



## **BMCRC GP2 Series Regulations**

### **Foreword**

The purpose behind the introduction of a GP2 EVO Class is to introduce riders and teams to adjustable chassis geometry/Data management in a supported environment, whilst keeping costs well below that of the full GP2 Class. The series organiser will supply personnel to assist in the understanding of geometry and data analysis.

Permissible Machinery: Any Triumph 675 2013> (GEN 3) and the Street Triple R/RS 765 are permissible donor bikes for the GP2 EVO class. (This does not include the Daytona 765 production Moto 2) The reasoning behind the limitation to 3-cylinder Triumph engines, is for the purposes of technical administration and parts supply at the circuit. It also gives competitors and teams access to full factory GP2 parts that will allow the upgrade of their existing production machines to full GP2 machinery over the course of time, should they wish to do so. 2022 will be an evaluation season to assess the different machines performance compatibility, with a view to finalising machine specifications for a full-blown series in 2023. The series is not closed doors to other manufactures, but we are keen to see the grid stabilise at a particular cc, simply because it will allow the best rider with the best bike to win and 'levelling up' can be removed. Right now, we envisage this being an 800cc class as it develops, therefore we are open to approaches from teams looking to run a 800cc production motorcycle.

### **BMCRC GP2 Technical Regulations**

are as per MSVR which are available for download from here:

<https://www.msvracing.com/media/6186/gp2-regs.pdf>

### **BMCRC GP2 EVO TECHNICAL REGULATIONS**

These are as follows and are correct as of the printing of these regulations, but which are subject to any amendments made by the BMCRC which will be issued by means of an BMCRC Bulletin.

1.0.1. GP2 EVO class is intended to accommodate non-homologated chassis specifications and technology. For clarification purposes these will be described as follows:

GP2 EVO machines must use the homologated production chassis & swing-arm which may be modified to accommodate series homologated geometry parts. The series organiser reserves the right to add further parts to the homologated list at any time.

**GP2 EVO CLASS SPECIFICATIONS EVERYTHING THAT IS NOT AUTHORISED AND PRESCRIBED IN THIS RULE IS STRICTLY FORBIDDEN All motorcycles must comply**

in every respect with all the requirements for Road Racing as specified in the technical regulations. The use of MMC (Metal Matrix Composite) and FRM (Fibre Reinforced Metal) materials is forbidden on any part of the motorcycle. The use of titanium in the construction of the frame, the front forks, the handlebars, the swinging arm/spindles, and the wheel spindles is forbidden. For wheel spindles, the use of light alloys is also forbidden.

1.0.2. Machine Specifications Selected items mentioned in the following must be homologated by BMCRC. A list of homologated parts will be supplied to the teams.

1.0.3. Balancing various motorcycle concepts: In order to equalise the performance of motorcycles with different engine configurations, changes in the minimum weight, rev limits, air restrictors and electronic throttle programming can be applied according to their respective racing performances. The decision about applying a handicap system to a respective team or machine type can be taken by BMCRC at any time. These changes will be under constant review by the series promoter and the GP2 EVO teams and any management groups will then present their recommendations to the BMCRC.

1.0.4. Engine configurations and Displacement capacities: 675cc to 795cc 3-Cylinder engine limited to 128bhp. BMCRC reserve the right to amend both the maximum bhp & torque figures for each model competing in the EVO class. The displacement capacities must remain at the homologated size. Modifying the bore and stroke to reach class limits is not allowed.

1.0.5. Minimum Weight: A combined rider and machine minimum weight of 222 kg, the organiser reserves the right to alter this with respect to different engine configurations. Machines will be weighed with rider dressed as to race including helmet. The addition of weight, including fuel or water after practice or race is not allowed. There is a +/- tolerance on the minimum weight of 2 KG. During the practice and qualifying sessions every rider may be asked to submit their motorcycle to weight control, in any case the rider and team must comply with this request. The use of ballast is allowed to stay over the minimum weight limit, the use of ballast and weight must be declared to the Chief Technical Officer at the preliminary checks.

1.0.6. Number Plate Colours Front: White background, red numbers Side: Any colour background with a contrasting colour number that is clearly defined from the background and complies with

1.0.7. To help identification the numbers should be surrounded by a single black line of at least 5mm thickness. In case of dispute concerning the legibility of numbers, the decision of BMCRC will be final.

1.07. Fuel: Pump fuel obtained from any commercial station available to the public may be used. No additives may be used.

1.0.8. Tyres: The use of any brand of tyres is permissible. The use of tyre warmers is allowed. Any modification (cutting, grooving) is forbidden.

1.0.9. Engine: All engines must comply with GP2 EVO Technical regulations unless stated otherwise. The series has a power ceiling of 128BHP as defined by the Bemsee Dyno. All machines will be tested on the Bemsee Dyno. BMCRC reserves the right to alter weight and/or rev limit and/or other sporting penalties.

1.10.0 Fuel injection systems: Fuel injection systems refer to throttle bodies, fuel injectors, variable length intake tract devices, fuel pump and fuel pressure regulator. The original homologated fuel injection system must be used as was supplied with the original donor engine without modification.

1.11.0 Cylinder Head: The Cylinder head may be modified to bring the power of the engine up to the stated 128bhp. This may include material removed from the mating surface or from the induction and exhaust ports. A stated maximum torque figure will be introduced to ensure this facility is not used for any performance advantage above reaching the maximum bhp limit in line with the spirit of the Championship.

1.12.0 Camshaft: The camshafts maybe be modified for duration only. Cam timing of engines may be altered from the engine manufactures homologated timing and the sprockets on those engines may be altered to achieve this. The method of drive and the cam sprockets or gears must remain as homologated.

1.13.0 Cylinders: No modifications are allowed.

1.14.0 Pistons No modifications are allowed.

1.15.0 Piston Rings No modifications are allowed.

1.16.0 Piston Pins and Clips No modifications are allowed.

1.17.0 Connecting Rods No modifications are allowed.

1.18.0 Crankshaft No modifications are allowed. Polishing and lightening is not allowed.

1.19.0 Crankcase/Gearbox: No modifications are allowed. It is not allowed to add a pump used to create a vacuum in the crankcase.

1.20.0 Lateral covers and protection Lateral (side) covers may be altered, modified or replaced. If altered or modified the cover must have at least the same resistance to impact as the original one. If replaced, the cover must be made in material of same or higher specific weight and the total weight of the cover must not be less than the original one. All lateral covers/engine cases containing oil and which could be in contact with the ground during a crash, must be protected by a second cover made from metal such as aluminium alloy, stainless steel, steel or titanium. Plates or crash bars from aluminium or steel also are permitted in addition to these covers. All of these devices must be designed to be resistant against sudden shocks, abrasions and crash damage. BMCRC approved covers will be permitted without

regard of the material. The Chief Technical Officer has the right to forbid any cover, if the evidence shows the cover is not effective.

1.21.0 Transmission/Gearbox All transmission/gearbox ratios, shafts, shift drum and selector forks must remain as homologated. An aftermarket quick shifter may be fitted.

1.22.0 Clutch An aftermarket slipper clutch may be used (Wet or Dry) and the operating method (Cable or Hydraulic) must remain as the homologated donor engine. No throttle blipper systems can be used. Back control torque springs may be changed.

1.23.0 Oil Pumps, water pumps and Oil Lines Oil lines must remain as homologated. Oil pump and water pump modifications are not allowed.

1.24.0 Radiator and oil coolers. No modification is permitted.

1.25.0 Air Box The air box must remain as originally produced by the manufacturer of the donor engine.

1.26.0 Fuel Supply: Fuel filters may be added. GP2 EVO machines must use the homologated fuel pump, lines and connectors.

1.27.0 Exhaust System: Exhaust pipes and silencers may be modified for the removal of the catalytic convertor or changed for stainless aftermarket versions. No full titanium systems are permissible, link pipes and end-can only, may be made from this material. Wrapping of exhaust systems is not allowed except in the area of the rider's foot, or an area in contact with the fairing for protection from heat. The noise limit for all classes will be 105 dB/A.

1.28.0 Electric and Electronics:

The GP2 EVO class must use the following ECU configuration: Standard production ECU or Triumphs Kit ECU and harness for use on the 675 model only. The 765 model must use the Street Triple standard production ECU and harness. Both harness configurations may be modified for the sole purpose of reducing weight.

1.29.0 Generator, alternator, electric starter Aftermarket generators/alternators are not permitted.

1.30.0 Additional Equipment: Additional electronic hardware equipment may be added (e.g. data acquisition to include the following. Front and rear potentiometers, brake pressure sensor, oil pressure sensor one rear wheel speed sensor for data logging ONLY, computers, recording equipment) Note: No front wheel speed sensor is permitted in any circumstances The addition of a device for infra-red (IR) transmission of a signal between the racing rider and his team, used exclusively for lap timing, is allowed. The addition of a GPS unit for lap timing/scoring purposes is allowed. Telemetry is not allowed. No other electronic equipment may be carried.

1.31.0 Wiring Harness The wiring harness may be altered or replaced. Cutting of the wiring harness is allowed.

1.32.0 Battery The size and type of battery may be changed and relocated.

1.33.0 Frame Body The main frame must be a modified version of the production homologated chassis.

1.34.0 Yokes and Offset Cups. Adjustable yokes and steering offsets may be used as supplied by the series organiser.

1.35.0 Frame Body and Rear sub-frame: GP2 EVO class machines must use either the homologated rear subframe or an aluminium type.

1.36.0 Front Forks: Front Forks must be from a series approved homologated motorcycle, the fitting of after-market cartridge kits is permitted. A steering damper may be added. The steering damper cannot act as a steering lock limiting device.

1.37.0 Rear Fork (Swing arm) GP2 EVO class bikes must use the homologated swing-arm. Machines must use the series homologated linkage system as supplied by the series organiser.

1.38.0 Rear Suspension Unit: Rear suspension units are free. No electronically controlled suspension units may be used.

1.39.0 Wheels: The homologated wheels for the applicable model must be used. Wheel rim diameter size is as follows. 17-inch Front wheel rim width 3.50 inches, Rear wheel rim width 5.5 inches.

1.40.0 Brakes Motorcycles must have a minimum of one brake on each wheel that is independently operated. Only brake discs of ferrous materials are allowed. Calipers must be as homologated on the donor machine, but master cylinders maybe changed.

Motorcycles must be equipped with brake lever protection, intended to protect the handlebar brake lever(s) from being accidentally activated in case of collision with another machine. Such devices must be strong enough to function effectively and designed so that there is no risk for the rider to be injured or trapped by it, and it must not be considered a dangerous fitting (at the sole discretion of the Technical Director). Anti-lock Brake Systems (ABS) are not permitted. Braking inputs must be powered and controlled solely by the rider's manual inputs. Conventional hydraulic hand/foot controls such as master/slave cylinders for brake systems are allowed. No increase or control of brake pressure by electronic or mechanical systems apart from the rider's direct manual inputs are allowed. Specifically, brake systems designed to prevent the wheel from locking when the rider applies the brake are forbidden Front and rear hydraulic brake lines must be of braided steel type and readily available on the open market from an established manufacturer. The split of the front brake lines for twin front brake callipers must be made above the lower edge of the fork bridge (lower triple clamp). Front and rear brake pads may be changed. Brake pad locking pins may be modified for quick change type. Additional air ducts are allowed.

1.41.0 Handlebars and Hand Controls are open.

1.42.0 Footrest/Foot Controls Footrest/foot controls are open. The end of the footrest must have at least an 8mm solid spherical radius. Non folding footrests must have an end (plug) which is permanently fixed, made of aluminium, plastic, Teflon® or equivalent type of material (min. radius of 8mm). The plug surface must be designed to reach the widest possible area of the footrest. The Chief Technical Officer has the right to refuse any plug not satisfying this safety aim.

1.43.0 Fuel Tank. Fuel tanks with tank breather pipes must be fitted with non-return valves that discharge into a catch tank with a minimum volume of 250 cc made of a suitable material. Fuel caps when closed, must be leak proof. Additionally, they must be securely locked to prevent accidental opening at any time. GP2 EVO bikes must use the homologated fuel tank, lines and connectors.

1.44.0 Fairing/Body Work: GP2 bikes must use series homologated bodywork.

1.45.0 Fasteners: Fasteners of any material and design maybe used. Aluminium fasteners may only be used in non-structural locations. Titanium fasteners may be used in structural locations, but the strength and design must be equal to or exceed the strength of the standard fastener it is replacing. Special steel fasteners may be used in structural locations, the strength and design must be fit for purpose. Fasteners may be drilled for safety wire. Fairing/body work fasteners may be of the quick disconnect type.

1.46.0 The following items **MUST BE PRESENT** Motorcycles must be equipped with a functional ignition kill switch or button mounted at least on one side of the handlebar (within reach of the hand while on the hand grips) that is capable of stopping a running engine. All drain plugs must be wired. External oil filter(s) screws and bolts that enter an oil cavity must be safety wired (i.e. on crankcases, oil lines, oil coolers, etc.) All motorcycles must have a closed breather system. The oil breather line must be connected and discharge in the airbox. Where breather or overflow pipes are fitted, they must discharge via existing outlets. The original closed system must be retained; no direct atmospheric emission is permitted.

1.47.0 RAIN LIGHT All motorcycles must have a functioning red light mounted at the rear of the machine to be used in rain or low visibility conditions as instructed by Race Control. The team must ensure that the light is switched on whenever a rain tyre is fitted on the motorcycle and/or when any practice or race is declared "wet" by Race Control. Lights must comply with the following: a) lighting direction must be parallel to the machine centre line (motorcycle running direction), and clearly visible from the rear at least 15 degrees to both left and right sides of the machine centre line. b) mounted on the seat/rear bodywork approximately on the machine centre line, in a position approved by the Chief Technical Officer. In case of dispute over the mounting position or visibility, the decision of the Chief Technical Officer will be final. c) power output/luminosity equivalent to approximately: 10 – 15W (incandescent) 0.6 – 1.8 W (LED). d) the switch must be accessible. e) rain light power supply may be separated from the motorcycle main wiring and battery.