

2008 Procar 2000 Regulations

Regulations for Procar 2000 category

1. INTRODUCTION. PROCAR 2000

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

- 1.1** Procar 2000 cars are 2-wheel drive hatchbacks, or four/ five door saloons, or coupes up to 2000 c.c. for cars with multivalve engines. The engine and gearbox used must be the same as that fitted to the production model of the car. The class is for cars that are, or have been available on general sale to the public. There is no minimum or maximum age limit for the vehicles that may be used. Organisers reserve the right to refuse entry into the Championship.

HOMOLOGATION SPECIALS ARE NOT PERMITTED

- 1.3** The cars will run in one class for Cars with engine capacities up to 2000cc which may have more than 2 valves per cylinder.

2. GENERAL TECHNICAL REQUIREMENTS AND EXCEPTIONS.

- 2.1** Cars must comply with the Technical Regulations published by the Organisers for the 2008 Rallycross Open Championship throughout official practice, qualifying heats and finals.
- 2.2** All cars must comply fully with the current MSA Yearbook regulations [C(b)], Technical (E69 - E81) inclusive and (E110 – E134) inclusive and these supplementary regulations.
- 2.3** No approved modification may give rise to an unapproved one.
- 2.4** The use of magnesium alloy sheet is not permitted. Titanium sheet may only be used for heat shields.

3 SAFETY REQUIREMENTS.

- 3.1** Cars must be fitted with a roll cage complying with current MSA Yearbook regulation (E131).
- 3.2** Provided that the front bulkhead is not penetrated and that no part of the cage extends rearwards beyond the rear shock-absorber mounting points, optional bars are permitted.
- 3.3** A Competition Seat with headrest is mandatory in accordance with [C(c)50], [C(c)51], [C(c)103] and [C(c)104].
- 3.4** Currently FIA Homologated Seat Belts are mandatory, with four separate fixing points.
- 3.5** From a 'race ready' position with seat belts fastened, the driver must be able to vacate the car in 5 seconds.
- 3.6** A fire extinguisher MUST be fitted; the minimum specification must be to current MSA Regulations. ([C(c)56] Table 56(b) or (c) not necessarily plumbed in).

4 CHASSIS and BODYWORK.

- 4.1** The standard body shell MAY NOT be strengthened except for the following: -
i) The fitting of the roll cage as 3.1 & 3.2 above
ii) The reinforcing of the standard suspension mounting points may NOT extend to more than a radius of 100mm from the center of the suspension point.
iii) To prolong the life of the body shell it is permitted to carry out seam welding to areas that are accessible from the engine bay only.
- 4.2** The exterior of the car MUST remain as standard including mirrors, door handles and bumpers, although it is permitted to remove body moldings, badges and the radio aerial. It is permitted to fit guards to engine sump and fuel tank. Any guards may protect but NOT strengthen. It is NOT permitted to reinforce the bumpers or their mountings.
- 4.3** Glass sunroofs MUST be replaced as per MSA Yearbook Regulation (G129).
- 4.4** The side and rear window glass must be replaced with polycarbonate (it is recommended that Perspex is not used) having a minimum thickness of 4mm. Consideration MUST be given to driver's compartment ventilation and for this purpose only, it is permitted to cut a maximum of 4 X 2-inch diameter holes in each of the rear side and tailgate windows. A vent hole may also be added to the driver's door large enough to accept the driver arm.
- 4.5** The interior of the car MUST have the roof lining, carpets and all the seats, apart from the driver's (See 3.3 above) removed. It is also required that any audio equipment, spare wheel, tools and standard seat belts be removed. It is permitted to remove the door trim panels and the window regulators (the windows must then be fixed to prevent them opening). It is recommended that trimpanels are replaced by aluminium or Kevlar panels.
- 4.6** An interior mirror of a minimum of 50 sq. cm. MUST be fitted. The original dashboard MUST be retained although instruments may be replaced. Dashboard may be modified to allow fitment of roll cage.

5 ENGINE.

- 5.1** The engine and gearbox must be as originally fitted as original equipment to the car and be in the original location.

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- 5.2 Pistons must be unmodified standard production or approved replacement pistons subject to a maximum oversize of +0.5mm. (which must not exceed the capacity of 2000cc) Competition pistons are prohibited. Stroke must comply with Manufacturer's original specification.
- 5.3 Lightening of crankshaft or con rods is prohibited. Conrods may be equalised in weight, but one will remain standard. The crankshaft may be balanced.
- 5.4 Camshaft must be standard as originally supplied for type of engine used. It may not be machined or reprofiled. Original timing gear must be used. Offset keys or adjustable vernier drives may not be used, unless fitted to the original engine.
- 5.5 Variable valve timing is permitted.
- 5.6 Cylinder head must be standard as originally fitted to the type of engine used. No gas flowing or polishing is allowed. The original terrain must be visible in the inlet & exhaust ports and in combustion chambers. Heads may be skimmed for maintenance purposes only and may not be less than Manufacturer's minimum dimension (The minimum dimension will be announced by the organisers for each different type of car, that drivers register in the Championship)
- 5.7 Competition flywheels are not permitted. The standard unit may not be lightened or machined.
- 5.8 It is permitted to baffle the standard sump and modify the oil pick up pipe. Dry sumping is not allowed.
- 5.9 It is permitted to fit an oil cooler within the engine compartment.
- 5.10 It is permitted to remove/replace the original air filter and filter housing with a performance filter or induction kit. Where engine breather pipes cannot be refitted to the induction system, breather pipes must go to a breather catch tank of adequate size. It is permitted to change carburettor jets or injectors. It is NOT permitted to modify the inlet manifold system including the throttle mechanism, carburetor and throttle body apart from fitting an additional external throttle spring
- 5.11 The standard ignition/engine management system MUST be retained. It is permitted to fit a modified "chip". Rev. limiters may be fitted or removed. Spark plugs and ignition leads are free. It is NOT permitted to add additional ignition systems.
- 5.12 All water radiator and hoses are free but the original radiator location MUST be retained. Heater may be removed and pipe work blanked off or linked together in the engine compartment.
- 5.13 Forced Induction engines, and turbo charged engines are not permitted.

6 TRANSMISSION.

- 6.1 The standard gearbox casing and all internals MUST be retained. Gear ratios & final drive ratios must be the same as originally supplied for that model of car. Torque bias and limited slip differentials are permitted.
- 6.2 Wheel speed sensors are not permitted and must be removed.
- 6.3 Standard drive shafts must be retained.
- 6.4 The clutch drive plate and cover may be up rated by a standard pattern type. It must fit without any modification to the flywheel. Friction material is free providing it is to the original configuration.

7 SUSPENSION and STEERING.

- 7.1 It is permitted to fit non-standard shock absorbers and springs provided that they mount onto the body at the standard suspension mounting points. Any shock absorber units may only have a single method of damping adjustment. Multiadjustable and/or remote reservoir types are prohibited.
- 7.2 The ride height may be altered. Adjustable spring platforms are permitted
- 7.3 It is permitted to fit up rated bushes to the suspension (No rose type joints permitted)
- 7.4 It is permitted to fit, remove or up rate anti-roll bars. (No rose type joints permitted)
- 7.5 Strut braces are permitted and their design and material are free.
- 7.6 The steering lock must be removed

8 BRAKES.

- 8.1 The standard braking system must be retained apart from modifications outlined in section 8.2 – 8.8.
- 8.2 Friction material is free.
- 8.3 Standard pattern after market ferrous discs and drums may be used.
- 8.4 It is permitted to use cross-drilled or grooved brake discs/drums. Only brake discs made predominantly from ferrous material are permitted.
- 8.5 Brake lines may be re-routed. It is recommended that flexible braided brake lines be installed.

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- 8.6** It is permitted to replace/add a brake pressure-limiting valve. Any such valve must not be able to be adjusted by the driver while driving the car. It must comply with MSA Yearbook Regulation (E97).
- 8.7** It is permitted to remove or deform brake back plates and add additional ducting to aid brake cooling.
- 8.8** Servos can be removed.
- 9. WHEELS.**
- 9.1** Wheels MUST retain standard diameter and offset and be of maximum rim width of 5.5", unless the standard rim width of the model is greater. Non standard wheels may be fitted but standard diameter and offset must be retained
- 10 TYRES.**
- 10.1** A Silverstone type RR control tyre is mandatory (type 185/55-14 or equivalent size for the vehicle). All tyres must be purchased with the correct Championship stamp, from the Official supplier – contact: Jeremy Freeman – 01942 237468.
- 11 ELECTRICS.**
- 11.1** The type of battery is free but it must-be secured.
- 11.2** The battery must be capable of repeatedly starting the engine.
- 11.3** It is mandatory that all lights are removed and similar shaped covers are fitted to the resulting holes.
- 11.4** Two high-level brake lights MUST be fitted to the inside of the rear window in accordance with the Rallycross section (E128) of the current MSA yearbook.
- 11.5** A high intensity rear light must be fitted in accordance with MSA Yearbook regulation [C(c)69-71].
- 11.6** Both charging and starting circuits must be as standard and function efficiently.
- 12 WEIGHT.**
- 12.1** There will be a minimum weight of 920kg - including car and driver. The organisers reserve the right to apply minimum weights to different types of car.
- 12.2** It is the responsibility of the driver to ensure that his/her car complies to the minimum weight limit and provide his/her own ballast to ensure that the car reaches the correct weight limit if the car is found to be under weight at any stage during an event. Any weight shall be fitted in accordance with [C(b)21].
- 12.3** The weight limits of each car will be reviewed three times during each season and at the end of the year. The organisers reserve the right to apply a success ballast system to ensure a level playing field throughout the Championship.
- 13 FUEL TANK and FUEL.**
- 13.1** The fuel pump, filter and fuel lines are free.
- 13.2** Cold start systems may be disconnected or removed.
- 13.3** Only Pump Fuel as defined in The Terminology Pump Fuels of the MSA yearbook is permitted.
- 13.4** The original fuel tank may be used or replaced by a purpose made unit located in the original location. If the tank is moved to a location inside the car, a safety, currently FIA homologated FT3 must be fitted. It is also permitted to have a foam filled, metal tank, with a maximum capacity 8 litres inside the engine compartment.
- 14 EXHAUST and SILENCING.**
- 14.1** The standard exhaust manifold MUST be retained.
- 14.2** The exhaust system beyond the existing manifold is free but it MUST exit from the rear of the car
- 14.3** Exhaust gas recirculatory systems may be removed.