



SOAP BOX DERBY®



Masters Car Plans

Optional Rear Plate Mounting - Tubular Assembly

General Guidelines

1. Only International Soap Box Derby axle mounting plates, angle iron bracket, alternate tubular brackets, bushings, kingpins, washers and hardware may be used.
 2. Painting is not allowed on any ISBD issued part or surface on the inside of the car. Exception is weights.
 3. One additional mounting plate may be added to the top of the first required mounting plate. No more than two plates (one required and one optional) will be permitted at each axle. Logo must be visible on top plate and bottom plate when top plate is removed.
 4. The bottom plate only may be epoxied to the top side of the floorboard.
 5. No drilling of holes in mounting plate will be allowed.
 6. No painting, polishing or surfacing of the plate is allowed.
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Assembly Plans

1. Install Bushing. Please refer to Step 3.
2. Align plate with the six holes (logo on plate must be visible).
3. Put kingpin bolt (gold) through the kingpin hole (this helps with alignment)
4. From the bottom add the six 3" elevator bolts to the hole locations. See Photo 1.
5. Add ¼" washer (SAE Washer Yellow Grade 8) to the front two bolt locations.
6. Add ¼" lock washer to the front two bolt locations.
7. Add ¼"-20 nut to the front two bolt locations. See Photo 2.
8. Add one 5/16"-18 Jam Nut z (thinner) to the 5/16"-18 x 2" carriage bolt.
9. Slide the small (2") tube onto the bolt. (you may place AASBD washers under the tube assembly, to keep adjusters in line with elevated axles. The tube assembly is limited in height by the length of the bolts).
10. Add a 5/16" lock washer then a 5/16"-18 Nut (thicker). See Photo 3.
11. Add two 5/16"-18 Jam Nut z (thinner) to two 5/16"-18 x 2" carriage bolts.
12. Slide the large (4") tube onto the bolts (you may place AASBD washers under the tube assembly, to keep adjusters in line with elevated axles. The tube assembly is limited in height by the length of the bolts).
13. Add two 5/16" lock washer then two 5/16"-18 Nuts (thicker). See Photo 4
14. Place the small tube on the rear elevator bolts on the top of the rear plate.
15. Place the large tube on the middle elevator bolts on the of the rear plate.
16. Add ¼" lock washer and then a ¼" -20 nut to the rear and center bolt locations (washers and nuts come with original kit. Tighten down. See Photo 5.
17. Add ¼" SAE Washer – Yellow Grade 8 to the ¼"-28 x 3 ½" Bolt Yellow Grade 8. Insert Kingpin and washer through bushing from the bottom.
18. Add a minimum one ¼" SAE Washer – Yellow Grade 8 to the Kingpin. More washers may be added under the axle or on top of the axle. (Note: Make sure you use enough washers so you have enough threads on the Kingpin to add the ¼" Nylon Insert Locknut YZ 8 nut. The top of the kingpin bolt must be even or exceed the top nut.)
19. Install rear axle. See Figure 1 to determine which is the rear axle.
20. After you determine your washer stack add one ¼" Nylon Insert Locknut YZ 8 to the kingpin and tighten. See Photo 6. In this photo example there are four washers under the axle and four on top along with the nut.
21. The rear carriage bolt head should be tightened to touch the rear of the axle. Once the carriage bolt touches the rear axle tighten both nuts (thin and thick) up to the small tubing. See Photo 7.

Photos



Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6

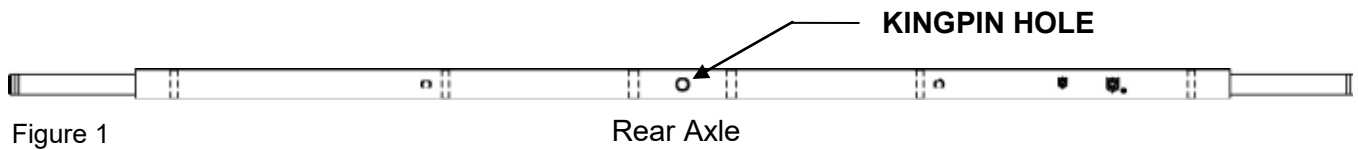


Figure 1

Rear Axle



Photo 7

Triangulation

To triangulate your car using the Tubular Assembly tighten/loosen the middle (thinner) nuts. Once you have it where you want it hold the thin nuts and tighten the thicker (forward) nuts.