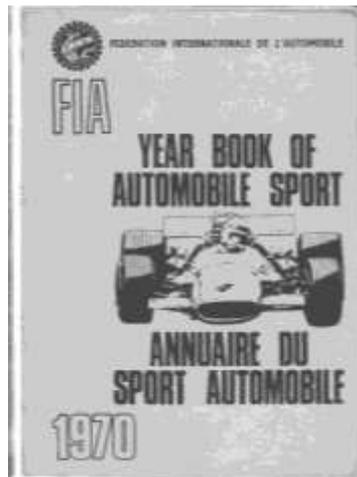


Period Regulations for International Formula 3 cars built between 1st January 1964 to 31st December 1970



Art. 295.—Formula No. 3.

Validity: from 1st January 1964 to 31st December 1970,

Engine: reciprocating piston engines only, Max. cyl. capacity 1,000cc. Maximum cylinder-capacity may be obtained by increasing or reducing either the original bore or stroke or both dimensions.

Maximum number of cylinders: four.

The engine block, including cylinder-head and cylinders (should they be removable) shall be those of an FIA recognized model of car, manufactured in a quantity of at least 1,000 units in 12 consecutive months, excluding all engines with overhead camshafts.

The number of crankshaft bearings shall not be modified, nor the type of bearing (the replacement of a plain bearing by a roller bearing is therefore forbidden). The location of the camshaft shall not be altered,

The induction system shall be the same as that used on the car from which the engine has been taken (the use of an injection system on an engine normally fed by a carburettor is therefore forbidden).

The engine shall be equipped with only one carburettor, whatever its number of chokes, and a throttling flange of a maximum diameter of 36 mm and a minimum thickness of 3 mm shall compulsorily be mounted between carburettor and inlet pipe. Through this throttling flange all the carburetted mixture feeding the cylinders must pass.

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

Other mechanical parts; the gearbox shall be that of an FIA recognized model of car, manufactured in a quantity of at least 1,000 units in 12 consecutive months, but not necessarily the one from which the engine has been taken. It shall not have more than four forward ratios plus a reverse gear. The scale of ratios is free. The use of any self-locking system on the differential is forbidden,

Dimensions:

Minimum wheelbase	200 cm
Minimum track	110 cm
Maximum width of coachwork	95 cm

Minimum weight, without ballast (see hereafter): 420 kgs (including 20 kg as provided for by the safety measures announced on 1st January 1969),

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.

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 i.e. 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,

e) Protection against fire: besides that already provided by Art. 125 of the International Sporting Code, the car shall be equipped with a general electric circuit-breaker either operating automatically or at the disposal of the driver,

f) 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,

g) Attachment points for safety-belt, the use of such a belt being optional,

h) 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,

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Behind the front wheels, the coachwork must not exceed a maximum width of 95 cm (nevertheless, the present exception provided for in Appendix J for lateral fuel tanks remains valid).

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 mounting of lateral fuel tanks is tolerated provided however they do not protrude beyond the vertical plane passing through the median line of the tyres,

i) **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.

j) **Fuel tanks 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,

k) **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 shall have a minimum capacity of 3 litres for F1 vehicles and those of formula libre of a cylinder-capacity of more than 2,000 cc and a minimum capacity of 2 litres for vehicles of Formula 2 and 3 and of formula libre of a cylinder-capacity inferior or equal to 2,000 cc.

l) **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.

m) **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.

n) **Safety devices:** the safety devices and measures given hereafter must be complied with for racing cars of the International formulae and become mandatory at the indicated dates.

Roll-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 — All junctions of tubes must be strengthened. This strengthening may be obtained for instance by using gusset plates of a length of 6 cm on each leg and 5 mm thickness,

3 — The basic crash-bar hoops and all braces may be seamless mild steel tubing, normally used for space-frame constructions, it must be noted that certain chromium alloys present difficulties in welding and in that case a normalizing of the structure would be advisable.

4 — When determining the size of tubing used, a basic distinction should be made between crash-bars for open cars which have to absorb a direct shock and roll-cages which are primarily intended to strengthen the driver compartment, (see hereafter).

5 — If mounting plates are used, they should be of a sufficient thickness (e.g. 5 mm, as for the gussets).

6 — 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.

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

8 — 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.

9 — Braces should preferably be of the same size tubing as used for the main structure,

10 — 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.

11 — 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.

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 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.

b) the tubes and brace(s) must have a diameter of at least 13/8 inch (3.5 cm) and at least 0.030 inch (2 mm) wall thickness. The material should be molybdenum chromium SAE 4130 (or equivalent in DIN, NF, etc.) or material of another specification but of the same strength. There must be at least one brace from the top of the bar rearwards at an angle not exceeding 80° with the horizontal. The diameter and material of the brace must be the same as

those of the roll-bar itself.

Mandatory application dates;

— as from 1st January 1970 for F2 and F3,

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.

Mandatory application date for all formulae: as from 1st March 1969.

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.

Mandatory application dates: 1st March 1969 for all Formulae,

Extinguishers; the cars must be equipped with two fire-extinguishing systems (which may be fed by a single fire-extinguisher of at least 5 kg) as follows:

a) a manual system operated by the driver in driving position, the outlets being directed at least towards the feeding systems and the injection pump (if provided).

b) a manual system operated by the driver in driving position as well as by any helper outside the vehicle, and unloading inside the cockpit. The triggering device must be indicated by a red circle with the letter E. Mandatory application dates as from;

— 1st January 1970 for F3.

Electric Circuit-breaker: it is recalled that as from 1st January 1969, the fitting of a general electric circuit-breaker, clearly indicated, will become 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 of reach as well from inside as from outside the car.

Influence of safety measures on minimum weights: it is considered that the introduction of the three following safety measures entails the weight handicaps mentioned hereafter:

- a) safety roll-bar : 10 kg
- b) safety fuel tank : 10 kg
- c) fire-extinguishing system; 10 kg (of which at least 5 kg extinguishing capacity).

Therefore the application of these three safety measures will be accompanied each time by an increase of 10 kg of the minimum weight required for the Formula concerned,