



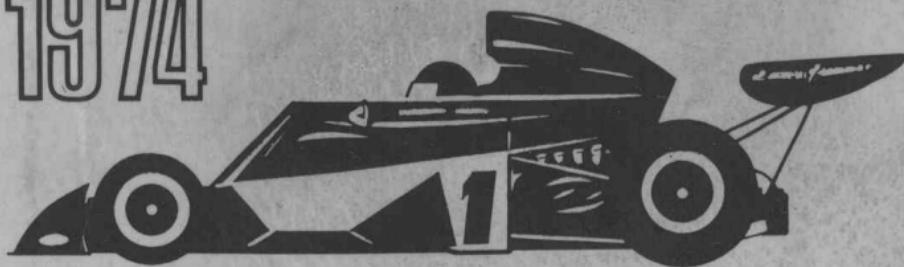
EASON GIBSON

FIA

ANNUAIRE DU  
SPORT AUTOMOBILE

YEAR BOOK OF  
AUTOMOBILE SPORT

1974





# Annexe "J" au Code Sportif International 1974

## Classification, définition et spécifications des voitures

En cas de divergence d'interprétation entre les termes des diverses traductions des règlements officiels de la FIA, le texte français fera seul foi.

# Appendix "J" to the International Sporting Code 1974

## Classification, definition and specifications of cars

In case of differences of interpretations as regards the terms used in the different translations of the official FIA regulations, the French text will be considered as authentic.

# Anhang "J" zum internationalen Automobil-Sportgesetz 1974

## Einteilung, Begriffsbestimmungen und Erläuterungen der Fahrzeuge

Im Falle von Streitfragen bei FIA Bestimmungen ist stets der französische Originaltext verbindlich.

# Allegato "J" al Codice Sportivo Internazionale 1974

## Classificazione, definizione e caratteristiche delle vetture

In caso di divergenza nell'interpretazione dei termini delle diverse traduzioni dei regolamenti FIA, farà fede il testo francese.

# **Appendix "J"**

## **to the International Sporting Code 1974**

### **Classification, definition and specifications of cars**

*Specifications In Italics are interpretations or explanations given by the CSI since the Introduction of the present Appendix "J" in 1966*

#### **TITLE I**

##### **CLASSIFICATION OF CARS**

**Art. 251.—Categories and groups:** cars competing in events shall be distributed into the following categories and groups:

**Category A:** recognized production cars (numbers between brackets are those of the required minimum production in 12 consecutive months).

- Group 1 : series-production touring cars (5,000).
- Group 2 : special touring cars (1,000).
- Group 3 : series-production grand touring cars (1,000).
- Group 4 : special grand touring cars (500).

**Category B:** experimental competition cars.

- Group 5 : sports cars.

**Category C:** racing cars.

- Group 7 : two-seater racing cars.
- Group 8 : International formula racing cars.
- Group 9 : "formule libre" racing cars.

#### **TITLE II**

##### **DEFINITIONS AND GENERAL PRESCRIPTIONS**

**Art. 252.—Definitions a) Recognized production cars:** cars of which the series-production of a certain number of identical (see definition of this word hereafter) cars, has been completed within a certain period of time, and which are meant for the normal sale (see below) to the individual purchaser. This period of time is of 12 consecutive months. The checking of the existing minimum production enables the ACN to apply to the FIA for recognition (see this word below).

**NB:** As from January 1st 1974, the period of time during which the minimal production of cars of Group 4 (500) will have to be reached will be 24 consecutive months.

**b) Experimental competition cars:** cars which have nothing or which have no more to do with a series-production vehicle, either that only one of the type has been built, or that the number of units which has been built is inferior to what is required for the group for which the minimum number of units annually produced is the smallest, or that although they originate from a series-production car, they have been modified or equipped with new accessories to the point that their series-production nature has been lost.

**c) Racing cars:** cars manufactured solely for speed races on a circuit or a closed course. These cars are generally defined by the international racing formulae the specifications of which are fixed by the FIA for a certain period of time. Racing cars not being defined by any international formula are said to be "formule libre" and their specifications must in that case be set out in the supplementary regulations of the event.

**d) Identical:** by "identical" cars are meant cars belonging to one and the same fabrication series and which have the same coachwork (outside and inside), same mechanical components and same chassis (even though this chassis may be amalgamated with the coachwork in case of a unitary construction).

"Mechanical components" include all parts for the propulsion, suspension, steering and braking system and all accessories whether moving or not which are necessary for their normal functioning (such as for instance, electric accessories).

By chassis is meant the structure of the car which holds mechanical components and coachwork together, and includes any structural part which is located below the horizontal plane passing through the centre of the wheel hubs.

**e) Minimum production:** this minimum production, different for each group of cars, applies to cars which are identical, the manufacturing of which has been fully completed within a period of 12 consecutive months.

*By "minimum series" should be understood only a number of entirely finished cars, eg, cars in running condition and ready for delivery to the purchasers.*

**f) Normal sale:** means the distribution of cars to individual purchasers through the normal commercial channels of the manufacturer.

**g) Recognition:** is the official certification made by the FIA that a minimum number of cars of a specific model has been made on series-production terms to justify classification in group 1, 2, 3 or 4 of these regulations. Application for recognition shall be submitted to the FIA by the ACN of the country in which the vehicle is manufactured and shall entail the drawing up of a recognition form (see below). It must be established in accordance with the special regulations, called "Regulations for Recognition", laid down by the FIA, and a manufacturer wishing to obtain the recognition of his model(s) must undertake to abide by their prescriptions. Recognition will only be granted to car-models which were still in production on January 1st 1972 or the production of which was started after that date. Recognition of a series-produced car will become void 4 years after the date on which the series-production of the said model has been stopped.

Recognition of a model may only be valid for one group. The transferring of a previously recognized model from one group to another will therefore nullify the effect of the said previous recognition.

#### *Definitive abandonment of the series-production*

*The series production is regarded as completely stopped if the monthly rate has decreased for more than four consecutive months to below 1/12th of the minimum figure required by the Appendix "J" for the minimum production of the group in which the model is recognized.*

#### *Definition of the term "model of car"*

By "model of car" is meant all the cars belonging to a production series distinguishable by a specific conception and specific external general lines of the coachwork and by an identical mechanical conception of the engine and the transmission to the wheels.

A model of car may exist in several variants (for example, different power or engine cylinder-capacity), which may possibly be the subject of separate recognitions.

However, taking the Art. 252g as a basis, it must be pointed out that, if the Sub-Commission for Recognitions has the possibility, for practical reasons, to authorize the recognition of certain variants of a same car-model in different Groups of cars, the principle of a simultaneous recognition of variants of a same model in Groups 1 and 2 (Touring Cars) on the one hand, and in Groups 3 and 4 (Grand Touring) on the other hand, remains forbidden.

**h) Recognition forms:** all cars recognized by the FIA shall be the subject of a descriptive form called recognition form on which shall be entered all data enabling identification of the said model.

To this effect only the standard recognition forms and standard additional form for "normal evolution of the type" and "variant" approved by the FIA shall be used by all ACNs.

The production of the forms at scrutineering and/or at the start may be required by the promoters who will be entitled to refuse the participation of the entrant in the event in case of non-production.

In case of any doubt remaining after the checking of a model of car against its recognition form, the scrutineers would have to refer either to the maintenance booklet published for the use of the make's distributors or to the general catalogue in which are listed all spare parts.

In case of lack of enough accurate documentation, scrutineers may carry out direct scrutineering by comparison with a similar part available from a concessionnaire.

It will rest with the competitor to obtain the recognition form and, if need be, the additional forms concerning his car, from the ACN of the manufacturing country of the vehicle.

In case of a normal evolution of the type, the model used will have to conform exactly to one of the models preceding or following the evolution.

*Whenever the scrutinizing of a car shows the complete compliance of it with its recognition form, inasmuch as is required for the group in which it is admitted, there is no need to worry about its year of fabrication.*

*Therefore, the chassis and engine numbers which may be mentioned on the recognition form are not to be taken into consideration.*

### **Manufacturing tolerances:**

Provided the tolerances comply with the tolerances allowed by the FIA, it will not be necessary to mention individual tolerances on the recognition form any more. Should any tolerance exceed the allowed ones, due explanations should be provided by the manufacturers for consideration by the Sub-Commission for Recognitions.

### **Tolerance scale:**

1) Tolerances for all machining, excepting bore and stroke:  $\pm 0.2\%$ . (Articles 156, 158, 159, 181, 196, 215, 216, 225, 262, 263 and also the orifices appearing on page 8 of the recognition form.)

2) Article 146: Tolerance  $\pm 0.5\%$ .

3) Unfinished castings:  $+4\% -2\%$ .

4) Cam-lift:  $+1\%$  (Articles 182, 197, 255).

5) Weight (Articles 160 to 164):  $+7\% -3\%$ .

6) Width of the car at front and rear axles:  $+1\% -0.3\%$ .

7) Track (Article 1):  $\pm 0.5\%$ .

**i) Cylinder-capacity classes:** the cars shall be distributed into the following 13 classes, according to their cylinder-capacity:

1.	Cylinder-capacity inferior or equal to 500 cc											
2.	Cylinder-capacity exceeding 500 cc and inferior or equal to	600 cc										
3.	"	600 cc	"	"	"	"	"	"	"	700 cc		
4.	"	700 cc	"	"	"	"	"	"	"	850 cc		
5.	"	850 cc	"	"	"	"	"	"	"	1,000 cc		
6.	"	1,000 cc	"	"	"	"	"	"	"	1,150 cc		
7.	"	1,150 cc	"	"	"	"	"	"	"	1,300 cc		
8.	"	1,300 cc	"	"	"	"	"	"	"	1,600 cc		
9.	"	1,600 cc	"	"	"	"	"	"	"	2,000 cc		
10.	"	2,000 cc	"	"	"	"	"	"	"	2,500 cc		
11.	"	2,500 cc	"	"	"	"	"	"	"	3,000 cc		
12.	"	3,000 cc	"	"	"	"	"	"	"	5,000 cc		
13.	"	5,000 cc										

Regulations Intended for specific events may provide one or several subdivisions of class 13. There shall be no sub-division of the other classes.

The above mentioned classification will apply only to non-supercharged engines.

Unless otherwise specified in special provisions set up by the FIA for a certain category of events, the organizers are not bound to include all the above mentioned classes in the supplementary regulations, and, furthermore they are free to group two or more consecutive classes, according to the particular circumstances of their events.

**j) Formulae of equivalence between reciprocating piston engines and special engines.**

**Rotary piston engines:** cars with rotary piston engines covered by the NSU-Wankel patents will be admitted on the basis of a piston displacement equivalence. This equivalence is twice the volume determined by the difference between the maximum and minimum capacity of the working-chamber.

**Turbine engines:** cars propelled by a turbine engine will be admitted on the basis of a formula of equivalence with regard to alternating piston engines. This formula is the following:

$$A = \frac{C \times 0.09625}{(3.10 \times R) - 7.63}$$

**A**=High-pressure nozzle area—expressed in square centimetres by which is meant the area of the air-flow at the exit from the stator blades (or at the exit from the first stage if the stator has several stages). Measurement is done by taking the minimum area between the fixed blades of the high pressure turbine first stage. In cases where the first stage turbine stator blades are adjustable, they will open to their greatest extent to present the greatest area for the determination of area "A".

The area of the high pressure nozzle is thus the product—expressed in square centimetres—of height by width and by the number of vane spaces.

**C**=Cylinder-capacity of reciprocating piston engine expressed in cubic centimetres.

**R**=The pressure ratio i.e. the ratio of the compressor of the turbine engine. This pressure ratio is obtained by multiplying together a value for each stage of the compressor, as indicated hereafter:

Subsonic axial compressor=1.15 per stage.

Trans-sonic axial compressor = 1.5 per stage.

Radial compressor = 4.25 per stage.

Thus a compressor with one radial and six axial stages will be designated to have a pressure ratio of:

$$4.25 \times 1.15 \times 1.15 \times 1.15 \times 1.15 \times 1.15 \text{ or } 4.25 \times 1.15^6$$

The CSI reserve their right to modify the basis of comparison established between conventional type engines and new type engines, while giving a previous notice of one year to start from January 1st, following the date on which the decision was made.

**k) Coachwork:** by coachwork is meant:

- externally: all parts of the car licked by the air-stream and situated above a plane passing through the centre of the wheel hubs.
- internally: all visible parts of the passenger compartment.

Coachworks are differentiated as follows:

- 1) completely closed coachworks,
- 2) completely open coachworks,
- 3) convertible coachworks: with a hood in either supple (drop-head) or rigid (hard-top) material.

**I) Use of aerodynamic devices on cars of groups 5, 7 and international racing formulae:** in interpreting Art 252(I), shall definitely be considered as coachwork all external parts of the car which extend above the highest point of either the front or rear wheels (with tyres) with the exception of units definitely associated with the functioning of the engine or transmission and the anti-roll bar.

Any specific part of the car which has an aerodynamic influence on the stability of the vehicle must be mounted on the entirely sprung part of the car and shall be firmly fixed whilst the car is in motion.

Neither the safety roll bar, nor any of the units associated with the functioning of the engine or transmission shall have an aerodynamic effect by creating a vertical thrust.

All external projections swinging in a horizontal plane shall have a minimum radius of 1.5 cm. The leading edge of any aerofoil fixed to the front of the car shall not be sharp.

**m) Towing-eye:** all cars, with the exception of formula cars, will be equipped with a rear and front towing-eye, for all events without any distinction. This towing-eye will only be used in case the car can move freely, and it must be avoided to use it to lift the car.

**Art. 253.—Prescriptions common to all cars of categories A and B.**

**a) Chassis, ground-clearance, steering lock:** no part of the car should touch ground when one of its tyres is deflated.

The maximum steering radius shall be 6.75 m which means that the car must be able to make a complete turn in both directions without the wheels going beyond two parallel lines drawn on the ground 13.50 m apart.

**b) Coachwork:**

**Conditions for recognition:**

Coachworks of one same minimum series shall be identical with the only exception of a "sun roof".

However, if a model has its coachwork equipped with a specific number of doors and has been recognized on the basis of a given minimum series, similar recognition may be granted to another coachwork with a different number of

doors when its minimum production reaches 50% of the figure necessary for recognition of the basic series, providing that both models have the following common characteristics:

- 1) a coachwork of similar shape, i.e. of which the general appearance is basically the same and which has not been modified beyond what is necessary to change from a four door version to a two door version (or vice-versa);
- 2) exactly identical mechanical parts;
- 3) the same wheelbase, track and number of seats;
- 4) at least the same weight;
- 5) an FIA decision to recognize this variant coachwork and to draw up an additional "variant" recognition form.

As far as convertible cars are concerned, these must comply in all respects with the specifications applying to closed cars if they run an event under this form, or with the specifications concerning open cars if they run with the hood down or the hardtop removed.

#### **Maximum outside dimensions :**

The overall width shall be 210 cm for all cars participating in events on circuits.

#### **Minimum inside dimensions and minimum number of seats :**

Cars shall be equipped with a minimum of two seats or a minimum of four seats according to the group in which they seek recognition and, within a same group, according to their engine cylinder-capacity.

For each group specified in these regulations, the minimum number of seats is listed hereafter and the minimum inside dimensions for both cases are indicated in the following paragraphs.

##### **1st case (see diagram 1): car equipped with 4 or (more) seats.**

The height at the front (B) is measured between the lowest point of the front seat cushion compressed by a standard mass of 60 kgs (see diagram 2) and the ceiling (the padding if any, may be compressed). Should the backrest of the front seat(s) be inclined backwards, the protected height must also be measured at the same angle as the inclination of the backrest.

— If the front seats are separate, the measurement is made in the middle of the two seats. In case of adjustable front seats, the seats will be placed in medium position.

— If there is a common front seat, the measurement is made at 25 cm from the centre line of the car.

The height at the back (D) is measured between the cushion of the rear seat, compressed by the standard mass, and the ceiling (the padding, if any, may be compressed) at 25 cm from the centre line of the car. Should the backrest of the rear seat be inclined backwards, the protected height must also be measured at the same angle as the inclination of the backrest.

The width over the front seats (C) is measured along the vertical plane passing through the centre of the standard mass placed on the seat. The width must be freely maintained over a height of at least 25 cm.

The width over the rear seats (E) is measured along the vertical plane passing through the centre of the standard mass. The width must be freely maintained over a height of at least 25 cm.

The minimum dimensions (in centimetres) are the following:

Cylinder-capacity	B	C	D	E
Up to 700 cc	85	100		
From 700 to 2,000 cc	85	110	85	110
Over 2,000 cc	90	120	85	120

Moreover, in order to be considered as a four-seater, a model must fulfil certain conditions regarding its rear-seating capacity. These conditions are the following (see diagram 3):

- 1.— l must be at least 90% of L;  
m must be at least 85% of M;  
p must be at least 85% of k+m.

2.— k must measure at least 15 cm and the minimum measures for the foot-space of the rear passengers must be: 32 cm long, 5 cm high and (for each one of the two passengers) 25 cm wide.

3.— the space available for the rear passengers must meet the following condition:  $k+l+m=95$  cm minimum.

4.— cars in which the back of the rear seat(s) is inclined forward beyond the vertical cannot be considered as four-seaters.

The measuring of the above dimensions must be carried out under the following conditions:

— the front seat, if adjustable, must be placed in its normal driving position, i.e.:  $K+L+M$  must measure at least 120 cm.

— if the front or rear seats have reclining backrests (by means of either a mechanical device or chocks or any other means) these should be set at an inclination of 15° backwards.

— K is measured horizontally from the brake pedal (at rest) to the foremost point of the front seat; k is measured horizontally at a height equal to l from the back of the front seat to the foremost point of the rear seat.

L and l are measured vertically from the highest point of the cushion of the seat to the floor of the car. At the front L must be measured at the usual resting-place of the driver's heels.

M and m are measured horizontally from the foremost point of the seat to the backrest to be measured at a height of L (l).

Two specific cases must be distinguished:

- 1) bucket-seats: the measuring must be taken on the centre line of each seat.
- 2) common seat: measuring must be carried out at 25 cm from the longitudinal axis of the vehicle.

However, for the rear seat(s) measuring must be made in the same vertical plane as for the front seats.

p is measured (in the same vertical plane as m) horizontally from the rearmost point of the backrest of the front seat to the backrest of the rear seat.

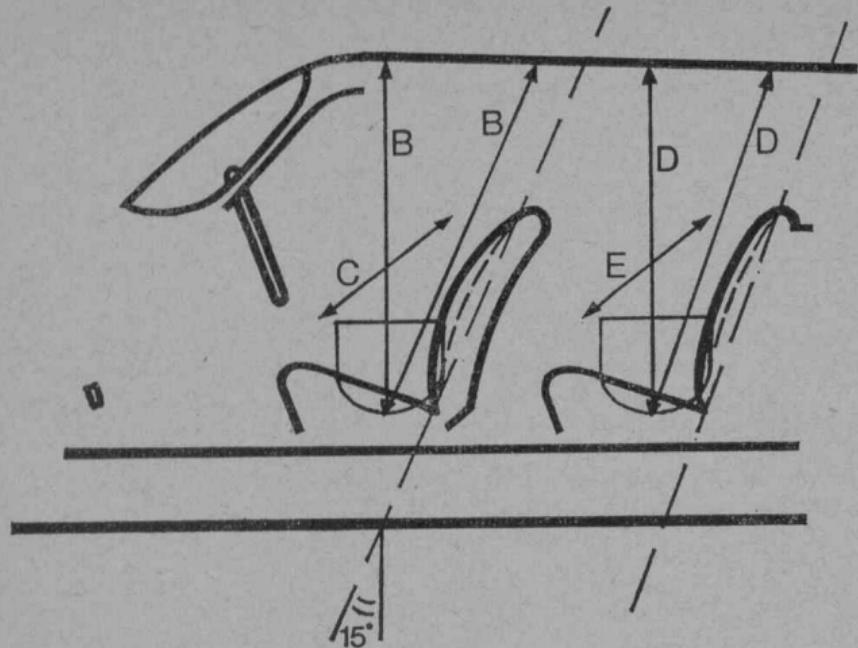
The seating cushion, if adjustable in height, must be fixed at half the adjusting range.

For the above-mentioned measurements, seats must not be occupied.

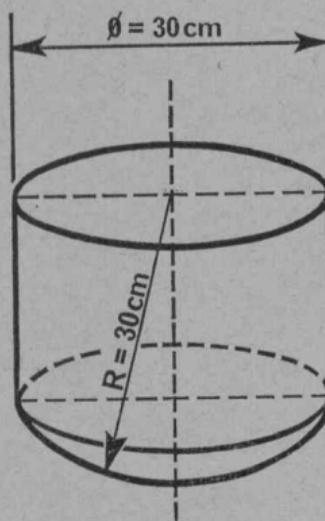
*Definition of the term "seat"*

— By seat is meant the two surfaces constituting the seating cushion and the seat back or backrest.

— By seat-back or backrest is meant the surface measured upwards from the bottom of the spine of a person normally seated.

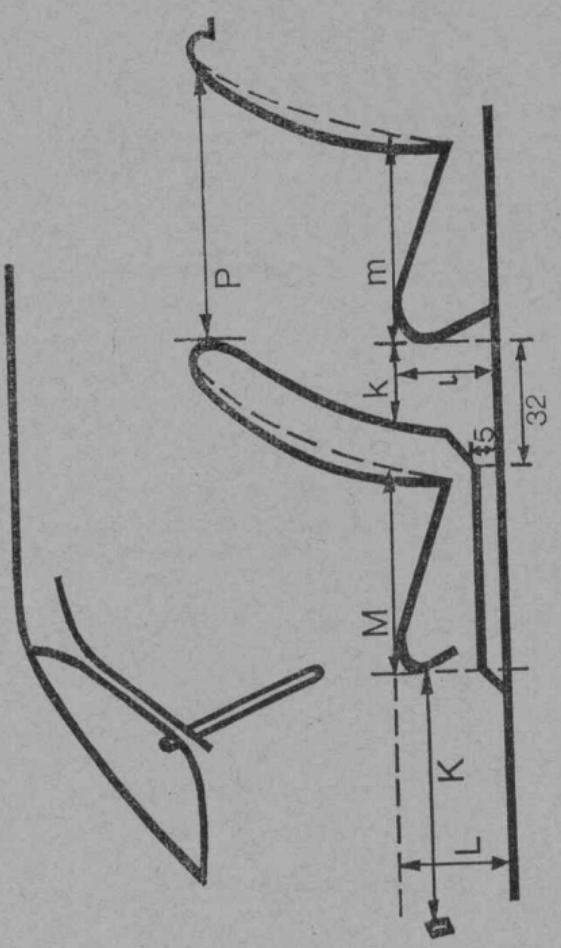


Dessin/drawing No. 1



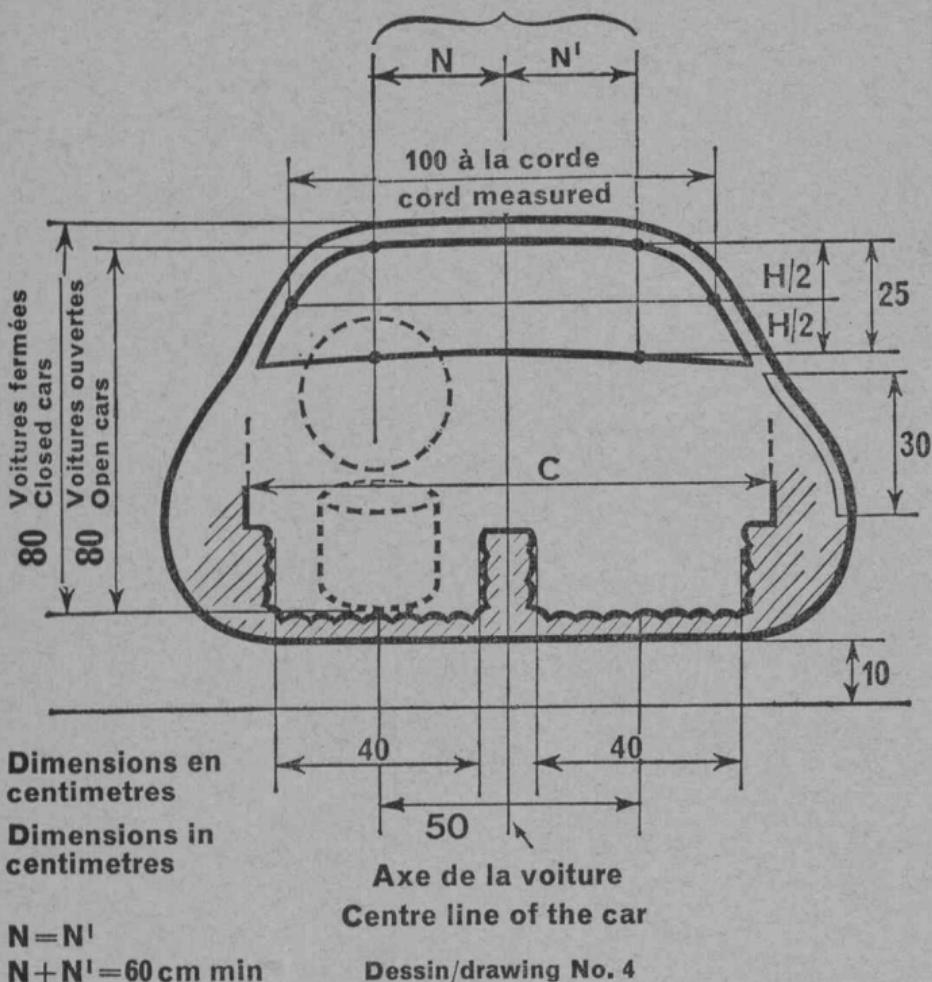
Weight/tare = 60 kgs  $\pm$  200 grms.

Dessin/drawing No. 2



Dessin/drawing No. 3

**Largeur sur laquelle la "hauteur protégée" doit être maintenue**  
**Width where the "protected height" must be maintained**

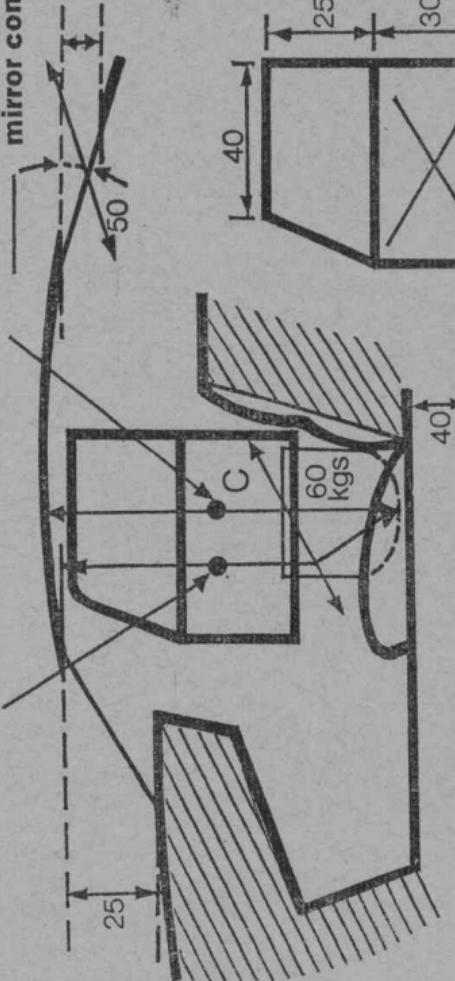


	0-700 cc	700-2,000 cc	2,000+ cc
C	100	110	120

**En dessous de 20° rétro-viseur extérieur obligatoire**

**Under 20° rear view mirror compulsory**

**80 Voitures ouvertes      80 Voitures fermées  
80 Open cars                80 Closed cars**



**Dimensions en centimètres  
Dimensions in centimetres**

**Dimensions portière  
Door dimensions**

**Dessin/drawing No. 5**

— By seating cushion is meant the surface measured forwards from the bottom of the spine of the same person.

These two main parts of the seat must form an homogeneous construction and be entirely covered with upholstery (for example, in natural or synthetic textiles).

When examining a specific car, the rear space reserved for passengers can only be considered as complying with the term "seat" if it offers comfort similar to that of the front seat, ie, the upholstery on it must have approximately the same thickness and the same flexibility as that of the front seats, or, in practical terms: during the measurement, the standard mass (60kg) must compress the seating cushion on the rear to approximately the same extent as on the front seats.

## 2nd case (see diagrams 4 and 5): cars with a minimum of 2 seats.

The two seats must be distributed equally on either side of the longitudinal centre-line of the car and at the same level, regardless of their normal play for adjusting them to the size of the driver. The location provided for placing or housing the seats must have a minimum width of 40 cm maintained all along the depth of the seat. The seats themselves must have identical dimensions.

The "protected height" shall be at least 80 cm measured from the cushion of the seat compressed by the standard mass (see diagram 2) to the ceiling (any existing padding being compressed) in cars with closed coachwork and 80 cm from the surface of the seat compressed by the standard mass (see diagram 2) to the upper edge of the windscreens (measured vertically through the centre of the standard mass) in case of open cars.

The minimum interior width over the front seats (see measurement C) shall be of 100 cm in cars with a cylinder-capacity inferior or equal to 700 cc, 110 cm in cars with a cylinder-capacity from 700 cc to 2,000 cc and 120 cm in cars with a cylinder-capacity exceeding 2,000 cc. The minimum width of foot-space (for each person) must be at least 25 cm measured perpendicularly to the centre-line of the car, plumb with the pedals.

The distance between the lengthwise centre-lines of the two seats should not be inferior to 50 cm. In case the two centre-lines should not be parallel, measurement should be done from the hollow of the seats.

*The passenger's compartment and seat shall remain free throughout the competition and shall not be encroached upon by any element or equipment of the car except when Appendix J specifically provides otherwise. The passenger's compartment and seat of open cars shall not be covered by means of a tonneau cover of any type.*

**NB:** If a modification authorized by Appendix "J" affects a dimension stated on the recognition form, it will not be possible to retain that dimension as an eligibility criterion for the car.

**c) Windshield—Windshield wiper:** a windshield made of laminated glass is compulsory. It shall be equipped with at least one automatic wiper sweeping a sufficient area to enable the driver to distinctly see the road from his seat.

The windshield shall comply with the following requirements:

- 1) be placed symmetrically with regard to the centre-line of the car;
  - 2) have a minimum height of 25 cm, maintained between two points symmetrically placed with regard to the centre-line of the car and of which one is determined by the vertical line passing through the centre of the steering-wheel. There must furthermore be at least 60 cm between the two said points;
  - 3) have a minimum width of 100 cm; cord measured at half its vertical height.
- Shall be considered as being the windshield, only the glass area through

which one has an entirely free vision towards the front, without being limited by any outside opaque projection apart from the bulge of the mudguards which cover the front wheels.

**d) Mudguards:** shall be of permanent nature and firmly fixed.

They shall project over the wheels and provide efficient covering of at least one third of their circumference, and at least the width of the tyre.

In those cars where mudguards are entirely or partly overhung by the body structure, the combination mudguards-body or the body alone shall nevertheless meet the above protection requirements.

Mudguards must be solid with the body, there being no gap between them.

**e) Doors:** all vehicles shall be fitted with at least one rigid door on each side, with closing devices and hinges which may not be located on the rear-door post, nor on the door-sill. The outside door handle, in case of closed cars, must be clearly indicated. The dimensions of the lower door panel (the part which is normally opaque) must be such as to allow a rectangle of at least 50 cm wide and 30 cm high being inserted in it. The corners of this rectangle may be rounded to a maximum radius of 15 cm. Cars with sliding-doors will not be allowed unless they include a safety system enabling a quick and easy evacuation of the car's occupants in case of an accident.

Cars with closed or convertible coachwork shall have doors equipped with moveable windows of the material provided by the manufacturer for the considered model, liable to be opened over at least one third of their surface in order to provide for ventilation, each window having a minimum width of 40 cm and a minimum height of 25 cm.

When opened, the doors must give free access to the seats. They must be made in such a way that they never restrict the lateral view of the driver.

*By door should be understood the part of the coachwork opening to give access to the seats.*

**f) Rear view:** this shall be provided by an inside mirror commanding a rear window measuring at least 10 cm vertically maintained along a width of at least 50 cm. However, if the straight line connecting the upper and lower edges of the rear window opening makes an angle inferior to 20° with the horizontal, when the car complies with the same specifications as those required for checking the ground-clearance (see art. 253), the rear view must be efficiently obtained by other means (two outside mirrors or any other system of equivalent efficiency).

**g) Luggage trunk:** a covered space shall be provided which is an integral part of the coachwork but outside the space occupied by the passenger seats.

This space shall be such as to enable to carry without special difficulty a number of suit-cases, sheltered from rain or dirt which varies according to the cylinder-capacity of the engine equipping the car (see below), of the following minimum dimensions: 60 cm × 40 cm × 20 cm.

Cylinder-capacity inferior or equal to 2,000 cc: 1 suit-case,

Cylinder-capacity superior to 2,000 cc: 2 suit-cases.

However, in cars having inside dimensions which are inferior to the minima laid down in article 253 b to allow classification as a four-seater, but which contain a compartment behind the front seats liable to receive passengers, this compartment may be taken into account as luggage space whether or not it has been equipped for this purpose but without modifying any of the original parts.

*It is specified that the luggage capacity for FIA recognized cars is checked at the moment of recognition. Therefore race scrutineers need not worry about minimum luggage space for all cars benefiting from an FIA recognition in Groups 1, 2, 3 and 4.*

**h) Starting:** cars must be equipped with a device and its source of power for automatically starting the engine and able to be actuated by the driver sitting at the wheel.

**i) Fuel tanks:** the total capacity of the fuel tanks (main and additional) must not exceed the following limits:

Cars up to	700 cc of engine cylinder-capacity	:	60 l.
Cars from	700 cc to 1,000 cc	"	: 70 l.
"	1,000 cc to 1,300 cc	"	: 80 l.
"	1,300 cc to 1,600 cc	"	: 90 l.
"	1,600 cc to 2,000 cc	"	: 100 l.
"	2,000 cc to 2,500 cc	"	: 110 l.
Cars over 2,500 cc	"	"	: 120 l.

Will be considered as a fuel tank any container holding fuel which can flow out by any method either to the main-tank or directly to the engine.

The filling-port(s) (and vents) of each tank must always be outside the passenger-compartment and be entirely leak-proof.

*Location of fuel tanks: The emplacement foreseen by the manufacturer for the fuel tank(s) and the feeding system towards the engine, constitutes one of the principles of series-production, and this implies that no change can be made, unless an authorization is explicitly stated in Appendix J.*

However, a derogation to the above rule shall be made for cars in which the manufacturer has placed the fuel tank inside the passenger compartment, and close to the occupants.

*In this specific case, and for the sake of safety, it will be possible, whatever the group of cars, to mount a leak-proof protective barrier between the tank and the passengers, or to change the place of the tank and, if necessary, its accessory parts (filling port, petrol pump, outlet tube).*

### **j) Safety Fuel Tanks approved by the FIA**

#### **Generalities**

Safety fuel tanks are made of a reinforced elastomer bladder manufactured to fit inside a smooth skinned surrounding structure.

Their fitting in a car is only compulsory if Appendix J explicitly prescribes it for the Group concerned.

#### **Technical specifications**

Two sets of specifications have retained the FIA recognition. The FIA reserves its right to approve any other set of technical specifications after study of the dossier submitted by the manufacturer(s) concerned.

### **Specifications FIA/Spec/FT3**

#### **1—Material**

The flexible tank skin must be manufactured from a woven fabric in polyamide, polyester or equivalent impregnated and coated with a fuel resistant elastomer.

#### **2—Minimal physical properties**

- Tensile strength: 450 lbs min. Spec MIL-CCC-T-191b Method 5102;
- Tear strength: 50 lbs min. Spec MIL-CCC-T-191b Method 5134;
- Puncture test: 175 lbs min. Spec MIL-T-6396-C Article 4.5.17.

These physical properties must be maintained throughout all areas of the finished fuel cell, including seams, joints and fittings.

### **3—General remarks regarding fittings and connections**

All fittings in elastomer shall be vulcanized on the skin and therefore be integral part of it.

All metal fittings shall be:

- either coated with elastomer and vulcanized on the skin,
- or integrated to the skin, by heating under pressure,
- or mechanically bound to the skin by a system of ring and counterring, the sealing being ensured either by a flat joint, or with an "O" ring.

In all cases, if there is a connection with bolts, it is recommended to fit steel inserts in the light alloy plates.

The hose clamp area of all nipple fittings shall be covered either with fabric, or with protection laths, in order to avoid cold flow of rubber when under clamp pressure.

### **Specifications FIA/Spec/FT5**

This specification will be published in the CSI Sporting Bulletin and be enforced 6 months after the publication date.

### **4—Safety tank manufacturers recognized by the FIA**

Entrants must use safety fuel tanks made by a manufacturer recognized by the FIA.

In order to obtain the FIA's agreement, a manufacturer must have proved the constant quality of its product and its compliance with the specifications approved by the FIA.

Safety tank manufacturers recognized by the FIA must undertake to deliver to their customers exclusively tanks complying with the norms approved. To this end, on each tank delivered there shall be a printed code indicating the name of the manufacturer, the exact specifications according to which this tank has been manufactured and the date of manufacturing.

### **5—Ageing of safety fuel tanks**

The ageing of safety tanks entails a considerable reduction in the strength characteristics after approximately five years.

Therefore, all fuel cells must be replaced at the latest five years after the fabrication date indicated on the cell.

Fuel cells which are not codified such as to show their date of fabrication will be considered to date from before January 1st 1970.

### **6—List of recognized manufacturers**

#### **Federal Republic of Germany**

Uniroyal, 5100 AACHEN, Postfach 410

#### **United States**

Aero Tec Laboratories, 20 Beldon Place, Norwood, New Jersey 07648

Donn Allen Inc, 5730 Bankfield Drive, Culver City, California 90230

Firestone Coated Fabrics Co, 1200 Firestone Parkway, Akron, Ohio 44301

Fuel Safe Corporation, 15516, Commercial Lane, Huntington Beach,  
California 92649.

Goodyear Fuel Cell Labs, The Goodyear Tire & Rubber Company,  
Akron, Ohio 44316

#### **France**

Kléber-Colombes-division Marston, BP22,

4 rue Lesage Maille, 76-Caudebec-les-Elbeuf

Superflexit SA, 45 Rue des Minimes, 92 Courbevoie

## **Great Britain**

FPT Industries Ltd, The Airport, Portsmouth, Hants  
Marston Excelsior Ltd, Wobaston Rd, Wolverhampton, Staffs

## **Italy**

Pirelli, Viale Rodi 15, Milano

## **Japan**

Bridgestone Tyre Co Ltd, 1-1 Chome Kyobashi, Chuo Ku, Tokyo 104  
Kojima Press Ltd, 3-30 Shimoichibacho Toyota, Aichiken  
Sakura Rubber Co Ltd, 48-14-1 Chome Sasazuka, Shibuya Ku, Tokyo  
Sumitomo Electric Industries Ltd, 15-5 Chome Katahama, Migashi Ku,  
Osaka

*For cars of groups 1 and 3 of Appendix J, the fitting of safety tanks, of an FIA approved type or others, will be allowed only if the manufacturer of the car has recognised them as such and provided they do not exceed the capacity of the original tanks as stated on the recognition form.*

Besides, cars from Groups 1 to 4 taking part in events qualifying for a World Championship may be equipped with a safety tank in so far as the necessary internal modifications do not affect the structural parts and the suspension mountings.

**k) Minimum weight:** is the real minimum weight of the empty car (without persons or luggage aboard) fully equipped and ready for delivery to the purchaser. It shall consequently include a spare-wheel equipped with a tyre similar to those mounted on at least 2 of the 4 wheels, and all the accessories normally mounted on the least expensive model of the series concerned being removed, except for the normally supplied repair kit (jack, tool-kit). All liquid tanks (of lubrication, cooling system, braking, heating system, if need be), except for the fuel tank, must be full.

*By full it will be understood: to the normal level recommended by the manufacturer.*

The minimum weight of the car mentioned on the recognition form shall be strictly respected. Any lightening of the car by removal or replacement of parts, aiming at reducing its weight, is prohibited.

Cars must maintain their minimum weight during all the duration of an event. Scrutineers can therefore take a car on the finish line and weigh it.

**l) Spare-wheels:** all cars shall be equipped with at least one spare wheel with its tyre occupying the position provided for by the manufacturer which may not encroach upon the space provided for luggage.

The spare wheel must be equipped with a tyre of the same dimensions as those fitted on at least two wheels of the car.

*By same dimensions it will be understood: same nominal tread circumference.*

**m) Silencer (muffler) and exhaust system:** even when the specific provisions for a group allow replacement of the original muffler, cars competing in an open road event shall always be equipped with an exhaust muffler complying with the road regulations of the country(ies) through which the event is run.

For events run exclusively on closed circuits, the supplementary regulations may authorize modification, replacement or removal of the exhaust muffler.

The outlet pipes of the muffler shall be directed either rearwards or sideways. If the outlet pipes are pointing rearwards, their orifices shall be placed at a height neither superior to 45 cm nor below 10 cm; they shall not protrude by more than 15 cm beyond the overall length of the car. If the exhaust pipes are directed sideways, their orifices must be located aft of a vertical line passing through the wheelbase centre and may not project in any way beyond side of the coachwork.

Adequate protection shall be provided in order to prevent heated pipes from causing burns.

**n) Safety devices:** for all cars competing in events entered on the FIA International Sporting Calendar:

- a supplementary locking device for engine bonnet, boot lid, and any other important objects carried on board of the vehicle, such as spare wheel, tool set, etc;
- a supplementary protection of all fuel pipes and brake lines outside the coachwork against any risk of damage (stones, corrosion, breaking of mechanical pieces, etc) and inside the cockpit against any risk of fire (fuel pipes only);
- anchor fittings for safety harness;
- for cars of Groups 1 to 5, the extinguishing system will have a capacity of 5 kg, carried in one or two units maximum. CO<sub>2</sub> will be considered as unacceptable as an extinguishant; BCF (Freon 12B1) is given as an example to be at least equalled in terms of capability and non-toxicity.

The extinguisher(s) will have to be immediately accessible to the driver and co-driver.

**All categories** of cars competing in Hill Climbs must be equipped with the same extinguishing systems as are obligatory for the **same** categories competing in circuit events.

### **o) Roll-over bars:**

#### **General considerations**

1 — The basic purpose of such devices is to protect the driver if the car turns over or is involved in a serious accident. This purpose should always be borne in mind.

2 — Whenever bolts and nuts are used, they should be of a sufficient minimum diameter, according to the number used. They should be of the highest possible quality (preferably aircraft). Square head bolts and nuts should not be used.

3 — One continuous length of tubing should be used for the main structure with smooth continuous bends and no evidence of crimping or wall failure.

4 — All welding should be of the highest possible quality with full penetration (preferably arc welding and in particular heliarc). Although good outside appearance of a weld does not necessarily guarantee its quality, poor looking welds are never a sign of good workmanship.

5 — Braces should preferably be of the same size tubing as used for the main structure.

6 — For space-frame constructions it is important that crash-bar structures are attached to cars in such a way as to spread the loads over a wide area. It is not sufficient to simply attach the roll-bar to a single tube or junction of tubes. The roll-bar should be designed in such a way as to be an extension of the frame itself, not simply an attachment to the frame.

Considerable care should be attached to the necessary strengthening of the basic structure, for instance by adding reinforcement bars or plates so as to properly distribute the loads.

7 — For monocoque constructions, consideration should be given to using a roll-bar hoop of 360 degrees completely around the inside of the car, and attached with suitable mounting plates. This type of roll-bar then becomes a substitute for the frame.

#### **I Cars of Groups 1 to 4**

It is compulsory to fit a safety roll-bar or cage for all speed events (on circuits).

For regularity events (rallies), hill-climbs, slaloms the fitting is compulsory for special cars (Groups 2 and 4), and optional for series-production cars (Groups 1 and 3). However, should the organisers of a rally or hill-climb deem that the driving conditions during their event are comparable to those of a speed event, they are entitled to prescribe the compulsory fitting of a safety roll-bar or cage, even for cars of Groups 1 and 3. This obligation must, in that case, be clearly mentioned in the Supplementary Regulations of the event.

The attention of racing drivers is drawn to the fact that a safety roll-bar can be efficient only if the driver is firmly maintained in his seat by a safety harness. In the opposite case, the safety roll-bar, instead of protecting the driver, constitutes a dangerous obstacle inside the passenger compartment.

The exact weight of the device shall be subject to a statement from the competitor, to be appended to the entry form. This weight must be added to that indicated for the vehicle on the recognition form.

### Closed Cars

As a general rule, the safety cage must be made of two main hoops, one behind the front seats and one following the windscreen pillars.

However, for practical reasons, the fitting of such a cage is made compulsory only for cars of which the weight declared on the recognition sheet is superior to 1,200 kg. For the cars under 1,200 kg the windscreen hoop is not compulsory. The general designing must comply with drawings 6 and 7. For regularity events (rallies) the diagonal is optional.

The safety roll-bar or cage must be conceived in such a way as not to obstruct the access to the front seats and not to encroach on the space provided for the driver and the passenger. On the other hand, it is allowed that the elements of the roll-bar or cage encroach on the space of the rear passengers, and pass through the upholstery or the rear seat(s).

The main roll-bar hoop(s) must be placed as near as possible to the roof in order to limit its crushing in the event of a somersault.

### Attachment of safety roll-bars on the chassis

The attachment points of the struts of the main roll-bar hoop(s) on the chassis must be locally reinforced by means of a steel-plate—2 mm thick at least—welded, riveted or bolted on the shell, with a prolongation along a vertical member of the chassis (for example: door pillar—see drawing 8). The total surface of this plate must be of 35 sq cm at least, of which a third at least ensures the connecting with the vertical chassis-member. The fixing of the main roll-bar hoop(s) must be realised with at least 3 bolts and nuts—diameter: at least 8 mm—with hexagonal head. The attachment plate integrated to the roll-bar struts shall have the same thickness as the wall of the tube on which it is fixed.

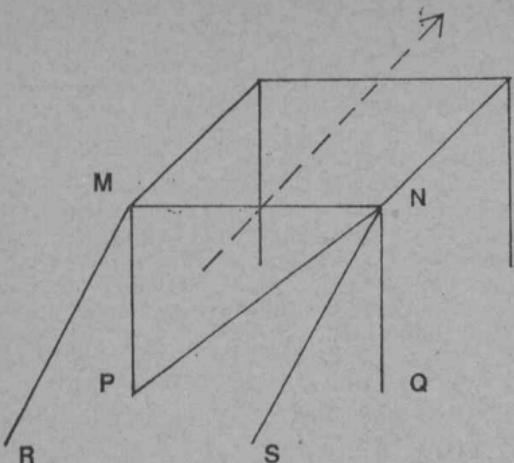
When the roll-bar rests on a box-member, the latter must be locally reinforced by a structure constituted of either welded bolts or welded tubing ends (see drawing 9).

### Removable connections

In case removable connections are used in the roll-bar construction, they must comply with a type approved by the FIA.

Are approved up to now: a tapered connection and a twin lug connection with axis working under double shearing conditions and a muff-connection complying with drawings 10, 11 and 12.

The twin lug connection may however be used only for longitudinal brace-rods and not for the basic frame of the roll-bar(s).



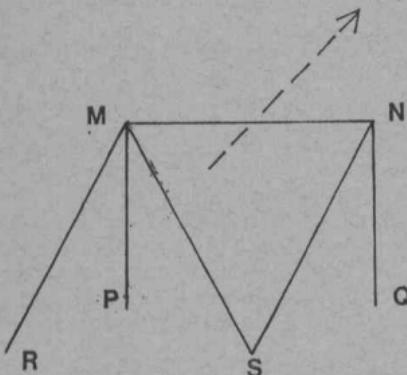
Dessin/drawing No. 6

### Groupes 1 à 4

Le montage d'un renfort diagonal est obligatoire. Les différentes variantes autorisées sont: MQ, MS, NP, NR. (NP est indiqué sur le dessin no 6 comme un exemple.)

### Groups 1 to 4

Fitting of a diagonal strut is compulsory. The various authorized alternatives are: MQ, MS, NP, NR. (NP is shown on drawing 6 as an example.)



Dessin/drawing No. 7

### Groupes 1 à 4

Le montage d'un renfort diagonal est obligatoire. Les différentes variantes autorisées sont: MQ, MS, NP, NR. (MS est indiqué sur le dessin no 7 comme un exemple.)

### Groups 1 to 4

Fitting of a diagonal strut is compulsory. The various authorized alternatives are: MQ, MS, NP, NR. (MS is shown on drawing 7 as an example.)

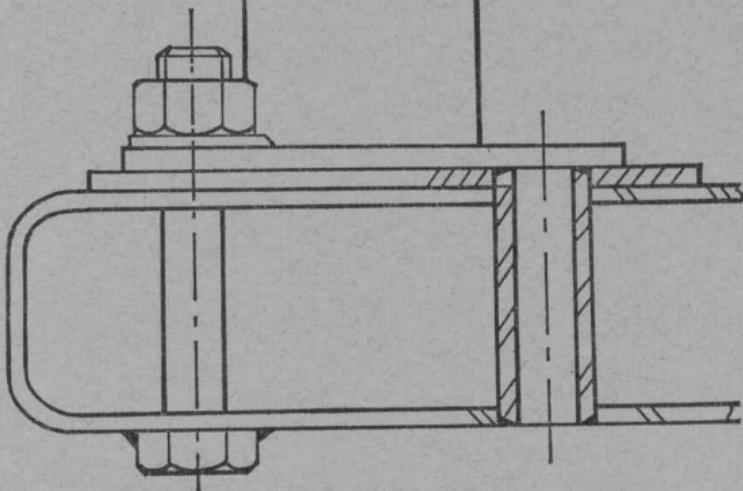
Montant de portière/ ▶  
Door pillar

(par exemple/  
for example)

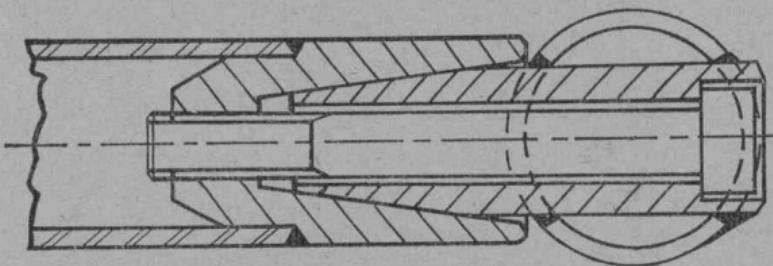
Plancher/Floor

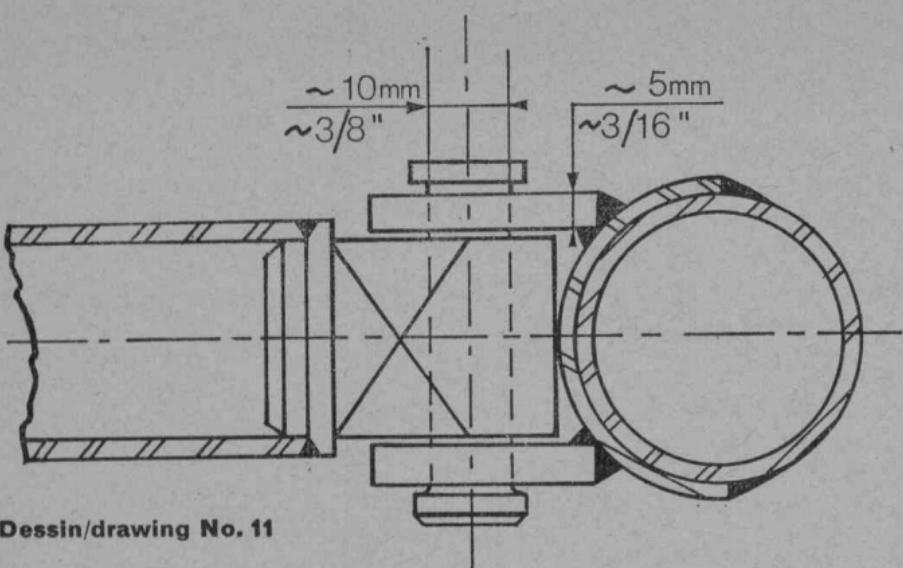
Dessin/drawing No. 8

Dessin/drawing No. 9

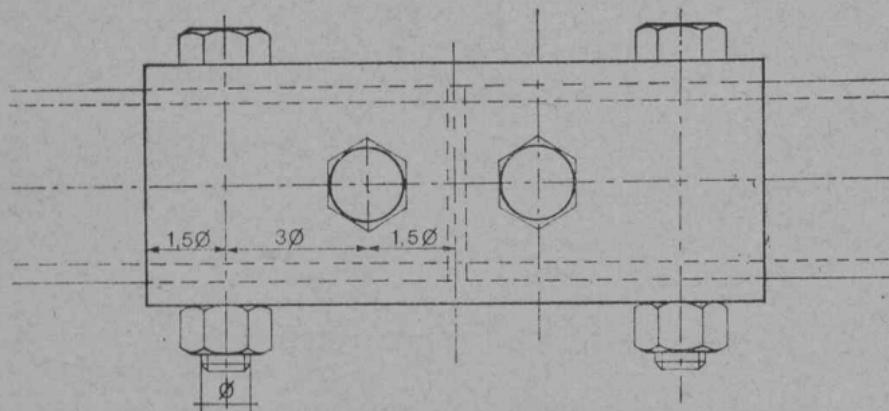


Dessin/drawing No. 10



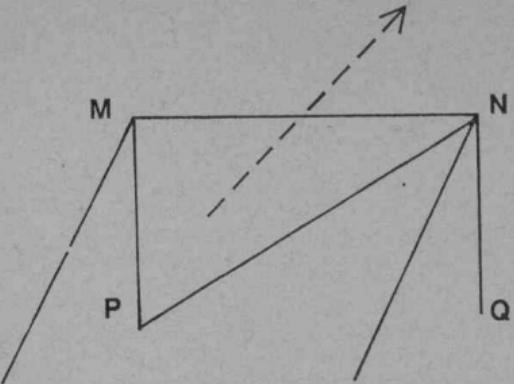


Dessin/drawing No. 11



Dessin/drawing No. 12

$12\text{ mm}$  (tube  $< 40\text{ mm}$  diam. ext)  
 $\phi = 14\text{ mm}$  (tube  $\geq 40\text{ mm} < 50\text{ mm}$  diam. ext)  
 $16\text{ mm}$  (tube  $\geq 50\text{ mm}$  diam. ext)



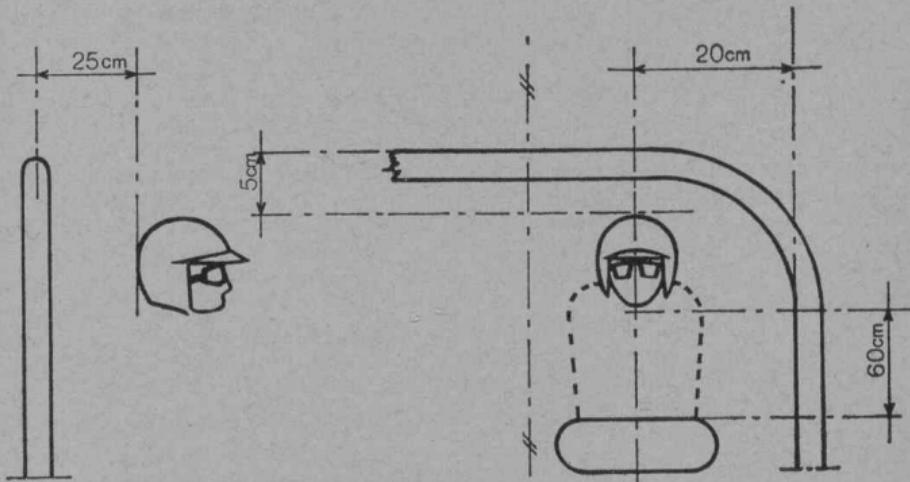
Dessin/drawing No. 13

### Groupe 5

Le montage d'un renfort diagonal est obligatoire. Les 2 variantes autorisées sont MQ et NP. (NP est indiqué sur le dessin no 13 comme un exemple.)

### Group 5

Fitting of a diagonal strut is compulsory. The 2 authorized alternatives are MQ and NP. (NP is shown on drawing 13 as an example.)



Dessin/drawing No. 14

## II Open Cars

Conception and realization identical to those prescribed for closed cars. Moreover, the main hoop behind the front seats must be symmetrical about the lengthwise centre-line of the car and comply with the following figures (see drawing 14):

**Height:** the top of the roll-bar must be at least 5 cms (2") over the helmet of the driver normally sat at his wheel.

**Width:** measured on the inside of the vertical struts of the roll-bar; there must be at least 20 cms (8") measured at 60 cms (23") above the driver's and passenger's seats (on the line perpendicular to the driver's vertebrae from the lengthwise centre-line to the outside).

**Lengthwise location:** the lengthwise distance between the top of the roll-bar and the helmet of the driver normally sitting at his steering wheel must not exceed 25 cm.

Will also be considered as open cars, cars which have no structural parts between the upper part of the windshield framework and that of the rear window, if any.

### Specifications of the tubes utilized

	Closed Cars		Open Cars	
	<1200 kg	≥ 1200 kg	<1200 kg	≥ 1200 kg
Ext. ø × Thickness				
Cold drawn seamless carbon steel E~30 daN	ø 38 × 2,6	ø 48,3 × 2,6	ø 44,5 × 2,6	ø 57 × 2,9
Alloy steel type 25 CD4 SAE 4125 etc E~50 daN	ø 33,7 × 2,3	ø 42,4 × 2,6	ø 38 × 2,6	ø 48,3 × 2,6

These dimension figures represent in mm the minimum figures admissible. They correspond to standardized tubes (International Standards ISO R 64).

In the case of cars weighing more than 1200 kg, the dimension figures prescribed for cars weighing less than 1200 kg may be used for tubular elements other than the main hoop located behind the front seats.

For rallies, the diagonal strut will not be compulsory.

**NB:** The CSI, conscious of the problem of habitability raised by the use of roll cages, suggests that each **car manufacturer** recommends a type of roll-bar complying with FIA specifications.

This roll-bar will have to be entered on a recognition sheet amendment and submitted to the CSI for approval.

## III Cars of Group 5 (open and closed)

Compulsory fitting, for speed events as well as for rallies. Manufacturing of roll-bars, in conformity with the following table and drawings 13 and 14. (International Standards ISO R 64 except for ø 35 × 2), and to previous specifications concerning the removable connections and the general considerations.

It is recalled that the safety roll-bar must be symmetrical about the lengthwise centre line of the car.

	Closed and Open Cars	
Cold drawn seamless carbon steel E~30 daN	<700 kg ø 42,4 × 2,6	≥ 700 kg ø 48,3 × 2,6
Alloy Steel type 25 CD4 SAE 4125 etc E~50 daN	ø 35 × 2	ø 42,4 × 2,6

However, recognized and traditional manufacturers may also present a roll-bar of free conception as regards the material used, the dimensions of the tubes and the implantation of the braces, providing that the construction is certified to withstand stress minima given hereafter.

The weight being that of the car in starting order (driver aboard, full tanks), the roll-bar must be able to withstand three simultaneously applied loads:

- 1.5 G lateral,
- 5.5 G fore and aft
- 7.5 G vertical, the induced loads being carried over into the primary structure.

A certificate signed by a qualified technician must be submitted to the Scrutineers of an event. It must be accompanied by a drawing or a photograph of the said roll-bar and state that this roll-bar can withstand the above mentioned loads.

**p) General circuit breaker:** all cars, open or closed, participating in speed races on closed circuits or in hill-climbs must be equipped with a general electric circuit breaker, clearly marked by a spark in a blue triangle, accessible from inside or outside the car. This circuit breaker will cut all electrical circuits (battery, alternator or dynamo, lights, hooters, ignition, electrical controls, etc). The fitting of such a circuit breaker, which is compulsory for speed events on circuits and hill-climbs, is authorised and even recommended for rallies.

**q) Safety harness:** As from January 1st 1974, the following prescriptions will be mandatory:

All cars of Groups 1 to 4 taking part in speed events and rallies: 4 points harness minimum.

All cars of Group 5: 6 points harness.

**r) Oil catch tank:** when cars are running in events which are entered on the FIA Sporting Calendar and when their lubrication system includes an open type sump breather, they must be equipped in such a way as to prevent oil from spilling on the track. In cars of a cylinder-capacity inferior or equal to 2,000 cc, the oil catching device shall have a minimum capacity of 2 litres and of 3 litres for cars with a cylinder-capacity exceeding 2,000 cc.

The container shall either be made out of translucent plastic or include a transparent panel.

**s) Minimum lighting equipment:**

- for all types of races, cars must be equipped with two "Stop" lights plus two red tail lights, each fitted with a bulb of at least 15 w. In addition all cars in Groups 1 to 5 should be fitted with two headlamps as powerful as those normally found on Touring or Grand Touring cars. These headlamps should be in working order throughout the race, even if the race takes place exclusively in the daytime. Two direction indicators must be fitted at the rear.

— for events run on open roads (rallies), cars must comply with the legal requirements of the country of the event; cars from other countries must comply in this respect with the Convention on international road traffic.

**t) External rear-view mirrors:** as from January 1st 1971 all Touring and Grand Touring cars competing in circuit events must be equipped with two external rear-view mirrors.

**u) Supercharging:** if the engine of a car includes a separate device used for supercharging it, the nominal cylinder-capacity will be multiplied by 1.4 and the car will pass into the class corresponding to the fictive volume thus obtained. The new cylinder-capacity of the car shall always be considered as the real one. This shall particularly be the case for assigning the car to its cylinder-capacity class, and the car will be treated in all respects as if its cylinder-capacity thus increased was its real capacity. Especially in regard to its classification per cylinder-capacity class, its inside dimensions, its minimum number of seats, etc.

A dynamic air inlet for ducting the air from the atmosphere into the engine intake will not be considered as a supercharging device.

**v) Limits of authorized modifications:** certain modifications to the original parts, certain additions and/or removal of accessories normally mounted by the manufacturer of the model concerned, are explicitly authorized by the present regulations. The limits of these modifications are set out for each of the 6 groups of categories A and B. All those not explicitly mentioned as permissible for the group in which the car claims classification and which affect, even secondarily, the mechanical efficiency of the engine, the steering, the transmission, the road-holding and/or the braking, will render the car ineligible for the Group requested.

If these modifications or additions have been the subject of a previous statement by the entrant, the car may be allowed to compete in the event in one of the other groups provided in the supplementary regulations and with the prescriptions of which it complies. Should there be however an obvious case of wilful misrepresentation, the entrant should not be authorized to start or should be stopped if he had already started, with request to the ACN concerned to pronounce his suspension for at least 12 months.

**w) Fuel:**

**Rallies:** a commercial fuel freely sold in the country(ies) traversed by the event. If in one of the countries the standards of the best commercial fuel are inferior to the fuel having the lowest octane number in one of the three following countries: France, Great Britain, Italy, a special waiver may be granted to the promoters with the approval of the CSI.

Upper-cylinder or two-stroke engine lubricants are authorized on condition there is no increase of the fuel octane number.

**Speed events:**

**1) for all piston engines (reciprocating and rotary):** by "commercial fuel" to be used in motor car speed events, the Federation Internationale de l'Automobile intends to designate a "motor" fuel produced by an Oil Company and currently distributed at road refuelling stations throughout one same country.

May therefore be used, in all speed races for which the use of commercial fuel is compulsory, all commercial fuels of the country in which the event takes place, with no other additive except that of a lubricant of current sale which cannot increase the octane number, or water.

May also be used, under the same conditions, any commercial fuel(s) which—

in France, Germany, Great Britain and Italy—is (are) of the highest octane rating, according to the Research Method.

If the above-mentioned fuel could not be easily imported into the country where the event is taking place, it may be replaced by another one of similar quality and with the same octane number (RM)—with a tolerance of +1—specially made by an Oil Company.

Whenever—in France, Great Britain, Germany and Italy—a new commercial fuel is made available which has a higher octane-rating than those sold so far, the Oil Company producing this said fuel shall give notice to the FIA by a registered letter and this new commercial fuel (or its equivalent as specified hereabove) may be used for racing 30 days after the registered letter has been mailed.

The Oil Companies who supply fuel directly to the entrants of a race shall have to send to the promoters the characteristics and a sample of the fuel delivered in such quantity as is sufficient to carry out the necessary analyses, and also a declaration stating that the fuel complies with the present specifications.

**2) for vehicles propelled by turbine engines:** kerosene used by commercial aviation companies for turbo-prop or jet engines or the fuel used by vehicles with conventional type engines and complying with the here-above definition of "commercial fuel".

**x) Application of general prescriptions:** the general prescriptions must be complied with if the particular specifications of groups of cars of categories A and B do not mention them or do not provide for any stricter prescription.

**y) Anti-pollution legislation:** it is specified that the freedom left for the modifications of anti-pollution equipment is valid only as far as these modifications are not forbidden by the national laws of the country traversed.

**Art. 253 bis.—Prescriptions common to all cars of categories A, B and C:** refuelling procedure valid as from 1/1/73: please refer to paragraph 16 of the General Prescriptions applicable to all FIA Championships, Trophies or Cups.

**Art. 254.—Rule for changing from one group to another and authorized amalgamation of groups:** cars originally belonging to a certain group but which have been subject to duly declared modifications and/or additions that exceed the limits specified for the group concerned, may pass into a higher group, provided for in the supplementary regulations, with the prescription of which it complies and under the following conditions:

Group 1	passes into group 2.
Group 3	passes into group 4.
Group 4 (or 3+4)	passes into group 5.

### TITLE III

#### SERIES PRODUCTION TOURING CARS (Group 1)

**Art. 255.—Definition:** touring cars built on large series production terms. These cars shall compete in an event without having undergone any preparation likely to improve their performances or their conditions of use. The only working authorized is normal maintenance or the replacement parts damaged through wear or accident and the modifications and additions explicitly authorized hereafter under article 257. Except for what is explicitly authorized any part damaged through wear or accident may only be replaced by an original part which must be exactly the same as the one for which it is substituted.

**Art. 256.—Minimum production and number of seats:** series-production touring cars shall have been manufactured in a quantity of at least 5,000 identical units and offer at least 4 seats, except if their engine cylinder-capacity is inferior or equal to 700 cc. In which case the manufacturer may deliver them as two-seaters.

**Art. 257.—Mountings and modifications authorized:**

a) **Lighting devices:** all lighting and signalling devices must comply with the legal requirements of the country of the event; cars from abroad must comply in this respect with the Convention on international road traffic.

Lighting devices which are part of the standard equipment must remain those foreseen by the manufacturer and must comply as far as is concerned their functioning with what the manufacturer has foreseen for the considered model. Thus, if changing from a road beam to a passing beam is produced by merely deflecting the beam inside one same reflector, this system may not be altered.

Freedom is granted with regard to the frontal glass, the reflector and the bulbs.

The mounting of additional headlights is authorized provided that a total of 6 headlights is not exceeded (parking lights not included). Extra headlights may, if necessary, be fitted into the front part of the coachwork or into the radiator grille, but such openings as needed in this case must be completely filled by the additional headlights. Shall be considered as a headlight any lighting-device throwing a beam towards the front (dipped-beam, long range lamp, anti-fog lamp).

The fitting of reverse-lights is authorized, if necessary by embedding into the coachwork, but provided it will only switch on when engaging the reverse-gear, and provided the police regulations are respected.

The mounting of manoeuvrable search-lights on the roof or elsewhere is forbidden.

Waivers may be granted to these specifications on condition that they be explicitly provided for in the supplementary regulations of the event.

*To comply with legal requirements of certain countries, it is permissible to rearrange the casing of front signalling devices in order to house both traffic indicators and parking lights.*

*The make of the lighting devices is free.*

b) **Fuel and oil tanks:** must be those normally provided by the manufacturer for the model concerned, the capacities of which are specified on the recognition form. If, for the same model, tanks of different capacities are normally provided, only those mounted on the required number of cars necessary for recognition will be authorized.

The location and type of filling port for the fuel tank(s) may not be changed.

For circuit races where refuelling takes place, it is permitted to use the standard refuelling coupling recommended by the CSI, even if this means modification of the coachwork, so long as the part of the coupling fitted to the car does not protrude beyond the coachwork line.

The use of a fuel tank with a larger capacity may be authorized by the ACN with the FIA's agreement, in the case of events organized under particular climatic conditions (on desert or tropical courses for instance).

c) **Cooling circuit:** If, for the same model, radiators of different capacities are normally provided, only those mounted on the required number of cars necessary for the recognition will be authorized. The addition of a radiator screen is authorized.

The use of a radiator with a larger capacity may be authorized by the ACN with the FIA's agreement, in the case of events organized under particular climatic conditions.

Make and type of thermostat are free, but it may not be removed nor its position changed.

*The radiator screen may be a rigid plate fixed behind the grille.*

d) **Induction:** the carburettor(s) or fuel injector pump(s) normally mounted on the recognized model and described on the recognition form may not be changed or removed.

The elements which control the quantity of fuel fed in the engine may be changed, but not those which control the quantity of air.

e) **Electrical equipment:** the tension (voltage) of the electrical equipment may not be changed.

The make and capacity (amperage) of **battery** and **generator** are free. The manufacturer may provide for one same minimum series the use either of a dynamo or of an alternator on condition that this is explicitly mentioned on the basic recognition form or on an additional "variant" form.

The original battery may be replaced—by the manufacturer or the entrant himself—by another one of larger capacity provided however that the location remains unchanged. By location of the battery is meant the coachwork compartment in which the battery is originally mounted.

**Ignition coil, condenser, distributor and regulator** are free; subject to the ignition system remaining the same as that provided by the manufacturer for the model concerned, and the replacement of the said accessories do not entail any modification of the attachment system provided by the manufacturer for the model concerned.

However, it is specified that the fitting of an electronic ignition system is allowed on series production cars provided no mechanical part other than those mentioned hereabove is modified or replaced.

**Spark plugs:** make and type free.

*In case of an electric circuit under a 12 volt tension, this may be produced either by a 12 volt battery or by two 6 volt batteries connected in series on condition the batteries remain in their original location and that there is no reduction of weight as compared with the original system provided by the manufacturer.*

f) **Transmission:** for one same series of 5,000 cars the following possibilities are given on the express condition that they are those of the series-production and that they are normally sold to the purchaser and entered on the recognition form.

**Gear-box:**

- either two gear-boxes with the same number of ratios but different in their staging,
- or two gear-boxes with a different number of ratios and different in staging provided that 50% of the required minimum number of cars have been equipped with either one of the gear-boxes.

The fitting of an overdrive system in addition to the existing gear-box is authorized.

**Final drive:** two different ratios.

Should the manufacturer have provided a greater number of gear-box ratios and/or rear axle ratios, he must, to obtain recognition, prove that he has achieved the required minimum production of the car as many times as he has submitted two different gear-boxes and two different rear-axle ratios. An automatically controlled gear-box is not taken into consideration. The use of it and of its particular rear-axle ratio will always be authorized in addition to the set of two manually controlled gear-boxes.

The gear-box lever must be located as provided by the manufacturer and mentioned on the recognition form. Form and length are free.

The use of an automatic gear-box is authorized but on condition this gear-box is foreseen by the manufacturer and mentioned on the recognition form. No minimum production is required.

It is recalled that, in a basic series of 5000 models a manufacturer may recognize two gear-boxes and two final drive ratios.

For each additional series of 5000 models, the manufacturer therefore has the possibility of requesting recognition for two new gear-boxes and two final drive ratios, if he is able to certify that, in each series the required minimum number of cars has effectively been delivered with the equipment object of the recognition.

**g) Shock absorbers:** the make and type are free. However, no addition is allowed, and neither their original purpose nor their number, nor their system of operation may be modified. By system of operation is meant: hydraulic, friction, telescopic, or lever type. The original supports may not be changed in any way.

If, in order to change the damping element of a McPherson suspension, it is necessary to replace the entire McPherson strut, the replacement part must be mechanically identical to the original one, except for the damping element.

**h) Wheels and tyres:** wheels must be those provided by the manufacturer for the considered model. They are defined by their diameter, the width of their rim and the track they determine. Wheels which differ by their shape or dimensions may be recognized subject to the following conditions:

- that there are enough cars equipped with such wheels to justify recognition.
- that they are mounted in compliance with the specifications of paragraph "mudguards" of Art. 253.

In any case, the four wheels of a car must always belong to one and the same recognized set of wheels.

Tyres are free (make and type) on condition they are tyres provided by their manufacturer to be fitted on the wheels without any intermediary device.

However, they will have to conform with the regulations of the country where the event takes place for events being run on roads open to traffic, and they will be left at the choice of the organisers for other events.

All special or additional non-skid devices for snow or ice may also be fitted.

However, as from 1974, the CSI reserves its right to prohibit the use of studded tyres for events run on open roads.

**i) Brakes:** must be those provided by the manufacturer. The replacement of worn linings is authorized and their system of attachment is free, provided the dimensions of inner friction surfaces remain unchanged. Servo-assistance is only permitted when duly recognized as fitted on a number of identical cars equal at least to that required for recognition.

It is permissible to fit a dual braking system on condition that it be of the same make as that of the hydraulic master cylinder or provided by the manufacturer of the vehicle.

*The material of the brake linings is free provided the dimensions of friction surface of the new linings are the same as the original ones.*

*The same applies to the clutch linings.*

*If a servo-assistance is normally provided for on a car, the servo device may not be disconnected.*

*A pressure limiting valve between the front and the rear brakes cannot be added if the manufacturer has not provided for its fitting in the series-production.*

**j) Supplementary accessories not included in the recognition:** are

authorized without restriction provided they have no influence whatsoever on the behaviour of the car, such as those concerning the aesthetics or the inside comfort (lighting, heating, radio, etc.) or those enabling an easier or safer driving of the car (speed-pilot, windscreen washer, etc.) provided they do not affect, even indirectly the mechanical performance of the engine, the steering, the transmission, the road holding and the braking.

All controls and their functions must remain those provided by the manufacturer, but it is permissible to arrange them in such a way as to make them accessible and easier to use, i.e. lengthening of the handbrake-lever, fitting of additional pads to the brake-pedal, etc. The position of the steering-wheel may be indifferently on the left or on the right, provided this only results in a simple transposition of the steering-system linkages as provided and supplied by the manufacturer and without any other mechanical alteration (manifolds, etc.).

*The following is authorized:*

- 1) The windshield may be replaced by a windshield of same material but with a heater-defroster device incorporated.
- 2) The original heater may be replaced by another one provided by the manufacturer and mentioned in his catalogue as available on request.
- 3) An electric water thermometer may be replaced by one of capillary type and a standard manometer by another one of high precision type.
- 4) The hooter may be changed or an extra one may be added, at the disposal of the passenger if wished.
- 5) The mechanism of the handbrake lever may be adapted for obtaining an instantaneous unbolting (fly-off handbrake). All electric switches may be freely changed, inasmuch as is concerned their purpose, their location and—in case of the adding of extra accessories—their number.
- 6) Extra relays and fuses may be added to the electric circuit, battery wires may be lengthened, pipes of the braking circuit may be protected by an armoured casing (metallic or other). The original accelerator cable may be replaced by another one, whether supplied or not by the manufacturer.
- 7) The original speedometer may be replaced by another one provided it fits exactly in the housing of the original one.
- 8) Seat brackets may be altered and any kind of seat-covers may be added, even those which constitute a bucket-seat.
- 9) Jacking points may be strengthened, their location may be changed or extra ones may be added.
- 10) Head-light covers may be fitted provided they do not influence the streamlining of the car.
- 11) Complete freedom is left with regard to the location and appearance of registration number plates, in consideration of the great differences between legal requirements from one country to another.
- 12) Safety fasteners (such as straps) may be fixed to the lids of the engine compartment and the luggage boot. The latter may be adapted for better accommodation of the equipment carried (straps for fixing a tool-box, protection of a supplementary fuel-tank, of an additional spare-wheel etc). The attachment system of the standard spare-wheel may be altered provided its original location is not changed.
- 13) Extra compartments may be added to the glove-box and extra lateral pockets to the doors.
- 14) Plates of insulating material may be added in all places where they may be necessary to protect those carried aboard the car from a risk of fire.

- 15) An oil-catch or a water-tank may be fitted.  
16) The radiator filler cap may be locked by any means.

**k) Coachwork:** none of the normal elements of the coachwork (dashboard, all inside quiltings whatever their location), and none of the accessories normally mounted by the manufacturer on the lowest priced model may be removed or replaced.

However, the modifications deriving from the fitting of the supplementary accessories authorized in the preceding paragraph, such as those necessitated by the addition of a windscreen washer (drilling of a hole into the bonnet) or of a rev. counter (housing in the dashboard), will be allowed.

The same minimum series may comprehend various materials for seats, upholstery and inside quilting (cloth, leather, plastics, etc.) and two different types of front seats (bench type or separate seats). These variants must be stated on the recognition form and in particular the different weights resulting from the mounting of different seats must be specified.

Transparent parts must, in case of damages, be replaced by others made of a material identical to the original one listed on the recognition form. They shall be completely interchangeable with those originally fitted. They must be mounted on the original supports and their original opening system (if any) must be maintained.

*Nuts and bolts may be freely exchanged and locked by pins or wires.*

*Bumper overriders may be removed*

*When the regulations of an event allow the fitting of an undershield, the fuel and brake system pipes may be protected by all means.*

*On the contrary, the following modifications are prohibited:*

- 1) to change the rake of the steering column,
- 2) to remove wheel-spats which are part of the coachwork,
- 3) to add an extra bolting system of the doors,
- 4) to add extra parking lights,
- 5) to change the location of the opening handle of the bonnet,
- 6) to replace the grille bolts by others of "quick-release" type.

**l) Bumpers, embellishers, streamlining:** bumpers are compulsory on all cars for which the manufacturer has normally provided them. For speed-events on circuit and for hill-climbs, the supplementary regulations may authorize the bumpers of a car to be removed. Failing such an authorization the bumpers must remain. For rallies, any car, normally delivered with bumpers and the recognition form of which shows such an equipment, must retain them.

Wheel embellishers may be removed. The addition of any protective device underneath the car is forbidden unless such a device is mentioned on the recognition form of the model in question or is authorized or made compulsory by the supplementary regulations of the event.

*When the bumper is an integral part of the coachwork, it cannot be removed, even if the Supplementary Regulations of the event provide for the removal of bumpers.*  
*Example: Porsche 911.*

**m) Reboring dimensions:** a maximum reboring dimension of 0.3 mm will be authorised in Groups 1 and 3 on condition that the piston be the original one and that the cylinder-capacity class remains the same.

## TITLE IV

### SPECIAL TOURING CARS (Group 2)

**Art. 258.—Definition:** cars of limited series-production which may be sub-

mitted to certain modifications aimed at making them better suited to competition. The list of the modifications and additions explicitly authorized is given hereafter under Art. 260.

Moreover in this group may be classed cars of group 1 which have been the subject of modifications and/or additions exceeding the limits of group 1. These cars will then enjoy the same freedom as provided for group 2.

**Art. 259.—Minimum production and number of seats:** touring cars shall have been manufactured in a quantity of at least 1,000 units and be equipped with at least 4 seats; however if their cylinder-capacity is equal or inferior to 700 cc, they may be delivered as two-seaters.

**Art. 260.—Modifications and additions authorized:** all those already authorized in group 1, plus the following ones:

**a) Modifications of the original mechanical parts:** the original mechanical parts having undergone all the normal machining operations foreseen by the manufacturer for series-production, except those for which the present article provides a freedom of replacement, may be subject of all perfecting operations by means of finishing or machining, but not replacement. In other words, provided the origin of the series-production part may always be ascertained undoubtedly, this part may be rectified, balanced, lightened, reduced or modified in its shape through machining, to the exclusion of any addition of material, mechanical extension or treatment which would entail a change in the molecular structure or the surface of the metal.

**b) Engine—cylinder-heads and valves:** besides the modifications which can be carried out on the cylinder-head as specified under paragraph a) hereabove, complete freedom is left as regards the valves, valve-guides and valve-seats.

The number of valves per cylinder cannot be modified.

*A dual ignition cylinder-head necessitating a new casting can only be recognized under the conditions enumerated in Art. 260 aa). However, if it is possible to fit a second sparking plug on each combustion chamber, on an original cylinder-head having gone through all the manufacturing sequences provided for by the manufacturer for the series-production, and in full compliance with Art. 260 a), dual ignition is obviously authorized.*

*It is allowed to add washers to the valve-spring assembly.*

**c) Engine—induction system and elements:** the induction system is free. Yet direct injection may only be used on an engine for which the fitting of a direct injection system has been originally provided for in the manufacturing. Ditto for supercharging.

By "originally provided for in the manufacturing" it will be understood: recognized by the FIA as a mechanical component of a recognized car. Such a recognition is only possible when the minimum number of cars necessary for the group concerned, series fitted with a direct injection or supercharged engine, will have been reached.

**d) Engine—reboring:** the reboring or replacement of sleeves of the engine is allowed up to the limit of the cylinder-capacity class to which the model belongs.

**NB:** As from January 1st 1975, the reboring/sleeving/resleeving of engines will be free within the permitted cylinder capacity limits.

By sleeve it will be understood the metal cylinder inside which the piston moves.

This part will be a separate component which will be fitted in the block in different ways: pressed, welded, etc. The material will be free. In case the engine would be directly bored and no intermediate part used, it will be possible to add a sleeve, the material of which will be free, but not allowed to replace the engine block by an identical one of another material.

By engine block it will be understood crankcase and cylinders.

e) **Engine—exhaust manifold, piping and mufflers:** free. Yet, for events run on open roads, the efficiency of the mufflers must remain, in all cases, within the limits specified in the police regulations of the country of the event.

f) **Engine—bearings:** plain or roller bearings may be replaced by others of the same type, provided the crankshaft and the original bearing caps are retained.

g) **Gaskets:** gaskets may be replaced by others or suppressed.

h) **Engine—lubricating system:** the oil sump may be modified or replaced by another one of different shape and capacity. The oil pump may be modified or replaced by another one. Yet, the number of oil pumps originally fitted cannot be changed. Oil filters and oil coolers are free (type, number and capacity).

*The fitting of an oil-cooler exterior to the coachwork is only permitted below the horizontal plane passing through the centre of the wheel-hubs. In no case, such a fitting of an oil-cooler may result in the addition of an aerodynamical enveloping structure.*

Moreover, the oil cooler must not constitute a protuberance outside the general car perimeter, seen from above.

*By general perimeter of the car seen from above, is meant the car fitted with bumpers. However, in cases where the circuit race regulations allow them to be removed, the general perimeter will not include the bumpers.*

i) **Engine—camshafts and valve gear:** free. Yet the location, number and driving system of the camshaft(s) cannot be changed. There is no restriction as regards the number and type of valve springs provided the necessary modifications of the mechanical parts do not go beyond those specified under the previous paragraphs.

j) **Piston, piston pin and piston rings:** free.

k) **Engine—other elements:** Mountings are free. The cooling fan and water-pump may be modified, replaced or suppressed.

There is no restriction for the fuel pump as regards number, type, location and capacity. Nevertheless, it must never be located in the passenger compartment.

*The switch of the electrical fuel-pump (if provided for) may be fixed inside the cockpit.*

*The inclination and the position of the engine inside the engine compartment are free, providing however that the implied modifications do not go beyond what is allowed in Art. 260 a), k), l) and m).*

l) **Transmission—gearbox.** Mountings are free. The number of speeds of the gearbox cannot be modified. The ratios are free. The location and type of the gear lever are free.

*Freedom for the scale of ratios implies the faculty of changing the primary and secondary shafts, as well as the gear and the bearings.*

m) **Transmission—differential.** Mountings are free. The differential ratios are free. A limited-slip differential, but not with a constant and complete locking effect, may be fitted provided it can be located in the casing without entailing a modification beyond that allowed under paragraph a).

The transmission shaft between the gearbox and the differential is free.

Cooling pumps for differentials are free on condition that there is no change in the differential housing.

**n) Suspension:** it is allowed to modify the original parts of the suspension in compliance with the specifications of Art. 260 a) hereabove. The addition of a stabilizer is allowed, or the original one may be replaced by another one.

In the case of a rigid axle rear suspension it is allowed to add locating arms and their mounting brackets.

The fitting of joints and attachment points of a different type and/or material is authorized.

*The replacing of a stabilizer is allowed even if this stabilizer serves other purposes in the suspension. It is also allowed to increase the number of stabilizers per suspension.*

*By suspension stabilizer is meant: a Panhard-rod, an anti-sway bar, a radius arm.*

**o) Suspension—springs and shock-absorbers:** complete freedom is left as regards springs provided the main type of spring is not changed. Yet, the fitting of other springs must not result in a modification of the mechanical parts beyond the limits fixed under Art. 260 a), and neither a change or a modification of the coachwork or the chassis. It is allowed to add auxiliary springs. According to the definition given under Art. 252 for chassis and coachwork, it is allowed to modify the non-visible parts of the coachwork.

Complete freedom is also left as regards the number of shock-absorbers, type and fitting, provided no mechanical part be modified beyond the limits fixed under Art. 260 a). Nevertheless, mounting brackets may be added to the chassis and suspension elements.

**p) Steering:** the steering-ratio is free, provided that the original steering box be kept.

**q) Wheels and rims:** complete freedom is left, provided their fitting can be carried out in full conformity with Art 253 d).

Moreover, the four wheels of a car must always have the same diameter.

*By wheel is meant disc + rim. Therefore not including the tyre. However, as regards Art. 253 d)—Mudguards, it is recalled that the said Article specifies the measurement of the wheel equipped with its tyre.*

*The location of the spare-wheel is free, provided that the external aspect of the coachwork is not modified.*

**r) Electrical system—lighting equipment:** free. Yet, for events on open roads, the vehicle must be in compliance with the police regulations of the country where the event is run or with the International Convention on road traffic. The location of the battery is free, as long as it is not placed in the passenger compartment.

*The liberty given for the lighting devices concerns their replacement or modification, but does not allow their pure and simple suppression. The number of headlights is free.*

*In case the battery is placed inside the cockpit of a car in the normal series production, it may remain there.*

**s) Electrical system—engine accessories:** it is allowed to replace a dynamo by an alternator. The mounting brackets and crankshaft pulley are free.

The ignition system is free as long as its replacement or modification does not alter the mechanical parts beyond what is allowed under Art 260 a).

*The generator may be put out of use or removed. However, the minimum lighting devices must remain in normal working order during the whole race. Besides, it is*

recalled that, in almost all races, the starting of the engine must be effected without any external help.

**t) Fuel tanks and water radiators:** the capacity of fuel tanks is free up to the limit specified under Art. 253 j). The location and dimensions of the filler orifice as well as those of the filling cap may be changed provided the new fitting does not protrude beyond the coachwork line and provides against fuel leakage into the inside compartments of the car.

Should the tank and its filler be located in the luggage compartment, an outlet at the lowest point must be provided for the fuel accidentally spilled in this compartment. (See paragraph x.)

There is complete freedom as regards the water radiator and its capacity. Its location may be changed provided no modification is entailed either to the outside or to the inside (cockpit) of the coachwork.

**u) Braking system:** the mounting of a double pump (master cylinder) or of any device which produces simultaneous action on the four wheels and a separate action on two wheels is allowed.

The discs and drums may be replaced by others provided the area of the friction surface is not modified. Linings are free. The backing plates may be modified and fitted with air openings. Protection shields may be modified or suppressed. Cooling air-ducts may be added provided they do not entail a modification of the coachwork.

The addition of brake servos is allowed.

*It is forbidden to replace drum brakes by disc brakes and vice-versa, except if this modification is duly recognised in conformity with Art. 260 cc).*

**v) Cables and pipes:** it is allowed to entirely modify the arrangement, location and materials of all cables and pipes providing for the passage of fluid elements (air, water, fuel, electric currents, etc, including the suspension system).

**w) Springs:** any spring that can be found on a car may be modified or replaced by another one.

**x) Coachwork elements:** the steering-wheel and the front seats may be replaced, provided seats of at least the same weight as the original ones be substituted for them.

*The modification of structural parts belonging to the coachwork of cars is not authorized, even if these parts are located under the plane determined by the front and rear wheel axles.*

*It is allowed to fit spoilers on the front part of the car below the horizontal plane passing through the wheel hubs. Nevertheless, these spoilers shall not protrude beyond the overall perimeter of the car, seen from above.*

*In case of the original seats being changed the two new ones must weigh at least the weight as entered on the recognition form for the original ones, but it is not mandatory that they both weigh the same weight.*

By "visible parts of the coachwork" is meant all non-structural elements struck by the air-streams and located above the horizontal plane passing through the wheel-hubs, as well as the visible parts of the passengers' compartment.

Non-visible insulating material may be removed.

Trimmings of the passengers' compartment, of the door panels, etc, which are normally provided for cars of the series-production, must not be removed.

*It is permitted to remove the rear seating arrangements (see definition Art. 253b), provided that a rigid metallic separation remains between the passenger and the luggage compartment.*

It is possible to install the spare wheel in the rear part of the habitacle provided it is firmly attached.

*It is also permitted to remove the glove-box lid and the floor carpets.*

Cars whose rear seating arrangements have been removed will have to be fitted with a rigid metallic partition flame and liquid proof, which will separate the habitacle from the engine compartment, when fitted at the back. Furthermore, when a front-engined car will be equipped with a supplementary fuel tank placed in the rear part of the bodywork, behind the back seats, the fuel tank and pipes will have to be isolated on all its faces by a rigid metallic protection, flame and liquid proof, except on the bottom where a fuel outlet will be provided.

**y) Heating System :** it is possible to remove the pipes which convey the water to the heating devices, on condition that the ventilation system will not be affected.

**z) Options—definitions:** a variant of the series-production. Accessories or equipment delivered on express request of the customer. By option is therefore meant any equipment supplied in supplement to or in place of the basic model available on request, even if this equipment is normally fitted on some series-production cars as is the case, for example, on cars for export.

**aa) Recognition of an option:** the recognition of an option will be granted only if the optional equipment is available freely at the manufacturer's or his dealers' for any one wishing to purchase it. It must be mentioned in the manufacturer's catalogue of spare parts for the model concerned and properly identified.

**bb) Optional equipment which may be recognized with a minimum production of 100 units per year to equip 100 cars:**

Cylinder head of a different shape and/or material: In so far as valve gear and camshafts are concerned, there is no restriction concerning the number and location of camshafts. Yet the new elements fitted to the engine must be a 'bolt-on option'.

*A bolt-on option will be defined as follows: 'To be considered as a bolt-on option, it must be possible to fit the elements constituting this option to the car with normal tools and without it being necessary to machine or modify the remaining mechanical parts. The bolt-on option kit must include all parts ensuring the normal functioning of the car after its fitting to a car in its normal series production configuration'.*

*It follows that as a modification of the remaining parts is forbidden and that it must be possible to reassemble the whole unit with all its original parts.*

There is no restriction as regards the number and type of valves and valve springs.

— Reinforced suspension elements, provided they are absolutely interchangeable with the original part and that the pivoting points to the chassis remain in their original location.

*A rigid rear axle is considered as being a part of the suspension. Consequently a reinforced axle can be recognised as a variant on the basis of an annual production of at least 100 of the part in question.*

— Reinforced auxiliary chassis members.

*It is specified that by "auxiliary chassis" is meant:*

a) Any element of the chassis fixed by means of bolts or rivets to the chassis or the body, and which may therefore be removed or replaced by a reinforced element without cutting or welding.

b) Any supplementary reinforcing element fixed to the chassis or the body, whatever the means of fixation (welding, bolts, etc), but without the obligation of cutting out beforehand any integral part of the original chassis or body.

— Gearboxes including those with a different number of speeds.

- Overdrive systems.
- Different steering cases.
- Different transmission shafts and half-shafts with joints.
- Connecting rods but not in a different basic material.
- Different clutch and different flywheel-type and dimensions—provided their fitting is possible, within the limits of Art. 260 a).
- Clutch housings, differentials and gearboxes (extension housing included) of a different basic material.
- Crankshafts of a same basic material provided the type and diameter(s) of the bearings remain those specified on the recognition form. Nevertheless, this optional crankshaft must retain the original stroke.
- Different bearing caps.
- Equipment for dry-sump lubrication.
- Steering rods of different dimensions.

### **Important**

**Lightened bodywork elements:** It is recalled that since January 1st 1972 all recognitions concerning optional lightweight bodywork elements mentioned hereafter: doors, windows, engine bonnet, trunk lid and wings have been deleted. Consequently the addenda that would remain appended to basic recognition sheets regarding such optional equipment are no longer valid. Only the lightweight wing extensions that the manufacturers will have had recognized by the FIA will be accepted, on condition they comply with article 260 z cc.

Especially, plastic bumpers will only be recognised when 1,000 equipped cars will have been produced.

**cc) Optional equipment which may be recognized without a minimum production:**

- Different dashboard.
- Protection shields under the car.
- Wing extensions provided they do not improve in a significant way the aerodynamics of the car, and they do not entail an increase of the width of the wings of more than 5 cm on each side of the car. Measurement is to be done at the vertical going through the centre of the wheel hubs.
- Brakes of different type and/or dimensions, which may include larger hubs and spindles.

**dd) Any other option** affecting directly or indirectly the performance of the car cannot be recognized unless 1,000 identical cars equipped with this option have been manufactured in 12 consecutive months.

*In case this Article would be applied within Group 4 (Special GT), the minimum production would obviously be 500 cars and not 1,000.*

**NB:** On account of the important modifications brought to the present group 2 in 1970, scrutineers are requested to disregard the note 'Important' mentioned on the International recognition form and specifying which numbers are to be retained for the technical verification.

## **TITLE V**

### **SERIES—PRODUCTION GRAND TOURING CARS (Group 3)**

**Art. 261.—Definition:** cars with at least two seats, manufactured on a limited series-production scale for the drivers who seek the best possible performances and/or the greatest comfort without a special concern about the cost.

**Art. 262.—Minimum production and number of seats:** grand touring cars must have been manufactured in a quantity of at least 1,000 units identical in all respects (unless authorizations, listed hereafter under Art. 263 specify otherwise) and be equipped with at least two seats.

**Art. 263.—Modifications and/or additions authorized:** exactly the same as those authorized for group 1 (Series-production touring cars) (see Art. 257).

## TITLE VI

### SPECIAL GRAND TOURING CARS (Group 4)

**Art. 264.—Definition:** At least two-seater cars manufactured on a small series-production scale, and which may be subject to modifications in order to be more particularly adapted to sporting competition. This group also includes cars derived from those recognized in group 3 (Series-production GT cars) and modified beyond the limits allowed for group 3.

**Art. 265.—Minimum production and number of seats:** the Special Grand Touring cars must have been manufactured in a quantity of at least 500 units and be equipped with at least two seats.

**NB:** As from January 1st 1974 the minimum figure of 500 units will have to be reached within a period not exceeding 24 consecutive months.

**Art. 266.—Modifications authorized:** exactly the same as those authorized for Group 2—Special Touring cars (see Art. 260).

## TITLE VII

### SPORTS CARS (Group 5)

**Art. 267.—Definition:** Two-seater competition cars especially manufactured for speed or long-distance races on closed circuits. Their use on open roads may however be foreseen and, in that case, the cars must include all elements normally provided and legally required for vehicles using public roads.

**Art. 268.—General specifications:** These cars should comply with the general prescriptions concerning cars of categories A and B (see Art. 253), except as regards the following points:

- a) the luggage trunk is optional (Art. 253 g),
- b) the spare-wheel is optional (Art. 253 l),
- c) in the case of an open car, the windshield and the transparent parts of the door are optional; however, if they are provided for, their dimensions are free (if no windshield is provided for, windshield-wipers are not compulsory),
- d) in the case of an open car, the opening delimiting the driver/passenger compartment must be symmetrical about the lengthwise centre-line of the car.
- e) An opaque and non-flexible part of the coachwork must extend downwards behind the rear wheels of the car to 20 cm minimum from the ground and over the entire width of the rear wheels and tyres.

This measurement should be done just before the start. It is understood that entrants have no right to bring any modification to the mudguards after the start of the race.

f) Partition between the seats: Any partition between the seats shall not be higher than a straight line drawn across the cockpit from the lowest edge of one door to the lowest edge of the opposite door.

Besides, it is specified that the Appendix J distinguishes only an entirely open car, ie, the passenger's and the driver's seats uncovered, and entirely closed cars. Sports cars must at least have the weight indicated on the scale hereafter:

engine cylinder-capacity	inferior or equal to	500 cc: 450 kgs
" " "	from 500 to	600 cc: 460 kgs
" " "	" 600 to	700 cc: 470 kgs
" " "	" 700 to	850 cc: 480 kgs
" " "	" 850 to	1,000 cc: 500 kgs
" " "	" 1,000 to	1,150 cc: 510 kgs
" " "	" 1,150 to	1,300 cc: 525 kgs
" " "	" 1,300 to	1,600 cc: 550 kgs
" " "	" 1,600 to	2,000 cc: 575 kgs
" " "	" 2,000 to	2,500 cc: 600 kgs
" " "	" 2,500 to	3,000 cc: 650 kgs
" " "	" 3,000 to	4,000 cc: 700 kgs
" " "	" 4,000 to	5,000 cc: 750 kgs
" " "	" 5,000 to	6,000 cc: 775 kgs
" " "	over 6,000 cc	: 800 kgs

### Art. 269.—Safety measures

In addition to the safety measures already prescribed by Art. 253, sports cars must be equipped with:

— safety fuel tanks in conformity with the specifications FIA/Spec/FT3. For all cars taking part in speed events on circuits run in one or several heats of more than 100 km.

The tanks must be filled with safety foam in conformity with the American military specifications MIL-B-83054 (Baffle material).

**For hill climbs:** If the fuel capacity does not exceed 20 litres, a safety bladder tank is no longer mandatory for cars of Groups 5 to 9 competing in hill climbs providing that no part of the tank exceeds 30 cm on either side of the longitudinal axis of the car and that it is surrounded by a 1 cm-thick crushable structure.

Tanks exceeding 20 litres will have to conform to the normal safety regulations of the group concerned.

**Refuelling procedure:** Please refer to paragraph 16, General Prescriptions.

**Extinguishers:** A fire extinguishing system of at least 5 kg extinguishing capacity composed of no more than 2 separate extinguishers. This system must include a manual triggering device which can be operated by the driver on board as well as by any helper outside the vehicle. The triggering device must be indicated by a red circle with the letter E.

The direction of the outlet(s) of the extinguishing system are left to the discretion of the entrant.

**Safety harness:** For all types of events, cars must be equipped with a "six-point" safety harness, ie, a harness made of two shoulder straps, one abdominal strap and two crutch straps. The wearing of this harness is compulsory.

**Braking system:** The braking system must be conceived in such a way that the effect of the brake-pedal is normally exerted on all four wheels. In case of a leakage, at some point in the piping, or a fault in some part of the brake transmission, the action of the pedal must still be exerted on at least two wheels.

**Art. 270.—Supplementary prescriptions concerning the use of aerodynamic devices:** the highest point of any forward facing gap in the coachwork shall not be situated above a horizontal plane, 80 cm above the lowest point of the entirely sprung structure of the car.

The maximum width of the coachwork shall not exceed by more than 20 cm the maximum width measured between the two vertical planes tangent to the outer face of the front or rear wheels.

**IMPORTANT:** It is specified that an organiser always has the right to require in his Supplementary Regulations that entrants competing with Group 5 cars send him beforehand a brief description of their cars.

## TITLE VIII

### NON-DEFINED CARS

**Art. 283.—Special ruling for rallies:** promoters may allow participation in an event of cars of any type and which do not correspond to any of the above categories or groups, such as for instance military cars, buses, lorries, etc.

But in this case these non-defined vehicles shall have to be classed separately and may under no condition be mingled with other cars in the general classification of the event.

## TITLE IX

### TWO-SEATER RACING CARS (Group 7)

**Art. 284.—Definition:** two-seater competition vehicles built exclusively for speed races on closed circuits.

**Art. 285.—Classification of cars shall be according to engine displacement as follows:**

1st series:	inferior or equal to	850 cc
2nd series:	from	850 to 1,150 cc
3rd series:	from	1,150 to 1,300 cc
4th series:	from	1,300 to 1,600 cc
5th series:	from	1,600 to 2,000 cc
6th series:	from	2,000 to 3,000 cc
7th series:	from	3,000 to 5,000 cc
8th series:		over 5,000 cc

Supplementary regulations of an event may provide for combining any of the above series of classes.

**Art. 286.—Fuel:** only commercial fuel such as defined by the FIA shall be used. (Refer to Art. 253 u.).

**Art. 287.—Self-starter:** the starting of the engine must be done by the driver seated at his wheel by means of a starter with a source of energy aboard the car.

**Art. 288.—Brakes:** these cars shall be equipped with a dual braking system operated by a single-control. In case of a leak or failure at any point in the system, effective braking power shall be maintained on at least two wheels.

A separate hand brake (emergency brake) is not required.

**Art. 289.—Coachwork:** coachwork shall provide comfort and safety for driver and a passenger. All elements of the coachwork shall be completely and neatly designed and finished, with no temporary or makeshift elements. The body shall cover all mechanical components, except that the intake and exhaust pipes and the upper part of the engine may protrude.

All major body components such as front and rear bonnet and/or hood, mud-guards, doors and windscreens must be maintained in normal position throughout the event.

The overall width shall be 210 cm. Cars built before January 1st 1973 which exceed this figure may continue to run, but all newly constructed cars must conform to this maximum dimension.

a) **Cockpit and seats:** there shall be seats for the driver and a passenger of equal dimension and comfort, and equally disposed on each side of the longitudinal axis of the car. Seats shall be firmly attached in the car, but may provide for adjustment for the size of the occupant.

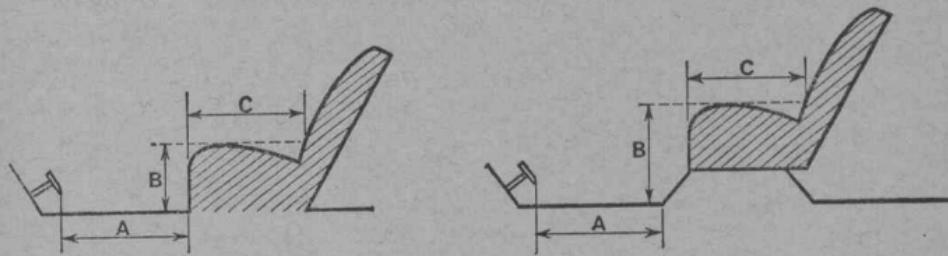
The passenger's space and seat shall remain available throughout the competition and shall not be encroached upon by any element of the car or equipment except as provided in these rules.

The passenger's compartment and seat shall not be sheltered by means of a tonneau cover of any type.

Driver and passenger space shall satisfy the following minimum dimensions:

— the inside minimum width of the compartment shall be 100 cm measured at the immediate rear of the steering wheel hub and at right angles to the longitudinal axis of the car, and must be unobstructed and maintained at least 25 cm in a vertical plane.

Seats must fulfil the following minimum dimensions:



(A) Is always measured horizontally and parallel to the longitudinal axis of the chassis, between two vertical planes perpendicular to the longitudinal axis and defining from front to rear the open space on a level where such measurement is taken.

For the driver's seat, (A) is measured on the floor level, or at the bottom of any recess if need be, from the perpendicular of the furthest pedal in its position of rest.

For the passenger seat, this measurement is taken at a height of 20 cm above the floor or at the bottom of the recess, if need be.

In case of movable seats it is forbidden to alter the position of any seat while car is being measured.

(B) is measured vertically from the rear of (A) to the horizontal plane tangent to the highest part of the cushion as shown on the drawings.

(C) is measured on the seat's centre-line, in the horizontal plane defined above from the upper end of (B), parallel to (A) and tangent to the foremost point of back of seats.

The arrangement of the body must be such that:

$$A + B + C = 110 \text{ cm minimum.}$$

The minimum width for the foot space for each person must be 25 cm measured at right angles to the longitudinal axis of the chassis, plumb to the pedals.

Windshield wipers are not required.

b) **Visibility:** coachwork shall provide visibility for driver and passenger forward and to both sides adequate for racing conditions. Rear view mirror(s) shall provide driver visibility to the rear on both sides of the car.

c) **Doors:** coachwork shall provide at least two rigid doors giving direct access to each seat. Each door shall accept a rectangle held in a vertical plane of at least 30 cm  $\times$  50 cm.

These dimensions shall not include any area above the horizontal plane of the body and door panels. The door openings may not be obstructed in any way. The locking mechanism shall be operable from both inside and outside of the car.

On closed cars, the doors shall be so designed that in case the car is partially or completely overturned at least one of the doors shall remain in a position to be opened, or a means of escape other than the door must be provided.

d) **Mudguards:** mudguards shall be firmly attached to the coachwork with no gap between body and mudguard. They shall be placed above the tyres and shall cover them effectively by surrounding at least a third of their circumference. The width of each mudguard shall extend beyond the side of the tyres when the wheels are parallel to the longitudinal axis of the car.

In case the mudguards constitute a part of the body, or are partly overhung by the structure of the body, the combination of mudguards and body, or the body alone, shall meet the above requirements.

e) **Aerodynamic devices:** the use of aerodynamic devices is authorized provided Art. 252 I (General prescriptions) and Art. 270 (Supplementary prescriptions for two-seater cars) are complied with.

#### **Art. 290.—Lighting:** the minimum lighting equipment shall be:

- at least two braking-lights;
- for night racing, two head-lights at least as effective as those normally fitted on touring cars and two direction indicators mounted at the rear.

The supplementary regulations of an event may require additional lighting equipment.

**Art. 291.—Wheels and tyres:** there shall be no restriction on the size of wheels or tyres, provided they are identical on the right and left front axles, and identical on the right and left rear axles.

A spare wheel and tyre is not required.

#### **Art. 292.—Safety equipment:**

a) **Fire extinguisher:** all cars shall carry during competition a fire extinguishing system in conformity with Art. 269.

b) **Scatter shield:** the installation of a scatter shield is required on those cars

where the failure of the clutch or flywheel could, due to its location, create a hazard to the driver. In addition, any rotating part of the drive train shall not pass openly through the driver and passenger compartment, but must be under the floor or chassis structure.

c) **Roll bars:** cars shall be equipped with a roll bar in conformity with Art. 253 o).

d) **Circuit breaker:** cars shall be equipped with a circuit breaker in conformity with Art. 253 p).

e) **Oil catch tank:** fitting compulsory in conformity with Art. 253 q).

f) **Safety belts:** the car shall be provided with a safety belt in conformity with Art. 269. The wearing of this belt is compulsory.

g) **Exhaust system:** the exhaust system shall terminate behind the driver and passenger seats.

h) **Firewall and floor:** cars shall have an adequate firewall to prevent the passage of flame from the engine compartment or under the car to the cockpit. Openings in the firewall for the passage of engine controls, wires, and lines shall be of the minimum size necessary.

The floor of the cockpit shall be constructed to protect the driver by preventing the entry of gravel, oil, water, and debris from the road and engine. Bottom panels or belly panels shall be adequately vented to prevent the accumulation of liquid.

i) **Bulkheads and tanks:** no part of any fuel, oil or water tank shall be exposed to any part of the driver and passenger compartment. Fuel tanks shall be vented to prevent the accumulation of fumes and to prevent fumes from passing into the driver or engine compartment.

Fuel tanks shall be isolated by means of bulkheads so that in case of spillage, leakage or a failure of the tank the fuel will not pass into the driver or engine compartment or around any part of the exhaust system.

Batteries shall be fully enclosed.

j) **Closed cars:** adequate ventilation shall be provided to prevent the accumulation of fumes inside the car.

k) **Safety fuel tanks:** The same prescriptions as those applying for Group 5 (see Art. 269).

**Important:** As from 1/1/74 all the safety measures compulsory for F1 in 1973 will apply to Group 7 cars.

## TITLE X

### SINGLE-SEATER RACING CARS—INTERNATIONAL FORMULAE (Group 8)

#### Art. 293.—Formula No. 1.

**Validity:** from January 1st 1966 to December 31st 1975.

#### Engines with reciprocating pistons:

- engine cylinder-capacity without supercharging: inferior or equal to 3,000 cc;
- engine cylinder-capacity with supercharging: inferior or equal to 1,500 cc.

Number of cylinders: max 12.

## Turbine engine

Utilization authorized on the basis of the Equivalence Formula given under Art. 252 j).

**Minimum weight**, without ballast: 575 kg.

**Overall body dimensions**: the overall maximum width behind the front wheels to the leading edge of the rear wheels shall not exceed 140 cm. No oil, fuel and electrical lines shall be situated beyond 60 cm on either side of the car's centre line and must not run adjacent to the main fuel cells or within the crushable structure.

The maximum width of the rear will be 110 cm.

As from January 1st 1974, nothing above the rear wheels must protrude more than 1 metre behind the axle of the rear wheels.

**Rubber bladder fuel cells**: all fuel tanks will be situated within the main structure of the car.

All fuel tanks beyond 30 cm on either side of the car's centre line must be non-self sealing rubber bladders conforming to the Specification FIA/Spec/FT5 (see NB).

A tank situated within the main monocoque not extending beyond 30 cm on the centre line of the car must be FT3 material, or the above material.

A collector tank of maximum one gallon may be placed outside the main chassis on condition that it be surrounded by crushable structure conforming to the specifications hereafter of at least 10 mm thickness. The rubber bladder to be to FT3 specifications, and will be connected to the engine by means of a self sealing break away coupling (aviation type).

The fuel system should be so arranged as no part of it is the first object to be struck in an accident.

**NB**: Please refer to Art. 253 Paragraph: Specifications FIA/Spec/FT5.

**Oil tanks**: all oil storage tanks, situated outside the main structure of the car, must be surrounded by 10 mm thick crushable structure. In any case, no oil storage tank, not located within the main structure, may be situated aft the gearbox or final drive casing.

**Fire extinguisher**: for all cars, the entire fire extinguishing system must be located within the main structure.

**Crushable structure**: the entire fuel tank area of the car in direct contact with the open air stream must incorporate a crushable structure conforming to the specification hereafter.

The term 'licked by the open air stream' is considered to define the complete external area of the body/monocoque construction irrespective of such added items as water radiators, inlet ducts, windscreens, etc.

a) The crushable structure should be a sandwich construction based on fire resistant core of minimum crushing strength of 25 lb/square inch. It shall be permitted to pass water pipes through this core.

The sandwich construction must include two sheets of 1.5 mm thickness one of which shall be aluminium sheet having a tensile strength of 14 tons/square inch and minimum elongation of 5%.

b) The minimum thickness of the sandwich construction should be 10 mm. The fore and aft fuel tank area, however, should provide for a crushable structure of at least 100 mm thickness at such crushable structure's thickest point, the position of this widest point to be at the constructor's discretion, over a length of at least 35 cm, after which it may be gradually reduced to 10 mm.

**Fuel capacity:** the total capacity of the fuel tanks shall not exceed 250 litres of which not more than 80 litres shall be contained in any one tank. (The fuel system must be arranged not to allow more than 80 litres of fuel to spill in the event of a rupture of any one principal fuel tank.)

**Safety roll-bar:** the safety roll-over bar will have a minimum height of 82 cm (identical checking method as for the height of wings on cars with bodywork). In all cases, the top of the safety roll-over bar will be at least at 5 cm above the helmet of the driver.

#### **Art. 294.—Formula No. 2.**

**Validity:** from 1st January 1972 to 31st December 1977.

As from January 1st 1976, free origin of engine.

**Reciprocating piston-engines:** engine cylinder-capacity inferior or equal to 2,000 cc.

Supercharging forbidden.

**Minimum weight without ballast:** 475 kg.

**The engine** (including engine-block and cylinder-head) must be derived from an engine equipping a model of car for which the FIA has ascertained a series-production of at least 1,000 units.

Modifications allowed on the original pieces of the engine are those provided for Group 2 (Special Touring Cars). However, all freedom is left for the crank-shaft and the connecting rods. The maximum cylinder-capacity authorized—2,000 cc—can be obtained by modifying the original bore and/or stroke.

Consequently, sleeving of an engine block is authorized, even if originally no sleeves are fitted.

**Gearbox:** five gears maximum, not including the reverse gear.

**The propulsion** will be ensured by two wheels maximum.

**NB:** As from January 1st 1976, the origin of the engine will be free. The number of cylinders will be limited to a maximum of 6. The cylinder capacity will remain unchanged.

The safety measures applied at present in F1 regarding crushable structures will be enforced on F2 as from January 1st 1975, and that the minimum weight will be increased to 500 kg as from the same date.

This formula will be valid until December 31st 1977.

However, crushable structures may be adopted as from January 1st 1974, and that in this case the permitted width will be 130 cm.

#### **Art. 295.—Formula No. 3.**

**Validity:** as from January 1st 1974 to December 31st 1976. Reciprocating piston engines only.

**Maximum cylinder-capacity:** 2,000 cc.

The maximum cylinder-capacity may be obtained by increasing or reducing either the bore or stroke of both dimensions.

**Maximum number of cylinders:** 4.

The engine block and cylinder head castings, machining completed, must be those of an engine equipping a car model of which the FIA has ascertained the series production of at least 5,000 units yearly.

The original engine block and cylinder head may be modified freely by removal

of material to the exclusion of any addition of material. However, it is permitted to sleeve an engine block that originally is not fitted with sleeves.

The type of crankshaft bearings may not be modified (the replacement of a plain bearing by a roller bearing is therefore forbidden).

The induction system is free but it must compulsorily be fitted with a throttling flange of 3 mm in length and with a parallel hole of 24 mm diameter. Through this throttling flange all the air feeding the engine must pass.

The throttling flange must compulsorily be made of metal or metallic alloy.

The material of the air-box is free, provided it is not a porous material.

It is prescribed that the entire inlet system including manifolds, injectors, air-box and restrictor must fit into a box of 1 m long, 50 cm wide and 50 cm high. It will also be prescribed that the inlet system may be removed from the engine as one unit with the cylinder head.

By "entire inlet system", it will be understood all the elements of the inlet system included between the head and external side of the throttling flange.

*The CSI reserves its right, after the experience obtained, to modify the dimensions of the throttling flange with a shorter previous notice than the two regular years.*

No supercharging device is allowed even if a series-production one was fitted on the original engine.

The other original parts of the engine may be replaced or modified without restriction.

#### **Other mechanical elements: free.**

<b>Dimensions:</b>	minimum wheelbase	200 cm
	minimum track	120 cm
	maximum rim width	10 inches

#### **Tyre restrictions**

The tread width of F3 tyres is limited to a value of 8 inches, plus a certain tolerance to compensate for tyre wear. This tolerance is provided for in the drawing on page 169 representing the measuring gauge to be used during scrutineering.

Checking may be done at any moment of the race and practice.

The measuring gauge must be held parallel to the axle of the wheel, but not necessarily vertically.

At the limit points C and D (see drawing) are in contact with the tyre shoulder but points A and B must remain in contact with the tyre tread.

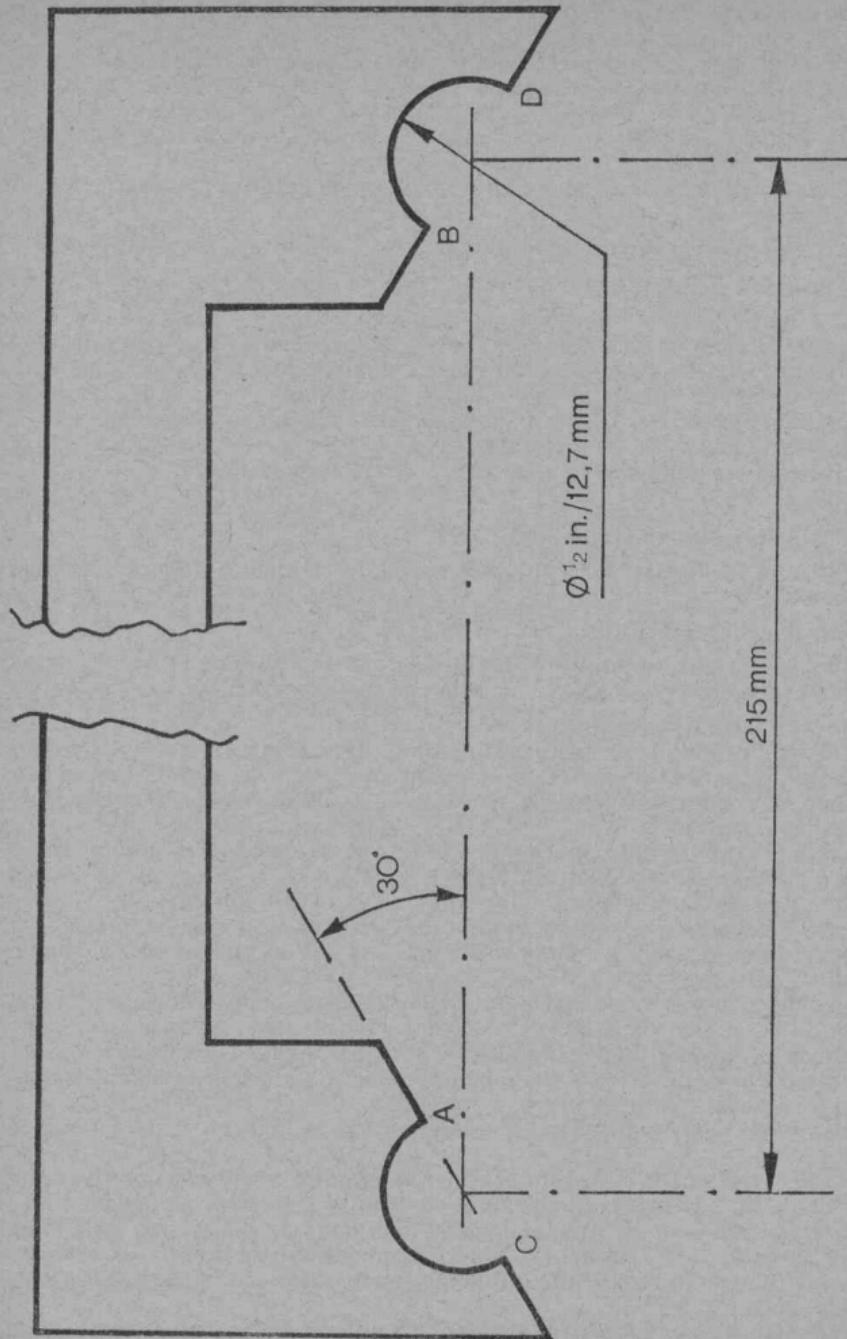
If a competitor uses tyre of dimensions evidently smaller than 8 inches, points A and B will naturally not touch the tyre tread simultaneously, but the checking will then not be necessary.

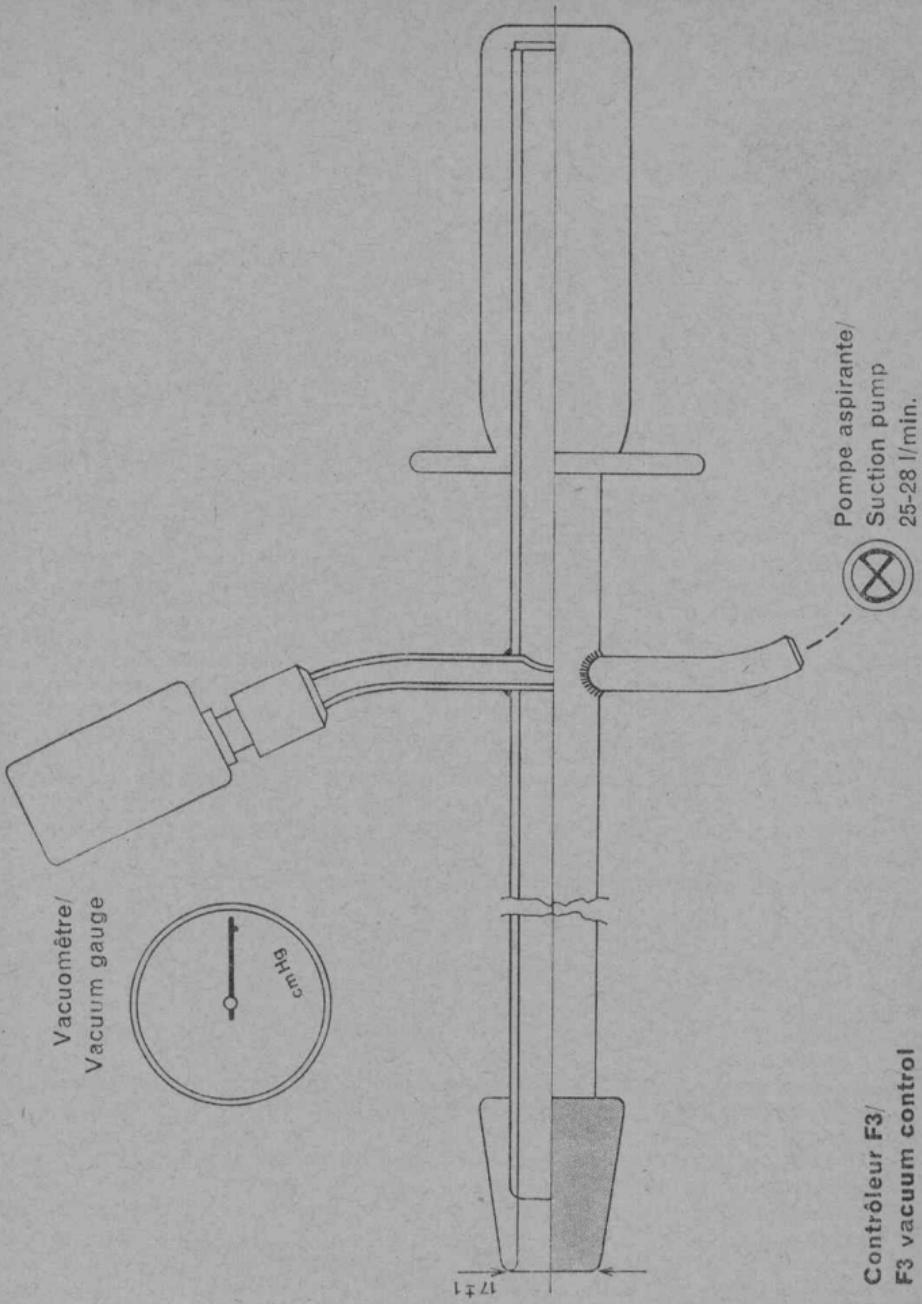
#### **Minimum weight, without ballast: 440 kg.**

**Certificate of origin:** any Formula 3 car showing up at the start of an event shall be supplied with a certificate established by the manufacturer and ratified by the National Sporting Authority, specifying the origin of the basic elements of the vehicle.

#### **Vacuum tightness control apparatus of the induction system for F3 engines:**

The control apparatus described hereafter represents the ultimate method of verification of the vacuum tightness of F3 induction systems, without the possibility of appeal. All F3 organizers will have to put such an apparatus at the disposal of the scrutineers for verification purposes both before and after the race.





The apparatus aims to create artificially a vacuum in the induction system and includes:

- a membrane suction-pump, with a nominal output of 25 to 28 litres/minute, and capable of obtaining a vacuum of 55 to 65 cm Hg for zero airflow.
- a rubber tubular stop perfectly adjusted to the flange.
- a vacuum-gauge connected to the piping between the rubber stop and the suction-pump.

The procedure to be respected for the checking is the following:

- a) Rotate the engine into such a position that, in each cylinder, at least one of the valves is closed.
- b) Open the injection slide or the carburettor butterflies.
- c) Check on the vacuum-gauge that the suction-pump creates in the induction system a depression superior or equal to 15 cm Hg.
- d) If the condition a) cannot be met, disconnect the rocker-arms or remove the camshaft in order to shut all inlet valves. If one or several valves have been damaged during the event, the entrant may repair them under the steward's control before undergoing the testing procedure. In these last cases, the minimum vacuum to be obtained shall be 20 cm Hg, instead of 15.

An example of this device is given on page 171.

For all further information, please contact the CSI Secretariat (8 place de la Concorde, Paris 8e, France).

### **Art. 296.—Prescriptions and definitions applicable to racing cars of the 3 international formulae.**

**a) Minimum weight:** the minimum weight is that of the car in running order, ie, with all lubrication and cooling liquids but without fuel.

The ballast which is prohibited is that of a removable type. It is therefore permissible to complete the weight of the car through one or several ballasts incorporated to the materials of the car provided that solid and unitary blocks are used, and that they are fixed by means of a tool and offer the opportunity of being sealed on should the officials entrusted with the scrutineering of the car deem it necessary.

**b) The construction of the vehicle** must be symmetrical i.e. when the car is lifted laterally and weighed, the half weight on either side must be equal to half the overall weight, a margin of + or - 5% being allowed for the said half weight. To verify the above, the weighing must be done with all tanks full (fuel, water, oil) and a driver, weighing at least 75 kilos normally sitting at the steering-wheel (or a ballast of the same weight occupying the same place).

**c) Reverse gear:** all vehicles must have a gearbox including a reverse gear, which must be in working order when the car starts the events and able to be operated by the driver when normally in his seat.

**d) Compulsory automatic starter** with electrical or other source of energy carried aboard the car and able to be controlled by the driver when normally in his seat.

The starting of F1 and F2 engines is authorized both on the dummy grid and in case of a stop at the pit with the help of a supplementary battery which will be temporarily connected to a proper coupling fixed on the car.

**e) Driver's seat liable to be occupied or left without it being necessary to open a door or remove a panel.** Sitting at his steering-wheel the driver must be facing the road.

Moreover, the cockpit must be so conceived that the maximum time necessary for the driver to get in or out does not exceed 5 seconds.

**f) Safety harness:** Cars must be equipped with a "six-point" safety harness, ie, a harness made of two shoulder straps, one abdominal strap and two crutch straps. The wearing of this harness is compulsory.

**g) Coachwork:** no part of the coachwork, with the exception of the safety roll bar, shall exceed in height a horizontal plane, 80 cm above the lowest point of the entirely sprung structure of the car.

*In other words, a car with its wheels and the mobile suspension elements removed, but without regard to the roll-over bar, must pass between two parallel planes separated by 80 cm.*

### **Formulae 1 and 2**

Behind the front wheels, the coachwork shall not exceed a maximum width of 110 cm.

This width does not include the crushable structure which will have a maximum width of 10 cm each side. The overall width of the coachwork may thus extend to 130 cm.

(For F1 please refer to Article 293.)

The coachwork ahead of the front wheels may be extended to an overall maximum width of 150 cm.

Nevertheless, any part of the coachwork ahead of the front wheels, exceeding an overall width of 110 cm, shall not extend above the height of the front wheel rims.

### **Formula 3**

Behind the front wheels, the coachwork must not exceed a maximum width of 95 cm.

The coachwork ahead of the front wheels may be extended to an overall maximum width of 135 cm.

Nevertheless, no part of the coachwork ahead of the front wheels, exceeding an overall width of 95 cm, shall extend above the height of the front wheel rims.

**For all Formulae:** wheels shall be external to the coachwork.

The coachwork opening giving access to the cockpit must have the following minimal dimensions:

Length: 60 cm

Width : 45 cm, maintained over 30 cm from the most rearward point of the seat-backrest towards the front.

**h) Braking safety system** which must include a double circuit operated by the same pedal and complying with the following:

- the pedal shall normally control the four wheels;
- in case of a leakage at any point of the brake system pipes or of any kind of failure in the brake transmission system, the pedal shall still control at least two wheels.

**i) Filling port** complying with the following requirements:

- the filling port(s) and their caps shall not protrude beyond the coachwork material;
- the opening shall have a sufficient diameter for allowing the air exhaust at the time of quick refuelling (in particular those done under pressure) and if necessary the breather-pipe connecting the tank with the atmosphere shall be such as to avoid any liquid leakage during the running.

**j) Oil catch tank:** the mounting of a tank(s) or device meant for collecting any oil spilling out of the engine and/or transmission is compulsory. This device must be conceived in conformity with the prescriptions of Art. 253 q).

**k) Exhaust pipes:** the outlet orifices of the exhaust pipes, when directed horizontally to the rear, must be placed at a height of more than 30 cm and less than 60 cm above the ground. If they are not entirely covered by an element of the coachwork, they may not protrude by more than 25 cm beyond the overall length of the car.

**l) No refuelling of lubricant** is allowed for the whole duration of the event.

The filling ports of the oil tanks and radiators shall provide the possibility of affixing seals.

The leads sealing the filling port(s) of the lubricant tank(s) may not be removed at any time during the race.

The leads sealing the filling port(s) of the radiator(s) shall be in place at the start of the race, but may be removed at any pit-stop.

**Art. 297.—Safety devices:** the safety devices and measures given hereafter must be complied with for racing cars of the International formulae.

**a) Roll-bars :**

**Dimensions:** the dimensions of the roll-bars must be as follows: the minimum height must be at least 36 inches (92 cm) measured along the line of the driver's spine, from the metal seat to the top of the roll-bar. The top of the roll-bar must also be at least at 5 cm above the driver's helmet, when the driver is sitting in normal driving position.

The width must be at least 38 cm measured inside the roll-bar between the two vertical pillars of the sides. It must be measured at 60 cm above the metal seat on the perpendicular to the line of the driver's spine.

**Strength:** in order to obtain a sufficient strength for the roll-bar, two possibilities are left to the manufacturers:

- a) The roll-over bar, of entirely free structural conception, must be capable to withstand the stress minima indicated under Art. 253 o) — III.
- b) the tubes and brace(s) must have a diameter of at least  $1\frac{3}{8}$  inch (3.5 cm) and at least 0.090 inch (2 mm) wall thickness. The material should be molybdenum chromium SAE 4130 or SAE 4125 (or equivalent in DIN, NF, etc.).

There must be at least one brace from the top of the bar rearwards at an angle not exceeding 60° with the horizontal. The diameter and material of the brace must be the same as those of the roll-bar itself.

In the case of two braces, the diameter of each of them may be reduced to 20/26 mm.

Removable connections between the main hoop and the brace must comply with drawings nos 10 and 11 of Art. 253 or with any other type approved by the FIA.

Provided the prescriptions concerning cockpit openings and strength of roll-bars are met, stays may be fitted forward.

**b) Cables, lines and electrical equipment:** except if the cables, lines and electrical equipment such as battery, fuel pump, etc., are in compliance with the requirements of the aircraft industry as regards their location, material and connections, they must be placed or fitted in such a way that any leakage cannot result in:

- accumulation of liquid,
- entry of liquid into the cockpit,
- contact between liquid and any electrical line or equipment.

Should the cables, lines or electrical equipment pass through or be fitted in the cockpit, they must be fully enclosed in a cover of a liquid-tight and fire-proof material.

**c) Safety fuel tanks**

F1=refer to Article 293.

F2 and F3=FIA/Spec/FT3.

**d) Red warning light:**

All Formula cars must be equipped with a rearward facing red warning light of at least 15 Watts. This light must be mounted as high as possible on the centre-line of the car and be clearly visible from the rear. The warning light must be switched on by order of the clerk of the course.

**e) Tank fillers and caps:** it is recalled that on formula cars, the tank fillers and their caps must not protrude beyond the coachwork.

The caps must be designed in such a way as to ensure an efficient locking action which reduces the risks of an accidental opening following a crash impact or incomplete locking after refuelling.

The fillers must be placed away from points which are vulnerable in case of a crash. The air vents must be located at least 25 cm to the rear of the cockpit.

**f) Electric circuit-breakers:** it is recalled that since 1st January 1969, the fitting of a general electric circuit-breaker, clearly indicated, is mandatory for all cars taking part in speed races.

For Formula cars, this circuit-breaker must be indicated by a blue triangle with a spark and be easy to reach from inside as well as from outside the car.

**g) Extinguishing system:** All cars of the International racing formulae must be fitted with an extinguishing system conforming to Art. 269.

**Art. 298.—Additional safety measures applicable to Formula 1**

**a)** At least half of the extinguishing capacity must be placed forward of the engine but rearward of the foremost pick-up points of the front suspension. Waivers to this rule may be given by the CSI for an installation which can be considered to be within the main structure of the car.

**b)** Provision for a clearly indicated external emergency handle which can be actuated easily by the circuit rescue personnel even at a distance with a hook. This emergency handle shall simultaneously initiate the fire-extinguisher, cut off the engine and isolate the battery.

**c)** Compulsory fitting of a headrest capable of restraining 17 kg under a rearward acceleration of 5 G. Its dimensions shall be such that in no case can the driver's head be trapped between the roll-over bar and the headrest itself.

**d)** The use of magnesium sheet will be authorized only if its thickness exceeds 3 mm.

**e)** The battery must be capable of starting the engine at least twice.

**f)** Chromium plating of steel suspension members of over 45 tons per sq in tensile strength is forbidden.

**Art. 299.—Conditions required for International Formula events**

**Duration of F1 Championship events:** the duration of F1 Championship events shall be 200 miles or two hours, whichever is the shorter. Should two hours elapse before the scheduled race distance is completed, the leader will be shown the chequered flag at the end of the lap in which the period of two hours shall end.

## **Other Formulae**

The following limits of distances are compulsory for all international formula races.

The superior limits are valid for all events admitting cars of international racing formulae.

The inferior limits are compulsory only for events counting towards an FIA Championship, Cup or Trophy.

	Length of 1 heat		Total length of event	1 heat-event		(in km)
	Min	Max	Max	Min	Max	
F2	100	175	325	200	250	
F3	75	100	200	100	175	

## **TITLE XI**

### **FORMULE LIBRE RACING CARS (Group 9)**

**Art. 300.**—It is permitted to organize sporting competitions open to other racing cars than those defined in one of the previous Groups of Appendix J.

All specifications concerning the vehicles and particularly the limitations of the cylinder-capacity are in this case at the discretion of the promoters and it rests with them to list these specifications as clearly as possible in the Supplementary Regulations of the event, which anyway have to be approved by the National Sporting Authority answerable to the FIA.

However racing cars which do not comply with any of the International Racing Formulae, must for security reasons be in conformity with the following rules listed here-above under Art. 296, General prescriptions and definitions: e), f), h), i), j), l), and 297.

**NB:** The introduction of safety foam in safety fuel tanks is only compulsory if commercial fuel is used.

## **TITLE XII**

### **FORMULA SUDAM**

**Validity:** as from January 1st 1973 to December 31st 1977. Reciprocating piston engines only.

**Engine-capacity:** Formula Sudam will allow the following engine-capacities:

- maximum cylinder-capacity: from 1800 to 2000 cc.
- intermediate cylinder-capacity: from 1600 to 1800 cc.
- minimum cylinder-capacity: up to 1600 cc.

The following weights will correspond to these engine capacities:

- maximum cylinder-capacity: 460 kg.
- intermediate cylinder-capacity: 440 kg.
- minimum cylinder-capacity: 420 kg.

**Maximum number of cylinders:** 4.

**Origin of cylinder-head and engine block:** the engine block and cylinder-head castings, machining completed, must be those of an engine equipping one

of the cars listed below. Engines with more than two valves per cylinder are not eligible.

In December of each year the CSI will establish a list of car models manufactured in South America, the engines of which are eligible for use in Formula Sudam. To be included in this list the car models' production must have attained one of the following production minima:

— For car-models of which both engine and chassis are entirely manufactured in a South American country: 500.

— For car-models of which all suspended chassis and coachwork elements are manufactured in a South American country but the main engine components of which are imported for assembly: 1000.

— For car-models of which all chassis, coachwork and main engine components are imported and assembled: 2000.

— Car-models imported as complete units, ie, chassis, coachwork and engine assembled, are not eligible.

#### List valid for 1974:

Make	Type of car	Cylinder capacity
Alfa Romeo	Giulia 1300	1250 cc
	Giulia 1750	1719 cc
Chrysler	Avenger	1639 cc
		1812 cc
Citroen	2 CV	424 cc
	3 CV — Ami 8 — Ami 6 — Dyane 6	602 cc
Fiat	600	700 cc
	850 Coupé — Berline	843 cc
	124 — Spécial	1197 cc
	125 — Spécial	1438 cc
	128	1608 cc
	1500	1166 cc
	1600 Berline — Sport	1500 cc
Fiat Zastava	1300	1624 cc
Ford		1300 cc
	Escort GT	1297 cc
	Escort de luxe	1098 cc
	Cortina	1933 cc
	Corcel — GT	1289 cc
		1480 cc
General Motors	Chevette	1400/1600 cc
Hillman	Arrow	1498 cc
Honda	N 600	508 cc
Mercedes Benz	200	1998 cc
Morris	1275 GT	1275 cc
Nissan	Datsun 510	1300/1500 cc
Opel	Kadett	1078 cc
	Rekord	1492 cc
Peugeot	404	1618 cc
	504	1971 cc

Make	Type of car	Cylinder capacity
Renault	R4	750/1020 cc
	R6	1118 cc
	R16 TS/R16	1565 cc
	R12	1289 cc
Simca-Chrysler	1000 — 1100	1000/1201 cc
Volkswagen	1200	1200 cc
	1300	1300 cc
	1500	1500 cc
	1600	1600 cc

**Modifications:** the original engine block and cylinder-head may be modified freely by removal of material to the exclusion of any addition of material.

However, it is permitted to sleeve an engine block that originally is not fitted with sleeves.

The type and number of crankshaft bearings may not be altered (the replacement of a plain bearing by a roller bearing is therefore forbidden).

The induction system is free as long as no direct or indirect injection is used. It must be fitted with an air-restrictor of 3 mm in length and with a parallel hole of 24 mm diameter. All the air feeding the engine must pass through this air-restrictor.

The air-restrictor must compulsorily be made of metal or metallic alloy.

The material of the air-box is free, provided it is not a porous material.

The entire induction system, including manifolds, carburettors, air-box and restrictor, must fit into a box of 1 m long, 50 cm wide and 60 cm high. It must be possible to remove the entire inlet system from the engine as one unit with the cylinder head(s).

No supercharging device is allowed even if one was fitted on the original engine in series-production.

The other original parts of the engine may be replaced or modified without restriction.

The CSI reserves its right, after the experience obtained, to modify the dimensions of the air-restrictor with a shorter notice than 2 years.

**Gear-box:** the gear-box is free. It may not have more than 5 forward speeds, plus the compulsory reverse gear. Ratios are free. The use of a limited slip differential is allowed.

**Chassis and coachwork:** the main structure of the chassis and the coachwork must be manufactured in a South American country. To facilitate control South American National Sporting Authorities will issue certificates of origin to every Formula Sudam car built on their territory.

As a transitory measure, chassis and coachworks manufactured outside South America will also be allowed as long as they have been imported into South America before 1st April 1972. The owners should apply to their respective National Clubs to obtain the relevant certificate of origin.

The use of alloys including more than 8% magnesium is forbidden for all suspended and non-suspended parts of the chassis (suspension uprights, wheels, etc.).

**Fuel tanks:** the outer skin of the metal container should be in aluminium and have a minimum thickness of 1.5 mm. By outer-skin should be understood all faces of the tank except that adjacent to the driver compartment.

The aluminium alloy should have a minimum tensile strength of 14 tons/sq inch and a minimum elongation of 12%.

The container should be fitted with a rubber bladder safety fuel cell conforming to FIA FT3 regulations.

Temporarily as an alternative to rubber bladder safety fuel cells it will be permitted to use an aluminium container of 1.5 mm wall thickness, the outer-skin of which is bonded preferably on the inside, with glass fibre reinforced polyester of at least 3 mm thickness.

The total maximum fuel capacity of the tank is 60 litres.

**Overall dimensions:**

- Minimum wheelbase: 200 cm
- Minimum track : 120 cm

The body dimensions may not exceed the maximum specified for the International F3.

**Tyre and rim restrictions:** the maximum rim width allowed is 10 inches. The tread width of tyres is limited to a nominal value of 8 inches, plus a certain tolerance to compensate for tyre wear. This tolerance is provided for in the drawing on page 169 (green section) representing the measuring calibre to be used during scrutineering.

Checking may be done at any moment of race and practice.

The measuring calibre being applied horizontally as regards its longitudinal axis and vertically as regards its transverse axis, without exercising pressure to the tyre tread, points A and B (see drawing) must be in contact with the tyre tread.

At the limit, points C and D (see drawing) are in contact with the tyre shoulder, but points A and B must remain in contact with the tyre tread.

If a competitor uses tyres of dimensions evidently smaller than 8 inches, points A and B will naturally not touch the tyre tread simultaneously, but checking will then not be necessary.

**Vacuum tightness control:** checking procedure identical to that prescribed for F3 (see green section, page 171).

**General prescriptions and definitions:** cars of Formula Sudam should conform to the general specifications applicable to single-seaters as specified under Art. 296—sub a), b), c), d), e), f), g), h), i), j), k), l), and Art. 297 a), b), d), e), f), g).

## TITLE XIII

### NATIONAL FORMULAE

#### Art. 301.—Registration of National Racing Formulae

The CSI will accept to study the registration of "national" formulae, in order to have their technical prescriptions known at an international level and to ensure a certain stability and a standardization of the regulations which rule them.

1 — In pursuance of Art. 298, any ACN has the right to define regulations applying to given types of "Formula libre" racing cars denominated hereafter: "National Formulae".

2 — Are eligible for registration only the applications presented by at least 2 National Sporting Authorities and concerning a National Formula used in at least 2 countries.

3 — The FIA will accept, in compliance with the preceding Art. 2 to register on a voluntary basis any set of prescriptions defining such National Formulae.

The regulations thus registered by the FIA will be applicable in countries, the ACNs of which have declared to abide by them.

The declaration made by the National Sporting Authority to adopt the regula-

tions for a determined National Formula is exclusively valid for the regulations such as they were originally deposited at the FIA, and this National Sporting Authority is entitled to withdraw this declaration if the regulations are altered afterwards.

The withdrawal of a declaration for another reason than the one hereabove mentioned, must compulsorily be communicated to the FIA before 31st December in order to be valid as from the following year.

4 — From the time when such a National Formula is registered, its appellation can be used, in those countries where the ACNs have adopted the registered regulations, only for cars entirely complying with the regulations deposited at the FIA.

5 — Any application for the registration of regulations for a National Formula should be addressed to the FIA at the latest on October 1st, to be valid as from January 1st of the following year.

The National Formulae can (but it is not compulsory) form the subject of restrictions as regards the engine or other manufacturing elements, in order to allow exclusively the use of castings of a given make. Such a one-make Formula may have a distinct commercial name related to the imposed design restrictions.

6 — The National Sporting Authorities which have adopted a determined National Formula may file on application at the FIA in view of the organization of a reward including several countries.

Any application of what kind will be submitted to the appreciation of the CSI whose decision will depend on the number of countries interested by the organization of an event included in that reward and on the advisability or the necessity, for the general interest of Automobile Sport, to introduce such a form of competition.

7 — The organization of any other type of international reward without the FIA's agreement, as prescribed in the above Art. 6 will entail the application of penalties.

#### Art. 302.—National Formulae registered by the FIA

Nation Nazionale		Limite de cyl (ccm)	Moteur dérivé de ...	Type de châssis	Secretariat
F. V.	(D)	1300	VW 1300	VW 1300 Monoposto	(Int) Formel Vau Europa, Lilienst. 48 D-8000 München 8
F. Super V	(D)	1600	VW 1600	Monoposto	(Int) Formel Vau Europa, Lilienst. 48, D-8000 München 8
F. Ford	(GB)	1600	Cortina GT	Monoposto	RAC Motor Sport Division, 31 Belgrave Square, London SW1X 8QH
F. Renault (F)		1600	Renault Gordini	Monoposto	FFSA, 136 rue de Longchamp, Paris 16e