

Technical Support Line: (952) 985-5675



21730 Hanover Ave. Lakeville, MN 55044
www.QA1.net

ASSEMBLY INSTRUCTIONS
GM COIL OVER CONVERSION KITS (GS, GD, GR, GN)
MUSTANG II KITS (MS, MD, MR, MN)

READ ALL INSTRUCTIONS THOROUGHLY BEFORE STARTING THIS PROJECT. PRODUCTS THAT HAVE BEEN INSTALLED ARE NOT ELIGIBLE FOR RETURN. SEE YOUR VEHICLE OWNER'S MANUAL FOR PROPER JACKING LOCATIONS AND SHOCK/SPRING REMOVAL TECHNIQUES. 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.

WARRANTY / DISCLAIMER

QA1 warrants that the products will be free from defects in material and workmanship for one year from date of sale to the original purchaser. QA1 makes no other warranty of any kind, express or implied. QA1 shall have no obligation under the foregoing warranty where the defect is the result of improper or abnormal use, your negligence, vehicle accident, improper or incorrect installation or maintenance, nor when the product has been repaired or altered in any way. QA1's liability in the case of defective products subject to the foregoing warranty shall be limited to the repair or replacement, at QA1's option, of the defective products.

Consequential or incidental damages are not recoverable under this warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

In order to be eligible for service under this warranty, you must return the defective part to QA1 together with a R.G.A. number issued from QA1. Tag each item with the part number and the specific explanation of defect. We will inspect the part and determine: a) if it is eligible for repair or replacement; and, b) if so, whether to repair or replace it. All returns must be shipped prepaid to:

QA1 Precision Products, Inc.
RGA # _____
21730 Hanover Avenue
Lakeville, MN 55044

THE BUYER UNDERSTANDS AND EXPRESSLY RECOGNIZES that racing parts, specialized street rod equipment, rod end bearings, and ALL parts and services sold by QA1 are exposed to many and varied conditions due to the manner in which they are installed and used. BUYER ACKNOWLEDGES that QA1 does not have full knowledge of the intended use of the goods, and BUYER WILL DEFEND AND INDEMNIFY QA1 upon demand against all claims, actions, liability, loss and expense (including investigating expense and attorney fees incurred in litigation or because of threatened litigation) for any loss, damage or injury, either to a person or to property, resulting from the direct or indirect use of any QA1 products or inability by the buyer to determine proper use or application of QA1 products. With the exception of the limited liability warranty set forth above, QA1 SHALL NOT BE LIABLE FOR ANY CLAIMS, DEMANDS, INJURIES, DAMAGES, ACTIONS, OR CAUSES OF ACTION WHATSOEVER TO BUYER ARISING OUT OF OR CONNECTED WITH THE USE OF ANY QA1 PRODUCTS.

MOTORSPORTS ARE DANGEROUS; AS SUCH, NO WARRANTY OR REPRESENTATION IS MADE AS TO THE PRODUCT'S ABILITY TO PROTECT THE USER FROM INJURY OR DEATH. THE USER ASSUMES THAT RISK.

DO NOT VOID YOUR WARRANTY!

Failure to lubricate the coil-over threads with anti-seize or equivalent prior to making any ride height adjustments will cause damage to your shock absorber and voids the warranty. All ride height adjustments must be made with the vehicle weight completely unloaded from the suspension. If there have been any alterations from the factory equipment, weight or ride height, call the QA1 Tech Hotline before assembling and/or installing any part of this kit. Failure to do so will void all warranties.

READ INSTALLATION INSTRUCTIONS COMPLETELY BEFORE STARTING

- Before starting the installation of your QA1 coil-over conversion kit, read the instructions carefully and thoroughly. A good chassis manual, available at your local parts store, may also aid in your installation. Check to make sure you have all of the parts and hand tools needed to complete the installation.
- Start your QA1 coil-over conversion by inspecting your chassis. Look for worn out bushings, ball joints, etc. If anything looks suspicious, replace it before continuing.
- Get started by taking a ride height (RH) measurement on both sides of the car. This ride height measurement should be taken from the top of the wheel well opening down to the ground. It is recommended to mark the wheel well opening as a reference point for later measurements.
- Jack the vehicle up so that the vehicle sets securely on the stand. **SEE YOUR VEHICLE OWNER'S MANUAL FOR PROPER JACKING LOCATIONS AND SHOCK/SPRING REMOVAL TECHNIQUES. DEATH OR SERIOUS INJURY CAN RESULT IF INSTRUCTIONS ARE NOT CORRECTLY FOLLOWED.**
- Remove the wheel and then the stock shock absorber. If applicable, remove the sway bar mount.
- Using the jack to support the A-arm assembly, loosen and remove one of the ball joint nuts. Use a Ball Joint / Tie Rod separator to release the ball joint stud from the spindle. Slowly, **CAREFULLY**, let the A-arm assembly down until the spring is free and can be removed.
- Remove the nut clips in the A-arm that retain the stock shock.
- Clean out the holes that the mounting bolts will go through. In some cases they may have to be opened slightly by drilling with a 3/8" drill bit or using a rat-tail file.
- Screw the aluminum spring seat jam nut (shoulder up) and spring seat (shoulder up) down to the last thread – NO FURTHER. Lubricate the threads of the shock body with an anti-seize lubricant.
- **For Mustang II Kits only:** For bearing mounted shocks, test fit the bearings in both ends of the shock. Assemble by inserting the bearing in a twisting motion. Install snap rings on both sides of the bearing. In some cases it may be necessary to press the bearings into the mount. Be sure to only press on the race of the bearing – do NOT press on the ball. Repeat for the other assembly.
- **For GM Coil-Over Kits only:** Place the shock T-bar down on top of the A-arm and insert the 3/8" bolts. Install the 3/8" nylock nuts, but do not tighten them. Center the shock assembly in the A-arm hole and tighten the nylock nuts to hold the assembly in place. If applicable, the valving adjuster should be facing out toward the spindle.
- Install half of the shock stud bushing pack (one stud washer and one bushing).
- QA1 highly recommends using the QA1 thrust bearing kit (part #7888-110) for ease of adjustment. **If the thrust bearing kit is used**, coat both washers with anti-seize lubricant. Install the stainless steel spring seat washer, then the bearing, then the second washer. **If the thrust bearing kit is not used**, coat one side of the stainless steel spring seat washer with anti-seize lubricant.

- Slide the small diameter end of the spring over the shock body and down onto the spring seat.
- With the shock fully extended, rotate the assembly vertically as you jack the A-arm and shock assembly into position.
- **For GM Coil-Over Kits only:** Rotate the spring until it lines up in the recesses from the factory to ensure that it is properly located.
- Continue jacking the A-arm up until the shock stud extends through the factory mount. Install the upper stud bushing, washer and nut.
- Reassemble the spindle and lower A-arm. Torque the spindle nut to the factory specifications. Insert cotter pin.
- Adjust the spring seat up approximately 1/3 of the way above the bottom-most thread.
- Repeat both the removal and installation procedures for the other side.
- Re-attach the wheels and torque to factory specifications.
- Now that both sides are fully installed, the final ride height (RH) has to be set. Bounce or settle the front end before checking the ride height.
- Measure the ride height (RH) as you did before disassembly. To achieve the ride height you desire, adjust the spring seats with the appropriate QA1 spanner wrench (part #T114W, or T120W for Economy Kits). **When making any ride height adjustments, ALWAYS make them with the car jacked up and set on jack stands with the A-arms fully extended.** To raise your ride height, turn your adjuster nut so that you compress the spring. To lower your ride height, turn your adjuster nut so that you are loosening the pre-load on the spring. **Be sure to tighten the jam nut against the spring seat after the final ride height is achieved.**
- After the installation is complete, the front end must be realigned at a reputable alignment shop.

• VALVING ADJUSTMENT •

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

Shocks with one adjuster knob:

“R” Series Drag Race Shocks: 0-6 clicks
 Other Single Adjustable Shocks: 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 Double Adjustable Shocks: 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 SHOCK AND CAUSE IT NOT TO ADJUST. THIS WILL VOID ALL WARRANTIES. DO NOT USE THE SHOCK ABSORBER AS A SUSPENSION/TRAVEL LIMITER. SEVERE DAMAGE TO THE SHOCK WILL OCCUR AND DOING SO WILL VOID ALL WARRANTIES.

HOT NEW PRODUCTS FROM QA1

New for All QA1 Adjustable Shocks in 2010/2011:

Improved Adjustment Range

QA1's general adjustment range has been altered to allow for a softer ride at the low end of adjustment for the casual driver, while maintaining the stiffness needed at the high end of adjustment for hard core performance handling applications. All part numbers have been changed to reflect the inclusion of the new valving.

Remote Ready Adjustable Shocks

All adjustable QA1 shocks utilizing the all new part numbers are compatible right out of the box with QA1's new Wireless Remote Adjust System.

Improved Adjustment Mechanism

A positive stop at the end of the adjustment range guards against over-adjustment. All shocks now 18 clicks of adjustment per knob, with 324 valving combinations for double adjustables.

Wireless Remote Adjust System - Available Fall 2010

This cutting edge technology gives you the ability to tune your ride remotely from inside the car, *and* at an affordable price. QA1's system allows users to select from 18 levels of adjustment per channel. This means 324 possible valving combinations for a two-channel system, and over 20,000 possible valving combinations for a four-channel system.

The simple, intuitive controller is completely wireless – absolutely no wiring is needed into the cockpit. There are 7 one-touch preset adjustment setups, all of which may be modified by the user for custom ride options. This system provides quick and precise valving changes from street to strip to road racing. Installation is easy – simply install the compact air management system under the hood or in the trunk, run adjustment lines and connect them to your QA1 adjustable shocks or struts, and start adjusting your ride.

The new QA1 Wireless Remote Adjust System will be available in the fall of 2010.

Stocker Star® NA Stock Mount Aluminum Non-Adjustable Shocks

These shocks are a significant upgrade from stock at an economical price. These shocks provide the appearance and contain the high quality components of the more expensive QA1 adjustable shocks, but are engineered to provide a nice ride and solid handling without the adjustment mechanism. If you're looking for improved performance and appearance over stock without a big price jump, these are the shocks for you. These shocks feature easy bolt-in installation and are 100% dyno tested, serialized and made in the U.S.A.

New & Improved '79 to Present Mustang Struts

The top-notch QA1 Mustang Struts have now gotten even better with a redesign that incorporates not only a double adjustable version, but also an improved adjustment range, remote-ready configuration, and improved adjustment mechanism. Available in double adjustable, single adjustable, or "R" series drag race valvings. The new struts feature easy bolt-in installation, and the aluminum threaded bodies allow for coil-over conversion and ride-height adjustment. 100% dyno tested, serialized and made in the U.S.A.

'82-'92 Camaro / Firebird Struts

QA1 now offers double adjustable, single adjustable, or "R" series drag race valvings for '82-'92 Camaros and Firebirds. These struts feature a wide adjustment range, remote-ready configuration, and upgraded adjustment mechanism. The new struts feature easy bolt-in installation, and the aluminum threaded bodies allow for coil-over conversion and ride-height adjustment. 100% dyno tested, serialized and made in the U.S.A.

Corvette C5 / C6 Coil-Over Conversion Kits

Complete front and rear kits including 2 shocks, 2 springs and all mounting hardware. Available in double adjustable, single adjustable, or "R" series drag race valvings. These shocks feature easy bolt-in installation, and the aluminum threaded bodies allow for coil-over conversion and ride-height adjustment. 100% dyno tested, serialized and made in the U.S.A.