



The Federation of Motor Sports Clubs of India

National Sports Federation recognized by the Government of India

**2022 Technical Regulations for
INDIAN JUNIOR TOURING CARS
(IJTC)**

Member of



Federation Internationale de l' Automobile

2022 Technical Regulations for Indian Junior Touring Cars – IJTC

The Following Articles of 2021 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)

Any 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 car manufactured / assembled in India. Only vehicles with Homologation / TDF (Technical Data Form) are allowed.

Only Normally aspirated vehicles are allowed.

Only 2010 model and later sold cars are allowed.

Art.2 - Classes

Upto 1625 cc

Art.3 - Minimum Weight & Ballast

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

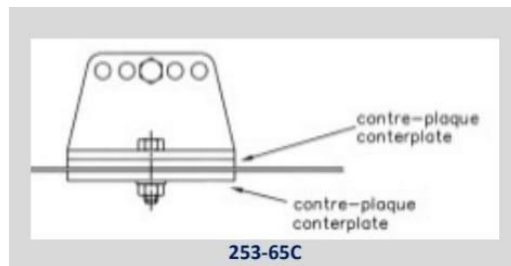
This is the real weight of the car WITH DRIVER(wearing racing gear and Helmet).

All the liquid tanks (lubrication, cooling, braking, heating where applicable) must be at the normal level foreseen by the manufacturer, with the exception of the wind screen wiper.

It is permitted to complete the weight of the car by one several ballast provided that they are strong and unitary blocks, fixed by means of tools with the possibility to fix seals, placed on the floor of the cockpit, visible and sealed by the scrutineers.

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

No ballast should have sharp edges and all the edges must have a radius of minimum 5mm.



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

Any movable ballast system is forbidden.

Art.4 - Engine

Re boring of Engine 0.5mm maximum is allowed without this leading to the capacity class limit being exceeded.

Swapping of engines / powertrain and its accessories are permitted from 2010 and later sold cars. The engine, transmission and driveshafts maybe swapped from the same manufacturer. Engine with accessories such as alternator, starter motor, power steering system, radiator, gearbox and driveshafts maybe swapped over. For this purpose driveshafts maybe modified.

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

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

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.

Valves are free so long (**material steel only**) as the Homologated length and the diameter is respected. The shape of the valve may be altered

Art.4.3 - Compression Ratio

Facing of the cylinder head is allowed.

Art.4.4 - Piston

OE / After market make pistons can be used provided they respect the Homologation / TDF data.

Minimum weight of the piston remains as per Homologation / TDF

Art.4.5 - Connecting Rod

OE connecting rods only allowed.

Modifications permitted to provide Oil Squirting to piston are allowed.

Art.4.6 - Gasket

FREE

Technical Commission

Art.4.7 - Camshaft

OE as per the Engine configuration.

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 is FREE

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

Vehicle equipped with Motorized Throttle body may change to mechanical Throttle body vice versa.

Art.8 - Intake Manifold

FREE

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

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

Air filter is free

Art.9 - Exhaust System

FREE

Fitment does 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 Ratio 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 in original Housing.

Gear selecting Grid pattern on series model 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 LSD and final drive is permitted.

Clutch, Pressure Plate and Release Bearing are free, provided that original dimension of the Flywheel is maintained of the engine fitted.

Art.11 - Lubrication System

Oil coolers can be fitted but must be in the confines of the engine compartment (it cannot be out side the radiator area)

The fitting of baffles in the oil sump is authorized.

Oil pumps are FREE.

Art.12 - Braking System

Hand brake: Fly-off hand brake is permitted

Brake Pads are FREE but original shape and Dimension to be maintained of the swapped OE/Swapped caliper has to be maintained.

Brake Hoses FREE, Brake Fluid FREE

Master Cylinder is FREE

After market drilled/slotted rotors are permitted

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

(eg. Polo GTI Front & Rear Brake caliper 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.

Brake Bias / Proportioning valve is FREE.

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 may be allowed.

Front and Rear Suspension Top mounts Free

Camber and Caster can be modified (camber/caster change only through top mounts)
3-way 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 torsion beam can be machined and/or shimmed to achieve the required geometrical change. Modifications to the lower arm are permitted, but is restricted only to balljoints. No spherical bearings or rose joints are permitted.

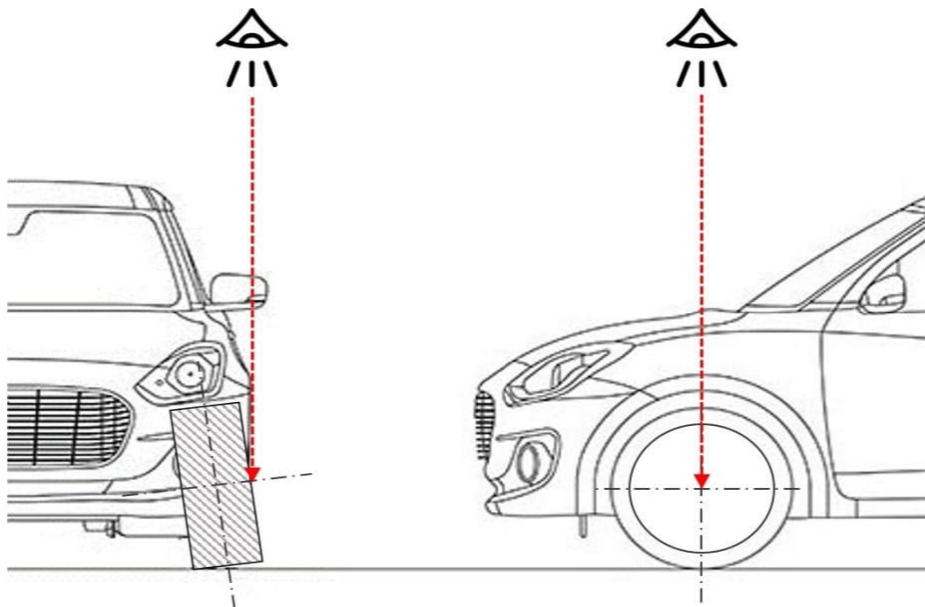
It is permitted to modify the link rods in the anti-roll bar mountings.

Art.14 - Wheels & Tyres

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

Maximum Track width as per Art 207 as per homologation data / TDF may be increased by **maximum of 80mm overall.**

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

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 passenger door 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 passenger door winder mechanism may be removed.
- ix. **Dead pedal for driver comfort is permitted.**
- x. **Dash board, its console and its fittings may be removed.**

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.

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 & 2022 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

It is permitted to replace the OE door rear view mirrors with any aftermarket mirrors.

Inner 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 counterplate 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.

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.

NOTE: Changes for the 2022 Technical Regulations are highlighted in Yellow

****END****