

Review of K37

Special Stage Rallies

37.1. Eligible Cars

All cars must comply with Section E12 of these regulations, and all statutory regulations concerning the construction and use of vehicles. In addition cars must;

- a) Be currently registered and taxed as a private car, unless specific event regulations relax the requirement for taxation, by virtue of the entire event taking place wholly on private property,
- b) Hold registration documents and, where a car is required by law to have a certificate, a valid MOT Certificate. These documents must be produced at scrutineering for all events, irrespective of whether or not part of the event takes place on the Public Highway,
- c) Hold a valid MSA Competition Car Log Book that must be produced at scrutineering, [E 11.3.2], AND
- d) Display registration plates in compliance with the current Road Vehicles (Display of Registration Marks) Regulations.

37.1.1. Category 1. Those that have been homologated in Groups 'A' or 'N' of the FIA Appendix 'J', or Groups 1, 2, 3 or 4 of the 1981 FIA Appendix 'J', Non-homologated Series Production Cars, or Specialist Production Cars.

Modifications are free within MSA Vehicle Regulations and as defined below in 37.2 to 37.10. The car must be in the configuration as supplied by the manufacturer, with the engine (any production car engine or Specialist Competition Engine) in the original location and with the original form of induction for the car, normally aspirated or forced induction.

The original means of forced induction is limited to the original fuel type.

Cars must retain the original number of, and location of, driven wheels, Front Wheel Drive (FWD), Rear Wheel Drive (RWD) or Four Wheel Drive (4WD), except where a 4WD car, other than a Specialist Production Car, is converted to Two Wheel Drive (2WD) without structural alteration.

37.1.2. Category 2. Any car not complying with 37.1.1 that may be authorised for use at the discretion of the MSA.

Such authorisation will only be granted for cars which retain the original manufacturer's chassis/bodywork/unitary construction, which must not have been substantially altered.

Modifications are free within MSA Vehicle Regulations and as defined below in 37.2 to 37.10.

The conversion of front wheel drive cars to rear wheel drive (or four wheel drive) is permitted subject to the body construction alterations being limited to those shown in FIA Appendix J Drawings 279-1 and 279-2.

Cars must be fitted with an engine in compliance with 37.3.

Full Guidelines for approval and to make application for a Category 2 Competition Car Log Book are available on request from the MSA.

37.2. Body

The term body shall include bodywork, bodyshell, unitary construction etc.

37.2.1. Have a bulkhead between any fuel tank and filler and driver/passenger compartment sufficient to prevent the passage of flame or liquid. Where a fuel tank constitutes part of a bulkhead between passenger and luggage compartment, an additional bulkhead must be fitted. Additional fuel tank protection may be required.

37.2.2 All bodyshells, inclusive of removable panels and parts must be of the vehicle manufacturers specified materials, specifications and thickness with the exception of bonnet, front wings, bumpers and boot lids which may be of alternative materials. Hatchback and estate cars may not be fitted with alternative tailgates.

Seam welding, and localised gussets/reinforcement where no dimension of the gusset/reinforcement exceeds 150mm in any direction, is permitted,

37.2.3 Front wings and rear wings/rear quarter panels, and inner wings, may be modified solely for the purpose of fitting wheel arch extensions.

37.2.4 With the exception of cars accepted under 37.1.2, and cars with modifications conforming to their homologation papers (37.1.1), floor pans, bulkheads and transmission tunnels may not be modified other than by localised alteration to accommodate the fitting of an alternative engine and/or gearbox and/or differential and/or axle. Provision of access holes purely to facilitate use of an alternative or modified gearbox control system is permitted, and the internal routing of pipes and wires, and safety equipment is permitted.

37.2.5 Glass sunroofs are not permitted. Sunroofs may be of a non-shattering solid rigid material other than glass. Any sunroof must be firmly secured in the closed position. The sunroof aperture may be closed by solid material permanently fitted in place.

37.2.6. Windscreens to be of laminated type only. Side windows if of glass must be of laminated or safety glass and if of safety glass must be coated on the inside with a transparent safety film of between 50 and 100 microns thickness.

37.2.7 Where advertising is allowed on windscreens it must not obscure the driver's vision nor reduce the minimum unobstructed vertical height to less than 25cm.

37.2.8. The fitting of mud flaps behind all four wheels extending to a minimum of 4cm each side of the tyre tread and a maximum of 8cm above the ground is mandatory.

37.2.9. Towing eyes of adequate strength and size must be fitted front and rear within the confines of the body. They must be painted a distinctive and contrasting colour.

37.3. Engine

37.3.1. Comply with the following specification and actual capacity limits:

- i) Production engines with a maximum of six cylinders:
 - a) Forced induction petrol or LPG - 2,000cc
 - b) Forced induction or naturally aspirated diesel – 2,500cc
 - c) Naturally aspirated petrol or LPG with more than 2 valves per cylinder – 2,500cc
 - d) Naturally aspirated petrol or LPG with maximum of 2 valves per cylinder – 3,000cc
 - e) Metro 6R4 2800cc Single Plenum engine complying with MSA Specification, exclusive to 6R4s and may be used in MSA approved Championships only.
- ii) Specialist Competition Engines
 - a) Naturally aspirated
 - b) No more than four cylinders.
 - c) No more than four valves per cylinder
 - d) Maximum capacity of 2,500cc
 - e) Petrol or LPG fuel only

37.3.2. Forced Induction engines must be fitted with a restrictor at a maximum of 50mm from the extremes of the compressor blades. The restrictor orifice to be to the dimensions currently in force in FIA Appendix 'J'. Where there are two forms of forced induction fitted, the restrictor must not exceed the appropriate FIA Appendix 'J' dimensions. Provision must be made for fitting seals to the unit(s).

37.3.3. If fitted with a different engine not have a capacity increase of more than 25% over the engine capacity of that of the vehicle model as supplied by the vehicle manufacturer as original equipment.

37.4 Transmission Systems

37.4.1. The transmission system is free. The use of active front and rear differentials, i.e. any system acting directly on the differential adjustments (initial stress, pressure...), is forbidden, only entirely mechanical systems are allowed. None of the parameters of the front and rear differentials can be modified except with the help of tools when the car is stopped. Passive viscous differentials are considered mechanical and are permitted.

37.4.2. The gear selection system may be modified or replaced by an alternative system.

37.5. Suspension, Wheels and Tyres

37.5.1 With the exception of cars accepted under 37.1.2, and cars with modifications conforming to their homologation papers (37.1.1), the suspension must retain the operating principle and utilise the mounting points as provided by the vehicle manufacturer. Strengthening of the sprung parts of the chassis and bodywork is allowed provided that the material used is the same material as the chassis/bodywork and follows the original shape and is contact with it. Springs, shock absorbers, anti-roll bars and control arms and links may be uprated.

Only mechanically operated anti-roll bar systems are authorised. The anti-roll setting can only be adjusted directly by the driver, using an exclusively mechanical system without external power. Any connection between dampers is forbidden. Any connections between front and rear anti-roll bars are forbidden. The ride height must be adjustable only with the use of tools and when the car is immobile. Any servo control activating a power circuit acting directly or indirectly on the suspension parts is forbidden. Any electronic control system for the shock absorbers is forbidden.

37.5.2. Not be fitted with spiked or studded tyres or any non-skid attachments, other than chains if permitted in SRs.

37.5.3. Have all spare wheels securely fastened in position.

37.5.4. Have complete wheels free providing that they can be housed within the original bodywork (including wing extensions) and that they do not exceed the widths in the following capacity divisions:

up to 1000cc	5.5in
up to 1400cc	6.0in
up to 1600cc	7.5in
up to 2000cc	8.5in
over 2000cc	9.0in

Note. Wheel widths relate to the capacity of the vehicle, inclusive of the forced induction coefficient, not the class divisions of the event.

Homologated FIA Appendix 'J' rim diameters may be increased by up to a maximum of 2in.

The complete wheel (flange + rim + tyre) shall be measured with the tyre at normal running pressure. The measurement of the width will be taken at the widest point of the complete wheel, above hub level.

37.5.5. Have tyres complying with Section R.

37.5.6. The use of any device for maintaining the performance of the tyre with an internal pressure equal to or less than atmospheric pressure is forbidden. The interior of the tyre (space between the rim and the internal part of the tyre) must be filled only with air or nitrogen. This does not preclude the use of inner tubes.

37.5.7. The use of tyre heating devices is prohibited.

37.6. Braking Systems

37.6.1. Braking systems may be modified including fitment of uprated components, conversion of drum brakes to disc brakes and use of alternative friction materials. The use of non-metallic brake discs is not permitted.

37.6.2. All vehicles must be equipped with a parking brake meeting vehicle construction and use requirements which may be applied at any speed and is effective in restraining the vehicle on a 1:6 gradient.

37.7. Fuel Systems

37.7.1. If the filler cap is of the quick release type or where the vehicle has been fitted with a non-standard filler, be fitted with a recessed fuel filler cap.

37.7.2. Use Fuel as defined in Section P.

37.7.3. Fuel lines may be installed within the driver/passenger compartment on safety grounds. [E12.13.].

37.7.4. Cars must be fitted with a self seal connector of a type approved by the FIA, located within the engine bay to facilitate the drawing of fuel samples. The mating coupling complete with a suitable length of hose to be connected, is to be carried onboard the car in order that fuel samples may be drawn at anytime as required by the organisers".

37.8. Electrical

37.8.1. Have all lights fitted in compliance with the current Motor Vehicle Lighting Regulations.

37.8.2. Not use any auxiliary lights in road sections except in conditions of fog or falling snow as permitted by law.

37.8.3. Have any forward facing lights, additional to the headlight system, sidelights and indicators, considered as auxiliary lights.

37.9. Vehicle Weight Limits

All homologated cars must conform to the minimum weights stated in their homologation documents. All non-homologated cars must conform to the minimum weights in the table below. The only exceptions are vehicles that have a specified minimum weight recorded in their MSA Competition Car Log Book.

The checking of vehicle weights will be as set out in FIA Appendix J.

Engine Capacity	Minimum Weight
Up to 1000cc	720kg
Up to 1400cc	840kg
Up to 1600cc	920kg
Up to 2000cc	1000kg
Up to 2500cc	1080kg
Up to 3000cc	1150kg
Up to 3500cc	1230kg
Up to 4000cc	1310kg

Note. Minimum weights relate to the capacity of the vehicle, inclusive of the forced induction coefficient, not the class divisions of the event.

37.10. Safety

37.10.1. Have, as a minimum, safety roll-over bars complying with regulation Q1, drawing number Q5 or Q6, and longitudinal door bars complying with Q1.2.5(b) (side sections drawing number Q9).

37.10.2. Be equipped with an internal switch that is capable of isolating all electrical circuits and completely stopping the engine. The operating switch must be positioned so that it can be operated by the driver or the co-driver when normally seated with seat belts fastened. Must also be equipped with an external circuit breaker complying with Q8.

37.10.3. Have currently FIA Homologated seat belts complying with Q 2.1.2.

37.10.4. Be equipped with fire extinguishers complying with Q3.1.4 and also all the relevant parts of Q3. The driver and co-driver must each be able to activate the extinguishers when normally seated with seat belts fastened.

37.10.5. Be fitted with front seats that are currently FIA homologated.

37.10.6. Have substantial underbody protection covering any area of a fuel tank exposed to running damage.

37.10.7. Be equipped with high-intensity horns that can be operated by either the driver or the co-driver.

37.10.8. Competing cars must carry an Emergency Red Warning Triangle and an SOS/OK Board (15.5.)

37.10.9. If a camera is carried, the fitting must be specifically approved by a Scrutineer.

Date of Implementation: 1st January 2009

Reason: The complete review of stage rally technical regulations to address issues of safety, vehicle construction and ever increasing performance.