

## APPENDIX XII

# Roll Bars / Roll Cages

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Roll bars (roll cage optional) are required in all open Improved and Modified category running automobiles. For purposes of these rules, if you chop the top off of your automobile, it is considered a convertible. Automobiles with original factory rollover protection, un-altered, will be considered as adequately meeting this requirement. Installed roll bars/cages (not original factory rollover protection) must be equipped with adequate padding in all areas potentially exposed to the driver. Roll bars/cages, when installed, must meet the current PCA Driver's Education Minimum Standards as written below. For reference, the 2014 Club Racing Rules regarding specifications is also referenced below.

The PCA DE Minimum Standards contain the following:

### Cabriolet/Convertible Cars

Any make of car delivered with factory installed roll over protection meets the minimum standards for PCA DE events. In these cars we recommend the soft-top be in the up position or the hard top installed. If the top is in the down position, restraint system must be used. An SFI and/or FIA approved arm restraint system for use with OEM three-point belts.

If a car does not have factory installed roll over protection, a roll bar or roll cage must be installed, which meets the "broomstick" rule (the driver's helmeted head is below a bar placed on top of the roll bar and windshield). Design, installation and materials of roll bars or cages and their installation must meet PCA Club Racing specifications, contained in Roll Cage Specifications of the PCA Club Racing Rules (referenced below). All targa tops must be installed unless there is addition roll over protection. All sunroofs must be in the closed position. The windshield alone is not considered to be factory roll over protection.

\*Velocity Management, Inc. is a source for the SFI approved arm restraint system for use with the OEM three-point belts. Contact info is [www.gofastbesafe.com](http://www.gofastbesafe.com) and the part number is QE3ptArm.

### ROLL BAR/CAGE SPECIFICATIONS (2014 Club Race Rules)

**Roll Cages and Bars:** The roll cage/roll bar must be securely mounted with the mounting plates at the bottom of the hoops mounted directly to the floor and/or longitudinal members of the unibody and make metal to metal contact. Any padding, carpet, upholstery, etc. must be removed to satisfy this requirement. The mounting area of bolt-in roll cage/roll bar must be backed by a plate of a size equal to that of the upper mounting plate with a minimum thickness of 3/16". Bolts must be grade 5 or higher. The roll cage/roll bar must be full cockpit width, except as originally supplied by the factory for open racecars, and have two fore/aft tubing braces. The braces must be mounted as near to the top of the main hoop as possible at an included angle of at least 30 degrees. Also, the

assembly must contain a diagonal (left to right side) tubing brace from one upper side of the main hoop to a floor or unibody lower frame mounting point of a bar member on the other side to obtain the strength benefits of triangulation. Roll cage/roll bar tubing in the Stock/Prepared Classes must remain within the passenger compartment. The removal of the door glass to facilitate side impact protection is allowed. Carbon fiber roll cages or bars are not allowed.

**Roll Cages:** The roll cage must have a full width main hoop and a full-width front hoop or two side halo hoops around the door opening connected by tubing across the top of the entire windshield. The tops of the hoops must

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be as close to the roof as closely as possible in closed-top cars. In open-top cars, the top of the main hoop must be at least 2" above the driver's helmet, and the plane formed by the top of the main hoop and the top of the front hoop must be above the driver's head in both closed and open top cars. The front (or side halo) and main hoops must go to the floor pan and be connected with each other with tubing as close to the roof line as possible. The cage must have at least one additional bar across the door opening below the window level on each side connecting the front and main hoops for side impact protection. Additional side impact protection (two bars or "NASCAR" style bars protruding into the door) is strongly recommended.

**Factory Roll Cages** as delivered in factory race cars are allowed. Roll cages sold or installed by Porsche in street cars are allowed in stock class cars if certified to meet FIA regulations. If the car exceeds the stock class rules, then a cage meeting the specifications above must be installed.

**Roll Bars:** All provisions under section "Roll Cage and Bars" apply. Note that roll bars without terminal mounting plates braced on the frame are not acceptable. The top of the main hoop must be at least 2" above the driver's helmet when the driver is seated in the normal driving position. Porsche Tequipment bars and factory roll bars in Boxsters are not sufficient to meet these rules. An inspection hole 3/16" in diameter must be provided in a non-critical area for verification of tube thickness. Any portion of the assembly which may come in contact with the driver's helmet must be covered with high density foam at least 3/4" thick held securely in place with zip ties, electrical tape or duct tape. Foam must be equivalent to SFI 45.1 or FIA 8857 standards for hardness.

### Minimum Roll Bar Tubing Sizes Car Weight without Driver

All required tubing must have the following minimum diameters and wall thicknesses:

	Under 1500 lbs.	Over 1500 lbs.
Mild Steel	1.5" x .120"	1.75" x .120"
Alloy Steel	1.375" x .090	1.625" x .095"

### Minimum Roll Cage Tubing Sizes

All required tubing must have the following minimum diameters and wall thicknesses:

#### Car Weight without Driver

	Under 2500 lbs.	Over 2500 lbs.
Mild Steel	1.50" x .095"	1.75" x .095" or 1.50" x .120"
Alloy Steel	1.375 x .095"	1.50" x .095"