



INSTALLATION INSTRUCTIONS

P/N: C7212

MAGNUM LADDER BAR™

A four-piece housing bracket system. By being able to assemble the one piece Ladder Bar Bracket and the one piece Housing Bracket together they create a 360 Degree housing bracket that can be tack welded in half the time of an older style system offered by our competitors. No more safety straps and individual plates. This kit will permit you to adjust preload and pinion angle without bind.

PARTS LIST

- | | |
|----------------------------------|-----------------------|
| 2) Formed 180 Deg. Housing Brkts | 2) Housing Bracket Sm |
| 4) Gussets | |

NOTE: Read all instructions included in your particular kit, completely before beginning the installation. The following suggestions will help to ensure a quality installation.

- Welding should be done using either the MIG or TIG process. A welding machine rated at 130 amps or higher should be used to ensure adequate penetration.
- Do not install this kit with the rear suspension extended. Set the car at ride height and leave it there for the duration of the project.
- Tack weld everything and double-check all your measurements before final welding.
- Remove the axles and axle bearings before welding on the housing to prevent damage.
- Leaf spring equipped vehicles require a housing floater to eliminate bind. We recommend using either Competition Engineering's Part No. C2030 bolt-on floater mount or Part No. C2033 weld-on floater mount.
- Coil spring equipped vehicles require a diagonal link or panhard bar to keep the rear centered in the car. Competition Engineering offers Part No. C2052 Bolt-on Diagonal Link and Part No. C2037 Panhard Bar to suit your needs.

***For Technical Assistance, call Competition Engineering's Tech Line at
(203) 458-0542, 458-0546 8:30am-5:00pm Eastern Time***

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HINT: Mount the bars as far apart as possible keeping them straight (Don't angle them in or out). This will allow more stability on initial launch.

Center the bars under the frame rails and check that the pinion angle remains the same. Keep in mind that there should be a minimum of 1" clearance between the tire sidewall and the ladder bar. Tack weld the Brackets to the axle housing.

- 1 After finding the mounting location per your instructions. Un-bolt the ladder bars from the mounting brackets and remove the rear axle housing from the car.
- 2 Level the housing side to side and make sure that the pinion angle is set at 0°. Check the Large Ladder Bar Bracket to ensure that it is 90° from the axle centerline. If not, break the tacks on the brackets and re-adjust.
3. a. Tack weld the Small Housing Brackets to the back of the housing and the Lg Housing Bracket, in line with the Large Housing Brackets.
b. Finish weld the Brackets to the housing and each other. Weld each Bracket a little at a time to prevent housing warpage.

TUNING TIPS

1. After the first run, check the tightness of all nuts, bolts and jam nuts. Also check all welds for stress cracks. This should be done before each race.
2. Check the condition of the Rod Ends. Replace any that show signs of stress such as bending, cracks and looseness. Use only high quality replacement rod ends.
3. If the car doesn't launch straight and flat, pre-load may have to be added to the right hand bar (Passenger side). Loosen the Jam Nuts on the Adjuster Link and lengthen by turning it one wrench flat. Tighten the Jam Nuts. Continue to add pre-load until the car launches correctly.
4. Pinion angle can be adjusted by rotating both Adjuster Links an equal amount and checking the angle with an angle finder such as Competition Engineering Part No C5020.

TROUBLESHOOTING

CAR DOES NOT DRIVE STRAIGHT:

- Check the wheelbase on both sides of the vehicle. If the dimensions differ more than an 1/8" reset the wheelbase. Make sure the housing is square under the car.
- Check for excessive pre-load. Too much pre-load will cause the vehicle to launch unevenly.
- Rotate the rear tires from side to side. If the problem goes away think about replacing the tires.
- Uneven ballast. Make sure that the ballast in the trunk is located in the correct place (center or Passenger side of the trunk) and not excessive.
- Suspension bind. Check that the bars are not binding through out the suspension's travel. Also look for obstacles that would limit full suspension travel.

CAR DOES NOT LEAVE HARD:

- Poor weight transfer. Raise front of ladder bars to top hole.
- Check front suspension travel. If front travel is too tight it will not allow the vehicle to transfer weight to the rear. Add Competition Engineering 3-Way Adjustable Shock Absorbers and Front Drag Race Springs.
- Change front to rear weight bias by moving heavy items (Battery, Fuel, and Ballast) as far to the rear of the vehicle as possible.