



MRO 600 CLASS REGULATIONS 2021



These regulations are the MRO 600 Regulations and also cover the Rookie 600 class.

Note: If you are planning to take your bike to compete at BSB as a private entrant under the regulations prescribed by the MSVR, you will need to refer to their regs with particular reference to the Control Tyre and Control Fuel rules there, and the regulations concerning the obligatory use of the MoTeC ECU, which can be hired by prior arrangement. Apart from tyre, fuel and ECU rules, the key differences compared with BMCRC regs cover the requirements to include Explosafe in fuel tanks, covers on tanks and engines, the need to add a front brake protection bar, and the use of homologated brakes. All of the enhanced safety measures are good ideas. Engine covers and the front brake protection bar are preferred and allowed - but are not mandatory at BMCRC, and tank covers and Explosafe are allowed but not specifically required. This, together with less strict homologation rules reflects the need to keep Club level running costs down.

Rider Eligibility

- Clubman 600 riders will not be eligible to score points in the main MRO 600 Championship. They will compete for just the Clubman 600 Championship.
- The top 3 from the previous year's Clubman Series must move onto MRO 600 for subsequent seasons if they wish to remain in the 600 class. (NOTE: This requirement has been waived for 2021 due to the Covid disrupted 2020 season)
- Riders coming from National Series (registered at BSB) must enter the MRO 600 series, irrespective of licence grade.

Everything that is not authorised or prescribed in these regulations are strictly forbidden.

- All motorcycles must comply in every respect with all the requirements for Road Racing as specified in the 2021 ACU handbook.
- The Appearance from front, rear and the profile of motorcycles must (except when otherwise stated) conform to the homologated shape (as originally produced by the manufacturer). The appearance of the exhaust system and engine case guards is excluded from this rule.

1. 600 CLASS

Over 400 up to 600cc 4-stroke 4 cylinder

Over 500 up to 675cc 4-stroke 3 cylinder (Note: The Triumph 765 is currently ineligible)

Over 600 up to 750cc 4-stroke 2 cylinder

The displacement capacities must remain at the homologated size. Modifying the bore and stroke to reach class limits is not allowed

2. MINIMUM WEIGHT

600cc 4 cylinder 161Kg

675cc 3 cylinder 161Kg

750cc 2 cylinder 161Kg

In the final inspection at the end of the race, the checked machines will be weighed in the condition that they finished race. Nothing can be added to the machine such as water, oil, fuel or tyres, that might alter the race finish weight.

3. NUMBER AND BACKGROUND COLOURS

Front: White background, blue numbers

Sides: Any colour background with contrasting colour numbers approved by the Chief Technical Official.

4. FUEL

Only fuel which is sold from roadside pumps for use on UK roads, and upon which all tax and duty has been paid, is permitted for **all** timed practice and races.

5. MACHINE SPECIFICATIONS

All items not mentioned in the following articles must remain as originally produced by the manufacturer for the homologated machine.

5.1 Frame Body and Rear Sub Frame

- Frame must remain as originally produced by the manufacturer for the homologated machine.
- The sides of the frame-body may be covered by a protective part made of a composite material. These protectors must fit the form of the frame.
- Nothing can be added or removed from the frame body.
- All motorcycles must display a vehicle identification number on the frame body (chassis number).
- Engine mounting brackets or plates must remain as originally produced by the manufacturer for the homologated machine.
- Rear sub frame may be changed or altered, but the type of material must remain as homologated, or of a higher specific weight.
- Additional seat brackets may be added, non-stressed protruding brackets may be removed if they do not affect the safety of the construction or assembly. Bolt-on accessories to the rear sub-frame may be removed.
- Holes may be drilled on the frame only to fix approval components (i.e. fairing brackets, steering damper mount, sensors)
- The paint scheme is not restricted but polishing the frame body or the sub frame is not allowed.

5.2 Front Forks

- Forks must remain as originally produced by the manufacturer for the homologated machine.
- Standard original internal parts of the forks may be modified or changed. No aftermarket or prototype electronically controlled suspensions can be used. If original electronic suspensions are used, they must be completely standard, and all parts must remain as homologated.
- Fork springs may be replaced, and after market damper kits or valves may be installed
- Fork caps may be modified or replaced to allow external adjustments.
- Dust seal can be modified, changed or removed if the fork is totally oil-sealed.
- The original finish of the fork tubes (stanchions, fork pipes) may be changed or modified. Additional surface treatment is allowed.
- The upper and lower fork clamps (triple clamp, fork bridges) must remain as originally produced by the manufacturer on the homologated machine.
- Steering damper may be added or replaced with an aftermarket damper.
- The steering damper cannot act as a steering lock limiting device.

5.3 Rear Fork (Swing arm)

- Rear fork must remain as originally produced by the manufacturer for the homologated machine. A chain guard must be fitted in such a way to reduce the possibility that any part of the riders' body should become trapped between the lower chain run and the rear wheel sprocket.
- Rear fork pivot bolt must remain as originally produced by the manufacturer for the homologated machine.
- Rear axle chain adjuster can be modified or changed.
- Rear wheel stand brackets may be added to the rear fork by welding or by bolts. Brackets must have rounded edges (with a large radius). Fastening screws must be recessed.
- An anchorage system or point(s) to keep the original rear caliper in place may be added to the rear fork.

5.4 Rear Suspension Unit

- Rear suspension unit can be changed or modified, the original attachments of the frame and rear fork must be as homologated.
- Rear suspension unit spring(s) may be changed.
- Rear suspension linkage must remain as originally produced by the manufacturer for the homologated machine.
- No after market or prototype electronically controlled suspensions can be used. If original electronic suspensions are used, they must be completely standard, and all parts must remain as homologated. Such original electronic systems must work properly in the event of an electric/electronic failure.

5.5 Wheels

- Wheels must remain as originally produced by the manufacturer at the time of sale into the dealer/distributor network for the homologated machine.
- The Speedometer drive may be removed and replaced with a spacer.
- If the original design included a cushion drive for the rear wheel, it must remain as originally produced for the homologated model.
- Front and rear axles must remain as originally produced by the manufacturer for the homologated model.
- Wheel diameter and rim width must remain as originally homologated.

5.6 Brakes

- Front and rear brake discs may be changed but must fit the original caliper and mounting. However, the outside diameter must remain as the homologated version.
The ventilation system must remain as originally produced by the manufacturer for the homologated machine. Internally ventilated discs are not allowed unless homologated on the original machine.
- The brake disc carriers may be changed, but must retain the same offset and same type of mounting to the wheels.
- Replacement brake discs must be of a ferrous material.
- Front and rear brake calipers as well as all mounting points and mounting hardware (mount, carrier, hanger) must remain as originally produced by the manufacturer for the homologated machine.
- The front master cylinder may be replaced with alternative items.
- The rear master cylinder may be replaced with alternative items.
- Front and rear hydraulic brake lines may be changed. The brake fluid reservoir may be replaced and/or repositioned. Quick connectors may be used. The split of the front brake lines for both front brake calipers must be made above the lower fork bridge.
- Front and rear brake pads may be changed. Brake pad locking pins may be modified for quick change type.
- Additional air ducts are not allowed, but in order to reduce the transfer of heat to the hydraulic fluid, it is permitted to add metallic shims between the brake pads and the calipers and/or to replace light alloy pistons with steel items made by the same caliper manufacturer.

5.7 Tyres

i) Tyre Regulations (either treaded or slick tyres may be used)

- Tyres must be fully moulded type carrying all size and sidewall marking for commercial sale to the public.
- Tyres of V or Z rating must be used.
- The depth of tyre treads must be at least 2.5mm over the entire pattern width, at pre-race control.
- The tyres must have a positive and negative tread of 96% positive and a minimum 4% negative (land and sea ratio).
- The maximum distance from the external edge of the tyre to 50% of the tread element is 35mm.
- The tyres must have a DOT and or E mark. The DOT or E mark must be on the tyre sidewall.
- As an alternative, slick tyres may be used.

ii) Wet Weather Tyres

- Only when a race or practice has been declared "wet", the use of a special tyre, commonly known as a "full wet" tyre, is allowed. "Wet" tyres must be a fully moulded tyre, no hand cutting is allowed on the moulded tyres. The use of hand cut tyres is not allowed. Wet tyres do not need to carry "E" or "DOT" mark, however, they must be marked "NOT FOR HIGHWAY USE".
Any modification or treatment (cutting, grooving) to a) or b) is forbidden.

5.8 Foot Rest/Foot Controls

- Foot rest/controls may be relocated but brackets must be fixed to the frame on the original mountings.
- Foot rests may be rigidly mounted or a folding type which must incorporate a device to return them to the normal position.
- The end of the footrest must have an 8mm solid spherical radius.
- Non folding footrests must have an end (plug) which is permanently fixed, made of aluminium, plastic, Teflon ® or an equivalent type material (minimum radius 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.

5.9 Handle Bars and Hand Controls

- Handle bars, throttle assembly and associated cables, hand controls and levers may be replaced.
- Handle bars and hand controls may be relocated.
- Electric starter switch and engine stop switch must be located on the handlebars.
- Throttle controls must be self closing when not held by hand.

5.10 Fuel Tank

- Fuel tank must remain as originally produced by the manufacturer for the homologated machine.
- Fuel tanks with a tank breather pipes must be fitted with non-return valves that discharge into a catch tank with a minimum volume of 250cc made of a suitable material.
- Fuel caps may be changed. Fuel caps when closed, must be leak proof. Additionally, they must be securely locked to prevent accidental opening at any time.

5.11 Fairing/Body Work

- Fairing, front mudguards and bodywork must appear to be as originally produced by the manufacturer for the homologated machine.
- Fairing and bodywork may be replaced with cosmetic duplicates of the original parts. The materials may be

Changed, but the use of carbon fibre or Kevlar® materials is not allowed for fairing, fuel tank cover, seat and seat base, and associated bodywork construction.

- Size and dimensions must be the same as the original parts without any addition or subtractions of design elements.
- Windscreens may be replaced with transparent material only.
- The original combination instrument/fairing brackets may be replaced. All other fairing brackets may be altered or replaced.
- The original air ducts running between the fairing and the air box may be altered or replaced.
- The original air ducts into the airbox may be altered or replaced.
- The lower fairing has to be constructed to hold, in case of engine breakdown, at least half of the total oil and engine coolant capacity used in the engine (minimum 5 litres). The lower edge of the openings in the fairing must be positioned at least 50mm above the bottom of the fairing.
- Minimal changes are allowed to permit the use of an elevator (stand) for the wheel changes and to add a small plastic protective cone to the frame or engine.
- Front mudguards must appear as originally supplied by the manufacturer for the homologated machine.
- Front mudguards may be replaced with cosmetic duplicates of the original parts,
- Front mudguards may be spaced upwards for increased tyre clearance.
- Rear mudguards fixed on the swingarm may be replaced with cosmetic duplicates of the original parts, including those made of carbon fibre or Kevlar® composites.
- Rear mudguards fixed on the swingarm that incorporates the chain guard can be modified to accommodate larger diameter rear sprockets.
- The existing rear mudguard under the seat may be removed. A replacement mudguard may be fitted directly onto the swingarm, but it may not cover more than 120 degrees of the wheel, and all exposed edges must be rounded.

5.12 Seat

- Seat, seat base and associated body work may be replaced with parts of similar appearance as originally produced by the manufacturer for the homologated machine.
- Holes may be drilled in the seat or cowl to allow additional cooling. Holes bigger than 10mm must be covered with metal gauze or fine mesh. Mesh must be painted to match the surrounding material.
- The top portion of the rear bodywork around the seat may be modified to a solo seat.
- The appearance from both front rear and profile must conform in principle to the homologated shape.
- All exposed edges must be rounded.

5.13 Wiring Harness

- The wiring harness may be altered or replaced. Additional wiring harnesses may be added.
- Cutting of the wiring harness is allowed.

5.14 Battery

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

5.15 Radiators and oil coolers

- The radiator may be changed only if it fits in the standard location and does not require any modifications to the main frame or to the fairings outer appearance.
- Modifications to the existing oil cooler are allowed only if it does not require any modifications to the main frame or to the fairings outer appearance. Heat exchangers (oil/water) can be changed to an oil cooler.
- Additional oil coolers are not allowed.
- Radiator fan and wiring may be changed, modified or removed.
- Oil coolers must not be mounted on or above the rear mudguard.

5.16 Air Box

- The air box must remain as originally produced by the manufacturer on the homologated machine.
- The air filter element may be removed or replaced.
- The air box drains must be sealed.
- All motorcycles must have a closed breather system. The oil breather line must be connected and discharge in the airbox.
- The original air ducts running from the fairing to the air box may be altered or replaced.

5.17 Fuel Injection Systems.

- References to fuel injection systems include the throttle bodies, fuel injectors, variable length intake tract devices, fuel pump and fuel pressure regulators.
- The original homologated fuel injection system must be used.
- Throttle body intake insulators may be modified.
- Bell mouths may be altered or replaced from those fitted by the manufacturer on the homologated machine.

- The butterfly cannot be changed or modified.

5.18 Fuel Supply

- Fuel pump and fuel pressure regulator must remain as homologated.
- Fuel pressure must remain as homologated.
- Fuel lines and connectors from the fuel tank up to the injectors may be replaced.
- The fuel lines connecting the fuel tank and injectors must be located or repositioned in such a way that they are protected from possible crash damage.
- Quick connectors or dry brake quick connectors may be used.
- Fuel vent lines may be replaced.
- Fuel filters may be added.

5.19 Exhaust System

- Exhaust pipes and silencers may be changed or modified.
- Catalytic converters must be removed.
- The number of final exhaust silencers must remain and exit on the same side as homologated.
- Exposed edges of the exhaust pipes must be rounded to avoid any sharp protruding edges
- The wrapping of exhaust systems is not allowed, except in the area of the rider's foot, for protection from heat.
- The noise limit is 105 dB/A in accordance with the ACU handbook.

5.20 Electrical Switches

- Connectors and switches may be modified, removed or replaced, except that a handlebar mounted engine kill switch must always remain and be capable of stopping the engine and fuel pump.

5.21 Engine

5.21.1 Cylinder Head

Cylinder head must be as homologated but the following modifications are allowed: -

- Grinding of the cylinder head surface on the side of the gasket.
- Modification of the inlet and exhaust ports by taking off or adding material (welding is forbidden)
- Original homologated valve guides may be cut or modified, but only on the intake or exhaust port side.
- Polishing of the combustion chamber.
- Original valve seats must be used, but modifications are allowed to the shape.
- Compression ratio is free, but the combustion chamber can be modified only by taking material off.

It is forbidden to add any material to the cylinder head unless as described above.

- The combustion chamber may be modified.
- Rocker arms (if any) must remain as homologated (material and dimensions)
- Valves must remain as homologated.
- Valve springs can be changed.
- The valve spring retainers and cotters may be replaced or modified.

5.21.2 Camshaft

- The method of drive must remain as homologated.
- The duration is free but the lift must remain as homologated.
- The cam chain or cam belt tensioning device(s) is free.
- At technical checks: for direct cam drive systems, the cam lobe lift is measured; for non direct cam drive systems (i.e. rocker arms) the valve lift is measured.
- Cam sprockets or gears can be modified or replaced to allow the degreeing of camshafts.

5.21.3 Crankshaft

- Crankshaft must remain as homologated without modification.
- Polishing and lightening is not allowed.
- Modifications of the flywheels are not allowed.

5.21.4 Oil Pumps and Oil Lines and Water Pumps

- Oil pump and water pump must remain as homologated. No modifications are allowed.
- Oil lines may be modified or replaced. Oil lines containing positive pressure, if replaced, must be of metal reinforced construction with swaged or threaded connectors.

5.21.5 Connecting Rods

- Connecting rods must remain as homologated.

- Polishing and lightening is not allowed.

5.21.6 Pistons

- Pistons must remain as homologated.
- Polishing and lightening is not allowed.

5.21.7 Piston Rings

Piston rings must remain as homologated. No modifications are allowed.

5.21.8 Piston Pins and Clips

Piston pins and clips must remain as homologated. No modifications are allowed.

5.21.9 Cylinders

- Cylinders must remain as homologated. No alterations or modifications are allowed.

5.21.10 Crankcase and all other Engine Cases (i.e. ignition case, clutch case).

- Crankcases must remain as homologated. Modifications (including painting, polishing and Lightening) are not permitted.
- It is not allowed to add a pump used to create a vacuum in the crankcase. If a vacuum pump is installed as part of the homologation, it must only be used as homologated.
- Other engine cases must be made of the homologated material.

5.21.11 Engine case guards

- Engine case guards in the form of strengthened engine side covers may be installed. These covers must be constructed of the same material and be no lighter in weight than the standard material, and if modified, must retain at least the same resistance to impact.
- All lateral covers/engine cases containing oil and which could be in contact with the ground during a crash should be protected by a second cover made of material such as aluminium alloy, stainless steel, steel or titanium.
- All these guard devices must be designed to be resistant against sudden shocks and fixed properly and securely. The Chief Technical Officer retains the right to reject any of these covers.

5.21.12 Transmission/Gearbox

- The gearbox case and primary gears must remain as homologated.
- Quick shift systems are allowed.
- Gear ratios must be retained as homologated, but the gears may have strengthening, under cutting and super finishing.
- Countershaft sprocket, rear wheel sprocket, chain pitch and size can be changed.

5.21.13 Clutch

- After market slipper clutches may be used, but the clutch type (wet or dry) and the way of operation (by cable or hydraulic) must remain as homologated.
- Friction and drive plates may be changed but the number of them must remain as homologated

5.21.14 Ignition/Engine Control System

- Spark plugs and plug caps and wires may be replaced.
- Ignition/Engine control system (ECU) is open. (Free to change) The use of flash memory ('flash RAM') for fuel injection mapping is allowed. An additional control unit to change the fuel mixture may be fitted.
- Additional electronics forming control systems will be allowed i.e Traction control, blipper boxes etc
- Cutting of the wiring harness is allowed.

5.21.15 Generator, Alternator, Electric Starter

- Generator may be modified, or replaced. The electric starter must operate normally and always be able to start the engine during practice, race or at anytime as requested by a technical official, including Parc Ferme.

5.22 Fasteners

- Standard fasteners may be replaced with fasteners of any material and design.
- 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, but the strength and design must be equal to or exceed the strength of the standard fastener it is replacing.
- Fasteners may be drilled for safety wire, but intentional weight saving modifications are not allowed.
- Fairing/body work fasteners may be changed to the quick disconnect type.

5.23 The following items may be altered or replaced from those fitted to the homologated motorcycle.

- Any type of lubrication, brake or suspension fluid may be used.
- Any type of spark plug, plug cap and spark plug lead may be used.
- Wheel balance weights may be discarded, changed or added to.
- Bearings (ball, roller, taper, plain, etc.) of any type or brand may be used.
- Gasket and gasket materials
- Painted external surface finishes and decals.

5.24 The Following Items May Be Removed

- Instruments and instrument bracket and associated cables.
- Emission control items (anti-pollution) in or around the air box (oxygen sensor, air injection devices).
- Speedometer and related wheel spacers.
- Bolt on accessories on a rear sub frame.

5.25 The following items MUST BE removed

- Headlamp and rear lamp
- Turn signal indicators (when not incorporated in the fairing). Openings must be covered with a suitable material.
- Rear view mirrors
- Horn
- Licence plate bracket.
- Tool Box
- Helmet hooks and luggage carrier hooks
- Passenger foot rests
- Passenger grab rails
- Safety bars, centre and side stands must be removed (fixed brackets must remain)

5.26 The Following Items Must Be Altered

- Motorcycles must be equipped with a functional ignition kill switch or button mounted on at least one side of the handlebar (within reach of the hand while on the hand grips) that is capable of stopping a running engine and fuel pump.
- Throttle controls must be self closing when not held by the hand.
- 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.

5.27 Additional Equipment

Additional electronic hardware equipment not on the original homologated motorcycle may be added. (i.e. data acquisition, computers, recording equipment etc.). 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.

Telemetry is not allowed