## **2023 MOTORSPORT AUSTRALIA MANUAL**





Modified Article Date of Application Date of Publication

## **Vehicle Eligibility**

## 1. EQUIPMENT STANDARDS AND GUIDELINES

## 1.1 SAFETY CAGES / ROLL BARS

Approval: Competitors wishing to use this option are required to submit their intended design to the Motorsport Australia National Office prior to installation. A specific form is available for these applications.

Link Here: Historic Safety Cage Application form

**General configuration:** Whilst there is no prescribed maximum height limit on these roll bar structures, excessive height is to be avoided as such can reduce both strength and the effectiveness of the structure. The top of the roll bar should be at least level with the top of the driver's helmet when seated in the normal position, but a height 50mm above that is considered ideal.

Where possible, bar forms should follow the styles shown in the *Manual* Technical Appendix Schedule J, type 1, 2 or 3.

Bracing can be forward or backward, but must leave adequate room for the driver to operate the car properly and exit rapidly in an emergency. The angle of the brace or braces to the main hoop must be such that it provides adequate strength in a fore and aft direction. Generally speaking, the greater the angle between the hoop and the brace, the greater the strength of the structure.

Braces should pick up the main hoop as near the top as possible to minimise the unbraced length. Wherever possible, all the components of the ROPS should use straight lengths of tube, with the obvious exception of the top of the hoop. In particular, fore and aft braces should be straight runs.

**Material:** Ideally the material specifications detailed in paragraph The *Manual* – Historic Appendix - General Requirements 1.6 (e). Materials should be used, but alternatives will be considered where these can be shown to be impractical. Alloy bars are not allowed.

**Mounting:** Adequately strong mounting is sometimes difficult to achieve with some early cars and careful design is needed particularly in cars with narrow or backbone chassis. Fibreglass and monocoque vehicles will need the bars to be mounted to suspension points, gearbox mountings or similar strong points. Load spreading by plates may be required. Bars may be fixed or removable. In the case of fibreglass bodied cars, where braces and hoop mountings need to pass through the bodywork, these should use sandwich plates between the mounting and the chassis attachment points.

Where improved side intrusion protection is desired, it will also require careful thinking and may be provided by internally reinforcing the door and catch mounting areas and internally reinforcing the doors themselves.

Where possible roll bar design should incorporate provision for safety harness mountings, or be designed in a way to facilitate harness mountings of adequate strength. Harness attachments should be designed to provide the harness angles shown in the *Manual* Technical Appendix Schedule I, Drawing I-1.

Ideally roll bars should incorporate a head restraint and/or shock-absorbing pad to minimise rearward movement of the driver's head in an accident. If a competitor feels that he cannot implement a ROPS to his satisfaction, but which also meets the Motorsport Australia rules and guidelines, perhaps the competitor should reconsider their choice of car or category.