INSTALLATION INSTRUCTIONS

PROFESSIONAL WHEEL-E-BAR™

P/N C2016, C2036, C2038, C2039 and C2040

The Competition Engineering Professional Coil-Over Wheel-E-Bar™ is designed to function as part of the rear suspension. They are not designed solely to keep the front wheels on the ground, but rather to control the weight that is transferred rearward without unloading the rear tires. When installed properly, the Wheel-E-Bar™ becomes a working part of your car's suspension and will properly control how far and how fast the front end will rise without shocking and unloading the rear suspension.

When adjusting the Wheel-E-Bar™ and "tuning" it to your particular application, keep a record of what is changed and what resulted from the change. Only change one function at a time until you become more familiar with what happens when the changes are made.

LENGTH

Standard length is 44". The configuration of the Wheel-E-Bar™ is such that the length is essentially non-adjustable. The length was arrived at after many hours of test and evaluation.

HEIGHT

We recommend you set the bottom of the wheels at 3-1/2" from the ground to start. But, only trial and error will tell you where they need to be.

PARTS LIST & DIAGRAM KEY

- 2- Aluminum Lower Struts **(A)**
- 2- Upper Strut Bars **(C)**
- 2- Springs **(E)**
- 2- Threaded Aluminum Struts **(G)**
- 2- Quick Release Pins **(J)**
- 2- Rubber Wheels **(L)**
- 1- Axle Spread Bar **(N)**
- 6- 5/16" x 1" Bolts
- 2- 3/8" x 1-3/4" Bolts
- 10- 3/8" Locknuts
- 2- 1/2" x 4" Bolts
- 2- Axle Housing Brackets **(B)**
- 2- Bolted Spring Collars **(D)**
- 2- Threaded Spring Collars **(F)**
- 2- Welded T-Pins **(H)**
- 2- Wheel Housings **(K)**
- 4- Wheel Spacers **(M)**
- 2- 5/16" x 1-3/4" Bolts
- 8- 5/16" Locknuts
- 8- 3/8" x 1" Bolts
- 2- 1/2" Jam Nuts
- 2- Wheel Axles

For Technical Assistance, call Competition Engineering's Tech Line at

(203) 458-0542, 8:30am-5:00pm Eastern Time

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Using the supplied diagram as a guide, assemble the Wheel-E-Bar™ as follows:

UPPER STRUT ASSEMBLY

1. Coat the unthreaded area of the two threaded aluminum struts **(G)** with lithium grease. Also spray the threaded portion with anti-seize lubricant.
2. Slide the bolted spring collars **(D)** over the upper strut bars **(C)** with the shoulder of the collar facing the spring.
3. Slide the threaded aluminum struts **(G)** into the end of the upper strut bars **(C)** and insert a 5/16” x 1-3/4” bolt through the hole in the assembly. Install the locknuts and make certain the threaded strut slides freely.
4. Install the springs **(E)** over the end of the threaded aluminum struts **(G).** Thread the threaded spring collars **(F)** onto the threaded aluminum struts **(G)** with the shoulder towards the spring.
5. Tighten the threaded spring collars **(F)** until the spring compresses 1/8”.
6. Thread the 1/2” jam nuts on to the welded T-pins **(H)**. Thread this assembly into the ends of the threaded aluminum struts **(G).**

LOWER STRUT AND WHEEL ASSEMBLY

1. Assemble the rubber wheels **(L)** to the wheel housings **(K)** using the supplied 1/2” x 4” bolts and a wheel spacer **(M)** on each side of the rubber wheel **(L)**. Make sure to slide the supplied 1-3/4” wheel axle tube into the center of the wheel. This will prevent binding of the wheel bearings.
2. Fasten the aluminum lower struts **(A)** to the wheel housings **(K)** using the supplied 3/8” x1” bolts and locknuts. The strut should be cradled by the wheel housing.
3. Attach the axle housing brackets **(B)** to the opposite end of the aluminum lower struts **(A)** using the supplied 5/16” x 1” bolts and locknuts.
4. Join both lower strut assemblies together using the axle spread bar **(N)**. It is recommended that a thread-locking compound be used on the 1/2” x 4” bolts that thread into the axle spread bar **(N).** Tighten to 70 ft-lbs. Make certain that the wheels turn freely.
5. Attach the upper strut assemblies to the top of each axle housing bracket using the 3/8” x 1-3/4” bolts and locknuts. Adjust the length of upper strut assembly so that the welded T-pins **(H)** line up with the holes in the wheel housings **(K).** Insert the quick release pins **(J)** through the wheel housing **(K)** and the welded T-pins **(H).**

INSTALLATION

1. Jack up the vehicle and support it with jack stands. Make sure that the weight of the vehicle is on the rear axle housing and that it is level from front to rear and side to side.
2. Take a measurement from the ground to the bottom of rear tires. Write this number down for later reference.
3. Locate the assembled Wheel-E-Bar™ under the car with the axle housing brackets **(B)** up against the housing tubes. Make sure that the assembly is centered under the car between the rear tires.
4. Hold the rear of the Wheel-E-Bar™ assembly in place with a rigid support so that the bottom of the rubber wheels **(L)** are approximately 3-1/2” higher than the measurement taken in step 2. (Ground to bottom of rear tire + 3-1/2”)
5. Tack weld the brackets into position.

IMPORTANT

In some chassis configurations, the gas tank, frame, or other components may interfere with the installation of the Wheel-E-Bar™. Whenever possible, the interfering member should be notched, or relocated to permit installation. If necessary, the upper strut can be relocated by drilling new mounting holes up to 1-1/2” lower in both the axle housing brackets **(B)** and the wheel housings **(K)**. **UNDER NO**

CIRCUMSTANCES SHOULD THE UPPER STRUT BAR BE CLOSER THAN 1”FROM ANY CHASSIS OR SUSPENSION COMPONENT.

6. When proper clearance of the upper strut bars has been assured, finish welding the axle housing brackets **(B)** to the rear axle housing.

TUNING

Height adjustments will control the amount of weight transfer a vehicle will have. Changes in height can be made by removing the quick release pins and threading the T-pins in or out. Pre-load adjustments determine the rate at which the Wheel-E-Bar™ springs will compress. Proper pre-load settings will prevent unnecessary tire unloading. Adjustments can be made by rotating the threaded spring collars up or down. More pre-load on the springs will make the Wheel-E-Bar™ react quicker. The direct opposite is true for less pre-load.