

TROPHEE TRANS-EUROPE

CR.: c/o N.A.V.
P.O. BOX 132
2040 AC ZANDVOORT (NL)

TEL.: 02507 -182 84 *

TELEX: 41896 CENAV

TECHNICAL REGULATIONS "TROPHEE TRANS EUROPE" 1981

N.B.: Articles mentioned in these Regulations are those mentioned in Appendix "J" of the FISA.

A. DEFINITION

Series production saloon cars conforming to the C.S.I. Sporting Code homologated in Group 1 and conforming to the general requirements of Appendix "J" (Art. 255).

The vehicles must be run to Group 1 homologation requirements except where specified otherwise in these regulations.

Only modifications as detailed are permitted. Modifications on items not detailed are prohibited.

All original parts which have undergone all these stages of manufacture scheduled by the manufacturer for mass production may be submitted to finishing operations, scraping, polishing, tufftriding, shotpeening and thermal treatments providing the dimensions and weights quoted in the homologation forms are complied with in full subject to the tolerances allowed in Appendix "J" (Art. 258 n)

- Any addition of materials or parts is strictly prohibited.
- Any part damaged due to wear or accident may only be replaced by an original part identical to the used part.
- Anything not explicitly authorised under Group 1 regulations and by these regulations, is strictly prohibited.

ENDURANCE RACES

Will be considered endurance races, those events run over a distance of at least 500 km or a duration of at least 4 hours.

B. ADDITIONS AND AUTHORISED MODIFICATIONS

A) ENGINE

A1) INDUCTION

Carburettor engines:

The inlet manifold is free, carburettors are free within the limitation that the total number of chokes must not exceed the maximum number of chokes homologated for Appendix "J" Group 1.

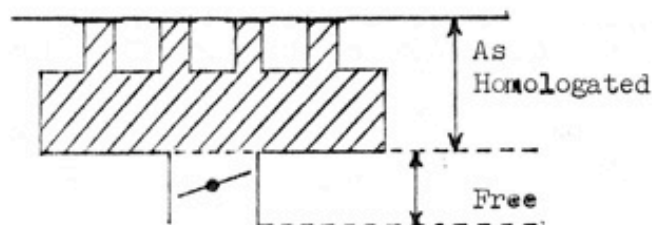
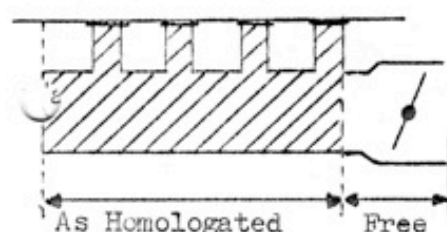
Fuel injected engines:

The original Plenum Chamber must be retained intact but the entry duct and/or flange may be variously:-

Enlarged in cross sectional area, associated throttle valve(s) being free except for the original number being maintained.

Extended upstream by the addition of metal and/or separate trunking not extending beyond the periphery of the bodywork.

Reduced in length by removal of metal upstream (not downstream) of the original entry to the main plenum chamber or entry to the first branch pipe whichever is the further upstream.



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All engines

Air filter and air filter box may be removed and air ducting/trunking is free providing it does not extend beyond the periphery of the vehicle bodywork.

Anti-surge pipes are permitted as also are return pipes from the carburettor/injection system.

Extra fuel lift pumps are permitted providing they are not mounted within the habitacle.

Fuel filters or pressure regulators etc. are unrestricted.

Gaskets are unrestricted but components must not be modified to accept them.

Emission controls may be removed, providing they do not increase the quantity of air admitted to the engine by so doing.

accelerator cable may be replaced or doubled by another whether or not it is supplied by the manufacturer.

Reboring Dimensions:

A maximum reboring dimension of 0.6 mm is permitted provided pistons comply with homologated dimensions for the model and the engine does not exceed the capacity class (Art.252 h).

It is permitted to fit cylinder liners within the above limits.

Camshaft(s) Tappets or Rocker Arms:

The camshaft(s) is/are free. Maximum valve lift as per homologationform plus FIA tolerances.

The shape of the contact faces of the tappets and rocker arms is free.

In case of wankelengines, induction timing is free and therefore the dimension of the inductionport which controls its opening and closing point may be modified by removal and addition of material. In all other respects the ports must remain as homologated.

Engine Springs (e.g. Valve Springs):

Springs may be modified or replaced by others of the same type and same number, subject to the express condition that there are no other modifications.

Spring seat washer to increase the tension of the springs are permitted.

Ignition:

Ignition System

The ignition distributor, the ignition coil or the high voltage generator (electronic or other) are free, subject to their retaining the ignition principle (ignition by battery, magnetic ignition) and the ignition distributor being interchangeable with the original ignition distributor, without modification.

It is forbidden to replace the ignition by another system (magneto or battery).

Spark plugs: free.

Cooling System:

Water cooling system:

The capacity of radiator and the water pipes are free, provided they maintain their original location.

A radiator blind is permitted. Ducting to the radiator is unrestricted, provided it doesn't alter the bodywork and is not visible from outside the vehicle. Ducting must serve no other function than to flow air through the radiator.

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Wm

Thermostat

Free, may also be removed.

Engine oil cooler:

The fitting of one or more engine oil coolers is permitted, but these must be fitted within the bodywork. Ducting to the cooler(s) is restricted provided it doesn't alter the bodywork and is not visible from outside the vehicle.

Ducting must serve no other function than to flow air through the cooler(s).

Engine Lubrification System:

The oil sump is free as is also the position of the oil pick-up pipe.

The diameter of the oil lines and pipes is free.

Flexible engine mountings:

The elasticity of flexible engine mountings is free.

The position of the engine in the body (particular length and height) must not be changed.

The engine mounting points on the chassis or the shell must remain as original.

Exhaust System: *after the cylinderhead*

The exhaust system is free within the limits of article 2520 and 2551 for cars with turbocharged engines the exhaust manifold can only be modified after the turbocharger. For wankel engines the exhaust system is free after the exhaust flanges of the engine.

Silencers

Supplementary regulations may prescribe the fitting of silencers according to national rules in the country where the event is taking place.

B. TRANSMISSION

Clutch

The material and methods of retention of the clutch linings are free, together with the springs, providing the original number and type of springs are retained.

For security reasons the fitting of a safety bellhouse, or the fitting of a protecting shield around the original bellhouse is permitted. The clutch cable may be replaced or doubled by another whether or not it is supplied by the manufacturer.

Gearbox:

Only the homologated gearbox(es) and gear ratios is/are permitted. Each combination of ratios shown on the homologation form shall be considered as a non-changeable entity. The fitting of an oil cooler to the gearbox together with its circulation system is allowed.

Overdrive:

The addition of an overdrive, unless homologated on the production model, is prohibited.

Gear-lever:

The gear-lever must remain in the position intended by the manufacturer and as stated on the homologation form. Shape and length of the gear-lever are free.

Final Drive:

The final drive is free, provided it can be fitted in the original housing without any modification.

Limited slip differentials:

Limited slip differentials are permitted, provided they can be fitted, without modification, instead of the original homologated differential. The fitting of a cooler to the differential together with its circulation system is allowed.

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04 Flexible transmission suspension components:

The elasticity of the flexible transmission suspension components is free, provided the original mountings and fixings are retained and the height and angle of inclination (in relation to the body) of the transmission components remain as in the original vehicle. Propshafts must remain standard, with the exception of the universal joints which may be uprated.

C. SUSPENSION

01 Suspension springs:

The suspension springs shall be retained in number and type (e.g. leaf springs, helical springs, etc.) apart from that they are free. The cups which retain the suspension springs may be made adjustable, even if it includes the adjunction of material.

02 Anti-roll bars (stabilisers):

Providing and anti-roll bar is homologated the diameter and shape are free; The original mounting points of the anti-roll bars must be maintained for modified units, except with regard to their elasticity. A system of adjustment may be fitted.

03 Shock-absorbers:

Make and type are free, but not their number, nor their system of operation (ex hydraulic, friction, telescopic, lever, gas, etc.). The original supports may not be changed in any way. If in order to change the damping element of a Mc Pherson suspension, it is necessary to replace the entire Mc Pherson strut, the replacement part must be mechanically identical to the original one except for the damping element and the spring cup. The original mountings must be maintained without modification. To permit suspension geometry tuning all suspension bushes are free, providing the original bush can be replaced without modification to the bush housing, thus re-establishing the original production geometry. It is permitted to machine circlip retaining grooves to locate suspension bushes.

Strengthening by the adjunction of material of the mounting points and existing suspension parts, the running gear and all the suspension parts is allowed. Securitywelding of suspension components is permitted, providing the component so secured remains unmodified other than effected by the welding.

04 Flexible components of suspension mounting points:

The elasticity of the flexible components of the suspension system mounting points is free, provided it does not entail any other modification. The position of the mounting points determining the arrangement of the suspension must be retained. The original mountings must be maintained in vehicles provided with a front Mc Pherson type suspension, that is to say the fixing holes of the element supporting the upper part of the shock absorber as well as the passage hole of the shock absorber in the case must not be modified.

D. WHEELS AND TYRES

01 Wheels:

Wheels, wheel nuts and studs are unrestricted subject to the following conditions:

the diameter of the wheel must be homologated for the model.

The wheel must fit directly to the hub without any intermediary device.

Wheel bolts/studs must be of steel and one piece. Studs must not exceed the homologated number. All four wheels must be of the same diameter.

The maximum "J" section rim widths permitted are:

0-1300 CC 5,5"	1601-2500 CC 6,5"
1-1600 CC 6,0"	2501-3500 CC 7,0"
	+ 3501 CC 8,0"

A spare wheel is optional.

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Fitting of cooling devices on the wheels is forbidden. Tyres and/or wheels must not under any circumstances protrude beyond the homologated width of the vehicle when the wheels point ahead.

at front and rear axle

d2 Tyres:

Tyres are free, provided they are tyres designed by the manufacturer for fitting to the wheels concerned.

Additionally, they must comply with the standards of the following drawing.

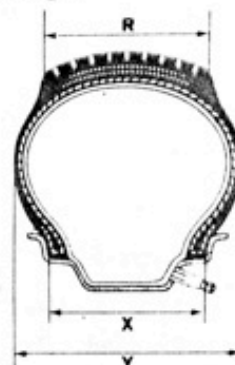
X= width inside the homologated rim

R= width of tyre tread

Y= overall width of the tyre measured on the vehicle

$R = X + 4$ cm. maximum

$Y = X + 8$ cm. maximum



E. BRAKES

Only the original homologated brake systems may be used, subject to the following:

e1 Brake linings:

The material and method of attachment (e.g. rivetted or bonded) are free, provided there is no increase in the friction surface.

e2 Brake servo's and brake limiters:

A brake servo is permitted only if homologated and fitted in the homologated place, it may be disconnected or removed. A brake pedalbox incorporating twin master cylinders to allow for brake balance front and rear is permitted providing it cannot be adjusted while the vehicle is in motion.

Brake pressure limiters are unrestricted and may be removed or fitted.

Brake limes are free.

e3 Brake cooling system:

** per wheel*

Frontbrakes:

It is permitted to remove or change brake backing plates, but addition of material is prohibited.

Flexible air ducting to the brakes is allowed, provided the crosssectional area does not exceed 78,5 cm² (per duct). The air ducts may only protrude through the front body-panel under the line where originally the front bumper is attached.

Rear brakes:

1. disc brakes:

It is permitted to remove or change brake backing plates, but addition of material is prohibited.

2. drum brakes:

It is allowed to drill holes in the back plates, provided the maximum diameter of a hole does not exceed 10 mm. and the distance from one hole to another is at least 20 mm.

Flexible airducting to the rearbrakes is allowed, provided its crosssectional area doesn't exceed 78,5 cm² (per duct)†

per wheel

On drum brakes, holes may be machined in the drums to achieve flow of air and removal of dust. The holes in total area must not exceed 10% of the swept friction area of each drum.

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The ducts must be placed under the body and bring no modification to the bodywork. Grooving or fluting of brake discs is permitted with:

- A) A maximum of 3 grooves on each side of the disc
- B) A maximum depth of groove equal to 1 mm, and a width of 2 mm. per groove.

e4 Hand brake:

The hand brake mechanism may be modified to obtain instant disengagement.

F. BODY-CHASSIS

- f1 The fitting of a sump or underbody guard is prohibited.
- f2 The removal of outside decorative strips is permitted.
- f3 ~~The~~ removal of bumpers overriders is permitted.
The removal of bumpers is permitted unless they are an integral part of the body.
- f4 In the vehicle interior, removal of floor carpets, passenger seat, rear bench seat and its back is permitted. The driver's seat must be of the bucket type with, the head rest incorporated in the seat structure. No other normal part of the body may be removed or altered. None of the other accessoires normally fitted to the basic version of the homologated model may be replaced or removed. Removal of headlining is permitted.
- f5 Bolts and nuts may be replaced freely and may comprise any locking device.
- f6 The luggage boot floor carpet may be removed.
The soundproofing and insulating materials of the engine compartment and boot must be removed.
- f7 The wheel trims must be removed.
- f8 The steering wheel is free. It is recommended that the steering column lock be removed.
- f9 All vehicles should have safety rolloverbars of the cage type (with windscreenbar) conforming to art. 253e drawing 2. Safety rolloverbars may be attached to the bodywork with bolts and nuts at existing body pick-up points for security purposes.
A lateral bar connecting the front hoop beneath the dashboard, secured by approved couplings is recommended.
- 10 Cars are subject to the following scale of minimum weights in relation to their cubic capacity:

upto	1000 cm ³	620 kg
	1300 cm ³	720 kg
	1600 cm ³	800 kg
	2000 cm ³	880 kg
	2500 cm ³	960 kg
	3000 cm ³	1035 kg
	3500 cm ³	1210 kg
over	3500 cm ³	1250 kg

The weights are those of the cars in racing trim (art. 254 h) but including the safety equipment defined in article 253.

The addition of ballast is permitted to reach the mentioned weightscale.

Any ballast carried must be firmly secured to the floor; provisions must be made in the fixing of the ballast for sealing with scrutineers wire seals. A sparewheel may be used as ballast under the conditions mentioned before.

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- f11 Security welding of bodypanels is permitted, seamwelding is allowed.
- f12 Reworking or modification of exterior bodywork is prohibited. Any part of the wheelarch/wing pressing folded into the wheelarch may be deformed, but not removed, to give clearance to the tyres.
- f13 Suppelentary regulations of a particular event may allow front spoilers.

G. FUEL TANK

The car interior must be separated from the engine compartment and from the compartment housing the fuel tank by fireproof and fluidproof partitions or bulkheads.

Only homologated tanks or FIA FT3 fuel tanks are allowed.

Maximum capacity for FIA FT3 fuel tanks conforming to art. 255g.

Mounting of FIA FT3 tanks conforming to art. 258b.

The fitting shall have to be approved by the Technical Commissioners.

H. ELECTRICAL SYSTEM

The rated voltage of the electrical system must not be changed.

h1 Battery:

Make and capacity of the battery are free. The battery must be firmly secured so as to prevent short-circuit and leakage, and must remain in its original compartment.

h2 Generator and regulators:

These are free provided they can be fitted without modification of the mountings points. Pulleys and belts are unrestricted.

h3 Lighting system (see Appendix "J" art. 258 a)

h4 Windscreen devices:

The vehicle must be equipped with at least one windscreen wiper in working order.

I. SAFETY DEVICES (see Appendix "J" art. 253)

Requirements are those applicable to Group 1.

In case of differences of interpretation used in the translation, only the English text will be considered authentic.

PARIS, October 1980.
BRUSSELS, November 1980.