



INSTALLATION INSTRUCTIONS

QA1 Pro Coil Coil-Over Systems

P/N GS401, GR401, GD401, GS501, GR501, GD501

MS303, MS302, MS301, MR303, MR302, MR301, MD303, MD302, MD301

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.

TOOLS AND SUPPLIES REQUIRED

- Floor Jack
- Jack Stands
- Ball Joint Separator
- Spanner Wrench (QA1 P/N T114W or T115W)
- 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 center of the wheel wells and record these measurements.
2. Unbolt front upper shock mounts from inside the engine bay.
3. Raise and support the vehicle by the frame with jack stands on a stable surface and remove front wheels.
4. Remove the sway bar end links.
5. Unbolt lower shock mounting bolts and remove the shocks from the car.

6. Remove the cotter pin from the lower ball joint and loosen the castle nut. Do not remove the nut.
7. Separate the lower ball joint from the spindle using a ball joint separator.
8. With a spring compressor, compress the coil spring to remove tension from the lower control arm.
9. With the spring tension off of the control arm remove the ball joint nut and spring from the car.
10. For GM cars, it is necessary to remove the welded nuts or “U” clips for the stock shock mount on the factory control arms. This can be accomplished with a grinder or hammer and chisel. The holes may then need to be enlarged to 3/8”.

INSTALLATION INSTRUCTIONS

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

2. QA1 highly recommends using the QA1 thrust bearing kit (P/N 7888-109) for ease of 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, then the bearing, then the second washer.
3. If the thrust bearing kit is not used, coat the stainless steel spring seat washer with **Permatex® Anti-Seize lubricant**. Place the lubricated side of the washer down on the spring seat.
4. With the piston rod fully extended, install a washer and bushing on the piston rod. Slide the small diameter end of the spring over the shock down to the spring seat adjuster.
5. Insert the assembly into the upper spring pocket. Install the other bushing, washer and nut. Do not tighten the nut at this time. Align the pig tail on the spring with the recess in the upper spring pocket if the spring has a pigtail. The adjusting knob should face the spindle.



Figure 1

6. **GM Cars:** With a jack under the lower control arm, raise the lower control arm up to the lower shock mount and install the supplied 3/8” bolts. (Figure 2)

Mustang II: Install the supplied 7/16” or 1/2” lower shock bolts supplied. For Mx301 shocks, install a spacer on each side of the spherical bearing.

7. With the lower shock bolt(s) installed, jack the lower control arm up and reconnect the lower ball joint and tighten to the factory specification. Install a new cotter pin.
8. Using a spanner wrench, adjust the spring seat adjuster about 1½” to 2” above the bottom-most thread for a factory ride height. If you have not done so, lubricate the threads on the shock with **Permatex® Anti-Seize lubricant** prior to making any ride height adjustments.
9. Re-install the sway bar end links
10. Re-install the front wheels.
11. Lower the car to the ground and bounce the suspension to seat the springs. Check the vehicle ride height referring to your notes from step 1 of disassembly. Raise the car off the ground and adjust the ride height as necessary using a spanner wrench. Once you have the ride height set, tighten the lock nut against the spring seat adjuster.



Figure 2

12. An alignment should be performed by a reputable alignment shop after any changes to the suspension.

QA1 shocks either have:

- 18 valving settings on one knob that simultaneously adjusts compression and rebound (Single adjustable).
- 18 valving settings on two knobs that independently adjust compression and rebound (double adjustable).

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 adjustments from that point. Recommended base settings to begin testing with are as follows:

Shocks with one adjuster knob:

Drag Racing:	0-6 clicks
Other Applications:	2-8 clicks for nice ride and handling; 8-12 clicks for firm ride and improved handling; 13+ clicks for more aggressive handling

Shocks with two adjuster knobs:

Drag Racing:	12-16 clicks compression and 0-4 clicks rebound
Other Applications:	2-8 clicks compression and rebound for nice ride and handling; 8-12 clicks for firm ride and improved handling; 13+ clicks for more aggressive handling

Note: Do not force the adjuster knob. Do not use pliers or any other tools on the piston rod or the adjuster knob. Do not exceed 18 clicks under any circumstances. This could damage the adjuster and cause the shock to not adjust. This will void any warranty. Do not use the shock as a droop limiter.