

## **SUPERSTOCK 600 - Technical Regulations**

### **0.1 Discipline Specifications Superstock 600**

To be admitted in the 2005 UEM Superstock 600 European Championship motorcycles require an FGSPORT homologation based in principle on FIM Stocksport technical rules. All motorcycles must comply in every respect with all the requirements for Road Racing as specified in FIM Road Racing Technical Rules

The appearance from both front, rear and the profile of Superstock 600 motorcycles must (except when otherwise stated) conform to the homologated shape (as originally produced by the manufacturer).

FGSPORT in agreement with Manufacturers chooses the eligible motorcycles. All motorcycles must be 4 stroke and sold to the public in Europe for road use.

Minimum capacity: 401 cc.

Maximum capacity: 600 cc. 4 cylinders

750 cc. 2 cylinders

FGSPORT can adopt a PERFORMANCE INDEX calculated to balance the performance of different models of motorcycles (capacity, number of cylinders, weight and racing attitude). The competitor is responsible to adopt and maintain in perfect function the PERFORMANCE INDEX system during the whole event.

All items, if not expressly mentioned in the following set of rules, must remain as originally produced by the manufacturer.

The competitor is responsible for producing specifications and other material (as the service or owner's manual) to prove its legality. The legality can be proved also in comparison to similar OEM parts. The FGSPORT Chief Technical Inspector is the only person responsible for the decision regarding the technical legality of any Superstock 600 motorcycle.

### **0.2 Minimum Weights**

The minimum weight value is determined by the dry weight (in kg) minus **12 kg**.

The dry weight of a homologated motorcycle is defined as the total weight of the empty motorcycle as produced by the manufacturer (after removal of fuel, vehicle number plate, tools and main stand when fitted). The result is rounded off to the nearest digit.

In the final inspection at the end of the race, 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 has finished the race; nothing can be added to the machine. This includes water, oil, or fuel.

At any time during the practice, the weight of the whole machines (including the tank) must not be less than the minimum weight.

During the 2005 season the minimum weights can be reviewed by the FGSPORT Technical Stewards, according with the previous sporting results.

### **0.3 Number Plate Colors**

The background colours and figures for Superstock 600 are exclusively a red background with yellow numbers, with the RAL colour table values being 3020 and 1003.

In case of a dispute concerning the legibility of numbers, the decision of the Technical Steward will be final. In case of non conformity of the number sizes, the Technical Director can ask rider to use correct numbers delivered by FGsport

The sizes for all the front numbers are:	Minimum height	120 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 number for the rider must appear 3 times on the machine. The number on the front must be affixed only once, either in the center of the fairing or to the side where the official timing services for the event is located. The 2 side numbers must be located on the left and the right sides of the seat or the fairing.

### **0.4 Fuel**

All Superstock 600 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. 01.63 of FIM Technical rules for full specification)

### **1.1 Machine Specifications**

All items not mentioned in the following articles must remain as originally produced by the manufacturer for the homologated machine.

#### **1.2 Frame Body and Rear sub frame**

Frame must remain as originally produced by the manufacturer for the homologated machine. The sides of the frame-body may be covered by a protective part made of plastic or composite material. These protectors must fit the form of the frame.

Nothing can be added by welding or removed by machining from the frame body.

All motorcycles must display the manufacturers' vehicle identification number on the frame body (chassis number).

Engine mounting brackets or plates must remain as originally produced by the manufacturer for the homologated machine.

Rear sub frame must remain as originally produced by the manufacturer for the homologated machine. Protrusive, not stressed brackets can be removed only on request of the Chief Technical Inspector if he supposes they can be dangerous.

Additional seat brackets may be added but none may be removed. Bolt-on accessories to the rear sub-frame may be removed.

The paint scheme is not restricted but polishing the frame body or sub frame is not allowed.

### **1.3 Front Forks**

Forks structure (spindle, stanchions, bridges, stem, etc..) must remain as originally produced by the manufacturer for the homologated machine.

The following standard original internal parts of the forks can be modified or replaced:

- 1) shims
- 2) hydraulic piston
- 3) oil passages
- 4) springs
- 5) spacers

But the external view of the fork must remain as homologated ( upper cap included)  
Any quality and quantity of oil can be used in the front forks.

The height and position of the front fork in relation to the fork crowns is free.  
The upper and lower fork clamps (triple clamp, fork bridges) must remain as originally produced by the manufacturer on the homologated machine.

Steering damper may be added or replaced with an after-market damper.

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

### **1.4 Rear Fork (Swing arm)**

Every part of the rear fork must remain as originally produced by the manufacturer for the homologated machine (including rear fork pivot bolt and rear axle adjuster).

Rear wheel stand brackets may be added to the rear fork Brackets must have rounded edges (with a mushroom shape). Fastening screws must be recessed.

For safety reasons it is compulsory to use a chain guard made with plastic material to void peril of slashes, fitted in such a way as to prevent trapping between the lower chain run and the final drive sprocket at the rear wheel.

### **1.5 Rear Suspension Unit**

Rear suspension unit (shock absorber and its spring) is free, but the original attachments to the frame and rear fork (swing arm) must be used and the rear suspension linkage must remain as originally produced by the manufacturer for the homologated machine.

### **1.6 Wheels**

Wheels must remain as originally produced by the manufacturer at the time of sale into the dealer/distributor network for the homologated machine.

The speedometer drive may be removed and replaced with a spacer.

No modification of the wheel-axles or any fixing and mounting points for front and rear brake caliper are authorized. Spacers can be modified. Modifications to keep spacers in place are permitted.

If the original design includes a cushion drive for the rear wheel, it must remain as originally produced for the homologated machine.

### **1.7 Brakes**

Brake discs must remain as originally produced by the manufacturer for the homologated machine. Front discs can be floating, using original rotors and mountings.

Front and rear brake caliper (mount, carrier, hanger) must remain as originally produced by the manufacturer for the homologated machine.

Front and rear master cylinder must remain as originally produced by the manufacturer for the homologated machine.

Front and rear hydraulic brake lines may be changed but the fluid tank must remain standard. The split of the front brake lines for both front brake calipers must be made above the lower fork bridge (lower triple clamp).

Front and rear brake pads may be changed. Brake pad locking pins may be modified to quick change type.

Additional air scoops or ducts are not allowed.

### **1.8 Tyres**

The PIRELLI tyre manufacturer was chosen by FG SPORT for the 2005 UEM Superstock 600 European Championship to supply tyres to all the entrants, for the duration of the season.

The rider can use a maximum of 2 front and 2 rear dry-weather tyres to each entrant for each event supplied by Pirelli.

The two sets of tyres will be sold at a fixed price. The price includes delivery, service and assistance on site.

Wet weather tyres must be provided by Pirelli, but their number is free.

Wet weather tyres may only be used after the race or practice is declared "WET" by the Race Director.

For each event the dry-weather tyres must be made of the same quality of compound and shall be strictly identical.

All tyres must be used by entrants as supplied by Pirelli. Any modification or treatment (cutting, grooving, etc.) is forbidden. This is applied to both wet and dry weather tyres.

Dry-weather tyres shall be marked by the manufacturer. Their distribution to all the competitors must be carried out by the supplier under the supervision of the Technical Inspector on thursday before the event, from 3,30 p.m. to 7 p.m. In extraordinary situations the Technical Inspector may alter this program.

On the left side of each tyre appropriate identification will be applied.

The use of dry – weather tyres without appropriate identification is strictly forbidden.

During all practice sessions and the race, no unmarked dry-weather tyres are allowed in the pits.

The use of tyre warmers is allowed.

### **1.9 Foot Rest/Foot Controls**

Foot rest may be relocated but brackets must be mounted to the frame at the original mounting points.

Foot controls linkage may be modified. The original mounting points must remain. Their two original points of fixture (on foot controls and on the shift shaft) must be maintained.

Foot rests may be rigidly mounted or a folding type which must incorporate a device to return them to the normal position.

The end of the foot rest must have at least an 8 mm solid spherical radius. Non-folding steel footrests must have an end (plug) which is permanently fixed, made of plastic, Teflon or an equivalent type material (minimum radius 8mm).

## **1.10 Handle Bars and Hand Controls**

Handle bars may be replaced (does not include brake master cylinder).

Handle bars and hand controls may be relocated.

Clutch and brake lever may be exchanged by an after-market copy.

Homologated switches must be located on the handle bars  
(See Art. 01.33)

## **1.11 Fairing/Body Work**

- a) Fairing, front mudguards and body work must appear to be as originally produced by the manufacturer for the homologated machine.
- b) Fairing, front mudguards and body work may be replaced with exact cosmetic duplicates of the original parts. The material may be changed. The use of carbon fiber, kevlar or carbon composite materials is not allowed.
- c) Overall size and dimensions must be the same as the original parts.
- d) Windscreen may be replaced with an exact cosmetic duplicate and must be made of transparent material. Upper edge height tolerance: +/- 15 mm..
- e) Motorcycles that were not originally equipped with streamlining are not allowed to add streamlining in any form, with the exception of a lower fairing device, as described in (h). This device cannot exceed above a line drawn horizontally from axle to axle.
- f) The original combination of instrument/fairing brackets may be replaced. All other fairing brackets may be altered or replaced.
- g) The original air ducts running between the fairing and the air box must remain as homologated, as the front meshes
- h) 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 liters). The lower edge of openings in the fairing must be positioned at least 50mm above the bottom of the fairing.
- i) The lower fairing must incorporate a maximum of two holes of 25mm. These holes must remain closed in dry conditions and must only be opened in wet race conditions as declared by the Clerk of the Course.
- j) Front mudguard may be spaced upward for increased tyre clearance
- k) Rear mudguard fixed on the swing arm that incorporate the chain guard can be modified to accommodate larger diameter rear sprockets.
- l) All exposed edges must be rounded.

### **1.12 Fuel Tank**

Fuel tank filler cap must be standard.

Fuel tank petcock must remain as originally produced by the manufacturer for the homologated machine.

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.

### **1.13 Seat**

Seat, seat base and associated bodywork may be replaced with parts of similar appearance as originally produced by the manufacturer for the homologated machine.

The top portion of the rear body work around the seat may be modified to a solo seat.

The appearance from both front rear and profile must conform to the homologated shape.

All exposed edges must be rounded.

### **1.14 Wiring Harness**

The wiring harness and connectors must be as originally produced by the manufacturer for the homologated machine.

Cutting of the wiring harness is not allowed, but to disconnect connectors is allowed.

### **1.15 Battery**

The size, type and position of battery must be as originally produced by the manufacturer for the homologated machine.

### **1.16 Radiator and oil coolers**

Additional radiators and/or oil coolers are not allowed

The radiators tubes to and from the engine can be changed

Electric fan can be removed.

### **1.17 Air Box**

The air box must remain as originally produced by the manufacturer on the homologated machine, but the air box drains must be sealed.

The air filter element may be modified or replaced.

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

### **1.18 Carburetors**

No modifications are allowed.

Carburetor jets, slide spring and needles may be replaced.

The slide metering holes may be changed.

Electronic or mechanical cold start devices must remain installed but may be deactivated.

Bell mouths must be as originally produced by the manufacturer for the homologated machine.

### **1.19 Fuel Injection System**

No modifications are allowed.

The injectors must be standard units as on the homologated motorcycle.

Bell mouths must be as originally produced by the manufacturer for the homologated machine.

Fuel pump and fuel pressure regulator must remain as homologated.

Central unit must stay as homologated and inner software can be changed.

A special device (from now named “filter”) could be added to all bikes on request of FGSport. This filter will be suited for all the models to consider the differences in the exhaust performances with the aftermarket models. The filter performances will be designed at the beginning of the season under the supervision of FGSport. The Technical Director can ask whichever rider at any time during the event to change his filter with another in the Technical Director disponibility.

### **1.20 Fuel Supply**

Fuel lines may be replaced but fuel petcock must remain as originally produced by the manufacturer.

Quick connectors or dry break quick connectors may be used.

Fuel vent lines may be replaced.

Fuel filters may be added.

### **1.21 Cylinder Head**

No modifications are allowed.

The cylinder head gasket can be changed.

The valves, valve seats, guides, springs and retainers must be as originally produced by the manufacturer for the homologated machine.

Valve spring shims are not allowed.

### **1.22 Camshaft**

No modifications are allowed.

### **1.23 Cam Sprockets**

No modifications are allowed.

### **1.24 Crankshaft**

No modifications are allowed (including polishing and lightening)

### **1.25 Oil Pumps and Oil Lines**

Only oil lines may be modified or replaced. Oil lines containing positive pressure, if replaced, must be of metal reinforced construction with swaged or threaded connectors.

### **1.26 Connecting Rods**

No modifications are allowed (including polishing and lightening).

### **1.27 Pistons**

No modifications are allowed (including polishing and lightening).

### **1.28 Piston Rings**

No modifications are allowed.

### **1.29 Piston Pins and Clips**

No modifications are allowed.

### **1.30 Cylinders**

No modifications are allowed.

### **1.31 Crankcase and all other Engine Cases (i.e. ignition case, clutch case.)**

No modifications are allowed.

The crankcase/gearbox casing, ignition, clutch and generator covers may be protected by additional means i.e. protective covers made of stainless steel or carbon Kevlar composites or similar.

Engine case guards in the form of strengthened engine side covers may be installed. These covers must be constructed of the same material and be no lighter in weight than the standard material.

Covers may be modified without any modification to the position and dimensions of the covered parts.

### **1.32 Transmission/Gearbox**

Additions to the gearbox or selector mechanism, such as quick shift systems, are not allowed.

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

The sprocket cover cannot be eliminated.

### **1.33 Clutch**

Only friction and drive discs may be changed, but their number must remain as original.

Clutch springs may be changed.

### **1.34 Ignition/Engine Control System**

Only spark plugs may be replaced.

### **1.35 Generator**

The electric starter must operate normally and always be able to start the engine during the event and until the time limit for protest expires. The engine must start and turn on its own power when the electric starter has stopped its procedure.

### **1.36 Exhaust System**

Exhaust pipes and silencers may be changed or modified.

The noise limit for Superstock 600 machines will be 102 dB/A with a tolerance of + 3dB/A

The location-of the silencer must remain as original.

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

### **1.37 Fasteners**

Standard fasteners may be replaced with fasteners of any material and design, but titanium fasteners may not be used. The strength and design must be equal to or exceed the strength of the standard fastener it is replacing.

Fasteners may be drilled only for safety wire, but intentional weight saving modifications are not allowed.

Fairing/body work fasteners may be changed to a quick disconnect type. Aluminium fasteners may only be used in non-structural locations.

### **1.38 The following items may be altered or replaced from those fitted to the homologated motorcycle.**

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

Any type of spark plug.

Any inner tube (if fitted) or inflation valves may be used.

Wheel balance weights may be discarded, changed or added to.

Gaskets and gasket materials (with the exception of cylinder gaskets)

Painted external surface finishes and decals.

### **1.39 The Following Items May Be Removed**

Instrument and instrument bracket and associated cables.

Horn

Tool box

Tachometer

Speedometer

Radiator fan and wiring.

Chain guard as long as it is not incorporated in the rear fender.

Bolt on accessories on a rear sub frame

#### **1.40 The Following Items Must Be Altered or Removed**

Helmets hooks and luggage carrier hooks

License plate bracket.

Passenger foot rests.

Passenger grab rails.

#### **1.41 General safety instructions**

Motorcycles must be equipped with a functional 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.

Throttle controls must be self closing when not held by the hand.

Safety bars center and side stands must be removed (fixed brackets must remain).

All drain plugs must be wired. External oil filter(s) screws and bolts that enter an oil cavity must be safety wired.

Where breather or overflow pipes are fitted they must discharge via existing outlets. The original closed system must be retained, no direct atmospheric emission is permitted.

Where an oil breather pipe is fitted, the outlet must discharge into a catch tank located in an easily accessible position and which must be emptied before the start of a race.

The minimum size of a catch tank shall be 250cc for gear box breather pipes and 500cc for engine breather pipes.

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

#### **2.1 Additional Equipment**

Additional equipment not on the original homologated motorcycle not may be added. (i.e. data acquisition, computers, recording equipment etc.), with the exception of lap timing system.

Telemetry is not allowed during the whole event, but potenziometers and other sensors can be maintained, if disconnected.

## **APPENDIX A LIST OF HOMOLOGATED MODELS**

### **Model Year 2004**

DUCATI	749 R (H5)
HONDA	CBR 600 RR (PC 37)
KAWASAKI	ZX 600 M (ZX 6 RR)
SUZUKI	GSX R 600 (K 4)
TRIUMPH	DAYTONA 600
YAMAHA	YZF R6

### **Model Year 2005**

*TBA – To be announced*

The bikes which have been homologated without having reached the minimum production number will be allowed to participate in the 2005 UEM Superstock 600 European Championship under the following condition:

If they have not reached the minimum number required by July 1<sup>st</sup> 2005, the bikes could complete the current Championship, but they will not be allowed to participate in the 2006 Championship.

The list of the homologated bikes for the 2005 UEM Superstock 600 European Championship could be modified by FG Sport during the season following a request for an entry from the manufacturers.