DON'T FORGET
These instructions can be found in color and expandable at QA1.net

Technical Support Line: (952) 985-5675 Email: sales@QA1.net

INSTALLATION INSTRUCTIONS

QA1 P/N RDK52628 through RDK52632
2015-2025 F150 Rear Coil-over System (3.5” to 5.5” drop)

TOOLS AND SUPPLIES REQUIRED

- Floor Jack
- Two (2) Jack Stands
- Drill with 1/4” & 7/16" drill bits
- SAE Wrench Set
- Ratchet & SAE Socket Set
- Torque Wrench
- Grinder or Air Chisel
- Anti-seize

PRE INSTALLATION NOTES:

This installation will require the factory leaf springs to be removed and installed below the rear axle. Keeping the rear axle as close to its factory position during installation will prevent the need to remove the ABS and brake lines/hoses from the axle.

The removal of the driver side leaf spring will require removal of the fuel tank. Ensure that the fuel tank has minimal fuel in it before beginning this installation.

Confirm that all the hardware listed on **page 5** is present before beginning the installation. The hardware kit includes both 9/16” and 16mm washers/nuts that are very similar in size and easy to mix up.

DISASSEMBLY-

1) Chock the front tires with the truck in gear (manual transmission) or park (automatic transmission).

NOTE-

It is not necessary to remove the wheels and tires for this installation, although it will give more access to the rear suspension parts.

2) Raise and support the rear of the vehicle and support using jack stands at the manufacturers specified locations. NEVER work on or go underneath a vehicle supported only by a jack.

3) Remove the rear shocks.

4) Mark the phasing of the driveshaft and remove it from the truck.

5) Remove the factory bump stop using a 13mm socket and thread the included QA1 bump stop into the factory bump stop hole. **(Figure 1)**

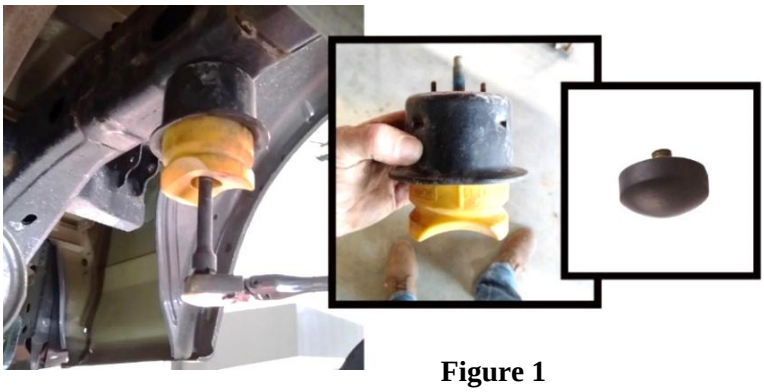

Figure 1

6) Support the rear axle using a jack to take pressure off the leaf springs. Do not apply enough force to raise the truck.

7) Remove the fuel tank from the driver side and the exhaust so that both front leaf spring connections can be disconnected.

8) While supporting both ends of the axle and the pinion, evenly remove the U-bolts holding the axle to the leaf springs. **(Figure 2)** Disconnecting the axle from the leaf springs while leaving the axle mostly in place will allow this installation to be completed without removing the brake and ABS systems from the axle.

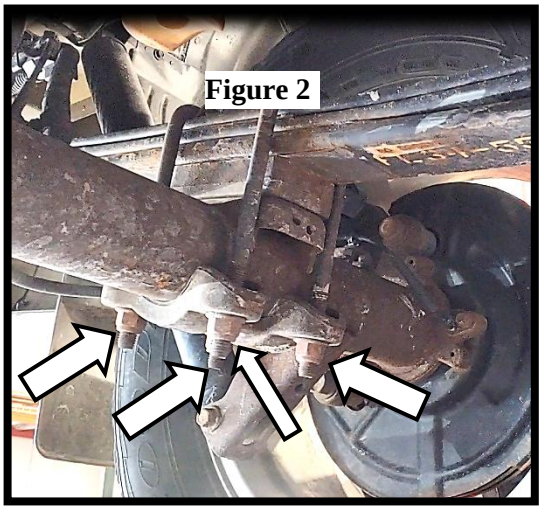

Figure 2

9) Remove the rear shackle to chassis bracket mounting bolt and remove the shackle from the truck. **(Figure 3)**

10) Remove the front leaf spring connections and remove the leaf springs from the truck. **(Figure 4)**

11) Remove the rear shackles from the leaf springs.

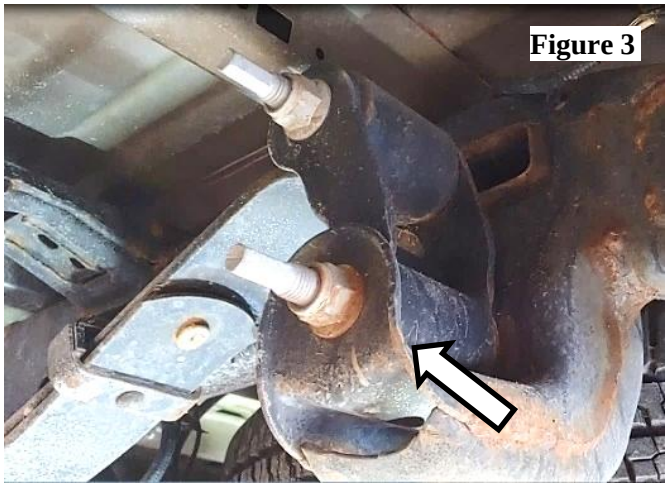

Figure 3

Figure 4

INSTALLATION

Left Hand/Driver Right Hand/Passenger

1) Remove the leaf spring pins and U-bolt plate from the leaf springs. **(Figure 5)**

2) Re-install the leaf spring pins onto the leaf springs **opposite** of their factory orientation without the U-bolt plate. Torque to 35 lb. ft. The U-bolt plate can be discarded. **(Figure 5)**

3) Identify the left and right QA1 front leaf spring mounts. **(Figure 6)**

Figure 5

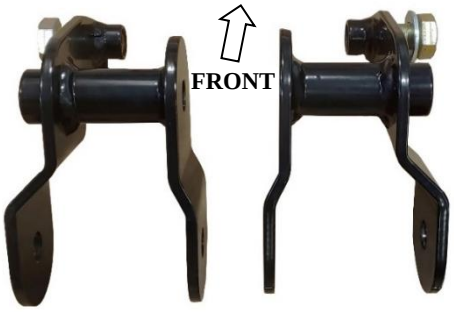

Figure 6

4) Install the QA1 front mounts to the factory front leaf spring mount using M18 x 2.5, 130mm long bolts with two washers per connection and M18 nyloc nuts. The smaller, forward-most hole will use M12 x 1.75, 30mm long hardware with oversized fender washers. **(Figure 7 & 8)**

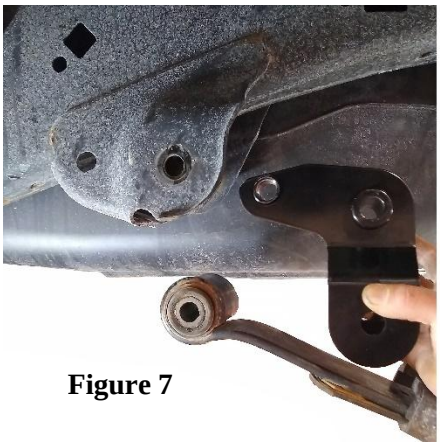

Figure 7

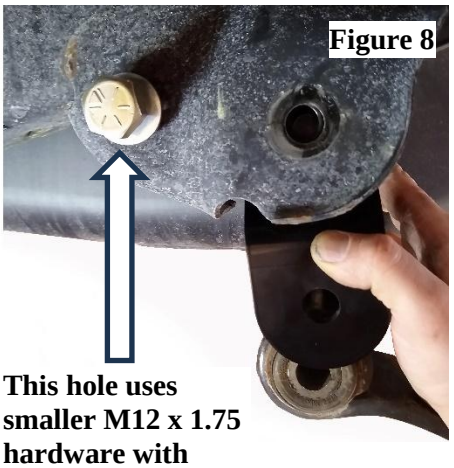

Figure 8

This hole uses smaller M12 x 1.75 hardware with oversized washers.

5) Install the front leaf spring connection to the front QA1 mount using M18 x 2.5, 130mm long bolts with M18 nyloc nut. **(Figure 13)**

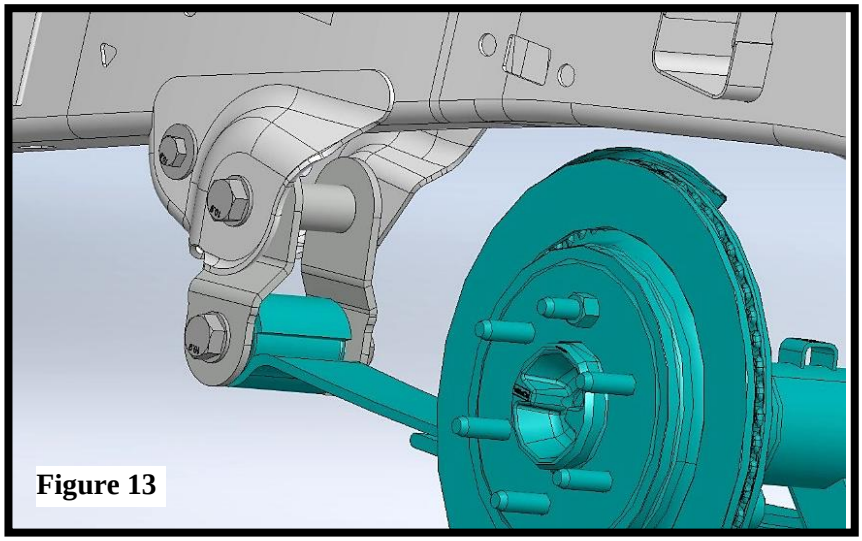

Figure 13

6) Connect the axle to the leaf spring using the QA1 axle saddle, upper plate, lower plate, and new U-bolts with the holes of the plates/saddle towards the front. **(Figure 11 & 12)** Secure using one 9/16" washer and nut per connection. This connection should be torqued in four stages once all connections are made. Torque stages: 26 lb. ft., 52 lb. ft., 74 lb. ft, and finally, 98 lb. ft.

7) 2021-2025 F150 with composite overload leaf springs should install the included pinion shims. It is recommended for all model years to check pinion angle and adjust as needed.

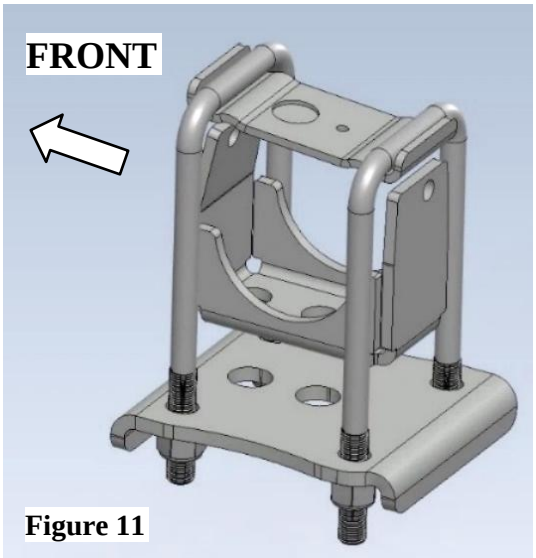

Figure 11

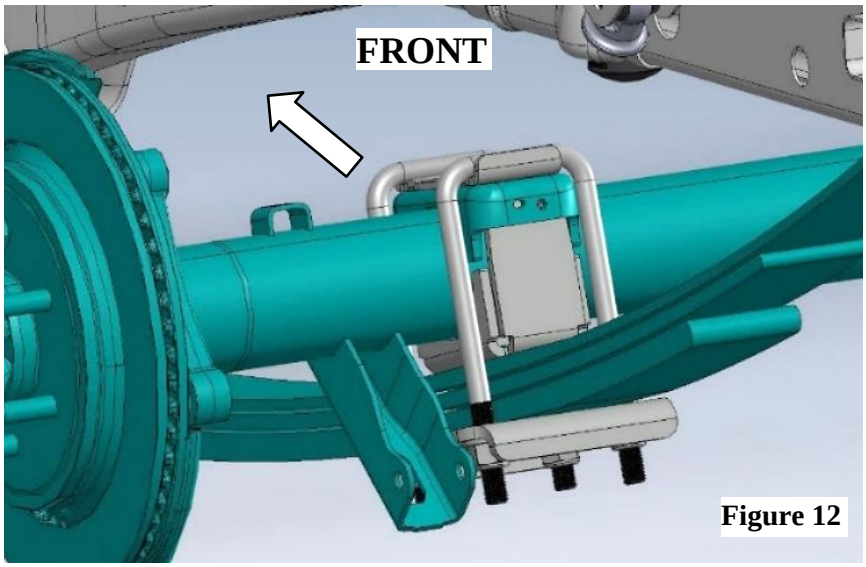

Figure 12

8) Attach the QA1 rear shackle to the factory rear frame mount using M16 x 2.0, 120mm long, with two M16 washers per connection and one taller nyloc nut per connection. **(Figure 9 & 10)**

9) Attach the rear leaf spring connection to the QA1 rear shackle in the correct hole for drop desired. **(Figure 9 & 10)** Secure using M16 x 2.0, 120mm long hardware with two washers and one short nyloc nut per connection. While the rear leaf/shackle hardware is the same bolt size and length, **the low profile M16 nuts should be installed on the rear leaf to shackle connection and not the shackle to frame mount.** The additional two holes between the shown drop range represent a 5/8" height adjustment from the two shown positions.

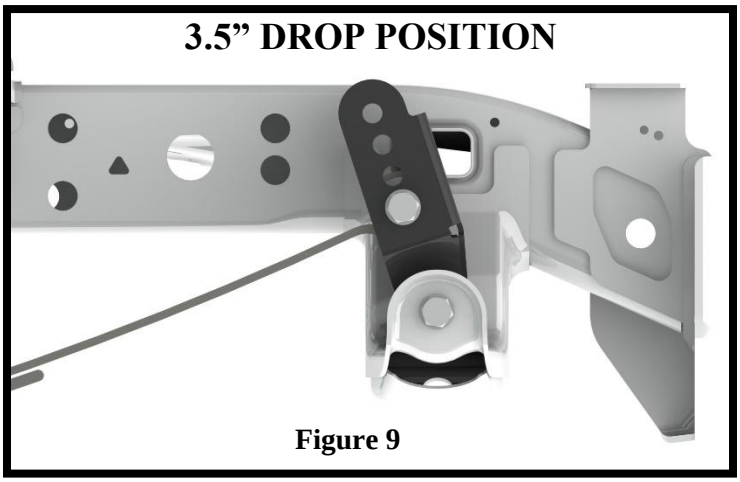

Figure 9

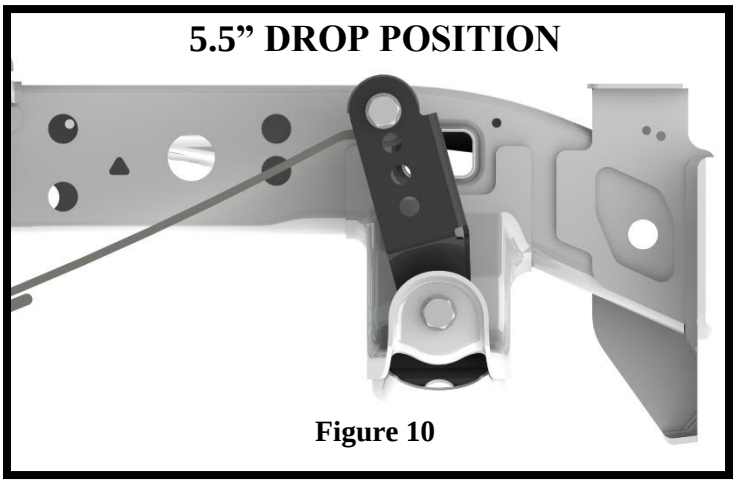

Figure 10

10) With weight on the axle, torque the front and rear leaf spring connections to the following specifications:

LOCATION	BOLT	NUT	QTY/KIT	TORQUE SPEC
Front leaf/Leaf Shackle Bolt	M18x2.5, 130mm	Nyloc, M18x2.5	4	230 lb. ft.
Front Shackle Bolt	M12x1.75”, 30mm	Shackle Bracket	2	93 lb. ft.
Rear Shackle Bolt	M16x2.0, 120mm	Nyloc, M16 x 2.0	2	161 lb. ft.
Rear Leaf Bolt	M16 x 2.0, 120mm	Nyloc, M16 x 2.0 **(Low Profile)**	2	62 lb. ft.

11) Install the included spacers into each side of all shock bushings. **(Figure 14)**

12) Install the rear shocks using the factory upper shock bolts and the included M12 x 1.75 x 65 mm bolts for 2015-2020 model year trucks or M12 x 1.75 x 65 mm for 2021-2025 model year trucks along with M12 nuts on the lower shock mount. **(Figure 15)** Torque to 65 lb. ft.

All shock mounting hardware should be installed with the bolt heads on the outboard side of the shock mounts.

Figure 14

13) Re-install the driveshaft, fuel tank, and exhaust.

14) double checking all work.


Figure 15

Rear Shock Valving Adjustments			
	Shocks with one adjuster knob:	*Shocks with two adjuster knobs:*	
		Compression	*Rebound*
Drag Racing:	4-10 clicks	7-12 clicks	2-8 clicks
Nice ride and handling:	0-6 clicks	0-6 clicks	2-8 clicks
Firm ride & improved handling:	6-12 clicks	6-12 clicks	8-14 clicks
Aggressive handling:	13-18 clicks	13+ clicks	14-18 clicks

Important Notice Regarding ADAS: This product may affect the operation of your vehicle's ADAS, such as lane departure warning systems, automatic emergency braking systems, and adaptive cruise control systems. It is the responsibility of the installer to ensure that the ADAS systems are properly recalibrated after installation. Failure to do so may result in the ADAS systems not operating as intended and could potentially lead to a collision or other safety hazards. By purchasing and installing this product, you acknowledge and accept the risks associated with modifying your vehicle's suspension and potentially affecting its ADAS systems.

A professional four wheel alignment is recommended before driving the vehicle.

HARDWARE

QTY	1ST DESCRIPTION	2ND DESCRIPTION	WHERE USED
4	BOLT, HEX M18 X 2.5 X 130mm	CLASS 8.8, DIN 931, CLEAR ZINC, PARTIAL THREAD	FRONT SHACKLE
4	NUT, NYLON INSERT, M18 X 2.5, 18.5mm HEIGHT	CLASS 8, DIN 985, CLEAR ZINC	
8	WASHER, FLAT M18	34mm OD X 3mm, DIN 125, CLEAR ZINC	
2	BOLT, HEX M12 X 1.75 X 30mm	CLASS 10.9, DIN 933, CLEAR ZINC	
2	WASHER, FLAT M12, OVERSIZED OD	37mm OD X 3mm, DIN 9021, CLEAR ZINC	
8	NUT, NYLON INSERT, 9/16-18	GRADE 5, CLEAR ZINC	U-BOLT
8	WASHER, FLAT 9/16, SAE	.59" ID X 1.17" OD X .095", CLEAR ZINC	
4	BOLT, HEX M16 X 2.0 X 120mm	CLASS 8.8, DIN 931, CLEAR ZINC, PARTIAL THREAD	REAR SHACKLE
8	WASHER, FLAT M16	30mm OD X 3mm, DIN 125, CLEAR ZINC	
2	NUT, NYLON INSERT, M16 X 2.0, 12.5mm HEIGHT	ISO 10511, LOW PROFILE, CLEAR ZINC	REAR SHACKLE (UPPER)
2	NUT, NYLON INSERT, M16 X 2.0, 16mm HEIGHT	CLASS 8, DIN 985, CLEAR ZINC	REAR SHACKLE (LOWER)
2	BOLT, HEX, FLANGED, M12 X 1.75 X 65mm	CLASS 10.9, DIN 6921, CLEAR ZINC, PARTIAL THREAD	LOWER SHOCK MOUNT (2021-2025)
2	BOLT, HEX, FLANGED, M12 X 1.75 X 60mm	CLASS 8.8, DIN 6921, YELLOW ZINC, PARTIAL THREAD	LOWER SHOCK MOUNT (2015-2020)
2	NUT, HEX, FLANGED, SERRATED, M12 X 1.75	CLASS 8, DIN 6923, CLEAR ZINC	LOWER SHOCK MOUNT

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READ ALL INSTRUCTIONS CAREFULLY AND THOROUGHLY PRIOR TO STARTING INSTALLATION. PRODUCTS THAT HAVE BEEN INSTALLED ARE NOT ELIGIBLE FOR RETURN. USE THE PROPER JACKING LOCATIONS. DEATH OR SERIOUS INJURY CAN RESULT IF INSTRUCTIONS ARE NOT CORRECTLY FOLLOWED. A GOOD CHASSIS MANUAL, AVAILABLE AT YOUR LOCAL PARTS STORE, MAY ALSO AID IN YOUR INSTALLATION.

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