

Bemsee Supertwin Regs 2023

Any four-stroke twin cylinder motorcycle available for purchase to the general public for road use with a water-cooled engine of up to 700cc may be used provided it adheres to the following regulations. Eligible machines must be, or have been available for sale to the general public and be homologated / Type approved for road use in the UK from 2001 or later. This class is for serial production machines only. One off or prototype machines are not permitted.

BMCR shall appoint a Technical Official as Series Eligibility Officer for this class, whose interpretation of the regulations shall be final. All motorcycles must comply in every other respect with all the requirements for Road Racing as specified in the ACU handbook.

1. MINIMUM WEIGHT • 650cc machines: 150kgs | 651cc to 700cc machines: 160kgs

- At any time during the event, the weight of the whole machine (including the fuel tank and its contents) must not be less than the minimum weight.
- There is no tolerance on the minimum weight of the motorcycle.
- In the post-race inspection, the checked machines will be weighed in the condition they were at the end of the race
- The established weight limit must be met in the condition the machine finished the race. Nothing can be added to the machine including water, oil, fuel or tyres.
- During the practice/qualifying sessions competitors may be asked to submit their motorcycle to weight control which the competitor and his team must comply with.
- The use of ballast is allowed in order to stay over the minimum weight limit. This must be securely mounted to the main body of the chassis and be declared at technical inspection.

2. FRAME AND SWING ARM

- Frame must remain as originally produced by the manufacturer for the homologated machine. Surplus attachment brackets may be removed and replaced with those more suitable for race fairings, sub frame attachment, instrument brackets and rear sub frame may be removed, replaced or modified.
- Swing arm may be replaced from a model of the same manufacturer provided the original attachment to frame and rear suspension remains the same as the standard motorcycle. No bracing or strengthening is allowed. Chain adjusters / rear axle blocks may be modified or replaced.

3. SUSPENSION

- Forks may be changed or modified. Fork yokes / triple clamp may be changed. Original internal parts of the fork may be modified or replaced. Aftermarket damper kits or valves may be installed. Fork springs may be replaced. Fork caps may be modified or replaced beyond the homologated standard to allow external adjustments. The use of carbon fibre for structural elements of the fork is not permitted.
- Steering damper may be added or changed. The addition of steering damper mounting lugs to the chassis by welding is permitted.
- Rear suspension unit can be changed or modified, but the original attachment to the frame and swing arm must remain as found on the standard machine.

4. BRAKES

- Front and rear brake discs may be changed. Only ferrous materials are allowed for brake discs.

- Front Brake and rear brake calipers maybe changed or modified.
- Front and rear brake pads may be changed.
- Front and rear master cylinders may be changed.
- Front and rear hydraulic brake lines may be changed. The split of the front brake lines for both front brake calipers must be made above the lower fork bridge (bottom yoke).
- Motorcycles must be equipped with brake lever protection, intended to protect the handlebar brake lever from being accidentally activated in case of collision with another motorcycle.

5. WHEELS AND TYRES

- Wheels may be replaced. Carbon fibre or composite wheels are permitted.
- Wheel rim diameter and width are free.
- Tyres can be treaded or slick. Rain tyres may be used.

6. CONTROLS

- Footrest and foot controls may be replaced or relocated.
- Handlebars, hand controls and cables may be altered or replaced. Engine starter switch and kill switch must be located on the handlebars and must be operational at technical checks.

7. BODYWORK, TANK, FAIRING AND SEAT UNIT

- Fairing, mudguards and seat unit may be altered or replaced. • Windscreen, if fitted, may be replaced with transparent material only.
- The original instruments and fairing brackets may be removed, replaced or added to.
- The lower fairing has to be constructed to hold, in case of an engine breakdown, at least half of the total oil and engine coolant capacity used in the engine (minimum 5 litres). The lower edge of openings in the fairing must be positioned at least 50 mm above the bottom of the fairing.

8. BATTERY

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

9. ENGINE

- Bore and Stroke must remain as per the standard machine.
- Original OEM cylinder head, pistons, valves, cylinders may be modified, polished or lightened. Gas flow modifications normally associated with individual tuning is permitted.
- Compression ratio of the engine may be changed.
- Pistons may be replaced.
- Conrods may be modified or replaced but the material must remain the same type as found on the standard machine (steel rods can only be replaced by steel rods) and the rods must be the same weight or heavier than standard.
- Crankshaft may be modified or changed but must be no lighter than that used on the standard machine.
- Camshaft timing may be changed by the slotting of cam sprockets. Cam lift and dwell is free. The thermostat may be removed from the housing to aid cooling, if required.

10. IGNITION/FUEL SYSTEM AND THROTTLE BODIES

- The ECU must remain as fitted to the homologated machine or a machine of similar type and construction from a previous model and from the same manufacturer. However, it is permitted to use a secondary fuel and/or ignition module such as a Power Commander. Flashing of the standard ECU is also allowed.
- The use of an aftermarket ECU's are not permitted.
- For machines under 651cc, the throttle bodies and injectors can be changed, bored out, polished

and modified. The use of multiple injectors per cylinder is allowed.

- For machines over 651cc, the throttle bodies and injectors must be as found on the standard machine. No modifications are permitted with the exception of removal or fixing the position of any secondary butterfly's only.
- Bell mouths may be modified, removed or changed.
- Air boxes may be modified or replaced.

11. TRANSMISSION

- Gearbox may be changed or modified. The number of gears must remain as found on the standard machine.
- Additions to the gearbox or selector mechanism, such as quick shift systems are permitted.
- Clutch springs; friction and drive plates may be replaced.
- The use of slipper clutch assemblies is permitted.
- Front and rear external drive sprockets, chain pitch, width and length can be changed.

12. ELECTRICS

- The engine must start using the standard on board electric start.
- The alternator may be modified or changed.
- The original wiring harness may be modified or replaced.

13. EXHAUST SYSTEM

- Exhaust pipe and silencers may be altered or replaced from those fitted to the homologated motorcycle. The number of final exit(s) to the exhaust may be altered from that of the homologated machine.

14. RADIATOR AND OIL COOLER

- Original radiator and oil cooler can be replaced. An oil cooler can be added if not fitted as standard.

15. OIL CONTAINMENT

- Engine cases containing oil and which could come into contact with the ground during a crash *MUST* be protected by a second cover made of either injection moulded nylon with 60% 6.6 long glass fibre, or aluminium, or steel, as approved by the FIM or MCRCB.

16. FASTENERS

- Standard fasteners may be replaced with fasteners of any design and material.
- Aluminium & Titanium fasteners may only be used in non-structural locations.
- 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.

17. FUEL

- Only unleaded pump fuel sold for use on UK roads is permitted, upon which all tax and duty has been paid. Additives that were not in the original manufacturer's formula are not allowed. At least 2 litres of fuel must remain in the tank at the end of a race, for fuel control tests.

18. THE FOLLOWING ITEMS MUST BE REMOVED

- Headlamp, rear lamp and turn signal indicators. Rear view mirrors, horn, license 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.

19. ADDITIONAL EQUIPMENT

- Additional electronic hardware equipment not on the original homologated motorcycle, is permitted. I.e. lap timing/datalogging.