

# 2011 STOCK ROD SPECIFICATIONS

This formula is NON-CONTACT and cars should be prepared with a professional racing appearance. This standard is required to be kept up throughout the drivers racing season. Cars with tatty, dented and badly battered panels will not be passed by the scrutineer. (Metal panels only may be used the exception being front and rear bumpers, see separate item 10. Bodywork).

## VIOLATIONS

When referring to the engine, gearbox, differential, mechanical or construction, rules and 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 in any way the standard Parts.

Unless these rules state you can do it, you CANNOT DO IT.

Cars, Engines and Fuel will be checked on a random basis.

Violations will result in an immediate suspension of all racing facilities and any refusal will also result in an immediate suspension.

All car and engine specifications will be taken from either the manufacturers technical specification books or the technical service data books for cars, as published by Glass's Guide Service Limited. If there are any discrepancies occurring between books, the promotion will exercise its judgement, which will be final in any dispute. Clarification on any item can be sought from: The Secretary, ORCi Limited, Technical Committee, P.O.Box 9889, Birmingham, B43 6WA.

N.B. Drivers are reminded that scrutineer checks can be carried out at any time, and most certainly at official championships. If parts are suspected of being illegal make sure you leave them with the promotion if you do not agree. If you refuse it will automatically make the parts illegal. It is the responsibility of the driver to prove to the promotion that the part is legal by the way of written proof of where the part originated. This must be done within seven days, otherwise the part(s) in question will be deemed to be illegal and will result in immediate suspension from racing and referral for disciplinary action.

## 1. CARS

1300cc and 1400cc cars will race under the same banner. The only cars eligible for use are those set out within these specifications and they must be raced with mechanical and constructional specifications as produced when new with the original engine capacity not exceeding 1300cc or see separate listing for 1400cc. Anyone wishing to race any car other than those listed may request permission from the ORCi Technical Committee as detailed above. All constructional rules will be the same for both the 1300cc and 1400cc. Any fuel injected 1400cc cars will have to use carburettor and manifold within their range, but not from a larger cc vehicle.

### 1300 cc CARS

### VENTURI SIZES

Fiat Uno 1299cc may be fitted into a Fiat 128.....	19/23 Weber 30/32
Ford Fiesta 1300 MK1 – MK5 (OHV or CVH).....	23/24
Nissan Micra.....	20/27
Toyota Starlet 1.3 1290cc – Must use standard 1300cc Carburettor.....	23/26 (throttle linkage may be altered)
Vauxhall Corsa 1300cc.....	Pierburg 2E3 Twin Choke 20mm/24mm
<b>Vauxhall Corsa C 1300cc.....</b>	<b>Pierburg 2E3 Twin Choke 20mm/24mm</b>
Vauxhall Nova 1300cc.....	Pierburg 2E3 Twin Choke 20mm/24mm
Vauxhall Tigra (run as Nova 1300cc).....	Pierburg 2E3 Twin Choke 20mm/24mm

It should be noted that some venturi sizes may vary slightly from those specified by the manufacturer. In these cases drivers should use the above sizes.

### 1400cc CARS

Citroen AX - 1360cc.....	Solex 32/34 Z2
Citroen Saxo .....	Run as AX spec
Fiat Uno - 1301cc , 1372cc	
Ford Fiesta - 1392cc	
Peugeot 106 - 1360cc .....	Solex 32/34 Z2
Peugeot 205 - 1360cc .....	Solex 32/34 Z2
Renault Clio - 1400cc	
Vauxhall Corsa 1400cc.....	<b>Pierburg 2E3 Twin Choke 20mm/24mm</b>
<b>Vauxhall Corsa C 1400cc.....</b>	<b>Pierburg 2E3 Twin Choke 20mm/24mm</b>
Vauxhall Nova 1400cc.....	<b>Pierburg 2E3 Twin Choke 20mm/24mm</b>
Vauxhall Tigra 1400cc.....	<b>Pierburg 2E3 Twin Choke 20mm/24mm</b>

*All carburettor/venturi sizes for the above, are to be the original standard part.*

## **2. ENGINES - 1300CC**

Engines must be as produced by the manufacturer, two valves per cylinder, no twin carburettor set ups, where not originally specified. No fuel injection or turbo charging is permitted. Engine mountings to remain standard, with the exception of Front Wheel Drive cars where the top engine mounting (by valve cover) may be solid.

**Cylinder Block**.....Nominal overboring to a maximum of 0.060" (1.5mm) is permitted. Skimming of the block on the head gasket surface only is permitted. No other modifications to the block are permitted.

**Cylinder Head.** The skimming of the cylinder head on the head gasket surface only is permitted. Cylinder heads must remain standard and unworked. A 3-angle cut, is permitted but there must be no machining or fettling either side of the valve seat. The valve length must remain within standard manufacturers tolerances (i.e the length as supplied to the industry, not a minimum service length). Eg. Vauxhall 104.25mm-105.35mm, Inlet Valve diameter 33mm and exhaust valve diameter 29mm. Valve springs are free. The following must not be machined, repositioned or modified in any way: valve caps, collets, valve guides, spring seats and valve stem oil seals, with the exception of Corsa/Nova lash caps which may be of competition type. Solid lifters may be fitted. Hydraulic lifters may be welded or modified to be solid and shimmed.

If the oil feed to the cylinder head becomes mis-aligned when head is surfaced it may be re-aligned.

*i)* Head bolts may be shortened or washers may be used.

*ii)* Bronze valve guides are NOT permitted unless fitted as standard, but it is permitted to use a thin wall bronze sleeve in existing guide.

*iii)* Inlet and exhaust valve seats may be lowered, (i.e. moved away from pistons) but the valve head must sit level with or below the combustion chamber roof.

**Pistons**.....Manufacturers pistons or original replacement pistons must be used and must not be altered in any way (Marks on pistons will be at Scrutineer's discretion. Cut-outs are illegal) other than for balancing as specified below.

**Camshaft**.....The camshaft may be changed to that of a competition type but no other parts may be altered to accept the camshaft other than those permitted within these rules. The only exception to this is for the Vauxhall Nova/Corsa engine where the cambox to cylinder head surface of the cambox may be surfaced (level). Offset dowels, drilling or pinning is permitted. Vernier timing wheel is permitted.

**Carburation**.....Must remain as standard and although jets and needles are free, they must remain fitted. (A list of venturi sizes and carburettors are detailed under item 29). Trumpets or stubs are not allowed on carburettors. Choke butterflies, cold start equipment and economy devices can be removed. The V.V. carb on C.V.H. engines may be replaced with a Weber 32 IBF. A 32 DHA carburettor is allowed on Kent Engine. A 32 DGA or 32 DGR carb is permitted on either the C.V.H. or Kent engine. Throttle butterflies may be modified to open together. ***Any hole may be blanked off but no re-drilling of any other parts is permitted.***

### **Inlet & Exhaust**

**Manifolds**.....Manifolds to be of standard type, to that of the engine fitted, unless otherwise specified. Exhausts with a hot spot may be blanked off. Water circulation holes may be blanked off.

**Distributor**.....Must be the standard type. The mechanical and vacuum advance may be altered. The vacuum advance may also be removed. No electronic ignition is permitted unless fitted as standard. No interchange between models is permitted. The BOSCH distributor is allowed on Ford Kent, and BOBCAT engine. Rev limiters are allowed.

**Balancing**.....Balancing is permitted by spot machining only. Spot machining means either hand grind, drill or machine. When balancing pistons and con rods, at least one of each must be as original. The flywheel and clutch assembly may be balanced.

**Con Rods**.....Any big end bolts may be used, but con rods must not be machined to accommodate them.

**Flywheel**.....Lightening of the flywheel is permitted.

**Sundry**.....Oil coolers are permitted, but must be within the confines of the engine compartment. Either electric or water pump fan is permitted but not both. Standard sumps must be used and can be baffled. Pick-up pipes can be modified within the confines of the sump. No outside alteration is permitted. The engine must be fitted with a metal catch tank of 1 litre minimum capacity connected to the engine breather system, fitted in the engine compartment. Bottom Crankshaft pulleys are optional.

**Transplants**.....Ford Escort and Fiesta may use the 1300 x- flow engine to replace the C.V.H., and the 1300 Nova engine may be used in the Corsa. No other engine transplants are allowed.

## **2A. ENGINES - 1400CC**

Engines must be as produced by the manufacturer, two valves per cylinder, i.e. no twin carburettor set ups, where not originally specified. No fuel injection or turbo charging is permitted. It is permitted to use an engine or block assembly from another model of the same manufacturer if all technical specifications are the same. Fuel injected engines may be used – see Inlet and Exhaust Manifold below. Engine mountings to remain standard, with the exception of Front Wheel Drive cars where the top engine mounting (by valve cover) may be solid..

**Cylinder Block**.....Nominal overboring to a maximum of 0.060" (1.5mm) is permitted. Skimming of the block on the head gasket surface only is permitted. No other modifications to the block are permitted.

**Cylinder Head**.....The skimming of cylinder head is permitted on head gasket surface. Cylinder heads must remain standard and unworked. A 3 angle cut is permitted, but there must be no machining or fettling either side of the valve seat. The measurements of the angle valve seats must be as manufacturers specifications with valve seat width free. The valve length must remain within standard manufacturers tolerances (i.e. the length as supplied to the industry, not a minimum service length). Eg. Vauxhall 104.25mm-105.35mm, Inlet Valve diameter 38mm and exhaust valve diameter 31mm. Valve springs must remain as standard, and must be the original manufacturer's part. The following must not be machined, repositioned or modified in any way: valve caps, collets, valve guides, spring seats and valve stem oil seals, with the exception of Corsa/Nova lash caps which may be of competition type. Solid lifters may be fitted. Hydraulic lifters may be welded or modified to be solid and shimmed. Fuel injected engines may be used, but injection inlet manifold must be replaced with a conventional carburettor version within the manufacturer's range. Only locating holes and gasket may be altered to allow manifold to fit. (Manifolds and carburettors from larger cc version cannot be used.) Peugeot 106 Cylinder heads and rocker gear are not interchangeable.

- i)* If the oil feed to the cylinder head becomes mis-aligned when head is surfaced it may be re-aligned.
- ii)* Head bolts may be shortened or washers may be used.
- iii)* Bronze valve guides are NOT permitted unless fitted as standard, but it is permitted to use a thin wall bronze sleeve in existing guide.
- iv)* Inlet and exhaust valve seats may be lowered, (i.e. moved away from pistons) but the valve head must sit level with or below the combustion chamber roof.

**Pistons**.....Manufacturers pistons or original replacement pistons must be used and must not be altered in any way (This includes all 4 pistons with valve indents) other than for balancing as specified below. Nova/Corsa if a small valve cylinder head is used, it must be with original compression ratio pistons (i.e. 9.4..1), the big valve cylinder head may use 9.4..1, 9.8..1 or 10.0..1.

**Camshafts**.....The camshaft may be changed to that of a competition type but no other parts may be altered to accept the camshaft other than those permitted within these rules. The only exception to this is for the Vauxhall Nova/Corsa engine where the cambox to cylinder head surface of the cambox may be surfaced (level). Offset dowels, drilling or pinning is permitted. Vernier timing wheel is permitted.

**Carburation**.....Must remain as standard and although jets and needles are free, they must remain fitted. Trumpets or stubs are not allowed on carburettors. Choke butterflies, cold start equipment and economy devices can be removed. The VV carburettor on CVH engines may be replaced with a Weber 32 IBF. A 32 DHA carburettor is allowed on Kent engine. A 32 DGA or 32 DGR carburettor is permitted on either the CVH or Kent engine. Throttle butterflies may be modified to open together. ***Any hole may be blanked off but no re-drilling of any other parts is permitted.***

**Inlet Manifold**.....Must be the original manufacturer's parts if available from the manufacturers range. Water circulation holes may be blanked off.

**Distributor**.....Must be the standard type. The mechanical and vacuum advance may be altered. The vacuum advance may also be removed. No electronic ignition is permitted unless fitted as standard. Where the engine is not fitted with a distributor as standard and it is not possible to fit a distributor from the same vehicle manufacturer, certain types of Luminition will be allowed to be fitted. (The Renault Clio 1.4 may fit Luminition Kit No C410 ECU. Top line mapped only. Max advance by 3750-RPM ignition may be advanced only; no retarding. Whatever advance figure appears at 3750-RPM must be continued to end of rev range). Rev limiters are allowed.

**Balancing**.....Balancing is permitted by spot machining only. Spot machining means either hand grind, drill or machine. When balancing pistons and con rods, at least one of each must be as original. The flywheel and clutch assembly may be balanced.

**Con Rods**.....Any big end bolts may be used, but con rods must not be machined to accommodate them.

**Flywheel**.....Lightening of the flywheel is permitted.

**Sundry**.....The engine must be fitted with a metal catch tank of 1 litre minimum capacity connected to the engine breather system, fitted in the engine compartment. Bottom Crankshaft pulleys are optional.

**Sump**.....Standard sumps must be used and can be baffled. Pick-up pipes can be modified within the confines of the sump. No outside alterations are permitted.

**Oil Catch Tank**.....OIL CATCH TANK OR BOTTLE MUST BE A MINIMUM OF 0.5L IN CAPACITY.

### **3. TRANSMISSION**

The gearbox, gearbox mountings and final drive must remain standard, but gears and ratios from the same manufacturer may be interchanged and the gearbox and final drive may be interchanged within manufacturer's range. The differential assembly may be locked by way of welding. All of the above exceptions must be achieved without machining or modification of the standard parts.

**Driveshafts**.....Must be the original fitted to make and model and must remain standard. The fitting of spacers is not permitted. Drive shafts from automatic versions are not permitted.

**Propshafts**.....May be modified or interchanged from manufacturers range.

### **4. WHEELS**

Wheels of any type may be fitted to the car and may be widened to a maximum of 6" by inserting a steel band, no wider types permitted. Manufactured steel wheels may be used e.g. Weller. Maximum wheel diameter is 13". Alloy wheels are permitted. No wheel spacers allowed, whether welded to the wheel or not, unless fitted as standard. The top of the wheel and tyre must be covered by the wheel arch. For users of the Citroen AX-1360cc—the 3 stud wheel fixing may be changed to 4 stud using Peugeot components or any other manufacturers standard hubs. Wheel studs are free.

### **5. TYRES**

The only tyre permissible is the Yokohama, size 185/70 x 13 A021R Compound No T567 only. Gaiters on tyres are not allowed. Additional tread pattern may not be cut into tyres.

### **6. FRONT SUSPENSION**

- To be fitted as original. Chassis pick-up points must remain in their original location. Bolts are free.
- Negative/Positive camber or caster on front wheels only is permitted. This may be achieved by modification of original standard parts only.
- Bottom arms may be extended and adjustable, locating holes on suspension components and top abutment plates may be elongated.
- Caster adjustment is permitted and may be achieved by modification of the original standard anti-roll bar / locating rods and bushes and may be adjustable. A tolerance of + or - 2" (50mm) on nearside, 1" (25mm) on offside from original wheelbase will be permitted
- No competition joints or bushes are permitted.
- ***Rule Clarification; front hub steering arms must not be modified in any way***

#### **Suspension**

- A Strut reinforcement bar may be fitted to the front top mounting and may be secured by means of a separate bracket.
- A front strut brace may be fitted and may be triangular in shape – IT CAN BE BOLTED OR WELDED TO THE BULKHEAD OR WELDED TO THE ROLL CAGE.
- Cars fitted with torsion bar suspension may use any rate of torsion bars but their profile must remain as manufactured.

#### **Shock Absorbers - Front**

- Uprated version of the original dampers may be used and may be strengthened but must not be adjustable with the exception of an adjustable version being permitted if the adjuster is removed or disabled. The lower abutment plate must remain in its original position and the unit must mount as the original and to the original mountings and must not be modified to achieve camber, with the exception of locating holes.

Unless stated above, no metal may be added to suspension parts.

### **7. REAR SUSPENSION**

Rear axle locating rods must remain standard length and bushes as original. For vehicles fitted with a rear beam axle, any repairs carried out to the rear axle beam should be done by simply resetting the beam with hydraulic equipment, always within the manufacturers tolerances.

## **Springs**

Can be altered to affect ride height by shortening of coils. Coils springs must retain the original overall diameter, also **must** be retained by either wiring, tie wraps or clips at one end only. See 6. Suspension for Torsion Bar Suspension

## **Shock Absorbers – Rear**

No competition shock absorbers are allowed on the rear.

## **8. STEERING**

The use of quick release steering wheel mechanisms is permitted. ~~Steering rack arms may be modified,~~ **Steering rack arms may only be shortened or lengthened i.e; the nearside arm may be lengthened and the offside arm may be shortened.** The 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**

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

## **10. BODYWORK**

To remain as production (see \*\* below) with removal of inner door panels and tops of doors and the inner rear quarter panels from the waistline down being permitted. Tops of tailgates must remain on. Removal of structural stiffeners is not permitted, with the exception of 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 may be added, but on cars where suspension mountings or subframe locate on a weak part of the body suitable strengthening may be added. All doors must be fixed when racing. No spoilers or aerofoils except where fitted as standard to the make and model of the car. Mild steel panels only may be used, door skirts may be fitted but these must tie into the lower edge of the wheel arch and must not be deeper than 2"(50mm). The width of 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's 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 skirt joins 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 headlamp apertures for cooling purposes only. Where two sections are used to form a front panel, the overlap must not exceed ½"(13mm). Repairs to front wings and fitch panels must be carried out with material of original thickness, not 18 SWG. Where front panels are non-original of 18 SWG, only the front section may be of that material; the "wrap-around" section to join it up to the wings and the inner fitches etc. must all be constructed with the 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. Likewise the fitches must follow approximately the original contour, not folded with angles to provide strength. Where bonnet slam panels are replaced, lightweight tube or box (2"(50mm) x 1"(25mm) or 1"(25mm) x 1"(25mm) with 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 headlamp apertures are filled, they must not have more than a 1"(25mm) overlap. Additional gussets 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 18 SWG 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.

The rear window aperture of a Vauxhall Tigra (which is viewed from the side elevation only) may be filled with metal **or Fibreglass.**

\*\* Where replacement panels are unobtainable, similar panels from other makes of vehicle may be used.

## **11. BUMPER & 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 10. For STEEL bumpers, there must be one 2" (50mm) inspection hole on the drivers side.

Grilles must be original or plastic replacements and must remain in their original position. Fibreglass grilles are allowed and may include headlamp apertures.

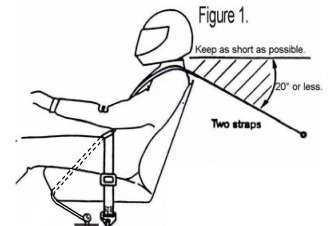
## **12. ROLL CAGES**

No Alloy roll cage or part cages are allowed. The minimum steel roll cage protection you must have is one front hoop, one rear hoop, one rear hoop cross bar at shoulder height to mount seat support or a seat brace hoop as a seat support, two roof connecting bars, one dash cross bar, two N/S chicken bars and two O/S chicken bars. The lower bar on the drivers side (if horizontal) should be a minimum of 3" (76mm) above the sill. The roll cage hoop feet must be on four welded 23cm square plate 3mm (min.) thick, or a piece of 38 x 38 mm box section, 2.5mm minimum thickness, connecting front and rear hoop feet welded to sill or floor. This bar will not be classed as a chicken bar. All joints must be welded over 90% of the joint unless as approved RACMSA cage is used. The cage must not protrude through the bulkhead with the following exception. It is permitted to support both turrets from the roll cage with the maximum material and gauge as the roll cage, but the shock absorber must not connect to it. Rear cage bars must terminate at least 4" from the rear panel. All bars connected to the cage must be steel. The minimum thickness of the roll cage are 1¼" OD 10swg (3mm) tube 1½" OD 12swg (2.5mm) tube 1½" x 1½" 10swg (3mm) box iron.

## **13. SEATS**

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.



## **14. SCREENS**

All glass must be removed. Front screen must have a central bar of 19mm x19mm or ¾" x ¾" SHS welded in place. An interior mirror must be fitted. A drivers 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 off whist in racing traffic)

## **15. BATTERIES & ELECTRICAL**

Batteries must be securely clamped in place and covered with a leak proof material to prevent spillage of acid. They may be fitted under bonnet, in passenger footwell or 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 R/N/S corner of the car. If the car is fitted with an electrical fuel pump, a 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 24 volt starter system is permitted.

## **16. STOP LIGHTS**

Either two stop/brake lights or one single stop/brake strip-light must be fitted onto the rear parcel shelf or hung from the roof. If two lights, they must be a minimum of 30 inches (762 mm) apart facing rearward. 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 21 watt intensity.

- For round type lamps: minimum diameter 3" (76mm), maximum diameter 5" (127mm).
- For square/rectangular type lamps: minimum 3" (76mm) square, maximum 5" (127mm) square.
- For strip type lamps 16" (406mm) maximum width.

## **17. FUEL TANKS**

Fuel tanks must be metal or FIA approved with a maximum capacity of 4 gallons or less are permitted. These must be fitted rear of the driver but in front of the rear axle centre line, and must be at least 6" from the battery, i.e. they are no longer allowed to be fitted in the boot area. They MUST NOT BE FITTED BELOW THE REAR CHASSIS RAILS AND MUST BE FITTED ABOVE THE FLOOR INSIDE OF 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. 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.

## **18. FUEL**

For the full fuel specification please see back page.

## **19. SILENCER/EXHAUST**

The only silencers allowed are the AX891,Laws or Simpson ORC225. 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 (NOT THE PIPE). Downpipes are free. The Vauxhall Corsa/Tigra may use the Nova twin outlet exhaust manifold. (See cylinder head.)

## **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. ROOF COLOURS**

When notified of their grading, drivers will paint at least 90% of the roof to their appropriate grading colour, White, Yellow, Blue or Red. Race car numbers can be painted on the top of the roof, but will not be used as an excuse to have the incorrect roof grading. Silver strip denotes top points scorer. Any driver winning an official ORC roof Championship will be required to paint his roof the said colour for that Championship as follows :

World	Gold
European	Red/Yellow Chequered
British	Black/White Chequered
National	Gold Stripe
English	St. George's Cross
Scottish	St. Andrew's Cross

The World Champion, European Champion, British Champion, National Champion and English Champion plus each promotion's Top Points Scorer must start at the back of the grid.

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.

## **22. NUMBERS**

Numbers must be displayed on both sides of the car in contrasting colours with a minimum of 12" high in 2" strokes. Regulation fin numbers must be Black 9" high in 1½" strokes minimum. The fin plate must be white fitted on or above the roof line but be no higher than 12" in total from the roof. All numbers must be of professional appearance and can be painted on the roof itself in addition to the fin plate.

## **23. TRANSPONDERS**

Transponders are mandatory and should be working at all times. They should be fitted 1.8 metres back from the front most position of the car. A hole of at least 6" (150mm) is required in the floor, with the transponder fitted vertically, just below the hole. In the event of a dispute with the transponder result, the Steward of the meeting will make the final decision. Any driver found to have fitted the transponder further forward than the required 1.8 metres will be excluded from the meeting.

## **24. SIGN WRITING**

The driver's name must appear plainly on the sun visor. Only other writing confined to sponsors or mechanics names which must have the approval of the promotion at all times.

## **25. WEIGHT**

Warning: Cars can be weighed at any time before, during or after a meeting, without driver. They must always achieve the minimum weight; the adding of fuel or any other liquids is not allowed to achieve this minimum weight. The minimum car weight for rear wheel drive cars is 600kg **630Kg** and front wheel drive cars is 650kg **680Kg**.

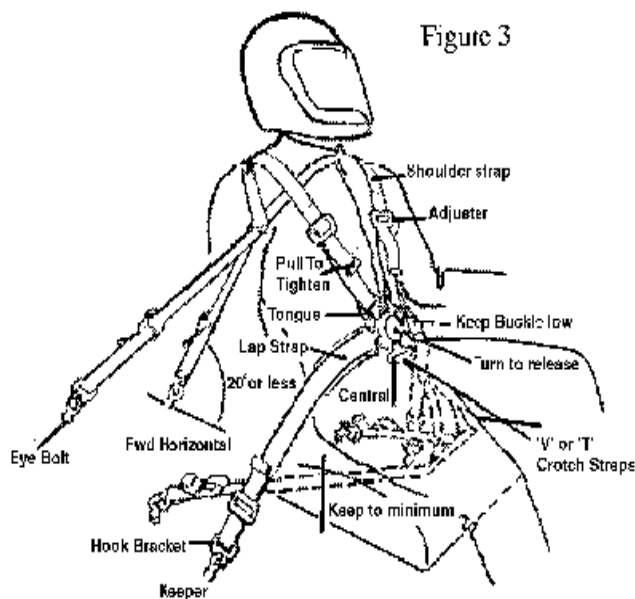
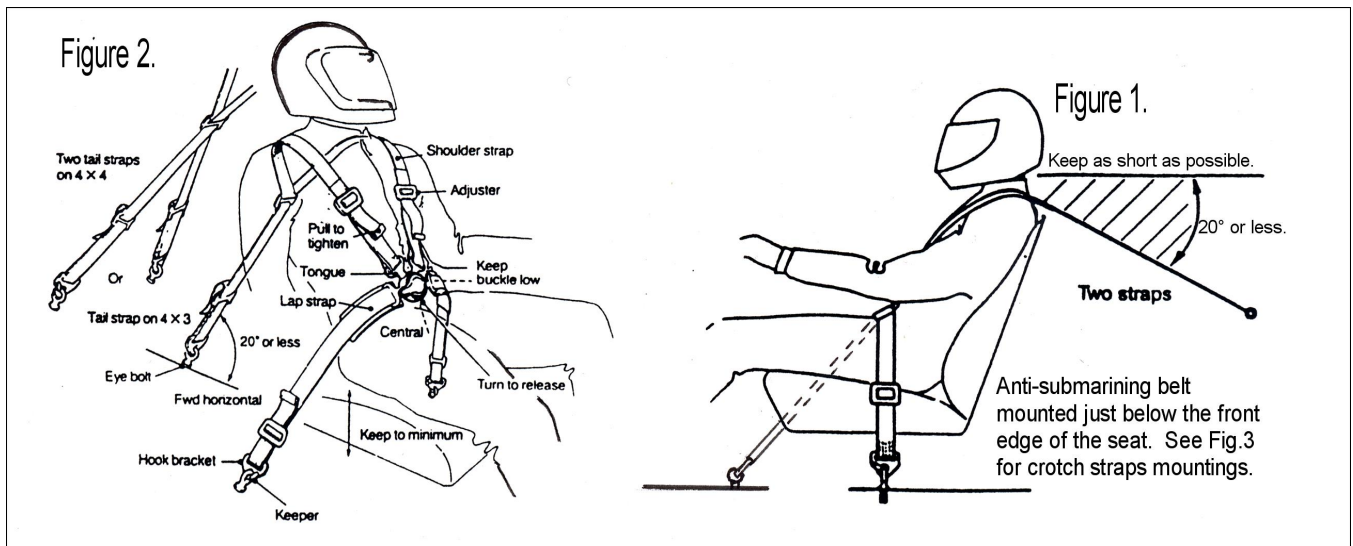
***The use of ballast to achieve this weight must be steel plate bolted to the floor, with equal amounts in both front & rear footwells and in the same position in each footwell. You are permitted to place more on passenger side, but must be equal in front & back footwells. Bolts of the same size and material must be used to fit the plates, and the bolts must be welded. The right hand driver's side weight must be a maximum 53%, at any time – this will be weighed without the driver in the car.***

- ✓ ***If you are checked and over the 53% but under 53.5% on your first offence you will lose all points/monies due on the day and receive a final warning. You must have this written in your log book.***
- ✓ ***If you are found on a second occasion to be over 53% but under 53.5% you will receive a one month suspension, lose all points/monies due on the day.***
- ✓ ***Anyone over 53.5% on their first check will receive an automatic one month ban, and loaded immediately with loss of any points or monies due (if applicable).***
- ✓ ***If a driver is found over 53.5% on a second occasion the penalty will automatically be doubled, or possibly carry a longer suspension. Checks will be carried out at any time.***

## **26. SAFETY EQUIPMENT**

- **Helmets must be of a minimum standard as directed by British Oval Racing Safety Executive (B.O.R.S.E). These are BS6658–Type A/FR, FIA8860-2004, Snell SA2005, Snell SA2010, 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 (ORC10) sticker.**
- Neck braces are recommended.
- Fireproof balaclavas are MANDATORY and must be marked appropriately.
- Fire retardant gloves are MANDATORY and must be marked appropriately.
- A minimum of 3" (75mm) wide safety belts (1.75" (40mm) sub-strap) are mandatory. This must be a full five point buckle release harness (including NASCAR type) with sub-strap and must be fitted and bolted to the floor and/or the roll cage. Shoulder belts with a sternum protection latch are highly recommended. The sub-strap must be used at all times and all belts must connect to the quick release buckle. In the case of NASCAR lever latch buckles it is advisable to fit a secondary means of detent to prevent overall sleeves accidentally unhooking buckles during racing. A small section of Tubegrip elasticated bandage slid over the hooked buckle serves this purpose. Special attention must be paid to the condition of seat belts and fixings once fitted. An extra bar is to be fitted to roll cage behind drivers seat approx 4" below shoulder height of driver. Your seat belts may be fixed to this bar. The bar is to be of roll cage material specification.

Following recent research made by leading safety harness manufacturers, new information has been made available with regard to the best way to fit your safety harness, which will further ensure your safety. Please study the diagrams below to ensure your safety harness is fitted correctly.



- Drivers must wear bright coloured racing overall type clothing of flame retardant Proban or a high specification material and this must be maintained in a clean and tidy condition in view of the public. N.B. If wet weather clothing is used this must be worn IN ADDITION TO and NOT INSTEAD OF the regulation flame retardant overall type of clothing described above.

- A quick release cloth window net must be fitted to the driver's door window aperture. The netting should have holes not larger than 7.5cm or 3" wide. It should come down level with the steering wheel, and should be flexible and easily removable separate to the movement of the door.
- 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 refueling.

## **27. GENERAL RULES OF RACING**

Each driver is only permitted one car per meeting and each car is only permitted one driver per meeting.

**Please note that all of the above rules are subject to change in respect of Health & Safety requirements.**

### **REVISED RULES FOR 2011 IN BOLD/ITALIC PRINT ITEMS MARKED STRIKETHROUGH ARE NO LONGER ALLOWED 2011 Stock Rod Technical Specifications, Issue 1 Dated 28<sup>th</sup> November 2010.**

#### **All Oval Racing Formulae**

Permitted fuel specification from 1<sup>st</sup> 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.**

	<b>BS EN 228</b>	<b>BS 7800</b>	<b>BS 4040</b>	<b>LRG/LRP</b>	Test Standard
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

\* Olefins and Aromatics values are expressed as a percentage of total fuel.