

OFF ROAD APPENDIX
EXTREME LITE BUGGIES

Modified Article	Date of Application	Date of Publication

A capitalised and italicised word in this document is defined in the FIA International Sporting Code (Code) or the National Competition Rules (NCR), including their Appendices.
Any HEADING is for reference only and has no regulatory effect.

THESE REGULATIONS ARE BASED ON REGULATIONS AS PRODUCED BY AND FOR TORC OFF ROAD RACING CLUB.
THESE REGULATIONS ARE PRELIMINARY AND SUBJECT TO CHANGE BY MOTORSPORT AUSTRALIA.

1. GENERAL

These General Requirements shall apply to each vehicle unless explicitly varied by Specific Requirements.
For clarification on any point you should contact a representative of the organising club.

2. DEFINITION

An Extreme Lite Buggy is a small single seat off road vehicle with a wet weight excluding *Driver* of no more than 550 kg intended for use in short *Course* off road competition with speeds limited by the nature of the *Course* to approximately 100km/h. The vehicle shall be of tubular space frame construction, powered by a motorcycle, utv, ATV, or snow mobile engine driving the rear wheels.

3. ENGINE / TRANSMISSION

Subject to any additional requirements as may be otherwise specified:

- Each vehicle shall have one engine only, which is to be mounted entirely to the rear of the *Driver*.
- Engines may be used from any mass produced, motorcycle, ATV, utv, or snow mobile as long as it meets the rest of the requirements laid out within this document. No factory specials, one off or prototype engines will be eligible.
- An engine derived from a production car or similar is prohibited.
- Only the rear wheels may be driven via a chain, a shaft, or a belt and can be driven through a differential or a live axle.
- Each vehicle shall have a manifold pressure less than atmospheric at all times during competition, except where the engine came from the manufacturer standard with forced induction. In such an instance the *Motorsport Australia* formula of 1.7 x the actual engine swept volume shall be used to calculate its engine capacity. An engine that has forced induction is not permitted any other forced induction device to be fitted other than that which was installed from the manufacturer at the time of sale.
- Carburetor/s and/or fuel injection are permitted.
- Engine capacity shall not exceed 1500 cc.

4. FRAME

Each vehicle shall be constructed as a space frame of steel tubes and shall incorporate a safety cage. It can be home built, custom built, or commercially built, as long as it meets these regulations. The only exception to the following regulations will be where the individual chassis has independent *Motorsport Australia* safety cage certification and the relevant paper work can be provided.

4.1 ODYSSEY FRAME

Odyssey Class vehicles shall use a factory produced Honda Odyssey (1981 or later model with full cage) or Pilot frame. Each such frame may be modified only by the addition of gussets to the junctions of frame members, or extra reinforcing members.

4.2 GUSSETING

Each gusset shall be either a U shaped piece of sheet metal, or a tube, each of minimum thickness 1.0mm. The length of the gusset shall be between 2 and 4 times the diameter of the tubes being joined

4.3 HOLES

Any hole made in a primary tube of the frame must be reinforced by a crushtube of at least the same wall thickness as the primary tube structure.

4.4 BENDS

Each bend must be smooth, and free of kinks. The minimum bend radius shall be 3 times the diameter of the tube. Any distortion of the tube at bends shall result in a reduction of any dimension by not more than 10%.

4.5 WELDING

All welding shall be gas shielded electric arc welding to industrial standards, with full penetration, and around the complete circumference/perimeter of the tube.

5. FREE CONSTRUCTION FRAME

The use of high tensile steels with a carbon content exceeding 0.3% is prohibited unless specifically authorised via a *Motorsport Australia* Certificate. It is preferable that the material used be either "cold drawn seamless CDS " or " Drawn over mandrel DOM" mild steel or 4130 chrome molly, and may not be less than 250 mpa . A frame of free construction shall meet the requirements specified in the following articles. Each such frame shall incorporate a safety cage structure as per Article 5.1.

5.1 SAFETY CAGE COMPONENTS

A safety cage is compulsory on each vehicle constructed using a free construction frame.

- (a) Each component of the frame considered as the safety cage is shown in Drawing 1, Drawing 2 and Drawing 3.
- (b) The safety cage shall consist of two main vertical transverse hoops and longitudinal struts, (Drawing 1), two lateral roll bars linked by transverse and vertical members (Drawing 2) or a transverse main hoop and two lateral half hoops (front legs - Drawing 3)

5.2 MAIN ROLL HOOP - STANDARD BRACING

- (a) The rear main roll hoop (Drawings 1 and 2) or the equivalent section created when using lateral roll bars (Drawing 3) must contain two diagonally opposed braces in the form of an "X" to extend from the top two corners to a point approximately halfway down the roll hoop, preferably to the hip rail. This cross brace must be round tube and have a minimum cross section dimension of 25 x 2.6 mm Alternately this cross brace may have a deviation to the center of not more than 10 deg to accommodate the *Driver* seating position and head room. Refer to Drawing 4
- (b) Due to the nature of some existing or commercially available designs and the requirement of a retrofit of this x brace to existing vehicles, it is acceptable for this cross brace to be installed up to 200 mm to the rear of the rear main roll hoop at the top or bottom but not both. In this case the x brace must be flat and no deviation is permitted. Refer to Drawing 5

5.3 MAIN ROLL HOOP [SINGLE BRACE OPTION]

- (a) A single diagonal cross brace is acceptable - in this case where only a single diagonal is used it must be inside the main hoop on the same plane both top and bottom. A minimum tube size of 31.8 mm x 2.6 mm, the same as the primary frame tubes must be used for a single brace and must extend from one top corner to the opposing bottom corner. However it is highly recommended that a "x" brace be used. In the case where a single cross brace is used it must be straight and no deviation is permitted. Refer Drawing 6

5.4 MAIN ROLL HOOP [ALTERNATE BRACING OPTIONS]

- (a) There are some additional bracing options that are acceptable in the rear main hoop and these can be a minimum of 25 x 2.6 round tube. But these configurations must also be entirely within the plane of the main hoop and no deviation is permitted. Refer Drawing 7
- (b) Some bracing is required in the lower half of the main roll hoop below the center rail but this is largely dependent on engine choice and mounting configuration and as such cannot be specified other than to say this cannot be left as a complete open span.
- (c) If in doubt about any of the above design aspects, seek clarification from the club scrutineer.

5.5 PRIMARY FRAME COMPONENTS

- (a) Each member of the safety cage highlighted in drawing 8 shall be considered as a primary frame component and shall be constructed from Circular Hollow Section (CHS), except for hoop bracing material. The tube used to construct the safety cage primary members shall have a minimum external diameter of 32mm and a minimum wall thickness of 2.6mm. The minimum yield strength of the material shall be 250 MPa. Each individual primary frame component shall be formed from a single piece of material with no joins. Where a tube needs to be replaced or repaired it must be sleeved internally with a neat fitting tube of the same thickness and extend into each end of the frame by no less than 70 mm and be plug welded in 2 positions in each end and fully welded at the actual join .

5.6 SECONDARY FRAME COMPONENTS

- (a) Each tube highlighted in Drawing 9 shall be regarded as a secondary frame component. Rectangular Hollow Section (RHS) tube used as a secondary frame component shall not be less than 31.8x2.6mm. Each CHS tube used as a secondary frame component shall be not less than 31.8x2.6mm. Metric equivalent is 32 x 32 x 2.6.
- (b) The safety cage must be designed so that it does not unduly restrict the *Driver* from getting in or out of the vehicle. There must be a minimum of two points of exit on each vehicle (in the case of frames incorporating roof hatch access, three points of *Entry/exit* shall be required) and the *Driver* shall be able to exit within 9 seconds, starting in a ready to race condition.
- (c) Each component not comprising part of the safety cage may be constructed from either CHS or RHS steel tube.
- (d) The upper part of the hip rail extending from the front leg/hoop of the safety cage to the rear main hoop must be at least 400 mm at its lowest point above the lower edge of the lower chassis rail. Refer Drawing 10
- (e) The safety cage shall incorporate side impact protection. This must take the form of at least one full length bar either diagonal or horizontal in the door area in approximately the middle, this tube or tubes can intersect with other tubes to form the side impact protection. These intrusion bars may be square or round and can be a minimum of 25 x 2.6 mm. Refer Drawing 11
- (f) Where any horizontal roof rail exceeds 600mm in length, it shall be provided with a reinforcement brace as per Drawing
- (g) Where any front roll hoop member exceeds, 6 0 0 m m a reinforcement tube shall be fitted, positioned such that no member of the front roll hoop exceeds 500mm. Refer Drawing 12
- (h) When the *Driver* is correctly seated in the restrained position there must be a minimum of 65 mm clearance between the *Driver's* helmet and the roof plate.
- (i) Any framework which can be contacted by the *Driver's* helmet when the *Driver* is correctly seated in a restrained seated position shall be covered by high density padding to *FIA 8857-2001* or *SFI standard 45.1*. Low density foam may be used to pad other areas of the frame that could contact the *Driver's* body.

6. HEAD REST

A head rest must be fitted to the safety cage behind the *Driver's* helmet. The headrest shall be covered with high density foam, and shall be of minimum dimensions 150mm x 100mm.

7. GLASS

For other than rear view mirrors, dust lights and stop lights, any glass and brittle plastic must be covered with adhesive film.

8. SUSPENSION

Other than Minisprint, FL250 Odyssey Class and Sidewinder Super Singles, all four wheels must have independent *Suspension* and at least one damper unit per wheel.

9. BATTERY/ELECTRICAL

- (a) An electric starter is permitted in all classes.
- (b) If fitted, each battery must be of a spill proof type securely mounted and protected.
- (c) Each battery terminal must be protected by insulating material.

9.1 ISOLATING SWITCH

Each vehicle shall be fitted with an externally operated *Circuit* breaker which shall isolate the positive *Circuit* of the electrical system, and be wired in such a manner as to kill the engine when operated. The *Circuit* breaker must be located within the vicinity of the rear roll hoop close to the hip rail on the right hand side, and be marked by a white edged blue triangle with sides of length 100mm minimum, with a red flash,. Clear markings showing On/Off must indicate the switch position. The *Circuit* breaker must disconnect each electrically operated device from the battery and stop the running engine. Each lead from the battery to the isolation switch must be double insulated.

9.2 KILL SWITCH

Each vehicle shall be fitted with a manually operated kill switch capable of stopping the running engine. This must be capable of being operated by the *Driver* whilst seated and restrained.

10. LOCKING DEVICES

Split pins, 'R' clips or self-locking nuts must be fitted to the bearing retaining nut on each axle and tie rod end.

11. BUMPER BARS

Where any part of the front or rear complete wheels extends longitudinally beyond the frame, a bumper bar must be fitted. The bumper shall be at least the same width as the frame and extend longitudinally at least 50mm beyond of the extremity of the wheel. Bumpers must be constructed from a minimum of 25mm x1.6mm CHS or RHS steel or 25mm x 2mm aluminium round tube, and have no open ends or sharp corners.

12. SHARP EDGES

No exposed edge or component on the exterior of the vehicle nor within the *Driver* compartment shall have a radius less than 10mm. All tube ends shall be capped.

13. REMOVAL OF MATERIAL - LIGHTENING

Drilling of bolts, pins or fixtures other than for locking devices is prohibited.

14. FUEL AND FUEL SYSTEM

- (a) Each fuel tank must be mounted entirely within the confines of the frame.
- (b) Each fuel tank must be constructed of a minimum of 1.6mm steel or 2mm aluminium. It must have a leak-proof filler cap.
- (c) The fuel system must be fitted with a device enabling the flow of fuel from the tank to be stopped. If a tap is used it shall be easily accessible and clearly marked by a label or sticker with an arrow clearly indicating the direction of shut off. A fuel injected engine using a fuel pump w h e r e fuel cannot pass through the pump while electrical current is removed, is exempt from this requirement.
- (d) The fuel tank must be separated from the *Driver* by a firewall in other than Odyssey Class automobiles.
- (e) Each fuel line between the fuel tank and fuel shut off tap must be made of metal. Each other fuel line shall be of a material specifically designed for the carriage of fuel. The fuel line must be fastened at each point of connection by hose clamps, and be entirely contained within the confines of the frame.
- (f) Each tank breather must contain at least one loop or rollover valve to minimise the risk of spillage in an inverted position.
- (g) Each vehicle fitted with an electrically operated fuel pump shall be configured so that the fuel pump shall be shut off within 5 seconds of the absence of crankshaft rotation.
- (h) Fuel must be Commercial fuel as specified in *Schedule G* of the *Motorsport Australia Manual*. Methanol fuels and additives are not permitted.

15. BRAKES

Each vehicle, other than 250 Odyssey Class and 350 Stock and 400 Modified, shall be equipped with a braking system operated by a foot operated pedal with a separate braking unit acting on the 2 front wheels and a minimum of one unit for the 2 rear wheels. A hand operated braking system independent of the primary system is compulsory on each vehicle that does not have a dual braking system.

16. NERF BARS

- (a) Each vehicle must be fitted with nerf bars between the front and rear wheels to minimise the possibility of wheel entanglement. Each nerf bar must extend in width from the main chassis to a point not less than the 25mm inside the outside edge of the rear tire and not beyond the outside of the rear rim. The maximum distance between the front of the rear tyre and nerf bar shall not exceed 200 mm.
- (b) The nerf bar should also extend to the front wheel in the same manner, but only needs to extend to half the front wheel width.
- (c) Each nerf bar must be constructed from CHS or RHS tube. The minimum tube size is 25mm x 1.6mm steel or 25mm x 2mm aluminium.
- (d) Nerf bars are not considered part of the frame and must not assume any structural load.
- (e) Each nerf bar shall be securely mounted to the chassis and should preferably be removable.
- (f) Each nerf bar shall be attached to the frame at three points in a triangular fashion. (e.g. attached front and rear to the lower frame/chassis and braced upward to the rear roll hoop). No tube open end will be allowed.

17. FLOOR PAN/BASH PLATE

- (a) Floor pans and bash plates must be constructed from 2mm steel or 3mm aluminium sheet and extend the full length.
- (b) Each Odyssey Class vehicle must have a floor pan/bash plate mounted beneath the seat. It is highly recommended that a full floor pan be fitted.
- (c) Each vehicle of any other class must have a floor pan from the back of the seat to the front bulk head of the vehicle, encompassing the full width of the chassis and be securely bolted or welded in place.

18. ROOF PLATES:

A roof plate is compulsory. The roof plate may be made from either 2mm steel or 3mm aluminium. The roof plate shall extend in length from the front hoop to the rear hoop and in width to span the roof bars. The roof plate must be securely mounted using a minimum of four 8mm bolts.

18.1 ROOF ACCESS/HATCHES

The plate shall be attached at its front edge by a continuous hinge which extends across the width of the roof to within 20mm of the side tubes. Both side and rear edges must overlap and be supported by the roll cage structure. Attachment of the hinge to the roof panel and mounting plate must be at intervals no greater than 30mm. Minimum acceptable fixing device is a 3mm diameter steel or Monel rivet. At least two latches self-locking suitable for securing the roof panel closed are required. Catches must be free of any sharp or protruding edges.

19. TRANSMISSIONS:

Each vehicle fitted with a gearbox must have a functioning neutral position.

20. BODY PANELS:

- (a) The *Driver* compartment must be protected from the direct *Entry* of debris. Body panels shall be fitted to each side of the frame up to the height of the hip rail from the rear of the *Driver* compartment to the front of the foot well. A bonnet panel shall enclose the area from the front roll hoop to the front of the foot well.
- (b) Each body panel shall be securely mounted at a minimum of three points
- (c) Drilling of any frame members to affix panels is prohibited
- (d) *Driver* access must not be hampered in any way.
- (e) Bolt on wings or spoilers are prohibited unless an integral part of moulded body work.

21. RADIATORS

Each radiator, if fitted, must be mounted securely within the confines of the frame and be as far away from the *Driver* as practical. Each radiator cap must be securely fixed.

22. DUST LIGHT

A rear amber dust light is compulsory. It must have a lens of at least 50mm x 50mm. The dust light must be operational whenever the isolation switch is on.

23. BRAKE LIGHT

- (a) A rear red brake light is compulsory except in Odyssey class.
- (b) Each brake light must have a lens of at least 50mm x 50mm

24. DRIVE GUARDS

- (a) Each chain driven vehicle shall have a chain guard over the top and rear of the chain.
- (b) Each belt driven vehicle shall have a belt guard around the front and top of the drive clutch.
- (c) Each shaft driven vehicle shall have a guard/strap to prevent the shaft from contacting the ground under the chassis.

25. NOISE LEVELS

Each vehicle shall not exceed a maximum noise emission of 95 dB (A) when measured 30 meters from the edge of the *Track* under competition conditions. Any vehicle exceeding the noise level limit shall be disqualified from that competition.

26. MIRRORS

One or more mirrors is permitted provided it is made from a shatter resistant material or covered with a clear adhesive film.

27. WARNING DEVICE

Each *Automobile* shall be equipped with an acoustic warning device (horn, siren) capable of generating a sound level of 100dB (A) at 1.0m from the device. This requirement may be waived by *Event* regulations.

28. WHEELS AND TYRES

The maximum permitted overall tyre diameter is 685mm. Each tyre and wheel is otherwise free.

29. SEATS

Each seat not integrated into the frame shall be mounted using a minimum of four Grade 8.8 (or greater) fasteners of not less than 8mm diameter. The seat must not be used as a fuel cell.

30. EXHAUST

Each exhaust pipe shall be inside a line from the top of the safety cage to the top of the rear tyre and be securely attached.

31. OVERALL WIDTH

The width of the vehicle shall be determined by a measurement across the outer most points of the front or rear wheels, whichever is the greater. Refer to class specifications.

32. WHEELBASE

The wheelbase is defined by a distance measured longitudinally between two parallel vertical planes through the front and rear wheel hubs. Refer to class specifications.

33. VEHICLE LOG BOOKS

Each vehicle shall be subject of a Club or *Motorsport Australia* Log Book. Each vehicle with a competition history prior to 31/12/2009 may be issued with a Log Book notwithstanding non-compliance with certain

aspects of the above Technical Regulations. Such a vehicle may continue to compete in its existing specification.

34. COMPETITION NUMBER

Each vehicle shall carry a competition number visible from each side. Numbers shall be a minimum of 150mm high in a colour and background as detailed in specific class requirements.

35. SEAT BELTS AND COCKPIT SAFETY

- (a) A certified five point harness consisting of lap belts, shoulder straps and a crotch strap shall be fitted. The latching system or buckle shall be operated by a single action. The minimum width of the main straps [shoulder and waist] is 75mm and must be date stamped Belts that have expired will not be accepted.
- (b) Each vehicle must be fitted with a window net to both sides of the *Driver* compartment. Window net construction is free providing there is no opening large enough to allow any limb or partial limb , i.e. hand / elbow etc. to extend beyond the bar work in the case of a roll over. Unlocking mechanism must be simple and allow operation from inside and outside the vehicle.
- (c) All vehicles must be fitted with a steel mesh front windshield device covering the entire front opening of the vehicle. The mesh size of which must be a minimum of 35 mm x 35 mm with a wire gauge of no less than 1.6 mm.

OFF ROAD APPENDIX

EXTREME LITE BUGGIES – SPECIFIC REQUIREMENTS

1. GENERAL

These Specific Requirements are detailed for and shall apply to each vehicle class. For clarification on any point you should contact a representative of the organising club.

2. CLASSES

250 ODYSSEY

MINI SPRINT Super Single

350 ODYSSEY

SUPER MODIFIED Super Single

LIMITED

PRO-MAX

Motorsport Australia Off Road SXS

250 ODYSSEY CLASS

1. GENERAL PRINCIPLES

In principle this class will respect the manufacturer's original specifications. The only modifications permitted are those which are detailed hereunder. This class is designed for members who wish to compete in a Honda Odyssey FL250.

2. FRAME

Each frame shall be a standard FL250 Odyssey frame modified only as per General Requirements Article 4.1

3. COMPETITION NUMBER

Competition numbers shall be white on a green background.

4. ENGINE

Vehicles must retain the FL250 air cooled engine.

5. TRANSMISSION

The transmission shall be the standard FL250 unit.

6. FUEL SYSTEM

Any modifications to the fuel system must meet the safety requirements detailed in General Requirement 14.

7. SUSPENSION

Each front swing arm may be gusseted for strength. The rear axle may have axle support bearings added for increased strength.

8. BRAKES

The original braking system shall be retained. A park brake shall be fitted to the vehicle.

9. WHEELBASE

Wheelbase shall remain standard.

10. WIDTH

Each vehicle shall have a maximum width of 1300mm.

11. COOLING

Additional air ducts, fins and cooling fans may be added.

MINI SPRINT SUPER SINGLE CLASS

1. GENERAL PRINCIPLES

A Mini Sprint is a Honda Odyssey FL250 prepared and set up for racing on smooth dirt surfaces. Modification is permitted subject to the following.

2. COMPETITION NUMBERS

Competition numbers may be painted on the body, but must be at least 300mm high and clearly visible from both sides of the vehicle. Numbers should be a strong contrast to the body. It is highly recommended to run a number plate mounted on the roof. *Competition* numbers shall be white on a red background.

3. ENGINE

3.1 Type A:

Modifications to the cylinder head and barrel are free including replacement by a cylinder and/or barrel from another manufacturer (pre 1995, excluding 1995) provided that at all times the capacity of the engine does not exceed 650cc and the original stroke dimensions are unchanged. A maximum overbore of 2mm is permitted.

3.2 Type B:

Replacement of the complete engine with a complete pre 1995 (excluding 1995) manufactured engine and gearbox as specified:

- (a) Engines permitted are up to 1995
- (b) The engine must be single cylinder and the capacity must not exceed 250 650cc.
- (c) A maximum overbore of 2 mm is permitted. The stroke of the engine must not be changed from the original manufacturers' specifications. The original gearbox must be retained. Ratios must remain standard.

4. SUSPENSION

- (a) Modifications and improvements are permitted to front *Suspension*. The mode of the front *Suspension* (swing arm) must be retained.
- (b) Maximum toe in and/or out from parallels is 20mm.
- (c) Modification to the rear *Suspension* is permitted with a maximum travel of 75mm.

5. BRAKES

- (a) Braking may be changed but must be proven to be more efficient to Chief Scrutineer. There shall be some form of hand brake system fitted to the vehicle or neutral gear.

6. ROLL CAGES

- (a) Stock FL250 frame dimensions must be retained. Chassis and/or roll cage plans and materials specifications must be submitted to the Chief Scrutineer for approval.
- (b) Roll cages must have two main hoops, the rear hoop, or equivalent, on home built chassis, must contain a metal firewall, at least the height of the engine, to separate the engine compartment from the *Driver's* cockpit.
- (c) The Scrutineer must inspect all new vehicles at the tack welded stage.

7. ROOF PLATES

Roof plates are highly recommended.

8. TRANSMISSIONS:

8.1 Type A:

The Honda FL250 transfer box must be retained in its original location if the FL250 crankcases are used. Ratio changes are not permitted. The FL250 transfer case may be removed but must be replaced by a drive system incorporating a belt drive assembly.

8.2 Type B:

Gearbox engines must use chain drive and have the ability to engage neutral gear. Ratios in the gearbox may not be changed from the manufacturer's specifications. The original Honda transfer case may be removed but external gearing must replace the transfer case. The ratio between the engine to the rear tyre shall be limited to the potentially fastest type B vehicle built to this date.

9. WHEELS AND TYRES:

- (a) The maximum rim diameter is 10 inches, wheels are otherwise free.
- (b) The maximum permitted tyre size for the front is 18 inches diameter.
- (c) Rear maximum diameter 20 inches and the tyres are free but must be designed for flat *Track* use, knobby tyres are not permitted.

10. WHEELBASE:

Wheelbase shall not exceed 1560mm

11. TRACK:

Track shall not exceed 1570mm

350 ODYSSEY CLASS

1. GENERAL PRINCIPLES

In principle this class will respect the manufacturer's original specifications. The only modifications permitted are those which are detailed hereunder. This class is designed for members who wish to compete in a Honda Odyssey FL350.

2. FRAME

Each frame shall be a standard FL350 Odyssey frame modified only comply as per General Requirements, Article 4.1

3. COMPETITION NUMBER

Competition numbers shall be white on a red background.

4. ENGINE

Vehicles shall retain the FL350 air cooled engine. The bore may be increased to a maximum of 82.0mm.

5. TRANSMISSION

The transmission shall be the standard FL350 unit.

6. FUEL SYSTEM

Any modifications to the fuel system must meet the safety requirements detailed in General Requirements Article 14.

7. SUSPENSION

The standard *Suspension* principal shall be retained

8. BRAKES

The original braking system shall be retained. A park brake shall be fitted to the vehicle.

9. WHEELBASE

Wheelbase shall remain standard.

10. WIDTH

Each vehicle shall have a maximum width of 1525mm.

11. COOLING

Additional air ducts or fins may be added. Cooling fans may be added.

SUPER MODIFIED SUPER SINGLE CLASS

1. GENERAL PRINCIPLES:

The Super Modified Single class is for modified FL350 and FL400 vehicles as well as other small capacity vehicles. Each vehicle is restricted to a maximum wheelbase dimension 2100 mm x 1700 mm.

2. FRAME

Each frame shall be either a standard FL350 or FL400 Odyssey frame as per General Requirements, Article 4.1, or a Free Construction frame as per article 5.

3. COMPETITION NUMBER

Competition numbers shall be white on a blue background

4. ENGINE

Each engine shall be naturally aspirated. Forced induction is not permitted.

4.1 Odyssey Frame:

Shall be either a 350cc or 400cc Odyssey or Pilot engine.

4.2 Free Construction Frame:

Each engine is free save that it shall be derived from a motorcycle manufacturer and have a maximum capacity as follows:

- (a) 4 stroke with a chain drive 650cc
- (b) 2 stroke with a chain drive 500cc
- (c) 2 stroke with a variable vee belt drive 520 cc

5. TRANSMISSION

The transmission shall be either an FL350 or FL400 unit, or as fitted to the engine used by the motorcycle manufacturer.

LIMITED CLASS

1. GENERAL PRINCIPLES

The limited class buggy shall have a wheel base of 2100mm or less and an overall width of 1700mm or less and be powered by an engine of 1000cc or less and weigh under 400 kg without a *Driver*.

2. FRAME

Each frame shall be a Free Construction frame as per General Requirements, Article 5

3. COMPETITION NUMBERS

Competition number shall be black on a yellow background and must be visible from both sides of the vehicle.

4. ENGINE

Each vehicle shall have a maximum engine capacity of 1000cc or subject to General Requirements, Article 3 for a forced induction engine.

PRO-MAX CLASS

1. GENERAL PRINCIPLES

The Pro-max class is a vehicle to larger dimensions than other class. Each vehicle shall not exceed 2370mm wheelbase x 1940mm width.

2. FRAME

Each frame shall be a Free Construction frame as per General Requirements, Article 5

3. COMPETITION NUMBERS

Competition numbers shall be white on a red background and must be visible from both sides of the vehicle.

4. ENGINE

Pro-max Class vehicles shall have a maximum engine capacity of 1500cc or subject to General Requirements, Article 3 for a forced induction engine.

MOTORSPORT AUSTRALIA OFF ROAD SXS

1. GENERAL PRINCIPLES

The *Motorsport Australia* Off Road SXS Class is for a vehicle which meets the requirements of a *Motorsport Australia* Off Road SXS.

Appendix A - Diagrams

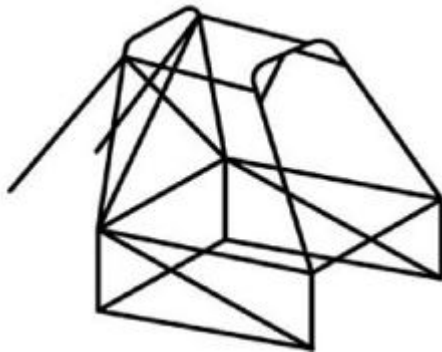


Diagram 1

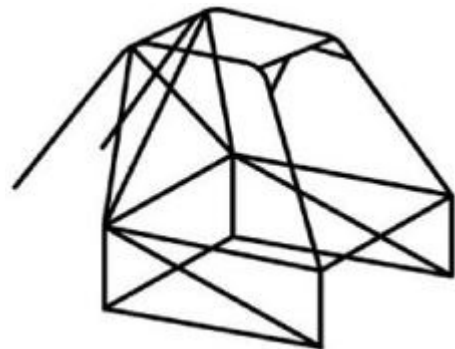


Diagram 2

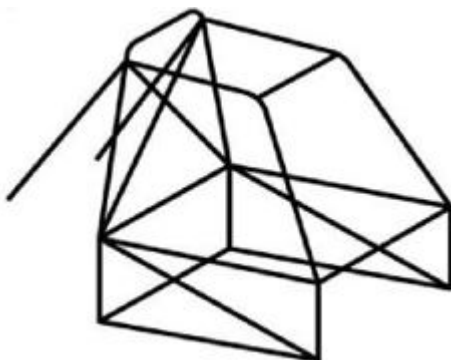


Diagram 3

Diagram 4

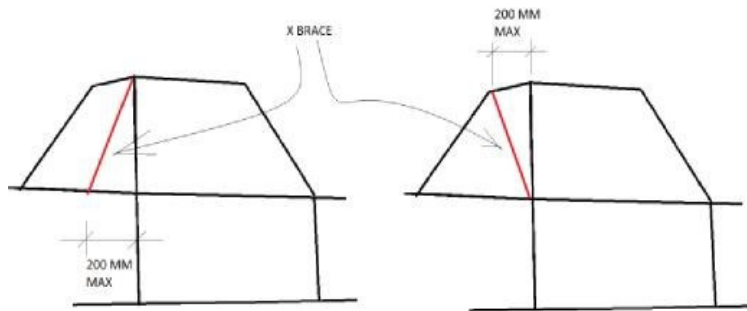
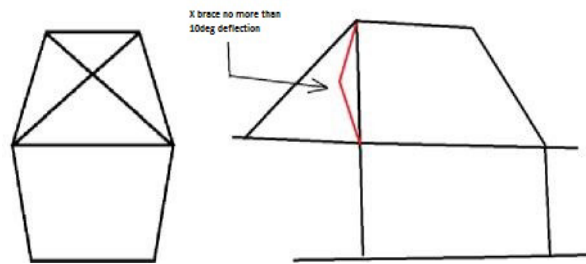


Diagram 5

Diagram 6

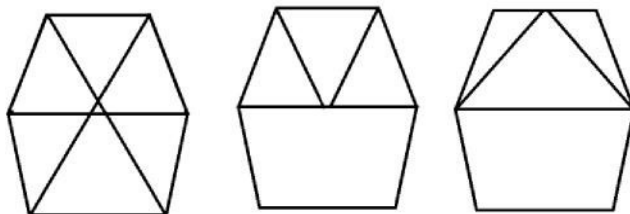
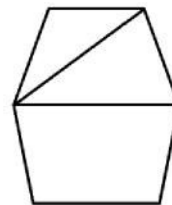


Diagram 7

Diagram 8

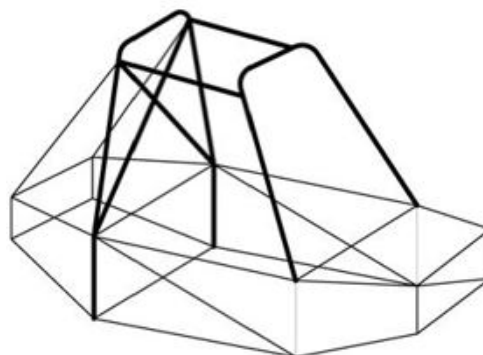


Diagram 9

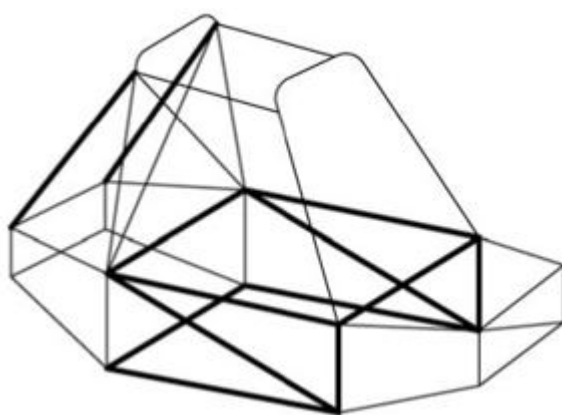
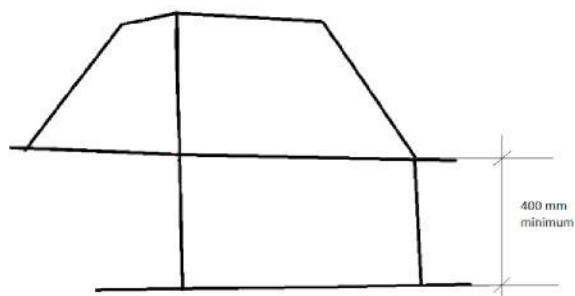


Diagram 10



Minimum side intrusion requirements

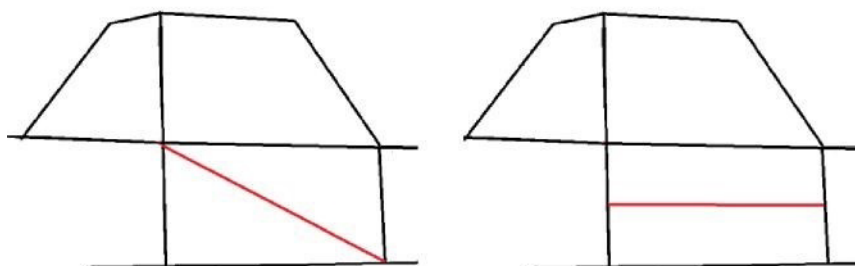


Diagram 11

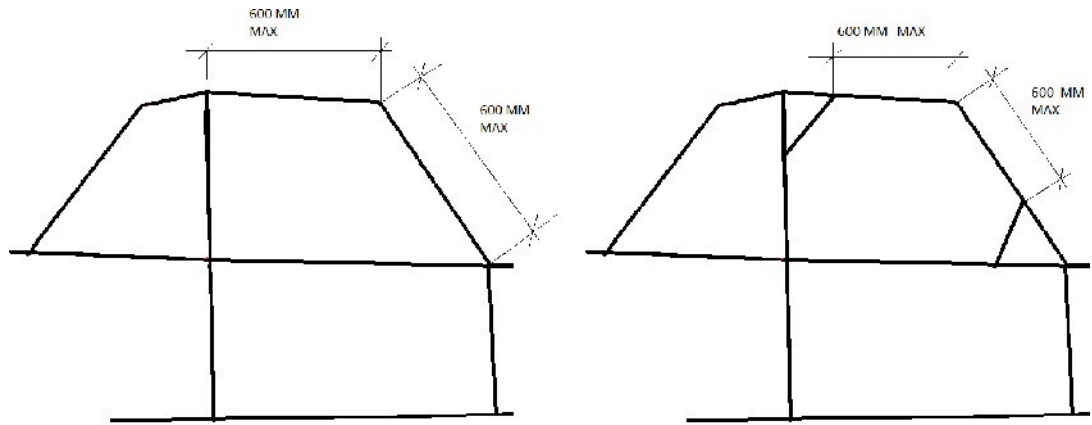


Diagram 12