

## Technical Regulations for Junior 1000 Rally Challenge Ireland 2019

The following text is in addition to Appendix 2 of the current Motorsport Ireland Yearbook.

### ENGINES

1.1. Engines must be a maximum of 1000cc capacity. There is no re-bore allowance. If your engine is worn then a replacement engine of the same type, of the correct capacity and of the same related model may be fitted. The fitting of a later engine from a newer model is not allowed eg. a Micra K11 motor cannot be fitted to a K10 model. If such a replacement is not available, then re-boring for the purposes of re-linering the engine to the correct capacity is allowed. Re-boring an engine and then short-stroking by swapping or modifying the crank in any way so as to achieve the correct engine capacity is not allowed. It is your responsibility to make sure the engine complies with the Championship rules. Motorcycle engines are specifically not allowed, even if the manufacturer supplied such an engine as standard.

1.2. It may be permitted to transplant a sub-1000cc engine into an originally higher specification car. E.g. Nova GTE with 993 cc Vauxhall engine.

1.3. Diesel engines are not allowed.

1.4. Rotary (Wankel) engines are not allowed.

1.5. Forced induction is not allowed.

1.6. Air filters must be fitted, open "ram pipes" are not allowed.

1.7. 4 wheel drive transmission is permitted if fitted as standard e.g. Fiat Panda 4x4.

1.8. For the purpose of these regulations models of any car differing in specification, including alternate manufacturer names will be considered to be the same vehicle. K11 Micras of any age are considered the same as each other. Toyota Aygo, Citroen C1, Peugeot 107 are considered the same as each other. Nissan Pixo and new Suzuki Alto are considered the same as each other.

### ENGINES PART 2 (DETAIL)

2.1. Carburettor or fuel injection is only permitted as originally fitted to the sub-1000cc engine.

2.2. Air filters and trunking are free, but must be fitted. These may be modified but all incoming air must go through the filter, i.e. no by-pass systems.

2.3. Cold air boxes may be fitted.

2.4. Carburettors may be set up to optimise jettings.

2.5. Fuel pumps are free.

2.6 Adjustable fuel pressure regulators may be fitted.

2.7. Inlet and exhaust manifolds must be original and unmodified in any way. The exhaust manifold must remain standard up to the entry of the cat or other junction whichever is sooner.

2.8. Exhaust pipes, silencers and their routing are free from the exit of the exhaust manifold, with reference to Motorsport UK Blue Book, Section (J) 5.16. 1-7 Exhaust by-pass systems are not allowed.

2.9. It is permitted to fit a sub-1000cc engine into a car of the same model, but all other performance related engine parts must be from that sub-1000cc engine. E.g. When fitting a 993cc Vauxhall engine into a 1300cc Opel Corsa it is not permitted to use the 1300cc carburettor/fuel injection.

2.10. Modifications of any kind to engine blocks, any internal engine parts or rotating masses are not allowed except as detailed in rule 2.11. Non original Steel cranks or bottom ends are not allowed. Modifications involving balancing and/or lightening are not allowed.

2.11. Cylinder head skimming up to 25 thousandths of an inch is permitted. Correction of valve timing may then be carried out.

2.12 Oil coolers may be fitted.

2.13. Radiators may be modified and increased, in either size or number. Location may be altered from the standard position.

2.14. ECU's must be standard and unmodified in any way from original for that particular engine other than detailed here. You may be asked to provide proof of this and sealing may be carried out. ECU's may be removed and sent away to confirm they are standard to the manufacturers' specification to the series nominated test company. Removal of certain functions such as anti-yaw, traction control etc. may only be carried out by the series approved company.

2.15. Rev limiters (where fitted as standard) are to remain unchanged from standard spec, both fuel and electric limiters are to operate as they did fitted new.

2.16. Drilling of any parts of the engine or its ancillaries, other than to facilitate the application of a seal is expressly forbidden. This is deemed as lightening.

## **BODYSHELLS**

3.1. The body shell of the car may be freely strengthened including rollcage and suspension areas.

3.2. Gusset/triangulation panels (or similar), plating, seam welding and "weld on" braces are all permitted.

3.3 Bolt on strut braces across the suspension turrets are permitted.

3.4. Any trim can be removed or replaced e.g. carpets, headlining, sound deadening.

3.5. Bonnet, doors and tailgate must be of original material i.e. you cannot exchange steel to plastic/GRP.

3.6. Additional or alternative instruments are permitted as are interior accessories e.g. intercom, trip meter etc.

3.7. Underbody guards are permitted.

- 3.8. Strengthening, adding or replacement of Gearbox and Engine mount fittings is permitted.
- 3.9. Brake & Fuel lines are free and their positioning can be changed.
- 3.10. Bonnet, boot and door fastenings are free.
- 3.11. All Glass areas MUST remain as glass areas i.e. replacement by any other material than glass is NOT permitted. Glass must remain original factory thickness.
- 3.12. Door/ Wing and interior mirrors are free however a minimum of three must be fitted in total; door mirror glass must be a minimum of 75 mm high and 100 mm wide or equal in area to standard fitment. The mirrors must be fully extended so that both driver and navigator can use the mirrors to ensure backward view. If a mirror is broken/damaged during an event then as a minimum an internal mirror is to be installed to allow rear view for the navigator.
- 3.13. Lightening of the bodyshell is not permitted, however in the interests of safety and for the purposes of fitting equipment, removal or alteration of internal trim, mountings and brackets is not considered lightening. Bonnets, boots/tailgates, doors must not be lightened and any strengthening bars MUST not be removed. Trim removal and drilling to affix handles or fittings are not considered lightening. Fixings may be removed, shortened or replaced with items made from any material.
- 3.14. The dashboard (dashtop), instrument panel and original heater box must remain in their original positions and must not be removed. The heater must be of full manufacturer working order including all components such as heater matrix, fan, filter etc to ensure full working order of the demist function for the windscreen. Altering the heater box or ducting pipes to enable the fitting of a roll cage is allowed. (i.e. WRC Style Cage) It is allowed to customise or alter the dash instrument panel to suit your personal preferences. The glove box may be removed.
- 3.15. The edges of the dashboard may be cut to enable the fitting of a roll cage.
- 3.16. The removal of the roof anti-flex bar is allowed.
- 3.17. The battery must remain in the original factory position and must be fitted to the original battery tray mounted in its original position. The method of strapping is free. The battery size is free.
- 3.18. Minimum weight of the complete car inclusive of crew members is 950Kg. Competitors may be subjected to weight checking throughout any event at any time from the start of the first stage to completion of post event scrutineering. Any car inclusive of crew below 950kg at any time during an event will score a 0 for that round. It will also count as one of their counting scores for the championship (one of the five), and cannot be used as a dropped score. The results of the scales used will be deemed to be final. It is your responsibility to ensure your vehicle/ crew is over the minimum weight limits at all times. On events crews may check the weight of their cars pre event as scales will be made available.
- 3.19. Bumpers are not classed as trim and are not allowed to be lightened, this includes drilling holes in the plastic, as well as removing or drilling holes in the steel back plate.
- 3.20. Only standard factory fitted 'wings' or 'aerofoils' are permitted. No aftermarket or altered versions are allowed, these must be a dealer part.
- 3.21. Roof mounted vent pod is allowed.

3.22. Door cards must be fitted to doors, original manufacturers door cards can be removed and replaced.

3.23. Tinted Windows are allowed, the tinting must allow clear visibility, through all windows, of the SOS/OK board if held up within the car by either driver or co-driver.

3.24. The radiator grill or the bumper air intake maybe altered, replaced or customised but must be fitted.

3.25. The removal of or replacement using a lighter material of the petrol filler flap is not permitted.

## **BRAKES**

Fluids, pads and linings are free.

4.1. ABS systems may be disabled or removed.

4.2. All major mechanical components must be standard for the model entered, or a direct bolt on replacement from another model in the range. You may fit brakes of a higher specification model, eg GTI, but they must not be aftermarket products.

4.3. HYDRAULIC HANDBRAKES are not allowed.

4.4. A brake bias valve can be installed. It is to be positioned where the driver or navigator are unable to adjust the bias valve while competing.

## **TRANSMISSIONS/DIFFERENTIALS**

5.1. NO modifications or machining permitted.

5.2. All internal parts MUST be to standard showroom sub 1000cc vehicle specification. The transmission unit must be complete as originally supplied by the manufacturer for the model of the competing car, i.e. a competitor cannot transfer any part or parts from one transmission to another thus creating a specialist box.

5.3. Up rated gear linkages are permitted.

5.4. Replacing automatic gearboxes with manuals are permitted.

5.5. Limited slip or torque biasing differentials ARE NOT PERMITTED.

5.6. Clutch linings, covers and release bearings are free.

5.7. Drilling on any external parts of the transmission, gearbox casing or its ancillaries, other than to facilitate the application of a seal is expressly forbidden.

## **STEERING**

6.1. Aftermarket steering racks of higher ratio than standard are not permitted.

6.2. Power steering may be added or removed.



6.3. Conversion from right hand drive to left or left to right is permitted.

## **SUSPENSION**

7.1. Bushes may be changed for similar polymer material.

7.2. No all metal spherical joints or similar permitted.

7.3. All mounting points MUST be kept in the same position as standard showroom specification but may be strengthened.

7.4. Top mounting hole movement is permitted to optimise caster, camber, tracking angles.

7.5. Springs and Dampers are free, Remote reservoir are NOT PERMITTED.

7.6. Struts may be changed for an up rated version, but MUST be attached to the original fittings.

7.7. Heavy duty/ fabricated strut top mounts or similar are permitted, including spherical joints. These MUST fit the standard body-shell location.

## **SAFETY EQUIPMENT**

ALL CARS MUST comply with MI safety requirements.

8.1. Five or six point harnesses are mandatory.

## **WHEELS**

9.0. FREE.

## **TYRES**

10.0. Only tyres listed by the championship organisers are permitted. For 2019 these will be Kumho K33 R800 Gravel Tyres as specified by championship organisers.

## **FUEL**

ONLY commercially available pump fuel (petrol) will be permitted.

11.1. Bio ethanol fuel is not permitted.

11.2. Only factory fitted fuel tanks are allowed.

## **LIGHTS**

12.0. Free within MI regulations

**In all technical matters the decision of the scrutineers is binding.  
IF THE REGULATIONS DON'T SAY YOU CAN DO IT, THEN YOU CAN'T!!!**