

## BIRDCAGE TIMING

All the talk about birdcage timing... why is it so important anyways? It is important because it is what sets the spring rate of your rear torsion bars. Imagine having a coil spring on the right front of your car that was marked a 150 but actually measured 225. If your birdcage timing is incorrect, this is the exact same effect it will have on your race car. You should always use a digital angle finder (PT# BRP 9316) as the rotary style angle finders that are available at your local hardware store will not be able to measure the birdcage timing accurately enough. Also remember that if you are checking birdcage timing in the chassis, make sure the chassis is level.

### QUAD LOCK BIRDCAGE TIMING OPTION A

**Birdcage timing option A:** +2° in front of rear end center line with -3° torque arms (birdcage timing +5° in relation to rear end cover)

This option helps corner entry but makes a looser race car. It loads the torque arms down on deceleration. This option is better suited to limited horsepower applications or tracks that need a loose race car.

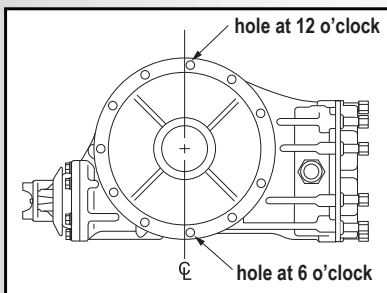


image 1



image 2

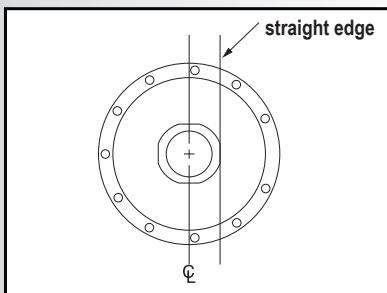


image 3

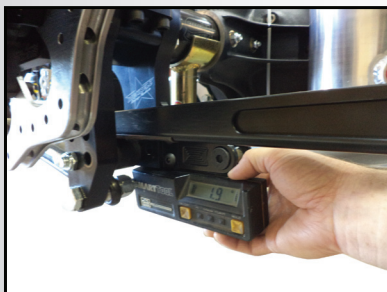


image 4

#### Step 1- Installing the tube in the rear end bell-

The tube is designed to be installed in the bell at 0°. So the flats on the tube need to be parallel with the mounting holes in the bell that are located at 12 o'clock and 6 o'clock (see image 1). The easiest way to achieve this is to put a piece of angle iron on the rear flat of the tube (see image 2). As the tube is installed, you can look down the angle iron and align it to the holes on the bell (see figure 3).

#### Step 2- Installing the birdcage-

The rear end tube sets the birdcage timing. If the timing of the tube is correct, then the timing of the birdcage will be correct. We aim for +2° forward (see page 28) with -3° torque arms. THERE IS +5° BUILT INTO A STANDARD QUAD LOCK BIRDCAGE. If you measure the birdcage timing in relation to the rear cover, it should be +5°. If you set the rear end in the car and use the setup blocks, the timing should be +2° (or 2° forward at the bottom see page 28)

An adjustable birdcage is also available if the tube is installed incorrectly, or if you would like to experiment with birdcage timing.

To locate the birdcage on the tube left to right, measure from the outside of the rear end tube (where the threads are) to the outside birdcage plate. It should measure approx. 6 3/4" for both sides. If you have offset the rear end to gain left side percentage, then these measurements may differ.

As a reference, if you set the rear cover of the rear end on the ground to measure birdcage timing, the birdcages will actually be at +5°.