

INSTRUCTIONS

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913-3901- Front Axle Assembly: Hairpin Radius Rod

The radius rod front end kit is used with both spring over and spring behind welded batwing style axles. While the axles vary slightly, the installation procedures are the same.

First, thread jam nuts onto the heim joints and assemble them onto the radius rods as shown in photos 1-2. Make sure to use anti-seize compound on all threads and leave approximately four to five threads exposed on each rod end.

Next, thread jam nuts onto the clevises and screw the clevises into the radius rods. Again, make sure to use anti-seize compound and leave approximately 4-5 threads exposed on each clevis.

Bolt the radius rods to the frame brackets using the supplied 5/8" bolts and lock nuts. Be sure to use a cone spacer between the frame mount and heim joint to prevent binding. Torque at final assembly should be 100-125 ft. lbs.

NOTE: If your frame does not have the radius rod mount brackets installed, bolt the radius rod to the frame mount brackets (like our 916-35048) and then temporarily clamp the bracket to the frame. In later steps when you are squaring the front axle, move the bracket as required instead of adjusting the radius rod heim joint.

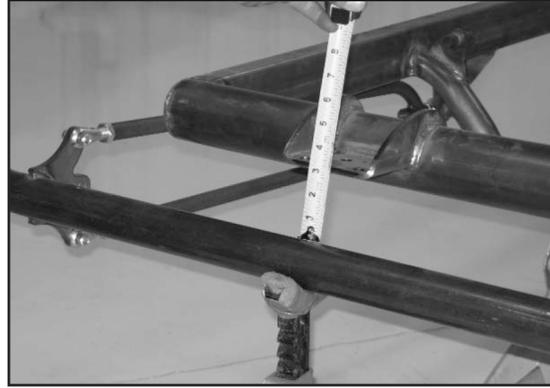
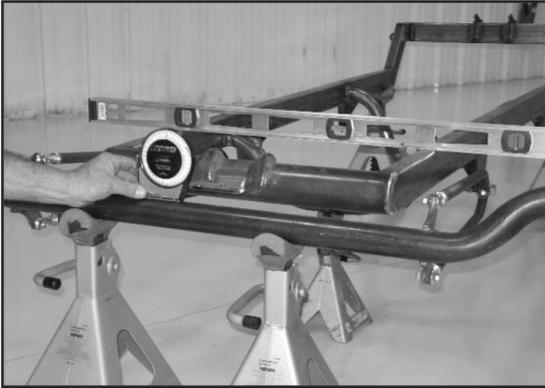


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Set the front axle on jack stands in front of the frame and bolt the clevises to the batwings using the supplied 3/8" x 1" bolts and nuts. Make sure the hardware securing the clevises and rod ends is snug, but not tight at this time. Final torque at assembly should be 20 ft. lb.



Take measurements to verify that the axle is level from side to side, and that it is positioned approximately 3-inches below the spring perch.

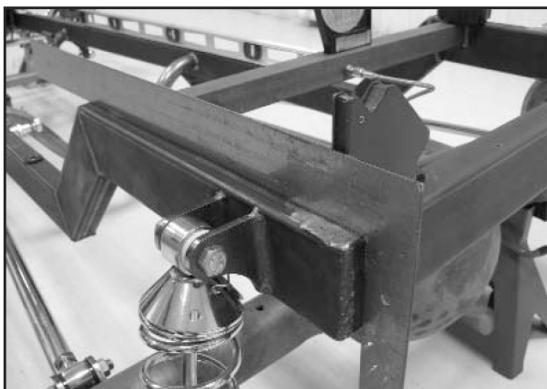
Slide a kingpin into each axle boss and use an angle finder to determine the amount of caster. This can be adjusted by threading the upper and/or lower radius rod clevises in or out. Make sure each side is adjusted equally. During initial assembly, with the chassis level on jack stands, caster should be around 10 degrees indicated. This is a preliminary adjustment – final caster adjustments must be made with wheels and tires installed and the vehicle on the ground at running weight and normal ride height. We recommend 6-8 degrees of positive caster (angled aft at the top) with the car complete and sitting on the ground at ride height. There is 2-3 degrees of rake in the chassis at ride height.



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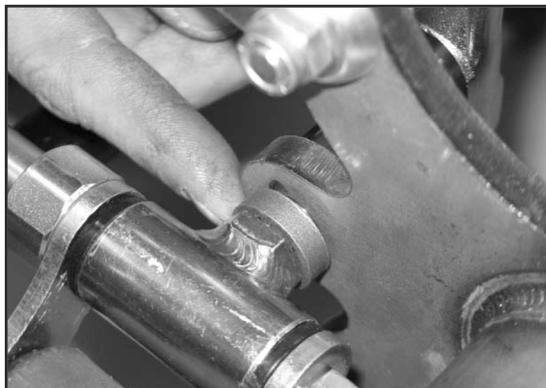


****At this time you need to make sure the axle is square to the frame.**

Measure from the upper clevis bolt to the rear of the frame on each side of the chassis. To get an accurate reading off the rear of the frame, use a framing square as shown. Grind the welds on the rear of the frame as required so that the square sits flush on the frame rail and butts evenly to the back of the frame crossmember.

Adjust by turning the heim joint on the end of the hairpin in or out as required. The dimension on the right side and left side should be within 1/16".

NOTE: If required, tack weld the radius rod mount brackets to the frame at this time.



Next, assemble one spring pivot on a batwing. We generally prefer to start with the driver's side pivot. Install the nut on the pivot stud only 4-5 threads at this time. Some applications using our 715-150 shock mount kit may require a spacer as shown to allow adequate clearance between the shock body and the radius rod.

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Secure the spring assembly onto the main spring perch on the frame using the supplied U-bolts. It's helpful to clamp the spring to the perch while threading the U-bolt nuts on.



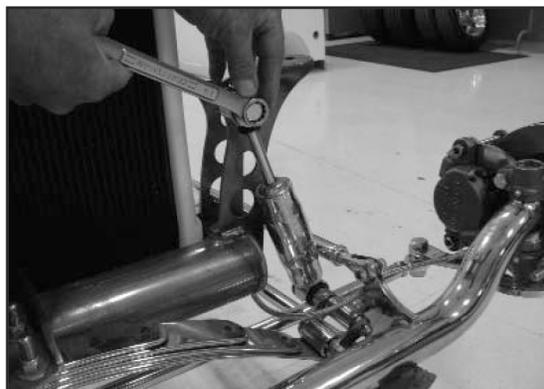
Insert the supplied bushings into the pivot and leaf spring and use the shackle to connect the spring and pivot. On spring behind applications, make sure the shock mount (if used) is on the pivot side of the shackle and that the shackle nuts face forward to prevent interference with the tie rod. Repeat for shackle assembly on the other side.



Install shock onto lower mount. It may be helpful to use a little petroleum jelly on the mount to help the bushing slide easier. Secure using the supplied washer and nut.



Secure upper shock eye to frame mount. Frame mounts will vary per application (715-150 shock mount shown).



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Secure all of the front suspension bolts, making sure they are snug, but not too tight at this time. Torque all fasteners to proper spec at final assembly.

NOTE: If your radius rod brackets were not welded on previously, double check the front axle to make sure that it is still square to the chassis and finish weld the frame brackets. We recommend that all critical suspension welds be of MIG or TIG method and performed by a certified welder.



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P.O. Box 81906 • Lincoln, NE 68501

800.979.0122 • SpeedwayMotors.com

