

## JUNIOR RODS

## 2017 Rules and Regulations V2

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## **JUNIOR ROD RULES 2017**

## 1. THE FORMULA

The object of the race is to complete the specified number of laps in the shortest time. This is a non-contact formula open to anyone from the age of 10yrs to 16yrs( If your 16th Birthday falls during the season you must progress to another formula, you will not be able to continue in Junior Rods), All new drivers will be required to undertake a multiple choice question paper and practical driving test before they are able to compete in a race meeting (Please contact the office to arrange this) all cars should be presented in a professional racing appearance, this standard is required to be kept up throughout the racing season. Cars with tatty, dented and badly battered panels will not pass scruitineering.

Racing is in a clockwise direction on a clearly defined circuit with a separate infield. Any wheels passing over the demarcation lines or entering the infield areas will mean that the driver will be penalised. Actions deemed to be deliberate or dangerous will carry penalties.

## 2. ELIGIBLE CARS

Any standard manufactured 8 valve car upto 1300cc non injection OHV or OHC car, with the addition of the 16v 1ltr Micra.

Front wheel drive only.

All cars must remain their original silhouette, however you can add skirt and arch kits. Cars are to be of mono type only. No separate chassis are permitted.

## 3. VIOLATIONS

- 1. 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.
- 2. 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!
- 3. Presentation of a Vehicle for Scrutineering is a declaration by the entrant that the vehicle is eligible for that event.
- 4. 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.
- 5. 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.
- 6. Should a discrepancy occur between the Specifications then the Promotion will exercise its judgement, and that decision will be final.
- 7. Clarification on any one item may be sought from the Promoter.
- 8. A minimum of 3 month ban will be issued for car sharing and given to both the driver and person using the car if caught; also illegal parts used in this formula will also result in a 3 month band which will be issued by the board of control; also any driver swapping his personal wrist band that he/she will be given once signed on will also result in a 3 month ban.
- 9. Drivers have been advised to keep check on other cars.
- 10. Anyone found to be illegal with engine or suspension parts to be awarded a minimum of 3 months racing ban. (Drivers committee to finalise bans when possible)

## 4. 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 affect their judgement or be detrimental to their health, when medical attention has to be administered by Paramedics, St Johns 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, 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.
- 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 the 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.

#### 5. SAFETY EQUIPMET

#### 1. CRASH HELMET

A helmet conforming to at least one of the approved standards MUST be worn.

Helmets MUST meet or exceed the MINIMUM standard as directed by BORSE. The current approved standards permitted for all drivers are:

- FIA 8860-2004
- FIA 8860-2010
- FIA 8859-2015
- Snell SA2005 (This standard will be reviewed at the end of the 2017 season)
  Snell SA2010
- Snell SAH2010
- Snell SA2015
- Snell EA2016
- SFI Foundation 31.1A
- SFI Foundation 31.2A
- SFI Foundation 31.1
- ECE R22.05 (in Fibreglass, Carbon or Tri-Composite form ONLY)

The following approved standards are permitted for Junior drivers only (drivers aged 15 and under) in addition to those above:

Snell CMR 2007 □
Snell CMS 2007 □
Snell CMR 2016 □
Snell CMS 2016 □
SFI 24.1

The use of polycarbonate helmets is NOT permitted.

The helmet MUST fit the competitor correctly, according to the manufacturer's sizing/fitting guidelines.

Shatterproof goggles or a shatterproof visor MUST be worn with the helmet at all times. the use of tinted visors is NOT advisable..

## 2. RACING OVERALLS

A flame resistant race-suit/overall MUST be worn.

Flame resistant race-suits/overalls MUST be manufactured from Proban, or material of a higher specification, e.g. Nomex.

Flame resistant race-suits/overalls MUST be clearly marked with the relevant SFI, FIA or equivalent standard, or the manufacturer's statement of protection.

Race-suits/overalls MUST be maintained in a clean and tidy condition.

Race-suits/overalls manufactured/certified to Karting standards, including, but not limited to, the CIK-FIA Level 1 or Level 2 standards, are NOT permitted as they do NOT provide the appropriate level of heat/flame protection.

## 3. GLOVES

Flame resistant gloves MUST be worn.

Flame resistant gloves MUST be clearly marked with the relevant SFI, FIA or equivalent standard, or the manufacturer's statement of protection.

#### 4. BALACLAVAS

A flame resistant balaclava MUST be worn.

Flame resistant balaclavas MUST be clearly marked with the relevant SFI, FIA or equivalent standard, or the manufacturer's statement of protection.

#### 5. NECK BRACE

An FHR or neck-brace MUST be worn.

If a neck-brace is used, it MUST be of the complete-circle type, i.e. it must form a complete circle around the competitor's neck with no gaps.

The use of "U" shaped, or "horseshoe" neck-braces is NOT permitted.

## 6. WET WEATHER CLOTHING

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

## 7. WINDOW NET

A quick-release fabric window net MUST be fitted in the driver's side door window aperture of all saloon car formulas, with the exception of Banger type formulas.

The width of the netting holes must NOT exceed a MAXIMUM size of 3in/75mm wide.

The window net MUST be fitted such that it hangs down level with the steering wheel.

The window net MUST be flexible and easily removable, independent of any movement of the driver's-side door. .

## 8. 1kg FIRE EXTINGUSIHER

A fire extinguisher, meeting the specifications below, MUST be carried in the competitor's tow-vehicle/transporter at all times.

The fire extinguisher MUST be within easy reach of the competitor and team members at all times, especially when re-fuelling the racecar.

The fire extinguisher capacity MUST be at least a MINIMUM of 2Kg.

The fire extinguisher MUST be of a dry powder or gas type.

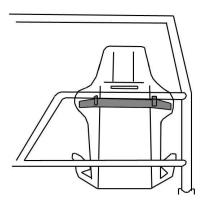
Old type BCF (green) fire extinguishers are NOT permitted.

# 9. COMPETITON STYLE DRIVERS 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 sides and back, with a suitable framework or seat stiffener's.

Additional wrap around seat support at shoulder height.

N.B If using an aluminium Kirey seat an extra support bar is needed to support the head rest



## 10. SAFETY HARNESS

A full safety harness MUST be used in accordance with the specifications below All mandated straps MUST be used at all times

The harness MUST comprise of a MINIMUM of 2 shoulder straps, 2 lap straps, and an antisubmarine strap (also referred to as a sub-strap, or crotch-strap) in a MINIMUM 5-point design.

Shoulder straps with a sternum protection latch are highly recommended.

The harness MUST incorporate a quick-release buckle (including rotary buckles, and NASCAR lever-latch type buckles), to which all straps MUST be connected.

Where a NASCAR lever-latch type buckle is used, it is advisable to fit a method of protection to prevent race-suit/overall sleeves from accidentally unhooking the buckle during racing. A small section of "Tubegrip" elasticated bandage, slid over the hooked buckle is sufficient for this purpose.

All Non-FIA Approved Harnesses - The shoulder and lap/pelvic straps of ALL non FIA approved harnesses MUST measure at least a MINIMUM of 2in/75mm in width. This applies, but is not limited to:

- ALL non-homologated harnesses
- · ALL harnesses with NASCAR lever-latch type buckles
- ALL harnesses homologated to SFI standards
- ALL harnesses that do not meet ALL FIA criteria below

FIA Approved Harnesses – The use of narrower lap/pelvic straps is now permitted on FIA approved harnesses ONLY. The harness MUST meet ALL the following criteria:

• The harness MUST be certified/homologated to the current FIA standards: 8853/98 or 8853-2016

- The shoulder straps MUST measure at least a MINIMUM of 2.75in/70mm in width (unless used in conjunction with an FHR device see below).
- The lap/pelvic straps MUST measure at least a MINIMUM of 2in/50mm in width.
- The FIA identification/homologation labels MUST be intact and visible to scrutineers on ALL sections of the harness.
- The harness MUST be within its visibly stated validity period.

ALL Harnesses - The anti-submarine strap MUST measure at least a MINIMUM of 13/4in /44mm in width.

ALL Harnesses - Where an FHR device is used by a competitor, it is permitted to use shoulder straps that narrow below the minimum specification (stated above) in order to ensure the correct fitment of the harness/FHR device combination. This exception applies to the shoulder straps ONLY. Any such straps MUST be manufactured by a recognised industry supplier AND be specifically designed for use with an FHR device.

The harness MUST be securely mounted to the floor, roll-cage, and/or chassis of the race car. Harness manufacturers specify their own installation requirements depending on the design of their harnesses. Therefore, harnesses MUST be installed according to the manufacturer's recommended best practice using only approved mounting components/methods.

All the major manufacturers have installation information on their websites, and competitors are advised to refer to this when fitting harnesses to their race cars. Useful websites include (addresses correct at time of publication): Manufacturer's Websites

- www.willans.com
- www.schrothracing.com
- www.trs-motorsport.com
- www.racequip.com

## Safety Standards

- www.sfifoundation.com
- www.fia.com/homologations

Key general guidelines from manufacturers for the installation of harnesses state that:

- Strap lengths should be kept as short as possible to avoid excessive stretching under impact.
- Shoulder straps should be supported at or just below shoulder level.
- Shoulder straps should be prevented from moving sideways, such that they may drop off a competitor's shoulders under severe impact/stretching.

It is recommended that any seat apertures, through which the straps pass, are lined to prevent chaffing of the straps.

Special attention MUST be paid to the condition of straps and fixings once installed.

The harness MUST be maintained according to the manufacturer's recommended best practice, and where possible kept free of dirt, oil and grease that could degrade any materials.

## 6. ROLL CAGE

Key: SHS - Square Hollow Section. RHS – Rectangular Hollow Section. CHS – Circular Hollow Section.

No Alloy cages or part cages are permitted.

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 ironwork:

- 1. One front hoop over the A posts.
- 2. One rear hoop over the B posts.
- 3. Two cant rail roof bars connecting the A & B hoops.
- 4. There must be one front crossbar at dash height
- 5. There must be one crossbar behind the driver, which must be at shoulder height to mount the seat support or seat brace hoop as a seat support.
- 6. It is recommended that an additional rear B post bar is welded in at floor level.
- 7. The roll cage hoop feet must be welded to four 3mm thick plates 100mm square or to a piece of bar or box 38x38mm with a minimum thickness of 2.5mm, connecting the front & rear hoop feet & welded to the floor or sill. This bar does not replace a door chicken bar.

- 8. Two near side and two off side chicken bars with connecting bracing fitted to both doors, the lower bar being 75mm or 3" above the door sill.
- 9. Rear facing ironwork from off of the cage is permitted but it must terminate 100mm or 4" from the back panel.
- 10. Both suspension turrets can be supported by two brace bars from off of the front of the cage going through the bulkhead, but it must be made from the same material as the cage.
- 11. All joints must be welded over 90% of the joint, unless an approved RAC, MSA cage is used.
- 12. Any part of the cage coming in to contact with the driver must be padded.

## 7. SUSPENSION GENERAL

- 1. Shock absorbers are to be standard and no competition, and must fit in original holes
- 2. Springs must be standard, no competition, but maybe lowered to help with set up.
- 3. Wheelbases must be manufacturers standard and not widened or shortened, however nearside and offside front wheels maybe moved forwards or backwards to help setup, but once achieved must not be adjustable.
- 4. Bottom arms can be lengthen to a maximum of 1" but must be non-adjustable and must be welded.
- 5. Camber must NOT exceed 12 degrees negative when measuring on N/S/F and 4 degrees positive when measuring on O/S/F. Rear axles Must remain standard, suspension turrets must remain standard no re-drilling or moving, shock absorbers may have bolt holes lengthened, no modified hubs.No Shimming of Hubs.
- 6. Tie bars maybe lengthened or cut shorter but must be non adjustable.
- 7. No Coilover Shock Absorbers
- 8. No suspension parts are to be adjustable
- 9. Shocks, Tie bars and bottom arms must NOT be adjustable, Camber can be achieved by redrilling hubs to strut holes, or bottom arm, but if all or any are used must not be more than a combined movement of 1" between all methods, all must be fixed by welding.

## 8. STEERING

The use of a quick release steering wheel mechanism is permitted.

Steering rack must occupy its original position, but the steering column height may be adjusted to suit the driver. It is recommended that the upper retaining bracket of the column be strengthened on some cars for safety.

#### 9. BRAKES

- 1. To be as original and to work on all wheels.
- 2. Hand brake is compulsory. NO hydraulic handbrakes except where standard.
- 3. No biased braking.
- 4. No modification to brake compensator (s).
- 5. No competition parts with the exception of competition pads may be used.
- 6. Brake components from the same manufactures range may be used, but must be done without modification of the standard parts and may not be from a larger cc vehicle e.g. no parts from a 1600cc may be used. For front wheel cars fitted with load dependent brake pressure regulating valves, the valve must not be modified, but the connection from the suspension to the valve maybe adapted or removed, and the regulator arm secured in any position.

## 10. VEHICLE WEIGHT

The minimum vehicle weight is 680KG

## 11. ENGINE & TRANSMISSION

Any 1000cc push rod or OHC engines as homologation list. Single point injection is permitted, standard original equipment only. 2 wheel drive only, single engine only.

Due to valve springs for 1000cc OHV Vauxhall being unavailable from Manufacturers or Factors, the following alterations are permitted: 1400cc 8 valve OHC valve springs are permitted with the addition of either one solid spacer under exhaust valve spring or original turntable ground off, or the centre of 1400cc turntable machined to fit valve guide. The solid spacer used must not measure any more or less than 7mm.

Part numbers for 1400cc components, Spring 9026508 G.M. Spring VSP 954255 (Factor) Turntable 90106266. Washer 90128720.

2 wheel drive only - no fuel injection.

Cars must be of a model originally fitted with 1 only single choke carburetor (or single point injection), max 2 valves per cylinder, with engines of up to 1000cc front wheel drive. No Cooper S, GT., Rallies, Sports, Special Editions, or engines parts permitted etc:

No modifications to engines permitted except as listed.

Drivers please note:-all cars must be as were produced by the manufacturers, except for permitted modifications. If a driver refuses to allow Ringwood raceway / Or the promoter to fit an ECU they will be deemed illegal. If it is not stated that it can be done then it **CANNOT** be done.

The ecu if fitted can be brought at any point by any parent or promoter for the sum of £50, If refusal to Allow this ecu to be purchased it will deem you illegal and a minimum of a 3 month ban will be given to the driver

- 1. 60 though (0.060") maximum overbore permitted and any other renewal or replacement of worn components.
- 2. No reprofiled or remanufactured camshafts, manufacturers original or manufacturers' replacement ½" wide lobe, 3/8" lobe cam is allowed but must be within the manufacturers tolerances. Camshaft Nos 6267 or 4717 are permitted. 4717 can be identified by 1 ring between lobes of cylinder № 3, 6267 can be identified by 1 or 2 ring between lobes of cylinder № 2. Other vehicle camshafts will be checked against manufacturers' technical data.
- 3. Manufacturers' dowel or woodruff keys must be fitted as standard.
- 4. Engine balancing is permitted. No machining of pistons except for balancing purposes and this can only be carried out on the inside surface of the piston and they must not protrude above block face but, some manufacturers have pistons that protrude as standard, so particular vehicles will be checked on their merit, according to manufacturers tolerances, for that specific vehicle. One piston and one con rod must remain as standard. Competition pistons are not permitted.
- 5. No centre main crankshaft straps.
- 6. When closed the valve head must protrude into the combustion chamber and not be recessed.
- 7. Valve springs must remain standard to the engine used.
- 8. No matching or machining of carb to inlet or manifold to block. Inlet and exhaust manifold must remain as standard.
- 9. Head numbers 12A 1456 2A 629 Minis or "APlus" CAM4810. Cylinder heads may be skimmed, but no modification to oilways. Lead free inserts and 3 angled valve seats may be used.
- 10. Oil pump pick-ups may be relocated, sumps may be baffled.
- 11. BL "A+" 1000cc engines or running gear are permitted. Crank, rods and pistons must remain standard to block.
- 12. No "S" type distributors on BL. "A" series and A+ engines. <u>Distributors must be the original</u> <u>manufacturer's part. No electronic ignition unless it is fitted as standard. The distributor base plate</u> <u>MUST BE attached to the vacuum unit it must not be secured and MUST BE FREELY MOVABLE.</u> <u>Distributors MUST remain standard as manufactured; the vacuum pipe must be connected and not modified in any way (i.e. holes in diaphragm, worn out holes in pipe or blockages).</u>
- 13. Electronic ignition permitted if fitted as standard. A+ 1000cc camshafts, heads and springs may be interchanged with A series 1000cc or vice versa.
- 14. Fitting of dynamo/alternator optional.
- 15. No duplex timing chains.
- 16. Air filters free. No ram pipes, air scoops, turbo or any other forced induction.
- 17. Carburetor butterfly must not be modified or removed.
- 18. All cars must retain original carburetion. 1 ½" maximum. S.U. Needles must remain round.
- 19. No twin specialist carburetors.
- 20. Casting and or forging marks must remain.
- 21. Vauxhall Novas may blank off original oil filter and use an adaptor plate to allow the oil filter to be repositioned.
- 22. Engine mountings to remain standard although the top mount next to the valve cover may be solid.
- 23. The Citreon AX carburetor engine & gearbox can be fitted into the Saxo.

All gearboxes must retain all gears. NOVA gear box must retain 1.96 second gear.

Gearboxes and axles must be as originally fitted to the car with NO modifications except:-Differential final drive ratio may be altered within the manufacturers range.

- 1. No competition or limited slip diffs are permitted.
- 2. Output drives and drive shafts must be within the manufacturers range.
- 3. No locked or welded diffs, and no Limited Slipped diffs are permitted
- 2.2.1 and 2.1.8 Gear Clusters are not permitted for use in this formula.

## 12. WHEELS

Wheels of any type may be fitted to the car. The maximum wheel width is 6j no wider types permitted. Wheel diameter is 13", Alloy wheels are permitted. No wheel spacers allowed, whether welded to the wheel or not. The top of the wheel and tyre must be covered by the wheel arch. Wheel studs are free but must have correct amount needed for each wheel. No wheel weights allowed.

## 13. **TYRES**

Any road legal tyre can be used, but Must NOT be of competition type.

All tyres must not exceed 165/70/13 Or 175/70/13

No kingpin Alpines or yokohama's are permitted.

## 14. BODYWORK

To remain as production apart from where replacement panels are unobtainable, similar panels from other makes of vehicles may be used.

Removal of inner door panels and top of doors and the inner rear quarter panels from the waistline down is permitted. Top of tailgates must remain on. Removal of structural stiffeners is not permitted, with the exception of the boot and bonnet. Wheel arches may be cut away to accept a wider rim. 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 the doors and wheel arches. Tack welding is allowed-this is defined as being 2" (50mm) weld with a 6" (150mm) gap before next weld.

No strengthening maybe added, but on cars where suspension mountings or sub frame locate on a weak part of the body suitable strengthening may be added.

All doors must be fixed when racing.

No spoilers or aero foils except where fitted as standard to the make and model of car.

Mild steel panels only may be used, Door skirts maybe fitted but these must tie into the lower edge of the wheel arch and must not be deeper than 2" (50mm). The width if the skirts must not be wider than the wheel arch.

A single 2" (50mm) diameter inspection hole must be included in bumpers on the driver side. Holes are permitted in side skirts but must be equal on both sides.

Gusseting of the near side front and off side rear wheel arch is allowed. Gusseting is permitted between the centre line of the front and rear axles, Where the side skirts join the wheel arches. Cars fitted with integral rear panel and bumper may substitute them for a metal panel of original shape and size.

Any replacement panels must be of the original gauge with a single 2" (50mm) diameter hole drilled for inspection.

Front panels must not exceed 1.2mm (0.048) or 18 gauge.

Front chassis must not be extended, except for a maximum of two 18 gauge flat plates from chassis to front panel. This must NOT be boxed in any type of way.

Holes are permitted in the front panel between the headlight apertures for cooling purposes only. Where two sections are used to form a front panel, the overlap must not exceed ½ inch (13mm). Repairs to front wings and flitch panels mjust be carried out with material of original thickness, NOT 18swg. Where front panels are not original of 18swg, only the front section may be of that material; The "Wrap around" sections to join it up to the wings and the inner flitches etc must all be constructed with original thickness of material which is usually 22 or 24 swg.

Where front panels are non original the shape reproduced must be the original silhouette of the car when the original bumper is removed. Front panels must not incorporate a front bumper in the shape produced. Like wise the flitches must follow approximately the original contour, not folded with angles to provide strength.

Where bonnet slam panels are replaced, light weight tube or box ( 2" (50mm) x 1" (25mm) or 1" (25mm) x 1" (25mm) with a 1mm or 1.5mm wall) must be used. Cross ties must be 16-18 gauge, 1mm wall box section. Panels must not be doubled.

Where headlight apertures are filled, they must not have more than a 1" (25mm) overlap. Additional gusset must not be added to provide strength to chassis legs etc. existing apertures, (headlamps etc) may not be strengthened by any means other than you may pop rivet a maximum of 18swg alloy plate as a blanking cover.

No stainless steel or foam filled panels are permitted. Extra holes other than those stated above are not permitted.

#### 15. **BONNETS**

Scoop Bonnets are NOT permitted.

## 16. **BUMPERS AND GRILLES**

A rear bumper may remain on the car occupying its original position. You may replace this with a panel as set out under bodywork rule 16.

For steel bumpers, there must be one 2" (50mm) inspection hole on the drivers side.

Fibreglass bumpers both front and rear are permitted.

Grilles must be original or plastic replacements and must remain in there original position.

Fibreglass grilles are allowed and may include headlight apertures.

#### 17. SCREENS

All glass must be removed.

Front screen must have a centre bar of 19mm x 19mm or 3/4" x 3/4" shs welded in place.

An interior mirror must be fitted.

A driver's door mirror must be fitted, mounted in such a position that it does not project further out than the body. (Must not be able to get knocked of whilst in racing traffic)

## 18. **BATTERIES AND ELECTRICAL**

Batteries must be securely fixed and covered with a rot proof material. They may be fitted under the bonnet but only on the Vauxhall nova at the original bulkhead fittings, all other vehicles must be behind the driver, but the floor cannot be cut to accommodate them. They must be fitted at least 6" from the fuel tank.

An electrical cut off switch must be fitted to the N/S/R corner of the car. If the car is fitted with a electrical fuel pump, the switch must also be within easy reach of the driver.

Self starter motors must be fitted and in working order at all times.

The use of a rev counter is permitted.

A 24v starter system is permitted.

#### 19. STOP LIGHTS

Either two stop/Brake lights or one single stop/brake strip light must be fitted/ hung from the rear of the roof. If 2 lights, they must be a minimum of 30" (762mm) apart facing rear ward. Lamp (s) 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 21watt intensity.

For round type lights: minimum diameter 3" (76mm), maximum diameter 5" (127mm). For square/rectangular lights: minimum diameter 3" (76mm) square, maximum diameter 5" (127mm) square.

The strip type lamps 16" (406mm) maximum width.

## 20. RADIATORS

Radiators are free but must occupy their original position. A heater matrix may be used as a secondary radiator but must be fitted under the bonnet.

## 21. SILENCER/EXHAUST

The only silencers allowed are manufactured standard full exhaust system including back box. A minimum of 2" (50mm) and a maximum of 10" (254mm) section of tail pipe must be fitted to the silencer facing rearwards or down. This will be measured from the rear of the box and not the pipe. The Vauxhall corsa may use the Nova twin outlet exhaust manifold.

#### 22. FUEL AND TANKS

Fuel tanks must be metal and FIA approved with a maximum capacity of 4 gallons or less. These must be fitted rear of the driver but in front of the rear axle centre line. Fuel tanks must NOT be in the boot area, and must be fitted at least 6" from the battery. Tanks must not be fitted below the rear chassis rails and must be fitted above the floor inside the car, and the floor must not be cut in any way to accept the tank. All tank filler caps must be of a secure leak proof metal with a screw fitting.

Petrol pipes must be of metal or metal covered and have a shut off tap within easy reach of the driver.

All tanks must be fitted with a breather system which prevents spillage if a car is inverted. A one way valve must be used All petrol pick up pipes must draw through a stand pipe from the top of the fuel tank.

Four 2" holes must be drilled at the lowest point under tanks to allow spilled petrol to drain. A firewall between fuel tank including filler cap/pump and driver must be fitted. Fuel regulators may be used.

All Oval Racing Formulae

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

1. 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).

- 2. 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.
- 3. 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.
- 4. Lead Replacement Gasoline, LRG, also known as LRP. Only additives from Sodium, Phosphorous, Potassium, or Manganese according to manufacturers 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.

5. 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 EN 228	BS 7800	BS 4040	LRG/LRP	TEST STANDARD
MOTOR OIL 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 / I P362
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% V/V	0.1% V/V	0.1% V/V	0.1% V/V	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% vlv	18% vlv	18% vlv	18% vlv	ASTM D1319
AROMATICS*	42% vlv	42% vlv	42% vlv	42% vlv	ASTM D1319

<sup>\*</sup> Olefins and Aromatics values are expressed as a percentage of total fuel.

## 23. PAINTWORK.

- 1. 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.
- 2. Your current roof grade must be painted on the roof in full, right to the outer gutter lines. This includes all Superstar or current Championship holder
- 3. Sign writing must be professional and be approved by the Promoter.
- 4. Drivers MUST know their correct roof grade.

## 24. SUN VISOR.

1. A Sun visor165mm or 6" in depth may be fitted with your name written upon it.

## 25. FIN PLATES & ROOF NUMBER.

1. Fin plates must be fitted above the roof line but it should not be larger than 305mm or 12" by 559mm or 22" wide.

- 2. Fin plate numbers must be 229mm or 9" high by 38mm or 1½" in width, black numbers on a white background. Please ensure they are correct.
- 3. The racing number can be painted on the roof, but please be aware that grading colours must be 90% of the roof.

## 26. DOOR NUMBERS

1. The drivers racing number must appear on both sides of the car. The numbers should be 300mm or 12" high x 50mm or 2" wide, on a contrasting background, which must extend a minimum of 50mm or 2" beyond the numbers.

## 27. SPECIFICATION AND RULE CHANGES.

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

- 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.

## 28. ROOF GRADING

- 1. All roof grade champions must start at the rear of the Grid, unless told otherwise by an official.
- 2. If you win a race at a meeting; you will start the next race from the rear of your grade.
- 3. It is at the promoters discretion to move any driver up/down the roof grade system at any time between roof grade rolls, Roof Grades will be amended every 2nd meeting.
- 4. Drivers are reminded that they should line up in points order on the grid with the engine switched off. Drivers with incorrectly painted roofs after the points chart has been issued will have to start at the rear of the grid.

N.B It is the drivers responsibility to know there roof grade colour after every 2nd meeting, and if unsure they must contact the office or view the Trojan international website to confirm there roof grade colour, which must be painted in full prior to the next meeting you intend to race.

- · Grid Line up / Roof Order:
- White
- Yellow
- Blue
- Red
- Points Champion Silver
- · Western Black & White chequers.
- Southern Champion Blue & White Chequers.