STANDARTA AUTOMOBIĻU KOMISIJA

# Latvian Automobile Federation Standard Automobile Commission

# TECHNICAL REGULATIONS

## 1. Vehicles.

1.1. These technical regulations are written for street-legal cars. Race cars need to meet the technical regulations of their own motorsports discipline, as well as the chosen LAF SAK series regulations and the particular event supplementary regulations.

1.2. Cars must meet the Latvian road traffic laws and other laws regarding permission to drive on the road, except for the points that are explicitly permitted in these regulations (even if they differ from laws regarding permission to drive on the road). All cars must have a valid technical inspection at the time of the event (if the car has a one-month permit to drive while fixing found issues, the car can still compete if these issues do not relate to braking, suspension or steering – the competitor must show this provided list of defects during scrutineering. Each such case is communicated to the clerk of the course). Cars registered outside of Latvia must be road legal (with valid technical inspection) in its country. In case of disputes, the competitor must be able to prove that the car does have valid technical inspection.

In series where there are no road sections where you drive on roads open to the public, it is allowed to compete in cars that do not have a valid technical inspection at the time of the event. Regardless, these cars also need to meet the requirements for passing such inspection.

Anything that is not explicitly allowed in these technical regulations and/or in the technical inspection of the particular country (with these regulations serving as the basis to settle disputes in case of varying inspection laws in different countries), is deemed to be forbidden.

1.3. It is allowed to fit a roll bar after the first row of seats, but it is prohibited to install racing (bucket) seats and/or racing seat belts. Cars should not have significant body damage or other visual defects. All cars must have a full, non-removable, metal roof (cabriolets and similar cars are not permitted), and must look similarly to the manufacturer's standard or homologated version.

1.4. It is forbidden to lighten structural components of the car (by removing metal – drilling, cutting, etc.), except for in places that are necessary for fitting a roll bar or other safety equipment.

1.5. It is allowed to install aerodynamic elements (spoilers) or to change them, but these elements must stay within the perimeter of the car. These elements cannot have sharp edges.

1.6. It is allowed to remove the sunroof and replace it with an iron or aluminium sheet that is at least as thick as the roof metal (and is no less than 2mm thick). Maximum distance between welding points is 30mm.

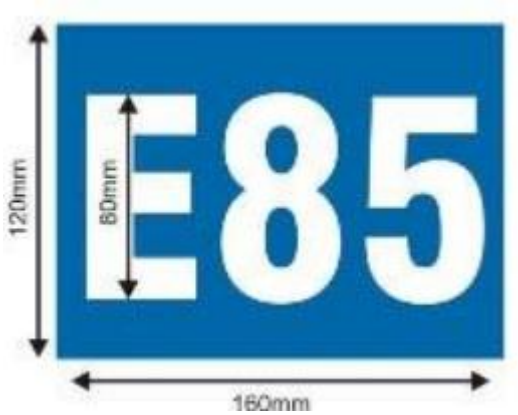
1.7. All cars must have two external mirrors (one on each side). Exception to this rule – cars that came with one external and one internal mirror from the factory. It is prohibited to fold down the mirrors before starting a run.

1.8. It is allowed to fit additional protection under the car, but they must be removable and must stay within the perimeter of the car.

## 2. Steering system.

2.1. Steering wheel – free.

3. **Braking system**.
   3.1. All braking system components must be industrially manufactured. It is allowed to disable ABS.
   3.2. Brake pads and discs – free.
4. **Fuel system.**
   4.1. All cars must use commercially available fuel, E85 or racing fuel (where permitted).
   4.2. If a competitor uses E85 fuel, they must have a sticker denoting this above the fuel fuller cap. This is how the sticker should look:




   4.3. Fuel tank – standard, as put in by the manufacturer. It is forbidden to move the fuel tank.
   4.4. If the manufacturer has put the fuel tank in the trunk, there must be a hermetically sealed wall between the trunk and the interior of the car.
5. **Wheels and tires.**
   5.1. Permitted tires – in accordance with the regulations of each series.
   5.2. Wheel fasteners cannot protrude outside of the wheel.
   5.3. Wheel size is not limited, but they cannot be outside of the perimeter of the car.
   5.4. Wheel covers / hubcaps must be removed during all events.
   5.5. It is forbidden to mechanically or chemically modify the tires.
   5.6. Tire warmers are prohibited.
6. **Electrical devices.**
   6.1. Both the positive and negative terminals of the battery must be protected against short-circuiting and isolated.
   6.2. Battery must be safely affixed in the manufacturer's provided place and in the way the manufacturer has intended.
   6.3. It is allowed to move the battery to the trunk. Battery can only be moved to another place (except the trunk) with a rebuild project that has been approved by the local technical inspection institution, and this approved project must be shown during scrutineering.
   6.4. If the battery is moved from its original place, it must be affixed to the body of the car by using a metal base and two metal strips with an insulating surface, which are affixed to the floor of the car with nuts and bolts. Bolts must be at least 10 mm in diameter, each of them must have a strengthening plate on the opposite side of the metal (at least 3 mm thick and with a surface area of at least 20 cm3). Wet type batteries must be inside a liquid proof plastic container, which has been

affixed to the battery itself. In such cases, the container must have an air intake which exits outside of the car interior.

6.5. If the battery is moved, it is recommended to use a gel (dry) type battery.

**7. Lighting**

7.1. Cars must always have working daytime running lights, low beams, and brake lights.

**8. Engine and gearbox.**

8.1. If the car has a liquid gas reservoir, it must be registered in accordance with the local laws.

8.2. Engine mounts must be without damage or repair welds on them.

8.3. If car division into classes is determined by their engine capacity and minimum weight, they are determined as follows:

8.3.1. For cars with forced induction, the capacity is calculated by multiplying the geometric engine capacity with a coefficient. For petrol engines, the coefficient is 1.7, for diesel engines it is 1.5. Rotary (Wankel) engine capacity is calculated as follows: 1.5 is multiplied by the maximum capacity of each chamber, and that is then multiplied by the number of chambers. In all the calculations above, it is assumed that $\pi = 3.1416$.

8.3.2. Cars must meet the stated minimum weights at all times of the event, except for times when they are being serviced.

8.3.3. The weight of the car is determined as follows: without the crew and their equipment (helmets, clothing, books, instrumentation, spare parts, etc.). Spare wheel is included in the minimum weight. If the spare weight is needed to meet the minimum weight, it cannot be removed during the event. Before the car is weighed, it is forbidden to refill any technical fluids, including fuel. Technical fluids, including fuel, refilling cannot be used as a way to meet the minimum weight of a particular class.

8.3.4. Cars are allowed to be 2.5% over the stated maximum engine capacity, but only if they use serial oversize pistons for engines that do not have changeable cylinder sleeves.

8.3.5. Using ballast is strictly forbidden.

8.4. Using a sequential transmission is forbidden.

**9. Interior and safety equipment.**

9.1. Each car must have a fire extinguisher with an expiration date that has not passed. It must be at least 1 kg, but 2 kg is recommended. It should be affixed safely and must be in an easily accessible place. The fire extinguisher must have a manometer for checking its condition. The fire extinguisher must have the following information listed on it: weight or volume, date of next inspection (which cannot be more than 2 years after the previous inspection or refilling).

9.2. During the runs, competitors must be in clothing that covers the whole body, and drivers must use gloves.

9.3. In race cars, the use of a HANS/FHR or Hybrid system is mandatory.

9.4. It is recommended to use equipment meant for motorsports (racing suit, helmet, fireproof underwear, shoes, balaclava, and gloves).

9.5. During the runs, competitors need to use motorsports helmets with at least an “E” marking (it is recommended to use helmets with valid or expired FIA homologation), which have been safely fastened.

9.6. During the event, there cannot be any unfastened objects in the interior, trunk or engine compartment.

9.7. Interior heating or ventilation with air directly from the engine compartment is prohibited.

9.8. During the runs, sunroofs and windows must be fully closed.

9.9. All interior elements from the front of the car to the rear part of the front seats must be in place (including roof lining, etc.). Original door cards can be changed to an aluminium or steel card with minimum thickness of 1.0mm, or another strong material with at least 2.0mm thickness, such as carbon fiber or other composites.

9.10. Mechanical manometers for the temperature/pressure measurements of technical fluids cannot be placed inside the car. It is allowed to install electric gauges.

9.11. There must be a first aid kit and an emergency triangle (in case of minirally – two emergency triangles) inside the car.

**10. Seats and seat belts.**

10.1. During the runs, drivers have to have their seat belt fastened and be in a fastened motorsports helmet.

10.2. The number of seats in the car must match its technical documentation. The car's technical passport needs to be shown during scrutineering.

10.3. It is forbidden to use belts that have damaged belt material or connections. The belt affixing mechanism cannot be damaged.

10.4. Street-legal cars (including cars with a roll bar) cannot have sports (bucket) seats installed.

10.5. Street-legal cars (including cars with a roll bar) cannot have racing seat belts installed.

**11. Roll bar.**

11.1. It is allowed to install a roll bar behind the first row of the seats. The roll bar cannot in any way affect the usage of seat belts or adjustment of the seats. The roll bar must be safely affixed to the body of the car with a screwed or welded connection.

Recommended construction for the roll bar:

- In accordance with paragraphs 253 and 283 of FIA Appendix J
- Main loop 45 mm * 2.50 mm or 50 mm* 2.00 mm
- All other material 40 mm* 2.00 mm, or 38 mm * 2.50 mm, or 45 mm * 2.50 mm

**12. Noise level**

12.1. Maximums permitted noise level is 103 dB(A) +-3dB at 4500 RPM, except for cases where the track or event regulations call for lower noise levels.

12.2. Static noise measurement takes place with a calibrated handheld decibel meter, placed at a 45 degree angle and 500 mm away from the tip of the exhaust, at the same height as the exhaust.