



The Federation of Motor Sports Clubs of India

National Sports Federation recognized by the Government of India

**2021 Technical Regulations for
INDIAN JUNIOR TOURING CARS (IJTC)
(TC-2)**

Member of



Federation Internationale de l' Automobile



Federation Internationale de Motocyclisme

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2021 Technical Regulations for Indian Junior Touring Cars (TC2)

The following Articles of 2021 FMSCI racing regulations 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 Production Cars (Group N)

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

Eligible Vehicles

Any large-scale series production Touring car manufactured / assembled in India. Only vehicles with Homologation / TDF (Technical Data Form) are allowed.

Only 2010 and later sold cars are allowed.

Classes

Upto 1625 cc

Weight

The minimum weight of the cars will be “cc” divided by a constant which is **1.65 for 1625cc WITH DRIVER**. This is the real weight of the car WITH DRIVER.

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 windscreen wiper.

1.1 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 / brakes from the same manufacturer is permitted. The engine, transmission, driveshafts and brakes maybe swapped from the same manufacturer. Engine with accessories such as alternator, starter motor, power steering system, radiator, gearbox, driveshafts and brakes maybe swapped over. For this purpose driveshafts maybe modified.

Modification to the engine mounting bracket to enable fitment to the OE chassis mounts is permitted. Chassis mounting location must remain OE

Any engine from the same manufacturer may be used, so long as the car/ chassis is manufactured / sold on or after 1st January 2010

No modification to the mounting points of the chassis to accommodate fitment of this engine.

Modifications are permitted to the Water Pump pulley and the impeller
Fuel lines may modified. Fuel hoses, cables and wiring may be modified to suit the engine.
Fuel pump is free

1.2 Ignition System

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

2.1 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

3.1 Compression Ratio

Planning of the Cylinder head is allowed

4.1 Piston

Free

The distance between Gudgeon Pin centre to Top of the Piston should remain as per Homologation / TDF.

Forged Piston is allowed.

Minimum weight of the piston remains as per Homologation / TDF.

5.1 Connecting Rod

Modifications permitted to provide Oil Squirting to pistons are allowed.
The connecting rod is free. The weight must be equal to or can be more than the OE homologated weight. The center distance between the big end and the small end bearing should remain as homologated.

6.1 Gasket

Free

7.1 Camshaft

Standard

8.1 Engine & Gearbox Mounting

Engine and Gearbox Mount material Free. Modifications to the bracket to enable fitment on to chassis is permitted

9.1 Throttle Body

Number has to be as per the Homologation / TDF. Diameter of the Throttle Valve must be OE.

THROTTLE BODY IS FREE

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

10.1 Intake Manifold

Free

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

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

11.1 Exhaust

Free

Fitment dose not entail the modification of other components.

The exit of the exhaust may be on the right or left side of the car, behind the mid-point of the wheelbase and below the door sill.

12.1 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 series 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

13.1 Lubrication system

The fitting of an oil radiator is only allowed below the horizontal plane passing through the hub in such a way that it does not protrude beyond the general perimeter of the car seen from above as it stands on the starting line, without modifying the bodywork.

Fitting an oil radiator in this manner does not allow the addition of an enveloping aerodynamic structure.

The fitting of baffles in the oil sump is authorized.
Oil pumps are free. Oil coolers are permitted

14.1 Braking System

Handbrake: Fly-off hand brake is permitted.

Brake Pads are Free but original shape and Dimension to be maintained. Brake Fluid Free

Brake Hoses Braided hoses are allowed.

After market drilled/slotted rotors are permitted so long as the OE dimensions are respected.

Larger front rotor and caliper are permitted, MC is free, rear drum size free provided that the brake configuration Front/Rear is as provided by the manufacturer in the car. Disc F / Drum R etc

15.1 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.

16.1 Tyre / Rims

Recommended 15 inch. Specified by the Organizer. Rim size is free so long as the competitor has the freedom to choose the size

17.1 ECU

The ECU and the Wiring harness is free

18.1 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 door glass and the rear windshield may be replaced with Perspex 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 door winder mechanism may be removed.

19.1 Exterior

- i. Only the front bonnet, front fenders and the rear boot/ rear door / **front passenger door and** Tail gate may be made of fiberglass, metal, composite or a combination.
- 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 and be safely secured. **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. **Radiator coolant is free**
- ~~vii. **It is permitted to replace the OE Bumpers with Fibre glass replicas, provided the shape is identical to the OE component.**~~
- viii. **Body kits are permitted.**
- ix. **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.**

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20.1 Safety Equipment

As per 2020 FMSCI Safety Regulations (Article 253)

Fire Extinguisher Systems Mounted

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

Manual Extinguishers

Minimum Quantity of Extinguishant:

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

Fire Extinguishersto 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

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, so long as the Rear-view visibility is equal to or more than the OE mirrors.

An inside rear-view mirror is optional

21.1 Roll Cage Basic Structure

As per FMSCI racing Regulations – **ARTICLE 253- ROLL CAGES**

22.2 Ballast

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.

**** END ****

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