

2020 AUTOSPEED (under 1800cc*) BANGER SPECIFICATIONS

Effective 1 January 2020



INTRODUCTION

This formula is especially designed to encourage new drivers to Stadium Racing and to enjoy the atmosphere and excitement of driving without a large financial investment, or for drivers who feel they cannot give the commitment required to compete at a very high level in the other various formulas available.

NOTICES

ALL DRIVERS MUST BOOK IN TO RACE AT LEAST 48 HOURS BEFORE ANY RACE MEETING. THIS IS MANDATORY AND APPLIES TO DAY LICENCE DRIVERS ALSO. ALL DRIVERS MUST SIGN IN AT THE PIT OFFICE AT LEAST 1 HOUR BEFORE START TIME.

ALL cars must be painted. Unpainted cars will not be permitted to race, until they have been rectified.

TYPE OF RACING

Autospeed Bangers are intended to be a LIMITED CONTACT formula, BUT without excessive contact. Drivers are not permitted to follow another car into the safety fence, intentionally attack a stationary car, drive in the opposite direction or deliberately wreck another car. Any driver who is in contravention of these rules shall, at the promotion's discretion, have their Autospeed Banger licence revoked and receive a FULL ORCi ban.

VIOLATIONS

- When referring to the engine, gearbox, final drive, mechanical or construction Rules & Regulations, the principle will always be: Unless permission is specifically granted to make modifications (or any variation) nothing may be done to alter or change the standard parts in any way.
- It is the responsibility of the Driver to prove to the Promotion that the part is legal, by way of written proof of where the part originated. This must be undertaken within 7 days, otherwise the item in question will be deemed illegal, resulting in immediate suspension from racing & referral for disciplinary action. **Unless the rules say you can do it, you cannot!**
- Presentation of a vehicle for a Safety Check is a declaration that the vehicle is eligible for that event.
- Car engines & fuel will be checked on a random basis. Violations or refusal to allow an engine check will result in an immediate suspension of all racing activities.
- All Car and Engine Specifications will be taken from either the manufacturers Technical Specifications or the Technical Service Data books as published by Auto Data. Should a discrepancy occur between the Specifications then the Promotion will exercise its judgment, and that decision will be final.
- Clarification on any one item may be sought from the Promoter.
- Each driver is permitted one car per meeting & each car is permitted one driver per meeting.

PRE MEETING SAFETY CHECKS

- Arrival at the raceway is required a minimum one hour before the advertised start time, to allow pre meeting safety checks to be carried out.
- You must sign in at the pit office, where your log book will be stamped, prior to pre meeting safety checks. The driver must accompany the car, complete with ORCi Log Book, racing overalls, fire retardant gloves and crash helmet.

1. CARS ELIGIBLE

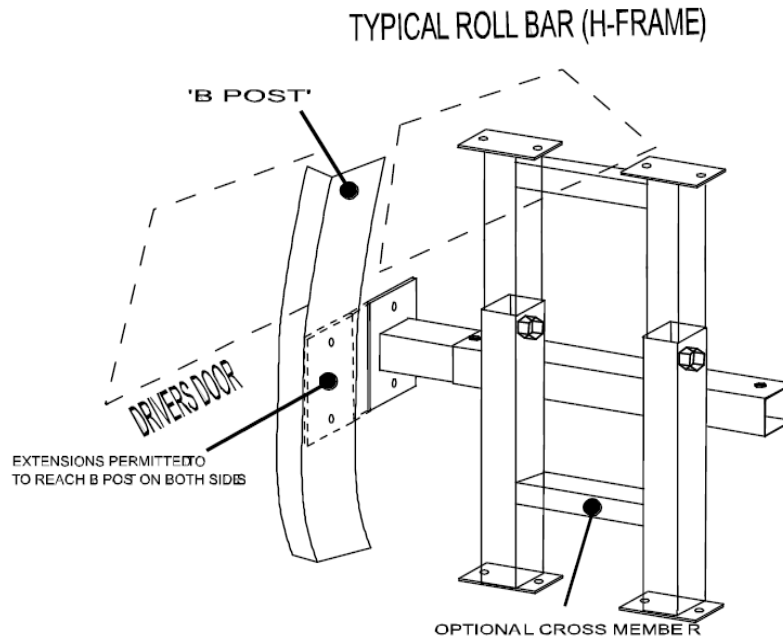
- Any British or European specification, four wheel, right-hand two wheel drive, saloon/hatchback or estate car over 1300cc but under 1600cc 1800cc (* however the BMW 3 Series up to 1895cc 8 valve - engine code M43TUB19 is permitted, along with the Proton Satria 1834cc).
- The following cars are expressly excluded in this class - Ford Mondeo, Ford Cougar, Ford Granada and Honda/Rover models using twin cam engines.
- The use of turbo or supercharged cars are not permitted.
- The car must have an all-steel body, which must not be lowered, narrowed or shortened.

2. STRIPPING & PREPARATION

- It is compulsory to remove all the interior, glass, airbags and charges, spoilers and side-skirts.

- It is strongly advised that all possible components of the dashboard are removed. You may be required to make an additional brace to secure the steering column. However this is mandatory if the standard support is removed.
- Remove all seats except the driver's which must be retained, the use of a racing seat is not allowed.
- Remove spare wheel carriers and tow bars plus associated steelwork if fitted.
- Original fuel tanks must be removed. If however, the tank is an integral part of the body you must remove as much as possible.

3. ROLL BAR



Plans Supplied by BBR Fabrication 07974 188819

- You must fit a single "hoop" roll bar in support of the door pillars, securely bolted to the roof and floor with a minimum size M12 bolt and suitable washers.
- You must have a minimum of four bolts in the top and four in the bottom, with a maximum of eight in the bottom on each side. The maximum size of the base plate is 12" (300mm) x 9" (230mm)
- Roll cages may be adjustable (height and width), however the use of screw adjusters i.e. acrow style, are not permitted.
- The roll cage must be fitted upright or dog-legged, but not leaning back or forward.
- It is compulsory to pad roll cages by the drivers head, the B pillar and steering columns with high density foam.
- The hoop must be one piece, or two uprights and one top bar of a welded construction. This top bar should be as shown at the top of the uprights.
- A second cross bar is compulsory, a third is optional; these must be welded or bolted to the uprights.
- THE ROLL BAR MUST NOT HAVE ANY REAR SUPPORTS but may have extensions no further forward than the B post (see diagram) (this applies to both sides of the car). If used, it is highly recommended that this is bolted through the B post.
- You may bolt the roll bar through both sides of the car.
- The minimum size steel for the roll bar is 2" (50mm) x 2" (50mm) RHS or tube equivalent, up to a maximum size of 4" (100mm) x 4" (100mm) RHS or tube equivalent. A minimum wall thickness of 3mm is required.
- Crossbars must have a 5" (125mm) square end plate fitted. This must be a minimum of 6mm thick.
- You must tie the seat at shoulder level to the roll cage or B pillar. This must be done through the seat frame and not the headrest; you may fit the 2nd cross bar in support of the seat just below the window aperture or weld a frame on the cage to support the seat at the top.

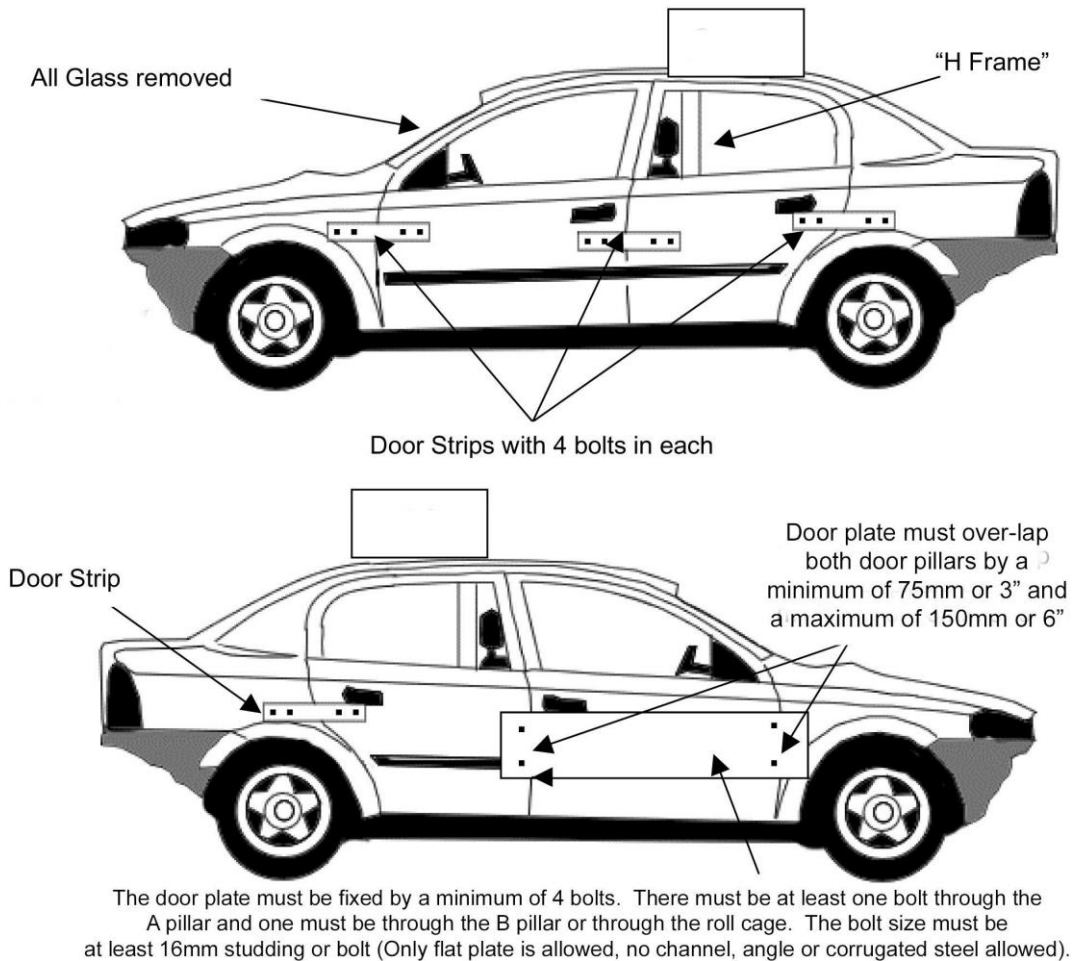
4. STRENGTHENING & PREPARATION

- Cars that fail pre-meeting Safety Checks or post-race scrutineering, found to be armoured or strengthened, including engine or gearbox suspension mounts that are over the top and not rectifiable on the day, will receive an immediate ORCi ban. If the vehicle can be rectified at the track then the vehicle must race, otherwise the driver will be subject to an ORCi ban.

- The only welding permitted is that on the driver's door area and bonnet corner straps (see below).
- **No other welding is permitted anywhere else on the car.**

Doors & Door Plates

- The driver's door may be welded, but must have no additional strengthening (this includes gussets)
- A FLAT (no channel or angle) steel plate MUST be bolted over the driver's door to the following dimensions:
Height – minimum 10" (255mm) to a maximum of 15" (380mm)
Thickness - minimum 3/8 (9mm) – 3/4" (20mm)
- This must be fitted with a minimum of 3" (75mm) and a maximum of 6" (150mm) past the A & B pillars.
- This must be securely bolted with a minimum of four bolts.
- It is not permitted to cut slots in the driver's doorplate. Holes for bolts only.
- There must be at least one bolt through the A and the B, or through the roll cage.
- The bolt size must be at least M16 studding or bolt. M12 is acceptable on all other bolts
- For 2 door and pillar-less cars (no B Pillar), the door plate MUST be bolted through the roll cage.
- All other doors must be secured by bolting or seat belt webbing to the following specification.
- If bolting you may use strips of flat metal; the strips must be no longer than 400mm in length, by 60mm in width. Maximum of four bolts can be used to attach each strip and the minimum size of the bolts/studding is 8mm in diameter & the maximum is 12mm diameter. Seat belt webbing can be used instead of metal strips or the doors can be fixed with 12mm bolts directly through the panels. **NO NATIONAL BANGER STYLE PLATES.**



Bonnet

- Bonnet may be removable but must be securely fixed front and back with seat belt webbing or rope only (No tie down straps, large Banger bolts, crush tubes or ratchet straps allowed – no plates permitted on the bonnet).

- Up to 3mm thick triangular corner plates or straps may be used to secure the rear of the bonnet by bolting or welding. Plates or straps must be placed no further than 300mm across or down from the back edge and side of the bonnet.
- Bonnet must not be moved forward or strengthened and must remain standard.

Driver's Floor Plate

- A steel plate fitted to the drivers floor pan is permitted.
- It must be no thicker than 6mm, and must be bolted in only.
- Floor plates may extend up the side of the transmission tunnel, to the same height as the door sill, and up the bulkhead to within 200mm (8") of the top of the bulkhead, but the plate can only be bolted through the floor and the A-pillar only, not to the sill, tunnel or bulkhead.
- A 4" (100mm) steel plate no thicker than 6mm bolted through the A pillar to the door plate can be welded or bolted to the floor plate.

Wings

- Front wings may be trimmed below the front bumper level.

Bumpers

- Front Bumper
 - Any car derived steel bumper/support panel (from a car which is permitted in this formula) is permitted. This must remain in its original form, i.e. no strengthening, and must be fitted by means of bolting, strapping with seat belt webbing, but no welding.
 - All plastic over-riders to be removed.
 - However the original front bumper may be removed, and an optional replacement front bumper may be fitted, as described below:
This is to be formed from one piece of 25mm square hollow section, and must extend the width of the two chassis legs. You must then weld two 100mm long pieces of 25mm square hollow section, at right angles to this, to attach the replacement bumper to the chassis legs by means of two bolts on each chassis leg. The replacement front bumper must not have the ends capped off. The replacement front bumper must be able to be clearly inspected to ensure the hollow section has not been filled.
- Rear bumpers including plastic bumpers and any metal reinforcement must be removed.

General

- If the complete dashboard has been removed, then you may be required to make an additional brace to secure the steering column, however this is mandatory if the standard support is removed .
- No screen bars allowed.
- You are not permitted to strengthen the gearbox tunnel.
- Expanding foam or any other material must not be used to fill chassis or door sills etc.
- Sunroof must be bolted. If covered, the maximum thickness of flat steel plate is 1/8" (3mm), and the maximum size is 4" (100mm) larger than the sun roof opening.
- It is not permitted to panel in headlight and window apertures.
- It is not permitted to panel in the inside of doors and or the rear parcel shelf and these must be left as original. Drivers name visors must be at the top of the windscreen only and must not be welded in place.
- A seat with a head restraint must be fitted. The seat must be securely mounted at shoulder height to the cross bar or to the rollover bar and bolted securely to floor. The seat must be a standard production seat, not a racing seat.

Guards/Covers

- No guards permitted – for example to protect crank sensor

5. FINAL PREPARATION & PAINTWORK

- All cars MUST BE PAINTED, preferably in a bright colour. Should a car not be painted it will NOT be permitted to race, until this is rectified.
- Cars can be neatly sign written, but nothing should be painted or sign written on the car which could cause offence.
- Rusty or dirty vehicles will not be allowed out onto the circuit.
- Rude or provocative slogans are not allowed.
- In addition to the car construction rules, all cars presented at scrutineering must be considered safe and not unsightly.

- New under sealing of the underside of the car is strictly forbidden.

6. **FUEL SYSTEM**

- The original petrol tank must be removed and replaced with a maximum size 2-3 gallon safety tank fitted inside the car on or under the roll bar. Before fitting, the tank should be carefully checked to see that it cannot leak when inverted or on its side and the outlet must be from the top of the tank. The vent pipe from the top of the tank must be terminated below the floor level of the car.
- All fuel lines must be in good condition and securely clamped.
- With carburettor fuelled cars, a manual shut-off tap must be fitted within reach of the driver when strapped in the car, but with fuel injected cars, the fuel flow must be controlled by the pump cut off switch. Immersed fuel pumps are permitted.
- All fuel tanks must be of steel construction and have a metal screw top.
- A one way valve must be fitted to the breather pipe.
- Electric fuel pumps may be fitted.
- External high pressure pumps must be contained within a steel box.

7. **ELECTRICAL SYSTEM**

- Batteries must be bolted or clamped in position and completely covered with rot-proof material to prevent acid leakage. Ratchet straps may be used as a secondary fixing only. Batteries must be fitted on or under the roll bar. If batteries are secured in a box the maximum dimensions are 18" x 12", 460mm x 300mm.
- Alternators, if fitted, cannot be wired to charge.
- All wiring must be fully insulated.
- Electric starters must be fitted and in working order.
- Ignition and starting must be activated through an insulated switch, not by connecting bare wires together. A battery cut off switch **MUST** be mounted on the roll cage on the near side of the car; the switch must be wired to the earth side of the battery.
- Engines that are fitted with ignition system relying on a flywheel sensor (or similar), must not be modified to use a gear driven distributor.
- On fuel injection cars the engine management system including ignition boxes must remain as originally fitted and not re mapped.

8. **SUSPENSION & BRAKES**

- **MUST REMAIN STANDARD.** No interchanging of suspension parts is permitted.
- Springs must remain original to the make/model of car. No cut springs, no lowered springs and no coil over springs.
- **LOWERING/CAMBERING OF CARS IS NOT PERMITTED. Scrutineers may at any time insist on camber being corrected.**
- The promotion reserves the right to check the ride height of a car at any time. This will be to ensure that the ride height is the same measurement (or greater) on the driver's side as it is on the passenger side, i.e. the car should sit level to the track (consideration will be given to the extra strengthening required on the driver's side). This will be done without the driver sat in the car.
- Brakes must remain standard and to be effective on all four wheels at all times.
- Hand brake must be fitted and be in working order.
- Back axles must be standard to the car with no additional strengthening.

9. **ENGINES, GEARBOX & DRIVESHAFTS/PROPSHAFTS**

- The engine, flywheel and gearbox must be the one originally fitted to the make/model as manufactured and in standard form.
- Engine codes/ID markings must remain intact. Removal of such items will deem the engine illegal.
- No skimming of the head more than 60 thou from standard for head gasket purposes only.
- No porting or gas flowing.
- No removing or adding material to the ports or combustion chamber.
- No Ford ST170/RS engine components are permitted.
- The cylinder head and the camshaft(s) must remain standard.
- No turbos or superchargers
- No dry sump systems.
- Bulkheads must remain original and not be cut or modified to fit an engine. You may cut a hole in the bulkhead to accommodate the wiring and fuel pipe.

- Engines must remain on the original engine mounts and remain standard to that particular car – no welding. However one aluminium engine mount maybe replaced with a steel mount, this must utilise the original position and fixings.
- Air filters are free.
- A 1.5mm overbore is allowed.
- Pistons must be standard - no modifications. Pistons and rings may be size matched with the appropriate overbore as specified above.
- Alternator may be removed.
- The inlet and exhaust manifolds must be standard to the engine (with the exception of rule 8 Carburettor noted below). These may be de-carbonised but not highly polished or ported i.e. No removal of casting marks etc.
- Sumps may be baffled to prevent oil wash away from oil pick up point.
- A registered driver may protest the legality of an engine, by lodging £150 reinstatement fee and completing a protest form (available from the promotion). If the engine is proved legal, the fee passes to the challenged driver. If illegal the fee returns to the protestor and the driver whose engine is illegal, will be suspended from racing. Protest will be accepted at the promotions discretion and only up to 30 minutes after the conclusion of a race meeting.

10. FUEL INJECTION & CARBURETTOR

- Must remain standard to the manufacturers model range. Cold start devices may be removed.
- Re-jetting is permitted.
- The Pierburg carburettor is NOT permitted on Fords.
- Injected cars may be converted to conventional carburation if available from that manufacturer, although vehicles fitted with a single point injection can be used providing they are fitted using the standard Banger fuel system and the fuel pump is replaced with a standard High Pressure Facet pump.
- Multi point injection can be used, with a return back to the tank or a t-piece fitted in the fuel line between the fuel tank and the fuel pump, but the electrical isolation switch (cut off switch) must be fitted in the N/S/R window area of the B post, for easy access of Safety Marshalls
- Carburettors may be replaced with the equivalent size Weber conversion. Adapter plates may be fitted by bolting or welding (max size carburettor allowed is 32/34).

11. DIFFERENTIAL

- Limited slip differentials, locked differentials, welded or power-locked differentials are not allowed, even if fitted as standard or available as an optional extra to the car.
- Axle and ratio must be as manufactured.

12. COOLING SYSTEM

- Radiators must be under the bonnet but they do not have to be in the 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 other oil or water coolers permitted.
- The bonnet must not be cut in anyway to accommodate the radiator

13. EXHAUST & EXHAUST MANIFOLDS

- Standard tubular manifolds may be used, only if fitted as standard to that model e.g. Nissan Primera.
- No non-standard aftermarket exhaust manifolds are permitted.
- In all cases the four branch manifolds allowed, they must be genuine original manufacturers parts.
- If the original exhaust system has to be replaced, there must be at least one silencer to each exhaust pipe and they must be securely fixed after the manifold. No Cherry Bombs or straight through systems are allowed.
- The original mount must be supplemented with at least one additional fixing to secure the system to the car.
- Removal of the catalytic converter is permitted.
- No car will be allowed to race without an exhaust system and all drivers must be aware that if your car appears to be too noisy by a scrutineer or the steward then you may not be permitted to race or may receive a technical disqualification.

14. **WHEELS & TYRES**

- Any standard road wheel may be used up to a maximum of 6J and ensuring it fits safely.
- You must only use conventional road tyres up to 195. The lowest profile permitted is "50" series.
- Wheel nuts must be fitted. Hub-caps and wheel weights MUST be removed.
- All identification markings to remain on tyres. Any tyre with buffed markings will not be accepted, and will be subject to disciplinary action.
- All tyres should have a minimum durometer reading of 60, whenever tested.
- Tyre gaiters are permitted.
- No "run flat" tyres, no 1B rated 'Track-day' tyres (see below), no Rally tyres or competition type or cut tyres. The ORCi reserves the right to ban any tyre make or type which give an unfair advantage.
- No Yokohama, Avon 7.3 wide safety, town and country, M & S, Toyo, Kingpin ~~Alpine Series~~, competition type or cut tyres.
- All 1B rated tyres as listed below are not permitted for use:

AVON	• FZ 201	• TB 15
• ACB 10 Sport		• TB 15 (f & r)
• CR6ZZ (Including Sport)	GOODYEAR	
• Turbospeed CR28 Sport	• EAGLE F1	NANGKANG
• CR500		• NS-2R
• ZZR	HANKOOK	
	• Z209	PIRELLI
BRIDGESTONE	• Z210	• P Zero Trofeo
• Patenza S007 RFT		• P Zero C
	KUMHO	• CA67
CONTINENTAL	• Ecsta V700 (inc V78)	• CF67
• ContiForce Contact	• Ecsta V70A	• P Zero Corsa
	• Ecsta TW01	• P7 Corsa Classic
DMACK	• Ecsta TW02	• P Zeri Torfeo R12
• Trackday	• Ecsta C03	
	MARANGONI	SILVERSTONE
DUNLOP	• Zeta Linea Sport	• FTZ Sport RR
• Formula R D83J		• FTZ Wet Tyre
• Formula R D84J	MAXXIS	• S575
• Formula R D93J	• Maz1 Drift	• S585
• Direzza 02G		TOYO
• Direzza 03G	MAXSPORT	• R888
• CR 311	• RB4 Intermediate	• R1-R
• Sport Maxx Race	• RB5	
• SP Sport R7		YOKOHAMA
	MICHELIN	• All Tyres
FEDERAL	• Pilot Sport Cup	
• 595 EVO	• Pilot Sport Cup 2	
• 595 RSR		

15. **SAFETY EQUIPMENT**

Refer to separate ORCi Safety Spec Sheet

16. **RACING NUMBERS**

- You must fit a fin plate to the roof of your car, minimum size 18" x 12" (460mm x 300mm) and a maximum size of 20" x 15" (510mm x 380mm).
- Your number must be black on a white background, no other colours allowed, any other writing allowed must not interfere with the numbers, which must be minimum size 9" (230mm) high x 1½" (40mm) wide. If your number is not to the above specification, you may not be lap scored.
- Your name must also feature prominently on the car.

17. **ROOF GRADES/STARTING POSITIONS**

- Each Track Champion is permitted to have a silver stripe on their roof, whilst the promotion's overall Points Champion must have a full silver roof. The Cornish Champion shall paint the cross of St Piran on their roof. The Devon Champion shall paint the cross of St Petroc on their roof.

- Each race shall be gridded in graded order (as per the current grading list with drivers in either White, Yellow, Blue or Red grade, plus a Champions grade). Grades will be determined by average points. The promotion reserves the right to alter a driver's grade on the day, should they not appear on the grading list. There must be a reasonable gap between each grade.
- Any driver winning a race must start at the back of their grade for the remainder of the meeting. The onus is on the driver to take up this grid position and two places will be docked by the Steward for each position out of place taken at the start.
- Each driver must paint the whole of their roof, down to the tops of doors, in the required colour.
- Roof colours will be checked at scrutineering. If incorrect, a driver will not race until this is rectified.
- There must be no contact or overtaking on the rolling lap. The green flag shall be given once the cars exit the fourth turn.

18. RACE FORMATS

- The number of cars present for racing, will determine the race format - the choices being all cars all races, two from three heats format, or a full format of qualifying heats/consolation. For all Autospeed Bangers fixtures, drivers must check the Notice Board within the last 30 minutes before start time, as it will be in this period that formats and heat division will be determined.

Updates in red/ for 2020 – 20_v1

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