

Rock Crawling Class Vehicle Specifications

1 General Vehicle Requirements (required for all classes)

1.1 Brakes - Complete brake systems must be in good working condition capable of stopping the vehicle at all times.

1.2 Body -

1.2a - The bonnet must cover engine bay to prevent any fluid spray from contacting occupants.

1.2b - Fire walls are required for fire safety and must be a minimum of .1.6mm aluminum, 1.2mm magnetic steel.

1.2c - All vehicles must have a floor under the driver and passenger feet to rest the occupant's feet on and protect them from flying parts during breakage. Floor must be a minimum of 1.6mm aluminum, 1.2mm magnetic steel.

Expanded metal is acceptable in Modified and Unlimited.

1.2d - Body parts damaged, missing, or torn off during the course of an event that were in place after a vehicle passed technical inspection must be approved by a Marshal. Vehicles that do not meet safety requirements after being damaged must be repaired or be disqualified from that course or the event.

1.2e - Plexiglas windshields are allowed.

1.3 Cooling - Radiator mounting must be designed so that in the event of a break in the radiator hoses, spotters and drivers are protected from the coolant spill. Radiators must be securely mounted. Hoses and connections must be in good condition without cracks. Top mount (roof mount) radiators are not approved. Radiators must have an overflow bottle connected to the radiator by an overflow tube. Spilled coolant shall be removed from the course by the competitors after completing the obstacle.

1.4 Electrical - Maintenance free type batteries with adequate mounting to keep the battery in place in the event of a roll are required. Battery must be securely mounted. Wires must be in good condition and safely routed. Exposed or burned wires are not approved. All bare electrical terminals (Battery, Winch Solenoid, Bulk Head Fitting etc) must be covered in a non conductive material.

1.5 Engine - Engines must be free of fluid leaks that pose a fire threat.

1.6 Fuel System -

1.6a - Non-vented fuel caps are required. Fuel system must be sealed with a rollover valve and manual shut off valve installed in the fuel vent line. Vent line must be routed so that if the rollover valve fails, fuels will not spill. Fuel tanks/cells including filler neck/hose must be mounted securely in a location that can NOT be damaged in a roll over or side impact.

1.6b - Vehicles leaking fuel will not be allowed to continue until repairs are made.

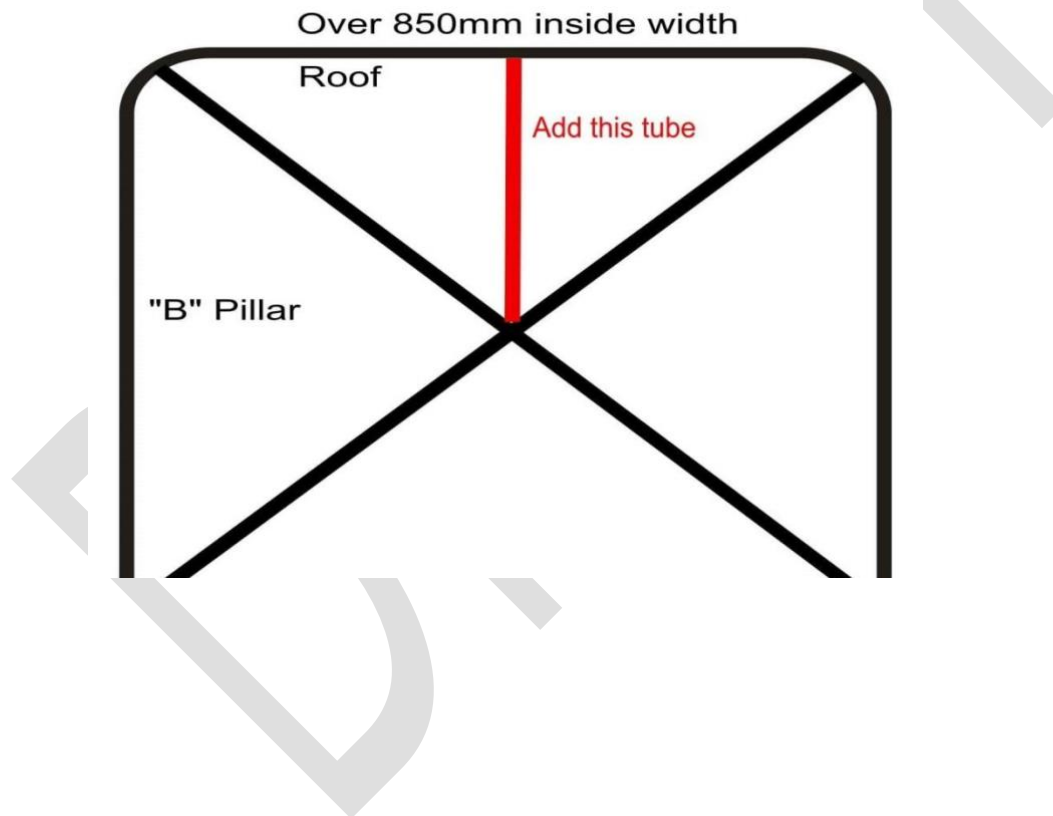
1.6c - Throttle assemblies must be in good order and work smoothly.

1.6d - Propane systems must have an electric energized to open solenoid for fire safety.

1.7 Roll Bars/Cages - Tube diameters and minimum requirements for roll over protection system:

- Wall thickness - 2.5mm minimum
- B pillar main hoop - 1 3/4 inch minimum
- B pillar x tube and vertical - 1 1/2 inch
- A to B tubes - 1 3/4 inch minimum
- A to A roof tube - 1 3/4 inch minimum
- Roof diagonals and roof centre tubes - 1 1/2 inch minimum
- Back stays- 1 3/4 inch minimum

Vertical bar from B hoop to centre of X brace is required when the top of the B hoop is 850mm or wider when measured from inside to inside of B pillar hoop.



External cages are only allowed in legends class

- Must have full factory cab
- Must have doors that use the factory opening and mounting points, must have a side intrusion bar, side intrusion bars can be installed within door provided they are mounted

between the lower hinge and the latch point. Factory door intrusion bars are acceptable provided they are installed in their original position and are the original size and material.

- Doors must be latched securely, if a door opens during competition instant DNF
- The front leg of a front roll bar or of a lateral roll bar shall be straight, or shall follow the windscreen pillars and have only one bend with its lower vertical part.
- Backstays shall be attached to the main hoop near the roofline and near the top outer bends of the main hoop on both sides of the vehicle. Backstays shall be attached to the main hoop within 100mm of the intersection of the diagonal cross brace. They shall be at angle of at least 30 degrees with the vertical, shall run rearwards and be straight as possible.

- No holes may be drilled in any part of the Roll Over Protection System.



- There must be diagonal members fitted in the B pillar and shall be straight. The lower end of the diagonal shall join the main hoop or the backstay not further than 100mm from the

fixing foot. The upper end must join the main hoop not further than 100mm from the junction of the backstay joint.

- The harness bar must be placed level with or within 50mm below the shoulder height of the occupant allowing the harness to pass over the bar and forward in a near horizontal plane before contacting the shoulders.
- Roof reinforcement shall consist of:
 - At least one longitudinal bar down the center joining the upper windscreen spreader bar to the main hoop
 - Two diagonal members joining the outer front corners of the upper windscreen spreader bar joining the centre no less than 2/3rds to the the main B pillar hoop.
- Roll cage main structure material may be CDW/CDS mild carbon steel or 4130 chromoly alloy steel. All welds must be of high quality and craftsmanship with good penetration and with no undercutting of parent material. Older buggies with Nb tube used in construction that have competed within the last 4 years will be individually assessed at scrutineering.
- All roll cage components (hoops, braces, gussets, etc.) must have a minimum of (50mm) of head clearance from any vehicle occupant's helmet when occupant is seated in normal driving/riding position. All roll cage components that might come into contact with the vehicle occupants' helmets must be padded.
- Roll cages must be securely mounted to the frame, chassis, or body. Roll cage terminal ends must be attached to a frame or body member that will support maximum impact and not shear or allow movement in the cage terminal end. Cab/body-mounted roll cages must sandwich the body structure using a minimum of two (3mm) thick, dissimilar sized, double plates, one on each side of the body structure. Roll cage mounting fasteners must be at least diameter S.A.E. Grade 8 (10mm gr 10.9) or equivalent or better. Sandwich plates, if used, must be oriented only in the horizontal plane. No vertical or other non-horizontal sandwich plate orientations are permitted.
- All vehicles, including those with OME steel doors, must have at least one side bar on each side of vehicle that will protect occupants from side impact. The sidebars must be of the same tubing material and dimensions as the main frame of the roll cage. The sidebars must be located to provide maximum protection to the occupants and must be securely welded to the front and rear hoops of the roll cage. The location of the sidebars must not cause difficulty in entering or exiting the vehicle.
- Gussets are recommended at all major intersections, including diagonal and rear down braces, where single weld fractures can affect occupants' safety. Gussets constructed of (75mm x 75mm x 3mm) flat plate or split, formed and welded corner tubing, or tubing gussets made of the same material and thickness as the roll cage may be used.
- All competing vehicles will need to have a CCDA log book for the roll cage.
- If cages are damaged at an event due to roll over or impact and deemed unsuitable to further protect the occupant from injury as per CCDA rules, vehicles will not be able to continue competition until repaired and inspected by CCDA official. Damage to roll over protection systems will be recorded in vehicle log book.

1.8 Roof - All vehicles must have a roof that covers the **FULL** roof of the cage to protect the driver from objects coming through the cage in the event of a rollover; this includes protection for the passenger if the spotter is in the vehicle during a spotter ride bonus. The roof must be made from a minimum of 3mm aluminum, 1.2mm steel.

1.9 Seating - Seats must have adequate support for the driver and spotter.

1.10 Steering - All steering components (u-joint, rag joint, electrical etc.) must be in good working order as determined by an Official. Hydraulic steering fluids must not leak. Hydraulic hoses must be shielded to prevent any hydraulic fluid from hitting occupants from the waist up.

1.11 Suspension - Suspension pivot points and connecting points must be free of cracks and in good physical condition.

1.12 Tires - All D.O.T. stamped tires are approved as well as tires designed for competition use.

1.13 Frames - Frames must be in good condition, free of cracks, designed to handle the abuse of rock crawling and tied to a roll cage that meets Ultimate Rock Crawling rules.

1.14 Fire Extinguisher Two (2) 1KG, Dry Powder Fire extinguishers are required to be fitted to all vehicles in all classes. Fire extinguishers need to be fully charged and mounted in the vehicle. At least 1 needs to be accessible by the driver and the other needs to be accessible from outside the vehicle for easy access by the navigator or a marshal.

1.15 Window Nets - Window nets are mandatory in all classes.

1.16 Axles - Axles including, but not limited to, ring and pinions, housings, hubs, axles, CV's, etc.

1.17 Battery Cutoff Switch - All vehicles must be equipped with a cutoff switch or lanyard type kill switch (both types preferred for safety). The switch must be easily accessible to the driver, spotter and course workers. The switch must kill the engine & fuel pump. Dash mounting is recommended.

1.18 Foot Containment - The foot containment method must be designed to keep feet inside the vehicle in case of roll over.

1.19 Seat Belts - 5 point harnesses are required in Modified and Unlimited, 4 point in Legends. Seat belts must meet the manufacturer's specifications. Seat belts must function and be used at all times. Mounting and use must meet the manufacturer's recommendations and directions. Seat belts must be in good working condition.

1.20 Transfer Case - Required

1.21 Transmissions - Required

1.22 Vehicle Numbers - Vehicles must have numbers at least 5" tall displayed.

1.23 First Aid Kit - A first aid kit is recommended for each team.

1.24 Helmets - Australian Standards or approved helmets are required for anyone riding in the vehicle while on course including spotters outside of vehicle

1.25 Fire Suits - Fire suits are compulsory for all Drivers and Navis if riding in the car.

1.26 Electric drive motors may be considered, and must drive through a transmission/ transfer case, the vehicle must be driven through tail shafts and differentials.

2. Legends Class

2.1: - **Tyres** - 42" maximum measured tire diameter by sidewall designation.

2.2: - **Steering** - Front axle steering only, rear steer is not allowed.

2.2a Portals- are not permitted.

2.3: - **Body** - Body panels are required. Body panels must closely match the original factory configuration of the vehicle. 66% of the original sheet metal must be in place. Tube bodied vehicles with skins go to Modified.

2.4: - **Seating** - Vehicles must have two (2) seats side by side.

2.5: - **Engine** - Mass produced automobile/light-truck engine available to the public mounted forward of the driver.

2.6: - **Suspension**- Changes in wheelbase allowed from normal suspension movement only.

2.7: - **Frame** - Box type or factory frame required (no tube buggies). 66% of original factory frame must be in place.

2.8: - **Fuel System** - Factory fuel tank and vents are acceptable. The tanks and vents must be in the stock location and configuration to pass tech. Any modifications to the factory systems will require a rollover valve and fuel vent line shutoff valve located near the fuel tank and accessible to track personnel.

2.9: - **Kill Switch** - Factory ignition switches are acceptable as a secondary engine stop. A separate battery isolation/ Kill switch must also be fitted clearly marked, red in colour and within reach of driver and navigator.

2.10: General Vehicle Requirements – General vehicle requirements apply - (see section 1).



3. Modified Class

3.6: General Vehicle Requirements - General vehicle requirements apply - (see section 1).

3.7 Body Profile – The front profile, Grille must resemble the original manufacturer. Side panels are compulsory, original bonnet not required, just engine covering.

3.8 Rear Steer Penalty – permitted.

3.9 Portal Penalty - permitted

4. Unlimited

4.1: No vehicle restrictions – provided they comply with all general safety and build standards

4.2: General Vehicle Requirements - General vehicle requirements apply - (see section 1).

4.3 Body – Panels need to be installed to prevent body limbs from protruding from vehicle, feet must be retained inside the cage as per rule 1.18

