



## **INSTALLATION INSTRUCTIONS**

*QA1 P/N HD606SK, HR606SK, HS606SK, CPK106*

1982-1992 Camaro / Firebird [Coil-Over Struts](#) & Caster Camber Plates

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.

### **• DISCLAIMER / WARRANTY •**

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 FORE GOING WARRANTY SHALL BE LIMITED TO THE REPAIR OR REPLACEMENT, AT QA1'S OPTION, OF THE DEFECTIVE PRODUCTS.

THE USER UNDERSTANDS AND RECOGNIZES THAT RACING PARTS, SPECIALIZED STREET ROD EQUIPMENT, 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. QA1 SHALL BEAR NO LIABILITY FOR ANY LOSS, DAMAGE OR INJURY, EITHER TO A PERSON OR TO PROPERTY, RESULTING FROM THE INSTALLATION, 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!

## **TOOLS AND SUPPLIES REQUIRED**

- Floor jack
- SAE and Metric Sockets
- Coil spring compressor
- Permatex® Anti-Seize Lubricant
- Jack stands
- SAE and Metric Wrenches
- Grinder
- Spanner Wrench (QA1 P/N T114W or T115W)

### **Pre-installation Note**

QA1 caster/camber kit, part number CPK106, must be used with the QA1 coil-over struts for the 1982-1992 Camaro and Firebird. These struts **will not** work with the factory caster/camber plates.

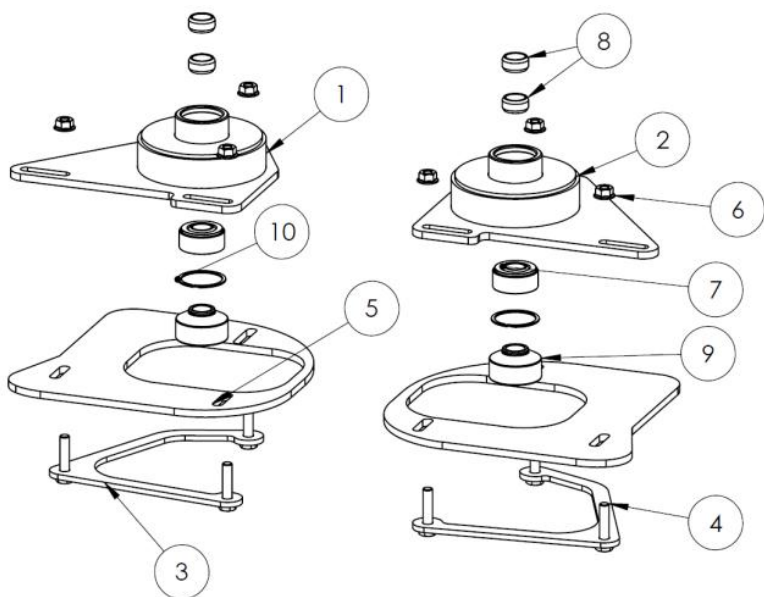
### **Disassembly**

1. Start the strut installation by inspecting your chassis. Look for worn/deteriorated bushings, ball joints, etc. Replace any worn components before continuing.
2. Jack the car up and ensure that the frame is set securely on jack stands. See the owner's manual for proper jacking techniques.
3. Remove the front wheels.
4. Compress the factory coil spring using a coil spring compressor. Jack the lower control arm up just enough to take the load off of the strut and the spindle, without raising the car off the jack stands.
5. Loosen the nut on the upper end of the piston rod above the factory caster/camber plate. There is a hex to enable the use of a wrench to keep the piston rod from turning. Do not completely remove the factory attachment nut at this time.

- Unbolt and disconnect the brake line bracket from the strut. Move the brake line to the side to ensure it does not get stretched or damaged while working on the car.
- Loosen and remove the two nuts and bolts that attach the strut to the spindle knuckle. Remove the factory nut at the top of the strut and remove the strut assembly.
- Remove the stock spring from the car. **SLOWLY** lower the jack until the spring is able to come out of the spring seat. **Warning- It is critical to use caution during this step as the spring has a lot of stored energy.**
- The factory caster/camber plate assembly can now be removed from the car.

### Caster/Camber Plate Installation

- Begin assembling the caster camber plates by sliding the stud retainer bracket through the holes in the strut reinforcement plate.
- Install this assembly from the bottom side of the strut tower so the studs slide up through the holes in the strut tower. **Note:** The elongated holes of the strut reinforcement plate should match the orientation of the elongated holes in the strut tower.
- Place the upper bearing plate on the strut tower so the studs on the stud retainer plate pass through the holes of the bearing plate. The elongated holes in the bearing plate will sit 90 degrees off center to the elongated holes in the strut tower. The bearing housing faces upwards much like the factory setup.
- Install and tighten the nuts and washers on the three studs of the caster camber plate assembly. Torque to 20 lb. ft.



Item	Part No.	Description	Qty.
1	9039-250	TOP PLATE BEARING WELDMENT, RIGHT	1
2	9039-251	TOP PLATE BEARING WELDMENT, LEFT	1
3	9039-200	STUD RETAINER, RIGHT LOWER	1
4	9039-201	STUD RETAINER, LEFT LOWER	1
5	9039-199	PLATE, MOUNT REINFORCEMENT	2
6	9014-325	NUT, HEX FLANGE M8 X 1.25	6
7	MSLB16-101	BEARING	2
8	9033-217	SLEEVE, .65" ID X .875" OD X .433"	4
9	9033-370	SPACER (NOT USED W/ COIL-OVER)	2
10	9007-146	RETAINING RING	2

### Strut Installation

**Note:** QA1 struts are right and left hand specific. The part number on the closure nut (top of body, near the piston rod) will indicate L or R. When assembled correctly the knobs should point towards the front of the vehicle.

- Assemble the coil-over hardware on the struts per the instructions included with the hardware kits. **Note:** If the struts are not being used as coil-overs, spacer p/n 9033-370 needs to be installed on the piston rod. This spacer is not used with coil-overs.
- Some spindles require grinding the ridge just below where the strut mounts to the spindle for the QA1 strut. Mark the area on the spindle at the bottom of the strut where it makes contact with the spindle. Carefully use a grinder to remove enough material on the spindle to allow the strut to line up with the holes in spindle. **Note: Do not grind material away from the strut assembly itself.**

3. Slide the upper threaded end of the strut shaft up into the caster/camber plate with the spacers from the caster camber plate and loosely install the supplied nut.
4. Install the two spindle mounting bolts and nuts. Torque to 195 lb. ft.

**Note:** Spacers for the piston rod will be provided with the QA1 caster/camber plate kit. The orientation of these spacers can be chosen based on the vehicle's driving application.

- a. If the vehicle is being used for drag racing place both spacers on the bottom of the caster camber plate. This will provide more extension travel while the vehicle is launching. **If this orientation is used a longer bump stop may be needed to prevent the strut from bottoming out during compression.**
- b. If the vehicle is going to have a stock or lowered ride height both spacers should be placed on top of the caster/camber plate. This will provide for more compression travel for the strut.

5. Attach the brake line bracket to the QA1 strut.
6. Re-install the wheel. Torque all nuts and bolts to factory specifications.
6. Torque the upper strut attachment nut to 50 lb. ft.
7. Repeat the entire removal and installation procedures for the other side.

**Note:** It is a good idea to have the car professionally aligned after making any suspension changes.

#### Front Strut 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. Recommended base settings to begin testing with are as follows:

***Struts 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

***Struts with two adjuster knobs:***

Drag Racing:	12-16 clicks compression, 0-6 clicks rebound
Other Applications:	2-8 clicks compression, 2-6 rebound for nice ride and handling 8-12 clicks compression, 4-8 rebound firm ride & improved handling 13+ clicks compression, 8-12 clicks rebound more aggressive handling