

**2008 Technical Regulations (1601cc upto 2000 cc)
Group N+ Specific Regulations**

With effect from January 2008

ARTICLE 1 : DEFINITION

Large scale series production touring cars.

ARTICLE 2: HOMOLOGATION

At least 2500 identical units must have been produced in 12 consecutive months and Homologated by the MAI in Touring Cars (Group A).

ARTICLE 3: SEATS

Seats With Head Rests Are Mandatory
- FIA Homologated Seats Are Mandatory

**THE TECHNICAL DELEGATE IS THE FINAL AUTHORITY ON THE
CONDITION AND SAFETY OF THE SEATS USED**

**ARTICLE 4: MODIFICATIONS AND ADJUNCTIONS ALLOWED OR
OBLIGATORY**

All the modifications that are not allowed by the present regulations are expressly forbidden.

The only work which may be carried out on the car is that necessary for its normal servicing, or for the replacements of parts worn through use or accident. The limits of the modifications and fittings allowed are specified hereinafter.

Apart from these, any part worn through use or accident can **only be replaced by an original part identical to the damaged one.**

The cars must be strictly series production models identifiable by the homologation form data.

ARTICLE 5: MINIMUM WEIGHT

The cars must have at least the following weight plus the weight of the safety devices (35 kg) irrespective of what is mentioned in the homologation form.

1600cc upto 1800cc----- 1030 kg + 35 kg = 1065 kg
1800cc upto 2000cc----- 1080 kg + 35 kg = 1115 kg

This is the real weight of the empty car (without persons or luggage aboard) without tools, jack.

All the liquid tanks (lubrication, cooling, braking, heating where applicable) must be at the normal level foreseen by the manufacturer, with the exception of the windscreen wiper or headlight wiper, brake cooling system, fuel and water injection tanks, which shall be empty.

Additional headlights, which do not appear on the homologation form, must be removed before weighing.

ARTICLE 6:

6.1 Engine

- Engine shields made of plastic material, the purpose of which is to hide mechanical components in the engine compartment, may be removed if they have a solely aesthetic function.

- The accelerator cable may be replaced or doubled by another one regardless of whether it comes from the manufacturer or not.

- The screws and bolts may be changed, provided that the replacements are made from ferrous material.

- **Ignition:** The make and type of the spark plugs, rev. limiter and high-tension leads are free.

- The electronic control unit and the ignition components in the electronic control unit are free. - The wiring loom is free.

- Sensors and actuators on the input side are free

- The data logging system is free.

- **Compression ratio** – free (permitted to face the block to achieve the desired compression ratio).

Cylinder head: Modifications are permitted to the original cylinder head and its components e.g. valves (provided the valve diameter remains as mentioned in the homologation form), valve guides etc.

- All drive pulleys are free - e.g. alternator, crankshaft etc

- In order to accommodate manifolds etc, it is permitted to re-locate components obstructing the fitment of the same

- **Valves:** Free as long as it respects the diameter mentioned in the homologation form. Valve angles have to remain original. Valve springs are free

- **Cylinder head gasket:** Free
- **Camshaft:** Free
- **Timing sprockets:** Free.
- **Engine Block:** The Connecting Rods and Pistons assembly are FREE. Re-boring is permitted (maximum of 0.75 mm.)
- **Flywheel:** The original flywheel may be modified.
- **Cooling system:** Free.
- **Intake System:** Free - Manifold, throttle body, system of operation (carburetted or injection), air-filter and its housing is free.
- **Lubrication:** The fitting of baffles in the oil sump is authorised. Oil filter cartridges are free. Dry sump lubrication is permitted so long as the oil tank is located in the engine compartment.
- **Mountings:** The engine and gearbox mountings are free, but not their numbers. THE ORIGINAL SUPPORT POINTS HAVE TO BE USED.
- **Exhaust** – Free (Manifold to the exit)
These liberties must not entail any bodywork modifications and must respect the laws of the country.
- **It is permitted to have an air scoop on the bonnet so long as it does not exceed 7.5cms in height.**

6.2 Transmission

6.2.1) Clutch:

The disc and the pressure assembly are free, including the weight, with the exception of the number. The diameter of the clutch disc may be increased.

6.2.2) Gearbox:

The interior of the gearbox is free.

The number of teeth and ratios are free. The joints of the gearbox linkage are free.

6.2.3) Differential:

The use of a mechanical type limited slip differential is authorised, provided that it can be fitted in the series housing

In order to allow its fitting, the interior of the original differential's housing may be modified.

"Mechanical limited slip differential" means any system that works purely mechanically, i.e. without the help of a hydraulic or electric system.

A viscous clutch is not considered to be a mechanical system.

If the homologated vehicle is fitted with a viscous clutch, it may be retained but it will not be possible to add another differential.

6.2.4) Half-shafts: Free. **Hubs** are Free.

6.3 Suspension

THE MODIFICATION OF SPRING AND SHOCK ABSORBER ADJUSTMENTS FROM THE COCKPIT IS PROHIBITED

The reinforcing of the structural parts of the suspension (with the exception of anti-roll bars) and its anchorage points by the addition of material is allowed.

The suspension reinforcements must not create hollow sections and must not allow two separate parts to be joined together to form one.

- **Springs:** The spring seats may be adjustable if the adjustable structural part is a part of the spring seat and is separated from the original suspension parts/bodywork (it may be removed).

Coil springs: The length is free, as are the number of coils, the wire diameter, the external diameter, the type of spring (progressive or not) and the shape of the spring seats.

The number of springs and spring seats is free provided the springs are mounted in series.

- **Leaf springs:** The length, width, thickness and vertical curvature are free.

Torsion bars: The diameter is free.

These freedoms on the suspension springs do not authorise one to disregard article 205 of the homologation form (minimum height of the center of the hubcap, wheel passage opening).

- **Shock absorbers:** Free, provided that their number, their type (telescopic, arm, etc.), their working principle (hydraulic, friction, mixed, etc.), and their attachment points remain unchanged.

The checking of the operating principle of the shock absorbers will be carried out as follows:

Once the springs and/or the torsion bars are removed, the vehicle must sink down to the bump stops in less than 5 minutes.

The damper tanks may be attached onto the unmodified shell of the cars.

If the shock absorbers have separate fluid reserves located in the cockpit or in the boot if this is not separated from the cockpit, these must be strongly fixed and must have a protection.

A silent block may be replaced by a "**Uniball**" joint, provided the mounting points remain the same, and is located in the same position as the original one.

Gas filled dampers, regarding their working principle, will be considered as hydraulic dampers.

If, in order to change the damping element of a Mac Pherson suspension, or a suspension operating in an identical manner, it is necessary to replace the entire Mac Pherson strut, the replacement parts must be mechanically equivalent to the original ones and have the same mounting points.

For McPherson suspensions, the shape of the spring seats is free. Their material is free.

In the case of oil-pneumatic suspension, the spheres may be changed as regards their dimension, shape and material, but not their number.

A tap, adjustable from outside of the car, may be fitted on the spheres.

- **Silent blocks:** Free.

6.4 Wheels and tyres

6.4.1) Wheels:

The wheels are **FREE**,

Wheels made from forged magnesium are forbidden (including standard wheels).

They must be covered by the wings (same checking system as in Group A, article 255.5.4), and the maximum track given on the homologation form must be respected.

Wheel fixations by bolts may be changed to fixations by pins and nuts provided that the number of attachment points and the diameter of the threaded parts as indicated on drawing 254-1 are respected.

Air extractors added on the wheels are forbidden.

6.4.2) Tyres:

Tyres are **FREE** provided that they can be mounted on those wheels.

The use of any device for maintaining the performance of the tyre with an internal pressure equal to or less than the atmospheric pressure is forbidden. The interior of the tyre (space between the rim and internal part of the tyre) must be filled only with air.

6.4.3) Spare wheel:

The spare wheel (wheels) is (are) compulsory if mentioned in the homologation form.

The spare wheel may be brought inside the driving compartment, on condition that it is firmly secured there and that it is not installed in the space reserved for the occupants.

6.5 Braking system

With the exception of the modifications authorised by this article, the braking system must be original or homologated in Option Variant (VO).

- Pressure Regulator: Front and Rear Regulator / Limiter authorised

Brake linings are free, as well as their mountings (riveted, bonded, etc.) provided that the contact surface of the brakes is not increased.

Protection plates may be removed or bent.

In the case of a car fitted with servo-assisted brakes, this device may be disconnected. The same applies for anti-lock braking systems.

If the anti-lock braking system (ABS) is disconnected or removed, the use of a mechanical rear braking distributor homologated by the manufacturer in VO is authorised.

It is permitted to add a spring in the bore of the callipers.

Brake lines may be changed for aviation type lines.

A device for scraping away the mud that collects on the brake discs and / or the wheels may be added.

6.5.1) XXX

6.6 Bodywork

6.6.1) Exterior:

Hubcaps must be removed.

Protective headlight covers may be fitted provided that their only function is to cover the glass, and that they have no influence on the car's aerodynamics.

The fitting of underbody protections is authorised in rallies only, provided that these really are protections which respect the ground clearance, which are removable and which are designed exclusively and specifically in order to protect the following parts: engine, radiator, suspension, gearbox, tank, transmission, steering, exhaust, extinguisher bottles. Underbody protections may extend the whole width of the underside part of the front bumper only in front of the front wheel axis.

Plastic soundproofing parts may be removed from the wheel openings. These plastic elements may be changed for aluminium or plastic elements of the same shape.

Any locking system may be used for the cap of the petrol tank.

The changing of the front and rear windscreen wiper blades is authorised.

6.6.2) Interior:

The front seats 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 front seat is formed by the height of the seat without the headrest, and if the headrest is incorporated into the seat, by the rearmost point of the driver's shoulders.

The rear seats may be removed.

The rear safety belts may be removed.

6.6.2.1) Should the fuel tank be installed in the boot and the rear seats removed, a fireproof and liquid-proof bulkhead must separate the cockpit from the fuel tank.

In the case of twin-volume cars it will be possible to use a non-structural partition wall in transparent, non-flammable plastic between the cockpit and the tank arrangement.

6.6.2.2) Dashboard:

The dashboard is free. The central console may be removed

6.6.2.3) Doors – Door side trim:

It is permitted to remove the soundproofing material from the doors, provided that this does not modify the shape of the doors.

It is permitted to remove the original trim (door pads) from the doors provided a fabricated trim is installed in its place.

It is permitted to replace electric winders with manual ones.

6.6.2.4) Floor

Carpets are free and may thus be removed.

6.6.2.5) Other sound-proofing materials and trim:

Other soundproofing materials and trim, except for those mentioned under articles 6.6.2.3 (Doors) and 6.6.2.2 (Dashboard) may be removed.

6.6.2.6) Heating system:

The original heating equipment may be retained. The following parts of the air conditioning system may be removed: condenser and auxiliary fan, fluid tank, evaporator and fan, expansion valve, as well as all pipes, connections, contact switches, sensors and actuators necessary for the functioning of the system.

The compressor may be rendered inoperative or removed.

6.6.2.7) The removable rear shelf in twin-volume cars may be removed.

6.6.3) Additional accessories

All those, which have no, influence on the car's behaviour, for example equipment that improves the aesthetics or comfort of the car interior (lighting, heating, radio, etc.), are allowed without restriction.

In no case may these accessories increase the engine power or influence the steering, transmission, brakes, or roadholding, even in an indirect fashion.

All controls must retain the role laid down for them by the manufacturer.

They may be adapted to facilitate their use and accessibility, for example a longer handbrake lever, an additional flange on the brake pedal, etc.

The following is allowed:

1) Measuring instruments such as speedometers etc. may be installed or replaced, and possibly have different functions. Such installations must not involve any risk. However, the speedometer may not be removed if the supplementary regulations of the event prevent this.

2) The horn may be changed and/or an additional one added, within reach of the passenger.

The horn is not compulsory on closed roads.

3) The handbrake locking mechanism may be removed in order to obtain instant unlocking (fly-off handbrake).

4) The steering wheel is free.

The locking system of the anti-theft steering lock may be rendered inoperative.

5) Additional compartments may be added to the glove compartment and additional pockets in the doors, provided that they use the original panels.

6) Insulating material may be added to the existing bulkheads to protect the passengers from fire.

6.6.4) Reinforcements:

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, on condition that they are removable and are attached by means of bolts.

The distance between a suspension attachment point and an anchorage point of the bar cannot 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 MacPherson suspension or similar.

In the latter case, the maximum distance between an anchorage point of the bar and the upper articulation point will be 150 mm (drawings 255-4 and 255-2).

Apart from these points, this bar must not be mounted on the bodyshell or the mechanical parts. Strengthening of the suspended part is allowed provided that the material used follows the original shape and is in contact with it.

6.6.5) When the spare wheel is originally set in a closed accommodation, and when this wheel is changed for a thicker one (see article 6.4), situated in this space, it is possible to remove from the cover of the location of the wheel the surface induced by the diameter of the new wheel (drawing 254-2).

6.7 Electrical system

- **Battery:** The make, capacity, and battery cables are free. The tension and the site of the battery may be changed

A power take-off connected to the battery is permitted in the passenger space.

- **Generator:** May be replaced by a more powerful one. A dynamo may not be replaced by an alternator and vice-versa.

- **Lighting system:** Additional headlights including the corresponding relays are allowed, provided that the total does not exceed eight (tail and parking lights not included) and that this is accepted by the laws of the country.

They may not be housed within the bodywork. Headlights and other exterior lights must always exist in pairs.

The original headlights can be made inoperative and covered with adhesive tape.

They can be replaced by other headlights, in compliance with this article.

A reversing light may be fitted provided it can only be used when the gear lever is in the "reverse" position, and provided that the police regulations on this subject are observed.

- **Fuses may** be added to the electrical system.

6.8 Fuel circuit

Providing the original tank is equipped with an electric pump and an interior filter, it is possible when using an FT3 or FT3 1999 tank or another tank homologated by the manufacturer on the car's homologation form to place a filter and a pump with identical characteristics to the homologated one outside.

These parts must be protected in adequate fashion.

The fitting of a second fuel pump is authorised, but this must be only a spare fuel pump, i.e. it cannot operate in addition to the authorised pump. It must be connectable only when the car is immobile and by means of a purely mechanical device situated beside the pumps.

The filler holes may not be located in the window panels.

Fuel lines must be changed for aviation type lines if an FT3 or FT3 1999 tank is used, the route of these lines being free. Should a series production tank be used, this change is optional.

The total capacity of the tanks must not exceed that indicated in article 401.d of the Group N homologation form, except for rallies, if the car is fitted with FT3 or FT3 1999 tanks.

In this case, the total capacity of the tanks must not exceed the following limits, in relation to the engine capacity:

upto 700 cc : 60 ltrs

over 700 cc and upto 1000 cc : 70 ltrs

over 1000 cc and upto 1400cc : 80 ltrs

over 1400 cc : 95 ltrs

For twin-volume cars homologated from 01.01.98 with a fuel tank installed in the luggage compartment, a fireproof and liquid-proof case must surround the fuel tank and its filler holes.

For three-volume cars homologated from 01.01.98, a fireproof and liquid-proof bulkhead must separate the cockpit from the fuel tank. Nevertheless, it is recommended that this liquid-proof bulkhead be replaced by a liquid-proof case as for twin-volume cars.

6.9 Jack

The jacking points may be strengthened, moved and increased in number. These modifications are limited exclusively to the jacking points.