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# Part III Technical Rules - Standard

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Version 1 Jan, 2019. (All elder regulations are not valid). Only the version published on the [www.eurotrial.org](http://www.eurotrial.org) website is valid.

These are technical rules and regulations for Eurotrial Championship for 2019 to 2023, and they are closed for this period of time. In case of severe security risks, apparent errors in the regulation or unsportsmanship caused by a loophole of the rules, changes will be made by Eurotrial committee.

Changes in the regulation is done in red color and underlined, old text that is not valid is with blue text with line through.

**Those rules apply together with “Part III Technical rules – common”.**

## 3.5 TRIAL GROUP S (STANDARD VEHICLES)

### 3.5.1 General information

Modification of the vehicle is forbidden unless specifically allowed and only permitted changes are allowed. The car must follow the manufacturer's conditions, like EU regulations or main importer regulations. All accessories and all special equipment, which can be supplied with the vehicle purchase, are allowed if no restrictions are present.

Only diesel or standard petrol is allowed as fuel. Beyond this the following regulations apply:

### 3.5.2 Frame/body

#### 3.5.2.1 Frame/chassie/wheelbase

Original. Fittings for engine, gearbox, transfer box and brackets for exhaust systems may be moved or modified, otherwise no changes are allowed. Bumper-mounting-plates can be removed or cut.

#### 3.5.2.2 Body

Original. Parts that are attached/fitted by screws to the body (e.g. bonnet, wings etc.) may be replaced by parts made of plastic or fiberglass, provided they have identical external dimensions. Body protection is allowed.

#### 3.5.2.3 Dimension / Vehicle outline

The dimensions must correspond to the manufacturer data.

The vehicle outline may not be changed with masking tape or other measures.

#### 3.5.2.4 Window/window frame/mirror

Windscreen frames may not be removed or folded down. If a windscreen is used it must consist of laminated glass, Lexan/Polycarbonate or Makralon. Plexiglas is forbidden.

Windscreens should not have damages, for safety reasons. Should damage occur the windscreen must be approved by technical control.

Mirrors of all kinds are allowed.

#### 3.5.2.5 Body lift

Bodylift is permitted with a maximum height of 50mm. This must be rigid.

**3.5.2.6 Bumper**

Bumpers and bumper mounting plates may be removed. It may be exchanged by other nonserial bumpers, however the form is not allowed to be molded or shaped to the vehicle. The material must be rigid and firm. Material thickness is free of will: Cover plates (or similar material) between body and frame are forbidden.

**3.5.2.7 Floor / firewall / transmissiiontunnel**

Original.

Its allowed to make new hole for gearlever in transmissiiontunnel when changing gearbox, otherwise no change.

**3.5.2.8 Passenger area**

Original.

**3.5.2.9 Seats**

The seats for the driver/codriver must be well secured. Seats must have head restraints that covers at least 2/3 height of the helmet. Codrivers seat must be present. Its allowed to replace the original seats with racing seats with the possibility for 4 point harness.

**3.5.2.10 Harness**

Harness must at least be of type 4-point belts or so-called suspender belts (y-belts) or more, and they must be well attached to the body and/or rollcage according to harness manufacturer's specifications. The harness must be in good condition and may not be modified. If new mounting points are created in the body, a steel reinforcement plate with a surface area of at least 40 cm<sup>2</sup> and a thickness of at least 3 mm must be used. The passengers must be buckled at all time in the section during driving or rescue. The belt system used is to be put on according to its regulation and may not be manipulated. Vehicles with active airbag or belt restrain systems must be marked at both doors with the "Airbag"-symbol. It's allowed to remove the airbags.

**3.5.2.11 Rollcage**

A sixpoint rollcage is mandatory. The rollcage must consist of a Basic structure according to 3.2.6.4, backstays, diagonal member 3.2.6.6 and roof reinforcement 3.2.6.7.

External rollcage is allowed.

See 3.2.6 for more info.

**3.5.2.12 Protective netting /Armstraps**

Protection nets or armstraps must be used. Net must cover the door/window area so the arm/hand cannot come outside the car. This also applies to armstraps. If arm straps are used they must open together with the harness.

**3.5.2.13 Body attachment**

Hardtop, tarpaulin with linkages inclusive all locked mounting plates, tailgate, rear seats, spare wheel, spare wheel handle, mirror and mirror handle, side and back windows, side turn signals, door handles and door upper sections may be removed (door lower part must be present). Interior door panel must be present. Material free, however not paper, cardboard, fabric or similar.

Original doors can be changed to half-doors. The door must be able to open from the outside, or have a marking on the outside that shows where the opening is on the inside of the door. Definition for half doors: There must be a cover available, which prevents feet or legs from falling out when the

vehicle is tilted. This cover must have at least the height of the belt line of the vehicle. In addition the cover must have at least the height of the highest point of the unloaded seat. The cover can consist of e.g. sheet metal, wood, lattice, etc. and the material must not be transparent. The cover/half door can be made to be opened.

#### **3.5.2.14 Fluid tubes**

A protection of the fluid tubes for the fuel -, oil-, and brake hoses outside of the body must be provided against damages (stones, corrosion, mechanical breaks etc..). Inside the body the tubes must be protected from any fire risk. If the series arrangement is maintained, no additional protection is necessary. If no serial tank is used there must be an anti-return valve inside the breather.

#### **3.5.2.15 Towing eye/hook**

There must be either one towing eye or hook in the front and in the back with an inside diameter of at least 50 mm. They must be firmly embodied, easily accessible and have to be painted red, yellow or orange, so that the body of the vehicle contrast with the towing eye/hook.

#### **3.5.2.16 Undershield**

Undershield is optional.

### **3.5.3 Suspension**

#### **3.5.3.1 Spring**

The type of spring must be of original design (coil spring, leaf spring, torsion or pneumatic). The fastening points of the springs must be kept in the frame and axle.

Shackle reverse is not allowed. It is not allowed to move the fastening points of support, control and/or radius arm in the frame or axle, in a coilsprung car. Change of radius arm are allowed, likewise material of radius arm and bushing. Johnny-joints, universal-joints or any kind of free moving joint is not allowed.

The original wheelbase and the original position of the axles must be kept.

#### **3.5.3.2 Spring pendants**

Longer spring pendants are permitted. Revolver shackles are not allowed.

#### **3.5.3.3 Shock absorber**

Shock absorbers are free of choice, however the number of shock absorbers, the working principle, and the fastening points must remain identical to its original design. Gas-pressure shock absorbers are to be regarded from the work principle as hydraulic shock absorbers.

Adjustable shock absorbers are forbidden.

#### **3.5.3.4 Bump stop**

Optional.

#### **3.5.3.5 Level control**

A serial level control may be inserted while maintaining the original work version.

#### **3.5.3.6 Torsion stick / Stabilizer bar**

Stabilizer bar may be disconnected or removed, otherwise original.

### **3.5.4 Steering**

#### **3.5.4.1 Steering**

The steering stop screws are optional. Only conventional, mechanical power steering is allowed. No additional steering cylinders are allowed unless it's original.

Modifications on the frame during change of steering unit are not allowed except new mounting holes and reinforcement of mounting holes. Cutting away parts of the frame is not allowed.

### **3.5.5 Brake**

#### **3.5.5.1 Brake**

Vehicles with drum brakes may be reequipped at both front and rear axles with disc brakes.

Brake tubes must be well attached, and brake hoses must be secured with metal fasteners. Plastic stripes are not allowed.

#### **3.5.5.2 Parking brake/emergency brake**

The parking brake must be maintained in the original position, and in good condition. It's allowed to relocate / modify the parking brake handle if it's not reachable with 4/6 point harness.

If the parking brake is mounted on the transferbox, no changes are allowed.

If the parking brake is mounted at the drums of the rear axle, it's only allowed to re-manufacture the brake system on the rear axle, and mountingpoints of the brake-cables at the body.

It is allowed to move a foot operated parking brake-pedal sideways to allow mounting of a 6-point rollcage. The parking/emergency brake must be able to slow down the vehicle in case of failure of the regular brakes. See 3.2.5 for test procedure.

#### **3.5.5.3 Steering brake**

Not allowed.

### **3.5.6 Wheels**

#### **3.5.6.1 Tire**

The maximum size of tires is 900 x 320 mm.

Max depth of the tire pattern is 20 mm, measure point is in the middle of the profile.

With remolded tires the tread depth may be maximally 20 mm, measure point is in the middle of the profile. The maximum of allowed tire types are Mud-terrain-profiles (MT-The use of competition tires like nops, "alligator", "Super-cross", chains, spikes or tires of other means are not allowed. The mounting of dual tires is not permitted. If there are doubts about the profile, the Eurotrial-committee must decide. The recutting of the tires-profile is not allowed (so far refused tires see ANNEX 3.3).

#### **3.5.6.2 Rim**

Free of choice. Maximum 18" (diameter, wideness and insertion depth).

Track widening/wheel spacers are allowed.

All kinds of bead lock system (internal and external) is allowed.

#### **3.5.6.3 Wings**

The tire track (profile area) must not go beyond the wings in vertical line. If this is not the case, this can be achieved in form of flared wings. The material of the flared wings must consist of solid and not transparent material.

### **3.5.7 Engine**

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**3.5.7.1 Engine**

Optional.

The engine may only be replaced with an engine with the same or fewer number of cylinders than original (manufacturer is not restricted). Additional tuning is free of will, but no supplementary additions (Compressor, turbo, NOX-injection, etc)...

**3.5.7.2 Mixture preparation**

If there is a defect with the gas control it must be ensured that the engine goes on idling (e.g.: by a spring at throttle valve shaft).

**3.5.7.3 Cooling**

Free of choice, but the radiator must maintain in its original place in the engine bay.

**3.5.7.4 Fueltank / fuelpipe**

The fuel tank is free of choice. It must be firmly joined in a sufficiently protected position and installed to the vehicle. It must not be in the passenger compartment. The fuel tank must be separated from the passenger compartment by a fireproof guard. The fuel tank has to be leak proof in any position of the car or the fuel tank.

**3.5.7.5 Exhaust**

The Exhaust opening from the side or from above must be behind the middle of the wheelbase. Exhaust pipes may not exceed laterally over the body. The rear of the exhaust system must be designed so that it's possible to make a control of vehicle noise without problem. Noise limitation: The volume of the exhaust system may reach max. 98+2 decibel (DMSB near field measuring method)

**3.5.8 Drivetrain****3.5.8.1 Gearbox**

Gearbox, transfercase and gearbox ratios are optional. The drive system (permanent or disengageable) may not be changed. Vehicles with automatic gearboxes must be secured so that the engine only can be started in "Neutral" and/or "Park".

**3.5.8.2 Axle/axle ratio**

Axles must correspond to original. Axle ration is optional.  
All kinds of portal-axles are forbidden. Even if it's original equipment.

**3.5.8.3 Diff-lock**

Optional for both rear and front axle.

**3.5.8.4 Disconnect of axle / drive system**

The disengagement of drive axles is not permitted, unless it corresponds to the series.  
Remanufacturing to 2WD Low is not permitted.

**3.5.9 Electric****3.5.9.1 Battery**

The battery must be securely fastened in its original place.  
The positive battery terminal has to be covered to prevent contact to other metal parts.

**3.5.9.2 Main circuit breaker**

A main circuit breaker is recommended. The main circuit breaker must cut all electrical circuits, battery, alternator or dynamo, lights, ignition, electrical controls, etc. and must also stop the engine. The main circuit breaker must be installed on the driver's side in front of the windshield. It must be reachable from the inside and from the outside. It must have a noticeably marked on/off position. Diesel engines which do not have an electrical "turn off"-solenoid must have a "stop the engine"-wire installed along with the main circuit breaker.

**3.5.9.3 Lights**

It is mandatory to keep the appearance of original headlights in the front of the vehicle. Either by using original lights or they can be painted, printed or made as a sticker. Otherwise optional.

**3.5.9.4 Electronic support**

It is not allowed to use electronic support like radios, cameras and sensors.