



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 1982 - 1992 Camaro / Firebird Struts p/n HS06, HD06
1982 - 1992 Camaro / Firebird Caster-Camber Plates p/n CC116

TOOLS AND SUPPLIES REQUIRED

- Floor jack
- Torque Wrench
- SAE and Metric Sockets
- T-15 Torx Bit
- Jack stands
- SAE and Metric Wrenches
- 24mm Crows Foot Wrench
- 24mm Crows Foot Wrench

Pre-Installation Note:

QA1 struts require the use of QA1 Caster-Camber plates and will not work with factory plates.

Disassembly

1. Start your 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 supported on jack stands. See your owner's manual for proper jacking techniques.
3. Remove the front wheels.
4. Remove the sway bar end links (if equipped).
5. Position a floor jack under the ball joint area of the lower control arm. Jack the control arm up just enough to take the load off of the strut and the spindle without raising the car off the jack stands. This will retain the factory spring.
6. 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.
7. Loosen the factory nut on the upper end of the piston rod where it comes through the factory strut mount. **(Figure 1)** There is a hex to enable use of a wrench to keep the piston rod from turning while loosening.
8. Remove the upper strut nut and slowly lower the jack supporting the control arm. This will take pressure off of the factory spring and lower the strut down into the wheel well.
9. Ensure all spring pressure has been released before loosening and removing the two nuts and bolts that attach the strut to the spindle.
10. Remove the factory strut and spring from the vehicle. The factory spring will not need to be removed if using the strut as a non-coil-over strut.
11. Remove the factory upper strut mount from the chassis. **(Figure 1)** Removing a strut tower brace (if equipped) is also recommended before beginning the installation.

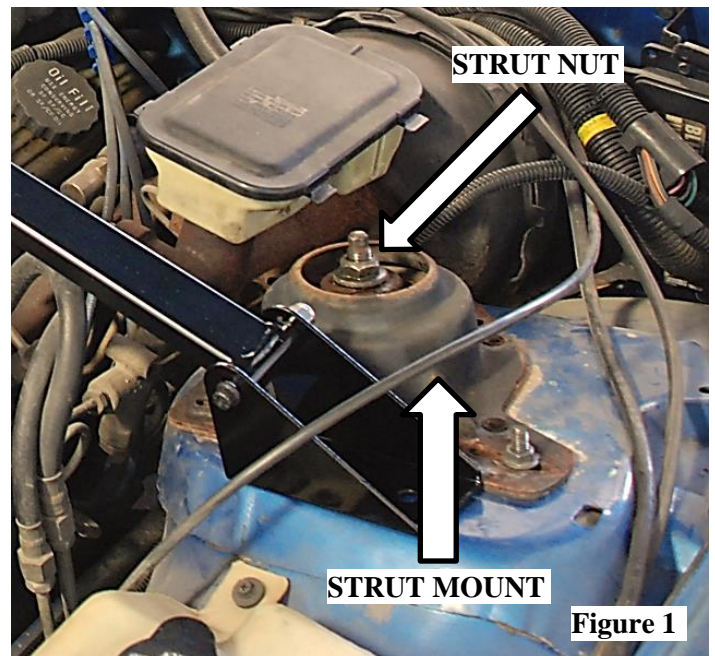
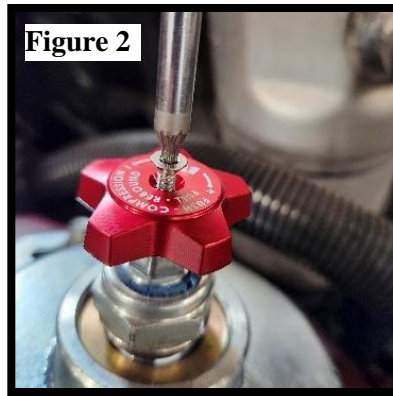


Figure 1

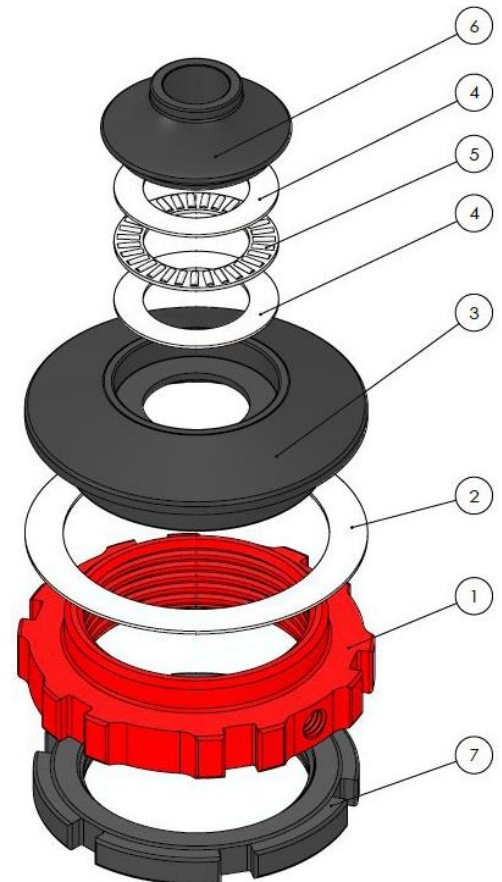
Non Coil-Over Strut Assembly-

1. Remove the strut adjustment knob using a Torx T-15 tool. **(Figure 2)**
2. Install the included SG108 spacer onto the strut **(Figure 3)** before installing into the Caster-Camber plates. Caster-Camber plate installation detailed on page 3. **This spacer is NOT used when using the strut as a coil-over.**



Coil-Over Strut Assembly-

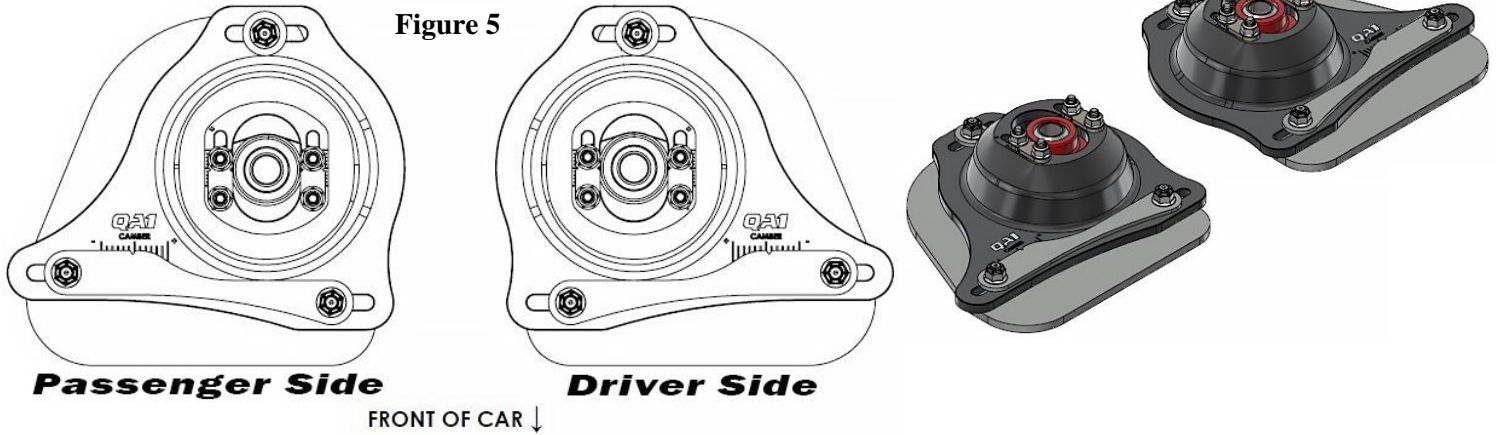
1. Remove the strut adjustment knob using a Torx T-15 tool. **(Figure 2)**
2. Remove the wiper boot from the top of the black threaded area of the strut. **(Figure 4)**
3. Thread the coil-over lock nut **(#7)** down the body of the strut with the shouldered end UP.
4. Thread the Spring Seat Nut **(#1)** down the body of the strut with the shouldered end up. This spring seat may have a threaded hole, but the hole is NOT used with this installation.
5. Coat one side of the stainless steel spring seat washer **(#2)** (included with each strut) with **Permatex® Anti-Seize Lubricant**.
6. Reinstall the wiper boot ensuring the boot is seated in the groove of the threaded portion of the strut. **(Figure 4)**
7. Install the spring onto the strut, followed by the upper spring seat **(#3)**.
8. Install the 1" I.D. thrust bearing kit onto the top of the upper spring seat to create a "bearing sandwich". **(#4, #5, #4)**
9. Install the bearing retainer **(#6)** onto the strut.



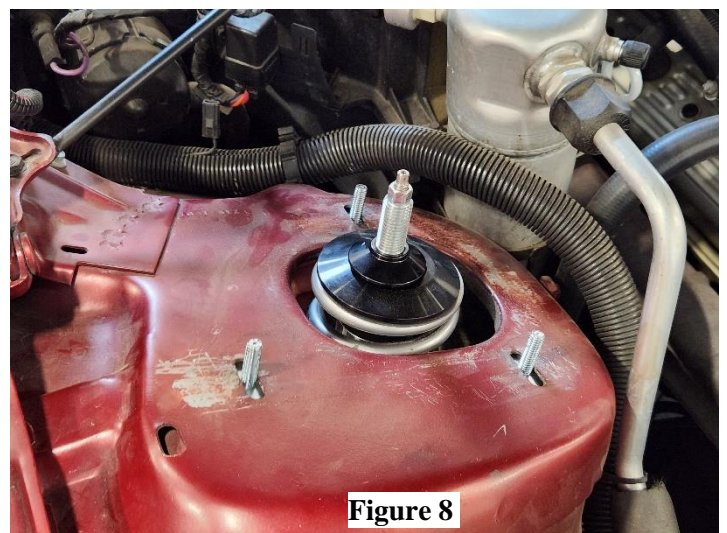
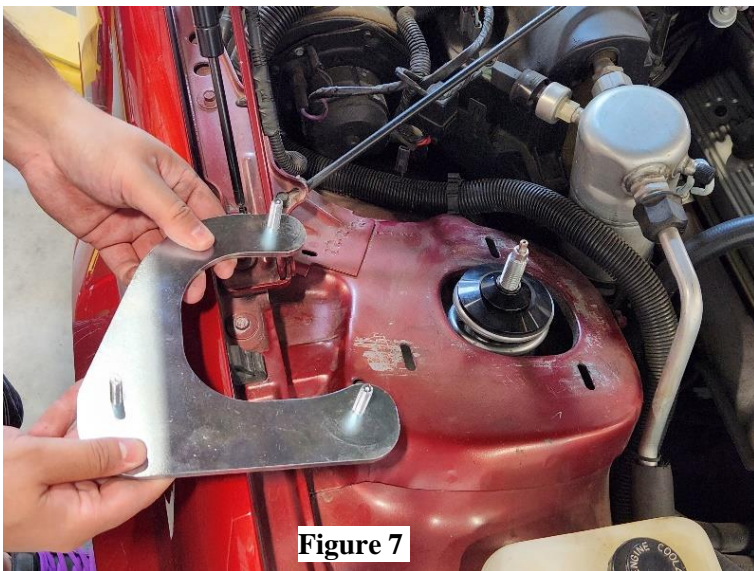
BALLOON #	ITEM #	DESCRIPTION	QTY.
1	9019-180	NUT, SPRING SEAT 2.5", 2.205" X 8 TPI	1
2	9005-109	WASHER, SPRING SEAT 2.5" ID	1
3	9018-144	SPRING SEAT, STRUT, C/O 2.5" SPRING	1
4	9006-101	THRUST WASHER, 1.00" ID	2
5	9010-101	BEARING, THRUST 1" ID	1
6	9018-145	BEARING RETAINER, STRUT COIL-OVER	1
7	9014-317	NUT, COIL-OVER LOCK, 2.205" X 8TPI	1

Installation

1. Identify the left/right (driver/passenger) side camber-caster plates. **(Figure 5)**



2. Slide the upper threaded end of the strut shaft up through the factory hole and re-install the factory spindle mounting hardware to secure the strut to the spindle. Torque to 150 lb. ft. **(Figure 6)**
3. Install the three-post plate from the underside of the strut tower. **(Figure 7 & 8)**



4. Install the black upper plate onto the three posts of the lower plate with the strut coming up through the bearing. Install the V-groove of the thin plate over the QA1 camber measurement and one thick 5/16" washer on the rear post. **(Figure 9 & 10)**
5. With the V-groove set at 0 and the caster-camber plate centered in the factory holes, evenly tighten the three 5/16" nuts to 18 lb. ft.
6. With the V-groove of the small caster plates set to the center mark, tighten the 1/4" nuts to 10 lb. ft.

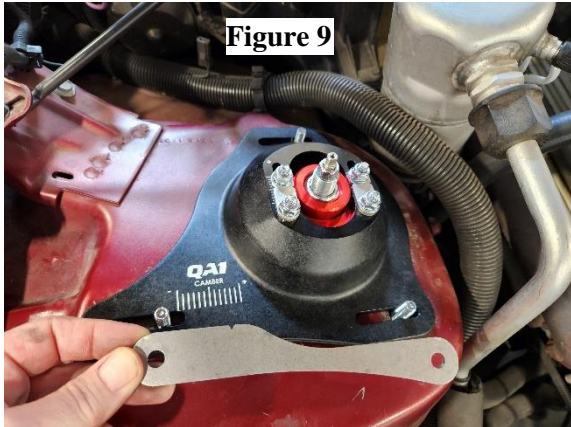


Figure 9

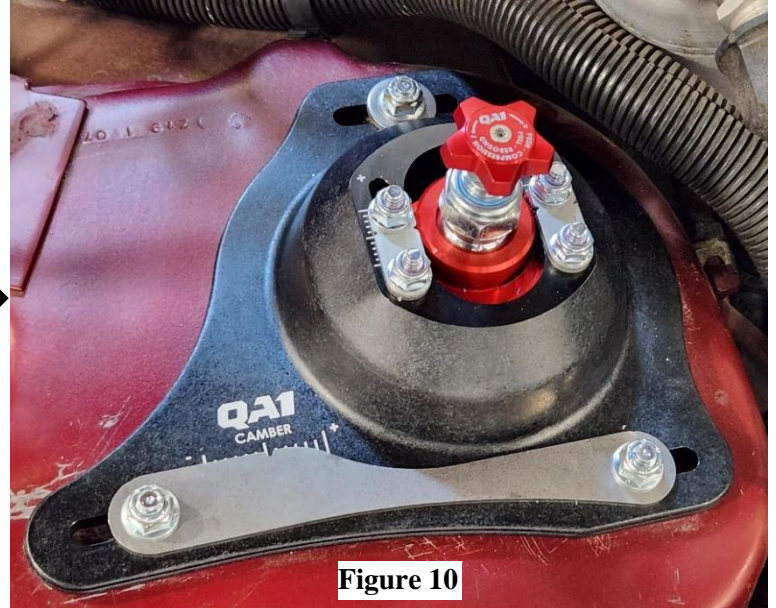
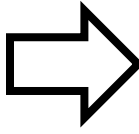


Figure 10

7. Install one beveled spacer with the narrow end down onto the strut top before securing with the strut nut **(Figure 11 & 12)** Torque the upper strut nut to 45 lb. ft. using a 24mm crows foot wrench while holding the hex on the strut rod.
8. Reinstall the adjustment knob onto the strut rod. Torque to 10 inch lbs.

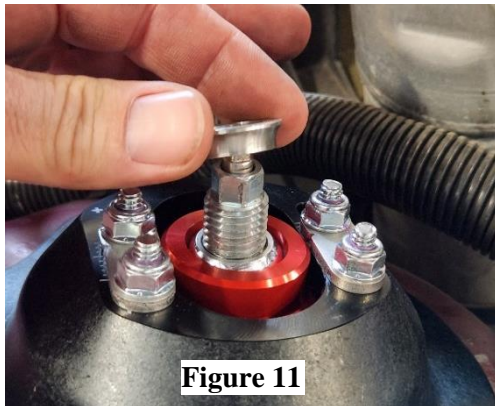


Figure 11

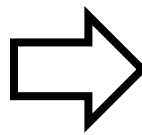


Figure 12

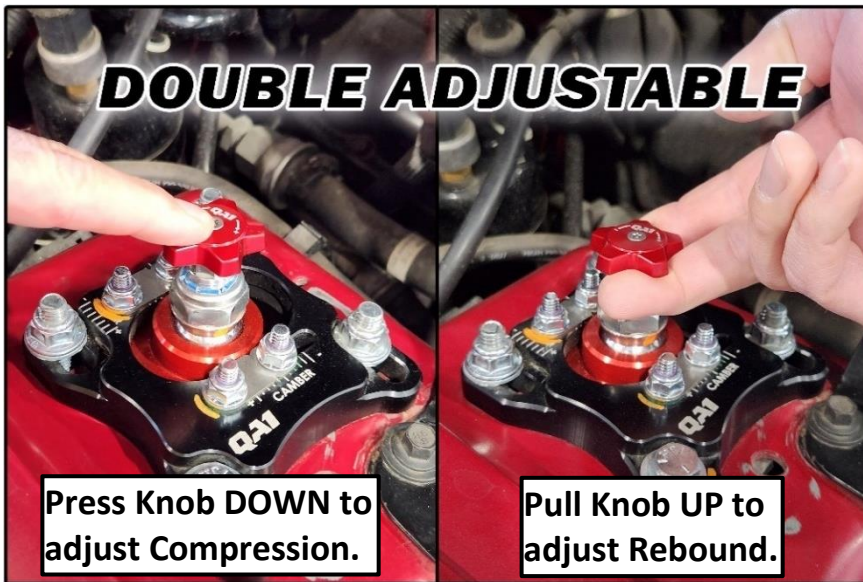
4. Re-install the brake line bracket to the QA1 strut.
5. Reinstall the wheel. Torque all nuts and bolts to factory specifications.
6. Reinstall the sway bar end links. (if equipped)
7. Repeat the entire removal and installation procedures for the other side.

Front Strut Valving Adjustments

QA1 struts have 18 damping settings adjusted at the knob on top of the strut. The knob set fully counter-clockwise is the softest setting -start your adjustments from this point. **Do not force the knob past the 18th click or it could cause damage to the valving.** Single adjustable struts soften or firm the rebound valving while having a fixed compression. Double adjustable struts have independent compression and rebound adjustments. The function of the adjustment knob on Single Adjustable and Double Adjustable struts is as follows:



SINGLE ADJUSTABLE- Turn the adjustment knob counter-clockwise until the knob stops- This is the softest setting. Turn the knob clock-wise to firm the rebound.



DOUBLE ADJUSTABLE- Pressing the adjustment knob DOWN will adjust the Compression valving of the strut. Pulling the adjustment knob UP will adjust the Rebound valving. Out of box, the strut should be at zero compression and rebound setting, or both adjustments turned counter-clockwise to stop. From the zero setting with the knob in the Compression position (pushed down), adjust clockwise to the desired setting. The Rebound setting will remain in the zero position. To adjust Rebound, pull the knob up to the Rebound adjust position and adjust clockwise to the desired setting. Either setting can now be adjusted up or down from the initial setting. When in doubt, turn the Compression to zero and then Rebound to zero and readjust.

Recommended base settings to begin testing with are as follows:

Single (Rebound) Adjust Struts:

Applications:

- 2-8 clicks for nice ride and handling
- 8-12 clicks for firm ride and improved handling
- 13+ clicks for more aggressive handling

Double Adjust Struts:

Drag Racing:

12-16 clicks Compression, 0-6 clicks Rebound

Other Applications:

2-6 clicks Compression, 2-8 Rebound for nice ride and handling

8-12 clicks Compression, 8-12 Rebound firm ride & improved handling

12-16 clicks Compression, 13+ clicks Rebound more aggressive handling

A PROFESSIONAL WHEEL ALIGNMENT IS RECOMMENDED BEFORE DRIVING THE VEHICLE.

Recommended Alignment Specs:

Camber -0.5° ±0.5°

Caster: 4.7° ±0.5°

Toe: 0.1° ±0.1°



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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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