

2024 Technical Regulations for Super Stock Cars – SSC

The Following Articles of 2024 FMSCI Appendix J are 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)

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

Art.1 – Eligible Vehicles & Classes

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 or OE Factory fitted Turbo charged engines are allowed.

Engine displacement for Naturally aspirated up to 2030cc.

Engine displacement for Turbo Charged up to 1180cc.

Art.2 – Dimensions & Minimum Weight

Track width is allowed to be increased by a maximum of 50mm overall from the Homologation / TDF data.

The minimum weight of the Naturally Aspirated cars will be cc divided by a constant which is **1.5**.

The minimum weight of the Turbocharged cars will be cc divided by a constant which is **1.45**.

**Turbo cars will have a multiplication factor of 1.7 times for equalization
(eg. 1176cc x 1.7 = 1999cc. minimum weight will be 1378Kgs)**

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

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

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.)

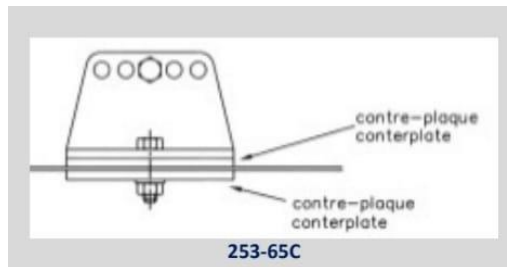
It is permitted to complete the weight of the car by one or more ballast weights provided that they are unitary blocks, rigidly fixed by means of tools on to the floor of bodyshell / chassis in a location clearly visible to the scrutineers, with the provision for sealing.

Maximum mass of a single ballast is 30kgs, Maximum mass of ballast at each mounting location is 30kgs and must respect drawing 253-65C.

Ballast must only be made of lead(no other materials).

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.3 – Engine

Modification to the Engine is not permitted.

3.1-Engine & Gearbox Mounting

As supplied by manufacturer, as per Homologation/TDF

3.2-Compression Ratio

As supplied by manufacturer, as per Homologation/TDF

3.3-Cylinder Block

As supplied by manufacturer, as per Homologation/TDF

3.4-Maximum Bore Allowed

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.

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.

3.5-Piston

As supplied by manufacturer, as per Homologation/TDF

3.6-Connecting Rod

As supplied by manufacturer, as per Homologation/TDF

3.7-Crank Shaft

As supplied by manufacturer, as per Homologation/TDF

3.8-Flywheel

As supplied by manufacturer, as per Homologation/TDF

3.9-Cylinder Head

As supplied by manufacturer, as per Homologation/TDF

3.10-Fuel Injection System & Throttle body

Throttle Body / Inlet manifold must be OE (TDF / Homologated)

3.11-Sensors & Actuators

Additional Sensors and Actuators not permitted.

3.12-CAM Shaft

As supplied by manufacturer, as per Homologation/TDF

3.13-Intake & Exhaust Valves

As supplied by manufacturer, as per Homologation/TDF

3.14-Intake Manifold

As supplied by manufacturer, as per Homologation/TDF

3.15-Exhaust System

Exhaust system is FREE from the 'IN' point of the first catalytic converter till the exit of the exhaust system, the maximum outer diameter of the exhaust pipe should not exceed 56mm.

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

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).

3.16-Ignition System

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

3.17-Cooling System

No other medium other than water is allowed as coolant.

3.18-Lubrication System

Oil catch can/tank is mandatory

3.19-Induction System

As supplied by manufacturer, as per Homologation/TDF

Art.4 – Fuel Circuit

Fuel FREE

4.1-Fuel Tank

As supplied by manufacturer, as per Homologation/TDF

4.2-Fuel Pump

Additional fuel pump CANNOT be fitted.

Art.5 – ECU, Wiring Harness & Electrical Equipment

5.1-ECU & Wiring Harness

Flashing of OE ECU is allowed

Wiring harness must be original and any kind of modification is forbidden.

5.2-Battery

As supplied by manufacturer, as per Homologation/TDF

Art.6 – Power Train

6.1-Driven Wheels

Only 2-Wheel Drive Cars are permitted

6.2-Clutch

As supplied by manufacturer, as per Homologation/TDF

6.3-Gearbox

Modification to the Gearbox is not permitted.

6.4-Differential

Modification to the Differential is not permitted.

6.5-Transmission Shafts

As supplied by manufacturer, as per Homologation/TDF

Art.7 – Axles & Suspension

7.1-Suspension System

OE Shock absorbers to be used.

Shock absorber can be re-valved or higher density shock absorber oil can be used.

Springs are free provided they fit into the original top mount and bottom seating area of the shock absorber.

No alteration are permitted to the bottom spring seat mount or the top mount by the way of extra spring seats.

The reinforcing of the structural parts of the suspension (with the exception of anti-roll bars) and its anchorage points by the addition of material is allowed.

Ride height free.

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).

Bushings and Mountings should conform to original design and size, uprated material is allowed.

OE/Replacement shock absorbers to be used, replacement shocks including insert is allowed as long as they fit in the OE mount. External adjuster not allowed.

7.2-Axle

As supplied by manufacturer, as per Homologation/TDF

7.3-Stabilisers

The Antiroll bar may be removed if required. The balance rod link height is FREE.

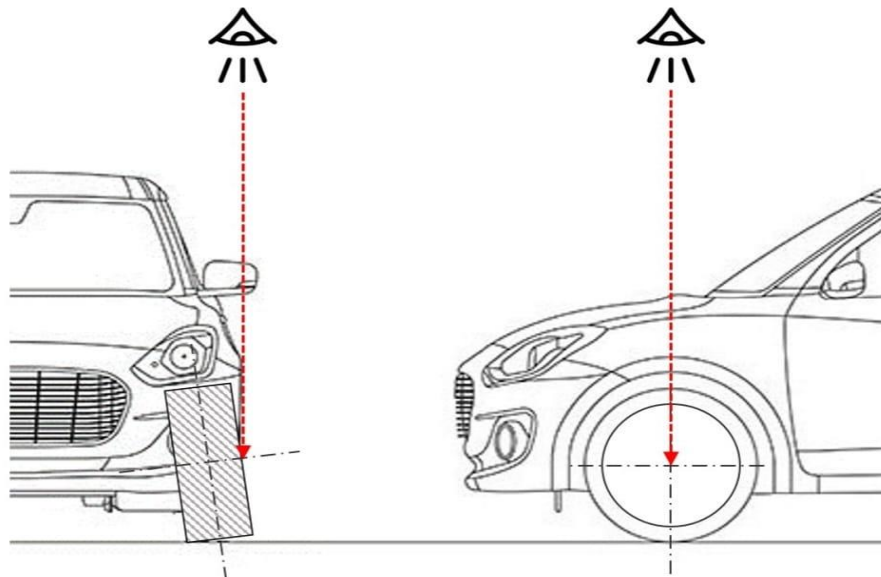
Art.8 – Running Gear

8.1-Wheels(Rims & 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.

Wheel rim offset is free, provided that it complies with Maximum Track Allowed.

No portion of the tyre above the centre line must be visible when viewed from the top(see drawing 8.1-1)



8.1-1

8.2-Wheel Assembly(Hub & Knuckle)

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

8.3-Brake System

No modifications permitted.

Brake Pad material is Free but original shape and Dimension to be maintained.

Brake Fluid Free, Brake lines, Braided hoses are allowed.

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

If the car is fitted with ABS it can be made inoperative or removed.

8.4-Steering System

As supplied by manufacturer, as per Homologation/TDF

Art.9 – Body Work

9.1-Interior

Floor carpets must be removed

All sound proofing material can be removed.

Spare wheel must be removed.

The components relating to the A/C and Heating may be removed.

The use of transparent or colour less anti-shatter film on the side windows is mandatory if the original glass is used.

Rear door window glasses and the rear windshield, may be replaced with Polycarbonate of minimum 3mm thick and provided it is properly riveted or bolted.

Front & Rear fixed Quarter glasses may be replaced with Perspex.

Front doors winder mechanism may be changed to manual or vice versa.

Rear doors winder mechanism can be removed.

Fixing of dead pedal is allowed.

Fixing of Driver hydration bottle is permitted but the bottle must be removable only by using tools (no press fits allowed)

9.2-Exterior

1. Hubcaps must be removed.
2. Only the front bonnet, the rear boot/ Tail gate may be made of fiberglass, metal or composite or a combination.
3. The fibre glass must replicate the original shape(The Moulded/Fabricated/Tinkered component should be replicate the original shape and dimensions in all respects). Failure to adhere this will result in DISQUALIFICATION FROM THE RACE.
4. The doors must be original as supplied by the manufacturer.
5. The passenger door should be openable from inside and out side.
6. Door pads and all insulation materials may be removed.
7. All sound proofing material may be removed.
8. It is permitted to replace the OE Bumpers with Fibre glass replicas, provided the shape is identical to the OE component. Failure to adhere this will result in DISQUALIFICATION FROM THE RACE.
9. All the openings in the Bumper can be covered with Mesh Grill(steel, plastic, etc).
Holes/openings on the rear bumper are allowed.
10. 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. Any change in position is permitted if a specific regulation allows it.
11. Headlights can be removed. However, the opening must be covered with a fiberglass / metal plate and of same shape/profile and size as OE Headlights and be safely secured.
12. However, headlights must be fixed and working for night racing and need not be OE
13. The front grill is free and can be fabricated.
14. Fender linings may be removed. If fitted shape and material are FREE.
15. Driver ventilations are allowed at front driver window, front passenger side window, **rear door windows, rear windshield, front quarter glass, rear quarter glass** and on the roof top. Maximum opening for each driver ventilation is 225sq.cm.
16. It is permitted to add a member between the aprons (Strut Brace), mounted only by means of bolt & nuts.
17. **Panel beating is not allowed.**
18. **Heat protective/damping shield is allowed to be fixed on the engine compartment firewall side.**

Fiberglass Specification

Recommended to be 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.10 – Safety Requirements

As per 2024 FMSCI Racing Regulations Appendix-J Art 253 Safety Equipment (Group N, A) and
As per FMSCI 2024 Safety Requirements for 4Wheeler.

10.1-Driver Safety Equipment

As per FMSCI 2024 Safety Requirements for 4Wheeler.

Its highly recommended to use FHR

From 01.01.2025 its mandatory to use FHR along with Helmets compatible to use with FHR as per FIA standards.

10.2-Roll cage

As per 2024 FMSCI Racing Regulations Appendix-J Art 253 Safety Equipment (Group N, A)
Art-8.Safety Cages

10.3-Seat & Seat Belt

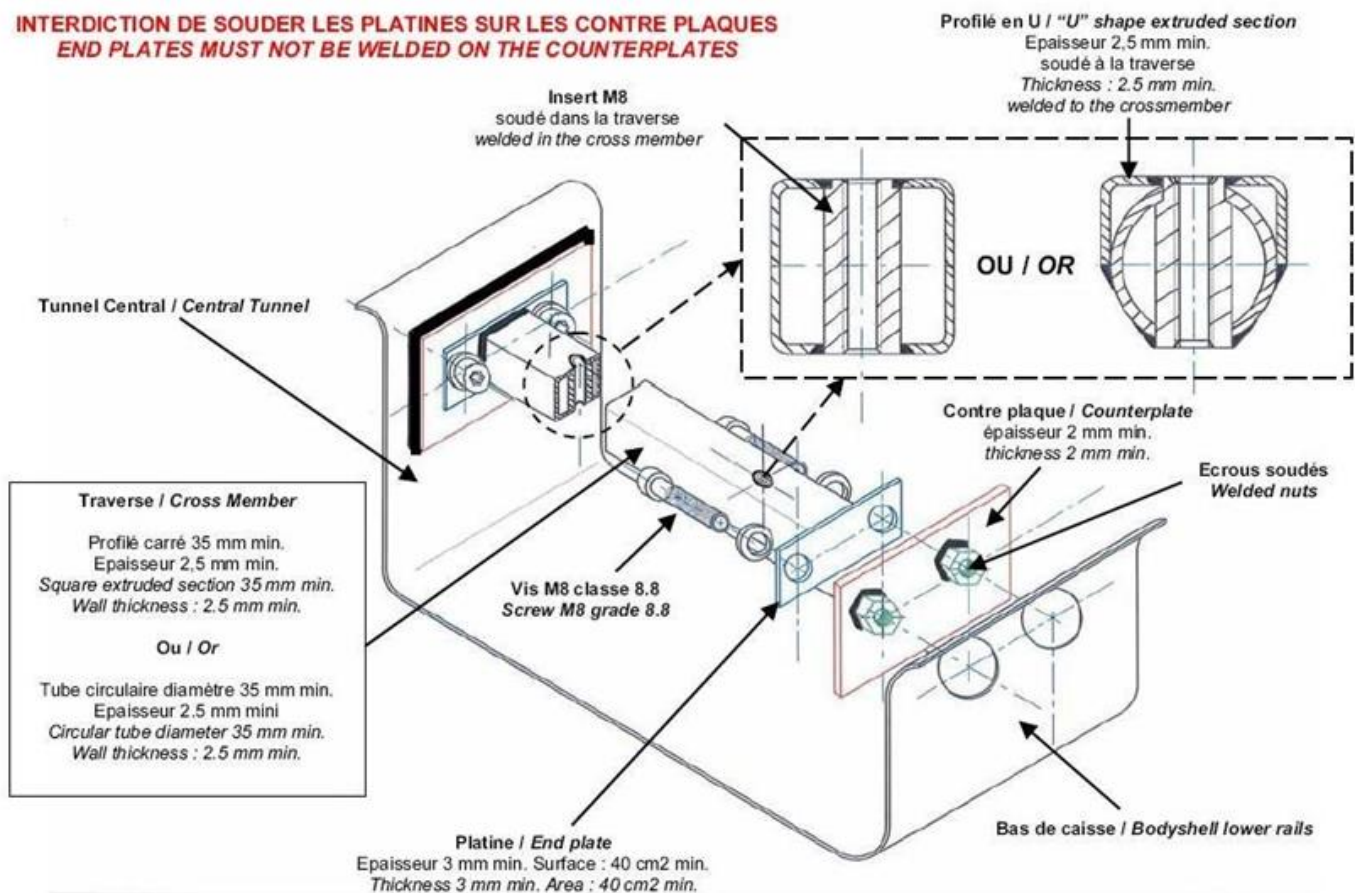
As per FMSCI 2024 Safety Requirements for 4Wheeler.

From 01.06.2024 Seat Anchorage point and Seat support must only as per the following methods

1) If OEM seat anchorage points are not used(seat support must be fixed on to the cross member):

It must follow the drawing 253-65B of FMSCI Art 253-Safety Equipment(Group N, A)

The seat support must be fixed on to the anchorage points of cross member for fixing seats via at least 4 mounting points per seat, using bolts minimum M8 of grade 8.8



253-65B

FITTING INSTRUCTIONS

- 1- Drill holes (larger than nut outer diameter) in the bodysell lower rail and in central tunnel wall.
- 2- Weld the nuts on the counter plates, then weld these on the bodysell lower rail on the central tunnel wall.
- 3- Weld the 2 threaded inserts in the cross member, then weld the endplates at each end of the cross member.
- 4- Fix the assembly through 4 number of M8 bolts of grade 8.8 which are screwed in the welded nuts.

2) If OEM seat anchorage points are used on to fix the seat supports directly onto the shell/chassis:

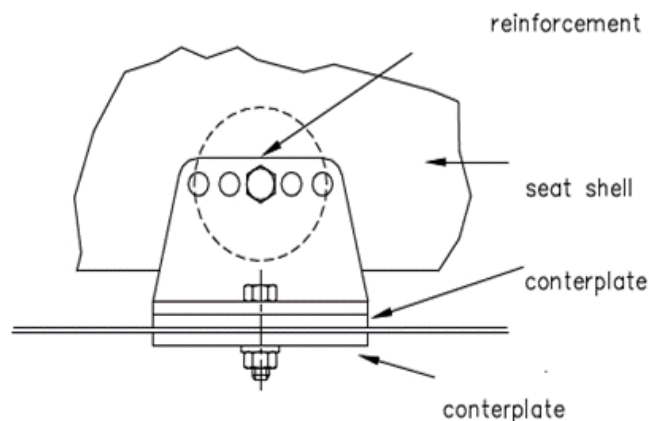
It must follow the drawing 253-65 of FMSCI Art 253-Safety Equipment(Group N, A)

The seat supports must be attached directly to the OEM seat anchorage points on the body shell/chassis via at least 4 mounting points per seat using bolts with minimum M8 of grade 8.8 and counter plates, according to the Drawing 253-65.

The minimum area of contact between support, shell/chassis and counter plate is 40 cm² for each mounting point.

The minimum thickness of the seat supports and counter plates is 3 mm for steel and 5 mm for light alloy materials.

The minimum longitudinal dimension of each support is 6 cm.



253-65

10.4-Fire Extinguisher

The minimum Quantity of Extinguishant for system mounted(plumbed in system) must be 3kg. Manual Extinguishers

Minimum Quantity of Manual 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 minimum bracket thickness-2mm MS SHEET METAL

10.5-Protective Padding

Where the occupant's bodies could come into contact with the safety cage, flame retardant padding as per FMSCI 2024 Safety Requirements for 4Wheeler must be provided for protection.

Art.11 – Data Acquisition

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.12 – Hybrid System

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

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 2024 Technical Regulations are highlighted in Yellow

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