



The Federation of Motor Sports Clubs of India

**AUTOCROSS/  
AUTO GYMKHANA  
TECHNICAL  
REGULATION**

**2020**

**NOTE: CHANGES FOR THE YEAR 2020 ARE IN ITALIC, BOLD AND UNDERLINED**

**Art: 1**

**1.1: ELIGIBLE CARS**

All cars, **MUV's, SUV's produced** in series and regularly on sale through a recognised commercial network in India are eligible. It's up to the entrant OR the Competitor to supply the elements necessary for proving the eligibility of a model".

**1.4: TURBO / SUPERCHARGING CHARGING**

**Applicable as per the SPECIFIC regulations wherever permitted**

**1.5: FUEL.**

Free, should be sourced from a legal government authorised distribution outlet. **Fuel additives are permitted**

**1.6: MODIFICATIONS ALLOWED AND/OR OBLIGATORY**

All modifications which are not explicitly allowed by the present regulations are forbidden. An authorised modification may not in the process entail a non-authorised modification.

**1.7 Auto Gymkhana: All the specifications stated in these regulations are applicable with the exception that the seats and seat belts may remain OE and a roll cage is not mandatory for any class.**

## **Art.2**

### **GROUP A | STOCK- INAC-4**

### **AND GROUP B PRO-STOCK- INAC-3**

VEHICLES AS SUPPLIED BY THE MANUFACTURER ARE ALLOWED.

2.Modifications not mentioned below are strictly not authorised :

**2.1a:** Spark plugs and HT cables are free.

**2.1b:** Exhaust system should as provided by the manufacturer. Only the OE muffler/s and the tail pipe maybe replaced with an aftermarket muffler component and is free. The Catalytic Converter should remain as OE

**2.1c:** Lubricants are free.

**2.1d:** OE Body kits, front lip spoilers, Boot/roof spoilers are allowed

**2.1e:** Wheel Rim, size free. Provided they are made of steel or Aluminium.

The wheel tyre combination should not protrude beyond the perimeter of the car when viewed vertically from top above the centre line of the wheel. Tyres are FREE as long as they are production tyres.

#### **Competition/Slick Tyres will not be permitted**

**2.1f:** Steering wheel is free but spinner knobs are not allowed.

**2.1g:** Gear knob is free but the lever is not.

**2.1h:** Accelerator/brake and clutch pedal covers are free.

**2.1i:** Spare wheel may be removed from the car.

**2.1j:** OE seatbelts, seats are permitted

**2.1k:** ECU/ECU's/Piggy back are free. Wiring maybe modified to adapt the ECU/ECU's, provided it is done up to 600mm from the ECU/ECU's connector

**2.1l: Air Filter is FREE**

### **Group B: ADDITIONAL MODIFICATIONS FOR PRO-STOCK**

**2.1m: Exhaust system is FREE**

**2.1n: Tyres- FREE**

## **Art. 3- GROUP-C, D, D1----INAC-3**

### **GROUP C | MODIFIED – NA**

### **GROUP D MODIFIED – TURBO / SUPERCHARGING**

All modifications authorised and specified in Group STOCK and in addition the following:

OE/ After-market Body kits, front lip spoilers, Boot/roof spoilers are allowed

**3.1a:** Engine control unit / ECU are free (piggy back units permitted).

Modification of wiring harness is permitted. Additional Sensors and Actuators are not permitted.

**3.1b:** Air filter, its housing and its plumbing are free (Upstream of the throttle body), it should remain inside the engine compartment only.

#### **3.1c: EXHAUST**

The exhaust manifold from its attachment at the cylinder head is free.

. The exit of the exhaust pipe must be situated at the rear/side of the car, within the perimeter of the car, and may be up to 25 cm inside of this perimeter. The exhaust exit must be horizontal. Exhaust pipe outlets which point downwards are prohibited.

**The following items are free respecting the special riders detailed below:**

#### **ENGINE:**

The assemblies mentioned between art. 3.1d-3.1g must be the same as that provided by the manufacturer for that series of donor chassis. This includes evolution variants produced for the same chassis.

(\* e.g. Esteem can be fitted with any Maruti Suzuki Engine that was produced for the market in the Esteem shell only).

Internals of the above listed systems are free, provided that the modifications respect the group/class specifications that the vehicle is competing within. Modifications such as adding, removal of material, drilling, welding, machining, porting are permitted.

#### **3.1d: ENGINE BLOCK**

Free\*

#### **3.1e: CYLINDER HEAD**

Free\*

#### **3.1f: DRIVESHAFT**

Free\*

### **3.1g: GEARBOX / DIFFERENTIAL**

**The gear ratios are FREE provided it is housed within the original casing.**

**Mechanical LSD's are permitted.**

### **3.1h: INTAKE MANIFOLD**

Free. But only a single throttle body system is allowed.

All air entering the engine must imperatively pass through the throttle opening or the opening of this air injection system. The size of the single throttle body is free.

ITB intake manifolds are not allowed.

### **3.2.1: IGNITION SYSTEM**

Only one spark plug per cylinder.

Ignition is only permitted by means of not more than a single ignition coil per cylinder.

### **3.2.2: INJECTION SYSTEM**

The injection system is free (**includes injectors**) but with the following restrictions.

A combination of direct injection and port injection systems is not allowed. Internal and/or external spraying or injection of water or any substance whatsoever is forbidden (other than fuel for the normal purpose of combustion in the engine).

### **3.2.5: OIL PUMP / SYSTEM -Free**

It is possible to improve the oil circulation internal to the engine.

Lubrication by dry sump is not allowed. Fitment of baffles in the oil sump is permitted

External aftermarket oil coolers are permitted so long it is within the perimeter of the car.

### **3.2.6:FLYWHEEL- Free**

### **3.2.7:CLUTCH**

Free.

### **3.2.8:COOLING SYSTEM**

Free

### **3.2.9:ELECTRICAL SYSTEM**

Free (Wiring / All sensors)

### **3.2.10:SOUND**

Free

### **3.2.11:SUSPENSION**

Cars must be fitted with a sprung suspension.

The use of active suspension is forbidden.

The modification of spring and shock absorber adjustments from the cockpit is prohibited.

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

The suspension reinforcements must not allow two separate parts to be joined together to form one spring.

The spring seats may be adjustable if the adjustable structural part is a part of the spring seat and is separated from the original suspension parts/body work (it may be removed).

Coil springs:

The length is free, as are the number of coils, the wire diameter, the external diameter, the type of spring (progressive or not) and the shape of the spring seats. The number of springs and spring seats is free provided the springs are mounted in series.

Leaf springs:

The length, width, thickness and vertical curvature are free.

Torsion bars:

The diameter is free

Spring-Shock absorber assemblies:

Spring shock absorber assemblies are authorised even if the series vehicle is not so equipped, provided that the original spring is removed.

### **.3.2.12:SHOCK ABSORBER**

Free, provided that their number, their type (telescopic, arm etc.), their working principle (hydraulic, friction, mixed etc.) and their attachment points remain unchanged.

The checking of the operating principle of the shock absorbers must be carried out as follows:

Once the spring and / or the torsion bars are removed, the vehicle must sink down to the bump stops in less than five minutes.

The damper tanks may be attached onto the unmodified shell of the cars. If the shock absorbers have separate fuel reserves located in the cockpit, or in the boot if this is not separated from the cockpit, these must be strongly fixed and must have a protection.

A silent block might be replaced by a “Uniball” joint.

Gas filled dampers, regarding their working principle, are considered as hydraulic dampers.

Twin shock absorber per wheel is authorised.

All shock absorbers must be independent of each other

Changes to the spring and shock absorber settings from the cockpit are prohibited.

### **3.2.13:ANTIROLL BARS:**

**FREE**

### **3.2.14:STRUT BRACE**

**FREE**

### **3.2.15:STEERING**

The OE steering system to be maintained. Any steering wheel may be used. An alternate steering wheel assembly, including all mounting hardware, which replaces an airbag-equipped wheel, can be used

### **3.2.16:SAFETY CAGE**

It is recommended that a safety cage be installed.

### **3.2.17:WHEELS**

Wheels made partially or entirely from composite material are prohibited.

Material, diameter and offset are Free. Wheel spacers are permitted, provided

The wheel tyre combination should not protrude beyond the perimeter of the car or body kits, (**No part of the wheel should be visible when viewed vertically from top above the centre line of the wheel.**)

### **3.2.18:TYRE**

Free but respecting the following, **Re threaded tyres or modified custom re grooved tyres are prohibited.** Tyres should not be more than five years old and suggested that they all be of the same year of manufacture.

Tyres manufactured specifically for agricultural use or marked for use at limited speeds are prohibited.

Preheating of tyres by electrically heated covers or similar is prohibited. **SLICK tyres are prohibited for GRAVEL/DIRT events.**

### **3.2.19:BRAKES-**

**FREE**

### **3.2.20:MUD FLAPS**

The fitting of mud flaps is compulsory. They must be made of a flexible plastic / rubber material at least 4mm thick. They must cover at least the width of each wheel and must not be more than 100 mm of the ground

### **3.2.21: BUMPER**

Front and rear bumper may be modified but not be removed. It should cover more than 75% of area covered by OE bumper. **Replica bumpers are FREE provided they are made of composite material (fibreglass etc) of minimum 3mm thickness**

### **3.2.22: SEATS & SEAT BELTS**

The co driver's seat as well as the rear seat may be removed.

The driver's seat must have a fixed headrest. A replica of a FIA approved seat, built by a reputed builder will be permitted.

**A VALID 4-point harness is mandatory. (FMSCI /FIA approved)**

### **3.2.23:TRIMS**

Interior trims may be removed.

A maximum of two roof scoops may be allowed for the purpose of ventilation.

### **3.2.24:DASHBOARD**

The OE dashboard has to be retained

### **3.2.25:DOOR**

**Except for the driver and passenger door, the material is free, provided the original outside shape and rigidity is retained.** If the car is equipped with **the specific roll cage (see drawing)**, the material of the passenger door is free. It must be possible to open the front doors from the outside and from the inside. **If the car is not equipped with the specified roll cage (see drawing), all doors should remain unchanged as provided by the vehicle manufacturer. This is the minimum design requirement of a roll-cage**

### **3.2.26:BONNET**

Material: Composite authorised but should maintain basic structural rigidity. Outer surface basic shape unchanged from the original car. At least two safety fasteners must be fitted. Minimum number of fixing points to the bodyshell = 4.

The original locking mechanisms must be rendered inoperative or removed. Opening from the outside must be possible (without tools).

A maximum of 2 bonnet scoops/vents with a total area of 700 cm<sup>2</sup> is allowed.

### **3.2.27: BOOT LID / REAR WINDSHIELD / SIDE WINDOWS**

Material: Composite authorised .The rear windshield / side windows, may be replaced with Perspex Plastic,

Original outer surface shape and basic structural rigidity maintained.

Inner surface free.

At least two safety fasteners must be fitted.

Minimum number of fixing points to the body shell = 4.

The original locking mechanisms must be rendered inoperative or removed.

Opening from the outside must be possible (without tools).

### **3.2.29: CABIN COOLING**

It is allowed to install roof or side vents to cool the driver cabin.

### **3.2.30: WINDSHIELD-It is mandatory to retain OE windshield**

### **3.2.31: WIPERS**

It is mandatory to have a fully functional OE windscreens wiper system.

### **3.2.32: TOWING DEVICE**

One front and one rear towing device is compulsory, the same may be a strap type arrangement. They must be clearly visible and marked in yellow, red or orange

**Note: Group D and D1 Technical Regulations will be as per the MODIFIED Group, the only inclusion being the Turbo and its Factor.**

**GROUP D MODIFIED –ONLY FOR PETROL TURBO / SUPERCHARGING CHARGED VEHICLES**

**3.2.33: OE / AFTER MARKET TURBOS / SUPERCHARGING, AND ITS COMPLETE SYSTEMS ARE FREE**

**GROUP D1 DIESEL CLASS – TURBO**

**3.2.34: OE / AFTER MARKET TURBOS AND ITS COMPLETE SYSTEMS ARE FREE**

**GROUP D1 CARS ARE PERMITTED TO ENTER ONLY IN GROUP D MODIFIED GROUP OTHER THAN THEIR OWN GROUP**

## **Art.4**

### **GROUP E -- UNRESTRICTED OPEN-- INAC - 1**

Vehicles confirming to modifications in Group STOCK, Group MODIFIED along with the modifications listed below will be eligible to participate only in the unrestricted Open Class.

**The Turbo factor will apply to this class**

#### **4.1: ENGINE – General**

The engine is free but should be of Indian origin from a series production Indian car manufacturer. Provided an engine having a maximum of up to, 420 cc above the original cars specification, will be allowed (Eg: an Esteem having had an engine with a capacity of 1298cc, can upgrade to an engine of 1710 cc from the same manufacturer)

The cylinder head and engine block may come from different cars. (Same manufacturer)

Only automobile engines are allowed.

The ECU is free. Custom made wiring harness is permitted.

The number of cylinders should be the same as what is allowed in the body shell they use.

For eg: If you want to swap an engine in a Volkswagen polo which has 4 cylinders, only another 4 cylinder engine will be allowed in this body shell.

Engine speed is free.

##### **4.1.1: ENGINE BLOCK-Free, so long as it respects Art 4.1**

##### **4.1.2: CYLINDER HEAD-Free, so long as it respects Art 4.1**

##### **4.1.3: CAMSHAFT & CRANKSHAFT-Free.**

**4.1.4: TAPPET/ ROCKER / CAM FOLLOWER:**-The diameter of the tappets and the shape of the tappets and rocker arms are free.

##### **4.1.5: VALVES-Free.**

##### **4.1.6: WATER PUMP-Free.**

#### **4.1.7: OIL PUMP / COOLER – FREE:**

Free. The lubrication system, internal and external is free. Dry sump along with all its plumbing is free and permitted

Lubrication by dry sump is allowed. **Oil coolers are free**

In this case, the new oil pump must be external to the engine block. It is possible to improve the oil circulation internally as well as between the cylinder head and the oil sump by means of lines internal/external to the engine.

#### **4.1.8:FLYWHEEL-Free.**

#### **4.1.9: ENGINE MOUNTING**-Free along with its numbers

**4.1.10: IGNITION SYSTEM**-Only one spark plug per cylinder is permitted. Ignition is only permitted by means of not more than a single ignition coil per cylinder.

**4.1.11: INJECTION SYSTEM**-The injection system is of free design. A combination of direct injection and port injection systems is allowed.

Internal and/or external spraying or injection of water or any substance whatsoever is forbidden (other than fuel for the normal purpose of combustion in the engine). Only solenoid injectors are allowed.

**4.1.12: INTAKE MANIFOLD**.-Custom made intake manifolds are allowed. ITB manifolds are permitted.

Throttle bodies shall only function, mechanically or electrically.

All air entering the engine must imperatively pass through the throttle opening or the opening of the air injection system.

The use of composite material (including carbon fibre) is authorised with the exception of the throttle unit body.

Intake manifolds with variable geometry are prohibited.

The intake manifold must be fitted with:

Either multiple valve throttle unit mechanically controlled

Or single-valve single throttle unit which may be mechanically or electrically controlled. If it is electrically controlled, the throttle unit must come from a commercial catalogue.

All air entering the engine must imperatively pass through the throttle opening or the opening of the air injection system.

**4.1.13:TURBO / SUPER CHARGER / COMPLETE SYSTEM- FREE:** It must be single.

**4.1.15:INTERCOOLER-Free**

The intercooler must be of the air/air type but must be within the bodywork of the car

The intercooler is free but with the following limitations:

It must be mounted in the engine compartment

The interchanger core must have a maximum of six flat faces.

**4.1.16: ELECTRICAL SYSTEM- FREE;** A cut-off system is mandatory. (Circuit breaker)

**4.1.17: LUBRICATION-**The addition of internal oil lines and/or the modification of the original oil lines for adjusting the flow are permitted.

**4.1.18: FUEL PUMP-Free**

Inside the fuel tank, or outside the fuel tank, protected by a leak-proof and flameproof cover.

**4.1.19: FUEL TANK-**From any OE parts catalogue of an automobile manufacturer or a specialist fuel tank manufacturer

Maximum capacity of the fuel tank: free.

The floor of the cockpit may be modified in order to install the fuel tank in the rear seats area; the maximum dimensions of the resulting hole in the floor are 500 x 500 mm. The bottom of the tank must be minimum 50 mm higher from the lowest point of the chassis

A 1 mm thick steel screen between the tank and the cockpit is compulsory. Not applicable to OE tanks in the original location

A fire, liquid-proof shield between the tank and the occupants is mandatory.

**4.1.20:COOLING SYSTEM-**Radiator core dimensions are free.

Mounting points may be modified. The original location to be respected (eg: if the radiator is located at the front of the car, the modified radiator should also remain at the same location).

Radiator cooling fan is free.

The thermostat is free, as is the control system and the temperature at which the fan cuts in. The radiator cap and its locking system are free.

The liquid cooling lines external to the engine block and their accessories are free. Lines of a different material and/or diameter may be used.

The fitting of extra cooling fans is permitted. A duct may be fitted between the radiator core and the cooling fan. Any spraying system on to the engine water radiator is prohibited.

#### **4.1.21: EXHAUST-FREE**

**4.1.23: GEARBOX / DIFFERENTIAL SYSTEM**-Free. Method of Gear Shift is FREE

#### **4.1.24: CLUTCH-Free**

**4.1.25: OIL COOLING**-Oil radiators are allowed. The oil radiators and their connections are free, provided that they do not give rise to any modifications to the bodywork and are situated within the perimeter of the bodywork.

#### **4.1.26: TRANSMISSION SHAFT**-Free design.

A minimum of two steel safety loops must be fitted to each longitudinal shaft (**propeller shaft**), to prevent it from hitting the ground in case of breakage. They must be fitted so that they are positioned one on either side of the midpoint of the propeller shaft.

For propeller shafts of less than 500 mm total length, only one safety loop is mandatory.

Should any tank be close to a longitudinal shaft, it is recommended that the tank has extra protection in the walls close to the shaft.

#### **4.1.27: SUSPENSION**-Cars must be fitted with a sprung suspension.

The use of active suspension is forbidden.

Coil/leaf springs are compulsory. They must be made from metallic material.

Solid rear axle vehicles may add traction bars or torque arms.

Camber kits (also known as camber compensators) may be installed but only the lower arm can be modified.

Adjustable camber plates may be installed at the top of the strut and the original upper mounting holes may be slotted.

Any type of bearing or bushing may be used in the adjustable camber plate attachment to the strut.

The modification of spring and shock absorber adjustments from the cockpit is prohibited.

The reinforcing of the structural parts of the suspension by the addition of material is allowed.

The suspension reinforcements must not allow two separate parts to be joined together to form one spring. The spring seats may be adjustable if the adjustable structural part is a part of the spring seat and is separated from the original suspension parts/body work (it may be removed).

Coil springs:

The length is free, as are the number of coils, the wire diameter, the external diameter, the type of spring (progressive or not) and the shape of the spring seats. The number of springs and spring seats is free.

Leaf springs:

The length, width, thickness and vertical curvature are free.

Torsion bars:

The diameter is free

Spring-Shock absorber assemblies:

Spring shock absorber assemblies are authorised even if the series vehicle is not so equipped, provided that the original spring is removed.

#### **4.1.28:SHOCK ABSORBER-Twin shock absorber per wheel is authorised.**

All shock absorbers must be independent of each other

Once the springs are removed, the vehicle must sink down to the bump stops in less than 5 minutes. With regard to their principle of operation, gas-filled shock absorbers are considered as hydraulic shock absorbers. A suspension travel limiter may be added.

Its sole function must be to limit the travel of the wheel when the shock absorber is not compressed.

Changes to the spring and shock absorber settings from the cockpit are prohibited.

The damper tanks may be attached onto the unmodified shell of the cars. If the shock absorbers have separate fuel reserves located in the cockpit, or in the boot if this is not separated from the cockpit, these must be strongly fixed and must have a protection.

A silent block might be replaced by a "Uniball" joint.

Gas filled dampers, regarding their working principle, are considered as hydraulic dampers.

All shock absorbers must be independent of each other

#### **4.1.29: ANTIROLL BARS-Free.**

#### **4.1.30: STRUT BRACE- FREE**

**4.1.31: WHEELS**-Diameter Free. Wheel spacers are permitted. The wheel tyre combination should not protrude beyond the perimeter of the car (No part of the wheel should be visible when viewed vertically from top above the centre line of the wheel.) / body kits.

Track width- free

**4.1.32: TYRE**-Free.

Rethreaded tyres or modified custom re grooved prohibited.

Tyres manufactured specifically for agricultural use or marked for use at limited speeds are prohibited.

Preheating of tyres by electrically heated covers or similar is prohibited. Slick tyres are not permitted on DIRT/GRAVEL events.

**4.1.33: BRAKES-FREE**

**4.1.34: STEERING**-The steering system and its position are free, but only a direct mechanical linkage between the steering wheel and the steered wheels is permitted.

Four-wheel steering system is forbidden.

Any steering wheel may be used. An alternate steering wheel assembly, including all mounting hardware, which replaces an airbag-equipped wheel, can be used

**4.1.35: DASHBOARD**-Free. May be removed.

**4.1.36: COOLING OF CABIN**-The heating/Cooling system may be removed.

It is permitted to install one or two roof vent(s) on the roof of the car.

**4.1.37: WINDSCREEN**-The windscreen must be of laminated glass. Or of polycarbonate ensuring the same transparency as the original glass

If of polycarbonate, the thickness must not be less than 5 mm. Windscreens which are damaged to such an extent that visibility is seriously impaired or that there is a likelihood of their breaking further during the competition will be rejected.

The addition of a protective transparent film on its external face is permitted.

**4.1.38:SIDE WINDOW**-Glass may be replaced with polycarbonate ensuring the same transparency as the original glass (minimum thickness 3 mm). If the original window winding mechanism is removed then

A sliding window in the side windows of the driver's and co-driver's doors must be fitted. The opening must be a minimum of 130 mm x 130 mm and a maximum of 150 mm x 150 mm.

The sliding windows must be closed at the start of the race.

**4.1.39:WINDSCREEN WIPERS**-Windscreen wipers are free, but they must be in working order. The fitting of an additional windscreen washer tank or of one with a greater capacity is authorised. This tank must be strictly reserved for the cleaning of the windscreen.

**4.1.40:BONNET**-Material: Composite authorised. If fibre glass is used, the minimum thickness should be at least 3mm

Outer surface basic shape and rigidity unchanged from the original car. A change in shape, at parts, to provide clearance for under body components is permitted. Openings may be made up to a maximum total surface of 1050 cm<sup>2</sup>, including any original opening

At least two safety fasteners must be fitted.

Minimum number of fixing points to the bodyshell = 4.

The original locking mechanisms must be rendered inoperative or removed.

Opening from the outside must be possible (without tools).

A maximum of 2 bonnet scoops with a total area of 400 cm<sup>2</sup> is allowed.

**4.1.41:BOOT LID- Rear windshield-Side rear door glass**-Material: Composite authorised. The rear windshield / side rear door glass, may be replaced with Perspex Plastic, ensuring the same transparency as the original glass

Outer surface shape and rigidity unchanged from the original car.

Inner surface is free. With ribs for rigidity.

At least two safety fasteners must be fitted.

Minimum number of fixing points to the bodyshell = 4.

The original locking mechanisms must be rendered inoperative or removed.

Opening from the outside must be possible (without tools).

**4.1.42: FENDER**-The material and shape of the fenders are free, provided that they do not give rise to any additional aerodynamic effect. However, the material must have a minimum thickness of 1.5 mm. Material: Composite authorised.

Flares may be added

Fenders and bumpers may be modified for tyre clearance.

**4.1.43: MUD FLAPS**-The fitting of mud flaps is compulsory.

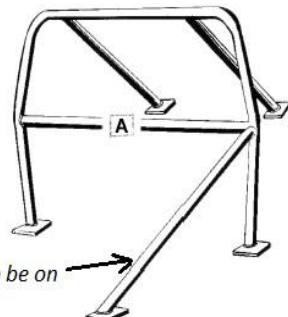
They must be made of a flexible plastic material at least 4mm thick. They must cover at least the width of each wheel.

**4.1.44 : DOOR**-Except for the driver and passenger door, the material is free, provided that the Original outside shape and rigidity is retained. It must be possible to open the front doors from the outside and from the inside. **ROLL CAGES ARE COMPULSORY AND SHOULD BE MINIMUM AS PER DRAWING ATTACHED BELOW. SEE DRAWING BELOW**

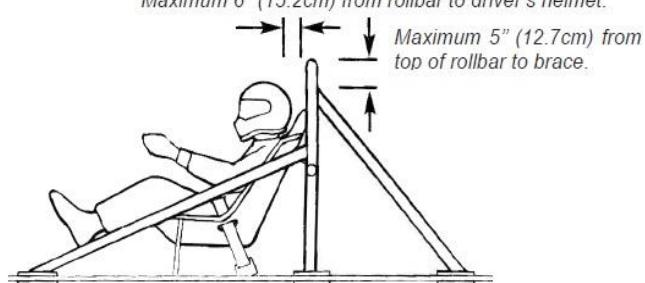
All cars with an OEM frame must have rollbar attached to frame.

Cars without frame use 6" (152mm) square 1/8" (3.2mm) steel plates on top and bottom of floor, securely bolted together with at least four 3/8" (9.53mm) bolts, or top plate welded to rocker sill.

All materials must be 1.75" OD x .118" (44.5 x 3.02mm) mild steel or .083" (2.11mm) 4130 chrome moly tubing, except for A which is 1.25" OD x .118" (31.8 x 3.02mm) mild steel or .083" (2.11mm) 4130 chrome moly tubing.



Maximum 6" (15.2cm) from rollbar to driver's helmet.



The minimum specifications for the Roll-Cage

<u>Material</u>	<u>Minimum Tensile Strength</u>	<u>Minimum Dimension <math>\underline{s}</math> (mm)</u>	<u>Use</u>
<p><u>Cold drawn</u></p> <p><u>seamless</u></p> <p><u>unalloyed</u></p> <p><u>carbon steel</u> <u>(see below)</u></p>		<p><u>45 x 2.5</u> <u>(1.75"x0.095")</u></p> <p><u>50 x 2.0</u> <u>(2.0"x0.08")</u></p> <p><u>3")</u></p> <p><u>350</u> <u>N/mm<sup>2</sup></u></p>	<p><u>Main rollbar</u> <u>(Drawings</u> <u>253-1 and</u> <u>253-3) or</u></p> <p><u>Lateral</u> <u>Or</u> <u>Rollbars</u></p> <p><u>and Rear</u> <u>Transverse</u> <u>Member</u></p> <p><u>(Drawing 253-2)</u></p>

<u>containing a</u>			
<u>maximum of</u>			<u>Lateral half-</u>
<u>0.3 % of</u>			<u>rollbars and</u>
<u>carbon</u>	<u>38 x 2.5</u>		<u>other parts of</u>
	<u>(1.5" x 0.09</u>		
	<u>5")</u>		<u>the safety</u>
	<u>Or</u>		<u>cage (unless</u>
	<u>40 x 2.0</u>		<u>Otherwise</u>
	<u>(1.6" x 0.08</u>		
	<u>3")</u>		<u>indicated in</u>
			<u>the articles</u>
			<u>above)</u>

NOTE:

For unalloyed steel, the maximum content of additives is 1.7 % for manganese and 0.6 % for other elements.

**4.1.45:FRONT BUMPER**-Material: Composite authorised.

The thickness of the front bumper must be 3 mm minimum. These constructions must be such that the structural integrity of the bumper remains. Should cover at least 75% of the area covered by the OE bumper.

**4.1.46:REAR BUMPER**-Material: Composite authorised.

The shape of the series model must be preserved, but in order to connect it with the free parts, a local tolerance of +/- 5 mm in relation to the original surface is accepted.

The thickness of the rear bumper must be 3.0 mm minimum.

It is possible to enlarge the original cut-out in the rear bumper for the exhaust or to create one or more new cut-outs, solely in order to allow the exhaust to exit.

**4.1.47:BULKHEAD, ENGINE COMPARTMENT**-The bulkhead separating the cockpit from the engine compartment may be modified to accommodate components, up to a maximum of 100 mm but shall not be moved entirely.

The shape is free.

The bulkhead material must be the same or stronger than the material of the homologated car. In any case, the materials added must be iron-based alloys and must be welded to the bodywork.

**4.1.48:UNDERBODY PROTECTION**-The fitting of under body protections is authorised provided that these really are protections which respect the ground clearance, which are removable and which are designed exclusively and specifically in order to protect the following parts: Engine, radiator, suspension, gearbox, tank, transmission, exhaust, extinguisher bottles.

These protections must be made from either aluminium alloy or steel, or composite material.

Minimum thickness for aluminium alloy and composite material is 4 mm and 2 mm for steel.

#### **4.1.49:DRIVER SEAT / POSITION-**

The seat must be attached using the OE body mounting holes/ studs. Additional mounting points may be added. Longitudinally.

#### **4.1.50: SEATS & SEAT BELTS**

**The co driver's seat as well as the rear seat may be removed.**

**The driver's seat must have a fixed headrest. A replica of a FIA approved seat, built by a reputed builder will be permitted.**

**A 4-point VALID harness is mandatory. (FMSCI /FIA approved)**

**4.1.51: TOWING DEVICE**-One front and one rear towing device is compulsory. They must be clearly visible and marked in yellow, red or orange. Towing straps may be used.

**4.1.52: REAR LAMPS**-Each car must be fitted with a minimum of two red rear brake lights. The minimum area of each should not be less than 10cm<sup>2</sup>

**4.1.53: HEAD LAMPS**-FREE, and may be removed. However the opening must be covered with fibre glass / metal plate and be safely secured.

