



The Federation of Motor Sports Clubs of India

National Sports Federation recognized by the Government of India

**2022 Technical Regulations for
INDIAN TOURING CARS
(ITC)**

Member of



Federation Internationale de l' Automobile

2022 Technical Regulations for Indian Touring Cars - ITC

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

Cars Commercially sold in India are eligible

The Engine and Power train Position / Location must be as supplied by manufacturer

Only 2-Wheel Drive Cars are allowed (either front wheel drive or rear wheel drive)

Turbo addition on NA vehicles is permitted

Art.2 - Classes

	Normally Aspirated Engine	Supercharged Engine
NATR-1	up to 1389 cm ³	up to 926 cm ³
NATR-2	Over 1390 cm ³ and up to 1599 cm ³	Over 927 cm ³ and up to 1066 cm ³
NATR-3	Over 1600 cm ³ and up to 1999 cm ³	Over 1067 cm ³ and up to 1332 cm ³
NATR-4	Over 2000 cm ³ and up to 2399 cm ³	Over 1333 cm ³ and up to 1599 cm ³
NATR-5	Over 2400 cm ³ and up to 2799 cm ³	Over 1600 cm ³ and up to 1866 cm ³
NATR-6	Over 2800 cm ³ and up to 3200 cm ³	Over 1867 cm ³ and up to 2133 cm ³

Art.3 - Dimensions

Wheel Base must be as per the manufacturers specification.

Track width is allowed to be increased by 100mm overall from the manufacturers specification.

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 Splitter / Front Bumper Skirt, air dam etc.,

Rear Overhang must be as per the manufacturers specification.

Art.4 - Minimum Weight & Ballast

	Normally Aspirated Engine	Supercharged Engine	Minimum Weight
NATR-1	up to 1389 cm ³	up to 926 cm ³	930 Kgs
NATR-2	Over 1390 cm ³ and up to 1599 cm ³	Over 927 cm ³ and up to 1066 cm ³	980 Kgs
NATR-3	Over 1600 cm ³ and up to 1999 cm ³	Over 1067 cm ³ and up to 1332 cm ³	1030 Kgs
NATR-4	Over 2000 cm ³ and up to 2399 cm ³	Over 1333 cm ³ and up to 1599 cm ³	1080 Kgs
NATR-5	Over 2400 cm ³ and up to 2799 cm ³	Over 1600 cm ³ and up to 1866 cm ³	1130 Kgs
NATR-6	Over 2800 cm ³ and up to 3199 cm ³	Over 1867 cm ³ and up to 2133 cm ³	1180 Kgs

The minimum weight of the cars are with water, oil, fuel and the driver (wearing racing gear and Helmet)

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

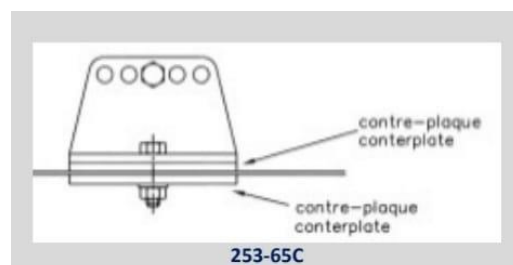
These minimum weights must be respected at all times during the event.

It is permitted to complete the weight of the car by adding one or several ballast, provided that they are safely secured, visible and approved by the scrutineer. Holes in the mounting retainers must be provided for sealing.

A maximum ballast of 90kg is permitted to be fixed in the prescribed locations in the prescribed manner. The weight of a single large ballast of 60kg maximum is permitted to be fixed only on the passenger seat mounting points provided all OE seat mounting points are utilized to locate and secure the ballast. The locations for the ballast 20kg and lighter will be free provided it is within the body shell and has been declared and sealed.

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.

The Organisers/Technical Delegate have the right to weigh the cars at any time during the event. Failing to meet the required weight regulations will result in disqualification of the relevant car.

Art.5 - Engine

Any Indian Engine with any Indian car (shell) sold in India including CBU is allowed.

In the case where the vehicles are fitted with a turbo, A restrictor must be fitted. **The Maximum ID shall be 30mm also in compliance with Art.13 (Induction system)**

Internals are free but the crankshaft and connecting rods are limited to be made out of steel and **No exotic materials such as Titanium or carbon fiber are allowed for these components.**

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

Art.6 - Cylinder Head & Cylinder Block

All modifications are permitted to the Cylinder Head & Cylinder Block, including addition and removal of material.

Modifications such as drilling, welding, larger valves, machining, porting etc. are FREE.

Valves, valve springs, valve retainers, camshaft(s), rockers, tappets, Cam sprockets are FREE

For example: the Suzuki G13B engines with imported dual overhead cams are not allowed. Any sub assembly /assembly which is available from the donor engine from a car marketed in India only can be used.

Art.7 - Compression Ratio

Compression Ratio is FREE

Art.8-Fly Wheel & Clutch Assembly

FREE

Art.9 - Engine & Gearbox Mounting

Adaptor plates and modification to output flanges, hubs, spacers and free. Engine mount and gearbox mount and their numbers are FREE

Art.10 - Exhaust System

FREE

Fitment does not entail the modification of other components except floor pan & running board (side sill).

The exit of the exhaust pipe should be behind the front wheel and ahead of the rear wheel on either side at the running board level.

Front Fender (only behind front wheel) at the running board level can be modified for exit of the exhaust pipe.

It is permitted to exit at the rear of the car below the bumper horizontal centre line.

Art.11 - Transmission

Gearbox FREE

Any Gear box is permitted, Automatic or Manual.

Shift Mechanism is FREE

The Internals are completely FREE

LSD's are allowed and the type, make and functions are FREE

Art.12 - Drive Shaft

FREE

Art.13 - Induction System

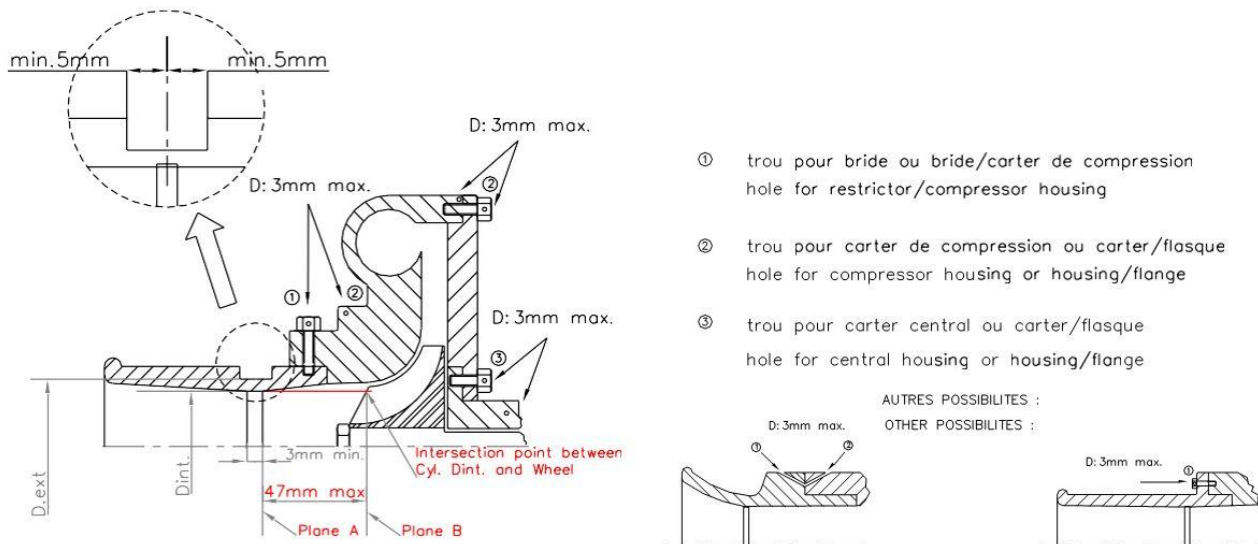
Components of the Induction, NA / turbo system (only one turbo per vehicle is allowed) are free.

The restrictor design must comply with the points mentioned below.

- 1) *All the air fed through the turbo and to the engine must pass through the restrictor only. The Technical Delegate can insist on the competitor to reveal all the air flow to the engine.*
- 2) *Any air found to bypass the restrictor, by way of a leak, intentional or unintentional, shall be considered as non-conformity.*
- 3) *The restrictor internal diameter shall be a maximum of 30mm and this diameter has to be maintained for a minimum length of 3mm, unless otherwise stated in the regulations.*
- 4) *This diameter must be complied with, regardless of the temperature conditions.*
- 5) *The fitment of the restrictor housing must be by way of bolts, on to the turbo housing. Threading the original housing for bolting the restrictor is permitted. The restrictor housing must be fitted, by using an intermediate 'O' ring, to ensure proper sealing. The technical delegate will verify the fitment, when the sealing is done. Removal of the restrictor housing may be necessary to satisfy the scrutineers of the method of sealing of air intake into the turbo. Additional sealing methods are permitted.*
- 6) *Failure of the sealing methods used, which allow additional air by passing the restrictor, will lead to nonconformity.*
- 7) *Fitment of the restrictor housing by way of grub screw is not permitted.*
- 8) *Holes for sealing must be provided in at least two of the bolts of the restrictor housing, adjacent to one another, which would ensure that the housing can never be removed without cutting the seal and removal of bolts.*
- 9) *Sealing of the compressor housing to the body of the turbo will be done by sealing two adjacent bolts. One seal may be used to seal all the four bolts (2 Bolts for Restrictor to turbo housing and the 2 bolts for turbo housing to the main body).*
- 10) *The diameter of the holes provided for sealing in the bolts shall be no more than 3mm*
- 11) *It will be duty of the competitor to ensure the sealing is done in a way which will not allow removal of the sealed components without breaking the seals.*
- 12) *The restrictor must be made from a single aluminium material and may be pierced solely for the purpose of mounting and sealing.*

13) All the air necessary for feeding the engine must pass through this restrictor which must respect the following:

- See Drawing 254-4.
- The maximum internal diameter of the restrictor is 30 mm.
- This diameter must be maintained for a minimum length of 3 mm.
- This length is measured upstream of plane A.
- Plane A is perpendicular to the rotational axis of the turbocharger and is at a maximum of 47 mm upstream of plane B, measured along the neutral axis of the intake duct.
- Plane B passes through the intersection between the most upstream extremities of the wheel blades and a cylinder of 30 mm diameter the centreline of which is the rotational axis of the turbocharger



254-4

- This diameter must be complied with, regardless of the temperature conditions.
- The external diameter of the restrictor at its narrowest point must be less than 39 mm, and must be maintained over a distance of 5 mm to each side.
- The mounting of the restrictor onto the turbocharger must be carried out in such a way that two screws have to be entirely removed from the body of the compressor, or from the restrictor, in order to detach the restrictor from the compressor.
- Attachment by means of a needle screw is not authorised.
- For the installation of this restrictor, it is permitted to remove material from the compressor housing, and to add it, for the sole purpose of attaching the restrictor onto the compressor housing. The heads of the screws must be pierced so that they can be sealed.
- The restrictor must be made from a single material and may be pierced solely for the purpose of mounting and sealing, which must be carried out between the mounting screws, between the restrictor (or the restrictor/compressor housing attachment), the compressor housing (or the housing/flange attachment) and the turbine housing (or the housing/flange attachment) (see Drawing 254-4).

Art.14 - Lubrication System

FREE

Dry Sump lubrication is permitted

Art.15 - Cooling System

Radiator Re-Location is FREE, But must remain within the Bodywork.

No other medium other than water is allowed to be used as a coolant.

Art.16 - Braking System

FREE

But must be Dual circuit Brakes
Fly off Hand brake allowed.

Art.17 - Suspension System

Suspension System – its mounts and components are FREE

Material restricted to cast iron, steel, aluminium and aluminium alloy. No exotic materials (eg. Titanium or composite).

Free. Ride height free. Ground clearance- 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 (occupant on board).

Dampers Free. Up to 4 way permitted.

Electronic control of dampers not permitted. Cockpit adjustment of dampers not permitted.
Modification of suspension geometry is permitted.

Art.18 - Steering System

FREE

Art.19 - Rims and Tyres

Maximum of 17inch is allowed
Specified by the Organizer
Rim FREE

Wheels made from forged magnesium are forbidden(including OE).

Art.20 - Ignition System and Wiring / ECU

FREE

Art.21 - Fuel & Fuel Tank

FREE

Only Petrol to be used

The fuel tank may be modified / altered or be newly made with alternate materials but must be placed at the original location. The spare wheel well behind the fuel tank must adequately protect the cockpit from spillage / leakages if the same has been altered or removed. Location of fuel filler is free provided that fuel CAN ONLY BE filled outside the passenger compartment.

FIA APPROVED SAFETY FUEL TANKS (recommended for 2022)

Must be equipped with an FT3-1999, FT3.5-1999 or FT5-1999 safety fuel tank.

Modifications necessary for its installation must not exceed those allowed by Articles 254 of the FMSCI Regulations.(recommended)

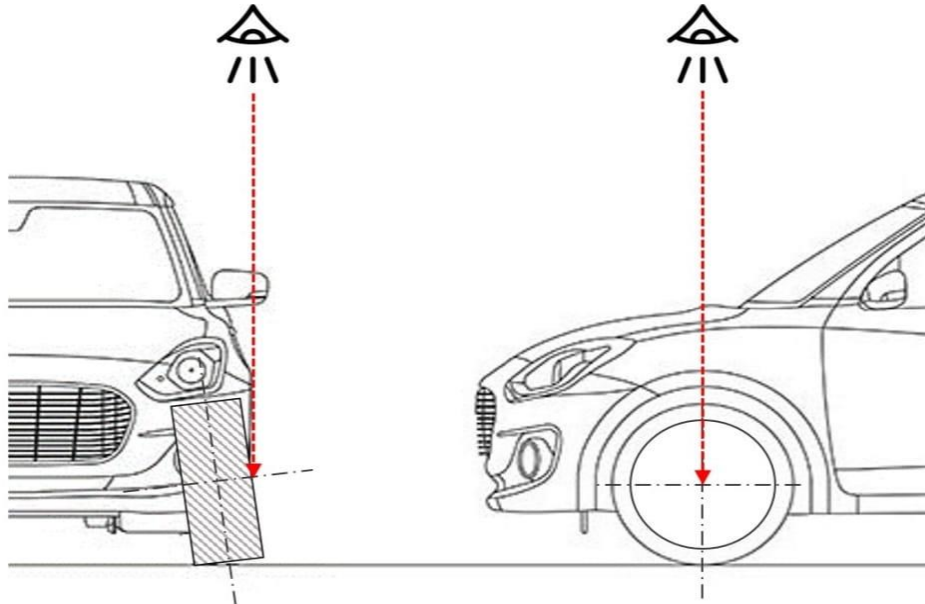
Art.22 - Interior

- FIA homologated racing seats are mandatory.
- 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 SEATBELTS USED
- The passenger seat and rear seat(s) may be removed.

- The removal of soundproofing, insulating material and carpeting is permitted.
- The steering wheel is free. The locking anti-theft system device must be inoperative.
- Extra gauges or meters are permitted.
- Door pads & dashboards may be removed.
- A/c, heating system may be removed. Spare wheel may be removed
- It is permitted to modify/replace the clutch/brake/throttle pedals individually or as an assembly to enable modifications to the clutch system/assembly, brake system/assembly and Throttle system/assembly.

Art.23 - Exterior

1. Only the rear doors, front passenger door, front bonnet, front fenders and the rear boot may be made of fiberglass, steel, aluminium or carbon fiber. The front passenger door should be openable from both inside and outside. Rear door maybe replaced with a copy made of fiberglass/composite/steel/aluminium or a combination and maybe securely fastened and/or bonded to the body. Driver door should be made of steel / Aluminium(should be openable from both inside and outside).
2. Rear windscreen and Front passenger door and Rear door glasses may be replaced with clear Polycarbonate sheet of minimum 3mm thick.
3. Original bumpers may be replaced by Fiberglass, steel, Aluminium, or composites. Change of bumper shape is permitted. The bumper should be removable; it is permitted to integrate with other body panels. The bumper can be removable separately or can be integrated with other body parts as one assembly. But should be removable out as one integrated part.
4. 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
5. 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).
6. Weight reduction by removal of material in the body shell is permitted.
7. Rear spare wheel well can be removed.
8. Scoops/Air vents can be incorporated anywhere on the body work.
9. Body work modifications are permitted to accommodate larger wheel and tyre size. No portion of the tyre above the centre line must be visible when viewed from the top(see drawing 23-8)
10. Rear wings, front skirting, side skirting, rear Diffuser and underbody tray/flat floorare permitted. Material can be Steel, Aluminum, Fiberglass, Composites, Wood or a combination, This Should be in compliance of Art.3.
11. Fixed Aero devices can be fitted on to the car, provided adjustments can only be made when the car is stationary
12. The A, B, C pillar of the original donor chassis of the car cannot be modified in any way.



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Fiberglass Specification

- 3mm thickness of Fiberglass is Recommended.
- Fire Retardant Resin (FRR) is Recommended in Fiberglass making Ribs in the Fiberglass Bonnet is Mandatory

Art.24 - Data acquisition

Data acquisition permitted provided Live Telemetry is not used. Onboard cameras permitted and if used should be made available to Stewards on demand.

Art.25 - Safety Equipment

As per FMSCI Racing Regulations Art 253 Safety Equipment & **2022 FMSCI Safety Requirements for 4W.**

Use of AFFF plumbed fire extinguisher system is recommended.

25.1 Fire Extinguishers:

25.1.1 System Mounted Fire Extinguishers

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

25.1.2 Manual Fire Extinguishers

Minimum Quantity of Extinguishant:

<u>AFFF</u>	<u>2.4 liters</u>
<u>FX G-TEC</u>	<u>2.0 kg</u>
<u>Viro 3</u>	<u>2.0 kg</u>
<u>Zero 360</u>	<u>2.0 kg</u>
<u>Powder</u>	<u>2.0 kg</u>

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 – 2 mm MS sheet metal

25.2 Protective Padding

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

25.3 Rear View

Rear view visibility must be ensured by two external rear-view mirrors (one on the right and one on the left).

An inside rear-view mirror is **mandatory**.

25.4 Battery

The battery may be relocated, provided it is securely fastened and fully enclosed in a non-conductive enclosure as stated below.

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.

Art.26 - Roll Cage

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

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

****END****