

# Appendix J

## to the International Sporting Code 1971

### 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).
- Group 5 : sports cars (25).

**Category B:** experimental competition cars.

- Group 6 : prototype-sports cars.

**Category C:** racing cars.

- Group 7 : two-seater racing cars.
- Group 8 : formula racing cars.
- Group 9 : formula 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).

**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, 4, or 5 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 1st January 1969 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, 4 and 5 (Grand Touring and Sport) 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.

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.

*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.*

**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 sub-divisions 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:

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

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) 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.

**l) 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.

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.

**m) Use of aerodynamic devices on cars of groups 5, 6, 7 and international racing formulae:** in interpreting Art 252(l), 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.

**n) 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.

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.

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

**a) Chassis, ground-clearance, steering lock:** the car, supplied with enough fuel for starting the event, its oil and water tanks full, must be able to drive over—under the power of its engine and with its driver at the steering-wheel—a mass of 80×80 cm and 10 cm high.

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:** 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, 30 cm above the compressed seat, and between the upper strip of each front door.

The width over the back seats (E) is measured along the vertical plane passing through the centre of the standard mass, 30 cm above the compressed seat and between the upper strip of each back door, or at the same height as for the front seats when there are no rear doors.

**NB: Definition of the width C and E as from 1st January 1972.**

The two above paragraphs will be modified as follows as from 1st January 1972:

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.