



INSTALLATION INSTRUCTIONS

PART NO: C2024

MAGNUM SERIES WISHBONE LOCATOR KIT

The Competition Engineering Magnum Series Wishbone Locator Kit is designed for high horsepower drag race vehicles using our C2028 Magnum Series 4-Link or any other traction device with 5/8" mounting holes. Replacement Clevis Brackets are available to adapt this kit to suspension systems using 3/4" mounting holes P/N: C3423. This kit will eliminate side to side movement of the rear axle housing as well as allow the chassis to rotate freely, making weight transfer easier. Installation requires some fabrication skills as well as knowledge of the GTAW (TIG) welding process.

PARTS LIST

- | | |
|-------------------------------------|--------------------------------------|
| 2) 1" x 28" Long 4130 Tube | 1) 1-1/4" x 10" Long 4130 Slide Tube |
| 1) 3/8" x 12" Long 4130 Gusset Tube | 1) 1-1/16" Slip Joint, DOM |
| 2) Clevis Mount Bracket | 2) 4130 Tube Adapter |
| 2) Mounting Tab | 1) 3/4"-16 Rod End |
| 2) 1/2" Rod End | 2) 1/2"-20 x 2-1/4" Bolt |
| 1) 3/4"-16 x 2-1/4" Bolt | 2) 1/2"-20 Locknut |
| 2) 1/2"-20 Jam Nut | 1) 3/4"-16 Jam Nut |
| 1) 3/4"-16 Locknut | |

INSTALLATION

Before beginning the installation, check over the parts in the kit and make yourself familiar with where they belong in the assembly. This kit is supplied with tubing that is longer than required for most applications. Take all measurements carefully and re-check dimensions before cutting. You can install this kit a few different ways. First, you can mount it above or below the rear axle housing, if ground clearance is an issue you might prefer to mount it above the housing. Second, you can mount the slip joint either on the axle housing or on the crossmember, if you have a cast iron center section (10-12 bolt, Dana 60) we recommend welding it on the crossmember. With the basic mounting location determined, we will now begin the assembly and installation process.

- 1) Jack up the vehicle and support it under the frame rails with jack stands. Support the rear housing with the floor jack so that it is set at ride height.
- 2) Install the supplied **Clevis Mount Brackets**. These brackets mount with the 1/2" holes facing up and the open end of the brackets facing each other. Use the 5/8" mounting bolts that were supplied with your ladder bar or 4-link kit. (If you require brackets with 3/4" mounting holes, purchase Competition Engineering P/N: C3423)

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

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- 3) Center the rear housing under the chassis. Measure the distance between your front chassis brackets and divide by two. Use this dimension to determine the centerline mounting location of the slip joint mounting tabs. The tabs will mount in the location selected at the beginning of the installation instructions.
With the supplied **3/4" rod end** bolted between the two **Mounting Tabs**, center it on the mark made previously and tack weld it in place. Make sure the **Slip Joint** will have enough room to pivot. Shorten the tabs as necessary.
 - 4) Thread the jam nuts onto the supplied **1/2" Rod Ends** and then thread the rod ends into the supplied **Tube Adapters**. Make sure that at least three threads show on the rod ends after the jam nuts.
 - 5) Mount the rod end assemblies into the clevis brackets you installed in Step 2. Fasten them in place using the supplied 1/2" bolts and locknuts.
 - 6) Thread the 3/4" jam nut onto the 3/4" rod end so that three threads show above the nut. Thread the **Slip Joint** onto the rod end so that it seats against the jam nut.
 - 7) Slide the **1-1/4"x10" Slide Tube** over the **Slip Joint** leaving 2" of the slip joint showing at mounting bracket end.
 - 8) Trimming the **1"x28" Tubes**:
 - a. Place one of the 1"x28" long tubes over the end of the tube adapter that is mounted to the clevis bracket.
 - b. With the Slip Joint assembly level with the ground, align the 1" tube so that it intersects with the 1-1/4" Slide Tube. Mark the intersection on the Slide Tube and mark the 1" tube for trimming. Remember to leave sufficient tubing for the fishmouth (approx. 1/2"). Repeat this process with the opposite side.
 - c. If your measurements are correct, both tubes will end up being the same length.
- Note: Make sure that you have enough driveshaft clearance before cutting or welding!
- 9) Cut and fishmouth the ends of the tube. We recommend drilling 1/4" holes in the tube adapter end of the tube for plug welds. This will strengthen the weld joint and prevent the tube adapter from twisting in the tube. Make these holes approximately 3/8" from the end of the tube.
 - 10) Tack weld the tubes to the tube adapters. Replace the tubes in position and check that the rear housing is still centered under the chassis. Line up the tubes with the mark made on the Slide Tube and tack weld in place.
 - 11) Take measurements for the **3/8" dia Gusset Tubes**. These tubes will mount 3/8" from the end of the Slide Tube and attach to a point on the 1"x28" tubes. These small tubes will keep the slide Tube from flexing and eliminate bowing of the 1" tubes. We supply you with a 12" piece of tubing cut it according so that you end up with two separate tubes. Do not install the tube in one piece it will interfere with the operation of the Slip Joint. Tack the tubes in place.
 - 12) With everything tacked in place, remove the assembly from the vehicle, remove the rod ends and the slip joint, and weld all joints. Since this kit is made from 4130 Chrome Moly, be sure to use an approved GTAW process and allow the welds to cool slowly. We recommend covering the welds

with a box or fireproof blanket to prevent wind and other rapid air movements from cooling the welds too quickly. If the welds cool too quickly they may fracture, leading to weld failure.

- 13) After the assembly has cooled sufficiently, lube the slip joint with wheel bearing grease and install it into the slide tube. The slip joint must slide freely back and forth. If a bind is encountered, ream the slide tube accordingly. In most cases, this will not be necessary because the slip joint supplied in this kit has been centerless ground.
- 14) Lubricate the rod end threads with anti-seize paste and install.
- 15) Re-install the assembled unit and tighten all fasteners. Check the slip joint for proper lubrication on a regular basis.

