



**10-POINT ROLL CAGE,
1993- 2000 CAMARO/FIREBIRD
P/N C3231**

This style cage kit is designed for use with the factory dash to remain in place and the front cage supports to pass through the dash. This design was developed for maximum interior room and to conform as tightly as possible to the body structure of late model, aerodynamic body styles.

PARTS LIST

- (1) Main Hoop**
- (1) Main Hoop Crossbar**
- (1) Windshield Crossbar**

- (1) Cage Leg (Left)**
- (1) Cage Leg (Right)**
- (2) 39" Hoop Diagonals**

NOTE: This kit must be used with a C3310 strut kit

INSTALLATION INSTRUCTIONS (CAMARO/FIREBIRD)

- (1) a Begin by jacking and leveling the car using jacking points, rocker panel pinch welds or the front or rear frame rails.
 - b Jackstands should be placed at points on the uni-body frame that are reinforced from the factory.
 - c Ensure the car is level from Front to Rear and Left to Right. Place the vehicle on (4) jackstands, (2) just behind the front wheels and (2) just in front of the rear wheels. Use shims placed between the jackstands and frame to level the chassis. Any twist that exists from improper leveling, will remain after the roll cage is installed.
- (2) a Remove all seats, consoles and carpeting.
 - b The windows and door/interior panels should be covered and protected from grinding and welding sparks.
- (3) a Reinstall the rear seat cushion. The main roll bar hoop should be installed just in front it.
 - b Place the main hoop inside the vehicle to check fit (at the desired location).

**For Technical Assistance, call Competition Engineering's Tech Line at
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- c Some gradual trimming may be needed to get the roll bar to fit correctly
(Be sure to measure and allow for the mounting plates to be welded to the floor and rocker panel area where the roll bar will be welded).
- (4) a Check placement and fit of the roll bar with the driver seated in position. Mark the floor area to be prepared for installation of the 6" X 6" X 1/8" thick mounting plates. The mounting area of the floor should be cleaned to bare metal, an additional 1" away from actual weld location.
- b Form the 6" X 6" steel plates to conform to the floor pan and or rocker panels at their mounting points.
- c Tack weld in place.
- d The Main Hoop can now be tack welded in place. Begin by ensuring the Hoop is positioned correctly and has equal spacing from left to right. See FIG 1



FIG 1

- (5) a To install the Left (Driver's Side) Cage Leg, the dash cover will have to be removed and a cut-out will have to be made in the dash.
- A hole slightly larger than the diameter of the roll bar tubing is necessary. (Generally 1-3/4")**
- (6) a Start by locating the hole position in the dash.
- b Remove the windshield post trim.
- c Measure along the dash pad edge (inward) 1-3/4" and mark this point. This is the center of the hole. FIG 2

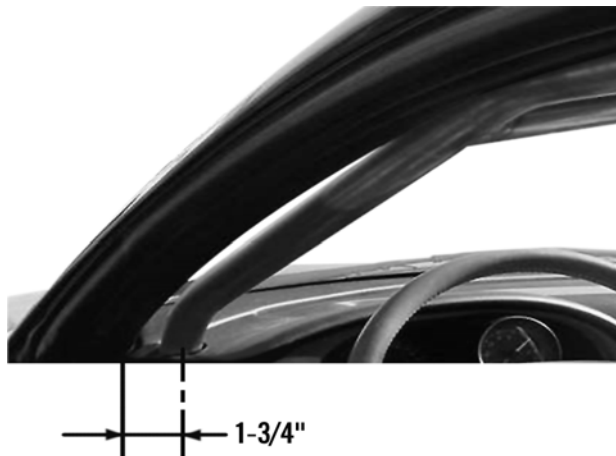


FIG 2

d You can now see that 1/2 of the hole will be located in the dash pad and 1/2 will be in the gauge panel cover.

(Some of the inner plastic dash structure will need to be cut away to allow the Cage Leg to pass through).

- (7) a Unbolt the steering column.
b The factory air conditioning (dash) duct work and defrost duct work will have to be permanently removed in order for the Cage Legs to pass through the dash board.
- (8) a In order to install the Cage Legs through the dash, the entire dash will have to be unbolted. Rotate the dash rearward until the dash is far enough back that the side leg can be slid through the hole made in the dash.
b Both the dash and the cage leg will be rotated back again until both parts are in position.
- (9) a Next install the Right (Passenger's Side) Cage Leg. Begin by marking the center point of the hole to be made.
b The hole center will be located at a point 2-1/4" to the right of the air bag cover, along the front edge of the dash pad. FIG 3
c A half round will have to be marked and cut in each of the two parts (the dash pad and the stationary portion of the dash) for the bar to pass through.
Note this will be a 1-3/4" dia. hole.

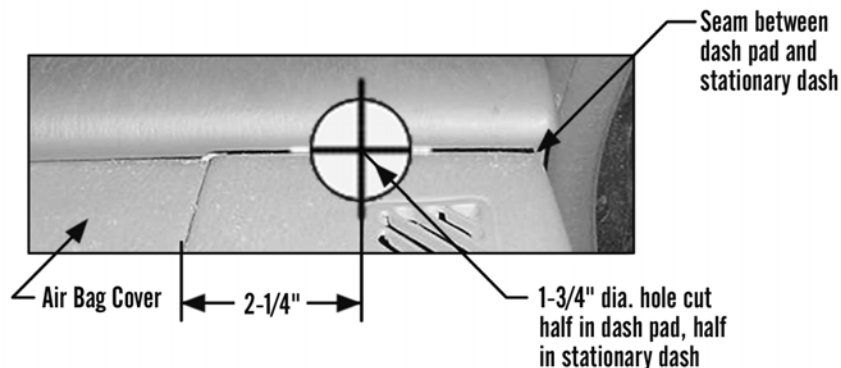


FIG 3

- (10) a Remove the dash pad and cut out the half round using a rotary file or similar tool. Gradually remove material working from the center mark out toward the half round you drew.
b Repeat this procedure for the stationary part of the dash.
c Remove the dash pad and test fit the Right Cage Leg through the dash. Once you are satisfied with the fit and location of the Cage Legs replace the dash pad and install the Cage Legs through the pad and dashboard.
- (11) a The main hoop end of the Cage Legs will require gradual trimming and notching for proper fit. While holding the either Cage Leg against the Main Hoop, carefully mark the leg for trimming.
Note: Leave 1" extra for notching.
It may take 4 or 5 tries to get it right. Keep trimming about an 1/8" at a time until the cage leg slips into position, hugging the roof line as close as possible.
- (12) a Prepare the front floor area for welding of the mounting plates. Mark the floor area to be prepared for installation of the 6" X 6" X 1/8" thick mounting plates. The mounting area of the floor should be prepared in the same way the rear was done.
b The mounting plates will need to be bent or cut and formed into a shape that conforms to the floor pan and rocker panel.
c Once the plates are fit, tack them in position.

d The cage side hoops can be slid into position for tack welding. Be sure to fit check with the driver seated in position. Tack weld in place.

(13) a The Windshield Bar will be installed next. The bar will require gradual trimming and notching. The windshield bar is designed to fit at the top of the windshield between the rear view mirror and the headliner panel.

b Measure the width of the roll cage across the vehicle just in front of the headliner. The measurement should be from inside of the left Cage Leg to the inside of the right Cage Leg.

c Mark the target location on each Cage Leg. Trim the windshield bar allowing an extra 1" inch at each end for notching. Notch the bar a 1/8" at a time until the bar fits properly. FIG 4

NOTE :At this time you should have already covered all window glass and protected anything that could be damaged by welding sparks.

d Tack into place, re-check position and finish weld.



FIG 4

Note: you will need to follow the directions included with your C3310 strut kit to complete the installation of this kit.