



***BEC4H***

***POWERED BY***  **Hankook**  
*driving emotion*

APPROVED BY



ŠOSEJAS  
KOMISIJA

LAF Racing Commission



LASF Racing Commission



EESTI  
RINGRAJA  
KOMITEE

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# TECHNICAL REGULATIONS 2018

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## 1. GENERAL

- 1.1. These technical regulations shall come into force on the 1st of April, 2018 and shall remain valid until the official publication of the amendment.
- 1.2. The requirements of the FIA International Sport Code Appendix J are only applicable if there is an explicit reference to a particular article / item.
- 1.3. Car parts and their attachments must do not endanger the driver, car service personnel, third parties or third party 's property.
- 1.4. Everything that is not allowed by these technical regulations should be considered as forbidden. Allowed changes / redundancies should not cause or have invalid changes.
- 1.5. In the event of disagreement on the perception or application of certain points, the right to comment and clarify these technical requirements is the responsibility of the "BEC 4H" officials.

## 2. DEFINITIONS

- 2.1. **Body shell** - the unit of metal body parts marked with a vehicle identification number (VIN), connected by welding or other fastening elements (glue, rivets), including the floor with the transmission tunnel and side sills, front and rear longitudinal beams (incl. shock towers) and cross-members between them (if they are not screwed in the production process), A, B, C pillars, roof panel with transverse beams, rear wings (if they are not screwed in during the production process), firewall between the cockpit and engine compartment, firewall (if provided) between the cockpit and luggage compartment, cross-members and suspension mounting points (if they are not screwed in during the production process).
- 2.2. **Cockpit** - the space provided by the manufacturer for the driver and passengers, separated by the engine compartment firewall and it may be separated by luggage compartment firewall (including a shelf under the rear window). If any part in the cockpit space is separated by a fluid-tight and fire-proof container or bulkhead, this part is considered to be outside the cockpit.
- 2.3. **Original part** - part used in a serial production of the car, or another part identical in shape and in operation (analogue) by a different manufacturer (*example: in a BMW car instead of the original BMW wishbone, SWAG, FEBI, TRW, and LEMFORDER wishbones can be used.*
- 2.4. **Serial part** - the part which is made in a serial production way in the factory (*example: in a BMW car, wishbones made by TOYOTA, VW, WISEFAB, SAMSONAS, IRP or other manufacturers can be used).*
- 2.5. **Free part** - a part that can be modified, reshaped or altered in any way or replaced by another part. Restrictions are not applied to the material or the form of the part. The part can be even removed.
- 2.6. The calculated engine capacity is the geometric engine capacity multiplied by the coefficients given in section 2.7. If the engine is not subject to a coefficient, the calculated engine capacity corresponds to the geometric capacity.
- 2.7. Coefficients for determining the calculated engine capacity:
  - Petrol engines with turbochargers - 1,7;
  - Petrol engines that geometrical capacity of max. 1400 cm<sup>3</sup> with turbochargers – 1,4;
  - Diesel engines with turbochargers - 1,0;
  - Engines with mechanical compressors (including G and COMPREX compressors) - 1,4;
  - Biturbo engines - 2,2;
  - Rotary engines -  $1,5 \times (\text{maximum chamber capacity minus minimum capacity}) \times \text{number of chambers}$ .

### 3. AUTHORIZED CARS

- 3.1. Large scale series production cars marked with factory VIN number (including CABRIO type cars with hard top in use).
- 3.2. GT1, GT2, GT3, GT4 cars.
- 3.3. Non-series production cars (with tubular frame bodywork, or semi-tubular bodywork, or monocoque bodywork).
- 3.4. Technical passport of the sporting vehicle issued by the FIA or ASN is compulsory.

### 4. PROHIBITED CARS

- 4.1. Cars that do not meet these technical regulations.
- 4.2. Cars with the height of less than 1100 mm or more than 1600 mm.
- 4.3. Cars with the seat in the centre (longitudinal projection) of the car.
- 4.4. Cars with an open cockpit (*example: LOTUS 7*).
- 4.5. Cars with body uncovered wheels (*example: LOTUS 7*).
- 4.6. Vehicles that construction or equipment contains deficiencies which could endanger the crew, service personnel, third parties or third party's property (as decided by the Competition Technical Commission).

### 5. CLASSES

- 5.1. The cars are divided into classes according to the calculated engine capacity, transmission type and construction type:
  - „A2000“– series production cars with calculated engine capacity up to 2000 cm<sup>3</sup> with 2WD transmission.
  - „A3000“– series production cars with calculated engine capacity up to 3000 cm<sup>3</sup> with 2WD transmission.
  - „A3000+“– series production cars with calculated engine capacity over 3000 cm<sup>3</sup> with 2WD transmission (including TCR cars).
  - „GT“– series production cars with more than 6 cylinder engines; series production cars with engines, which calculated capacity is more than 4500 cm<sup>3</sup>; series production cars with 4WD transmissions; series production cars with engines in the rear, or in the center (behind the transverse center line of the wheel base), FIA GT3 cars, SRO GT4 cars.
  - „X1“– non-series production cars (with tubular frame bodywork, or semi-tubular bodywork, or monocoque bodywork), GT1 cars, GT2 cars.
  - „D“– series production cars with diesel engines.

### 6. MINIMUM RACING WEIGHT BY THE CALCULATED ENGINE CAPACITY

- 6.1. Minimum racing weight of a car at any time of the race (including qualifying):
  - 1200 cm<sup>3</sup> - 1300 cm<sup>3</sup> minimum weight - 790 kg;
  - 1300 cm<sup>3</sup> - 1400 cm<sup>3</sup> minimum weight - 820 kg;
  - 1400 cm<sup>3</sup> - 1500 cm<sup>3</sup> minimum weight - 870 kg;
  - 1500 cm<sup>3</sup> - 1600 cm<sup>3</sup> minimum weight - 960 kg;
  - 1600 cm<sup>3</sup> - 1800 cm<sup>3</sup> minimum weight - 1000 kg;
  - 1800 cm<sup>3</sup> - 2000 cm<sup>3</sup> minimum weight - 1100 kg;
  - 2000 cm<sup>3</sup> - 2500 cm<sup>3</sup> minimum weight - 1150 kg;
  - 2500 cm<sup>3</sup> - 3000 cm<sup>3</sup> minimum weight - 1190 kg;
  - 3000 cm<sup>3</sup> - 3500 cm<sup>3</sup> minimum weight - 1225 kg;
  - 3500 cm<sup>3</sup> - 4000 cm<sup>3</sup> minimum weight - 1310 kg;
  - More than 4000 cm<sup>3</sup> minimum weight – 1360 kg.

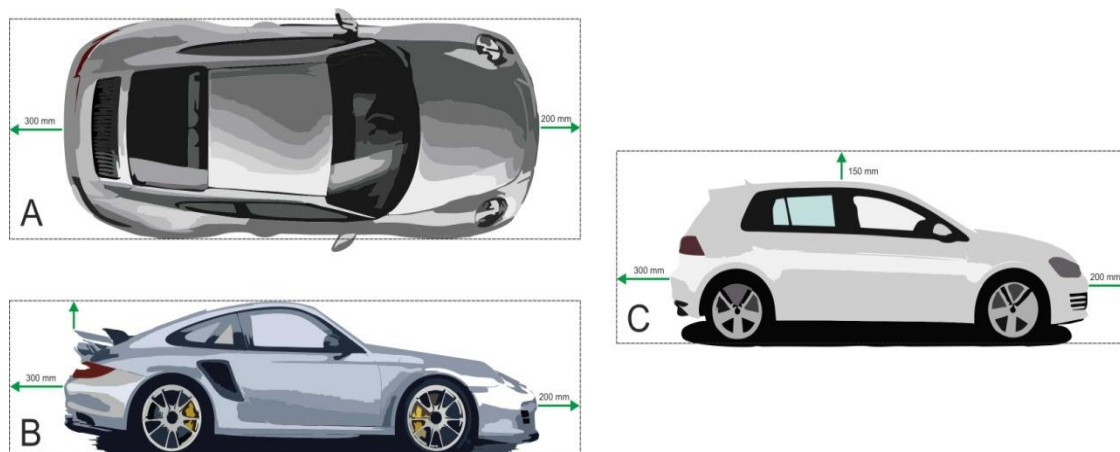
- 6.2. Weighting procedure. Minimum weight is the weight of the car with the driver, the driver's equipment, all the vehicle's operating fluids and a minimum 3 liters of fuel in the tank.
- 6.3. Prior to the weighing, it is forbidden to add any objects or any liquids (including fuel) to the car.
- 6.4. It is permitted to complete the weight of the car by one or several ballasts provided that they are strong and unitary blocks, fixed by means of tools with the possibility to fix seals, placed on the floor of the cockpit.
- 6.5. A weighing error of  $\pm 0,25\%$  is applied.

## 7. BODYWORK

- 7.1. Body shell.
  - 7.1.1. The exterior of the bodywork of the base model should be maintained and recognizable.
  - 7.1.2. Body shell must be original but may be modified in accordance with the requirements in this paragraph.
  - 7.1.3. Parts and brackets (rear seat, spare wheel, wiring harnesses brackets, etc.), whose function is not associated with the stiffening of the body shell and which do not engage parts of body shell, can be removed.
  - 7.1.4. Firewall and the floor – must be original but may be modified, however, only where necessary for the installation of the seats, the exhaust system, engine and transmission units or suspension mounting. The area to be modified cannot be larger than necessary for the installation of the above-mentioned parts. These modifications are permitted only if the material and material thickness used are the same as the original part.
  - 7.1.5. Spare wheel housing - FREE. If housing is cut off, the opening must be covered (welded, riveted, glued) with the same material (same material thickness) as the original, or with a 2,0 mm thickness aluminum sheet.
  - 7.1.6. Roof panel (including transverse member) - original or can be made of composite materials (except transverse member). In the case of a sunroof, the opening must be covered (welded, riveted, glued) with the same material (same material thickness) as the original or with a 2 mm thickness aluminum sheet. It is allowed (recommended) to cut-off or grind-off the inner edges of the sunroof opening to reduce the possibility of the injury.
  - 7.1.7. Ventilation openings, diffusers on the roof panel may be installed, with the condition that their design is well protected of direct access of any objects or water to the interior of the car.
  - 7.1.8. Reinforcement of the body shell is permitted.
  - 7.1.9. Welding of the original body shell joints is permitted.
  - 7.1.10. Additional hinges, threads, and fitting are permitted.
- 7.2. Doors, engine bonnet and boot lid, bumpers, front fenders, grills.
  - 7.2.1. Front doors - original. These doors can be modified by dismantling the safety bar or can be made of composite materials. In the case of modified or composite doors, a crash box must be fitted in the driver's door from year 2019 according to section 7.2.2.
  - 7.2.2. Crash box - must be made of non-combustible composite materials (minimum panel composition must comply with FIA J art 255 -14). The panel must cover the plane from the bottom of the door to the upper edge of the roll cage side bars.
  - 7.2.3. Front door window lifters - serial. May be electrical or mechanical and must operate (open / close) the serial windows. If case of plastic windows (according to section 7.3.5), window lifters can be removed.
  - 7.2.4. The inner panel of the front doors - original (can be modified) or can be made of:
    - A sheet of metal (min thickness 0,5 mm);
    - A sheet of carbon fiber (min thickness 1,0 mm);
    - Other non-combustible materials (min thickness 2,0 mm).
  - 7.2.5. Rear doors - original (may be modified) or made of composite materials
  - 7.2.6. Rear door window lifters- FREE.
  - 7.2.7. Inner panel of the rear doors - FREE.
  - 7.2.8. Front doors must be openable from both inside and outside of the car.

- 7.2.9. Engine bonnet and boot lid - original (may be modified), or made of composite materials, or aluminum (minimum thickness 1,0 mm).
- 7.2.10. Original engine bonnet lock - must be rendered inoperative or removed.
- 7.2.11. Safety pins - mandatory at least two for each engine bonnet and boot lid.
- 7.2.12. Front and rear bumpers - compulsory.
- 7.2.13. Front and rear bumper cross-beams - FREE.
- 7.2.14. Front fenders - original (may be modified), or made of the composite materials, or aluminum (min thickness 1,0 mm).
- 7.2.15. Front grilles –compulsory.
- 7.2.16. Other external decorative parts - FREE.
- 7.3. Windows, wipers, washers.
- 7.3.1. Windscreen can be original (can be heated) or made of polycarbonate plastic with a minimum thickness of 5,0 mm and an outer surface treated to be wear-resistant. It may be fitted with one or several transparent and colorless films on its outer surface.
- 7.3.2. It is allowed to use sun strip on the upper edge of the windscreen, on condition that it does not prevent the driver from seeing the signals and signs of the judges.
- 7.3.3. Windscreen wipers - FREE, but at least one active wiper is required.
- 7.3.4. Windscreen washer system - FREE.
- 7.3.5. Side windows - original (covered with a colorless protective film in accordance with FIA J art 253 - 11) or may be replaced with transparent polycarbonate plastic (min thickness 3,0 mm). In case of the plastic glazing in the front doors, windows must be fitted in such a way that they can be removed without the help of tools. *Example: windows may be placed in the original upper girth of the door and mounted on the bottom with brackets, rivets, bolts.* The attachment of other side windows (including windows of front doors made of composite doors) is free.
- 7.3.6. The rear window can be original or made of polycarbonate plastic with a minimum thickness of 3,0 mm. The attachment of the rear window is free.
- 7.3.7. Rear window wiper - FREE.
- 7.3.8. Rear window washer system - FREE.
- 7.3.9. Window vents - for security reasons, it is recommended to install air-vents in the plastic windows of the both front doors. The shape of the vent opening is free (recommended minimum size of 90 cm<sup>2</sup>). Air-vents can also be installed in spaces between the upper edge of the rear door frame and the window.
- 7.3.10. Tinting of the windows (including the silver film) is prohibited.
- 7.3.11. Due to ventilation, it is allowed to open the front side windows by 1/5 of the opening during the race.
- 7.4. Rear-view mirrors.
- 7.4.1. External rear-view mirrors must be fitted on both sides of the car. The reflecting surface of each mirror cannot be less than 90 cm<sup>2</sup>.
- 7.4.2. An inside rear-view mirror - compulsory, except for cars with the originally closed visibility through the rear window.
- 7.5. Aerodynamic elements and under guards.
- 7.5.1. Aerodynamic elements–FREE but must be situated within the perimeters marked in the Picture 1.

Picture No 1



A – for all cars, B – for coupe, sedan, cabrio, C – for hatchback, wagon.

7.5.2. Aerodynamic elements may only be adjusted with the help of the tools.

7.5.3. Under guards - FREE.

7.6. Interior.

7.6.1. Main condition - the cockpit of the car cannot have open cavities with sharp, protruding edges that could injure the driver during an accident.

7.6.2. If any of the following - fuel tank, liquid-filled battery, fuel pumps, liquid (oil) tanks (except for water and window wash tanks) – are installed in the luggage compartment, a non-flammable, fluid-tight firewall separating the cockpit from the luggage compartment must be installed.

7.6.3. Instrument panel - serial (may be modified) or made in the form of the serial panel from other materials.

7.6.4. Supplementary instruments (gauges, meters, sensors) - FREE, however, it is prohibited to install mechanical instruments for engine lubrication and cooling system according to paragraph 16.

7.6.5. Horn - FREE.

7.6.6. Onboard cameras and radio – allowed but must be securely fixed either on the roll cage, or on the part of body shell.

7.6.7. Other interior parts - FREE.

7.7. Towing-eyes.

7.7.1. Towing eyes - must be fitted to the front and rear of the vehicle.

7.7.2. Towing eyes must be clearly visible (colored yellow, red or orange) or (and) clearly marked.

## 8. ENGINE

8.1. Only internal combustion engines are permitted.

8.2. Motorcycle engines are prohibited, even if they were serially fitted into a model of a production car.

8.3. Cylinder block - serial (can be modified). *Example: the MITSUBISHI cylinder block can be mounted on the BMW body.*

8.4. Cylinder diameter and piston stroke can be changed.

8.5. Due to engine repairs (original repair piston sizes) it is allowed to exceed the original geometric engine capacity limit by up to 2%. In such cases, the original geometric capacity is deemed to have not changed and this does not cause the car to be moved to another class or (and) weight category.

8.6. Crankshaft - FREE, but the number and type of the bearings must be retained.

8.7. Conrods and pistons (including rings and pins) - FREE.

8.8. Crankshaft main and conrod bearing shells - FREE.

8.9. Flywheel and pulleys - FREE.

8.10. Cylinder head -FREE, but original layout of the camshaft (-s) and number of the valves must be retained.

8.11. Valves and springs - FREE.

8.12. Valve drive (rocker arms, tappets) - FREE.

8.13. Camshaft (-s) - FREE.

8.14. Camshaft sprocket gear (-s), pulleys, variable phase regulators - FREE.

8.15. Camshaft drive (chains, belts, tensioners, sliders) - FREE.

8.16. Cylinder head gasket and screws - FREE.

8.17. Engine mounting - FREE.

8.18. Lubrication system - FREE, but its components cannot be fitted in the cockpit.

8.19. Cooling system - FREE, but its components, with the exception of interior heating, cannot be fitted in the cockpit. It is permitted to remove or modify the heating system; however it is necessary to ensure protection against fogging of the windscreen.

8.20. Engine fuel - air supply system.

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

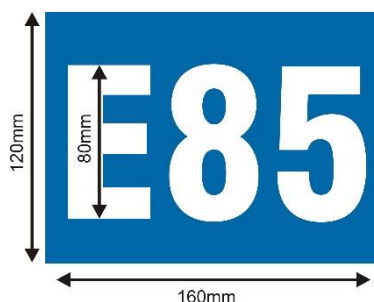
8.20.2. Air inlet cannot be placed in the cockpit.

8.20.3. Air filter box (with diffusers) - FREE.

8.20.4. Air filter - FREE.

8.20.5. Air intake lines (pipes, hoses) - FREE.

- 8.20.6. Throttle body (valve) - FREE.
- 8.20.7. Intake manifold - FREE.
- 8.20.8. Turbocharger (-s) (compressor) - FREE.
- 8.20.9. The intake air restrictor is not used.
- 8.20.10. Intercooler - FREE. Water spray cooling is allowed.
- 8.20.11. Injectors - FREE.
- 8.20.12. Carburetors – FREE.
- 8.20.13. Fuel circuit and filters - FREE. Installation according to paragraph 16. Use of automatic cut-off valve on the fuel circuit is recommended. Installation according to FIA J 253-3.3.
- 8.20.14. Fuel pump (-s) - FREE. Fuel pump(-s) must operate when the engine is running, except during the starting process.
- 8.20.15. Fuel tank (-s) - original or (and) FIA homologated fuel tank FT3 1999, FT3.5 or FT5 (an extension of the homologation for 2 years, without approval of the manufacturer, is allowed). Installation according to FIA J art 252 - 9.6 and FIA J art 253 - 14. *Max two tanks, not exceeding a sum capacity of 120 liters may be used.*
- 8.20.16. Fuel tank ventilation system and roll-over valves- original. If the original ventilation system is dismantled, the new system and parts must comply with FIA J art 253 - 3.4.
- 8.20.17. The fuel filler neck or (and) homologated fuel filler connectors must not extend beyond the outer perimeter of the bodywork. Installation according to FIA J art 253 – 14.2.
- 8.20.18. Liquefied or natural gas tanks (cylinders) - prohibited.
- 8.20.19. Fuel - FREE.
- 8.20.20. When using bio-ethanol (E85), the vehicle must be marked on both sides with E85 stickers, with no more than 200 mm above the rear wheel arches.
- 8.20.21. Bioethanol sticker example:



- 8.21. Exhaust system.
- 8.21.1. All engine exhaust gases must enter the main exhaust pipe and exit it at the end.
- 8.21.2. The end (exit) of the exhaust pipe must be situated within the perimeter of the car and less than 100 mm from this perimeter, on the rear part of the car, behind transverse center line of the wheel base. No parts of the chassis should be used to evacuate exhaust gasses.
- 8.21.3. Exhaust manifold - FREE.
- 8.21.4. Other parts of the exhaust system - FREE.
- 8.21.5. Maximum noise level: 110 dB (A) at 3500 RPM for petrol and 2500 RPM for diesel vehicles. This measurement will be taken at a distance of 0,5 m and at a 45-degree angle to the point of exit of the exhaust.
- 8.22. Ignition system - FREE.
- 8.23. Engine ventilation system –FREE. In case of an open type sump breather, the system must be equipped in such a way, that the oil flows into the catch tank, with a minimum capacity of 2,0 liters. It is recommended to follow the requirements of FIA J art 255 – 5.1.14.
- 8.24. Engine management.
- 8.24.1. Engine control unit (ECU) and software - FREE.
- 8.24.2. Engine wiring harness - FREE.
- 8.24.3. Additional sensors are allowed.
- 8.25. Other engine parts and systems - FREE.

## **9. TRANSMISSION**

- 9.1. The conversion from two-wheel drive to four-wheel drive and vice versa is allowed, even if these gear types were not provided in the base model.
- 9.2. Clutch - FREE.
- 9.3. Clutch drive (pedal, master and slave cylinders) - FREE.
- 9.4. Clutch fluid lines may be replaced by aviation type tubes or hoses. It is permitted to run these lines inside the cockpit according to paragraph 16.
- 9.5. Gear box - FREE.
- 9.6. Position and orientation of the gearbox - FREE.
- 9.7. Gear ratios - FREE.
- 9.8. Reverse gear - mandatory.
- 9.9. Gear change system - FREE.
- 9.10. Central differential (including management) - FREE.
- 9.11. Prop-shafts (including CV joints) - FREE.
- 9.12. Drive-shafts (including CV joints) - FREE.
- 9.13. Differential - FREE.
- 9.14. Limited slip differential systems - FREE.
- 9.15. Other transmission parts - FREE.

## **10. BRAKING SYSTEM**

- 10.1. Double circuit brake system, operated with one pedal - compulsory. The pedal must normally control all wheels, but in the event of any type of brake failure, the pedal must brake at least two wheels.
- 10.2. Brake pedal and drive - FREE, but parts must be made of metal.
- 10.3. Brake light switch - compulsory with retained function.
- 10.4. Master cylinder(-s) (including fluid tank) - FREE.
- 10.5. Brake booster - FREE.
- 10.6. Anti-lock braking system - FREE.
- 10.7. Brake calipers - FREE.
- 10.8. Brake discs - FREE.
- 10.9. Brake pads - FREE.
- 10.10. Hand brake - FREE.
- 10.11. Brake balance adjuster - FREE.
- 10.12. Brake lines may be replaced by aviation type tubes or hoses. It is permitted to run these lines inside the cockpit according to paragraph 16.
- 10.13. Other parts of the braking system - FREE.

## **11. STEERING**

- 11.1. If the series production car model has an all-wheel steering system, it can remain, but cannot be modified.
- 11.2. Steering wheel - FREE.
- 11.3. Steering wheel quick release system - recommended.
- 11.4. Steering drive (shafts and their hinges) - FREE.
- 11.5. Steering wheel lock - must be an inoperative or removed.
- 11.6. Steering wheel position adjuster. The steering wheel position can only be adjusted with the help of tools.
- 11.7. Steering rack - FREE.
- 11.8. Steering rods (including ends) - FREE but cannot be made of composite materials.
- 11.9. Power steering (pump, motor, gear and fluid lines) - FREE.
- 11.10. Other parts of the steering system- FREE.

## **12. SUSPENSION**

- 12.1. The operating principle of the suspensions- FREE.

- 12.2. Wheel base - FREE.
- 12.3. Springs (leaf springs, torsion bars) - FREE.
- 12.4. Spring supports - FREE.
- 12.5. Shock absorbers - FREE, however systems allowing adjustment of the shock absorbers during the driving are prohibited.
- 12.6. Shock absorber (spring) top mounts (bearings) - FREE.
- 12.7. Uprights (including bearings, hubs) - FREE.
- 12.8. Wishbones, trailing arms - FREE, but cannot be made of composite materials.
- 12.9. Anti-roll bars (sway bars) and their connections with the suspension - FREE.
- 12.10. Suspension joints (bushes, bearings) -FREE.
- 12.11. Cross-members - FREE, but modifications cannot cause structural weakness.
- 12.12. Suspension mounting points - FREE, however, the modification cannot cause structural weakness.
- 12.13. Other parts of the suspension - FREE, but they cannot be made of composite materials.
- 12.14. Ground clearance. No part of the car must touch the ground when all the tires on one side are deflated. This test must be carried out on a flat surface under race conditions with driver onboard.

### 13. WHEELS

- 13.1. Fenders (bodywork) must completely cover the wheels from the top. With the wheels straight (with no damages to suspension) the projection line „A“, lined with the side of the wheel, must cut through or touch the fender at the point „B“ (picture 3).
- 13.2. Wheel fasteners. Serial fastening with bolts can be replaced by fastening with studs and nuts or axel fastening with one nut.
- 13.3. Rims made of magnesium are not permitted.
- 13.4. Tires – according to general sporting regulations of “BEC 4H“.
- 13.5. The number of tires – according to general sporting regulations of “BEC 4H“.
- 13.6. Any heating (with a help of electrical or fuel power) or chemical treatment of the tires are prohibited.

## **14. LIGHTING AND ELECTRICAL EQUIPMENT**

- 14.1. External lighting must be original or other lights can be fitted if they meet the following minimum requirements:
- One pair of front (low beam) lights (55W or equivalent LED);
  - One pair of red rear lights (10W or equivalent LED);
  - One pair of red brake lights (21W or equivalent LED);
  - Two pairs of indicator lights – one pair in the front, one - in the rear (21W or equivalent LED);
  - Max two pairs of the front additional lights may be used;
  - Recognition lights may be installed (max 5W or equivalent LED).
- 14.2. Alternator - FREE.
- 14.3. Starter - FREE.
- 14.4. Battery - FREE. If battery is moved from its original location, it must be installed according to FIA J art 255- 5.8.3. Battery located in the cockpit must be dry-type battery and it must be installed behind the line of the driver seat.
- 14.5. Wiring harness - free but must be installed according to paragraph 16.
- 14.6. Other lighting and electrical equipment - FREE.

## **15. GENERAL CIRCUIT BREAKER**

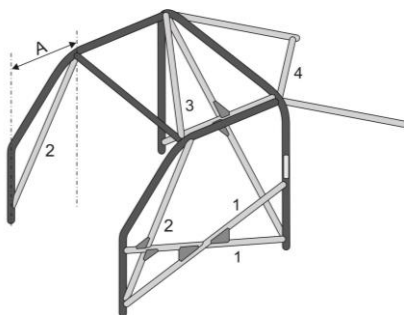
- 15.1. The general circuit breaker – compulsory. It must cut out all electrical circuits from the battery and switch of the engine. Installation and use according to FIA J art 253 - 13.

## **16. LINES (HOSES, PIPES) AND ELECTRICAL CIRCUITS**

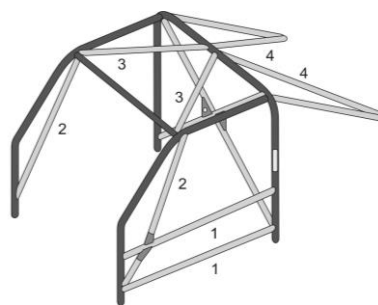
- 16.1. Obligatory application if the series fitting is not retained.
- 16.2. Oil, fuel, and hydraulic lines must be protected externally against any risk of deterioration (stones, corrosion, mechanical breakage, etc) and internally against any risk of fire and deterioration.
- 16.3. Any lines containing cooling water (fluid) or lubricating oil must be outside the cockpit.
- 16.4. Lines containing fuel or hydraulic fluid may pass through the cockpit, but without any connectors inside the cockpit, except on the front and rear bulkheads and on the braking and clutch circuits.
- 16.5. In case of flexible lines, threaded, crimped, or self-sealing connectors and an outer braid resistant to abrasion and fire must be used.
- 16.6. In places where lines or wires pass through firewalls, the edges of the holes must be covered with protective materials.
- 16.7. No lines or wiring, no cables or lines of the fire extinguishing system may pass between the bodywork and outer perimeter of the roll cage.
- 16.8. Additional information FIA J art 253 - 3.

## **17. SAFETY CAGE**

- 17.1. The fitting of the safety cages is compulsory. It may be either:
- Homologated by FIA or ASN;
  - Fabricated in compliance with the requirements of the FIA J art 253 – 8.2 / 8.3 and certified by ASN. The safety cage certificate must be present at every race event.
- 17.2. Minimum safety cage structure (pictures 2, 3):

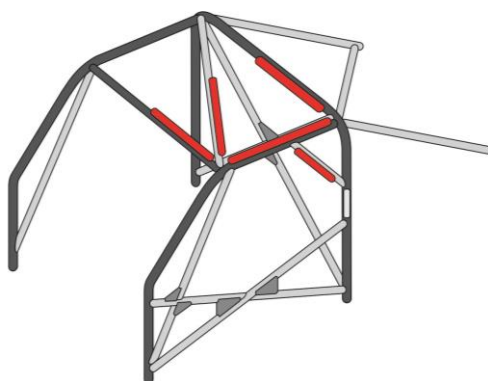


Picture 2



Picture 3

- 17.3. Windscreen pillar reinforcement bar (No 2) must be fitted on each side of the front roll-bar if dimension „A“ is greater than 200 mm (picture 4).
- 17.4. Places (marked red in picture 4), where the driver's helmet can come into contact with the safety cage during an accident, must be covered with a padding in accordance with FIA 8857-2001 standard. Padding must be fixed tightly to the safety cage bar, with no possibility to move it or to turn it on the radius of the bar.



Picture 4

**18. SAFETY HARNESS, SEATS, WINDOW NET AND DRIVERS EQUIPMENT**

- 18.1. Safety harness. Six point, mechanically or (and) chemically undamaged safety harnesses in compliance with FIA 8853/98, 8853-2016 standards must be used. Installation and use according to FIA J art 253-6.2/6.3. No homologation extensions allowed.
- 18.2. Belt cutter - compulsory. It must be easily accessible for the driver when seated with his harnesses fastened.
- 18.3. Seat. Mechanically or (and) chemically undamaged seat in compliance with FIA 8855-1999, 8862-2009 standards must be used. Installation and use according to FIA J art 253-16. Homologation extension of 2 years, without approval of the manufacturer, allowed.
- 18.4. Window net– mandatory. Installation and use according to FIA J art 253 – 11. The use of hand straps instead of a net is authorized. The installation and use of this equipment must ensure the protection of driver's hands.
- 18.5. Drivers' equipment. Clothing (overalls, shirt, trousers, socks, balaclava, shoes and gloves) in compliance with FIA8856-2000 standard must be used.
- 18.6. Helmet. Helmet in compliance with FIA8858-2002, 8858-2010, 8860-2004, 8860-2010, 8859-2015, 8860-2018 standards must be used. Any additional equipment (cameras, camera-holders) that are not provided by the manufacturer - prohibited.
- 18.7. Head restraint systems (HANS, HYBRID). Head restraint systems in compliance with FIA 8858-2002, 8858-2010 standards must be used.

**19. FIRE EXTINGUISHING EQUIPMENT**

- 19.1. Fire extinguishing systems - recommended. Installation according to FIA J 253- 7.2.
- 19.2. Manual fire extinguisher – mandatory (min 2 kg), if there is no fire extinguishing system installed in the car. Manual fire extinguisher must be easily accessible for the driver. Installation according to FIA J art 253- 7.3.

**GOOD LUCK!!!**



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