

SRI LANKA AUTOMOBILE SPORTS APPENDIX – G

Classification of Automobiles

Effective from 1st January 2027

THIS DOCUMENT SHALL CONSTITUTE THE CURRENT AND OPERATIVE VERSION OF APPENDIX G AND SHALL SUPERSEDE, REPLACE, AND RENDER NULL AND VOID ALL PRIOR VERSIONS OF APPENDIX G, INCLUDING ANY AND ALL AMENDMENTS, REVISIONS, SUPPLEMENTS, OR MODIFICATIONS THERETO, WHETHER ISSUED SEPARATELY OR INCORPORATED THEREIN.

THIS DOCUMENT SHALL REMAIN VALID, BINDING, AND IN FULL FORCE AND EFFECT UNTIL FURTHER NOTICE OR UNTIL SUPERSEDED, AMENDED, OR OTHERWISE WITHDRAWN BY AN INSTRUMENT DULY AUTHORIZED AND ISSUED FOR SUCH PURPOSE.

(TO BE READ IN CONJUNCTION WITH THE NATIONAL SPORTING CODE NSC)
OF THE
SRI LANKA AUTOMOBILE SPORTS.

APPENDIX G - 2027

THE INTERPRETATION OF THESE RULES AND REGULATIONS LIES WITH THE SLAS COUNCIL AND SUCH INTERPRETATION WILL BE FINAL AND BINDING.

In The event of any dispute or inconsistency arising out of the interpretation, the English text shall prevail

EFFECTIVE FROM 1ST January 2027 UNTIL FURTHER NOTICE

Any Changes to the regulations will be approved by SLAS and will be published as an amendment.

HOW TO UNDERSTAND AND USE "APPENDIX G"

Example1 - For '**SL E ',** '**SL N**' & '**SL H**' Classes:

First, you read	- Section 1	- General Specifications
Second, you read	- Section 3	- Regulations for Group N Production Cars
Third, you read	- Section 4	- Class Specification Regulations

Example 2 - For '**SL A**', '**SL S**' & '**SL GT**' Classes:

First, you read	- Section 1	- General Specifications
Second, you read	- Section 4	- Class Specific Regulations

General Regulations will be SUPERSEDED by the **Group Regulations;** both General and Group Regulations will be SUPERSEDED by the **Class Specific Regulations**.

Only the following documents will be considered as authentic documentation when obtaining any specification for reference, which is not specified herein, Appendix G.

1. Manufacturer's Workshop manual/ Repair manual

2. Haynes Repair manual

TABLE OF CONTENTS

SRI LANKA AUTOMOBILE SPORTS APPENDIX – G 1
HOW TO UNDERSTAND AND USE "APPENDIX G" 2
TABLE OF CONTENTS 3
SECTION 1 5
1. GENERAL SPECIFICATIONS 5
G-01. CONSTRUCTION 5
G-02. CONSTRUCTION REQUIREMENTS 6
G-03. ROLL CAGE 8
G-04. DRIVER SAFETY EQUIPMENT 9
G-05. COCKPIT SAFETY EQUIPMENT 11
G-06. OTHER DETAILS 12
G-07. NAME AND BLOOD GROUP 15
G-08. GROUPS 15
G-09. WHERE CLASSIFICATION IS BY CUBIC CAPACITY: 16
SECTION 2 17
2. GROUPS AND CLASSES 17
2.1 Group and Class classifications 17
SECTION 3 19
3. GROUP REGULATIONS & TECHNICAL SPECIFICATIONS 19
3.1 REGULATIONS FOR GROUP "N" PRODUCTION CARS 19
SECTION 4 24
4. CLASS SPECIFIC REGULATIONS & TECHNICAL SPECIFICATIONS 24
4.1 GROUP E cars up to and including 1000cc 24
4.2 GROUP E cars up to and including 1300cc 27
4.3 GROUP N cars up to and including 1300cc 29
4.4 GROUP N cars up to and including 1500cc 32
4.5 Group A Modified Cars UP TO 1050cc 34
4.6 GROUP A cars up to and including 1350cc 36
4.7 GROUP H Cars SLH 1600 37
4.8 GROUP H cars SLH 2000 43
4.9 GROUP H cars up to and including 1275cc 45
4.10 Group SL S Cars up to 3500cc 48
4.11 Group GT Cars up to 3500cc 53
4.12 Group T & J 59

SECTION 5 61
5. FORMULA CARS 61
5.1 Formula McLarens 1300cc EFI 61
5.2 Modified Formula Cars up to 1665cc 61
5.3 Specific Regulations for Formula Ford 1600 GENERAL 61
5.4 FORMULA FORD 1600 - PRE-1975 74
SECTION 6 76
6. CROSSCARS 76
6.1 GENERAL 76
6.2 MODIFICATIONS AND ADJUNCTIONS ALLOWED OR OBLIGATORY 76
6.3 PRESCRIPTIONS FOR CROSSCARS 78
6.5 FUEL CIRCUIT 81
6.6 ELECTRONICS 82
6.7 TRANSMISSION & CLUTCH 83
6.8 SUSPENSION 84
6.9 WHEELS & TYRES 86
6.10 BRAKING SYSTEM 87
6.11 STEERING 88
6.12 CHASSIS 89
6.13 BODYWORK 101
6.14 SAFETY EQUIPMENT 103

SECTION 1

1. GENERAL SPECIFICATIONS

GENERAL REGULATIONS WILL APPLY TO ALL CLASSES UNLESS SPECIFIED IN THE CLASS REGULATIONS.

APPENDIX "G" – CLASSIFICATION OF AUTOMOBILES 2027 (Other than Karts)

These regulations shall apply to all automobiles except Karts. The word "car" used in these regulations shall have the same meaning as the word "automobile." All regulations mentioned in the General Specification shall apply to all Groups and Classes.

All competitors should be familiar with the Appendix C available on the SLAS website, for license categories for respective classes.

G-01. CONSTRUCTION

1.1 BODY SHELL/ CHASSIS:

The major structural part of the homologated vehicle, constructed of all parts which are permanently attached (by welding, brazing, bonding, etc.) around which are assembled the mechanical components and the bodywork. Components or panels which are attached by means of removable fasteners are not considered to be part of the body shell. The fitting of underbody protections is authorized in rallies only, provided that these really are protections which respect the ground clearance, which are removable, and which are designed exclusively and specifically to protect the following parts: engine, radiator, suspension, gearbox, tank, transmission, exhaust and extinguisher bottles. These protections must be made from either Aluminum alloy or Steel and have a minimum thickness of 4 mm for Aluminum alloy and 2 mm for Steel. Nevertheless, it is possible to reinforce the upper part with metal or composite ribs and to add non-structural composite parts. Underbody protections may extend the whole width of the underside part of the front bumper only in front of the front wheel axis. For Formula cars, the Chassis/Frame should be of tubular Steel construction and of adequate strength.

The Silhouette and Plan View must remain as per the original design. The wheel archers/ fenders may be extended; however, the wheel rim or the Tyre cannot be jutting out of the fender when the wheels are straight.

1.2 BODY PARTS:

Components or panels not considered to be part of the body shell, which are attached by means of removable fasteners, are not considered to be a part of the body shell.

All Cars (except formula and Cross car) should have the bonnet stay Rod.

For all classes, front and rear bumpers can be replaced by proper bumpers similar or identical to the original bumper. However, only bumpers manufactured out of fiberglass or plastic will be allowed to be used as replacement bumpers. Front fender design cannot be changed; material could be metal, fiberglass or plastic.

The chief scrutineer of the Meet may exclude an Automobile if the construction of which is deemed to be not fit to race or dangerous.

G-02. CONSTRUCTION REQUIREMENTS

All Automobiles to which these regulations apply:

3.1 Wheels –
Have four complete wheels, of which at least two are used for steering and at least two for propulsion (excluding the spare).

3.2 Brakes –
Be equipped with brakes which comply with statutory requirements as to construction of motor vehicles, or if there is no mechanical system available for applying braking effort to at least two wheels, there shall be two hydraulic systems so that in the event of failure of one system, braking on at least two wheels remains effective. Dual circuit hydraulic systems are mandatory. **Upgrading of brake parts with OEM will be allowed. (Unless specified in class regulations).**

3.3 Steering Wheel –
Have a steering wheel which has a full-diameter rim. Aircraft-type wheels are not permitted. (Except for Formulas).

3.4 Front and Rear Windscreen Glass –
All cars must be fitted with a Glass Windscreen; polycarbonate is strictly prohibited. (Except Formulas).

3.5 Seat & Mounting –
A non-reclinable racing seat is compulsory for all classes. If a seat railing is used, the seat Railings have to be properly mounted.

2.6 Have a protective bulkhead between the engine and the driver's / passenger's compartment, suitable and sufficient in the case of fire for preventing damage to the driver.

2.7 Driver's / passenger's compartment –
Have a complete floor rigidly supported and of adequate strength within the driver's/passenger's compartment

2.8 Fuel Tank –

If the fuel tank is mounted inside the car, the fuel tank should be totally covered with Steel with a minimum thickness of 1mm or Aluminum with a minimum thickness of 2mm plate**.** If the fuel line(s) or vents pass through the driver's/passenger's compartment, they should be covered or enclosed in a solid metal cover. All openings situated within the interior body panel behind the driver's compartment should be covered. (Refer to specific class regulations for further details). A non-return valve must be fitted on all fuel tank breather pipes to prevent the fuel from moving out of the tank in case of overturn, collision, or any other matter.

2.9 Exhaust –

Have the exhaust system outside the driver's/passenger's compartment or beneath the floor of the car or secured in casings or covers of solid metal.

2.10 Bonnet –

Except rear-engine single-seated racing cars, have a bonnet or casing of metal or, if original, solid non-flammable material covering and/or surrounding the engine and which is secured by fastenings of adequate strength and positive locking action.

2.11 Doors –

Have secure fastenings for all doors and all hinged or detachable parts of the bodywork. Interior panels and Bars of the door could be removed. **(Unless specified in class regulation)**.

2.12 Glass on Door and side panel –

Both front doors should have safety glass windows (Safety reasons). Rear windows could be substituted with Polycarbonate of a minimum Thickness of 4mm.

2.13 Suspension –

Be fitted with sprung suspension between the wheels and the chassis. Suspension and steering movements must be strictly controlled to ensure that road wheels or steering components do not come into contact with any part of the vehicle structure (such as inner fender, chassis or brake components) during operations. **Mounting positions must remain unchanged. Regulation of Suspension - Strictly refer to specific class regulations.**

2.14 Mirrors –

Be fitted with Door / Wing Mirrors on either side of the vehicle. Also with one mirror of a reflective surface as a rear-view mirror within the car of at least 40 sq. cm's, securely mounted in the original position to give a clear view of the rear. The mirror glass shall be enclosed in a suitable frame with no sharp edges exposed that would cause injury in the event of an accident.

2.15 Radiator –

Radiator size, shape, and mounting point are free; number of fans is free. (unless specified in group or class regulations)

G-03. ROLL CAGE

If a closed car:

Have a FIA homologated 6-point roll cage securely mounted inside the car or have a Roll cage of adequate strength mounted onto the chassis or body shell of the car. All joints of the cage have to be welded or Bolted (MIG welding). This roll cage must be braced to resist collapse in all directions and must be manufactured so that the top of the roll cage is at least 5cm above the driver's helmet when the driver is in the normal driving position. For all classes, the Minimum outer Diameter of the pipes used should be 1.5 inches (38.1mm), and the Minimum Thickness of the material used should be a minimum of 1.6mm. The material should be steel pipes or UN alloyed carbon steel tubing, both of which should not be seam-welded between two joints.

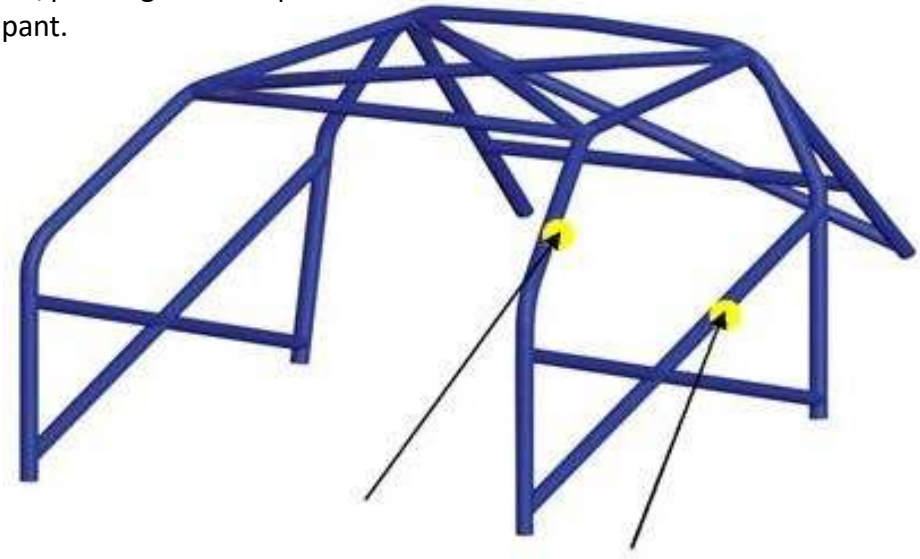
When mounting the Roll Cage to the Chassis/ Floorboard of the car, a minimum base of 4x4 inches is required.

The Roll Cage may be welded or bolted to the Floorboard of the car. If bolted, a counter plate measuring the same size (4x4 inches) as the base must be fixed to the car.

The following design of the ROLL CAGE IS RECOMMENDED (**Refer Image N/1 for design of roll cage**). A hole should be drilled with a 7 mm drill bit on the left side of the roll cage in order to measure its thickness. (Refer to point "M" on roll cage diagram/ drawing). If the roll cage is being painted, an area of 2 inches either way should be left bare (without paint) from where the hole is situated.

- For Hill Climbs, Autocross Meets, Circuit Meets, Road Races, and Special Stage Rallies a 6-point Roll cage is Mandatory.
- For TSD Rallies, a 4-point roll cage is recommended.
- Effective means of ventilating the driver's/passenger's compartment.
- Operable means of access (from both inside and outside) on either side to the driver's/passenger's compartment sufficient in size for removal of the occupant.

Image N/1



If an Open Car:

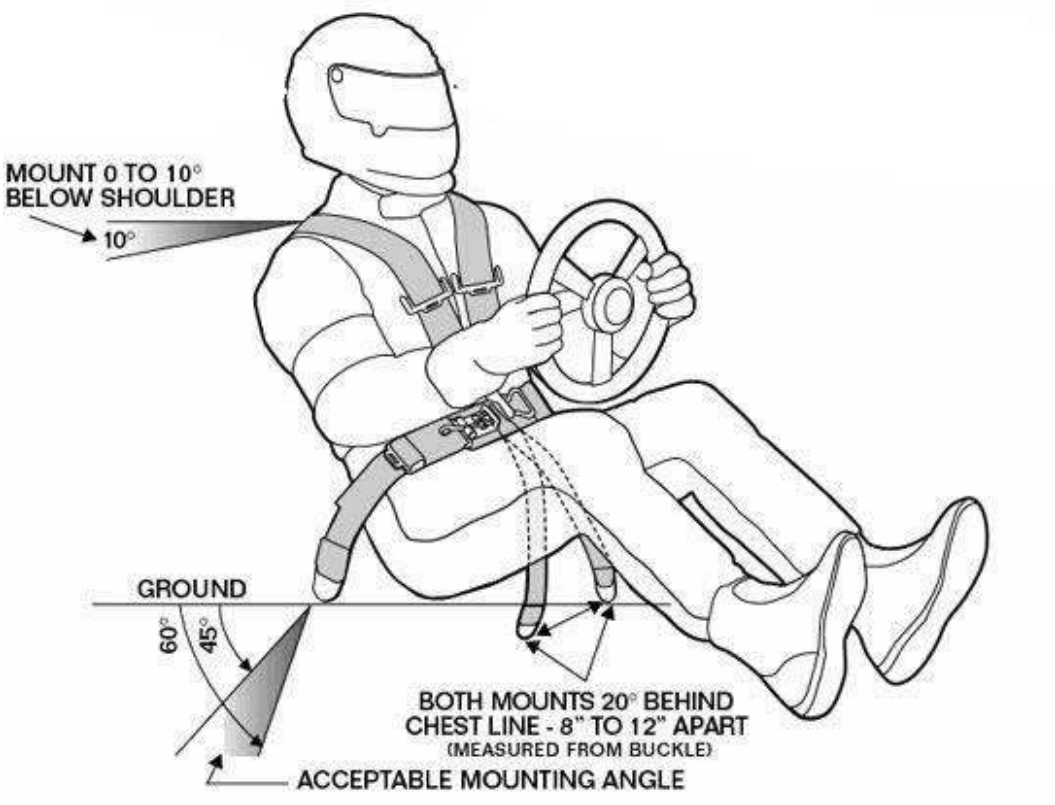
4-point roll cage of adequate strength mounted onto the chassis or body of the car. This roll bar must be braced to resist collapse in all directions and must be manufactured so that the top of the roll bar is at least 5cm above the driver's helmet, when the driver is in the normal driving position.



G-04. DRIVER SAFETY EQUIPMENT

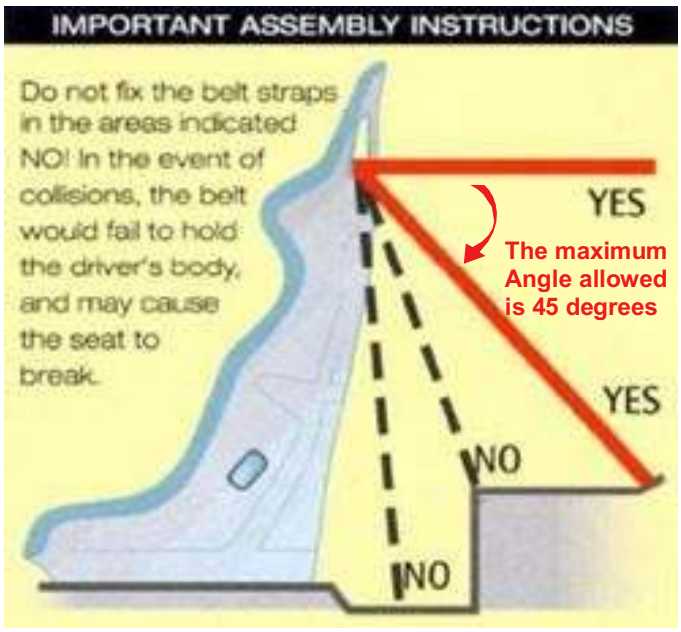
FIA approved racing suit, Helmet, Balaclava, Shoes & HANS Device connected to the helmet via tethers are mandatory for all classes. (Refer to Appendix G Minimum safety standards).

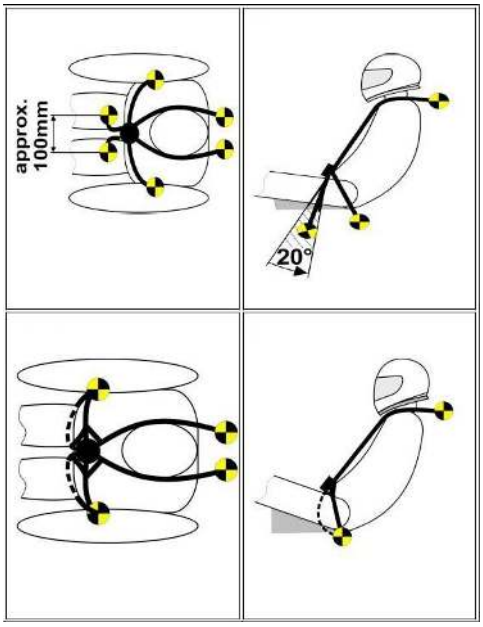
Safety Harness: Be fitted with a safety harness belt of at least 4 points, with a central release. Compulsory for all classes (excluding TSD rallies), a minimum of 2 points of the belt should be securely mounted to the Chassis of the car according to the diagram and specs given. Lap Straps are prohibited. **(2 / 3 point seat belts are prohibited)**. The belts cannot be mounted to the same bolt with which the seats are bolted to the frame**. (Refer to images)**


MOUNT 0 TO 10°
BELOW SHOULDER
10°
GROUND
60°
45°
BOTH MOUNTS 20° BEHIND
CHEST LINE - 8" TO 12" APART
(MEASURED FROM BUCKLE)
ACCEPTABLE MOUNTING ANGLE


TRS
TRS


TRS
TRS





G-05. COCKPIT SAFETY EQUIPMENT

5.1 Competition seat in compliance with **FIA Standard 8855-1999 as a guideline**.

5.2 Harness in compliance with **Appendix G Minimum Safety Standards.**

5.3 Hand-held extinguisher for circuit events with a validity certificate from a service provider and a Meter showing the condition of the extinguisher is compulsory.

5.4 Roll-cage padding made out of suitable compressed foam can be used.

5.5 A Fire extinguisher containing a minimum 1.00 Kg AFFF extinguisher. It should be mounted securely. This will be applicable for all motor racing events; however, for speed rallies, a fire extinguisher containing a minimum 2.00 Kg AFFF extinguisher or 1.00kg x 2 is compulsory. All extinguishers should contain a meter in working condition to show the condition of the extinguisher and a tag to show its validity period or expiry date. If a Fire extinguishing system (properly wired and fixed) is installed within the car, the Extinguisher can be mounted according to a given diagram by the manufacturer or to facilitate the length of the tubing.





G-06. OTHER DETAILS

6.1 Except for rallies, all hubcaps, number plates and wheel embellishments should be removed. All glass lenses to be taped down to prevent their shattering.

6.2 To have a general circuit breaker that will cut all electrical circuits, battery, alternator or dynamo, lights, hooters, ignition, electrical controls, etc., and must also stop the engine is compulsory. It should be spark-proof and should be accessible from inside and outside. As for the outer, the triggering system of the circuit breaker will compulsorily be situated at the lower part of the windscreen mounting frame on the left side for closed body cars (Right Hand drive).





6.3 Battery –
All batteries which are mounted within the passenger compartment and the luggage compartment should be securely covered with a non-conductive solid material. (Paper-based material prohibited) and should be properly mounted.

6.4 Lights –
The original headlights may be made inoperative and covered with adhesive tape, or they may be removed. The side lights may also be removed. However, except in formula-type cars, the working brake lights must remain. Additionally, for all cars, an indicator light (permanent red light – 21W bulb or LED equivalent to 250 lumens) must be fixed in a central position at the

rear, approximately at the height of the rear parcel tray.

Working and operative brake lights are compulsory. The original mounting positions of the tail/brake lights must be retained unless specified otherwise in the specific regulation.

Furthermore, in addition to the original brake lights, **two additional brake lights** must be fitted on either side of the permanent light at the parcel tray height. The size of these lights must be identical to or larger than the permanent light. All four brake lights must work together. **The permanent light should be wired to operate with the ignition switch**. (The requirement for four brake lights is compulsory for all Gravel Circuit Meets, Tarmac Circuit Meets and Rallies).

LED lights are allowed as a permanent light and for the two newly added brake lights, to be fitted alongside the permanent light. These lights must be at least **3 inches by 4 inches** in size. LED strips are prohibited.

6.5 Throttle Body –

Have on each throttle, whether butterfly, slide or other type, a return spring which, in the event of the throttle linkage becoming detached, will in all cases return each throttle to the closed position **(Not applicable to cars fitted with electronic or fly-by-wire throttle systems).**

6.6 Tyres –

Be fitted with Tyres which have not been re-treaded, recapped, repaired, or in any way reconditioned.

6.7 Seat Mounting –

Seat supports must be attached to the shell/chassis via at least 4 mounting points per seat, using bolts with a STEM LENGTH of a minimum diameter of 8 mm and counter plates.

6.8 Tow hook –

At all Meets, all automobiles (Except Formula cars) must be fitted with front and rear tow hooks. Tow hook position should be highlighted and indicated clearly.



6.9 Mud flaps –

Rear mud flaps are mandatory at all rallies, circuit meets, super cross and autocross events (Gravel). The Mud flaps must be a minimum thickness of 4mm and should be broader than the tyre being used. The flap cannot be sagging, and the minimum height from ground level should be 10 cm. If at any race meet there are two races of the same class, irrespective of the conditions, mud flaps will be compulsory for both races.

6.10 Fuel –

Only commercially retailed fuel in Sri Lanka & currently available is permitted to be used. The highest grade of fuel that can be used is as follows.

No additives or oxides are permitted.

PETROL 95 OCTANE AND SUPER DIESEL

All Competitors (Except Group F cars and Group X cars) should retain a minimum of 6 liters of fuel in the fuel tank at the end of each event during the following as a mandatory requirement. Competitors failing to do so will be liable for immediate disqualification and/or disciplinary action.

(a) Closed Circuit meets (Tarmac/ Gravel) (Each race)
(b) Hill Climbs (each Run)
(c) Each stage at Rallies

The following parameters of the fuel "PETROL 95 OCTANE" which are published and available at registered local fuel suppliers/retailers will be the standards to be complied.

PROPERTY	TEST METHOD	SPECIFICATIONS
DENSITY @ 15 ^{0}C kg/m^3	ASTM D 1298	720 – 775
SULPHUR CONTENT mg/kg	ASTM D 5453/ASTM D 2622	MAX. 50
LEAD CONTENT g/l	ASTM D 5059 / ASTM D 3237	MAX. 0.005 (NOTE 2)
Total AROMATICS % v/v	ASTM D 5580	MAX 35
OXYGENATE % v/v	ASTM D 4815	MAX. 15
OXYGEN CONTENT % m/m (CALCULATED)		MAX. 2.7
OXIDATION STABILITY, Minutes	ASTM D 525	MIN. 360
BENZENE % v/v	ASTM D 3606 / ASTM D 5580	MAX. 1
OLEFINES CONTENT (% V/V)	ASTM D 1319/ASTM D 6730	MAX 18

6.11 Branding – Windscreens & windows –

The front and rear side glasses should be free from any sponsor stickers. All glasses should be clear or transparent; tinted or shaded glasses are strictly prohibited. Sponsor stickers, maximum 6 inches' height from the top of the front and rear windscreen are permitted. The driver should be visible from behind and the side.

6.12 Passenger Seat –
Except for Rallies, all front and rear Passenger Seats Have to be removed.

6.13 Power Steering –
May be disconnected.

6.14 Rims –
All 4 Rims should be of the same size and of the same offset (Except for Formulas and Cross cars).

6.15 Tyres –
All four (4) Tyres should be of the same size and same profile for all classes other than Group F and X.

6.16 Modification to the original fuel injection system using Water, Water Methanol or any other type of injection into the Air Intake system, onto the Air filter or after the Air Filter until the combustion chamber for Normal Aspirated Engines or turbocharged or supercharged engines is strictly prohibited.

G-07. NAME AND BLOOD GROUP

The name and blood group (as specified on SLAS license) should be displayed on the car. For closed circuit meets (gravel and tarmac) for road races, hill climbs and rallies, the name and blood group should be displayed on the rear left and right side door glass only. (If hatchback or a two-door car, on the rear side glass) (For rallies, driver and navigator should be clearly marked.) name/s and blood group/s cannot be displayed in any other area.

The height / Font Size of the Name and Blood Group should be 5cm and can be displayed only in white colour. Name and Blood group written over any tape will not be permitted. No sponsor stickers will be permitted in this area. For Hill Climbs, if a car is shared, both names and blood groups should be displayed in the area stated above.

G-08. GROUPS

Cars competing in events shall be distributed / Categorized into the following groups.

A vehicle cannot be classified in more than one Group. Upgrading is not allowed for any event. Running of concurrent events is not permitted.

(1) Group E : Entry Level

(2) Group N : Production Cars – Standard

(3) **Group A** : Production Cars – Modified

(4) **Group S** : Specials

(5) **Group H** : SLAS Homologated Cars

(6) **Group GT** : Grand Touring Cars

(7) **Group T&J** : Trucks, Jeeps, Double Cabs, Single Cabs and SUVs. (Estates and station wagons are excluded).

(8) **Group F** : Formula Cars

(9) **Group X** : Cross cars

G-09. WHERE CLASSIFICATION IS BY CUBIC CAPACITY:

In the case of supercharging or turbocharging, the calculated cylinder capacity will be multiplied by 1.7, and the car will pass into the class corresponding to the cubic volume thus obtained. In the case of rotary engines, the capacity (cc) will be deemed to be equivalent to twice (x2) the volume of the working chamber.

SECTION 2

2. GROUPS AND CLASSES

Mandatory Requirements for All Classes - All Competitors Participating in any of the SLAS approved race meets should strictly comply with the Minimum Safety Standards, in relation to the race gear (Appendix G Minimum Safety Standards).

Competitors may apply in writing and obtain prior approval of SLAS to include any car event/s provided a minimum of ten vehicles are assured and presented for inspection with the proposal.

2.1 Group and Class classifications

Group E

- SLE Cars up to 1000cc - One make Nissan March

- SLE Cars up to 1300cc - Ford Laser/ Mazda 323 BD, BE, BF, SGPJFP, SGNKHD, BFTP, BF3P, SGNKCE, SGPJAT, KA, SGNKAU, SGPJAM, SGNKAM, SGPJAS, SGNKCG, SGNKBT, SGPJBJ, SGNJYA, SGPKGM, SGNJCG, SGPJFB series 4-door sedan/hatchback.

Group N

- SLN Cars up to 1300 cc - Ford Laser / Mazda 323 - BD, BE, BF, SGPJFP, SGNKHD, BFTP, BF3P, SGNKCE, SGPJAT, KA, SGNKAU, SGPJAM, SGNKAM, SGPJAS, SGNKCG, SGNKBT, SGPJBJ, SGNJYA, SGPKGM, SGNJCG, SGPJFB series 4-door sedan/hatchback.

- SLN Cars up to 1500 cc - Ford Laser / Mazda 323 - BD, BE, BF, SGPJFP, SGNKHD, BFTP, BF3P, SGNKCE, SGPJAT, KA, SGNKAU, SGPJAM, SGNKAM, SGPJAS, SGNKCG, SGNKBT, SGPJBJ, SGNJYA, SGPKGM, SGNJCG, SGPJFB series 4-door sedan/hatchback.

Group A

- SLA cars up to 1050cc

- SLA cars up to 1350cc

Group S

- SLS Cars up to 3500cc

Group H

- SLH Cars up to 1600cc - One make Honda 3-door hatchback cars only.

- SLH Cars up to 2000cc - One Make Subaru Legacy.

- SLH Cars up to 1275cc - One Make – Mini.

Group GT

- Cars up to 3500cc

Group T & J

Trucks, Jeeps, Double Cabs, Single Cabs & SUVs. (Estates, station wagons, Vans and Lorries are excluded).

- Diesel up to 5500cc (must be on body-on-frame / ladder frame configuration).

- Open for Diesel & Petrol Vehicles (SUVs allowed).

Group F

- Formula McLarens 1300cc EFI.

- Formula Cars up to 1600cc (Ford Formula).

- Formula Cars up to 1665 cc (Modified).

Group X

- Cross cars up to 650 cc.

SECTION 3

3. GROUP REGULATIONS & TECHNICAL SPECIFICATIONS

3.1 REGULATIONS FOR GROUP "N" PRODUCTION CARS

3.1.1 DEFINITION

Large-scale series Production Cars, equipped with normally aspirated engines.

3.1.2 HOMOLOGATION

At least 2,500 identical examples of these cars must have been manufactured in 12 consecutive months (One-Make Series classes are excluded from this rule). Proof of which should be produced.

3.1.3 NUMBER OF SEATS

Cars must be at least a two-seater whilst being manufactured.

3.1.4 MINIMUM WEIGHT

At the time of homologation, the SLAS Classification Committee of the Sri Lanka Automobile Sports (SLAS) will establish the minimum weight for each make and model of car, including the weight of the driver with full racing gear, based on the manufacturer's net weight. Where a particular model of car has several weights declared, the SLAS will establish the lowest weight applicable in each case, and the competitor will be permitted to reduce the weight in accordance with the rules applicable in the SL-N Group.

3.1.5 ENGINE

(a) Cylinder-Block, Cylinder-Head:
The Series Production Engine should be retained. Maximum re-boring allowed is the second oversize, in relation to the original bore, unless specified under individual class rules. The re-sleeving of the engine is allowed under the conditions as for re-boring and the sleeve material modified. Planning of the cylinder block will be allowed up to a maximum of 0.50mm. **Reducing the cubic capacity of a series production engine is strictly prohibited.**

(b) Ignition:
The make and type of the spark plugs and high-tension leads are free. The Wire Harness is free.

(c) Cooling System:
Radiator size, make, and fan are free. (Unless specified in class regulations)

(d) Carburetors:
The original system and type of carburettor must be retained. The operating principle of the carburettor venturi doors has to be retained. The components of the Carburetor which control the quantity of petrol entering the combustion chamber may be modified, provided that they do not have any influence over the quantity of air admitted. Air filter(s) are free and they may be removed; however, the original air cleaner housing should be retained.

(e) Injection:
The original system must be retained. Components of the injection system situated downstream of the air- or measuring device, and which control the quantity of petrol. Entering the combustion chamber may be modified but not replaced, provided that they do not have any influence over the quantity of air admitted. The injectors may be modified or replaced to modify their flow rate, but without modifying their operating principle and their mountings. The injector rail may be replaced with another of free design.

(f) Lubrication:
The fitting of baffles in the oil sump is authorized.

(g) Engine Mounts:
The material of the engine mountings is free.

(h) Exhaust:
Exhaust free; the original cast-iron exhaust manifold should be retained.

(i) Cylinder Head Gasket:
The material is free. (Unless specified in class regulations)

(j) Flywheel:
The original flywheel should be retained. **(Refer to class Regulations)**

(k) Cruising Speed Controller:
This controller may be disconnected.

3.1.6 CLUTCH & TRANSMISSION

(a) Clutch:
Make and material are free. **(Unless specified in class regulations)**.

(b) Gearbox:
The original gearbox ratios should be retained; no modifications are permitted **(refer to class regulations)**

(c) Final Drive:
The final drive ratio should be as per the manufacturer's specification, but in the event of One-Make Series, it will be specified. **(Refer to class regulations)**

3.1.7 SUSPENSION

- Original manufacturer's design, mounting positions and working principles cannot be altered.
- Camber adjustments are permitted. **(Unless specified in class regulations).**

3.1.8 WHEELS AND TYRES

(a) Wheels:
Wheels Free. **(Unless specified under particular class rules)** Hubcaps must be removed.

(b) Tyres:
The size of the tyre and the word "Competition Tyres" are specifically excluded, except in "Off-track" (gravel and rallies, etc.). The Tyres may be changed from the manufacturer's specification provided the aspect ratio is equal to or greater than 50%, unless otherwise specified by the manufacturer. By this rule, slicks, semi slicks/special racing Tyres are specifically excluded.

All four (4) tyres should be the same size.

3.1.9 BRAKING SYSTEM

(a) Brakes:
Brake linings are free. Upgrading of Brakes is allowed; however, the system of Front Brake Disc and Rear Brake Drum must be retained. Servo units and Anti-lock braking units can be disconnected.

(b) Hand brake:
The original Hand brake mechanism mounted in the original mounting position should be retained (original hand brake lever holding mechanism should be in place). Hydraulic Hand brake systems are prohibited.

3.1.10 BODY, SHELL AND CHASSIS

No modifications may be made to the manufacturer's design of the series production body shell and/or chassis. Reinforcements, in the form of crash or similar bars inside or outside, are not permitted except for the fitting of a Roll Cage.

3.1.11 LIGHTING SYSTEM

The taillights and Brake lights have to remain in their original mounting position and be in operating condition unless otherwise specified in specific rules for classes.

3.1.12 BATTERY

Battery free. However, must be securely fixed and covered to avoid short-circuiting and leaks.

3.1.13 AIR CLEANER

Air filter element is free; air filter housing should remain. **(Unless specified in class regulations)**

SECTION 4

4. CLASS SPECIFIC REGULATIONS & TECHNICAL SPECIFICATIONS

4.1 Class Specific Regulations for GROUP E cars up to and including 1000cc

(One Make Nissan March)

These rules should be read in conjunction with GROUP N Regulations

4.1.1 Engine Specifications

(CG10 Engines)

Bore - 71 mm

Stroke - 63 mm

Using up to a maximum of 0.50mm on 2nd oversize from the standard size pistons is allowed. Additional cc from using 2nd oversize pistons is allowed. Maximum cubic capacity allowed after re-boring to 2nd oversize is 1012cc.

Head Height - 120 mm (minimum)

Block Height - 191 mm (minimum)

Throttle body Diameter at butterfly side (Manifold side) – Max 46 mm

Inlet valve diameter - 27.5mm +/- 0.2 mm (tolerance)

Exhaust Valve diameter - 22.5mm

Cam Lobe dimensions - Inlet lobe height 38 mm – base circle 32 mm
Exhaust Lobe Height 38mm – Base Circle 32mm

Valve spring wire Diameter - Inlet 2.7 to 3.1 mm
Exhaust 2.7 to 3.1 mm

Unloaded Valve Spring Height - 40 to 45 mm

No. of coils - Inlet 8
Exhaust 8





Intake port – 37 mm, 30 mm, 20 mm +/- 1 mm (caliper should be placed on the outer edge of the port)

Exhaust port – 33 mm, 25 mm +/- 1 mm



4.1.2 Transmission

Final drive ratio of 4.47 (maximum allowed)

Gear Ratios - Nissan March series gearbox should be used (K10, K11 can be interchanged with newer models, but gear ratios should be as per Nissan March K11 and K10 series.)

Clutch - Aftermarket not permitted.

Flywheel - Minimum weight should be 6 kg.

LSD - Not permitted.

1st	50/15	3.333
2nd	41/23	1.783
3rd	35/29	1.207
4th	37/41	0.902
5th	34/45	0.756
Final Drive	76/17	4.47

4.1.3 Tyres

Tarmac, Circuit, Road Races and Hill Climbs Events – Brand is Free. Racing Tyres, slicks, or semi-slicks are not permitted.
Size 175 or 185 x 70 x 13
Tyres are free for gravel circuits.

4.1.4 Weight

MINIMUM CLASS WEIGHT 835 kg (with Driver)

4.1.5 Ignition Coils

Only the Distributor type IGNITION System is permitted. Individual Plug Coils are prohibited.

4.1.6 Air Intake, Cooling system, Wire Harness and ECU

Air filter(s) are free. The original air filter housing must be retained.

Cooling system & wiring harness, and ECU are free.

4.1.7 Suspension

Suspension mounting points must remain as per manufacturer specifications. Negative Camber is allowed. Brand of Shock absorber is open. However, pressure-adjustable shock absorbers and competition shock absorbers are prohibited.

Shock Absorber – Make - KYB for Nissan March K11. Part Numbers are as follows:

Front 332062/332061 Gas 632079 /632080 Oil

Rear 343249/348063 Gas 443255 Oil
Or equivalent product.

Coil Spring Specifications

Front	Maximum Thickness	- 12.3mm
	Number of rings	- Minimum 5 Maximum 7
Rear	Maximum Thickness	- 10.8mm
	Number of rings	- Minimum 8 Maximum 9
Front	Wire diameter	- 10.25 to 11 mm
	Coil diameter	- 106 to 107mm
	Free length	- 335mm (Minimum)
Rear	Wire diameter	- 10.25 to 11 mm
	Coil diameter	- 110 to 115mm
	Free length	- 340mm (Minimum)

4.2 Class Specific Regulations for GROUP E cars up to and including 1300cc

(One Make Ford Laser/Mazda 323)

To be read in conjunction with Group N Regulations

Body shell and Chassis only BD, BE, BF, SGPJFP, SGNKHD, BFTP, BF3P, SGNKCE, SGPJAT, KA, SGNKAU, SGPJAM, SGNKAM, SGPJAS, SGNKCG, SGNKBT, SGPJBJ, SGNJYA, SGPKGM, SGNJCG, SGPJFB series 4-door sedan/hatchback.

4.2.1 Engine

E3 (chain-driven, single or dual).

Bore - 77 mm / Stroke 69.6 mm / CC 1297.

Maximum re-bore allowed is the second oversize specified by the manufacturer (.50) in relation to the original bore; re-sleeving of the engine is allowed under the same conditions as for re-boring, and the sleeve material is modified. Planning of the cylinder block and the cylinder head will be allowed up to a maximum of 0.50 mm. However, the maximum cylinder capacity increased due to re-boring cannot exceed 1314cc.

Cylinder head Port sizes
Intake Port Maximum size: 33mm Tolerance: + / - 0.6mm

Exhaust Port Maximum size: 28mm Tolerance: + / - 0.6mm

Valve Spring Thickness and height are free (Double springs are prohibited)

Compression Ratio
Increase in Compression Ratio up to a maximum of 9.5:1 is permitted by facing of the cylinder head or block only.

Camshaft
The Camshaft should be as per the manufacturer's specification. Optimizing Valve Timing and the use of OFFSET KEYS is strictly PROHIBITED.

4.2.2 Transmission

Standard (Ratios: 1st Gear 3.416, 2nd Gear 1.842, 3rd Gear 1.290, 4th Gear 0.918, 5th Gear 0.775).

Final Drive Ratio: 4.105

Flywheel Minimum weight: 7 kg.

Clutch Diameter – 184mm or 190mm

4.2.3 Suspension

Suspension mounting points must remain as per manufacturer specifications. Negative Camber is allowed. The brand of Shock absorber is open. However, pressure-adjustable shock absorbers and competition shock absorbers are prohibited.

.

Shock Absorber – Make – KYB part numbers are as follows; any other brands with similar specifications are allowed.

Part Numbers are as follows:
Front 333025/26 Gas
Rear 332019/332020 – Gas; 332017/330018 - Gas
333085/333086 - Gas
633049/50 Oil
632034/632035 - Oil
633010/11 Oil
632004/632005 - Oil
632032/632033 - Oil
633111/633112 – Oil

Coil Spring Specifications

Front	Maximum Thickness	- 13mm
	Number of rings	- Minimum 5
Rear	Maximum Thickness	- 12mm
	Number of rings	- Minimum 6

4.2.4 Wheels & Tyers

Wheel Size 5.5J x 13 (Spacers are strictly prohibited). All four tyres should be the same size. Racing Tyres, slicks, or semi-slicks are not permitted. 175 or 185 x 70 x 13 – Brand is Free **(For Tarmac Circuit, Road Races and Hill Climbs Events)**

Tyres are free for gravel circuits.

4.2.5 Lighting system

The original taillight or lights of similar size must be fixed in their original mounting points. Modified or individual lights will not be permitted.

(Refer G-06/6.4)

4.2.6 Weight

MINIMUM CLASS WEIGHT 900 kg (with Driver)

NOTE:

If a car/cars are involved in a racing accident and determined by SLAS to be rechecked, the car/cars involved must be presented for inspection and obtain a fresh pre-scrutineering approval after completion of the repair before racing the vehicle in any race meet.

4.3 Class Specific Regulations for GROUP N cars up to and including 1300cc

(One Make Ford Laser/Mazda 323)

To be read in conjunction with Group N Regulations

Body shell and Chassis only BD, BE, BF, SGPJFP, SGNKHD, BFTP, BF3P, SGNKCE, SGPJAT, KA, SGNKAU, SGPJAM, SGNKAM, SGPJAS, SGNKCG, SGNKBT, SGPJBJ, SGNJYA, SGPKGM, SGNJCG, SGPJFB series 4-door sedan/ hatchback.

4.3.1 Engine

E3 (chain-driven single or dual)

Bore - 77 mm / Stroke 69.6 mm / CC 1297

Maximum re-bore allowed is the second oversize specified by the manufacturer (.50) in relation to the original bore; re-sleeving of the engine is allowed under the same conditions as for re-boring, and the sleeve material is modified. Planning of the cylinder block and the cylinder head will be allowed up to a maximum of 0.50 mm. However, the maximum cylinder capacity increased due to re-boring cannot exceed 1314cc.

Cylinder head Port sizes
Intake Port Maximum size: 33mm Tolerance: + / - 0.6 mm
Exhaust Port Maximum size: 28mm Tolerance: + / - 0.6mm
Valve Spring Thickness and Height are free (Double springs are prohibited).

Compression Ratio
Increase in Compression Ratio up to a maximum of 9.5:1 is permitted by facing of the cylinder head or block only.

Camshaft
The Camshaft should be as per the manufacturer's specification.
Optimising Valve Timing and the use of OFFSET KEYS is strictly PROHIBITED.

4.3.2 Transmission

Standard (Ratios: 1st Gear 3.416, 2nd Gear 1.842, 3rd Gear 1.290, 4th Gear 0.918, 5th Gear 0.775).

Final Drive Ratio: 4.105

Flywheel Minimum weight: 7 kg.

Clutch Diameter – 184mm or 190mm

4.3.3 Suspension

Suspension mounting points must remain as per manufacturer specifications. Negative Camber is allowed. The brand of Shock absorber is open. However, pressure-adjustable shock absorbers and competition shock absorbers are prohibited.

Shock Absorber – Make – KYB part numbers are as follows; any other brands with similar specifications are allowed.

Part Numbers are as follows:
Front 333025/26 Gas
Rear 332019/332020 – Gas; 332017/330018 - Gas
333085/333086 - Gas
633049/50 Oil
632034/632035 - Oil
633010/11 Oil
632004/632005 - Oil
632032/632033 - Oil
633111/633112 – Oil

Coil Spring Specifications

Front	Maximum Thickness	- 13mm
	Number of rings	- Minimum 5
Rear	Maximum Thickness	- 12mm
	Number of rings	- Minimum 6

4.3.4 Wheels & Tyers

Wheel Size 5.5J x 13 (Spacers are strictly prohibited). All four tyres should be the same size. Racing Tyres, Slicks or Semi Slicks not permitted. 175 or 185 x 70 x 13 – Brand is Free **(For Tarmac Circuit, Road Races and Hill Climb Events)**

Tyres are free for gravel circuits.

4.3.5 Lighting system

The original taillight or lights of similar size have to be fixed in its original mounting points. Modified or individual lights will not be permitted.

(Refer G-06/6.4)

4.3.6 Weight

MINIMUM CLASS WEIGHT 900 kg (with Driver)

NOTE:.

If car/cars are involved in a racing accident and determined by SLAS to be rechecked, the car/cars involved must be presented for inspection and obtain a fresh Pre- Scrutinizing approval after completion of the repair prior to racing the vehicle in any race meet.

4.4 Class Specific Regulations for GROUP N cars up to and including 1500cc

(One Make Ford Laser/Mazda 323)

To be read in conjunction with Group N Regulations

Body shell and Chassis Only: BD, BE, BF, SGPJFP, SGNKHD, BFTP, BF3P, SGNKCE, SGPJAT, KA, SGNKAU, SGPJAM, SGNKAM, SGPJAS, SGNKCG, SGNKBT, SGPJBJ, SGNJYA, SGPKGM, SGNJCG, SGPJFB series 4-door sedan/hatchback.

4.4.1 Engine

E5 (chain-driven, single or dual)

Bore - 77 mm / Stroke 80 mm / CC 1491

Maximum re-bore allowed is the second oversize specified by the manufacturer (.50) in relation to the original bore; re-sleeving of the engine is allowed under the conditions as for re-boring and the sleeve material modified. Planning of the cylinder block and the cylinder head will be allowed up to a maximum of 0.50 mm. However, the maximum cylinder capacity due to re-boring cannot exceed 1510cc.

Cylinder head Port sizes

Intake Port Maximum size : 33mm Tolerance: + / - 0.6mm
Exhaust Port Maximum size : 28mm Tolerance: + / - 0.6mm
Thickness and Height of the Valve Spring are free (Double springs are prohibited).

Compression Ratio

Increase in Compression Ratio up to a maximum of 9.5:1 is permitted by facing of the cylinder head or block only.

Camshaft

The Camshaft should be as per the manufacturer's specification. Optimizing Valve Timing and the use of OFFSET KEYS is strictly PROHIBITED

4.4.2 Transmission

Standard (Ratios: 1st Gear 3.416, 2nd Gear 1.842, 3rd Gear 1.290, 4th Gear 0.918, 5th Gear 0.775).

Final Drive Ratio: 3.850

Flywheel Minimum weight: 7 kg.

Clutch Diameter – 184mm or 190mm

4.4.3 Suspension

Suspension mounting points must remain as per manufacturer specifications. Negative Camber is allowed. Brand of Shock absorber is open. However, pressure-adjustable shock absorbers and competition shock absorbers are prohibited.

Shock Absorber – Make – KYB part numbers are as follows; any other brands with similar specifications are allowed.

Part Numbers are as follows:
Front 333025/26 Gas
Rear 332019/332020 – Gas; 332017/330018 - Gas
333085/333086 - Gas
633049/50 Oil
632034/632035 - Oil
633010/11 Oil
632004/632005 - Oil
632032/632033 - Oil
633111/633112 – Oil

Coil Spring Specifications

Front	Maximum Thickness	- 13mm
	Number of rings	- Minimum 5
Rear	Maximum Thickness	- 12mm
	Number of rings	- Minimum 6

4.4.4 Wheels & Tyres

Wheel Size 5.5J x 13 (Spacers are strictly prohibited). All four tyres should be the same size. Racing Tyres, slicks, or semi-slicks are not permitted. 175 or 185 x 70 x 13 – Brand is Free **(For Tarmac Circuit, Road Races and Hill Climb Events).**

Tyres are free for gravel circuits.

4.4.5 Lighting system

The original taillight or lights of similar size must be fixed in their original mounting points. Modified or individual lights will not be permitted.

(Refer G-06/6.4)

4.4.6 Weight

MINIMUM CLASS WEIGHT 940 kg (with Driver)

NOTE:.

If car/cars are involved in a racing accident and determined by SLAS to be rechecked, the car/cars involved must be presented for inspection and obtain a fresh Pre-Scrutinizing approval after completing the repair prior to racing the vehicle in any race meet.

4.5 Class Specific Regulations for Group A Modified Cars UP TO 1050cc

4.5.1 DEFINITION

Large scale series production cars.

4.5.2 HOMOLOGATION

At least 2500 identical body shells of these cars must have been manufactured in 12 consecutive months.

4.5.3 NUMBER OF SEATS

Cars should have two (02) seats minimum in design at the original production stage.

4.5.4 CUBIC CAPACITY

Maximum engine capacity: 1050 cc

4.5.5 ENGINE MODIFICATIONS

All modifications are permitted if a series production engine block and cylinder head of the same series of body shell used is retained and the cubic capacity (cc) does not exceed 1050cc. De-stroking is not permitted. All competitors shall declare in writing to the Chief Scrutineer at each race meet the following details as per the given document.

4.5.6 TURBO CHARGED OR SUPERCHARGED

The capacity of the engine will be deemed to be the measured capacity multiplied by the factor 1.70.

4.5.7 ROTARY ENGINE

The capacity (cc) will be deemed to be equivalent to twice (x2) the volume of the working chamber.

4.5.8 BODY PARTS AND GLASS ITEMS

All body parts and glass items must be retained as per the original car. However, only Polycarbonate (minimum thickness of 4mm) may replace the side and rear glasses. Removing the headlights, seats, upholstery, dashboard and carpeting is permitted. The holes may be closed using sheet metal or plastic materials, and may be welded, stuck, or riveted. Other apertures in the bodywork may be closed by adhesive tape only. The original mounting points of the taillight/brake lights must be retained. The lenses of these lights must be clean.

Buffers may be removed for Gravel circuit meets and rallies, compulsory for tarmac and hill climbs.

4.5.9 AIR CLEANER

Air filter element, housing and pipe are free.

4.5.10 CHASSIS / BODYSHELL

No modifications may be made to the manufacturer's design of the series production body shell and/or chassis. Reinforcements, in the form of crash or similar bars inside or outside, are not permitted except for the fitting of a roll cage. However, seam welding and strengthening are permitted.

4.5.11 RE-BORING

Re-boring must not result in increased capacity to make the engine pass into a higher class or exceed the limit allowed in class.

4.5.12 Brakes

Upgrading Brakes is permitted.

4.5.13 Tyres

Tyres are free.

4.5.14 Weight

MINIMUM CLASS WEIGHT 725KG (with driver)

4.6 Class Specific Regulations for GROUP A cars up to and including 1350cc

4.6.1 DEFINITION

Large-scale series production cars.

4.6.2 HOMOLOGATION

At least 2500 identical body shells of these cars must have been manufactured in 12 consecutive months.

4.6.3 NUMBER OF SEATS

Cars should have two (02) seats minimum in design at the original production stage.

4.6.4 CUBIC CAPACITY

Maximum engine capacity: 1350 cc

4.6.5 ENGINE MODIFICATIONS

All modifications are permitted if a series production engine block and cylinder head of the same series of body shell used is retained and the cubic capacity (cc) does not exceed 1350cc. De-stroking is not permitted. All competitors shall declare in writing to the Chief Scrutineer at each race meet the following details as per the given document.

4.6.6 TURBO CHARGED OR SUPERCHARGED

The capacity of the engine will be deemed to be the measured capacity multiplied by the factor 1.70.

4.6.7 ROTARY ENGINE

The capacity (cc) will be deemed to be equivalent to twice (x2) the volume of the working chamber.

4.6.8 BODY PARTS AND GLASS ITEMS

All body parts and glass items must be retained as per the original car. However, only Polycarbonate (minimum thickness of 4mm) may replace the side and rear glasses. Removing the headlights, seats, upholstery, dashboard and carpeting is permitted. The holes may be closed using sheet metal or plastic materials, and may be welded, stuck, or riveted. Other apertures in the bodywork may be closed by adhesive tape only. The original mounting points of the taillight/brake lights must be retained. The lenses of these lights must be clean.

Buffers may be removed for Gravel circuit meets and rallies, compulsory for tarmac and hill climbs.

4.6.9 AIR CLEANER

Air filter element, housing, and pipe are free.

4.6.10 CHASSIS / BODYSHELL

No modifications may be made to the manufacturer's design of the series production body shell and/or chassis. Reinforcements, in the form of crash or similar bars inside or outside, are not permitted except for the fitting of a roll cage. However, seam welding and strengthening are permitted.

4.6.11 RE-BORING

Re-boring must not result in increased capacity to make the engine pass into a higher class or exceed the limit allowed in class.

4.6.12 Brakes

Upgrading Brakes is permitted.

4.6.13 Tyers

Tyres are free

4.6.14 Weight

Minimum weight to be 750 KG (with driver)

4.7 Class Specific Regulations for GROUP H Cars SLH 1600

(One Make HONDA Hatchback 3 door)

These rules should be read in conjunction with GROUP N regulations

4.7.1 Definitions

Manufacturer	- HONDA MOTOR CO., LTD
Engine	- B16A
Cylinder Capacity	- 1,596cc (STD)

4.7.2 Engine

Bore	81.00MM (0.50mm 2nd Oversize allowed. Max Bore 81.50mm, Max CC 1615.774CC)
Stroke	77.40MM
Connecting rod	Steel
Crank Shaft	Steel
Sleeves	Cast Iron
Total minimum volume of a Combustion Chamber in the Cylinder head	41.3cm
Minimum volume of a combustion Chamber in the cylinder Head	42.2cm
Minimum height of the cylinder block	263mm (To be measured from the center of The line bore of the crank to the top of the deck)
Piston Material	Aluminum - alloy
Number of Rings	3
Distance from wrist pin center Line to highest point of piston crown	33.5mm +/- 0.1mm
Distance from Piston at TDC and the gasket plane of the cylinder block	+3.5mm +/- 0.3mm
Crankshaft Maximum diameter of Big end journals	45.0mm
Cylinder Head Minimum Height	140.5mm
Thickness of Cylinder Head Gasket	0.7mm +/- 0.2mm
Inlet Valve Diameter	33mm
Exhaust Valve Diameter	28mm

4.7.3 VALVE SPRINGS

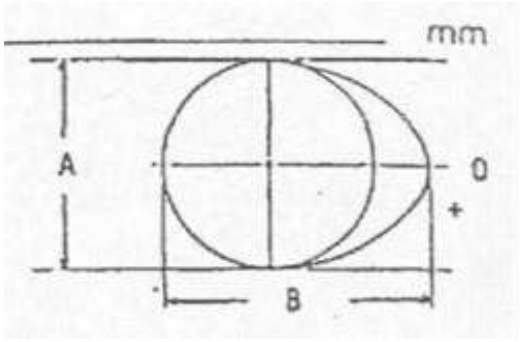
Inlet

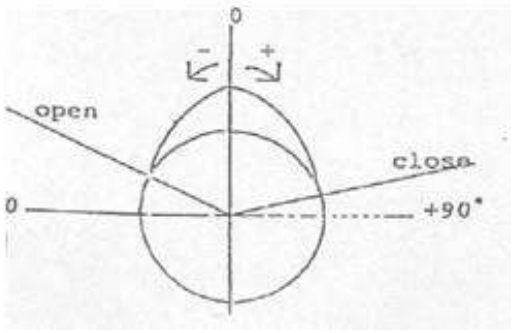
Number of springs per valve	2
Exterior diameter of the springs	Inner Spring 20.2mm +/-0.2mm Outer Spring 28.9mm +/-0.2mm
Diameter of Spring Wire	Inner Spring 2.3mm +/- 0.1mm Outer Spring 3.5mm +/- 0.1mm
Number of Spring Coils	Inner Spring 6.43 Outer Spring 7.74
Maximum Free Length of the Springs	Inner Spring 36.7mm Outer Spring 40.9mm

Exhaust

Diameter of the manifold exit(s)	42.0mm +/- 1.5mm
Number of Springs per Valve	1
Exterior Diameter of the Spring	29.3mm +/- 0.2mm
Number of Spring Coils	6.44
Diameter of Spring Wire	3.7mm +/- 0.1mm
Maximum Free Length of the Spring	41.95mm

4.7.4 CAMSHAFTS





VTEC CAM Lobe Dimensions

Inlet "A" = 29.5mm +/- 0.2mm
Inlet "B" = 36.4mm +/- 0.3mm

Exhaust "A" = 29.5mm +/- 0.2mm
Exhaust "B" = 35.7mm +/- 0.3mm

SECONDARY CAM Lobe Dimensions

Inlet "A" = 29.5mm +/- 0.2mm
Inlet "B" = 35.0mm +/- 0.3mm

Exhaust "A" = 29.5mm +/- 0.2mm
Exhaust "B" = 34.7mm +/- 0.3mm

PRIMARY CAM Lobe Dimensions

Inlet "A" = 29.5mm +/- 0.2mm
Inlet "B" = 33.1mm +/- 0.3mm

Exhaust "A" = 29.5mm +/- 0.2mm
Exhaust "B" = 32.8mm +/- 0.3mm

4.7.5 Air Intake, Cooling system, Wire Harness and ECU

Throttle Body bore Diameter - 60.00mm + 0.2mm

Air filter(s) are free. Original housing can be removed.

Cooling system & wiring harness and ECU - free

4.7.6 Exhaust

Exhaust is Free. The Manufacturer's Cast Iron Exhaust Manifold should be retained. (4-2-1)

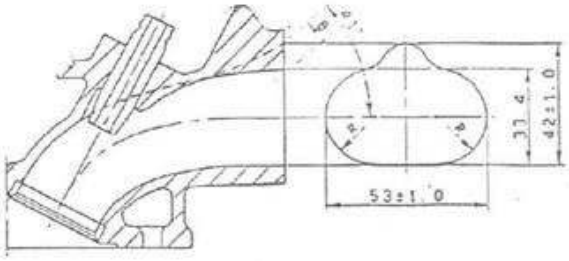
4.7.7 Inlet Manifold, Exhaust Manifold

Inlet & Exhaust Ports Cylinder Head Dimensions.

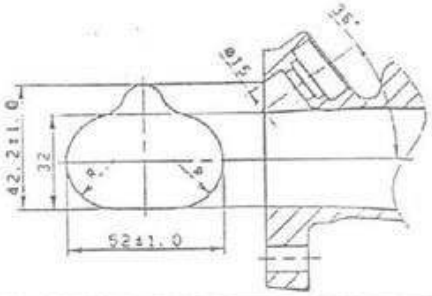
DRAWINGS / 図解

Engine / エンジン

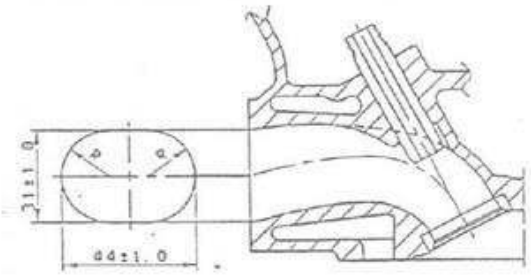
I Cylinderhead inlet ports, manifold side
(tolerances on dimensions: −2%, +4%)
シリンダーインテークポート、マニホールド側
(寸法公差：−2%+4%)



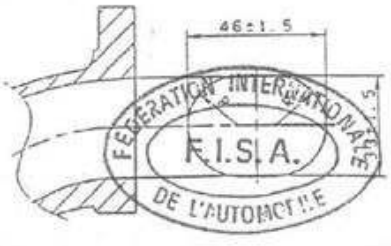
II Inlet manifold ports, cylinderhead side
(tolerances on dimensions: −2%, +4%)
インテークマニホールドポート、シリンダーヘッド側
(寸法公差：−2%+4%)



III Cylinderhead exhaust ports, manifold side (tolerances on dimensions: −2%, +4%)
シリンダーヘッドエキゾーストポート、マニホールド側
(寸法公差：−2%+4%)



IV Exhaust manifold ports, cylinderhead side (tolerances on dimensions: −2%, +4%)
エキゾーストマニホールドポート、シリンダーヘッド側
(寸法公差：−2%+4%)



4.7.8 Ignition System

Number of Ignition Coils- 01

4.7.9 Transmission

Clutch Type - Dry single plate

Diameter of Clutch Plate - 220mm +/- 2mm

Flywheel Weight - 7.4kg

LSD - Aftermarket is permitted

Gear Ratios

1st Gear	- 3.230
2nd Gear	- 2.105
3rd Gear	- 1.458
4th Gear	- 1.107
5th Gear	- 0.848
Reverse	- 3.000
Final Drive	- 4.400

4.7.10 Body Parts & Glass Items

All body parts must be retained. However, only polycarbonate with a minimum thickness of 4 mm may replace the door and side panel glass, which are permanently fixed.

The taillights and stop lights must be retained and be in operating condition. Headlights / front lights and all interior equipment can be removed or replaced. All seats other than the driver's racing seat must be removed. The front passenger seat, a proper racing seat like the driver's racing seat, can be fitted only for rallies. Headlights may be covered with suitable material. Buffers may be removed for Gravel meets and rallies only (bumpers are compulsory for tarmac). Use of fibreglass or any other material other than any form of steel and/or bars on Front Fenders and Bumpers is permitted, as an option to the original parts. The Design of the Front bumper, rear bumper, front fenders, and rear spoiler is free. The Boot Lid may be modified. Hidden lurk bars behind the front and rear bumpers are strictly prohibited. However, if a Crash bar or Lurk bar has been attached to the car when it is manufactured, the Competitor shall declare the same with proof of documentation to the chief scrutineer at each event. Aerodynamic and dynamic devices will be allowed. Trim strips and body mouldings may be removed.

4.7.11 Others

- The use of data loggers is allowed.
- Twin or multiple injectors are not allowed.
- Engine Mounts – The Number of Mounts and Material is free.
- Wire Harness and ECU are free.
- Original Fuel Tank mounted in its original position with its original mounting must be retained; use of external fuel pump and regulator is allowed.
- Aftermarket Oil cooler and oil catch tank are allowed.

4.7.12 Tyres

Semi-slick tyres (dot-rated) to be used for Tarmac - Circuit meets & Hill climbs.
Competition Tyres to be used for Supercross & Rallies.

4.7.13 Brakes

Upgrading of Brakes is permitted.

4.7.14 Weight

MINIMUM CLASS WEIGHT 1075KG (with Driver)

4.8 Class Specific Regulation for GROUP H cars SLH 2000

(One Make - Subaru Legacy)

These rules should be read in conjunction with GROUP N regulations

4.8.1 MAKE

Subaru

4.8.2 MODELS ALLOWED

Legacy- BC, BJ, BF, BD, BG and BK

2,000cc (non-turbo)

4.8.3 DEFINITIONS

Manufacturer : Subaru Corporation/ Fuji Heavy Industries

Engine permitted **:** EJ20 N/A (NATURALLY ASPIRATED)

Cylinder Capacity : 1994cc

4.8.4 ENGINE

Bore	92.00mm (2nd Oversize allowed 92.5mm)
Stroke	75.00mm
Con Rod	Steel
Crank Shaft	Steel
Sleeves	Cast Iron
Maximum Compression Ratio	11.6:1
Piston	O.E. Pistons only permitted
Piston Material	Aluminum - Alloy
Re-Sleeving Material	Free
Camshaft	Free
Valve Spring	Intake & Exhaust single Valve Spring only. Make & Material Free
Valve Diameter	Intake not to exceed 36mm Exhaust not to exceed 32mm
Valve Stem Diameter	Intake not to exceed 06mm Exhaust not to exceed 6mm
Valve Overall Length	Intake not to exceed 104.5mm Exhaust not to exceed 104.6mm
Valve Seat Angle	Intake and Exhaust 45 degrees

4.8.5 Induction

Throttle Body bore Diameter - 66.00mm

Air filter element and Housing - Free

4.8.6 Transmission

5-speed manual, All Wheel Drive

Final Drive **-** 4.44 or 4.11

Clutch, Flywheel, LSD **-** Free

4.8.7 Electrical, Wire harness, ECU, Fuel System **-** Free

4.8.8 Tyres

Semi-slick tyres (dot-rated) to be used for Tarmac - Circuit meets & Hill climbs; Competition Tyres to be used for - Supercross & Rallies.

4.8.9 Brakes

Upgrading of Brakes is permitted

4.8.10 Weight

MINIMUM CLASS WEIGHT 1175KG (with Driver)

4.9 Class Specific Regulations for GROUP H cars up to and including 1275cc

(One Make Mini 1275cc)

All cars must be raced with standard Mini 1275 cc, non-Cooper/S engines and gearbox. No alterations are allowed on the Engine, Cylinder Head, or Gearbox for that model apart from those modifications specifically allowed below.

These rules shall apply to Mini / Mini Clubman cars manufactured up to 2000.

4.9.1 ENGINE

Standard 1275 cc Cylinder block is mandatory. All '12A' and '12H' series blocks.

It is permitted to convert a car normally supplied or homologated as an 850 cc / 998 cc / 1275 cc (or vice versa), provided that all the elements that would have had to be present in the vehicle's original form under these regulations are still present after conversion.

The Connecting Rod Can only be replaced with part # BHM 1137

Bore:

(2.78in + .060in = 2.84in) 70.61mm + 1.5mm = 72.14mm x (3.2)

81.28mm (1275 cc) Maximum bore size permitted: 70.61 + 1.5mm = 72.14mm

Only the Standard mini 1275cc (12G940) Cylinder Head must be retained. Minimum head height should be 69mm. The Ports of the Original / above mentioned 1275cc Cylinder heads may be enlarged. 12A & 12H engine blocks will be permitted. Minimum bore diameter permitted is (+ 60 piston) 72.14.

Pistons and rings:

[Minimum of 3 rings] must be of original specification and material and cannot be modified. The pistons can be flush with the block face, but no part of it can protrude beyond the block face.

The original/standard piston can only be replaced with unmodified aftermarket pistons.

Connecting Rod:

Can only be replaced with part number:

A Series	2 Nos.	12G123	} Gudgeon Pin
	2 Nos.	12G126	} Bush Type
A+ Series	2 Nos.	12A1997	
	2 Nos.	12A1999	} Fi Type

Crankshaft:

Any production Mini with standard stroke 81.28 mm is permitted.

Cooper S Crankshafts Part Nos: 12 A 595, 12A1454, BHM 1436 NOT allowed

Camshafts

Camshaft standard.

Checking clearance: 0.017 in

Inlet Valve Lift - 0 .263 in

Exhaust Valve Lift - 0 .263 in

Camshaft Duration - Inlet 230 degrees
Exhaust 252 degrees

Lobe center angle **-** Inlet 106 degrees
Exhaust 109 degrees

Optimizing valve timing is permitted. Provided the original wheels are retained. The use of venire adjustments is prohibited. Valves and springs – Double Valve Springs Permitted. Inlet 35.71mm dia., Exhaust 29.38mm dia. (as per specs of Haynes Manual)

4.9.2 AIR INLET SYSTEM

A single 1.75” mm SU HS6 Carb or single 1.75' (HIF 44) carburettor is permitted. The air filter element is free.

4.9.3 EXHAUST SYSTEM

The exhaust system is free.

4.9.4 IGNITION SYSTEM

The ignition system shall only be a contact breaker system. The ignition distributor should be fitted as standard. Nos. 25D4 / 45D4 / 49D4 / 59D4 / 65DM4. Electronic ignition is allowed.

The use of magnetic field electrical breakers will be permitted in place of platinum electrical breakers.

4.9.5 COOLING

The standard engine-driven cooling fan should be retained in original working order.

4.9.6 TRANSMISSION & CLUTCH

The combined weight of the flywheel and clutch assembly [clutch plate and back plate] should not be less than 5.9kg.

Prohibited: aluminium or competition flywheel/racing gears

GEAR RATIOS

Final Drive STD helical cut 3.211 RATIO (pinion 19-teeth and crown wheel 61 teeth). [A+ Series]

The 29-tooth Primary Gear and the 29-tooth Input Gear must remain standard, along with the intermediate gear [idler] 37-tooth, and must not be interchanged with any other ratios.

The intermediate gear must remain standard. (29:37:29)

Prohibited:

Locked, torque- reducing, or any form of limited- slip diff i s prohibited.

The replacement of any gears from the main gear cluster and lay gear as fitted to the Mini 1000 that will in any way alter the ratios is not allowed.

4.9.7 SUSPENSION

Rear radius arms cannot be lightened or altered. The vehicle may be lowered by alteration of cone/doughnut only. The original shock absorber length, mounting points, and supports cannot be changed. Only pressure-adjustable shock absorbers are allowed. Negative camber is allowed.

4.9.8 BRAKES

Mini fins are not allowed. The drilling or grooving of any brake parts. Split-rimmed wheels are prohibited. Upgrading brakes is permitted.

4.9.9 WHEELS, TYRES & STEERING

12 inch for Tarmac. Racing Tyres, slicks, or semi-slicks are not permitted. Size 155 x 65 x 12. Brand is Free.

Gravel Tyres are free.

4.9.10 WEIGHT

MINIMUM CLASS WEIGHT 695 kg (with Driver)

4.10 Class Specific Regulations for Group SL S Cars up to 3500cc

The Rules for the above class should be read as follows: First, you read - Section 1 - General Specifications. Second, you read - Section 4 - Class Specific Regulations.

General Regulations will be SUPERSEDED by the **Group Regulations;** both General and Group Regulations will be SUPERSEDED by the **Class Specific Regulations**.

4.10.1 Body Shell / Chassis

A Series production closed body shell of which at least 5000 units have been manufactured post 1990. The Only modifications permitted are to accommodate the proper positioning of the engine and transmission.

4.10.2 Engine mounting free. (Subject to Pre-Scrutinizing)

The wheelbase of the series production car cannot be altered.

No other modifications may be made to the manufacturer's design of the series production body shell and/or chassis. However, the only other modifications permitted to the body shell would be – seam welding,

strengthening, mounting a roll cage, and that which is necessary to convert an engine or upgrade a vehicle from a two-wheel drive to a four-wheel drive, and widening of the rear fenders and, in addition, the front nose panel could be modified to make it detachable.

However, if a nose panel is modified, the design should be sent to SLAS for approval before modification.

4.10.3 Number of seats

Cars must have a minimum of two (02) seats whilst being manufactured.

4.10.4 BODY PARTS and GLASS ITEMS

All body parts and glass items must be retained. However, only Polycarbonate door windows (minimum thickness of 4mm) may be replaced; front and rear windscreen glass must be retained.

The position of the taillights and stop lights must be retained and be in operating condition. Headlights/ front lights and all interior equipment can be removed or replaced. All seats other than the driver's racing seat must be removed. The front passenger seat, a proper racing seat like the driver's racing seat, can be fitted only for Rallies. Headlights may be covered with suitable material. Front and Rear bumpers must be retained.

The material of the fenders and the front & Rear bumpers is free. The Design of the Front bumper, rear bumper, front fenders, rear fenders, and Spoiler is free. Hidden lurk bars behind the front and rear bumpers are strictly prohibited. No additional crash bars are permitted.

4.10.5 Engine

The Engine is free, but the Engine block must be from a production-series engine (At least 2500 engines produced), provided the engine is originally designed for or derived from any automobile and does not exceed the maximum CC limit of 3500 cm^3

Turbo multifactor = 1.7.

Motorcycle / Boat / Aircraft engines are not allowed. Twin Turbo, Rotary, and supercharged engines are not allowed.

For turbo-charged engines, the maximum cylinder capacity authorised is 2058 cm^3

Normally aspirated engines are allowed up to the equivalent corrected cylinder capacity of the turbo engines.

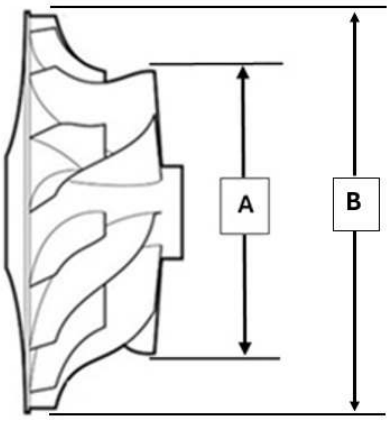
Valve Train - variable valve timing and Lift systems prohibited

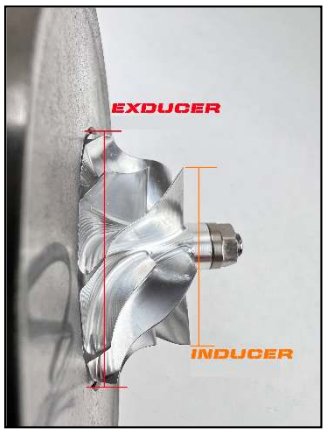
4.10.6 Turbo Charger

The turbocharger must be a single turbocharger, with single-stage compression and expansion, and must not have variable geometry, with the following compressor size as maximum:

A - Compressor wheel inducer should **NOT exceed 50mm**.
B - Compressor wheel exducer should **NOT exceed 68mm**.

Measuring locations of the compressor wheel are as below.





4.10.7 Waste gate

The waste gate is free. Electromagnetic or hydraulic actuation is not permitted.

4.10.8 Intercooler

The intercooler must be of the air/air type. It must be mounted in the engine compartment.

4.10.9 Restrictor

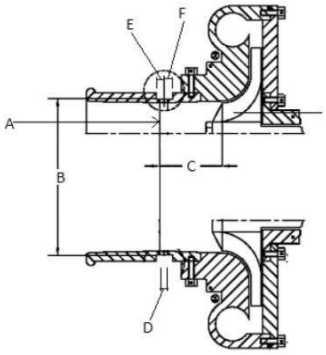
All turbocharged cars must be fitted with a 32mm restrictor fixed to the compressor housing. The 32 mm area should be maintained for a minimum of 3 mm. All the air necessary for feeding the engine must pass through the restrictor.

The maximum internal diameter of the restrictor is 32 mm, maintained for a minimum distance of 3 mm measured downstream of a plane perpendicular to the rotational axis situated at a maximum of 50 mm upstream of a plane passing through the most upstream extremities of the wheel blades; this diameter must be complied with regardless of the temperature conditions. This rule will apply to all events, including hill climbs.

The external diameter of the restrictor at its narrowest point must be less than 38mm 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 must be entirely removed from the body of the compressor, or from the restrictor, in order to detach the restrictor from the compressor. Attachments by means of needle screws are not authorised.

For the installation of this restrictor, it is permitted to remove material from the compressor housing and add to it, for the sole purpose of attaching the restrictor onto the compressor housing. The head 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 mounting and sealing, which must be carried out between the mounting screws, between the restrictor (or the restrictor compressor housing attachments), the compressor housing (or the housing/flange attachment) and the turbine housing (or the housing/flange attachment).



A- Maximum internal diameter of the narrowest point must not exceed 32mm

B- Maximum external diameter over the 32mm orifice must not exceed 38mm

C- Maximum distance from beginning of the 32mm orifice to the impeller blade must not exceed 50mm

D- The 32mm orifice must be maintained for a minimum of 3mm

E- & F- The 38mm external diameter limit must be maintained for a minimum of 5mm on either side of the centre of the 32mm orifice.

4.10.10 Water Radiator

The water radiator is free. Radiator size, shape, and mounting point are free.

4.10.11 Fuel Tank

Fuel Tank to remain in the original area of the production body shell.
The floor of the rear seats may be modified to install the racing fuel tank.

The fuel tank must be located at least 300 mm from the bodywork in both lateral and longitudinal directions.

The bottom of the tank must be a minimum of 80 mm from the lowest point of the chassis. A 1mm thick steel screen between the tank and the cockpit is compulsory.

4.10.12 Fuel sampling

The car must be fitted with a self-sealing connector for sampling fuel.

A minimum of 6 liters of fuel must remain in the fuel tank at any stage of the competition.

4.10.13 TRANSMISSION

Any electronic driving aid system is prohibited (ABS / ASR / ESP / ACD / AYC / DCCD /etc.). Conversion to four-wheel drive is permitted.

Front, rear, and center mechanical limited-slip differentials are permitted. Hydraulic or Electric system differential controllers are NOT permitted.

In the case of a 4-wheel drive vehicle with no central differential, a rear final drive disconnect system will be permitted.

Type of gearbox
Only H Pattern gearboxes are permitted.

Clutch
Free, but must be operated by the driver's foot.

4.10.14 Brake / Clutch fluid tanks

If inside the cockpit, they must be securely fastened and protected.

4.10.15 SUSPENSION

Cars must be fitted with a sprung suspension. The operating method and the design of the suspension system are free. The use of active suspension is not permitted.

4.10.16 Brakes

Upgrading of Brakes is permitted.

4.10.17 Weight

The weight of the car is measured with the driver on board wearing his/her full racing apparel, and with the fluids remaining at the moment at which the measurement is taken.

The weight must be according to the following table:

Over 1400 cm^3 and up to 1600 cm^3	1050 kg
Over 1600 cm^3 and up to 2000 cm^3	1150 kg
Over 2000 cm^3 and up to 2500 cm^3	1180 kg
Over 2500 cm^3 and up to 3000 cm^3	1260 kg
Over 3000 cm^3 and up to 3500 cm^3	1350 kg

It is permitted to complete the weight of the car by one or several ballasts, if they are strong and unitary blocks, fixed by means of steel bolts, placed on the floor of the cockpit

4.10.18 Wheels and Tyres

The diameter of the rim may not exceed 18".

Tyres are Free for Gravel, Rallies, Hill Climbs and Tarmac Events.

4.11 Class Specific Regulations for Group GT Cars up to 3500cc

4.11.1 DEFINITION

Large-scale series production cars.

4.11.2 HOMOLOGATION

At least 2500 identical body shells of these cars must have been manufactured in 12 consecutive months.

4.11.3 NUMBER OF SEATS

Cars must have four (04) seats minimum whilst being manufactured.

4.11.4 WEIGHT

Up to 3500 cc - 1350 kg for H Pattern Gearbox (with the Driver).

The Minimum Weight of a car fitted with a gearbox using any shifting mechanism other than an H Pattern (that includes Automatic, Sequential, Dual Clutch etc.) ***will be 1390 KG (with the Driver).***

4.11.5 ENGINE MODIFICATIONS

All modifications are permitted as long as a series production engine block is retained, and the cubic capacity (cc) does not exceed the class limit. The Engine could be interchanged with an earlier/later model of the same series. However, for Mitsubishi Lancer / Cedia Cars that are upgraded to 4WD from a 2-Wheel Drive, an Engine change will be permitted only to a 4G63 (Upgrade up to Evo 9) or a 4B11 (Upgrade to Evo 10). Oil cooler is free.

For Turbocharged or Supercharged engines, the capacity of the engine will be deemed to be the measured capacity multiplied by the factor 1.70. For Rotary engines, the capacity (cc) will be deemed to be equivalent to twice (x2) the volume of the working chamber.

4.11.6 BODYSHELL/ CHASSIS

No modifications may be made to the manufacturer's design of the series production body shell and/or chassis. However, the only modifications permitted to the body shell would be: seam welding, strengthening, mounting a roll cage, and that which is necessary to convert or upgrade a vehicle from a two-wheel drive to a four-wheel drive, and widening of the rear fenders; in addition, the front nose panel could be modified to make it detachable. However, if a nose panel is modified, the design should be sent to SLAS for approval before modification.

4.11.7 AIR CLEANER

Air filter element and housing are free.

4.11.8 BODY PARTS and GLASS ITEMS

All body parts and glass items must be retained. However, only Polycarbonate door windows (minimum thickness of 4mm) may be replaced; front and rear windscreen glass must remain.

The taillights and stop lights must be retained and be in operating condition. Headlights/ front lights and all interior equipment can be removed or replaced. All seats other than the driver’s racing seat must be removed. The front passenger seat, a proper racing seat like the driver’s racing seat, can be fitted only for Rallies. Headlights may be covered with

suitable material. Buffers may be removed for Gravel meets and rallies only (bumpers are compulsory for tarmac). Use of fibreglass or any other material other than any form of steel and/or bars on Front Fenders and Bumpers is permitted, as an option to the original parts. The Design of the Front bumper, rear bumper, front fenders and rear spoiler is free. The Boot Lid may be modified. Hidden lurk bars behind the front and rear bumpers are strictly prohibited. However, if a Crash bar or Lurk bar has been attached to the car when it is manufactured, the Competitor shall declare the same with proof of documentation to the chief scrutineer at each event. Aerodynamic and dynamic devices will be allowed. Trim strips and body mouldings may be removed.

4.11.9 RE-BORING

Re-boring must not result in increased capacity to make the engine pass into a higher class or exceed the limit allowed by these regulations.

4.11.10 TURBOCHARGED OR SUPERCHARGED CARS UP TO 3500 CC

The series production turbocharger or supercharger must be retained in the original position as per the standard engine. Replacing internals or housings or any other part among series production or aftermarket turbochargers or superchargers is prohibited. Any modification/ s to the original turbocharger or its components are strictly prohibited (including wastegate). External wastegates are prohibited.

4.11.11 RESTRICTOR

All turbocharged or supercharged cars must be fitted with a 36mm restrictor fixed to the compressor housing. The 36 mm area should be maintained for a minimum of 3 mm. All the air necessary for feeding the engine must pass through the restrictor.

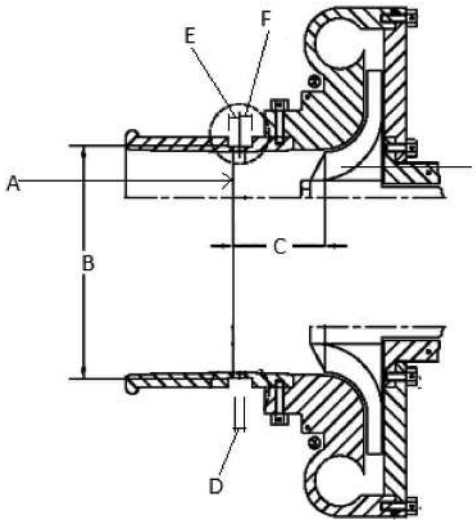
The maximum internal diameter of the restrictor is 36 mm, maintained for a minimum distance of 3 mm measured downstream of a plane perpendicular to the rotational axis situated at a maximum of 50 mm upstream of a plane passing through the most upstream extremities of the wheel blades; this diameter must be complied with regardless of the temperature conditions. This rule will apply to all events except for hill climbs.

The external diameter of the restrictor at its narrowest point must be less than 42 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 must be entirely removed from the body of the compressor, or from the restrictor, to detach the restrictor from the compressor. Attachments by means of needle screws are not authorised.

For the installation of this restrictor, it is permitted to remove material from the compressor housing, and add to it, for the sole purpose of attaching the restrictor onto the compressor housing. The head 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 mounting and sealing which must be carried out between the mounting screws, between the restrictor (or the restrictor



A - Maximum internal diameter at the narrowest point must not exceed 36mm at any temperature.
B - Maximum External diameter over the 36mm orifice must not exceed 42mm at any temperature.
C - Maximum distance from the begining* of the 36mm orifice to the impellor blade must not exceed 50mm at any temperature.
D - The 36mm orifice must be maintained for a minimum of 3mm.
E & F - The 42mm external diameter limit must be maintained for a minimum of 5mm on to either side from the center of the 36mm orifice.

Notes -
1. 'Begining' of the restrictor is considered as the side towards the air inlet pipe from the air filter, not the turbo side.
2. The restrictor must be made of one block of material.
3. All air passing through to the engine must not by pass the restrictor under no circumstance.
4. The 36mm orifice must be maintained right round its circumference.

compressor housing attachments), the compressor housing (or the housing/flange attachment) and the turbine housing (or the housing/flange attachment). In case of an engine with two parallel compressors, each compressor must be limited by a restrictor with a maximum internal diameter of 28.0 mm and a maximum external diameter of 32 mm in the conditions set out above.

Normal aspirated engines with a CC of more than 2000 should have a restrictor, with an internal diameter of 43.2 mm (in the case of one restrictor) and 31.3mm in the case of two (02) restrictors.

Refer to the drawing below:

4.11.12 RACE WORTHINESS AND SAFETY

Competitors must ensure that the competition vehicle is race-worthy and safe. The interpretation of this clause will lie with the Chief Scrutineer / Stewards of the meet.

4.11.13 TYRES

Tyres are Free

In case of Wet weather, the organizing Club/ The Clark of the course must declare that the track is Wet in order for Wet tyres to be used prior to a qualifying session or race.

4.11.14 FUEL TANK

The fuel tank should be mounted in the original manufacturer's mounting position.

4.11.15 Exhaust

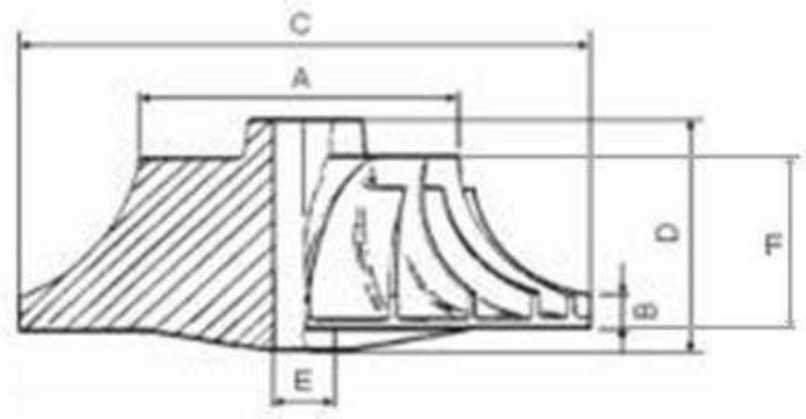
Exhaust is free.

4.11.16 Brakes

Upgrading Brakes is permitted

4.11.17 SL-GT up to 3500CC TURBO MEASUREMENTS – Maximum Dimensions. APG-GT-01

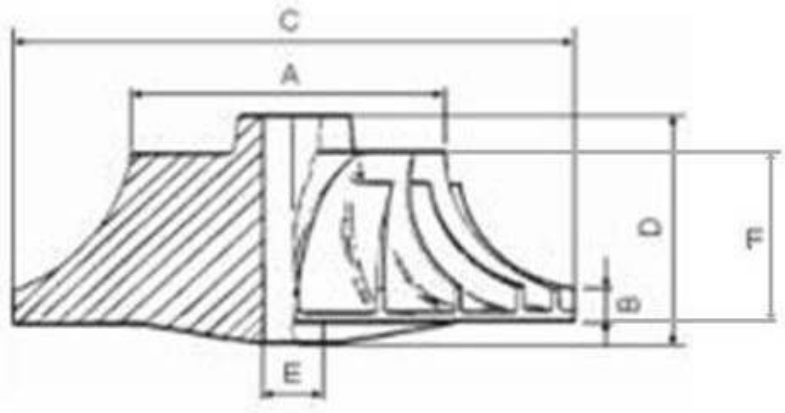
SLGT Turbo regulation for 4G63 engine, Maximum Measurements.



Impeller	Diagram	SPEC
Number of blades		6 taller+ 6 Short
A. Blade Upper diameter (taken as Inner diameter of the impellor housing at the narrowest)	Diagram I1	50mm
B. Blade outer height	Diagram I2	5.6mm
C. Impeller Diameter	Diagram I3	68mm
D. Impeller height	Diagram I4	31.5mm
E. Impeller side Shaft Diameter	Diagram I 5	6.6mm
F. Height of blades Tall Short	Diagram I6	 22mm 16.4mm
Turbine		
Number of blades		12
A. Blade top diameter	Diagram E1	50.38mm
B. Blade height	Diagram E2	20.5mm
C. Blade bottom Diameter	Diagram E3	56.5mm
D. Turbine height	Diagram E4	25mm
E. Shaft Diameter	Diagram E5	9.2mm
GENERAL		
Bearing	Gen 1	Bush
Blades/Vanes		No Variable Vanes

4.11.18 SL-GT up to 3500CC TURBO MEASUREMENTS – Maximum Dimensions. APG-GT-02

SLGT Turbo regulation for 4B11 engine, Maximum Measurements.



Impeller	Diagram	4B11 engine
Number of blades		6 taller+ 6 Short
A. Blade Upper diameter (taken as Inner diameter of the impellor housing at the narrowest)	Diagram I1	48mm
B. Blade outer height	Diagram I2	
C. Impeller Diameter	Diagram I3	68mm
D. Impeller height	Diagram I4	
E. Impeller side Shaft Diameter	Diagram I 5	
F. Height of blades Tall Short	Diagram I6	
Turbine		
Number of blades		12
A. Blade top diameter	Diagram E1	49.5mm
B. Blade height	Diagram E2	
C. Blade bottom Diameter	Diagram E3	56mm
D. Turbine height	Diagram E4	
E. Shaft Diameter	Diagram E5	
GENERAL		
Bearing	Gen 1	Bush
Blades/Vanes		No Variable Vanes

4.12 Class Specific Regulations for Group T & J

Specific Rules & Regulations for SL - T & J Double and Single Cabs, SUVs and Other 4-wheel drive vehicles.

Diesel up to 5500cc - (must be on body-on-frame / ladder frame configuration).

T & J Open - Diesel & Petrol Vehicles (SUV's Allowed).

4.12.1 DEFINITION

Double Cabs, Single Cabs, Special Utility Vehicles and other four-wheel drive vehicles.

4.12.2 MODIFICATION

Modifications to Engine, Gearbox, Air Intake, Suspension and Braking System is Permitted, provided the engine is originally designed for/ or derived from any automobile of any make or model.

4.12.3 EXCLUSIONS

Motorcycle/boat/aircraft engines are not allowed.

Turbo, rotary, and supercharged engines are allowed if they do not exceed the class limit for T and J Diesels up to 5500CC.

For the Open event, the Cylinder Capacity is not limited.

Number of Seats:
Minimum of 02 front-mounted seats when being manufactured.

4.12.4 Safety Regulations

Should conform to General Specifications.

4.12.5 BODY MODIFICATIONS

All modifications are permitted. However, any vehicle considered unsafe or not race-worthy as deemed by the Chief Scrutineer / Stewards of the Meet or the Organising Committee will not be permitted to participate.

4.12.6 TYRES

Tyres are free. However, gravel tyres should be used for gravel events only.

4.12.7 Brakes

Upgrading of Brakes is permitted.

SECTION 5

5. FORMULA CARS

5.1 Formula McLarens 1300cc EFI

Vehicle specifications are as per the owner's manual (engine and chassis)

5.2 Modified Formula Cars up to 1665cc

Type and make of engine and chassis are free. All modifications are permitted.

5.3 Specific Regulations for Formula Ford 1600 GENERAL

As with all regulations, "UNLESS IT SAYS YOU CAN DO IT. YOU CANNOT".

5.3.1 DESCRIPTION

Four-wheel, single-seater racing car, as defined for Formula 3 (1985) and these regulations, fitted with a Ford 1600cc GT "Kent" Engine.

5.3.2 SAFETY

These regulations are based on the current RACMSA Yearbook (Blue Book). All relevant and current RACMSA regulations apply. See Appendix 'A' for some of the more specific regulations.

5.3.3 CHASSIS

(a) The chassis must be of tubular steel construction with no stress-bearing panels except bulkhead and under tray; curvature of the under tray must not exceed 2.54 cm. The under tray/floor (E 13.2.4) extends from the bulkhead forward of the pedals to the bulkhead between the fuel tank and the engine. Minocqua chassis construction is prohibited. Stress-bearing panels are defined as sheet metal fixed to the frame by welding or bonding or by rivets, bolts or screws which have centres closer than 15.25cm. Bodywork must not be used as stress-bearing panels. The use of stabilised materials, composite materials using carbon and/or Kevlar reinforcement is prohibited.

(b) Cars built after 1.1.87 and before 1.1.95: The internal cross-sectional area of the cockpit from the driver's feet to behind his seat shall nowhere be less than 700 cm2, and a minimum width must be 25cm over the whole length of the cockpit. The only intrusion permitted into the cross-sectional area is the steering column.

(c) Cars built after 1.1.95: The free internal cross section of the cockpit from the soles of the driver's feet to behind his seat shall at no point be less than 700 cm2. The only thing which may encroach on this area is the steering column. A free vertical section of minimum 25cm width maintained to a minimum height of 25cm with corners of maximum 5cm radius must be maintained over the whole length of the cockpit with the steering wheel removed. The driver normally seated in his driving position with the seat belts fastened and the steering wheel in place must be able to raise both legs together such that his knees reach the plane of the steering wheel in the rearward's direction: this action must not be obstructed by any part of the car.

(d) Cars built after 1.1.87: The soles of the feet of the driver, seated in the normal driving position and with his feet on the pedals in the inoperative position, shall not be situated to the fore of the vertical plane passing through the centre line of the front wheels.

(e) No engine oil or water tubes are permitted within the cockpit.

(f) Cars built after 1.1.95 -The chassis must include an impact-absorbing structure fitted ahead of the front bulkhead of the tubular steel frame. This structure must be independent of the bodywork and must be solidly fixed to the extremities of the bulkhead (i.e. with bolts requiring tools for removal). It must constitute a box of 30cm minimum length, 15cmminimum height in any vertical section, and 400cm2 minimum total cross section. It must be metallic, using honeycomb sandwich construction with a panel thickness of 15mm minimum. It is recommended, but not mandatory, that this safety feature is fitted to older cars.

(g) Cars built after 1.1.96: Must be built with a LATERAL PROTECTION STRUCTURE, defined as continuous panels whose projection on a vertical plane parallel to the longitudinal axis of the car shall be at least 15cm high, shall extend on either side of the car, at a minimum distance of 55cm from the car's longitudinal centre line between at least the transverse planes passing through the fuel tank rear face and the frontal extremity of the minimum cockpit opening, and at a minimum distance of 35cm from the car's longitudinal centre line between at least the transversal planes passing through the above extremity and the front rollover bar hoop. These panels shall be made from a composite material of 30 cm2 minimum cross section with a honeycomb core in metal giving adequate resistance to compression. The external skins shall be of aluminium alloy of a minimum thickness of 0.5mm or made up of another assembly of materials of equivalent efficiency. The panels must be securely attached to the bottom and at the upper extremity to the main structure of the car in such a manner as to ensure absorption of a lateral impact. The radiators may play the role of protective panels or of transversal struts. The periphery of the bodywork covering the

Lateral Protection Structure, when viewed from below, must be curved upwards with a minimum radius of 5cm, and a maximum radius of 7 cm, except for air entry and exit openings into the Lateral Protection Structure. The floor of the side pod must reject the plan of the upper surface. The floor is to be in the same plane as the under tray in both directions, i.e. transverse and longitudinal, subject to all points being within 2.54cm of any at plane situated under the car (see Art 3.1).

5.3.4 BODYWORK

See table of single-seater dimensions. (Appendix "B"). The use of composite materials using carbon and/or Kevlar reinforcement is prohibited. Bodywork is not required behind the vertical plane taken through the front of the topmost portion of the roll over structure. If bodywork is used, it must conform to the following regulation.

(a) Any device designed to augment the down thrust on the vehicle aerodynamically is prohibited, as are aerofoils, nose or spoilers of any type.

(b) For cars built after 1.1.87, the engine cover must not extend rearwards past the rearmost point of the gearbox housing (no gearbox extensions permitted). The shape of the cover must not include any reflex curves, and **no flat** surfaces are permitted within 15° of the horizontal.

(c) For cars built after 1.1.87, the lower rear bodywork (located below the wheel center line) is only permitted alongside and beneath the engine and can only extend from behind the cockpit to a line drawn through the rear axis. The incorporation of suspension or other fairings in this bodywork or separately is prohibited.

(d) It is not permitted to construct any suspension member in the form of an aero foil or to incorporate a spoiler in the construction of any suspension member.

(e) All cars must have at least two mirrors mounted so that the driver has visibility on both sides of the car (minimum surface area of each one: 55cm^2).

(f) For cars built after 1.1.95 Cockpit opening: The opening giving access to the cockpit must allow a designated horizontal template to be inserted vertically into the cockpit (not considering the steering wheel) down to 25mm lower than the lowest point of the cockpit opening. This template is defined by dimensions J, K, L in Appendix "B".

(g) See also Lateral Protection Structures.

5.3.5 ENGINE GENERAL

(a) Engines will be mounted upright and aligned fore and aft in the chassis.

(b) The addition of any material, be it metal, plastic or composite, etc., by any means, be it welding, bonding, encapsulation or encasement to any component is prohibited. However, specific repair of the mounting points of the cylinder block to the transmission or chassis is allowed, whilst other casting repairs may be allowed with prior written approval of the Technical Commissioner responsible for the Formula.

(c) Balancing of reciprocating and rotating parts is permitted only by removal of metal from locations so provided by the manufacturer.

(d) Pump, fan and generator drive pulleys and their retention bolts, washers and belts are free.

(e) Mechanical tachometer drives may be fitted.

(f) Generators are optional.

(g) The use of non-standard replacement fasteners, nuts, bolts, screws, studs and washers which are not connected with, or which do not support, any moving parts of the engine or its compulsorily retained accessories is permitted. Freedom granted to any fastener does not allow for freedom to move items relative to each other. For components that are granted the freedom for the fitment of a key or dowel, then material may be removed to allow the fitting of the key or dowel. Only one hole or keyway per component is allowed.

(h) The use of thread locking compounds is permitted.

(i) Gaskets are free except for the cylinder head, intake and exhaust system gaskets, which must be standard Ford manufacture for the engine, and inlet manifold to cylinder head gasket which must be of approximate production thickness (see 5.2e).

(j) Any process of cleaning may be used on any component, provided the surface finish, which must remain standard, is not affected.

(k) Forced induction is prohibited. Ram Air generated by the forward motion of the car is not considered as forced induction.

(l) The exterior surfaces only (of the complete engine assembly) of ferrous parts and the exterior surface of the aluminium Rocker Cover may be protected by paint or similar means. No internal component or surface may be coated by any protective finish. Other

Ford-produced aluminium components may be protected only on their external surfaces by a transparent clear varnish, or similar.

(m) Part numbers quoted were correct at the time the regulations were drafted. However, as with all companies, the Ford Motor Company Limited reserves the right to make changes to components for reliability or other reasons. Consequently, the part numbers quoted may be superseded by later released parts. Full Ford part numbers do not necessarily appear on all parts.

5.3.6 PERMITTED ENGINE

The only permitted engine is the Ford 1600 GT "Kent" (also referred to as

Mark II Escort 1600 "Sport") with a nominal bore of 81 mm and stroke 77.6mm. Production tolerances are permitted, provided the total swept volume does not exceed 1600cc.

5.3.7 AIR INDUCTION SYSTEM

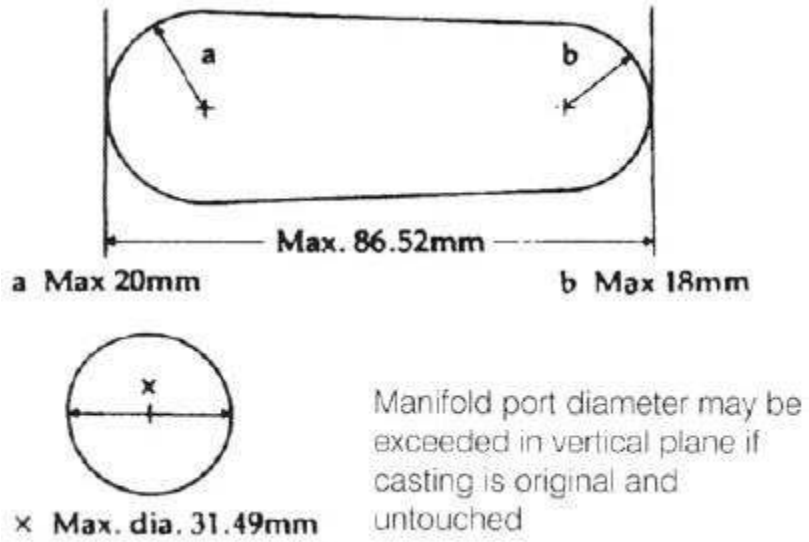
(a) The air cleaner may be removed or replaced and a trumpet fitted.

(b) Carburettor Type: Weber 32/36 DGV and DGAV (from 1600 GT "Kent" or 2000 SOHC NE engine). Number on engine 1 Number of Main Venturi 2 Maximum dia. of Main Venturi 26.0/27.0mm Maximum dia. of carb outlet to inlet manifold 32.0/36.0mm.

(c) It is permitted to change jets, open both throttles together, remove cold start devices and diffuser bar, the internal and external anti-surge pipes, and remove seals on emission control carburettors. No other modifications are permitted; chokes must remain standard, and no polishing or profiling is permitted. Any means of reducing intake air temperature is prohibited. Any form of water injection is prohibited.

(d) Inlet manifold: standard Ford production inlet manifold for 1600 GT "Kent" engine. The carburetor seat face may be machined to horizontal in the fore and aft plane. The water passage must remain intact but may be blanked off or plugged. The manifold may be machined externally to clear the throttle mechanism in the use of both throttles being opened together.

(e) Carburetor to inlet manifold gasket Thickness 5.7mm ± 0.35mm Inlet manifold to cylinder head Thickness 0.86mm (max)



5.3.8 EXHAUST SYSTEM

(a) The exhaust system and manifold are free, within Vehicle Regulations.

(b) A mandatory silencer, Ford Part No. 9095317 (or old unit 9094277) must be fitted.

5.3.9 CYLINDER BLOCK

(a) It is permitted, as a means of repair, to replace damaged cylinder bores with cast iron cylinder liners, all to standard dimensions.

(b) Localized machining of the cylinder block is permitted to allow fitting of the dry sump system.

(c) The crankcase breather may be altered or removed, but all breathers must discharge into a catch tank.

(d) May be machined to maintain deck height.

5.3.10 CYLINDER HEAD (INCLUDING VALVES AND VALVE GEAR)

(a) Non-standard rocker covers are permitted, provided they in no way improve the performance of the engine. Water passages are not permitted in rocker covers.

(b) Standard valve spring retainers must be used; only single valve springs are permitted. Shims are permitted; otherwise, valve springs are free.

(c) Push-rods, rockers, tappets, pedestals and shafts must remain standard except that recon touring of the valve stem contact pad on the rocker arm is permitted, provided the maximum specified lift at the spring cap is not exceeded. Rocker shaft springs are free.

(d) Maximum permitted lift at the spring cap with zero tappet clearance: inlet 9.042mm, exhaust 9.093mm. Maximum permitted lift at the top of the push rod: inlet 5.917mm, exhaust 5.943mm.

(e) Valves must remain standard; no profiling or polishing is permitted. The original 45° seat angle must be maintained. Distance apart at centres: 39.12 ± 0.5mm. Maximum face diameter, inlet 39.62mm; exhaust 34.00mm.

Overall length inlet: 110.92 ± 0.5mm. Overall length exhaust: 110.61 ± 0.5mm. Valve stem seals are optional.

(f) It is permissible to reshape inlet and exhaust ports by removal of metal within limits. Addition of material in any form is prohibited. Maximum port diameter at manifold face: inlet 36.12mm, exhaust 29.41mm. Inlet and exhaust port diameters may be exceeded if the original casting is visible and untouched at the gasket face.

(g) It is permitted, as a means of repair, to replace damaged valve guides and valve seats by replacement valve guides and valve seat inserts, all to standard dimensions.

5.3.11 COMPRESSION RATIO

(a) The maximum compression ratio will be controlled as follows:

(Minimum combustion volume in piston 41cc (with piston at TDC in cylinder and no account taken of volume down from the crown to the top piston ring).

(b) Standard Ford cylinder head gasket Part No. 781M 6051 AA / 931M 6051 AA minimum. Compressed thickness 0.85mm, minimum diameter of cylinder head aperture 82.50mm.

(c) Pistons must not protrude above the cylinder block face at TDC. The cylinder block surface may be machined.

(d) Maximum permitted protrusion of the valves into the combustion chamber 1.2mm.

5.3.12 CAMSHAFT

(a) The only permitted camshaft is the Ford production camshaft for the 1600 GT "Kent" engine.

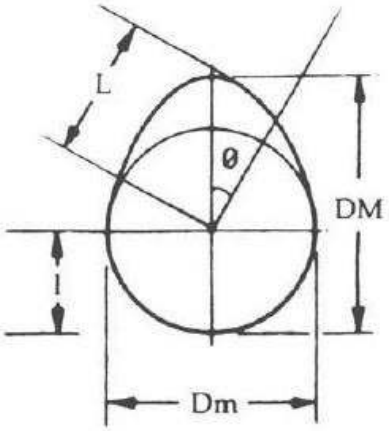
(b) The camshaft must remain entirely unmodified. It must be fully manufactured and ground to the Ford Motor Company profile. It is prohibited to grind from blanks, regrind or profile. Tuft riding or Parkerizing is permitted. Shot peening, shot blasting or polishing are prohibited. Offset dowels are permitted.

(c) The cam profile is defined by determination of lift (L-l) against a footed follower at various angles (Ø). Maximum lift at all points on the camshaft must not be exceeded.

Standard Ford tolerances apply to the following camshaft drawing:

Dimension	Symmetrical	
	Inlet	Exhaust
DM (max)	33.60mm	33.65mm
Dm	27.78mm	28.15mm
Lift at 0°	5.37mm	5.89mm
Lift at 5°	5.81mm	5.85mm
Lift at 10°	5.64mm	5.67mm
Lift at 15°	5.38mm	5.41mm
Lift at 20°	5.00mm	5.03mm
Lift at 30°	4.01mm	4.04mm
Lift at 40°	2.69mm	2.77mm
Lift at 60°	0.46mm	0.61mm
Lift at 90°	0.05mm	0.20mm

Angle between major axes of inlet and exhaust cams: 109°.



5.3.13 PISTONS

(a) Pistons must be standard Ford production pistons for the 1600cc engine, unmodified in any way except for balancing and as detailed.

(b) All three piston rings must be fitted; piston rings must be standard production or similar replacements, i.e., the compression rings must be one piece, with conventional plain gaps; chromium plating of the top ring is optional; the oil control rings must be either single-piece twin-land type or apex three-piece (two rails and an expander). Molybdenum-faced top compression rings are permitted.

(c) Localized machining of the bowl, including valve relief and gudgeon pin bosses of the piston, to achieve volumetric and weight balance and minimum weight is permitted. Minimum weight complete with piston rings and gudgeon pin: 520gm, weight of gudgeon pin: 115 ± 2.0gm.

5.3.14 CONNECTING RODS

(a) Connecting rods must be standard Ford Part No. 2737E 6200 B. Machining is permitted to remove metal from the balancing bosses on the big-end cap and at the little end to achieve balance only.

(b) Polishing is prohibited. Minimum weight (including bolts and small end bearing) 640 g.

5.3.15 CRANKSHAFT

(a) A standard crankshaft must be used. Spot machining to achieve balance is permitted. Tuft riding shot peening and shot blasting are permitted. Polishing is prohibited. Crankshaft minimum weight: 11.2kg.

(b) Crankshaft pulley is free as is tooth belt drive.

(c) It is not permitted to alter the number of bearings or to use bearings of less than standard production width.

(d) Standard oversize and undersize bearings are permitted.

(e) The rear main journal may be fillet rolled in the radius.

5.3.16 FLYWHEEL AND CLUTCH

(a) The flywheel and clutch assembly must be standard components. To achieve minimum weight and balance, material may be removed from the originally machined surfaces, rim/flange, etc. For rectification, the clutch mating face may be resurfaced. Cast surfaces must remain in original condition. It is permitted to use a similar pattern replacement clutch (i.e., conventional single diaphragm spring) driven plate with shock absorber springs. Organic friction material only is permitted. Racing clutches are prohibited.

(b) Flywheel bolts are free, and locating dowels are permitted.

(c) It is permitted to secure the starter ring to the flywheel.

(d) Flywheel and clutch assembly minimum permitted weight: 13.16kg. (Including all flywheel and crankshaft mounting bolts).

5.3.17 LUBRICATION SYSTEMS

The lubrication system, external to the engine, is free. Existing standard production oil ways, linings or oil grooves may be enlarged or reduced, but no additional ones are permitted. Standard friction surfaces must remain unchanged. Dry sump is permitted; oil coolers are free.

5.3.18 COOLING SYSTEM

(a) A liquid cooling system is mandatory, but the radiator and water pump are free.

(b) The radiator, if housed in or incorporating a cool air scoop or detector, must comply with bodywork regulations.

5.3.19 FUEL PUMP

(a) Only the standard mechanical fuel pump for the engine is permitted.

(b) Fuel pipes are free. Fuel cooling radiators are permitted, within safety regulations, but must be mounted within the main chassis frame.

5.3.20 DISTRIBUTOR

(a) Distributors are free, provided they retain the original drive and location.

(b) The distributor is defined as the component which triggers the LT current and distributes the HT ignition current. The ignition timing may only be varied by vacuum and/or mechanical means. It is prohibited to use any other method or component to trigger, distribute or time the ignition.

(c) It is permitted to mount a simple indicating pointer to the engine to facilitate the timing of the distributor with respect to the crankshaft/flywheel.

5.3.21 SUSPENSION

(a) The following parts must be of alloy steel or other ferrous material: wishbones, rockers, push and/or pull rods. All other stress-bearing components must be metallic with no composite materials allowed. It is permitted to incorporate suspension mounting points on the engine and transmission assembly.

Active suspensions are prohibited, as is any system which allows control of the flexibility of the suspension springs, shock absorption and trim height when the car is moving

(b) Anti-roll bars for front and/or rear suspension may be capable of manual adjustment by the driver when seated in the car.

(c) Simple ovalised tubes which have the same section top and bottom are not considered to be an aero foil.

5.3.22 BRAKES

Only brake discs made predominantly from Ferrous material are permitted. Callipers must be of Ferrous material with a maximum of two working cylinders per calmer. Brake pad materials, including carbon metallic, are free.

5.3.23 SHOCK ABSORBERS

Light alloy casings and/or separate reservoirs for fluid/gas are prohibited; otherwise, free. Any form of active damping is prohibited. Any method of altering the damper performance by the driver whilst seated in the car is prohibited. The shock absorber casing is defined as the item which contains the piston, fluid/gas, and moving parts which control the damping action.

5.3.24 STEERING

The steering must consist of a mechanical link between the driver and the wheels; rear wheel steering is prohibited, otherwise free.

5.3.25 WHEELS & TYRES

(a) 13-inch diameter steel wheels with a maximum rim width of 5.5 inches are the only wheels permitted. They must be of standard manufacture, but the offset may be altered. (It is recommended that weekly checks for cracks be carried out and that the wheels be replaced twice a year).

(b) The only tyres permitted are those listed in the Sporting Regulations for the event. Minimum tread depth is 1 mm at the start of each practice session and race.

(c) Tyre warmers are not permitted. Tyre covers whose only function is to protect the tyre in the paddock area are allowed. Tyre warmers found at the circuit will be judged to be available for use.

5.3.26 TRANSMISSION

(a) The gearbox must contain no more than four forward gears and include an operable reverse gear, capable of being engaged by the driver whilst normally seated. The ratios are free.

(b) Rear Wheel Drive only is permitted.

(c) Final drive ratio is free.

(d) Torque biasing, limited slip and locked differentials are prohibited. Non-ferrous differential components are prohibited.

(e) Gear change must be manual in operation. The gear change must use the conventional 'H' pattern gear change gate. Any gear change mechanism that only allows sequential selection of gears is not permitted.

(f) The only position for the main gear cluster will be wholly behind the rear axle output shaft centre line, and in line with the crankshaft centre line. Transverse, vertical, or other non-in-line configuration will not be allowed.

5.3.27 FUEL SYSTEM

(a) Tanks outside the chassis frame must comply with FIA Spec Ft3.

Inboard tanks, covered externally with a fireproof coating, are acceptable for events of less than 70km.

(b) Protection must at all times comply with J20.1.1 and E 13.2.3 (Bulkheads). A metal tank coated with GRP does not comply.

(c) Maximum capacity is 41 litres unless carried in an FIA-spec FT3 tank or better.

(d) No fuel can be used that exceeds BS 7800: 1992 (Super Unleaded), or BS 4040 (Premium Leaded) or equivalents outside the UK. A mixture of fuels is not allowed. Event regulations are allowed to specify a single-source fuel which meets these minimum standards, but do not exceed them.

5.3.28 STARTING

(a) Compulsory electric starter with electrical source of energy carried on board the car, and able to be controlled by the driver when normally in his seat.

(b) A supplementary external source of energy temporarily connected to the car may be used to start the engine whilst in the pit area.

5.3.29 WEIGHT

Minimum car weight at any time during the competition: 420 kg.

5.3.30 ENGINE SEALING

All engines should have provision for scrutineer's wire seals. 1/16-inch diameter holes predrilled in readily accessible locations on installed engines must be available. Failure to comply renders the entrant liable to penalty.

(a) Sump - two holes through the cylinder block/sump joining, one on either side of the engine.

(b) Timing Cover - at least two retaining screw heads must be cross-drilled.

(c) Rocker Cover - at least two retaining screw heads must be cross-drilled.

(d) Inlet Manifold - at least two retaining bolt heads to the cylinder head must be cross-drilled.

(e) Carburetor - at least two retaining nuts to the cylinder head must be cross-drilled.

(f) Bell housing - at least two retaining bolts to the engine must be cross-drilled to enable the clutch and flywheel to be adequately sealed, OR competitors must be prepared to remove either engine or transmission to enable sealing of clutch and flywheel, in which case at least two clutch cover retaining bolts must be cross-drilled. Failure to comply renders the engine ineligible.

5.3.31 MISCELLANEOUS

(a) Use of titanium, high strength composites, and similar materials is prohibited.

(b) Electronic dashboards and Data logging equipment are allowed, subject to them having no influence whatsoever on the behaviour of the car during competition. All information obtained from any Data logging or storage equipment shall be made freely available to the Scrutineer on request.

(c) Competitors are reminded that only modifications or additions specifically covered by these regulations are permitted. Engine components not covered by these regulations must remain completely standard and unmodified. In cases of dispute on engines, reference will be made to Ford Motor Company Limited drawings.

(d) Vehicles defined in these regulations are required to comply with the section of the RAC MSA yearbook covering General Vehicle and Race Vehicle which apply to single seater racing cars, a summary of which is given in

5.4 FORMULA FORD 1600 - PRE-1975

5.4.1 DESCRIPTION

Single-seater racing cars complying with current Formula Ford 1600 regulations, and these regulations, manufactured before 1st January 1974.

5.4.2 CHASSIS

The chassis specification must remain fundamentally unaltered from original manufacture. Wheelbase, Track, and pick-up points must remain to manufacturer's specification.

5.4.3 PERMITTED MODIFICATIONS

To current Formula Ford-1600 regulations.

(a) Any modification of which the primary purpose is safety or driver comfort.

(b) Bodywork is free within FF-1600 dimensions.

(c) Coil springs, shock absorbers, anti-roll bars and steering rack are free, provided they are fitted in the same original locations.

(d) Wheel offsets may be varied to alter track dimensions by a maximum of 3 inches.

(e) All transmissions in production before 1st January 1974 in FF are permitted.

(f) Make and type of drive shaft is free.

(g) The number, type and location of radiators is free.

5.4.4 MISCELLANEOUS

(a) Cars may be updated to the specification of the latest model built by the manufacturer which appears in the list of eligible vehicles (e.g. Merlyn Mk1 1A up to Mk24 specification).

(b) ELIGIBLE CARS if built prior to 1st. January 1974
Alexis Mk 1 4B to 24B Cougar Crossle 1 6F & 20F DRW Mk8
Dulon LD4, LD4A to LD4C, LD9, MP15 & MP1 5B
Eldon Mk8, Mk10 to 1 0C Ginetta G18, G1 8B Hamlen Ff69 Hawke DL2A, DL2B, DL9, DL10, Dl11
Huron FF Image FF1 Jamun T2, T3 Jomic Mk2A Jomo
Lola Mk5A, T200, T202, T204 Lotus 51, 61, 61M, 61R, 61X, 69

Macon Matek McNamara
Merlyn Mk9, Mk11A, Mk17, Mk17A, Mk20A, Mk24
Mirage M5 Mistrale
MRE FF72, FF73 U2 Mk9
Nike Mk10B (prior to 1.1.74) Nomad KH/FF16

SECTION 6

6. CROSSCARS

6.1 GENERAL

6.1.1 Definition

Rear-engine, 4-wheeled single-seater land vehicles, solely designed for races on off-road circuits, with a multi-tubular space frame chassis which must have a safety cage as an integral part of the chassis, as defined in Article 12 of this document. The propelling device and steering are controlled by a driver on board the vehicle.

The vehicles must be 2-wheel rear-wheel drive and powered by a chain-driven engine originating in a mass-produced motorcycle.

6.1.2 Eligibility & Construction

Cars conforming to the FIA's Article 279B, and listed in Appendix 1 of the same document, will be allowed entry to the class provided they conform to the rest of the prescriptions of these regulations. Locally designed and manufactured cars conforming to these regulations are allowed and encouraged, but homologation by the FIA is mandatory.

However, any construction deemed dangerous by event scrutineers may not be permitted entry to an event.

6.2 MODIFICATIONS AND ADJUNCTIONS ALLOWED OR OBLIGATORY

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

6.2.1 Optional devices

If a device is optional, it must be fitted in a way that complies with regulations.

6.2.2 Material

Unless explicitly authorised by the present regulations, the use of the following materials is prohibited unless they correspond exactly to the material of the original part:

Titanium alloy
Magnesium alloy (< 3 mm thick)
Ceramics

6.2.3 Screws, Nuts & Bolts

Unless explicitly authorised by the present regulations or unless it corresponds exactly to the material of the original part, all threaded fasteners must be manufactured from iron-based alloy.

Damaged threads can be repaired by screwing on a new thread with the same interior diameter ("Helicoil" type).

6.2.4 Fuel, Oxidants & Energy Recovery

Cars must use fuels complying with SLAS Appendix G. Only air may be mixed with the fuel as an oxidant. Any energy-recovery system other than that provided by the engine is prohibited.

6.2.5 Driving aids

All driving aid systems are prohibited (ABS / ASR / Traction Control / ESP etc.).

6.2.6 Telemetry, Voice communications, Data & GPS

Any form of wireless data transmission between the car and any person and/or equipment other than the driver is prohibited while the car is on the track.

This definition does not include:

- Voice radio communications between the driver and his/ her team.
- Transponder from the official timekeeping, and Automatic timing recording

None of the above-mentioned transmission data may in any way be connected with any other system of the car (except for an independent cable to the battery only).

On-board data recorders are permitted.

GPS Units are allowed as long as there is no wire or wireless connection with any of the electronic systems of the car. This definition includes in particular the dashboard, meters, the engine management unit, etc.

6.2.7 Competitor Cameras

On-board cameras are permitted and encouraged, but must not hinder the driver's visibility, exit or extrication in terms of emergency. The fixing device must withstand a deceleration of 25G without detaching, must be inside the cockpit, and must be approved by the scrutineers.

6.3 PRESCRIPTIONS FOR CROSSCARS

6.3.1 Maximum Car Dimensions & Wheelbase

Overall length : 2600 mm
Overall width : 1600 mm (excl. mudguards)
Height : 1480 mm (excl. engine water radiator air intake and roof competition number)

The wheelbase and tracks are free, within the limits of the above.

For cars with liquid cooling, an air intake of maximum 150 mm above the roof over its entire width is allowed, and on either side of the main rollbar in the form of scoops. Its width may not exceed 150 mm beyond the main rollbar.

6.3.2 Ground Clearance

No part of the car must touch the ground when all the tyres on one side are deflated. This test must be carried out on a flat surface under race conditions (driver on board).

6.3.3 Weight

The minimum weight of the vehicle, with the driver wearing his/her full racing apparel on board, and with the fluids remaining at the moment at which the measurement is taken, is **425 KG**. However, the minimum weight of the car, as described previously, without the driver and his/her full apparel, is **345 KG**.

At no time during the competition may a vehicle weigh less than these minimum weights.

6.3.4 Ballast

It is permitted to complete the weight of the car by one or several pieces of ballast, provided that they are strong and unitary blocks, fixed to the chassis by means of tools with the possibility to fix seals and placed outside the cockpit at the floor level. The securing system must be able to withstand a deceleration of 25G.

6.4 ENGINE & RELATED

6.4.1 General

Engines are restricted to mass-produced four-stroke motorcycle engines, with integrated gearboxes. The lay-out and number of cylinders is free.

Engines are limited to 650cc and must conform to the original manufacturer's specifications (gearbox ratios included).

Positions & inclination of the engine are free.

Engine supports/mounts are free.

6.4.2 Dynamos, alternators, batteries, starters

Dynamos and alternators may be removed, but each car must have an on-board battery. A starter with an electric or other source of energy on board, operable by the driver when seated in the seat, is mandatory.

The use of any outside source of energy to start the engine of the car on the grid or during a race is forbidden, except in the case of mechanical failures requiring a 'push-start'.

6.4.3 Exhaust System

An exhaust barrel/silencer/muffler is mandatory.
The exit of the exhaust pipe must be situated at the rear of the car, behind the wheel axis, at least 200 mm from the ground and within the perimeter of the car.

Exhaust pipe outlets that point downwards are prohibited.

Heat shielding of the exhaust system is authorised directly on the exhaust system, and on components in close proximity to the exhaust system (must be removable only with the use of tools).

6.4.4 Throttle

There must be a proven means of closing the throttle in the event of failure of the throttle linkage, by means of an external spring operating on each throttle spindle or slide.

6.4.5 Radiator

The water radiator and its capacity are free.

The position of the coolant radiator is free but forbidden and not visible in the cockpit. It must be located inside the bodywork.

6.4.6 Cooling Systems

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 expansion chamber is free, provided that the capacity of the new chambers does not exceed 2.5 litres.

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.

No part of the cooling system (water or oil) may be inside the cockpit.

The fans and their position are free, as are their electric looms.

At any time, the maximum distance between the rear face of the radiator core and the rearmost part of the cooling fan blades is 150 mm.

A duct may be fitted between the radiator core and the cooling fan.

Any system for spraying water onto the engine water radiator is prohibited.

The oil radiators and their connections are free, provided that they are situated within the perimeter of the bodywork.

All oil tanks, engine coolant expansion chambers, oil and water radiators must be isolated from the cockpit by means of bulkheads so that in the case of leakage or failure of a tank/radiator, no liquid may enter into the cockpit.

6.5 FUEL CIRCUIT

6.5.1 Fuel Pumps

Fuel pumps (including their number) are free provided that they are installed:

- either inside the fuel tank,

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

6.5.2 Fuel Lines

Flexible lines must be of aviation quality.

The installation is free, provided that:

(a) Fuel, oil and brake lines must be protected externally against any risk of deterioration (stones, corrosion, mechanical breakage, etc.) and internally against all risks of fire and deterioration.

(b) Lines containing cooling water or lubricating oil must be outside the cockpit.

Recommended:
All fuel feed pipes going to the engine must be provided with automatic cut-off valves located directly on the fuel tank, which automatically close all the fuel lines under pressure if one of these lines in the fuel system is fractured or leaks.

Compulsory:
All the fuel pumps must only operate when the engine is running, except during the starting process.

6.5.3 Fuel Tank

The capacity of the fuel tank is free.

It is recommended, but not mandatory, that the fuel tank be homologated to one of the following FIA standards: FT3-1999, FT3.5-1999, FT5-1999. If not compliant with these standards, it should be of a leak-proof, non-flammable metallic construction with a minimum material thickness of 1.50 mm.

The location of the fuel tank must respect the following conditions :

- Must not be located in the cockpit, must be situated behind the seat in side view and must be separated from the cockpit by a fireproof bulkhead.

- Must be mounted in a sufficiently protected location inside the base construction structure and be firmly attached to the car.

The fuel circuit must comprise only the following parts:

- One fuel supply outlet for the engine.
- One fuel return into the tank.
- One breather

The storing of fuel on board the car at a temperature of more than 10° centigrade below the ambient temperature is forbidden

6.5.4 Filling & Venting

The location of the filler caps or the two quick-action couplings for refuelling is free, but they must be leak-proof and must not protrude beyond the perimeter of the chassis and bodywork.

6.6 ELECTRONICS

6.6.1 Engine Control Unit

The ECU is free. However, only one ECU may be used per car.

6.6.2 Wiring Loom & Fuses

Free.

6.6.3 Launch Control Switch

Launch control switches are prohibited.

6.6.4 Battery

Each car must have an on-board battery.

The make, capacity and cables of the battery(ies) are free.

Location of the battery(ies): Its (their) location is free, but the battery must be of the dry type if it is in the cockpit.

6.6.5 Battery Fixing

Each battery must be securely fixed, and the positive terminal must be protected.

The securing system must be able to withstand a deceleration of 25g.

6.6.6 General Circuit Breaker

The general circuit breaker must cut all electrical circuits battery, alternator or dynamo, fuel pumps, lights, hooters, ignition, electrical controls, etc.) and must also stop the engine.

It must be a spark-proof model and must be accessible from inside and outside the car.

As for the outside, the triggering system of the circuit breaker must compulsorily be positioned on the lower part of the windscreen/metal grill mountings on the left side of the car. It must be marked by a red spark in a white-edged blue triangle with a base of at least 12 cm.

6.6.7 Lights

Brake lights: Each car must be fitted with a minimum of two red LED rear lights with a diameter of at least 80 mm (36 LEDs minimum) or with two rain lights approved by the FIA (FIA Technical List n°19) that work whenever the brakes are on.

They must be positioned between 1400 mm and 800 mm above ground level and must be visible from the rear. They must be placed symmetrically in relation to the longitudinal axis of the car and in the same transverse plane.

Permanent Rear light: Each car must be fitted with one red LED rear light with a diameter of at least 80 mm (36 LEDs minimum) or with a rain light approved by the FIA (FIA Technical List No. 19). It must be clearly visible from the rear, and it must be permanently switched on when the car is driving and must be positioned between 1400 mm and 800 mm above ground level. It must be possible for the driver sitting at his steering wheel to switch them on.

6.7 TRANSMISSION & CLUTCH

6.7.1 Gearbox & Shifter

The engine integrated gearbox must not undergo any modifications compared to the standard one unless such modifications are explicitly allowed by the present regulations.

The gear change mechanism must be manual, linked to a gear change lever directly by rods or cables only.

The gear lever must be fixed on the chassis and can be adjustable.

No air, electrical or hydraulic assisted gear change system is allowed.

The principle of changing gears by using paddles on the steering wheel or steering column is prohibited.

The transmission system must be activated and controlled only by the driver.

Cut-off sensors for gear command are permitted.

6.7.2 Transmission System

Free, but the two rear wheels must be attached to the same shaft, which may have universal joints.

Engine-side and transmission-side sprocketing is free.

Any kind of differential is forbidden.

A secondary chain drive is permitted.

Traction control is prohibited.

A reverse gear is recommended, but not mandatory.

6.7.3 Clutch

The clutch system is free, but must be exclusively operated and controlled by the driver's foot.

6.7.4 Clutch fluid tank

If inside the cockpit, it must be securely fastened and be protected by a leak-proof and flameproof cover or must be made out of metallic material.

6.7.5 Sensors

Any sensor, contact switch or electric wire on the four wheels and gearbox is forbidden.

A gear cut sensor is allowed.

Exception:
Only one sensor for displaying the speed of one front wheel is allowed.

6.8 SUSPENSION

6.8.1 General

It is forbidden to use active suspension (any system which allows control

of flexibility, damping, height and/or attitude of the suspension when the car is in motion.

6.8.2 Joints (wishbones/links and suspension parts)

Rubber, ball joint, plain bearing, bearings (ball, roller, needle): free

6.8.3 Suspension System

Cars must be fitted with a sprung suspension.

The operating method and the design of the suspension system are free.

The use of active suspension is forbidden.

Coil springs are compulsory. The number is free. They must be made from steel alloy.

Suspension parts made partially or entirely from composite materials are prohibited.

6.8.4 Shock Absorbers

Only one shock absorber per wheel is authorised.

Only maximum three-way adjustment systems are permitted.

Only non-adjustable hydraulic bump stops are permitted.

Roll control systems are prohibited.

All shock absorbers must be independent of each other.

Inertia shock absorber systems are prohibited.

The checking of the operating principle of the shock absorbers must be carried out as follows: Once the springs are removed, the car 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.

If the shock absorbers have separate fluid reserves located in the cockpit, these (including hoses and joints) must be securely fastened and be protected by a liquid-proof and flameproof cover.

A suspension travel limiter may be added.

Only one cable per wheel is allowed, and its sole function must be to limit the travel of the wheel when the shock absorber is not compressed.

Water cooling or heating systems are prohibited.

Whatever the type of shock absorbers, the use of ball or roller bearings with linear guidance is prohibited.

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

The adjustment of the springs and/or shock absorbers from the cockpit is forbidden.

It must only be possible when the car is not in motion and only with the use of tools.

The adjustment device must be situated on the shock absorber or its gas reserve.

Any connections between dampers are forbidden; the only connections permitted are the damper fixing points passing through the frame; these must have no other function.

6.8.5 Antiroll Bars

They must respect the following:

- Their operating principle must be solely mechanical.
- The antiroll bars and their links must be made from metallic material and must not be adjustable from the cockpit.
- Under no circumstances may the antiroll bars be connected to one another.

6.9 WHEELS & TYRES

6.9.1 Wheels

The rims must have a maximum diameter of 10” and a maximum width of 6” at the front and 8” at the rear.

Rims must be made from either iron-based alloy or aluminium alloy.

Bead lock type rims are permitted.

Bead lock rings are free but must be in conformity with the following:

- Maximum outer Ø: 300 mm
- Minimum inner Ø: 175 mm

- Material: either iron-based alloy or aluminium alloy.

- No part of the bead lock ring and its attachment may protrude beyond the vertical plane of the outermost part of the tyre.

6.9.2 Wheel Attachment

Central wheel nut fixation systems are prohibited.

No part of the wheel attachment (wheel studs and wheel nuts) may protrude beyond the vertical plane of the outermost part of the rim.

6.9.3 Tyres

The complete wheel (flange + rim + inflated tyre) must always fit inside a U-shaped gauge of which the extremities are 260 mm apart, the measurement to be made on an unloaded part of the tyre.

Any modification – retreading, mechanical or chemical treatment – is prohibited.

Any means of warming the tyres – tyre blankets, ovens, roller systems, etc. – is prohibited.

6.9.4 Pressure Control Valves

Pressure control valves on the wheels are forbidden.

6.9.5 Wheel Trims

Wheel trims are forbidden.

6.9.6 Air Extractors

The fitting of air extractors on the wheels are prohibited.

6.10 BRAKING SYSTEM

6.10.1 Brakes

The braking system is free, provided that:

- It is activated and controlled only by the driver.

- It includes at least two independent circuits operated by the same pedal (between the brake pedal and the callipers, the two circuits must be separately identifiable, without any interconnection other than the mechanical braking force balancing device).

- The pressure is identical on the wheels of the same axle, with the

exception of the pressure generated by the handbrake

A hydraulic handbrake system is authorised; it must be efficient and simultaneously control the two front wheels or the two rear wheels.

A central braking system on the rear axle is permitted. Brake discs must be made from iron-based alloy.

Carbon brake discs are forbidden.

A hydraulic handbrake system is authorised; it must be efficient and simultaneously control the two front wheels or the two rear wheels.

A central braking system on the rear axle is permitted. Brake discs must be made from iron-based alloy.

Carbon brake discs are forbidden.

6.11 STEERING

6.11.1 Wheel Steering

The link between the driver and the wheels must be mechanical and continuous.

4-wheel steering is prohibited.

6.11.2 Steering Mechanism

The steering mechanism and its position are free.

Flexible steering controls, e.g. chain, cable, etc., are prohibited.

6.11.3 Steering rods/Steering joints

Free.

6.11.4 Steering Column

Free, but it must be fitted with a retractable device in case of impact.

The retractable part must have a minimum travel of 50 mm.

6.11.5 Steering Wheel

The steering wheel must be fitted with a quick release mechanism.

This mechanism must consist of a flange concentric to the steering wheel axis, colored yellow and installed on the steering column behind the

steering wheel.

The release must be operated by pulling the flange along the steering wheel axis.

Controls and buttons on the steering wheel are prohibited.

6.11.6 Power Steering

Any power steering system is forbidden.

6.12 CHASSIS

The multi-tubular space frame structure formed by the compulsory base construction of the safety cage, compulsory reinforcement tubes and any other tubular structure or elements welded together for the functioning of the car, must be considered as “the chassis”.

6.12.1 General

The fitting of a safety cage is compulsory.

(a) In all cases, it must be fabricated in compliance with the requirements of the following articles;

(b) It must be homologated or certified by an FIA ASN in compliance with the requirements of the following articles.

Any cage which is homologated or certified by an ASN must be identified by means of an identification plate affixed to it by the manufacturer; this identification plate must be neither copied nor moved (e.g. embedded, engraved, metallic plate).

The identification plate must bear the name of the manufacturer, the homologation or certification number of the ASN homologation form or certificate and the individual series number of the manufacturer.

An authentic copy of the homologation document or certificate bearing the same numbers, approved by the FIA ASN and signed by qualified technicians representing the manufacturer, must be presented to the competition’s scrutineers.

Any modification to a homologated or certified safety cage is forbidden.

Exceptions:

(a) Adding, removing, or modifying specific brackets e.g. bodywork brackets, handbrake brackets, gear lever brackets, electric loom brackets, fuel line brackets, pedal box brackets, ballast brackets are permitted.

Any of these modifications must be carried out by the manufacturer of the safety cage, or with its approval.

(b) Any other modifications carried out by the manufacturer of the safety cage must be documented in an Option Variant (VO) of the Safety Cage Certificate.

The modifications on the homologated chassis must not entail any variation of the length, geometry or tube dimensions of the compulsory members that are indicated in the chassis drawing of the Safety Cage Certificate.

To be considered as a modification: any operation carried out on the cage by machining or welding that involves a permanent modification of the material or the safety cage.

All repairs to a homologated or certified safety cage, damaged after an accident, must be carried out by the manufacturer of the cage or with his approval.

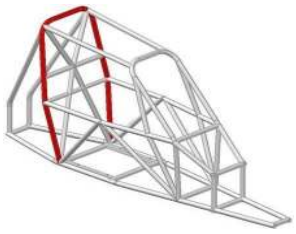
6.12.2 Definitions

(a) Safety cage
Multi-tubular structure installed and welded to the chassis or being an integral part of it, the function of which is to reduce the deformation of the cockpit in case of an impact.

(b) Roll bar
Tubular frame forming a hoop with two mounting feet.

6.12.2.1 Main roll bar

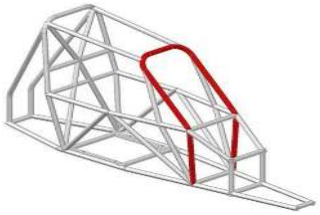
Transverse and near-vertical (maximum angle +/-10° to the vertical) single piece tubular hoop located across the car just behind the driver's seat. The tube axis must be within one single plane.



6.12.2.2 Front roll bar

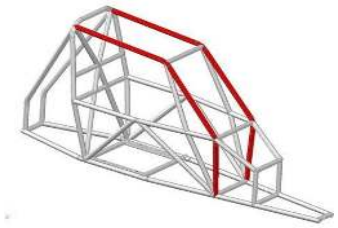
Similar to the main roll bar but located in front of the driver's seat at

windscreen level.



6.12.2.3 Lateral half-roll bar

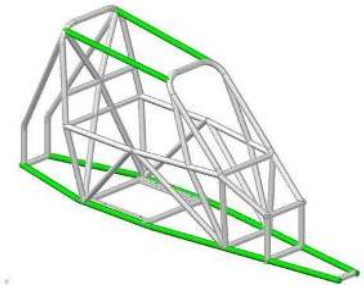
Lateral roll bar without the rear pillar.



6.12.2.4 Longitudinal member

(a) Near-longitudinal single piece tube joining the upper parts of the front and main roll bars.

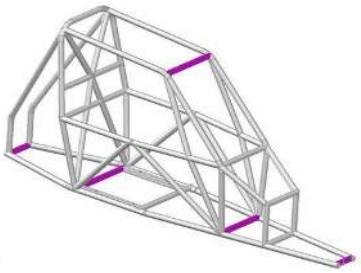
(b) Near-longitudinal single piece tube joining the mounting feet of the front roll bar, main roll bar, and rear backstays.



6.12.2.5 Transverse member

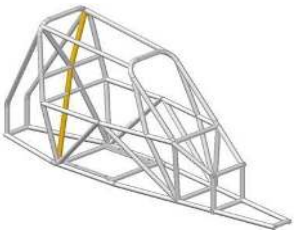
(a) Near-transverse single piece tube joining the upper parts of the lateral half-roll bars.

(b) Near-transverse single piece tube joining the 2 mounting feet of the front roll bar, of the main roll bar, of the backstays, or the 2 front and rear ends of the lower longitudinal members.



6.12.2.6 Diagonal member

Transverse tube between: One of the top corners of the main roll bar, and the lower mounting point on the opposite side of the roll bar.



6.12.3 Removable members

Members of a safety cage which must be able to be removed.

6.12.4 Cage reinforcement

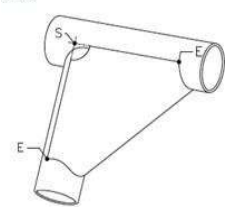
Member added to the safety cage to improve its strength.

6.12.5 Mounting foot

End of a roll bar tube to permit its welding to the chassis.

6.12.6 Gusset

Reinforcement for a bend or junction made from bent sheet metal with a U shape the thickness of which must not be less than 1.0 mm. The ends of this gusset (point E) must be situated at a distance from the top of the angle (point S) of between 2 and 4 times the outer diameter of the biggest of the tubes joined.



A cut-out is permitted at the top of the angle but its radius (R) must be no greater than 1.5 times the outer diameter of the biggest of the tubes joined.

The flat sides of the gusset may have a hole the diameter of which must not be greater than the outer diameter of the biggest of the tubes joined.

6.12.7 Assembly of the safety cage

The safety cage must be welded onto the structure to which the suspension loads are transmitted (with, if necessary, additional reinforcement at the joint between the chassis and the foot of the roll bar).

The mounting points of the front, lateral half and main roll bars must be situated at least at the level of the cockpit floor.

The chromium plating of all or part of the cage is forbidden. Tubes must not carry fluids or any other item.

The safety cage must not unduly impede the entry or exit of the driver.

6.12.8 Specifications

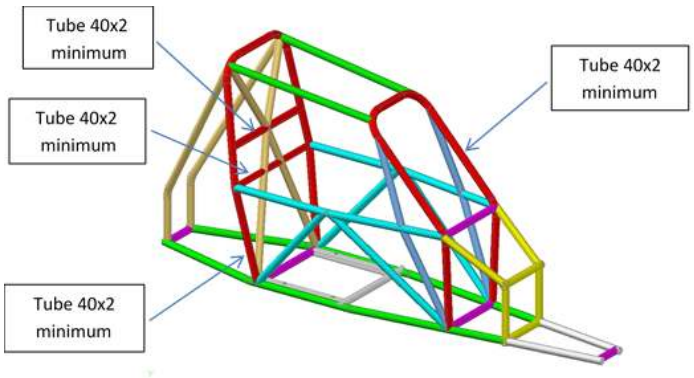
Two base designs are acceptable

6.12.8.1 Base Construction 1

- 1 main roll bar.
- 1 front roll bar.
- 2 longitudinal members joining the upper part of the main and front roll bars.
- 2 backstays with 2 near-vertical extensions (maximum angle ± 10° to the vertical) of the same section and quality going down to the floor level and to the rear end of the car.
- 2 longitudinal side members joining the vertical extensions to the backstays, main roll bar and front roll bar, ending in front of the pedal box frame.
- 4 transverse members connecting the vertical extensions to the backstays, main roll bar, front roll bar and the front ends of the two lower longitudinal side members.
- 2 transverse members connecting each side of the main roll bar, 1 at the height of the door bars, and a second one for the safety

harnesses.

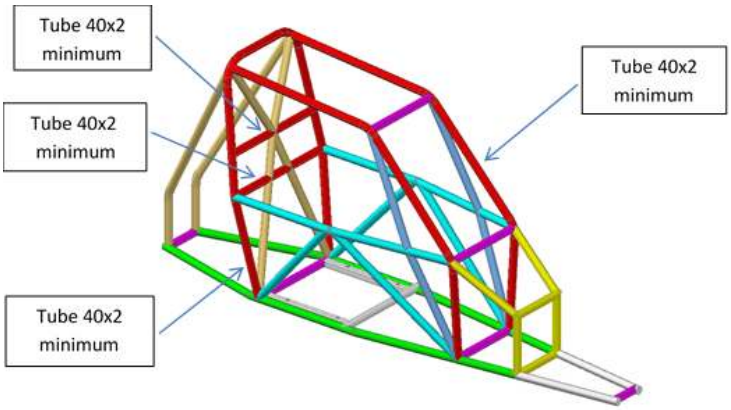
- Pedal box frame.
- Door bars.
- Diagonal member.
- Windscreen pillar reinforcement.
- Transverse member on the front roll bar.



6.12.8.2 Base Construction 2

- 1 main roll bar.
- 2 lateral half-roll bars.
- 1 transverse member joining the upper part of the lateral half-roll bars.
- 2 backstays with 2 near vertical extensions (maximum angle ± 10° to the vertical) of the same section and quality going down to the floor level and to the rear end of the car.
- 2 longitudinal side members joining the vertical extensions to the backstays, main roll bar and lateral half-roll bar, ending in front of the pedal box frame.
- 4 transverse members connecting the vertical extensions to the backstays, main roll bar, front roll bar and the front ends of the two lower longitudinal side members.
- 2 transverse members connecting each side of the main roll bar, 1 at the height of the door bars and a second one for the safety harnesses.

- Pedal box frame.
- Door bars.
- Diagonal member.
- Windscreen pillar reinforcement.
- Transverse member on the front roll bar



The vertical part of the main roll bar must have only one bend between its lower part and its upper part. The pillar of a front roll bar (or the front pillar or half-roll bar) must have only one bend between its lower part and its upper part.

The angle between the lower part of the front roll bar and the longitudinal side member must be 90° ±1°.

The following connections must be situated at the roof level:

- Longitudinal members to the front and main roll bars.
- Lateral half-roll bar to the main roll bar.
- The backstays must be attached at the roof level and near the top outer bends of the main roll bar, on both sides of the car

6.12.9 Removable Members

Only the base construction and optional members of the safety cage mounted behind the main roll bar may be made with removable members.

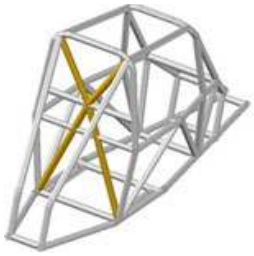
6.12.10 Design

Design is free, as long as it includes all the mandatory members defined above and below. Once the base construction is defined, it must be completed with compulsory members and reinforcements, to which optional members and reinforcements may be added. Unless explicitly permitted, all members and tubular reinforcements must be single pieces.

6.12.11 Other Compulsory Members

6.12.11.1 Diagonal Members

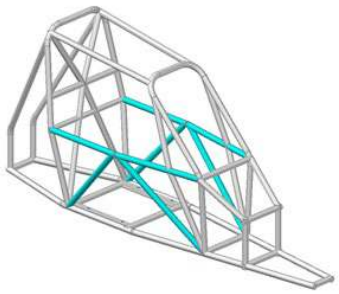
The cage must have two diagonal members on the main roll bar. Members must be straight.



6.12.11.2 Door bars

Longitudinal members must be fitted on each side of the car. The design must be identical on both sides. The side protection must be as high as possible, but its upper attachment point must not be higher than half the height of the lateral cockpit opening measured from its base. The lower attachment points of the members must be fitted directly onto the longitudinal side members, less than 100 mm from the junctions between the mounting points of the front roll bar / lateral half roll bars / main roll bar and the longitudinal side members.

The connection of the door bars to the windscreen pillar reinforcement is compulsory. If the door bars and the windscreen pillar reinforcement are not situated in the same plane, the reinforcement may be made of fabricated sheet metal.



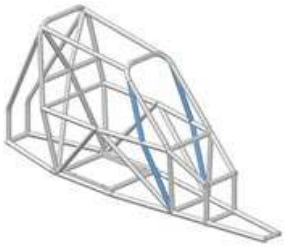
6.12.11.3 Windscreen Pillar Reinforcement

It must be fitted on each side of the front roll bar. It may be bent on condition that it is straight in side view and that the angle of the bend does not exceed 20°.

Its upper end must be less than 100 mm from the junction between the front (lateral) roll bar and the longitudinal (transverse) member. Its lower end must be at the (front) mounting foot of front (lateral) roll bar. If this reinforcement intersects the door bars, it must be divided into several

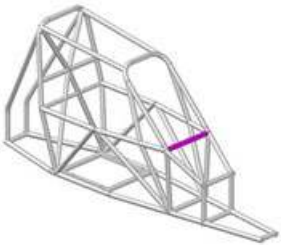
parts.

If the door bars and the windscreen pillar reinforcement do not intersect each other, a specific reinforcement made of fabricated sheet metal is compulsory.



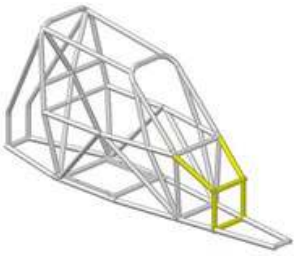
6.12.11.4 Transverse member on the front roll bar

The transverse member fixed to the front roll bar must not encroach upon the space reserved for the driver. It may be placed as high as possible, but its lower edge must not be positioned below the steering column.



6.12.11.5 Pedal box frame

Tubular frame forming a protection around the pedal box.



6.12.11.6 Backstays

Two backstays with two near-vertical extensions of the same section and quality going down to the floor level and to the rear end of the car.

6.12.12 Tube Specifications

For the main chassis, only tubes with a circular section are authorized. However, box bars (also conforming to the material specification below) are allowed for seat rails and pedal box supports.

Material	Min. Tensile Strength	Min. Dimensions (mm)	Use
Cold drawn seamless unalloyed carbon steel (see below) containing a maximum of 0.3 % of carbon	350 N/mm2	40 x 2 mm	*– Main roll bar – Front roll bar or lateral half-roll bar 2 transverse members fitted to the main roll bar*
		40 x 1.5mm	*Other parts of the safety cage (unless otherwise indicated in the articles above)*

In selecting the steel, attention must be paid to obtaining good elongation properties and adequate weldability. The tubing must be bent by a cold working process and the centerline bend radius must be at least **3 times** the tube diameter. If the tubing is ovalised during bending, the ratio of minor to major diameter must be 0.9 or greater. **The surface at the level of the bends must be smooth and even, without ripples or cracks.**

6.12.13 Guidance on welding

Welding must be carried out along the whole perimeter of the tube. All welds must be with full penetration and preferably using a gas-shielded arc. When using heat-treated steel the special instructions of the manufacturers must be followed (special electrodes, gas protected welding).

6.12.14 Protective Padding

It is recommended that protective padding in compliance with FIA Standard 8857-2001 type A (see Technical List n°23) be installed on the upper parts of the cockpit.

6.12.15 Cockpit Dimensions

The width of the cockpit, maintained over 500 mm from the rearmost point of the seat in a horizontal plane towards the front, must not be less than 600 mm measured at the mid-point of the vertical height of the cockpit.

The location provided for the seat must have a minimum width of 450 mm maintained over the complete depth of the seat.

The minimum vertical height of the safety cage is 1050 mm between the cockpit floor (at seat location) measured at a point 300 mm forward of the lowest point of the main roll bar (cockpit side) and a line joining (on the outside of the cockpit) the two main roll bar and the front roll bar or the main roll bar and the transverse member between the lateral half roll bars.

The two safety roll bars must be high enough for a line extended from the top of the main roll bar to the top of the front roll bar (or transverse member between lateral half-roll- bars) to pass at least 50 mm over the top of the driver's helmet when he is seated normally in the car with his helmet on and his safety harness fastened.

6.12.16 Pedal Box

The axis of the pedal box must be situated behind or directly above the axis of the front wheels. Furthermore, the driver's feet must be located at all times aft of the vertical plane passing through the front axle centerline. The minimum width of the footwell must be 250 mm, maintained to a height of 250 mm, measured horizontally and perpendicularly to the longitudinal axis of the chassis directly above the pedals.

6.12.17 Floor

The floor of the cockpit extended to the front of the pedal box must be closed with a metallic sheet, minimum thickness 1.5 mm. The rear floor part of the chassis can be covered with a metallic sheet. The metallic sheet must be securely fixed to the chassis with steel bolts.

6.12.18 Roof

A rigid roof panel made from steel sheet, minimum 1.5 mm thick, above the driver is mandatory. The panel may be fixed by welding to the safety cage tubes, or with a minimum of 6 M6 mm metallic bolts. The panel fixation brackets must be welded to the safety cage tubes. If the welded panel or the fixation brackets have to be repaired, the work can only be done by the chassis safety cage manufacturer.

6.12.19 Internal Parts

No mechanical part other than the controls necessary for driving the vehicle may be situated in the cockpit. No part of the cockpit, or situated in the cockpit, may have sharp or pointed parts. Particular care must be taken to avoid any protrusion which could injure the driver.

6.12.20 Cockpit Lateral Openings

The car must have lateral openings on both sides of the cockpit allowing the exit of the driver. The cockpit must be designed so as to allow the driver to exit it from his normal position in the car within 7 seconds.
For the purpose of the above tests, the driver must be wearing all his/her equipment in accordance with SLAS rules, the seat belts must be fastened, the steering wheel must be in place and in the most inconvenient position, and the openings must be closed.

These openings must be closed completely to prevent the passage of a hand or arm.

The closing must be made of a steel grill with a maximum mesh of 25 mm x 25 mm, with a wire diameter or steel sheet thickness that is a minimum of 1 mm and a maximum of 2 mm. At the top, this steel grill must be fixed to the safety cage by two hinges allowing the grill to be swung upwards to a vertical position.

At the bottom, this steel grill must have a locking device.
The locking device's latch must be fixed to the:
- door bar, or
- windscreen pillar reinforcement tube, or
- gusset of the windscreen pillar reinforcement.

The parts of the locking device must be made of steel.

The locking device must be built in such a way:
- that it can be opened from outside and inside the car;
- that it cannot be opened or open accidentally.

6.12.21 Lateral Cockpit Protection

The cockpit must have lateral protection, covering the space between the upper part of the top lateral door bars to the floor level, and from the main roll bar to the most forward point of the pedal box.

This protection must consist of a minimum 1.5 mm thick metallic sheet or a minimum 2.5 mm thick Kevlar or carbon- Kevlar panel, securely fixed on the external face of the safety cage, using welded steel brackets.
The lateral cockpit protection can be part of the bodywork.

In case a rocker arm type front suspension is used, a steel sheet, minimum thickness 1.5 mm, must separate the cockpit from the rocker arm suspension parts, including the shock absorbers. The steel sheet must be fixed on at least 4 welded steel brackets, minimum thickness 2 mm, using at least 4 M6 steel bolts.

6.12.22 Lateral anti-locking wheel protection

In addition to that, a tube structure which must conform to the material specifications given in Article 253-8.3.3 of 2020 Appendix J, with the

exception of the dimensions of the tubes, which must measure at least 30 x 2 mm, must be fixed to the base construction of the car.
This structure must not have any sharp corners.

The outermost part of the protection must be situated at the level of the centre of the wheel hubs, over a minimum length of 60% of the wheelbase.

This protection must extend outwards on both sides at least as far as the vertical planes passing through the middle of the foremost part of the rear tyres and through the middle of the rearmost part of the front tyres, but not further than the vertical planes passing through the outside of the foremost part of the rear tyres and through the outside of the rearmost part of the front tyres.

6.12.23 Fireproof bulkhead

A fireproof and liquid-proof metallic bulkhead must separate the cockpit from the engine compartment.
Behind the driver's seat the bulkhead must be located from the floor up to the roof.

From the floor to the height of the door bars, the bulkhead must be made of steel sheet with a minimum thickness of 1.0 mm.

The remaining part of the bulkhead can be made of metallic material with a minimum thickness of 0.8 mm. The bulkhead must be securely fixed to the chassis with M6 steel bolts.

Any object of a dangerous nature (inflammable products, etc.) must be carried outside the cockpit.

6.13 BODYWORK

Additional bodywork is optional. However, if bodywork is installed, then the following rules will apply:

All parts of the bodywork must be carefully and fully finished, with no temporary or makeshift parts and no sharp corners. No part of the bodywork may present sharp edges or points. All parts having an aerodynamic influence and all parts of the bodywork must be secured rigidly to the completely sprung part of the car (chassis/body unit), must not have any degree of freedom, must be securely fixed and must remain immobile in relation to this part when the car is in motion except the driver's ventilation sliders/scoops.

6.13.1 Front & Side Bodywork

Bumpers are prohibited.

The bodywork must cover the front part of the chassis entirely.

At the front and at the sides there must be hard, opaque bodywork providing protection against stones.
At the front, this bodywork must rise at least to the level of the centre of the steering wheel, and its height must not be less than 42 cm measured from the driver's seat mounting.

The height of the side bodywork must not be less than 42 cm, measured in relation to the plane passing through the driver's seat mounting.

6.13.2 Rear Bodywork

All mechanical elements necessary for propulsion (engine, transmission, excluding the driveshaft's) must be covered by the bodywork or mudguards.

Seen from above, all parts of the engine must be covered by sturdy, hard and opaque bodywork; the sides of the engine may be left uncovered.

From the outer perimeter of the bodywork, direct access to fan blades must be prevented either by being installed within the bodywork or by installing protection grilles.

6.13.3 Rear view mirrors

An external rear-view mirror must be present on each side of the car. The reflecting surface of each of these rear-view mirrors must not be less than 90 cm2, and it must be possible to fit into this surface a square with sides measuring 6 cm.

6.13.4 Aerodynamic Devices

Front aerodynamic devices are prohibited.

A rear aerodynamic device may be allowed under the following conditions:

- It must be composed of just one wing (aero foil profile), optional endplates and its supports.
- The material wing, its endplates and the supports are free.
- The wing must be made in one single piece and without any type of adjustments or any additional or dismountable elements.
- The shape of the supports is free.

- The wing must be fixed to the supports.
- The supports must be fixed either to the bodywork or the chassis.
- The total width of the device in Y direction must not be more than 1080 mm

6.13.5 Windscreen

Must be made of polycarbonate or be a metal grill.
Polycarbonate windscreen: The thickness must not be less than 4.75 mm.

Cars with 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.

Windscreens must not be tinted.

Steel grill: The windscreen may be replaced, or protected, by a steel grill covering the entire surface of the windscreen opening. The mesh size must be between 10 mm x 10 mm and 25 mm x 25 mm, and the diameter of the wire or steel sheet thickness of which the mesh is formed must be a minimum of 1 mm and a maximum of 2 mm.

In cars which have a windscreen, or which have the steel grill defined above, motorcycle type goggles or a visor fitted on the helmet must be worn by the driver.

Blanking material in the windscreen and windows may be accepted, on condition that it is properly fixed, and located only over a horizontal plane passing through the driver's helmet visor's highest point, when seated normally and with the seatbelts tightened.

Apertures of a total area not exceeding 64 cm2 may be made in the windscreen.

6.13.6 Windscreen wipers, motor and mechanism, washer tank.

Wiper and motor/mechanism are free. The capacity and the position of the windscreen washer tank are free. The pumps, lines and nozzles are free.

6.14 SAFETY EQUIPMENT

6.14.1 General

Safety equipment must be used in its homologation configuration without any modification or removal of parts, and in conformity with the

manufacturer's instructions.

6.14.2 Driver's Seat

A complete, FIA-homologated seat conforming to 8855-1999, 8855-2021 or 8862-2009 standards is recommended. This seat may not be modified in any way. The driver's seat backrest may be tilted backwards by a maximum of 15° to the vertical.

6.14.3 Anchorage points for fixing the seat supports

The seat supports/brackets must be fixed on anchorage points that are additional members to the base construction, but instead of bolting these cross members to the base construction, the cross members must be welded to the car base construction crosswise or lengthwise.

6.14.4 Seat supports

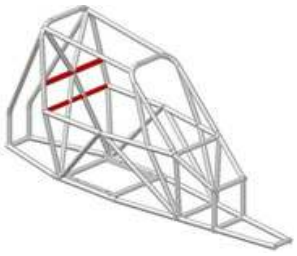
The seat supports must be fixed to the anchorage points for fixing seats via at least 4 mounting points per seat, using bolts measuring at least 8mm in diameter.

6.14.5 Safety harness and installation

Compulsory, with at least six points, and conforming to current FIA standards. The two shoulder straps must have separate anchorage points. It is prohibited for the safety harnesses to be anchored to the seats or their supports. Care must be taken in order to ensure that the straps cannot be damaged through chafing against sharp edges.

The shoulder straps must be fixed to a reinforcement bar on the safety cage by means of a loop or screws, but in the latter case, an insert must be welded for each mounting point.

The transverse reinforcement must be a tube measuring at least 40 mm x 2 mm, made from cold-drawn seamless carbon steel, with a minimum tensile strength of 350 N/mm2.



6.14.6 Mudguards

It is mandatory to fix mudguards on each wheel for mass-start racing, and optional for single-car timing events.

They must be made of a flexible plastic material at least 4 mm thick.

They must be firmly mounted on a minimum of 2 mounting brackets.

The mudguards must project over the wheels and provide at all times an efficient covering of at least the entire width of the tyre and must be situated behind the driven wheels no more than 5 cm above the ground.
On the front wheels, the mudguard must cover the wheel at least up to a vertical (Z) plane passing through the front wheel axis.
On the driven wheels, the wheel must not be visible from above.

Mudguards must have no perforations or sharp angles.

Should it be necessary to reinforce the mudguards, this may be done with an aluminium alloy tubing with a maximum diameter of 15 mm.

Under no circumstances may the mudguard reinforcement be used as a pretext for the construction of crash bars or bumpers.

6.14.7 Towing device

One front and one rear towing device, of a belt type, made from soft material, are compulsory.

They must :

- Be clearly visible and marked in yellow, red or orange;
- Allow the passage of a cylinder with a diameter of 60 mm;
- Be a belt type, made from soft material;
- Allow the car to be towed on a dry surface (concrete or asphalt), by applying traction on a plane parallel to the ground, with an angle of plus or minus 15 degrees to the longitudinal centerline of the car.

This check must be carried out with the wheels blocked by means of the main braking system. The car must be fitted with tyres of a type identical to that used during the competition. It may take place during preliminary scrutineering.