

## 7142

## INSTRUCTIONS FOR ELIMINATOR II 4130 FRAME BEHIND HOOP, 5 1/2" GROUND CLEARANCE

<u>ITEM</u>	<u>QTY</u>	<u>SIZE/PART NO.</u>	<u>DESCRIPTION</u>
1	1	1 5/8	Lower main hoop crossmember
2	1	1 5/8	Upper main hoop crossmember
3	2	1 5/8	Rear frame crossmember
4	2	1 1/4	Shock crossmember to lower 4-link mount strut
5	2	1 1/4	Main hoop to roll cage rear strut
6	1	1 1/4	Rear strut tie bar
7	2	1 1/4	Shock crossmember to frame rear strut
8	2	1 1/4	4-link triangulator
9	2	1 1/4	Main hoop to upper crossmember strut
10	2	1 1/4	Rear strut support
11	4	2101	Suspension tab 1/2 hole
12	1 pr	4932	4130 1 5/8x.083 4-link rear rails 5 1/2 ground clearance
13	2	4352	4130 1 5/8x.083 4-link support (upper and lower)
14	2	3100	Bolt 1/2-20 x 2 1/4
15	2	3200	Locknut 1/2-20
16	4	1000	Misalignment bushing 1/2
17	1	927142	Assembly drawing

This rear frame clip is designed for use with Chassisworks Eliminator II rear suspension. A roll cage kit is also required; some of the necessary components are part of the roll cage kit. This rear frame is designed to position the roll cage main hoop forward of the front 4-link mount. This will position the driver more forward in the body.

Chassisworks makes no guarantee or claims that any sanctioning body will accept this chassis. It is the sole responsibility of the chassis' owner to determine that this chassis can be used for the owners intended use. We suggest that you carefully examine the rules that pertain to chassis construction for the associations that you race under and, make sure that this chassis fits those rules. We also require you to measure the diameter and wall thickness of every tube (bent and straight) that goes into the chassis to make sure it is the correct size for the rules. With the advent of sonic testing, it is important that you measure the wall thickness of every tube in the roll cage that is subject to the sonic test. See your Association Rule Book to determine which tubes must be a specific minimum wall thickness. Do not install any tube that is not at least the minimum. Chassisworks will replace any tube that is undersized and has not been installed.

Read all the instructions completely and make sure you understand them before you begin. Only tack weld the chassis components whenever possible. This will make it easier to remove components if you make a mistake. All joints that are covered by another tube or bracket must be completely welded before they are covered up. An experienced welder must weld this chassis - your life depends on it!

Construction of a chassis cannot be accomplished without a jig. To assemble the chassis you will need a level surface as large as the car. This should be a steel table, an "I" beam, or a garage floor. You will need to hold the body up off your surface at ride height; the jig surface will simulate the ground.

Also, weld a little of each joint at a time to help avoid distortion. Do not assemble your chassis using only the dimensions on the assembly drawing. You must use a body to help in tube placement.

Prepare the body for the frame by first measuring forward from the rear axle centerline and marking the rocker panel at 35 inches. This dimension will be used to position the body correctly on the chassis when viewed from the side. The mark on the body at 35 inches should be in line (when viewed from the side) with the back of the main hoop crossmember where the 4-link support mounts. This will position the new chassis rear axle centerline in the same location in reference to the body that the stock rear axle centerline had. In some vehicles, it will be necessary to move the rear axle centerline forward 1 to 3 inches from stock to provide adequate room for the rear wheel tubs against the back window. To do this, just move the body back in reference to the chassis 1 to 3 inches. Measure the wheelbase, this will be Dimension A.

Cut up the body by trimming all inner panels. You just want the single outer skin. You need to attach the body at the rocker panel, A-pillar, B-pillar, rear valance, and top 4 corners of the cage. On steel bodies, weld tabs to the chassis and body that bolt together. This will make it easier to remove and re-install the body as you build the car. Fiberglass bodies should be attached to sheet metal plates and fiber-glassed inside the body. Cleco the body to the plates until the final assembly when the plates should be fiberglassed in. Do not use pop rivets, they will rattle out and crack the fiberglass.

Locate the body off of the jig or garage floor at the correct ride height. Block the rocker panels and rear of the body so that the car will be held steady. Your jig will need a centerline from the rear of the car to a point forward of the front axle centerline. A string pulled tight will work. This will ensure that all chassis and body parts are centered.

1. Install a main hoop crossmember in the chassis between the rocker panels, use one of the 1 5/8 x 60" long straight tubes. To position the main hoop crossmember in the car, you must place the backside 35 inches forward of the rear axle centerline. If this puts your main hoop too far forward, you can move it back by shortening the 12" length on the drawing. Shorten the legs of the 4-link support and they can still weld to the backside of the upper and lower main hoop crossmember.

2. Install your main hoop per the drawing. It should be as tall as possible to provide adequate headroom. It should be at least 40 inches above the top of the frame and tilted back at the top 4 3/4 inches. In some low body styles, the rear of the body will have to be raised off the ground to get enough height for the main hoop. In these cases, the main hoop crossmember will actually be below the rocker panel.

3. Install the lower 4-link support. It welds to the main hoop crossmember. Its back side should be 23 inches forward of the rear axle centerline and 12 inches behind the main hoop crossmember.

4. Install the upper main hoop crossmember; use another tube 1 5/8 x 60 inches. Also, install the upper 4-link support. Use the 4-link chassis mounts to help position it at the correct location.

5. Install the rear frame rails per the dimensions on the assembly drawing. Measure from the back of the main hoop crossmember to the tail light panel. Subtract 35 inches and this will be Dimension B. The frame rails should be centered in the car and 3 inches narrower than the outside width of the 4-link brackets. This will be Dimension C. Make the 4-link brackets outside width as wide as possible while leaving enough room for the rear tires. Install the two rear frame crossmembers per the assembly drawing using the remaining 1 5/8 x 60 inch tube. Install the rear upper shock mount so it is centered under the frame. Install the chassis 4-link front mounts on the upper and lower 4-link supports. The upper support's front side is even with the lower support's rear side when viewed from the side. Two 1/2

x 2 1/4 inch bolts and two 1/2-inch locknuts are used in the upper shock mounts to mount the shocks. The four misalignment bushings are also used in the shock mounts. One goes on each side of the shock bearings to fill the gap in the shock mount bracket. Use #6247 Adjustable Shock Mount for the lower mount.

6. Install the 1 5/8 rear struts from the main hoop to the top of the frame. Also, install the 1 1/4 diameter struts from the top of the frame to the rear frame crossmember. These tubes are not provided; they are part of the roll cage kit.

7. Install the shock crossmember to lower 4-link mount struts. Use one of the 1 1/4 x 134 x 60 inch tubes to make both pieces. These supports are 2 inches narrower than the inside of the 4-link brackets at the lower end.

8. Install the main hoop to roll cage rear struts. These tubes go over the wheel tub and are also made from 1 1/4 OD tube. They must be high enough to clear the wheel tub.

9. Use another 1 1/4 tube to attach a tie bar between the roll cage rear struts at the same height as the tubes in step #8.

10. Use the remainder of the tube from step 9 to make the shock crossmember to frame rear struts. These must clear the rear shocks.

11. Use the last 1 1/4 tube to make the 4-link triangulator and main hoop to upper crossmember struts.

12. Use a remnant from the roll cage rear struts to make the rear strut supports.

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