



The Federation of Motor Sports Clubs of India

National Sports Federation recognized by the Government of India

2023 Technical Regulations for INDIAN JUNIOR TOURING CARS (IJTC)

Member of



Federation Internationale de l' Automobile

2023 Technical Regulations for Indian Junior Touring Cars – IJTC

The Following Articles of 2023 FMSCI Appendix J is applicable

Art.251 – Classification and Definitions

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

Art.253 – Safety Equipment (Groups N, A)

Art.254 – Specific Regulations for Productions Cars (Group N)

All modifications are forbidden unless expressly authorized by the regulations specific to the group as mentioned below.

Art.1 - Eligible Vehicles

Any large-scale series production Touring cars manufactured or assembled in India.

The vehicles must be homologated with the FMSCI or have a completed TDF (Technical Data Form) to be eligible to compete.

Only vehicles sold as a 2010 model or newer with Normally aspirated engines are allowed.

Art.2 - Classes

Engine displacement up to 1625 cc

Art.3 - Minimum Weight & Ballast

The minimum weight of the car will be “cc” divided by a constant which is **1.65**

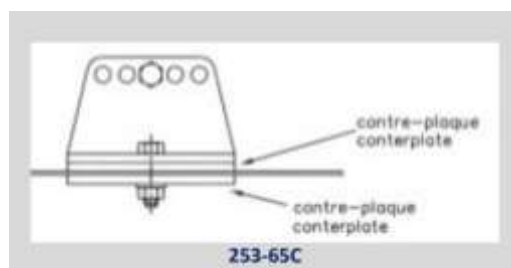
In order to balance performance, the FMSCI reserves the right to change the minimum weights at any point of time as deemed fit.

The minimum weight of the car measured will be as raced with water, oil, fuel and the driver with complete safety gear (Helmet, inners, suit, gloves, shoes, balaclava etc.)

It is permitted to complete the weight of the car by one or more ballast weights provided that they are unitary blocks, fixed by means of tools rigidly fixed to the bodyshell / chassis in a location clearly visible to the scrutineers, with the provision for sealing.

The ballast must be attached to the bodyshell/chassis at least at two fixing points by bolts of at least grade 8.8 with a minimum diameter of 10mm, with counter plates, according to the principle of Drawings 253-65C

The ballast should not have any sharp edges and all the edges must have a minimum radius of 5mm.



The minimum area of contact between bodyshell /chassis and counter plate is 40cm² for each fixing point.

Any movable ballast system is forbidden.

Failing to meet the required weight regulations will result in disqualification or exclusion of the car for the relevant session.

Art.4 - Engine

Re-boring of the engine is allowed, up to a maximum of 0.5mm over the standard bore size, without this leading to the displacement exceeding the class capacity.

Swapping of engine / powertrain and its accessories from another car from the same manufacturer are permitted provided the donor car is also a 2010 or newer model. Engine with accessories such as alternator, starter motor, power steering system, radiator, gearbox *and* driveshafts maybe swapped over. For this purpose driveshafts **are FREE**.

The swapped part should also be Homologated or have a TDF as a variant.

Modification to the engine mounting bracket / gearbox / support mount to enable fitment to the OE chassis mounts is permitted.

Chassis mounting location cannot be altered / modified and should remain as OE in the same location.

Modifications are permitted to the Water Pump pulley and the impeller

Fuel lines may be modified. Fuel hoses, cables and wiring may be modified to suit the engine.

Fuel pump is FREE

Crank Pulley FREE

Oil catch can/tank is mandatory

Art.4.1 - Cooling System

Only water can be used in the radiator as a coolant

Bigger Radiators can be used but mounting points should be inside the engine compartment

Art.4.2 - Cylinder Head

Cylinder head Porting is allowed but adding of material is not allowed.

The valves are free so long as they are made from steel, meet the homologated length and diameter. The shape of the valve seating area may be altered.

Art.4.3 - Compression Ratio

Facing of the cylinder head is allowed **but must respect the Homologation Art 321) Sub Art g)**

Art.4.4 - Piston

OE / After market pistons can be used provided they respect the Homologation / TDF data. Minimum weight of the piston remains as per Homologation / TDF

If the bore of the engine is increased an oversize piston may be used up to a maximum of 0.5mm over the standard diameter, only if the oversize piston is homologated/TDF.

Art.4.5 - Connecting Rod

OE connecting rods are only allowed.

Art.4.6 - Gasket

FREE

Art.4.7 - Camshaft

OE as per the Engine configuration.

Adjustable CAM pulley is permitted.

Art.5 - Ignition System

Spark plugs, plug wire, coil and trigger wheel and rotor are free provided they are mechanically interchangeable with the original part.

Art.6 - Engine & Gearbox Mounting

Engine and Gearbox Mount materials FREE.

Modifications to the bracket to enable fitment on to chassis is permitted.

Art.7 - Throttle Body

Number has to be as per Homologation / TDF.

Individual Throttle bodies are not allowed

Throttle body & The sensors mounted on the Throttle body are FREE

Vehicles equipped with Motorized Throttle body may change to a mechanical Throttle body or vice versa.

Art.8 - Intake Manifold

FREE

But the Mounting points of the Intake Manifold should be same as OE.

Fitment should not entail the modification of other components, (Ex. Fire wall & Bonnet etc).

Air filter is free

Art.9 - Exhaust System

FREE

Fitment should not entail the modification of the other components.

The exit of the exhaust pipe may be on either side of the car behind the mid point of the wheel base and below the door sill or at the rear of the car.(must respect Art. 13 first para)

Art.10 - Gearbox

Gear Box housing must be OE

Gear Ratios Free, Synchronized or Non-Synchronized (Dog Box) Final Drive Ratio Free

Mechanical type Limited Slip Differential (LSD) is authorized provide that it can be fitted into the original Housing.

Gear selecting Grid pattern on series model must be retained. Linkages may be modified.

Welding and adding of materials is not allowed to the gearbox housing. Removal of material on the inside of the casing to accommodate fitment of the LSD and final drive is permitted.

Clutch, Pressure Plate, Release Bearing and flywheel are free, provided that the dimension are maintained as per the homologated / TDF Engine used.

Art.11 - Lubrication System

Oil coolers can be fitted but must be in the confines of the engine compartment

The fitting of baffles in the oil sump is authorized.

Oil pumps are FREE.

Art.12 - Braking System

Handbrake if fitted the locking mechanism must be disabled. A hydraulic fly off hand brake is permitted.

Brake Pad material is FREE

The shape and dimension must be maintained as per either the OE or swapped calliper.

Brake Hoses FREE, Brake Fluid FREE

Master Cylinder is FREE

After market drilled/slotted rotors are permitted, **dimensions as per Homologation / TDF**

Larger Front rotor-calliper and Rear drum or Rear rotor and calliper can be used from the same manufacturer provided that they are swapped in full from the donor car.

(eg. Polo GTI Front & Rear Brake calliper should be used as donor part in the same VW category car for braking)

The swapped part should be Homologated / TDF as a variant or if Homologated earlier that data can be used.

Failing to meet the above required regulations will result in disqualification or exclusion of the car for the relevant session.

Brake Bias / Proportioning valve is FREE.

Brake booster may be removed

Art.13 - Suspension

No part of the car must touch the ground when all the tyres on one side are deflated. This test shall be carried out on a flat surface under race conditions (occupants on board).

Front and Rear suspension top mount - fitting of uniball joint is permitted and modifications required in the strut tower to accommodate the uniball joint is permitted.

Front and Rear Suspension Top mounts Free

Camber and Caster can be modified (camber/caster change only through top mounts)

3-way adjustable dampers are permitted - (One way, two way and three-way dampers are allowed)

In case of a torsion beam assembly the hub, the spindle including, flange of the torsionbeam can be machined and/or shimmed to achieve the required geometrical change.

Front suspension lower arm ball joints are FREE.

No spherical bearings or rose joints are permitted in place of front suspension bushings.

It is permitted to modify the roll bar link rods.

Art.14 - Wheels & Tyres

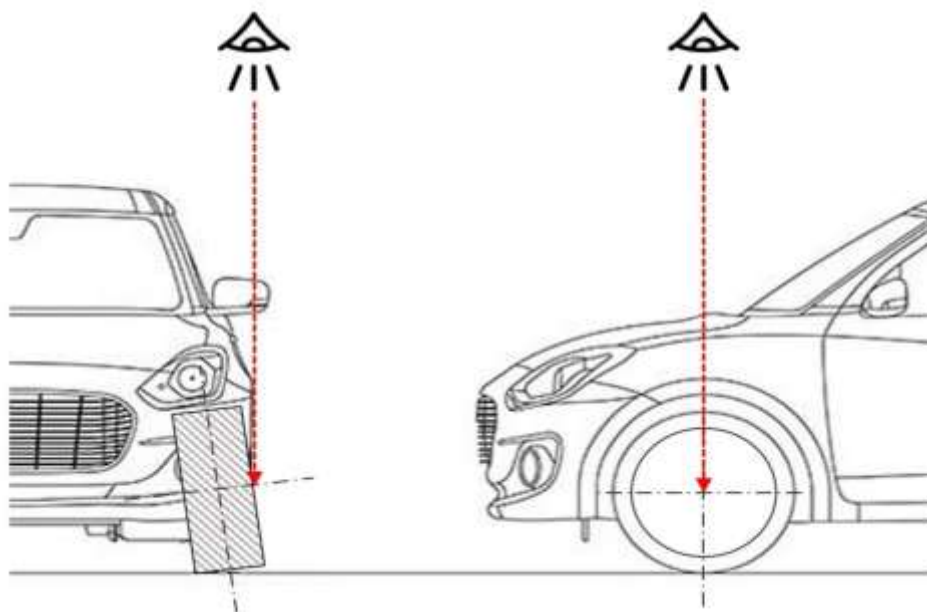
Wheel size is FREE. The competitor has the right to choose the rim size based on the tyre size provided / supplied by the organizer.

Track width is allowed to be increased by a maximum of 80mm overall from the Homologation / TDF data.

Wheel spacers between wheel and hub are permitted respecting the maximum Track width allowed as per the above Article

Fixing of Hub ring is permitted and should be fixed on the alloy wheel, Hub ring material is FREE.

No portion of the tyre above the centre line must be visible when viewed from the top(see drawing 14-1)



14-1

Art.15 - ECU

FREE- including the wiring harness

Fitting of wide band O2 sensor is permitted.

Art.16 - Interior

- i. FIA homologated racing seats are mandatory.
- ii. The fitment of a 5-point harness with a 5-point mounting or more point's harness with turn buckle is mandatory. FIA homologated harness is mandatory. THE TECHNICAL DELEGATE (in his absence the Chief Scrutineer) IS THE FINAL AUTHORITY ON THE CONDITION AND SAFETY OF THE SEATS AND SEATBELTSUSED
- iii. The passenger seat and rear seat(s) may be removed.

- iv. The removal of soundproofing, insulating material and carpeting is permitted.
- v. The steering wheel is free. The locking anti-theft system device must be inoperative.
- vi. Extra gauges or meters are permitted.
- vii. Spare wheel, AC, heating system and all its accessories may be removed.
- viii. Rear doors & Front doors glass and the rear windshield may be replaced with clear Polycarbonate sheet of minimum 3mm thickness and must be fastened with rivets or bolts. The use of transparent or colorless anti shatter film on the side windows is mandatory if the original glass is used.
The Rear doors & Front doors winder mechanism may be removed.
- ix. Dead pedal for driver comfort is permitted.
- x. Dash board, its console and its fittings may be removed.
- xi. Front & Rear fixed Quarter glasses may be replaced with Perspex.
- xii. Fixing of Driver Hydration bottle is permitted but the bottle must be removable only by using tools. (no press fits allowed).

Art.17 - Exterior

- i. Only the front bonnet, front fenders and the rear boot/ rear doors / front passenger door and Tail gate may be made of fiberglass, metal, composite or a combination but it must replicate the original shape (The Moulded/Fabricated/Tinkered component should be replicate the original shape and dimensions in all respects).
- ii. Front passenger door must be openable from both inside and outside of the car. Headlights can be removed. However, the opening must be covered with a fiberglass / metal plate of same shape/profile and size as OE Headlights and be safely secured, unless used as air intake ducts. However, headlights must be fixed and working for night racing and need not be OE
- iii. 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.
- iv. The original grill may be replaced with a mesh. Material is free. No other modification to the original opening is allowed.
- v. Bonnet vents are permitted.
- vi. It is permitted to replace the OE Bumpers with Fibre glass replicas.
- vii. Body kits (Front bumper, Rear bumper, Rear spoiler) are permitted. Overall Length of the cars must be as per manufacturer specification. The front Overhang measured from the front wheel centre line to the extremity of the body work is allowed to increase by maximum of 100mm above the manufacturers specification for fitment of body kits.
- viii. Bumper modifications are permitted for the purpose of cooling of engine and brakes, provided the original basic shape is maintained. All the openings in the Bumper can be covered with Mesh Grill (steel, plastic, etc).
- ix. Fender linings may be removed. If fitted shape and material are FREE
- x. Driver ventilations are **allowed at front driver window, front passenger side window and on the roof top**. Maximum opening for each driver ventilation is 225 sq. cm.
- xi. Fitting of FIA approved nets on OE doors/fibre glass doors is permitted.
- xii. Panel beating on all the four fenders is allowed, so that they comply with the technical requirements of tyre within the fender limits. (Art.14 & Fig 14-1).

Fiberglass Specification

Fiberglass recommended to be a minimum of 3mm thickness.

Ribs in the Fiberglass bonnet is MANDATORY.

THE TECHNICAL DELEGATE (in his absence the Chief Scrutineer) IS THE FINAL AUTHORITY ON THE CONDITION, STRUCTURE AND SAFTY OF THE MODIFIED PARTS.

Art.18 - Safety Equipment

As per FMSCI Regulations Art 253 Safety Equipment & 2023 FMSCI Safety Requirements for 4W.

Protective Padding

Where the occupant's bodies could come into contact with the safety cage, flame retardant padding must be provided for protection.

Rear View

Rear view visibility must be ensured by two external rear-view mirrors (one on the right and one on the left).The rear-view mirrors may be replaced with any aftermarket replacements, as long as the viewing area is equal to or more than the OE part.

An Inside rear-view mirror is mandatory

Art.19 - Fire Extinguisher

The minimum Quantity of Extinguishant for system mounted must be 3kg.

Manual Extinguishers

Minimum Quantity of Extinguishant:

- AFFF 2.4liters
- FX G-TEC 2.0 kg
- Viro 3 2.0kg
- Zero360 2.0kg
- Powder 2.0kg

Fire Extinguishers to be rigidly fastened with a quick release clamps (minimum 2 nos.) fitted in an easily accessible and a visible position. The mounting bracket of the fire extinguisher must be bolted to the floor with a bolt of minimum 10 mm diameter. The bracket thickness–2MM MS SHEET METAL

Art.20 - Roll Cage Basic Structure

As per FMSCI Racing Regulations **Article-253 – Art-8.Safety Cages**

Art.21 - Battery

i)Location of the battery:

- Battery must be located in its original location or in the cockpit.
- If Installed in the cockpit, the battery must be situated anywhere behind the base of the driver's or co-driver's/passenger seat.

ii) Battery fixing:

- Battery must be securely fixed and the positive terminal must be protected.
- If the battery is moved from its original position, it must be attached to the body using a metal seat and two metal clamps with an insulating covering, fixed to the floor by bolts and nuts.
- The insulation used for covering the battery must be of fire proof material. In case of any dispute concerning on the fire proof material, the decision of the FMSCI Chief Scrutineer/Technical Delegate will be final.
- For attaching these clamps, metallic bolts with a diameter of at least 8mm must be used, and under each bolt, a counter plate at least 3mm thick and with a surface of at least 20cm² beneath the metal of the bodywork.
- If the wet battery is moved from its original position into cockpit it must be rigidly fixed and the entire battery must be covered in a leak proof casing and the positive terminal must be protected and an insulation covering must be done between the battery and the leak proof outer casing. The decision of the Technical Delegate/Chief Scrutineer is final.

Art.22 - Hybrid System

Hybrid unit and its components has to be rendered inoperative or be removed in full.

Art.23 – Sensors

Sensors(for driver development only)

Fitting of additional Sensors are allowed, for data acquisition.

Fitting of Additional Sensors are allowed provided these cannot have any form of actuators or motors to make any electro mechanical changes

Any device capable of making electro mechanical changes without human intervention will be classified as actuator these are not allowed.

The additional sensors is for driver development and input only.

No communication of any sort between the driver and the pits or other drivers. Whether by radio, cellphone or by any other communication signals between car and pit once the car is on the track.

The drivers are not allowed to carry cell phones while on the track during the sessions.

Violation of the above regulations will entail disqualification.

Art.24 – Fuel

Pump fuel / Racing fuel / Fuel Additives are permitted.

Methanol is not permitted.

Note: Wherever in this regulation its mentioned that swapping of components from the same manufacturer/family is allowed, the component used must be a Homologated/TDF component.

Failing to meet the above required regulations will result in disqualification or exclusion of the car for the relevant session.

Note: If any ambiguity or missing data from the Homologation / TDF form, the FMSCI may source any component from the OE manufacturers to compare dimensions.

NOTE: Changes for the 2023 Technical Regulations are highlighted in Yellow

****END****