



INSTALLATION INSTRUCTIONS

P/N: C2148

UNIVERSAL 80" SINGLE WHEEL, WHEEL-E-BAR™ KIT

This Universal Wheel-E-Bar™ Kit allows the professional chassis builder to fabricate a bar to fit a specific vehicle. The tubes can be cut to the desired length to suit individual needs.

PARTS LIST

- | | |
|--|---------------------------------|
| (1) Lower Strut Assembly | (2) Small Tube End, RH |
| (2) Tube, Brace .5"OD X .065" Wall X 6" Long | (2) Small Tube End, LH |
| (2) Tube 1"OD X .065" Wall X 76" Long | (2) Rod End, 1/4" LH |
| (1) Tube 1"OD X .065" Wall X 12 | (2) Rod End, 1/4" RH |
| (1) Tube End, 3/8-24 | (6) Mounting Tab |
| (2) Tube End, 1/2-20 | (6) Small Tab |
| (2) Rod End, 3/8 Hi Misalignment | (1) Quick Release Pin 3/8" X 2" |
| (1) 3/8-24 X 2-1/4" HHCS | (1) 1/4-20 X 1-1/2" HHCS |
| (1) 1/4-20 X 1-3/4" HHCS | (2) 1/4-28 RH Jam Nut |
| (2) 1/4-28 LH Jam Nut | (2) 3/8-24 RH Jam Nut |
| (1) 3/8-24 Loc Nut | (3) 1/2-20 Loc Nut |
| (2) 1/2-20 Jam Nut | (2) 1/4-20 X 1" HHCS |
| (1) Wheel | (2) Rod End, 1/2-20 |

REQUIRED TOOLS

- | | |
|--|-------------------|
| TIG Welder | Straight Edge |
| MIG Welder | Permanent Marker |
| Carpenter's Square | Hard Disc Grinder |
| Recommended TIG Wire: ER70S-6 Uncoated | Plumb Bob |

Select a large, level, paved surface to work on.

INSTALLATION

LOCATE AND MARK CENTERLINE

- Using a plumb bob, drop points to the ground along the centerline of the vehicle and mark with permanent marker.
- Use a straight edge to connect the marks and continue the centerline past the vehicle, far enough that the Wheel-E-Bar will contact the line.
- Transfer the vehicle centerline to the rear housing using the plumb bob and marker.

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

80 Carter Drive • Gullford, CT 06437

Visit Us At www.competitionengineering.com

DETERMINE LENGTH

2. a Determine the desired length of the Wheel-E-Bar. (Distance from the rear end housing to the center of the wheel on the bar).
- b Cut the Lower Strut Assembly to the desired length. Remember to allow for the length of the solid tube end that will be inserted in the Lower Strut Assembly.
- c Drill a 3/8" hole through the tube 1/2" back from the cut end (these holes will be for plug welding later on).
- d Tack weld the solid end into the tube with the TIG welder making sure that the flats on the end are parallel with the sides of the wheel shoe at the opposite end of the tube.

DETERMINE MOUNTING TAB PLACEMENT AND TACK WELD

3. a Bolt (2) Mounting tabs to the solid end. Tighten bolt just enough to allow tabs to move without any free-play .
- b While keeping the entire assembly centered on the vehicle centerline, tack weld the Mounting Tabs to the bottom of the rear end housing using a MIG welder.
4. a Install the wheel into the housing and space it off the ground at the desired height.
- b Drill a 3/8" hole through one end of both upper struts 1/2" from the end.
- c Tack weld a 3/8-24 Tube End into both Upper Strut Tubes, using the TIG welder.
- d Thread a 3/8" Hi-misalignment Rod End into the Tube Ends, leaving approximately (6) threads showing. Next install both Rod Ends into the upper holes of the wheel shoe using the Quick Release Pin.
5. a Determine where on the top of the rear end housing the upper struts will attach. Make sure that both mounts are an equal distance from the center line you made during step (2).
- b Cut the Upper Struts to length, making sure to include the length of the 1/2" Tube End with the Rod End Installed. Next drill a 3/8" hole through both tubes exactly as you did previously in Step (5).
6. a Tack weld the Tube Ends into the Upper Struts using a TIG welder and then thread the Rod Ends in (leaving approximately (6) threads showing).
- b Bolt the Mounting Tabs to the Rod Ends and position them on the rear end in the desired location Profiling the Mounting Tabs with a grinder to match the housing may be necessary, to obtain a proper fit.
- c Tack weld the Tabs to the Rear end housing with the MIG welder.

CROSS SUPPORT TUBE INSTALLATION

7. a Make a mark on both upper struts half way between the wheel and the rear end housing. This will be the location of the Cross Support Tube.
- b Cut the Support Tube from the 12" piece of tubing supplied with the kit. Notch the tube so that it fits between the two Upper Struts at the marked position and is parallel to the rear end housing.
- c Drill a small 3/32" hole in the tube to allow welding gases to escape and tack in place with a TIG Welder.
8. a Using (2) of the 1/4" Rod Ends as spacers, tack weld (2) of the Small Tabs to the Lower Strut, directly below the Cross Support Tube.
- b Bolt the other (2) Rod Ends to the remaining Small Tabs and position them on the Upper Strut Tubes At the intersection of the Cross Support Tube and tack weld in place using a TIG welder.
- c Measure the distance between the Small Tabs on the Lower Strut to the Small Tabs on the (2) Upper Struts. **(These two measurements should be the same)**. Record measurements.
- d Thread the Rod Ends into the Small Tube Ends, leaving (6) threads showing.

NOTE: There are (2) Left Hand and (2) Right Hand Rod Ends and an equal number of matching Small Tube Ends.

- e Space the rod ends apart the same distance that you measured in step 8c.
- f Now measure the distance between the shoulders of the Tube Ends and cut the 1/2" tubes to this length.

g Drill a 3/16" hole through both ends of the tubes 1/4" from the end. Tack weld the Small Tube End in place. (1) L.H. and (1) R.H. per tube, with a TIG Welder.

9. a Check to make sure the Wheel-E-Bar is straight with the centerline of the vehicle and that the Upper Struts are an equal distance from the Lower Strut.

FINISH WELD WHEEL-E- BAR KIT.

10. a Remove the assembly from the vehicle.

b Remove all hardware and Rod Ends and finish welding completely using the appropriate welding process.

11. a After it has cooled, reassemble the Wheel-E-Bar kit making sure to put anti-seize compound on all the rod end threads.

b Reattach the assembly to the rear end and check alignment. Make any changes necessary with the Rod Ends and tighten all hardware securely.