"LE MANS" GRAND TOURING OF SPORT ("LM" GTS)

ART. 1 - DEFINITION

1.1 - The "LE MANS" GRAND TOURING OF SPORT car ("LM" GTS) is defined by the AUTOMOBILE-CLUB DE L'OUEST (ACO).

It is a car having an aptitude for sport with 2 doors, 2 or 2+2 seats, opened or closed, which can be used perfectly legally on the open road and available for sale thanks to the dealer network of a manufacturer recognised by the ACO.

1.2 – Manufacturer : It's a business firm which :

a) is incorporated to an official national organisation;

b) devotes itself to the construction and the regular marketing of cars meant for a daily use.

- A manufacturer producing and selling less than 2000 cars a year is considered as a "small manufacturer".

ART. 2 - GRAND TOURING OF SPORT Car "LM" GTS

2.1 - Eligibility :

2.1.1 - ACO is the only authority to judge the eligibility of a "LM" GTS car.

2.1.2 - Eligibility criteria of a "LM" GTS Grand Touring of Sport car are made out by the ACO.

2.1.3 - The "LM" GTS Grand Touring of Sport car must meet a minimum of the following criteria :

a/ To be regularly produced by a manufacturer approved by ACO ;

- A regular production implies a permanent implementation of the means required to produce a minimum of 1 car per month. The ACO can suspend at any time the homologation of the car if the production is not respected. A handicap will be imposed (See Art. 2.3 below) as long as a minimum of 25 road cars for the "big manufacturers" and 12 road cars for the "small manufacturers" will not be produced.

b/ To have a launch campaign : exhibitions in motor show, tests with journalists, leaflets with the technical specifications of the car…

c/ To be delivered in at least two major countries recognized by the ACO located in two different continents through the manufacturer's network to private customers with all documents required for a normal use quite legally on the road. The manufacturer must bring all the necessary proofs of the sale and the use of this car on the road at the ACO request.

d/ To have a **commercial network** at its disposal which provide an after-sales service. An exemplary of the spare parts' catalogue and the maintenance manual must be delivered to the ACO during the homologation of the car.

e/ To have an official **"Low Volume"** homologation for the model of car as a minimum.

- If the "Low volume" homologation doesn't include a crash test, the car shall meet the frontal protection requirements enforced on "LM" GTP (Art. 16.2.3) ;
- A "Full type CEE" homologation or equivalent for United States or Japan is mandatory for the cars with a carbon chassis

g/ The **fuel tank** of the homologated road car cannot contain less than **50 litres**.

2.1.4 - The use of the following technical specifications makes the eligibility of a car impossible :

a/ Parts of the suspension fixed on mechanical components : engine, gearbox, etc. ;

b/ Carbon fibre, titanium, magnesium (apart from wheels and standard production mechanical parts as listed in the Homologation form), etc., or unless specified in these regulations ;

c/ Air ducts integrated into the doors or/and into the doorsills excepted for the cockpit ventilation and for the exhaust system cooling

2.2 - Homologation

2.2.1. – Homologation form :

a/ An Homologation form describing the road car must be filled by the manufacturer and agreed after the inspection carried out by the ACO.

b/ Once the Homologation Form has been agreed by ACO, the manufacturer shall give a copy of it to the owner of every car sold after filling the first page (chassis number, name and address of the owner)

c/ A car is not permitted to undergo scrutineering before taking part in an event if it has not been homologated by the ACO.

d/ The Homologation form must be presented by the competitor during scrutineering.

2.2.2. – Modifications : they are allowed for racing purposes :

a/ For all the cars homologated by ACO after 01/01/2002 : From a basis version of the production car and not from a special version based on a restricted homologation ;

b/ Complying with these technical regulations ;

2.2.3 – lapsed Homologation

The homologation will become lapsed:

a/ The year following the stop of the production if a minimum of 100 road cars has not been produced (25 for a "small manufacturer")

b/ 5 years after the stop of the production if at least a minimum of 100 road cars has been produced (25 for a "small manufacturer")

2.2.4 - Maximum of race cars admitted:
For each car entered in a race, a minimum of 3 road cars identical to the model homologated by the ACO must be produced. It is for the manufacturer to inform the ACO about the development of the production. In case of waiver (Art. 2.3.), 2 cars maximum will be accepted.

2.2.5. –Evolution of the type:
Modifications introduced for good on the road model homologated will be permitted provided :
- This model thus modified fully respect the eligibility criteria as defined above including the minimum of production;
- The old model and the new model are not the subject of derogation;

The evolutions should be described on the homologation form and approved by the ACO. They will be also allowed on the old models if they are fully applied.

2.3. - Waivers :
Waivers to these above articles could be granted :
- by the express and justified request of the manufacturers ;
- By proving to the ACO that the road car will be homologated and mass-produced ;
- for 2 years maximum apart from the waiver regarding the minimum of production which could be possibly extended if the article 2.1.3.a. (regular production) is respected ;
- To the following conditions :

Criteria witch can be subject of a waiver		Handicaps applied (*)	
		Reduction of the restrictor(s) area (**)	lest
Art. 2.1.3.a	Minimum of production.	5 %	30
Art. 2.1.3.b	Promotion	5%	20
Art. 2.1.3.c, d et f	Marketing and Homologation	5%	20
Art. 2.2.4.	Race cars : 25% of the Total production.	5%	20

(*) the handicaps add up.
(**) The new diameter of the restrictor(s) will be calculated by ACO. The result will be rounded up to the nearest decimal.

Note : A manufacturer can get derogations for only one model of his make. The Handicaps will be withdrawn 3 months after the manufacturer has proved to the ACO that the eligibility criteria for which they were applied are respected

2.4 - Original :
2.4.1 - Everything which is specified in the **Homologation form** of the car accepted by ACO.
2.4.2 - Comparison with a reference production car shall be made possible in all circumstances.
2.4.3 - **"Optional"** equipment or **"performance kits"** the purpose of which is to obtain aerodynamic or performance improvement are not permitted.

2.5 - Bodywork :
2.5.1 - The bodywork concerns all entirely sprung parts of the car in contact with the external air stream apart from:
a/ The underbody of the car ;
b/ Parts in relation to the mechanical functioning of the engine, of the drive train and of the running gears.
2.5.2 - As viewed from above (plan view), from the sides (elevation), from the front and from the rear, the bodywork shall not allow mechanical parts to be seen.
2.5.3 - Movable bodywork parts/elements are forbidden when the car is in motion.

2.6. - Main structure / Chassis
Entirely sprung part of the structure of the vehicle, to which all the suspension and/or spring loads are transmitted, extending longitudinally from the fixing of the front bumper to the fixing of the rear bumper.

2.7 - Air intakes / air extractors :
2.7.1 - Air intakes / air extractors are part of the bodywork.
2.7.2 - If air intakes or air extractors make mechanical parts visible, they shall be fitted with mesh about **10 mm** (to Scrutineers' appreciation).

2.8 - Cockpit :

2.8.1 - Closed car : volume inside the main structure to accommodate the occupants which is defined by the top of the car, floor, doors, side panels, glass areas and frontal and rear bulkheads.

2.8.2 - Open car : as viewed from above, the cockpit opening must be symmetrical and nothing is permitted on top of it apart from a hood or a removable hard-top.

2.8.3 - ACO will be the only valid authority to assess the minimum measurements regarding inside volume (roominess), vision, windscreen, rear window, doors, etc.

2.9 - Electronic Systems :

2.9.1 - Any automatic or electronic control system or function is forbidden : chassis control, final drive differentials, adjustment of the shock absorbers, the suspension or the ride height, anti-lock braking, four wheel steering, etc.

Semi-automatic or automatic gearboxes, power-driven clutches with electronic or pneumatic control are forbidden unless they are fitted on the series vehicle homologated by the ACO.

In this case, the manufacturer must provide the ACO with the system for checking the whole control system of the series gearbox and/or the series clutch.

2.9.2 - **Closed-loop** electronic control system (FIA wording) :

This is an electronically controlled system in which :

a/ An **actual value** (controlled variable) is continuously monitored ;

b/ The feedback signal is compared with a **desired value** (reference variable) ;

c/ The system is then automatically adjusted according to the result of this comparison.

2.9.3 - Unless specified in these regulations and apart from engine management systems, **no such system is permitted**.

2.10 - Telemetry :

Apart from any other process, are permitted :

1. Legible messages on a pit board ;
2. The driver's body movements ;
3. Telemetry signals from the car to the pits (one direction) ;
4. "Lap trigger" signals for the start or the end of a lap :
   a/ Lap marker transmitters (lap triggers) shall be autonomous and not connected to any pit equipment by means of wires, optical fibers, etc. ;
   b/ The only function of these transmitters is to mark the laps ;
5. Two way voice communications between the driver and his pit.
   - The use of any other communication system whatsoever is only possible with the agreement and under the control of the organizer.

***2.11 – Location** : relative definition of the place where is an element in relation to the other original elements of the car that surround it.*

***2.12–position**: dimensional definition of the place along the 3 axles where is an original element of the car.*

2.13–orientation: angular position of an original element of the car. If the element is turned 180°, this will be regarded as a change in orientation.

2.14 - Regulations :

2.14.1 - What is not allowed by the Automobile-Club de l'Ouest is prohibited.

2.14.2 - ACO is the only valid authority to assess the eligibility of a car.

2.14.3 - Changes of the regulations made on grounds of safety will be enforced **without notice** and **immediately**.

ART. 3 - BODYWORK & DIMENSIONS

3.1 - Dimensions :

Except what is permitted under Art. 3.6 below, inside/outside dimensions, windscreen, windows, etc., overall measurements and the shape of the bodywork elements of the homologated car cannot be modified and/or changed.

3.2 - Overhangs and wheelbase :

3.2.1 - Front and rear overhangs and wheelbase figures as specified in the ACO Technical form of the homologated car cannot be modified.

3.2.2 - The bodywork modifications permitted under Art. 3.5.3 and 3.6.4 shall not alter the front overhang.

3.3 - Doors :

3.3.1 - The minimum dimensions specified by FIA for the GT Class (Appendix J) are not taken into account.

3.3.2 - Doors must provide a normal access to the cockpit.

3.3.3 - The extension of the side windows over the top of the car are not taken into account neither for the measurements not for assessing accessibility.

3.3.4 - ACO is the only valid authority to assess the design of the doors.

3.3.5 – The door hinges may be replaced for the sole purpose of allowing faster evacuation of the driver in the event of an accident.

3.4 - Windscreen & windows :

3.4.1 - Windscreen : mandatory, one piece made from **laminated glass** or **polycarbonate** (thickness : 6 mm minimum) :

a/ Minimum width at the bottom of the windscreen must be at least **65%** of the overall width of the car (homologation form) and must not be less than 1200 mm. This rule doesn't apply for the cars "Full type CEE" homologated or the equivalent for United States or Japan and produced at least 200 units for the "big manufacturers" and 25 units for the "small manufacturers.;

b/ As viewed from the front, the windscreen must be framed with four rounded angles, the upper line being almost horizontal (trapezoid shaped) ;

c/ At the top of the windscreen, the curvature shall not exceed some centimetres above the horizontal chord of the arch (to ACO's assessment).

d/ In order to protect the windscreen, the addition of a translucent film on its external face is permitted

3.4.2 - Rear window : mandatory, made from transparent material.

3.4.3 - Side and rear windows made from polycarbonate are permitted.

3.4.4- The lateral window on driver's side may be replaced by a net.

3.4.5 - Safety fasteners or additional window frames may be added provided they have no aerodynamic effect.

3.4.6 - Openings *:*

a/ Openings may be made exclusively for the cockpit ventilation and the operation of the lap trigger :

- through the side windows ;
- through the lower part of the rear window (5 holes maximum of 50 mm of diameter maximum) ;

b/ Air intakes are permitted in the side windows provided :

- They do not protrude more than **15 cm** ;
- They do not extend beyond the perimeter of the car ;

- These openings must not hinder the driver's vision.

3.4.7 - Mid or rear engine cars :

If it is possible to see the engine from outside the car, a **metallic firewall** is mandatory between the cockpit and the engine compartment (Art. 16.2 below).

3.5 - Bodywork :

3.5.1 - Flat bottom :

a/ Between at least the front and rear wheel centre lines and all across the width of the car, the bottom/underbody of the car shall be fitted with a flat bottom, rigid, continuous being an integral part of the chassis/body unit ;

b/ Except for the rear edge, the flat bottom may be curved with **25 mm** maximum radii in order to join up to the bodywork ;

c/ The car as viewed from above, the flat bottom must not be visible ;

d/ The flat bottom shall not have any aerodynamic effect :

d.1 - No air flow with an aerodynamic effect is permitted between the bodywork and the flat bottom.

d.2 - Air streams channelled into the air intakes or out through the air extractors and moving above any part of the flat bottom whatsoever shall not allow to get any lift or down force (see below Art. 3.6.7.a) ;

e/ Openings : the only openings permitted in the flat bottom or the rear diffuser are :

e.1 - Cut-outs related to wheel travel ;

e.2 - Hatches for maintenance operations ;

e.3 - Passing of air jacks ;

e.4 - Heat extraction from the exhaust pipes (if front engine) ;

These openings or holes :

1. Are permitted only for cooling the exhaust system and limited to a maximum width not exceeding the exhaust pipes diameter ;
2. Must follow the shape of the exhaust pipe(s) all along ;

e.5 - Exit of the overflow pipe from the fuel tank filler.

e.6 - 4 "naca" air ducts maximum for cooling, the total area of which must not exceed 360 cm^2 measured horizontally.

f / No sprung part of the car is permitted below the plane generated by the flat bottom ;

g/ **Rub blocks** : not permitted.

3.5.2 - Rear diffuser :

a/ A diffuser, perfectly flat over the whole surface of the inclined panel, limited by square angles and with no openings except for the pneumatic jack(s) is permitted :

a.1 - All along the space existing between the rear edge of the flat bottom and the vertical plane defined by the rearmost element of the bodywork (car standing against a wall) ;

a.2 - Between the vertical planes formed by the inside faces of the rear wheels ;

b/ The rear diffuser shall remain within the perimeter of the car as viewed from above (rear wing in place) ;

c/ No part of the diffuser is permitted more than **150 mm** above the plane generated by the flat bottom ;

d/ No bodywork element (fixed or not) is permitted to extend the inclined panel rearwards ;

e/ Any extension of the bodywork rearwards that is designed to enlarge the rear diffuser is forbidden ;
f/ **Vertical and flat fins** may be added provided that :
f.1 - They remain parallel to the longitudinal centre line of the car ;
f.2 - Their surfaces remain flat and parallel.

3.5.3 - Front section :
a/ Forward of the front wheel centre line, no part of the bodywork is permitted having a **wing profile** (*****).
b/ Forward of the front wheel centre line, only bodywork elements with constant thickness (parallel surfaces) are permitted.
(*) Wing profile : *section generated by two arcs with different curves joining a leading edge at the front to a trailing edge at the rear, the purpose being to exert an aerodynamic effect, lift or down force.*

3.5.4 - Bodywork construction :
a/ As viewed from above, sideways, from the rear and from the front, bodywork shall cover all mechanical components apart from the lower half of the complete wheels ;
b/ Any system that is designed to bridge the gap between the sprung parts of the car and the ground is prohibited ;
c/ Only the **movable** bodywork parts (bonnet, boot lid, fenders, doors, bumpers, etc.) described in the A.C.O. homologation form and fixed on the main structure may be replaced by elements made from lighter material (apart from titanium and magnesium) provided that the original shape is entirely retained, save case in Art. 3.6.1. below (overall width).
d/ Trunk and engine covers :
d.1. - Their hinges are free ;
d.2. - It must be possible to remove or open them without using tools ;
d.3. - They must be secured by at least two safety fasteners (identification by means of **red** arrows or any other **contrasting colour**).
e/ Bodywork joints in the vicinity of the refuelling devices must be designed in such a way as to prevent any leakage into the engine compartment or into the cockpit ;
f/ **Reinforcements** : Apart from the elements of the carbon chassis which must remain strictly as original, reinforcements are permitted provided that they follow exactly the shape of the original part and that the contact is kept direct on all the surface :
- Reinforcement struts may be added between the suspension mounting points and the main structure (if metallic) regarding the same axle and if symmetrical in relation to the longitudinal centre line of the car.

g/ **Mobile flap** :
Closing of the fuel tank filler by means of a mobile flap is permitted provided :
g.1 - It is fitted on the car when scrutineering is on the process ;
g.2 - It remains always on the car ;
g.3 - It is closed when the car is running ;
g.4 - It is opened or closed by means of a **mechanical** device by the **fuel attendant** exclusively.

3.6 - Bodywork modifications :

3.6.1 - Maximum width :
a/ Across the front and rear wheel arches, the width of the bodywork (ACO Homologation form) may be increased by **10 cm** maximum.
b/ The modification of the fenders must maintain as much as possible the original appearance and shape. The sides of the front and rear bumpers may be modified with the only purpose to join them up to the wider fenders.
- Cars the overall width of which exceeds **200 cm** (rear view mirrors excluded) are not eligible.

3.6.2 - Rear wing :
a/ It is permitted to fit a **rear wing** :
- It may replace the original wing but it cannot be added to it ;

b/ The complete wing assembly must not form the highest point of the bodywork ;
c/ It must not be backward the rearmost point of the car. Any bodywork modification or extension the purpose of which is to increase the dimensions of the wing or to move it backward is prohibited ;
d/ The wing shall have no more than one airfoil section. A rigid trim tab/gurney is mandatory.
It must be :
- 15 mm high as a minimum above the wing plane ;
- At right angle to the plane defined by the top of the wing ;
- Solidly fixed all along the wing by means of tools if the gurney is not an integral part of the wing. A locking system at each end is not enough.

No air stream may pass between the wing surface and the gurney (trim tab) ;
e/ Dimensions :
e.1 - The wing (including end plates) shall be framed in a volume the maximum dimensions of which are : **52 cm** (longitudinally and horizontally) **x 15 cm** (height) **x width** as defined in the ACO homologation form. The width of the wing is equivalent to the width of the windscreen measured in its half height + 300 mm. However, it must not exceed 1900 mm, nor the width of the road car across the rear wheel axle.

e.2 - Length of the wing section chord : **40 cm** maximum ;

f/ Vertical wing supports :

f.1 - Length : **52 cm** maximum ;

f.2 - Their surfaces shall be **flat** and **parallel** to the vertical plane passing through the longitudinal centre line of the car ;

f.3 - The leading edges may be round (constant radius) and the trailing edges may be bevelled **20 mm** maximum ;

f.4 – They must be :

- separated of at least 100 mm of the end plates ;
- metallic as well as their fixings ;

g/ End plates :

g.1 – The surfaces must be **flat** and **parallel** to the vertical plane passing through the longitudinal centre line of the car ;

g.2 - Thickness : 10 mm minimum ;

g.3 - The edges of the end plates must be rounded with a constant radius of 5 mm minimum ;

3.6.3 - At the front of the car, below the horizontal plane passing through wheel centre line and forward of the vertical plane tangent to the front complete wheels, the bodywork elements shall not :

a/ Extend beyond the perimeter of the bodywork as viewed from above (ACO Homologation form) ;

b/ Be lower than the flat bottom ;

c/ Modify the front overhang (ACO Homologation form) ;

d/ Have a wing profile (Art. 3.5.3 above).

3.6.4 - Front spoiler/splitter :

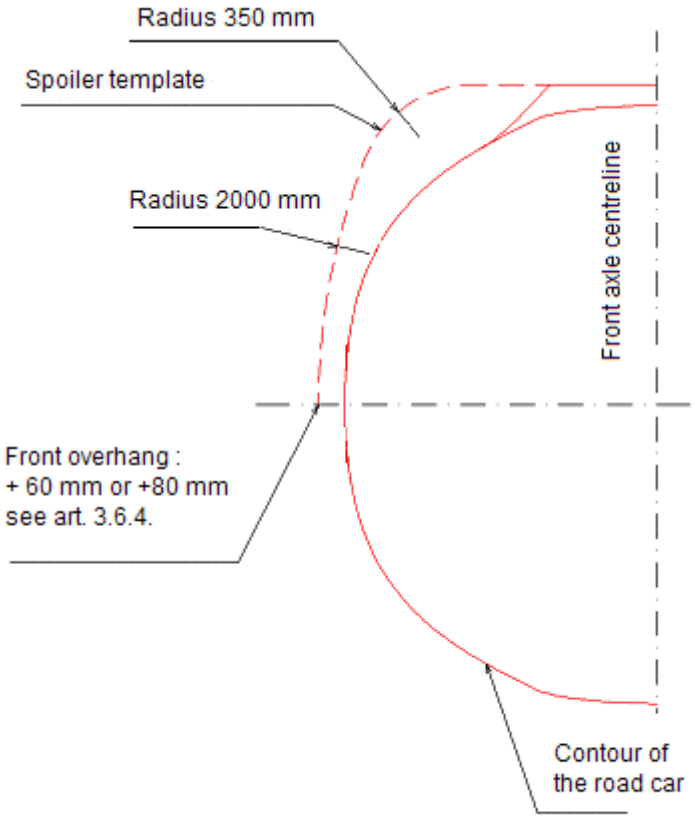
a/ Adjustment of the frontal blade (spoiler/splitter) is permitted at any time during the practice sessions and the race provided it does not modify the original front overhang as specified in the ACO Homologation form ;

b/ for the cars "Full type CEE" homologated or the equivalent for United States or Japan and produced at least 200 examples per year. The original front overhang can be increased (*) by adding a spoiler (thickness : 30 mm maximum) which must abide by the gauge defined in the following drawing :

(*) – by 80 mm maximum if the original overhang is less than 1000 mm

- by 60 mm maximum if the original overhang is equivalent or more than 1000 mm and less than 1100 mm.

Seen from the front, the spoiler must not exceed the width of the bodywork of the race car across the front wheel axle.



c/ Two aerodynamic elements maximum can be added above the spoiler.
They must be :
- On each side of the car, forward of the vertical plane tangent to the front complete wheels ;
- Within the contour of the spoiler seen from above ;
- Outside of the original front track of the car (ACO homologation form) ;
- 180 mm maximum above the flat bottom ;

They must not :
- Mask the headlights ;
- Wider than 200 mm ;

3.6.5 - Lateral elements :
Bodywork parts may be added on each side of the car between the front and rear wheel arches cut out provided that :
a/ They are below the lowest wheel centre line ;
b/ They do not protrude beyond the original overall width (ACO Homologation) ;
c/ They are not lower than the flat bottom ;
d/ They do not protrude beyond the perimeter of the car as viewed from above.

3.6.6 - Wheel arches :
a/ External wheel arches cut out and inside panels may be modified ;
b/ No panel or element is permitted to be removed in relation to the car homologated by ACO.

3.6.7 - Air intakes :
a/ They shall be used exclusively for **cooling** the mechanical components (radiators, brakes, etc.), **feeding** the engine with air and **ventilation** (driver, engine compartment, etc.).
b/ Air intakes shall :
b.1 - Not have an aerodynamic effect ;
b.2 - Channel all the air stream towards the elements to be cooled ;
b.3 - Not extend beyond the perimeter of the car as viewed from above ;
b.4 - Not protrude more than **10 cm** over the surface of the bodywork of the homologated car (ACO Homologation form) ;
b.5 - Not be fitted on the glass areas, save case specified under Art. 3.4.6 above ;
b.6 - Not allow a mechanical part/element to be seen :
- For that purpose, a mesh circa **10 mm** shall be used in order to make a screen ;

c/ On top of the car (area formed by the upper line of the windscreen, the side windows and the rear window), air intakes shall :
c.1 - Be located aft the highest point of the windscreen ;
c.2 - Be integrated into the curved line of the roof ;
- "Snorkel type" air intakes are not permitted ;

d/ The highest point on top of the car - not the air intake(s) - will be used to check the maximum height of the rear wing.

3.6.8 - Air extractors :
a/ Air extractors can neither protrude more than **20 mm** over the surface of the bodywork, nor modify the original look, nor permit a mechanical component to be visible :
- If it is the case, a thin mesh (**10 mm** maximum) or louvers are mandatory ;

b/ Aft the wheels, air extractors shall not :
b.1 - Induce an aerodynamic effect ;
b.2 - Permit to see the mechanical components and the tyres from behind the car :
- If it is the case, a thin mesh (**10 mm** maximum) or louvers are compulsory.

3.6.9 – Registration plates :
Mountings and lights of the registration plates may be removed but this must not lead to the modification of the bodywork except for those permitted by the regulation. Even if they are maintained, they cannot be used to determine the overhangs of the car.

3.7 - Luggage compartment(s) :

3.7.1 - Capacity : **150 dm^3** minimum :
a/ Maximum two volumes are permitted ;
b/ The design and the volume of the luggage compartment(s) are to the assessment of ACO.

3.7.2 - Location :
a/ The space behind the front seats in their rearmost position and up to the lowest point of the rear window is admitted as luggage compartment :
- In that case, roominess at front seat level and field of vision shall be retained unchanged in relation to the homologated car.

b/ The location of the luggage compartment shall be the same as on the homologated car.

3.7.3 - Shape :
The luggage compartment, airtight, framed by rigid surfaces shall permit to accommodate **from outside** a minimum volume corresponding to a "pilot case" the measurements of which are : **45 cm x 35 cm x 20 cm.**

3.7.4 - Provided they have an efficient protection (shocks and leaks), are permitted in the luggage compartment(s):

a/ Fuel tank, capacities and pipes complying with Art. 6 below ;
b/ Oil tank, oil catch tank and pipes ;
c/ Power steering oil tank ;
d/ Pneumatic jack(s) and air pipe(s) ;
e/ Battery(ies).

ART. 4 - WEIGHT

4.1 - Weight :

4.1.1 - **Minimum weight**, according to the engine capacity : see Appendix 1.

4.1.2. - Except for the weighing procedure used during the practice sessions, it is the weight of the car with no driver and no fuel on board.
The car must comply with the minimum weight at all times throughout the event. The checking of the weight of any part that may have been replaced during the event is at the discretion of the scrutineers.

4.2 - Ballast :

4.2.1. - the ballast must be secured according to the specifications of the article 253.16 (Appendix J) concerning dimensions and characteristics of the fixations.

4.2.2. - The securing system must allow the fixing of seals by the scrutineers and must be designed such that tools are required for its removal.

4.2.3. - Any movable ballast system when the car is in motion is forbidden.

4.2.4 - The ballasts covered by the article 2.3. (Waivers) above must be secured in the cockpit in the front passenger's location

4.3 - Weighing :

Weight may be checked at any time during the event.

ART. 5 - ENGINE

5.1 - Make and position :

5.1.1 - The make of the engine, its orientation (crankshaft) and location shall comply with the ACO Homologation form.

5.1.2 - Changing the position of the engine shall not modify the cockpit dimensions.

5.2 - Modifications :

5.2.1 - The engine of the homologated car shall be retained :

a/ Cylinder block, cylinder head(s), valve angle(s), firing order : original ;
b/ The adding of material to the block or cylinder head(s) is not permitted. Intake and exhaust manifolds are free but their support face on the head cylinder must be at 10 mm maximum from the original cylinder head gasket face ;
c/ The cylinder block and the valve tappet guides may be fitted with sleeves if not originally ;
d/ Lubrication holes, injector holes may be modified or blocked :
- The use of helicoïls is permitted.

5.2.2 - Are forbidden **unless original** on the car available for sale (Homologation form) :

a/ Variable valve timing (*);
b/ Variable geometry (turbo/superchargers) (*)
c/ Ceramic components ;
d/ Variable length inlet systems except for rotary engines (*);
e/ Titanium except connecting rods, valves, valve retainers and heat shields ;
f/ Magnesium apart from mechanical parts regularly produced and described in the ACO Homologation form ;
g/ Carbon and composite materials except when used in clutches, covers or non-stressed pipes.

(*) These devices cannot be modified, but they can be neutralised or removed.

5.3 - Throttle :

Only a **direct mechanical** linkage (rod, cable) is permitted between the throttle pedal and the fuel supply control system (air and/or fuel) of the engine.
If the original car is fitted with a system without a mechanical linkage, this system may be retained but not modified.

5.4 - Normally aspirated engines :

5.4.1 - Displacement : **8 000 cc** maximum.

5.4.2 - Intake system :

It must be fitted with one or more **air restrictors** made from metal or metal alloy the diameter of which is kept at least **3 mm** in length (Technical Regulations : Appendix 1). Restrictors must be
- 600 mm maximum forward the centreline of the first cylinder.
- 1000 mm maximum apart (centre of the restrictors).
- fitted so that they can be easily removed for possible checks.

5.4.3 - **Air box(es) :**

a/ All the air feeding the engine must pass through the restrictor(s) ;

b/ Air tightness must be total in all circumstances. If the air box includes several parts, they must be put together in an efficient way and the design shall be agreed by ACO.

c/ No pipe containing air is permitted to come into or to exit from the air box(es) ;

d/ Its internal total volume, measured from the control diameter of the restrictor(s) to the intake ports on the cylinder head(s), must not be greater than 70 dm^3.

e/ Blockage of the restrictor(s) must lead to stall the engine immediately. The depression measured in the air box when the engine stop must be :

- equal to the atmospheric pressure at the place where the test is carried out – 150 millibar ;
- maintained during half a second ;

f/ A standard connection "Dash 3 male" is mandatory on the air box for the possible junction of the data recording system of the organizer (see appendix 1). The diameter of the air outlet must be 2.4 mm (3/32") minimum. This connection must be :

- Easily accessible ;
- Outside the air flows above the induction trumpets ;
- Preferably facing the air intake(s) ;
- Sealed when the data recording system of the organizer is disconnected ;

g/ A sealing device shall be ready made for the Scrutineers ;

h/ Any faulty functioning is the Competitor's responsibility.

5.5 - Turbocharged / Supercharged engines :

5.5.1 - Displacement : 4 000 cc maximum.

5.5.2 - Inlet system :

a/ The inlet system must be fitted with one (or more) **air restrictor(s)** made from metal or metal alloy the diameter of which shall be kept at least **3 mm** minimum in length ;

b/ **Air restrictor(s) position** : a one piece and airtight right cone must be fitted between the restrictor(s) and the inlet diameter of the charging device :

b.1 - That cone shall have a mandatory opening angle of **7°** minimum ;

b.2 - To each end of the cone, over a **10 mm** maximum length, a round shape is permitted to join up to the diameter of both the restrictor(s) and the charging device inlet.

5.5.3 - Charging device :

a/ It may include one or more **single stage** charging device(s) with air/air and/or air/water heat exchanger(s);

b/ Are not permitted :

b.1 - Any device whatsoever that is designed to adjust, from inside the cockpit, the boost or the electronic program managing the boost pressure while the car is running ;

b.2 - Charging devices including ceramic components, variable diameter inlets and variable angle blades ;

c/ Maximum absolute boost pressure : Ref. Appendix 1.

5.6 - Temperature of the charge :

5.6.1 - Intercoolers for cooling intake air are free :

- The fitting of an intercooler must not alter the original volume inside the cockpit.

5.6.2 - Apart from intercoolers, any system the purpose of which is any decrease of the temperature of the intake air and/or of the charge (air and/or fuel) of the engine is forbidden.

5.6.3 - Apart from those feeding an air/water intercooler, the pipes between the turbo/super-charging device, the intercoolers and the inlet manifold(s) are free, but their function must be to channel air only.

5.6.4 - Spraying or injection of any substance whatsoever other than fuel is forbidden.

5.7 - Cooling :

The cooling system is free, but the number and the location of the water radiator(s) must comply with the ACO Homologation form.

5.8 - Exhaust :

5.8.1 - The exhaust system :

a/ Shall not protrude beyond the bodywork as viewed from above ;

b/ Must be adequately isolated from the cockpit.

5.8.2- Installation (front engine car) :

As long as the main elements of the main structure are not concerned, the underbody and the front and rear bulkheads may be modified in order to allow the exhaust system and its insulation from the cockpit to be fitted:

- These limited modifications must be ACO approved.

5.8.3 - Exhaust pipe outlets : they must exit :

a/ Aft the middle of the wheelbase ;

b/ Between **10** and **45 cm** above ground level.

ART. 6 - PIPING & FUEL TANK(S)

6.1 - Fuel tank(s) :

6.1.1 - Fuel tanks must be placed either in their original location (ACO Homologation form) or in the luggage compartment :

- They must be separated from the driver and engine compartment by a **firewall**.

6.1.2 - On grounds of safety, it is recommended :

a/ to install the fuel tank(s) between the two vertical planes touching the front of the front wheels and the rear of the rear wheels ;

b/ the outside panels of the fuel tank(s) shall not be more than **675** mm from the longitudinal centre line of the car.

6.1.3 - A **crushable structure** at least **10 m**m thick shall wrap the tank.

6.1.4 - Only those chassis modifications are allowed which are necessary to install the tank(s) in the area defined above and for this purpose exclusively.

6.1.5 - Fuel tanks must be **rubber bladders** meeting or exceeding the FIA FT3 specifications.

6.1.6 - Rubber bladders must be made by manufacturers approved by FIA the list of which is available from the FIA ;

6.1.7 - Rubber bladders shall have a printed code indicating the name of the Manufacturer, the specifications to which the tank has been manufactured and the date of manufacture.

6.1.8 - No rubber bladder shall be used more than **5 years** after the date of manufacture, unless inspected and re-certified by the manufacturer for an other period which cannot exceed **2 years**.

6.2 - Fittings and piping :

6.2.1 - Any fuel fitting which is part of the tank walls (air vents, inlets, outlets, tank fillers, inter tank connectors and access openings) must be made from metal or composite and bonded into the fuel tank(s).

6.2.2 - Fuel lines connecting the fuel tank(s) to the engine must have a **self sealing breakaway valve** the parts of which must separate at less than half the load required to break the fuel line fitting or to pull it out of the fuel tank.

6.2.3 - No line containing cooling water may pass inside the cockpit. Fuel and oil lines may pass through the cockpit provided that they have no connections other than to the bulkheads and that they are covered by a leakproof protection.

6.2.4 - Lines must be fitted such that any leakage cannot result in accumulation of fluid in the cockpit.

6.2.5 - Flexible lines must have **threaded connectors** and an **outer braid** which is resistant to abrasion and flame.

6.2.6 - **Fuel** and **lubricating oil lines** must have a minimum burst pressure of **41 bar** at the maximum operating temperature of **135°C**.

6.2.7 - Hydraulic fluid lines :

a/ Those not subjected to abrupt changes in pressure, apart from lines under gravity head, must have a minimum burst pressure of **408 bar** at the maximum operating temperature of **204 °C** (steel connectors) and **135°C** (aluminium connectors) ;

b/ Those subjected to abrupt changes in pressure must have a minimum burst pressure **of 816 bar** at the maximum operating temperature of **204 °C**.

6.2.8 - Only hydraulic fluid lines with **screwed connectors** and **secured** by means of a metallic wire are permitted inside the cockpit.

6.2.9 - **Fuel pumps** must be in operation only when the engine is running or being started.

6.3 - Fuel tank fillers :

6.3.1 - Cars must be equipped with fuel tank fillers and vents which may be either combined or single units fitted on both sides of the car.

6.3.2 - Both fillers and air vents must be equipped with leak proof dry break couplings complying with the **dead man** principle, therefore not incorporating any retaining device when in an open position :

- Couplings dimensions : Appendix J - Diagrams 252.5 with internal diameter : $D \leq 50$ mm.

6.3.3 - Tank fillers, vents and caps must :

a/ Be placed where they would not be vulnerable in the event of an accident ;

b/ Not protrude over the bodywork surface.

6.3.4- Any tank **breather pipe** shall :

a/ Exit outside the bodywork ;

b/ Be fitted with a **non return valve** ;

c/ Be designed such as to avoid any liquid leakage when the car is running or if upside down.

6.3.5 - Cars must be fitted with a **self sealing connector** which can be used by the Scrutineers to take fuel from the tank. This connector must be :

a/ Type approved ;

b/ Fitted immediately before the injectors nozzles.

6.3.6 - Fillers may be installed in the side rear windows provided they are separated from the cockpit and the engine compartment by a **firewall**.

6.3.7 : Self-sealing systems the purpose of which is to permit to add oil and/or water from the outside of the car are allowed :

- *if they are not protrude beyond the surface of the bodywork ;*

- *if they are placed where they would not be vulnerable in the event of an accident.*

6.4 - Refuelling during the race *:*
6.4.1 - Ref. Appendix A below : Refuelling.
6.4.2 - The refuelling installation **(with the car number affixed)** and the tank of the car shall remain at the ambient outside temperature and atmospheric pressure.

6.5 - Fuel capacity :
6.5.1 - **100 litres** maximum on board whatever the ambient temperature and atmospheric pressure.
6.5.2 - Any device or system whatsoever which is designed to increase the fuel storage capacity on board of a car is prohibited.

ART. 7 - OIL SYSTEM
Free, provided the following prescriptions are complied with :
7.1 - Oil tank(s) :
7.1.1 - If the oil tank(s) is (are) not placed in its (their) original position (ACO Homologation form), it (they) must be protected by a crushable structure with minimum **10 mm** thick walls.
7.1.2 - The oil tank(s) must be located neither in the cockpit nor in an area where it (they) might be vulnerable in the event of an accident.

7.2 - Oil catch tank :
The open type oil sump breather (if any) must vent into a **3 litre** minimum capacity catch tank.

ART. 8 - ELECTRICAL EQUIPMENT
8.1 - Battery(ies) :
8.1.1 - Batteries shall be securely fixed and protected by a box made of **insulating material**.
8.1.2 - If in the cockpit, the battery(ies) must be fitted in the place of the passenger.
8.1.3 - Except for dry batteries, the protection box must include a vent pipe the exit of which is outside the cockpit.

8.2 - Windscreen wiper :
At least one efficient windscreen wiper in working order is compulsory.

8.3 - Starter :
8.3.1 - A starter in working order is mandatory.
8.3.2 - The driver must be able to operate the starter when seated normally at the wheel.

8.4 - Lighting equipment :
8.4.1 - Lighting equipment must always be in working order.
8.4.2 - The position and the original function of the lighting equipment shall be retained :
- Any lighting equipment which is not homologated shall be approved by ACO.

8.4.3 - Headlights protection : transparent covers are permitted but the shape of the bonnet or the fenders shall not be modified (Ref. ACO Homologation form).
8.4.4 - Beam : headlights must produce a **yellow beam**.
8.4.5 - Rain light(s) **:** mandatory at the rear the bodywork :
a/ Either **1 red "Rain"** or **"Fog" light** (21 watts minimum) or any other equivalent device ACO approved and fitted the highest possible at the rear in the middle of the bodywork ;
b/ Or **2 red "Rain"** or **"Fog" lights** (21 watts minimum) or any equivalent device ACO approved, fitted on each side symmetrically in relation to the car longitudinal centre line.

ART. 9 - TRANSMISSION
9.1 - Electronics :
Any resort to electronics incorporated in the functioning of any component of the transmission is forbidden whatever the system or device being used and the purpose.

9.2 - Drive train :
9.2.1 - Are prohibited :
a/ Four wheel drive ;
b/ Automatic or semi-automatic gearboxes and differentials with electronic, pneumatic or hydraulic control, etc. ;
9.2.2 - Are only permitted :
a/ **Mechanical** limited slip differentials working without the help of a hydraulic or electric system.
- A visco-coupling system is not considered as a hydraulic slip control device provided that no control is possible when the car is running.

b/ Traction control that operates solely through the engine control unit (ECU). Wheel speed sensors are permitted.
c/ A direct mechanical linkage (rod, cable) between the gear shift lever operated by the driver and the gear-box.

- If the original car is fitted with a system without mechanical link, it may be retained without modification (cf. Art. 2.8.1.) provided the gear-box and its synchronizers remain original as well. In this case, only the ratios may be modified.

d/ A simple open-loop electrical switch activated directly by the gear shift lever and acting on the ignition system of the engine.

9.2.3 **-** Gearbox :

a/ Forward ratios : **6** maximum ;

b/ Provided original location is retained (ACO Homologation form), the gearbox is free ;

c/ Possible modifications of the underbody are permitted to fit the gearbox and the differential but only with the ACO agreement and under the express condition that they do no not modify too much :

c.1 - The integrity of the main structure ;

c.2 - The cockpit inside measurements.

9.2.4 - Reverse gear :

Mandatory : it must be possible for the driver seated at the wheel to select it **when the engine is running**.

9.3 - Clutch :

Conventional mechanical design only, material free :

- The clutch must be activated by the driver only.

If the original vehicle is fitted with a power-driven clutch with electronic or pneumatic control, the mechanism may be replaced but the whole original control system must be retained (see Art. 2.8.1.)

9.4 – Propeller shaft : Carbon fibre and titanium are permitted.

ART. 10 - SUSPENSION

10.1 - Suspension (type and pick up points) :

10.1.1 - Ground clearance :

No suspended part/element of the car is permitted to touch the ground when it is in motion :

- **Penalty :** stopping of the car by the Race Control.

10.1.2 - The type and working principle of the suspension (ACO Homologation form) shall not be modified.

10.1.3 – Leal spring blades can be substituted by helicoidal springs.

10.1.4- Adjusting the springs, shock absorbers and roll bars from inside the cockpit is forbidden.

10.1.5.- If the car is fitted with a suspension "inboard", the original rocker and shock absorber axle joints on the chassis must be maintained.

10.2 - Active suspension :

Any system, whatever the working principle, activated or not by the driver that is designed to modify the ground clearance while the car is stopped or in motion is not permitted.

10.3 - Suspension members :

10.3.1 - Suspension arms must be made from **homogeneous metal.**

10.3.2 - Chromium plating of steel suspension members is forbidden.

ART. 11 -: STEERING

11.1 - Principle :

The link between the steering wheel and the wheels can only be **mechanical** and **continuous**.

11.2 - Modifications :

11.2.1 - Apart from the steering ratio and the steering rods, parts shall be those listed on the ACO homologation form.

11.2.2 - Steering parts may be strengthened provided they can still be identified.

11.3 - Four wheel steering : not permitted.

11.4- Power steering :

Permitted but without any resort to electronics whatsoever :

11.4.1 - Electric power assistance : permitted provided that any increase of an electrical signal respects a fixed ratio between the entry and the exit (linear function).

11.4.2 - Control system : it shall use an **open loop** (Ref. Art. 2.8 above) with no feed back for the driver's information.

11.5 – Steering wheel :

11.5.1. - The steering wheel rim must be circular and continuously closed.

11.5.2. - A quick release system is mandatory.

11.6 - Anti-theft device : it must be removed.

ART. 12 - BRAKES

12.1 - Separate circuits :

The braking system is free provided that :

12.1.1 - It includes at least **two separate circuits** controlled by the same pedal :

- Between the brake pedal and the callipers, it must be possible to identify separately the two circuits with no other interconnection than the **mechanical** balance mechanism.

12.1.2 - No system or device is fitted between the master-cylinder and the callipers :

- Sensors to collect information, stop lights switches or mechanical brake pressure control **adjustable by means of tools** are not considered as "systems". They must be fitted at the very exit of the master-cylinders.

12.2 - Brake callipers :

12.2.1 - Brake callipers shall be made from **aluminium** materials **(**elasticity modulus **< 80 Gpa)**.

12.2.2 - Only one calliper with **6 pistons** maximum is permitted per wheel.

12.2.3 - The area of each calliper piston (brake plunger) must be circular.

12.3 - Discs & Brake pads :

12.3.1 - Material : free.

12.3.2 - Discs : **one** rotor per wheel maximum ;

12.3.3 - Carbon equipment (discs and brake pads) :

a/ Disc diameter : **15"** (380 mm) maximum ;

b/ Carbon discs the 2nd wear warnings of which are not visible before use are forbidden.

12.4 - Anti-lock braking systems :

Prohibited whatever the system.

ART. 13 - WHEELS & TYRES

***13.1 - Dimensions** (complete wheels) :*

Measurements to be made horizontally at wheel hub level :

13.1.1 - Wheels :

a/ Width ……. **14"** maximum

b/ Diameter…... **28"** maximum

13.1.2 - Rims :

a/ Diameter …….. **18"** maximum

b/ The rim flanges shall be :

b.1 - Symmetrical

b.2 - Not higher than **19.2 mm**.

13.1.3 - Wheel/hub caps : not permitted if removable.

***13.2 -Minimum weight of the wheel** (tyre removed) :*

a/ Front : **7.5 kg**

b/ Rear : **8.5 kg**

13.3 - Wheel position :

Above the wheel centre line :

13.3.1 - It must be possible to house the complete wheels inside the wheel arches.

13.3.2 - As viewed from above, the front wheels aligned for the car to proceed straight ahead shall not be visible above the horizontal plane passing through the wheel centre lines.

13.4- Wheel material :

13.4.1 - Metallic mandatory ;

13.4.2 - One piece wheel : recommended.

***13.5 - Number of wheels :* 4** (four) maximum.

13.6 - Wheel attachment : Free.

13.6.1 - If the wheel is attached by means of a single nut, a **safety spring** (painted **red** or **"dayglo" orange**) must be **on** the nut whenever the car is running, and it must be put back after every wheel change.

13.6.2 - another method of retaining the wheels attachment system may be used, provided it has been approved by the FIA.

13.7 - Pneumatic jacks :

13.7.1 - They are permitted but compressed air bottles are not to be carried on board for their operation.

13.7.2 - Openings are permitted in the flat bottom and in the rear inclined panel of the diffuser for their use.

13.8 - Pressure control valves : not permitted.

13.9 – Sensors : Sensors for the pressure and the temperature of the tyres when the car is in motion are recommended.

ART. 14 - COCKPIT

14.1 - Fitting : It is permitted to remove the passenger seats, internal trimming, window winding mechanisms, air conditioning, heating system, etc. :

- An efficient windscreen demisting device is compulsory.

14.2 - Equipment :

Provided that neither access nor exit are hindered (Art. 14.6 below), only the following equipment is permitted in the cockpit :

a/ Driving controls including radio-communication systems ;
b/ Safety : harness, fire-extinguishers ;
c/ Comfort : driver's cooling and ventilation systems ;
d/ Repairs : tools (securely attached to the floor) ;
e/ Electronic equipment ;
f/ Battery(ies) ;
g/ Ballast.

14.3 - Dashboard :

14.3.1 – Material free, but shape, dimensions, look must conform with the original car (ACO Homologation form).

14.3.2 - Apart from the radio communication system, all implements and equipment needed for driving (original or not) shall be fitted on the dashboard exclusively and/or on a **600 cm^2** maximum rectangular panel :

- None of the above equipment may hinder the cockpit exit (Art. 16.6).

14.4- Pedal support :

The swivel axle for the clutch, brake and throttle pedals may be moved.

14.5 - Cockpit exit time :

The driver when seated in a normal position at the wheel, wearing his complete racing equipment and safety belts fastened shall be able to exit the cockpit in **7 seconds** using the door on his side and **9 seconds** through the opposite door.

ART. 15 - SAFETY EQUIPMENT

15.1- Fire Extinguishers :

Ref. : International Sporting Code - Appendix J : Art. 258.14.1.

15.2 - Safety belts :

15.2.1 - Two shoulder straps, one abdominal strap and two straps between the legs complying with FIA standard 8853-98 are mandatory.

15.2.2- Two buckles safety belts are not permitted.

15.2.3- The safety belt mounting points shall be capable of resisting a **25 g** deceleration.

15.2.4 - It is prohibited for the seat belts to be anchored to the seats or their supports.

15.3 - Rear-view mirrors :

15.3.1 - **Two** rear-view mirrors (one each side) are mandatory to provide an efficient vision.

15.3.2 - Minimum area: **100 cm^2** per mirror.

15.4 - Seats & Headrest :

15.4.1 - Seat :

a/ The driver's seat shall be homologated by CEE, FMVSS or FIA. It shall not be modified ;
b/ An extension made from energy absorbing, not modified and non flammable materials shall protect the driver's head ;
c/ Seat mounting points or original supports : Ref. International Sporting Code - Appendix J - Art. 253.16 :

- It is recommended to describe the seat mounting points in the ACO Homologation form.

15.4.3 - Headrest :

a/ It must not deflect more than **5 cm** when a rearward force of **85 daN** is applied ;
b/ It must be positioned so that it is the first point of contact for the driver's helmet in the event of an impact projecting his head backwards when he is seated normally ;
c/ Surface : **400 cm^2** minimum, continuous and with no protruding parts ;
d/ Any device designed such as to provide the maximum driver's head protection is strongly recommended.

- ACO approval is essential.

15.5 - Master switch :

15.5.1 - The driver, when seated normally at the wheel, safety belts fastened must be able to cut off all the electrical circuits and switch off the engine by means of a **spark proof breaker switch**.

15.5.2 - The switch must be :

a/ Positioned on the dashboard or in any other place easily accessible by the driver or from outside ;
b/ Clearly identified by a symbol showing a **red** spark in a **white** edged **blue** triangle.

15.5.3 - There must be also an **exterior switch**, with a **handle** making possible to operate it at a distance with a hook :

- This switch must be put at **the lower part of the windscreen pillar on the left hand side**.

15.6- Towing eyes :

15.6.1 - Front and rear towing eyes shall :

a/ Be **rigid**, made from **steel**, with no chance of breaking, have an inner diameter between **80** and **100 mm** and be **5 mm** thick (round section for not cutting or damaging the straps used by the marshals) ;
b/ Be securely fitted to the structures of the chassis by means of a rigid piece made from **metal**
c/ (cable hoops are not permitted) ;
d/ Be within the perimeter of the bodywork as viewed from above ;
e/ Be easily identified and painted in **yellow**, **red** or **orange** ;
f/ Allow to tow a car stuck in a gravel bed.

15.6.2 - **Penalty :**

During the race, should the towing eye break the marshals will pull the car into a safe position by using any part of the car whatsoever they will judge strong enough and the car will be excluded from the race :

- The Competitor will have no right to lodge a protest if the car has been damaged.

ART. 16 - SAFETY STRUCTURES

16.1 - Rollover structure :

16.1.1 - A roll cage meeting the requirements of the International Sporting Code (Appendix J - Art. 253.8) is compulsory.

16.1.2 - Longitudinal struts or any equivalent device **ACO approved** shall provide lateral protection.

16.1.3 - Tubes in the driver's vicinity shall be wrapped in fireproof foam FIA approved.

16.2 - Firewalls :

16.2.1 - A compulsory **metallic** and completely **sealed firewall** is mandatory to stop flames in the engine compartment from getting into the cockpit.

16.2.2 - Any hole in the firewall must be of the minimum size necessary for the passage of controls and wires and must be kept sealed.

16.3 - Modifications :

16.3.1 - for the cars "Full type CEE" homologated or the equivalent for United States or Japan and produced at least 300 units per year, modifications of the chassis/body unit others that those permitted by the present regulation are possible. These modifications concern only the fitting of the rear diffuser, the rear wing supports and the mechanical elements (position of the engine, installation of a new gearbox, position of the radiator(s), suspension mounting points, etc.) which must be carried out within respect of the above technical regulations :

These modifications can be made only by the manufacturer of the car or by a tuner who has serious references in motor sport and with the agreement of the ACO (ACO homologation form) .

These modifications to the chassis must be subject of a certificate from the manufacturer or the tuner stipulating that the strength of the chassis is not altered.

The original materials must be retain.

Carbon chassis : the chassis homologated for the road must not undergo any modification. The mounting points of the various mechanical elements fixed on the carbon parts of the chassis (engine, gear-box, suspension, steering, etc..) must be those used on the road car.

No reinforcement will be permitted apart those possibly necessary for the installation of :

- the fuel tank and its equipments ;
- the rollover structure in the cockpit ;

Such modifications on the carbon chassis can be made only during his building, by the manufacturer and with the agreement of the ACO.

16.3.2 - No modification other than those specifically permitted by these regulations may be introduced into a structure which has been approved by an official Authority and by ACO.

ART. 17 - FUEL

17.1 - Fuel :

The Organiser will supply one type of fuel only (Eurosuper 98).

17.2 - Specifications : Ref. : International Sporting Code (Appendix J - Art. 258.16).

17.3 - Special fuels :

The use of any fuel other than gasoline (petrol) is subject to a special request submitted to the agreement of the Automobile-Club de l'Ouest and the ASN if necessary.

ART. 18 - FINAL TEXT

a/ The **French version** of these regulations is the only one valid.

b/ Any interpretation is the AUTOMOBILE CLUB DE L'OUEST (ACO) exclusive competence.

"LE MANS" SPORT GRAND TOURING ("LM" GTS)

APPENDIX 1

AIR RESTRICTORS DIAMETER

The tables below (air restrictor diameter and boost pressure limit) are made out in order to balance the performance of the cars.
In case of force majeure, ACO reserves the right to make any change which they will consider necessary as to maintain a fair balance during the Event.

2 valve engines :
For two valves per cylinder engines, the following restrictors diameter must be corrected according to the formula : D = {[D-1] x 1,034} + 1. The result will be rounded up to the nearest decimal.

Rotary engines :
For rotary engines, the following restrictors diameter must be corrected according to the formula :
D = {[D-1] x 1,10} + 1. The result will be rounded up to the nearest decimal.

The data recording system of the organizer :
- Is compulsory for turbocharged engines ;
- must be fitted into the cars with a normally aspirated engine at the request of the scrutineers ;

Competitors who wish to receive the mounting instructions of the system must ask for it.

1 - NORMALLY ASPIRATED ENGINES
(3 valve engines and more)

Minimum weight (Kg)	1100	1150	1200	1250	1300
Capacity maxi (cm3)	1 restrictor (mm)				
3500	45,9	46,9	47,9	48,9	49,9
4000	45,2	46,2	47,2	48,2	49,1
5000	44,3	45,3	46,3	47,2	48,2
6000	43,6	44,6	45,6	46,5	47,4
7000	43,0	43,9	44,9	45,8	46,7
8000		43,2	44,0	45,0	45,8

Minimum weight (Kg)	1100	1150	1200	1250	1300
Capacity maxi (cm3)	2 restrictors (mm)				
3500	32,8	33,4	34,2	34,8	35,6
4000	32,2	33,0	33,7	34,4	35,0
5000	31,6	32,4	33,0	33,7	34,4
6000	31,2	31,8	32,6	33,2	33,8
7000	30,7	31,4	32,0	32,7	33,3
8000		30,8	31,4	32,1	32,7

2 - TURBOCHARGED ENGINES

2.1 – Air Restrictors diameters
(3 valve engines and more)

Minimum weight (Kg)	1100	1150	1200	1250	1300
1 restrictor (mm)	43.4	44,4	45,3	46,3	47,1
2 restrictors (mm)	30,9	31,7	32,4	33,0	33,6

2.2 - *Absolute boost pressure*
a/ 3 valve engines and more :

Maximum capacity	2000	2400	2800	3200	3600	4000
Maximum boost pressure (millibars)	3360	2800	2400	2100	1870	1680

b/ *2 valve engines*:

Maximum capacity	2000	2400	2800	3200	3600	4000
Maximum boost pressure (millibars)	3820	3180	2730	2390	2130	1910