7122

INSTRUCTIONS FOR 1 5/8 FRAME, STRUT, 4-LINK

ITEM	QTY	PART NO.	DESCRIPTION
1	1	4708	Rack and pinion crossmember
2	2	2300	Rack and pinion mount
3	16	2101	Suspension tab 1/2
4	2	4215	Front frame, strut, 1 5/8 X 108"
5	2	4207	Rear frame, 4-link, 1 5/8
6	2	1817	Tube 1 5/8 x .120 x 72"
7	8	1000	Misalignment bushings
8	4	3114	Bolt 1/2 - 20 x 2 1/4
9	4	3200	Locknut 1/2 - 20
10	1	927122	Assembly drawing

This frame kit is designed to be used with a 14-point roll cage, CHASSISWORKS' part #7015. The roll cage is mandatory to properly support the frame. The body should be prepared for the frame by first measuring forward from the rear axle centerline and marking the rocker panel at 22 inches. The wheelbase should also be measured. Both of these dimensions will be used when installing the frame. The complete floor and firewall should be removed at this time. The frame can be installed without completely removing the floor if you simply slot the floor for the frame; however, this method is a lot more difficult and will result in a much heavier car. Position the body so it is level front to rear and right to left before starting.

1. Install the main 1 5/8 crossmember first. After you have cut the floor our and neatly trimmed all the panels, you must level the car front to rear and right to left. The doorsills are a good place to put your level. When you cut the floor out, you should have left the inner part of the rocker panel in place. The rocker panel should be neatly trimmed to allow for a good fit of the crossmember. In most cases, the crossmember does not have to be dropped, the drive shaft passes above it. If your inner rocker panel is not straight, you will have to contour the ends of the crossmember. Make sure you have a good fit to the rocker panel or it will be difficult to weld. Tack weld the crossmember in place so the rear side is 22" forward of the rear axle centerline (the dimension you previously measured.)

2. Measure from the back of the crossmember to the tail light panel. Cut the frame rails to this length and tack them in place. The frame rails should be centered in the car an equal distance from each side of the car and at the same height.

3. Install the crossmembers. The rear crossmember should be centered on the frame and approximately 1/2" forward of the tail light panel. Weld the shock brackets to the center crossmember at the dimension shown on the assembly drawing. Make sure they are straight to each other. Put the crossmember between the frame rails at the dimensions shown.

4. Install the chassis 4-link mount. The 4-link mount attaches to the backside of the frame and crossmember. The brackets are centered under the frame. Use a rod end to get the correct spacing between them. The brackets must be straight or the 4-link will not fit right. The front brackets are part of the 4-link kit #6205.

5. The kit provided hardware is used to mount the top of the coil over shocks to the shock brackets. You will need to use an adjustable lower shock mount (our part #6216).

6. You need to run a string centerline from the rear of the car to a point forward of the stock frame. You can make a front string mount out of two pieces of angle iron tacked on the car under the floor. They should run forward and form a "V" at least 18" ahead of the stock axle centerline. Tack them together and weld a post straight up about 1' high. Move the post right and left to center the string perfectly between the rocker panels. The further to the rear you attach the string, the more accurately you can center it. Use a large square off the floor to make measurements from the string centerline.

7. Install the front frame rails in the chassis at the correct width, 23". The rear of the frame attaches to the main hoop crossmember and it will probably have to be shortened. The frame must also be an equal distance from the string centerline.

8. Measure forward from the main hoop crossmember's backside to a point 22 inches less than the wheel base and draw a line across the floor (90 degrees to the string centerline) to represent the front axle centerline. Use a large square or plumb bob to put a line on both sides of the new front frame rails, which will represent the front axle centerline. All of your brackets will locate off of this line.

9. Install the front crossmember. It is 26 inches long with a 30-degree angle on each end and 16 inches forward of the front spindle centerline. Cut the legs off of the steering box tube so it is only 1 3/4 inches tall and the correct width for your chassis. Locate the steering box tube per the assembly drawing. Upon completion, the bottom of the front crossmember will be approximately 3 1/2 inches off of the ground when using a 25" diameter tire.

10. Install the forward and rear control arm mounts. Check the assembly drawing for their locations and angles. The angle of the brackets is determined by the angle of the control arm leading into them. Also, install the rack and pinion mounts.

11. Using some scrap tacked to your "V" frame (string mount), make some fixtures, mounted at the correct height and center distance, to locate the upper strut mount. Install forward strut mounts to frame and existing cage. Ideally, the forward struts should tie to the cage sides but, in some cases, you will have to weld them to a crossbar between the cage sides. Tack the upper strut mounts in place and recheck your measurements.

12. To determine the correct spacing between upper strut mounts, use the formula below. Measure the following:

A. Width of front bodywork between fenders, measured from inner lip driver's side to inner lip passenger's side;

B. Horizontal distance from hub of strut brake where wheel bolts on to upper strut mount. This distance is 5 3/4 inches. Multiply by 2, one distance for each side;

C. Clearance from inner lip of fender to side of tire will be 4 inches to 5 inches per side. Multiply by 2, one distance for each side;

D. Distance from outside edge of tire to rim surface where the wheel bolts. Lay tire on its side (inflated and mounted). Place the straight edge across the side of the tire and measure through the center to the surface of the rim that mounts on the hub. Multiply by 2, one distance for each side.

E. Width of upper strut mounts. A-B-C-D=E. NOTE: If you change the width between the upper strut mounts, you will have to change the angle of the control arm mounts. You want the sides of the control arm brackets to be parallel with the tubes of the control arm. Obviously, the rod end in the control arm can compensate for misalignment of up to 5 degrees so, these pieces do not have to be perfectly parallel.

13. Recheck all of your measurements and finish welding.

14. The four 1/2 x 2 1/4 bolts and the four 1/2 locknuts are used in the upper shock mounts to be mount the shocks and struts. The 8 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.

15. You need CHASSISWORKS' tie rod tubes kit #6100 to replace the tie rods on the steering box because they will be the wrong length.

16. The dimensions on the assembly drawing A, B, C, D, E & F are just sample dimensions. They must be adjusted for your application.

17. If you are using this frame in a truck, the main hoop cannot mount on the crossmember at the four link front mounts. Install an additional crossmember at the four link only as wide as the frame. Move the main crossmember as far forward as necessary to position the main hoop in the cab.

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