



## 2017 BTRDA AUTOSPORT INTERNATIONAL CLUBMAN'S RALLYCROSS CHAMPIONSHIP

### Appendix 3

### SuperModified Technical Regulations

#### 5.3.1 INTRODUCTION.

The following Technical Regulations are set out in accordance with the MSA specified format and it should be clearly understood that if the following texts do not clearly specify that you can make a modification you should work on the principle that you cannot.

**5.3.1.a** Class open to cars of rigid construction complying with FIA Super 1600, FIA Touring Car, plus two-wheel drive cars not eligible in Supercar but complying with the following regulations and having been homologated in Group N, A or B of FIA Appendix 'J' or in groups 1, 2, 3 or 4 of 1981 FIA Appendix 'J' although homologation may have lapsed.

**5.3.1.b** Super Modified cars permitted and class splits are;

i) SuperModified up to 1600cc

ii) SuperModified over 1601cc and up to 2100cc

iii) SuperModified over 2101cc

**5.3.1.c** Mass produced non-homologated vehicles may be accepted

**5.3.1.d** Rallycross vehicles complying with these regulations.

**5.3.1.e** Space framing of chassis is permitted but the vehicle must remain externally recognisable as the series production model

**5.3.1.f** Space framed vehicles with current valid Rallycross Competition Car Log Books are permitted.

#### 5.3.2 GENERAL TECHNICAL REQUIREMENTS AND EXCEPTIONS.

**5.3.2.a** Cars must comply with the Technical Regulations published by the Organisers for **The Championship** throughout official practice, qualifying heats and finals. (See SR.4.)

**5.3.2.b** All cars must comply fully with the current MSA Yearbook Regulations J Common Regulations for Competitors: Vehicles and Rallycross Technical Sections J, K, and N.6.1 to N.6.14.3 inclusive and these supplementary regulations.

**5.3.2.c** No approved modification may give rise to an unapproved one.

**5.3.2.d** The use of magnesium alloy sheet is not permitted. Titanium sheet may only be used for heat shields.

#### 5.3.3 SAFETY REQUIREMENTS.

**5.3.3.a** Minimum, all cars must comply fully with the 2017 MSA Blue Book sections J, K, and N.6.1 to N.6.14.3 as appropriate. Double longitudinal door bars must be fitted to the driver's side of the roll cage in accordance with Section K Appendix 2 Drawing No 12(g) or 12(h).

In addition:

**5.3.3.b** Roll over structure to N 6.12.1 as a minimum is mandatory.

**5.3.3.c** Seats must comply with N6.13.6.

**5.3.3.d** Seat Belts minimum requirement; complying with N6.12.2.

**5.3.3.e** From a 'race ready' position with seat belts fastened, the driver must be able to vacate the car in 5 seconds.

**5.3.3.f** A fire extinguisher MUST be fitted; the minimum specification must be to current MSA Regulations. (K3.1.2. (b) or (c) not necessarily plumbed in)

**5.3.3.g** In addition to the minimum apparel standards set out in MSA General Regulations the following are highly recommended:

i) FHR devices

ii) fireproof gloves

iii) fireproof underwear

iv) fireproof balaclava

#### 5.3.4 CHASSIS and BODYWORK.

**5.3.4.a** If bumpers are removed, both must be removed, and all supports must also be removed. It is prohibited to reinforce the front apron.

**5.3.4.b** Have any under tray provided with drainage holes to prevent accumulation of liquids.

**5.3.4.c** Must have a windscreen as N.6.2.4 and J.5.20.

8.. All side and rear windows may be replaced with polycarbonate of minimum 4mm thickness. **5.3.4.d** Have an operative windscreen wiper and washer system.

**5.3.4.e** A wire mesh stone guard adequately affixed to the bodywork and with a minimum matrix of 1in is permitted with any type of windscreen.

**5.3.4.f** When viewed from above wheels must be covered by rigid material at all times. The outside shape of the original coachwork must be retained except as concerns the wings.

**5.3.4.g** Have a bulkhead separating the cockpit from the engine compartment. It must retain its original material and place, measured in respect of the relevant standard car. Installing components up against or passing through this bulkhead is however permitted, providing it does not protrude into the cockpit more than 20cm (as measured perpendicularly to the bulkhead). This will be measured at the point of intrusion, and parallel to the ground. If this is to include the engine, the cam/valve cover may not extend further back than the forward most point of the windscreen aperture when viewed directly from above. For scrutineering purposes, a 13mm diameter hole must be drilled at the forward most point of the Screen aperture.

**5.3.4.h** Openings may be made in the bonnet or boot lid for ventilation, providing they do not make mechanical components visible.

**5.3.4.i** Bumpers, if fitted, must both be as originally fitted to the mass produced vehicle. The supports must also be as originally fitted to the mass-produced vehicle. No reinforcing of bumpers or supports is permitted.



**5.3.4.j** Have internal bonnet locks removed and external positive locking fasteners fitted.

**5.3.4.k** Have towing eyes of adequate strength and size fitted front and rear. These should be painted a contrasting bright colour.

**5.3.4.l** Be fitted with at least one mirror of minimum surface area 50sq.cm securely mounted and positioned to give a clear view to the rear. The edges of the mirror must be protected by a suitable cover to reduce the possibility of injury in event of an accident.

**5.3.4.m** Under no circumstances can any part of the bodywork or the suspended parts of the car be below a horizontal plane passing 40mm above the ground, the car being in normal race trim with the driver strapped into the seat

**5.3.4.n** Aerodynamic devices - Front  
Material and shape are free but must:

- i) Be made from a material that is not less than 2mm and not more than 5mm thick.
- ii) Not protrude beyond the vertical projection of the front bumper of the homologated car.
- iii) Be contained within the vertical plane passing through the axis of the front wheels and the horizontal plane passing through the lowest point of the door opening.

**5.3.4.o** Aerodynamic devices – Rear  
Material and shape are free but must:

- i) Be made from a material that is not less than 2mm and not more than 5mm thick.
- ii) Must be contained entirely within the frontal projection of the car without its rear view mirrors and within the plan of the car seen from above.

**5.3.4.p** Be fitted with mud flaps behind all four wheels extending to a minimum of 3.8cm either side of the tyre tread and to a maximum of 7.6cm above the ground section N.6.9.

### **5.3.5 ENGINE.**

**5.3.5.a.** The engine is free, but the block must be that of a mass produced engine from a vehicle manufacturer, although actual production may have lapsed, and must have the same number of cylinders as an engine originally fitted to a vehicle from the same manufacturer.

**5.3.5.a (i)** Specialist competition engines, as defined in blue book Nomenclature and Definitions are also permitted. (N6.3.1. refers)

**5.3.5.a (ii)** Motorcycle derived engines from any manufacturer are not allowed.

**5.3.5.b** The engine must be located within the original engine compartment.

**5.3.5.c** Twin-engine configurations are not permitted unless mass produced in that form.

**5.3.5.d** If not on a return system the must have catch tanks fitted.

**5.3.5.e** Have any oil tank, which is, situated outside the chassis or main structure of the vehicle suitably covered with a protective coating (e.g. GRP).

### **5.3.6 TRANSMISSION.**

**5.3.6.a** Transmission is free other than as below.

**5.3.6 b** The clutch and its control are free, but automatic operation of the clutch is prohibited, unless fitted by the manufacturer to that body style. The clutch must be operated by the driver's feet, unless an alternative method of operation is fitted by the manufacturer to that body style.

**5.3.6.c** Gear selection mechanism must be mechanically operated. Electronic, hydraulic or pneumatic mechanisms are prohibited, unless fitted by the manufacturer to that body style.

**5.3.6.d** The final drive assembly, differentials, propshafts and driveshafts are free.

**5.3.6.e** Electronically controlled systems are prohibited.

### **5.3.7 SUSPENSION and STEERING**

**5.3.7.a** Suspension is free other than as below.

**5.3.7.b** Active suspension and any system which allows control of the spring flexibility, shock absorption or trim height when the car is moving, are prohibited unless fitted by the manufacturer to that body style.

**5.3.7.c** Have steering column locks rendered inoperative.

### **5.3.8 BRAKES.**

**5.3.8.a** Brakes are free other than as below.

**5.3.8.b** An effective handbrake is obligatory. The handbrake may be modified for fly-off operation. There must be at least two hydraulic systems so that, in the event of failure of one system braking is maintained on at least two wheels (not on the same side).

**5.3.8.c** The braking system on all vehicles must be capable of demonstrating its efficiency without impairing the driver's control when tested immediately prior to an event.

It must be possible under all conditions, running or stationary, for 25% minimum braking effort to be applied by the driver through the braking system to each axle.

**5.3.8.d** Brake balance adjusters must not be capable of adjustment during running if they contravene (b).

**5.3.8.e** Anti-lock devices are prohibited.

**5.3.8.f** Brake discs must be of ferrous material.

### **5.3.9 WHEELS.**

**5.3.9.a** Have maximum wheel width on all cars of 25cm (wheel width = flange + rim + tyre).

**5.3.9.b** Have all nuts securing road wheels, excepting those of centre-lock type, of steel and in thread contact over a minimum length of 1.5 bolt/stud diameters reference N.6.9.1. Extended or composite wheel bolts/studs are prohibited. Safety wheel nuts to prevent wheels pulling over the standard nuts are strongly recommended.

### **5.3.10 TYRES.**

**5.3.10a** Free subject to 5.3.9.a above, subject to Championship regulations.

**5.3.10.b** Hand-cutting is permitted but only for the purpose of introducing additional grooves no deeper than those moulded into a new tyre. Hand cutting in order to increase the depth of existing moulded grooves is prohibited.

### **5.3.11 ELECTRICS.**

**5.3.11.a** All lights may be removed

**5.3.11.b** All cars must be equipped with two rear lights of the anti-crash type as used in fog with minimum of 15 watts each and illuminated area of 60sq.cm. These must work with or replace the car brake light system at all times and must be between 115cm and 150cm above the ground and must be clearly visible from behind.



**5.3.11.c** Generators are optional but the self starter system must be operable at all times.

**5.3.11.d** Be equipped with an ignition cut-off switch having positive ON-OFF position clearly marked, and which must be operable by the driver when normally seated with seat belts secured. It must also isolate electric fuel pumps.

**5.3.11.e** Have any forward facing lamps of more than 32sq.cm surface area adequately protected in case of glass breakage.

**5.3.11.f** A red rear warning light complying with current MSA Yearbook regulation K5. Must be fitted

### **5.3.12 WEIGHT**

**5.3.12.a** The minimum weight for all vehicles including driver wearing full race apparel is: 830kg (Note: BTRDA intend to increase to 900kg in 2018)

**5.3.12.b** Any ballast needed MUST be mounted as per GR J5.15

### **5.3.13 FUEL TANK and FUEL**

**5.3.13.a** All the fuel pumps must operate only when the engine is running, or during the starting process. Be equipped with an effective method of stopping the full supply that can be operated by the driver when normally seated with seat belts secured

**5.3.13.b** Pump fuel as defined in 2017 MSA Blue Book "Nomenclature and Definitions"

**5.5.13.c** The fuel pump, filter and fuel lines are free.

**5.5.13.d** Cold start systems may be disconnected or removed.

**5.5.13.e** The original fuel tank may be replaced by another provided it is located in the original location

**5.5.13.f** If the fuel tank is located inside the car, a safety, currently FIA homologated, FT3 type must be fitted if the standard tank is not used.

**5.5.13.g** An alloy fuel tank, maximum capacity 5 litres, fitted with fuel tank foam may be fitted inside the engine compartment.

**5.5.13.h** Should the fuel tank be installed in the boot and the rear seats removed, a fireproof and liquid-proof bulkhead must separate the cockpit from the fuel tank.

**5.5.13.i** The tanks must be protected effectively and securely attached to the shell or the chassis of the car.

**5.5.13.j** The use of safety foam in tanks is recommended.

**5.5.13.k** Have sufficient fuel for a fuel test present at any time during the meeting to comply with the fuel sampling requirements as laid down in the MSA year book D34.1 Procedure for fuel testing.

### **5.3.14 EXHAUST and SILENCING**

**5.3.14.a** Comply with current MSA Yearbook Regulations J5.16 and J5.17

**5.3.14.b** All cars MUST adhere with a 100db limit. Failure to comply to this rule will mean an immediate black flag from any practice, heat or final and could result in exclusion from the meeting/event.

### **5.3.15 Telemetry / Voice communications**

**5.3.15.a** Any form of wireless data transmission between the vehicle and any person and/or equipment (other than that required by the time keepers) is prohibited while the car is on the track.

Data transmission through a temporary physical connection is allowed in the paddock only