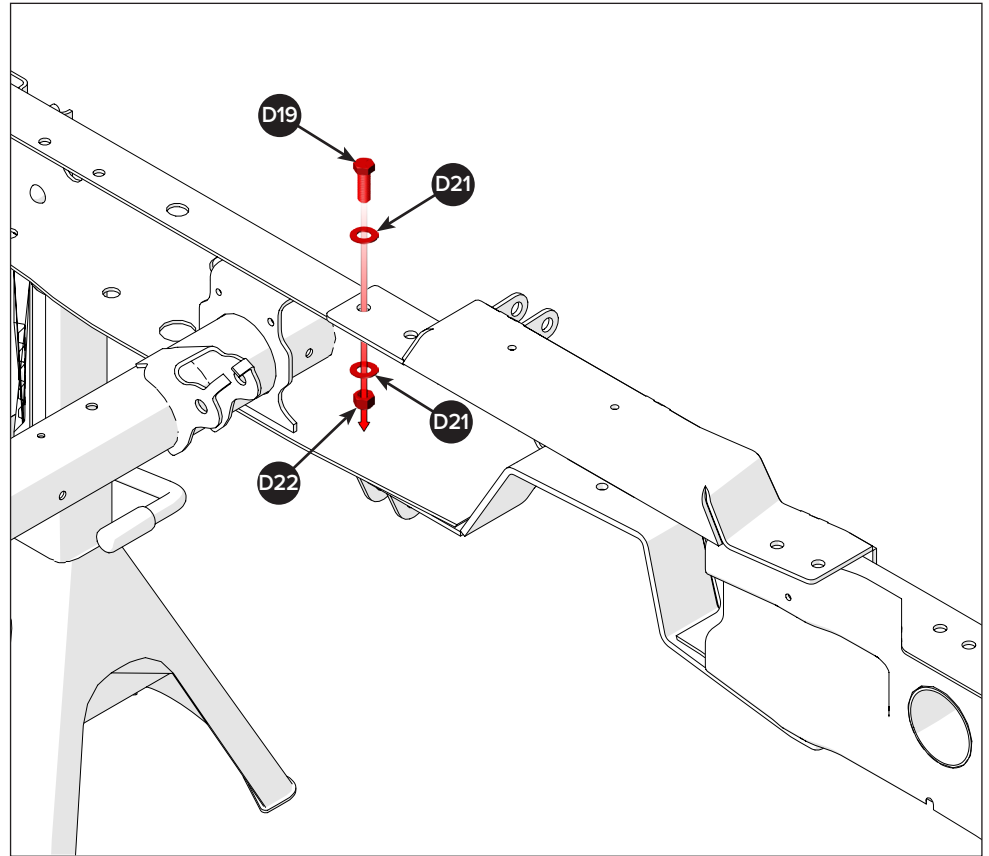
With the template's shape marked on the frame rail, cut the frame where marked. Discard the cut off frame rail.

Save the template for use on the other frame rail and repeat the frame cut procedure.

Note: Bend the template along the dotted seam for use on the right frame rail.

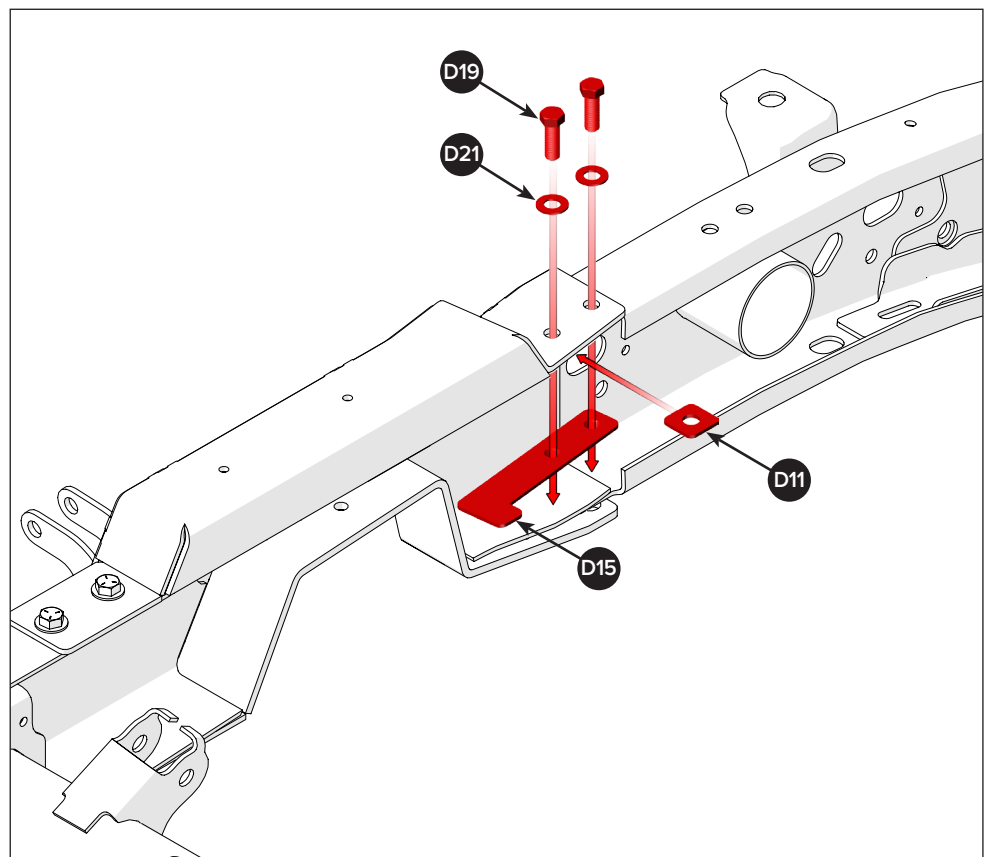


- 27** Use the C-Notch as a drill template.
Use a drill and an appropriately sized bit to drill through the frame.
To initially attach the C-Notch to the frame and prevent movement, use one bolt (D19), two washers (D21), and a Nylock nut (D22).
Snug the fasteners, as they will get torqued during step 32.



Installer's Note: The inside frame plate has been removed for visual clarity.

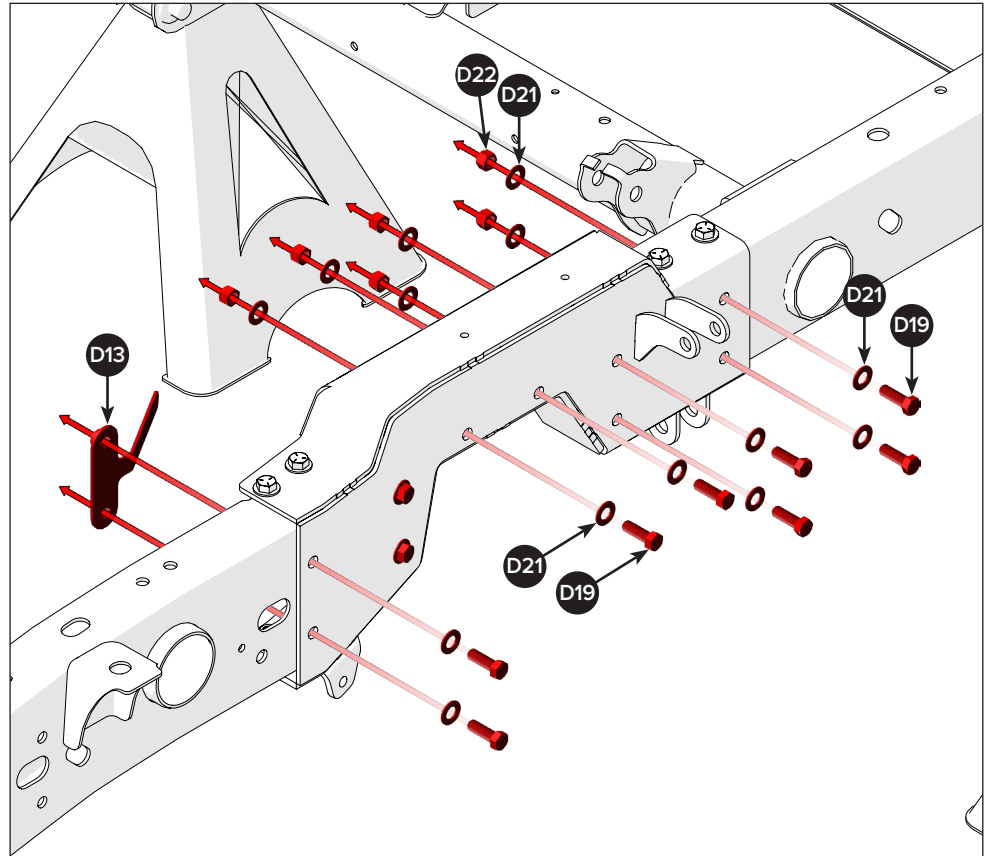
- 28** Use the C Notch as a template and drill two holes through the top front of the frame, as illustrated.
Next, place one frame notch spacer (D11) below the C Notch and at the top of the frame. Make sure to properly align with the rear hole that is farther from the edge.
Then, attach the left-hand upper nut plate (D15) using two bolts (D19) and washers (D21).



29

Drill the remaining holes through the outer face of the C Notch and the frame.

Use ten bolts (D19), twenty washers (D21), eight Nylock nuts (D22), and one front nut plate (D13).



30

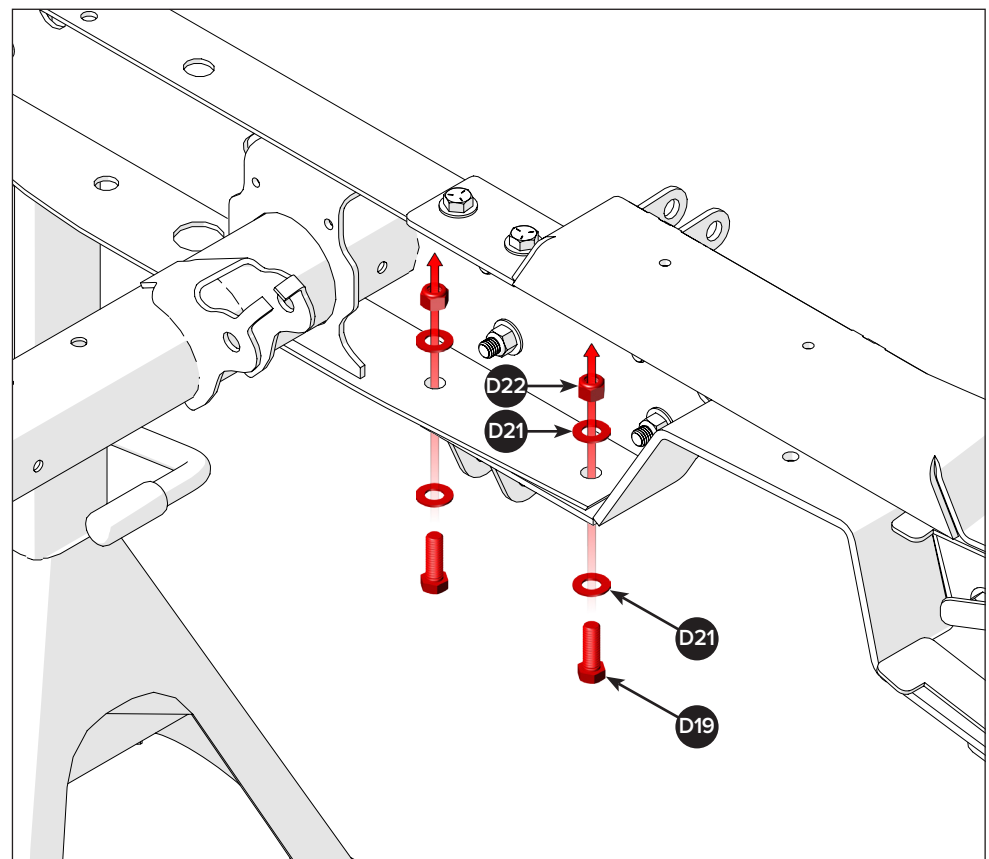
Use the C-Notch as a template and drill two holes through the bottom of the back end of the C-Notch and the frame.

Use two bolts (D19), four washers (D21), and two Nylock nuts (D22).

Note: For frames from 1999 to mid-2000, which have a shorter frame section of 5.00", leave these two bolts loose by approximately 5/16".

Proceed to step 31.

For later model trucks, continue to step 32.



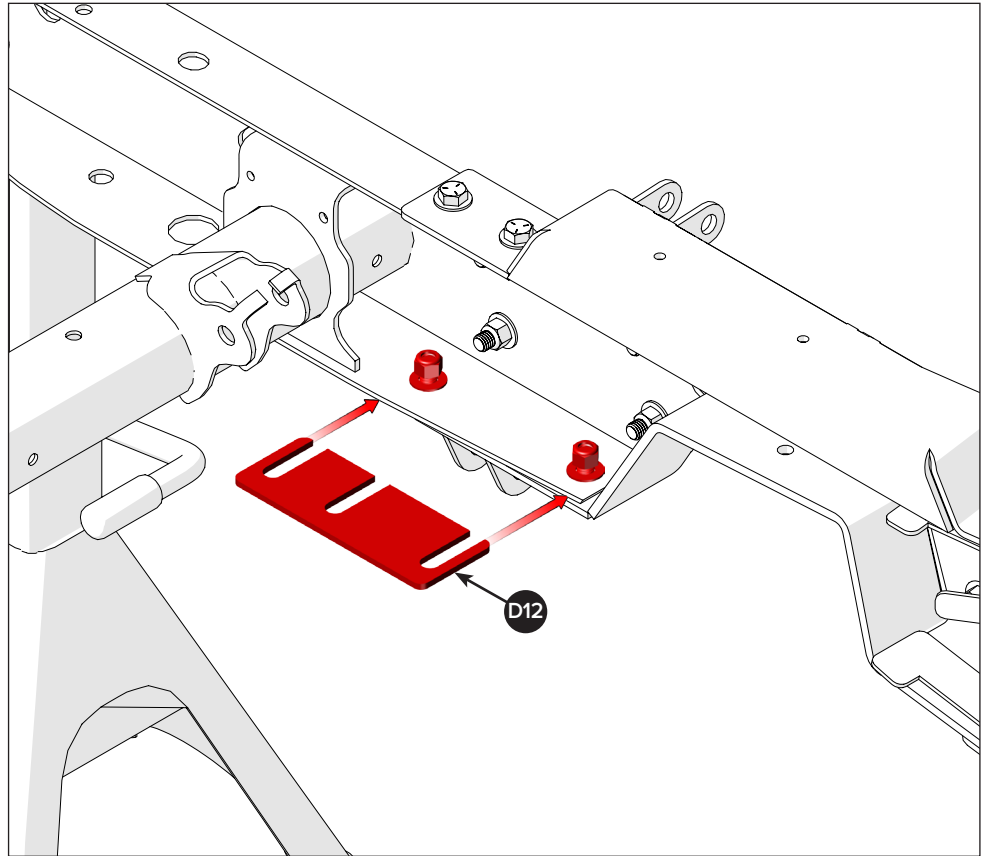
Installer's Note: The RX45-4 C Notch kit includes frame spacer plates.

1999 to mid-2000 frames are 1/4" narrower, and the spacer takes up this width to create frame rigidity with the C Notch.

These spacers are not used for any other applications and can be discarded.

31 Once the bolts are in the C Notch and frame, guide a frame spacer plate (D12) between the bottom of the frame and the C Notch weldment.

Use a rubber mallet if necessary to fully seat the spacer.



32 To use the optional QA1 sway bar, refer to QA1 rear sway bar installation instructions 9919-345.

Use the C-Notch as a template to drill two holes through the bottom front of the C-Notch and the frame.

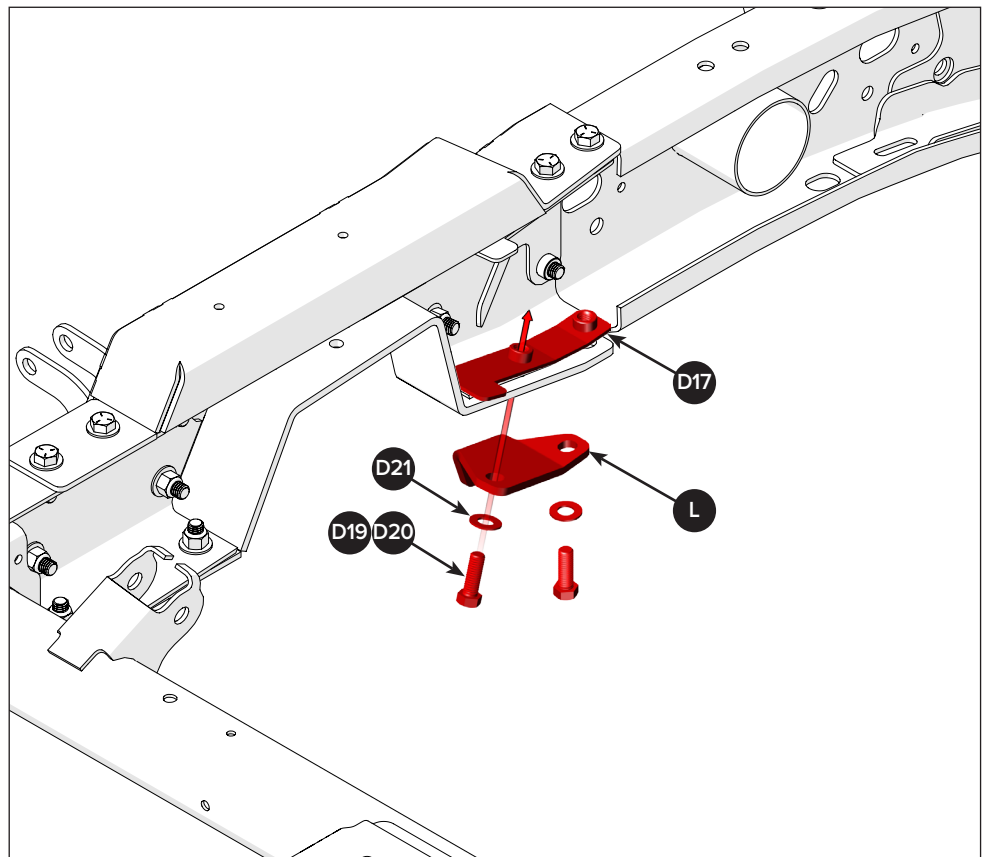
Insert the left-hand (LH) sway bar nut plate (D17) into the frame pocket.

Attach the rear sway bar mount bracket (L) with two bolts (D20) and washers (D21).

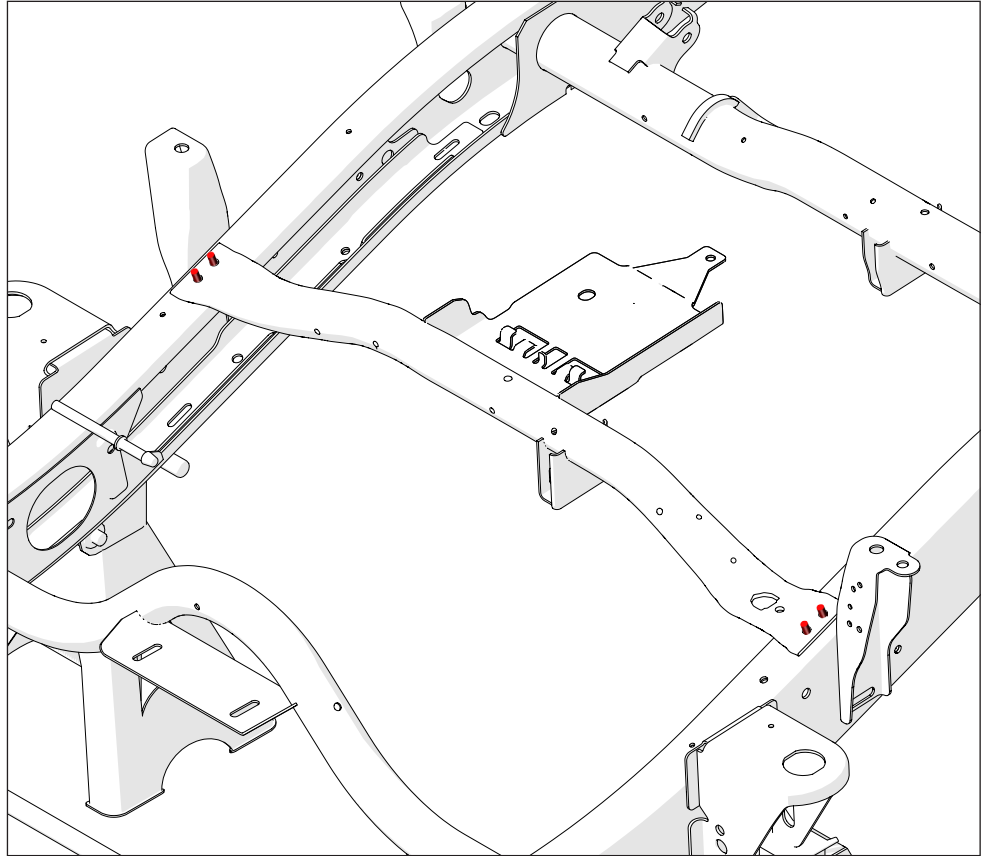
If a rear sway bar will not be used, fasten the bottom of the C-Notch to the frame with the LH sway bar nut plate (D17), two bolts (D19), and washers (D21).

After all fasteners are in place in the C-Notch weldment, torque them to 49 lb-ft.

Repeat steps 24 through 32 to install the right-side C-Notch weldment.



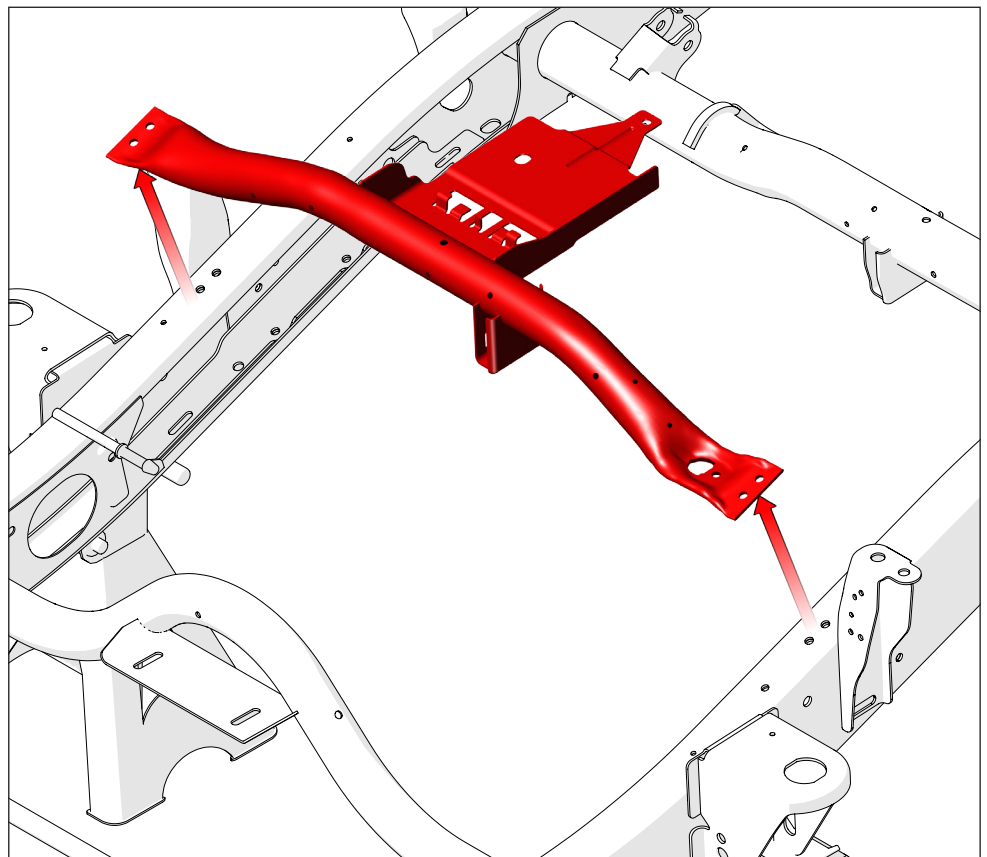
- 33** Remove the four rivets that hold the factory front fuel tank crossmember to the top frame rails.



Installer's Note: This step only applies to late-model trucks equipped with this mount on the crossmember. Early model trucks will not have this mount.

- 34** Lift the crossmember off the frame rails and put it on a work surface.

Note: The vapor canister mount bracket must be cut from the crossmember, then modified for use with the QA1 torque arm crossmember.



Installer's Note: Early model trucks have a tank-mounted EVAP canister and will not perform this step. Skip to step 40 if you have an early model.

35 Turn the removed crossmember so the bottom points up.

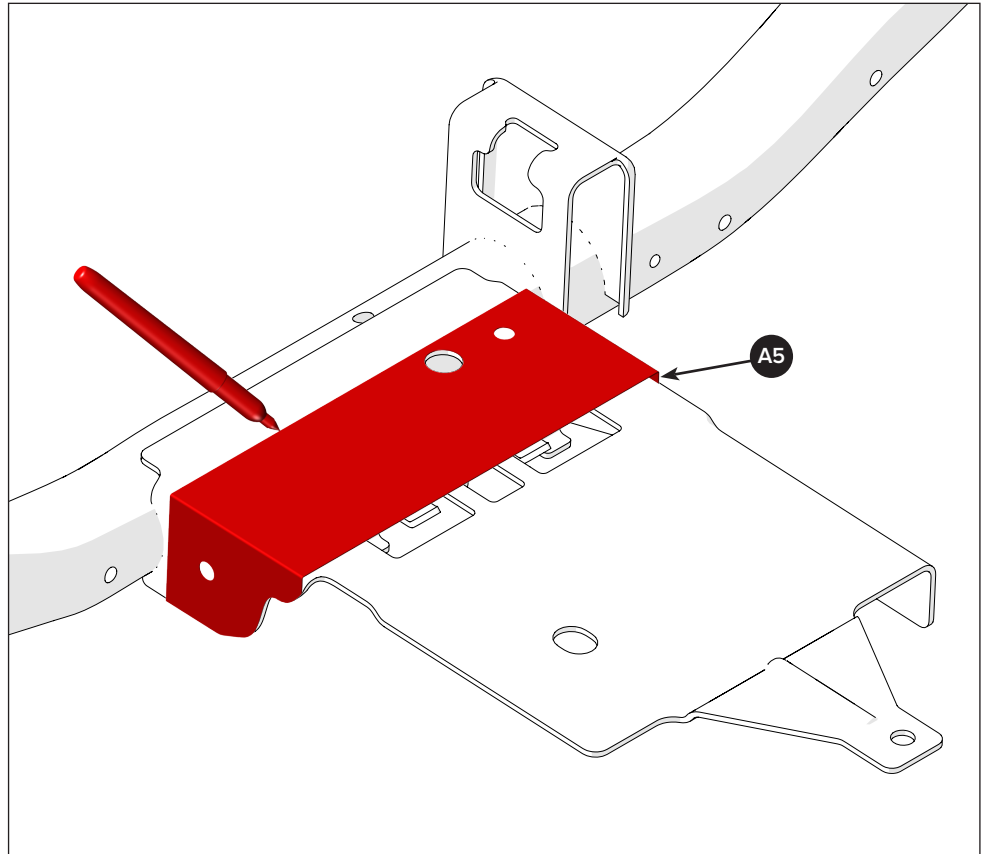
Position the trim template (A5) onto the canister mounting bracket.

The template must align with the large hole on the bracket as shown.

Once the template is aligned, use a marker or scribe to trace along the outside edge of the template and the three holes needed for installation.

With the template's shape transferred to the canister mount bracket, remove the template.

Discard the template, as it will not be used again.

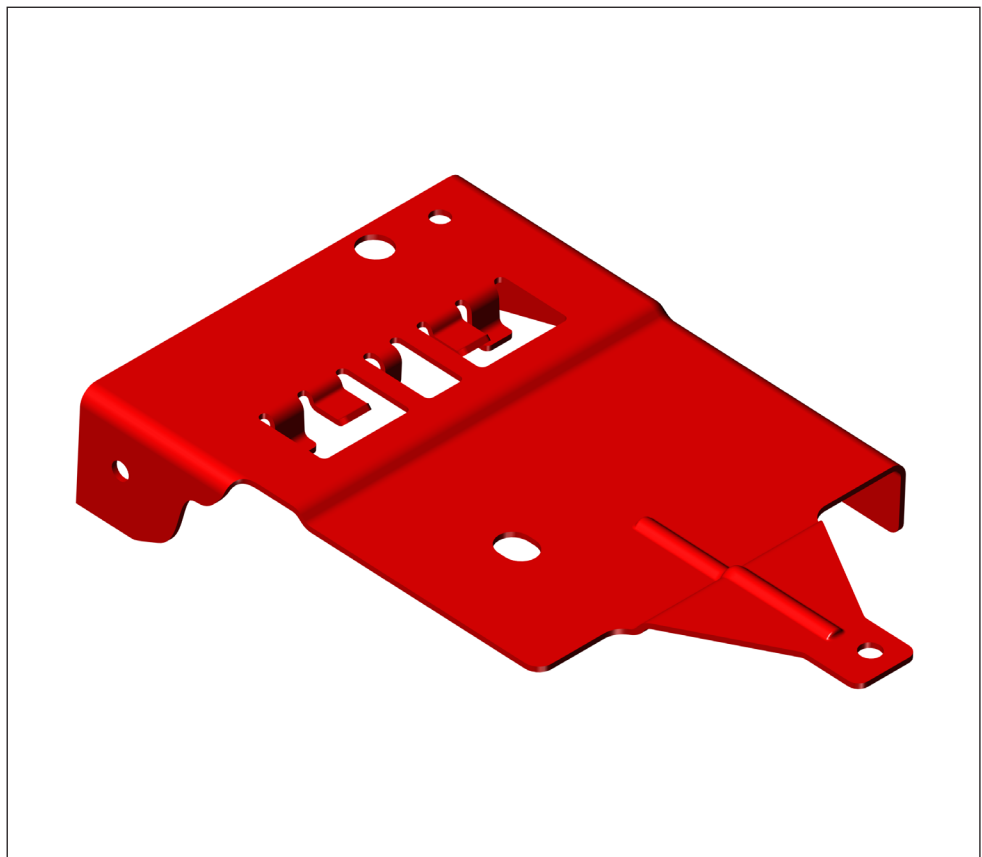


36 Use a cut-off tool to cut the vapor canister bracket from the crossmember.

Deburr all sharp edges along the cut.

Drill the marked holes with an applicable bit.

If desired, prime and paint the bracket before installation.



37 Put the QA1 torque arm crossmember (4) onto the frame.

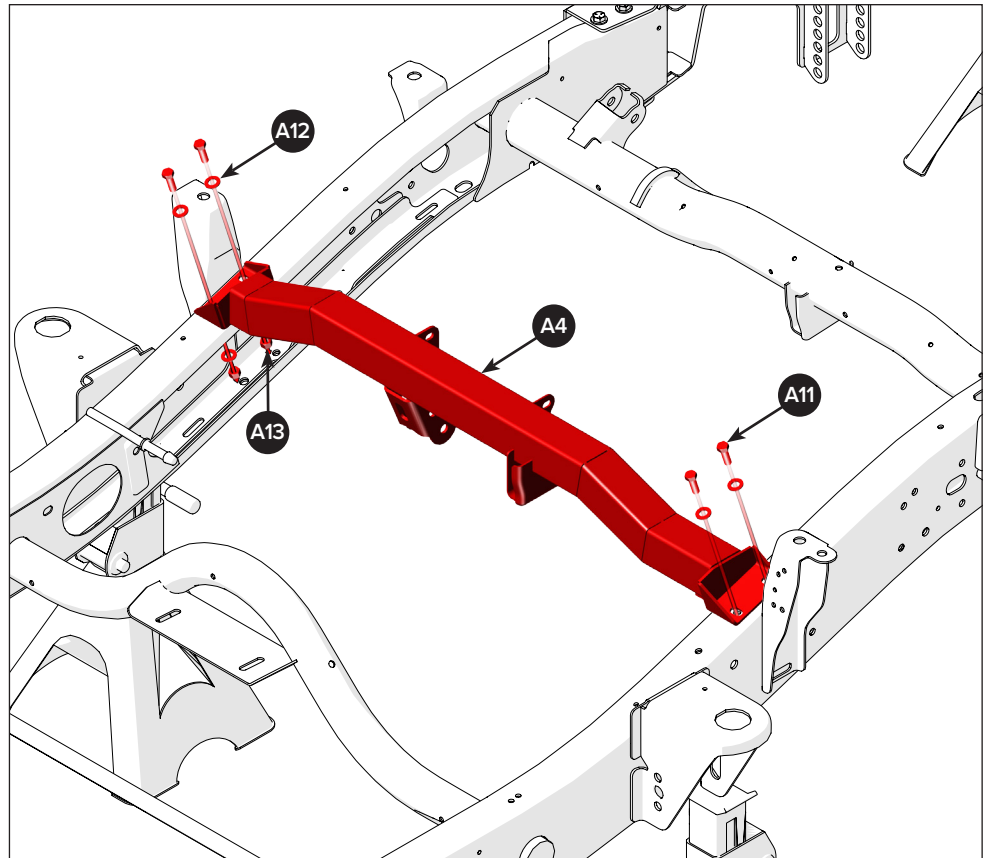
Attach the crossmember to the frame with the front pair of pre-existing crossmember holes.

Use two bolts (A11), four washers (A12), and two Nylock nuts (A13).

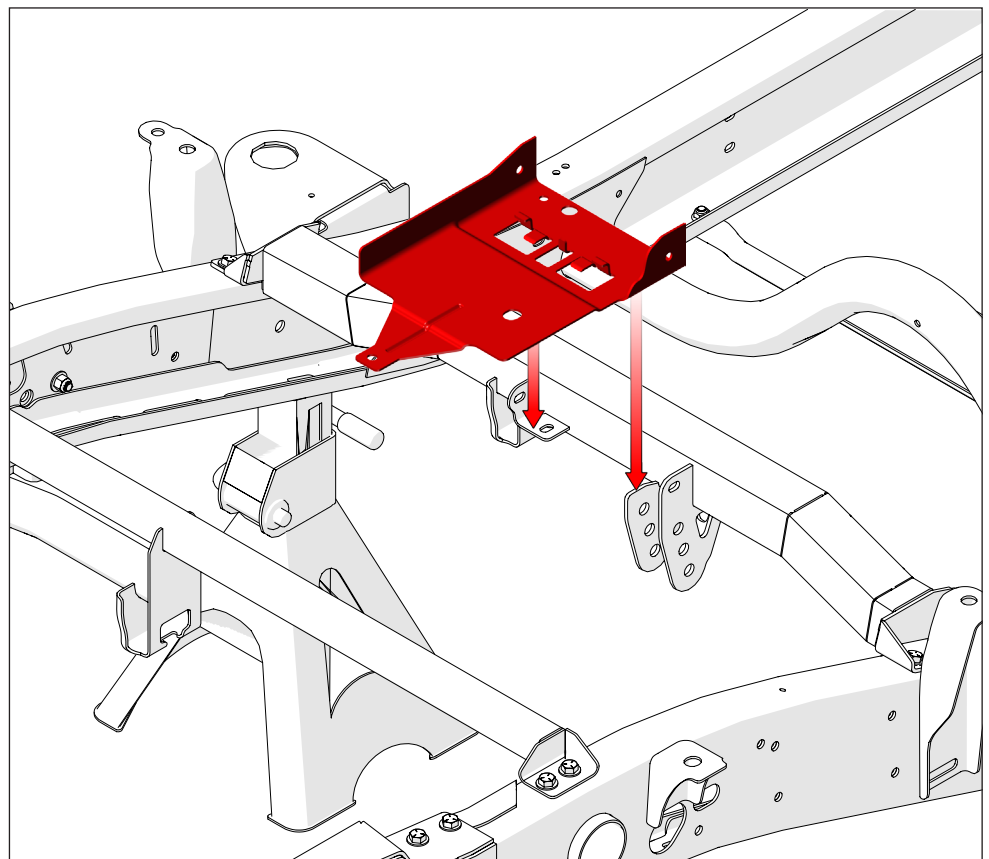
Now, use a drill and an appropriately sized bit to drill holes for the remaining crossmember fasteners.

Attach the crossmember to the frame back set of frame holes with two bolts (A11), four washers (A12), and two Nylock nuts (A13).

Torque the fasteners to 49 lb-ft.



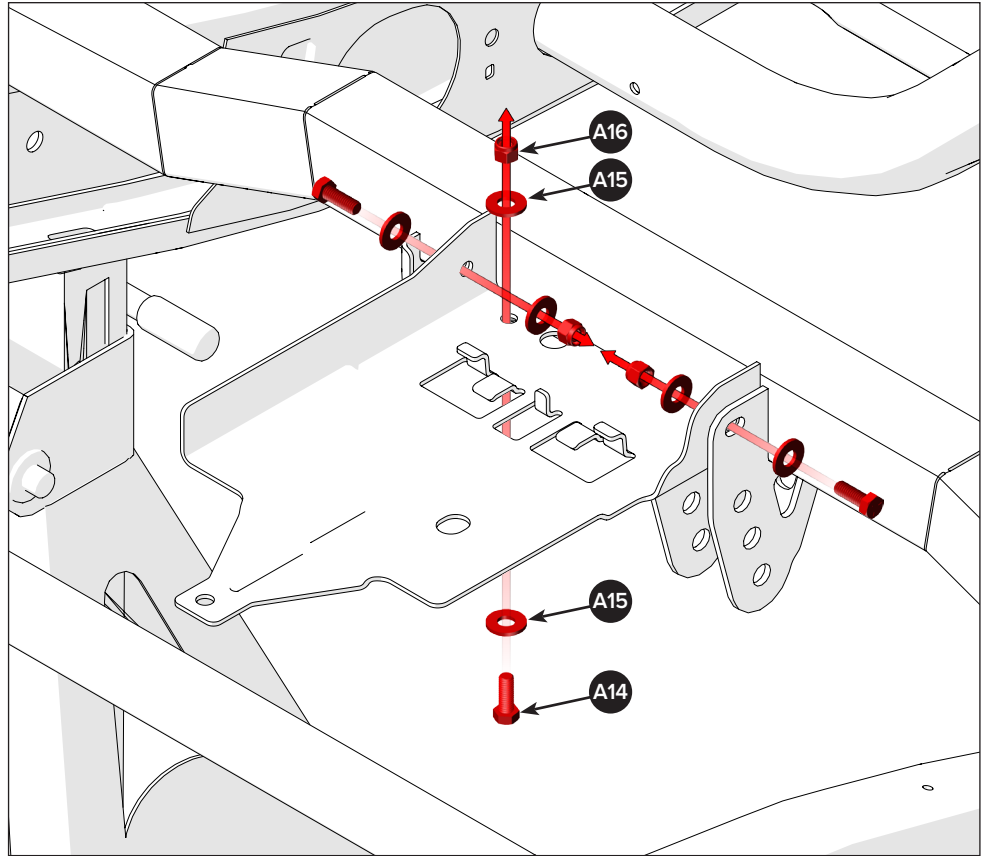
38 Attach the trimmed vapor canister bracket to the mounting tabs of the torque arm crossmember.



39

Attach the vapor canister bracket to the crossmember with three bolts (A14), six washers (A15), and three Nylock nuts (A16).

Torque the bolts to 31 lb-ft.



40

Put the gas tank crossmember template (D4) from the Frame Notch Kit RX45-4 on the frame rail.

The arrow and "FRONT" point to the front of the vehicle.

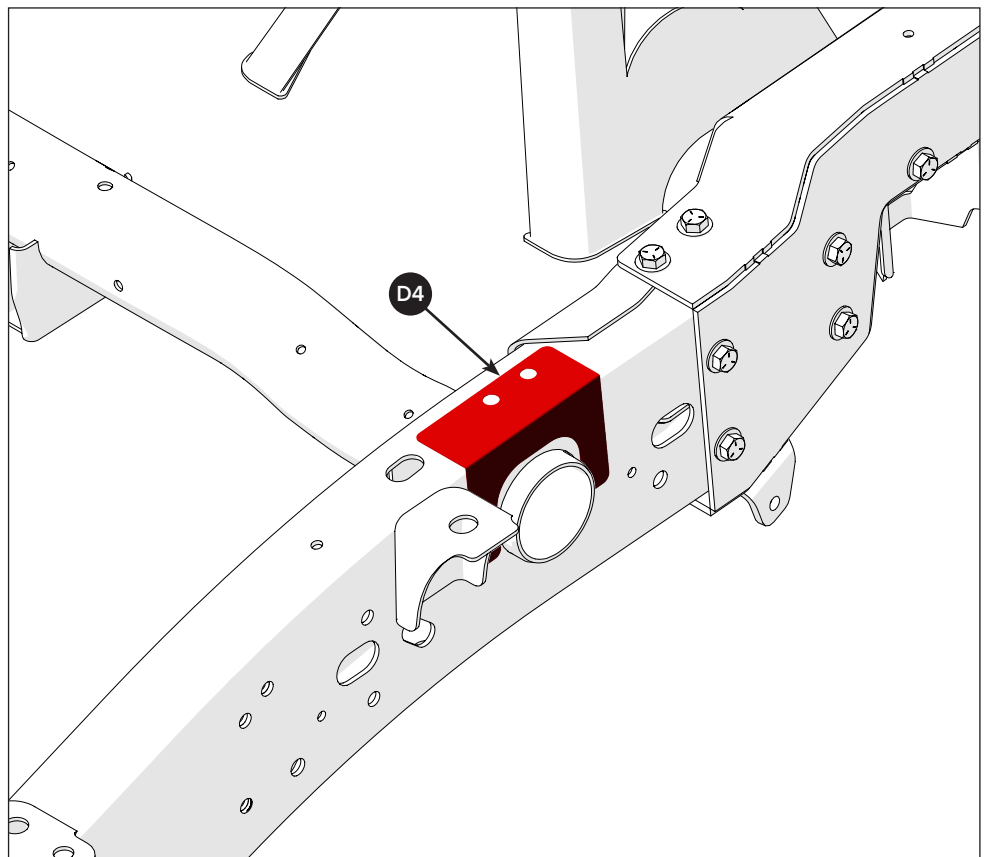
The template must align with the crossmember's tube and rest flush on the frame rail.

Once the template is aligned, use a marker or scribe to trace inside the template's top holes.

With the template's shape transferred to the frame rail, remove the template and save it for use on the other side of the crossmember.

Use a drill and an appropriately sized bit to drill holes into the frame for the crossmember's fasteners.

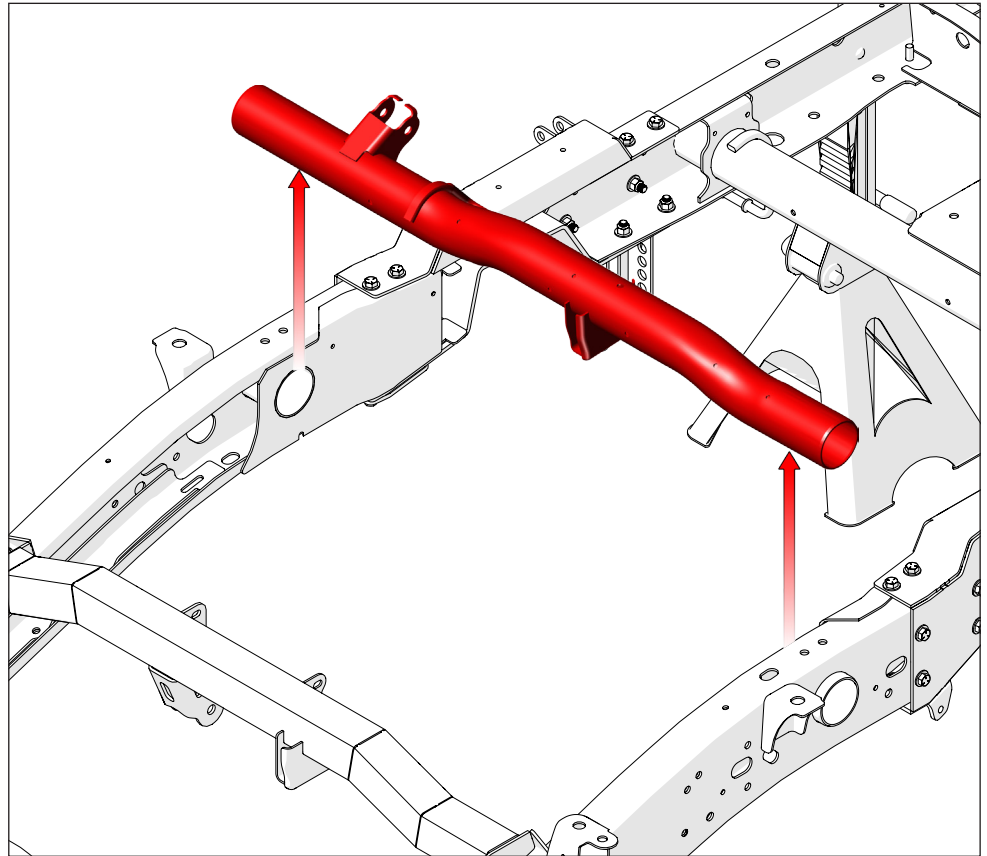
Note: Bend the template at the dotted seam to fit the right frame rail.



41 Use an appropriate tool to trim both ends of the tube and bracket.

Make sure they are nearly flush to preserve the factory welds within the frame rails.

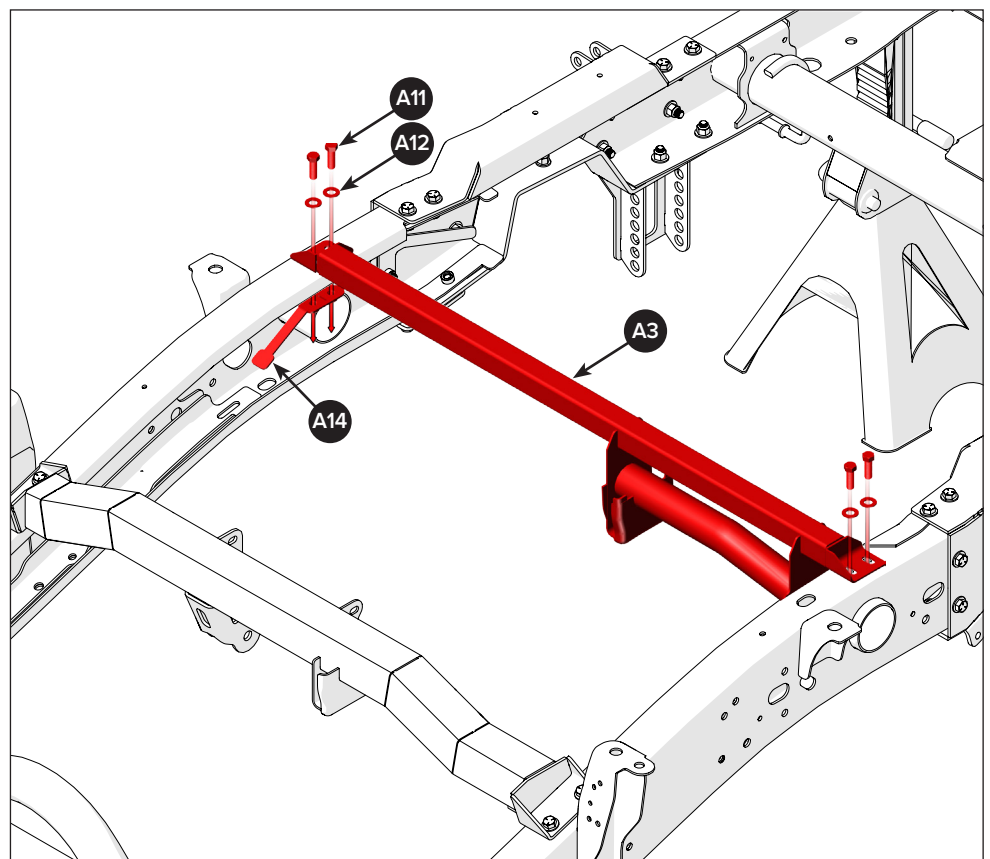
Deburr the cut edges, then prime and paint, if desired.



42 Put the QA1 fuel tank crossmember (A3) onto the frame rails and align it to the holes drilled during step 38.

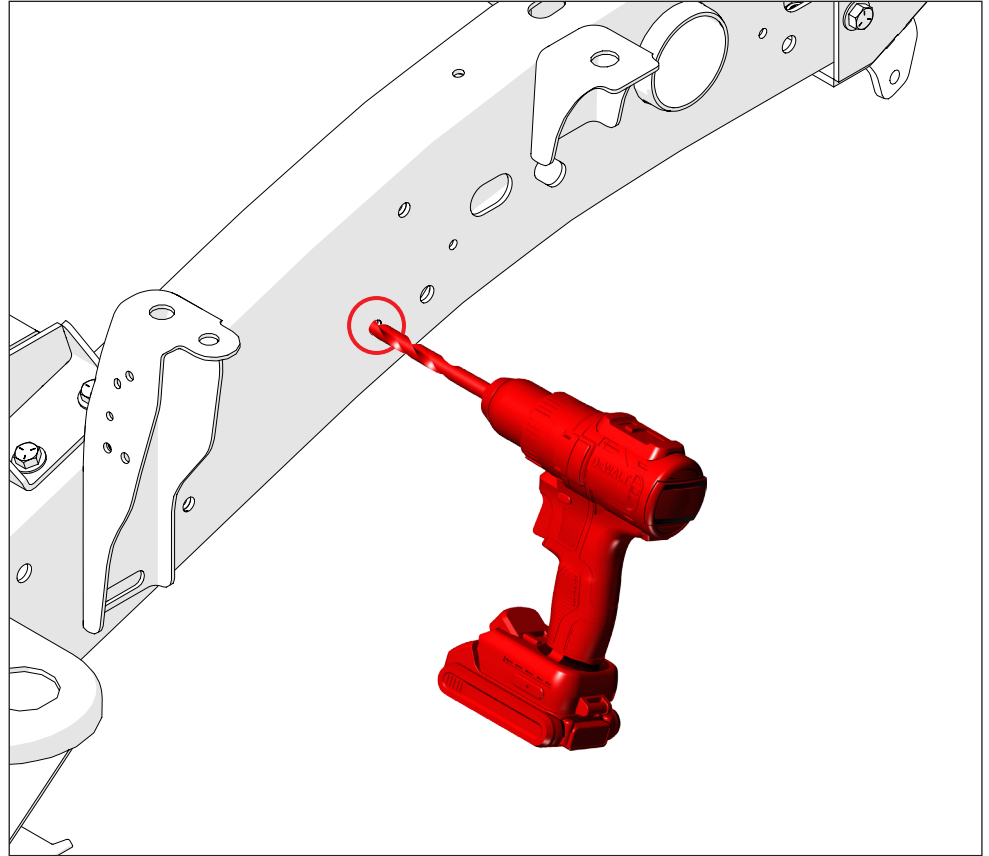
Use four bolts (A11), four washers (A12), and the two nut plates (A14) from the RX45-4 kit to attach the gas tank crossmember to the frame rails.

Torque the fasteners to 49 lb-ft.

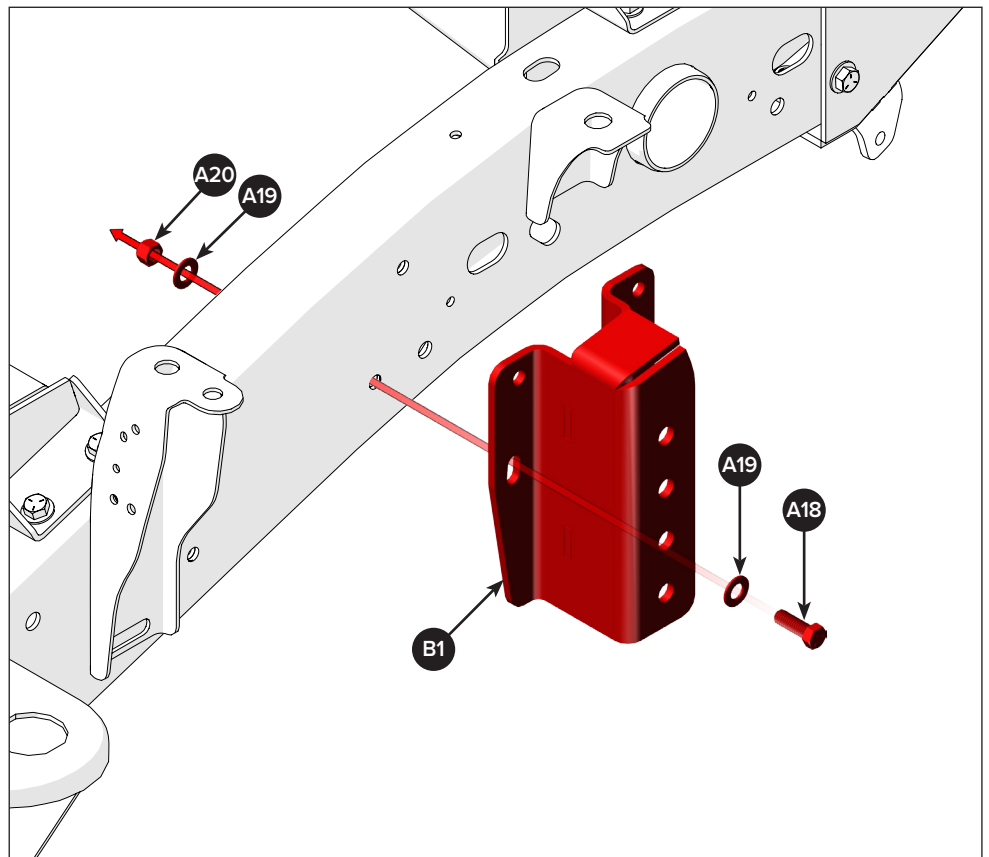


Installer's note: Steps 43 through 46 show the trailing arm mount installation procedure on a short bed frame.

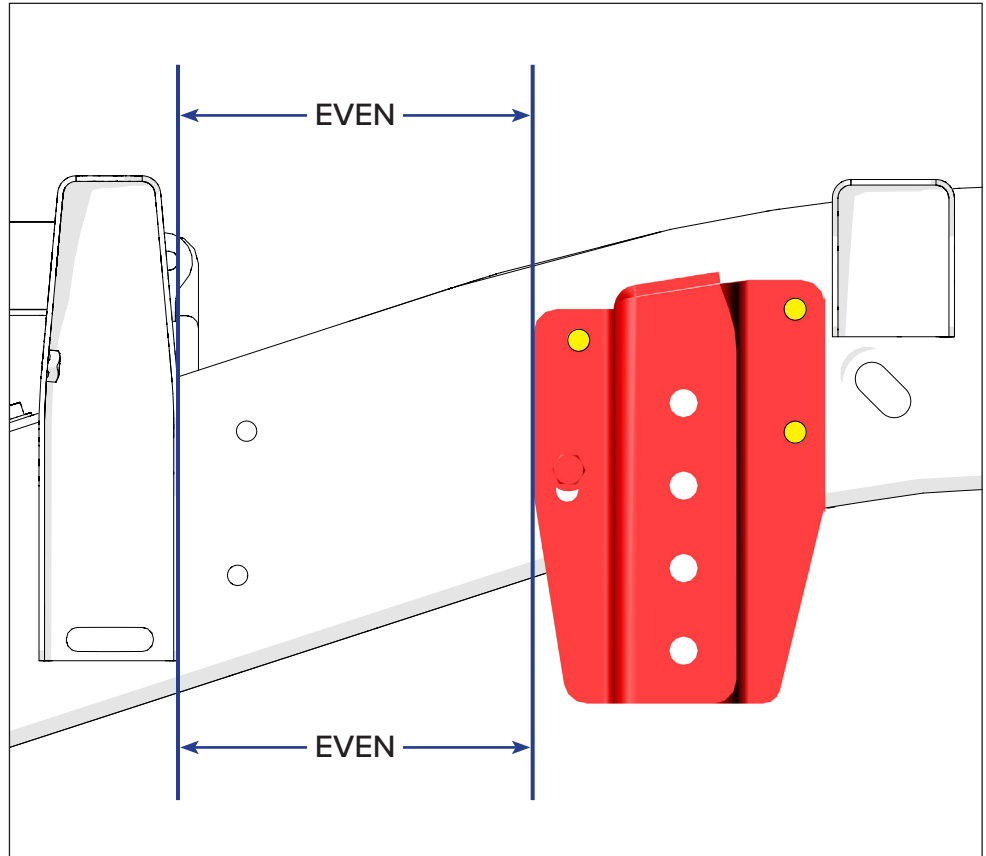
- 43** First, use a 15/32" drill bit along with a drill to increase the rivet hole marked in red.



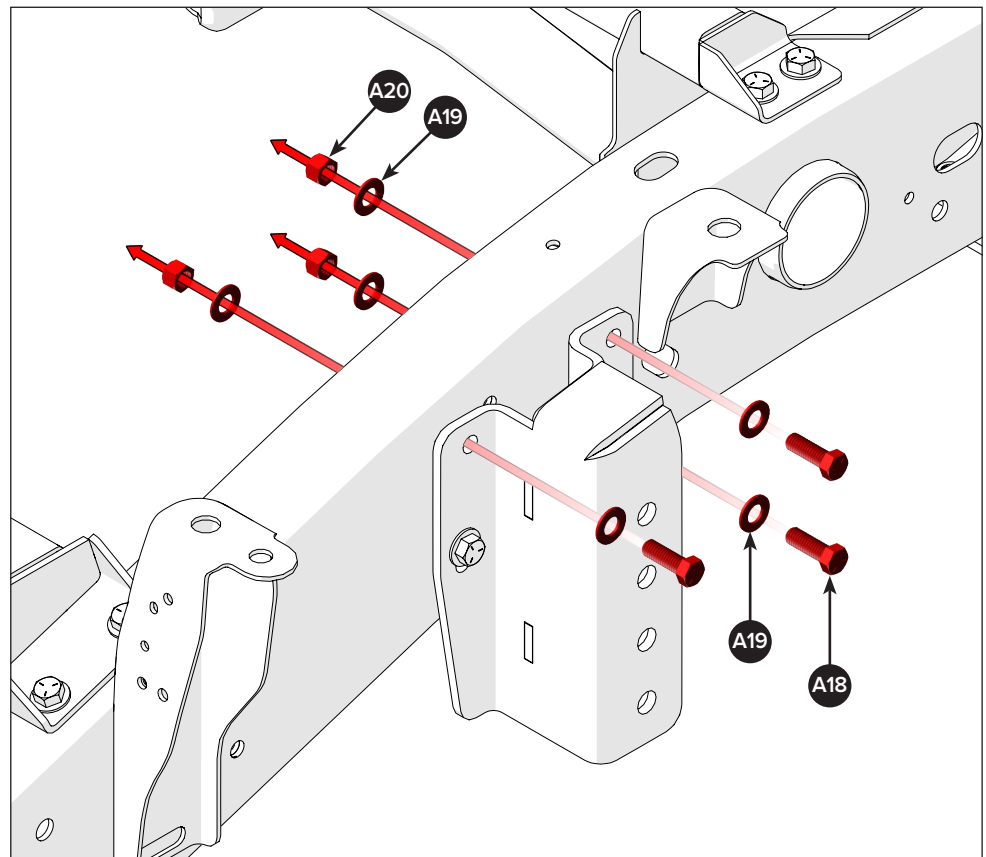
- 44** Attach the front trailing arm mount (B1) to the left side of the frame. Use one bolt (A18), two flat washers (A19), and a Nylock nut (A20). Snug the fasteners for now, as they will be torqued to specification during step 46.
- Note:** A flat washer and the Nylock nut attach from the inner frame channel.



- 45** Make sure that the mount is parallel to the front bed mount as shown. Use the mount as a template and use a 15/32" bit to drill through the mount's holes marked in yellow.

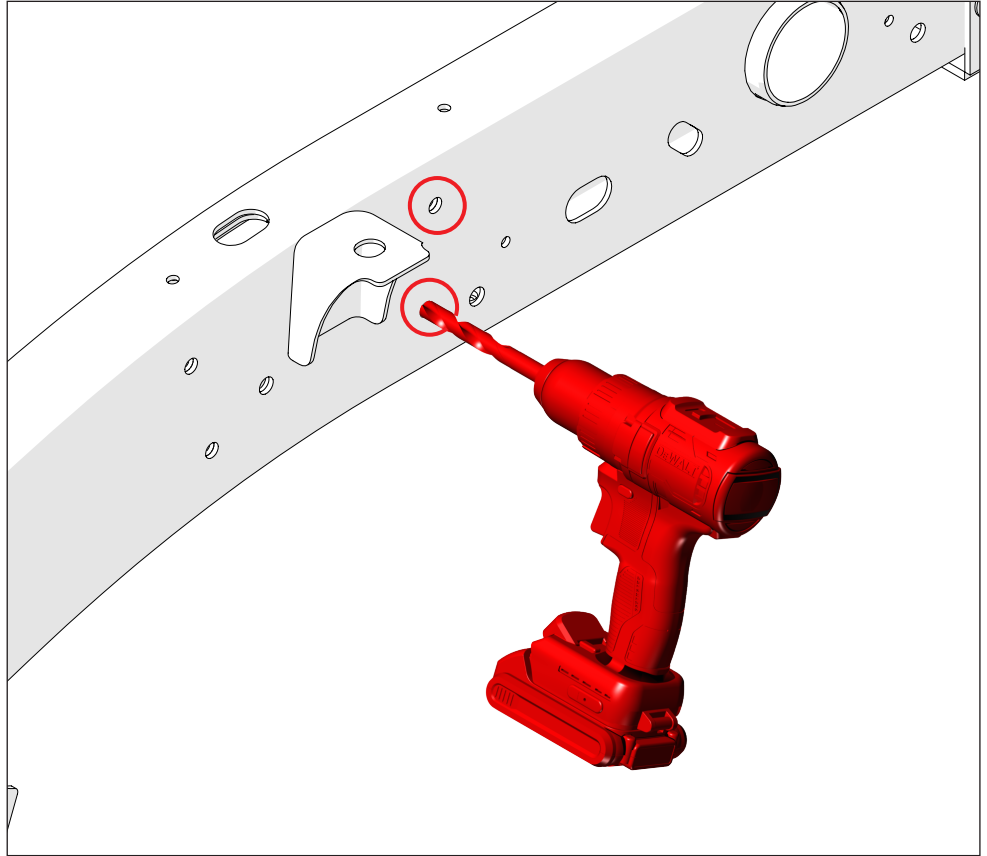


- 46** Use three bolts (A18), six flat washers (A19), and three Nylock nuts (A20) to complete the trailing arm mount attachment. Torque all front trailing arm mount hardware to 49 lb-ft. Repeat steps 43 through 46 to attach the right-side trailing arm mount (A2).



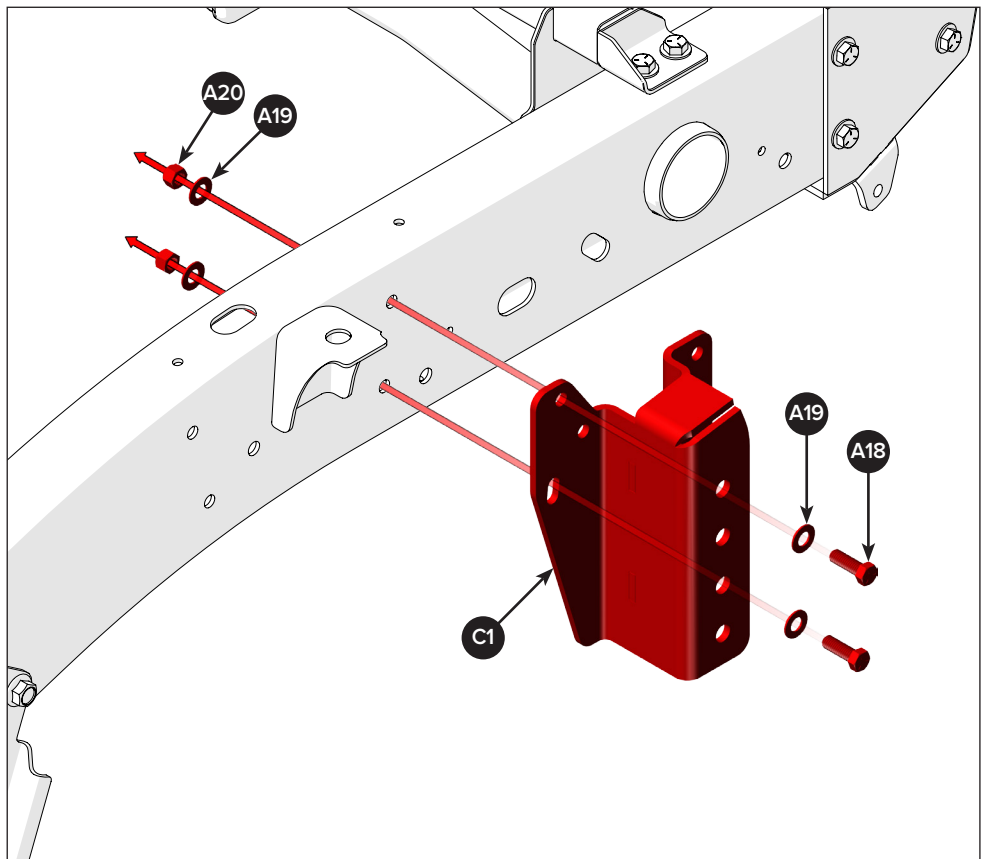
Installer's note: Steps 47 and 50 show the trailing arm front mount installation procedure on a long bed frame.

- 47** First, use a 15/32" drill bit along with a drill to increase the two rivet holes marked in red.

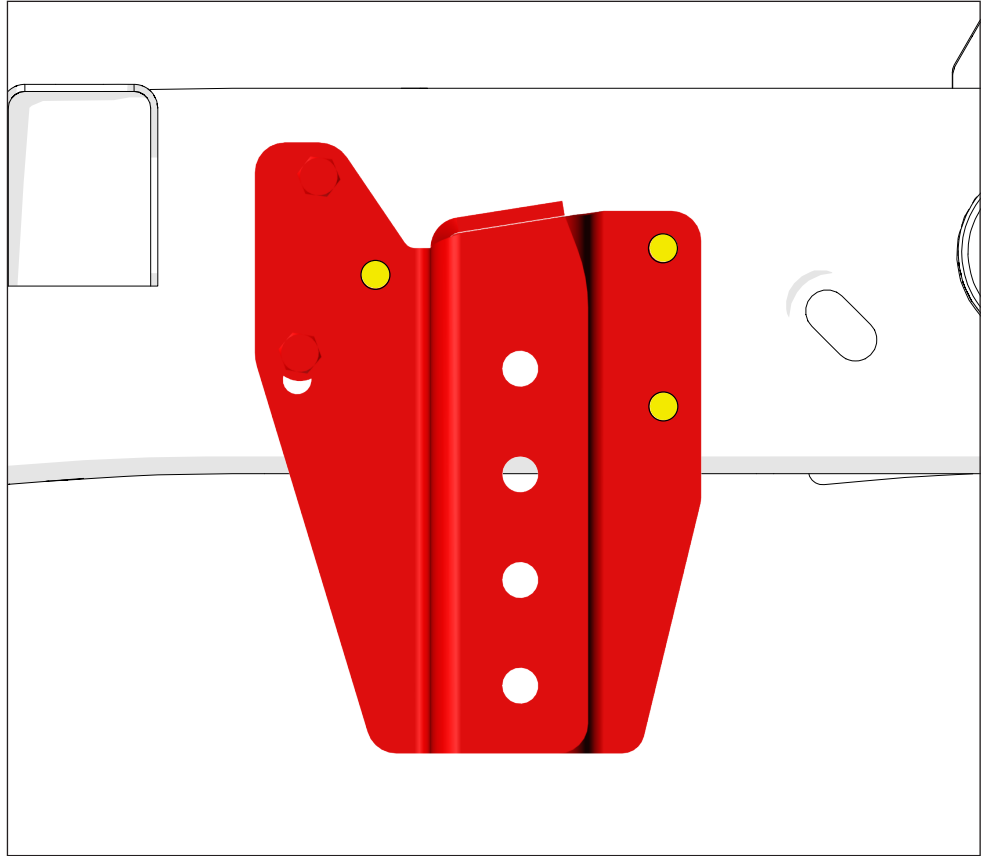


- 48** Attach the front trailing arm mount (C1) to the left side of the frame. Use two bolts (A18), four flat washers (A19), and two Nylock nuts (A20). Snug the fasteners for now, as they will be torqued to specification during step 50.

Note: Two of the flat washers and the Nylock nuts attach from the inner frame channel.



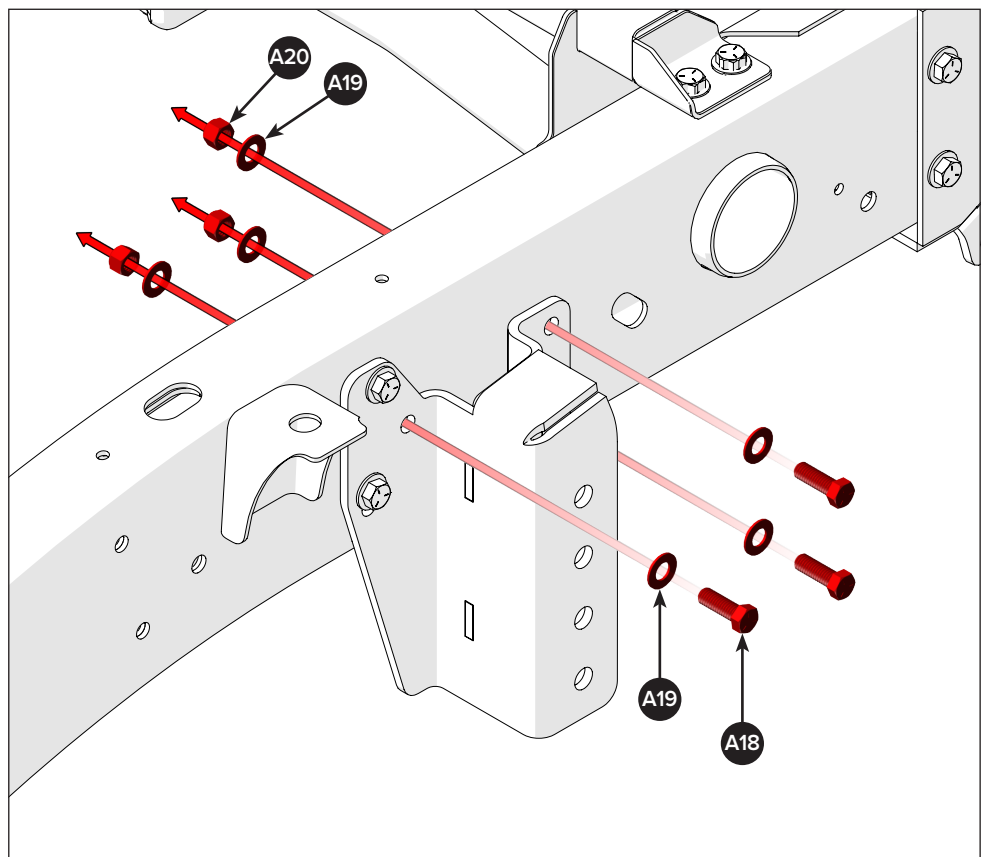
- 49** Use the mount as a template and use a 15/32" bit to drill through the mount's holes marked in yellow.



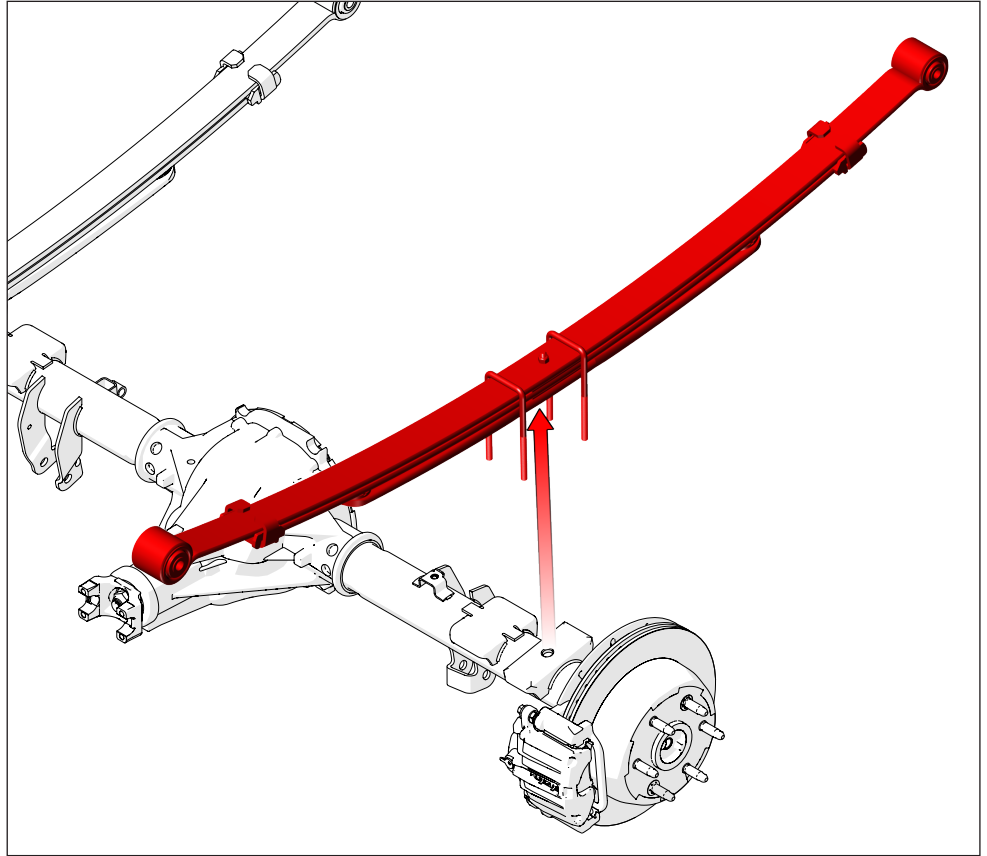
- 50** Use three bolts (A18), six flat washers (A19), and three Nylock nuts (A20) to complete the trailing arm mount attachment.

Torque all front trailing arm mount hardware to 49 lb-ft.

Repeat steps 47 through 50 to attach the right-side trailing arm mount (B2).

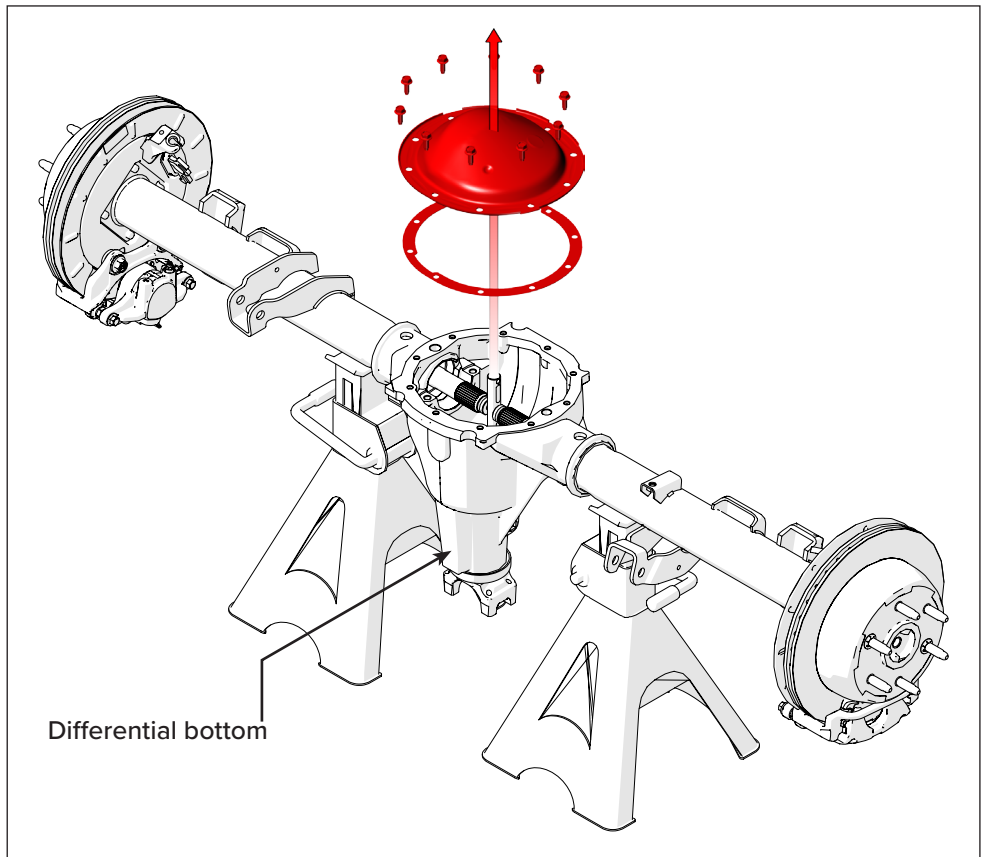


- 51** Remove the nuts from the leaf spring U-Bolts.
 Next, remove the leaf spring from the axle.
 Repeat this process for the leaf spring on the other side of the axle.
 Discard the leaf springs, U-bolts, and hardware as they will not be reused



Installer's note: Steps 52 and 53 show the bottom of the rear axle assembly.

- 52** Mount the rear axle assembly and safely support it.
 Remove the ten bolts from the differential cover.
 Remove the cover's gasket.
 Discard the cover, gasket, and bolts as they will not be reused.



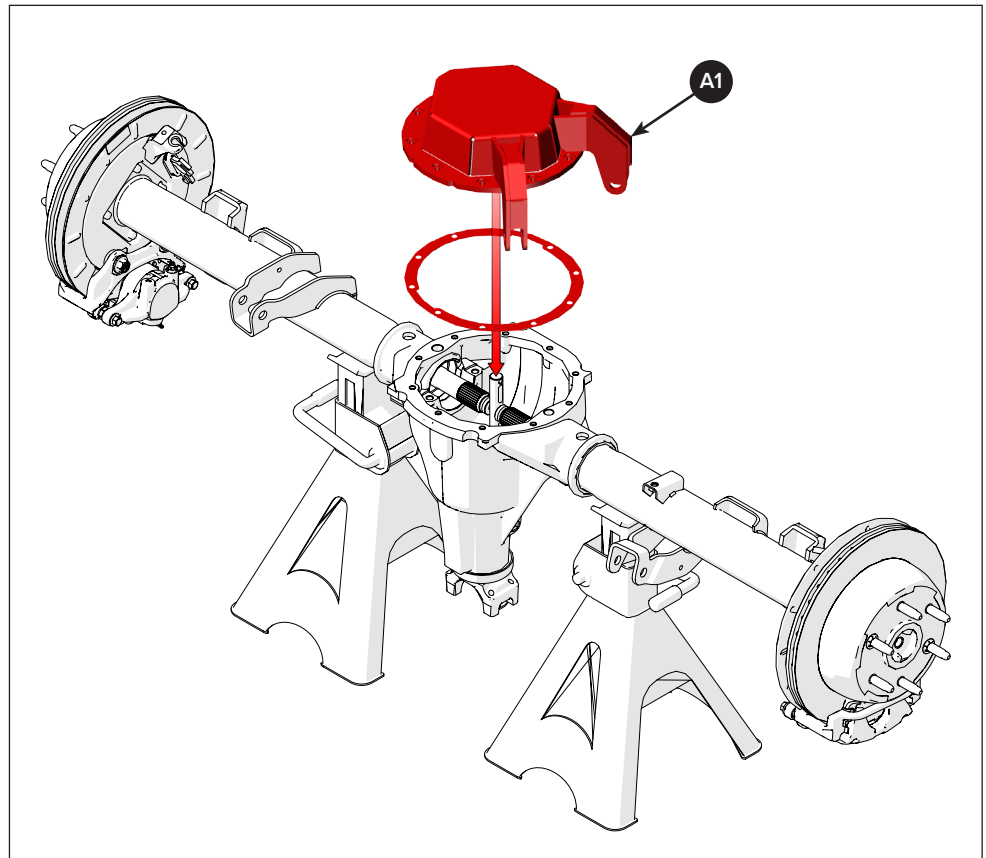
Installer's note: The differential cover's mount ears must be mounted on the passenger side (RH) of the axle.

- 53** First, clean all mating surfaces to remove any oils and greases. Then, apply an even bead of gasket sealer to the housing's mating surface, as recommended by the manufacturer. Carefully put the QA1 torque arm differential cover (A1) onto the differential. Make sure the hole patterns align.

Note: Before the sealant is applied, examine the QA1 differential cover. It must have the correct number of mount holes, as well as the same hole pattern, as the differential.

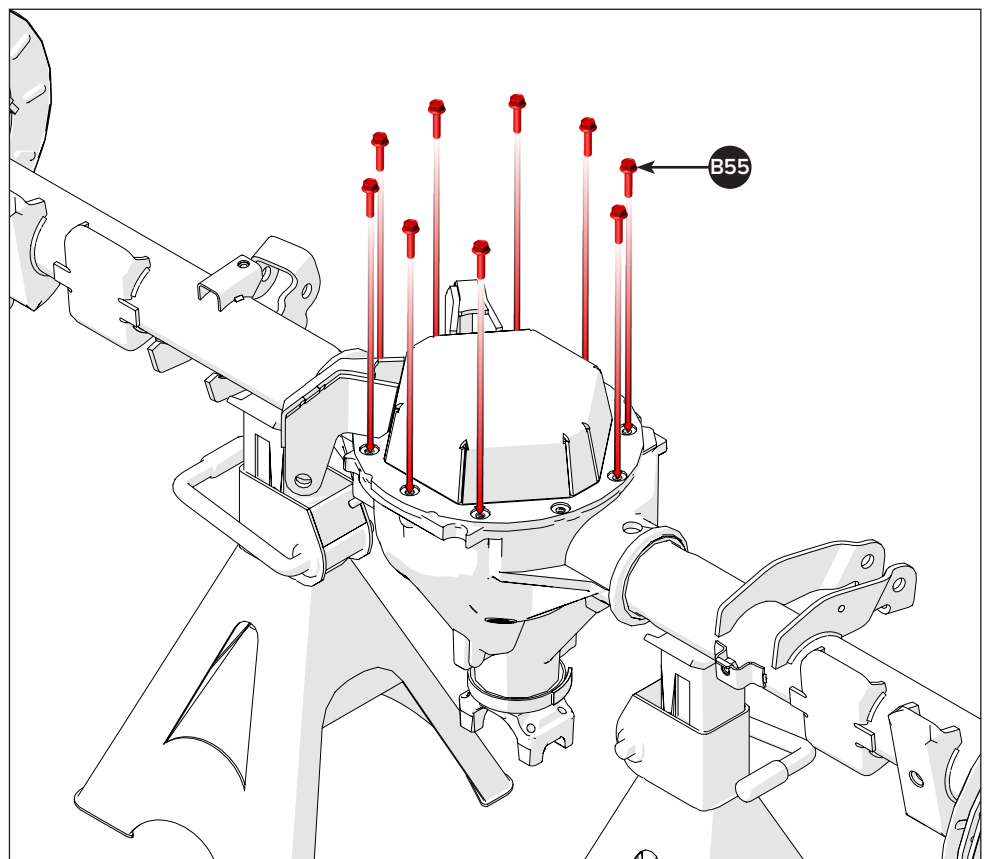


For the best sealing results, QA1 recommends Permatex The Right Stuff gasket maker.

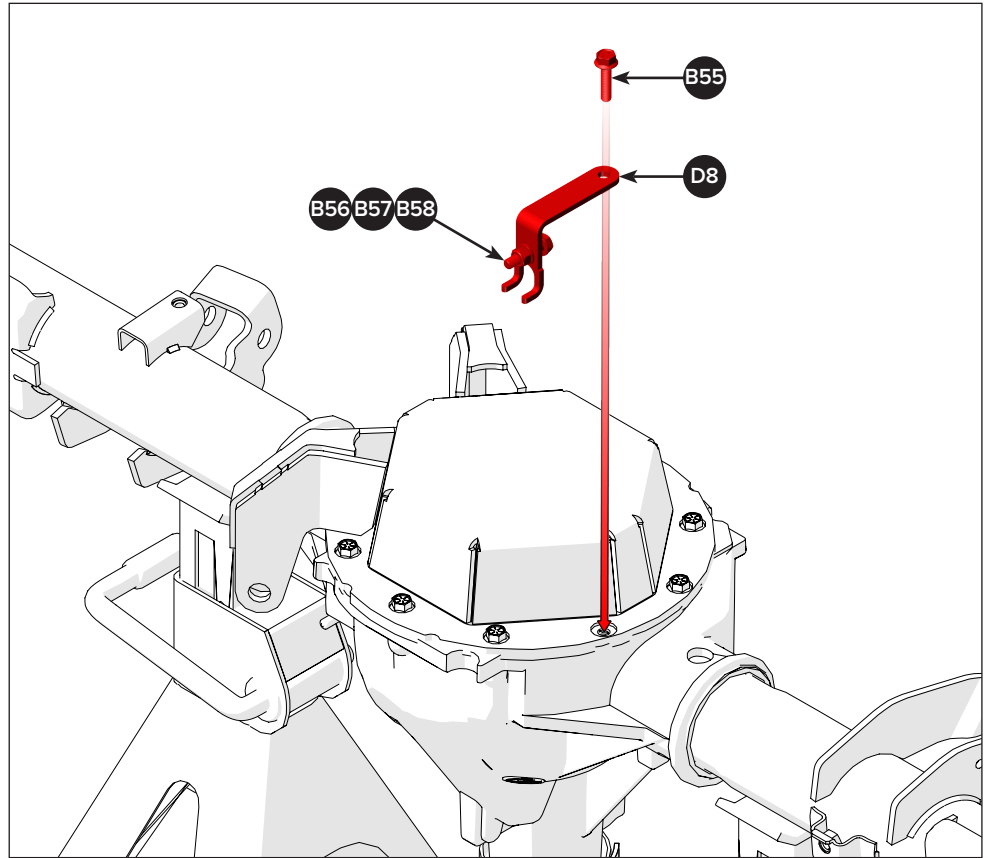


Installer's note: Steps 54 through 58 show the top of the rear axle assembly.

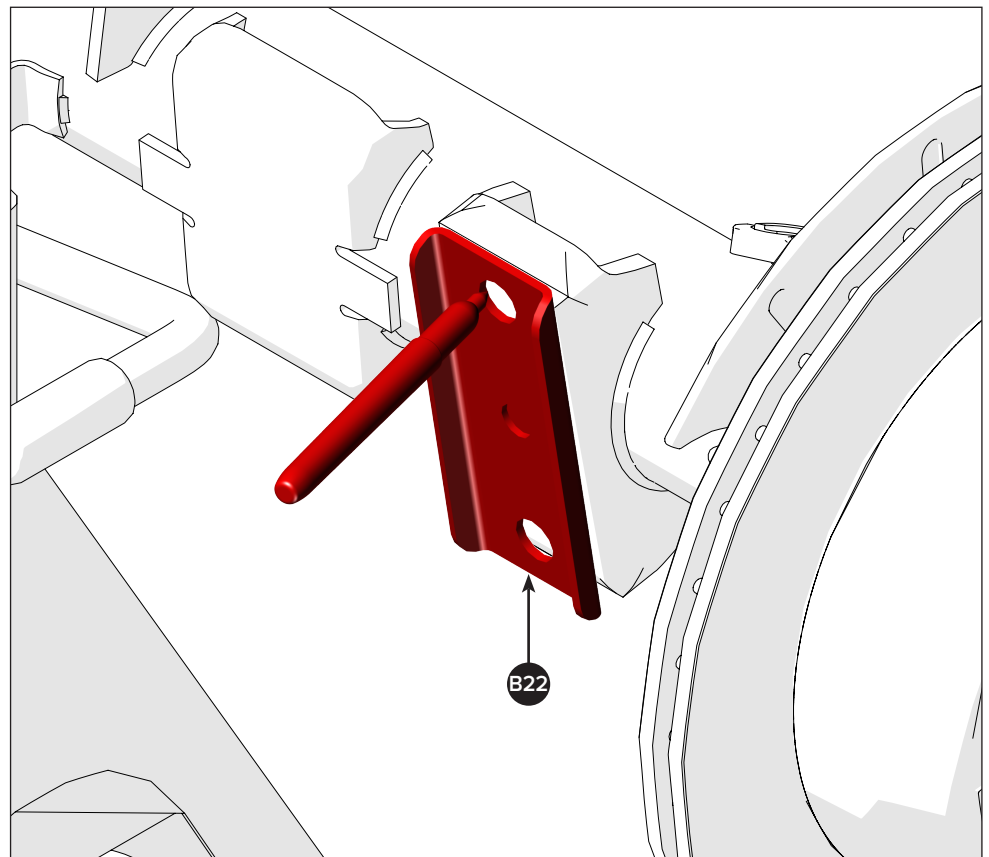
- 54** Apply blue threadlocker to the threads of the differential bolt (B55). Attach the differential cover using the bolts, but leave the bolt hole just above the 9 o'clock position open. Snug, but do not tighten the bolts. **Note:** The QA1 decal (A2) can be applied to the differential cover at any time.



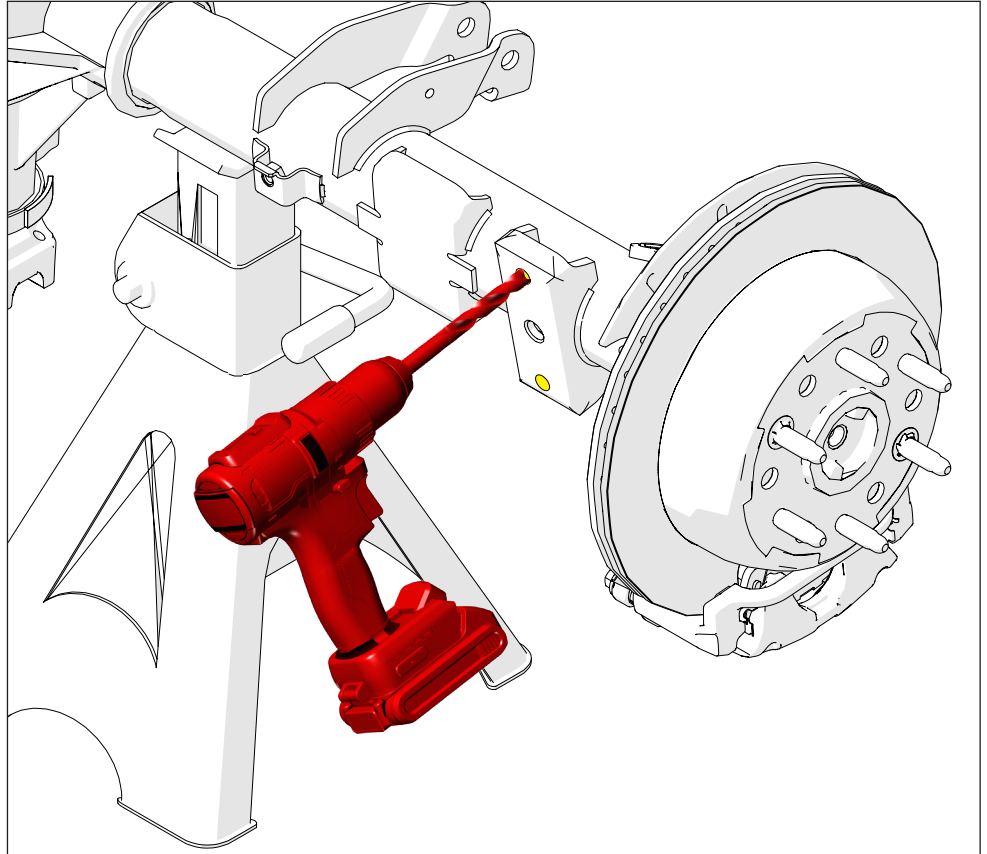
55 Assemble one bolt (B56), two washers (B57), and one Nylock nut (B58) to the brake line relocation bracket (D8).
 Now, use one bolt (B55) to attach the relocation bracket to the cover. It will attach to the cover's remaining bolt hole.
 Finally, torque all of the differential bolts to 23 lb-ft.



56 Put an axle mount plate onto the LH it into the hole in the spring's mount pad.
 Make sure the mount plate's sides align parallel with the mount pad's.
 Now use a marker or scribe to trace along the inside of the holes in the mount plate.



- 57** Use a 21/32" bit to drill holes (marked in yellow) through the mount pad marked during step 56.



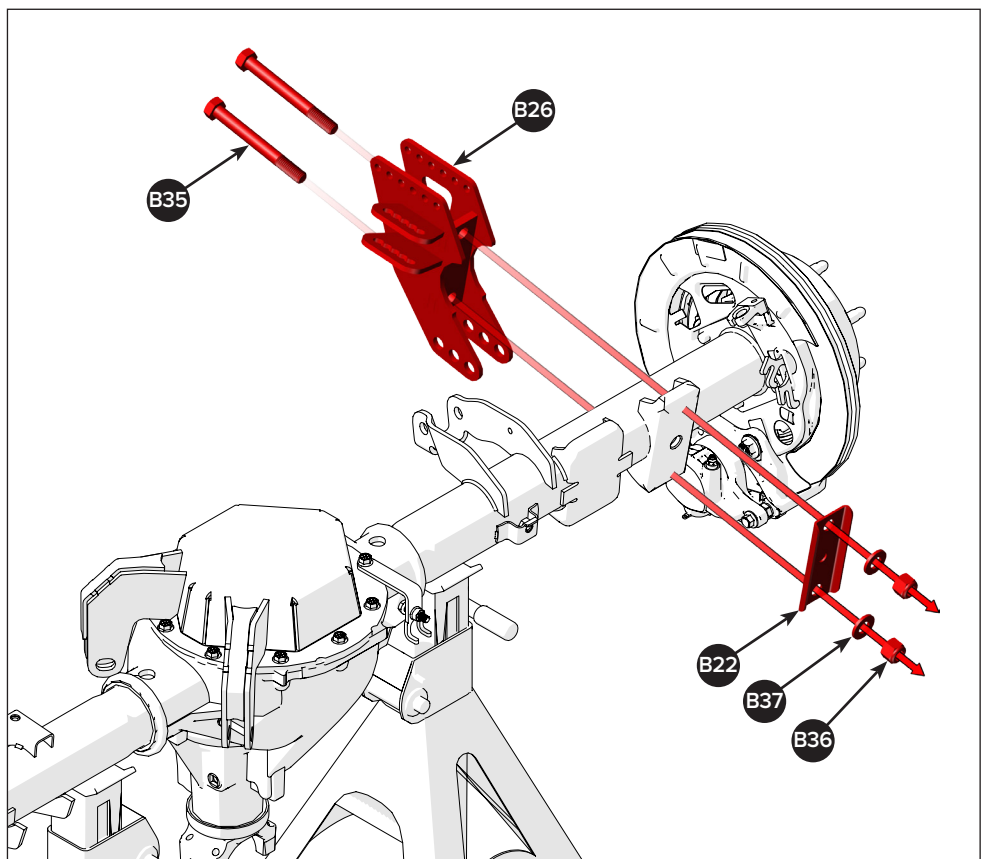
- 58** Attach the driver side axle mount weldment (B26) to the axle.

Use two bolts (B35), one axle mount plate (B22), two washers (B37), and two Nylock nuts (B36).

Tighten the bolts evenly to make sure the axle mount weldment is square with the axle mount pad.

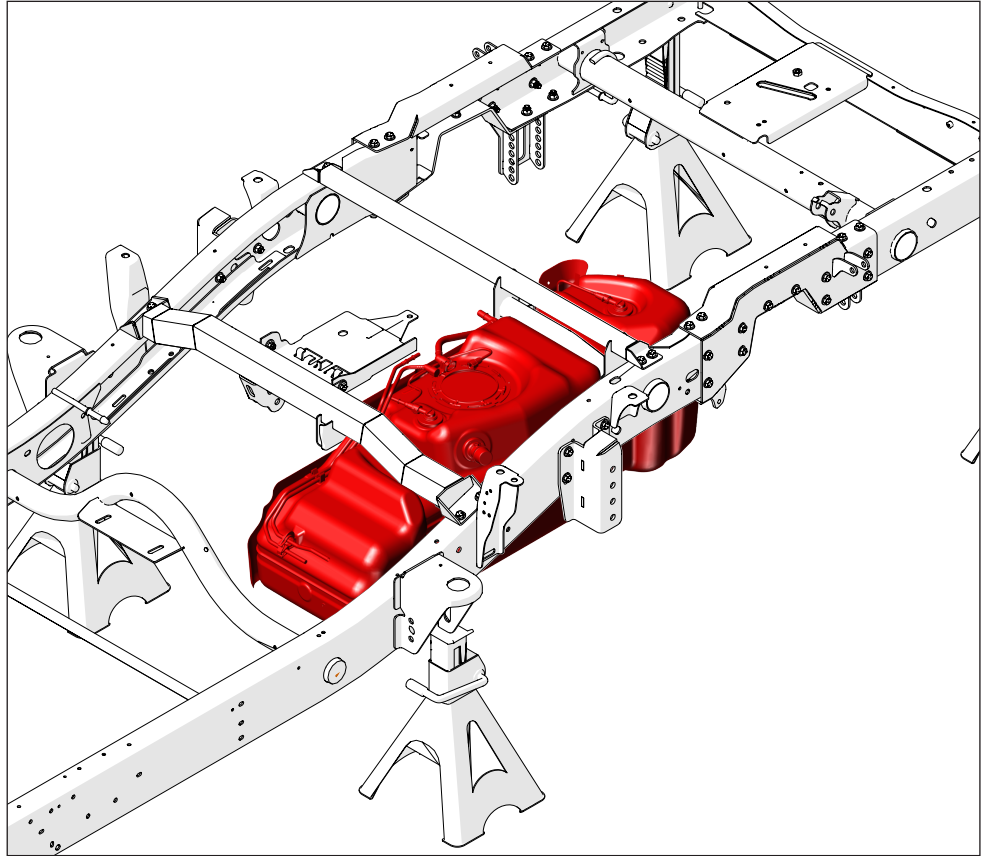
Now, torque the nuts to 128 lb-ft.

Repeat steps 56 through 58 to install the passenger side axle mount weldment (B27).



59 Put the fuel tank beneath the frame and lift it into position.

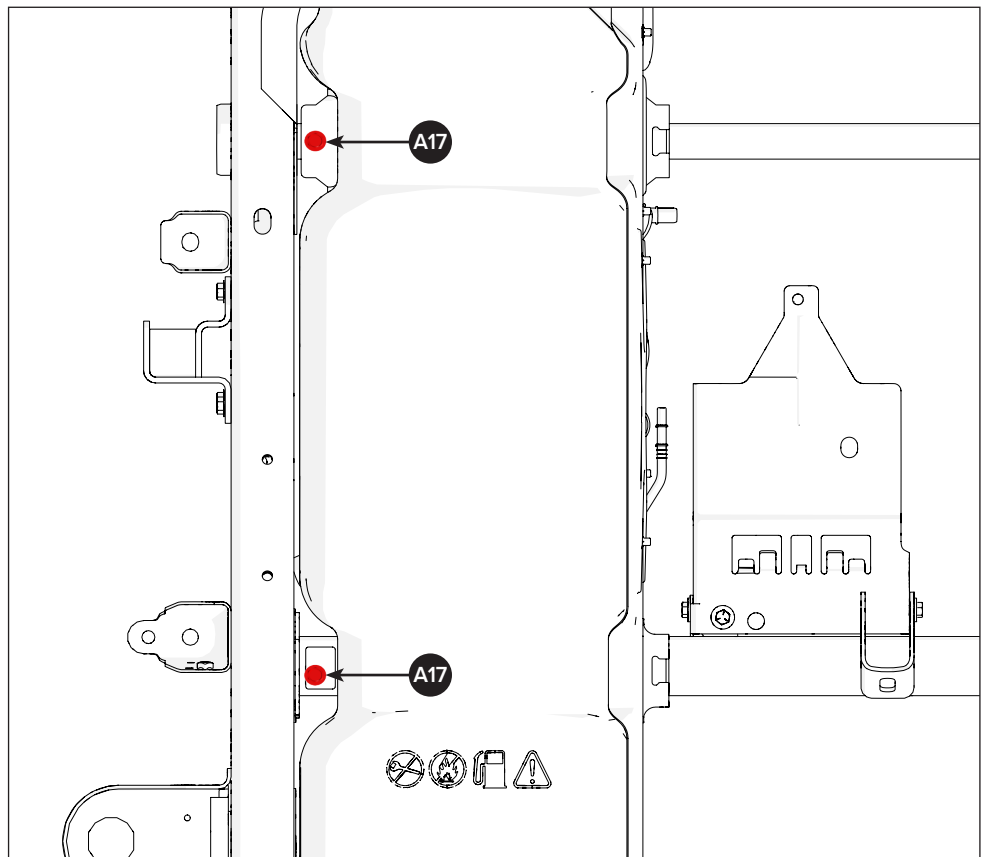
Hold the tank in position with a floor or transmission jack. The tank should fit against the QA1 crossmembers installed in steps 35 and 42.



60 Put the fuel tank straps back into position.

Use bolts (A17) to fasten the straps to the fuel tank crossmember.

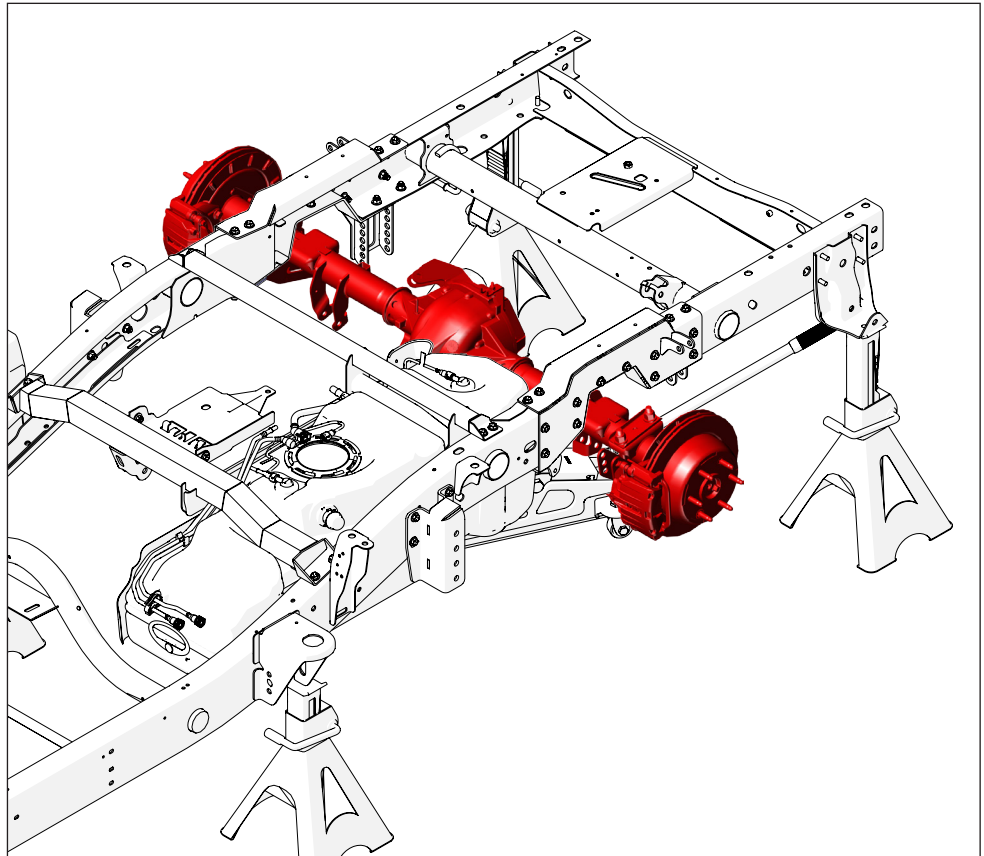
Torque the bolts to 30 lb-ft



61

Put the assembled rear axle under the frame.

Use a floor jack to lift the axle up and into the new frame notches.



62

First, turn a RH jam nut (A9) onto the bushing end (A10) until it comes to a stop.

Next, apply anti-seize to the threads of the short end.

Then, turn the bushing end into the trailing arm weldment (A5) until the jam nut contacts the Panhard end.

Next, turn a LH jam nut (A8) onto the rod end (A7) until it comes to a stop.

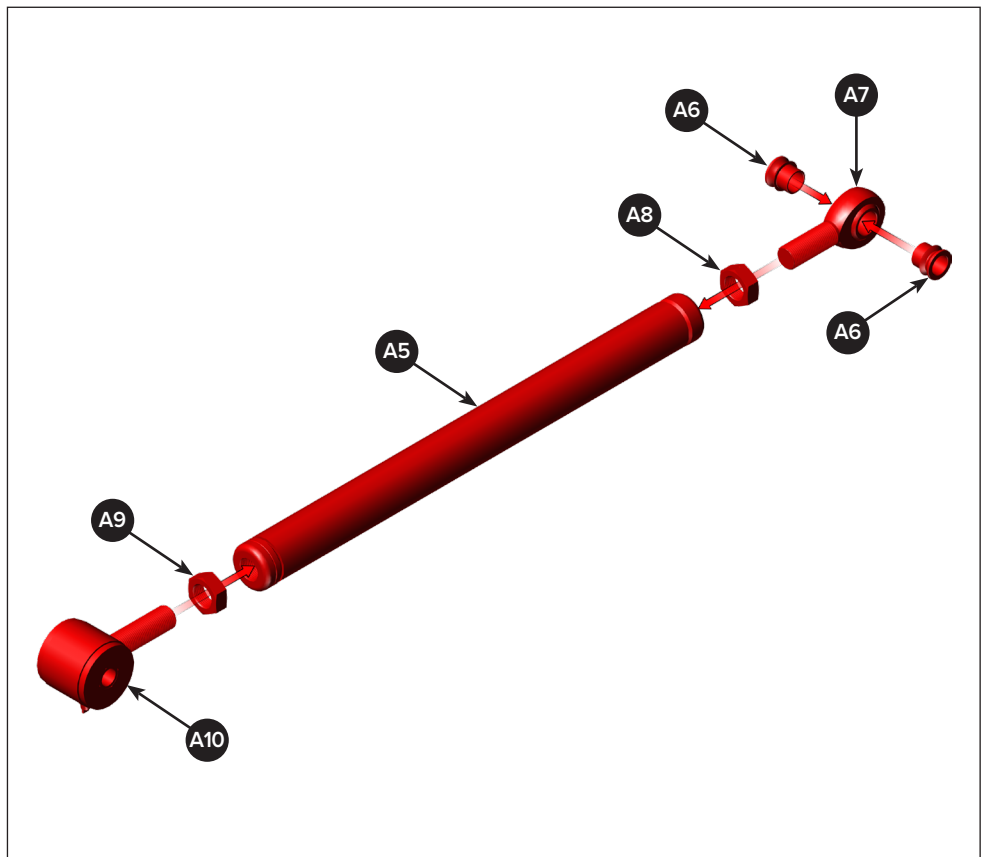
Next, apply anti-seize to the threads of the short end.

Now, turn the rod end into the trailing arm weldment until the jam nut contacts the bushing end.

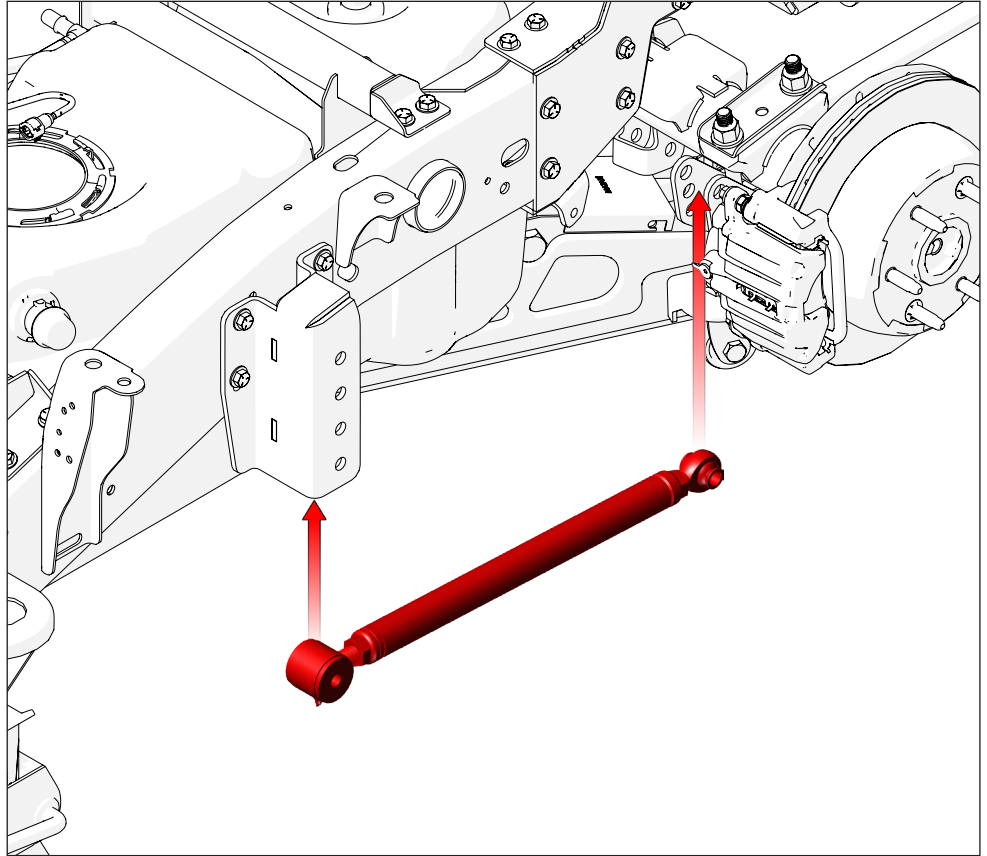
Push one high misalignment spacer (A6) into each side of the rod end bearing.

Set the initial trailing arm length to 22" for adjustment during step 99.

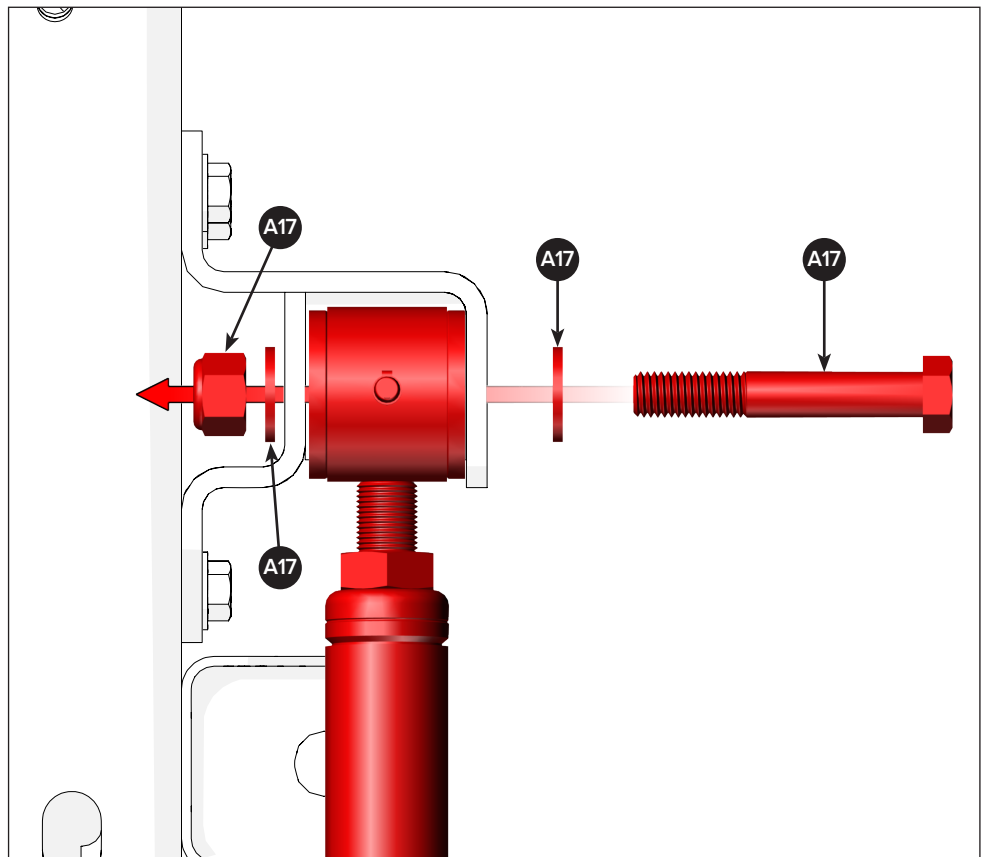
Repeat this step to assemble the other trailing arm assembly.



- 63** Put the bushing end of the trailing arm assembly into the front trailing arm mount and axle mount.



- 64** Attach the front of the trailing arm to the front mount with one bolt (21), two washers (22), and one Nylock nut (23). Torque the bolt to 109 lb-ft.



65

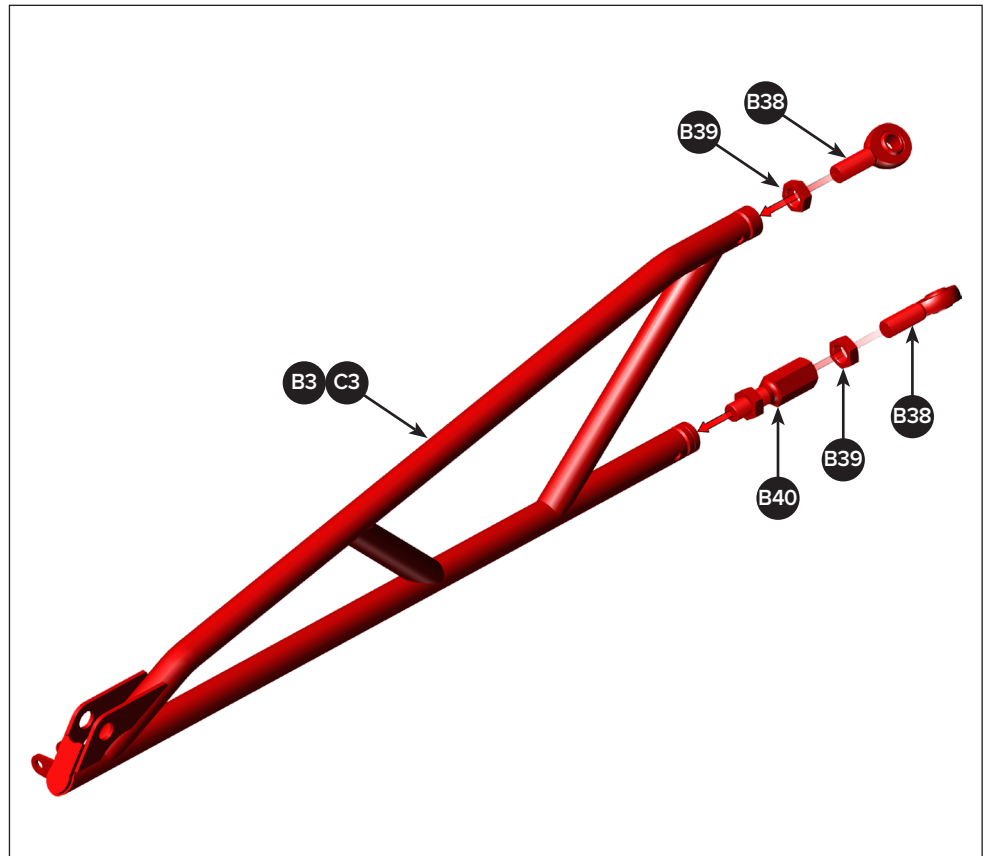
First, turn the jam nuts (B39) onto the rod end (B38) until they come to a stop.

Next, apply anti-seize to the threads of the rod end.

After that, screw the rod ends into the torque arm (B3 or C3) until they are halfway in, about 8 to 10 threads.

Now, tighten the jam nuts. They will be torqued during final adjustments.

Note: Maintain an equal amount of exposed threads to provide maximum future adjustability.



66

Now, take two bushings (B54) and push one into each side of the bushing end (B53).

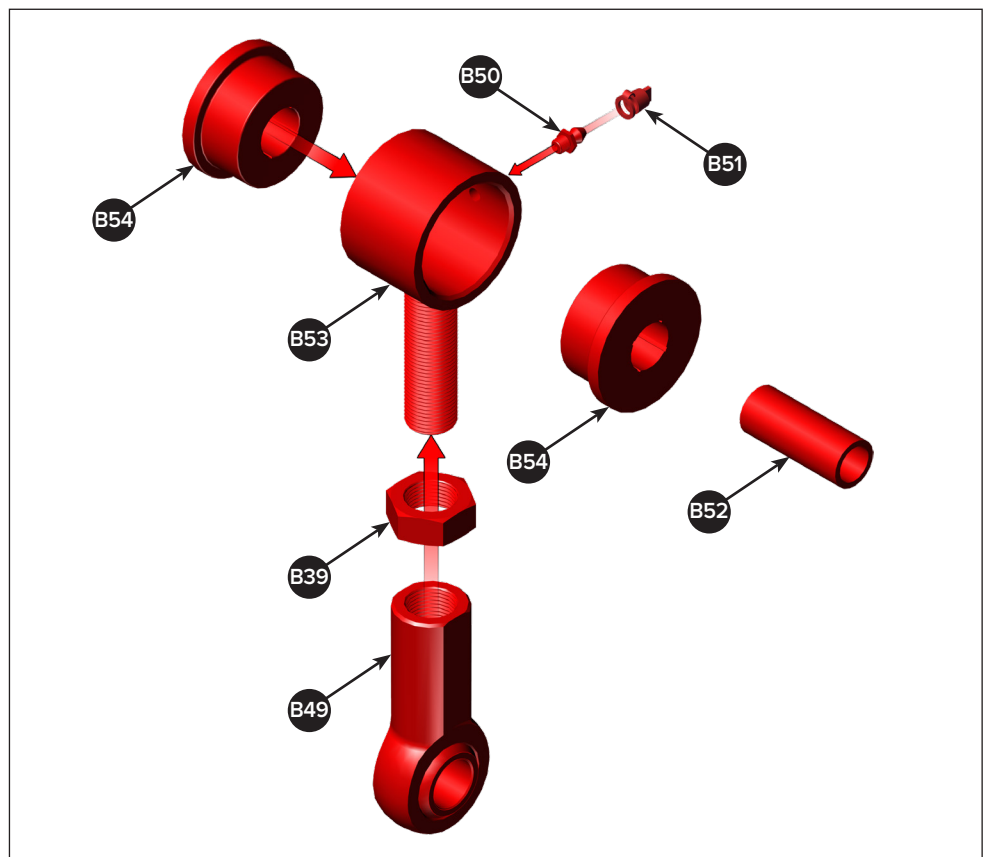
After that, slide the sleeve (B52) onto the bushings and make sure it is centered.

Then, turn a jam nut (B39) onto the bushing end until it stops.

Apply anti-seize to the threads of the short end.

Next, screw the rod end (B49) onto the bushing end until it is halfway in, about 8 to 10 threads.

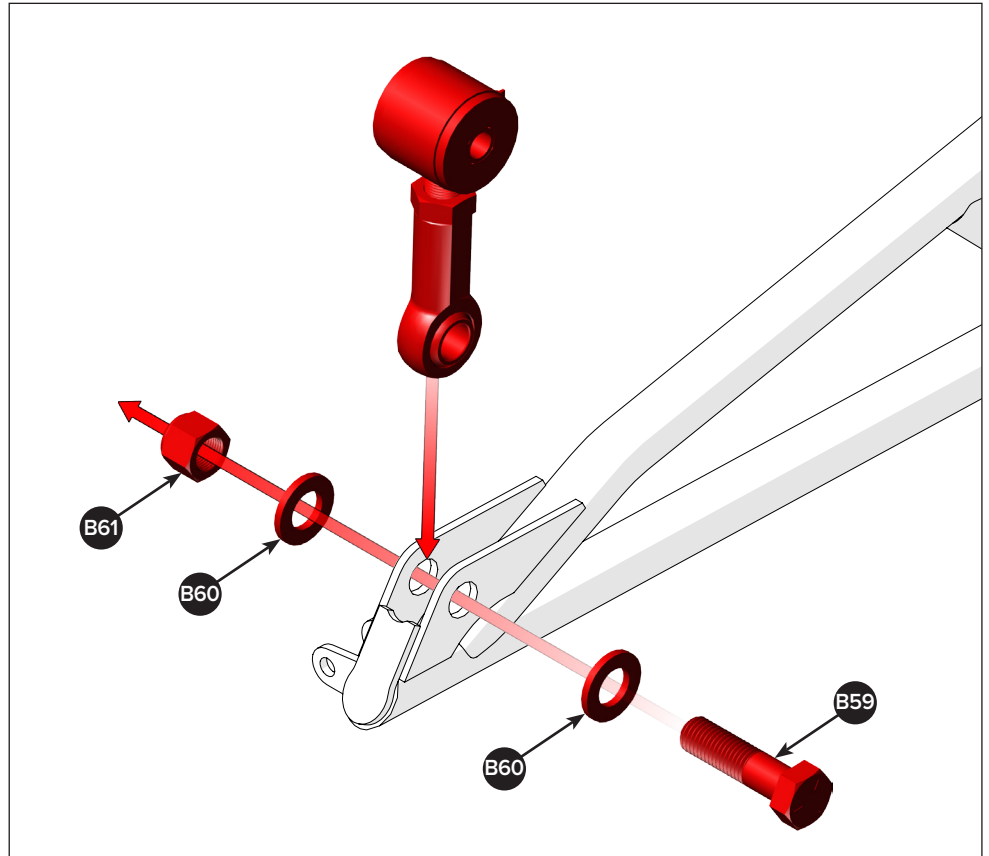
Finally, tighten the jam nut. It will be torqued during final adjustments.



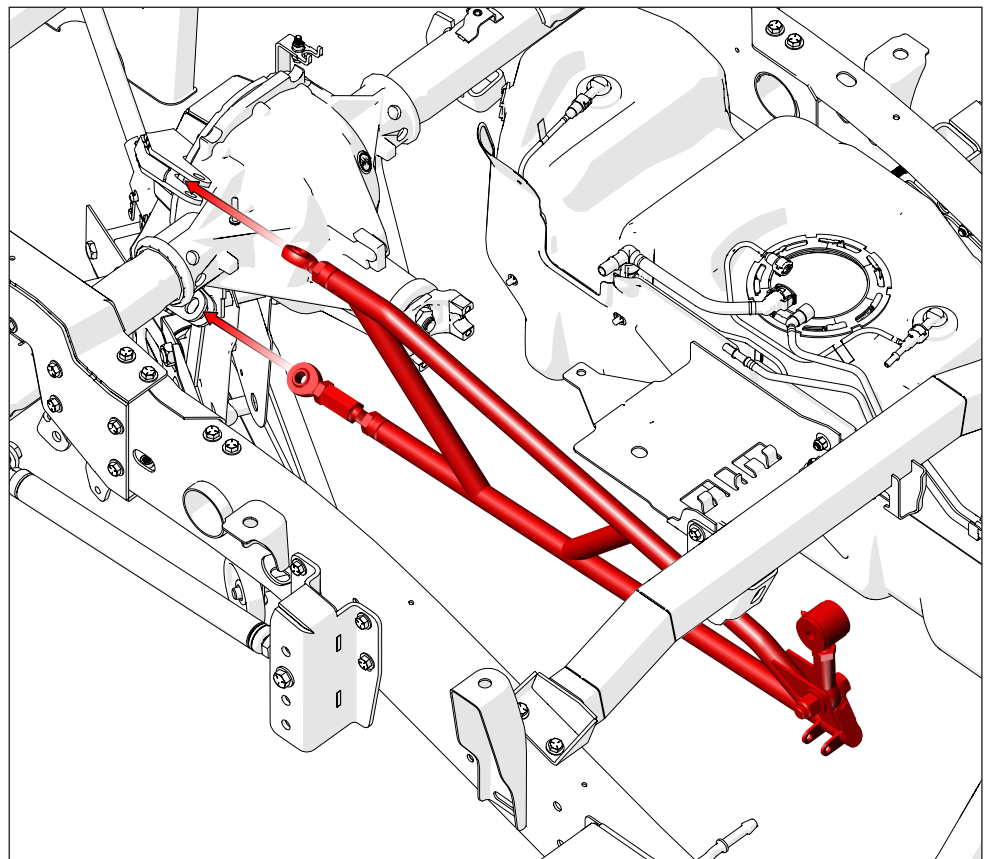
67 Put the rod end of the torque arm's pivot assembly into the front front of the torque arm.

Attach the rod end assembly to the torque arm with one bolt (B59), two washers (B60), and one Nylock nut (B61).

Torque the bolt to 227 lb-ft.



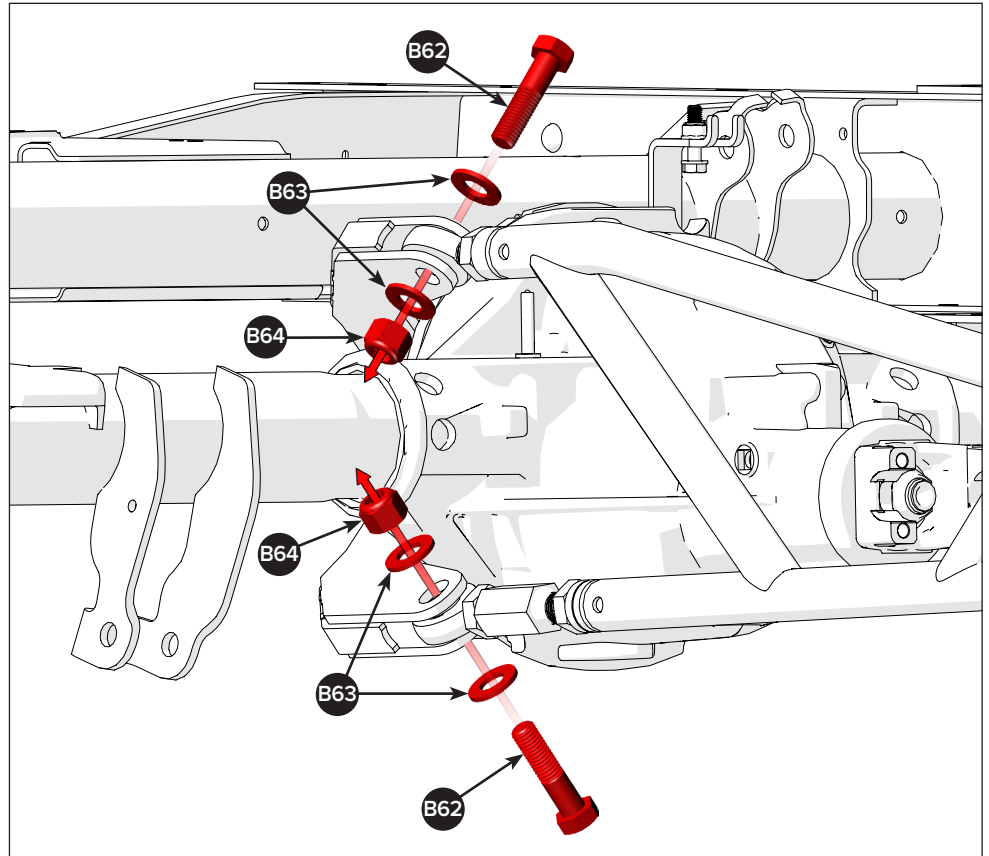
68 Insert the rod ends of the torque arm assembly into the differential cover's weldment ears.



69

Attach the torque arm to the differential cover with two bolts (B62), four washers (B63), and two Nylock nuts (B64).

Torque the fasteners to 128 lb-ft.

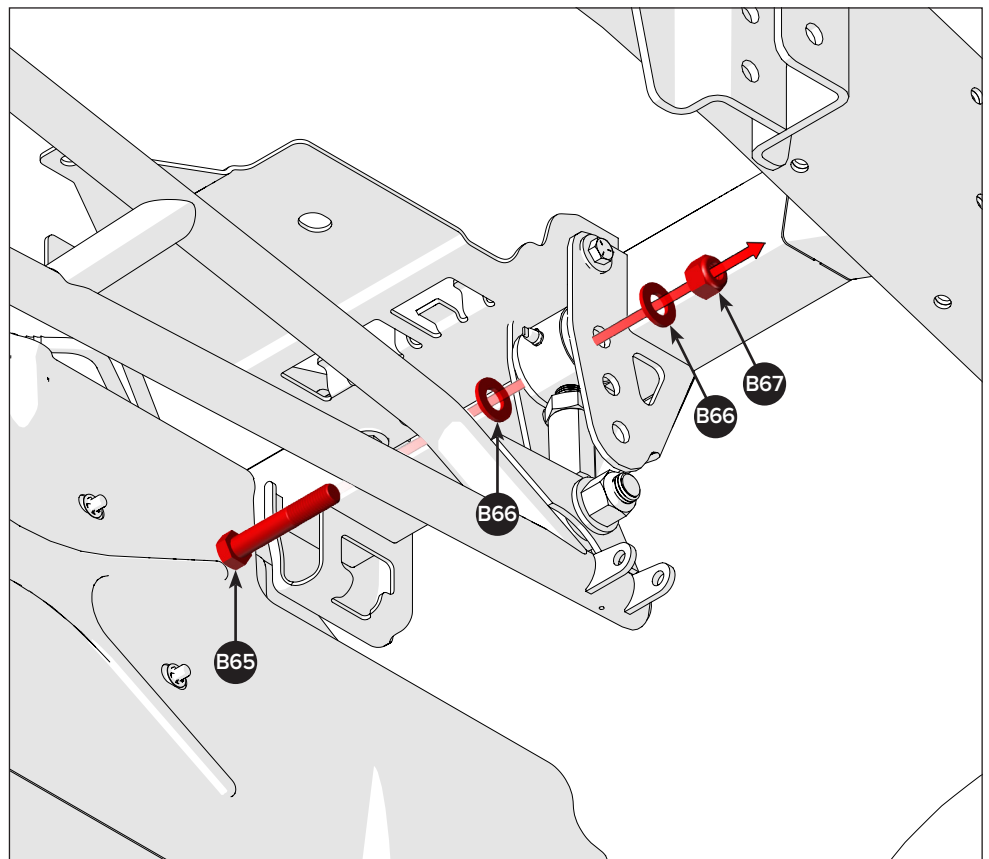


70

Attach the bushing end of the torque arm pivot to the torque arm crossmember.

Use one bolt (B65), two washers (B66), and a Nylock nut (B67).

Torque the fasteners to 109 lb-ft.



71

First, thread a right-hand jam nut (B45) onto the rod end (B46) until it stops.

Next, apply anti-seize compound to the threads of the rod end.

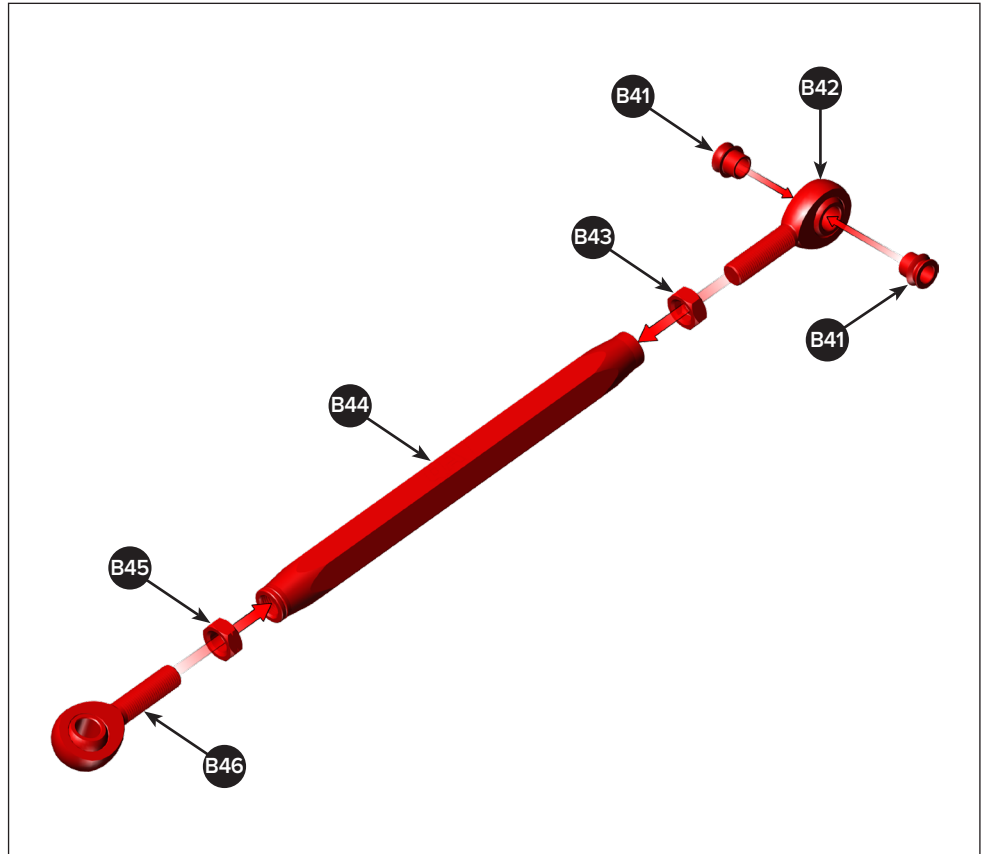
Then, screw the rod end into the aluminum sleeve (B44) until the jam nut contacts the end of the sleeve.

After that, thread a left-hand jam nut (B43) onto the rod end (B42) until it stops.

Again, apply anti-seize compound to the threads of the rod end.

Now, screw the rod end into the aluminum sleeve until the jam nut makes contact with the end of the sleeve.

Finally, push one high misalignment spacer (B41) into each side of the rod end bearing.

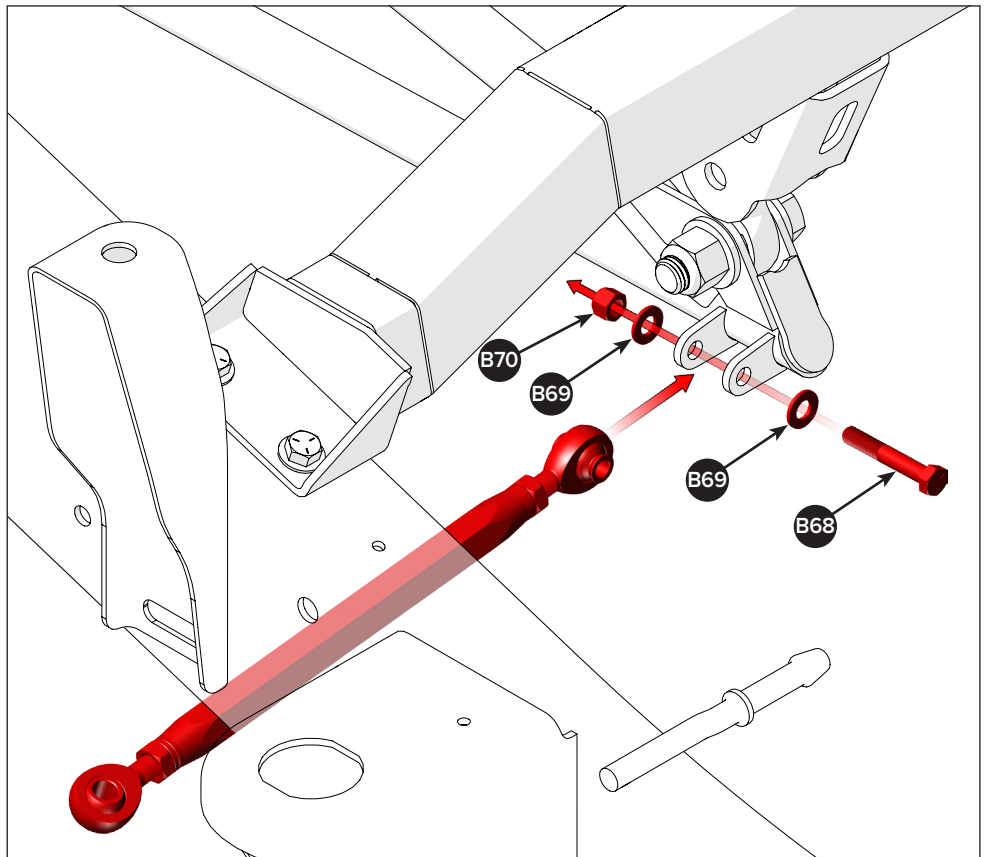


72

Attach the torque arm support rod to the front of the torque arm.

Use one bolt (B68), two washers (B69), and a Nylock nut (B70).

Torque the fasteners to 31 lb-ft.

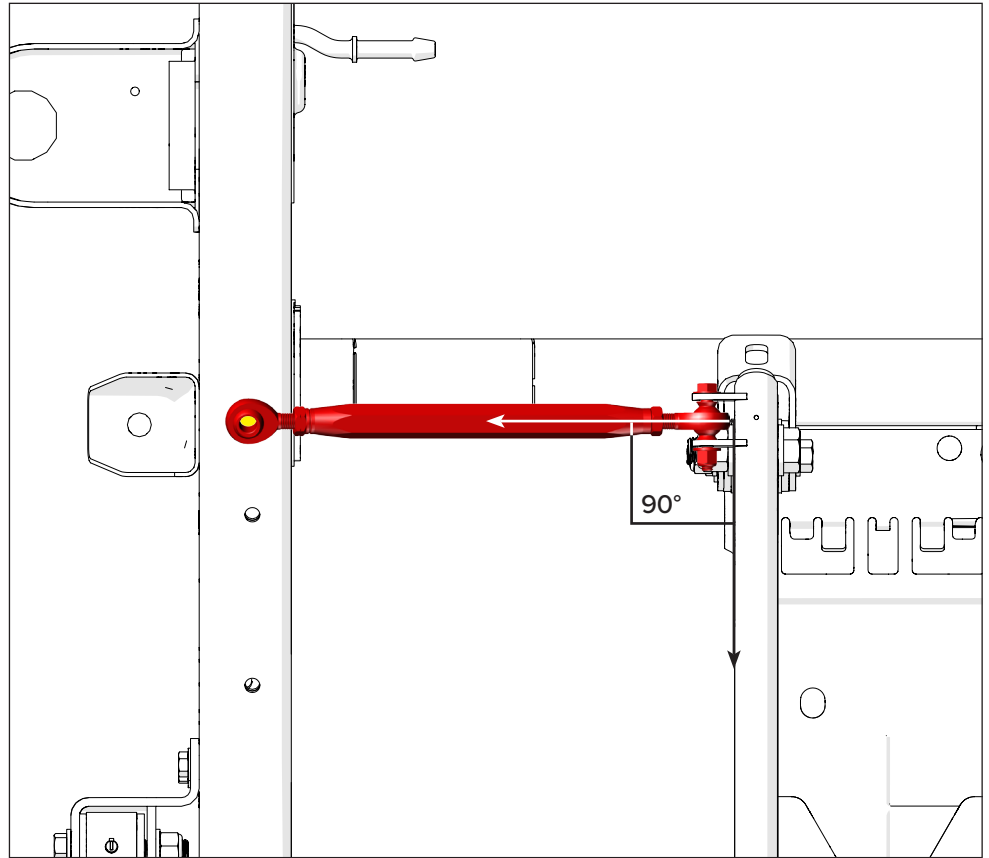


73

Align the torque arm support rod so it is perpendicular to the torque arm.

Use a 19/32" bit, and drill a hole through the rod end and into the frame indicated in yellow.

Note: Adjust the assembled support rod's length before you mark and drill the hole. The rod end must be centered on the frame rail.



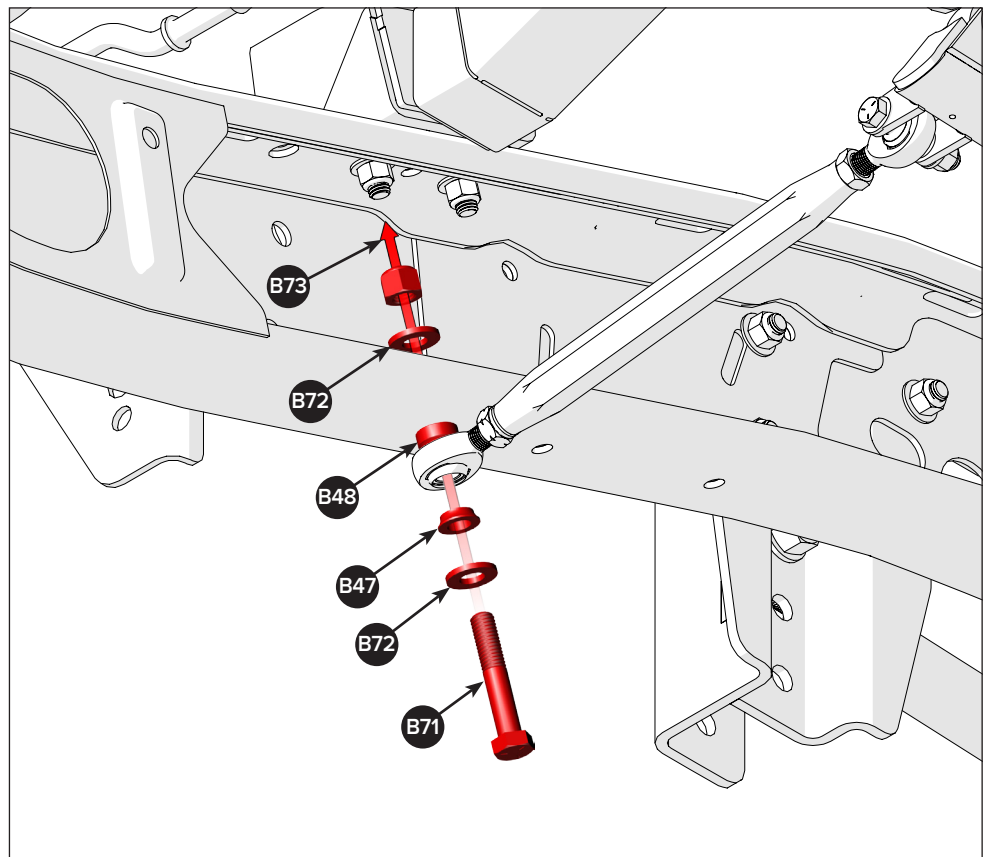
74

Attach the torque arm support rod to the frame rail in this order:

One bolt (B71), one washer (B72), one spacer (B47), the rod end, spacer (B48), another washer (B72), and a Nylock nut (B73).

Torque the fasteners to 75 lb-ft.

Note: The spacers are tapered and point toward the spherical bearing on the rod end.



75

Take a bushing (B11) and push it into each side of the Panhard bar bushing end (B4).

After that, slide the sleeve (B12) onto the bushings and make sure it is centered.

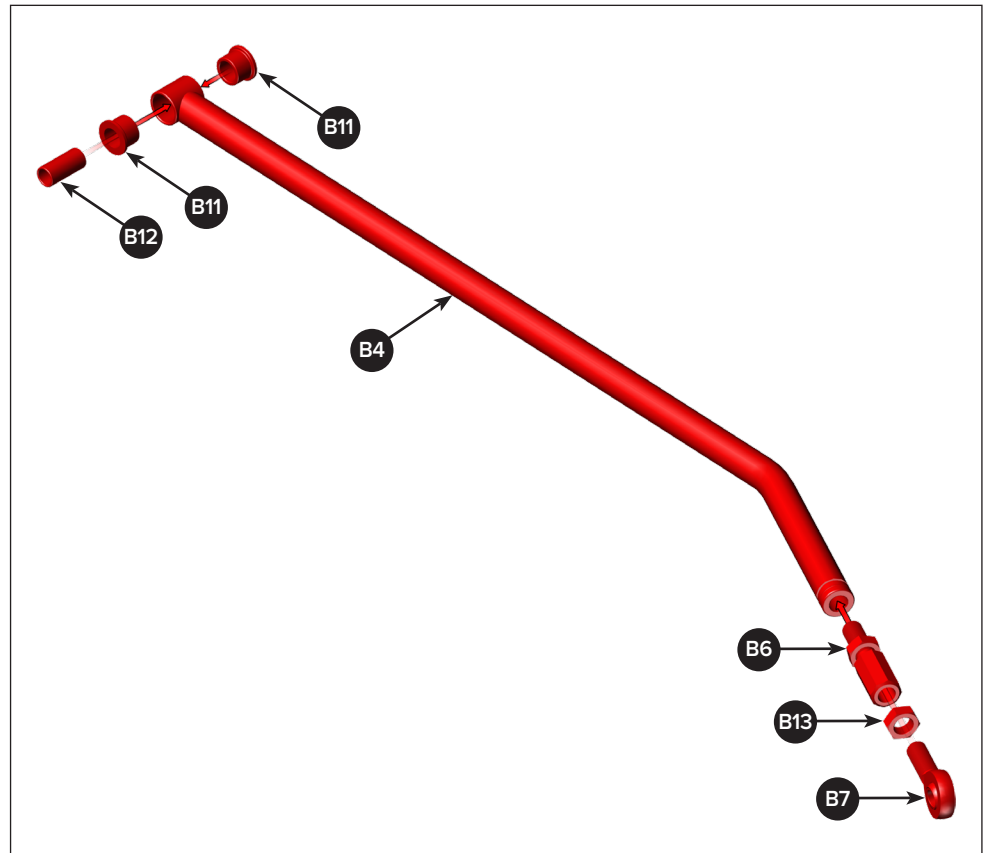
Then, turn a RH jam nut (B13) onto the rod end (B7) until it stops.

Apply anti-seize to the threads of the rod end.

Next, screw the rod end (B49) into the linkage adjuster (B6) until it is halfway in, about 8 to 10 threads.

Finally, turn the linkage adjuster into the bent end of the Panhard bar until it stops.

Note: Do not tighten the jam nut. It must be loose enough to install the Panhard rod during step 82.



76

Turn a LH jam nut (B14) onto the rod end (B8).

Apply anti-seize to the threads of the rod end.

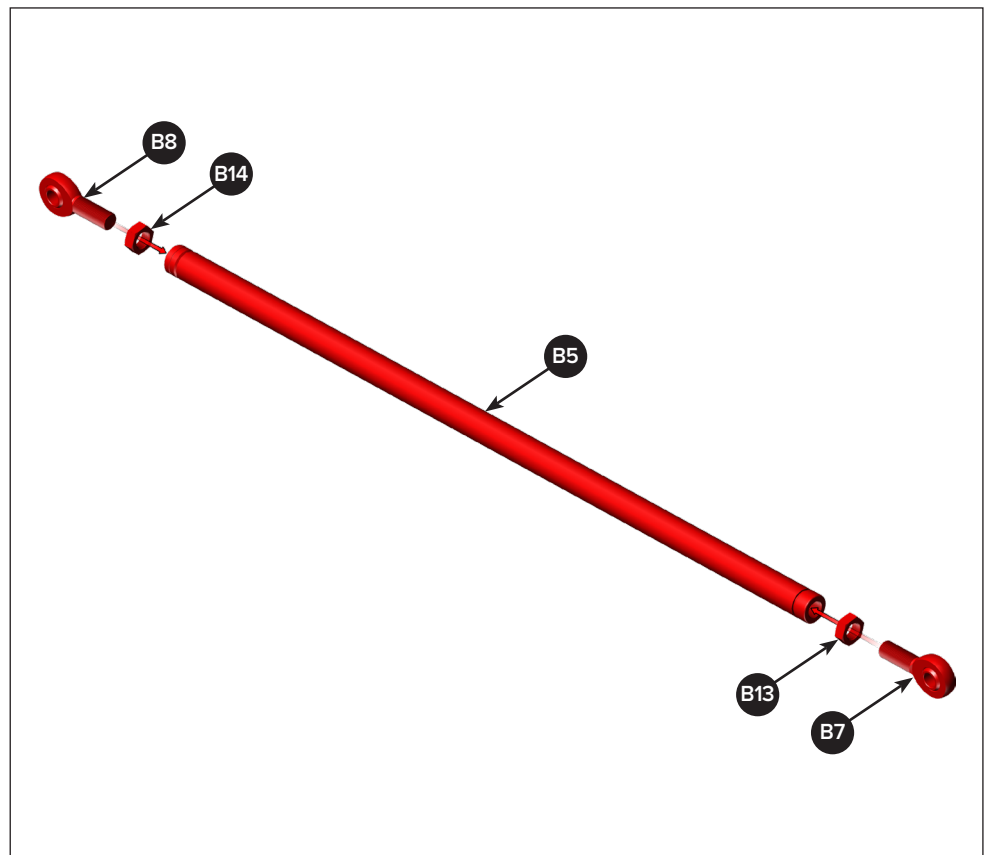
Next, screw the rod end into the brace bar (B5) until it is fully tightened.

Then, turn a RH jam nut (B13) onto a rod end (B7) until it stops.

Apply anti-seize to the threads of the rod end.

Finally, screw the rod end into the brace bar.

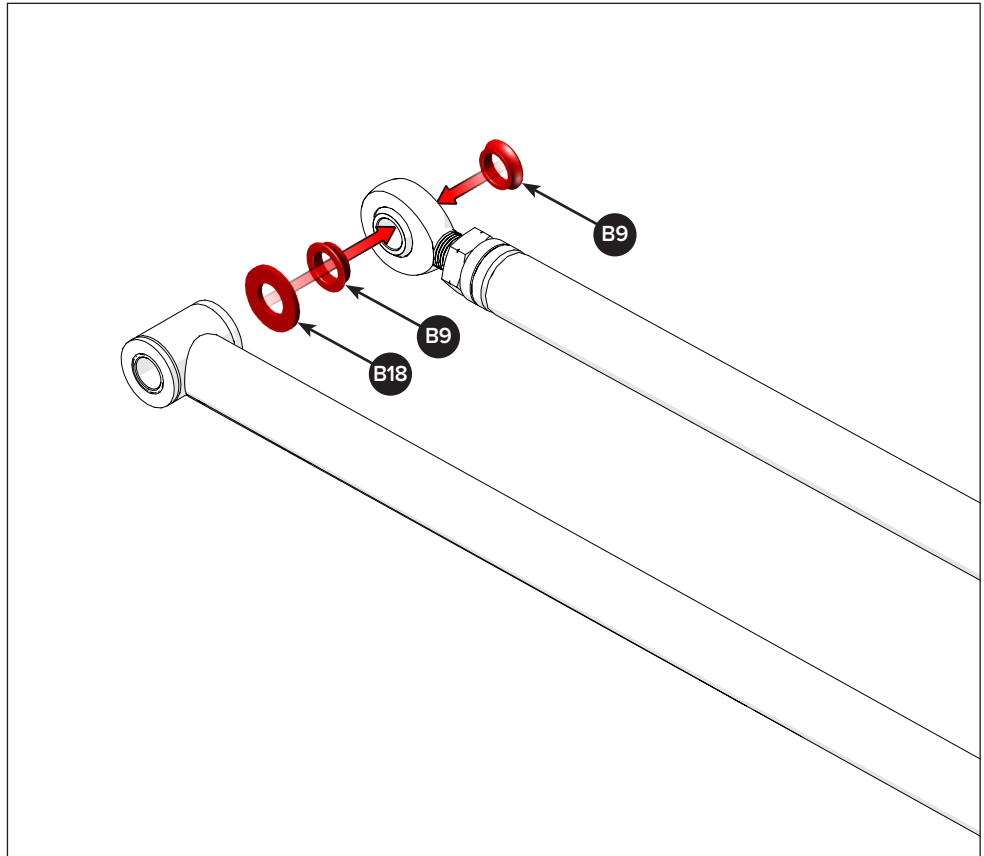
Note: Do not tighten the jam nuts. They must be loose enough to install the brace rod during step 80.



77 Push one spacer (B9) on each side of the brace's rod end.

Put a washer (B18) between the bushing on the Panhard rod and a spacer.

Note: The spacers are tapered and point toward the spherical bearing on the rod end.

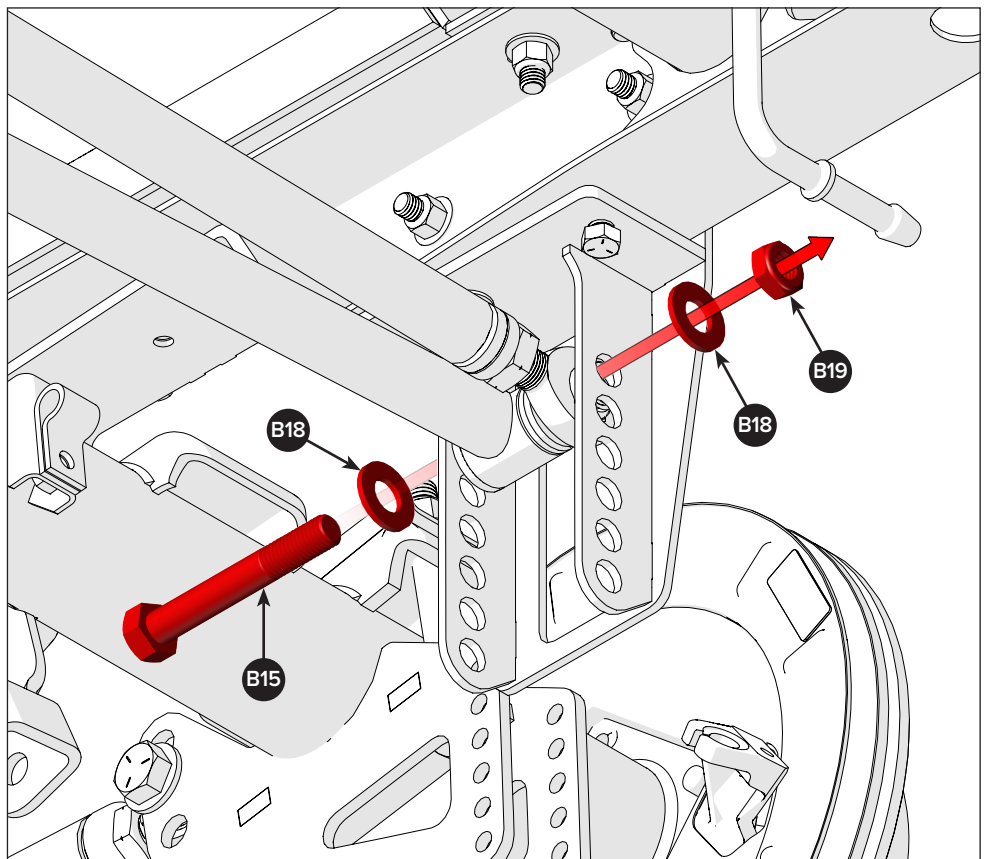


78 Position the Panhard and brace rods into the Panhard mount bracket on the RH C Notch.

Attach the Panhard and brace rods with one bolt (B15), two washers (B18), and a Nylock nut (B19).

Torque the fasteners to 128 lb-ft.

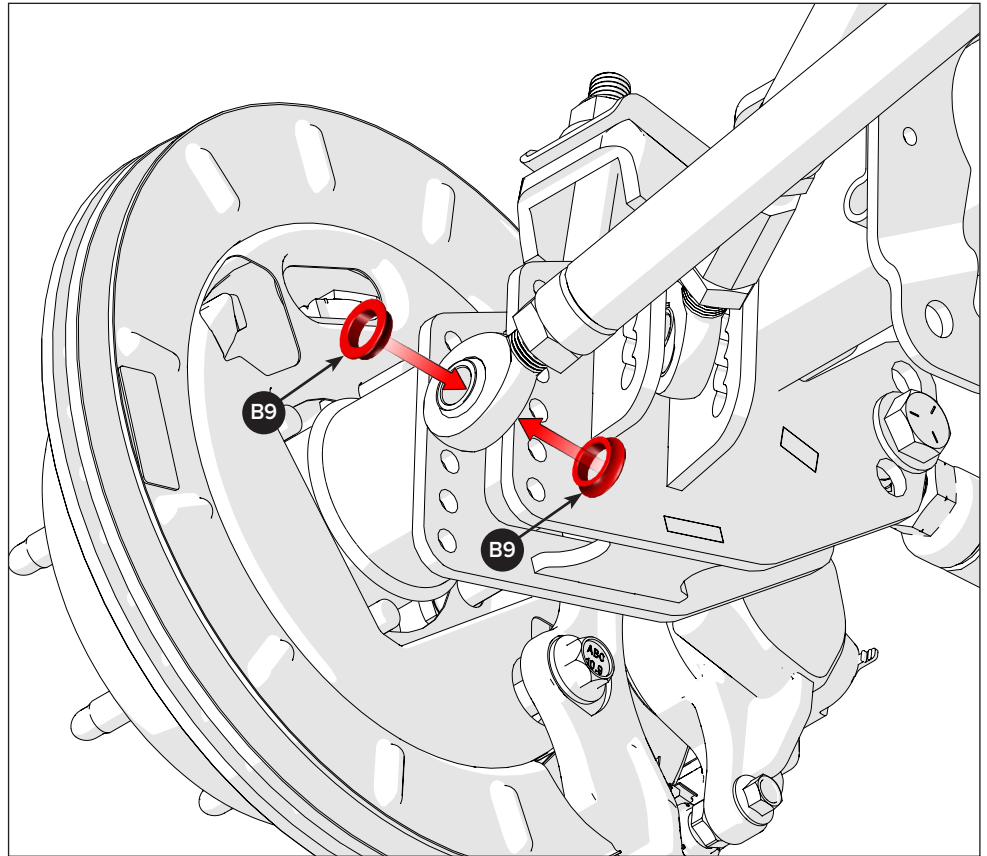
Note: The brace is positioned toward the back of the frame.



79

Push one spacer (B9) on each side of the rod end.

Note: The spacers are tapered and point toward the spherical bearing on the rod end.

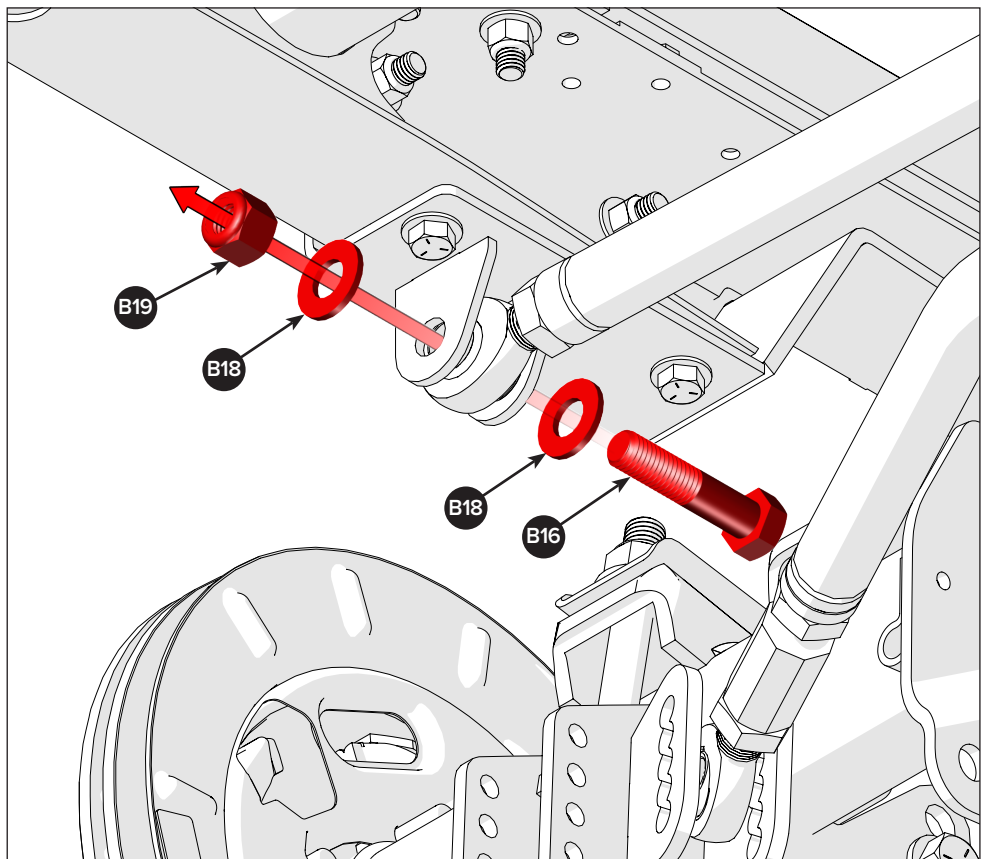


80

Move the brace rod up and into the brace mount on the bottom of the left-hand C Notch.

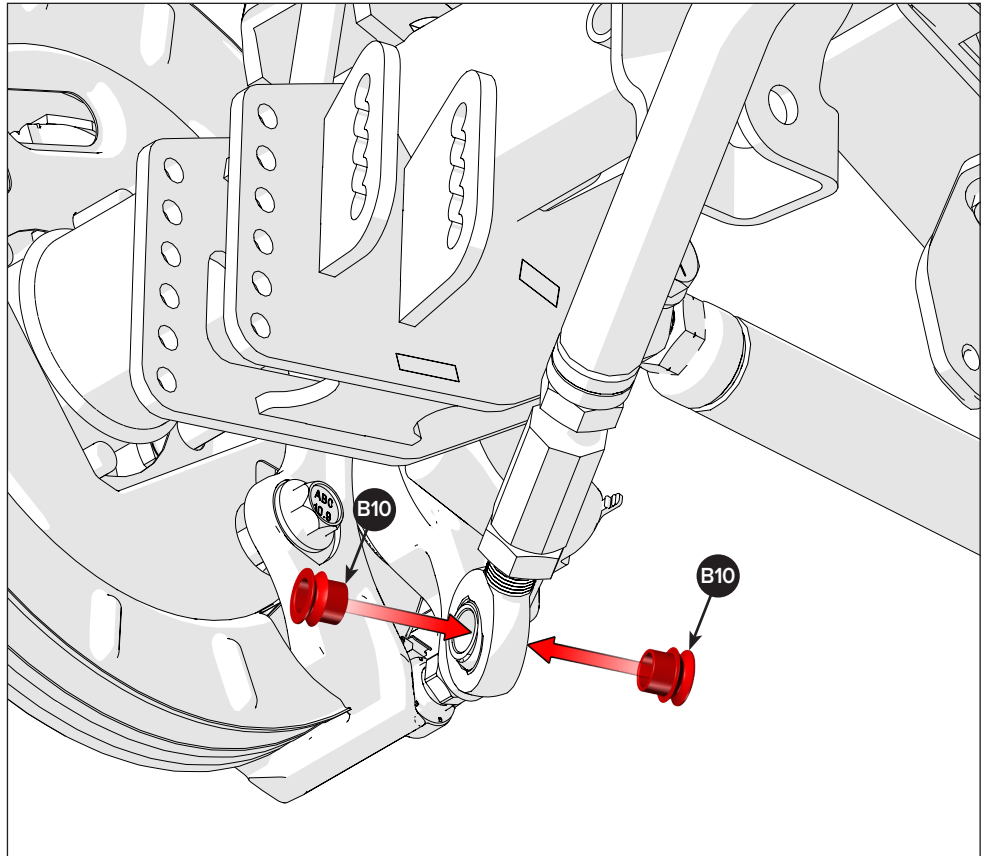
Attach the brace rod to the mount with one bolt (B16), two washers (B18), and a Nylock nut (B19).

Torque the fasteners to 128 lb-ft.



81

Push one high misalignment spacer (B10) into each side of the Panhard rod end.



82

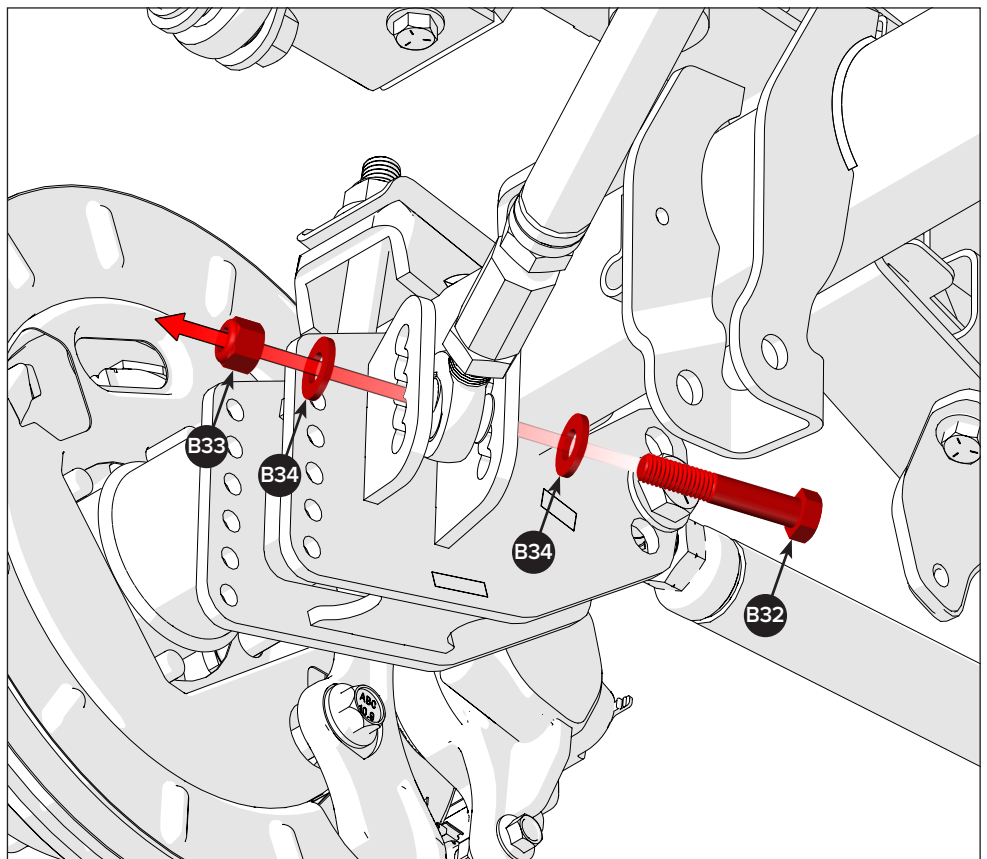
Move the Panhard rod up and into the mount ears on the left-hand axle mount.

Attach the Panhard rod to the mount with one bolt (B32), two washers (B34), and a Nylock nut (B33).

Torque the fasteners to 50 lb-ft.

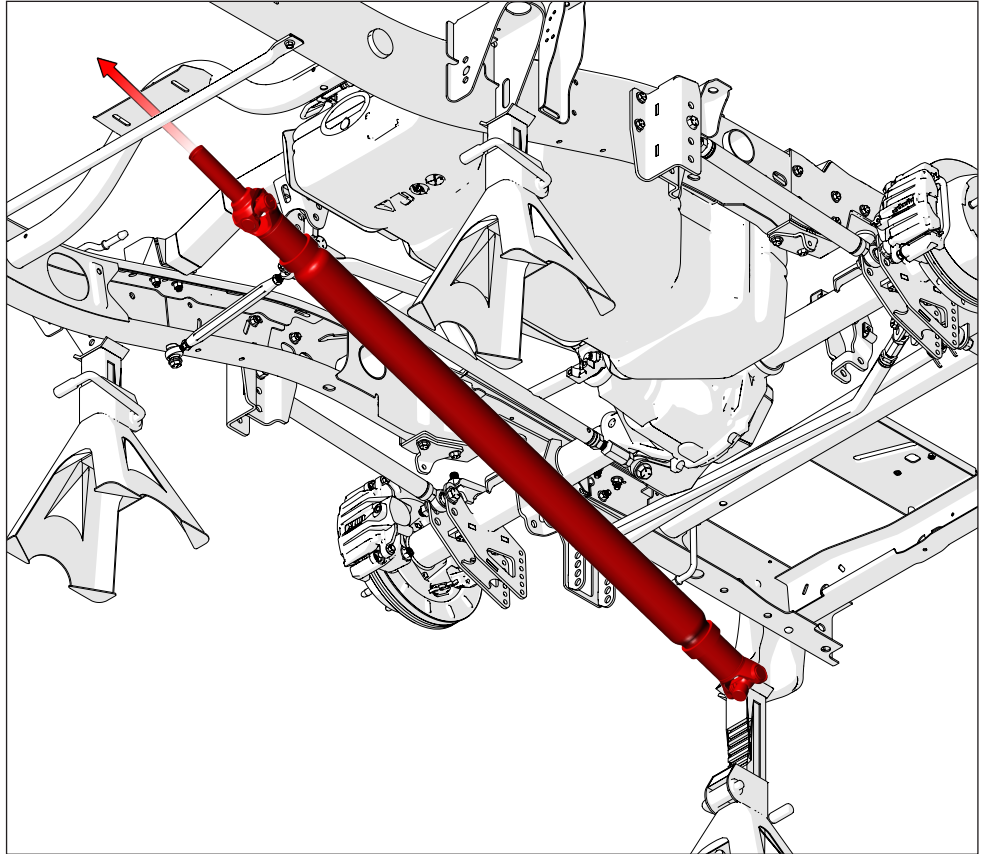
Note: The axle mount features multiple holes for lateral adjustability for customization based on the final ride height.

Therefore, attach the Panhard's rod end in the middle holes and adjust its height after you determine the final ride height.



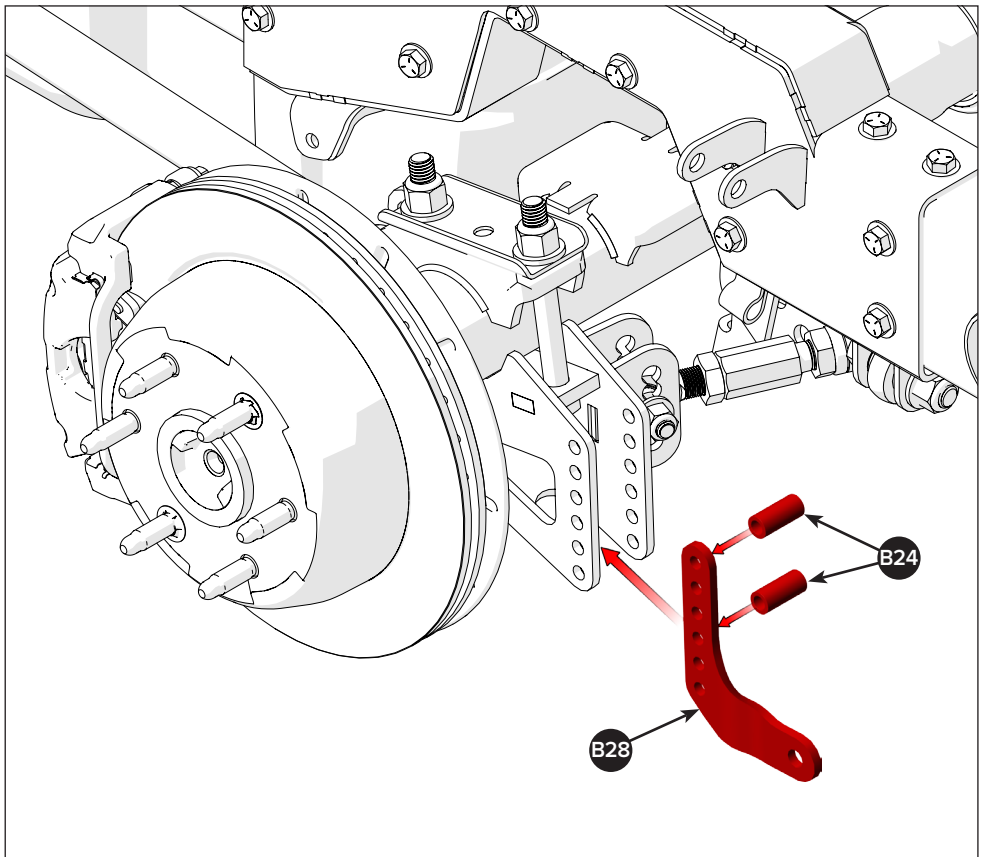
83

Install the drive shaft into the transmission, then attach it to the differential pinion yoke.

**84**

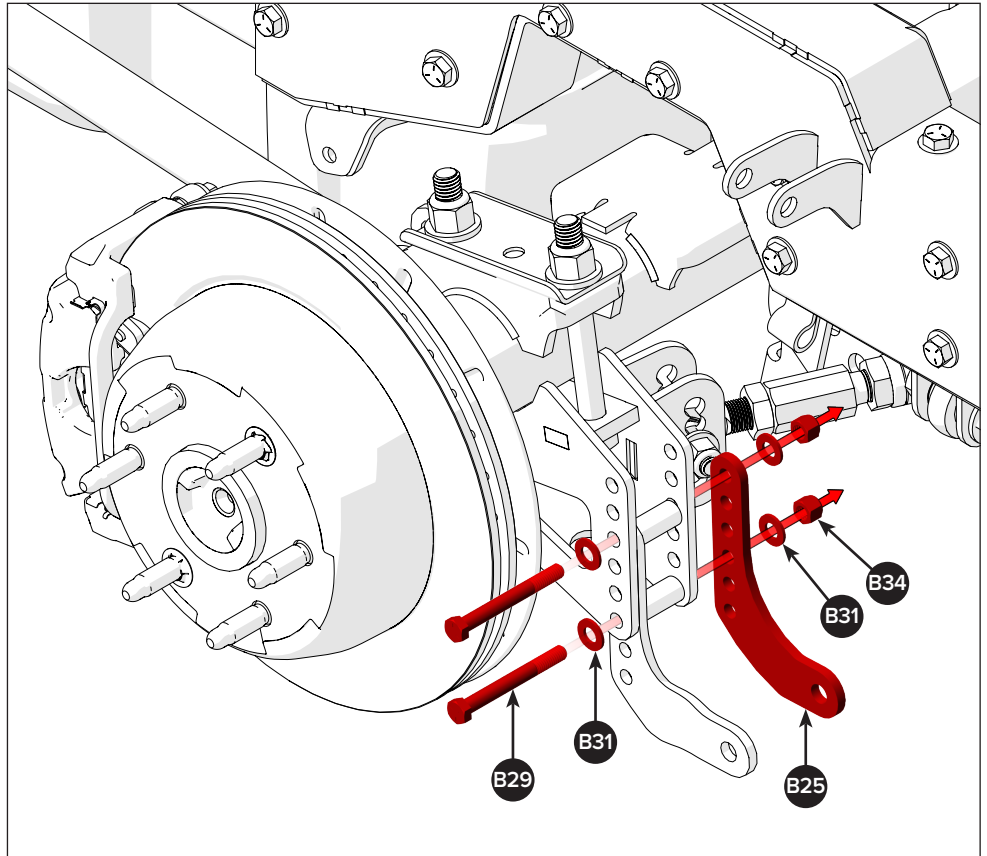
Install the left shock mount plate (B28) into the axle mount.

Put two shock mount sleeves (B24) between the left shock mount and axle mount.



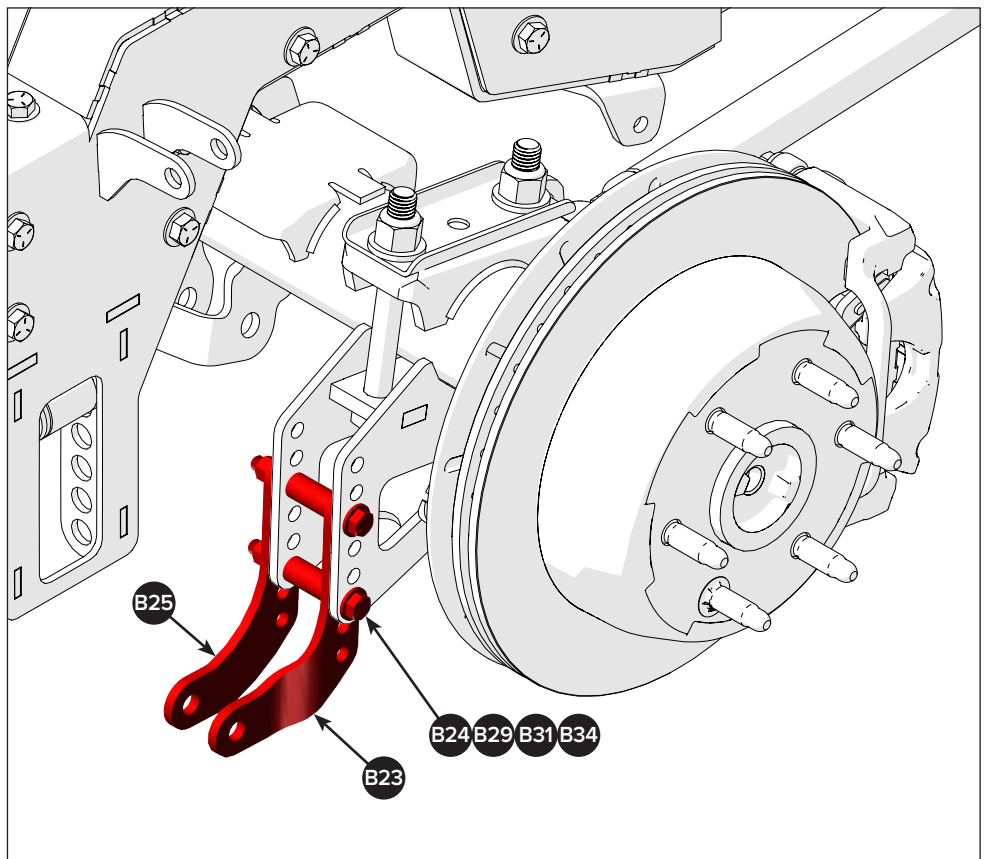
85

Put a flat shock mount plate (B25) on the outside of the axle mount.
 Attach the shock mounts to the axle mount with two bolts (B29), four washers (B31), and two Nylock nuts (B34).
 Torque the fasteners to 31 lb-ft.



86

Repeat steps 84 and 85 to install the right-hand shock mounts with the parts listed.

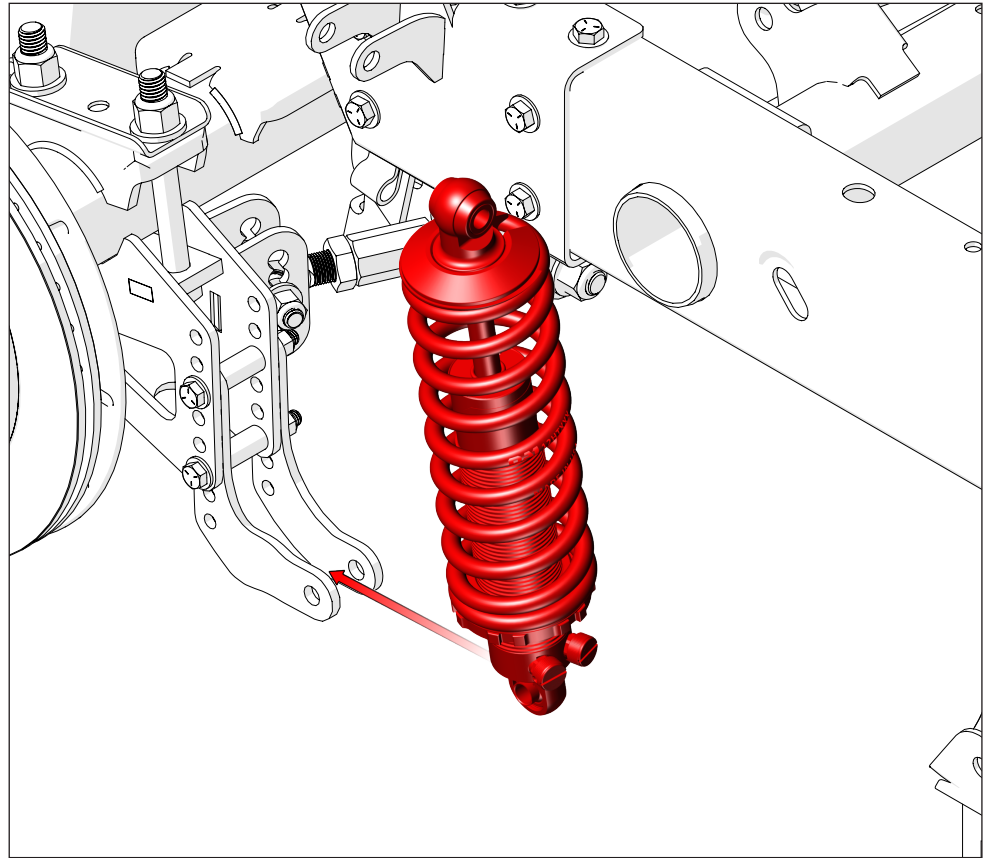


87

Refer to the instructions included with your chosen QA1 coilover shocks for assembly instructions.

Insert the shock's lower into the shock mount.

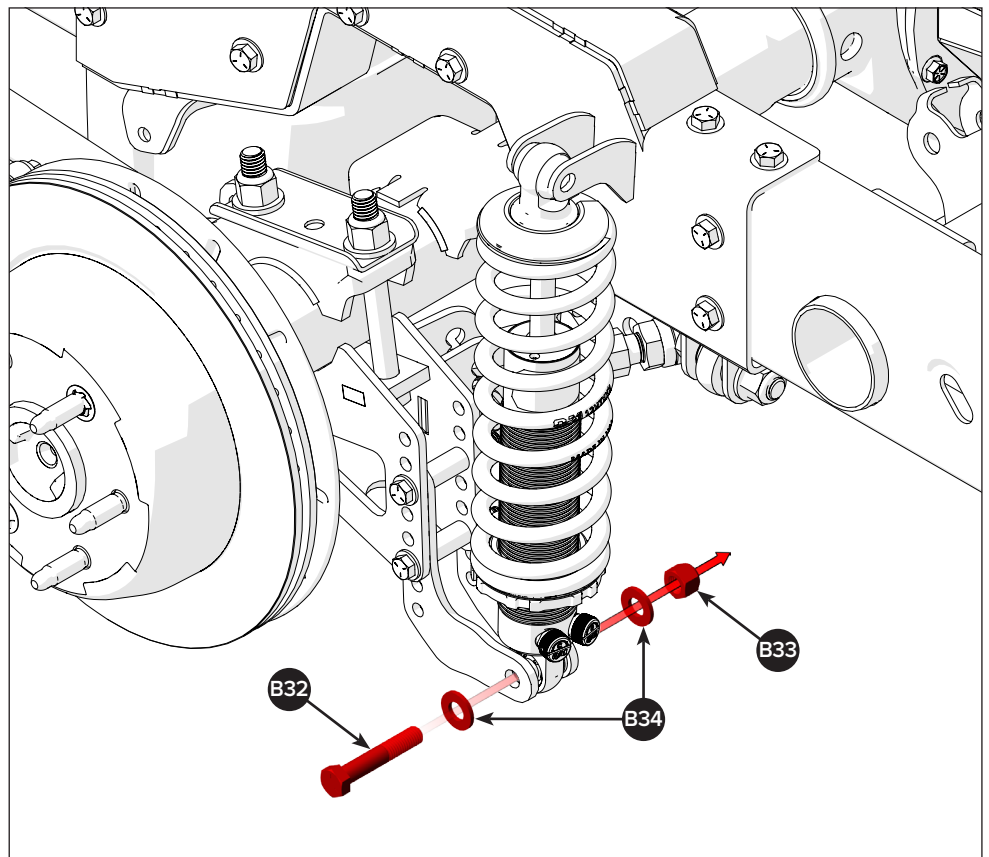
Note: Make sure the valve adjusting knob is facing toward the rear of the vehicle.



88

Attach the shock to the shock mounts with one bolt (B32), two washers (B34), and a Nylock nut (B33).

Torque the fasteners to 50 lb-ft.

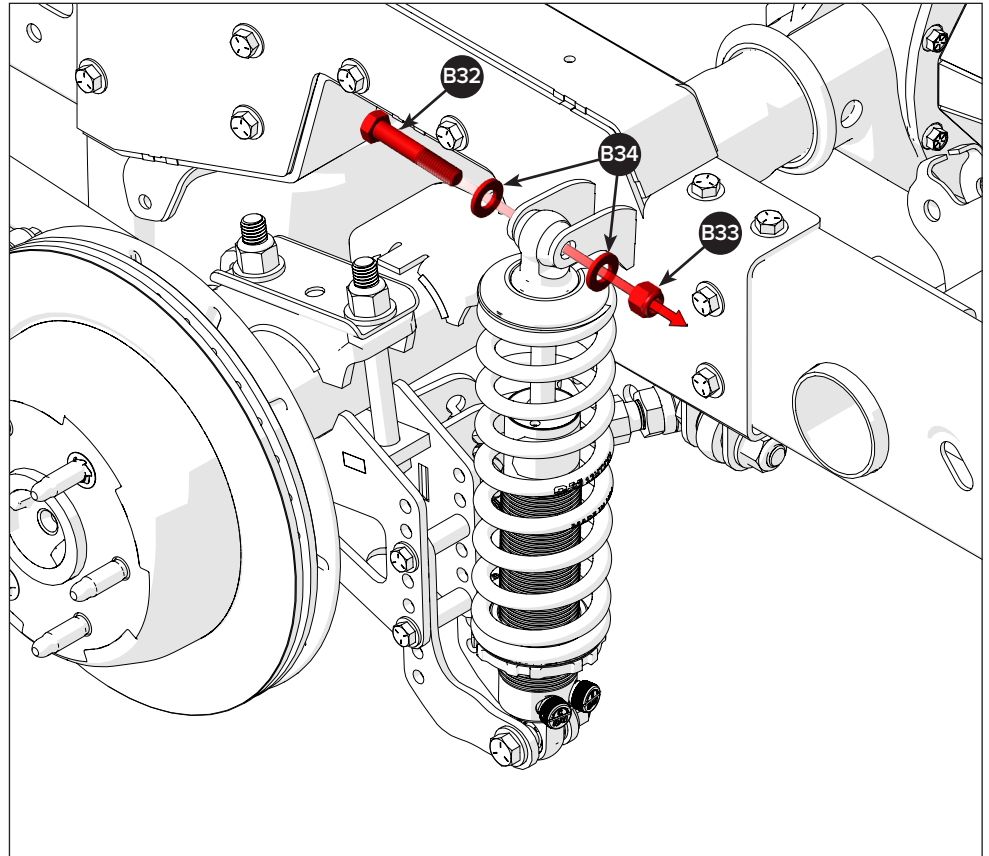


89

Attach shock top to the C Notch with one bolt (B32), two washers (B34), and a Nylock nut (B33).

Torque the fasteners to 50 lb-ft.

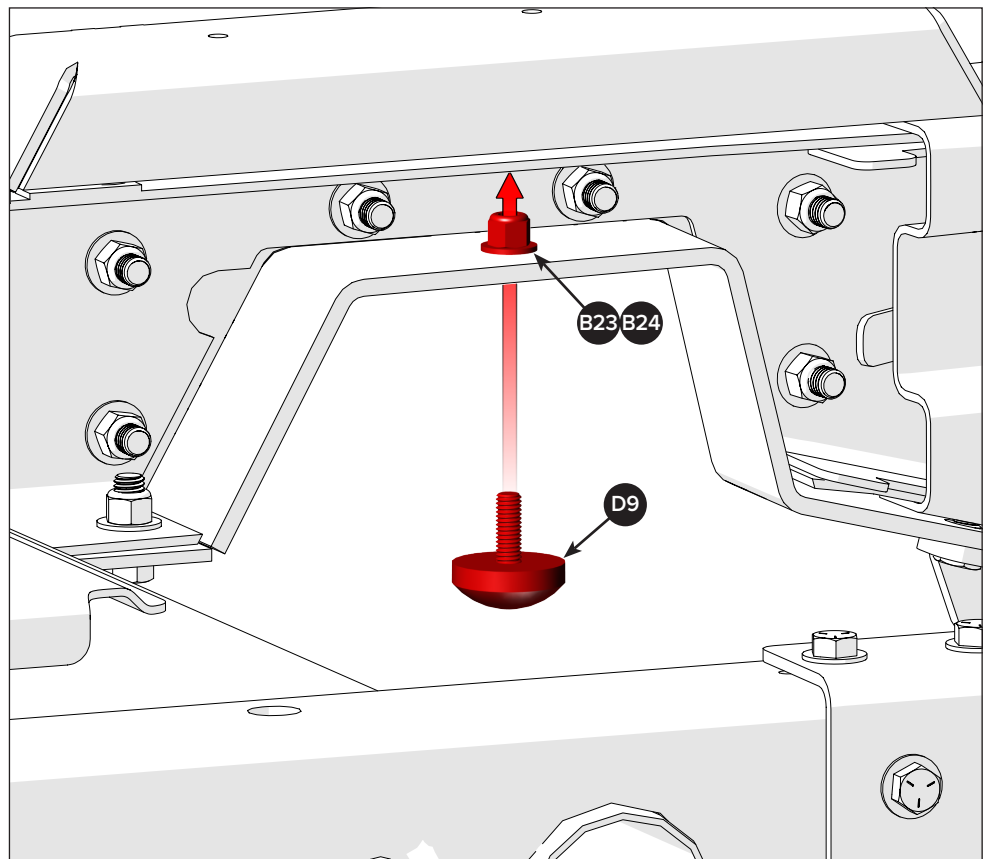
Note: QA1 offers the QA1 Sway Bar Kit 52869 for the 1999-2007 Silverado/Sierra, sold separately. Contact QA1 Sales to order.



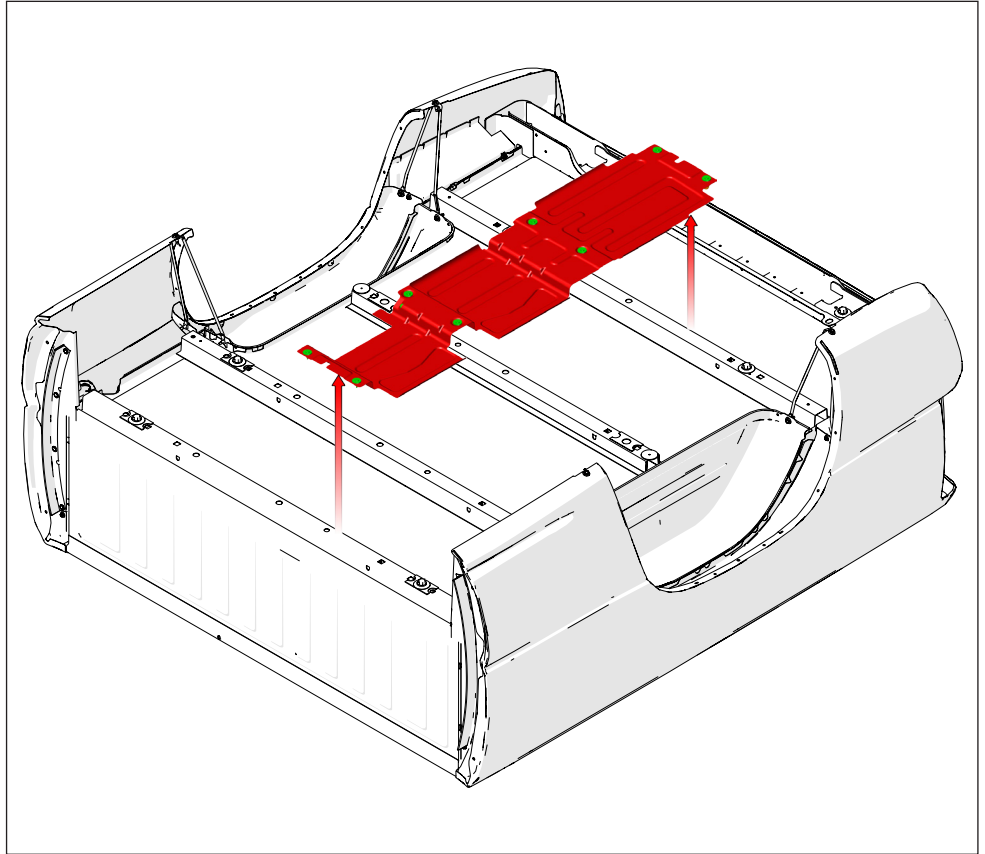
90

Install the bump stops (D9) to the bottom of each C Notch with washers (D24), and Nylock nuts (D23).

Torque the nut to 10 lb-ft.



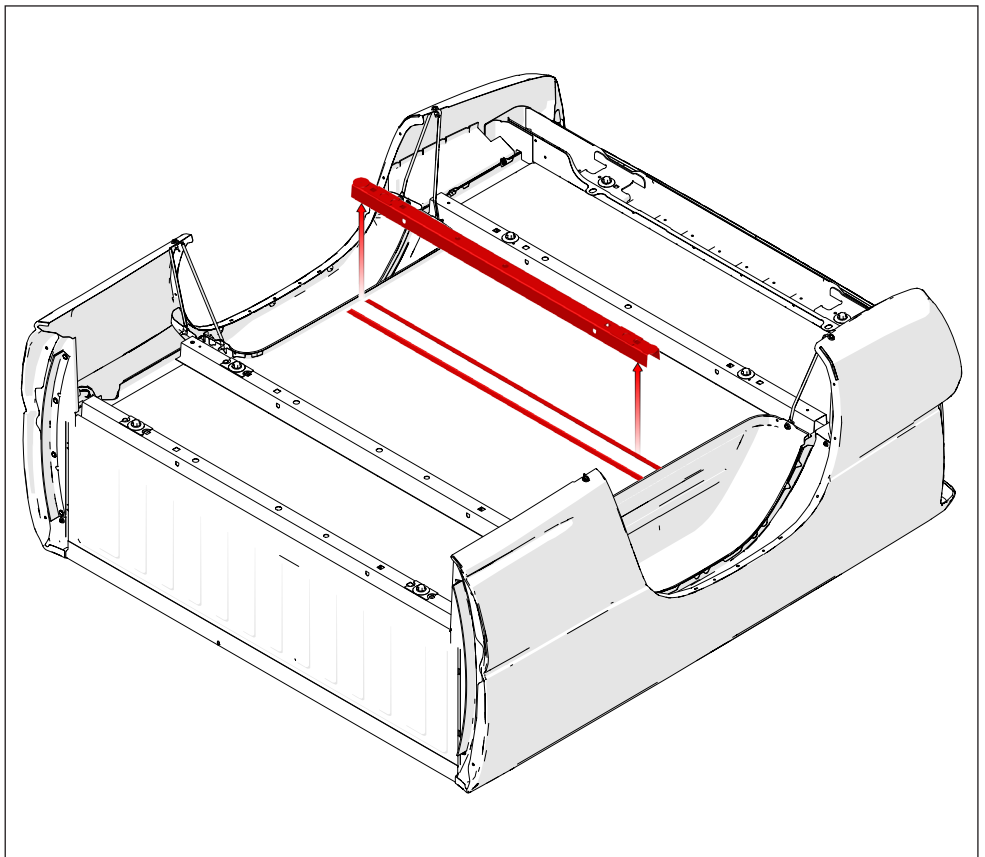
91 Remove or trim the heat shield on the bottom of the bed.



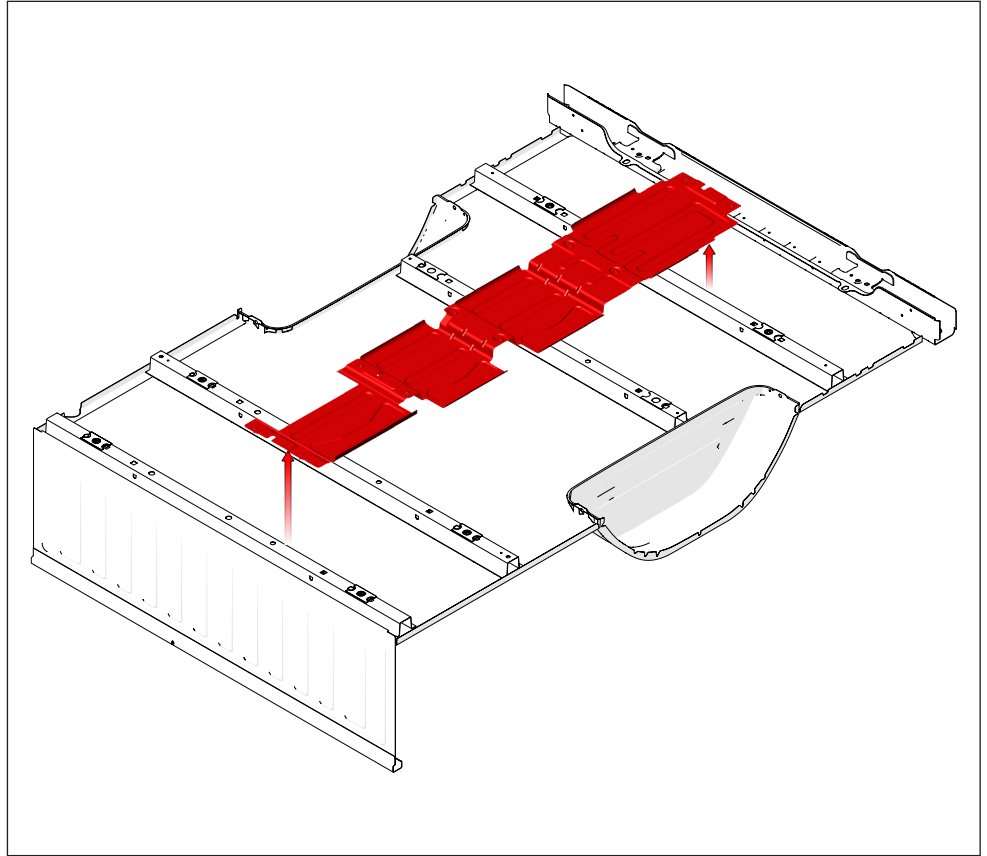
92 Remove the bed channel that is positioned over the axle.

Use a cut-off tool or plasma cutter to remove the bed support channel as close to the bed as possible.

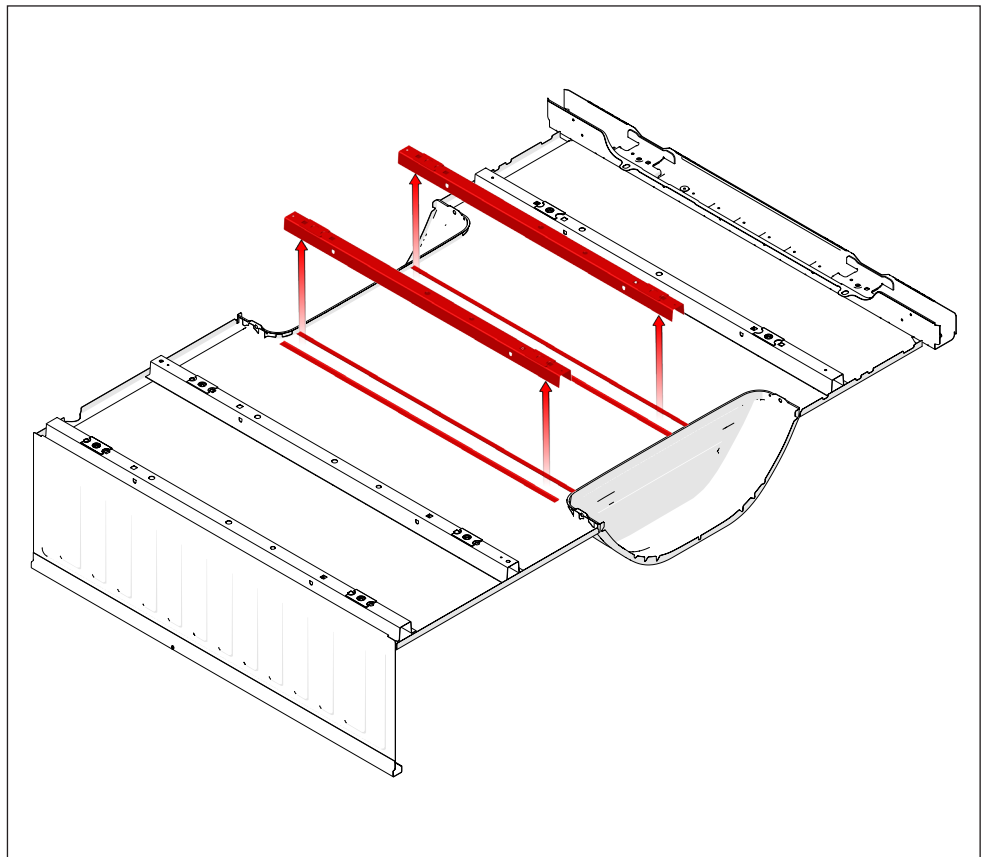
Note: Leave the two strips of spot-welded channel on the bed, as it will offer some support to the bed.



- 93** Remove or trim the heat shield on the bottom of the bed.



- 94** Remove the bed channels that are positioned 4" behind the axle and between the wheel well openings.
- Use a cut-off tool or plasma cutter to remove the bed support channel as close to the bed as possible.
- Note:** Leave the two strips of spot-welded channel on the bed, as it will offer some support to the bed.

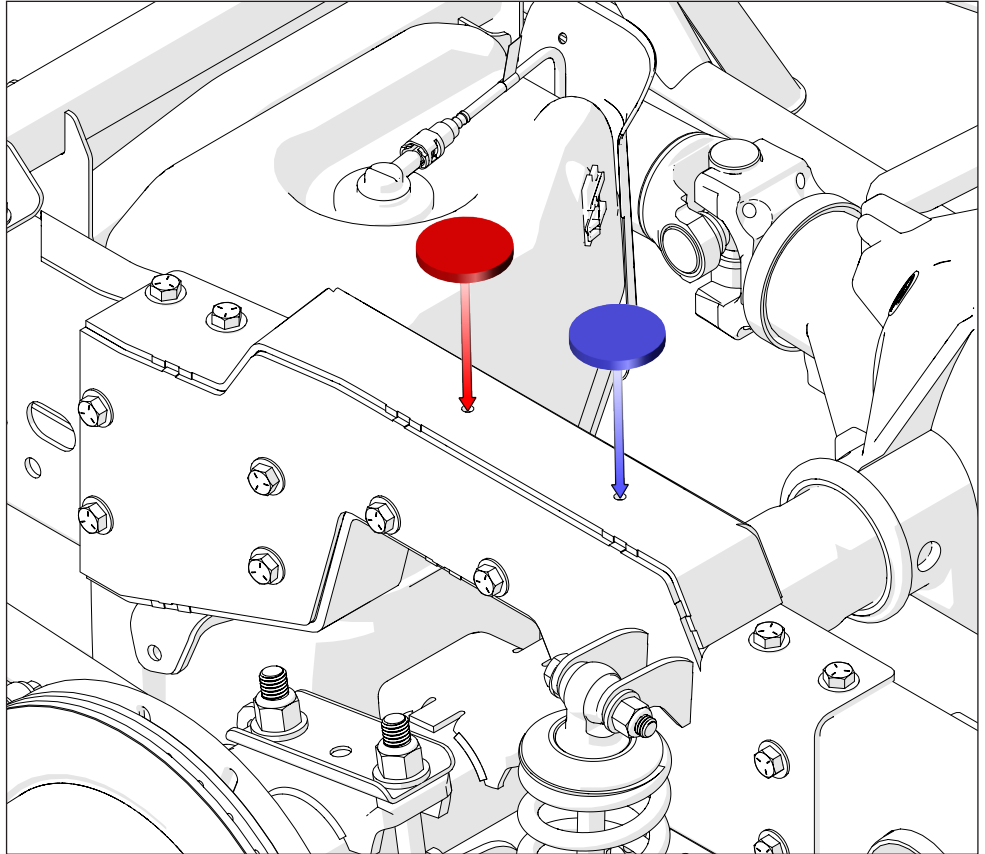


Installer's note: Pad isolators are not included with the torque arm kit. They can either be reused from the existing frame for relocation or must be purchased separately.

95 Insert one frame pad isolator into one of the drilled holes located at the top of the left-hand C Notch.

Use the front hole for the short bed (indicated by the red isolator) and the back hole for the long bed (indicated by the blue isolator).

Repeat pad isolator installation on the right-hand C Notch.

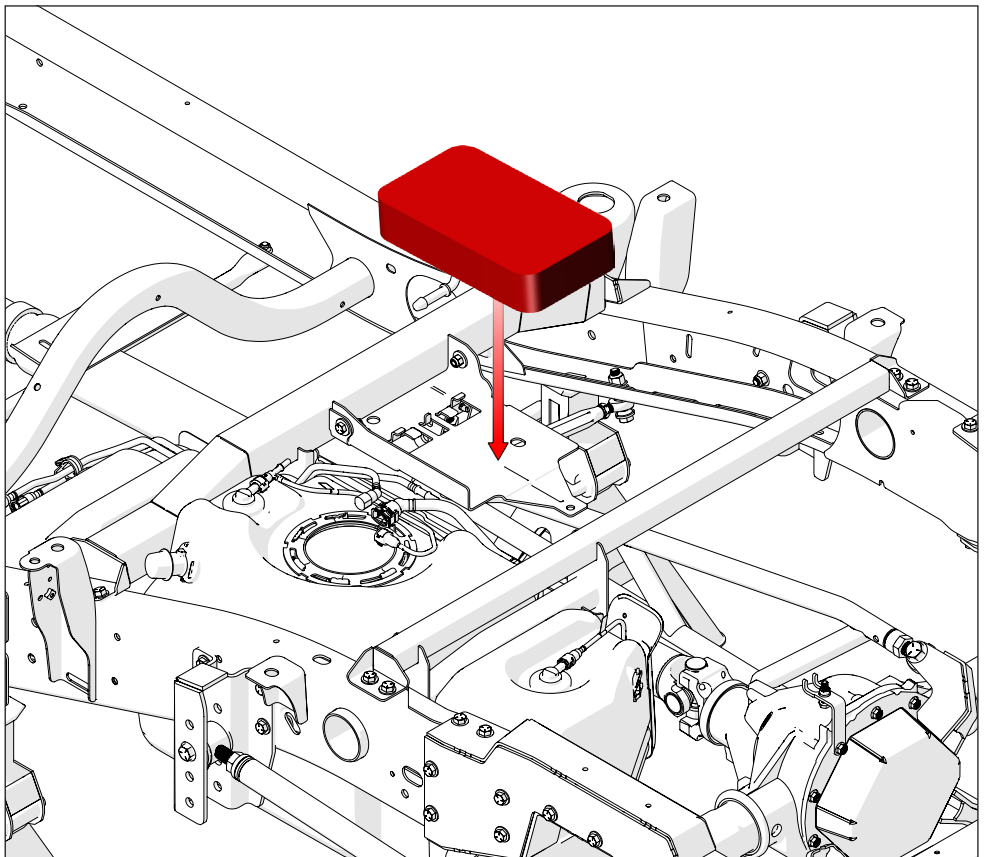


Installer's note: This step applies only to later model trucks that have the vapor canister mounted under the bed.

If you have an early model truck with a fuel tank-mounted vapor canister, skip this step.

96 Put the fuel vapor storage canister onto the canister mount in its original position.

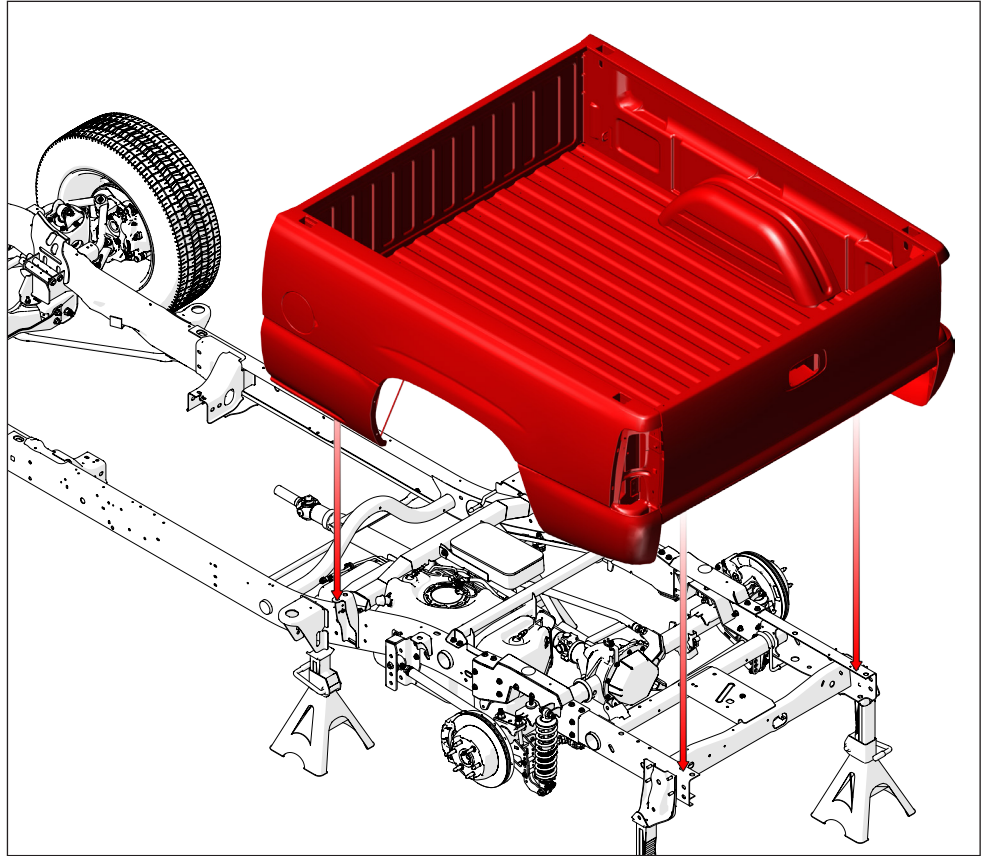
Attach the fuel lines and electrical connectors removed during steps 16 and 17.



97

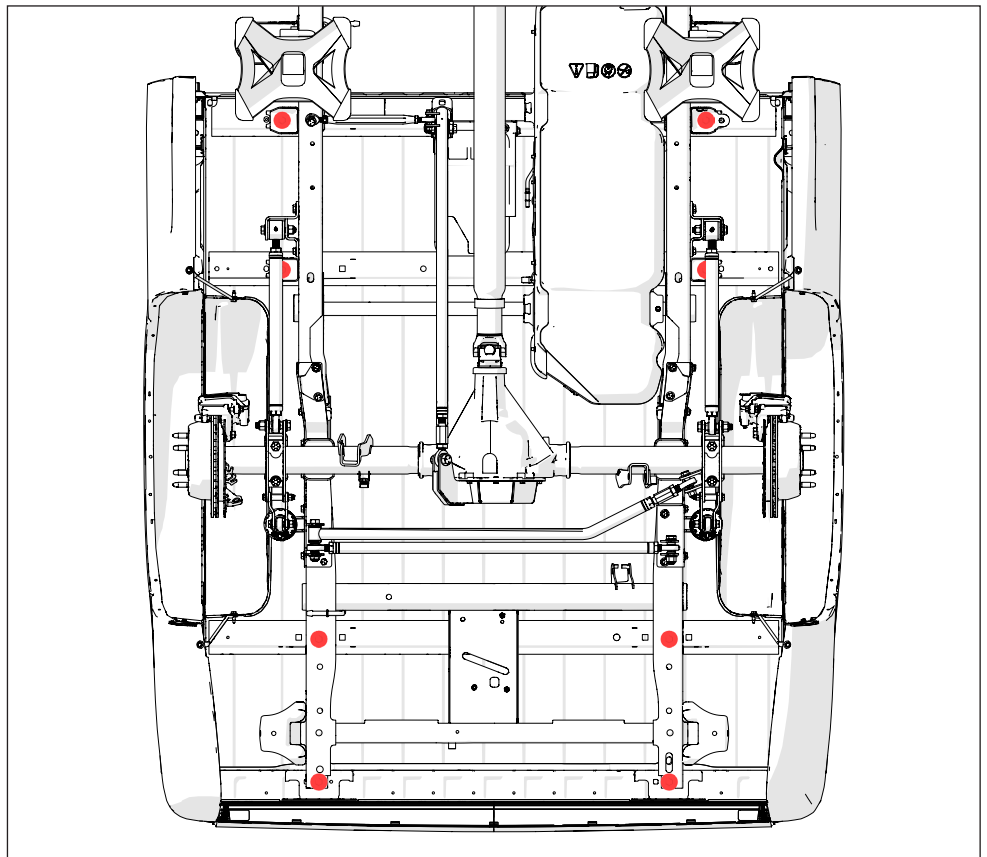
With the aid of additional people, evenly lift the bed and place it onto the frame rails.

Make sure the bed rests on the bed mounts.



98

Attach the bed to the frame mounts with the hardware removed during step 4.



99

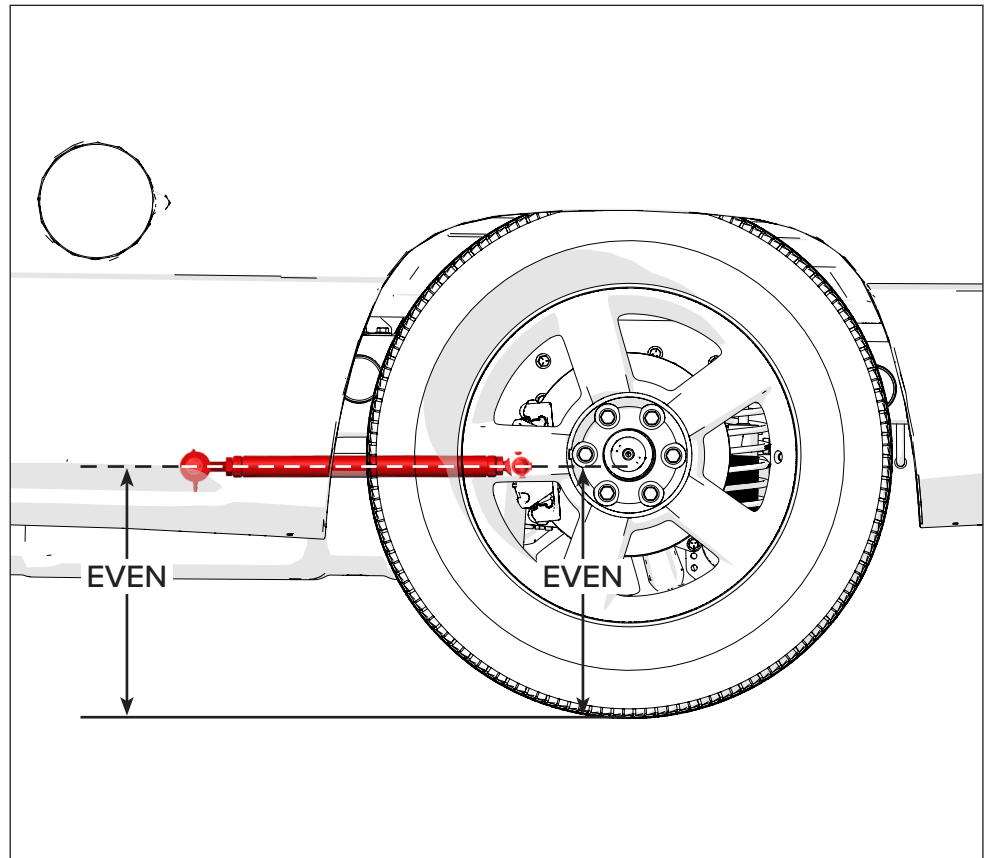
To start, install the tires and lower the vehicle to the ground.

Next, cycle the suspension up and down to settle the coilover shocks and suspension.

Then, roll the vehicle forward and backward for about 10 feet to help further settle the suspension.

Now, adjust the vehicle to your desired ride height.

Finally, adjust the trailing arms at the front or rear until they are level with the ground.



100

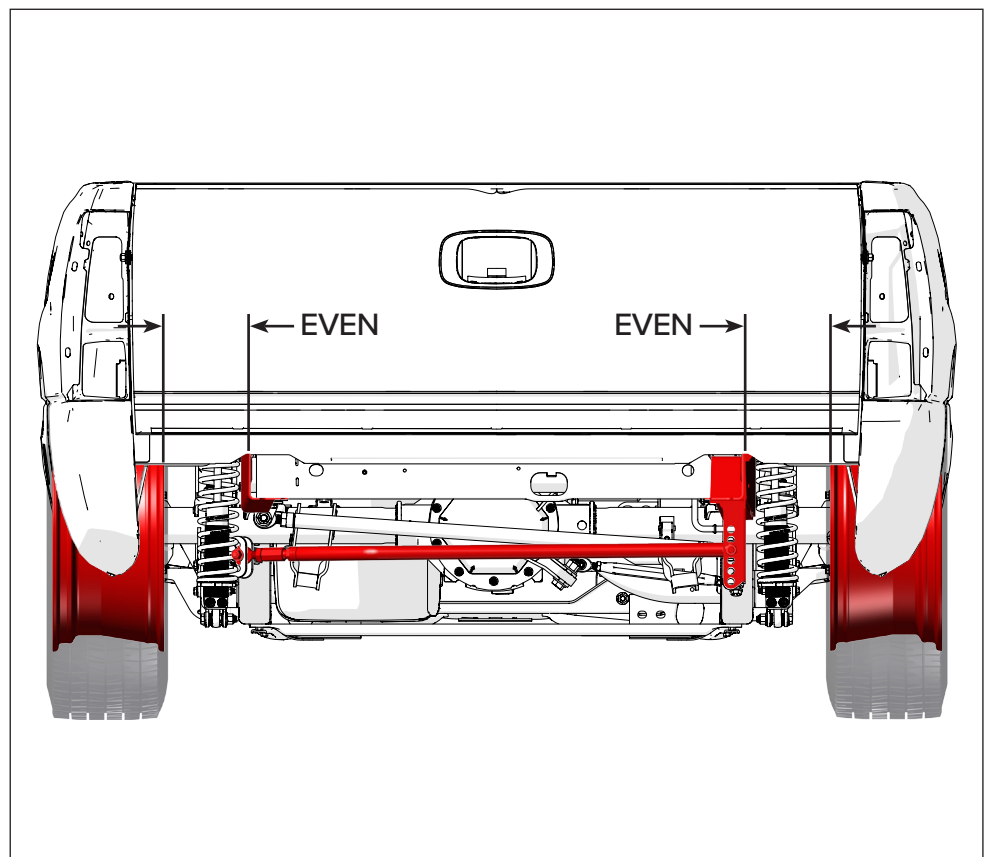
Adjust the Panhard bar so that it is level with the ground.

Once the trailing arms and Panhard bar are correctly aligned, adjust the Panhard bar to center the axle.

With the vehicle at the desired ride height, measure the distance from the frame to the inner rim of the wheel on both sides.

Adjust the length of the Panhard bar until these measurements are equal on both sides.

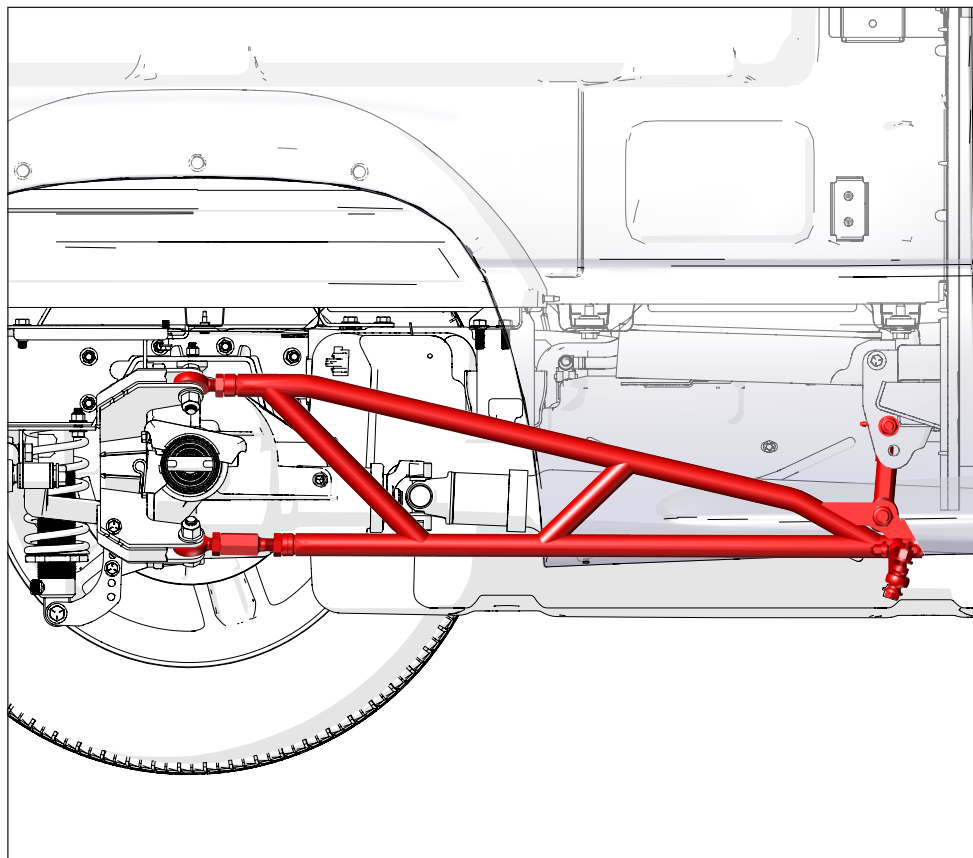
Finally, tighten the jam nuts on the Panhard bar's adjuster.



101

Next, adjust the height of the torque arm so that the bottom tube of the torque arm is parallel to the ground.

To achieve this, make adjustments to the front of the mount as needed.



102

Use an angle finder to measure the pinion and driveshaft angles to the transmission.

Make sure the pinion runs parallel to the engine and transmission.

Once the torque arm is level, use the linkage adjusters to set the pinion angle.

Be sure to tighten the jam nuts.

Note: When the pinion angle is adjusted, it affects the ride height because the coilovers are connected to the axle mounts.

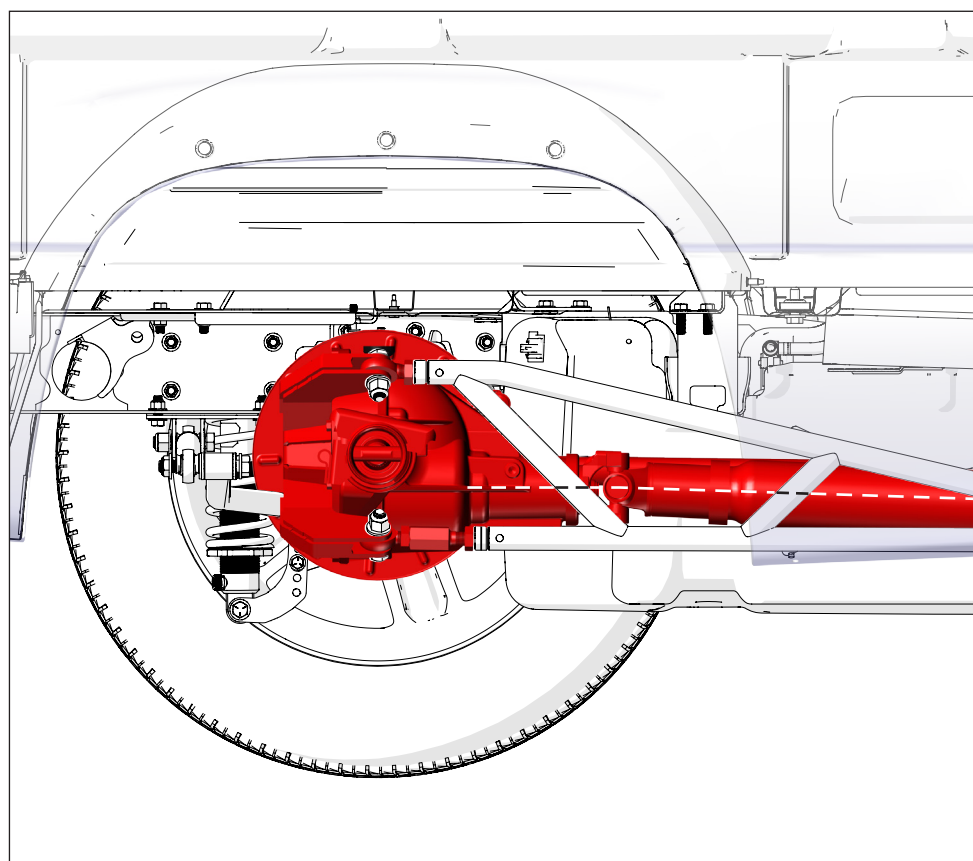
Make sure to recheck and adjust the ride height as needed when changes to the pinion angle are performed.

More information on pinion angles can be found at:

<https://qa1.net/resources/driveline-and-pinion-angle-explained/>



For accurate measurements, QA1 recommends a digital angle finder.



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