250 Four Stroke Road Race (250 4 T)
Technical Regulations

Annex B

Claiming rule – Parts

250 Four Stroke Road Race
Technical Regulations

RR09 2 Discipline Specifications 250-4T

The class is open to racing bikes using rolling chassis prototypes and engine stock-of products and homologated by UEM with the following main characteristics:

Water-cooled, Single cylinder 4-stroke engine with a minimum capacity of 200 cc and a maximum of 250 cc and maximum 6 gears.

Amendments to the technical regulations may be made at any time in order to ensure a fairer competition. These amendments come into force after an approval of the UEM/RRC.

RR09.2.1 Minimum Weights

The minimum weight value is 90 kg.

The minimum weight of a motorcycle is defined as the total weight of the empty motorcycle (with an empty fuel tank but with engine oil and other liquids at optimal level). The result is rounded off to the nearest higher digit.

In the final inspection at the end of the race, the checked machines will be weighed in the condition as they are. Nothing may be added to the machine. This includes water, oil and fuel.

At any time during the event, the weight of the whole machine may not be less than the minimum weight with a tolerance of 1 kg**.**

The use of ballast is allowed to stay over the minimum weight limit and may be required due to the handicap system. The use of ballast must be declared to the Technical Stewards at the preliminary checks.
The ballast must be made from solid metallic piece/s, firmly and securely connected, either through an adapter or directly to the main frame or engine. For example with minimum 2 steel bolts (min. 8 mm diameter, 8.8 grade or over).

RR09.2.2 Use of Materials

The use of titanium in the construction either of the engine (if not originally installed in the homologated unit) or of the rolling chassis is forbidden. For wheel spindles, the use of light alloys is also forbidden.

RR09.2.3 Number Plate Colours

The background colours and figures for 250-4T are exclusively a red background with white numbers.

The sizes for all the front numbers are:	Minimum height	160 mm
	Minimum width	80 mm
	Minimum stroke	25 mm
The sizes for all the side numbers are:	Minimum height	120 mm
	Minimum width	60 mm
	Minimum stroke	25 mm

The allocated place for the number (& plate) must be affixed on the machine as follows:
- one on the front, either in the centre of the fairing or slightly off to one side;
- one on each side of the motorcycle or one across the top of the rear seat section with the top of the number to the rider.

In case of a dispute concerning the legibility of numbers, the decision of the Technical Director will be final.

RR09.2.4 Fuel

All motorcycle engines must function on normal unleaded fuel with a maximum lead content of 0.005 g/l (unleaded) and a maximum MON of 90 (see Art. 02.10 of FIM Technical rules for full specification).

RR09.2.5 Coolants

The only liquid engine coolants permitted, other than lubricating oil, shall be water or water mixed with ethyl alcohol.

RR09.3 ROLLING CHASSIS

RR09.3.1 Frame Specifications

The Championship is for motorcycles, i.e. vehicles with 2 wheels that make one track propelled by an internal combustion engine, controlled exclusively by one rider.

Providing that the following regulations are complied with, the constructors are free to be innovative with regards to design, materials and overall construction of the rolling chassis.

RR09.3.2 Frame Body and Rear sub frame

The frame and rear sub frame must be made in steel or aluminium alloy. No other materials are allowed. The sides of the frame-body may be covered by a protective part made of plastic or composite material. These protectors must fit to the form of the frame.

RR09.3.3 Front Forks

Computer controlled front forks are not permitted**.**

The steering damper cannot act as a steering lock limiting device.

The front fork is subject to “claiming rule” (see annex B)

RR09.3.4 Rear Fork

Swing arm must be made in steel or aluminium alloy.
For safety reasons it is compulsory to use a chain guard made with rigid plastic material fitted in such a way as to prevent trapping between the lower chain run and the final drive sprocket at the rear wheel.

RR09.3.5 Rear Suspension Unit

Computer controlled suspension units are not permitted**.**

The shock absorber is subject to “claiming rule” (see annex B)

RR09.3.6 Wheels

Only aluminum alloy wheels are allowed.

Compulsory dimensions: front 2.50 – 17”; rear 3.50 – 17”.

RR09.3.7 Brakes

Only ferrous materials are allowed for brake discs (central hub can be made in aluminium alloy)

Only a single disc and a single caliper are allowed on each wheel.

No racing type calipers are allowed (main parts cannot be obtained by machining)

RR09.3.8 Tyres

Slick tyres are allowed

Maximum number of tires is: 3 front – 3 rear per event.

RR09.3.9 Foot Rests/Foot Controls

Footrests may be of a folding type but in this case they must be fitted with a device which automatically returns them to the normal position, and an integral protection is to be provided at the end of the footrests which must have at least 8 mm solid spherical radius (see diagrams A & C).

Non folding 'metallic' footrests must have an end (plug) which is permanently fixed, made of plastic, Teflon® or an equivalent type material (min. diameter 16mm).

RR09.3.10 Handle Bars and Hand Controls

Handlebars must have a total width of not less than 450 mm and their ends must be solid or rubber covered. The width of the handlebar is defined as the width measured between the outside of the handlebar grips or throttle twistgrips.

There must be at least 15 degrees of movement of the steering each side of the centre line.

Levers must not be longer than 200 mm measured from the pivot point.

Throttle twist grips must close automatically when released.

Switches can be changed but electric starter switch and engine stop switch must be located on the handle bars.

RR09.3.11 Fairing/Body Work

a) The use of carbon fibre or carbon composite materials is not allowed. Local specific reinforcements in kevlar or kevlar-carbon are authorized around holes and other stressed points.

b) The maximum width of bodywork must not exceed 600 mm. The width of the seat or anything to its rear shall not be more than 450 mm (exhaust pipes included).

c) Wind screen edge and the edges of all exposed parts of the streamlining must be rounded.

d) Bodywork must not extend beyond a line drawn vertically at the leading edge of the front tyre and a line drawn vertically at the rearward edge of the rear tyre. The suspension should be fully extended when the measurement is taken.

e) The combination instrument/fairing brackets is free, but the use of titanium and carbon (or similar composite materials) is forbidden.

f) When viewed from the side, it must be possible to see the rider, seated in a normal position with the exception of the forearms. No transparent material may be used to circumvent the above rule.

h) The lower fairing has to be constructed to hold, in case of an engine breakdown, at least half of

g) the total oil and engine coolant capacity used in the engine (minimum 5 litres). The lower edge

g) of any opening in the fairing must be at least 50 mm above the bottom of the fairing.

h) The lower fairing must incorporate at least a hole of 25 mm (minimum) diameter in the bottom front lower area. This hole must remain closed in dry conditions and must be only opened in wet race conditions as declared by the Race Director/Clerk of the Course.

i) Wings are not allowed, also if they are an integral part of the fairing or seat. No moving

aerodynamic devices are allowed.

RR09.3.12 Fuel Tank

Fuel tank filler cap must be leak proof and have a positive closing device.

Fuel tank must be manufactured only with aluminium alloy or steel material.

All fuel tanks must be completely filled with fire retardant material (open-celled mesh)

Fuel tanks with 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.

RR09.3.13 Spindles

The use of titanium or carbon fibers (and similar products like aramid, nano composites, etc.) in the construction of the front fork, handle bars, the swinging arm spindles, wheel spindles is forbidden. For wheel spindles, the use of aluminium alloys is also forbidden.

RR09.4 ENGINE AND ITS ACCESSORIES

RR09.4.1 Engine Specifications

Engines are stock products. Only engines belonging to the “UEM list of approved engines for 250-4T Road Racing class” can be used. In this list UEM will put in, engines originally installed on production motorcycle sold to the public.
The engine must have the following trade property :
Produced in at least 50 complete and working units;
If sold separately to the public a maximum price of 4000 € inclusive of carburettor but excluded the airbox and exhaust pipe

EVERYTHING THAT IS NOT AUTHORISED AND PRESCRIBED IN THIS “ENGINE AND ITS ACCESSORIES” SET OF RULE IS STRICTLY FORBIDDEN

RR09.4.2 Air Box

The air box construction is free but it must be compulsory fitted on the machine.

All motorcycles must have a closed breather system. The oil breather line must be connected and discharge in the air box.

RR09.4.3 Fuel Injection System, Carburettors and CDI

The use of aftermarket throttle bodies, fuel injectors and carburettors is free, but the maximum equivalent diameter is 44 mm. **(**cross section area = 1520mm2)

Air funnel is free.

Fuel pump and fuel pressure regulator are free..

The central unit (ECU) model is defined by UEM and will be sold to the public at a fixed price by the after market supplier chosen by UEM.

The UEM ECU will allow all the engines to run at maximum 22 meters per second.

RR09.4.4 Fuel Supply

Fuel lines may be replaced. Quick connectors or dry break quick connectors may be used.

Fuel vent lines may be replaced.

Fuel filters may be added.

RR09.4.5 Cylinder Head

Cylinder head ducts can be machined, but is not allowed to add any kind of material to the original unit.

The cylinder head gasket can be changed.

The valves, valve seats, guides, tappets, oil seals, shims, cotter valve, spring base and retainers must be standard, springs may be changed

RR09.4.6 Camshaft

Camshaft is free.

RR09.4.7 Cam Sprockets

Cam sprockets are free.

RR09.4.8 Crankshaft

No modifications are allowed but polishing, lightening and balancing is free.

RR09.4.9 Oil Pumps and Oil Lines

Oil pumps and oil lines are free.

RR09.4.10 Connecting Rods

Connecting rod must be standard, but polishing is allowed

RR09.4.11 Pistons

Aftermarket products can be used but bore must stay standard as homologated. Minimum weight: 160 g.

RR09.4.12 Piston Ring, Pins and Clips

Piston rings, pins and clips are free..

RR09.4.13 Cylinders

No modifications are allowed but machining for adjusting the squish height is allowed.

RR09.4.14 Crankcase and all other Engine Cases (i.e. ignition case, clutch case.)

No modifications are allowed to the crankcases**.**

Strengthened engine side covers may be installed but must be no lighter in weight than the original components.

All engine cases containing oil, and which could be in contact with the ground during a crash, must be protected by a second cover made of metallic or composite material (type carbon or Kevlar). Aluminium or steel plates or bars are also permitted. All the devices must be designed to be resistant against shocks and fixed properly and securely.

RR09.4.15 Transmission/Gearbox

All transmission gears must be standard, as shafts, drums, selector fork. Only 1 supplementary set of racing gear ratios can be used during the season . Each entrant must declare the racing ratios set before his first race in the Championship

The number of gears must remain as homologated.

Primary ratios are free.

Additions to the gearbox or selector mechanism, such as quick shift systems, are allowed.

Countershaft sprocket, rear wheel sprocket, chain pitch and size can be changed.

The sprocket cover can be modified but may not be eliminated.

RR09.4.16 Clutch

Aftermarket or modified clutches are permitted.

Clutch system must be wet, method of operation (cable/hydraulic) must remain as originally produced by the engine manufacturer.

Back torque limiter is permitted.

RR09.4.17 Starter

Starter system must be in place on the engine (mechanical or electric). The electric starter (if any in the original engine) must operate normally and always be able to start the engine during the event. The engine must start and turn on its own power when the electric starter has stopped its procedure.

RR09.4.18 Exhaust System

Exhaust pipes and silencers may be changed or modified.

The noise limit is 102 dB/A with a tolerance of + 3dB/A at the final verification.

The location of the silencer is free.

Wrapping of the exhaust system is not allowed.

Titanium and carbon exhaust and silencers are allowed.

For safety reasons the exposed edge(s) of the exhaust pipe(s) outlet must be rounded to avoid any sharp edges.

RR09.5 GENERAL

RR09.5.1 Replace or remove

The following items may be altered or replaced from those fitted to the homologated engine:

- Aluminium fasteners may only be used in non-structural locations.

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

- Any type of spark plug.

- Gaskets and gasket materials.

RR09.5.2 General safety instruction

Motorcycles must be equipped with a working ignition kill switch or button mounted on a 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.

No direct atmospheric emission is permitted. All motorcycles must have a closed breather system. The oil breather line must be connected and discharge in the air box.

RR09.5.3 Homologation

All engine models must be homologated. A technical document with dimensions, weights, drawings, parts list and costs, photos must be submitted by the manufacturer or his representative and edited by UEM and will be valid for 1 racing season minimum.

RR09.5.4 Claiming Rule System

The parts of the machines in the list of " Demandable parts" of the first three top riders in each UEM Championship race can be requested by other entrants in the same race.
No rider can refuse to sell requested parts unless he was asked for same part again in the previous three races.
The requested parts must be sold at the price fixed by UEM + 100 €.

Applying rider must introduce his written request to the Technical Chief Steward before the final opening of the park fermè after the end of the race with a cheque or cash money. If the seller refuse to agree he will be disqualified by Race Direction.
The Race Direction must supervise the deal. The part must be disassembled and handed over by the seller in 2 hours from the opening time of the park fermè.
For any reason the purchaser can refuse to buy the requested part after the deal was countersigned by Race Direction. If the purchaser gives up the part after letter and money were given to the Technical Chief Steward the money will be confiscated by UEM and 100 € will be allocated to the missed seller.

UEM list of approved engines for 250 4T class
(draft)

Manufacturers	Model	Bore	Stroke	Capacity
BETA (KTM)	RR 250 4T	75.00	56.50	249.61
HONDA	CRF 250 R	78.00	52.20	249.43
	CRE F 250 X INIEZ	78.00	52.20	249.43
	CRF 250 X	78.00	52.20	249.43
HUSQVARNA	TE 250	76.00	55.00	249.51
KAWASAKI	KXE 250 F	77.00	53.60	249.60
KTM	250 EXC F	76.00	55.00	249.51
SUZUKI	RMZ250 E	77.00	53.60	249.60
TM	EN 250 F ES	77.00	53.60	249.60
YAMAHA	WR250 F	77.00	53.60	249.60
SHERCO				

GAS GAS

Annex B

Claiming rule – Parts

Front fork (complete)	1700 € + 100 €
Shock absorber (complete)	750 € + 100 €