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 52937, 52919, 52920, 52964, 52966*
*Drag Race Lower Control Arms*

## TOOLS AND SUPPLIES REQUIRED

- Floor Jack
- Jack Stands
- Wrench Set
- Ratchet & Socket Set
- Spring Compressor
- Ball Joint Separator
- Internal & External snap ring pliers
- Razor blade or box cutter knife

## PRE INSTALLATION NOTES:

These control arms require the use of coil-overs and will not work with a factory style coil spring.

QA1 front coil-overs come with poly bushings and t-bars installed in the lower shock connection for customers using factory control arms. QA1 control arms require the installation of the included spherical bearing mounts. Refer to page 3 for installation instructions.

QA1 does not recommend driving the vehicle until it has been properly aligned. *A front-end alignment should be performed by a qualified alignment shop after any changes to the suspension system.*

**Drag Race control Arms** are equipped with composite pivot bushings and QA1 Ultimate (low friction) Ball Joints; please refer to the ball joint instructions on page 4 for checking the initial preload. Preload is set from the factory, but the ball joint stud should be checked for play before installing these **Drag Race Control Arms** and every race season.

## Disassembly With Factory Springs

1. Raise and support the vehicle by the frame with jack stands on a stable surface and remove the front wheels.
2. Remove the sway bar end links. (if equipped)
3. Unbolt the upper shock mounts from the inside the engine bay.
4. Unbolt the lower shock mount and remove the shock.
5. Remove the cotter pin and loosen the lower ball joint castle nut. **Do not remove the nut at this time.**
6. With the castle nut still threaded onto the stud, separate the lower ball joint from the spindle using a ball joint separator.
7. Support the lower control arm with a jack to take pressure off the droop stop and to contain the spring pressure. **(Figure 1)**
8. Remove the lower ball joint nut.
9. Slowly lower the jack supporting the lower control arm to release any remaining spring pressure. **Do not continue to step 10 until all of the spring pressure has been released.** A spring compressor may need to be used to safely release all pressure.
10. Remove the spring.
11. Remove the lower control arm pivot bolts noting the direction they are installed and remove the arm.

**Figure 1**

**Disassembly With Coil-over Shocks**

1. Raise and support the vehicle by the frame with jack stands on a stable surface and remove the front wheels.
2. Remove the sway bar end links. (if equipped)
3. Remove the cotter pin in the lower ball joint stud and loosen the castle nut.
   **Do not remove the nuts at this time.**
4. With the castle nut still threaded onto the stud, separate the lower ball joint from the spindle using a ball joint separator.
5. Lower the spring seat collar to the bottom of the coil-over shock to release any spring pressure.
6. Support the lower control arm with a jack to take pressure off the droop stop and to contain and remaining spring pressure. **(Figure 1)**
7. Unbolt the upper shock mount from inside the engine bay.
8. Slowly lower the jack supporting the lower control arm to release any remaining spring pressure. **Do not continue to step 8 until all the spring pressure has been released.** A spring compressor may need to be used to safely remove the pressure.
9. Unbolt the lower shock mount and remove the shock and spring.
10. Remove the lower ball joint castle nut and swing the lower control arm down out of the spindle.
11. Remove the lower control arm pivot bolts noting the direction they are installed and remove the arm.

**PRE-INSTALLATION NOTES:**

For 1967-1969 Camaro/Firebird, install the supplied bump stop in the same location as the factory bump stop either on the front or rear of the control arm.

QA1 Coil-over shocks come with poly bushings and t-bars installed in the lower shock connection for customers who are using factory control arms. QA1 control arms require the lower shock bushing to be swapped out with the included spherical bearing mount.

1. Install the provided spherical bearing kit into the lower shock mount using the following steps:

**INSTALLATION-**

2. Install the lower shock connection to the control arm before mounting the arm.
3. Hold the new QA1 lower control arm in place and insert the included pivot bolts. **(Figure 2)** If the control arm has a wider bushing mount (G-Body & S10), install into the front pivot point with the longer mounting bolt. S10 arms use a 14mm bolt in the front pivot and a shorter 12mm in the rear connection. The G-body uses 12mm mounting bolts with the longer bolt in the front connection. A-Body and 1st Gen Camaro use 1/2" hardware. 1970-1981 camaro will use either 1/2" or 14mm (9/16") bolts. Control arm mounting bolts should be torqued after the installation is complete and the vehicle is at ride height to 80 lb. ft.

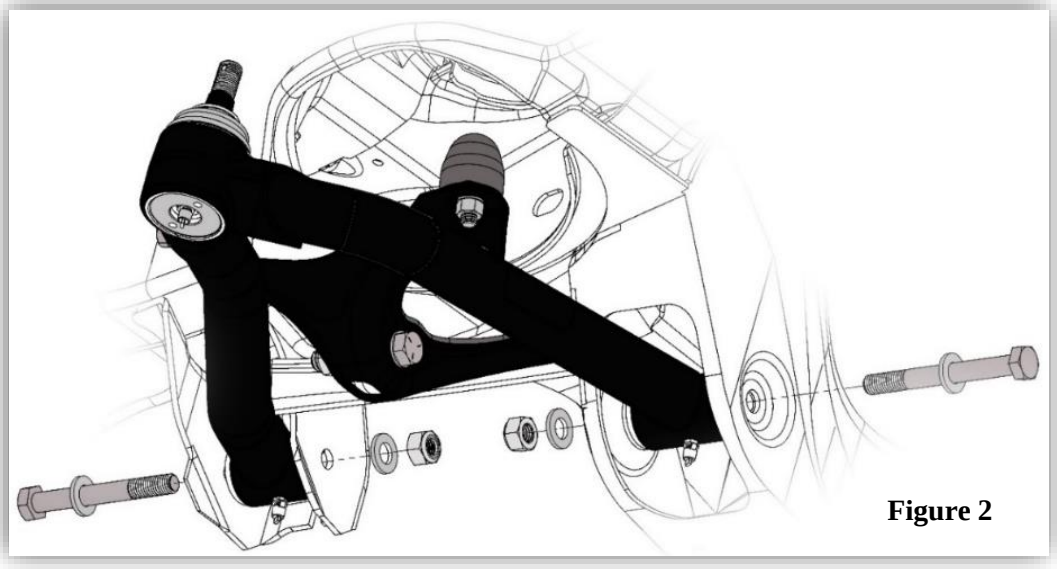
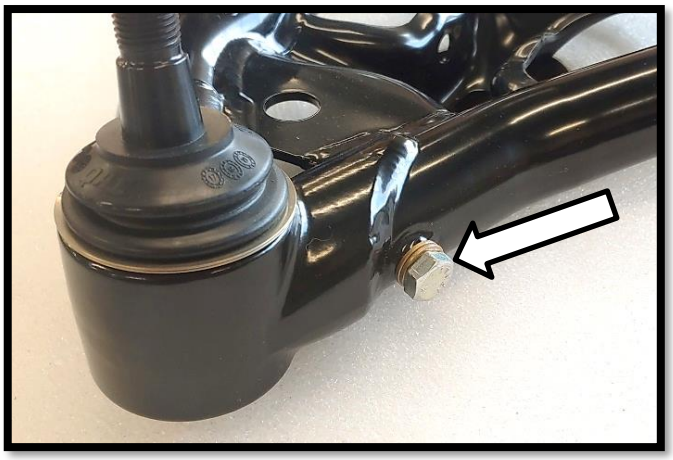


**Figure 2**

4. Refer to the instructions included with the shocks for coil-over assembly.
5. Install the coil-over shocks. Torque lower ½" bolt to 50 lb. ft.
6. Connect the lower ball joint into the spindle. Torque to 65 lb. ft. Continue tightening to line up the cotter pin hole. Never loosen the ball joint to find the cotter pin hole.
7. Re-install sway bar end links.
8. Lightly grease control arm and ball joint zerk fittings using a quality lithium bearing grease.
9. Re-install wheels.



**NOTE:**
Each control arm has an adjustable steering stop bolt that the spindle will contact at full steering lock. The steering stop can be adjusted by adding or removing the 3/8" washers. Torque to 31 lb. ft. after adjustments are made.

**A PROFESSIONAL ALIGNMENT SHOULD BE PERFORMED BEFORE DRIVING THE VEHICLE**

(Recommended alignment specs on reverse)

## Alignment Information

**QA1 upper and lower control arms are designed to add more caster and negative camber. It is a good idea to make the alignment shop aware of this, as the alignment shop will only try to align the vehicle to factory specs. These alignment specifications are for vehicles equipped with both QA1 upper and lower control arms. Vehicles with other configurations may not be able to achieve these alignment specifications.**

### Recommended Alignment Specifications for Street Driving

| | | |
|---|---|---|
| 1964-1972 A-Body<br>1967-1981 Camaro and Firebird<br>1968-1974 Nova, X-Body<br>1973-1977 A-Body<br>1975-1979 Nova, X-Body | Camber:<br>Caster:<br>Cross-Caster:<br>Toe: | Neg. .5° ±.5°<br>Pos. 3° to 5°<br>± .5°<br>.1° to .3° toe in |
| 1978-1988 A-Body and G-Body<br>1982-2003 S Series<br>1978-1996 B-Body | Camber:<br>Caster:<br>Cross-Caster:<br>Toe: | Neg. .5° ±.5°<br>Pos. 4° to 7°<br>±.5°<br>.1° to .3° toe in |

### NOTE ON ALIGNMENT SPECS:

Alignment specifications will vary based on the vehicles use and the above are based on street vehicles. Autocross and track prepped cars will typically use up to 2 degrees of negative camber, max out the available caster, and use 1/8" toe-out alignment spec. Drag racing will typically use similar specs to a street car while maxing out the positive caster with varying toe-in settings to increase straight line stability. Consult with your alignment professional for the specifications that will work best for your application.

### Maintenance of QA1 Ultimate Ball Joints

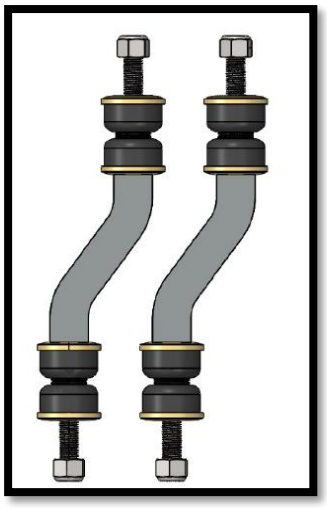
Grease the ball joint using high quality NLGI #2 GC-LB Lithium based grease and check preload on a regular basis. Check and set ball joint preload at least annually or every 3,000 miles, whichever comes first.

**NOTE:** Preload on the ball stud can be set with the ball joint attached to the control arm if the spring is unloaded and the ball joint taper is free from the spindle.

1. Using the QA1 spanner socket from Ball Joint Tool Kit (p/n 1891-106) loosen the lock nut by turning counter-clockwise.
2. Using the QA1 hex key, torque the torque nut to 25-30 in. lbs. and then back off 90°.
3. Using the QA1 hex key, a ½'' open-ended wrench or socket, and the QA1 spanner wrench, tighten the lock nut while holding the torque nut, locking them together to 25 ft. lbs.
4. Re-check the lash on the ball stud and adjust as needed. The ball stud should not have any axial lash.
5. Using a grease gun, lubricate and rotate the ball stud by hand until the grease is visible on the bottom of the ball. If the ball joint is on the car, move the suspension up and down to get the same effect. Note: Excessive grease may result in hydraulic lock. If this occurs, move the ball stud until pressure is relieved and the ball stud freely rotates.

## S-SERIES TRUCK OWNERS-

Offset end-link brackets are included for use with factory and aftermarket sway bars. **These offset end-links are only intended for 1982-2004 S-Series trucks.** These offset end links should not be installed on other applications.



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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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