



FIM ASIA ROAD RACING
CHAMPIONSHIP 2007

**MACHINE SPECIFICATION FOR 115cc (UNDERBONE)
(4-stroke horizontal layout engine)**

1. CLASSES

Classes	Engine Capacity	Stroke	Max. no. of cylinder	Max. Number of Gear
115CC	Up to 115CC	4	1	6

2. GENERAL SPECIFICATION

- 2.1 Motorcycle for SS Class Underbone must correspond to motorcycles of current production and must be homologated by the respective Asian FMN.
- 2.2 Motorcycles must conform to all regulations for Underbone class and must be of half front fork type only. (Full fork like sport model / separate handlebar are strictly not allowed)
- 2.3 The maximum width of rims must be as follows :-

Class	Front	Rear
115cc	2.5 inch	3.0 inch

- 2.4 Cast alloy wheels are allowed with the minimum gross weight for :
Front: 6.0kg
Rear: 6.5kg
(Gross weight includes the disc brake and brake hub for rear tyre with drum brakes, tyre, rim and hub, excluding the sprocket and sprocket hub)

2.5 The following items MUST NOT BE altered

- 2.5.1 Type of engine, number of cylinder, piston stroke and the number valve.
- 2.5.2 The material and casting of cylinder, cylinder head, crankcase and gear box.
- 2.5.3 The materials of the internal parts of the engines.
- 2.5.4 The materials, casting and shape of crankcase cover.
- 2.5.5 The materials, dimensions and shapes of crankshaft assembly.
- 2.5.6 Fuel tank (excluding inlet opening and fuel cork)
- 2.5.7 Primary gear ratio & number of gears.
- 2.5.8 Frame body, rear swing arm & rear suspension system
- 2.5.9 Frame body must remain as originally produced by the manufacturer
- 2.5.10 Front Fork and under bracket complete.



2.6 The following items MAY BE ALTERED, but must conform to the general specification.

(This is for clarification only. Other parts not listed in Art. 2.5 & 2.6 can be altered or replaced. Change of specification means modification, changes or removal of the parts.)

- 2.6.1 Change of compression ratio is allowed.
- 2.6.2 Setting of carburetor, attachment or size change of air funnel.
- 2.6.3 Inlet opening of fuel tank for fuel charge may be modified but cannot be relocated.
- 2.6.4 Change of fuel pipe and fuel cork.
- 2.6.5 Change of exhaust pipe and muffler, but must have silencer.
- 2.6.6 Material of clutch discs and specifications of spring. Hand clutch is allowed.
- 2.6.7 Gear ratios are free.
- 2.6.8 Starting device and parts relative to this device may be removed.
- 2.6.9 Modification or removal of air cleaner box, wire harness and control wires.
- 2.6.10 Removal of speedometer (including meter gearbox and cable.)
- 2.6.11 Removal of drive chain case and cover. Change of drive chain is allowed.
- 2.6.12 Change of final gear ratio is allowed.
- 2.6.13 Attachment of bead stopper and balance weight to tyre.
- 2.6.14 Modification and change of rear brake part is allowed.
- 2.6.15 Frame body may be strengthened.
- 2.6.16 Modification and change to brackets and pedals including footrest.
- 2.6.17 Front suspension unit must remain as originally produced by the manufacturer. However, the following internal parts of the fork can be modified: Shims, hydraulic piston, oil passages, springs and spacers.
- 2.6.18 Attachment of stabilizer to strengthen or reinforcing rear swing arm is allowed.
- 2.6.19 Removal of dust seals.
- 2.6.20 Rear suspension unit must remain as originally produced by the manufacturer. However rear suspension unit is free. The rear linkage must remain as originally produced by the manufacturer.
- 2.6.21 Handle bars, clutch and front brake lever may be changed by an after market copy. Clutch springs may be changed.
- 2.6.22 Steering dampers may be fitted. They must not act in any way as a steering lock limiting device.
- 2.6.23 Materials of streamlining and material of seat cowling. (However, expensive materials such as carbon fibre and kevlar are not allowed).
- 2.6.24 Removal of rear mudguard and side cover. Front mudguard may be cut but not less than 6 inches from the front fork on original part.
- 2.6.25 All lubricants are free
- 2.6.26 Adjusting and polishing any parts are allowed.
Adjusting is defined as: "To select each part or assembly complete with-in the limit of single or total tolerance" (i.e. that of valve clearance, ignition timing etc.)
- 2.6.27 Cutting unnecessary stays is allowed (including part of seat-rail)
- 2.6.28 Flywheel and ignition is free.



- 2.6.29 Front disc brake may be added. The front fork must be standard but may be modified to incorporate the disc. Change of front forks is permitted only for same makes of underbone for the purpose of incorporating the front disc.
- 2.6.30 Camshaft, timing chain, and cam sprockets and connecting rod may be modified.
- 2.6.31 Leg shield may be shaved at the edge from the standard size only for cornering purposes
- 2.6.32 Cylinder head must remain original visually but can be modified
- 2.6.33 Maximum permitted valve size is 29mm
- 2.6.34 Front mudguard may be cut but not less than 6 inches from the front cowling
- 2.6.35 Carbon fibre silencer sleeves are permitted

2.7 **Weight**

The minimum half dry weight without fuel for the rider's with full gears and bike is **135kgs**.

Motorcycle without fuel	75kgs
Rider's Minimum Weight with full gear (Racing Suit, Gloves, Helmet and Boots etc.)	60kgs

Please note that if the rider's minimum weight with full gears is less than 60kgs, a penalty of maximum of 5kgs must be added onto the motorcycle to equal 135kg. However no additional weight will be added should the total weight still be less than 135kg after the penalty is imposed. All ballast added to the bike must be securely fitted. Sprocket will not be allowed to be use as weight ballast unless permanently welded on the bike.

* Half dry weight means: Motorcycle ready to race without fuel. In case of separate lubricant oil, it's regarded as fuel.

2.8 **The following items MUST BE ALTERED if the homologated motorcycle does not comply.**

- 2.8.1 Motorcycles must be equipped with a functional ignition kill switch. (with-in reach of hands while hand grips).
- 2.8.2 Removal of safety equipment
i.e. stands, rear view mirror, auxiliary steps and turn signals.
- 2.8.3 All drain plugs must be wired. All parts of external oil pressure line must be safety wired.
- 2.8.4 Maximum size of carburetor is 24mm. Minimum cross sectional area of intake mixture air passage. Jet needle, butterfly shaft, valves. Throttle valve shapes and its sectioned area is not concerned.
- 2.8.5 All breather hose must have a catch tank located in as easily accessible position and which must be emptied before the start of each race. Catch tank must measure at least 250cc.



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2.9 The following will be prohibited in any case.

- 2.9.1 Use of special materials such as Magnesium light alloy, titanium alloy, reinforced carbon fibre, etc. when modifying or changing parts.
- 2.9.2 Light alloy in the construction of Front and rear wheel spindle (shaft).
- 2.9.3 Tyres are free. slick, hand cut or rain tyres are not allowed.
- 2.9.4 Any type of oil cooler
- 2.9.5 Single ring piston and racing piston

2.10 Noise Control

Exhaust must have silencer. The noise limit will be 103db/A. There will be 3db/A tolerance.

2.11 Change of Parts

Exchange of single parts or an assembly of motorcycle with those of the same model bearing the same type of frame number and engine number is allowed.