

TECHNICAL REGULATIONS FOR GTC CLASS

GTC 技术规则

* The English version shall be used should any dispute arise over their interpretation.

1. VEHICLES

1.1 FIA GT3 cars are not permitted.

1.2 All vehicles must have only 1 driver side door and 1 passenger side door.

1.3 Open Wheel vehicles, Clubman, Kit cars and centre-steered vehicles are NOT permitted, as determined by the Promoter.

1.4 All vehicles must have only four (4) wheels with the steering acting on the front wheels only unless rear wheel steering is originally fitted, in which case the original system may remain.

1.5 Vehicles may only contain one internal combustion engine

2. VEHICLE MODIFICATIONS

All vehicles must be presented as originally manufactured (see definitions) apart from the freedoms allowed in these regulations.

FURTHER NOTE

Any vehicles that do not meet the definitions listed will need to be considered on a case-by-case basis. If your vehicle does not have shock towers, frame rails, or any other items listed or you are unclear (for example a vehicle which came equipped with push rod suspension) you must submit your vehicle modifications for approval.

2.1 BODY

All convertible type vehicles must be equipped with a hard top or a roll cage that complies with FIA Standing Regulations, and/or meets the approval of the Chief Scrutineer.

Any non- movable element must be attached with the use of tools.

All bodywork joints in the vicinity of the refueling connections must be designed in such a way as to prevent any leakage of fuel into the engine compartment and/or cockpit during refueling.

2.1.1 Total vehicle width (measured at its widest point, excluding mirrors and front winglets/canards as outlined) must not exceed 350mm wider than original).

2.1.2 Windscreen may be replaced with Lexan but must be in original position under FIA Regulation.

2.1.3 Original lights must be retained in original position and must be visible from rear (cannot be decals).

The addition of a single working brake light may be fitted as a minimum if original lights are inoperable.

2.1.4 No fully tubular construction or composite monocoques are allowed.

2.1.5 bonnet and boot lids must have at least two safety fasteners, both of which are clearly indicated by red (or contrasting color) arrows. It must be possible to remove or open them without the use of tools.

2.1.6 Door hinges must be designed as to allow a quick release of the entire door when opened.

2.2 CHASSIS

2.2.1 All vehicles must retain the original firewall.

2.2.2 Modifications can be made for transmission clearance, wiring or roll cage, however the resulting bulkhead must resemble the original and continue to be both structural and create seal between the forward area and the cockpit. Any replacement material must be of the same thickness as the original firewall and of similar material (e.g., steel for steel, aluminum for aluminum).

2.2.3 Original shock towers position can be moved horizontally no more than 1.5 inches.

2.2.4 No fully tubular construction or composite monocoques are allowed.

2.2.5. The rear most part of the engine block may be no more than 2 inches rearward of the most forward point of the firewall. If the vehicle is rear engine, the front most part of the engine block may be no more than 2 inches forward of the most rear point of the mainly vertical firewall.

2.2.6 Aftermarket sub frames are permitted to be used provided they are bolted in.

2.2.7 Composite/ Carbon fiber materials can be used only in non-structural components unless originally fitted. The use of magnesium alloy sheet less than 3 mm thick is forbidden.

2.2.8 Inertial dampers (shock absorbers) are forbidden.

2.2.9 The steering lock must be dismantled and the column adjusting system must be locked.

The steering wheel must be fitted with a quick release system.

2.2.10 The Wheel Hub must remain in original position.

2.3 MINIMUM VEHICLE WEIGHTS

Is the weight of the car with the driver at any time during the competition.

There is no limit on the weights, but the China GT Committee reserves the right to adjust the minimum weight of any car in order to maintain the balance of performance between the cars.

2.4 ROLLOVER PROTECTION

Rollover protection is compulsory and must be of a minimum 6-point construction that complies with FIA regulations, and/or meets the approval of the Chief Scrutineer.

2.5 AERODYNAMIC AIDS

Strength and method of aero component fastening will be checked thoroughly at scrutineering and if found to be unsuitable the vehicle will not be permitted to start until improvements are made to meet approval of the Chief Scrutineer.

Active aero includes hydraulically or electronically actuated or movable components are not permitted.

All measurements have a tolerance of +/-3mm to allow for inaccuracy of hand measurement and thermal expansion.

The China GT Committee reserves the right to adjust the characteristics of the rear aerodynamic device (wing) of any car in order to maintain the balance of performance between the cars.

It is permitted to fit the following:

2.5.1 Front under tray/splitter must follow the outline of the front bar and may extend only 150mm beyond the original coachwork longitudinally forward. It can extend rearwards to the front axle centerline.

2.5.2 Front aero is permitted but must not extend higher than the top of the bonnet or 100mm beyond the vehicle bodywork at its closest point; whichever is smallest.

2.5.3 Front canards/winglets are permitted but must not extend more than 75mm beyond the coachwork and must remain within the maximum vehicle width defined in section E1 vehicle modifications - Body

2.5.4 Rear Wing assembly design is free and may have up to two elements. It must extend no higher than the horizontal line from the highest point of the roof, no wider than 100mm per side wider than the body width and 100mm further rearward than the original coachwork except in the case of a hatchback where the wing can be no higher than 250mm from the highest point of the wing to the roofline and must be on the rear portion of the roof.

2.5.5 End plates are measured separately with a maximum thickness of 10mm.

2.5.6 Rear diffuser/under tray may extend 300mm rearward beyond the furthest point of the vehicles bodywork.

2.5.7 Flat floors are permitted. The flat floor is not permitted to be part of the structural monocoque.

Mechanical force is not permitted to be used with the design of the floor

2.6 ENGINE

2.6.1 Engine modifications are free except that vehicles must retain an engine from the OEM manufacturer of that vehicle and the number of cylinders or in the case of a rotary engine, rotors must remain as per OEM however the use of a turbocharger or supercharger is allowed.

2.6.2 The crankshaft centre line may be lowered. The engine positioning and mounts being free provided that its relationship to the firewall is not exceeded as in rule 2 (see chassis)

2.6.3 Only air may be mixed with the fuel as an oxidant.

2.7 Intake system

2.7.1 The intake system is defined by the assembly of components situated between the restrictor(s) and the intake ports on the cylinder head(s).

Supercharged engines without restrictors: The intake system is defined by the assembly of components situated between the air inlet of the compressor and the intake ports on the cylinder head(s).

2.7.2 All the air feeding the engine must pass through the air restrictors, and no pipe containing air is permitted to enter or to exit from the intake system. Sealing the restrictors must cause the engine to stop immediately (it must be possible to place directly a plug inside the restrictors). This check must be carried out at an engine speed of 2500 rpm, the pressure sensors present inside the intake system being possibly disconnected.

The depression measured in the intake system when the engine stops must be at least equal to the atmospheric pressure in the place where the check is carried out minus 150 mbar, maintained during at least 0.5 seconds.

2.7.3 The air restrictors and the supercharging pressure must be in compliance with the applicable notification from the GT Committee.

The China GT Committee reserves the right to adjust the diameter of these air restrictors and/or the supercharging pressure in order to maintain the balance of performance between the cars.

2.8 TRANSMISSION, DIFFERENTIAL AND DRIVELINE

2.8.1 Clutches and flywheel are free.

2.8.2 Gearbox and differential may be replaced by another of free design.

2.8.3 Internal components of transmission and differential are free.

2.8.4 The bell housing is free.

2.8.5 Gearbox and differential oil coolers are permitted.

2.8.6 Automatic transmissions if provided as an option by the manufacturer for that model are permitted.

2.8.7 All cars must have a reverse gear which, at any time during the competition, can be selected while the engine is running and be used by the driver when seated normally.

2.9 SUSPENSION

2.9.1 Springs and Dampers may be replaced however the number of dampers per vehicle must remain as original.

2.9.2 Suspension bushes are free.

2.9.3 Original mounting points of wheel end can be changed, all mounting points may be reinforced and altered in design.

2.9.4 Each fully sprung part of the automobile must be at least the specified height above the ground when measured at any point within the wheelbase. The automobile ride height will be measured without the driver and tire pressures at a minimum of 20psi.

2.9.5 Sway bars are free.

All measurements have a tolerance of +/-3mm to allow for inaccuracy of hand measurement and thermal expansion.

2.9.6 Vehicle suspension geometry and arms are free

2.9.7The China GT Committee reserves the right to adjust the ride height in order to maintain the balance of performance between the cars.

2.10 BRAKES

2.10.1The brake and clutch fluid tanks may be fixed inside the cockpit, on condition that they are securely fastened and protected.

2.10.2 For cars fitted with anti-lock and/or automatically variable power braking systems, the control module (ABS unit) must not have more than 8 active electro valves.

The FIA Technical Delegate may at any time oblige the competitor to use the reference unit registered with the FIA by the manufacturer.

2.10.3 No cooling device other than a simple duct is permitted. Ducts are free downstream of the air inlets on the homologated bodywork, in compliance with the present regulations. Installation of ducts must be made without modifying the homologated components.

2.11 TYRES

2.11.1 All tires must be marked by the organizers at scrutineering.

2.11.2 The use of any tire softening chemical or treatment on tires is strictly prohibited and will result in immediate exclusion from the event

2.11.3 Random tire checking will be conducted throughout the event, failure to comply will result in a penalty up to exclusion.

2.11.4 Tire sizes are defined by width (mm)/aspect ratio (profile)/diameter (inch)

2.11.5 Tire restrictions will apply to all competitors.

2.12 WHEELS

2.12.1 Wheels are free and size is unrestricted.

2.12.2 A maximum of one metallic spacer may be used behind each wheel. Consideration must be given to wheel stud length when fitting spacers.

2.12.3 Pressure control valves on the wheels are forbidden.

2.12.4 If a single wheel nut is used, a safety pin fitted with a spring must be in place on the nut or the stub axle whenever the car is running and must be replaced after each wheel change. These pins must be painted "day-glow" red or orange.

2.12.5 Sensors for measuring the pressure and the temperature of the tires when the car is in motion are strongly recommended. If these sensors are used, there must be at least one warning light to notify the driver of a probable failure.

2.13 INTERIOR

2.13.1 The only components which can be added in the cockpit are:

- Safety equipment and structures
- Tool kit
- Seat, instruments and any other controls necessary for driving including the brake balance adjuster
- Electronic and electrical equipment
- It is permitted to channel air towards the electronic equipment on condition that the ventilation devices comply with the present
- Driver cooling system
- Ballast
- Pneumatic jacks and their pipes
- Battery
- Driver ventilation equipment
- Braking and clutch system hydraulic lines with properly secured connectors
- Electronic control unit and hydraulic unit of the ABS system
- Pneumatic unit of the gearbox control system.

2.13.2 None of the above items may hinder cockpit exit or the driver's visibility.

2.13.3 The above components must be covered where necessary by a rigid protective material to minimise injury, and their mountings must be able to withstand 25 g deceleration.

2.13.4 The driver, seated in his normal driving position, must be able to get out from the cockpit in 7 seconds through the driver's door and in 9 seconds through the passenger's door.

For the purposes of these tests, the driver must be wearing all normal driving equipment, the seat belts must be fastened, the steering wheel must be in place in the most inconvenient position, and the doors must be closed.

2.13.5 With the driver seated in his normal driving position in the car with which he is entered, wearing a cervical collar appropriate to his size and with the seat harness tightened, a member of the medical service must demonstrate that the helmet which the driver will wear in the race can be removed from his head without bending his neck or spinal column.

2.14 Data logging

The car must be fitted with a data logging system able to provide at least the following data:

- Speed of the 4 wheels (failing that, of one front wheel and one rear wheel)
- Internal Combustion Engine Revs
- Longitudinal acceleration
- Lateral acceleration
- Accelerator position.

The data thus collected must remain at the disposal of the China GT Committee.

2.15 Telemetry

The use of telemetry is forbidden.

2.16 Driving aids

Any electronic stability control system is forbidden.

3. VEHICLE SAFETY

3.1 Fire extinguishers

3.1.1 The use of the following products is prohibited: BCF, NAF

3.1.2 All cars must be equipped with an extinguishing system homologated by the FIA in accordance with Article 253-7.2, except as regards the means of triggering.

3.1.3 A means of triggering from the outside, possibly combined with the circuit breaker and operated by a single lever, must be present at the bottom of the windscreen on the left side.

3.1.4 It must be marked with a letter "E" in red inside a red-edged white circle at least 100 mm in diameter.

3.2 Safety belts

3.2.1 The harness must be used in accordance with Article 253-6 of Appendix J.

3.2.2 The original seatbelts must be replaced by a valid safety harness homologated according to FIA 8853/98

standard.

3.2.3 The wearing of two shoulder straps, one lap strap and two crotch straps is compulsory.

3.2.4 It must have a minimum of five (5) anchorage points.

3.2.5 Elastic cords attached to the shoulder straps are forbidden.

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

3.3 Rear view mirrors

3.3.1 The car must be fitted with two rear view mirrors, one fitted on each side of the car, in order to give an efficient view to the rear.

3.3.2 Each mirror must have a minimum area of 100 cm^2 .

3.3.3 The Scrutineers must be assured through a practical demonstration that the driver, seated normally, can clearly see the vehicles following him.

3.3.4 To this end, the driver must identify letters or figures, 15 cm high and 10 cm wide, displayed at random on boards placed behind the car according to the following instructions:

3.3.5

- Height : Between 40 cm and 100 cm from the ground.
- Width : 2 m one side or the other of the longitudinal centerline of the car.
- Position : 10 meters behind the centerline of the rear axle of the car.

4 FUEL SYSTEM, REFUELLING

4.1 Refueling during the race

4.1.1 Refueling the car by any other means than gravity, with a maximum height of 2 meters above the track where the refueling takes place, is forbidden throughout the competition.

4.1.2 During the race, only one autonomous supply tank complying with the Drawing 252-7 must be used per car.

This tank must have a simple cylindrical internal shape and must not have any additional internal parts.

It must not be pressurized.

For safety reasons, this tank must be fixed, through a tower, onto a trolley with the following characteristics:

All the tower components must be mechanically assembled without any degree of freedom in relation to the trolley.

The base of the trolley must have a surface area of at least 2 m^2 and must be made with a case fitted on 4 self-braking castors, ballasted with a weight greater than that of the tank filled with fuel.

A system for weighing the fuel may be applied through placing a weighing plate underneath the tank, provided that the characteristics set out above are respected.

An arm for supporting the refueling lines and air hoses may be attached to the trolley:

- It must be independent of both the tank and the tower
- It is recommended that this arm be allowed a degree of freedom in relation to the trolley (rotation following a vertical axis)
- It must not exceed 4 m in length and must allow a free passage of a height of 2 m over its entire length, including the accessories
- An identification plate bearing the race number (recto/verso) of the competing car must be fixed to its end.

A flow restrictor with the following dimensions:

Thickness: 2 mm

Maximum internal diameter: 33 mm must be placed at the exit of the refueling tank (see Drawing 257A-2).

4.1.3 Above the tank there must be an air vent system approved by the FIA.

4.1.4 The refueling pipe, minimum length 250 cm (flexible part only), must be provided with a leak-proof coupling to fit the filler mounted on the car.

During refueling the outlet of the air vent must be connected to the supply tank with an appropriate coupling of the same diameter.

4.1.5 Before refueling commences, the car and all metal parts of the refuelling system, from the coupling to the supply tank and its rack, must be connected electrically to earth by a manual contactor having no other function.

4.1.6 A 90° cut-off valve, situated on the outlet of the supply tank and controlling the fuel flow, must be manned at all times during refueling.

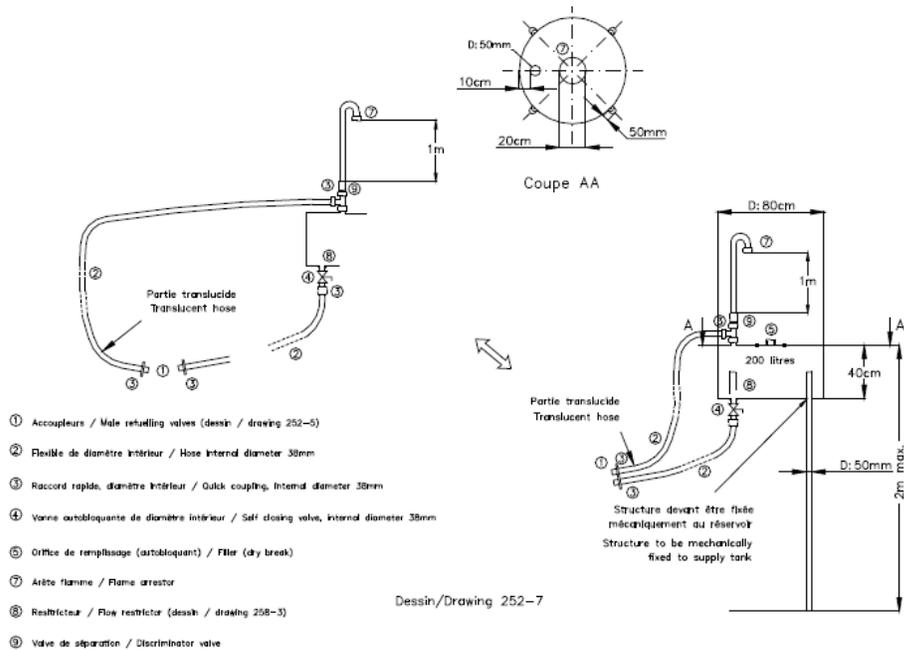
A self-closing valve with an internal diameter of 38 mm must be fixed under the supply tank according to Drawing 252-7.

4.1.7 All hoses and fittings from the supply tank to the car and back must have a maximum inside diameter in compliance with Drawing 252-5(1.5 or 2.0 inches maximum for version A).

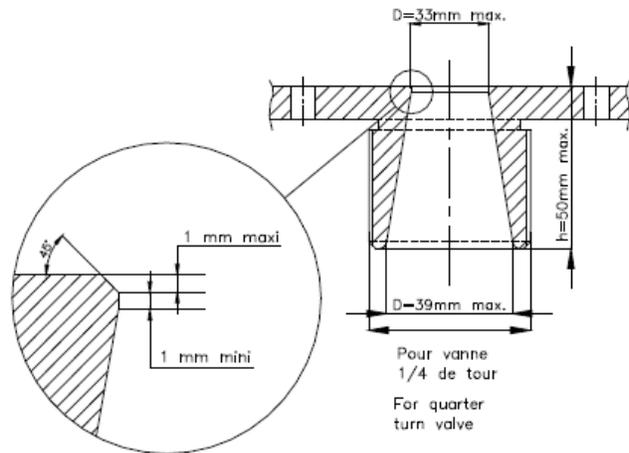
4.1.8 A visible level equipped with isolating valves fitted as close as possible to the tank must be mounted to the tank.

4.1.9 The storing of fuel on board the car at a temperature less than 10°C below the ambient temperature is forbidden.

The use of a specific device, whether on board the car or not, to reduce the temperature of the fuel below the ambient temperature is forbidden.



252-7



257A-2

4.2 Fuel capacity

The China GT Committee reserves the right to adjust the capacity of the fuel tank in order to maintain the balance of performance between the cars.

4.3 Fuel tanks

All fuel tanks must be rubber bladders conforming to or exceeding the specifications of FT3-1999, and must comply with the prescriptions of Article 253-14.

The fuel cell ventilation system must be that homologated.

For cars homologated as from 01.01.2016

It is recommended that the tank be filled with MIL-B-83054, SAE-AIR-4170 (MIL-F87260 recommended in case of quick refueling) type safety foam.

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 of metal or composite and bonded into the fuel tank.

The fuel tank must be contained in a flameproof* and liquid-proof housing that has no other mechanical function.

This housing must include a crushable structure** on all surfaces unless positioned within and protected by the main structure/chassis.

The bottom part of the housing may be made of the flat bottom, provided that it complies with the specifications of the crushable structure**.

* Flameproof:

The external face of the part must have a V0 level of acceptance respecting the "UL94" US standard (fire-retardance capability).

** Crushable structure :

Sandwich construction with a minimum thickness of 10 mm, made of a core (minimum crushing strength of 18N/cm²) and of two skins of 1.5 mm minimum thickness (minimum tensile strength of 225N/mm²).

Composite material authorized.

4.4 Filling & venting devices

For cars homologated as from 01.01.2016

They may be either combined or single units fitted on both sides of the car.

They must be equipped with leak proof dry break couplings complying with the dead man principle (without retaining device when in an open position).

Couplings dimensions: Appendix J - Diagrams 252.5 .A with internal diameter $D \leq 2"$ or Diagrams 252.5.B.

Locations: Above the complete wheels, within the track of the nearest axle, where they are not vulnerable in the event of an accident.

They must not protrude beyond the bodywork surface.

Filling devices may be installed in the side rear windows provided they are separated from the cockpit and the engine compartment by a firewall.

The vent and filler spouts may pass through the cockpit as close to the walls as possible.

Their pipes must be made from metal or flame resistant / flame retarding material, and their connectors from material identical to that used for the walls of the tank.

They must be isolated from the cockpit by means of a leak-proof protection.

4.5 Seat and Headrest

The original driver's seat must be replaced by a valid racing seat homologated according to FIA 8862-2009 standard.

Maximum thickness of any cushion used between the driver and the homologated seat = 50 mm.

With the driver seated in his normal driving position, the eye line must be below the top edge of the side head support and above the bottom edge of the side head support.

The lateral distance between the helmet and the side head support (measured at 150 mm from the forward face of the side head support) must not be greater than 50 mm (40 mm as from 2017) and may be adjusted by means of additional foam.

The material of the foam extension must be the same as the one in the head support of the given seat.

The fixation of the foam extension must be approved by the FIA.

The use of the seat brackets (supports) homologated with the seat is compulsory.

The seat mountings must be homologated by the car manufacturer.

The seat must be mounted to these mounting points by means of at least 4 M8 bolts of at least 10.9 quality.

The seat longitudinal centerline must not be less than 270 mm from the car's longitudinal centerline (measured transversally).

4.6 Master switch

4.6.1 The driver, when seated normally at the wheel with the 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.

4.6.2 The switch must be positioned on the dashboard or in any other place easily accessible and must be able to be handled from inside the car by the driver seated and secured by his safety belts, or from outside by the officials. The switch must be clearly identified by a symbol showing a red spark in a white-edged blue triangle.

4.6.3 There must be also an exterior switch, with a handle that can be operated from a distance by a hook.

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

4.7 Towing eyes

Front and rear towing eyes are compulsory.

They must be securely fixed to the structure of the chassis.

They must be easily identifiable (coloured yellow, red or orange), and accessible, and must allow the towing of a car stuck in a gravel bed.

They must be within the perimeter of the bodywork as viewed from above.

4.8 Lifting device

The device must be that homologated.

4.9 Racing nets

They are compulsory and must be homologated according to FIA8863-2013 standard (Technical List n°48).

They must be attached to the homologated mounting points (see the homologation form of the car) and must be installed in accordance with the installation specifications published by the FIA.

5 ELECTRICAL EQUIPMENT

5.1 Windscreen wiper

The system is free but one windscreen wiper in working order is mandatory.

The capacity of the windscreen washer tank may be modified.

5.2 Starting

A starter must be fitted and be in working order at all times during a competition.

The driver must also be able to operate the starter when seated normally.

5.3 Lighting equipment

5.3.1 All lighting equipment must be in working order throughout the competition.

5.3.2 The exterior lighting equipment must at least ensure the following functions:

- Headlights, direction indicators, stop lights, rain light (see 8.3.4) and rear sidelights.
- For safety reasons, it is obligatory for headlights to produce a white beam.
- For races run in the daytime, cars from the GT3 Group must be equipped with white headlight covers.
- For races run at night, the front bumper may be modified to accommodate a maximum of 4 supplementary headlights.
- These modifications must not create any aerodynamic down force.

5.3.3 The bulbs of the reversing lights must be removed.

5.3.4 One rain light approved according to the ECE R38 road standard (or an equivalent or stricter standard

from another country), or approved by the FIA (Technical List n°19) is compulsory at the back of the car and it must be in working order throughout the competition.

It must be:

- Directed to the rear at 90° to the car centerline
- Clearly visible from the rear
- Mounted no more than 10cm from the car centerline
- At least 35 cm above the reference plane
- At least 45 cm behind the rear wheel centerline, measured to the face of the lens and parallel to the reference plane
- Able to be switched on by the driver when seated normally in the car.

The three measurements are taken to the centre of area of the lens.

5.4 Batteries

They must be securely fixed to the body shell and completely protected by a box made of insulating material.

The attachment to the body shell must be homologated as Option

Variant or must consist of a metal seat and two metal clamps, with an insulating covering, fixed to the floor by bolts and nuts.

For attaching these clamps, bolts with a diameter of at least 10 mm must be used, and under each bolt, a counter plate at least 3 mm thick and with a surface of at least 20 cm² beneath the metal of the bodywork (see Drawings 255-10 and 255-11).

6. DEFINITIONS

Alternative Materials - Materials of suitable and acceptable strength and construction for use in motor vehicle parts and panels.

Body work - Refers to the exterior body of a motor vehicle.

Dashboard - A dashboard (also called dash, instrument panel, or fascia) is a control panel placed in front of the driver of an automobile, housing instrumentation and controls for operation of the vehicle.

Firewall - A firewall is a fire proof barrier that separates the engine from the driver and passengers.

Frame Rails - Two primary boxed sections running fore to aft on the vehicle.

Standard Specification - As originally supplied from the manufacturer, including allowable production tolerances.

Sub Frame - A structural component of an automobile that uses an additional separate structure to carry certain components, such as the engine, drivetrain, or suspension. The sub frame is bolted to the original

integral monocoque, chassis or frame rails of the vehicle and may be equipped with rubber bushings to dampen vibration.

Original - A component which is the one originally fitted when manufactured Eg. OEM (Original Equipment Manufacturer).

7. APPENDIX

The Porsche 911 GT3 Cup must be presented as originally manufactured.

Only modification allowed on the original car is the fitting of the ABS (and paddle shift for the 997 Spec). All parts mounted on the car must be Porsche original parts.