



BMCRC 2027

THUNDERBIKE SPORT

2027 TECHNICAL REGULATIONS

Championship regulations | 2027 edition

**POWER-TO-WEIGHT RACING.
THUNDERBIKE SPORT.**



BMCRC THUNDERBIKE SPORT

2027 Technical Regulations

This series is based on a power-to-weight ratio restriction and is aimed at older bikes, or those which comply with class engine limits, plus later hybrids and specials admitted at the BMCRC Eligibility Officer's discretion. Please check the specific date/model of your proposed bike against the detailed rules and with our Eligibility Officers before you proceed to build.

Machines are subject to the applicable power-to-weight ratio and power limits set out in these regulations. Power is measured at the rear wheel using BMCRC's scales and dyno.

GENERAL REQUIREMENTS

The power-to-weight ratio applies to all machines.

All machines must have unaltered VIN, frame and engine numbers.

All machines must comply with the machine preparation regulations set out in the current ACU Handbook for road race meetings.

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ELIGIBILITY AND POWER LIMITS

THUNDERBIKE SPORT CLASS

- Any three- or four-cylinder machine up to and including the 2004 model year.
- Any year twin-cylinder machine up to 750cc, including Supertwin-type machines.
- Any single-cylinder four-stroke machine.
- Any two- or three-valve-per-cylinder four-stroke machine.
- Any air-cooled four-stroke machine.
- Any two-stroke machine, including GP125cc.

Model year refers to year of manufacture, proof of which lies with the competitor. Year legacy rules apply where a model extends past 2004 but remains unchanged.

Some machines which fall particularly well into the performance envelope of the class are granted eligibility on a case-by-case basis. Machines already eligible under this accommodation include the Honda VTR1000 Firestorm and Yamaha TRX850.

If you have a bike which you think fits with the spirit of Thunderbike Sport, please contact us to see whether it would be approved.

POWER LIMITS

Category	Power-to-weight limit	Maximum power
Single-cylinder Thunderbikes	1 SAE bhp per 1.56kg	Not separately stated
Lightweight Thunderbikes	1 SAE bhp per 1.63kg	75bhp
Thunderbike Sport	1 SAE bhp per 1.81kg	105bhp

All ratios apply to machine weight. Under the technical inspection procedure, the motorcycle is weighed with fuel but without the rider.



NUMBERS CHASSIS AND ENGINE

1. RACE NUMBERS AND BACKGROUND COLOURS

1.1 Race numbers for the Thunderbike Sport class should be as specified in the ACU Handbook for your class of bike.

2. CHASSIS

2.1 Frame, engine cases, and cylinder heads must be from the same production model and year where applicable. (Year legacy rules will apply whereby a model extends past cut-off date but remains unchanged)

2.2 Single cylinder motorcycles and accepted “technically interesting” motorcycles may use any frame but the engine must conform within the engine (section 4) guidelines.

2.3 Anything other than frame or crankcases may be modified or changed subject to:

2.3.1 Seat sub frames where fixed may be replaced by bolt on replaceable rear sub frames.

2.4 Hybrid bikes (Big engine, small frame) whose engine conforms to the rules stated may also be considered and approved on an individual basis by the series coordinator(s) and/or eligibility officer(s). In the case of hybrid bikes, 4 stroke engines must be mounted in a 4 stroke chassis. 2 Stroke engines mounted in a 2 Stroke chassis.

3. WHEELS AND TYRES

3.1 Wheels may be replaced. Tyres can be treaded or slick. Rain tyres may be used.

4. ENGINE

4.1 Reducing engine size of machines from stock displacement to meet BMCRC Thunderbike class displacement limits is not allowed.

4.2 Crankcases may be strengthened.

4.3 Cylinder heads may be modified but must retain the original number of valves.



ELECTRONICS AND CONTROLS

5. ELECTRONIC CONTROL SYSTEMS

5.1 The use of electronic control systems to aid launch or traction are strictly forbidden.

5.2 Thunderbike Sport machines are only permitted to have one loaded fuel map at any one time, and any bike found with multiple maps loaded in the software will be excluded. Any 'On-the-fly' switch-able map is strictly forbidden.

6. CONTROLS

6.1 Throttle stops or cable adjustments must be fixed or secured in a manner that will prevent adjustment by the rider or crew without the use of tools prior to dyno testing.

6.2 Switches or other methods designed to affect horsepower readings during dyno testing are strictly prohibited.

6.3 Machines are restricted to the mounting and use of one ignition or engine management module during all competition. Modules with more than one setting must be mounted in such a way that the settings cannot be altered by the rider or crew while on course or prior to dyno testing.

ELIGIBILITY CONTACTS

Mark Dent - Senior Tech Official

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TECHNICAL INSPECTION

7. TECHNICAL INSPECTION

7.1 The dyno operator, Technical Official or person appointed by the race or series organisers to ensure eligibility, may request removal of bodywork before, during or after dyno testing, and may request removal of other components for inspection.

7.2 Any machine not capable of post race dyno testing will be deemed to have failed the dyno test.

7.3 Machines will be run on the dyno until, in the opinion of the dyno operator the maximum output is achieved. If in the opinion of the dyno operator or race official, an unsafe condition exists while performing the dyno testing, the test will be stopped and the Clerk of the course in conjunction with the Technical officer will make the final decision on the dyno test results.

7.4 Machines will be selected at random by race officials to run on the dyno as soon as possible following the end of the race. Failure to report directly to the dyno when requested to do so after the end of a race will result in automatic disqualification.

7.5 All machines must have at least 1 spark plug lead or coil lead accessible to the Dyno operator to allow the pick up clip from the dyno to be attached. This ensures the quality of the test and is in the competitors own interests. Machines where the lead is unavailable may be disqualified.

7.6 All machines will be weighed on the BMCRC Technical Officials own scales. They will be calibrated in house before each round and yearly as deemed necessary. They are definitive. (Circuit scales will only be used if the BMCRC scales are unavailable).

7.7 Machine test procedure will be as follows. Machine(s) will be selected. The machine will be weighed with fuel but without rider. The machine will be Dyno tested and a Pass or fail given. No other information will be supplied.

7.8 Bikes which have been deemed to have failed the power to weight or technical rules may be excluded from the race results. This exclusion may be for the entire meeting at the discretion of the clerk of the course.



APPENDIX A ELIGIBLE BIKE GUIDE

This list gives examples of machines which are eligible and have previously participated in the championship. It is a guide only; the regulations remain the main indication of eligibility. Individual machines may also be approved where they fall within the spirit of the class.

Eligibility does not establish compliance. The rider remains responsible for meeting the applicable power and power-to-weight limits. If your machine is not listed but falls within the manufacturing periods in the rules, contact the Eligibility Officers for a decision.

HONDA AND KAWASAKI

HONDA

- NS/NSR 250 & 400
- CBR400/CBR400RR
- VFR400
- RVF400
- CB500 (All Models)
- CBR600F (1987 through to 2007 model year*)
- CBR600RR (2003/2004 model year)
- VFR 750 (all Models, Including VFR750R RC30)
- CB600F Hornet (1998-2006 Model year*)
- Firestorm (All Models**)

KAWASAKI

- KR1/KR1S 250
- ZXR400
- ZZR600 (All Models)
- GPZ/GPX 600R (All Models)
- ZX6R (1995 through to 2004 Model year)
- ER6 (All Models - Including Supertwin modified machines to a maximum of 750cc)
- Versys 650 (All Models - Including Supertwin modified machines to a maximum of 750cc)
- Z650 (All Models - Including Supertwin modified machines to a maximum of 750cc)
- GPX750
- ZXR750 (All Models)
- ZX7-R



ELIGIBLE BIKE GUIDE

SUZUKI

- RG/RGV 250, 400 & 500
- GSXR400
- GSF600 Bandit (1995 to 2005 Model Year*)
- RF600
- GSXR600 (1996 Through to 2005 Model Year*)
- Gladius 650 (All Models - Including Supertwin modified machines to a maximum of 750cc)
- SV650 (All Models - Including Supertwin modified machines to a maximum of 750cc)
- GSXR750 (1985 Through to 2005 Model Year*)
- GSX750F

YAMAHA

- RD250 & 350
- TZR 250 (all Models)
- FZR400
- FZ & FZR600
- YZF600 Thundercat
- YZF R6 (1999 Through to 2004 Model Year)
- MT-07 Twin Cylinder (All Models)
- FZ & FZR750 (All Models Including OW01)
- YZF750 R & SP
- TRX850**



ELIGIBLE BIKE GUIDE

EUROPEAN MANUFACTURERS

APRILIA

- RS250
- SXV450/550
- Shiver 750
- Dorsoduro 750

BIMOTA

- YB7 400cc
- YB9 600cc
- BB1 650cc Single
- SB7 750cc
- YB4 750cc

BMW

- All Aircooled Boxer Twins
- All Watercooled Twins to 750cc
- K Series 750cc Triples

DUCATI

- All Air cooled Models
- All 2 and 3 Valve models
- All 750cc 4 valve Water cooled Models

Excluded from Thunderbike Sport: Ducati 748RS; Ducati 748 Biposto, SP, SPS and R with an 853 conversion, all years.

KTM

- All 2 stroke and 4 Stroke Singles

MV AGUSTA

- F4 750 (1999 to 2004 Model Year)

TRIUMPH

- TT600 (2000 to 2002 Model years)
- Daytona 600 (2002 to 2004 Model Years)
- Speed four (2002 to 2005 Model Years*)
- 750cc Triples

ELIGIBILITY NOTES

* Machines manufactured after 2004 up to the listed end of production remained unchanged and are eligible.

** Machine classified as a special inclusion.



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POWER-TO-WEIGHT RACING

BRITISH MOTORCYCLE RACING CLUB