

# OPEN CLUBMAN RALLYCROSS CHAMPIONSHIP



## 2024 TECHNICAL REGULATIONS



## 4 TECHNICAL REGULATIONS

### 4.1 INTRODUCTION

4.1.1 The following Technical Regulations are set out in accordance with the Motorsport Ireland specified format and it should be clearly understood that if the following texts do not clearly specify that you can do it you should work on the principle that you cannot.

4.1.2 It is the competitor's responsibility to ensure that their car complies with these Technical Regulations, as published by the Organisers, throughout official practice, qualifying, and races at all times.

### 4.2 GENERAL DESCRIPTION

4.2.1 The Open Clubman's Rallycross Championship is for Competitors participating in two wheel drive vehicles up to 2050cc normally aspirated or up to 1650cc forced induction (supercharged or turbo, not both) complying with the following regulations.

#### 4.2.2 Examination of Vehicles

4.2.2.1 The organisers (in addition to any other powers they may have under these Regulations) reserve the right before or after any race in the Championship to designate any one or more of the competing cars for special eligibility scrutineering. Upon such election being made, the competitor shall immediately place the car under the control of the Organisers and be deemed to have permitted all such scrutineering, examination and testing as the organisers may responsibly require to undertake. The organisers have the right to:

- a) Examine the car at the circuit for such period as they may reasonably require and take fuel and/or other samples and/or
- b) Retain the car for detailed examination at premises chosen by the organisers. If the organisers elect to retain the car, they shall make it available for collection by the competitor at least seven days prior to the qualification session for the next race in the Championship unless the car is found to be in breach of these regulations and/or
- c) Seal the car and its components in such a manner as they may choose and require the competitor at their own expense to present the car at any other premises chosen by the Organisers for detailed examination within a specified period and/or remove the car by transporter at no expense to the competitor to an appointed location. The competitor will be advised in writing of the time, date and location of the subsequent testing or eligibility examination.

4.2.2.2 The stripping of the engine or any required component will be undertaken by the competitor and/or mechanic/technician nominated by the competitor at the premises designated and overseen by a Motorsport Ireland licenced Scrutineer.

4.2.2.3 Competitors will be personally and solely responsible for ensuring that their cars comply with their registration details and with these regulations for each event at which they are entered. Failure to comply in either respect will be a breach of these regulations. Queries concerning eligibility should be referred in writing to the Organisers or the Eligibility Scrutineer at least seven days prior to an event entered, to permit a written ruling in advance of any meeting at which it is intended to compete.

4.2.3 All cars must be presented in a good condition, clean and tidy with any damage from a previous round removed or repaired. Any car which, in the opinion of the Chief Scrutineer, does not meet with these requirements will be excluded from the event.

### 4.3 SAFETY REQUIREMENTS

4.3.1 All cars must comply with these Technical Regulations, in addition to the safety requirements as listed in MI GCR Appendix 2 of the current MI Yearbook.

- 4.3.2** A Multi Point roll cage in compliance with FIA Appendix J 253 and in accordance with MI GCR Appendix 2 Section 16 is mandatory. The fitment of the cage to the chassis of the car must only contact the chassis at the mounting points which must be within the passenger compartment. No additional welding, mounting points or bars may be used. No chassis modification or stiffening is permitted except that derived from the fitting of the roll cage. Seam welding or the addition of spot welds to the shell is prohibited.
- 4.3.3** It is mandatory to use a handheld or plumbed in fire extinguisher in accordance with MI Regulation Appendix 2 Section 6.4.2.
- 4.3.4** A minimum five-point safety harness in accordance with MI Regulations Appendix 2 Section 7.2 must be fitted
- 4.3.5** An FIA Homologated Driver's seat in good condition must be used and fitted in accordance with MI Regulation Appendix 2 Section 20.2.
- 4.3.6** Safety helmet must be to the standard specified in MI GRC Appendix 2 Section 17 and must incorporate an FIA approved FHR device fitted in accordance with FIA Regulations.
- 4.3.7** Drivers must wear current FIA homologated flame retardant overalls, underwear, socks, boots, balaclava and gloves. Flame retardant overalls must cover the arms to the wrists, the legs to the ankles and the torso to the neck during the competitive sections of the event. Clothing will remain valid for 5 years after the expiry date shown on the relevant FIA Technical List subject to being in adequate condition. See MI GRC Appendix 2 Section 23.
- 4.3.8** Vehicles must be equipped with an externally and internally operated circuit breaker as per MI GRC Appendix 2 Section 22 of the current MI yearbook. The circuit breaker must be operable when the driver is normally seated irrespective of whether a safety harness is worn or not.
- 4.3.10** The car must be fitted with towing points front and rear. It is only permissible to use a strap to connect to the existing towing eye mounting point on the cars to avoid damage in a contact situation. Where a solid bracket is used, the towing eye must not protrude beyond the bodywork of the vehicle. See MI GRC Appendix 2 Section 21.

#### **4.4 GENERAL TECHNICAL REQUIREMENTS & EXCEPTIONS**

- 4.4.1** All vehicles must be of sound construction and mechanical condition and be well maintained.
- 4.4.2** Standard – is a part, the specification, features, location, and method of operation of a part are as provided when new by the motor manufacturer for the model and date of car. No modifications permitted beyond the repair or adjustment processes specified by the manufacturer. Checking will be by comparison to parts supplied by the manufacturer, or any of its nominated dealers or suppliers.
- 4.4.3** All vehicles must have a Competition Car Logbook in accordance with MI GRC Appendix 2 Section 27.
- 4.4.4** The competitor must provide the facility to seal (3mm holes cross drilled in two adjacent bolts/studs/castings and a tell-tale wire installed) so that no stripping can be done without removing the seal. The following items must have the facility to be sealed so they cannot be removed and/or dismantled without breaking the seal(s).
- Cylinder head
  - Camshaft
  - Sump
  - Inlet manifold

- Exhaust manifold
- Clutch housing
- Gearbox
- Differential

## 4.5 CHASSIS

4.5.1 Chassis must be as per manufacturer's dimensions and design. No chassis stiffening is permitted except for that which is derived from the fitting of the roll cage as per 4.3.2. No modifications or additions may be made to the roll cage and seam welding of the shell is permitted but not beyond the front strut.

4.5.2 All cars must have the manufacturer's chassis number attached.

4.5.3 No space frame cars allowed

4.5.4 No chassis modification allowed.

## 4.6 BODYWORK

4.6.1 The exterior of the car MUST remain as standard, with the exception of bonnet pins or similar retaining devices, which must be fitted. Any replacement body panels must be of original shape, material, and thickness. It is not permitted to reinforce the bumpers or their mountings.

4.6.2 A laminated windscreen must be fitted in accordance with Appendix 2 Article 19. It is permitted to replace side and rear windows with lexan/polycarbonate type material. Where glass has not been removed safety film must be fitted and a driver's side window net is recommended. Consideration must be given to driver's compartment ventilation and for this purpose it is permitted to cut a maximum of four, 50mm holes in each of the rear side and tailgate windows. A vent hole may be added to the driver's door window large enough to accept the driver's arm then window webbing must be fitted.

4.6.3 The interior of the car must have the roof lining, carpets and all the seats, apart from the driver's removed. It is also required that all audio equipment, spare wheel, tools, airbag (including circuit), and standard seat belt be removed. Ignition lock must be rendered inoperable in accordance with MI GCR Appendix 2 Article 3.1

4.6.4 Front door panels and rear side panels must be removed, a door card must be fitted to the driver's door, and must be in accordance with MI GCR Appendix 2 Section 14.3. No lightening or removal of materials from the door is allowed. A method of opening and closing the doors from inside the car must be retained. Composite doors are not allowed.

4.6.5 The original dashboard MUST be retained. Replacement of instruments and switches is permitted.

4.6.6 It is permitted to remove the heater matrix and associated pipework and ducting and replace it with an alternative motorsport heater/fan.

4.6.7 It is permitted to fit guards to engine sump and petrol tank.

4.6.8 Vehicle must have an operative windscreen wiper and washer system

4.6.9 It must be fitted with at least one interior mirror mounted and positioned to give a clear view to the rear in accordance with MI GCR Appendix 2 Article 4.2.3. The edges of the mirror must be protected by a suitable cover to reduce the possibility of injury in event of an accident

- 4.6.10 All cars must be equipped with two outside mirrors (one on the right and one on the left) at all times. These rear-view mirrors may be as standard.
- 4.6.11 Glass sunroofs must be replaced by a panel of steel and be at least the same thickness as the remainder of the roof and be firmly secured in the closed position by welding.
- 4.6.12 The passenger compartment must not contain any fuel, oil or hydraulic pumps or filters. (This includes power steering systems). Oil reservoirs, if fitted in a two compartment vehicle, must be rearward of the rear axle and enclosed in their own boxed-in section. MI GCR Appendix 2 Article 5 applies.

## 4.7 ENGINE

- 4.7.1 Engines may be up to 2050cc normally aspirated or up to 1650cc forced induction. There is rebore allowance of 0.50mm over standard. Forced induction cars must use OEM turbos or Superchargers unmodified.
- 4.7.2 Engine position, mounting method and mounts must be as standard. Mounting bushing materials may be changed to polyurethane type material. Solid mounting of engine is not permitted.
- 4.7.3 Bore and stroke must remain standard except as permitted in 4.7.1. It is permitted to replace valves and valve guides with standard or standard pattern parts only.
- 4.7.4 Crankshaft must remain as standard and unmodified. It is permitted to replace conrods with uprated versions once the length remains the same as the factory original part.
- 4.7.5 It is prohibited to modify the inlet or exhaust ports or the seats in any way other than to lap in the valves.
- 4.7.6 **Camshaft**  
Must remain as standard and unmodified except as permitted below. It is not permitted to regrind or reprofiled the camshaft. Camshaft timing and gears must remain as standard.  
Adjustable cam gears are not permitted.  
Up to 1650cc Normally Aspirated engines aftermarket cams are permitted.  
Forced inductions engines must retain all original manufacturer specification
- 4.7.7 **Oil/Water cooling**  
The engine radiator must remain in the standard manufacturer's location. It is permitted to change the radiator for an aluminium type. Oil coolers are not permitted unless fitted as standard. Internal baffles may be fitted to the standard sump and it is permitted to modify the oil pick up pipe. No dry sump tanks allowed.
- 4.7.8 **Induction System**  
Intake manifold must be original manufacturer part. Throttle Body must be original manufacturer part. No aftermarket throttle bodies are permitted. Air filter type is free. Normally aspirated cars may change the pipe work from filter to the throttle body. Forced induction cars all pipework must be original manufacturer pattern part. The rocker cover may be vented to a catch can. Supercharger pulleys are free.
- 4.7.9 **Ignition system**  
The standard ECU must be retained and may be remapped. The original coil must be retained. Spark plugs and ignition leads are free.

## 4.8 SUSPENSION

- 4.8.1 Fitting of Coilover type suspension is permitted. Manufacturer is free. No external or remote canisters are permitted. Maximum of 2 way adjustable.

- 4.8.2 Spring type and size is free.
- 4.8.3 Fitting of aftermarket polyurethane bushings is permitted. Fitting of Rose Joint type bushings is not permitted. Standard bottom wishbones must be retained.
- 4.8.4 Upgrade of top shock mount (front and rear) is allowed but cannot be adjustable. The strut tower cannot be modified in any way.
- 4.8.5 An aftermarket anti-roll bar may be fitted but the silhouette must be the same as the standard roll bar and must fit in its original mounting brackets. It is not permitted to fit rose jointed or up-rated link bars. You may completely remove one link if you want to leave the anti-roll bar inoperable.
- 4.8.6 Standard chassis bump stops must be fitted in original location.
- 4.8.7 Standard suspension pick-up points must be retained. It is not permitted to fit offset or adjustable mounts. Modification of standard mounts is prohibited. Location and fitting must be as per the original fitment.
- 4.8.8 It is permitted to alter the ride height of the vehicle, but it must be able to be driven over a 100 mm block placed at any point under the car.

#### **4.9 TRANSMISSIONS**

- 4.9.1 All cars must have a standard H pattern gearbox.
- 4.9.2 Sequential, dogbox or DSG gearboxes are not permitted.
- 4.9.3 Final Drive ratios are free. Gear Ratios must remain standard for the gearbox being used.
- 4.9.4 Clutch type and material is free.
- 4.9.5 The use of limited slip differentials is free.
- 4.9.6 Traction control of any type is prohibited.
- 4.9.7 Front to rear-wheel-drive conversions are prohibited.

#### **4.10 ELECTRICS**

- 4.10.1 All lights and fittings must either be removed or taped up.
- 4.10.2 All cars must be equipped with two rear lights of the anti-crash type as used in fog with the minimum of 21 watts or FIA equivalent each and illuminating an area of 60 sq. cm. These must work with or replace the car brake light system at all times and must be between 115cm and 150 cm above the ground and must be clearly visible from behind.
- 4.10.3 One FIA specification high intensity LED rear light (rain light) must be fitted in the centre line of the rear screen. It must be clearly visible, fitted at the bottom of the screen outside the car. See MI GRC Appendix 2 Section 2.2
- 4.10.4 Battery type is free. Battery location is free, if mounted in the drivers compartment it must be a dry cell type and mounted securely. Battery terminals must have insulated covers over them. It must be capable of repetitively starting the engine without the use of a slave battery.

4.10.5 The standard alternator must be fitted, connected and providing a charge when the engine is running.

#### 4.11 BRAKES

4.11.1 A Dual Circuit Braking System is compulsory for all cars.

4.11.2 The brake disc/drums must be standard pattern and size as supplied by original manufacturer and may be drilled or grooved.

4.11.3 Brake callipers must be original for the model chassis being used and unmodified.

4.11.4 The brake pad/shoe make and material are free.

4.11.5 The handbrake must be fitted and operational. Hydraulic type handbrake is permitted.

4.11.6 It is permitted to fit a brake bias valve. Brake lines may be replaced with solid or braided type. Copper brake pipes are not permitted

4.11.7 It is permitted to fit non-standard linings and fit braided brake hoses. Brake ducting may be fitted once it is connected to openings in the lower part of the front bumper.

4.11.8 ABS must be electronically disabled where fitted.

#### 4.12 WHEELS/STEERING

4.12.1 Wheels are free.

4.12.2 The steering wheel may be replaced; this is mandatory where the car has an airbag as standard to remove the airbag. All airbags must be removed.

4.12.3 Steering lock must be removed. Manufacturer's power steering may be added or removed. If the vehicle was fitted with a hydraulic system

#### 4.13 TYRES

4.13.1 Tyres are free. No slick tyres or cut slicks are permitted. Tyre cutting is prohibited.

#### 4.14 WEIGHTS

4.14.1 The minimum weight of the car including driver in full race apparel must as follows:

Up to 1650cc Normally aspirated 930kg

1650cc to 2050cc Normally aspirated 980kg

1650cc to 2050cc Normally aspirated Variable Cam timing (i.e. Vtec) 1050kg

Up to 1650cc Forced Induction 1100kg

#### 4.15 FUEL TANK/FUEL

4.15.1 Only standard pump fuel as defined in MI GRC Appendix 2 Section 28.2 may be used. Race fuel is not permitted.

4.15.2 Fuel tank and fuel tank location in accordance with MI GCR Appendix 2 Article 5. If located in the drivers compartment it must be firewalled and appropriately sealed off. **If a modified fuel tank is being used you may use a modified fuel pump.**

- 4.15.3 Fuel lines must be in accordance with MI GCR Appendix 2 Article 5. It must be possible to take a fuel sample. For fuel injected cars the facility must be a dry break fuel sampling coupling, approved by the FIA. For all others an appropriate fitting to allow fuel sampling must be present.
- 4.15.4 Fuel filter must be made of the same material as supplied by the manufacturer.
- 4.15.5 Fuel Pump is free, Fuel rail and fuel regulator may be upgraded. Fuel pressure must be standard.

#### 4.16 SILENCING

- 4.16.1 Normally aspirated and supercharged cars may fit an aftermarket manifold. For turbo charged cars the standard exhaust manifold and turbo must be retained and unmodified except for the removal of catalytic converters.
- 4.16.2 Exhaust system must exit the rear of the car and be fitted at all times.
- 4.16.3 The remainder of the system is free and must be silenced to meet the required noise limit. See Championship Regulation 4.16.5.
- 4.16.4 It is not permitted to wrap any part of the exhaust system in any heat resistant covering.
- 4.16.5 For all cars a noise limit of 105dB is imposed, measured with a noise pressure meter regulated at Position A and SLOW, placed at an angle of 45 degrees to and 50 cm distance from the exhaust outlet, with the car engine turning at 4,500rpm.