

Classification „4X4 EURO CHAMPIONSHIP”

Technical regulations for cars prepared for off-road (Group TR2) 2009-2012 year

In case of cars inadequacy for group TR2 by one or more parameters, which do not influences cars passability, security of crew and persons around, concerned person should submit application in written form to technical commission in order to be authorized to start in group TR2. All organizers of the competition must verify submitted authorization.

Category sport

1. Definition

Off-road car with wheel formula 4x4, specially prepared to participate in competitions:

- Homologed FIA cars in groups T1, T2;
 - Stockcar (Series production cars) produced at least 1000 identical units.
- It is allowed to compare car parts with serial parts during technical inspection.

2. Enhancement.

Enhancement of any car part should follow: used material repeats shape of part, if enhancement in not talked out in concrete paragraph of these rules.

Cars exterior must be kept, as it is original.

3. Seats.

It is allowed to install any car seats. Seats must be safely fixed. Third row of seats can be removed. Cars must have room to accommodate at least two persons.

4. Cars construction

If in one or other paragraph of these technical regulations there are list of allowed rebuilds, changes or upgrades, then all other changes, not mentioned in the list, are question less **forbidden**.

The only work which may be carried out on the car is that necessary for its normal servicing or for the replacement of parts worn through use or accident. The limits of the modifications and fittings allowed are specified hereinafter. Apart from these, any part worn through use or accident can only be replaced by an original part identical to the damaged one.

It is strongly stated that cars must be stockcars, recognizable (identifiable) by factory data (catalogue or homologation form).

All cars must be registered in traffic police institutions and allowed to participate in road traffic (must have ticket or mark that car has passed roadworthiness test)

Any car changes, adds or modifications must not conflict with countries laws, where competition is taking place.

5. Car weight

Car weight must not be less than 1000 kg and not more than 3500 kg.

Decision about car weight check is on technical commission delegate.
Car weight must be checked “as car is” and the result compared with limits.
All tanks consisting fluids (oil, cooling, brake, heating and others) must be filled to normal level mentioned by producer. Exceptions: windscreen and light cleaner fluid tanks, brake cooling tanks, fuel tank, and water spray system tanks, those tanks must be empty during weight control.

6. Technical requirements

6.1. Wheel formula

It is allowed to use units that realise special wheel formula 4x4, it is:

- Total wheel number touching ground must be four;
- Total number of driving wheels must be four.

Usage of any other wheel formula is strongly forbidden.

6.2. Engine.

Allowed to use any petrol and diesel engine, inter alia equipped with air blow up systems.

Interchange of engine must not conflict with country laws, where competition is taking place.

Cooling circuit: it is forbidden to remove radiator from engine room.

It is forbidden to equip car cooling circuit with extra radiator in cockpit.

Original heating elements must stay in original dimensions.

Air filter: it is forbidden to take air from cockpit

Petrol: It is allowed to use only officially provided petrol marks, sold by authorized providers. Any additive to petrol is strongly forbidden. In engine as oxidant must be used only air from surrounding atmosphere.

Exhaust: Allowed to use any exhaust system, providing sound level not higher than talked out in country laws, where competition is taking place.

Changes in exhaust system must not influence bodywork changes.

Maximum sound level is 103 Db. (For international competition)

6.3. Transmission. Transmission type must correspond car and engine model.

Gear box:

Allowed to change gear box. Gear box inside system is not limited.

Transfer box:

Allowed to change transfer box. Transfer box inside system is not limited.

6.4. Suspension

Forbidden to change principles of car suspension. Allowed to change vertical suspension fixing points on body or axles in order to use wheels with grater diameter. If such changes made, it should be safely fixed (weld, on bolt or other). Allowed to put XXXX under or upon axles.

6.4.1. Springs

Forbidden to change spring type.

Dampers:

Allowed to add dampers but it has to be not more than two dampers per one wheel.
Allowed to change dampers with no limits.

6.4.2. Axles.

Allowed to use any kind of axles, if axles are produced in series for given car brand. Maximal clearance, measured from lower point of axle central speed-reducer, to flat horizontal ground where the car is standing on, must be no less than 200 mm, and not more than 340 mm. During clearance measuring on car must be adjusted competition tyres(see paragraph 6.5.) air pressure in tyres not less than 2,0 atm. If tyres changed this parameter must be remeasured.

Clearance is measured on booth rear and front axle.

Highest measure is taken in account.

Allowed to use differential gear with blocking system. There are no limits on number or type of differential gear with blocking system.

6.5. Wheels and tyres.

On wheel, dimensions there are no limits

Allowed to use only car pneumatic tyres, diameter less than 775 mm and more than 915 mm, measured when pressure 2,0 atm. For every cars tyre maximum outside diameter should be synchronized with cars clearance (see 6.4.2.). Forbidden to use tyres from farm machines and special cars or route technique units.

Allowed to use mud terrain tyres and tyres with elevated passability with minimal remaining protector height 5 mm.

Tyres protector width is not limited, except, that tyre all width long must be covered with arches or arch extenders.

Diameter is measured when tyre pressure is 2,0 atm., in straight diametric line traversing centre point of tyre, and is not vertical anent ground (during measurement tyre squeeze should not be taken in account). Measuring must be performed on every tyre (including spare wheels and other), going to use in competition.

Tyre bolt fastening could be changed with threaded studs, screw-nuts if number of fastening points and component thread diameter stays as was.

Forbidden to install any contra slip out equipment (e.g. chains, special framing, and other)

6.6. Brake system

Allowed to use brake system according to Country roadworthiness test demands.

Allowed to change brake artery placement and protection.

6.7. Bodywork

Allowed to protect and install every hanger.

6.7.1. Roof:

Cars having soft roof coverage, must have metallic roof (protection) over crew, and in mean time width of firm part must be not less than upper part of every screen width and length not less than from upper part of every screen to back edge

of crew seat or to main safety circle. Minimal metal thickness: 1mm – steel, 2mm – aluminium.

Allowed to use plastic roof, factory made.

6.7.2. Exterior

Forbidden to curtail car body. Allowed to cut off car body's upper part to "windowsills" behind edge of crew seats. Allowed to cut out wheel arches. Must install tyre arch extenders.

Body protection:

Allowed to use additional protecting elements under body to realize protection of the following car parts: engine, cooler, suspension, gearbox, transfer box, tank, transmission, exhaust.

Bumper and additional protecting equipment:

No limits, if new bumper usage is not conflicting with countries, where competition is taking place, laws.

Windows:

Forbidden to change front screen material.

Wings and tyre arch's:

Allowed small changes in tyre arch if they needed to install big diameter tyres.

Allowed to install tyre arch extenders, installation must be safe. Wheels (tyres and discs) must be covered by arch or extender in all width, if watching from upper side.

Doors:

Forbidden to change original front side door. In case if there are no original front door or it is not firm, firm door must be installed and it should open/close and has to be equipped with lock device which excludes door self opening. In that case it is allowed to add firmly fixed parts in door aperture in stead of doors, then distance from seat level to upper part of fixed part must be not less than 30 cm.

Doorsteps:

Allowed to cut off body doorsteps. Allowed to strengthen doorsteps with no limits.

Removable body parts. Soft roof:

For serial cars with easy removable body parts (plastic roof, soft roof), allowed to change these element shape and even remove them, if filling rules 6.7.1.

Additional front engine cover lock:

Front engine cover must have additional lock mechanism, preventing from self opening during car movement.

6.7.3. passenger convenience:

All lever place can be upgraded, to make them more convenient and more easy to use, for example, taller parking brake lever and other.

6.7.4. Seats

Allowed to install every car seat. They must be safely fixed.

6.7.5. Body lift.

Allowed to change distance between body and frame, but not more than 76 mm.

6.7.6. Spare wheel

Spare wheels can be moved into cockpit, if they are safely fixed.

6.7.7. Towing eyes

Car must be equipped with towing eyes: Car must have at least one towing-eye in front and one in back side of car, and towing-eyes must be demonstratively marked. This towing-eye must be very firmly fixed to cars body if there is no frame, otherwise to frame. It will be clearly visible and painted in yellow, red or orange. It must have closed shape and has to be firm, minimum inside diameter: 30 mm. Allowed to leave original "hook" towing eye.

6.8. Electrical system

If changing electrical system, all wires must be insulated.

Battery:

Type, capacity and cables for battery connections are not limited. Allowed to install not more than two batteries. Batteries must be safely fixed. In case the battery is located in cockpit it must be in hermetic partition and as obligatory is ventilation system ensuring ventilation system which can conduct steam out of battery partition, and it must lead to outside of car.

Generator:

No limits.

Lighting system:

Lighting elements are not limited, but must correspond country laws, the competition is taking place. Present lighting elements must be in working order in moment of technical commission.

Main electrical equipment switch:

Car must be equipped with main electrical equipments switch (battery, generator, lighting elements, alarm system, ignition, starter and other). It must work without sparking and must be in reachable area for pilot and copilot. Turning off all electrical equipment must be followed by engine stop apart from its type (diesel or petrol).

6.9. Fuel circuit

Fuel tank

Allowed to interchange, change or replace original fuel tank. Fuel tanks must be separated from cockpit with flame-proof material.

Forbidden to lead out fuel tank ventilation into cockpit.

Filling neck and cap must not be put out of car body. As fuel tank cap can be used every lock system which can provide accidental cap opening in case of hit or incomplete lock.

Fuel pipes:

Allowed to interchange, replace, move and reinforce fuel pipes, taking in account that in cockpit it must be in entire metallic piece. Any fuel pipe joints in cockpit are forbidden except pairs metal-metal, metal – homologued fuel pipe.

6.10. Jacks

Hi-jacks, and jacking points are not limited.

Forbidden use of stationary adjusted, jacking systems of any type (mechanical, pneumatic, hydraulic and other).

6.11. Winch and additional equipment

Car must be equipped with at least one winch (one not manual winch), traction parameters must exceed car weight at least 1,4 times. Allowed to use winch of any type (electrical, mechanical, hydraulic), with condition, that winch is produced serially and by one of registered trade marks.

Adjusting more than two winch's is forbidden.

Allowed wheel spools.

To ensure car safety it must be equipped with rope dampener.

To avoid tree damaging during winch usage, car must be equipped with flat, corrosion-resistant sling (minimal wide 50 mm).

Winch rope, rope extenders, sling, fixing hooks, rope loop, blocks, dampener must be safely fixed.

6.12. Safety cage.

It is allowed to adjust interior and exterior safety cage. Cars must be equipped with main safety rollbar. Construction of main safety rollbar can be seen in attachment No.

2, or is factory produced. All parameters and ways of making main safety rollbar must correspond attachment No. 2 or be homologued.

Cars having original metallic roof must have steel safety frame over crew heads with at least four fixing points to car frame.

Cars not having metallic roof must have steel safety cage, consisting main rollbar and front rollbar and at least 6 fixing points to frame.

Recommended to use FIA certificated cages.

6.13.Safety belts.

Car must have at least three point car safety belts, factory produced, for all crew members. Third or side seat must be equipped with at least four point seat belt factory produced.

6.14.Extinguisher

In car must be extinguisher, factory made, it must contain not less than 4 kg (2+2) extinguish structure (Freon-12, bromethylen, carbonic acid, extinguishing powder), concentrated in one or two bottles.

Usage of foam extinguisher is forbidden.

Extinguisher must be easily reachable for pilot and co-pilot. It must be safely fixed, and must ensure quick and easy removal without using any tool. On bottle must be shown: net weight, extinguisher weight, and bottle weight.

7. Additional equipment

Additional equipment must be as given in attachment No.1.

Obligatory additional devices

1. First aid kit.

Car has to be fitted with special first aid kit. All kit components must be with legal period of use and with no visible damage of wrapping. First aid kit must be in easy reachable place, and have waterproof package. In first aid kit must be:

2. Communications

To ensure safety, and temporary medical assistance, it is **recommended** to equip car with radio station MW-diapason (27 MHz). As intermedia can be used radio station using other diapason, radio, cellular and satellite phones.