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SPEDEWORTH  
MOTORSPORTS

## Junior Productions – Rules And Regulations 2021



### 1 Definition

This formula has been specifically designed for younger drivers.

A responsible adult must be present at each race meeting with the Junior Production driver. The responsible adult must be present at any official or formal meeting with promoters or staff. The responsible adult must recognise that any irresponsible or unsporting behaviour on their part, or by any other team or family members, within the stadium may result in penalties, up to and including a ban from racing, being handed down to their driver. In the event of any dispute, no responsible adult may confront any other Junior Production driver under any circumstances.

**All 2021 rule changes are in red bold.**

## Age Limits for the formula are as follows –

**Drivers may start racing on their 10<sup>th</sup> birthday.**

**The Junior Productions formula is for drivers aged 10-15 years old - all drivers must retire from the formula on their 16th birthday.**

This Formula is ***Non-Contact***, and ***racing is in a clockwise direction***.

Cars should be prepared with a professional racing appearance. This standard is required to be maintained throughout the driver's racing season.

New applicants are required to complete a multiple choice written test and a basic driving skills test before a licence will be issued. This should be arranged with your promotion before your first meeting.

## 2 Type of Car

Any 1300cc or 1400cc Production Car is permitted. No Sports Cars, GT's or Mini Coopers etc may be used.

No Fuel Injection or Twin Cam engines.

Cars must be raced with mechanical and constructional specifications as produced when new, with original engine capacity not exceeding 1400cc.

No chassis modifications can be carried out, or engine transplants i.e. engine must be from same manufacturer as chassis.

## 3 Violations

**A.** When referring to the engine, gearbox, differential, 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.*

**B.** Car, engines, and 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.

**C.** All car and engine specifications will be taken from either the manufacturer's 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 own judgement, which will be final in any dispute.

**D.** Clarification on any item may be sought from DMC Race Promotions.

**NB:** Drivers are reminded that Scrutineer checks can be carried out at any time, and most certainly on all Official Championships. If parts are suspected of being illegal, and you do not agree, make sure you leave them with the Promotion. If you remove any disputed parts from the Stadium without the consent of the Scrutineer/Promotion, they will automatically be deemed illegal.

## **4 Bodywork**

Bodyshell must remain as standard. Rear inner quarter panels may be removed. All pillars must remain complete. Floor cross members must remain - if removed must be replaced by 2" x 1" box section. Bonnets and tailgates may be skinned.

Steel Panels only may be used.

Wheel Arches may be cut away. If the body is cut, then 50mm wheel spats of mild steel must be fitted. These must be tapered front and back (as in photo below) to avoid sharp, square edges causing punctures on other cars.



All doors must be fixed when racing

The removal of inner door panels is permitted.

## **5 Front Suspension**

- A.** To be fitted as original. Bolts are free.
- B.** Negative/Positive camber and caster is permitted on front wheels only. This may be achieved by modification of original standard parts only.
- C.** Bottom arms may be extended and adjustable.
- D.** No competition joints or bushes are permitted.
- E.** Front springs are free

### **Front Shock Absorbers**

Up-rated version of the original dampers may be used and may be strengthened but must not be adjustable.

Front suspension bottom spring seat may be modified to accept different width and length of spring but must be welded to strut casing.  
The original top must be used but can be modified to accept springs of different diameter.

### Steering

Steering Rack must remain in original position. Only standard steering rack can be used – no quick racks etc.

Steering column height may be adjusted to suit driver.

## **6 Rear Suspension**

Rear Axle Mounting and Location must remain as production.

Rear Springs are free.

## **7 Roll Cage & Ironwork**

**A.** Alloy roll cages are not permitted.

**B.** A full roll cage (which must support both A & B pillars), consisting of a minimum of:

- I. Two hoops, either running from front-to-rear or side-to-side.
- II. Two top hoop connecting bars.
- III. One rear hoop cross bar at shoulder height to mount seat support, or a seat brace hoop to mount seat support.
- IV. One lower bar (recommended).
- V. One dash cross bar.
- VI. Two driver's-side chicken bars.
- VII. Two passenger-side chicken bars
- VIII. A 3mm thick steel plate must be welded on the outside of the chicken bars; between the top and bottom drivers door irons.
- IX. The roll cage hoop feet must be welded to four 3mm thick plates, 230mm square, welded to the floor, or a piece of tube or box (38mm x 38mm x 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.

**C.** If Self-built: To a minimum size of:

Tube - 32mm (3mm) *or* 38mm OD (2.5mm)

1. All structural bars connecting to the cage inside the car must be steel.
2. Any part of the roll cage that may come into direct contact with the driver's body must be suitably padded.

3. All joints must be welded over a minimum of 90% of the surface area of the joint *unless an approved RACMSA cage is used.*
4. It is important there are no large gaps between any part of the cage, and the body shell. Roll hoops and connecting bars must not be dropped from roof, and must support the A & B pillars.

**D.** For protection, all Junior Productions must have two Straight Throughs made from minimum 2" x 2" x 3mm thick box section. Straight Throughs may be modified to fit chassis of car.

A front bumper must be fitted with a minimum of one cross iron of 2" x 2" box section, fitted across the two straight throughs.

A rear bumper must also be fitted, consisting of at least one cross iron of 2" x 2" box section, fitted across the two straight throughs.

To avoid snagging and unnecessary punctures, it is compulsory to cover the steel front and rear bumpers with the original plastic bumper.

Side Irons of 1 ½" x 1 ½" x 3mm thick box section must also be fitted to the outside of the car, and joined to the straight throughs in at least four separate points. Side irons must be similar on both sides of car. **These side irons must be capped with plate or onto the wheel arch – no ragged/sharp ends.**

It is permitted to support both front suspension turrets from the roll cage/straight throughs with the maximum material and gauge as the roll cage. The turret can be strengthened by a maximum of two bars only, including any brace between the struts.

## **8 Engines**

**A.** Engines must be as produced by the manufacturer: two valves per cylinder (i.e. no twin carburetor set-ups where not originally specified).

**B.** No fuel injection or turbo-charging is permitted.

**C.** Engine mounting to remain standard, with the exception of front-wheel drive cars, where the top engine mounting (by valve cover) may be solid.

## **1300cc Engines**

### **8.1 Cylinder Block**

- a) Nominal overboring, to a maximum of 1.5mm, is permitted.
- b) Skimming of the block, on the head gasket surface only, is permitted. No other modifications to the block are permitted

## 8.2 Cylinder Head

- a) The skimming of the cylinder head, on the head gasket surface only, is permitted.
- b) Cylinder heads must remain standard and un-worked.

## 8.3 Valves

Valve seats and valve length must remain within standard manufacturers' tolerances.

Valve seats may have a 3 angle cut of 30 deg top angle 45 deg seat angle 60 deg bottom angle .Valve length must remain within standard reconditioning tolerances.

## 8.4 Pistons

- a) Manufacturer's pistons (or original replacement pistons) must be used, and must not be altered in anyway.

## 8.5 Camshafts

Camshafts must remain standard as supplied by the manufacturer.

Camshafts may be 1.3 / 1.4 or 1.6 standard cams . No regrinding of cams.

Camshaft may be re-dowelled for cam timing. Tappets must remain hydraulic.

## 8.6 Carburettors

Carburettors must remain standard except from the following:

1. Jets and needles including fuel inlet needle may be modified
2. All components for automatic cold start choke may be removed
3. Vacuum unit for 2nd choke butterfly operation may be changed to spring operation but not allowed to open together.

## 8.7 Manifolds

Both inlet and exhaust manifolds must remain standard.

On Vauxhall 1300cc engines, the cast 1400 exhaust manifold may be used.

## 8.8 Flywheels

The lightening of flywheels is permitted.

## 8.9 Distributors

1300 / 1400 engines may use either black cap distributors or brown cap Bosch distributors. Black cap distributors may have drive unit changed to suit 1400/1600

camshafts. Vacuum advance/ retard unit may be removed and blanked off and weights / springs may be modified.

## **1400cc Engines**

### **8.1 Cylinder Block**

- a) Bore must remain standard
  - b) Block may be surfaced on head gasket face only
- Vauxhall engines must use NV or NZ pistons  
Peugeot engines must use the block with dished pistons/ bowl in piston type.

### **8.2 Cylinder Head**

- a) The skimming of the cylinder head, on the head gasket surface only, is permitted.
- b) On Vauxhall engines only the square port head with 33mm In 29mm Ex valves are allowed  
On Peugeot/Citroen engines only the head with 36.7mm In 29.3mm Ex valves are permitted. This head must be the carbureted head or single point injection head.

Heads must remain unworked

### **8.3 Valves**

Valve seats and valve length must remain within standard manufacturers' tolerances.  
Valve seats may have a 3 angle cut of 30 deg top angle 45 deg seat angle 60 deg bottom angle .Valve length must remain within standard reconditioning tolerances.

### **8.4 Camshafts**

Camshafts must remain standard. Peugeot may use either finger type or roller type cam but must be standard.  
Camshafts may be 1.3 / 1.4 or 1.6 standard cams. No regrinding of cams.  
Camshaft may be re-dowelled for cam timing. Tappets must remain hydraulic.

### **8.5 Carburettors**

Vauxhall 20/24 Pierburg 2&3 as 1300 engine  
Peugeot 24/27 Solex 32/34 Z2

Carburettors must remain standard except from the following:

1. Jets and needles including fuel inlet needle may be modified
2. All components for automatic cold start choke may be removed
3. Vacuum unit for 2nd choke butterfly operation may be changed to spring operation but not allowed to open together .

### 8.7 Manifolds

Both inlet and exhaust manifolds must remain standard.

### 8.8 Flywheels

The lightening of flywheels is permitted. Vauxhall may use either small flywheel block or large flywheel block

### 8.9 Distributors

1300 / 1400 engines may use either black cap distributors or brown cap Bosch distributors. Black cap distributors may have drive unit changed to suit 1400/1600 camshafts. Vacuum advance/ retard unit may be removed and blanked off and weights / springs may be modified.

## **9 Gearbox/Final Drive**

The gearbox 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 the manufacturer's range. The differential assembly may be locked by way of welding.

All of the above exceptions must be achieved without machining or modifications of the standard part(s).

### Driveshafts

Any driveshaft can be used from the same manufacturer as original.

## **10 Weight**

Cars may be checked at the end of a race. They must, at this time, meet the minimum permitted weight for the formula, as listed below. Drivers should allow for wear of brakes, tyres, and use of fluids during a race.

The *minimum car weight at any time without driver for a Junior Production is 750kg.*



## **11 Brakes**

Efficient brakes must work on all four wheels.

No bias or balancing systems are permitted.

In the case of the Vauxhall Corsa D and Vauxhall Adam, you may machine the disc and caliper carrier to fit a 13 inch wheel – standard Vauxhall parts must be used.

## **12 Cooling System**

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.

## **13 Wheels and Tyres**

Maximum 13 x 5.5 steel wheels only may be used. Alloy wheels are not permitted.

The only tyre that can be used in Junior Productions is the 175/70r13 Kingstar SK70.

These tyres are available at all good tyre outlets, including our partners at George Fegan Tyres, Antrim Road, Belfast (Tel: 028 9035 1705).

## **14 Exhaust Systems**

A silencer box must be fitted and effective in reducing noise.

Any exhaust system passing through the driver's cockpit must be fully covered by a metal shield.

## **15 Windscreens/Interiors**

All glass and interior trim must be removed from the car.

## **16 Stop Lights**

Either two stop/brake lights, or a centrally-fitted single stop/brake strip-light, must be fitted onto the parcel shelf, or hung from the roof in the case of hatchbacks. Lamps must be operated by the standard switch, as fitted to the car.

## 17 Mirrors

Driver's door and interior mirror must be fitted to all cars.

## 18 Batteries

All batteries must be securely fixed and covered with rot-proof material.

All Batteries must be fitted a minimum of 6" from the fuel tank.

A battery master switch must also be fitted in the area of the left rear window and must be clearly marked.

If an electric fuel pump is fitted, a switch must be fitted within easy reach of the driver.

## 19 Fuel Tanks

- Fuel tanks must be metal or FIA approved with a maximum capacity of 4 gallons or less are permitted. These must be securely 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 level of 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.
- The fuel pump must be fitted in the rear behind the driver.
- A one way valve must be fitted to the breather pipe.
- Only road-side fuel can be used, No additives permitted I.E. Upper cylinder lubricants, Octane booster.

## **20 Racing Numbers**

Numbers must be a minimum of 229mm (9") high by 38mm (1.5") stroke, black on white background, fitted above the roof-line.

The driver's racing number must also appear on both sides of the car. Preferably, these should be in large, American-style numbers on a contrasting background.

## **21 Drivers Seat**

- A.** Seats should occupy original position, where applicable.
- B.** Seats must be of competition type, and adequately supported at shoulder height.
- C.** If a seat does not have structural stiffeners at sides and back, a framework must be made to strengthen seat.
- D.** Seats must be securely fitted and provide a strong head restraint; otherwise, the head restraint must be an integral part of the roll cage.
- E.** If you have an integral head restraint, it must be fixed top and bottom to avoid your head being forced under or over.

## **22 ORCi 2021 Driver Safety Equipment Specification Regulations**

**The "Driver Safety Equipment Specification Regulations" are a common set of regulations, produced by the ORCi, governing the safety equipment used by drivers, and applicable to all ORCi sanctioned formulas.**

**These regulations are located in the "Technical" section of the ORCi website where they can be accessed by anyone, and managed in a controlled fashion to ensure integrity and consistency across formulas.**

**Drivers should regularly consult the ORCi website for the latest applicable regulations and updates:**

**ORCi Website Technical Section: <http://www.orci.co.uk/Content/Technical>**

**ORCi Website Home-page: <http://www.orci.co.uk/Home>**

**Follow the ORCi on Social Media:**

**Facebook - [@OvalRacingCouncilInternational](#)**

**Twitter - [@orc\\_int](#)**

## **23 Race Receivers**

Race Receivers are now mandatory for all Junior Productions drivers. These are a one way communication link from the Steward to the drivers on track.

The system enables the Steward to give instructions or warnings to a specific driver, or to all drivers warning of possible track hazards etc.

When the Steward transmits via this system, his instructions/warning are heard by every driver at the same time.

Any driver whose Race Receiver is not working when forming the grid prior to a race will not be allowed to race, unless it can be repaired before the race start.

## **24 Gradings**

All cars must start from the correct grade as notified by the promotion. Novice drivers start as White grade, and progress through yellow, blue and red.

The Irish Champion will carry a green, or green and white chequered, roof and will always start from the red grade.

The Scottish Champion will carry the Scottish Saltire on his roof and always start from the red grade.

Junior Productions must signify their grades via their roof fins. The fins must be as follows:-

- White Grade – Black numbers on White background
- Yellow Grade – Black numbers on Yellow background
- Blue Grade – White numbers on Dark Blue background
- Red Grade – White numbers on Red background
- Points Champion – Black numbers on Silver background

The rear of the fin must be plain & white in colour, the roof of a car cannot have a championship status unless the driver is the reigning champion & a roof colour has been designated to that championship i.e. Green or Green & White Chequered for Irish Champion, Scottish Saltire for Scottish Champion.

The Steward of the meeting reserves the right to re-grade any driver, at his discretion, at any time.

## **25 Final Preparations**

**A.** Make sure that, in the construction of your car, you have not included any flammable material; all original interior and exterior trim, mouldings, and wiring, must be removed (unless stated otherwise).

**B.** The external painting of the car must, at all times, be of professional appearance — preferably in bright colours, although any colour scheme is permitted.

**C.** All sign-writing must be of a professional nature. Scrutineers are instructed to refuse any car which they consider unsafe, unsightly, or in any way offensive.

## **26 Violations**

**A.** When referring to the engine, gearbox, differential, mechanical, or construction Rules & Regulations, the principle will always be:

I) 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.

II) 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 seven days; otherwise the part(s) in question will be deemed to be illegal, resulting in immediate suspension from racing and referral for disciplinary action.

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

**B.** Presentation of a vehicle for Scrutineering is a declaration by the entrant that the vehicle is eligible for that event.

**C.** Car, engines, and 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.

**D.** All car and engine specifications will be taken from either the manufacturer's 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.

**E.** Clarification on any item may be sought from DMC Race Promotions.

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

## **27 Rule Changes**

The Promoters may, at any time, make amendments to the specifications in the interests of safety. It may also make amendments in the interest of expense to the driver or in areas that are determined to be detrimental to the future of the formula, and also if unnecessary advantage has been deemed. Additionally, if it is felt the formula is drifting away from its original concept.

Current registered drivers will be notified automatically, but if you are building a new car from these specifications, please check with your promoter who will advise of any amendments.