



The Federation of Motor Sports Clubs of India

National Sports Federation recognized by the Government of India

2021 Technical Regulations for
INDIAN TOURING CARS
(ITC)

Member of



Federation Internationale de l' Automobile



Federation Internationale de Motocyclisme

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2021 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 Production Cars (Group N)

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

1 Eligible Vehicles

~~TILL THE END OF THE YEAR 2021 – Vehicles Manufactured / sold BEFORE January 1st 2010 WILL BE ALLOWED~~

~~FOR THE YEAR 2022 ONWARDS – Vehicles Manufactured / sold on or after January 1st 2010 ONLY will be allowed.~~

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

CARS COMMERCIALY SOLD AND REGISTERED IN INDIA ARE ELIGIBLE.

The engine and the power train cannot be shifted from the front to the rear or vice versa. Turbo fitment onto NA vehicles are permitted

2 Classes

~~TURBO UP TO 1320 CC – 950 KG, UPTO 1620 CC – 1050 KG AND UPTO 2020 CC – 1150 kg.~~
NA / TURBO

- NA up to **2020** CC – weight factor 1.65

- **TURBO CLASS WEIGHTS**

Upto 1100 cc - 800kg

1101 to 1475 cc - 900kg

1476 to 1775 cc - 1000 kg

1776 to 2075 cc - 1100 kg

A maximum ballast of 90 kg is permitted to be fixed in the prescribed locations in the prescribed manner. The weight of a single large ballast of 60 kg maximum is permitted to be fixed only on the passenger seat mounting points provided all seat mounting points are utilized to locate and secure the ballast. The locations

for the ballast 20 kg and lighter will be free provided it is within the body shell and has been declared and sealed.

3 Weight

Application of Success ballast – Winner 30 kgs, runner 20 kgs and 2 nd runner 15 kgs

The minimum weight of the cars is, with water, oil, fuel and the driver (Wearing Racing gear and Helmet) subject to Success ballast.

In order to maximize equality of performance, the FMSCI reserves the right to change the factor/ weight.

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

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

The Organisers have the right to weigh the cars at any time during the event.

Failing to meet the required weight regulations will result in exclusion of the relevant car.

4 1.1 Engine

The Engines generic to the maker of the donor chassis from the same manufacturer only can be used, e.g. esteem can be fitted with any Maruti engine only. Cylinder Head with Block as a unit or individual may be used.

In the case where vehicles are fitted with a turbo, A RESTRICTOR MUST BE fitted. The maximum ID shall be 30 mm

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.**

5 2.1 Cylinder Head

All modifications are permitted to the Cylinder Head, 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 Maruti 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.

6 3.1 Compression Ratio

Compression Ratio is Free

7 4.1 Fly Wheel & Clutch Assembly

Free

8 5.1 Engine & Gearbox Mounting and Linkages

Adaptor plates and modification to output flanges, drive shafts hubs and other attachments and spacers free. Engine mount and gear box mount free.

All modifications required for the fitment of a gear linkage are permitted

9 6.1 Exhaust System

Free

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

The exit of the exhaust may be on the right or left side, OR REAR of the car, behind the mid-point of the wheelbase

10 7.1 Transmission

Any Gear box is permitted. Mechanical Shift mechanism including sequential shift mechanism is allowed but electronic assistance/control selection not allowed. The internals are completely free. LSD's are allowed and the type, make and functions is free. Modification to Shift mechanism permitted. No microprocessor-based mechanism or electrical or electromagnetic solenoids can be used. GPS based command module not permitted. Carbon fibre axles not permitted.

11 8.1 Induction System

Components of the Induction, NA / turbo system (one turbo per vehicle) are free.
For turbo vehicles, all the air necessary for feeding the engine must pass through a restrictor which must respect the following:

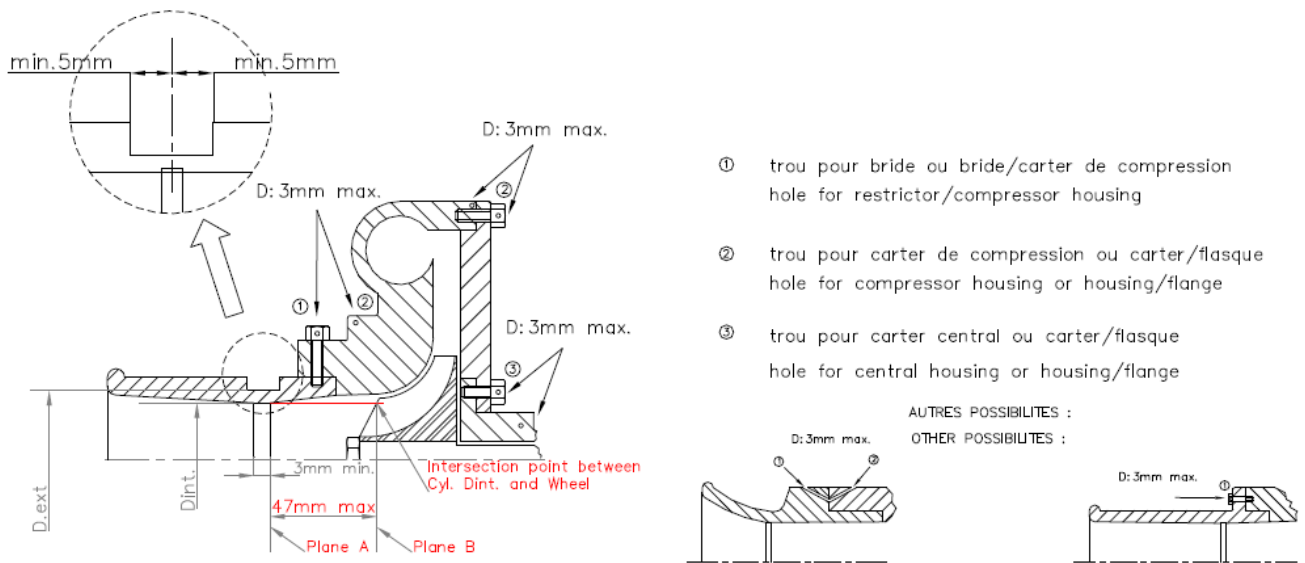
8.1-Induction System

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

The restrictor design is free provided it complies 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 may 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 maximum distance PLANE A, inclusive of the restrictor minimum length (3mm) shall be no more than 150mm from the outer most upstream extremity of the blades of the compressor wheel.**
6. **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.**
Failure of the sealing methods used, which could allow additional air bypassing 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 3 mm**

- 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 material and may be pierced solely for the purpose of mounting and sealing.**
- 13. NOTE- IN THE DRAWING BELOW, PLANE A IS MENTIONED AS 47 MM. SHOULD READ AS- MAXIMUM-147MM, AS PER POINT NUMBER 5.**



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12 9.1 Lubrication System

Free

Dry Sump lubrication is permitted.

13 10.1 Cooling System

Free.

Radiator coolant is free.

RADIATOR RE-LOCATION IS FREE, BUT MUST REMAIN WITHIN THE BODYWORK.

14 11.1 Braking System

Free

But must be Dual circuit Brakes

15 12.1 Suspension System

Suspension system – its mounts and components are free

Material restricted to cast iron, steel, aluminium and aluminium alloy. No exotic materials or composites.

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.

The original subframe can be modified to accommodate brackets, mounts for suspension, engine, gearbox etc. Additional frames of any kind can be bolted / welded on to strengthen, or to locate suspension arms and components thereof.

16 13.1 Steering System

Free

17 14.1 Rims and Tyres

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

18 15.1 Ignition System and Wiring / ECU

Free

19 16.1 Fuel & Fuel Tank

Free

Only Petrol may be used

The fuel tank may be modified / altered or be newly made with alternate materials but must be placed at the original location. Location of fuel filler is free provided that the fuel can only be filled outside the passenger compartment. 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.

17.1 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 should 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.

20

18.1 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. 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 can be of fiber glass or Aluminium if side impact cage is installed in the cars roll cage assembly. Rear windscreen and door glasses may be replaced with clear Perspex.
2. 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.
3. Headlights can be removed. However, the opening must be covered with a fiberglass / metal plate 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**
4. 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).

5. Weight reduction by removal of material in the body shell is permitted.
6. Rear spare wheel well can be removed.
7. Scoops/Air vents can be incorporated anywhere on the body work.
8. 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. ***(Method of measuring will be made available in a bulletin)***
9. Rear wings, front skirting, side skirting, rear Diffuser and underbody tray/flat floor are permitted. Material can be Steel, Aluminum, Fiberglass, Composites, Wood or a combination.
10. Fixed Aero devices can be fitted on to the car, provided adjustments can only be made when the car is stationary

Fiberglass Specification

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

21 19.1 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.

22 20.1 Safety Equipment

As per 2020 FMSCI racing Regulations). Use of AFFF plumbed fire extinguisher system is recommended.

Fire Extinguisher Systems Mounted

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

Manual Extinguishers

Minimum Quantity of Extinguishant:

	2.4
AFFF	liters
FX G-TEC	2.0 kg
Viro 3	2.0 kg
Zero 360	2.0 kg
Powder	2.0 kg

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

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

Reward 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 optional.

Battery

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

21. Roll Cage

AS PER FMSCI RACING REGULATIONS- ARTICLE 253- ROLL CAGES

22. 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.

BALLAST FOR TURBO CARS - REFER ART 2

** END **