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TECHNICAL REGULATIONS

2019

BALTIC TOURING CARS

Riga, January 2019

CONTENTS

1. DEFINITIONS

FIA	International federation of automobiles
ASN	National federation of automobile sport
BTC	Baltic Touring Cars
BGT PRO	Class Baltic GT PRO Series production cars and non series production cars (with tubular frame bodywork, or semi-tubular bodywork, or monocoque bodywork), LM GTE, GT3 cars.
BGT AM	Class Baltic GT AM Series production cars with front mounted engines and SRO GT4 cars, maximum allowed engine capacity is 5200 cm³. Air restrictor for turbo cars.
BTC 1	Class BTC 1 BTC 1 class is meant for cars built on basis of serial production GT or Touring car manufactured after 1980, with engine capacity 1798-2800cm³. Only front or rear wheel drive cars allowed.
BTC 2	Class BTC 2 BTC 2 class is meant for cars with maximum allowed engine capacity 4000 cm³. The capacity includes all the coefficients from BTC Technical Regulation (Example: 2000 cm³ bi-turbo engine have coefficient 1,7 which means that theoretical capacity would equal 3400 cm³) Maximum 6-cylinder engines are allowed in this class. Only front or rear wheel drive cars allowed.

2. GENERAL PRESUMPTIONS

2.1. All quoted points (articles) in these rules are from FIA Appendix J. When FIA homologated car or car from international mono-series have some point of not accordance with these rules, this question will be resolved by the event organizer or Series Board.

2.2. Organizer has right to impose additional requirements during the racing season for BGT cars (for example: installation of air restrictors, adding extra weight etc).

2.3. The use of titanium and magnesium is prohibited (except parts made of these metals in standard model of the car).

2.4. In uncertain situations regarding Technical Regulations, as a source of information Wikipedia and Google are used as a reliable source of the information.

2.5. The promoter, with the respective decision of the Organizing Committee, reserves the right to put a competitor of BTC class in category most suited for the competitor's car.

3. ENGINE CAPACITY QUOTIENTS

3.1. Depending on the engine and car specifics the following quotients to apply in order to calculate theoretical engine capacity of each racing car.

3.1.1. For classes BTC 1 and BTC 2

Diesel engines with turbo	1,4
Otto engines with turbo	1,7
Bi-turbo (Diesel and Otto engines)	1,7
Compressor with mechanical gear	1,4
Radial Wankel	1,5

3.1.2. For BGT class

2 valves per cylinder	1,00
More than 2 valves per cylinder, diesel engines	1,25
2valves per cylinder and Supercharged	1,70
Radial Wankel	2,00
More than 2 valves per cylinder and Supercharged	1,70
Radial Wankel and Supercharged	2,60
FWD (calculated subsequently factor)	0,95
ABS brakes (calculated subsequently factor)	1,10
Sequential dogbox / dogbox (calculated subsequently factor)	1,10

3.2. Theoretical engine capacity is calculated multiplying the actual engine capacity with quotients as per #3.1.1. and 3.1.2.

Example: BGT class car with engine capacity 3246 cm³, more than 2 valves per cylinder, 2/4 stroke engine and sequential gear box.

3246 cm³ x 1,25 x 1,10 = 4463 cm³ (Theoretical engine capacity)

4. CAR WEIGHT CALCULATION

4.1. Weighting procedure is set to be a car with all lubricants, with minimum 3 liters of the fuel (in fuel tank) and driver with his full equipment.

4.2. Minimum weight of the race cars depending on the theoretical engine capacity are set to be as follows:

4.2.1. For class BTC 1

1798 – 1900 cm³	1050 kg
1901 – 2000 cm³	1100 kg
2001 – 2800 cm³	1150 kg

4.2.2. For class BTC 2

2801 – 3199 cm³	1190 kg
3200 – 3500 cm³	1225 kg
3501 – 4000 cm³	1265 kg
~~4001 – 4500 cm³~~	~~1285 kg~~

4.2.3. For class BGT

0 – 2200 cm³	820 kg
2201 – 2400 cm³	840 kg
2401 – 2600 cm³	860 kg
2601 – 2800 cm³	880 kg
2801 – 3000 cm³	900 kg
3001 – 3200 cm³	920 kg
3201 – 3400 cm³	940 kg
3401 – 3600 cm³	960 kg
3601 – 3800 cm³	980 kg
3801 – 4000 cm³	1000 kg
4001 – 4200 cm³	1020 kg
4201 – 4400 cm³	1040 kg
4401 – 4600 cm³	1060 kg
4601 – 4800 cm³	1080 kg
4801 – 5000 cm³	1100 kg
5001 – 5200 cm³	1120 kg
5201 – 5400 cm³	1140 kg
5401 – 5600 cm³	1160 kg
5601 – 5800 cm³	1180 kg
> 5801 cm³	1200 kg

4.3. For cars homologated as GT2, GT3, GT4 the minimum weight according to FIA homologation.

Example: BGT class car with theoretical engine capacity 4463 cm³ must weight minimum 1060kg

5. ENGINE

5.1. For BTC1 and BTC2 cars it is allowed to use any serially produced engine of the same manufacturer (as bodywork) or belonging to manufacturer`s group

Example:

- *in BMW 3. series car it is allowed to install BMW 5 series engine*
- *in SKODA or SEAT cars it is allowed to install AUDI or VW engines*

5.2. For BGT cars engine is free

Example: in TOYOTA it is allowed to use HONDA engine

5.3. Tubular frame and monocoque + tubular frame-based cars, self-made and so-called kit cars, that are not passed through the crash test and are without crash box by FIA rules and without ASN or FIA homologation will be reviewed by the promoter regarding safety issues.

5.4. The engine must be located in the original engine compartment.

5.5. If the car has a lubrication system that includes an open type sump breather, this must go into a catch tank of at least 2 liters capacity.

5.6. The intake system is free.

5.7. The exhaust system is free but must be located by FIA Art. 252.3.6. It is recommended to use catalytic element in exhaust system.

5.8. The noise level for all classes is limited to 100dBA/4500 rpm (by FIA method; microphone 50cm/45 degrees at outlet of exhaust pipe) or in accordance with special regulations of the supplementary regulations whichever is the lowest.

5.9. Engine cooling system is free. Installation according FIA Art. 253.

5.10. Engine fuel feed system is free. Installation according FIA Art. 253.

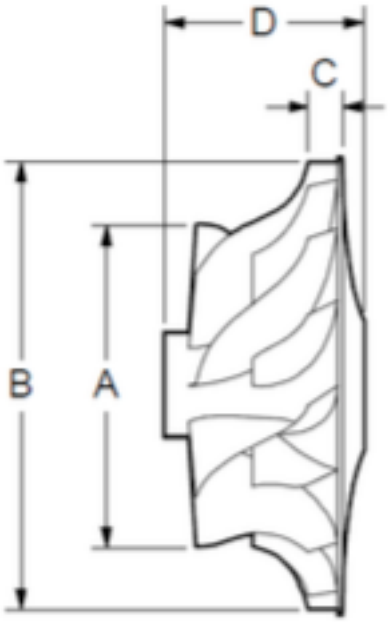
5.11. Engine ignition and electrical system including ECU is free.

5.12. Otherwise engine parts and systems are free.

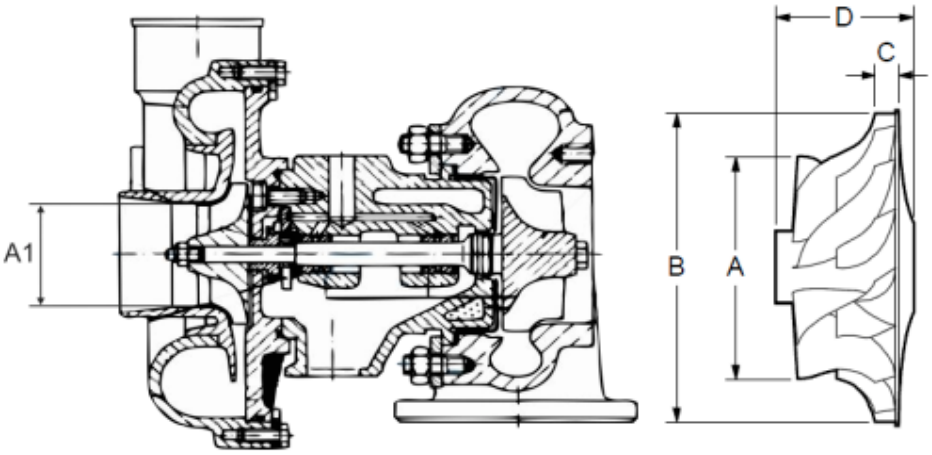
5.13. When measuring engine capacity, difference of 2% accepted.

5.14. Turbocharger (-s) - FREE. The use of more than one turbocharger is permitted in engines that have been manufactured in a such composition by the factory, and only with original turbochargers in use.

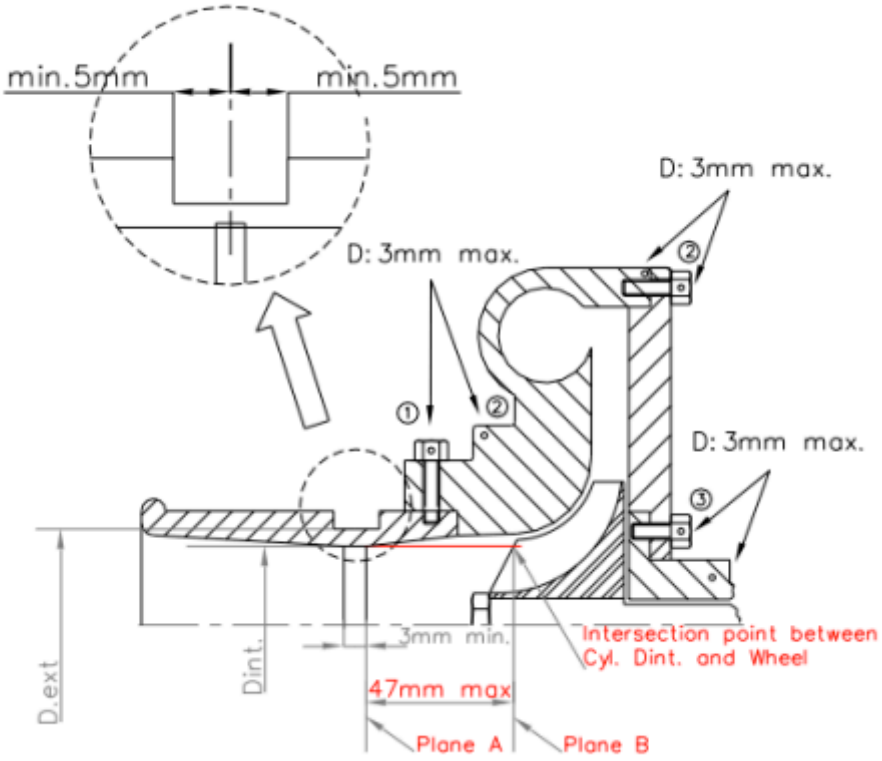
5.15. The intake air restrictor is mandatory on the turbochargers of cars competing in class BTC1, BTC2, BGT AM if compressor impeller diameter A (picture 1) is greater than 48 mm, or inlet diameter A1 (picture 2) is greater than 50 mm (+1,0 mm tolerance is permitted). All air necessary for feeding the engine must pass through this restrictor. Restrictor must be produced, installed and prepared for sealing according to FIA J art 255 - 5.1.8.3 (picture 3). Internal diameter of the restrictor can not be greater than 50 mm.



Picture 1



Picture 2



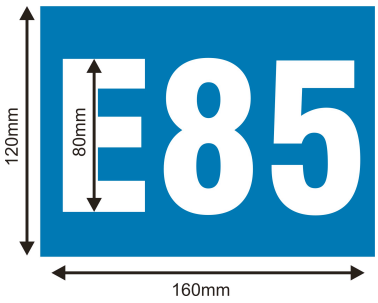
Picture 3

6. FUEL

6.1. The choice of fuel is free.

6.2. If using bio ethanol E85, the car should be marked with stickers “E85” (example 6.2.1.) on both sides of the car, not higher than 200 mm above rear wheel arch.

6.2.1. Sticker for bio ethanol users



7. TRANSMISSION

7.1. Four-wheel drive is allowed only in BGT class, but only in cars, produced with such type of transmission in serial version of the model.
7.2. Reverse gear in working order is compulsory.
7.3. It is allowed to make necessary body changes in order to make room for the transmission. Safety and proper fastening have to be assured.
7.4. Otherwise the transmission is free.

8. BRAKES

8.1. Brake system should consist of two separate circuits, operated by the same pedal. The system must be designed so that, if leakage or failure occurs in one circuit, the pedal shall still operate the brakes on at least two wheels.
8.2. The brake fluid tanks may be fixed inside the cockpit, on condition that they are securely fastened and protected with liquid and flame-proof covering.
8.3. Brake line installation according to FIA Art. 253.3.1. and 253.3.2.
8.4. Brake light switch should be in proper working order.
8.5. It is permitted to use any type of brake balance adjusters and handbrake.
8.6. The use of carbon brake discs is prohibited.
8.7. Otherwise the brake system is free.

9. WHEELS

9.1. Magnesium wheel rims are prohibited.
9.2. The choice of tires is free.
9.3. Tire pre-heating with devices powered by electricity or any type of fuel (gas) is prohibited.

10. STEERING

10.1. Four-wheel steering is prohibited.
10.2. Steering wheel lock should be dismantled.
10.3. Otherwise the steering is free.

11. SUSPENSION

11.1. Active suspension systems (systems enabling the flexibility of springs, shock absorbers, roll-bars and the ground clearance height of the car to be controlled while the car is in motion) are prohibited.
11.2. Suspension parts (wishbones, uprights, steering rods, etc.) made partially or completely from composite materials are prohibited.
11.3. Joints (bushings, ball joints) of suspension parts are free.
11.4. Otherwise suspension is free.

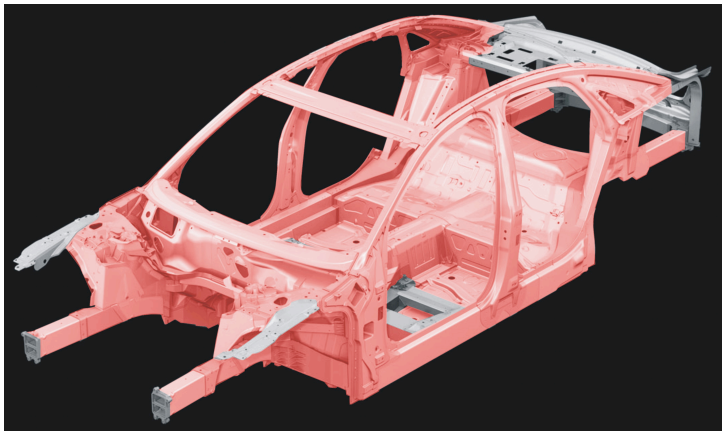
12. BODYWORK

12.1. Requirements for classes BTC1 and BTC 2.

12.1.1. Only passenger car bodyworks are permitted. In case of bodywork repairs it is not allowed to weaken the supporting structures and change the bodywork design. Lateral profile of the car body at the bonnet, windshield, roof, rear window, and boot lid must keep its original appearance after removal of spoilers.

12.1.2. Main bodywork structures (including internal reinforcements) marked red in Picture 4 (wheel housings, propeller shaft tunnel, floor, firewall, pillars, roof frame, door sills, etc) should not be removed or made lighter. These structures may be modified in purpose of installing safety cage, racing seats, transmission, suspension or exhaust. Bodywork should not become weaker as a result of such modifications.

Picture 4



12.1.3. It is allowed to take off non-structural bolted or welded parts (exhaust fasteners, front and rear seat supports, decorative body parts, protectors, name plates, etc).

12.2. Requirements for BGT cars.

12.2.1. Bodywork modifications are allowed.

12.2.2. It is allowed to take off bolted or welded parts (exhaust fasteners, front and rear seat supports, decorative body parts, protectors, name plates, etc).

12.3. Requirements for tubular frame and monocoque + tubular frame-based cars, self-made and so-called low-cost kit cars, no passed through the crash test and without crash box by FIA rules.

12.3.1. The driver in his normal driving position must be located on one side of the longitudinal center line of the car.

12.3.2. The car must have two-foot wells, defined as two free symmetrical volumes on either side of the longitudinal center line of the car, each one having a minimum vertical cross-section of 750 cm2. This cross-section must be maintained from the pedal faces to the vertical projection of the center of the steering wheel. The minimum width of each foot well is 250 mm and this width must be maintained over a height of at least 250 mm.

12.3.3. The openings which correspond to the driver and passenger seats must enable the horizontal template defined in Drawing 259-2 in FIA Appendix J to be placed vertically within the cockpit, with the steering wheel removed. It must be possible to lower the template to a point 250 mm below the lowest point of the cockpit opening.

12.4. Requirements for all cars.

12.4.1. Reinforcement of car bodywork is allowed.

12.4.2. Visible traces of rust must be removed.

12.4.3. Covering of the floor is allowed.

12.4.4. Use of aerodynamic elements under the floor and outside the car is permitted with the following conditions:

12.4.4.1. must be made with highest safety standards and safely attached;

12.4.4.2. should not touch the ground, when both tires on one side of the car are flat;

12.4.4.3. should not protrude from the widest part of bodywork, when looking from the front and the rear;
12.4.4.4. front splitter should not protrude more than 200 mm from the bodywork (looking from the top);
12.4.4.5. rear wing (spoiler) and diffuser should not protrude more than 300 mm from the bodywork (looking from the top);
12.4.4.6. rear wing (spoiler) should not be higher than 150 mm from the roof line for hatchback and caravan bodywork types (looking from the side);
12.4.4.7. rear wing (spoiler) should not be higher than the roof line for sedan and coupe bodywork type (looking from the side);
12.4.5. Roof panel, bonnet and boot covers, wings can be made of composite materials.
12.4.6. Doors must comply with the following conditions:
12.4.6.1. All doors can be made of composite materials;
12.4.6.2. The driver's door must be upholstered. The upholstery may be original or replaced with metal sheet (minimum thickness 0,5 mm) or with carbon panel (minimum thickness 1 mm) or with another fireproof material with minimum thickness of 2 mm;
12.4.6.3. It is recommended to fill driver's door inner space with energy absorbing material;
12.4.6.4. Side protection panel (the minimum configuration of this panel must comply with a drawing 255-14 FIA Art. 255), made from non-inflammable composite materials must be installed between door and safety cage or in the driver door if:
a) driver's door is made of composite materials;
b) driver's door side protection bar is removed;
12.4.6.5. This requirement does not apply to doors originally made of composite materials.
12.4.6.6. All doors must remain safely closed during the race (mechanical fixation).
12.4.6.7. Must be possible to open and close driver and passenger doors from inside and outside. Outside door opening handles must be clearly visible or indicated.
12.4.6.8. Stationary doors (so-called NASCAR-doors). Minimum dimensions of the window opening in these doors should exceed 400mm in height and 800mm in length.
12.4.6.9. The driver should be able to exit car independently with full equipment in not more than 7 seconds trough driver side and not more than 9 seconds through passenger side.
12.5. Windows
12.5.1. The windscreen must be of original shape and consist of triplex glass or may be in polycarbonate on condition that thickness is not less than 6mm and external surface is treated to resist wear. In order to protect the windscreen, the addition of not more than 4 translucent films on its external face is permitted.
12.5.2. The rest of the windows may be replaced by transparent polycarbonate (minimum thickness 3 mm) or other transparent material (minimum thickness 2 mm) that does not break when folded.
12.5.3. It is compulsory to use clear protection films on all original glass windows (except windscreen).
12.5.4. Additional tinting (original tinting is allowed) or (and) covering windows with non-transparent materials is prohibited, with the exception of the upper edge of the windscreen (maximum height 150 mm).
12.5.5. No side windows required for cars that are not meant to have them (so called NASCAR type cars).
12.6. Wiper. If the car has a windscreen, it must be fitted with at least one wiper which is in working order throughout the event.
12.7. Mirrors. All cars should be equipped with inside rear-view mirror (except cars without possibility to install inside mirror or cars without visibility trough rear window) and external rear view mirrors (minimum surface 90 cm^2) on both sides. Mirrors can not be folded during the race or qualification.
12.8. Cockpit.
12.8.1. All mats, upholstery (except that of the driver's door 11.4.6.2.), passenger seats and their fastening elements may be removed from the cockpit.
12.8.2. All unnecessary components fastened by bolts and nuts may also be removed from the cockpit.
12.8.3. Dangerous sharp edges or projecting elements are not allowed in the cockpit.

12.8.4. Cockpits of all closed cars must be fitted with a fresh air inlet and used air outlet. The inlet cannot be connected with engine or fuel tank compartment.

12.9. Towing device. All cars should be equipped with towing devices at the front and rear of the car. It must be clearly visible and painted in yellow, red, orange or another colour that contrasts from the car bodywork colour. The hole in towing device must allow the passage of a cylinder with a minimum diameter of 60 mm and maximum diameter of 100mm. It must be capable of supporting a minimum traction force of 3000 N.

13. LIGHTS

13.1. All cars must be equipped with:

13.1.1. one pair of low beam headlights (55W, if using LED-s the luminous intensity has to be of same magnitude), except so called NASCAR type cars that are participating in the category BGT);

13.1.2. one pair of red taillights (10W, if using LED-s the luminous intensity has to be of same magnitude);

13.1.3. one pair of red brake lights (21W, if using LED-s the luminous intensity has to be of same magnitude);

13.1.4. one fog (rain) light in the rear (21W, if using LED-s the luminous intensity has to be of same magnitude).

13.2. Tubular frame and monocoque + tubular frame-based cars, self-made and so-called low-cost kit cars which roof line is lower than 110 cm should be equipped with two headlights at the height not less than 100 cm from the ground. These lights should be switched on during the race.

13.3. It is compulsory to use clear protection film on the glass headlights. Use of not transparent tape on the upper and lower edges of the headlight, leaving a 4 cm gap between tapes also accepted.

14. ELECTRICAL SYSTEM

14.1. Electrical system is free but must be safely installed (wires should be installed in a way to minimise risk of damage in case of accident or repairs, wires should be isolated and properly connected).

14.2. Electrical system must be equipped with a circuit breaker to disconnect battery from all electrical equipment by FIA Art. 253.13. The driver, when seated normally with his safety belts fastened, must be able to shut the switch inside of car.

14.3. The choice of battery is free. Battery may be located in original place. If moved from original place, must be securely fixed according FIA Art. 255.5.8.3. The “dry” battery must be completely electrically protected and “wet” battery must be completely protected inside a box made of insulating material. The battery breather must vent outside the cockpit.

15. TELEMETRY

15.1. The use of “one way” telemetry is free. This means that the transmission of data and/or signals from the car to an external installation is permitted. The transmission of data and/or signals from an external installation to the car is NOT permitted.

16. SAFETY REQUIREMENTS

16.1. Fuel, hydraulic lines, pumps and filters by FIA Art. 253.3.1. and 253.3.2. Fuel and hydraulic lines should be installed in a way to minimise risk of damage in case of accident or repairs.

16.2. Additional fasteners for bonnet and boot covers by FIA Art. 253.5.

16.3. Safety belts according to FIA Art. 253.6.

16.4. Emergency knife for cutting safety belts must be attached close to the driver seat. The driver, when seated normally with his safety belts fastened, must be able to reach this knife.

16.5. Driver seat in accordance with FIA Art. 253.16. however, it is also allowed to use seats in compliance with 8855/1999 FIA standard 2 (two) years after validity date (without authorization by the manufacturer).

16.6. FIA homologated extinguishing systems or manual extinguishers by FIA Art. 253.7.

16.7. Fuel tanks original or racing fuel cells by FIA Art.253.14. however, it is also allowed to use fuel tanks:

16.7.1. with SFI standard 28.1 and 32.1
16.7.2. 2 (two) years after validity date (without authorization by the manufacturer).
16.8. The driver's door net by FIA Art. 253.11.
16.9. Safety cage by FIA Art. 253.8. with minimum structure as follows:
16.9.1. Basic structure: according to FIA Art. 253.8.3.1 (drawings 253-1, 253-2, 253-3).
16.9.2. At least two diagonal stabilizers are obligatory according to FIA Art. 253.8.3.2.1.1 (drawing 253-4 and 253-5 together or 253-7). Diagonal stabilizers according drawing 253-7 are compulsory for CABRIO cars.
16.9.3. Side protection structure according to FIA Art. 253.8.3.2.1.2 (drawings 253-9, 253-10, 253-11).
16.9.4. Roof reinforcement according to FIA Art. 253.8.3.2.1.3 (drawings 253-12; 253-13 or 253-14). It is allowed to use one diagonal bar according to drawing 253-12, if its front part is fixed on the driver side.
16.9.5. Windscreen pillar reinforcement according to FIA Art. 253.8.3.2.1.4. (drawing 253-15) compulsory for CABRIO cars only.
16.10. At places where the drivers crash helmet could come into contact with safety cage, protective padding (complying with the FIA 8857-2001 standard, type A, technical list no. 23 „Roll Cage Padding homologated by the FIA ") must be attached. The padding must be secured, so that it does not spin around the bar.
16.11. BGT cars according to their type should confirm with FIA safety regulations.

17. DRIVER`S EQUIPMENT

17.1. Drivers are responsible for using only valid FIA homologated equipment and other safety means. It is compulsory to use FIA homologated head and neck equipment FHR (HANS / Hybrid).

Confirmed by EASU, LAF and LASF Circuit Racing Committee