



SPECIFIC TECHNICAL REGULATIONS

CROSS COUNTRY CARS

LIMITED & OPEN 2022

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1. GENERAL

The following specific regulations are to establish the technical guidelines and regulations for the “Limited” and “Open” subcategory at the Cross-Country cars class in the RBI Sport events.

2. DEFINITIONS

2.1 Series production cars

Cars of which the production of a certain number of identical examples (see definition of this word hereinafter) within a certain period of time has been verified at the request of the manufacturer, and which are destined for normal sale to the public. These cars have a maximum of six wheels and a minimum of four driven wheels.

2.2. Competition cars

Cars built singly and intended solely for competition. Cars which are heavily modified and upgraded to meet the nature of the cross country rally will be considered as competition cars.

2.3. Identical vehicles

Vehicles belonging to the same production series and which have the same mechanical components and same chassis (even though this chassis may be an integral part of the bodywork in the case of a monocoque construction).

2.4. Model of vehicle

Vehicles belonging to a production-series distinguishable by a specific conception and external general lines of the bodywork and by an identical mechanical construction of the engine and the transmission to the wheels, with the same wheelbase and the same cubic capacity.

2.5. Variants (VF, VP, VO)

These are either supply variants (VF) (two suppliers providing the same part for the manufacturer and the client does not have the possibility of choice), or production variants (VP) (supplied on request and available from dealers), or options variants (VO) (supplied on specific request).

2.6. Evolution of the type (ET)

Characterises modifications made on a permanent basis to the basic model (complete cessation of the production of the car in its original form).

2.7. Use

2.7.1. Variants (VF, VO)

The competitor may use any variant or any part of a variant as he wishes.

2.7.2. Evolution of the type (ET)

The car may comply with a given stage of evolution.

3. CLASSIFICATION

The cars taking part in the Cross-Country cars class are divided into the following subclasses:

- “Limited” Cross-Country cars
- “Open” Cross-Country cars

The vehicles which fully comply with the Specific Technical Regulations - article 7 hereinafter can enter the “Limited” Cross-Country cars subclass.

The vehicles which do not fully comply with the Specific Technical Regulations hereinafter are to enter the “Open” Cross-Country cars subclass.

4. SCRUTINEERING

All cars must comply with the General technical regulations of the event.

All cars will pass thorough the scrutineering in order to confirm compliance with the General technical regulations and the Specific technical regulations of the subclass.

Cars which are found not compliant with the Specific technical regulations for “Limited” cars subclass will be transferred to “Open” cars subclass by the Rally Administration following the protocol of the Chief scrutineer.

Cars which under the run of the rally undergo modifications which are not compliant with the Specific technical regulations for “Limited” cars will be transferred to “Open” cars subcategory with their classification so far.

5. ALLOWED AND/OR OBLIGATORY MODIFICATIONS

All the modifications which are not allowed by the present regulations or rendered mandatory by the General Technical and Safety regulations are expressly forbidden.

For the “Limited” subclass, the only work which may be carried out on the car is that necessary for its normal servicing or for the replacement of parts worn through use or accident. Apart from these, any part worn through use or accident can only be replaced by an original part identical to the damaged one.

6. MINIMUM WEIGHT

There is no limit on the minimum weight of the cars in the Cross country category.

7. CROSS COUNTRY “LIMITED” SUBCLASS MODIFICATION LIMITS

The limits of the modifications and fittings allowed for the “Limited” subclass are specified hereinafter:

7.1. Engine

- Engine must be that originally specified for the car by the manufacturer or an engine that has been used in the car - model's variants or evolutions.
- Turbo / supercharger kits to non turbo / supercharger engines are not permitted if not used in the car model's variants or evolutions.
- Movement of the engine's original position is not allowed.
- Engine capacity, overbore and manifolds are free.
- Programmable ECUs, additional sensors and readers are permitted.
- If the mountings are original, the material of the elastic part is free.

7.2. Engine's bell housing

No adapters are permitted.

7.3. Ignition

Ignition modifications are free.

7.4. Cooling circuits

The main operational radiator containing the coolant is free, as is the type of thermostat, which may be removed.

The original location and attachment points of the main operational radiator must be conserved and should not differ from those of the series production.

The addition of an electric fan is permitted provided that it is fitted on any series vehicle and is commonly on sale.

Additional coolers may be added within the bodywork and may not protrude the car's silhouette.

7.5. Carburettors

Carburettor modifications are free.

7.6. Injection

Injection modifications are free.

7.7. Air filter

The air filter system is free.

The air must not be taken from the cockpit, modifications must not affect the structure of the car, and the installation must be situated entirely in the engine compartment.

A snorkel may be fitted. It is possible to make an opening in the engine bonnet or in the front fenders in order to provide air for the engine, and to place a pipe in this opening.

7.8. Intake

There are no intake restrictions. Modifications are free.

7.9. Timing

The springs and play of the valves are free.

Camshafts (including the profile of the cams) modifications are free.

7.10. Feed pump

The number and the operating principle of the feed pumps are free.

7.11. Exhaust

Exhaust modifications are free.

7.12. Cruising speed controller

Modifications are free.

7.13. Soundproofing panels

These panels may be removed as well as engine shields made of plastic material.

7.14. Air conditioning

Modifications are free.

7.15. Clutch

Modifications are free.

7.16. Gearbox

The joints of the gearbox linkage are free.

Gearbox ratios and gear material types are free.

7.17. Differentials

Differential ratios are free.

Differential locking systems are free.

7.18. Suspension

The basic design and operating principle of the suspension must remain unchanged.

Suspension components must be that originally specified for the car by the manufacturer or components that have been used in the car model's variants or evolutions.

Original chassis anchorage points must be respected and the mounting location points must be the original rotation centres with a tolerance of +/- 10mm.

The reinforcing of the suspension and its anchorage points by the addition of material is allowed.

The reinforcing must follow the original profile of the component. The original components may not be replaced by alternative fabricated parts (i.e. tubular frame parts).

In the case of oil-pneumatic suspension, the spheres may be changed as regards their dimensions, shape and material, but not their number. A tap, adjustable from the outside of the car, may be fitted on the spheres.

Rubber bushes may be replaced by larger or smaller diameter parts, rod ends or spherical bearings. Mounting bolts size maybe changed.

Sway bars may be added or increased in size or removed.

Additional hydraulic and/or pneumatic bump stops are not permitted.

7.19. Axles

Axles must be those originally specified for the car by the manufacturer or axles that have been used in the car model's variants or evolutions.

Internal axle elements are free.

If a rigid axle is used, the original parts may be strengthened in such a way that the original part still can be recognized.

7.20. Straps

Suspension travel straps are allowed at the front and at the rear.

7.21. Springs

Coil springs: The length is free, as is the number of coils, the wire diameter, the external diameter, the type of spring (progressive or not), the external diameter and the form of the spring seats.

Pneumatic or oil-pneumatic springs may be replaced with coil springs with the same type being used in the car model's variants or evolutions.

Leaf spring: The length, width, thickness and vertical curvature are free. The fitting of shackle protection pads is strongly recommended. The number of leaves is free.

Torsion bars: The diameter is free.

7.22. Shock absorbers

Free, provided that their type (telescopic, arm, etc.) and their working principle (hydraulic, friction, mixed, etc.) remain unchanged.

They must have no other function than that of shock absorber.

The checking of the operating principle of the shock absorbers must be carried out as follows:

Once the springs and/or the torsion bars are removed, the vehicle must sink down to the bump stops in less than 5 minutes.

The number of shock absorbers is limited to two per wheel.

No other part, apart from those whose only function is to permit the fitting of an additional shock absorber, may be added to or removed from the suspension.

In the case of a vehicle which has only one shock absorber per wheel, the mounting of this shock absorber is free provided that no part other than those exclusively allowing the attachment can be added to and/or removed from the suspension. The fluid tanks for the shock absorbers may be attached in the wheel arches as well as to the chassis.

A local modification of the shell or chassis is authorized if its sole purpose is to allow the mounting of the shock absorber.

7.23. McPherson Suspension

If, in order to change the damping element of a McPherson suspension, or a suspension operating in an identical manner, it is necessary to replace the entire McPherson strut, the replacement parts must be mechanically equivalent to the original ones and have the same mounting points.

For McPherson suspensions, the shape of the spring seats is free. Their material is free.

7.24. Wheels and tires

The wheels are free and there are no limitations on the size of tires.

They must be covered by the fenders.

Tires are free provided that they can be mounted on these wheels, **but studded tires and motorcycle tires are forbidden.**

The spare wheel may be brought inside the driving compartment, on condition that it is firmly secured and that it is not installed in the space reserved for the occupants.

Wheel fixations by bolts may be changed to fixations by pins and nuts provided that the number of attachment points is respected.

7.25. Braking system

Discs and callipers are free.

Carbon fibre or other composite breaks are not permitted.

Brake linings are free, as are their mountings.

Protection plates may be dismantled or bent.

In the case of a car fitted with servo-assisted brakes or an anti-locking device, this device may be disconnected. The same applies for anti-lock braking systems.

Brake lines may be changed for aviation type lines.

In the case of a vehicle which has a homologated antilock braking system, this system may be removed in its entirety from the competition vehicle.

The mechanical handbrake may be replaced with a hydraulic system.

The parking brake function must be retained.

It is permitted to modify the position of the hydraulic handbrake system.

7.26. Exterior

Hubcaps may be removed.

Plastic sound-proofing parts may be completely or partly removed from the inner wheel arches.

Protective headlight covers may be fitted provided that their only function is to cover the glass, and that they have no influence on the car's aerodynamics.

The fitting of underbody protections is recommended but only authorized provided that these really are protections which respect the ground clearance, which are removable and which are designed exclusively and specifically in order to protect the following parts : engine, radiator, suspension, gearbox, tank, transmission, exhaust.

Mounting of an aftermarket bumpers or custom build solid build bumpers (front and/or rear) is allowed. Bull-bars are allowed. A local modification of the body or chassis is authorized if its sole purpose is to allow the mounting of the bumpers. Complete removal of the bumpers is allowed.

The side and rear windows may be made from a polycarbonate or acrylic, with a minimum thickness of 3 mm.

The original bodywork shape and materials cannot be changed other than the use of lightweight single piece panels for doors, bonnet, rear doors and wings.

The profile of the bodywork must not be modified as a result of these freedoms. Their fixation is free, the mechanisms may be removed, several panes filling an opening may be replaced by just one panel, and the same applies for the windows of the side doors.

The glass panel of a sun roof may be replaced by a metal sheet with a minimum thickness of 1.5 mm, with additional attachments if necessary.

Any locking system may be used for the cap of the petrol tank.

If the original spare wheel support constitutes a hazard on the outside of the bodywork and if this wheel is brought inside the cockpit, it may be removed.

The fitting of external rear-view mirrors is permitted, as is the changing of the windscreen wiper blades, front and rear.

The rear window wiper system may be removed.

Extra roof vents and exhaust vents for passenger compartment are allowed.

Only electric winches, fitted without making any modifications to the structure of the vehicle other than a modification allowing the winch to be attached by means of bolts, are authorized.

7.27. Passenger space

All unnecessary parts of the original safety belt systems may be removed.

All accessories which have no effect on the vehicle's behaviour are allowed without restrictions, such as those concerning the aesthetics or interior comfort (lighting, heating, etc.), on the express condition that they do not influence, even on a secondary manner, the efficiency of the engine, steering, strength, transmission, braking, or road-holding.

Additional measuring instruments, counters, etc. may be freely installed, provided that their fitting is not likely to create any danger.

The horn may be changed. Another one, possibly for the passenger's use, may be added.

The mechanism of the handbrake lever may be adapted in order to obtain instant unlocking (fly-off handbrake).

The rear seats may be removed.

Additional compartments may be added to the glove compartment as well as additional pockets to the doors.

Steering wheel is free.

It is authorized to replace the electric windows by manually operated windows.

Carpets are free and may thus be removed.

Soundproofing materials and trim may be removed.

Door panels may be made from metal sheeting at least 0.5 mm thick, from carbon fibre at least 1 mm thick or from another solid and non-combustible material at least 2 mm thick.

7.28. Reinforcements

Strengthening of the suspended parts of the chassis and bodywork through the addition of parts and/or material is allowed under the following conditions:

The shape of the reinforcing part/material must follow the surface of the part to be reinforced, having a shape similar to it and the following maximum thickness measured from the surface of the original part:

- 4 mm for steel parts;
- 12 mm for aluminium alloy parts.

For bodywork parts, the reinforcing part / material must be on the area not visible from the outside.

The reinforcing part / material must not have any other function than that of a reinforcement.

It is permitted to fit reinforcement bars, on condition that they are removable and are bolted onto the attachment points of the suspension to the body shell or onto the suspension spring mounts.

A hole may also be bored in the upper suspension trim to fit these rods.

7.29. Battery

The make, capacity, and battery cables are free.

7.30. Generator

May be replaced by a more powerful one.

7.31. Lighting system

Additional headlights including the corresponding relays are allowed, on condition that the total does not exceed eight (tail and parking lights not included) and provided that this is accepted by the laws of the country. They may not be housed within the bodywork.

Headlights and other exterior lights must always exist in pairs. The original headlights can be made inoperative and covered with adhesive tape. They can be replaced by other headlights, in compliance with this article.

Fuses may be added to the electrical system.

7.32. Fuel circuit

It is allowed to use the original tank and its accessories (in conformity with the various articles of the regulations).

The original tank may be replaced by a custom build or aftermarket one on condition that it is located within a sealed metal container and that there is a liquid-tight bulkhead separating the cockpit from the tank.

If the tank is not a standard tank as supplied by the manufacturer then it must be accepted by the Chief scrutineer.

No fuel lines are allowed to pass through the cockpit.

Where fuel tank and/or fuel pumps are mounted within the bodywork a drain hole and hose must be present to evacuate any leaked fuel in the case of unforeseen tank failure or leakage. **Fuel pumps and drain hole must be positioned outside of the cockpit.**

The number of tanks is free.

7.33. Jack

The jack is free and the jacking points may be changed for others.

8. CROSS COUNTRY “OPEN” SUBCLASS MODIFICATION LIMITS

There are no limits of the modifications and fittings for the “Open” subclass except for the specified hereinafter:

6.1. General

Modifications rendered mandatory by the General Technical and Safety Regulations are expressly allowed.

6.2. Wheels and tires

The wheels are free and there are no limitations on the size of tires.

Tires are free provided that they can be mounted on these wheels, but studded tires and motorcycle tires are forbidden.

The spare wheel may be brought inside the driving compartment, on condition that it is firmly secured and that it is not installed in the space reserved for the occupants.

6.3. Passenger space

Door panels may be made from metal sheeting at least 0.5 mm thick, from carbon fibre at least 1 mm thick or from another solid and non-combustible material at least 2 mm thick.

6.4. Fuel circuit

It is allowed to use the original tank and its accessories (in conformity with the various articles of the regulations).

The original tank may be replaced by a custom build or aftermarket one on condition that it is located within a sealed metal container and that there is a liquid-tight bulkhead separating the cockpit from the tank.

If the tank is not a standard tank as supplied by the manufacturer then it must be accepted by the Chief scrutineer.

No fuel lines are allowed to pass through the cockpit.

Where fuel tank and/or fuel pumps are mounted within the bodywork a drain hole and hose must be present to evacuate any leaked fuel in the case of unforeseen tank failure or leakage. **Fuel pumps and drain hole must be positioned outside of the cockpit.**

The number of tanks is free.