

# Racewall 1300 Stock Car Rules 2019

## The formula

The object of the race is to complete the specified number of laps in the shortest time. This is a full contact formula but you may not follow a car into the safety fence. A follow-in is defined as follows 'a car that deliberately follows a car into the safety fence and is still in contact anywhere when the car hits the safety fence'. You may push a car from behind or spin a car inwards no deliberate outward spinning allowed. Attacking a car from the safety infield is also not permitted.

Actions deemed to be deliberate or dangerous will carry penalties.

Racing is in a clockwise direction on a clearly defined circuit with a separate infield. Any wheels passing over the demarcation lines (touch line) or entering on to the grassed infield areas will mean that the driver will be eliminated from that race.

## 1. 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 do it!**
- Presentation of a Vehicle for Scrutineering is a declaration by the entrant 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 facilities.
- All Car and Engine Specifications will be taken from either the manufacturers Technical Specifications or the Technical Service Data books as published by Glass's Guide.
- Should a discrepancy occur between the Specifications then the Promotion will exercise its judgement, 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.

## 2. Eligible Cars

Any 1300cc Carburettor fuelled, metal bodied, four -seater saloon or hatchback as listed below. Drivers wishing to race alternative vehicles must contact the Promoter. Vehicle Make & Model	Engine Capacity	Carburettor Venturi Diameter
Toyota Starlet 1.3	1290cc (Must use 1200cc 21/24/carb)	
Vauxhall Nova, Corsa, Tigra	Peirburg 2E3 20/24mm	
Volkswagen Golf, Polo, Passat	21/23 or Peirburg 2E3 20/24mm	

## 3. Engines

- The Engine must be standard to the car, the exception being the Vauxhall Corsa/Tigra, which must use the Nova specification engine.
- All engine components must remain standard and not be interchanged between models with different engine sizes.
- Toyota 3K & 4K engines must NOT use the cylinder head with the ports larger than 29mm.
- The bores may be machined out to a maximum of 1.5mm oversize.
- Cylinder head & piston combinations must be as manufactured.
- The cylinder block may have its head gasket face skimmed only.
- The maximum piston protrusion is 0.010".

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- Piston crowns must have their identification markings visible.
- The cylinder head may be skimmed on its head gasket face only.
- Head bolts may be shortened or washers used as spacers.
- The head gasket cannot be modified in any way.
- If the oil feed to the head becomes misaligned when the head is skimmed it may be re-aligned.
- No welding may be done to the head either as repairs or modifications.
- Valves must be standard
- Three-angle valve seats are permitted. The measurements of the three angle valve seats are as follows; Angle 1; Combustion chamber 30° - Angle 2; Valve seat 45° - Angle 3; Port 60—65° with valve seat width free.
- The original manufacturers' part, or any other manufacturers' standard or pattern replacement springs may be used (no competition types).
- Rocker arms must be standard or pattern replacement. Vauxhall OHC engines are permitted to use the Diesel rocker as a replacement
- The standard sump may be baffled
- The oil pick-up pipe may be modified within the confines of the sump.
- The engine position cannot be altered but the engine may be tilted to stop fuel starvation, engine mountings may be solid and can be picked up from the iron work
- The engine may be restrained.
- You must use a standard flywheel and clutch to the engine the face maybe skimmed 1300 Vauxhall flywheel weight minimum 5kg and Toyota starlet flywheel 8kg not including the clutch or bolts.
- **Vauxhall 1300CC Engines - any crank may be used from the same manufacturer providing it has the same stroke as the standard Vauxhall 1300cc crank – any oil pump may be used to suit.**

## **NEW ENGINES**

When using any of the following type of engines, any driver with the same type of engine in their car, a car it could be fitted into or promoter can buy your engine at the end of a meeting for £400 minus inlet, carb, distributor, clutch and flywheel (i.e. bare engine). *Restrictor plates will be used to govern competitive performance for all new type cars.*

1250cc – 1350cc Multi-valve / 1351cc - 1400cc 8v or Multi-valve Engines

The engine must be standard to the car. **The ECU should be standard to the car but other types are available but must not exceed 33 degrees when checked with a timing light.**

No oversized boring of pistons allowed. All engine components must remain standard and must not be interchanged from different models with different engine sizes.

***Restrictor plate dimensions for these engines are as follows:***

***(Supplied by GMP)***

1250cc – 1350cc Multi-valve Engines – 2x24mm round holes.

1351cc - 1400cc 8v or Multi-valve Engines – 2x22mm round holes.

The Honda multi valve engines will have to use a 22mm restrictor plate. Diff ratio and gearbox ratio are free within the manufacturers range but the diff must be locked by welding.

**Vauxhall 1400 multi valve engine (with Weber carb) will have to use a 22mm restrictor plate. Vauxhall 1400 8v non se engine may use the 1400 manifold with the pierburg 2E3 carburettor (Again we state non SE). Without restrictor plate.**

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**Restrictor plates may be changed at any time to keep all cars competitive.**

## **4. Carburettor**

If the engine being used came originally with either single point or multi point fuel injection, this must be removed and replaced with an inlet manifold and WEBER 32/34 DMTL carburettor. If a standard inlet manifold from another make or model fits the engine it may be used. If there is not one available, an inlet manifold may be fabricated or adapted to fit the engine and incorporate a WEBER 32/34 DMTL carburettor. **Any fabricated manifold must have the approval of the promotion before being used (you may ask for advice prior).** A conversion plate no thicker than 13mm may be used for either the inlet manifold, the carburettor or both.

**The webcon adapter with a single point manifold is permitted with only modification is by adding material to the manifold to allow for drilling and tapping to enable the carburettor to be bolted. No alterations to manifold internal.**

**The IKE manifold is permitted for use as supplied standard.**

**Homemade manifolds must show the original manifold casting still complete unaltered apart from the exception of the adaptor plates to fit cylinder head and carburettor.**

**The adaptor plate used can be either welded or bolted but no fettling inside manifold only dressing allowed on welds.**

**Note: All modified manifolds must be approved by the promotion prior to racing.**

- Air filters may be removed or replaced.
- No ram pipes, bell mouths or stubs are allowed.
- Choke butterflies and cold start equipment may be removed but economy devices must be fitted as standard.
- The slow run air correction main jet, where fitted, may be drilled to adjust mixture only.
- The carb' Venturi size must not be altered.
- The carburettor body must not be altered or modified. (linkages may be made to take throttle cable)
- The exhaust manifolds with a hot spot under the carburettor may be blanked off.
- The standard sump must remain, but may be baffled and the oil pick up may be modified within the confines of the sump.
- Cylinder head may be skimmed. The head gasket must not be modified in any way.
- If the oil feed to the cylinder head becomes misaligned when the head is skimmed it may be realigned.
- No welding of cylinder head, either repairs or modifications.
- Valve springs must be the original manufacturers' part to the engine used.
- Engine mountings may be solid. The engine position must not be altered.
- The engine may be tilted to stop fuel starvation.
- Any electronic ignition system can be used.
- Distributors must be standard manufacturer's & not modified in anyway including vacuum pipe.

## **5. Flywheels**

Flywheels must be standard. **1400 16V only.**

*These rules may be revised at any time during the course of the season for the benefit of the formula and to ensure competitive racing*

## **6. Engine Sealing**

We may at any time require your engine or other parts to be sealed. This may or may not mean your engine / parts will automatically be stripped or checked. It could be that we wish to monitor your performance or seek clarification on an item. It is normal to strip engines at all major championships unless they run consecutively in which case by agreement on, stripping may be postponed.

**Driver:** Drivers wishing to have their engines sealed may do so. It will require two people (one may be an official, the other a Scrutineer) to be present at the final stages of a build & it will incur a charge based on the time & distance travelled. If this option is taken at a major championship your engine will not require stripping, unless the seals have been broken. Seals can only be removed by The Promotion & its officials; if they are removed without permission the engine / parts will deem to be illegal & the Driver suspended pending a Board of Control meeting. If any engine/ parts are sealed because Championship events are within a period, which may exclude that Driver due to a rebuild, the Driver with the Promotion's agreement, may postpone stripping for three meetings.

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It is the Drivers responsibility to make provision for the sealing of the engine by drilling 1.5mm sealing holes in the following bolts / nuts & marked with red paint for identification purposes:

- Either side of the Sump
- Two Head bolts, if not covered wholly by a rocker / cam cover.
- Two Inlet manifold bolts
- Two Rocker / Cam cover bolts
- The Bell housing
- The Carburettor body and the mounting bolts / nuts

## 7. Oil Catch Tank

- An oil catch tank (no drink cans or bottles – minimum capacity of 0.5 litres) must be fitted in the engine bay.
- The tank must have a minimum of 2 breather pipes connected to it: one from the rocker box and one from the crankcase. Breather pipes are free but must go to a catch tank.
- Ineffective tanks during racing or practice will mean the car being withdrawn from the event.

## 8. Cooling System

- Radiators are free, but they must occupy their original position.

## 9. Ignition System - Distributor

- Distributors must be the Standard manufacturer's part.
- No electronic ignition unless it's fitted as standard.
- The Vacuum must be fitted but may or may not work, the base plate may be locked
- The Vauxhall OHC engine may use the Bosch distributor with contacts or the AC-Delco type with electronic ignition.
- This does not include the evolution engine distributors which must stay standard in every way including pipes

## 10. Carburettor & Inlet Manifold

- The Carburettor & venturi size, must be as listed in the table of eligible cars on page 2.
- The Idle, Air Correction & Main Jets may be drilled to adjust the mixture strength only.
- The Cold starting Choke Butterflies may be removed.
- The Carburettor body must not be modified in any way and any economy devices must be fitted.
- A secondary fixing is required on the Carburettor fuel inlet pipe if it is of the hose type.
- Water circulation holes in the inlet manifold may be blanked off.
- Exhaust manifolds with a Hot Spot under the Carburettor may blank it off.
- Air filters may be removed.
- No Ram pipes, Bell mouths or Stubs are allowed.
- For 8v Novas, Corsas and Tigras using the Pierburg 2E3 Carburettor. *Venturi's of 20 /24mm and a 8mm/7mm pre-atomiser diameter. Needle valve/fuel inlet must be no larger than 1.55mm as standard. This will be checked by using a 1.6mm drill bit which must not enter the hole.*
- **For Vauxhalls 1400 16v 32/34 carburettor jets are free, needle value must be standard.**

## 11. Fuel System

- Fuel tanks must be metal/*alloy* or FIA approved & fitted inside the boot or rear area, but not below the chassis rails.
- A complete fire wall must cover the tank and electric fuel pump.
- The tank must have a maximum capacity of 18 litres.
- Fuel caps must be of a metal screw type, no push fit types are allowed
- The tank must have a positive means of fixing.
- The fuel outlet must be from the top of the tank.

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- Fuel regulators are allowed.
- An electric fuel pump can replace the mechanically one.
- All fuel lines must be inside the car and be metal or metal covered.
- A fuel shut off tap must be within easy reach of the driver.
- A breather pipe must be fitted which should incorporate a one – way valve, with the pipe terminating below the tank so as to prevent spillage if inverted.
- The tank should not be below the chassis rails so where a floor exists, four 50mm diameter holes should be drilled for drainage purposes.
- Only roadside fuel can be used. No additives are allowed.

## 12. Exhaust System

- The exhaust manifold must be standard to the engine and not to the model of the car
- Exhaust down pipes are free, but stainless steel types are not permitted. *FWD vehicles must use standard down pipes.*
- You must use either the Ford E1ADDN5320A (an equivalent cross reference one is allowed) or the AX891 silencer. *Alternatively, the system standard to the car may be used or a BriSCA F2 type.*
- There must be 254mm or 10” of tail pipe maximum & 50.8mm or 2” minimum on the end of the silencer facing rearwards.
- Any part of the system passing through the inside of the car must have heat shielding around it.
- If your exhaust becomes ineffective in the last 5 laps of a race you must pull off, as you will be automatically removed from any results.

## 13. Batteries & The Electrical System

- The Batteries must be securely fixed & covered with rot proof material if they are not of the sealed type.
- No battery box only adequate clamping.
- Battery position is free & a maximum of two batteries is allowed. Oversized batteries used for ballast are not permitted.
- The Battery must be 152mm or 6” away from the fuel tank.
- Contact between the safety harness & the Battery should not be possible
- A battery master switch must be fitted in the rear left-hand window and clearly marked “ON- OFF” or have an electrical danger decal.
- When an electric fuel pump is used, a cut off switch must be positioned within easy reach of the driver.
- A self-starter motor must be fitted & working at all times.

## 14. Transponder

- A Transponder is mandatory & it must be fitted 1.8m back from the front position of the car.
- A hole 150mm or 6” in diameter or square, must be cut in the floor & the transponder fitted above it.
- In the event of a dispute with a transponder result, then the Steward of the meeting will make the final decision.

## 15. Mirrors

- A rear view mirror is allowed.
- Door mirrors if fitted must not protrude beyond the width of the vehicle.

## 16. Bodywork

- Body shells & panels must remain as manufactured & must retain the original silhouette. **(No lowered body shells, window apertures must be of original size to that vehicle).**
- Front wings below the ironwork may be removed in front of the wheel.
- Original foot wells must stay in the original position.

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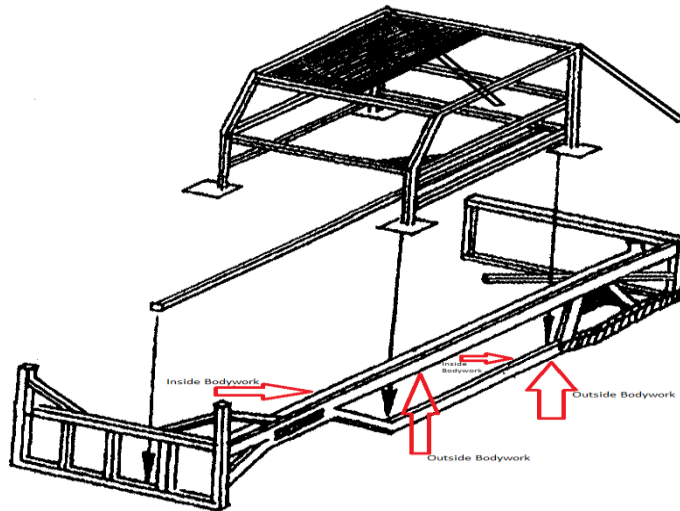
- Original bulkhead must stay in the original position. You may cut into the bulkhead for allowing ironwork to pass through.
- Roof inner lining may be removed but if the roof is flexing it must have plates welded in place to hold in the original position.
- Spare wheel well can be removed but **MUST** be replaced with flat plate up to the centre line of the rear axle (the centre line is determined by the centre of the stubs).

## 17. Roll Cage

**Key:** SHS - Square Hollow Section.

RHS – Rectangular Hollow Section

CHS – Circular Hollow Section



The roof may be removed to aid welding and fitting of the cage, but it must not be lowered or shortened when refitted. The roll cage must be constructed from either 38mmx38mm or 40mmx40mm SHS or CHS, with a wall thickness of 3 to 3.5mm & it must support both the A & B pillars. The cage must consist of the following minimum iron work.

- One front hoop over the A posts.
- One rear hoop over the B posts.
- Two connecting rail roof bars connecting the A&B hoops, with an additional third centre roof bar.
- A 3mm plate is to be welded on all four sides on the driver side from centre bar to cover completely the driver side as shown in diagram
- There must be one front crossbar at dash height.
- There must be two crossbars behind the driver, one of which must be at shoulder height to support the seat.
- Both front doors must have two chicken bars linking the A&B posts.
- Drivers doors must have a 3mm thick plate welded on the outside of the chicken bars, and may substitute the original outer body panels between the front & rear wheels. Alternatively, if the original outer panels are used the 3mm plate needs only to be a minimum of  $\frac{2}{3}$  of the width of the door, placed centrally between the A&B posts.
- It is compulsory to weld a 3mm thick driver's floor plate from just below the pedals to the rear of the driving seat if no under-irons are fitted.
- A metal up-right made from a maximum of 38x38mm or a minimum 19x19mm by 2 to 3mm thick SHS must be welded or bolted to the centre of the front windscreen aperture. Wire mesh **must be fitted** in front of the driver in this area.
- It is also permitted but not compulsory, to fit a brace off the upper passenger door chicken bar to the dash cross bar. This single bar made of 38mmx38mm or 40mmx40mm by 3mm thick SHS must go no further back than the centre of the front passenger door window aperture.



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- A single bar of 38mmx38mm or 40mmx40mm by 3mm thick SHS may be fitted from the nearside front lower bumper iron to the rear roll cage hoop cross bar. This bar & any connecting iron work must not be above the lower door chicken bar inside the confines of the roll cage.
- Corner gussets of 150mm triangles are permitted but there must be no overlapping of the gussets.
- Any part of the cage coming in to contact with the driver must be padded.

## 18. Under Irons (*Optional*)

- All iron work must be between 2.5 to 3.5 mm in thickness unless otherwise stated.
- The under irons must be made of either 38x38mm, 40x40 mm SHS or 50x25mm RHS iron and may be cross-braced. They may also be connected to the internal iron work.
- Under irons must follow the chassis rails or floor and must not come above them at any point. An exception to this rule would be when a piece of floor running next to the chassis is lower than the chassis rail, then it may be pushed up level with the top of the chassis member or cut out.
- The under irons may pass under or over the axle, cross member or subframe.
- Subframes may be mounted to the under irons.

## 19. Front & Rear Bumpers

- The bumpers must be constructed of 38x38mm, 40x40mm SHS or 50x25mm RHS iron with a maximum thickness of 5mm & consist of a *maximum of 8* equally spaced uprights between the horizontal cross-bars.
- The bumper horizontal cross bars must be spaced a minimum of 305mm (measurement taken from the outside of the horizontal bars) apart top to bottom.
- The bumpers may have straight or angled ends **no greater than 200mm cut back (angled) rear bumpers may be curved.**
- There should be a maximum of three pieces of iron joining each bumper corner.
- A rubbing iron made from 50x25x3mm or 40x40mm RHS iron may be welded to the fence side front bumper upright only. Please ensure that the welding of this rubbing iron has full penetration & the 50mm side of the iron is against the side of the upright.
- The **straight** horizontal bars in the front bumper should have a minimum width of 750mm/29.5".
- Bumpers must not have added steel as strengthening behind the bumper. A gap of approximately 40mm/1½" between the bumper and any other strengthening. The scrutineer's decision is final with regards to supports. If the car does not have a rear panel to the floor, the rear bumper must be panelled in with plate of a maximum thickness of 1.2mm.

## 20. Side Irons

- All side irons must be constructed from 50x25 x 3 or 4mm (or 40x40mm x 3 or 4mm) thick RHS iron.
- When the outer panels are removed, the 3mm plate should be positioned behind the irons to infill the area between the side irons from the front to the rear wheels, substituting the outer panels.

## 21. Front Wheel Protection

- A single piece of iron either 38x38mm, 40x40mm or 50x25mm 3 to 4mm thick may be fitted centrally over both the front wheels, on the exterior iron work only, to protect the struts. The maximum length of this iron is 610mm & it must have rounded edges.

## 22. Rear Wheel Protection

- The top part of the wheel rim must be covered to prevent the wheel breaking loose whilst racing and this may be done by one of two ways:
- The lower side irons around the area of the rear wheel can have a frame made of 38x38mm or 40x40mm by 3mm thick SHS iron welded to them to stand off of the side irons. The front of this frame should be angled so that it glances off other cars but the rear part of the frame may continue on to join the rear bumper.

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- A section of heavy duty leaf spring with a suitable angled mounting bracket (50mm maximum protrusion) is located so that the leaf is secured at the front of the rear wheel, with a slipper bracket fitted to the rear of the wheel. The leaf spring bolt should be no larger in diameter than 12mm & the leaf must be cold worked, no heating of the leaf is allowed.

## 23. Wheelbase

- The wheelbase on both side of the car must be standard + or -- 25.4mm or 1" (This means rather ½" or 12.7mm on both wheels or one wheel standard wheel base and the other one to a maximum of 1" or 25.4mm forward or backwards). When the wheel base is checked the driver will be asked to set their wheels where they want them & once one side is measured they are not allowed to move the wheels to measure the other side.
- When repairs have been made to the suspension using standard parts & the wheelbase is found to be incorrect, washers may be added or removed from the front tie-bars or anti-roll bars only to bring it within specifications or this may be achieved any other way ie For the Honda cut the bottom arm.

## 24. Vehicle Weight

- Cars may be checked (excluding the driver) at any time for their weight and they must weigh no less than 930kg and no more than 1030kg.
- **Cars over inside weight will have points deducted. Cars consistently outside required weights will be disciplined and possibly face a ban.**
- There is also a maximum of 52% inside (drivers side) weight

## 25. Front Suspension

- To be fitted as original no interchanging of parts within the manufacturers range to change the suspension geometry. Whatever is fitted on the nearside must be fitted on the offside.
- Camber on N/S/F wheel must not exceed 15 degrees however achieved but must not be adjustable.
- The N/S/F top suspension mounting may be repositioned to achieve negative Camber & Castor & be strengthened and must be welded fully in place, and not just tack welded. The geometry settings must not be adjustable.
- The O/S/F suspension top mounting may be strengthened only and the wheel has to have 0 degree's – 2 degree's negative camber.
- **N/S/F front turret and chassis may be removed, O/S/F turret and chassis must be complete up to the front of the turret.**

## 26. Rear suspension

- Must remain as standard & to manufacturers settings. **Washers maybe used to re-align damaged axels but not for rear wheel steer.**
- Race cars that have suffered damage or corrosion may strengthen or attach any suspension pick up point to the iron work, **this can only be a maximum of one pick up point, if a car did get damage again it must have in writing from there promoter to get permission to move the second pickup point.** But the pickup points must be in its original position.
- Toyota Starlet link arms may be substituted for bars and bushes of a different size but the centres must be as the manufacturer's original dimensions.
- **Rear axle or swinging arms may have a support brace to strengthen.**
- **If the boot floor and rear chassis has been removed this can only go back as far as the centre line of the back wheels.**



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## 27. The Steering

- No quick racks can be used
- A quick release steering wheel is permitted.
- Steering column height may be adjusted to suit the driver & the upper bracket strengthened.

## 28. The Springs

- Springs are free (57mm or 2¼" are now permitted).
- Only one spring is allowed per corner.

## 29. Ride Height

- This is measured without the driver, from the bottom of the sill (not the rebate lip) to the ground, and this ride height measurement must be no lower than 178mm or 7". The test block must travel freely along the length of the sill between the front & rear wheels.

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## 30. Front Shock Absorbers

- The front Shock absorbers must be standard **fitment** and available to everyone, through recognised outlets.
- Gas shock absorbers are allowed.
- The shock absorbers must have NO exterior means of adjustment.
- The casing must be original to the car or a replica of the original.
- Spring platforms cannot be adjustable & must be in their original position.
- Fixing bolts must be original in size, so as not to allow for any movement or angle change.
- Fixing bolt holes maybe moved on passenger side to achieve negative camber but not slotted to be adjustable.

## 31. Rear Shock Absorbers

- Any standard production shock absorber, from any manufacturer that fits to the original mounting position without modification. The shock absorber maybe mounted of the iron work but be in the original position
- **No Gaz** or competition types are allowed

## 32. Wheels & Tyres

- Any standard 13" steel wheel can be used up 5½" J in width also any *branded manufacturer's alloy may also be used with 5½ J in width.*
- Tyres allowed as follows : -
- **Pace PC50 and Yokohama A drive / Bluearth .. 175/70/13**
- Tyre buffing is permitted. **But This May Not Be Done In The Pits, By Any Means Other Than A Hand Rasp.**
- Tyre softener is not permitted
- Tyre gaiters are permitted

**The TYRE RULE WILL BE MONITORED DURING THE SEASON AND REVIEWED FOR 2020.**

## 33. Final Drive

- You must use the standard axle for the car if it is a rear wheel drive car and you may change the final drive ratios but these must come from the same manufacturers range without machining or modifications to the standard part.
- Front wheel drive cars are allowed to change the final drive ratio from the same manufacturers range without machining or modifications to the standard part.
- You must lock the differential by welding only.
- 4. No limited slip differentials are allowed.

## 34. Gearbox & Propeller Shaft

- The gearbox must remain as standard with all the gears, but ratios from the same manufacturer can be interchanged, but it must be without machining or modification of the standard parts.
- The gearbox mounts may be solid but they may not be repositioned
- Rear Wheel Drive cars can interchange propeller shafts from within the manufacturers range

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- Front Wheel Drive cars can use any drive-shaft from within the manufacturers range.

## 35. Brakes

- To remain as standard as fitted by the manufacturer without modification.
- Front Wheel Drive cars however, may bypass brake compensators.
- Brakes must operate on all four wheels.

## 36. Paintwork

- The external appearance of the car must look professional at all times, drivers of scruffy looking cars will be told to improve their appearance & may not be allowed to race.
- A maximum of two cars may be painted in team colours or painted to look similar, unless it is required by the Promoter for a particular team event.
- 100% of the roof must be painted in the correct roof grading unless you are a Superstar or a current Championship holder, when the roof must be painted accordingly.
- Sign writing must be professional and be approved by the Promoter.

## 37. Sun Visor

- A Sun visor 165mm or 6" in depth must be fitted with your name written upon it.

## 38. Fin Plates

- Fin plates must be fitted above the roof line but it should not be larger than 305mm or 12" by 559mm or 22" wide.
- Fin plate numbers must be 229mm or 9" high by 38mm or 1½" in width, *plain* black numbers on a *plain* white background only.
- Please ensure they are correct. *No Holographic numbers or backgrounds.*

## 39. Door Numbers

- The drivers racing number must appear on both sides of the car. The numbers should be **clearly visible with black numbers on a white background.**

## 40. Roof Grading / Championships.

- All roof grade champions must start at the rear of the Grid, unless told otherwise by an official.
- If you win a race at a meeting; you will start the remaining races from the rear of your grade. Should you win another race at the same meeting – you will be automatically upgraded.
- Champions should start in the order of the list below, but multi-Champions will start next to the Gold Roof Champion.

Grid Line up / Roof Order:

White (Novice)

Yellow

Blue

Red

Red Silver Stripe – *Current National Points Leader*

Blue with White Cross – Scottish Champion

Silver Roof National Points Champion

To be eligible to enter into a Championship race; a Driver must have a full licence. (No Day Licences allowed). **The exception to this is a reigning Champion may defend the Championship from the rear of the grid but also must hold a full license.**

To be eligible to race in the Scottish championship you must have competed in 50% or 4 meetings prior.

To be eligible to race in the gold roof final you must compete in at least one of the gold roof qualifying race/meeting.

## 41. Specification and Rule Changes

- The Promotion may at any time make amendments to the Specifications for the following reasons:

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- In the interests of Safety
- Reduce costs for the driver
- In areas that are detrimental to the future of the formula
- If an unnecessary advantage has been deemed.

Current registered drivers will be notified automatically of any changes.

## All Oval Racing Formulae

Permitted fuel specification from 1<sup>st</sup> January 2008 (this specification supersedes all previous specs).

- All cars must only use fuel from roadside pumps as defined below.

Petrol (Motor Gasoline of the type on sale to the general public from roadside filling stations) BS 4040 (Leaded) Subject to a valid permit for use. LRG (Unleaded), BS EN 228 (Unleaded), BS7800 (Super Unleaded).

- Petrol is a product refined from crude oil that contains a large number of identifiable compounds that can typically be 250 in number. These compounds can be identified and compared to the available petrol from major oil companies and suppliers.
- Unless otherwise stated, or the distinction is made between leaded and unleaded petrol, major gasoline fuel shall meet the following; Acceptance levels for Octane numbers will be determined at 95% confidence level. Only additives to this motor gasoline fuel solely for the purpose of lead replacement are allowed.
- Lead Replacement Gasoline, LRG, also known as LRP. Only additives from Sodium, Phosphorous, Potassium, or Manganese according to manufacturer's recommendations are allowed. Note; Manganese can enhance octane values in any petrol. Under no circumstances will values in excess of 0.005 grams/litre be permitted.
- Lead in excess of EU directive 98/70EC requirements is illegal.
- We reserve the right to amend the detail of the above specification to reflect any change occurring in the quality of the fuel on sale to the general public at any time.

Roadside fuel consistency when testing fuel samples.	BS 7800	BS 4040	LRG/LRP	Test Standard	
BS EN 228					
Motor Oct No (max)	89.0	89.0	89.0	89.0	ASTM D2700/86
Mon (min)	85.0	86.0	86.0	86.0	ASTM D2700/86
Research Oct No (max)	100.0	100.0	100.0	100.0	ASTM D2699/86
Ron (min)	95.0	97.0	97.0	97.0	ASTM D2699/86
Lead (max)	0.005	0.005	0.15		ASTM D3341 / IP362
Lead (min)	ASTM D3237	ASTM D3237	0.005		ASTM D3237 / D3341 / IP362
Density @ 15°	0.720 - 0.775	0.720 - 0.775	0.720 - 0.775	0.720 - 0.775	ASTM D1298/ D4052
Oxygen % max	2.7% w/w	2.7% w/w	2.7% w/w	2.7% w/w	Elemental
Nitrogen % max	0.1% w/w	0.1% w/w	0.1% w/w	0.1% w/w	ASTM D4629/ IP379
Benzene % max	1.0% v/v	1.0% v/v	1.0% v/v	1.0% v/v	EN238
Sulphur	150mg/kg	150mg/kg	150mg/kg	150mg/kg	EN ISO 14596 / ASTM D2622
Olefins*	18% v/v	18% v/v	18% v/v	18% v/v	ASTM D1319
Aromatics*	42% v/v	42% v/v	42% v/v	42% v/v	ASTM D1319

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## 42. Personal Safety

Drivers are advised that under Health & Safety, they are responsible for their own and their Mechanic's actions.

Promoters have had complaints made about Registered Drivers & Mechanics consuming large amounts of alcohol at meetings, which could effect their judgement or be detrimental to their health, when medical attention has to be administered by Paramedics, First Aid or Hospital Staff. Should an incident occur that proves fatal on the raceway and you are involved, it is likely that the Police will want interview you. If you drive, don't drink! Scrutineers and Officials will report to the Clerk of the Course, anybody they believe is under the influence of Drink or Drugs. Drivers whom it is thought are under the influence may be breathalysed. You have been warned!

It is also apparent that some drivers are not aware of the flags used by the track staff so here is a reminder:

- Waved Green Flag – Go, the race is on.
- Waved Red Flag – Stop racing slow down & stop.
- Chequered Flag – Race winner has crossed the line, continue to race until the Red Flag is shown.
- Held Yellow Flag – Beware, you are approaching a hazard on the track, continue to race.
- Waved Yellow – Slow down to 15mph, hold your position, and do not overtake any other cars.
- Waved Blue Flag – Shown to a driver who must hold his racing line. Driver must either hold a line on the inner part of the track or the outer part of the track, not weave between both.
- Blue & White Flag – Give up your track position, you have not taken notice of the Blue flags.
- White Flag with a Blue spot – Oil on the track.
- Waved Black Flag - You are disqualified, pull off the track immediately.
- Black cross on a White board – You have committed an infringement and may be penalised in the results.
- White Flag with a Red Cross – Technical Disqualification, leave track immediately

Drivers are also reminded that they should line up on the grid with their engines switched off in the correct points order, unless told otherwise.

## 43. Safety Equipment

### A) Crash Helmet

Helmets must be of a minimum standard as directed by British Oval Racing Safety Executive (B.O.R.S.E). These are FIA8860-2004, FIA8860-2010, Snell SA2005, Snell SA2010, Snell SA2015, SFI Foundation 31.1A, SFI Foundation 31.2A. The E2205 European standard helmet may be used in Fibreglass, 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 (ORC15) sticker.

### B) Racing Overalls

You must wear Fire retardant, clean, un-torn and brightly coloured Racing Overalls that are made of a fire retardant material and are clearly marked fireproof. Mechanics are also required to wear clean overalls and will not be permitted on to the track without them being on, when instructed to do so.

### C) Gloves

It is Mandatory to wear Fire retardant Gloves also clearly marked fireproof.

### D) Balaclavas

It is Mandatory to wear Fire retardant Balaclavas clearly marked fireproof.

**E) Neck brace** is recommended but not compulsory, so too is a spine support.

**F) Wet weather clothing** is also recommended and must be worn in addition to, and not instead of the racing overalls.

### G) Window Net

You must have a cloth type Window Net with a maximum spacing of 76mm x 76mm, which must be fitted with a quick release mechanism.

### H) 1kg FIRE EXTINGUISHER

A 1Kg Dry Powder Gauge Fire Extinguisher is highly recommended and if fitted, this 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 2kg fire extinguisher dry powder or gas, which must be within easy reach of the driver and mechanics at all times, especially when refuelling.

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## **I) Competition style driver's seat with head restraint**

You must have a Competition type Driving Seat with a head restraint. The seat should occupy its original position where possible and be suitably supported at shoulder height and on both of the sides and back, with a suitable framework or seat stiffener's.

Additional wrap around seat support at shoulder height.

Extra padding recommended in the back of the seat

Additional wrap around seat support at shoulder height.

Extra padding recommended in the back of the seat

## **J) 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

It is mandatory to have a 5 point Safety harness with 3" shoulder straps, the lap & crutch straps can be either 2" or 3" in width.

All seatbelt connection points must be visible and no belts must 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.

Fig.1 below shows the location for the tail straps, which should be horizontal to 200 below horizontal, and as close to the shoulder as is practical for optimum restraint.

Only safety belts comprising of separate shoulder, lap, and sub-straps will be permitted.

The sub-strap must be used at all times, and 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.

Additional wrap around seat support at shoulder height.

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.

The safety of your seat will be judged by the Scrutineer's and you will only be permitted to race when they are satisfied that you will be as safe as possible in any event.

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FIG 1.

