



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 Mx431-09450, Mx431-09550, Mx431-09650
'03-'11 Crown Victoria Front Coil-over

TOOLS AND SUPPLIES REQUIRED

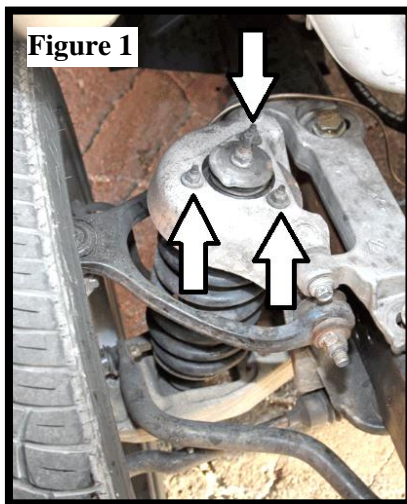
- Floor Jack
- Jack Stands
- Ball Joint Separator
- T115W or T114W Spanner Wrench
- SAE Wrench Set
- SAE Socket Set
- Coil Spring Compressor
- Permatex® Anti-Seize Lubricant

DO NOT VOID YOUR WARRANTY!

Permatex® Anti-Seize Lubricant should be used on coil-over threads to prevent galling. Failure to lubricate the coil-over threads with Anti-Seize prior to making ride height adjustments will cause damage to your shock absorber and will void any warranty. All ride height adjustments must be made with the vehicle weight completely unloaded from the suspension. Please call QA1 Technical Support with any questions.

DISASSEMBLY INSTRUCTIONS

1. Measure the vehicle ride height from the ground to the edge of the fender through the center of the wheel. Record these measurements.
2. Raise and support the vehicle by the frame with jack stands on a stable surface and remove the front wheels.
3. Remove the tie rods from the spindles using an 18mm socket.
4. Remove the brake calipers by removing the caliper brackets using an 18mm socket. Secure the brake calipers out of the way. Do not let the calipers hang by the brake lines as this will damage the lines.
5. Remove the brake rotors.
6. Remove the sway bar end links using a 15mm socket.
7. Unplug the ABS sensor from the back of the spindle (if equipped) and secure it out of the way.
8. Loosen the upper and lower ball joint nuts using a 24mm wrench and allen wrench. **Do not remove the nuts at this time.**



9. Loosen the three upper spring plate nuts using a 14mm wrench. **(Figure 1)** Leave these nuts threaded on the shock mount until step 15.

10. Support the lower control arm with a floor jack to contain the spring pressure.

11. Remove the upper ball joint nut.

12. Slowly lower the jack supporting the lower control arm to release all spring pressure.

13. Loosen and remove the lower shock mounting bolt using a 24mm socket. The head of this bolt has a safety tab that will need to be rotated to remove it from the lower mount.

14. Support the spindle and remove the lower ball joint nut. The lower ball joint is a downward facing stud and the spindle will fall out if the nut is removed and the spindle is not supported.

15. Remove the three upper spring plate nuts and remove the shock/spring from the vehicle.



INSTALLATION

1. Screw the aluminum spring seat adjuster nut (shoulder up) down to the last thread - NO FURTHER. (Figure 2) Now is a good time to lubricate the threads of the shock with **Permatex® Anti-Seize lubricant**.



Figure 2

Optional 7888-109 Thrust Bearing

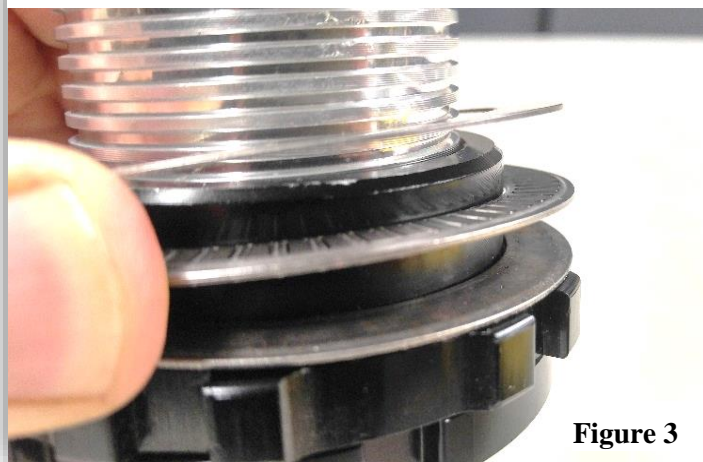


Figure 3

2. QA1 highly recommends using the QA1 thrust bearing kit (P/N 7888-109) for ease of ride height adjustment. If the thrust bearing kit is used, coat both sides of the washers with **Permatex® Anti-Seize lubricant**. Install the stainless steel spring seat washer followed by the needle bearing, then the second washer. (Figure 3)
3. If the thrust bearing kit is not used, coat the included stainless steel spring seat washer with **Permatex® Anti-Seize lubricant**. Place the lubricated side of the washer down on the spring seat.
4. Install the spring onto the shock followed by the steep angle spring cap. (Figure 4)
5. Install the provided mounting plate to the shock using 1/2" x 2.25" bolt with two washers and nylock nut. The plate should be installed with the single stud facing the same direction as the adjustment knob(s). (Figure 5)
6. Install the upper plate connection of the coil-over assembly into the vehicle using the included 5/16" flange nuts. Torque all three nuts to 22 lb. ft. (Figure 6)



Figure 4



Figure 6



Figure 5

7. Install the lower shock connection to the lower control arm re-using the factory hardware. Torque to 166 lb. ft.
8. Re-install the spindle onto the upper and lower ball joints. Torque to 111 lb. ft.
9. With anti-seize on the threads of the shock body and the locking collar separated from the spring seat collar, adjust the spring seat collar down the shock until 2" of threads are showing above the collar. **(Figure 7)**

NOTE:

Ride height adjustments can be made with the T114W (handled version) spanner wrench or the T115W spanner wrench. The T115W spanner wrench (pictured right) attaches to a 3/8" drive ratchet and extension for making adjustments around the upper control arm.



Figure 7

10. Re-install brake rotors, brake caliper brackets, and calipers. Torque caliper brackets to 118 lb. ft. Torque calipers to caliper brackets to 32 lb. ft.
11. Re-install ABS sensors (if equipped)
12. Re-install tie rod ends. Torque to 59 lb. ft.
13. Re-install front sway bar end links. Torque the end links to 49 lb. ft.
14. Install the wheels. Torque to 95 lb. ft.
15. Set the vehicle on the ground and measure ride height. Re-adjust spring seat collars to set final ride height.

NOTES:

All ride height adjustments should be made with the shock adjustment knobs on the softest setting and the weight off the vehicle.

Rolling the vehicle 2-3 feet will settle the suspension and show a more accurate ride height.

16. With the ride height set, insert the 1/4" nylon set screw into any of the three threaded holes in the spring seat to secure. **(Figure 8)**

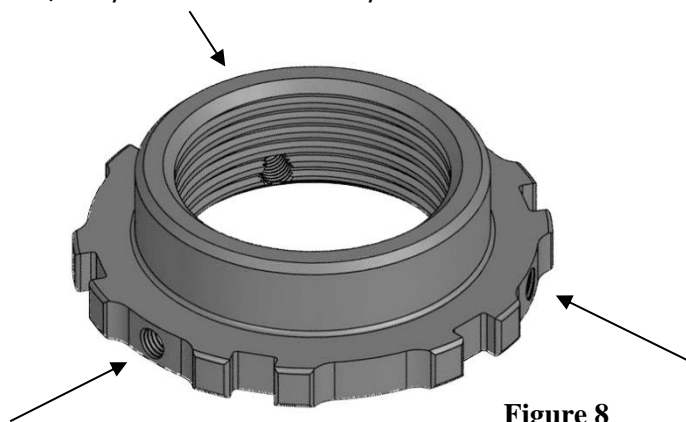


Figure 8

A four-wheel alignment should be performed by a qualified alignment shop before driving the vehicle.

Shock Valving Adjustments

QA1 shocks have 18 damping settings per knob. There are 6 clicks per revolution of each knob, and each knob has 3 complete revolutions. The knob set fully counter-clockwise is the softest setting - start your adjustments from that point. The following are recommended base settings to begin testing with. Do not be afraid to adjust the shocks to find the best settings for your vehicle/driving style.

	Shocks with one adjuster knob:	Shocks with two adjuster knobs:	
		Compression	Rebound
Drag Racing:	0-6 clicks	12-18 clicks	0-6 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



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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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