



2023 BRSCC Mazda MX5 Mk4 Trophy

Sporting & Technical Regulations

PUBLISHED COPY

Signed: 
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Date: 12/04/2023

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CONTENTS	Page
1 SPORTING REGULATIONS – GENERAL	1
1.1 Title & Jurisdiction	1
2 TECHNICAL REGULATIONS	2
2.1 Introduction	2
2.2 General Description	2
2.3 Safety Requirements	3
2.4 General Technical Requirements & Exceptions	3
2.5 Chassis	4
2.6 Bodywork	4
2.7 Engine	4
2.8 Suspension	8
2.9 Transmissions	8
2.10 Electrics	8
2.11 Brakes	9
2.12 Wheels/Steering	10
2.13 Tyres	10
2.14 Weights	10
2.15 Fuel Tank/Fuel	11
2.16 Silencing	11
2.17 Numbers & Decals	11
3 APPENDICES	12
3.1 Race Organising Clubs & Contacts	12

1. SPORTING REGULATIONS – GENERAL

1.1 TITLE & JURISDICTION

The BRSCC Mazda MX5 Mk4 Trophy series is organised and administrated by the British Racing & Sports Car Club (BRSCC) in accordance with the General Regulations of Motorsport UK (incorporating the provisions of the International Sporting Code of the FIA) and these Regulations.

Motorsport UK Series Certificate No: RS2023/062

Race Status: Interclub

The BRSCC reserves the right to amend or vary the Sporting Regulations in accordance with Motorsport UK Regulation [D 11.1] at any time before or during the season and further issue additional statements concerning the Regulations from time to time, subject to Motorsport UK approval, and all such statements will be issued by a Bulletin to the Motorsport UK and to all registered competitors by email or by post to the address detailed on the Registration Form, or by delivery to the competitor by hand. It is a condition of entry that all competitors, teams, team members and persons associated with any of the above agree to be bound by the Regulations including any amendments, variations or statements relating thereto.

For all other Sporting Regulations, refer to the 2023 Evolution Trophy Sporting & Technical Regulations.

2. TECHNICAL REGULATIONS

2.1 INTRODUCTION

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

In these regulations “standard” shall mean in accordance with Motorsport UK Regulation Section B Nomenclature & Definitions – Standard Part/Standard Pattern Part.

Any replacement component must be of the same shape, material type, dimensions and weight as the original. Any replacement part must use the same manufacturing process as the original equipment component.

It should be noted that unless specifically mentioned or approved in these regulations, no further modifications may be made. No component or modification permitted within these regulations shall additionally perform a prohibited function. All adjustments shall be as per the manufacturers specifications and / or within the manufacturers specified tolerances except where specifically permitted within these regulations. No updating or backdating of specifications and / or components thereof shall be permitted except as specifically permitted within these regulations.

Should a disabled licence holder wish to join the series and requires the car to be modified to allow this to happen, the organizers reserve the right to amend these regulations to permit any changes to the vehicle concerned. Such amendments will only apply to the car whilst being operated by a disabled licence holder.

2.2 GENERAL DESCRIPTION

- 2.2.1 The Mazda Mk4 MX-5 Trophy is open to 2015 - 2022 Mk4 Mazda MX-5's fitted with either the ND1 2.0 litre or ND2 2.0 litre engine. The intention of these regulations is to deliver an opportunity for any race prepared Mk4 2.0 litre cars to compete equally together on track for the 2023 season.

Classes

Class A: Cars fitted with Sheard Motorsport supplied Sadev sequential gearbox package. Maximum permitted flywheel power output of 190bhp

Class B: Cars fitted with standard manual gearbox. Maximum permitted flywheel power output of 190bhp

Invitation: Any car which in the organisers opinion does not meet the requirements of the above classes.

All vehicles must be of sound construction and mechanical condition and be well maintained. There is no requirement for an MOT Certificate, Road Tax or Insurance. Vehicles must be operated in an “open” condition i.e. without the hard or soft top.

Cars must remain standard with the exception of the following restrictions or specifically allowed modifications.

Unless specifically mentioned or approved in these regulations, no modifications may be made. These regulations are not intended as guidelines or suggestions and they will be vigorously enforced.

Vehicles must comply with Motorsport UK General Technical Regulations contained within Sections C, H, J, K, L and Q of the current Motorsport UK Yearbook.

2.2.2 Examination of Vehicles

The organisers (in addition to any other powers they may have under these Regulations) reserve the right before or after any race in the series to designate any of the competing cars for special eligibility scrutineering. Upon such selection being made the competitor shall immediately place the car under the control of the organisers to allow all such scrutineering, examination and testing as the organisers may require.

The organisers may:

- A) Examine the car at the circuit for such period as they may reasonably require and take fuel and/or other samples and/or
- B) Seal the car and its components in such a manner as they may choose and require the competitor at their own expense to present the car at any other premises chosen by the organisers for detailed examination within a specified period and/or remove the car by transporter at no expense to the competitor to an appointed location. The competitor will be advised in writing of the time, date and location of the subsequent testing or eligibility examination.
- C) The organisers reserve the right to power test vehicles using a BRSCC nominated Dynamometer. The results of this dyno test will be used to determine if the maximum engine power output complies with these technical regulations and if further investigation is required. The nominated supplier for an event will be listed in the final instructions.

Competitors will be personally and solely responsible for ensuring that their cars comply with these regulations for each event at which they are entered. Failure to comply in either respect will be a breach of these regulations. Queries concerning eligibility should be referred in writing to the Organisers/Series Eligibility Scrutineer at least seven days prior to an event entered.

The colour scheme for any car is free but the car must be presented in a good, clean condition and any damage sustained must be made cosmetically good to the approval of the Eligibility Scrutineer before the next race. Failure to do so may result in the car being considered non-compliant.

Cars must have all series decals affixed as per the issued decal sheet. The Series Eligibility Scrutineer may deem any cars not carrying all decals to be non-compliant.

2.3 SAFETY REQUIREMENTS

The following Articles from the Motorsport UK yearbook, Section K Safety Criteria Regulations will apply:- [K 1], [K 2], [K 2.1.2] to [K 2.1.4], [K 2.2], [K 3.1], [K 5], [K6], [K 8], [K 9], [K 10], [K 11], [K 12], [K 13] and [K 14]. All relevant regulations in Motorsport UK yearbook Section J and Q will apply.

2.4 GENERAL TECHNICAL REQUIREMENTS & EXCEPTIONS

2.4.1 Towing Eyes

There must be towing eyes with minimum internal diameter of 60mm securely fixed to the main structure of the vehicle, front and rear, within the confines of the body to enable the vehicle to be moved in

accordance with Motorsport UK Regulation [Q13.1.3]. In respect of the front towing eye, this may not protrude beyond the vertical plane of the front bumper by more than 10mm. For the avoidance of doubt this precludes the use of the standard towing eye in its standard location, competitors must find an alternative.

It is strongly recommended that all Race Cars should, wherever possible, be equipped with two front and two rear towing eyes positioned equally either side of the longitudinal centre line. They should be clearly visible, marked with an arrow and the word "tow" and the wire painted in yellow, red or orange to contrast with the vehicle colour scheme.

It is strongly recommended that the towing eyes be made of at least 6mm diameter steel wire rope with a 6x19 wire core, each which must have a breaking-strain of at least 2 tons. Each towing eye must allow the passage of a cylinder with a diameter of 60 mm, situated 25mm forward of the adjacent bodywork - 100 mm above and below this hole must retain clearance to enable the recovery crews to attach straps and shackles.

The towing eye must be fixed to a structural part of the chassis with a minimum of M12 fixings, the inner part must be flexible in order for the towing eye to be retracted inside the bodywork profile. A "pull-cord" must be attached to the towing eye to enable the marshals to access the wire loop. The end attached to the chassis may be either 'thimble' or 'open-loop' style.

Each complete towing eye must be certified as meeting this load requirement.

The intention is to allow an angled pull away in the event of a crumpled or obscured vehicle corner e.g. +/- 45 degrees from straight ahead.

2.5 CHASSIS

No modifications permitted except the 3-piece front strut tower brace may be removed. It is not permitted to fit any additional or aftermarket equipment, tie bars / chassis braces or aftermarket strut braces.

2.6 BODY WORK

2.6.1. Modifications Permitted

All bodywork must remain as standard except for the following

Interior

The driver's seat must be replaced with an FIA approved seat and mountings suitable for competition use. The factory seat tracks may be modified, reinforced or removed. It is permitted to fit replacement seat mountings to both driver and passenger sides of the car, these may be fitted between the inner sill and the transmission tunnel but must not perform any other function. Seat mountings should not be attached directly to the floor panel without additional reinforcement. It is permitted to modify the transmission tunnel and floor under the driver's seat to facilitate the installation of the seat. Any modifications must maintain the strength of chassis and be no more than 30mm in depth. The seat installation should not allow any part of the seat to be outside of the roll over protection structure.

The standard dashboard must be fitted, minimal trimming of the dashboard is permitted to allow for roll cage fitment only. The central audio system and heater controls may be removed and substituted for a flat panel.

Additional dashboard instrumentation and switchgear may be added.

Air Conditioning, heating and ventilation systems may be removed but adequate provision should be made to demist the windscreen should the need arise.

The windscreen is free provided that it is made from glass, is a direct replacement for the original screen and complies with Motorsport UK regulation Q13.2.1. (a). Heated screens are permitted but must not restrict the forward view.

The door lifting window glass and window operating mechanisms must be removed.

Standard door interior panels may be removed, however they must be replaced by secure metal, plastic or composite sheeting with no sharp edges,

An interior means of opening the drivers door must remain. Door locks to be disabled.

All other carpets and interior trim may be removed.

Passenger seat may be removed. If retained must colour match the driver's seat.

All safety airbags and their triggering mechanisms must be removed.

The internal panel between the boot space and the driver cockpit may be replaced. Any replacement panel must ensure a firebreak between the fuel filler pipes and the driver cockpit. The panel can cover the whole of the rear shelf behind the driver seat and be angled to fit to the existing mounting points for the folding roof. The design of the panel is free but the fitting of the firebreak is compulsory with Motorsport UK Regulation [Q13.1.1].

Spare wheel and toolkit must be removed.

Exterior

Antenna and emblems may be removed.

Number plate mounting brackets may be removed.

Fuel Filler Door and Boot release mechanisms may be modified.

Windscreen washer systems and horn may be removed.

Standard bonnet and boot catches may be removed and replaced with safety locking pins or clips.

Wheel arch linings may be removed.

Mirrors may be replaced but only in matching pairs, these must be either original fitment. Other types of mirror are not permitted.

Vehicles must be operated in an "open" condition i.e. without the hard or soft top.

Composite replacement panels are permitted for the driver/passenger door. All replacement panels must be the same shape and size of the original and be fitted to the vehicle without modification of the standard mounting points.

It is permitted to use a non-standard under tray but this must not extend any further in any direction than the original under tray and may not have additional openings, slots or flaps.

2.6.2 Modifications Prohibited

General

The use of adhesive tape or any other medium to cover or bridge body gaps deemed to improve the aerodynamics of the body is prohibited.

Interior

Other than to provide for the installation of required safety equipment or other authorised modifications, no other driver/passenger compartment alterations are permitted.

Exterior

No performance enhancing air dams, aerofoils or spoilers are allowed.

All apertures resulting from the removal of forward facing lamps must be completely and permanently filled with solid material from the rear surface of the aperture thus maintaining the shape of the original panel.

It is permitted to remove both the front and rear crash attenuators but it is not permitted to reinforce or strengthen the crash attenuators or to replace them with other materials.

Wings and wheel openings shall remain unmodified except for rolling or flattening of inner wing lip for tyre clearance.

It is not permitted to remove material from or to distort anybody panel to gain an aerodynamic advantage.

2.7 ENGINE

The only permitted engines are those fitted as original equipment in 2.0 litre Mazda MX-5 MK4 ND1 & ND2 range cars (Art. 2.2.1. applies).

Any vehicle requested to attend a BRSCC nominated Dyno for testing and found not to comply with the maximum power measurement (as per Art. 2.2.1) will be reported to the Clerk of the Course, and will have the engine sealed or resealed by the attending scrutineer at the time of testing, it may also be requested by the scrutineer that the car is dismantled for further inspection, this could be at the same or a separate location at the competitors expense, to check compliance with the regulations.

Two front cam cover bolts must be cross drilled to accept Motorsport UK Seals.

At any time chosen by the Series Scrutineer, the engine may be sealed. The details of the seals will be recorded and kept by the Series Scrutineer or the nominated licensed scrutineer.

It is the Competitors' responsibility to maintain the seal unbroken and to protect the seal from damage or loss, as the eligibility of the relevant engine depends upon the seal being in place.

Should there be the need by the competitor to break the Motorsport UK seal or replace the engine, the competitor must inform and have written approval from the Series Scrutineer or the nominated licensed scrutineer before the work can be carried out. At the next event the Series Scrutineer or the nominated licensed scrutineer will check and fit new Motorsport UK seals and record the details.

2.7.1 Permitted Modifications

Modification of any engine component from standard is prohibited unless explicitly stated below.

For ND1 model engines only: The fitment of aftermarket camshafts is permitted, however all other parts such as cam pulleys, lifters, valves etc must remain as standard. (Maximum power output as per Art. 2.2.1 remains applicable)

2.7.2 Prohibited Modifications

The general prohibition of engine modifications includes the use of vernier cam pulley wheels.

Camshaft timing must comply with the standard position for inlet and exhaust pulley wheels.

Porting or polishing of the inlet and exhaust ports of the cylinder head is prohibited.

2.7.3 Location

The engine location and orientation must remain as the original manufacturer specification.

The original aluminium engine mount brackets (left and/or right side of engine) may be replaced by uprated brackets made of stronger material.

2.7.4 Oil/Water Cooling

The radiator is free but must be mounted to the standard location. Thermostats are free. An additional Oil cooler is permitted.

2.7.5 Induction Systems

The induction system is free but the standard unmodified Mazda intake manifold and throttle controls must remain fitted and must remain as standard. Removal or modification of the swirl flaps or the operating system is prohibited.

2.7.6 Exhaust Systems

Subject to the following, the exhaust system is free.

It is not permitted to remove the EGR valve which must remain and be connected electrically.

Any part of the exhaust manifolds or exhaust system may be wrapped in heat barrier tape. It is not permitted to have any parts of the exhaust manifold or system coated internally or externally in any type of ceramic materials.

The exhaust must exit in the normal position.

The exhaust system must comply with Motorsport UK Regulation [J 5.16] to [J 5.18] noise regulations.

A minimum 100 cell catalytic convertor must be fitted in the exhaust system and all exhaust gases must pass through the convertor.

It is permitted to remove the EVAP control pipes and charcoal cannister.

2.7.5 ECU & Ignition Systems

ECU type is free.

The type and grade of spark plug is free.

2.7.6 Fuel Delivery Systems

The restrictor plate in filler neck may be removed.

2.8 SUSPENSIONS

Suspension type and spring rates are free. The fitment of polyurethane bushes is permitted. All suspension wishbones and control arms must remain as standard original equipment fitment in terms of their materials, dimensions, positioning and operation. Anti roll bars and drop links are free, however they must be fitted and fully operational at all times.

Suspension alignments (camber, caster, toe) is free within the limits of the unmodified factory adjustment points.

Minimum ride height/ground clearance is as per Motorsport UK regulation Q13.1.2.

It is not permitted to fit wheel spacers or to remove material to alter the vehicle track from standard.

2.9 TRANSMISSIONS

2.9.1 Permitted Modifications

It is permitted to fit/use the following:

Sadev SCL8217 six speed sequential gearbox kit, including

- SWR Motorsport Bell Housing to mate Sadev gearbox to Mazda ND engine
- SWR Motorsport Gear Lever
- SWR Motorsport Lightweight Flywheel
- SWR Motorsport Racing Clutch (friction and pressure plate)
- SWR Limited Slip Differential unit with 4.1 Final Drive

All SADEV parts are available from Paul Sheard Autos.

The standard Mazda Power Plant Frame (PPF) must be used

The standard Mazda Propshaft must be used

The standard Mazda driveshafts and CV or Tripod joints must be used

The standard Mazda differential casing must be used. Differential units and final drive is free.

Clutch cover and plate are free subject to it being mounted to the standard flywheel.

Two adjacent differential cover retaining bolts must be cross drilled to allow for eligibility seals

Other than the above and 2.9.2, the standard Mazda MX5 ND gearbox must be used. The standard gearbox may be modified to increase the strength or reliability of internal components, but the shape, size, dimensions must remain as per standard Mazda.

A differential oil cooler may be fitted.

- 2.9.2 It is also permitted to fit the Mazda MX5 NC (Mk3) gearbox using a suitable adapter plate (available from BBR GTI Ltd.). For the Mk3 gearbox only - strengthening of the selector fork for 3rd/4th gear is permitted and it is permitted to replace any bush or roll pin with components made from different materials. The standard NC gearbox may be modified to increase the strength or reliability of internal components, but the shape, size, dimensions must remain as per standard Mazda.
- 2.9.3 The only permitted final drive is that fitted as original equipment to the Mazda MX-5 Mk4 (ND) range. The final drive may be equipped with either open or limited slip differential but must be original Mazda equipment. Modifications of any type are not permitted.

Final Drive Ratio (standard Mazda ND): 2.866:1

2.10 ELECTRICS

- 2.10.1 Wiring Harness: The wiring harness is free provided that it maintains the function of all of the required electrical systems and maintains them within the manufacturer's parameters.
- 2.10.2 All standard rear lamps must remain in place and the rear lamps and brake lamps must be fully functional at all times. It is permitted to use the centre, high level brake light as a bad weather light provided that it meets the requirements of Art. 2.10.3.

Front wing marker/indicator lights may be removed and the apertures covered.

Headlamps complete with their operating mechanisms may be removed but headlamp covers must be fitted permanently to the inside of surrounding body panel.

- 2.10.3 Bad weather light: A bad weather light is required to be fitted above the boot lid facing rearward and within 10cm of the vehicle centre line. The lamp must be capable of operation at all times. Motorsport UK Regulation [K 5].
- 2.10.4 Batteries: A battery and electric starter motor must be fitted and capable of at least 3 repetitive starts. The type of battery is free but any non-lead/acid technology battery must be taken from the list approved by Motorsport UK, Regulation J5.14.9).

It is recommended that the battery be relocated from the engine bay to the passenger foot well or the boot area. The ground lead must be indicated with a yellow colour coding and both battery terminals must be covered with insulating materials.

- 2.10.5 Generators: A fully working standard alternator must be fitted and electrically connected so that the standard battery charging function is providing to the onboard battery at all times when the engine is running.

2.11 BRAKES

2.11.1 Permitted Modifications

The fitment of non-standard front brake calipers, brake pads and discs is permitted, however a maximum of 4 pistons are permitted in each front brake caliper. Brake discs must be steel, and composite or carbon discs are not permitted.

Rear brakes must have standard Mazda calipers and mounts, but the discs may be grooved or cross drilled and of the same size and material as standard Mazda. Pads are free, but must be of standard Mazda size/dimension – only the friction material is free.

Brake lines may be routed inside the passenger cabin, and steel braided flexible hoses may be used.

Backing plates may be removed.

The brakes must be able to fit under the wheel stipulated in section 5.12 below.

The anti-lock braking systems may be retained or disabled/removed. The ABS Control Unit may be removed, and the hydraulic pipes changed to suit.

A brake bias adjustable valve may be fitted which may be either single or dual pipe to rear brakes. Position of fitment is free.

2.11.2 Prohibited Modifications

No modifications may be made to the handbrake, and it must remain as standard and be in working order.

2.12 WHEELS/STEERING

Any steering wheel may be used except wood rimmed type but must comply with Motorsport UK Regulation [J 5.7].

The steering lock must be removed.

Wheel nuts are free providing they are manufactured from steel and of equal or better quality than OEM. Motorsport UK Regulation [Q13.5.2].

The standard power steering system and steering rack must be retained, and the power steering pump remain driven at all times. The steering ratio must be as per standard.

Maximum wheel width is 7.5" and maximum diameter is 17".

2.13 TYRES

The control tyre for 2023 is the Nankang AR-1. The only option is the use of any tyre from list 1a of the 2023 Motorsport UK Yearbook for wet conditions.

2.14 WEIGHTS

The minimum weight including driver will be 1050 kg for the duration of the race meeting up to and including post event scrutineering. Should any ballast be required to achieve this minimum, it must be securely bolted to the passenger floor area, in accordance with Motorsport UK Regulation [J 5.15].

2.15 FUEL TANK/FUEL**2.15.1 Types**

Original fuel tank must be used as per factory specification.

2.15.2 Locations

Fuel filler trap door and restrictor plate in filler neck may be removed.

2.15.3 Fuel

Only pump fuel as defined in [Motorsport UK Regulations Section B Nomenclature and Definitions (see Pump Fuel)] may be used. The use of power boosting or octane boosting additives by competitors in any fuel is prohibited. A minimum of 3 litres of fuel must remain in the fuel tank at the end of qualifying or race.

2.16 SILENCING

Must comply with Motorsport UK Regulation [J 5.16], [J 5.17] and [J 5.18].

2.17 COMPETITION NUMBERS & SERIES DECALS**2.17.1 Positions**

Competition numbers must comply with Motorsport UK Regulation [J 4] and due to a space constraint, a 15" diameter roundel may be used with 7" numbers on both sides of the car.

In addition, the windscreen of all cars must display the competition number positioned on the upper side area of the passenger's side of the windscreen, as follows:

- (1) the numerals must be at least 150mm high
- (2) be placed no closer than 50mm from the lower edge of the windscreen "sun strip" and 50mm from the side edge of the windscreen

All cars must carry BRSCC decals on both sides of the car

Any decals specified by the Series Co-ordinator must be fitted as and when required.

2.17.2 Series Decal Suppliers

BRSCC and Series Co-ordinator.

3. APPENDICES

The following Commercial Undertakings are not subject to the Judicial Procedures of either the Series Stewards and/or the Motorsport UK/MSA.

3.1 RACE ORGANISING CLUBS & CONTACTS

ORGANISING CLUB

British Racing & Sports Car Club
Suite 1, 60 Churchill Square
Kings Hill
West Malling
ME19 4YU
Tel: 01732 780100
www.brscc.co.uk

SERIES COORDINATORS

Greg Graham
Tel: 01732 780100
Email: greg@brscc.co.uk

LICENCED ELIGIBILITY SCRUTINEER

Mark Armstrong
Tel: 07837 701767
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