

**Appendix no. 5 of 2012 Lithuanian Automobile Rally Championship Regulations**

**PREPARED AND CONFIRMED:**

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**2012 NATIONAL TECHNICAL REGULATIONS FOR STANDARD VEHICLES  
(GROUP "SG")**

***1. Definition***

This group consists of the serial production cars, **which comply with these technical regulations.** During the technical commission the car must be technically ordered i.e. it must have a document which approves the execution of the obligatory technical inspection and **sport car technical passport handed out by LASF.**

***2. Safety equipment***

***2.1. Additional fasteners***

At least two additional safety fasteners may be fitted for each of the bonnet and boot lids.

***2.2. Safety belts***

Two shoulder straps and one lap strap is obligatory ; anchorage points on the shell: two for the lap strap, two for the shoulder straps, or one, symmetrical in respect of the seat. These belts must be homologated by the FIA and comply with FIA standards No. 8854/98 or 8853/98. Their validity date is extended for 5 years (calculated from the date which is on the label of ordered belts).

During the rally two belt cutters must be carried on board. They must be easily accessible for the driver and co-driver when seated with their harnesses fastened.

The mounting of safety belts is described in 6.2 section of 253 article (J appendix).

***2.3. Extinguishers***

Manual extinguishers are mandatory.

Each extinguisher must be mounted in such way that it could withstand a deceleration of 25 g in any direction. Only quick-release **two** metal fastenings **with metal straps** are accepted. Extinguisher must be easily accessible for the racer.

Minimum quantity of extinguishant:

in case of powder, 2.25 litre for the following quantities.

**2.3.1. Minimum quantity of extinguishant:**

AFFF: 2.4 litres

FX G-TEC: 2.0 kg

Viro 3: 2.0 kg

Powder: 2.0 kg

**2.3.2. All extinguishers must be pressurised according to the contents:**

AFFF: in accordance with the manufacturer's instructions;

FX G-TEC ir Viro 3: in accordance with the manufacturer's instructions;

Milteliai: 8 bar min, 13.5 bar max

Furthermore, each extinguisher when filled with AFFF must be equipped with a means of checking the pressure of the contents.

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2.3.3. The following information must be visible on each extinguisher:

Capacity, type of extinguishant, weight or volume of the extinguishant, date the extinguisher must be checked, which must be no more than two years after either the date of filling or the date of the last check.

### *2.4. Rollbars*

Rollbars are mandatory and must comply with LASF national rollbar regulations for D class competition or **regulations of FIA Code 253.8 article (J Appendix).**

### *2.5. Rear view*

Rearward visibility must be ensured by two external rear-view mirrors (one on the right and one on the left). These rear-view mirrors may be as standard.

An inside rear-view mirror - free.

### *2.6. Towing eye*

Every car must be equipped with a rear and front towing-eye. They have to be painted in bright yellow, red or orange. They must be clearly visible that, in case of an accident, it would not be difficult to find them.

### *2.7. Windows*

Only front, side and rear windows which come from manufacturer are allowed. The use of transparent film on all side windows is mandatory. The windows may be replaced by the equivalents of other manufacturers, however, the material can not be changed i.e. it is not allowed to replace glass with plastic etc.

### *2.8. Fuel tank*

Fuel tank **may** be original and remain at the original location provided by the manufacturer. **FT3 1999, FT3.5 or FT5 fuel tank may also be used if it is installed under the regulations of 9.6 point of 252 article and 14 point of 253 article (FIA J Code).** A tank of calor and natural gas is prohibited. Fuel lines without joints are allowed inside the cockpit. They must comply with the regulations of 253 article (FIA Code J Appendix).

### *2.9. Battery*

If the battery is moved from its original position, it must be attached to the body using a metal seat and two metal clamps with an insulating covering, fixed to the floor by bolts and nuts. For attaching these clamps, bolts with a diameter of at least 10 mm must be used, and under each bolt, a counterplate at least 3 mm thick and with a surface of at least 20 cm<sup>2</sup> beneath the metal of the bodywork. The battery filled with liquid must be covered by a leak proof plastic box, attached independently of the battery. Its location is free, however if in the cockpit it will only be possible behind the front seats. In this case, the protection box must include an air intake with its exit outside the cockpit.

### *2.9. Seats*

#### *2.9.1. Driver's and co-driver's seats*

If the original seat attachments or supports are changed, the new parts must either be approved for that application by the seat manufacturer or must comply with the specifications mentioned below:

1) Supports must be attached to the shell/chassis via at least 4 mounting points per seat using bolts with a minimum diameter of 8 mm and counterplates, according to the drawing. The minimum area of contact between support, shell/chassis and counterplate is 40 cm<sup>2</sup> for each mounting point. If quick release systems are used, they must be capable of withstanding vertical and horizontal forces of 18000 N, applied non-simultaneously. If rails for adjusting the seat are used, they must be those originally supplied with the homologated car or with the seat.

2) The seat must be attached to the supports via 4 mounting points, 2 at the front and 2 at the rear of the seat, using bolts with a minimum diameter of 8 mm and reinforcements integrated into the seat.

Each mounting point must be capable of withstanding a force of 15000 N applied in any direction.

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3) The minimum thickness of the supports and counterplates is 3 mm for steel and 5 mm for light alloy materials. The minimum longitudinal dimension of each support is 6 cm.

All the occupants' seats must be homologated by the FIA (8855/1999 standard), and not modified.

The seats may be used 10 years from the date of manufacture indicated on the mandatory label (the validity of ordered seat is extended for 5 years).

### *2.9.2 Rear seats*

*The rear seats may be removed. If the rear seats are removed from sedan type vehicle, a fireproof and liquid-proof bulkhead must be mounted instead of the rear seats.*

## **2. Drivers' clothing**

During the speed events drivers must wear helmets homologated by FIA or with expired homologation. FIA homologated liners are mandatory.

Close type non-inflamable overalls are mandatory.

It is recommended to use homologated overalls or the ones with expired homologation.

During the technical commission, the entrants must also submit their helmets and clothing, the suitability of which will be evaluated by the technical committee.

## **3. Modifications and adjunctions allowed or obligatory**

**All the modifications which are not allowed by the present regulations are expressly forbidden.** The only work which may be carried out on the car is that necessary for its normal servicing, or for the replacements of parts worn through use or accident. The limits of the modifications and fittings allowed are specified hereinafter. The cars must be strictly series production and identifiable from the information specified in the articles on the homologation form. It should consist of the following information:

**weight of the car without equipment,**

**cylinder capacity,**

**compression ratio,**

**diameter of the cylinder,**

**stroke of the piston,**

**diameters of intake and exhaust valves,**

**strokes of intake and exhaust valves,**

**type and scheme of the ignition,**

**type and scheme of fuel supply system,**

**serial number of the electronic control unit (if such exists),**

**dimensions of the clutch disc,**

**gearbox ratio,**

**final drive ratio,**

**diameter of the rims,**

**diameters of front and rear brake discs,**

**overall dimensions of the bodywork,**

**dimensions of the ground clearance and the base.**

**If this information is not submitted, a vehicle may be not allowed to start.**

This preparation of the vehicle for sport competition is normal maintenance, more accurate and careful adjustment, allowed modifications and adjunctions, mentioned in this section.

While checking the dimensions of the parts (in case there are no manufacturer drawings), it is not allowed to exceed the deviations of nominal dimensions:

processed parts, except the diameter of the cylinder and stroke of the piston	+ 0.2%	- 0.2%
unprocessed castings and extrusion positions	+ 4%	- 2%

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height of the camshaft lug	+ 1%	
weight of the parts	+ 7%	- 3%
wheel base	+ 1%	- 1%
width of the wheel rut	+ 25 mm	- 25 mm
width of the vehicle in front and rear axes	+ 1%	- 0.3%

In order to compare the allowed deviations, the dimensions of original unprocessed parts and units may be used.

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

### **4. Engine**

**An engine must remain provided by the manufacturer, produced for a particular model of the car. (eg. it is not allowed to mount Golf III or Passat engines into Golf II GTI).**

In order to estimate the cylinder capacity of supercharged engines, the 1.7 rate is applied.

The maximum allowed cylinder capacity for engines with 2 valves in one cylinder is 3000 cm<sup>3</sup>, while for engines with more than 2 valves in one cylinder or supercharged engines – 2500 cm<sup>3</sup>.

*Engine:* provided by the manufacturer.

Cylinder head: standard. **A mechanical treatment of unprocessed head channel surfaces is allowed if it does not exceed +4% of nominal dimension.**

*Gas distribution mechanism:* distribution cylinders - standard.

*Ignition:* provided by the manufacturer.

*Cooling system:* provided by the manufacturer.

*Carburettor:* provided by the manufacturer.

*Air filter and it's housing* - **free**.

*Injection:* provided by the manufacturer.

*Supercharging:* All supercharged cars must be fitted with a restrictor fixed to the compressor housing. All the air necessary for feeding the engine must pass through this restrictor which must respect the following: the maximum internal diameter of the restrictor is 33 mm, maintained for a minimum distance of 3 mm measured downstream of a plane perpendicular to the rotational axis situated at a maximum of 50 mm upstream of a plane passing through the most upstream extremities of the wheel blades. This diameter must be complied with, regardless of the temperature conditions. The external diameter of the restrictor at its narrowest point must be less than 38 mm, and must be maintained over a distance of 5 mm to each side. The mounting of the restrictor onto the turbocharger must be carried out in such a way that two screws have to be entirely removed from the body of the compressor, or from the restrictor, in order to detach the restrictor from the compressor. The heads of the screws must be pierced so that they can be sealed. The restrictor must be made from a single material and may be pierced solely for the purpose of mounting and sealing, which must be carried out between the mounting screws, between the restrictor (or the restrictor/compressor housing attachment), the compressor housing (or the housing/flange attachment) and the turbine housing (or the housing/flange attachment). In case of an engine with two parallel compressors, each compressor must be limited to a maximum intake diameter of 22.6 mm.

*Lubrication:* The fitting of baffles in the oil sump is authorised.

*Engine mounting:* There are no limitations for the material of elastic parts used for engine mounting, except for the number and place of engine mounting points.

*Exhaust system:* It may be modified. It is allowed to modify the exhaust from the first silencer to the exit, the maximum external diameter of the duct being that of the pipe situated upstream of the first silencer. If two inlets exist in the first silencer, the section of the modified duct must be less than or equal to the total of the two original sections. These liberties must not entail any bodywork modifications. The catalytic converter is considered as a silencer. **The noise level must not exceed 100 dB for an engine rotation speed of 3500 rpm. A noise level is measured according to the FIA method.**

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*Cylinder head gasket:* The material is free, but not the thickness (provided by manufacturer).

### **5. Transmission**

*Clutch:* The disc is free, with the exception of the number.

Reduction gear: **Limited slip differentials are allowed.**

### **6. Suspension:**

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

*Coil springs:* free.

*Leaf springs:* free.

*Torsion bars:* free.

*Shock absorbers:* free. Shock absorbers with any expansion reservoirs are prohibited.

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

The reinforcing of the structural parts of the suspension and its anchorage points by the addition of material is allowed.

**Any modifications in steering mechanism and its transmissions are prohibited.**

### **7. Wheels and tyres**

Wheels made from forged magnesium are forbidden. Wheels must be covered by the wings.

Wheels fixations by bolts may be changed to fixations by pins and nuts.

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

Minimum tread depth is 2 mm. From the 10<sup>th</sup> of November to the 1<sup>st</sup> of April minimum tread depth is 3 mm.

SLIK type tyres are prohibited. **It is allowed to use touring tyres intended to be used for roads in Europe (tyres should consist of "E" mark and the code of homologated country).**

The requirements for studded tyres are indicated in Supplementary regulations.

Sport tyres for gravel roads are allowed.

### **9. Braking system**

It is allowed to use only original braking system and standard units of the system.

Brake linings are free, provided that the contact surface of the brakes is not increased.

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

Brake lines may be changed for aviation type lines. Brake lines without joints are allowed inside the cockpit according to the regulations of 253 article (FIA Code J Appendix). Any wires or tubes between rollbars and bottom strut are prohibited.

Other brake master cylinder from other vehicle of the same model is allowed.

### **10. Bodywork**

#### 10.1. Exterior

Hubcaps must be removed. The fitting of underbody protections is authorised.

#### 10.2. Interior

All the accessories which improve the aesthetics or comfort of the car interior (lighting, heating, radio, etc.), are allowed without restriction.

**Original inside door trims may be replaced by the door panels made from metal sheeting at least 0.5 mm thick, from carbon fibre at least 1 mm thick or from another non-combustible (certificated) material at least 2 mm thick.** Carpets and roof trims may be removed.

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

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

The following is allowed:

Measuring instruments such as speedometers etc. may be installed.

The horn is mandatory, but it is free.

Additional compartments may be added to the glove compartment and additional pockets in the doors.

It is permitted to replace an electric window lift by a manual lift, if these were originally available.

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

### **10.3. Reinforcements**

Body reinforcements are authorised on condition that material following the original shape and in contact with it is used.

The lightening of the bodywork is prohibited.

### **10.4. Underbody protections**

Free.

## ***11. Electric system***

*Generator:* May be replaced by a more powerful one.

*Lights:* The mounting of additional six headlights is authorised provided that the total number of headlights equipping the car does not exceed 8 (parking lights and rear lights are not included). Additional lights may exceed the perimeter of the car, however, they must not cover the light flow of the main lights. Front and other exterior lights must always be external.

*Fuses:* they may be added to the electrical system.

## ***12. Minimum weight of the vehicles according to the class***

12.1. At any time during the event, except the service zone, a car must comply with the minimum weight.

- up to 1400 cm<sup>3</sup> - 820 kg;

- more than 1400 cm<sup>3</sup> up to 1600 cm<sup>3</sup> – 900 kg;

- more than 1600 cm<sup>3</sup> up to 2000 cm<sup>3</sup> – 1000 kg;

- more than 2000 cm<sup>3</sup> – 1200 kg.

12.2. Minimum of the car: this is the real weight of the car, with neither driver nor co-driver nor their equipment and with a maximum of one spare wheel. At no time during the event may a car weigh less than indicated in this article.

PREPARED AND CONFIRMED in LASF Technical Regulation Committee on the 3rd of November, 2011.