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"ABC RACE" racing cars

TECHNICAL REGULATIONS

(for years 2024 – 2026)



1.VEHICLES

Large series tourism vehicles with an engine located above the front axle, which must be produced at car factory at least 2500 identical cars for 12 consecutive months and must have at least four passenger seats according to the tourism vehicles (group A) sizes. The vehicles must have Technical sports passport issued by LAF (Latvian Automobile Federation), FIA or another ASN.

2.PERMITTED OR MANDATORY MODIFICATIONS, TERMS AND EXPLANATIONS

- 2.1. **STANDART** part or component as built or manufactured in the factory, or other analogue manufacturer, in accordance with the parameters of the manufactured part, without any mechanical, chemical, heat or other treatments. For all parts used with the term standard, after the request of the technical commissioners, driver has to be able to present, explain and prove manufacturer, original conformity and origin of the part.
- 2.2. **NOT LIMITED** the part or component may be modified or replaced in any way. There is no restriction on the material, shape and number of the part, with the exception of the parts and components referred to the Article 3 of this Regulation. It is also possible to dismantle this part if it not contradicts with security regulations. To all part or operations, which does not apply term "not limited", the term "standard" or "not allowed" applies. Any changes not expressed in this technical regulations are prohibited.
- 2.3. In any vehicle nuts or bolts can be replaced by any other nut or bolt, given the condition that they are made of the same group materials and have the same diameter or larger.
- 2.4. The minimum weight of the vehicle, including the pilot and his compulsory equipment, technical fluids, and at least 3 litres of fuel is determined using the specific engine displacement applicable coefficient, which must be multiplied by the engine power of the vehicle in horsepower (which is obtained by performing a control measurement on the vehicle engine power stand (dyno stend), which is specified in the regulations of the particular year of the competition). Examples and the coefficients are shown below:

| Engine displacement | Applicable coefficient |
|-----------------------------|------------------------|
| 0 – 1050 cm ³ | 12,2 |
| 1051 – 1150 cm ³ | 12,4 |
| 1151 – 1250 cm ³ | 12,6 |
| 1251 – 1350 cm ³ | 12,8 |
| 1351 - 1450 cm ³ | 13 |

To calculate horsepower (HP) the metric horsepower coefficient 1,36 is applied,

Example: Renault Clio 1.2 (engine displacement: 1149 cm3, power 55kW, applicable coefficient 12.4)

55 kW x 1.36 = 74.80 HP

74.80 HP x 12.4 (coefficient) = 927.52 kg (specified minimum vehicle weight including pilot with full compulsory equipment).

The result of the weight calculation is rounded so that the result is without decimal places. Example: 927.52 kg is rounded to 928 kg. (to 0.49 is rounded down, starting at 0.50 is rounded up).

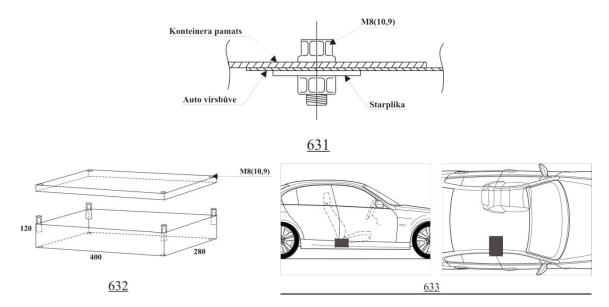
2.5. The minimum vehicle weights must be abided throughout the race. It is permitted to supplement the mass of the vehicle with one or more ballasts, provided that they are rigid one-piece blocks fixed by tools and placed on the floor of the body or luggage compartment and visible. The ballast shall be secured to the bodywork/chassis by Class 8.8 bolts



at least 8 mm in diameter and spacers as shown in visual No 631. The technical commissioner of the competition decides on each specific situation and its compliance.

- 2.6. The minimum contact area between the body / chassis and the spacer is 40 mm2 at each point of attachment.
- 2.7. Each car must be fitted with an additional weight container secured with four screws according to visual No 631. Thickness of the container plates 2 mm, dimensions see visual No 632. Position of the container in the car see visual No 633. Cases when and how to use additional weights, see current year's competition regulations.





3.MATERIAL

3.1. The use of titanium, ceramic materials, magnesium or composite and fibrous materials is prohibited on the chassis suspensions as well as superstructures.

4.SAFETY REGULATIONS (Annex J, Chapter 253)

- 4.1. **Additional locks** both the engine and luggage compartment covers must be equipped with two additional locks. Original latches must be rendered inoperable or dismantled. The original hinges must be retained as standard.
- 4.2. Pilot seat original pilot seat must be replaced by a bucket sports seat (standard 8855/1999 or 8862/2009 and later homologation standard) with FIA homologation, with five (5) openings for seat belt systems. FIA homologated seats with FIA standard 8855/1999 are valid for 5 years from the date of manufacture indicated on the chair's special information patch or stickers. Seats with FIA standard 8862/2009 and later homologation standard are valid for 10 years from the date of manufacture indicated on the chair's special information patch or sticker. This period may be extended by the manufacturer by 5 years and must be indicated on an additional label. Participation is permitted with seats whose homologation period has expired by not more than 5 years after the end of its homologation, the technical commission of the competition decides on each specific case. The seat must be secured with at least four (4) 10.9 quality M8 bolts subject to Articles 253 to 16 of Annex J. Original seat anchorages may be removed.
- 4.3. **Seat belt system** according to FIA standard Annex J 253-6.
- 4.4. **Safety frame** one intended for circuit or rally racing and with a certificate issued by LAF or other ASN certified manufacturers.



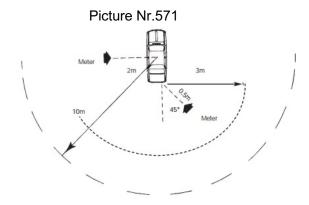
- 4.5. **Fire extinguisher/fire extinguishing systems** a manually operated fire extinguisher with a capacity of at least 2 kg and their installation according with Annex J, paragraphs 253.-7. point. It must be equipped with a pressure gauge and a clearly visible service life. Permitted and recommended automatic fire extinguishing system in accordance with Annex J. The provisions of Sub-paragraph 253-7.
- 4.6. **Protective nets** according to FIA standard Annex J point 253-11. Before the competition, during the technical inspection, at the request of the technical commission, the pilot must demonstrate that while in the pilot seat, fastened, with the door closed, and a fixed window net, within a maximum of 7 seconds, it is possible to leave the vehicle completely, through the pilot's side door, and within a maximum of 9 seconds, through the adjacent door.
- 4.7. Pilot equipment (mandatory):
 - 4.7.1. Suits, head mask, shoes, gloves, according to FIA standard 8856 2000 or 8856-2018;
 - 4.7.2. Underwear according to FIA 8856 2000 standard or 8856-2018 standard;
 - 4.7.3. FHR ('HANS') system;
 - 4.7.4. Helmet according to FIA technical list N.25, N.33, N.49TL.

5.ENGINE

- 5.1. It is allowed to use only the standard engine available from the specific car manufacturer, specific car model with the maximum engine displacement 1450 cm3 and the maximum power not exceeding 75 hp (including), on condition that the specific engine and its code have been agreed and authorized by the organizers. The total displacement must not exceed 2,5% of the total displacement of the engine.
 - Maximum **compression ratio** standard plus 0.2 (example if the standard compression ratio is 9.5, then the maximum allowable compression ratio is 9.7). Only engines with electronic fuel injection or mono injection are permitted. Engines with carburettors are prohibited.
- 5.2. **Air filter** and its housing standard, from the specific engine. High-flow air filters that can be inserted into the original air filter housing can be used. Allowed to install non-standard air supply to the original air filter housing, provided that the car is not rebuilt, as well it is prohibited to create additional air openings for the creation of such a structure.
- 5.3. **Throttle body** housing- standard, from the specific engine.
- 5.4. **Throttle body supply** (including valve shaft) not restricted, but must be adequately supplied a strong spring for forced closing in the event of a drive failure. The accelerator cable may be backed up or replace with another.
- 5.5. Intake manifold standard, from the original equipment of the particular engine.
- 5.6. **Exhaust manifold** standard, from the original equipment of the specific engine. May be replaced by muffler intended for a lower Euro standard, in the case of Euro 2/3/4, which affects vehicles above 2001, and for which the catalytic converter is installed in the exhaust manifold, it may only be replaced with a racing catalytic converter.
- 5.7. **Exhaust muffler** muffler is allowed to be modified or made anew on the condition that it preserves the number of pipes as in standard equipment of exact car, and it is prohibited to weld partitions or other elements that affect the direction/flow of exhaust gases in the muffler. The muffler must end in the dimensions of the car body. The end opening must be located no deeper than 100 mm from the rear gauge of the car body, provided that, if there are no other restrictions at the place of competition (Track), the specified noise level is 97 dB(A) at 4500 rpm (maximum +3dB) (or according to the regulations of the competition), measured according to the noise measurement method (picture No.



571), has not been exceeded. Adjustable exhaust systems are prohibited. If the car is originally equipped with such a system, it must be disabled.



- 5.8. **Cylinder block** standard, permitted cylinder processing within the repair dimensions.
- 5.9. **Cylinder head** standard, from the original equipment of the particular engine.
- 5.10. **Cylinder head sealing** standard.
- 5.11. **Crankshaft** standard, from the original equipment of the specific engine. Only neck grinding is allowed within the repair dimensions.
- 5.12. **Connecting rods** standard, from the original equipment of the specific engine.
- 5.13. **Pistons, piston rings, piston rods** standard, from the original equipment of the particular engine, considering repair dimensions approved by the manufacturer.
- 5.14. **Camshaft (s)** standard, from the original engine configuration.
- 5.15. **Camshaft drive gear (s)** standard, from the original equipment of the particular engine.
- 5.16. **Drive belt and chains** if the original engine is equipped with automatic drive belts (or chains) tensioners, it is permitted to fix them in a certain position with a mechanical device help.
- 5.17. **Valves and their drive parts** valves and their drive parts must be standard, from the specific engine original equipment. Valve seat material standard, but their processing is allowed.
- 5.18. **Lubrication system** oil pump, standard. It is allowed to weld partitions in the crankcase cover. It is permitted to install deflectors in the crankcase cover of the engine lubrication system. Oil radiators and their connections are not regulated, provided that they do not alter the bodywork and are located within the perimeter of the bodywork.
- 5.19. **Ignition system** standard, from the standard equipment of the specific engine.
- 5.20. **Cooling system** standard. Hoses are FREE. Thermostat may be removed. System must be filled with water only. Special additive may be added. Due to difficulties of system drainage, small amount of non-freezing coolant may be left in the system. Freezing point of max -5°C allowed.
- 5.21. **Engine sealing** it must be possible to seal the engine valve cover with the engine head, excluding any possibility of opening it. The Technical Commissioner decides on a case-by-case basis. (At least 1.5mm hole for wire and seals). Honda engines also need to be able to seal the throttle body in such a way that the throttle body can be sealed together with



the restrictor, limiting any possibility access/replace/process the restrictor without removing the seal. (At least 1.5mm hole for wire and seal)

5.22. **Engine mounts** - not limited. The location of the engine and gearbox must not be changed.

6.TRANSMISION

- 6.1. Gearbox only functional series gearboxes are approved, which has been homologated with at least 2500 production cars. The gearshift control is not restricted. Bodywork modifications installation of a new gear shift control are permitted provided that they do not conflict with other paragraphs of this Regulation. Shifting must be mechanical. Gearshift schematics is standard. The position of the gearshift lever is not limited. Transmission mounts may be replaced by other components, whatever their material, provided that the positions of the transmission components do not change. The gear ratio must be standard, depending on the car model and engine configuration. Reverse gear must be available at all times and the pilot must be able to engage it while seated in his seat with the seat belt system fastened.
- 6.2. **Flywheel** standard, from the standard equipment of the specific engine, alleviation is not allowed.
- 6.3. **Clutch** clutch disc is not limited except by the number. The clutch release unit is not restricted. The outer diameter of the pressure plate may be smaller than the original, but not larger. Clutch control system is not limited. Clutch guide sleeve is not limited.
- 6.4. **Main transmission** main transmission gears, and their ratio standard from the specific model and engine configuration.
- 6.5. **Differential** only differentials homologated with 2500 cars are allowed. Limited slip differential is prohibited. "Limited slip differential" means any system in operation by mechanical, hydraulic, viscous or electrical help. Original wheel slip control system must be rendered inoperative by dismantling its control unit.
- 6.6. **Drive shafts** standard. Cardan shaft between gearbox and differential standard.
- 6.7. **Transmission sealing** it must be possible to seal the gearbox and the main differential housing, excluding any possibility of opening it. The Technical Commissioner shall decide on a case-by-case basis. (At least 1.5mm hole for wire and seal)

7.SUSPENSION

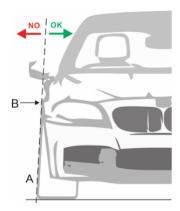
- 7.1. **Suspension** standard, connection material may differ from the original (for example: harder bushings, aluminium). No modifications may be made to the original suspension component. Steering rods, steering joints and their connecting parts standard. Upper connections for front suspension "MacPherson" suspension parts standard. Body modifications are not permitted. If the original "MacPherson" strut is attached to the wheel pillar with a bolted connection, the side thrust of the front undercarriage may be adjusted by those bolt. It is allowed to adjust the inclination and geometry of the wheels of the rear suspension with the help of metal spacers (metal adjustment plates).
- 7.2. **Steering gear** standard. The steering wheel is not limited. Anti-theft systems, such as the steering lock system, must be dismantled.
- 7.3. **Power steering** not limited.
- 7.4. **Anti-roll bars** anti-roll bars and their fastening structures standard, anti-roll bar links standard, harder type (polyurethane, etc.) compounds can be used instead of standard rubber. The anti-roll bar can be dismentled



- 7.5. Wheel spacer wheel spacer is not regulated, except for their maximum width which cannot exceed 25mm.
- 7.6. Wheel bearings standard.
- 7.7. **Springs:**
 - a) **Coil springs** coil springs are not limited, provided that the type of their installation corresponds to the standard production specified for the specific car model. It is forbidden to change the industrial mounting points for springs.
 - b) **Torsion bars** vehicles with torsion bars, coil springs may be fitted on the axle provided that they are concentric around the shock absorber.
- 7.8. **Shock absorbers** standard. It is not permitted to use shock absorbers which have the possibility to adjust the characteristics in any way (hardness / rebound / compression / height, etc.).

8.WHEELS AND TIRES

8.1. **Complete wheel**: Maximum wheel dimensions (discs + flanges) are 7" x 15". The diameters measured at the level of the outer and inner edges of the wheel disc must be identical with a tolerance of +/- 1,5 mm. In other aspects wheels are not restricted with condition that they are made of metal and are integral. Wheel mounting bolts may be replaced by mounting studs and nuts provided that the number of mounting points and the diameters of the threaded parts remain unchanged. The studs and their nuts must not protrude beyond the dimensions of the outer rim of the wheel disc. The upper part of the complete wheel (flange + disc + tire), located vertically on the wheel hub in its centre, must be covered by the bodywork, measured vertically (see Figure 810). Foam or any other system that allows the car to move without air in the tires is prohibited. Pressure regulating systems are prohibited.



Picture Nr.810

- 8.2. **Spare wheel**: It is forbidden to carry a spare wheel in the car.
- 8.3. **Tires:** Tire model and size limited (mono) according to the regulations of the current year of the competition. Any mechanical or chemical treatment is prohibited. Tire heaters are prohibited.
- 8.4. Minimum wheel disc weight 5kg.

9.RIDE HEIGHT

9.1. It is allowed to change the height of the car. Under no circumstances any part of the car bodywork or suspension/suspension parts, including the exhaust system, should not be lower in a horizontal plane than 60 mm from the ground when the car is fully equipped with its pilot in the pilot's seat. The gauge/instrument can be used by the



technical service at any time to check the height of the vehicle. At the time of measurement, the car may be static or moving.

10.BRAKES

- 10.1. Front and rear brake cylinders and brake discs/shoes standard, from the specific car model and engine configuration. Brake discs are free, on the condition that they are one-piece and in standard sizes, as provided by the specific car model and engine configuration. Brake pads not limited. Original parking brake may be dismantled or replaced by a pilot-operated hydraulic cylinder without any intermediate system. If the car was originally equipped with a brake vacuum booster or electric booster, this device may be disconnected or dismantled. The brake master cylinder and/or pedal box are not restricted, but they must be made of a metal structure if the standard design is not maintained. Modifications to the bodywork are permitted provided that they have no function other than securing the master cylinder and/or the pedal box. Adjustment of the distribution of braking forces between the front and rear axles is permitted and recommended. An inertia mechanical braking force distribution system is prohibited. If the vehicle was originally equipped with an anti-lock braking system (ABS), its control unit and all parts of the anti-lock braking system must be dismantled, provided that Annex J, paragraphs 253 to 4 are complied with, the provisions of subparagraph.
- 10.2. Brake hoses and hoses may be replaced by sports brake hoses, hoses and their connections, their locations are not regulated. Brake disc guards may be disassembled or deformed.

11.BODYWORK

- 11.1. **Exterior** front and rear fenders are standard, their arches are allowed to be machined, with condition that the dimensions of the car are not extended. Soundproofing materials and corrosion protection materials removal is permitted. Removal of external decorative linings is permitted. It is not allowed to lighten the body (when removing metal by drilling, cutting, etc.). The only mechanical modifications that permitted in main structures are related to the installation of the safety frame and other systems. If a body with a sunroof is used, the hatch opening must be welded using a steel plate not thinner than the roof material with a maximum distance between welding points (places) of 30 mm.
- 11.2. **Protective bumpers** standard. Spoilers (if any) standard.
- 11.3. The car must be equipped with towing straps or towing loops at the front and rear. They must be clearly visible or indicated with the symbol (arrow) in yellow, red or orange. The towing hooks must not protrude car dimensions.
- 11.4. **Cockpit** the passenger seat and rear seat (s) must be removed. It is recommended to remove all insulating and sound insulation materials. Standard seat belts and carpets must be removed. It is permitted to replace the electric rear window lifter of a two door car with a mechanical or hinged glass, if any. Additional equipment which does not affect the handling of the vehicle, such as to make the interior of the vehicle more aesthetic or comfortable (lighting, heating, radio, etc.) is permitted, provided that it does not in any way, even indirectly, affect the engine, steering, transmission, braking or road stability characteristics. Standard air conditioning system may be dismantled. Standard heating appliances may be dismantled or replaced. Internal heating water supply may be blocked to prevent water splashing in the event of a collision if an electrical or similar anti-exhaust system is available. Only unused brackets located on floor may be dismantled.
- 11.5. **Underbody** the installation of guards is not permitted, except for the engine, gearbox or other devices and system protection and which does not have an aerodynamic function. Pneumatic jack system is not allowed. Unused optional equipment supports (e.g. spare wheel, thermal shield, etc.), located on the chassis/bodywork may be dismantled.



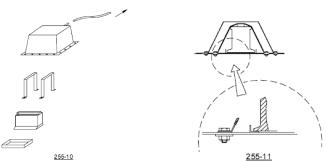
- 11.6. Windows, mirrors and their mechanisms there must be at least one working windshield wiper on the pilot's side. Cars must have a rear-view mirror. The car must be equipped with a standard, the left and right rear-view mirrors of the specific car model. The windscreen must be multilayer (Triplex type). The side windows and the rear window, as standard, must be covered with a transparent, a colourless safety film not exceeding 100 microns in thickness to prevent the glass fragments from dissolving in the event of a collision. They may be tinted as standard, but additional tinting of the glass is prohibited.
- 11.7. **Doors** standard. The front door trim panels may be dismantled by replacing them with other metal sheets at least 0,5 mm thick, at least 1 mm thick carbon fibre, or of at least 2 mm thick other hard and non-combustible material. Hinges standard. The glass lifting mechanisms are not restricted, they may be dismantled or rendered inoperable, but the glass must remain locked in the upper position and slip without possibility to slip down in various conditions. Rear window regulators are not regulated. Modifications to the installation of trim panels are permitted.
- 11.8. **Lids** standard. The sound insulation material of the engine and boot lid may be removed. It is not permitted to install any type of aerodynamic ventilation accessory on the bonnet. Hinges standard.
- 11.9. **Dashboard** standard. Its mechanical processing is allowed. Allowed panel to flock or sheathe. At least a partial, visual resemblance to the standard must be maintained. Measuring instruments are not regulated, however the installation must not present any risk. Standard switches may be replaced by other designs switches and located elsewhere on the instrument panel or centre console. Prohibited in the cabin install/use mechanical oil and fuel pressure gauges.
- 11.10. Luggage and engine compartment unused batteries and spare wheel holders may be removed.

12.ELECTRICAL EQUIPMENT

- 12.1. Main mass switch The main switch must cut off all electrical circuits (battery, generator or dynamo, lights, car beep signal, electrical controls, etc.) and engine operation. It must be a spark-proof model and accessible from inside and outside the car. On the outside of the car, the switch actuation system must be located in the lower part of the windscreen mount. It should be marked with a red spark in a blue triangle with a white edge; the base of the triangle must be at least 12 cm long. The pilot must be able to reach and turn off the main mass switch while in the pilot's seat and fastened.
- 12.2. Wires not limited.
- 12.3. **Control unit (ECU)** standard, specific model and engine standard configurations. Reprogramming of the engine control program between races is allowed by submitting the nominal power parameters to the management of the ABC race club according to the regulations on power measurement. On race day the ECU software must be exactly as it was on power measurement day for the measurement submitted to ABC race management as the nominal from which the car's minimum specified weight is applied. Any reprogramming or modification of the control unit software is prohibited during the competition. On the day of the competition, it is forbidden to replace the control units with another one, unless it is agreed with the technical commissar of the competition. It must be possible to seal the ECU, excluding any possibility of its opening. Each specific case is decided by the technical commissioner. (A hole of at least 1.5 mm must be prepared for the wire and seal).



12.4. Vehicle battery - the make and capacity of the battery/-ies are not regulated. It must be possible to start the engine at any time using the car battery. Each car battery must be securely fastened and covered to prevent short circuit or leakage. The number of car batteries specified by the car manufacturer must be maintained. If the car battery need to be secured in a different position from the standard, it must be secured to the bodywork, cab or luggage compartment using a metal base and two metal clamps with an insulating coating that attach to the floor with bolts and nuts. These clamps must be fitted with bolts of at least 10 mm and gaskets at least 3 mm thick under each bolt with an area of at least 20 cm2 on the opposite side of the bodywork metal. The car battery must be covered with a leak-proof box that will secure independently of the car battery. The protective box must have an air inlet and an outlet for air outside the cab (see Figures 255-10 and 255-11).



If the car battery in the cab is a dry battery, it must be electrically protected by a cover that completely covers it. Any energy regenerating system not provided by engine is prohibited.

- 12.5. **Alternator** standard configurations of the specific engine.
- 12.6. **Lighting** standard lighting system must be preserved, it must be able to function throughout the race, except for turn signals, and high beams. Headlamp upper and the lower edges may be covered with adhesive tape. However, a band at least 4 cm wide coinciding with a plane parallel to the transverse axis of the vehicle and symmetrical about the centre of the lamp must remain free throughout the width of the headlamp. The front fog lamps must be removed. The openings may be used in accordance with 5.2. conditions of this Article.
- 12.7. Fuses not limited.
- 12.8. Car beep sound not limited.
- 12.9. Radio communication not limited.

13.FUEL SYSTEM

- 13.1. **Fuel system** standard, specific engine and model standard configurations.
- 13.2. **Fuel tank** standard. The original carbon filter from the fuel tank air duct as well as its control unit may be removed. It is allowed to install addition fuel tank, with the maximum capacity 1 litre. It must not be in the passenger compartment, must be securely fastened and as close as possible to the fuel tank.
- 13.3. **Fuel lines** may be replaced by sports fuel lines, hoses and their connections. The installation of fuel lines is not regulated provided that J the provisions of Sub-paragraph 253-3 of the Annex.
- 13.4. Fuel pumps standard.
- 13.5. **Fuel** Only retail available land transport fuel is allowed. The fuel must be commercially available petrol, without any additives other than those lubricants already added to it. The fuel must comply with the following standard LVS EN 228:



2013 and the octane number must not exceed 99. Any other type of fuel, including (E85), is prohibited. After the qualification or competition, the participant's car must have a minimum of 3 litres of fuel in the fuel tank.

14.VEHICLE OVERVIEW

14.1. The vehicle must be free from obvious visual and structural defects (rust, severely deformed body parts, severely cracked glass in the field of direct vision, etc.) which could affect in any way safety of competitions or create a negative impression of them. There are no restrictions on car painting, except for the requirements mentioned in the competition regulations. Each car must be provided with start numbers, the driver's surname, the flag of the country issuing the license, and the inscriptions (advertising) regulated by the race regulations, provided by the organizer. Doors, hood, fenders, etc. contact points, with the body, gluing is not allowed.

15.CONCLUSION

15.1. Additions or clarifications may be introduced in the technical regulations for unclear situations, which are approved in writing by the organizer two weeks before their entry into force. Specific, exceptional in case of unspecified or unauthorized changes in the car design, may be accepted or allowed by the decision of the organizer, publishing the said changes no later than 30 days before the start of the next stage of the competition. It is the driver's responsibility to prove that the car complies with these regulations. It is recommended to consult the ABC Race Club Technical Council on unclear issues. In case of disagreement, the Latvian version of these Terms shall prevail. These regulations are valid from January 1, 2024 to December 31, 2026.