LAF Racing Commission

LASF Racing Commission

EAL Racing Commission

V1600

Technical Regulations 2022

V1600 powered by BaTCC

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1. Definition

Serial production car which is model year 2000 or after. Engine capacity may be max 1600cm3. At least four seats as standard is mandatory. Only normally aspirated 2 wheel drive cars are permitted. The car doesn't have to be homologated by FIA to groups A or N.

At least 2500 similar cars must be produced within 12 consecutive months period.

The cars which V1600 Technical Passport is granted 1.1.2016 or after, must be year model 2000 or newer, intended to EU -market area and it is or have been in common sale and possible to register in EU countries.

The car must remain like a series production car in all respects, except as otherwise stated in these rules.

Articles 251 and 252 of Annex J shall apply where applicable and Article 253 unless otherwise stated in these regulations.

2. Passport

All V1600 cars must have Local ASN issued -Technical Passport. The passport applicant is obliged to provide all information which is required. V1600 Technical Passport includes also technical passport, which is valid only then, when the car is used in the competition in a class which is intended for V1600 cars.

The FIA homologation form must be accompanied if the car is homologated model (The basic group A homologation form).

If the car is not FIA homologated, the passport applicant is obliged to provide all necessary documents (the official technical data) as well as add them to the application. The CoC (Certificate of Conformity) is mandatory. The cars must always be exactly as the serial production models.

If the information in the passport is found to be incorrect during the scrutineering, the passport can be cancelled by the technical working group and a new passport must be obtained for the car in accordance with the normal procedure. In this case, the competitor must also reimburse any costs incurred in examining the information which has been provided.

The car must have a valid passport before the expiry of the entries for the competition.

For FIA homologated cars the extensions are not valid except if they are errata (ER) or evolution (ET). Also Supply Variant (VF) or Production Variant (VP) extensions are valid. Also following extensions are permitted:

- The flywheel to replace a two part flywheel
- Safety cage
- Seat fastening
- Harness fastening
- 2/4 door versions

Granted V1600-passport does not guarantee the conformity with these rules. The competitor is always obliged to prove the regularity of the car leaning on the manufacturer documents on request by the competition organizer or ASN. The cars must be strictly series production models.

If the vehicle structure has been modified in such a way that the car no longer corresponds to the identification number or the car is made on the spare parts chassis which serial number is missing, the applicant must notify the identification number, which corresponds to the car. This indicated VIN number will be written in the passport and all the technical inspections of the vehicle and the regularity of the parts are made on the basis of the notified identification number. In this case, also the EU certificate of conformity should be amended to respond to this car model.

3. Competitions

All the V1600 cars which takes part in Baltic Touring Car Championship, must always be according to these regulations and the passport form must be the 2016 onwards introduced form. In this case also the car must be inspected by the BaTCC V1600 inspector and all the photos of the passport will be taken by this inspector.

4. Minimum weights

When calculating the minimum weight of the car the original maximum net power provided by the manufacturer (CoC) will be used as a reference.

The minimum weights for use in competitions is calculated using the following formula:

- Up to 1400 cc vehicle weight is calculated by 475 kg + 6.8 kg per kW.
- Up to 1500 cc vehicle weight is calculated by 500 kg + 6.8 kg per kW.
- Up to 1600 cc vehicle weight is calculated by 525 kg + 6.8 kg per kW.

If the car is equipped with a 6-speed manual gearbox, the car minimum weight is added to 25 kg.
With semi-automatic gearboxes (eg. DSG), the minimum weight of the car is added to 50 kg, regardless of the number of gears.

To achieve minimum weight in the car may be installed one or more ballast provided that they are fixed and integrated. The ballast must be affixed visible to the floor with at least 10mm diameter 8.8 grade bolts which must be pierced for sealing. The ballasts may be located either in the cabin or in the luggage compartment on the floor. The floor must be reinforced in every anchorage point on both sides of the bodyshell with at least 3 mm steel plate with a minimum surface area of 40 cm2.

Car weight will be checked on racing condition.

5. Modifications and adjunctions allowed or obligatory

ALL MODIFICATIONS WHICH ARE NOT AUTHORISED IN THESE REGULATIONS ARE EXPRESSLY FORBIDDEN.
The allowable change may not lead to a modification which is not specifically permitted.

The permitted modifications and installations limits are defined below. Tolerances for the non-homologated car parts will be the same tolerances as for the FIA homologated cars.
The only thing allowed for this car is normal service or replacement of worn or damaged part.

Any part which is worn or damaged in use, may be exchanged with the original part of the same kind. Also, with the use of an identical part of the original (ie. accessory part) is allowed.
The original part refers the basic part homologated by the FIA or the original part of a non-homologated car model(art 251 2.1.10.).

6. Engine

6.1 Ignition

The make and type of the spark plugs are free, as well as the rev limiter and high-voltage wires associated with the ignition.

The electronic control unit (ECU) and the ignition components in the electronic control unit are free, nevertheless the system must be mechanically interchangeable with the original unit.

The original loom should be kept. The sensors and actuators must be original, as well as their function. Lambda sensors can be removed, but at least one must be maintained in operation, if the original system is equipped with a lambda sensor.

Sensors may not be added, even for the data collection system.

Data acquisition systems are completely forbidden, except the original car system (OBD) on which may not be added any functionality. If the ECU of the car is changed , and the new ECU includes a larger collection of

data, it must be switched off (data logging). The competitor must be able to display this information from the control unit.

If it is not possible to declare that information, the control unit will be delivered by AKK to the ECU representative for further inspection.

6.2 Cooling System

The thermostat is free, as well as the cooling fan control system and the switching temperature. The radiator cap locking system is free.

The radiator may be protected against hits of stones with eg. mesh. Protection must be carried out so that the mesh is not visible.

6.3 Fuel system

6.3.1 Carburettors

The original system must be maintained.

The components of the carburettor which control the quantity of petrol entering the combustion chamber may be modified, provided that they do not have any influence over the quantity of air admitted.

6.3.2 Injection

The original system must be maintained.

Components of the injection system situated downstream of the air- flow measuring device, and which control the quantity of petrol entering the combustion chamber may be modified but not replaced, provided that they do not have any influence over the quantity of air admitted.

The fuel pressure regulator may be replaced.

The injectors may be modified or replaced in order to modify their flow rate, but without modifying their operating principle and their mountings.

The injector rail may be replaced but it must be fitted with original connectors.

6.3.3 The throttle wire

The accelerator cable may be replaced or doubled by another one regardless of whether it comes from the manufacturer or not.

6.3.4 Inlet

The air filter housing and the pipes must be kept original, the filter cartridge is free.

6.3.5 Lubrication system

The oil filter cartridge is free. The fitting of baffles in the oil sump is authorised.

6.3.6 Exhaust

The exhaust manifold must be retained original up to the first detachable connection, from here the exhaust pipes is free, but the noise level of the event must not be exceeded.
The changes must not lead to any changes in the bodyshell. Additional parts for the mounting of the exhaust are authorised. If the original catalytic converter is a part of the manifold, the catalyst may be replaced with a conical part of the same length and with the same inlet and outlet diameters. The workable catalytic converter in the exhaust system is mandatory. The catalyst must be either the original or the FIA-approved.

7. Transmission

Traction control must be switched off and may not be switched on from the cabin.

7.1.1 Clutch

The disc is free, except the number.

7.1.2 Gearbox

The original gearbox may not be modified. The joints of the gearbox linkage are free.

7.1.3 Differential

Original. The limited slip must be removed and replaced with standard differential of the same car model.

8. Suspension

The suspension parts (not anti-roll bar) and their mounting points may be reinforced by the addition of the material. The added material must follow the original shape. Two separate parts may not be connected to each other. A silent block material may be replaced. The maximum hardness for new material is 80 shores – Type A.

Suspension travel limiters may be installed to limit the travel.
The spring plate may be done adjustable if the adjustment part is a part of the plate and separate from the rest of the suspension / body part (it may be removed).

8.1 Wheel adjustment

It is permitted to modify the shape of the suspension anchorage points on the bodyshell for adjusting the camber angle. The camber angle adjustment can also be made by modifying the lower anchorage points of the strut or exchanging the upper end of the strut to be adjustable. The adjustment possibility may be only to one direction (the camber).

8.2 Springs

8.2.1 Coil springs

The length, number of threads, the thickness and the outer diameter of the spring as well as the type (progressive or not) and the spring plate shape are free. Up to two springs can be installed in series (per wheel). Intermediate flange may be added.

8.2.2 Leaf Springs

Length, width, thickness and the bending radius in the vertical direction are free.

8.2.3 Torsion Bar

The diameter is free.

8.2.4 Liquid / Air suspension

The balls are free from the dimensions, shape and materials and is subject to an external control valve. The number of balls must be kept.

8.2.5 Shock Absorbers

Free, provided that their working principle, number, their type, and their attachment points remain unchanged. Gas filled dampers, are considered as hydraulic dampers.
The shock absorber must not be equipped with more than one adjustment. The use of shock absorbers with more than one adjustment is not allowed even if the excess adjustments would be plugged or locked.

The separate fluid reserves can be attached to the sprung part of the car. If these reserves are in the cockpit or the luggage compartment which is not separated from the driver's compartment, they must be protected against leakage and fastened securely.

A silent block may be replaced by a "Uniball" joint.

The checking of the operating principle of the shock absorbers must be carried out as follows:
Once the springs and/or the torsion bars are removed, the vehicle must sink down to the bump stops in less than 5 minutes.

If, in order to change the damping element of a McPherson suspension, it is necessary to replace the whole telescopic part and/or the shock strut, the replacement parts must be mechanically equivalent to the original ones and have the same mounting points. The shape and material of the spring plate is free and it may be adjustable.

The bearing of the upper end of the spring strut is free.

Elastic materials of the pivot points can be exchanged for another flexible material having a hardness not more than 80 Shore.

9. Wheels(Rim and Tire)

9.1 Rims

The permitted wheel diameter is 15 ".

The maximum width of 15” rim 7”.

Only wheels of one part are permitted and the track width is free. Maximum 25,4mm intermediate pieces between the rim and the hub are permitted, provided that they are attached to either the rim or the hub.

Wheel Size (= flange, rim and tire) must be able to place within the original bodywork in such a way that the space above the wheel hub part is covered when measured on the vertical position.

Air extractors added on the wheels are forbidden.

Wheels fixations by bolts may be changed to fixations by pins and nuts provided that the number of attachment points and the diameter of the threaded parts will not change.

9.2 Tires

Nankang AR-1 tires(size 195/50 R15) are mandatory.

Only air may be used between the tire and the rim.

10. Braking system

10.1 Brake Calipers

Master cylinder and the wheel cylinder must remain the original.

It is permitted to add a spring in the bore of the callipers.

In the case of a car fitted with servo-assisted brakes, this device may be disconnected.

A device for scraping away the mud which collects on the brake discs and / or the wheels may be added.

10.2 Brake pads

Brake pads and linings are free.

10.3 Brake lines

Brake lines may be changed for aviation type steel-braid lines.

Brake lines may be moved inside the cockpit.

10.4 Cooling of brakes

For the cooling of the brakes an air pipe is permitted. The 2/3 of the length of the pipe the inner diameter must be up to 77mm. This pipe and the installation to the car may not cause changes to the bodywork.

The bumper openings of removed lights may be used to duct air to the pipes. If there are not any original openings, it is permitted to make an opening up to a diameter of 10 cm or other shape of the same surface area.

Brake disc protection plates may be removed or bent.

10.5 Anti-Lock braking system

Anti-lock braking system may be removed. In this case, it is permitted to install maximum two brake balance adjusters.
If the ABS pump unit is removed, it is permitted to divide the rear brake pipe on different place from the original location.

10.6 Electric Braking system

If the car is equipped with an electronic braking system, this control unit is free, but it must always be interchangeable with the original. All sensors of the system must be kept in its original form, such as the loom.

11. Bodywork

11.1 Exterior

Plastic wheel arch liners may be removed or replaced by equivalent liners produced of plastic or aluminium.

Changing the front and rear wipers is permitted. Rear wiper may be removed.

The places for lifting the car may be strengthened, moved or added for jack stands. They may not have any other function. Except for circuit racing, the installation of bodyshell protections are permitted provided that these protections will respect the regulations of ground clearance, are removable, and specially designed to protect the floor of the cockpit. The maximum thickness of the protection is 5 mm and their maximum total weight may not exceed 10 kg. The material of the protection must be flexible. The protection do not need to follow the original form, but their sole function may be to provide the floor protection against the wear.

11.1.1 Aerodynamic device

Rear aerodynamic device may be installed under the following conditions:

- On top and front view, it should not exceed the car perimeter.
- The whole device including the supports must fit into the square of 15cmx15cm on the side view.

11.1.2 Towing device

One front and one rear towing device is compulsory.

They must:

- Be clearly visible and marked in yellow, red or orange
- Allow the passage of a cylinder with a diameter of 60 mm
- Allow the car to be towed on a dry surface (concrete or asphalt), by applying traction on a plane parallel to the ground, with an angle of plus or minus 15 degrees to the longitudinal centreline of the car.

This check must be carried out with the wheels blocked by means of the main braking system. The car must be fitted with tyres of a type identical to that used during the competition. It may take place during preliminary scrutineering.

11.2 Interior

The rear seats and rear safety belts must be removed.

The removable rear shelf in twin-volume cars must be removed.

Air bags must be removed.

The dashboard should be kept in its original format. It is permitted to remove the part of the centre console which contains neither the heating nor the instruments.
Electric side window lifters may be replaced by mechanical and vice versa.

Unused Co-pilots seat may be removed.

11.2.1 Trim

The original upholstery and carpets must be removed from the floor. The trim of the doors and below the rear side windows may be removed. If the original trim in these areas are not used, they must be replaced either at least 1 mm thick aluminium or carbon fibre, or 2 mm thick non-flammable solid material.

The roof trim may be removed.

Other soundproofing material and panels may be removed (also from the engine compartment)

11.2.2 Air Conditioning

Air-conditioning with all its parts may be removed.

11.3 Reinforcement

Reinforcement bars may be fitted on the suspension mounting points to the bodyshell or chassis of the same axle, on condition that they are removable and are attached by means of bolts.

The distance between a suspension attachment point and an anchorage point of the bar cannot be more than 100 mm, unless it is an upper bar attached to a McPherson suspension or similar.

In the latter case, the maximum distance between an anchorage point of the bar and the upper articulation point must be 150 mm. Apart from these points, this bar must not be mounted on the bodyshell or the mechanical parts.

If the bar is a transverse strut homologated with the safety cage, it must be used as homologated. Strengthening of the suspended part is allowed provided that the material used follows the original shape and is in contact with it. Unused supports, which only purpose is for attaching accessories and trim body construction, may be removed.

11.4 Additional Accessories

All those which have no influence on the car's behaviour, for example equipment which improves the aesthetics or comfort of the car interior (lighting, heating, radio, etc.), are allowed without restriction.

In no case may these accessories increase the engine power or influence the steering, transmission, strength, transmission, brakes, or road holding, even in an indirect fashion.
All controls must retain the role laid down for them by the manufacturer.

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

It is also permitted:

- Voltage, tachometer, headlamp̈ and the oil pressure gauge are permitted, provided their installation does not pose any hazard. If the dashboard, etc. are made, eg. a hole for the instrument, the instrument must meet the installation place entirely made of it.
- The necessary sensors and cables for the operation of the meter may be added. These sensors and cables may not have any other purpose. Retrofitted meters loom must be clearly separated from the rest of the car looms and the meter must obtain their data directly from the sensor. The original instrument shall be made inoperative.
- The horn device may be changed or install an extra for co-pilots use.
- Fly-off model handbrake is permitted (mechanical, not hydraulic).
- The steering wheel is free. The locking system of the anti-theft steering lock may be rendered inoperative. Steering Wheel Quick Release system may be installed. The release must be operated by pulling the flange along the steering wheel axis and the colour of the lever must be yellow. Power steering hoses may be replaced according to Appendix J art. 253.3.2.

- Additional compartments may be added to the glove compartment and additional pockets in the doors
- Insulating material may be added to the bulkhead to protect the passengers or parts from fire or heating.
- Inside rear-view mirror may be increased.
- On circuit races during the race the car may use GPS-based timing devices (eg. A smart phone, clock, gauge), which do not have any connection with the car's electrical system or electronics (not even through the charging cable).

11.5 Electric Circuit

The loom of the unused electrical equipment (speakers, radio, interior and reading lights etc.) may be removed. The loom of the airbag system may be removed.
Fuses may be added.

The accident safety switch may be removed.

11.5.1 Battery

The make, capacity, and battery cables are free.

The tension and the site of the battery must be retained.

A power take-off connected to the battery is permitted in the passenger space.
The general circuit braker in accordance with article 253.13. is compulsory.

11.5.2 Generator

The alternator may be changed for the same type.

11.5.3 Lightning system

A maximum of 6 additional headlights are allowed.

If the series fog lamps are kept, they are counted as additional headlights. They may not be housed within the bodywork.

The original headlights can be made inoperative and covered with adhesive tape.

They can be replaced by other headlights, in compliance with this article (as fog lights and headlights in bumper).

The original fog lights in front bumper may be removed. However, their openings in bumper must be covered unless these openings will be used as air duct for brakes according to article 6.5.

A reversing light may be fitted provided it can only be used when the gear lever is in the "reverse" position, and provided that the police regulations on this subject are observed.

11.6 Fuel System

Only the original fuel tank is permitted. It may be filled with safety foam.

If the fuel tank is in the luggage compartment, the fuel tank must be isolated from the driver's compartment with bulkhead or fire-resistant fuel tank housing. The locking for fuel tank cap is free. The fuel to be used in V1600 car must be in accordance with article 252.9 National Amendment point 1. (normal fuel station fuel 98E)

12. Safety Cage and Safety Equipment

The minimum requirements for safety cage:

Safety cage according to Appendix J with minimum two door bars on both sides of the car (253-9, 253-10, 253-11), roof reinforcement (253-12, 252-13, 253-14), and diagonal members (253-7; 253-21 or 253-22)

If the homologated of certified safety cage does not include all the additional tubes above, this should be written in V1600 Passport.

In the cars, which first passport was issued after 1.1.2016, the safety cage must comply the latest requirements of appendix J art. 253.8. When reviewing the regularity of safety cage, the issuing date of the first V1600 passport will be considered as it is the homologation date for the car.

The window net according to appendix J art 253.11 is recommended.

Seats and the six point harnesses must be according to FIA appendix J and its national appendixes.

The installation of seats and harnesses must be according to appendix J art 253 and art 254.6.7.2

In other manners, the car should comply with Appendix J of the safety regulations, such as the group N.

GOOD LUCK!