



**The Federation of Motor Sports Clubs of India**

**2021**

**FMSCI-INRC-R**

**Specific Technical Regulation  
For  
Rallying**

**Member of**



**Federation Internationale  
de l' Automobile**



**Federation Internationale de  
Motocyclisme**



**Indian Olympic  
Association**

Please Note- Changes for the 2021 Technical Regulations below are in ***Bold, Italic and Underlined.***

**The INRC R Specific Regulations 2021 should be read with the following Articles of FMSCI Appendix J RALLYING.**

**Article.251 – Classification and Definitions**

**Article.252 – General Prescriptions for Production Cars (Group N), Touring Cars (Group A)**

**Article.253 – Safety Equipment (Groups N,A)**

**Article.254 – Specific Regulations for Production Cars (Group N)**

**All modifications permitted below, in INRC- Group-R, will be in addition to the modifications permitted in Article 254**

**It is permitted to use after-market replacement parts as long as such parts are in conformity with the homologated parts N(including of Optional Variants in Group) in ALL ASPECTS except the brand name. Such parts should have no additional functions relative to the original parts.**

#### **Eligible vehicles**

FMSCI Homologated/TDF Cars with FMSCI R2B / R2C Kits OR FMSCI Homologated/TDF Cars following the regulations listed below.

#### **Normally aspirated engines – Up to 2000cc and Supercharged engines – Up to 1333cc**

When the word **FREE** is used in the regulations below, it means that those parts need not be homologated as a variant. It also means that parts may be used without any attached conditions, so long as the **basic** function/principle, of the replaced part is the same. In some cases it is permitted to remove parts, and in others, replace.

Series production Indian vehicles sold on or after 01/01/2010 in India.

E.g. Mitsubishi Cedia was sold from 2006 to 2011 so it is eligible for this class.

**MINIMUM WEIGHT**— NA VEHICLES- 1390cc to 1600cc is 1030kg

NA VEHICLES- 1600CC to 2000cc is 1080kg

**SUPERCHARGED VEHICLES- 927cc to 1067 is 1030kg**

**SUPERCHARGED VEHICLES- 1067cc to 1333cc is 1080kg**

**The use of ballast / ballasts is permitted**

**1-ENGINE-** For the sole purpose of being able to fit the gearbox, local external machining of the engine block is allowed. Mountings and their anchorages on the body shell may be modified provided that the angle and position of the engine within its compartment are not modified. The number of mountings may not be modified. The material of the elastic part may be replaced; the number of mountings must be the same as the original

Re boring of 0.5mm maximum is allowed in relation to the original bore. **Crossing the limit of 2000cc NA or 1333cc Supercharged is permitted, provided the limit was crossed only by means of reboring to a maximum of 0.5mm over the Homologated bore.**

**1.1 SUPERCHARGING-** TURBOCHARGER: FREE. But not the numbers.

**Supercharging a Homologated NA car is permitted, provided the CC limit of the Supercharged vehicles under Eligible Vehicles, is respected.**

**INTERCOOLER-** FREE.

Ducts and the pipes of the supercharging system are free, but their only function must be to channel air and to join various parts together. **The intercooler and its components must be in the engine bay or ahead of the radiator provided it is within the bodywork of the car. Ducting for the intercooler is permitted through the bumper, front grill. Holes may be cut out to allow air to pass. Water spray system may be adopted.**

**1.2 Piston-** FREE**1.3 Compression Ratio-** Free**1.4 Connecting Rod** – FREE- Must be made of steel

**1.5 CYLINDER HEAD-** Surfacing of the head gasket plane is permitted. Cylinder head Porting is allowed. Addition and removal of material is permitted  
Cylinder head gasket is free.

**1.6- VALVE TRAIN-**(inlet and Exhaust) -Free, but not their numbers so long as the valve homologated diameter is maintained. The valve cotters and guides are not subject to any restriction. Valve springs and their numbers are free. Spacers may be added under the springs.

**EXCEPT TITANIUM, ANY OTHER MATERIAL MAY BE USED IN THE VALVE TRAIN**

**Rocker arms** are free as well as their ratio

The timing is free. If the original timing includes an automatic play recovery system, this may be neutralised mechanically and play compensation discs may be used.

**1.7 – Air filter** and its plumbing up to the throttle body – Free, but must remain in the engine compartment.

**1.8 -13. ECU** and wiring system- FREE- The location of the ECU may be changed

Sensors and Actuators are free.

Modification of the Wiring loom, as well as custom built looms are permitted

**1.9 Camshaft-** FREE

Adjustable CAM pulley is permitted. The number and diameter of the bearings must be retained.” VVT” and “VALVETRONIC” etc. Type systems are authorised if original. They may be rendered inoperative. Timing belt, belt tension rollers and locking of belt tensioners are free. The material and the profile of the timing belt is free so long as the number of teeth is identical to the original.

The oil inlets may be blocked. The plugs used must have no function other than that of blocking the ducts.

The valve play compensation discs between the valve buckets and stem are free

**1.10 –CRANKSHAFT-** Balancing is permitted. Forged crankshafts are permitted

The make and material of the shell bearings and thrust bearings are free, but they must retain their original type and dimensions. **All engine pulleys are free along with the drive belt**

**1.11– ENGINE FLYWHEEL**

**Free. Diameter of the starter ring and the number of teeth must be retained. Only steel or Aluminium alloy or a combination of both is permitted. No exotic materials are permitted. Titanium, composites etc )**

**2-Lubrication**

The oil radiator, oil/ water exchanger, lines, thermostat and pump strainers (including the number) are free without modifying the bodywork. The oil radiator cannot be situated outside the bodywork. The oil gauge is free but must be present at all times. It may be moved from its original location. Fitting of an oil filter is mandatory and the entire oil flow must pass through this filter or cartridge. An adaptor between the oil filter and the oil filter housing or between the oil filter support and the engine block is permitted. The adaptor may also have oil cooling and temperature and / or the pressure sensor connections. Fitment of baffles in the oil sump is permitted. The oil pump may be modified. The flow rate may be increased relative to the original. Fitting of oil pump chain tensioner is permitted. The drive system to the oil pump is free. The oil pressure regulation system may be modified. The oil pressure accumulator is free.

### **3-INTAKE MANIFOLD – FREE. Relocation of the fuel injectors is permitted**

#### **4-Throttle Body**

Numbers has to be same as Homologation / TDF. Diameter of the throttle Valve is free. Vehicle equipped with Motorized Throttle body may change to mechanical Throttle body vice versa.

**5– INJECTORS-** May be modified or replaced in order to modify their delivery, but without modifying their working principle, nor their mountings. **Blow off valves and fuel pressure regulators are free**

#### **6 -EXHAUST**

Free.

**7 - COOLING SYSTEM-** A larger radiator may be fitted, the mounting points may be changed to accommodate the same, so long as it remains **in proximity to** the original radiator. Radiator screens are free. **Cooling fans are free.**

The original **water pump** must be retained.

**The original Radiator Cowl may be modified to accommodate a larger radiator and the intercooler. Holes may be made (FREE OF SIZE AND SHAPE) in the front bumper/front bodywork/front grill, provided these are meant for the sole purpose of cooling the radiator/intercooler or brakes. However the minimum weight of the car should be respected.**

**8-GEAR BOX- FREE. The number of** mountings and their anchorages may be modified.

Gear Ratios Free, Synchronized or Non Synchronized (Dog Box) and Sequential gear boxes are permitted.

Linkages are free. **Internal shifting methods are free.** An additional oil cooling device may be used. Final Drive Ratio **is** Free.

**9-FINAL DRIVE-** Free.

Mechanical type Limited Slip Differential (LSD) is authorized.

**10--CLUTCH ASSEMBLY-** Free. The master cylinder is free. The clutch disc is free

**11-TRANSMISSION HALF SHAFTS-** Free

**12-FRONT AND REAR RUNNING GEAR-**Strengthening of Sub frames by addition of material is permitted. A silent block may be replaced by any other type of joint, collaring is authorised. Upper plate for the mounting of shock absorber to chassis is free. Front and rear hubs may be modified. Wheel carriers and hub carrier supports may be strengthened. (hollow sections authorised).

**WISHBONES-** Strengthening of wishbones are allowed only by addition of material and in contact with it on condition that the original parts remain easily identifiable and that the reinforcements do not allow to join two distinct parts together. Spring seats may be removed if they are not used. Silent block bushes may be replaced with uniball joints or plain bearings.

**FRONT AND REAR SUB FRAMES-** Modifications are allowed.

**HELICOIL SPRINGS-** Free along with their numbers. Parts for preventing the springs from moving in relation to their mounting points are authorised.

**TORSION BARS-** Free. These freedoms on torsion springs do not authorise one to disregard the ground clearance.

**FRONT AND REAR ANTIROLL BARS-** Free. The anti-roll bars homologated by the manufacturer may be removed or disconnected.

**SHOCK ABSORBERS-** FREE. Whatever the type of shock absorbers used, plain bearings are mandatory and the use of ball bearings with linear guidance is prohibited.

**Suspension travel limiters are allowed**

**FRONT AND REAR SUSPENSION TOP MOUNTS-** Free design.

**13-RUNNING GEAR.** Under no circumstances may the rim exceed a width of 8". In all other respects wheels are free. The spare wheel(s) is (are) not mandatory and if carried it must be securely fixed.

**14-BRAKING SYSTEM**– For each wheel one cooling duct with a maximum diameter of 10 cm is allowed or two cooling ducts of 7 cm diameter is allowed, these ducts may be made of composite material.

Only the following mounting points are authorised for fixation of lines to bring the cooling air to the brakes.

- Original apertures in the body work, e.g. for fog lamps, may be used to bring cooling air to the brakes; the connection of the air ducts to the original apertures in the bodywork is free, provided these apertures remain unchanged.
- If the car does not have any original apertures, two circular apertures of a maximum diameter of 10 cm, or equivalent section, may be made in the front bumper.
- A device for scraping away mud which collects on the brake discs and / or the wheels may be added.
- A device to protect the brakes from flying stones may be added.
- Servo brakes- free
- Brake linings- material and mounting method (riveted or bonded) are free provided the dimensions of the linings are retained.
- **Brake rotors are free as long as they are housed within the wheel rim.**
- Pedal box- free or the original may be modified.
- Tandem Master cylinder- free.
- Front and rear pressure regulator / limiter- free.

Handbrake – Free. It is permitted to modify / replace the hand brake provided it remains on the central tunnel. Dual rear handbrake (standard one and Hydraulic system) is permitted

- Front callipers- free. The calliper support is free.

**15- STEERING** - The driving pulleys and the position of the hydraulic power steering system are free.

- Steering rods are free
- Steering column-free
- Steering wheel- free, the original locking system of the anti-theft lock may be rendered inoperative.
- Steering fluid tank- free

#### **16-FUEL TANK AND CIRCUIT-**

**The fuel tank capacity is free. The OE fuel tank may be replaced with any other OE fuel tank, provided the original seam welding remains untouched. The fuel tank may be relocated in the boot so long as there is a cover and this cover must be fire and leak proof. The filler cap must be located on the body (external) and must have a breather/vent, and located where it is open to atmosphere. All fuel lines are free.**

**17-ELECTRICAL-** As per ART-254

**18-BODYWORK-** Internal and external

- **Strengthening of chassis is allowed by welding or addition of sheet metal so long as it follows the shape of the original part.**

- The window glass of the rear doors, rear windshield glass may be replaced with fixed Perspex / acrylic sheets, so long as the transparency of the original glass is maintained and fixed with bolts or rivets. The winding mechanisms may be removed.
- Front and rear wheel arches - It is permitted to fold back the metal edges or reduce the plastic edges of the fenders and bumpers if they protrude into the wheel housing
- Plastic and sound proofing parts may be removed from inside the wheel arches. These parts may be replaced with parts made from aluminium or composite material of the same shape
- The original dashboard must be retained. It is permitted to remove the glove compartment cover and the central console. Door pads may be replaced with fabricated ones.
- All parts of the AC/heating system may be removed
- The dashboard may be modified to accommodate the fitment of roll cage, navigational instruments etc.
- Floor carpets are free and may thus be removed
- All sound proofing materials may be removed
- The capacity of the windshield water tank is free
- Additional safety fastenings for the windscreen and side windows are permitted
- The bumper mountings are free so long as the original shape of the bodywork and the bumper remain the same
- **BUMPERS /GRILLS/HEADLIGHTS AND FENDER INNER LININGS MAY BE INTERCHANGED WITH DIFFERENT MODELS OF THE SAME CAR.**
- **COOLING DUCTS/VENTS ARE PERMITTED WITHIN THE BUMPER AND ON THE BONNET TO ENABLE COOLING/VENTING OF THE ENGINE COMPARTMENT AND BRAKES**
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UNDER BODY PROTECTION- Is permitted

19- Bonnet Vents / Scoops – FREE. These modifications are limited to the bonnet only. This will be in addition to the roof scoops for the driver and navigator.

20-Additional modifications permitted.

- It is permitted to replace the OE Bumpers with Fibre glass replicas, provided the shape is identical to the OE component.
- It is permitted to replace the OE door rear view mirrors with any aftermarket mirrors, so long as the Rear view visibility is equal to or more than the OE mirrors.
- The Frame/Cowl which houses the radiator assembly, if made of plastic, may be made/repaired/strengthened with metal, so long as the original position of the components, it houses remains the same as provided by the manufacturer. Any change in position is permitted if a specific regulation allows it.

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