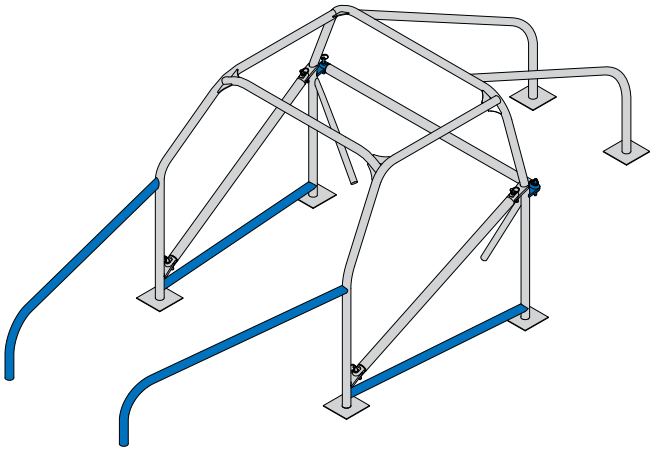
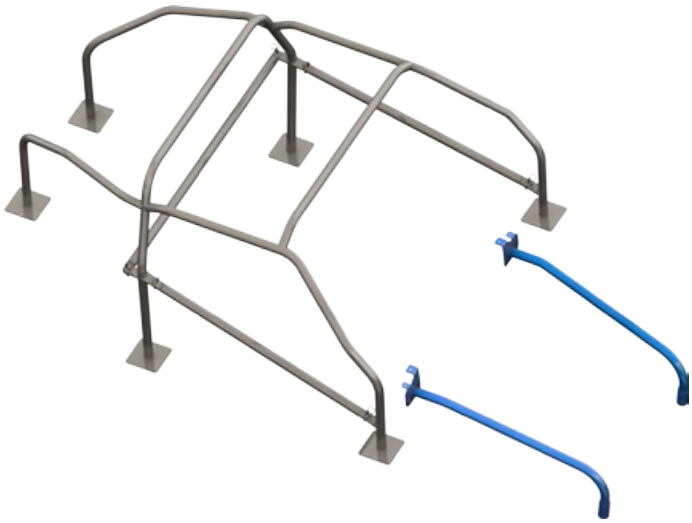
INSTALLATION GUIDE

CHRIS ALSTON'S Chassisworks
THE HOME OF HIGHER TECHNOLOGY

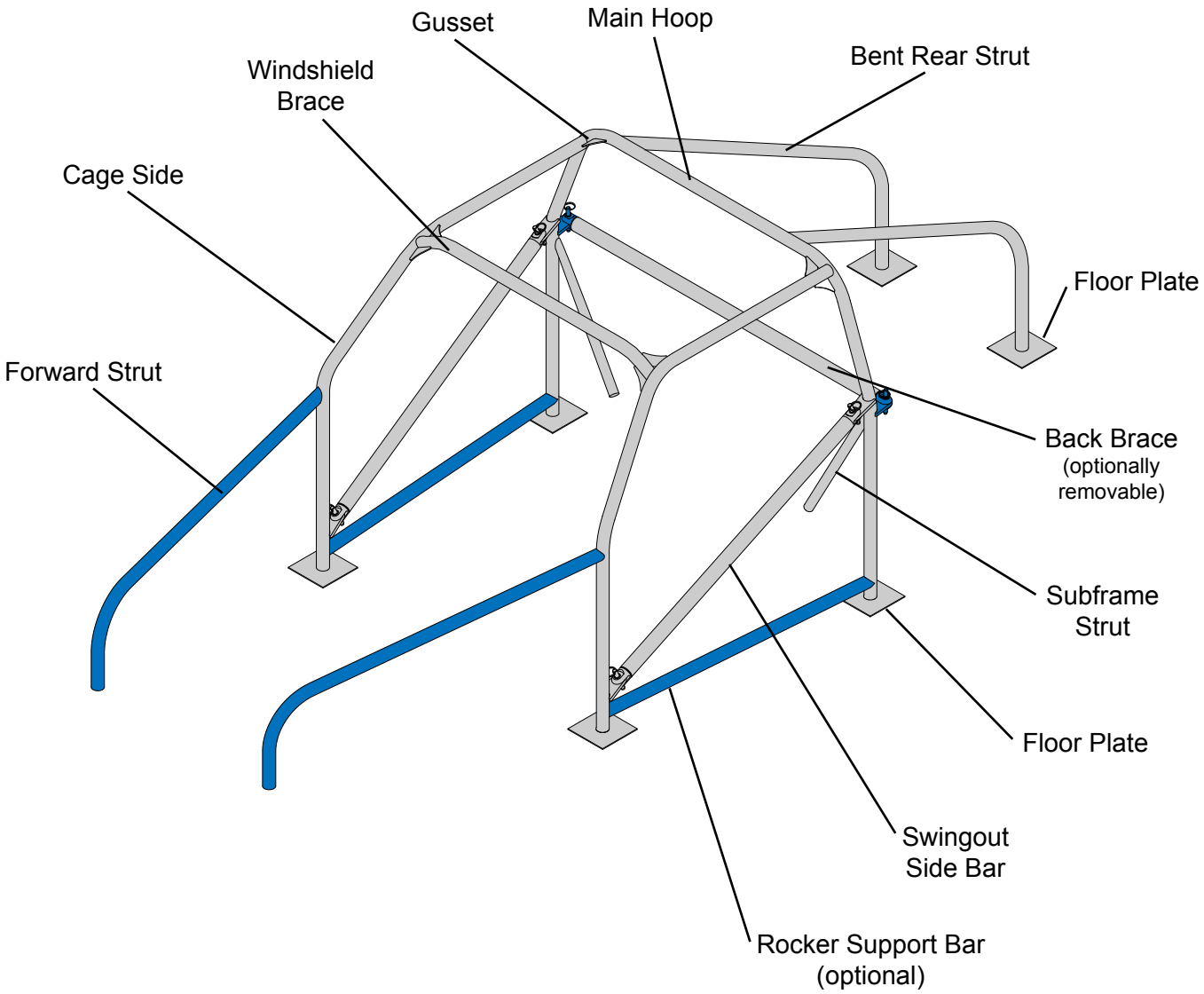
G-STREET & EXACT-FIT
8-POINT 1-5/8” MILD-STEEL CAGE





Description: 1-5/8” diameter x .134” wall thickness 8-point roll cage - Includes main hoop, cage sides, windshield brace, bent rear struts, swingout side bars, back brace (removable brace option available), 1-1/4” diameter subframe struts, rocker support bars (optional), and window nets (optional).

PARTS DIAGRAM



Component	Description
Main Hoop	mounts to floor at B-post, main connection point for additional bracing
Cage Side	connects from main hoop to floor at A-pillar, connection point for side bars
Windshield Brace	provides bracing between two cage sides above windshield
Bent Rear Struts	connects top of main hoop to trunk area, improves chassis rigidity
Swingout Side Bars	connects lower area of cage side to main hoop at roughly driver's shoulder height
Back Brace	braces across main hoop span, serves as safety harness attachment point
Subframe Struts	provides additional strength to key area of roll cage and rear suspension members
Rocker Support Bars	connects base of cage side to base of main hoop, provides improved stability to main hoop footing and additional side impact protection
Floor Plates	welds directly to floor to create broader attachment point
Forward Struts	connects leading edge of cage sides to chassis forward of the suspension

PARTS LIST

Straight Tube Box Contents (4421):

Item	Qty	Part Number	Description
1	1	2027	Floor Plates 6 Pieces 1/8 x 6 x 10 Gauge
2	1	2168	Roll Cage Gusset Tree, Includes 8 Gussets 2-1/4 x 2-1/4 x 10 Gauge
3	1	E20.134-060.000	Tube 1-1/4 x .134 ERW x 60” (2 Subframe Struts)
4	3	E26.134-060.000	Tube 1-5/8 x .134 ERW x 60” (2 Side Bars, 1 Back Brace)

Additional Components (not in box):

Item	Qty	Part Number	Description
1	1	40XX	Main Hoop (specific to vehicle)
2	2	41XX	Cage Sides (specific to vehicle)
3	1	42XX	Windshield Brace (specific to vehicle)
4	1	7011	Bent Rear Struts
5	2	7008	Swingout Clevis Set (standard)

Optional Components:

Option Category	Part Numbers	Description
Window Nets	6307	Window Net Mount Only
	6307, 6308	18 x 24 (rectangle) Black Net with Mount
	6307, 6309	18 x 24 (rectangle) Red Net with Mount
	6307, 6310	18 x 24 (rectangle) Blue Net with Mount
	6307, 6317	24 x 24 x 18 (angle) Black Net with Mount
	6307, 6318	24 x 24 x 18 (angle) Red Net with Mount
	6307, 6319	24 x 24 x 18 (angle) Blue Net with Mount
Rocker Support Tubes	7024	1-5/8 x .134 HREW Roll Cage Rocker Support Bar (Driver Side)
	7024 (Qty 2)	1-5/8 x .134 HREW Roll Cage Rocker Support Bar (Both Sides)
Swingout Clevis Sets	7030 (Qty 2)	Swingout Clevis & Single Eyebolt Set (replaces 7008)
	7040 (Qty 2)	Swingout Clevis Dual Eyebolt Set (replaces 7008)
Removable Back Brace	7034	1-5/8 Removable Back Brace Bracket Kit
Forward Support Tubes	7010	Forward Struts for A-Arm Chassis
	4219	Forward Struts for Strut Chassis

CLASS LEGALITY

To assure class legality, you must measure all roll cage tubes that have a minimum size requirement. Chassisworks will replace any tube that does not meet the .134” wall thickness minimum, provided the tube has not been installed. You must return the undersized tube to Chassisworks for replacement. (Freight and installation is not included.) **It is the owner’s and builder’s responsibility to check with the governing racing organization regarding the legality of removable back braces and swing out door bars.**

INSTRUCTIONS

Read all instructions and make sure you understand them before starting.

1. Remove all interior upholstery, seats, carpets, and front and rear kick panels. It is not necessary to remove the headliner or dashboard.

2. Separate the floor plate tree into its six individual pieces.

3. Trial fit the main hoop to locate the correct floor plate position. Main hoop should be even with forward edge of B post and either follow the B post angle or be positioned 90 degrees to the rocker panel. If the hoop seems too tall, do not cut at this time. Final trim fit will be made after the floor plates have been welded into place.

4. Determine where the floor plates go. The main hoop should be centered on the floor plate. Floor plates may sit on top of the rocker panel or on the floor board depending upon vehicle type. Floor plates may need to be bent to achieve a proper fit. Plates can be clamped in a vise and struck with a hammer to bend. The better you follow the contour of the floor, the easier the floor plates will be to weld. Once bent into the correct shape the floor plates can be tack welded into position. ALL TACK WELDS SHOULD BE EASILY ACCESSIBLE WITH A CUT OFF WHEEL FOR REMOVAL.

   Notes:
   - Full frame vehicles, such as early Chevys, should attach main hoop directly to the frame.
   - 55-57 Chevy kits include 3 x 2 box tubing to create out-riggers for the main hoop to sit on.

5. Reposition the main hoop to determine the cut angle for ends of tube. Any adjustments to the height of the hoop should be made at this time. Trim only small amounts at a time, then refit to avoid cutting it too short. Once correctly trimmed and fit, tack weld the main hoop in place to begin test fitting the cage sides.

6. Trial fit the cage side to locate the correct floor plate position in the area of the A pillar. The cage side should be centered on the floor plate and positioned at the main hoop for maximum head clearance. Floor plate may need to be bent to achieve a proper fit as previously done for the main hoop floor plates. Once bent into the correct shape the floor plates can be tack welded into position.

7. Reposition the cage side to determine the cut angle for floor plate end and notch angle and position of main hoop end. Reposition to verify the cage side fits correctly. If NOT installing forward struts, cage sides can be tack welded into place, then continue with step 9. If installing forward struts use cage side as a guide to mark the dashboard or firewall where the forward strut will come through, then proceed with step 8.

8. The forward struts can be routed through or below the dash depending on available space. The forward end of the strut ties to the frame forward of the suspension and can also be welded to the inner fender panel. The rearward end ties to the cage side as high as possible. Once the forward strut has been correctly trimmed and fitted it can be tack welded into position along with the cage side.

9. Trial fit the windshield brace to determine the correct length and notch angles. The brace should be positioned as far forward as possible without impairing vision through the windshield. Once correctly notched and fit, **securely** tack weld into position.

10. With the windshield brace still tacked to the cage sides, remove all tack welds at the main hoop. Push the main hoop rearward. Remove the tack welds at the cage side tubing to floor plate joint, and forward struts (if installed), then lower the cage sides and windshield brace as an assembly.

11. All floor plates can now be completely welded to the vehicle.

12. Tack weld roll cage gussets on each side of the tube at the windshield brace to cage side joint (4 gussets total). Weld completely around the windshield brace joint and gussets. Once welded, the cage sides, main hoop, and forward struts (if installed) can be tack welded back into position.

13. Completely weld the cage side to main hoop joints before positioning the gussets. Once welded, the remaining four gussets are welded to both sides of the tube at the cage side to main hoop joint.

    Note: To weld by the headliner or window without burning them, you need a piece of wet cardboard and a piece of aluminum sheet. Duct tape a piece of cardboard to the aluminum sheet about 12 inches square. Soak the cardboard with water. Slide the sheet between the roll bar and headliner with the wet side against the part you want to protect while welding.

14. Trial fit the bent rear strut to locate the correct floor plate position and main hoop attachment point. Bent rear struts should be mounted close to the outside corners of the main hoop and routed through the rear deck into the truck space. Floor plates are typically located close to the shock/spring mount or a suitably strong area of sheet metal, such as a corner joint. Strut tubes must be trimmed and notched for fitment, then tack welded in place.

    Note: Full frame vehicles, such as early Chevys, should attach rear struts directly to the frame.

15. The length of 1-1/4” diameter tubing will be used to make two individual subframe struts running from the main hoop to back brace joints rearward to the subframe of the chassis or a crossmember. Fit and tack the subframe struts in place. The lower end of subframe struts should attach as close as possible to forward end of rear suspension link mount.

16. The optional rocker support bars (7024) must be installed at this time. Rocker support bars are routed from the base of the cage side to the base of the main hoop. Verify that placement does not interfere with seat levers or other vehicle equipment. Tubes must be trimmed and notched for fitment, then welded into place.

    The following steps describe installation of the removable or optionally removable components of the roll cage system. The roll cage must be completely welded before installing the removable components. It is also critical that the vehicle be supported by its suspension or by supports positioned in areas to simulate the suspension carrying the weight of the vehicle. Failure to follow these steps will cause pin alignment to be incorrect after initial installation.

17. Determine correct placement of the back brace at this time. Some racing organizations specify a height range for the back brace (safety harness attachment point) in relation to the driver’s shoulders. Verify this with your specific organization. Once the correct position has been determined the back brace can be notched and tack welded in place. If installing a removable back brace refer to installation guide #917034 for specific information.

    Note:
    - Corvettes receive a bent back brace. One straight length of tubing will not be used.

18. Determine position of side bars then proceed with fitting and installation of selected clevis types. Sidebars should be mounted low in front to facilitate entry and exit from the vehicle. Rear attachment points at the main hoop must route the tube between the height of the driver's shoulder and elbow while seated in the vehicle.

    Notes:
    - Standard swingout clevis set (7008): Installation covered in steps 19-24 of this installation guide.
    - Swingout clevis and single eyebolt set (7030): Refer to installation guide #917030, proceed to step 24.
    - Swingout clevis dual eyebolt set (7036): Refer to installation guide #917036, proceed to step 24.

19. Position the clevis in the tube, then weld completely around clevis joint.

20. Bolt the swingout bracket in place (1/2" bolt) at installed clevis with enough bolt tension to prevent bracket from moving freely. Position the side bar assembly with swingout bracket at its desired position on forward cage side tube. Make sure the tube is at the correct angle and rotated correctly to allow the tube to swingout as intended. Tack into position, then weld completely around bracket joint after removing side bar tube.

21. Bolt the loose swingout bracket and clevis together as done in previous step. Position the assembly on the main hoop to determine the correct cut length of the side bar. Verify that swingout bracket is mounted at correct angle to allow side bar to swingout as intended. Cut the side bar so it is approximately 1/8" too long.

22. Insert the clevis into the side bar and swingout bracket. A 3/8" bolt can be used as a pin to allow for the 1/8" difference in tube length. With the side bar installed, tack weld the upper bracket in place. Remove 3/8" bolt/pin and verify that bracket angle allows clevis to slip in and out freely. Once correct, weld completely around bracket joint.

23. Remove clevis from side bar and shorten tube to exact length. Drill two 3/16" holes at the end of the side bar on opposite sides for rosette (plug) welds. Reassemble the side bar with clevis pinned to installed swingout bracket. Plug weld the holes first to prevent the clevis from shifting. Remove the bar and completely weld around clevis joint.

24. Reinstall side bar to verify fit after welding. If fit is tight, bracket holes can be lengthened using a round file.

25. Reinstall the interior. Some parts may have to be trimmed.

Notes:

WARRANTY NOTICE:
There are NO WARRANTIES, either expressed or implied. Neither the seller nor manufacturer will be liable for any loss, damage or injury, direct or indirect, arising from the use or inability to determine the appropriate use of any products. Before any attempt at installation, all drawings and/or instruction sheets should be completely reviewed to determine the suitability of the product for its intended use. In this connection, the user assumes all responsibility and risk. We reserve the right to change specification without notice. Further, Chris Alston's Chassisworks, Inc., makes **NO GUARANTEE** in reference to any specific class legality of any component. **ALL PRODUCTS ARE INTENDED FOR RACING AND OFF-ROAD USE AND MAY NOT BE LEGALLY USED ON THE HIGHWAY**. The products offered for sale are true race-car components and, in all cases, require some fabrication skill. **NO PRODUCT OR SERVICE IS DESIGNED OR INTENDED TO PREVENT INJURY OR DEATH**.

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