

**NEZ CHAMPIONSHIP 2010
SUPER B2000 TECHNICAL REGULATIONS**

Confirmed by:

FIA NEZ RACING COMMISSION

Table of Contents

Technical Regulations	
1. Eligible Cars	
2. Homologation/Admission of the basic cars	
3. Permitted or Prescribed Modifications and Adjunctions	
4. Minimum Weight	
5. Engine	
5.1 Cylinder Capacity	
5.2 Pistons	
5.3 Fuel and air feed:	
5.4 Ignition	
5.5 Lubrication	
5.6 Cooling System	
5.7 Heating System	
5.8 Cylinder Head	
5.8.1 Compression Ratio	
5.8.2 Pistons	
5.8.3 Camshaft	
5.9 Flywheel	
5.10 Exhaust System	
5.11 Engine and Gearbox Mountings	
5.12 Materials on the Engine	
6. Transmission	
6.1 Gearbox	
6.1.1 Authorised gearboxes	
6.1.2 Gear Changes	
6.1.3 Ratios	
6.1.4 Gearbox Housing and Oil Radiator	
6.2 Clutch	
6.3 Differential	
6.4 Drive Shafts	
7. Suspension	
7.1 Front Axles	
7.2 General Remarks to the Rear Axles	
7.2.1 Multi-Link Rear Axles	
7.2.2 Single-Link Rear Axles / Twist-Beam Rear Axles	
7.3 Wheel Geometry	
7.4 Stabiliser	
7.5 Reinforcement	
7.6 Wheel Bearing	
7.7 Suspension Travel Limiter	
7.8 Suspension Springs	
7.8.1 Coil Springs	
7.8.2 Leaf Springs	
7.8.3 Torsion Bars	
7.9 Shock Absorbers	
8. Chassis Underframe/Auxiliary Frame	
9. Reinforcement	
10. Wheels and Tyres	
10.1 Complete Wheel	
10.2 Spare wheel	
11. Ground Clearance	
11.1 Front Pumper	
12. Brakes	
13. Steering	
14. Bodywork	
14.1 Exterior Bodywork	
14.1.1 Front aerodynamic device / front bumper	
14.1.2 Rear aerodynamic device	
14.1.3 Widening of the wings/bumpers	
14.1.4 Modifications to rear doors	
14.2 Cockpit	
14.3 Luggage and Engine Compartment	
16. Electrical System	
16.1 Cables	
16.2 Battery	
16.3 Generator	
16.4 Lighting	
16.5 Fuses	
16.6 Switches on and around the Dashboard	
16.7 Telemetry	
17. Fuel System	
17.1 Fuel tanks	
17.2 Fuel lines	
17.3 Fuel pumps	
18. Safety Prescriptions	
18.1 Additional fasteners	
18.2 Driver's seat	
18.3 Safety belts	
18.4 Rollover structures	
18.5 Extinguishers/Extinguishing systems	
18.6 Protective Nets	
18.7 Towing Device	
18.8 Fire Bulkhead	
18.9 General Circuit Breaker	
19. Dry Ice	

20. Definitions / Clarifications

- 20.1 Free
- 20.2 Family of Material
- 20.3 Cockpit
- 20.4 Luggage Compartment
- 20.5 Liquid Lines
- 20.6 Radiator Mounting
- 20.7 Battery
- 20.8 Piston
- 20.9 ISG

21. General

Drawings

Technical Regulations

The following provisions come into force as from 01.01.2010:

1. Eligible Cars

Eligible are large scale production touring cars as specified below:

1.1 In order to be eligible all cars must be homologated by the FIA in Group N or by the Oberste Nationale Sportbehörde (below ONS) respectively the Deutscher Motor Sport Bund (below DMSB) in Group DMSB-2000 or FIA NEZ National Sporting Authority (below ASN).

The basic car must have a cubic capacity between 1700 cm³ and 2300 cm³. Of the car is originally equipped with a supercharger system (for example turbo), the system must be removed.

For any car failing to hold an FIA homologation, the manufacturer or the general importer must submit an application for FIA NEZ ASN's homologation. For this purpose, the car must be described on FIA NEZ ASN's Homologation Form. The FIA NEZ ASN's homologation regulations are available from the FIA NEZ ASN's secretariat.

In order to be granted an FIA NEZ ASN's homologation, the car must have a General (ABE) or EU Certification and comply with the following requirements.

1.2 The basic car must have two-wheel-drive (rear or front wheel drive).

1.3 Basic cars with engines having more than two throttle valves for the load regulation in their standard version are not admitted. Throttle valves, which modify the length resp. the diameter of the inlet ports in a variable induction pipe, are not considered to be load regulating throttle valves.

1.4 The FNRC reserves the right to refuse the homologation of cars or of car parts without having to give reasons. Furthermore and in exceptional cases, the FNRC reserves the right to admit cars or car

parts which do not comply with the aftermentioned regulations, upon application.

2. Homologation/Admission of the basic cars

All cars must have been produced in a quantity of at least 2500 identical units in 12 consecutive months and homologated by the FIA in Group N (not Super Production for example) or by the ONS respectively the DMSB in Group DMSB-2000 or FIA NEZ ASN's.

The following provisions are applicable for FIA-homologated group N cars:

- Supply variants (VF) homologated in-group A or in-group N are also valid in Group B-2000.
- Option variants (VO) of the Group A and Group N homologation forms are not valid in Group B-2000, unless they refer to:
 - * Fuel tank,
 - * Sliding/sun roof,
 - * Safety roll cage,
 - * 2-/4-doors versions.

Evolutions of the types ET and ES homologated in-group A as from 01.01.97 are also valid in Group B-2000.

Evolutions of the types VK and WR included in the A homologation form as well as evolutions for group SP (Super Production) are not valid for the group B-2000. Parts homologated in the ONS respectively the DMSB-2000 or FIA NEZ ASN's form as ES extensions may also be used individually with the exception of descriptions to the contrary in the corresponding extension.

The series version of the cars must have at least 4 places and comply with the interior dimensions specified for group A.

3. Permitted or Prescribed Modifications and Adjunctions

All the modifications, which are not explicitly allowed by the present regulations, are forbidden.

An authorised modification may not entail a non-authorised modification.

The only work, which may be carried out on the car, is that necessary for its normal servicing, or for the replacement of parts damaged through wear or accident.

Modifications and adjunctions may only be carried out if they comply with the prescriptions specified hereafter. Apart from these permitted modifications, any part damaged through wear or accident may only be replaced by an original part identical to the damaged one.

Nuts, bolts, screws, screw locks and washers: Throughout the car, any nut and bolt may be replaced by any other nut or any other bolt, provided that they are made of the same family of material. Other screws may replace the screws provided that they have the same or a greater diameter as the original one, but the standard thread and the family of material must be retained and the tensile strength must correspond at least to the original one. For sheet-metal screws only, the thread pitch is free. Screw locks and washers are free.

In order to check the temperature of the engine oil, the gearbox oil, the differential oil and the engine

cooling water, the maximum of one bore (threaded hole) with the maximum diameter of 14 mm may be applied on each one of the corresponding positions for the purpose of mounting the maximum of one temperature sensor.

The cars must comply with the present regulations and in all other respects totally comply with the series production version. Identification by means of the specifications of the basic homologation must be possible.

The articles 251 and 252 (not articles 254 or 255 for example) of the Appendix J to the FIA ISC are valid, but the points specified in the present regulations have priority.

4. Minimum Weight

The minimum weight of the car, including the driver and his full equipment, is:

For front-wheel driven cars:	1110 kg
For front wheel drive cars with sequential gearbox	1140 kg
For rear-wheel driven cars:	1140 kg
For rear-wheel driven cars With sequential gearbox:	1170 kg

All cars must comply with this minimum weight, which is eventually increased by the handicap weight, at all times during the event.

The use of ballast is permitted in order to comply. This ballast as well as the handicap weights must consist of strong, unitary blocks. These elements must be fixed by means of tools and placed on the floor of the cockpit or the luggage compartment. They must be capable of withstanding an acceleration/deceleration of at least 25 g. A simple sealing of the additional weight elements must be possible.

5. Engine

Only naturally aspirated engines are permitted. Coverings fitted to the engine exclusively to improve the aesthetics of the assemblies may be removed. The driving wheels, belts as well as the tensioning device and its supports of the existing accessories are free.

The crankshaft gear is free.

Unused and screwed or riveted supports located outside the engine block and the cylinder head may be partly or totally removed.

Cylinder bore: The bore diameter is free. A rebore of the cylinders is permitted. The resleeving of the cylinders through the addition of material is only permitted for cars with a standard cylinder capacity of more than 2 litres, provided that the material of the bearing surface is original, the bore diameter may be reduced but not increased. The bores must be circular.

The height of the engine block may be reduced on the side of the head up to maximum 1.0 mm in resurfacing the sealing area.

Other bearing shells of the same width and of the same diameter may on the crankshaft side replace the bearing shell of the crankshaft main bearing.

Other bearing shells may replace the bearing shells for the connecting rods, situated towards the

crankshaft too. A tolerance of +/- 3 mm for the width and for the diameter is given.

The crankshaft and the vibration damper may be balanced.

The standard crankshaft may be machined through the removal of material provided that the following minimum dimensions are respected:

- 13 kg for 4 cylinder engines
- 15 kg for 5 cylinder engines
- 17 kg for 6 cylinder engines

The diameter at the bearing positions (main and connecting-rod bearing) of the crankshaft may nevertheless be maximum 0.10 mm smaller than the standard or the homologated diameter.

Connecting rod:

The standard connecting rods may be used. With the exception of the bearing positions, the standard connecting rods may be machined through the removal of material but the minimum weight of 500 g must be respected.

The connecting rod weight is determined with bearing cap, screws and bearing.

The piston-pin bearing on the connecting rod is free. If the original engine was equipped with balancer shafts, these shafts and their drive system may be partly or totally removed.

Annotation: The following can be homologated:

a) Crankshafts made of steel with a minimum weight of 13 kg for 4-cylinder, 15 kg for 5-cylinder, 17 kg for 6-cylinder with standard diameter at the main bearing position. The standard stroke must be maintained for basic cars with more than 1940 cm³ and up to 2000 cm³.

b) Connecting rods made of steel with a minimum weight of 500 g for 4-cylinder-, 450 g for 5-cylinder- and 400 g for 6-cylinder-engines. The weight is determined with bearing cap, screws and bearing. For basic cars with more than 1940 cm³ and up to 2000 cm³, the standard length (measured between the axles) of the connecting rod must be maintained.

5.1 Cylinder Capacity

The maximum permitted cylinder capacity including wearing tolerance is 2000+2% cm³.

For basic cars with more than 1940 cm³ and up to 2000 cm³, the cylinder capacity may be increased up to the maximum of 2000+2% cm³ through cylinder bore exclusively.

For basic cars from 1700 cm³ and up to 1940 cm³ and over 2000 cm² up to 2300 cm³, the cylinder capacity may be increased to the maximum of 2000+2% cm³ through cylinder bore and stroke.

5.2 Pistons

The standard pistons may be used. The pistons, the piston rings, the piston pins and the fixation rings are free but each piston must have at least two piston rings (1 oil control ring, 1 compression ring) each one at least 1 mm thick respectively high.

The minimum weight of non-standard pistons (pistons including their rings, pins and fixation rings) is:

- 350 g for 4 cylinder engines
- 300 g for 5 cylinder engines
- 270 g for 6 cylinder engines.

The piston excess length respectively the undersize are free.

5.3 Fuel and air feed:

The original injection system must be retained. The electronic injection control unit is free.

The original intake system comprising a maximum of two (2) throttle valves is permitted.

As an alternative to the original throttle valve, another throttle valve with a maximum interior diameter of 64.25 mm (tolerance included), measured at the throttle valve housing at the level of the throttle shaft may be used. Should the standard throttle valve housing have an interior diameter of more than 64.25 mm, it must be replaced by another housing, which complies with the maximum diameter of 64.25 mm.

An adapter between the throttle valve housing and the intake manifold is permitted.

The chord distance (port centre) of the throttle shaft up to the sealing area at the inlet of the intake manifold may be maximum 100 mm.

Variable intake systems are prohibited. If the vehicle is originally equipped with such a system, it must be mechanically rendered inoperative or be removed. Eventual resulting orifices on the housing must be closed or the system must be rendered inoperative through clamps (addition of material).

The electrical idle control device respectively the auxiliary-air device may be removed but the resulting connecting orifices must be closed.

The accelerator cable may be doubled or replaced by another one. Solely a mechanical linkage between the throttle pedal and the throttle valve control is permitted. The throttle cable support to the throttle valve is free.

If an electric throttle is homologated on the basic car, it must be rendered inoperative.

Injectors may be replaced by other ones provided that their original number, the operating principle and the position must be retained.

The sensors and actuators of the electronic control unit are free.

The design and production of the sound wheel for the sensors are free, as is the modification of any existing wheel.

The minimum of one lambda probe including its active control unit is compulsory.

None of these authorised modifications may have an effect on the quantity of air reaching the engine.

All devices for the exhaust gas recirculation or similar systems (for example additional air pump, charcoal filter) must be removed and the resulting opening be closed.

Only a mixture of the prescribed fuel and the car ambient air may be added in the combustion chamber. Any action taken in or on the car and/or the use of any substances, which might for example reduce the temperature of the mixture, are prohibited.

5.3.1 Air filter

All the combustive air reaching the engine must pass through one air filter box. The air lines upstream of the air filter box are free and the air lines downstream of the air filter box towards the throttles are free.

The air filter box is free under the following conditions:

- One air filter box intake only, of a maximum diameter of 80 mm or a total maximum surface of 50 cm² is allowed. This surface must be measured in at least one plane between the air intake and the air filter box.
- There must be a filtering cartridge in the box. This cartridge is free as long as it filters the dust particles.
- All the air admitted to the engine must pass through this air filter.
- Only one air outlet is permitted.

The installation position of the air filter box in the engine compartment is free.

5.4 Ignition

The make and type of the spark plugs, rev limiter, high tension leads and ignition components are free. The ignition components in the electronic control unit are free.

5.5 Lubrication

The fitting of baffles in the standard oil sump is free. The volume of the oil sump may be increased by the maximum of 2 litres compared to the standard part; the standard oil sump may locally be modified, provided that this does not have any aerodynamic effect.

The standard oil suction tube may be replaced. The oil must only flow from the oil catch tank towards the engine block or the oil sump by the force of gravity alone.

The oil pump drive ratio is free. Modified respectively different drive parts may be used for this purpose. The oil pump itself and its position must remain unchanged.

An oil deflector may be fitted between the plane of the oil sump gasket and the engine block, provided that the distance separating the planes of their joints is not increased by more than 6 mm. Oil lines in the engine block and in the cylinder head may be closed completely or partly through the addition of material.

The replacement of the oil filter insert is free, provided that the new insert has the same characteristics as the original one. Screw-in oil filter inserts may be used instead of oil filter cartridges under the following conditions:

- Make and manufacturer of the oil filter free.
- Oil filter dimensions are free provided that the original dimensions of the filter fixation flange are retained.
- Neither the oil filter cartridge nor the filtering element of the oil filter may be removed.
- The oil cartridge or the oil filter insert must filter the oil, the passage flow may be greater than that of the original element.
- The entire oil must pass through the filter cartridge or the filter insert.

In order to allow the fitting of oil cooler and temperature sensor connections, the oil filter housing may be machined. An adapter between the oil filter and the oil filter housing or between the oil filter housing and the engine block is permitted. This adapter may also have oil cooling and temperature sensor connections.

Oil-to-water heat exchangers are free.

An air/oil separator may be mounted outside the engine (minimum capacity 0.5 litres) in accordance with drawing no. 4. The oil must flow from the oil catch tank towards the engine by the force of gravity alone. The vapours must be re-aspirated by the engine via the intake system.

In order to allow the fitting of lubrication temperature sensors (gearboxes, differential casing, etc.) holes or threaded orifices of a max. diameter of 14 mm may be made in the respective casings.

5.6 Cooling System

The thermostat is free as is the control system and the switch-on temperature. The radiator cap and its locking system are free. Provided that they are fitted in the original location without any modification to the bodywork, the radiator and its attachments are free, as are the screens and the air cooling lines upstream of the radiator. Series production air ducts are permitted behind the series production radiator solely. For the purpose of fixing the radiator the maximum of 4 bores, each one with a maximum diameter of 8.5 mm may be applied in the bodywork.

Another one may replace the original cooling water expansion chamber provided that the capacity of the new chamber does not exceed 2 litres and that it is placed in the engine compartment.

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

Induction-pipe preheating or preheating systems of the fuel and air feed may be rendered inoperative or removed. Radiator fans and its attachments are free.

The oil radiators and their connections are free, provided that they do not give rise to any modifications to the bodywork and that they are situated within the perimeter of the bodywork.

5.7 Heating System

Other ones may replace the original heating systems. The water feed of the internal heating device may be blocked off in order to prevent the spraying of water in

the event of an accident, if an electrical or similar demisting system is available.

The heating system may be removed partly or completely if a windscreen heated by means of electric resistance or an electric fan is fitted. The air duct parts are free. The air outlet openings must be standard and may not be modified.

The electrically heated windscreen must be made of laminated glass with a type test certificate and comply with the series production exterior design.

5.8 Cylinder Head

The cylinder head gasket is free.

Resurfacing the cylinder head sealing area may reduce the cylinder head height. The valve springs are free but must be made of steel.

The preload may be modified through the addition of washers. Valve-spring pockets are free.

The intake and outlet ports in the cylinder head, as well as the ports in the intake manifold, may be machined through removal of material, as long as the dimensions on the homologation form are respected.

The valve seats and the valve guides are free, but the respective angles of the valve axes must be retained. It is permitted to adjust the combustion chamber to the new cylinder bore through the local removal of material.

The exterior diameter of the valve seat inserts as well as the valve guides may be increased by the maximum of 0.5 mm with regard to the standard part. Adjustments on the cylinder head, necessary for the installation of these seat inserts and valve guides, are permitted.

5.8.1 Compression Ratio

The compression ratio may be modified but it must not exceed 11:1. If the car is homologated with a higher ratio, it must be amended so as not to exceed 11:1.

5.8.2 Camshaft

The driving pulleys on the camshaft are free provided that the original timing belt/s and/or chains for the camshaft drive are used.

The camshaft/s is/are free, but the number of camshafts must remain unchanged.

The number and the diameter of the bearings must remain unchanged.

Variable camshaft systems (variation in the timing of the camshafts) are prohibited. If the vehicle is homologated with such a system, it must be rendered inoperative through dismantling or blocking.

The valve lift, as defined in article 326.e of the homologation form, may be modified, but must not exceed 10mm (this is a maximum with no tolerance). If the car is homologated with greater lift, the camshaft must be modified so that the lift does not exceed 10 mm. If the original timing includes an automatic play recovery system, this may be neutralised mechanically.

Valve-clearance compensation shims between tappet and valve shank are free.

The original hydraulic valve tappet must be used. The hydraulic element may be replaced by a rigid element. The maximum of 4 oil balance holes, each one with a maximum diameter of 5 mm at the tappet housing, may be applied; the covering or the reduction of the oil bores for the oil supply is also permitted.

An oil delivery hole with a maximum diameter of 5 mm may be applied on the tappet guide housing (cylinder head) for each tappet. For the sole purpose of the valve adjustment, the tappet guide may be machined through the absolutely necessary removal of material.

5.9 Flywheel

The minimum weight of the flywheel is 5000 g. The flywheel ring gear must comply with the standard part but it may have additional fastenings. As to the rest, the flywheel is free.

5.10 Exhaust System

The exhaust system is free downstream of the cylinder head provided that the prescribed sound levels of 100 dB (A) at 4500 rpm measured in conformity with the FIA noise-measuring method are not exceeded.

Variable exhaust systems are prohibited. If the vehicle is originally equipped with such a system, it must be rendered inoperative. The exhaust manifold is part of the exhaust system.

The homologated catalytic converter is compulsory for all cars.

Catalytic converter placement must be marked on the side of cars with sign "CAT" and arrow.

The exit of the exhaust pipe must be situated at the rear of the car and be directed rearwards. The exhaust gases must exit at the rear of the car within a distance of 0 to minus 10 cm to the rear edge (drawing no. 1).

The section A-A (see drawing no. 7) of non standard exhaust silencers and exhaust tubes must always be round or oval. The exhaust silencer or the exhaust tube must have no aerodynamic effect.

5.11 Engine and Gearbox Mountings

Engine and gearbox mounting components may be replaced by others provided that they have the same standard connection dimensions as the original ones, but the position of the engine and of the gearbox must remain unchanged.

5.12 Materials on the Engine

The use of titanium, ceramics, magnesium or composite or reinforced fibre materials is prohibited, unless it corresponds exactly to the original material. The prohibition of material does not apply for the air inlet system in front of the throttle-valve housing and not for the air cooling lines in front of the water radiator.

6. Transmission

6.1 Gearbox

6.1.1 Authorised gearboxes

- Gearboxes homologated on the vehicle at 2500 units

A maximum of five (5) engageable forward gears and one (1) engageable reverse gear, and in working order, are authorised. If the series gearbox has more than five (5) forward gears, the gear wheels as from the sixth (6th) ratio must be rendered inoperative by the removal of the teeth of the gear wheels concerned.

The inside of the original housing is free but only steel or aluminium alloy parts may be used, except for the bearings and gearshift forks which may be made from bronze or from copperbased alloy as well.

- Sequentially controlled homologated gearbox

A maximum of six (6) engageable forward gears and one (1) engageable reverse gear, and in working order, are authorised.

6.1.2 Gear Changes

Gear changes may only be made mechanically. An operation by means of gear selector drum is prohibited. The position of the gear lever must be in the car's longitudinal axis beside the driver's seat, a tolerance of 100mm is accepted. Modifications to the bodywork for the passage of the gearshift control are authorised only if they are not in contradiction to other points of these regulations. In all other respects, the control devices for gear changes are free.

The position of the reverse gear only is free. The standard selection grid for the maximum permitted 5 forward gears must be the homologated one (position 602.f).

6.1.3 Ratios

The transmission system must always include a reverse gear, which can be engaged by the driver sitting in his seat with his safety harness fastened. A mechanical locking system avoiding the accidental engagement of the reverse gear is authorised.

- Original gearbox homologated on the vehicle at 2500 units :

(a) Homologated standard ratio: The number of teeth of gears is free. The original ratios as homologated must however be kept as far as the 2nd decimal point, the third decimal point rounded down from 1 to 4 and rounded up from 5 to 9.

Example: The number of teeth in third gear of the standard gearbox is 34:26. The resulting rounded ratio is 1.31. The calculated ratio of the third gear may consequently lie between 1.305 and 1.314.

(b) Competition gearbox: In addition to the homologated standard ratio one additional ratio (5 forward gears plus reverse gear) may be

homologated by the DMSB or by FIA NEZ ASN's. In this case, the homologated number of teeth must be used without any tolerance.

- Sequentially controlled homologated gearbox :

Only the ratios homologated by FIA NEZ ASN's are authorised.

6.1.4 Gearbox Housing and Oil Radiator

It is permitted to reinforce the original gearbox housing locally through the addition of material bolted or welded to the inside and/or the outside. It is also permitted to remove material, for example the bearing seat, but at the inside solely. It must at all times be possible to clearly recognize the housing as the homologated standard housing.

The original attachment points to the engine must be retained.

A gearbox oil radiator including its system for circulating the oil and the necessary pipes are permitted. For this purpose, the maximum of two bores for the connections may be applied in the standard gearbox housing. The sole purpose of the orifices must be to connect the outflow and inflow lines of the oil circuit.

6.2 Clutch

Carbon discs are authorised.

The clutch must have a maximum of 3 discs.

The pressure assembly is free, provided that the following points are not modified:

- original type;
- operating principle;
- original spring type;

The external diameter of the friction disc of the clutch mechanism must not be smaller than 183 mm and not greater than the original one.

The number of the fixation bolts and their position on the flywheel are free.

The control system of the clutch is free but it must remain of the same type as the original.

An automatic tightening device on the clutch control may be replaced with a mechanical device and vice versa.

6.3 Differential

Only the final drive ratios homologated by the FIA in Group N (not for example Super Production) or by the DMSB or by the FIA NEZ ASN's are authorised.

Annotation: For each gearbox (Art. 6.1.3.a and 6.1.3.b, former Art. 2.7.1.3.a and 2.7.3.1.b), only one standard and the maximum of 4 additional final-drive ratios may be homologated by the DMSB or by the FIA NEZ ASN's upon application submitted by the manufacturer/general importer.

The manufacturer/general importer may homologate, one time per year, one additional ratio for the standard gearbox (Art. 6.1.3.a, former Art. 2.7.1.3.a) and one for the competition gearbox (Art. 6.1.3.b, former Art. 2.7.1.3.b).

The design of the gears (for example material or type of teeth) is free, but not the number of teeth.

A mechanical limited slip differential inside the differential housing is free. Electrically or hydraulically (for example viscous lock) controlled limited slip differentials are consequently prohibited. All electrical connections to the differential housing are prohibited, with the exception of those measuring the differential oil temperature. An original electronic anti-wheel spin control system must be rendered inoperative by the removal of its control unit.

It is permitted to reinforce the original housing locally through the addition of material bolted or welded to the inside and/or the outside. It is also permitted to remove material, but at the inside solely. It must at all times be possible to clearly recognize the housing as the homologated standard housing.

A differential oil radiator including its system for circulating the oil and the necessary pipes is permitted. For this purpose, bores for the connections may be applied in the standard housing. The sole purpose of the orifices must be to connect the outflow and inflow lines of the oil circuit.

6.4 Drive Shafts

The drive shafts including their joints and elastic connection points (Hardy disc) are free, but the non standard shafts must be made of steel.

7. Suspension

The standard bearing elements of the suspension may be replaced by other elements (for example silent sleeves of harder rubber, aluminium sleeves, "Uniball" joints).

The position of the new suspension mounting and rotation points may be situated at a maximum of 20 mm in relation to the original mounting and rotation points. With the exception of fitting circular grooves, thread and a torsion locking device by means of bolts, nuts, grooved pins or by the maximum of 4 spot welds for each bearing element, the standard suspension parts (homologation form - front axle: see photo T - rear axle: see photo U) may not be modified in this connection. This means that after removing the new joint of the suspension part, the original suspension joint (for example the standard silent sleeves) can be fitted to the corresponding suspension part.

7.1 Front Axles

The supporting joints (ball-and-socket joints situated on the wishbone or on the lower triangle on the wheel side) may be replaced by other ones. The position of the new rotational point may be moved by a maximum of 20 mm, following all the axes in relation to the initial rotational point.

Should the standard wishbone have a conical attachment, the bore at the steering swivel (swivelling bearing, wheel-bearing housing, wheel carrier) may be rebored cylindrically up to the big diameter.

The upper joints of McPherson suspension parts of the front running gear are free provided that the original mounting points, on the bodyside, are retained and that the adjustment of the standard mounting point in the x-, y- and z-axis involves a

maximum displacement of 20 mm. This means that the upper joints, adjustable or non-adjustable, may assume an eccentric position of the upper mounting point in the x-, y- and z-axis of a maximum of 20 mm in relation to the original articulation point. Modifications to the bodyshell are not authorised, but the maximum of four holes of a maximum diameter of 10.5 mm may be bored in the upper bell housing of the shock absorber for the mounting of the upper joint support if, in the original bell housing, there are no or not as many fixation holes. Furthermore, the diameter of the central original spring bell housing opening may be increased to the maximum of 120 mm. If the suspension strut is bolted on to the wheel uprights, the wheel camber of the front running gear may also be adjusted by this bolted connection respectively the adapters.

Wheel suspension anchorage points on the front wheel suspension subframe (chassis underframe, axle support) may be modified in the form of elongated holes so that, in relation to the original bore, a possibility for adjustment by the maximum of 10 mm is given.

The bore diameter for the suspension of the wheel bearing in the wheel bearing housing may be increased by the maximum of 3 mm.

7.2 General Remarks to the Rear Axles

For all permitted modifications to the rear wheel suspension, any modifications to the bodyshell are prohibited unless explicitly allowed.

7.2.1 Multi-Link Rear Axles

Elongated holes up to the maximum distance of 10 mm from the original bore may be made at the links and at the wheel suspension subframe (chassis underframe, axle support), if existing.

7.2.2 Single-Link Rear Axles / Twist-Beam Rear Axles

The original links may be modified in order to allow the adjustment of the camber and the toe. The original arrangement of the spring and of the shock absorber, as well as the original distance between the steering pivot and the wheel hub centre, may not be modified.

7.3 Wheel Geometry

The wheel geometry (track, camber, etc.) is free. Spacers may be used between the wheel and the wheel attachment.

The centring of the wheel hub may be reduced axially by maximum 5 mm for the use of spacers.

7.4 Stabiliser

The original stabilisers may be removed or replaced by stabilisers of free design, but they must remain in their original position (in front of or behind the front axle, in front of or behind the rear axle). If the original axle is not fitted with a stabiliser, it may be added.

The stabilisers must be made from steel and they must not be adjustable from the cockpit. For the purpose of fitting the stabilisers, material may locally be removed or added to the wheel suspension parts, the axle support and the bodyshell.

7.5 Reinforcement

Strengthening of the suspension parts and the suspension mounting points through the addition of material is allowed.

7.6 Wheel Bearing

The original wheel bearings may be replaced by bearings of the same type with the same inside diameter as the original ones. In all other respects, the wheel bearings are free.

7.7 Suspension Travel Limiter

A strap or cable for limiting the suspension travel may be affixed to each suspension. To this end, holes of a maximum diameter of 8.5 mm may be bored on the bodyshell side and on the suspension side. The standard suspension travel limiters may be completely removed. The resulting holes may be closed.

7.8 Suspension Springs

Parts to prevent the springs from moving in relation to their mounting points are authorised.

7.8.1 Coil Springs

Coil springs are free, provided that they fulfil the following conditions. Their number is free provided that they are mounted in line with one another and that their type corresponds to the original type of spring. The shape, dimensions and material of the spring seats are free. The spring seats may be made adjustable if the adjustable part forms part of the seats and is distinct from the other original parts of the suspension and the chassis (it may be removed). Modifications to the body shell are not authorised, but three (3) holes, each one of a maximum diameter of 8.5 mm, may be bored in the body shell for the mounting of the upper joint support, if there are no or fewer than three (3) fixation holes.

7.8.2 Leaf Springs

The length, width, thickness and vertical curve of leaf springs are free.

7.8.3 Torsion Bars

The original torsion bars may be replaced with other torsion bars made from steel. The standard inner diameter of the bars, if existing, must be retained, a tolerance of ± 1 mm is permitted. The exterior diameter may be exceeded, but if it is smaller, it must be maximum 20% smaller compared to the homologated diameter (position 706.b in the homologation form).

7.9 Shock Absorbers

The shock absorbers including their cylindrical shock-absorber housing are free, provided that their number, their type (telescopic, arm, etc.), their working principle (hydraulic, friction, etc.) remain unchanged.

The upper attachment parts and the upper attachment points of the shock absorbers are free but the new attachment points may be moved by maximum 20 mm from the original attachment points in x-, y- and z-axis. Modifications on the bodywork for this purpose are prohibited.

Any device allowing for the adjustment of the shock absorbers whilst the car is moving is prohibited.

It is permitted to replace the silent blocks of the shock absorbers by an „Unibal“ joint or by another joint, for example of harder rubber or an aluminium sleeve.

Gas-filled dampers are considered as hydraulic dampers. The damper tanks may be attached on to the bodyshell of the car by any suitable means, provided that this does not result in modifications which are not authorised by these regulations. Holes in the bodywork with a diameter of maximum 60 mm for the passage of the damper tanks of the shock absorbers are permitted but the remaining holes must be closed after the passage.

If, in order to change the damping element of a McPherson suspension, or a suspension operating in an identical manner, it is necessary to replace the suspension strut, the replacement parts must be mechanically equivalent to the original ones and have the same mounting points. In the case of a McPherson suspension, the shape, dimension and material of the spring seats are free and it may be adjustable.

In the case of an oil-pneumatic suspension, the spheres may be changed as regards their dimension, shape and material, but not their number. A tap, adjustable from the outside of the car, may be fitted for the spheres.

For axles with torsion bars only, it is permitted to use shock-absorber-coil spring units (see principle in drawing no. 8). For the purpose of mounting the coil spring unit, an enlargement of the axle support up to the maximum of 40 mm is permitted, provided that the original rotation and mounting points remain unchanged.

8. Auxiliary Frame/Sub-frame

The standard bearing elements of chassis underframes respectively of wheel suspension subframes may be replaced by other bearing elements (for example silent sleeves of harder rubber, metal sleeves, plastic sleeves), provided that the standard position in no-load condition of the chassis underframe/auxiliary frame in relation to the bodywork remains unchanged in all three dimensions compared to a new car.

This chassis underframe/auxiliary frame as well as the bodywork and the original mounting points must not be modified in any way through this modification. The fixation of annular grooves at the chassis underframe/auxiliary frame in order to attach the new bearing elements is nevertheless permitted. This

means: After removal of the bearing elements, it must at all times be possible to fix the original bearing elements to the chassis underframe/auxiliary frame and to attach the chassis underframe/auxiliary frame then to the bodywork at its original position.

The wheel suspension mounting points situated on the front wheel suspension subframe (underframe, axle support) may be modified in the form of elongated holes so that an adjustment possibility of maximum 10 mm in relation to the original bore is possible.

9. Reinforcement

Reinforcement bars may be fitted on the suspension mounting points to the bodyshell or chassis of the same axle, on each side of the car's longitudinal axis, provided that they can be removed and that they are bolted. The distance between a suspension attachment point and an anchorage point of the bar may not be more than 100 mm, unless the bar is a transversal strut homologated with the rollbar, or unless it is an upper bar attached to a McPherson suspension or similar. In order to attach transversal struts between upper identical axle pivot points, the maximum of three bores on each side with a maximum diameter of 8.5 mm each one may additionally be applied on the bodyshell.

In the latter case, the distance between an anchorage point of the bar and the upper articulation point is 150 mm. (Drawing 2)

The mounting rings for the suspension dome (see arrow in Drawing 2) may be welded to the bodywork. Apart from these points, this bar must not be mounted on the bodyshell or on mechanical parts.

10. Wheels and Tyres

10.1 Complete wheel

The maximum dimensions of the 4 rims+flanges are 9" x 17" and their weight must not be less than 9 kg each. The complete wheel inflated to a pressure of 2 bars must fit into a box with a diameter of 610 mm and a thickness of 250 mm.

Or

The maximum dimensions of the 4 rims+flanges are 7" x 15" and their weight must not be less than 5 kg each. The complete wheel inflated to a pressure of 2 bars must fit into a box with a diameter of 580 mm and a thickness of 223 mm.

The diameters measured at the level of the inner and outer rim edges of a wheel must be identical, with a tolerance of +/- 1.5 mm.

In any case, the dimensions of all 4 wheels must be identical.

Metal inserts are allowed for the passage of the drive to the wheel.

The upper part of the complete wheel (flange+rim+tyre), located vertically over the wheel hub centre, must be covered by the bodywork when measured vertically.

Foam or any other system enabling the car to be driven without pressure in the tyres is prohibited.

All pressure regulation systems are prohibited.

Wheel fixations by bolts may be freely changed to fixations by studs respectively knurled-head screws and nuts, provided that the number of fixation points remains unchanged. Adaptation measures on the wheel hub for this purpose are permitted. The fitting of air extractors on the wheels is prohibited.

10.2 Spare wheel

It is forbidden to carry a spare wheel on board.

11. Ground Clearance

No part of the car or its suspended parts must be less than 80 mm from the ground.

This test shall be carried out on a flat surface.

This measurement may be taken at any time during the event.

No system for changing ground clearance when the car is in motion is allowed.

11.1 Front bumper

The lower portion of this part must be formed from a maximum of two planes (one horizontal, for which a tolerance of +/- 1° will be applied, and one inclined) and must form a maximum angle of 8° to the horizontal at all times when the car is not in motion.

12. Brakes

The front brakes are free, provided that they are mounted on the fixation points of the original brakes and that they comply with the following prescriptions:

- the master cylinder(s) is(are) free;
- the maximum number of pistons per wheel is four (4);
- the maximum diameter of the brake disc is 332 mm;
- the brake discs must be made from ferrous metallic material;
- the rear brake callipers may be replaced but must not have more than two (2) pistons per wheel;
- all parts of the brake callipers must be made from aluminium materials with a modulus of elasticity no greater than 75 GPa;
- the internal parts of the brake callipers may be made from steel or titanium.

The following prescriptions apply to the complete braking system:

- the brake lines and their fitting method are free;
- the original handbrake may be removed or replaced by a hydraulic valve operated manually and without any intermediate system by the driver;
- if, in its original version, a car is equipped with servo brakes, this device may be disconnected or removed, but the master cylinder and/or the pedal box must remain in their original compartment.

Modifications to the bodyshell are authorised provided they have no other function than to allow the fixing of the master cylinder and/or the pedal box.

The balance of the braking forces between the front and rear axles may only be adjusted by the driver through:

- direct intervention on the position of the centre of the joint, on the linkage lever of the hydraulic pumps of the front and rear circuits;
- direct intervention on a proportional valve, in which the intake pressure of the rear circuit is adjusted through a pre-loaded spring, variable according to the position of the manual linkage system (see the drawing of the principle 263-9).

Only one of these two systems is permitted.

All other systems are prohibited, including inertial mechanical systems.

If, in its original version, a car is equipped with an anti-lock braking system, the control unit must be removed.

Moreover, all the parts of the anti-lock system must be removed, provided that the prescriptions of Article 253.4 of Appendix J are respected.

The location of the brake lines is free provided that the prescriptions of Article 253.3 of Appendix J are respected.

The brake lines may be replaced by aircraft-quality lines. The connection of the dual braking circuit is free.

For each brake, one cooling line with a maximum internal diameter of 10 cm is allowed, or two cooling lines with a maximum diameter of 7 cm. This diameter must be maintained over at least 2/3 of the distance between its entrance and exit.

Only the following mounting points are authorised for the fixation of the lines to bring the cooling air to the brakes:

- original apertures in the bodywork, e.g. for fog lamps, may be used to bring the cooling air to the brakes;
- the connection of the air lines to the original apertures in the bodywork is free provided that these apertures remain unchanged;
- if the car does not have any original apertures, two (2) circular apertures of a maximum diameter of 10 cm, or an equivalent elliptical section, may be made in the front bumper;
- the disc protection plates may be removed or their shape

13. Steering

The steering comprises the steering wheel up to the tie-rod end including its fixations.

The servo pump may be replaced by an electrically driven pump. The position of the pump including its liquid container is free, provided that it is not located in the cockpit. The attachment bores necessary for the installation of this electrical pump may be applied in the bodywork.

If the pump is situated in the luggage compartment, it must be separated by a bulkhead/box from the cockpit.

The steering coolers including their connection lines are free, but if such parts are installed, they must be situated inside the engine compartment.

The position of the steering gear housing must be retained, but its attachments/supports may be replaced by other, reinforced ones.

The complete tie rods and tie-rod ends, threads included, must comply with the original ones or may

be replaced by parts homologated for the corresponding car.

The steering lock on the side of the steering is free.

The steering wheel is free, but it must have a closed steering-wheel rim. It is permitted to place adapters between the steering wheel and the steering column.

These adapters may be connected or welded to the steering wheel and the steering column by means of separable fixations. The anti-theft steering-lock device must be made inoperable (Exception: Rallies). The vertical installation angle of the steering column may be modified in the area of the dashboard through the fixation of adapters.

14. Bodywork

14.1. Exterior Bodywork

It should be possible to open the doors normally from the outside.

Only the aerodynamic elements homologated on the vehicle are allowed.

The bumper homologated on the basic vehicle may be used.

Wheel embellishers must be removed

It is permitted to fold back the steel edges or reduce the plastic edges of the wings if they protrude inside the wheel housing.

The plastic sound-damping materials may be removed from the interior of the wheel arches. These elements made from synthetic materials may be changed for aluminium, plastic or composite material elements of the same shape.

The soundproofing material or the material for the prevention of corrosion may be removed.

Inside the engine compartment respectively inside the external bodywork contour, a metal grille may be installed in front of the oil cooler and in front of the radiator. These grilles may solely serve as a protection of the coolers from gravel impact and they must not have any aerodynamic effect.

The removal of external decorative strips, following the contour of the car and less than 55mm wide, is authorised. Decorative strips/protective mouldings more than 55 mm wide may only be removed in near the areas reserved for the competition numbers.

The bumper mountings are free as long as the bodywork and the shape and position of the bumpers remain unchanged.

The original apertures in the bodywork may be used for the passage of the cooling air. The standard fog lamp covers may be modified through the removal of material or be completely removed for the same purpose. The connection of the air lines to the original apertures in the bodywork is free as long as these apertures remain unchanged.

The fitting of underbody protection is prohibited.

Pneumatic jacks are authorised and may be attached to the safety cage. Minimum openings allowing the use of air jacks are authorised. Any kind of pressure tanks respectively pressure accumulators are prohibited in the car. The pipes of the pneumatic jacks as well as the air chambers of the lifting legs are not considered to be pressure accumulators, provided that the active pressure air is solely used for lifting the car.

The connector for the feeding of compressed air must be situated rearward of the rear axle centreline and must not protrude beyond the surface of the bodywork. The bodywork may be modified over a maximum area of 100 cm² as to create a housing for this connector.

The windscreen wiper blades may be replaced by others. A rear-window wiper, if fitted, may be completely removed, including its drive units as engine etc. The washing system for the rear window (water tank, spraying nozzles, etc.), if fitted, may be removed. The resulting apertures in the bodywork may be closed. The wiper system for the windscreen is free.

The cars must have external rear-view mirrors on the left hand side and on the right hand side. Their external shape must be that of the homologated model, but the material may be modified. However, a cut-out (maximum surface 25 cm²) is authorised for cockpit ventilation.

Strengthening of the suspended part is allowed provided that the material used follows the original shape and is in contact with it.

The above strengthening of the "suspended" parts authorises for example the reinforcement of the complete bodywork by welding or by the addition of material. A second suspension bell housing may for example be placed above and soldered to the original. If material is added, it must principally follow the original shape and be in contact with it. The term "suspended parts" means all the parts dampened by the wheel suspension, in other words all parts situated within the rotational point/s and axes of the suspension parts.

The windscreen may be replaced by an electrically heated laminated glass windscreen provided that it has the same shape (see also Article 5.4).

The windscreen may be in polycarbonate on condition that its thickness is not less than 6 mm and that its external surface is treated to resist wear.

The standard side windows may be covered with a transparent safety film from the interior in order to avoid the shattering and spraying of glass (specifications: SAFETY FILM ~~~~ D5170, D 5178, D5190, D5195, D5233 or D5197)

Unused supports for accessories or trims (e.g. spare wheel, heatshield...) situated on the chassis / bodywork can be removed.

14.1.1 Front aerodynamic device / front bumper

The material and the shape are of free design, limited by the vertical transversal plane passing through a point situated 300 mm ahead of the axis of the front wheels and the horizontal plane below 230 mm from the ground. See drawing n°10.

Outside this area, the sealing of apertures for fog lights and temperature probes is authorized while respecting the shapes of the original bumper.

On level ground, take a height measurement of between 80 and 230 mm. Above this limit, the shape of the bumper must not be modified (except for the lateral parts that may be modified according to the definition of the wing given in see Article 251 of Appendix J). Below, the shape is free, but this part of

the bumper must not protrude when seen in vertical projection.

Limited by the homologated overall length of the family.

Maximum width according to art. 204a of the homologation form (family - 25,000 units), increased by 3%.

Limited to the front by the vertical projection of the bumper of the original model.

The lower portion of this part must be formed from a maximum of two planes (one horizontal and one inclined) and must form a maximum angle of 8° to the horizontal at all times.

This lower portion is limited to a maximum of 250 mm from the furthest forward point of the bumper.

The material of the bumper must remain unchanged (plastic remaining plastic, including composite materials).

The lower rear point of the free part must be situated between 390 mm and 325 mm ahead of the front wheel axis.

The angles of the free part must have a maximum radius of 40 mm.

The maximum distance between the free part and the maximum width of the car at the level of the front wheel axis must be no greater than 50 mm.

The lower part of the front bumper may be detachable. No element of this detachable part may protrude beyond the upper part, when seen in vertical projection.

The surface of the lateral part must always be uniform and must not have any air inlet or outlet.

14.1.2 Rear aerodynamic device

The car's original device must be removed.

One single device must be present. This device must respect the dimensions defined by drawing n° 11 and Appendix 2.

For two-volume cars, if the device is mounted on the top of the tailgate, the compliance with the 75 mm dimension is not mandatory.

This device must be rigid and offer no possibility for the penetration of air (groove, hole, opening, etc.).

The wing must be made in one single piece (a single profile and no adjustment flap in conformity with Appendix 2), and must be straight in all its dimensions.

The device must be totally contained within the frontal projection of the car without its wing mirrors.

The complete assembled device must be contained, together with its supports, within a box having a width of 150 mm and a height of 200 mm.

The maximum chord of this wing is set at 149 mm +/- 1 mm.

The distance "a" of at least 100 mm will be checked at 0° of incidence.

The maximum width of the single Be 183-176 type carrier profile (see Appendix 2) must not exceed 1200 mm and this profile may be adjustable.

A manufacturing tolerance of +/- 0.5 mm will be applied for measuring the profile.

This tolerance must be random between two consecutive measurements.

The trailing edge may have a thickness of 2 mm. Attachment onto the glass is prohibited, only support is authorized.

The side plates may extend beyond 1200 mm, when seen from the front, but must not generate any aerodynamic force and must have a minimum thickness of 10 mm and a maximum width of 20 mm. The wing should be checked with the car horizontal. The wing supports must be defined as in drawing n°11.

14.1.3 Widening of the wings/bumpers

Increase in the width by a maximum of 3% in relation to the maximum width of the family of the car (25,000 units - art. 204a and 204b of the homologation form or 203 if this measurement is taken on the wings).

This width must in all cases be limited to 1885 mm. For the front wing, this increase may be obtained by means of an extension or a new part.

The shape of this wing must respect the shape of the series wing as far as possible.

The series material may be replaced with plastic.

The lateral part of the front and rear bumpers must follow the volume of the wing.

The making of new inner wheel arches is not allowed.

The housings, side members, subframes and mounting points must remain in conformity with Appendix J, Group A.

These wings and wheel arches must not give rise to any additional aerodynamic effect.

The wings homologated through the kit must be continuous, with no air intakes or outlets.

Only the lateral parts of the front bumpers, which must follow the volume of the wing, may be modified through the kit.

These lateral parts must not give rise to any aerodynamic effect.

For the rear wings, it is possible to cut the original wing locally to allow for the passage of the wheel (a plan of the cut-out must be supplied).

A new outside wing made from composite material may be stuck onto the original wing.

A plan of the modification of the rear wing shall be supplied at the time of homologation.

A new rear bumper may be homologated, if only its lateral parts are modified, the material remaining as original.

It will be possible to enlarge the original cut-out in the rear bumper for the exhaust or to create a cut-out.

14.1.4 Modifications to rear doors

Localized modifications of the rear doors will be authorized to allow the passage of the wheel. The door mouldings may be removed.

These modifications must not extend more than 700 mm ahead of the front wheel centerline.

14.2 Cockpit

The passenger seat and the rear seat(s) must be removed.

It is permitted to replace the original passenger seat consoles in compliance with drawing no. 6. The tube material to be used must be steel with a dimension of

minimum \varnothing of 38 mm x 2.5 mm or \varnothing of 40 mm x 2 mm. The original seat attachment may be removed for this purpose.

The driver's seat may be moved backwards, but not beyond the vertical plane defined by the front edge of the original rear seat. The limit relating to the driver's seat is formed by the height of the seatback without the headrest, and, if the headrest is incorporated into the seat, by the rearmost point of the driver's shoulders.

All insulating material, including roof lining, sound-proofing material, corrosion preventive, standard safety belts, rear-window shelf and floor carpets may be removed.

Door sound-proofing material and the rear side trims must not be removed. The door sound-proofing material and the rear side trims may be the original ones or be made from metal sheeting at least 0.5 mm thick, from carbon fibre at least 1 mm thick or from another solid and non-combustible material at least 2 mm thick. The panels must totally and effectively cover all the movable parts as well as the door, its handles, locks and window winding mechanisms.

It is recommended to fill the inside of the front doors and eventually of the rear doors on the driver's side with energy-absorbing material. It is furthermore recommended to install non-combustible panels from energy-absorbing material on the driver's side between the rollcage and the driver's door and/or between the rollcage and the seat. No other parts may be placed between these panels and the seat.

It is permitted to replace electric winders with manual ones which are infinitely adjustable. The original window opening area must be retained. The rear window winders are free. It is permitted to replace a rear electric window winder in a two-door car with a mechanical one, or to replace a swivelling rear window with a fixed one, if it is available as an original part for this type of car.

Unused attachments on the bodywork (exterior and interior) which do not have an influence on the degree of rigidity of the bodywork may also be partly removed as shown in drawing no. 9. Only those attachments which are exclusively bolted may be removed completely. The attachment for the roof lining may also be removed.

Two (2) holes may be bored in the bulkhead between the engine compartment and the cockpit and two (2) in the bulkhead between the luggage compartment and the cockpit, for the passage of lines. Each hole may have the maximum diameter of 50 mm. After the passage of the lines, the eventually remaining rest of the holes must be closed.

Air bag systems must be rendered inoperative or be removed.

All additional accessories which have no influence on the car's behaviour are allowed, for example equipment which improves the aesthetics or comfort of the car interior (lighting, heating, radio, etc.). In no case may these accessories increase the engine power or influence the steering, transmission, brakes, or road holding.

The original air-conditioning system may be removed. Left-hand drive versions and right-hand drive versions are authorised provided that the original car and the modified car are mechanically equivalent and that the

function of the parts remains that defined by the manufacturer.

All the driving controls parts must retain the same function as those supplied by the manufacturer. They may be adapted in order to facilitate their use and accessibility, for example the fitting of an extension to the handbrake lever. The modifications to the bodywork necessary for this purpose are permitted (for example screw bores).

The prescriptions of Article 12.b must be respected in relation to the pedals.

The following is in particular allowed:

- The horn is free.
- The handbrake lever mechanism is free
- Dashboard: The trimmings situated below the dashboard and which are not a part of it may be removed. In order to accommodate the pedal box, trimmings on the dashboard situated below the line A may in addition be reduced by the maximum of 100 mm. The instruments are free. However, the installation must not present any risk. It is permitted to remove the part of the centre console which contains neither the heating nor the instruments (drawing 3).
- The part of the centre console situated below the broken line (see drawing 3) is free.

14.3 Luggage and Engine Compartment

The carpets and the sound-proofing materials in the luggage compartment may be removed.

The sound-proofing materials of the engine cover and of the engine compartment rear bulk may be removed. An original engine encapsulation may be removed.

16. Electrical System

16.1 Cables

The electric cable assembly of the engine is free. The rest of the cabling is free, provided that the following prescriptions are respected.

16.2 Battery

The make and the capacity of the battery is free (but not the tension in volt). It must at all times be possible to start the engine with the energy of the battery transported on board the vehicle.

It must be securely affixed and covered in such a way as to avoid any short circuiting or leaks. The number of batteries laid down by the manufacturer must be retained.

Should the battery be moved from its original position, it must be attached to the body using a metal seat and two metal clamps with an insulating covering, fixed by bolts and nuts.

For attaching these clamps, bolts with a diameter of at least 10 mm must be used, and between each bolt and the metal of the bodywork, a counter plate at least 3 mm thick and with a surface of at least 20 cm² must be provided.

Inside the cockpit, only a dry battery may be installed. If a wet battery is used, it must be covered by a leak proof plastic box, attached independently of the battery. Its location outside the cockpit is free. In this case, the protection box must include an air intake with its exit to the outside of the cockpit. (see drawing 5).

16.3 Generator

The generator may be replaced by another one. The attachments parts are free, but the original flange joints to the engine or other original bores or attachments, if existing, must be used.

The engine must always be started with a source of energy transported on board the vehicle.

16.4 Lighting

The original lighting system must be retained, with the exception of the fog lamps, and must be operational at all times during an event. However, a third high-level brake light eventually situated on the rear window may be removed. The headlights must have a road homologation for a country (ECE, DOT, etc.).

The fog lamps may be removed. The apertures may be used in accordance with articles 12 and 14.1.

A reversing light may be fitted provided that it will only switch on when the reverse gear is engaged and that the laws in force in this respect are observed.

16.5 Fuses

The fuses in the electrical circuit and the fuse carriers are free.

16.6 Switches on and around the Dashboard

Standard switches may be replaced by switches of different design and may be fitted at different locations on the dashboard or on the centre console. Any openings that result from this must be covered. Supplementary panels for instruments and/or switches may be in composite material.

16.7 Telemetry

Any kind of data transmission from the moving car is prohibited with the exception of radio communication. Pulse generators giving information about the lap times are allowed provided that the generators are separate components without any connection to the engine management. A system to store data on board the car is permitted.

17. Fuel System

The only permitted fuel is unleaded petrol. Article 252.9 of the Appendix J to the ISC must be respected.

17.1 Fuel tanks

The original fuel tank may be replaced by an FT3, FT3.5 or FT5 safety fuel tank according to FIA specification. They must be placed in the luggage

compartment or in their original location. It is recommended that the FT3, FT3.5 or FT5 tank be filled with MIL-B-83054 safety foam. Car must have original certificate for safety tank; using of tanks is allowed 7 year at production date (without checking by manufacturer).

The car may only be refuelled from the outside or from the luggage compartment. The location of the filler holes on the bodywork is free apart from in the window panels and they must not protrude beyond the perimeter of the bodywork.

If the original filler hole is not used, the original location of the filler hole on the bodywork may be closed.

In the case of the original fuel tank being situated below the floor of the car, it is permitted to make a hole with a maximum diameter of 100 mm in the bottom of the luggage compartment to allow the refuelling pipes to reach the tank. A local underbody protection is permitted for the purpose of protecting a fuel tank and fuel pumps situated below the floor of the car. No additional aerodynamic advantage may result from this underbody protection.

The bodywork may locally be modified in order to install the refuelling tube and the ventilation tube with a maximum exterior diameter of 80 mm each one. A fluid/flame-proof bulkhead to the cockpit must be provided.

An original carbon filter in the tank air vent, as well as its control unit, may be rendered inoperative or be removed.

A collector tank with a capacity of 1 litre is permitted. The total capacity of all the fuel tanks may not exceed 100 litres.

The connections between the filler holes and the tank must be shielded by a fire-proof and liquid-proof protective device. The same is applicable for the fuel tank ventilation which is compulsory. If the fuel tank is located in the luggage compartment of a hatchback car, the tank must at least be shielded by a fire-proof and liquid-proof protective device; in any case, there must be a fire-proof and liquid-proof bulkhead between the cockpit and the luggage compartment.

17.2 Fuel lines

The fuel lines must be of aviation quality. The installation of the fuel lines is free provided that the prescriptions of article 253.3, appendix J to the ISC, are respected.

17.3 Fuel pumps

The fuel pumps are free. The fuel pumps must not be located in the cockpit and they must be separated from the cockpit by a fire-proof and liquid-proof protective device.

18. Safety Prescriptions

18.1 Additional fasteners

Two additional safety fasteners must be fitted for each of the bonnet and of the boot lids. The original locking mechanism must be rendered inoperative or removed.

Original gas-filled telescopic struts which serve as fasteners may be removed.

18.2 Driver's seat

The original driver's seat must be replaced by an FIA-homologated competition seat with five (5) passages for the safety harness straps. The seat must be mounted by means of at least four (4) M8 bolts of at least 10.9 quality with sufficiently large counterplates. The original attachment points may be used.

Seat attachments may be modified in compliance with the prescriptions of Article 253.16 of the Appendix J to the ISC.

A seat attachment complying with drawing 6 is authorised and recommended. The tube material to be used must be steel with a dimension of minimum \varnothing of 38 mm x 2.5 mm or \varnothing of 40 mm x 2 mm or comply with the homologation if applicable. The original seat attachment may be removed for this purpose.

18.3 Safety belts

A safety harness equipped with a turn buckle release system and having a minimum of five (5) anchorage points, homologated by the FIA in accordance with Article 253.6 of Appendix J, is compulsory.

18.4 Rollover structures

A rollcage with lateral protection in accordance with article 253.8 of the Appendix J (ISC) are compulsory. The rollbar tubes situated near the driver must be equipped with a protective sleeve. This non-flammable protective sleeve must be provided for within a perimeter of 50 cm, around the head of the driver seated in the driver's seat with his harness fastened.

18.5 Extinguishers/Extinguishing systems

Extinguishers, homologated in accordance with article 253.7 of the Appendix J are compulsory.

18.6 Protective Nets

Protective nets in accordance with article 253.11 of the Appendix J are compulsory.

18.7 Towing Device

All car must be equipped with a rear and front towing device / towing-eye. The original device may be replaced by another, reinforced one. They must be painted in colour.

18.8 Fire Bulkhead

A liquid-proof and flame-proof bulkhead must be placed between the engine compartment and the cockpit as well as between the cockpit and the fuel tank (including the filler tube and neck).

18.9 General Circuit Breaker

A general circuit breaker is compulsory for all cars. It must cut all electrical circuits, battery, alternator or dynamo, lights, horns, ignition, electrical controls, etc. It must be accessible from inside and outside the car. As for the outside, the triggering system of the circuit breaker must be situated at the lower part of the windscreen mounting of the left side of the car. It must be marked by a red spark in a white-edged blue triangle with a base of at least 12 cm.

19. Dry Ice

Dry ice may not be carried on board the car nor be used at any time during the event, neither inside nor outside the car.

20. Definitions / Clarifications

20.1 Free

A free part may be manufactured and modified in all respects. It may also be replaced by another part. Total freedom is granted as to the material, the shape and the number. This means that the part can also be completely eliminated.

20.2 Family of Material

This is for example steel, aluminium or plastics. The exact alloy components are not of importance in this context.

20.3 Cockpit

The volume which encloses the driver and eventual passengers. The cockpit is the standard volume foreseen by the manufacturer to accommodate the driver and the passengers up to the standard partition panel and rear-window shelf with the rear seats in normal position. The so-called radiator tank area is not regarded to be part of the cockpit but of the engine compartment.

20.4 Luggage Compartment

In the case of two, originally separated parts welded together, the resulting parts is considered to be one component.

This is not applicable for parts connected by screwing, riveting or by any other means. In these cases, as for the application of the present regulations, they are still regarded as two separate components.

The volume distinct from the cockpit and the engine compartment inside the vehicle. This volumes is limited in length by the fixed structures provided for by the manufacturer and by the rear edge of the rear seats positioned as much backwards as possible and reclined backwards at a maximum angle of 15° to the rear.

20.5 Liquid Lines

The protection of the lines and pumps permitted in conformity with article 253.3 of the Appendix J allows for the local fitting of underbody protections for this sole purpose and must not entail any further aerodynamic advantages.

20.6 Radiator Mounting

It is clarified that the freedom concerning the radiator mounting as described in Article 2.6.3, 1st paragraph, refers to the water radiator only. Concerning the bodywork, solely the maximum of the 4 bores, each one with a maximum diameter of 8.5 mm, may be applied. This means that any braces at the bodywork side which, amongst others, serve as bodywork strengthening are not permitted.

20.7 Battery

From the provisions specified in the Articles 16.2 and 16.3 it is clear that the engine may only be started with the energy of the battery transported on board the vehicle. Each participant is responsible that this battery has enough capacity. The scrutineers may, amongst others, ask an engine to be cut on the starting grid. The engine may afterwards not be restarted with an external source of energy.

20.8 Piston

The engine piston is made up of the pistons, the piston rings, the piston pins and the fixation rings. So a standard piston also includes the standard piston rings, the standard piston pin and the standard fixation rings.

20.9 ISG

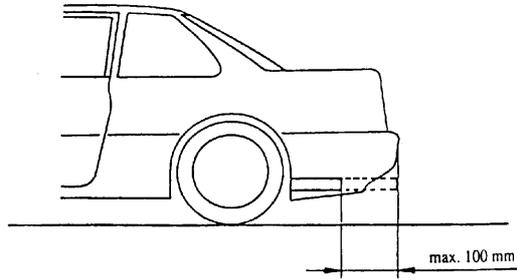
International Sporting Code.

21. General

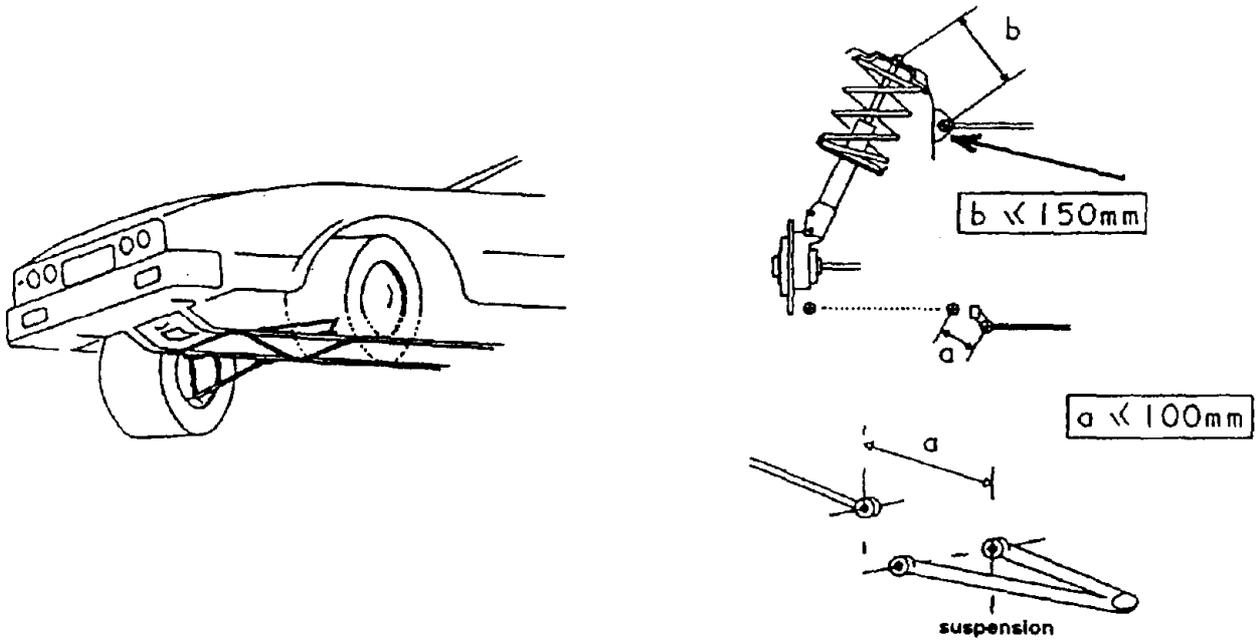
The final text for these Regulations is the English text should any dispute arise as to the interpretation of the text.

Drawings

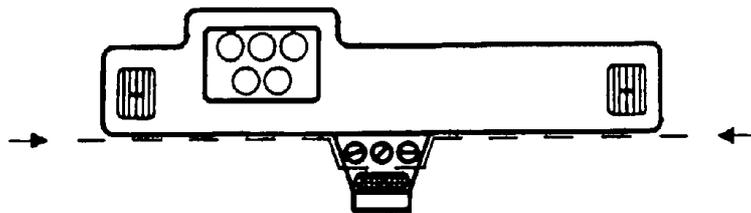
Drawing 1 End of the exhaust system



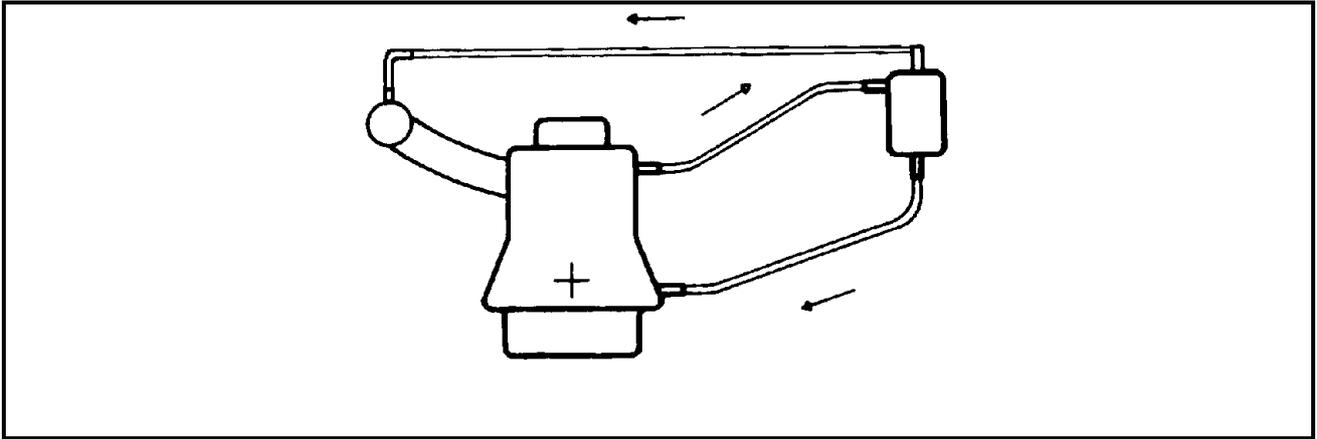
Drawing 2 Suspension reinforcements



Drawing 3 Dashboard

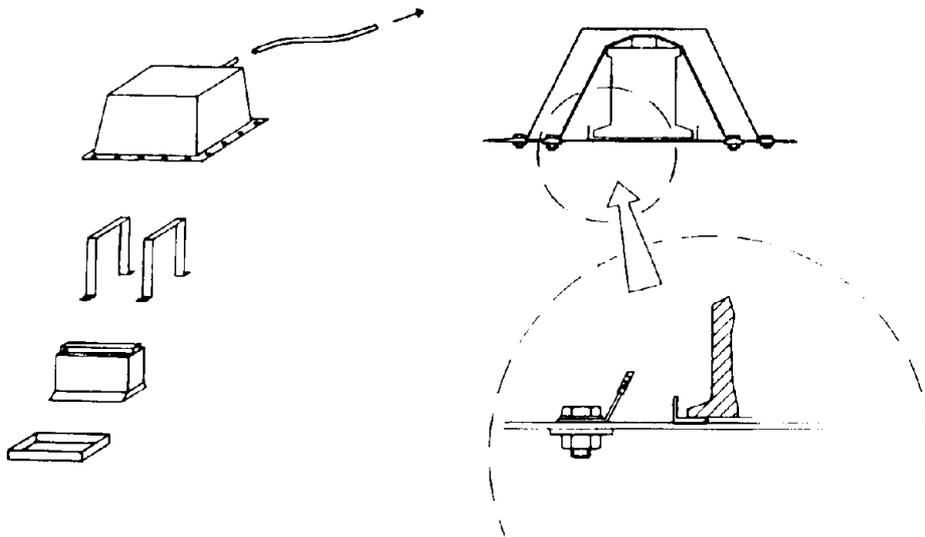


Drawing 4 Air/oil separator



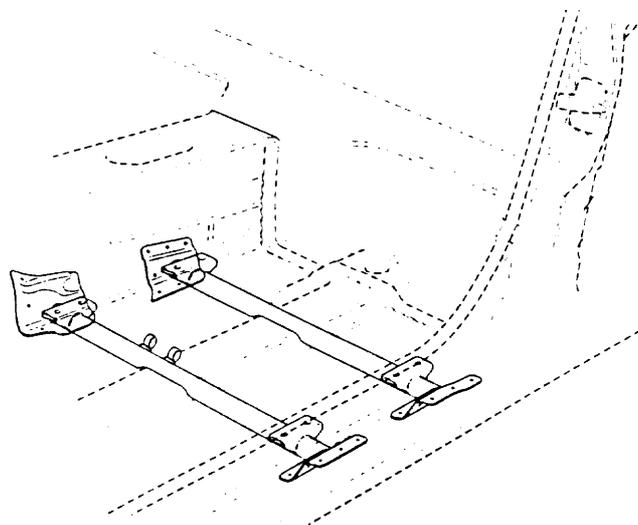
Drawing 5

Battery cover



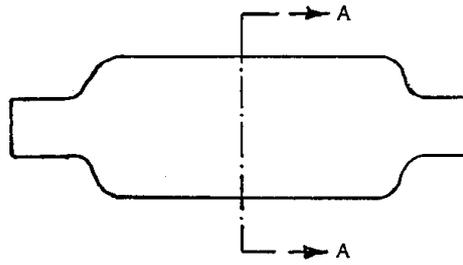
Drawing 6

Seat attachment



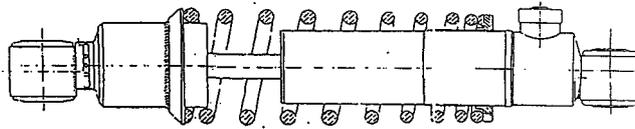
Drawing 7

Silencer



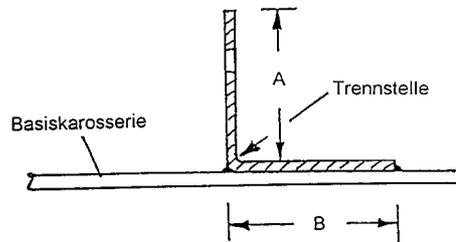
Drawing 8

Shock absorber



Drawing 9

Supports

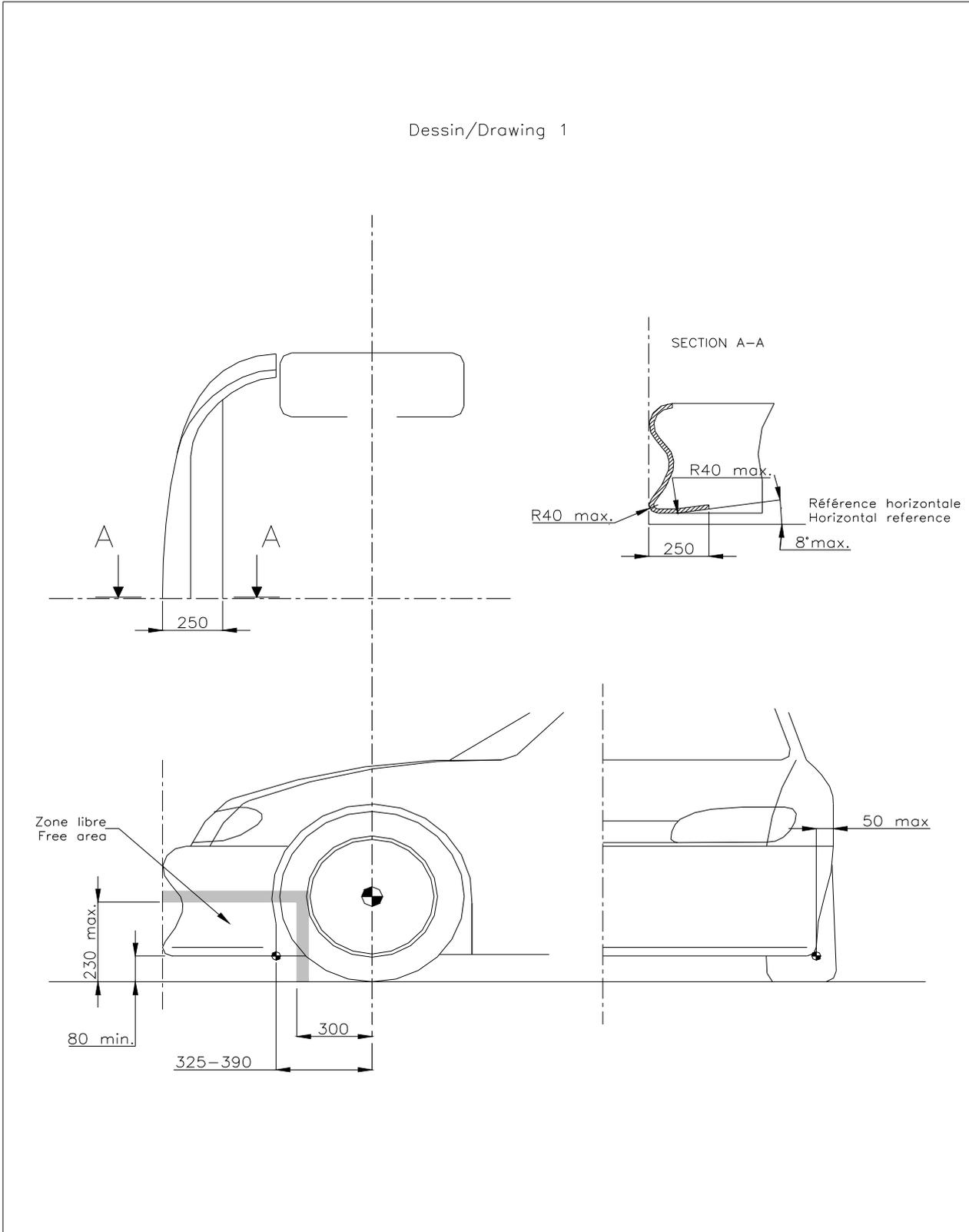


A = Protruding part of the support which may be removed
B = must not be modified

Drawing 10

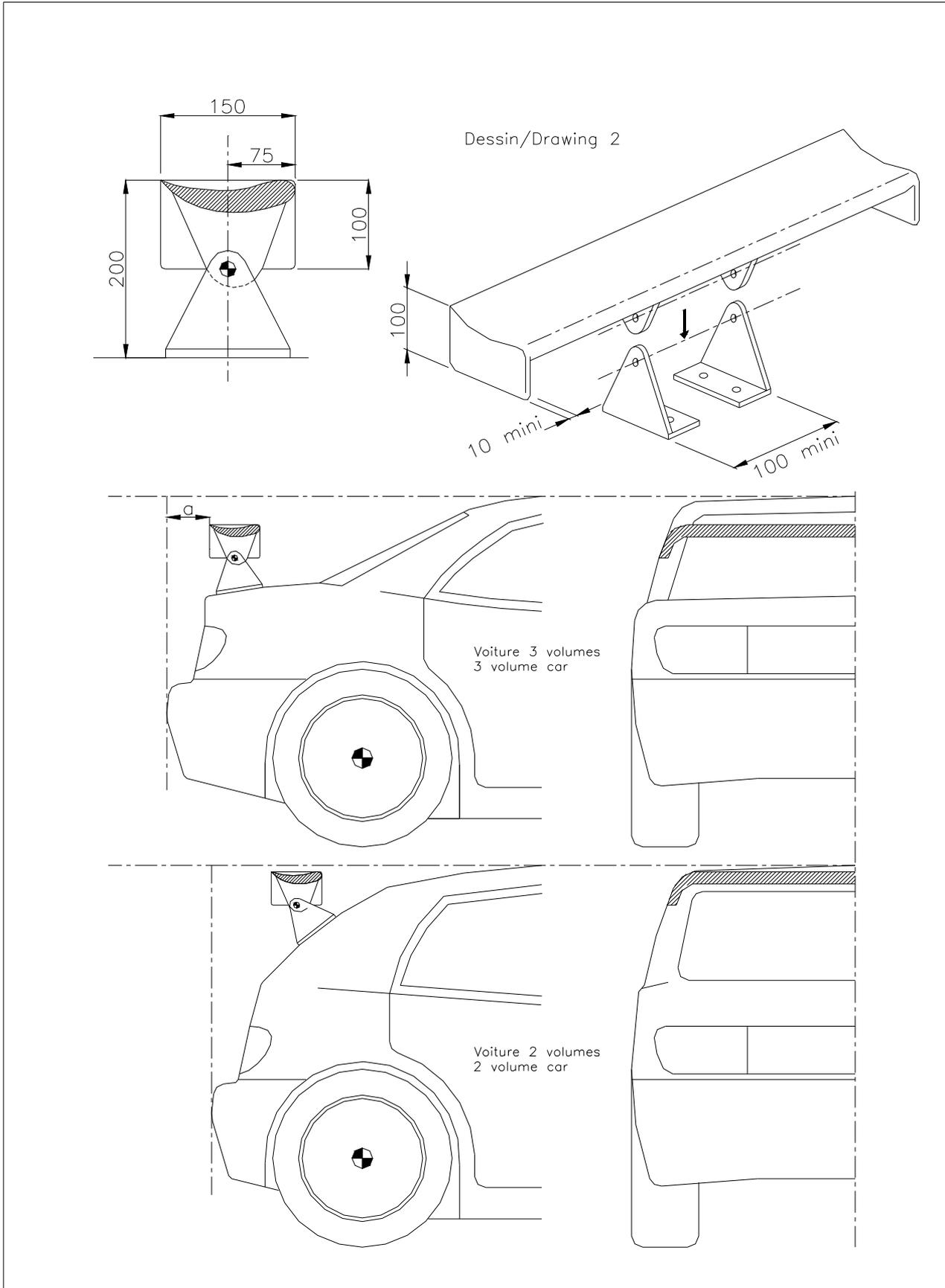
Front aerodynamic device / front bumper

Dessin/Drawing 1



Drawing 11

Rear aerodynamic device



**B2000 TECHNICAL REGULATIONS
APPENDIX 2**

Profile of rear aerodynamic device: Single Be 183-176 type carrier profile

**Be 183-
176**

Ro = Xo = -Yo =
2.69 2.69 2.79

x %	0	1.25	2.5	5	7.5	10	15	20	30	40	50	60	70	80	90	95	100
-Yv	2.79	0.53	0.07	0.1	0.62	1.32	2.86	4.35	6.79	8.8	10.02	11.4	11.95	11.8	9.03	5.58	0.1
-Yo	2.79	7.31	9.4	12.52	14.95	16.94	20.05	22.3	25.01	25.98	25.65	24.39	21.44	17.43	11.43	6.63	0.2

