

# 2023 BUXTON/SKEGNESS JUNIOR RODS (NISSAN)

## CAR CONSTRUCTION RULES AND REGULATIONS

Note: Text changes/additions from last year's 2021 rules are highlighted in Bold

Deleted items are struck through thus.

### RECENT CHANGES

**In red below**

**We plan to Check weights during 2023 and then set it for 2024**

### RACECEIVERS

**Drivers must have a working Race Receiver device fitted**

### INTRODUCTION

Junior Micra Rods are a low cost, entry-level saloon formula running on a STRICTLY NON-CONTACT basis. This formula is for drivers aged 11 to 16.

**The only cars permitted to be used are Nissan Micra's only, K11 with 2 or 4 doors fitted with 1000cc engine. We are working on the weight limit during the 22 season with it being listed for 2022**

It is a "training ground" from where hopefully drivers will progress to a senior formula. The Promoters decision will be final in the interests of keeping the formula attractive to newcomers. Newcomers are coming into this formula at all times, these drivers are required to do the ORC Junior Test. This CAN'T be done on race days and needed to be booked via the office

NOTE: Junior Micra Rod racing is individual racing for points. No team racing is allowed.

Please refer to Section 22 "General" regarding racing lines and mechanical defects

In Junior Rods, day licences are not accepted.

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### **Youth Helmets (Drivers aged 15 and under)**

See ORCI website

### VIOLATIONS

When referring to the engine, gearbox, differential, mechanical or construction, rules and regulations the principle will always be: Unless these rules state you can do it, you CANNOT DO IT.

Unless permission is specifically granted to make modifications, or any variation, nothing may be done to alter or change in any way the standard Parts. Any requests must be made in writing to the Raceway Office, which will be presented for consideration by the Board of Control. If, in the interest of the formula a change is appropriate, notification will be given via the newsletter, pending formal inclusion in the Rules at the next up-issue.

Cars, Engines and Fuel will be checked on a random basis and all drivers must be prepared to have their engine stripped for examination at any time. If the driver does not have the expertise to do it, then he/she must provide someone to do it for them. Refusal to allow the engine strip may result in a ban of up to one year from all formulas.

Violations will result in an immediate suspension of all racing facilities and any refusal will also result in an immediate suspension. All car and engine specifications will be taken from the Technical Service Data book for cars as published by Glass's Guide Service Limited. It is the driver/parent responsibility to check the legality of his or her own car prior to competing.

NB: Drivers/Parents are reminded that scrutineer checks can be carried out at any time. If parts are suspected of being illegal, make sure you leave them with the promotion if you do not agree. If you refuse it will automatically make the parts illegal. It is the responsibility of the driver/parent to prove to the promotion that the part is legal by the way of written proof of where the part originated. This must be done within 7 (seven) days, otherwise the part(s) in question will be deemed to be illegal and will result in immediate suspension from racing and referral for disciplinary action. Any part we think is illegal will be sent to be checked, if found illegal Driver/Parent will be subject to cost, if found legal Buxton will pick up the cost.

### **SCRUTINEERING**

Arrival at the Raceway is required minimum 1 (one) hour before the advertised start time to allow scrutineering to be carried out. You need to present your car to the scrutineering area to be checked, as soon as possible after arriving at the raceway, having first signed in at the Pit Office accompanied by parent/guardian. The driver/parent/guardian must accompany the car complete with race licence and full PPE.

### **1. CARS ELIGIBLE**

- **The only car permitted for use in Junior Micra Rods is the K11 Nissan Micra with the 1.0 engine, 2 or 4 door shells can be used.**

### **2. PREPARATION**

- Remove all exterior headlamps/rear lamps.
- Remove all glass, interior trim, dashboard, head linings, door linings, floor coverings, passenger seats and all

other non-essential flammable material.

- All window mechanisms must be removed.
- ☒It is recommended that all obsolete wiring be removed.
- Remove spare wheel carriers and tow bars if fitted.
- ☒Head/tail lamp apertures must be plated over (welded / riveted) and painted. Original one-piece plastic bumpers must be retained and securely affixed without protrusions by way of six bolts (i.e. use mushroom / countersunk headed bolts
- ☒Standard cosmetic grilles may be removed and replaced with steel mesh / drilled alloy sheet to protect radiator. No other protection is allowed.
- All doors must be welded shut or bolted shut (2 x M10 bolts). This includes tailgates / boot lids which must NOT be removed. Doors may not be secured with ropes and/ or chains.
- Deskin of the car is only permitted on the passenger & driver's doors, rest of the car must remain standard.

- No additional welding is permitted.

### 3. BODYWORK

- Cars must be tidy in appearance and maintained to look good at all meetings.
- Standard/aftermarket external door mirrors must be fitted drivers' side and passenger side. For safety, the glass must be taped to the housing. Mirrors MUST be fitted inside.
- Doors must not be folded down.
- A hole (round or square) must be cut in the bonnet near to the inlet to enable a fire extinguisher to be used without the need to open the bonnet. Minimum size 2". Maximum size 6",
- Bonnets may be secured with up to 4 bonnet pins, (2 front, 2 back). The pins shall be ½" (12mm) maximum diameter and 1 ½" (38 mm) long maximum above the bonnet. These bolts must not pass through the chassis or be attached to the suspension bed. Front bolts must go through the slam panel or the inner wings. Front bolts must be no further forward than the slam panel. Maximum size of washer is 1½" x 1½" x ¼". (38 x 38 x 6 mm)
- Triangular corner plates may be fitted between wing top and scuttle are no longer allowed
- Sunroof apertures must be plated over (riveted or welded) with sheet steel - minimum thickness 1 mm.
- Boot spoilers may be fitted if standard to the car.
- All holes in the front bulkhead must be filled to provide a firewall between the engine and driver.
- No welding for strength. No armouring.
- No reinforcing behind front or rear bumpers.
- Wheel arches may be cut away; if the body is cut then 2" (50mm) wheel spats of mild steel must be fitted. Seam welding is not permitted anywhere on the car with the exception of WHEEL ARCHES
- Good overall appearance is requested but no team colours permitted.
- If you have 2 cars and one is used at a different track other than Buxton & Skegness, it must be a different colour.
- Minimum of 6" or whole roof must be painted according to the driver grading [when grading is used] and at least two flashing amber light fitted for Superstars. (\*See also Section 19 - Racing Numbers) These flashing lights should be normal indicators (side repeaters) only and must be working. No rotating beacons. LED type lights can be used.
- A roof fin shall be fitted to each side of the car at gutter level at the top of the rear "C" pillars or a single fin mounted in the middle of the roof. Each fin shall be a 12" x 8" rectangle (A4 paper size) mounted horizontally, painted white with black numbers 6" high x 1" brush strokes. The plates shall be securely welded or bolted in place.  
**The original type of bumper must be fitted at all times to prevent the cars looking like bangers.**
- **A footplate must be fitted with a minimum of 6x 10mm (spanner size 17mm) bolt, nut and washers**

### SCRUTINEERS MAY FAIL CARS THAT ARE NOT IN A CLEAN & TIDY CONDITION

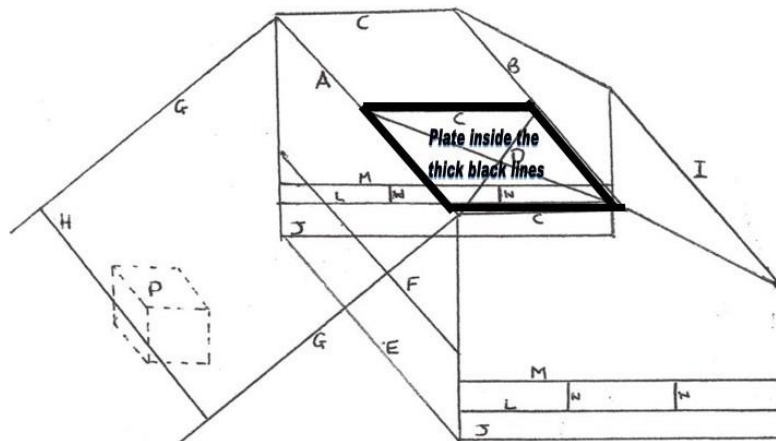
#### 4. SUSPENSION

- No competition dampers, no adjustable platforms.

- Aftermarket lowering/coil over springs may be used.
- No adjustable coil overs or adjustable platforms.
- The original springs may be cut or heated to lower.
- Repairs to damaged cars can be carried out by patch plating after cars are pulled straight but ONLY steel of the car body thickness may be used otherwise this will be considered to be illegal armouring
- Due to some issues with CAMBER and after looking into it and speaking with some parents it has been decided to allow CAMBER on Junior Rods. The new rule reads:
- Nearside front wheel ONLY can have Negative camber.  
Camber can be only gained by drilling elongating holes in the bottom of the suspension leg only.
- No positive camber & no Negative camber on rear wheels & O, S, F wheel.
- Race damage repairs will be allowed with the promoter / Scrutineer's discretion
- No lengthening of drive shaft
- All suspension components must be bolted in the original bolt holes

#### **4A Roll Cage**

- Full roll cage has to be a 6-point cage the rear down bars must be 1" from the wheel arch both sides
- This must be constructed of minimum 1 1/4" (10 gauge) square or round section tube.
- The cage shall consist of two hoops: one behind driver and one in support of the windscreen with connecting bars in the roof. There must be a 3mm Steel plate welded or bolted above the driver's head as per the diagram. (welded 50% or bolted approx. every 10 inches)



- All four uprights must have a steel plate on the base bolted to the floor no less than 100mm square min, 3mm thick. Bolt in cages only.
- Two chicken bars may be fitted to the roll-cage on the driver's side and two on the passenger side.
- A horizontal bar must be fitted across the roll cage pillars at shoulder level behind the driver and at the scuttle panel.
- This bar must be a minimum size of 2" x 1" or 1½" x 1½" or tube equivalent.
- All roll cages must terminate within the vehicle.

- The cage must be a six-post roll cage by addition of diagonal tubes from the rear hoop down to the rear suspension strut tops (rear wheel arches). Size and grade of material must be the same as the rest of the cage specified above.

## **6. ENGINES**

- Up to 1000cc, "as manufactured". An overbore up to **0.5mm** is permitted on the minimum standard bore.
- Air filters may be removed, aftermarket filters are permitted.
- **Only standard engines fitted to Nissan Micra K11 1000cc are permitted.**
- Fuel Injection must be used subject to complete compliance of these rules, particularly Sections 9 and 12.
- The engine must be fitted with a metal catch tank of 1 litre minimum capacity connected to the engine breather system.
- **ONLY standard ECU's are allowed as fitted to 1000cc K11**
- **Rev Limiter function must not be removed**
- **There will be a buyout clause of the engine and gearbox complete for £300. Anyone wishing to purchase another driver's engine and gearbox must do so by approaching the meeting steward and not the driver concerned. Any refusal will be an automatic 12 month ban.**
- **From 2023 the coil pack engine may be used.**

## **7. GEARBOX/DIFFERENTIAL**

- Must remain as manufactured. No locked or limited slip differential gears anyone found to have one will receive an automatic 6 month ban.
- The Scrutineer MAY request an inspection hole (typically 1" to 2") be cut in an appropriate part of the bell housing in order to check internal components. The driver must be prepared to allow this (or remove the engine for the clutch / flywheel to be checked). As with other Scrutineer's requests, failure to comply will deem the car or components illegal.
- Preface lift small shaft gearboxes are not permitted.

## **8. FUEL INJECTION**

- Nissan K11 Micra only came fitted with fuel injection as standard, this is the only system to be used, no carbs.
- Injectors must be standard K11 from the 1000cc engine.

## **9. FUEL SYSTEM**

- The original fuel tank must be removed and replaced with a fuel tank featuring a fuel outlet at the top of the tank, a secure screw-on metal cap and a breather, which must terminate below the bottom of the tank. The maximum capacity is 3 gallons.
- It must be fitted on, under or behind the roll bar (in the rear passenger seat well), NOT behind the driver and must be securely bolted to the floor/roll cage.
- If the car has Single Point Injection, then the appropriate "Facet" type pump must be fitted, must be covered which again must be wired to the main cut off switch and not directly to the battery. All pump installations must be to the absolute satisfaction of the scrutineer.
- In tank fuel pumps may be used
- All fuel lines must be routed away from electrical wiring

- Fuel pipes must be metal, or metal covered (braided).
- Flexible non-metallic fuel lines may be used to connect metal fuel pipes to injection fuel tank (maximum length 6" (150 mm). In all cases, fuel lines shall be securely clipped to prevent damage (or being tripped over)
- It is recommended that some allowance for movement of the fuel lines should be made in the event that the car body shell is distorted which may cause damage to the fuel line. (E.g. kinking)
- In case of fuel spillage inside the car when re-fuelling, drain holes must be present in the floor and/or rear seat area (dependent on location of tank) to prevent fuel pooling. Minimum hole size 1/2".
- Only standard pump fuel
- No Avgas (aviation fuel). No special mixes or Methanol blends, Nitrous Oxide or octane boosters are permitted.
- Electric isolation switch (cut off switch) must be fitted in the N/S/R window area of the B post, for easy access of Safety Marshall's.
- IMPORTANT A non return valve must be fitted to the fuel tank breather pipe.
- Fuel tank and pump must be covered in a box.

#### 10. COOLING SYSTEM

- Standard Micra Radiator must be fitted in original position
- No steam tanks allowed.
- Thermostat may be removed.
- No heater matrix permitted inside the car. If retained, the original matrix must be relocated under the bonnet.
- No additional oil or water coolers permitted, except as originally fitted by the manufacturer.

#### 11. EXHAUST SYSTEM

- No car will be allowed to race without an exhaust system
- Only standard manufacturer's CAST manifolds are permitted.
- No fabricated manifolds are allowed.
- No modification to the manifold is permitted.
- The down-pipe must be standard to the car and terminate at the back of the engine but the rest of the system is free and must be suitably silenced.  
cases where the catalyst converter is on the down-pipe, this Need to stop in and you can remove the contents
- The exhaust must have at least one silencer box.
- The exhaust may NOT be routed through the car interior.
- The system must terminate towards the rear, not the side of the car. (It is not essential for the system to terminate AT the rear of the car)
- All drivers must be aware that if your car is above the required noise level you will not be allowed to race. The Stewards decision is final.

#### 12. BATTERY AND ELECTRICAL

- If the original position of the battery is either front corner of the car, the battery must be moved to the passenger seat area, but not behind the driver unless **dry cell**, and must be securely bolted to the floor/roll-cage. In all other cases the battery may remain in its original

position under the bonnet. In either case, it must be covered with a leak proof material to prevent the spillage of acid.

- All wiring must be fully insulated.
- As a general rule, all unnecessary wiring (lighting, ancillaries, etc) shall be removed where possible. Essential wiring may remain (e.g. engine management in the case of injected cars) but these looms should be secured neatly to prevent any fire and/or trip hazard.
- An electrical cut-off (battery isolator) switch must be fitted to the R/N/S corner of the car and be suitably marked ON/OFF. This should interrupt the cable running from NEGATIVE battery terminal to chassis. This is a requirement of the Oval Racing Council (ORCi).
- Alternator MAY be removed
- If alternator is retained, it must be wired such that the above-mentioned Isolator not only stops the engine but kills all other electrics on the vehicle. Due to back feed from the alternator, it may be necessary to fit an isolator with advanced features. These are available from race equipment suppliers.
- An electric fuel pump may be fitted but it must be wired to the main cut off switch (isolator). An additional switch must also be fitted within easy reach of the driver when belted in
- The use of a rev counter and other such instruments is permitted.
- Electrical starters must be fitted and be in working order.
- Two stop/brake lights must be fitted onto the rear parcel shelf or window aperture and a minimum of 30 inches apart facing rearwards.
- Lamps must be in working order and must be operated by the standard stop light switch as fitted to the particular model of car. No other switches or modifications to switches to be made. Bulbs to be of 21-watt intensity or the equivalent LED type lights may be used.
- For round type lamps: minimum 3" (75 mm), maximum diameter 4" (100 mm)
- For square type lamps: minimum 3" (75 mm) square maximum 4" (100 mm) square.
- Electrical wiring and petrol pipes must not be run side by side i.e. when running parallel through the car interior. They should take separate routes as far away from each other as possible but as a minimum 12" (300 mm) apart.
- The use of AGM (Absorbed Glass Mat) type batteries, which are often mistakenly referred to as gel-type batteries, e.g. Varley Red Top, and Odyssey Extreme, are permitted.

### 13. **BRAKES**

- Must remain as manufactured and working on all four wheels.
- The handbrake must be in working order.

### 14. **WHEELS & TYRES**

- Any steel or alloy road wheel is permitted subject to the following: SIZES
- Maximum rim width 6 inches
- Tyre width up to 195mm
- Minimum tyre profile 50 (higher profiles may be used – ie, 55, 60, 65, 70)
- Only 13" or 14" or 15" diameter rims and tyres allowed
- Front and rear axles may be different from each other. (e.g. 14" front, 13" rear)
- Wheel diameter, width and offset as well as tyre size must be the same across the axle.
- Tyres are going to be looked at for 2023 season, promoter has final decision.

## **MARKINGS**

- All tyres must have markings in the conventional format consistent with standard road tyres. These markings with respect to width, aspect ratio, construction, diameter, load index and speed rating must be in the format
- E.g. 165/70R13 79T. Any other format is NOT acceptable.
- Any tyre with buffed markings will not be accepted.
- New tyres must display the "E" mark as per EEC regulations
- Re-treaded/remould tyres must display the BSAU144 mark.

## **EXCLUSIONS**

- No competition tyres of any kind whatsoever, or any tyre not designed specifically for road use.
- No rally type or off-road tyres. (although standard road tyres designated as "mud and snow" marked "M&S" or "MS" are permitted)
- No Toyo Proxies (R888), Avon 7.3's, Avon Turbospeed, Yokohama's, Colways (except road remoulds), knobblies, or slicks.

## **GENERAL**

- Hubcaps and wheel trims must be removed.
- All balance weights must be removed.
- It is strongly advised that drivers do not take to race meetings any other wheels / tyres which are deemed outside the rules for the avoidance of doubt.
- Tyres must not be buffed.

Note: The Promotion reserves the right to review the regulation relating to wheels and tyres at any time.

## **15. DRIVER'S SEAT**

- A seat with a head restraint must be fitted. The seat must be securely fastened at shoulder height to the cross bar or to the rollover bar and bolted securely to floor. Racing seats are permitted. Homemade seats are not allowed.
- At any point during a meeting the safety officer can refuse you to race if your seat is not secured properly or the fixing are rusted/ corroded.
- The steering wheel need to have a full in fill

## **16. SAFETY HARNESS**

The lap belt/straps and crotch straps should not pass over the sides of the seat, but through it, in order to wrap and hold the pelvic region over the greatest possible surface. A minimum of a four point buckle fixing must be used with a minimum of 3 floor fixings. A secure part of the floor or cage (including the seat bar), are recommended anchor points. All seatbelt connection points must be visible and no belts pass through any firewall. Following research made by leading safety harness manufacturers, information has been made available with regard to the best way to fit your safety harness; this will further ensure your safety. Please study the diagrams to ensure your safety harness is fitted correctly. The lap belt crossing should be below the anterior-superior iliac spines (bony part of the hip). Under no circumstances should it be worn over the region of the abdomen. Lap belt/straps must terminate vertically downwards, and not forwards or rearwards of the hip joint. Lap straps should terminate symmetrically about the wearer on either side of the seat, about 20"



(500mm) apart. The distance between the seating surface and the anchorage point should be kept to a minimum to prevent submarining. The location of the crotch strap mounting should be to the rear of the driver. All belts must connect to the quick release buckle. The abdominal strap fixing point must be on the chassis, roll cage, or floor (for vehicles with no chassis), either side of the driver.

The shoulder straps must be supported at shoulder height. NASCAR type buckles must be fitted with lever on the right side of the driver. It is advisable to fit a secondary means of detent to prevent overall sleeves accidentally unhooking the buckle during racing. A small section of tube grip elasticated bandage, slid over the hooked buckle, serves the purpose.

Special attention must be paid to the condition of seat belt fixings once fitted. Information is available, from your Promotion, on the correct procedure to follow when fitting seat belts. Remember - your life depends on them, and belts, once involved in a severe accident, should be discarded and replaced.

Over the years, we have had many unnecessary injuries due to badly fitted seats. They frequently occur in Non-contact Formulas, when perhaps a driver believes it is more unlikely that he will be involved in a serious crash, and he also believes that, if he is involved in a collision, the impact on his car will be from the front. However, this is often not the case. It is therefore, imperative that you ensure your seat is really well supported, especially where the shoulder straps go through. You must also ensure that your seat cannot move sideways.

Please also see ORCI rules.

The safety of your seat will be judged by the Scrutineers and you will only be permitted to race when they are satisfied

that you will be as safe as possible in any event.

## **17. DRIVER SAFETY EQUIPMENT**

### **Overalls**

Drivers must wear bright coloured racing overall type clothing of flame retardant Proban or a higher specification material and marked accordingly. Overalls must be maintained in a clean and tidy condition when in view of the public.

If wet weather clothing is used this must be worn in addition to, and over the top of, and not instead of the regulation overall type clothing described above.

### **Helmets**

Helmets must be of a minimum standard as directed by British Oval Racing Safety Executive (B.O.R.S.E). These are, Snell SA2010, SFI Foundation 31.1A, SFI Foundation 31.2A. The E2205 European standard helmet may be used in Fiberglass, Carbon or Tri-Composite form only i.e. NO POLYCARBONATE helmets are allowed. It is important that the helmet fits the driver correctly. Shatterproof goggles/visors must be worn although tinted visors are not advisable. Your helmet must display the current ORCi (ORC10) sticker.

@@ The ORCi have reviewed the current safety specification standards for driver helmets, and now issue the following additions/changes to existing ORCi rules for the 2020 season, effective immediately. Youth Helmets (Drivers aged 15 and under)

☒ New – Helmets certified to one or more of the following standards are permitted for use by youth drivers aged 15 and under. These are ADDITIONAL permitted standards to those currently allowed.

- Snell CMR 2007
- Snell CMS 2007
- Snell CMR 2016
- Snell CMS 2016
- SFI 24.1

**Window Nets** A quick release cloth window net must be fitted to the drivers door window aperture at all times when racing. The net should have holes not larger than 7.5cm or 3” wide. It should come down level with the steering wheel, and should be flexible and easily removable separate to the movement of the door.

### **Neck Brace**

A NECK BRACE is compulsory for Junior Micra Rods [all Junior Formulas across all ORCi Tracks]. A spine support is optional. The neck brace must be complete and the wrap around style and not the U shape style or a forward head restraint can be used but must be to either FIA or SF1 standard. It remains the driver’s responsibility to ensure that their device is the correct size and fitting and used with a compatible helmet. It is also a requirement that a driver must be able to quickly exit from their car wearing the head restraint and helmet without the intervention of a third party.

### **Balaclava**

The use of a Fire retardant Balaclava is mandatory.

**Fire Extinguishers** A one kg Dry Powder gauge fire extinguisher is highly recommended and if fitted, should be in a tube with a spring top and should be within easy reach of the driver. Old type BCF (green) type extinguishers are not allowed.

All tow vehicles must carry a minimum of a 2 kg fire extinguisher, dry powder or gas, which must be within easy reach of the driver and mechanics at all times, especially when refuelling.

## **18. RACING NUMBERS**

- [for attention] Your racing numbers MUST be displayed on both front doors in BLACK numbers (16" high x 2" wide brush strokes) on a white panel, with at least 2” of white border showing around the numbers.
- Additionally racing numbers must appear on the roof fins on each side of the car to aid lap scoring. These must be 6” high x 1” brush strokes black numbers on a completely white background. See section 3 BODYWORK for dimensions of roof fins.
- In the case of the doors, the rest of the door may be painted in line with the car’s colour scheme. If racing numbers are not presented as above, you will NOT be lap scored.

## **19. DRIVERS ELIGIBLE**

- Each driver is only permitted one car per meeting, in Junior Micra Rods and each car is only permitted one driver per meeting.
- In the interests of avoidable accidents, new drivers must have a large black cross on the back of their car and start their first three meetings from the back of the grid behind the superstars. After this, the Promoter’s discretion on starting grid position will then apply. The black cross is to be removed when starting from a driver’s correct grading position.

## 20. PENALTIES

Stiffer penalties for "deliberate" contact have been introduced in a determined effort to improve the formula as unfortunately there are crashes that are sometimes caused deliberately.

The usual system for non-contact formulas will apply. Any driver seen to be making deliberate contact with another driver will receive a warning flag (white flag with black cross) and this will be recorded. Should he/she commit another offence they will receive a black flag which will be a load up on the day. Should any driver receive two black flags within a 3 month period then they will not only be loaded up for their second black flag but will also receive a 2 month ban.

Any heavy contact deemed to be to excessive on the day will result in an immediate load up and referral to the Board of Control to see if the 2 month ban should come into place.

## 21. GENERAL

Number of racing laps is: Normal Heat 10 laps. Final Race 12 laps.

All races are a rolling start, drivers will be instructed via the Raceciever system when to start racing - "jumping" the green flag will be docked a minimum of 2 (two) places from the race result.

Maximum number of cars per heat will be 24 subjects to the discretion of the Steward / Clerk of the Course.

1/3rd - 2/3rds format will be adopted thereafter.

When overtaking a vehicle on the same lap, it is your responsibility as a driver to ensure the whole of your car is completely past the car being overtaken before taking the racing line. It is NOT the responsibility of the driver already on the racing line to brake and let you in. Such offences will be penalised.

Many different types of mechanical problems - damaged suspension, tyres, ineffective brakes, etc, have caused incidents. If your car is not handling properly or suffering such problems, you should pull off to the safety of the centre green as soon as possible to avoid danger to other competitors and/or damage to other cars (including your own!)