



2025 **Sportbike** 500 Regulations

Motorcycle Endurance Race Series

These regulations are Sportbike 500 MERS regs for 2025. Please take the time to read them. Failure to do so may end up in riders being excluded in post-race technical inspection.

Please make sure your machine is eligible.

All machines competing in any 2025 MERS Sportbike 500 Races must comply with these regulations.

The regulations are additional to the ACU Standing Regulations as laid out in the ACU Handbook. All MERS Championships are for riders who possess a valid ACU or SACU. The regulations are as follows and are correct at the time of writing, but which are subject to any amendments made by the ACU or MERS which will be issued by means of a MERS Bulletin. Engine and frame numbers must not have been tampered with or deleted. New, unstamped components are admissible. Bikes without a frame number are acceptable providing they were originally supplied for racing. Motorcycles must be based upon bikes originally homologated for road use.

Anything that is not authorised and prescribed in this rule is strictly forbidden.

Everything that is not authorised and prescribed in these specifications must remain in standard form, excluding paintwork.

1.0 Eligible Machines

All machines must be production-based sub 500cc four stroke twin or single cylinder e.g. Kawasaki Ninja 300,400 or 500 or ER500. Honda CBF 500, CBR 500R. Yamaha R3. Suzuki GS500.KTM 390. Aprilia RS457. CF Moto 450SR. Permitted alterations are listed below. Any questions over machine eligibility contact the general secretary.

2.0 Fuel

2.1 Only unleaded fuel, available from a roadside service station to current ACU regulations. E85 biofuel is also acceptable from roadside outlets.

3.0 Bodywork and Screen

3.1 The appearance and dimensions must be as homologated.

3.2 Single seat units or seat covers may be fitted to facilitate the use of race numbers but must retain the original silhouette of the bike. Seat units specifically designed for racing are strongly recommended.

3.3 The seat may be altered or replaced but any replacement seat must retain the original seat profile.

3.4 Engine protector pads may be fitted but must be secured with lock wire or bolts (adhesive alone is not acceptable).

4.0 Steering Damper

4.1 A steering damper may be added.

5.0 Frame/Swingarm

5.1 No alterations to the chassis/frame are allowed unless specified in these regulations.

5.2 Frame braising or strengthening is forbidden.

5.3 Additional frame bracing is forbidden.

5.4 The side stand lug may be removed for safety reasons (ground clearance).

5.5 The standard swingarm must be used and remain unaltered.

5.6 Unused lugs may be removed from the frame & swing arm.

6.0 Suspension

6.1 Front Forks must remain as homologated by the manufacturer.

6.2 Front Fork springs or Cartridge kits may be changed for aftermarket items e.g. Hyperpro, Hagon, Maxton, Ktech etc.

6.3 Front Forks may be positioned in the yokes at any height.

6.4 Any quantity or type of fork oil may be used.

6.5 Rear Suspension Units must remain as homologated or direct replacement aftermarket items from Hagon, YSS, Hyperpro, Maxton, Bitubo etc. The adjustable damping version of the standard or other aftermarket shocks is also permitted.

7.0 Tyres

7.1 Any treaded tyres can be used – Slicks are not permitted. You should plan for the tyres to last the duration of the race – usually 6 hours or you will need to factor in a tyre change during the race. Severely worn or damaged tyres (cord or wires exposed) during the race will not be allowed back out on circuit until changed. Tyres found to be severely worn or damaged after the race the team will be given a time penalty at the discretion of the Chief Technical Officer and Clerk of the course.

7.2 The cutting of extra tread grooves is forbidden.

7.3 Wheel balance weights may be discarded or added.

7.4 Rain tyres may be used.

8.0 Silencers and Exhaust Systems

8.1 The exhaust system and silencers may be changed.

8.2 The exhaust may exit on either side of the machine, or under the seat unit. The noise output must always be within the 105db limit, including post-race controls.

9.0 Spark Plugs

9.1 Any make and type of spark plug may be used.

10.0 Oils and Fluids

10.1 Any type of lubrication, brake or suspension fluid may be used.

11.0 Safety Wiring

11.1 All drain plugs, external oil filters and bolts that enter any oil cavity must be safety wired. Engine protection covers must be safety wired.

12.0 Starter / Generators

12.1 Must remain entirely as homologated. Starting devices and electrical generators must operate normally, i.e., the mechanical and electrical connections must be maintained. The generator must charge the battery as normal during the race and at post-race control with respect to current and voltage. The engine starting must operate normally at pre- and post-race scrutineering.

13.0 Air filters

13.1 The entire air intake system must be as homologated & fully assembled in the correct manor, including air filter element.

13.2 Pattern air filters maybe used provided they are a direct replacement for the original item and offer no technical advantage. No cutting, shaping or other alterations to filters is permitted.

13.3 Performance air filters such as K & N Filters are permitted.

14.0 Fuelling devices

14.1 Any aftermarket fuelling devices are permitted e.g. Dynojet, PowerTronic, etc.

15.0 Brakes

15.1 The choice of brake pads is free

15.2 Brake callipers must remain standard.

15.3 Brake hoses may be changed.

15.4 Original equipment master cylinders must be used.

15.5 Aftermarket master cylinders are not permitted.

15.6 Original discs, solid replacement items & floating type aftermarket discs, to the homologated sizes, may be used (this includes Wave type discs in the standard size).

15.7 Dust seals may be removed.

16.0 Throttle

16.1 Throttle control must be self-closing.

16.2 Quick action throttles, both complete systems and modifications to the original assembly are permitted.

17.0 Breathers

17.1 All motorcycles must have a closed breather system. No direct atmospheric emission is permitted.

18.0 Number Plates

18.1 Must conform to ACU regulations.

18.2 Race Numbers must be clearly displayed to the front and both sides of the machine as per ACU specifications.

18.3 All number plates will have a Yellow background with Black numbers.

19.0 Kill Switch

19.1 Motorcycles must be equipped with a functional ignition kill switch or button mounted on either the right- or left-hand side of the handlebars (within reach of the hand while on the hand grips) that is capable of killing the ignition to fully stop a running engine.

20.0 Footrests / Foot Controls

20.1 On original footrests the rear pillion brackets must be removed.

20.2 On all makes and models race style rear sets may be fitted.

20.3 Standard or race shift linkages may be utilised.

20.4 Quick shifters of any type are permitted.

21.0 Wiring Harness

21.1 Original equipment wiring harness may be modified or replaced.

21.2 Data acquisition or non-standard functions may be included in the replacement harness.

21.3 For neatness & safety redundant & excess wiring should be secured in such away it causes no restriction to machine function (i.e., fork/yoke movement and steering).

22.0 Cooling System

22.1 Must remain as homologated except the thermostat may be removed.

22.2 Only water is to be used in the cooling system (no anti-freeze is permitted as per ACU handbook).

22.3 The cooling fan may be removed complete with electrical connections.

23.0 Engine

23.1 Rebores – to allow for wear, rebores will be permitted, but only to the maximum of the manufacturer's recommended rebore sizes.

23.2 Compression ratio – cylinder head joint faces may be machined – the external appearance of the engine must remain unaltered. Where originally specified, a solid head gasket must be retained.

23.3 An oil containment tray to ACU regulations must be securely fitted under the engine. Items designed for racing are strongly recommended and are available from several bodywork suppliers.

24.0 Final Drive

24.1 Sprockets may be changed from standard to aftermarket replacements. Any final drive gear ratio may be used.

25.0 Speedo/Rev Counter

25.1 The original speedo and rev counter assembly can be removed, retained or modified.

25.2 The use of aftermarket rev counters and shift lights is permitted.

25.3 The fitment of a rev counter is recommended to aid with noise testing at circuits. Having no rev counter fitted may result in riders being turned away from noise testing and refused permission to take part in practice and/or racing.

26.0 Handlebars

26.1 Both standard and suitable aftermarket handlebars may be used e.g. clip on, Renthal, etc.

26.2 Bar ends must be fitted to the handlebars.

27.0 Chain Protector

27.1 A shark fin type chain guard must be fitted as per the ACU regulations to the underside of the swingarm on the drive chain side of the machine.

28.0 Wheels

28.1 Wheels must remain as standard and with original rim sizes.

28.2 Either drum or disc brake rear wheels from the original models may be used.

28.3 Captive spacers may be utilised to assist wheel changes. Changes requiring alternate bearing sizes are permitted.

28.4 Spindle (ends only) may be modified to prevent damage, retaining original materials.

29.0 Items That Must Be removed

Side and centre stand, Rear view mirrors, Traffic indicators, Front Lights, Rear Lights, Light fittings and left-hand switch gear, Horn, Registration plate support, Pillion support bars, Stand handles, Internal gear of the mileage indicator (where applicable)

30.0 Presentation

30.1 The organisers reserve the right to refuse any machine admission to the start if, on arrival at the technical inspection it is not in a presentable condition.

30.2 Machines should be maintained to a high standard and checked regularly before, during and after meetings by competitors to ensure continued compliance.

31.0 Parc Ferme /Disputes/Challenges

This is covered in the ACU handbook and minor queries should be directed through the riders' representatives. Check ACU Handbook for correct procedures.

32.0 General

32.1 If there are any queries relating to these regulations contact MERS UK General Secretary.