FÉDÉRATION INTERNATIONALE
DE MOTOCYCLISME

APPENDICES / *ANNEXES*

Road Racing World Championship Endurance Regulations

Règlements du Championnat du Monde d'Endurance de Courses sur Route

FIM ENDURANCE WORLD CHAMPIONSHIP

2007

Appendices / *Annexes*

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Règlements du Championnat du Monde d'Endurance de Courses sur Route

2007

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Articles amended as from 01.01.2007 are in bold type
Les articles modifiés dès le 01.01.2007 sont en caractères gras

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ÉDITION 2007

2. TECHNICAL REGULATIONS

Amendments to the technical regulations may be made at any time in order to ensure fairer competitions.

If a motorcycle is found not to be in conformity with the technical regulations during or after the practices, the Team will be given a 'stop and go' penalty for the race. Further penalties (such as a fine – a suspension and/or a withdrawal of Championship points) may also be imposed.

If a motorcycle is found not to be in conformity with the technical regulations after a race, the rider will be disqualified. Further penalties (such as a fine – a suspension and/or a withdrawal of Championship points) may also be imposed.

2.1 INTRODUCTION

2.1.1 Motorcycles for the FIM Endurance Road Racing World Championship are based on recent or current production motorcycles and available to the public through the normal commercial channels of the constructor.

2.2 CLASSES

2.2.1 The Sports Production classes will be designated by engine capacity.

2.3 GENERAL ITEMS

2.3.1 Materials

The use of titanium in the construction of the frame, the front forks, the handlebars, the swing arms, the swing arm spindles and the wheel spindles is forbidden. For wheel spindles, the use of light alloys is also forbidden. The use of titanium alloy nuts and bolts is allowed.

Titanium test to be performed on the track: Magnetic test (titanium is not magnetic).

The 3 % nitric acid test (titanium does not react. If metal is steel, the drop will leave a black spot).

Specific mass of titanium alloys 4,5-5, of steel 7,5-8,7 can be ascertained by weighing the part and measuring its volume in a calibrated glass filled by water (intake valve, rocker, connecting rod, etc.)

In case of doubt, the test should take place at a Materials Testing Laboratory.

2.3.3 Handlebars

Exposed handlebar ends must be plugged with a solid material or rubber covered.

The minimum angle of rotation of the handlebar on each side of the centre line or mid position must be of 15° for solo motorcycles.

Whatever the position of the handlebars, the front wheel, tyre and the mudguard must respect the gap with the motorcycle (parts) as written in Table 1.

Solid stops, (other than steering dampers) must be fitted to ensure a minimum clearance of 30 mm between the handlebar with levers and the tank when on full lock to prevent trapping the rider's fingers (see diagrams A,B,C).

Handlebar clamps must be very carefully radiused and engineered so as to avoid fracture points in the bar.

The repair by welding of light alloy handlebars is prohibited.

2.3.4 Control levers

All handlebar levers (clutch, brake, etc.) must be in principle ball ended (diameter of this ball to be at least 16 mm). This ball can also be flattened, but in any case the edges must be rounded (minimum thickness of this flattened part 14 mm). These ends must be permanently fixed and form an integral part of the lever.

Each control lever (hand and foot levers) must be mounted on a independent pivot.

The brake lever if pivoted on the footrest axis must work under all circumstances, such as the footrest being bent or deformed.

2.3.5 Wheel & rims (See Table 1)

1) All tyres will be measured mounted on the rim at a pressure of 1 kg/cm^2 (14 lb./sq.in.); measurements taken at a tyre section located at 90° from the ground.

2) Any modification to the rim or spokes of an integral wheel (cast, moulded, riveted) as supplied by the manufacturer or of a traditional detachable rim other than for spokes, valve or security bolts is prohibited except for tyre retention screws sometimes used to prevent tyre movement relative to the rim. If rim is modified for these purposes bolts, screws etc., must be fitted.

3) The maximum wheel rim widths are:

Superbike	Front:	4.00”
	Rear:	6.25"
Superproduction	Front:	4.00”
	Rear:	6.25"
Superstock	according to the homologated size	

4) For information, the distance is measured inside flange walls of the wheel rim in accordance with ETRTO.

5) The minimum rim diameter is 400 mm.

2.3.6 Tyres

Tyres may be replaced from those fitted to the homologated motorcycle.

1) With the exception of slick tyres and tyres marked ‘NOT FOR HIGHWAY USE’ (NHS), the manufacturer must identify the tyre with a mark indicating:

- The DOT mark and/or the E mark (used for "homologated tyres" or tyres marked for highway use only)
- The name of the manufacturer
- The year of manufacture (in code)
- The tyre dimension
- The speed rating
- Any other features necessary for the correct use of the tyre

2) Fitting

- The tyre must be mounted on the correct rim.
- The rim must not be deformed or damaged.

3) Permitted minimum speed

The minimum speed rating for use in Superstock is: (W).

4) Tyre surface tread pattern

The tread pattern is unrestricted.

The tread pattern must be made exclusively by the the manufacturer when producing the tyre.

The choice of a certain type of tread pattern is left entirely up to the individual rider.

The choice of slick and/or WET weather tyres (where applicable) will also be at the discretion of the rider. If conditions should become problematic however, he must take into account the recommendations of the appropriate representative of the tyre manufacturer.

As a safe minimum, the depth of the tyre tread over the whole pattern at pre-race control must be at least 2.5 mm.

Tyres which at the preliminary examination have a tread depth of less than 1.5 mm are considered as non-treaded tyres and the restrictions applying to slick tyres will then apply to them.

The surface of a slick tyre must contain three or more hollows at 120° intervals or less, indicating the limit of wear on the centre and shoulder areas of the tyre. The rider shall not enter the track if at least 2 of these indicator hollows are worn on different parts of the periphery.

2.3.7 The minimum distance between the surface of the tyre (at its largest point) and any fixed parts of a motorcycle is shown in Table 1.

2.3.8 Adaptation of the tyre's surface

In order to obtain optimal tyre adhesion, new unused tyres can be adapted by scuffing the surface. As a safe minimum, the depth of the tyre tread over the whole pattern at pre-race control must be at least 2.5 mm.

2.3.9 The use of tyre warmers is alllowed.

2.3.10 Starting devices

Starting devices are compulsory for Endurance racing.

2.3.11 Electrical equipment

Only for races taking place partly at night:
It is compulsory for all motorcycles to be equipped with complete electrical equipment in working order.

– The original headlamp(s) or – (units), the internals of the headlamp(s) and the headlamp brackets may be modified or replaced. When the original headlight glass is used, it must be completely covered with a self-adhesive, clear plastic film to prevent breaking up in case of damage.

– In case of a replacement of the original headlight, the opening of the original headlight in the front of the fairing must be presented or obtained by a plexi or a metallic film, duplicating the form, and location of the headlight when homologated (tolerance +/- 10 mm).

– The front headlight may consist of either one headlight unit, equipped with a minimum of two (2) bulbs (min. 55 W each) or two separate headlight units. Each light must be independently wired and connected to the power source, in case of a unit failure. **The colour of the motorcycle's headlights can only be white or yellow**

– Two independent rear lighting systems (red) and with two feeding systems (light lamps with a minimum power of 5 Watts, maximum 15 Watts) in good working order must be installed. It is mandatory that these lights work simultaneously. A flat, red retro-reflective surface (min. 60 cm≈), must be installed under the seat, at the rear of the motorcycle, perpendicular in relation to the ground and slightly inclined to the rear (max 30°). See diagram.

– An additional, non-blinking identification light (max 5 W) may be added to a motorcycle, fixed to the side and not visible from the rear.

2.3.12 Number Plate and Colours

The background and figures of the number plates are as follows:

Class	Background	Figures
Superbike	**Black (Ral 9005)**	**white (retro-reflective or luminous numbers for races taking place partly at night)**
Superproduction	**Blue (Ral 5010)**	**white (retro-reflective or luminous numbers for races taking place partly at night)**
Superstock	**Red (Ral 9010)**	**white (retro-reflective or luminous numbers for races taking place partly at night)**
Open	**Green (Ral 6002)**	**white (retro-reflective or luminous numbers for races taking place partly at night)**

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

The size for all the side numbers is:
Minimum height: 120 mm
Minimum width: 60 mm
Minimum stroke: 25 mm

The allocated number (& plate) for the rider must be affixed on the machine as follows:

– once on the front, either in the centre of the fairing or slightly off to one side. The figures must be inclined at an angle of 30° (+/-5°) from the vertical plane passing through the centreline. The top of the figures must be inclined towards the centerline.
– once, on each sides of the motorcycle. Alternatively, once across the top of the rear seat section with the top of the number towards the rider.
These numbers must have the same size as the front numbers.

For light coloured bodywork, there shall be a black line of 8 mm minimum all around the perimeter of the white background.

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

2.3.13 Reflective area

Only for races taking place partly at night, a red reflective surface of minimum area of 60 cm^2 must be fixed to the rear of the motorcycle seat cowling, completely visible in its entirety by the following rider. A bracket is allowed to be fitted underneath the seat to carry the red reflective surface.

2.3.14 Handprotectors

Additional hand-protectors can be attached to the streamlining with "quick-fit" type fasteners only. Hand-protectors are intended to give extra protection to the hands only and cannot exceed the handlebar width. All sharp edges must be rounded. The required clearances must be respected when hand-protectors are fitted to the streamlining (see Diagram A-3).

2.3.15 Refuelling

The original fuel tank cap must be replaced by maximum two openings to accommodate a ‘quick-fill’ type (i.e. aviation type) fuel valve and must provide a closed system. Quick fill valves with concentric openings are permitted.

The maximum diameter of a fuel valve opening is 76 mm (3 inches).

Other refuelling systems are allowed providing they use a closed circuit system and are leak proof.

Any excess fuel must be contained or return via an overflow line back to the fuel tower or handheld fuel container.

The refuelling system can be portable or fixed to the wall of the pit-box and must be a ‘closed’ (circuit) system. The complete fuel tower installation must be rigid and fixed securely to the wall of the pit-box.

All personnel who are involved in the refuelling operations, including the person responsible for the fire extinguisher, must wear an overall made of fire retardant materials, hands must be protected with gloves made of fire retardant materials; safety goggles/mask and balaclava of fire-retardant quality or a helmet for eye protection.

During the refuelling operations, the rider cannot stay on his machine.

During the practices or the race, only tyre warmer systems and cordless portable electrical tools are allowed.

2.3.16 Markings

During the race, all defective parts may be replaced with the exception of the frame **and** crankcase.

The frame **and engine case** must be marked and/or sealed **before the race**.

2.3.17 Ballast

The use of ballast is allowed to stay over the minimum weight limit. The use of ballast must be declared to the FIM Technical Delegate/Chief Technical Steward at the preliminary checks.

The ballast must be made from solid metallic piece/s, firmly, securely connected, either through an adapter or directly to the main frame or engine, with minimum 2 steel bolts (min. 8 mm diameter, 8.8 grade or over).
Fuel in the fuel tank can be used as ballast.

2.4 SUPERBIKE TECHNICAL SPECIFICATIONS

Rules intended to give freedom to modify or replace some parts in the interest of safety, research and development.

EVERYTHING THAT IS NOT AUTHORISED AND PRESCRIBED IN THIS RULE IS STRICTLY FORBIDDEN

Superbike motorcycles require an FIM homologation (see Art. 2.9). All motorcycles must comply in every respect with all the requirements for road racing as specified in the Technical Regulations, unless it is equipped as such on the homologated machine.

The appearance from both front, rear and the profile of Superbike motorcycles must (except when otherwise stated) conform to the homologated shape (as originally produced by the manufacturer). The appearance of the exhaust system is excluded from this rule.

2.4.1 Displacement capacities

2 cylinders	Over 800cc up to 1000cc	4 stroke
3 cylinders	Over 750cc up to 1000cc	4 stroke
4 cylinders	Over 750cc up to 1000cc	4 stroke

The displacement capacities must remain at the homologated size. Modifying the bore and stroke to reach class limits is not allowed.

2.4.2 Minimum Weights

The minimum weight of a motorcycle will be-
– 165 kg: for races not taking place partly at night;
– 170 kg: for races taking place partly at night.

The use of titanium in the construction of the front forks, the handlebars and the wheel spindles is forbidden. For wheel spindles, the use of light alloys is also forbidden.

During the final inspection at the end of each race, the machines chosen will be weighed in the condition they finished 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.

During the practice and qualifying sessions, riders may be asked to submit their motorcycle to a weight control in the pit lane. (This will be done in such a way so as to disturb the rider and team as little as possible. In all cases the rider must comply with this request for a control.)

At any time of the event, the weight of the whole machine (including the tank) must be not be less than the minimum weight with a 1kg tolerance.

2.4.4 Carburation Instruments

2.4.4.1 For 1000 cc Twins and Three cylinders up to 900 cc

- Carburation instruments refer to both throttle bodies and carburettors.
- Carburation instruments must be used un-modified either as the original homologated carburation instrument or as the homologated optional carburation instrument.
- The only modifications allowed to the homologated carburation instruments original or optional are jets, needles, throttle valves, fuel injectors and bell mouths.
- Variable-length carburettor/fuel injection intake tract devices that function while the engine is operating are prohibited, unless such a system is used on the homologated machine
- The original manufacturer must use the following criteria for the designing and making of the optional homologated carburation instruments.

a) There is no limit for the intake size of an engine equipped either by carburettors or fuel injection systems.
b) The optional carburettor / injector body material must remain the same as used on the original homologated carburation instruments.
c) A minimum number of optional carburation instruments must be available as spare parts and be included in the manufacturer's racing parts lists. All manufacturers must have a minimum of 15 sets available through traditional distributorships worldwide for the life of the homologation. The price of the optional carburation instruments to the public must not exceed twice the manufacturers suggested retail price of the original homologated carburation instrument in the country of origin. This price must be indicated on the Homologation Form.
d) The motorcycle manufacturer may submit only one optional carburation instrument for each model at the time of homologation.
e) The motorcycle manufacturer must supply a sample set of the original and optional carburation instruments to the FIM for use as comparison samples at the events.

f) The motorcycle manufacturer must provide evidence that the minimum of 15 sets of optional carburation instruments have been manufactured.
g) The optional carburation instruments must be available for at least three years after the homologation date.
h) The carburation instrument homologation will be valid for the same period as the homologated motorcycle.
i) An additional model of optional carburation instruments may be homologated during the life of the machine's homologation. These carburation instruments must meet the same requirements as the original modified instruments. This is to allow development after the original homologation.

- The optional carburation instruments may only be homologated at the same time as a new homologation. [see number i) above for additional optional carburation instruments]

2.4.4.2 For 1000 cc Three- and Four cylinders

- Carburation instruments refer to both throttle bodies and carburettors.
- The original homologated carburation instruments must be used un-modified.
- The use of optional homologated carburation instruments is not allowed.
- The fuel injectors may be replaced, however they must fit without modification to the homologated throttle body.
- The carburation instruments intake insulators may be modified.
- Bell mouths may be altered or replaced.
- Variable length intake tract devices that function while the engine is operating are not allowed, unless such a system is use on the homologated machine.
- Modifications to the fuel pump and the pressure regulator are allowed.
- The fuel injection management computer may be changed.
- The use of flash memory (flash RAM) is allowed.
- Vacuum slides may be fixed in the open position
- Secondary throttle valves and shafts may be removed or fixed in the open position and the electronics may be disconnected or removed

2.4.5 Fuel

All 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 also Art. 2.10 for full fuel specifications).

2.4.6 Machine Specifications

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

2.4.6.1 Main Frame Body

The main frame must remain as originally produced by the manufacturer for use on the homologated machine.

The main frame may only be altered by the addition of gussets or tubes. No gussets or tubes may be removed.

The homologated dimensions and position of bearing seats in the steering head column, and the engine, swing arm, rear shock, and suspension linkage mounting points must remain as original.
Steering angle changes are permitted by fitting inserts onto the bearing seats of the original steering head, but no part of the insert must protrude axially more than 3 mm from the original steering head.

All motorcycles must display an identification number on the frame body (chassis number).

Rear sub frame may be changed or altered, but the material must remain as homologated.

The paint scheme is not restricted.

2.4.6.2 Front Forks

Front fork in whole or part may be changed but must be the same type homologated (leading link, telescopic, upside down, etc.).

The upper and lower fork clamps (triple clamp, fork bridges) can be changed or modified.

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

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

2.4.6.3 Rear Fork (Swingarm)

The rear fork may be altered or replaced from those fitted to the homologated motorcycle. The use of carbon fibre or Kevlar® materials is not allowed if not homologated on the original machine. A chain guard must be fitted in such a way to reduce the possibility that any part of the riders'body should become trapped between the lower chain run and the rear wheel sprocket.

Rear wheel stand brackets may be added to the rear fork by welding or by bolts. Brackets must have rounded edges (with a large radius). Fastening screws must be recessed.

2.4.6.4 Rear Suspension Unit

Rear suspension unit can be changed but a similar system must be used (i.e. dual or mono).

The rear suspension linkage may be modified or replaced.

The original fixing points in the frame (if any) must be used to mount the shock absorber, linkage and rod assembly fulcrum (pivot points).

2.4.6.5 Wheels

Wheels may be replaced (see Art. 2.3.5.2) and associated parts may be altered or replaced from those fitted to the homologated motorcycle. Carbon fibre or carbon composite wheels are not allowed, unless the manufacturer has equipped the homologated production model with this type of wheel.

Bearings, seals, and axles may be altered or replaced from those fitted to the homologated motorcycle.

Wheel rims smaller than 16 in. in diameter are not allowed.

Maximum front wheel rim width: 4.00 in.
Maximum rear wheel rim width: 6.25 in.

2.4.6.6 Brakes

Front master cylinder may be altered or replaced from those fitted to the homologated motorcycle.

Rear master cylinder may be altered or replaced from those fitted to the homologated motorcycle.

Front callipers may be altered or replaced from those fitted to the homologated motorcycle.

Rear callipers may be altered or replaced from those fitted to the homologated motorcycle.

Brake pads or shoes may be altered or replaced from those fitted to the homologated motorcycle.

Brake hoses and brake couplings may be altered or replaced from those fitted to the homologated motorcycle. The split of the front brake lines for both front brake callipers must be made above the lower fork bridge (lower triple clamp).

Brake discs may be altered or replaced from those fitted to the homologated motorcycle. Only ferrous materials are allowed for brake discs. The use of exotic alloy materials for discs and brake callipers (i.e. aluminium beryllium, etc.) is not allowed.

2.4.6.7 Tyres

See Art. 2.3.6.

2.4.6.8 Foot Rest/Foot Controls

Foot rest/foot controls may be relocated, but the original mounting points must be used.

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 8mm solid spherical radius. (see diagram A & C).

Non folding footrests must have an end (plug) which is permanently fixed, made of plastic, Teflon® or equivalent type of material (min. radius of 8mm). The plug surface must be designed to reach the widest possible area of the footrest. The Chief Technical Steward has the right to refuse any plug not satisfying this safety aim.

2.4.6.9 Handle Bars and Hand Controls

Handle bars, hand controls and cables may be altered or replaced from those fitted to the homologated motorcycle

Engine stop switch must be located on the handle bars.

2.4.6.10 Fairing/Body Work

a) Fairing and body work must conform in principle to the homologated shape as originally produced by the manufacturer.

b) Wind screen may be replaced.

c) Original air ducts running between the fairing to the airbox may be altered or replaced from those fitted to the homologated motorcycle.

d) 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 (min. 5 litres). The lower edge of openings in the fairing must be positioned at least 50 mm above the bottom of the fairing.

e) The lower fairing must incorporate one hole of 25 mm in the bottom of the front lower area. This hole must remain closed in dry conditions and must be only opened in wet race conditions.

f) Minimal changes are allowed in the fairing to permit the use of an elevator (stand) for wheel changes and to add plastic protective cones to the frame or the engine.

g) Holes may be drilled or cut in the fairing or bodywork to allow additional increased intake air to the oil cooler. Holes bigger than 10mm must be covered with metal gauze or fine mesh. Mesh must be painted to match the surrounding material.

h) Front mudguard must conform in principle to the homologated shape originally produced by the manufacturer.

i) Holes may be drilled in the front mudguard to allow additional cooling. Holes bigger than 10mm must be covered with metal gauze or fine mesh. Mesh must be painted to match the surrounding material.

j) Rear mudguard may be added or removed.

k) Material of construction of the front mudguard, rear mudguard and fairing may be altered or replaced from those fitted to the homologated motorcycle.

2.4.6.11 Fuel Tank

Material of construction of the fuel tank may be altered or replaced from those fitted to the homologated motorcycle.

All fuel tanks must be filled with fire retardant material, or be fitted with a fuel cell bladder.

Fuel tanks made of composite materials (carbon fibre, aramid fibre, glass fibre, etc.) must have passed the FIM Standards for fuel tanks or be lined with a fuel cell bladder.

Tanks made of composite material must bear the label certifying conformity with FIM Fuel Tank Test Standards. Fuel tanks without a fuel cell bladder must bear a label certifying conformity with FIM Fuel Tank Test Standards.

Such labels must include the fuel tank manufacturer's name, date of tank manufacture, and name of testing laboratory.

Each manufacturer is requested to inform the FIM/CCR Secretariat of its fuel tank model(s) which have passed the FIM test standards, together with a copy of the fuel tank label.

Full details of the FIM Fuel Tank Test Standards and Procedures are available from the FIM (See 'Fuel Tank Test Standards' below).

Fuel cell bladders must conform to or exceed the specification FIM/FCB-2005. Full details of this standard are available from the FIM

The fuel tank must be fixed **to the frame from the front and the rear with a crash-proof assembly system. Bayonet style couplings can not be used, nor any fixing to any parts of the streamlining.** The **Chief Technical Steward** has the right to refuse a motorcycle if he is of the opinion that the fuel tank fixation is not safe.

The original tank may be modified to achieve the maximum capacity of 24 litres, provided the original profile is as homologated.

A cross over line between each side of the tank is allowed (maximum inside diameter 10 mm).

Fuel tanks with tank breather pipes must be fitted with non-return valves which discharge into a catch tank with a minimum volume of 250 cc made of a suitable material.

The fuel tank filler cap must be of a 'quick-fill' type and when closed, must be leak proof. Additionally, they must be secured to prevent accidental opening at any time (See also Art. 2.3.15).

The same size fuel tank used in practice must be used during the entire event.

Fuel tank homologation

1. Any fuel tanks, made of non ferrous materials (with the exception of aluminium) must be tested according to the test procedure prescribed by the FIM.

2. Each manufacturer is responsible for testing its own fuel tank model(s) and will certify that the fuel tank exceeds the FIM test procedure, if it has passed the minimum FIM test procedure for fuel tanks.

3. Each manufacturer must affix a quality and test label on each fuel tank type that is produced for competition use. This quality and test label will be the recognition of a fuel tank model which has passed the FIM test procedure.

4. All fuel tanks that are made to the same design, dimensions, number of fibre layers, grade of fibre, percentage of resin, etc, must be identified with the same quality and test label.

5. The quality and test label will include the following information on each label affixed to each fuel tank: name of the fuel tank manufacturer, date of fabrication, code or part number, name of testing laboratory, fuel capacity.

6. Each manufacturer is requested to inform the FIM/CTI Secretariat of its fuel tank model(s) which have passed the FIM test procedure, with a copy of the quality and test label, according to point 5.

7. Only fuel tanks that have passed the FIM test procedure will be accepted for use in the FIM Superbike competition.

2.4.6.12 Seat

Seat may be altered or replaced from those fitted to the homologated motorcycle.

The top portion of the rear body work around the seat may be modified to a solo seat. The solo seat then must incorporate the rear number plates. The appearance from both front rear and profile must conform in principle to the homologated shape.

The seat/rear cowl must allow for proper number display.

Holes may be drilled in the seat or rear cowl to allow additional cooling. Holes which are bigger than 10 mm must be covered with metal gauze or wire mesh. Gauze (mesh) must be painted to match the surrounding material.

Material of construction of the seat may be altered or replaced from those fitted to the homologated motorcycle.

2.4.6.13 Radiator/Oil Cooler

The original radiator or oil cooler may be altered or replaced from those fitted to the homologated motorcycle.

Additional radiators or oil coolers may be added.

Oil cooler must not be mounted on or above the rear mudguard.

Radiator fan and wiring may be removed or replaced.

The appearance from the front, rear and profile of the machine must in principle conform to the homologated shape after the addition of additional radiators or oil coolers.

2.4.6.14 Air Box

The air box may be altered or replaced from those fitted to the homologated motorcycle (a special design for racing is allowed). If fuel injectors are attached to the cover of the air box, their position must remain as original.

The air filter element may be removed.

The air box must be completely closed around the induction bell mouth and all engine breather tubes, with air ingress only above the lowest point of the bell mouths lip (see diagram C). Carburation instruments may be entirely within the airbox.

The air box drains must be sealed.

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

The breather system (airbox plus any breather oil collector box) must be capable in the event of drain pipe blockage, of retaining a minimum of 1000 cc of discharged fluid.

2.4.6.15 Carburettors

(See Art. 2.4.4).

2.4.6.16 Fuel Injection System

(See art. 2.4.4).

2.4.6.17 Fuel Supply

The fuel injection management computer chip (EPROM) may be changed. The use of flash memory ("flash RAM") is allowed.

Fuel pump and pressure regulator may be modified or changed.

Fuel lines may be replaced.

The fuel line(s) going from the fuel tank to the carburetion instruments must be located in such a way that they are protected from possible defects.

Fuel vent lines may be replaced.

Fuel filters may be added.

Fuel petcock may be altered or replaced from those fitted to the homologated motorcycle.

2.4.6.18 Engine

The following engine components may not be altered from the homologated machine except as noted.

Four cylinder engines with a bore and stroke ratio of 1.5 to 1 or greater will be subject to an RPM limit of 14'000 rpm's. This will be controlled by an electronic device issued by the FIM.

The homologated engine design concept cannot be changed.

Homologated materials and castings for the crankcase, cylinder, cylinder head and gear box housing must be used.

Material for the crankcase, cylinder, cylinder head and gear box housing may only be added by welding or removed by machining.

The method of cam drive must remain as homologated unless a complete kit is available through normal commercial channels. These kits must be available in significant quantity and be listed in the racing spare parts book.

***1000 cc Three and Four cylinders machines:**
Aftermarket or modified cam drive components are allowed, however the cam drive must be in the homologated location.

The method of valve retention must remain as the homologated model (no pneumatic valve retention devices are allowed unless fitted to the homologated model).

All moving internal engine, gear box and clutch parts may be altered or replaced including materials from those fitted on the homologated motorcycle (unless not allowed by the individual section covering the parts in question).

Polishing and lightening of engine parts is permitted, except for carburation instruments (unless not allowed by the individual section covering the parts in question).

For Three and Four cylinder engines:
The sequence in which the cylinders are ignited (i.e. 1-2-4-3), must remain as originally designed on the homologated model. Simultaneous (*) firing of 2 cylinders is also forbidden if not adopted on the homologated motorcycle.
* up to 5 degrees firing difference in 2 cylinders is regarded as 'simultaneous' firing.

2.4.6.19 Cylinder Head

The homologated cylinder head can be modified as follows:

Homologated materials and castings for the cylinder heads must be used. Material for these parts may only be added by welding or removed by machining.

The induction and exhaust system including the number of valves and or ports (intake and exhaust) must be as homologated.

Porting and polishing of the cylinder head normally associated with individual tuning such as gas flowing of the cylinder head, including the combustion chamber is allowed.

The compression ratio is free.

The combustion chamber may be modified.

The valves may be altered or replaced from those fitted to the homologated motorcycle.

The valve seats may be altered or replaced from those fitted to the homologated motorcycle.

The valve guide may be altered or replaced from those fitted to the homologated motorcycle.

Valve springs may be altered or replaced from those fitted to the homologated motorcycle.

The valve retainers may be altered or replaced from those fitted to the homologated motorcycle.

***1000 cc Three and Four cylinder machines:**
Aftermarket or modified valves, springs, retainers and other valve train components are permitted. The original number of valves must be maintained.

a. Valve diameters, including stem, must remain as homologated.
b. Valves must be made of the same basic material as the homologated valves.
c. Valves must remain in the homologated location and at the same angle as the homologated valves, except for normal valve maintenance.

2.4.6.20 Camshaft

Camshafts may be altered or replaced from those fitted to the homologated motorcycle

2.4.6.21 Cam Sprockets or Gears

Cam sprockets or cam gears may be altered or replaced to allow the degreeing of the camshafts (see also Art. 2.4.6.18).

2.4.6.22 Crankshaft

Crankshaft may be altered or replaced from those fitted to the homologated motorcycle.

Crankshaft stroke must remain as homologated.

***1000 cc Three and Four cylinders machines:**
The following modifications are allowed to the homologated crankshaft:

a. Bearing surfaces may be polished or a surface treatment may be applied.
b. Balancing is allowed but only by the same method as the homologated crankshaft (for example: high density metal inserts, i.e. Mallory metal inserts, are not permitted unless they are originally specified in the homologated crankshaft.)
c. Attachment of aftermarket ignition components or sensors is permitted.
d. Balance shaft may be removed.

2.4.6.23 Oil Pumps and Oil Lines

Oil pump may be altered or replaced from those fitted to the homologated motorcycle.

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

2.4.6.24 Connecting Rods

Connecting rods may be altered or replaced from those fitted to the homologated motorcycle. Carbon composite or carbon fibre materials are not allowed.

2.4.6.25 Pistons

Pistons may be altered or replaced from those fitted to the homologated motorcycle.

2.4.6.26 Piston Rings

Piston rings may be altered or replaced from those fitted to the homologated motorcycle.

2.4.6.27 Piston Pins and Clips

Piston pins and clips may be altered or replaced from those fitted to the homologated motorcycle.

2.4.6.28 Cylinders

Homologated materials and casting for the cylinder block must be used. The material for the cylinder block may only be added by welding and/or removed by machining. The sleeves or liner material may be changed and the surface finish is free. The original bore size must be retained.

2.4.6.29 Crankcase/Gearbox housing and lateral covers

Homologated materials and castings for crankcase and gearbox housing must be used. Material for crankcase and gearbox housing may only be added by welding or removed by machining.

Oil-pan (sump) may be altered or replaced.

Lateral (side) covers may be altered, modified or replaced. If replaced, the cover must be made in material of same or higher specific weight **and the total weight of the cover must not be less than the original one.**

All engine cases containing oil and which could be in contact with the ground during (after) a crash must be protected by a second cover made from composite materials, type carbon or Kevlar®.

2.4.6.30 Transmission/Gearbox

All transmission/gearbox ratios, shafts, drums, selector forks are free.

Primary gear ratios are free for 1000 cc Twins and 900 cc Three cylinder machines only.

Primary gear ratios must remain as homologated for 1000 cc Three and Four cylinder machines.

The number of gears must remain as homologated.

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

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

2.4.6.31 Clutch

Aftermarket or modified clutches are permitted.

Back torque limiter is permitted.

***1000cc Twins and 900cc Three cylinder machines:**

Clutch system (wet or dry type) and method of operation (cable/hydraulic) may be altered or replaced from those fitted to the homologated motorcycle.

***1000 cc Three and Four cylinder machines:**

Clutch system (wet or dry type) and method of operation (cable/hydraulic) must remain as homologated.

2.4.6.32 Ignition/Engine Control System (CDI)

Ignition/engine control system (CDI) may be modified or changed.

Spark plugs and plug wires may be replaced.

2.4.6.33 Generator, alternator, electric starter

The generator, starting system, electrical or manual including kick lever, pedal, starter crank gear and starter shaft may be altered or replaced from those fitted to the homologated motorcycle.

2.4.6.34 Exhaust System

Exhaust pipes, **catalytic converters** and silencers may be altered or replaced from those fitted to the homologated motorcycle.

The number of the final exhaust silencer(s) must remain as homologated. The silencer(s) must be on the same side(s) of the homologated model.

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

Wrapping of exhaust systems is not allowed except in the area of the riders foot or an area in contact with the fairing for protection from heat.

The noise limit for Superbikes will be 107 dB/A (with a 3 dB/A tolerance after the race).

2.4.7 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 and plug cap may be used.

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

Gaskets and gasket material.

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

Bearings (ball, roller, taper, plain, etc.) of any type or brand may be used.

Fasteners (nuts, bolts, screws, etc.).

Electronic devices, electric cables, connectors, battery and switches.

External surface finishes and decals.

2.4.8 The following items MAY BE removed (or replaced)

Unused elements of the wiring harness

Instrument and instrument bracket and associated cables.

Tachometer.

Speedometer and associated wheel spacers.

Radiator fan and wiring.

Chain guard.

2.4.9 The Following Items MUST BE Removed

Turn signal indicators (when not incorporated in the fairing). Openings must be covered by suitable materials.

Rear-view mirrors.

Horn.

License plate bracket.

Tool box.

Helmet hooks and luggage carrier hooks

Passenger foot rests.

Passenger grab rails.

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

2.4.10 The following items MUST BE altered

Motorcycles must be equipped with a functional ignition kill switch or button mounted at least on one 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.

All drain plugs must be wired. External oil filter(s) screws and bolts that enter an oil cavity must be safety wired (i.e. on crankcases, oil lines, oil coolers, etc.)

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

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.

Oil cooler must not be mounted on or above the rear mudguard.

2.4.11 Additional Equipment

Additional equipment not on the original homologated motorcycle may be added (i.e. data acquisition, computers, recording equipment etc.). **Telemetry is not allowed.**

2.6 SUPERPRODUCTION TECHNICAL SPECIFICATIONS

EVERYTHING THAT IS NOT AUTHORISED AND PRESCRIBED IN THIS RULE IS STRICTLY FORBIDDEN

Superproduction motorcycles are based on road going models with a valid FIM homologation (see Art. 2.9).

All motorcycles must comply in every respect with all the requirements for Road Racing as specified in Road Racing Technical Rules, unless it is equipped as such on the homologated machine.

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

2.6.1 Displacement capacities

4 cylinders	Over 600 cc up to 1000 cc	4-stroke
3 cylinders	Over 750 cc up to 1000 cc	4-stroke
2 cylinders	Over 850 cc up to 1200 cc	4-stroke

The displacement capacities must remain at the homologated size. Modifying the bore and stroke to reach class limits is not allowed.

2.6.2 Minimum Weights

The FIM decides the minimum weight value for a homologated model as sold to the public by determining its dry weight.

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). To confirm the dry weight a minimum of three (3) motorcycles are weighed and compared. The result is rounded off to the nearest digit.

The minimum weight for motorcycles will be:-
– Dry weight minus 15 kg for races not taking place partly at night;
– Dry weight minus 11 kg for races taking place partly at night.

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.

At any time of the event, the weight of the whole machine (including the tank) must not be less than the minimum weight with a 1 kg tolerance.

2.6.4 Carburation Instruments

Carburation instruments must remain as homologated

2.6.5 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 also Art. 2.10 for full specification)

2.6.6 Machine Specifications

2.6.6.1 Main Frame Body

The main frame must remain as originally produced by the manufacturer for use on the homologated machine.

The main frame may only be altered by the addition of gussets or tubes. No gussets or tubes may be removed.

The homologated dimensions and position of bearing seats in the steering head column, and the engine, swing arm, rear shock, and suspension linkage mounting points must remain as original.
Steering angle changes are permitted by fitting inserts onto the bearing seats of the original steering head, but no part of the insert must protrude axially more than 3 mm from the original steering head.

All motorcycles must display an identification number on the frame body (chassis number).

Rear sub frame may be changed or altered, but the material must remain as homologated.

The paint scheme is not restricted.

2.6.6.2 Front Forks

Front fork in whole or part may be changed but must be the same type homologated (leading link, telescopic, upside down, etc.).

The upper and lower fork clamps (triple clamp, fork bridges) can be changed or modified.

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

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

2.6.6.3 Rear Fork (Swing-arm)

The rear fork may be altered or replaced from those fitted to the homologated motorcycle. The use of carbon fibre or Kevlar® materials is not allowed if not homologated on the original machine.

A chain guard must be fitted to the swing-arm in such a way to reduce the possibility that any part of the riders' body should become trapped between the lower chain run and the rear wheel sprocket.

Rear wheel stand brackets may be added to the rear fork by welding or by bolts. Brackets must have rounded edges (with a large radius). Fastening screws must be recessed.

2.6.6.4 Rear Suspension Unit

Rear suspension unit can be changed but a similar system must be used (i.e. dual or mono).

The rear suspension linkage may be modified or replaced.

The original fixing points in the frame (if any) must be used to mount the shock absorber, linkage and rod assembly fulcrum (pivot points).

2.6.6.5 Wheels

Wheels (see Art. 2.3.5.2), and associated parts may be altered or replace from those fitted to the homologated motorcycle. Carbon fibre or carbon composite wheels are not allowed, unless the manufacturer has equipped the homologated production model with this type of wheel.

Bearings, seals, spacers and axles may be altered or replaced from those fitted to the homologated motorcycle.

Wheel rims smaller than 16 in. in diameter are not allowed.

Maximum front wheel rim width : 4.00 in.
Maximum rear wheel rim width : 6.25 in.

2.6.6.6 Brakes

Front master cylinder may be altered or replaced from those fitted to the homologated motorcycle.

Rear master cylinder may be altered or replaced from those fitted to the homologated motorcycle.

Front callipers may be altered or replaced from those fitted to the homologated motorcycle.

Rear callipers may be altered or replaced from those fitted to the homologated motorcycle.

Brake pads or shoes may be altered or replaced from those fitted to the homologated motorcycle.

Brake hoses and brake couplings may be altered or replaced from those fitted to the homologated motorcycle. The split of the front brake lines for both front brake callipers must be made above the lower fork bridge (lower triple clamp).

Brake discs may be altered or replaced from those fitted to the homologated motorcycle. Only ferrous materials are allowed for brake discs. The use of exotic alloy materials for discs and brake callipers (i.e. aluminium beryllium, etc.) is not allowed.

2.6.6.7 Tyres

See Art. 2.3.6.

2.6.6.8 Foot Rest/Foot Controls

Foot rest/foot controls may be relocated, but the original mounting points must be used.

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 8mm solid spherical radius. (see diagram A & C).

Non folding footrests must have an end (plug) which is permanently fixed, made of plastic, Teflon® or equivalent type of material (min. radius of 8mm). The plug surface must be designed to reach the widest possible area of the footrest. The Chief Technical Steward has the right to refuse any plug not satisfying this safety aim.

2.6.6.9 Handle Bars and Hand Controls

Handle bars, hand controls and cables may be altered or replaced from those fitted to the homologated motorcycle (see Art. 2.3.4).

Engine stop switch must be located on the handle bars.

2.6.6.10 Fairing/Body Work

a) Fairing and body work must conform in principle to the homologated shape as originally produced by the manufacturer.

b) Wind screen may be replaced.

c) Original air ducts running between the fairing to the airbox may be altered or replaced from those fitted to the homologated motorcycle.

d) 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 (min. 5 litres). The lower edge of openings in the fairing must be positioned at least 50 mm above the bottom of the fairing.

e) The lower fairing must incorporate one hole of 25 mm in the bottom of the front lower area. This hole must remain closed in dry conditions and must be only opened in wet race conditions.

f) Minimal changes are allowed in the fairing to permit the use of an elevator (stand) for wheel changes and to add plastic protective cones to the frame or the engine.

g) Holes may be drilled or cut in the fairing or bodywork to allow additional increased intake air to the oil cooler. Holes bigger than 10mm must be covered with metal gauze or fine mesh. Mesh must be painted to match the surrounding material.

h) Front mudguard must conform in principle to the homologated shape originally produced by the manufacturer.

i) Holes may be drilled in the front mudguard to allow additional cooling. Holes bigger than 10mm must be covered with metal gauze or fine mesh. Mesh must be painted to match the surrounding material.

j) Rear mudguard may be added or removed.

k) Material of construction of the front mudguard, rear mudguard and fairing may be altered or replaced from those fitted to the homologated motorcycle.

2.6.6.11 Fuel Tank

Material of construction of the fuel tank may be altered or replaced from those fitted to the homologated motorcycle.

All fuel tanks must be filled with fire retardant material, or be fitted with a fuel cell bladder.

Fuel tanks made of composite materials (carbon fibre, aramid fibre, glass fibre, etc.) must have passed the FIM Standards for fuel tanks or be lined with a fuel cell bladder.

Tanks made of composite material must bear the label certifying conformity with FIM Fuel Tank Test Standards. Fuel tanks without a fuel cell bladder must bear a label certifying conformity with FIM Fuel Tank Test Standards.

Such labels must include the fuel tank manufacturer's name, date of tank manufacture, and name of testing laboratory.

Each manufacturer is requested to inform the FIM/CCR Secretariat of its fuel tank model(s) which have passed the FIM test standards, together with a copy of the fuel tank label.

Full details of the FIM Fuel Tank Test Standards and Procedures are available from the FIM (See 'Fuel Tank Test Standards' below).

Fuel cell bladders must conform to or exceed the specification FIM/FCB-2005. Full details of this standard are available from the FIM

The fuel tank must be fixed **to the frame from the front and the rear with a crash-proof assembly system. Bayonet style couplings can not be used, nor any fixing to any parts of the streamlining.** The **Chief Technical Steward** has the right to refuse a motorcycle if he is of the opinion that the fuel tank fixation is not safe.

The original tank may be modified to achieve the maximum capacity of 24 litres, provided the original profile is as homologated.

A cross over line between each side of the tank is allowed (maximum inside diameter 10 mm).

Fuel tanks with tank breather pipes must be fitted with non-return valves which discharge into a catch tank with a minimum volume of 250 cc made of a suitable material.

The fuel tank filler cap must be of a 'quick-fill' type and when closed, must be leak proof. Additionally, they must be secured to prevent accidental opening at any time (See also Art. 2.3.15).

The same size fuel tank used in practice must be used during the entire event.

Fuel tank homologation

1. Any fuel tanks, made of non ferrous materials (with the exception of aluminium) must be tested according to the test procedure prescribed by the FIM.

2. Each manufacturer is responsible for testing its own fuel tank model(s) and will certify that the fuel tank exceeds the FIM test standard, if it has passed the FIM test procedure for fuel tanks.

3. Each manufacturer must affix a quality and test label on each fuel tank type that is produced for competition use. This quality and test label will be the recognition of a fuel tank model which has passed the FIM test procedure.

4. All fuel tanks that are made to the same design, dimensions, number of fibre layers, grade of fibre, percentage of resin, etc, must be identified with the same quality and test label.

5. The quality and test label will include the following information on each label affixed to each fuel tank: name of the fuel tank manufacturer, date of fabrication, code or part number, name of testing laboratory, fuel capacity.

6. Each manufacturer is requested to inform the FIM/CCR Secretariat of its fuel tank model(s) which have passed the FIM test procedure, with a copy of the quality and test label, according to point 5.

7. Only fuel tanks that have passed the FIM test procedure will be accepted.

2.6.6.12 Seat

Seat may be altered or replaced from those fitted to the homologated motorcycle.

The top portion of the rear body work around the seat may be modified to a solo seat. The solo seat then must incorporate the rear number plates. The appearance from both front rear and profile must conform in principle to the homologated shape.

The seat/rear cowl must allow for proper number display.

Holes may be drilled in the seat or rear cowl to allow additional cooling. Holes bigger than 10 mm, must be covered with metal gauze or fine mesh.
Mesh must be painted to match the surrounding material.

All exposed edges must be rounded.

Material of construction of the seat may be altered or replaced from those fitted to the homologated motorcycle.

2.6.6.13 Radiator, cooling system and Oil Cooler

The original radiator or oil cooler may be altered or replaced from those fitted to the homologated motorcycle.

Additional radiators or oil coolers may be added but the appearance from the front, rear and profile of the machine must in principle conform to the homologated shape after the addition of additional radiators or oil coolers.

Oil cooler must not be mounted on or above the rear mudguard.

The radiator tubes to and from the engine can be changed.

Radiator fan and wiring maybe removed or replaced.

Thermal switches, water temperature sensor and thermostat can be removed inside the cooling system.

2.6.6.14 Wiring Harness

The original wire-loom must be used. The unused wire loom elements supplying current to direction indicators, horn, ignition contact and key-lock, etc, may be unplugged and/or removed (no cutting is allowed).

2.6.6.15 Battery

A battery is compulsory and must be in good working order. The size and type may be changed.

2.6.6.16 Air Box

The air box must remain as originally produced by the manufacturer on 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 into the air box.

IMPORTANT: Air Intake Restriction

If necessary, an air intake restriction system may be imposed during the season in order to rectify possible performance discrepancies.

2.6.6.17 Carburettors

No modifications are allowed.

Carburettor jets, slide spring and needles may be replaced.

The slide metering holes may be changed.

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

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

2.6.6.18 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.

No modifications of fuel pump or pressure regulator are allowed.

The fuel injection management computer chip (EPROM) may be changed.

Fuel pump and fuel pressure regulator must remain as homologated.

The use of flash memory (‘flash RAM) for fuel injection mapping is allowed.

An additional control unit to change the fuel mixture may be installed and must be fitted to the original connectors.

The original wire-loom must remain unmodified.

2.6.6.19 Fuel Supply

Fuel lines may be replaced but the 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.

2.6.6.20 Cylinder Head

No modifications are allowed.

No material may be added or removed from the cylinder head.

The cylinder head gasket may 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.

2.6.6.21 Camshaft

No modifications are allowed.

2.6.6.22 Cam Sprockets

Timing of the camshaft is free. However, no machining of the actual camshaft sprocket is authorised.

2.6.6.23 Crankshaft

No modifications are allowed (including polishing and lightening).

2.6.6.24 Oil Pumps and Oil Lines

No pump modifications are allowed.

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.

2.6.6.25 Connecting Rods

No modifications are allowed (including polishing and lightening).

2.6.6.26 Pistons

No modifications are allowed (including polishing and lightening).

2.6.6.27 Piston Rings

No modifications are allowed.

2.6.6.28 Piston Pins and Clips

No modifications are allowed.

2.6.6.29 Cylinders

No modifications are allowed.

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

No modifications **to the crankcases** are allowed (including painting, polishing and lightening).

Lateral (side) covers may be altered, modified or replaced. If replaced, the cover must be made in material of same or higher specific weight **and the total weight of the cover must not be less than the original one.**

All engine cases containing oil and which could be in contact with the ground during (after) a crash must be protected by a second cover made from composite materials, type carbon or Kevlar®.

2.6.6.31 Transmission/Gearbox

No modifications are allowed.

A quick shift system is authorised.

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

2.6.6.32 Clutch

Only the clutch springs and the discs (of which the number must remain as on the homologated model) may be changed.

2.6.6.33 Ignition/Engine Control System

The ignition/engine control system (CDI) may be modified.

The position and the size of the ignition/engine control unit must be identical to the original, homologated unit.

2.6.6.34 Generator, Alternator, Electric Starter

No modifications are allowed.

The electric starter must operate normally and always be able to start the engine during the event.

2.6.6.35 Exhaust System

Exhaust pipes, catalytic converters and silencers may be altered or replaced from those fitted to the homologated motorcycle.

The number of the final exhaust silencer(s) must remain as homologated. The silencer(s) must be on the same side(s) of the homologated model.

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

Wrapping of exhaust systems is not allowed except in the area of the riders foot or an area in contact with the fairing for protection from heat.

The noise limit for Supersproduction will be 107 dB/A (with a 3 dB/A tolerance after the race).

2.6.7 The following items MAY BE altered or replaced from those fitted to the homologated motorcycle

A special 'one-way' valve can be fitted to the crankcase oil filler opening (to avoid any oil spillage).

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

Any type of spark plug and plug cap may be used.

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

Gaskets and gasket material.

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

Bearings (ball, roller, taper, plain, etc.) of any type or brand may be used.

Fasteners (nuts, bolts, screws, etc.).

External surface finishes and decals on fairing and bodywork.

2.6.8 The following items MAY BE removed

Unused elements of the wiring harness

Instrument and instrument bracket and associated cables.

Tachometer.

Speedometer and associated wheel spacers.

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

Bolt on accessories on a rear sub frame (seat).

2.6.9 The Following Items MUST BE Removed

Turn signal indicators (when not incorporated in the fairing). The openings in the fairing must be covered by a suitable material.

Rear-view mirrors.

Horn.

License plate bracket.

Tool box.

Helmet hooks and luggage carrier hooks

Passenger foot rests.

Passenger grab rails.

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

2.6.10 The following items MUST BE altered

Motorcycles must be equipped with a functional ignition kill switch or button mounted at least on one 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.

All drain plugs must be wired. External oil filter(s) screws and bolts that enter an oil cavity must be safety wired (i.e. on crankcases, oil lines, oil coolers, etc.)

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

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.

Oil cooler must not be mounted on or above the rear mudguard.

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

2.6.11 Additional Equipment

Additional equipment not supplied on the original homologated motorcycle may be added (i.e. data acquisition, computers, recording equipment etc.). **Telemetry is not allowed.**

2.7 SUPERSTOCK TECHNICAL SPECIFICATIONS

Rules intended to limit changes to the homologated motorcycle in the interests of safety.

EVERYTHING THAT IS NOT AUTHORISED AND PRESCRIBED IN THIS RULE IS STRICTLY FORBIDDEN

The motorcycle must be homologated by the original manufacturer only. The model will be eligible for competition for a maximum period of 5 years.

As the name Superstock implies, the machines used are allowed limited modifications. Most modifications are only allowed for safety reasons.

All motorcycles require an FIM homologation (see Art. 2.9). All motorcycles must comply in every respect with all the requirements for Road Racing as specified in these Regulations, unless it is equipped as such on the homologated machine.

The appearance from both front, rear and the profile of the motorcycles must (except when otherwise stated) conform to the homologated shape (as originally produced by the manufacturer). The appearance of the exhaust system is excluded from this rule.

2.7.1 Displacement capacities

4 cylinders	Over 600 cc up to 1000 cc	4-stroke
3 cylinders	Over 750 cc up to 1000cc	4-stroke
2 cylinders	Over 850 cc up to 1200 cc	4-stroke

The displacement capacities must remain at the homologated size. Modifying the bore and stroke to reach class limits is not allowed.

2.7.2 Minimum Weights

The FIM decides the minimum weight value for a homologated model as sold to the public by determining its dry weight.

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). To confirm the dry weight a minimum of three (3) motorcycles are weighed and compared. The result is rounded off to the nearest digit.

The minimum weight for motorcycles will be:-
– Dry weight minus 15 kg for races not taking place partly at night;
– Dry weight minus 11 kg for races taking place partly at night.

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.

At any time of the event, the weight of the whole machine (including the tank) must not be less than the minimum weight with a 1 kg tolerance.

2.7.4 Carburation Instruments

Carburation instruments must remain as homologated.

2.7.5 Fuel

All 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 for full specification)

2.7.6 Machine Specifications

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

2.7.6.1 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 a 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 an 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.

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

2.7.6.2 Front Forks

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

Standard original internal parts of the forks may be modified.

After market damper kits or valves may be installed.

The fork caps can be modified or changed to add spring preload/compression adjusters

Dust seals can be modified, changed or removed providing the fork remains totally oil-sealed.

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.

2.7.6.3 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 positioning (support) brackets may be added to the rear fork by welding or by bolts. Brackets must have rounded edges (with a large radius) viewed from all sides. Fastening screws must be recessed.

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

2.7.6.4 Rear Suspension Unit

Rear suspension unit (shock absorber) may be modified or replaced, 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.

Rear suspension unit spring may be changed.

2.7.6.5 Wheels

Wheels must remain as originally produced by the manufacturer.

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

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

No modifications of the wheel-axles or any fixing and mounting points for front brake calliper are authorised. Spacers can be modified. Modifications to the wheels to keep spacers in place are permitted.

Wheel diameter and rim width must remain as originally homologated.

2.7.6.6 Brakes

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

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

The rear brake caliper bracket may be mounted 'fixed' on the swingarm, but the bracket must maintain the same mounting (fixing) points for the caliper as used on the homologated machine. A modification of these parts is authorized. The swingarm may be modified for this reason to aid the location of the rear brake caliper bracket, by welding, drilling or by using a helicoil.

The 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.

The split of the front brake lines for both front brake callipers must be made above the lower fork bridge (lower triple clamp).

"Quick" (or "dry-brake") connectors in the brake lines are authorised.

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

Additional air scoops or ducts are not allowed.

2.7.6.7 Tyres

See Art. 2.3.6.

2.7.6.8 Foot Rest/Foot Controls

Foot rest/foot controls may be relocated but brackets must be mounted to the frame at the original mounting points. Their two original points of fixture (for the footrest, foot-controls and on the shift shaft) must remain as original. Foot controls linkage may be modified. The original mounting points must remain.

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. (see Diagram A & C).

Non folding footrests must have an end (plug) which is permanently fixed, made of plastic, Teflon® or an equivalent type material (minimum radius 8mm). The plug surface must be designed to reach the widest possible area. The Chief Technical Steward has the right to refuse any plug not satisfying this safety aim.

2.7.6.9 Handle Bars and Hand Controls

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

Handle bars and hand controls may be relocated.

Throttle assembly and **associated cables** may be modified or replaced.

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

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

2.7.6.10 Fairing/Body Work

a) Fairing and body work may be replaced with exact cosmetic duplicates of the original parts, but must appear to be as originally produced by the manufacturer for the homologated machine, with slight differences due the racing use (different pieces mix, attachment points, fairing bottom, etc). The material may be changed. The use of carbon fibre or carbon composite materials is not allowed.

b) Overall size and dimensions must be the same as the original part**.**

c) Wind screen may be replaced with a duplicate of transparent material. The height of the windscreen is free, within a tolerance of +/- 15 mm regarding to the vertical distance from to the upper fork bridge.

d) 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 wheel axle to wheel axle.

e) The original combination instrument/fairing brackets may be replaced, but the use of titanium and carbon (or similar composite materials) is forbidden. All other fairing brackets may be altered or replaced.

f) The original air ducts running between the fairing and the air box may be altered or replaced. Carbon fibre composites and other exotic materials are forbidden. Particle grills or “wire-meshes” originally installed in the openings for the air ducts may be taken away.
Any fixing point(s) for the front/rear wheel stand must be bolted to either, the frame, engine block or rear fork (swingarm). No element of this support can exceed any part of the fairing. Only modifications made to the fairing in order to accept this element are allowed. The maximum clearance between this device and the fairing is 5 mm.

g) 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 litres). The lower edge of openings in the fairing must be positioned at least 50 mm above the bottom of the fairing.

h) The lower fairing must incorporate an opening of Ø 25 mm diameter in the front lower area. This opening must remain closed in dry conditions and must be only opened in wet race conditions.

i) Front mudguards may be replaced with a cosmetic duplicate of the original parts and may be spaced upward for increased tyre clearance. This modification must guarantee absolute security ("dzeus" fasteners, clips, tie-raps, clamps, etc. are not permitted). ‘Flexible’ mounts are not permitted.

j) Rear mudguard fixed on the swing arm **can be modified or changed but the original profile must be respected.**

2.7.6.11 Fuel Tank

Fuel tank filler caps may be altered or replaced from those fitted to the homologated motorcycle. The fuel tank filler cap can be replaced by two (maximum) valves of 'aviation' type for a quick fill type. The maximum diameter of the fillers may be 76 mm.

The fuel tank may be modified or constructed in aluminium in order to obtain a maximum capacity of 24 litres; however the original profile (when viewed from the side) must be based the homologated model.

The top part of the tank must be modified by adding a small, plate in order to assemble and fit the quick fillers.

Other refuelling systems are allowed providing they use a closed circuit system and are leak proof.

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

The sides of the fuel tank may be covered by a protective part made of a composite material. These protectors must fit the shape of the fuel tank.

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.

2.7.6.12 Seat

Seat, seat base and associated body work 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.

The seat/rear cowl replacement must allow for proper number display.

2.7.6.13 Wiring Harness

The original wire-loom may be modified as indicated hereafter:
The unused wire loom elements supplying current to direction indicators, horn, ignition contact and key-lock, etc, may be unplugged and/or removed (no cutting is allowed).

The wire-loom and the key lock may be relocated.

Cutting of the wiring harness is not allowed.

2.7.6.14 Battery

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

2.7.6.15 Radiator, cooling system and oil coolers

Additional radiators and/or oil coolers are not allowed.

Protective meshes can be added in front of the oil and/or water radiator(s).

The radiator tubes to and from the engine can be changed, but the system must be maintained, with its original tanks.

Radiator fan and wiring may be removed. Thermal switches, water temperature sensor and thermostat can be removed inside the cooling system.

2.7.6.16 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 airbox.

2.7.6.17 Carburettors

No modifications are allowed.

Carburettor jets, slide spring and needles may be replaced.

The slide metering holes may be changed.

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

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

2.7.6.18 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.

No modifications of fuel pump or pressure regulator are allowed.

2.7.6.19 Fuel Supply

Fuel lines may be replaced but the 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.

2.7.6.20 Cylinder Head

No modifications are allowed.

No material may be added or removed from the cylinder head.

The cylinder head gasket may 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.

2.7.6.21 Camshaft

No modifications are allowed.

At the technical checks: for direct cam drive systems, the cam lobe lift is measured; for non direct cam drive systems (i.e. with rocker arms), the valve lift is measured.

The timing of the camshaft is free, however no machining of the camshaft sprocket is authorized.

2.7.6.22 Cam Sprockets

No dimensional modifications are allowed.

2.7.6.23 Crankshaft

No modifications are allowed (including polishing and lightening).

2.7.6.24 Oil Pumps and Oil Lines

No pump modifications are allowed.

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.

2.7.6.25 Connecting Rods

No modifications are allowed (including polishing and lightening).

2.7.6.26 Pistons

No modifications are allowed (including polishing and lightening).

2.7.6.27 Piston Rings

No modifications are allowed.

2.7.6.28 Piston Pins and Clips

No modifications are allowed.

2.7.6.29 Cylinders

No modifications are allowed.

2.7.6.30 Crankcase and all other Engine Cases (i.e. ignition case, clutch case, etc.)

No modifications **to the crankcases** are allowed (including painting, polishing and lightening).

Lateral (side) covers may be altered, modified or replaced. If replaced, the cover must be made in material of same or higher specific weight **and the total weight of the cover must not be less than the original one.**

All engine cases containing oil and which could be in contact with the ground during (after) a crash must be protected by a second cover made from composite materials, type carbon or Kevlar®.

2.7.6.31 Transmission/Gearbox

An external quick-shift system on the gear selector (including cable and potentiometer) may be added.

Other modifications to gearbox or selector mechanism are not allowed.

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

The sprocket cover can be modified or eliminated.

2.7.6.32 Clutch

Only the clutch springs and the discs (of which the number must remain as on the homologated model) may be changed.

2.7.6.33 Ignition/Engine Control System

The ignition control box (CDI) must be either:

a) As Homologated and inner software can be changed.
b) Or the CDI kit model (produced and/or approved by the machine Manufacturer) can be used. A special connector can be used to connect CDI and the original wire loom.
The retail price of the full system (software included) must not be more than 1.5 times higher than the price of the original system.
c) In addition to option a) and b) mentioned above, external ignition and/or injection module/s can be added to the standard production ECU, but their total retail price cannot be higher than the complete CDI kit.

2.7.6.34 Generator, alternator, electric starter

No modifications are allowed.

The electric starter must operate normally and always be able to start the engine during the event.

2.7.6.35 Exhaust System

Exhaust pipes, and silencers may be altered or replaced. **Catalytic converters must be removed.**

The number of the final exhaust silencer(s) must remain as homologated. The silencer(s) must be on the same side(s) of the homologated model.

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

Wrapping of exhaust systems is not allowed except in the area of the riders foot or an area in contact with the fairing for protection from heat.

The noise limit for Superstock will be 107 dB/A (with a 3 dB/A tolerance after the race).

2.7.6.36 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 for safety wire, but any intentional weight saving modifications are not allowed.

Fairing/body work fasteners may be changed to the quick disconnect type.

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

2.7.7 The following items MAY be altered or replaced from those fitted to the homologated motorcycle.

A special one way valve can be fitted to the crankcase oil filler opening (to avoid any oil spillage).

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.

Gaskets and gasket materials (with the exception of cylinder base gasket).

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

Instruments, instrument bracket(s) and associated cables,

Painted external surface finishes and decals.

Headlamp and rear lamp, only for races taking place partly at night.

Material for brackets connecting non original parts (fairing, exhaust, etc) to the frame (or engine) cannot be made from titanium or fibre reinforced composites.

Protective covers for engine, frame, chain, footrests, etc. can be made in other materials like fibre composite material if these parts do not replace original parts mounted on the homologated model.

2.7.8 The Following Items MAY BE Removed

Headlamp, rear lamp, only for races not taking place partly at night.

Tachometer.

Speedometer.

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

Bolt on accessories on a rear sub frame.

2.7.9 The Following Items MUST BE Removed

Turn signal indicators (when not incorporated in the fairing). The openings in the fairing must be covered by a suitable material.

Rear-view mirrors.

Horn.

License plate bracket.

Tool box.

Helmet hooks and luggage carrier hooks

Passenger foot rests.

Passenger grab rails.

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

2.7.10 The Following Items MUST BE Altered

Motorcycles must be equipped with a functional ignition kill switch or button mounted at least on one 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.

All drain plugs must be wired. External oil filter(s) screws and bolts that enter an oil cavity must be safety wired (i.e. on crankcases, oil lines, oil coolers, etc.)

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

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.

2.7.11 Additional Equipment

Additional equipment not on the original homologated motorcycle may not be added. (i.e data acquisition, computers, recording equipment etc.). Telemetry is not allowed. **The only** potentiometers and sensors **allowed are those fitted as original equipment on the motorcycle as homologated.**

2.9 FIM HOMOLOGATION PROCEDURE FOR SUPERSTOCK, SUPERPRODUCTION AND SUPERBIKE

ELIGIBILITY REQUIREMENTS

- Motorcycles must have a valid international homologation for road use or a national homologation for road use obtained in one of the signatory countries of the 1968 Vienna Convention.
- The motorcycles must represent machines of mass production.
- The motorcycles must be of current production or for sale to the public within 90 days of the homologation being granted by the FIM.
- The motorcycles are to be sold for every day use.
- At the time of the FIM homologation the inspected motorcycles must be completely equipped with all road going equipment. (I.e. full lighting equipment).
- All motorcycles must comply in every respect with all the requirements for road racing as specified in this Appendix.

2.9.1 Requirements for an FIM homologation

Motorcycles eligible for an FIM homologation must meet the following requirements:

- Only the original manufacturer may present the motorcycle for homologation.
- The manufacturer must be a holder of an FIM Manufacturer's licence.
- If the motorcycle is presented with an engine from a motorcycle manufacturer different from the manufacturer requesting the homologation, a permission or commercial agreement must be presented at time of the homologation request.
- The motorcycle must have a manufacturer's certificate of origin.
- The deadlines stated in these rules are the number of days prior to the deadline that the requests and documents must arrive in the FIM CCR Secretariat.

N.B: If for marketing reasons or legal requirements, another type of carburetion instruments is fitted to the model in a particular geographical area, these instruments must be replaced for competition using the homologated instrument.

2.9.2 Minimum production quantities

The annual production figures of the manufacturer who requests the homologation does not include the production quantities of 50 cc automatics and 50 cc scooters, when establishing the minimum quantity of motorcycles required for a FIM homologation.

1) Superstock and Superproduction

Proof of production quantities must be provided by certified documentation.

- All manufacturers must produce a minimum quantity of 1000 units before the date of homologation. These motorcycles must be identical to the homologated model with the same specifications and available worldwide. The minimum number must have been reached prior to the homologation inspection. The homologated motorcycle must be for sale to the public within 90 days of the homologation inspection

- A minimum quantity of 25 units must be shown at the time of homologation inspection.

- The FIM will withdraw the homologation if these rules are not respected.

2) Superbike

A motorcycle with a valid Superstock homologation may, having received formal request and payment from the original manufacturer, be homologated at any time for the Superbike class (Such homologation will not require new documentation or a factory visit).

Proof of production quantities must be provided by certified documentation.

FIRST HOMOLOGATION:

A manufacturer requesting a homologation for the first time in its history must follow the procedure shown below.

- For a first time homologation, the manufacturer must produce a minimum quantity of 150 motorcycles (75 units at the time of the first homologation inspection and 75 units within a six month period following the first homologation inspection).

- The motorcycles must be for sale to the public within 90 days of the homologation being granted by the FIM.

- The FIM will withdraw the homologation if these rules are not respected.

ADDITIONAL HOMOLOGATIONS:

Requirements for manufacturers which have previously homologated a Superbike:

- The manufacturers producing over 100,000 motorcycles per year must produce a minimum of 500 units. These motorcycles must be identical to the homologated model with same specifications and available worldwide. The minimum of 500 units must have been reached prior to the homologation inspection.

- The manufacturers producing over 50,000 motorcycles and less than 100,000 motorcycles per year must produce a minimum of 250 units. These motorcycles must be identical to the homologated model with same specifications and available worldwide. The minimum of 250 units must have been reached prior to the homologation inspection.

- The manufacturers producing less than 50,000 motorcycles must produce a minimum of 150 units. These motorcycles must be identical to the homologated model with same specifications and available worldwide. The minimum of 150 units must have been reached prior to the homologation inspection.

- The motorcycles must be for sale to the public within 90 days of the homologation being granted by the FIM.

- The FIM will withdraw the homologation if these rules are not respected.

2.9.3 Dates for application, submissions & publications

- The deadline for receiving requests for homologation at the FIM CCR Secretariat is 45 days before the homologation inspection is to take place.

- A newly homologated motorcycle may race in the FIM Championship events 30 days following the homologation inspection.

- Motorcycles homologated by January 31st may be used in the first race of the season even if the event is less than 30 days following the homologation.

- After the homologation inspection, manufacturers are required to send the completed and signed Homologation forms 1, 2 and 3, together with all relating documentation and drawings, to the FIM CCR Secretariat.

- The deadline for receiving the completed, signed, and corrected homologation documents is 7 days following the homologation inspection. The documents and drawings have to be sent in paper form and in electronic form (*.pdf, *.jpg, *.doc ,*.txt to ccr@fim.ch,cti@fim.ch)

- Within 7 days of the new homologation documents arriving at the FIM CCR Secretariat, an updated Homologation list will be published.

- At any time, copies of the homologation form 1, 2 & 3 drawings and photographs (DIN A4 size) and in electronic form may be requested from the FIM CCR Secretariat and will be available on the FIM website.

2.9.4 Application, Inspection and Homologation

- Only the original manufacturer may submit a request to the FIM CCR Secretariat for the homologation of a motorcycle.

- The original manufacturer may apply for a new homologation, a maximum of 2 times per year, in each racing class.

- The inspection of the motorcycle presented for homologation will be carried out according to the information requested on the forms produced by the FIM (Homologation Form 1, 2 and 3).

- The inspection must be carried out by an inspector appointed by the FIM CCR.

- The inspector must satisfy himself that the claims made on the production certificate (Form 2) are correct.

- The inspector will select at random 2 motorcycles for detailed inspection. One of these two must be disassembled sufficiently for all relevant measures to be taken. Inspection and disassembling will take place immediately once the selection has taken place. The inspector will remain present throughout the examination.

- The manufacturer shall at all times be responsible to complete the homologation documents with the correct information. All dimensions must be given according to the metric system, excluding wheel dimensions.

- After the inspection, the inspector will sign the completed certificates of homologation. These signed homologation forms indicate that the manufacturer will comply with the specifications mentioned on the homologation forms.

- Homologation documents with missing information will be returned to the manufacturer for correction. Corrected homologation documents must be returned immediately to the CCR Technical Members for verification of the corrections trough the FIM CCR secretariat

- The homologation forms will be studied by the CCR Technical Members and the FIM CCR Secretariat, to confirm that they are complete and correct prior to granting the homologation.

- Once a motorcycle has been homologated, it may be used for a maximum period of 5 years, or until such a time that the homologated motorcycle no longer complies with the technical rules.

- A manufacturer can request an extension of a homologation before the end of the 5 year homologation period. The FIM may grant an extension of the homologation period. The extension will be for an additional 2 years. The fee for this extension of the homologation period will be double the normal fee.

- A homologation or an extension of the homologation will be granted only if the fee has been paid.

2.9.5 Product Update

- Any change in the specifications of the following parts of a FIM homologated motorcycle, will require a new homologation:

- Crankcase
- Cylinder
- Cylinder head
- Crankshaft, connecting rods
- Camshafts, valves
- Carburation instruments
- Frame: main dimensions [in relation to wheelbase, caster, steering head angle, relative location of the swing-arm, relative location of rear shock absorber(s) and linkages]
- New engine prefix number
- New frame prefix number

2.9.6 Homologation for Product Update

- Product updates on other parts than frame and engine, such as the fairing, wheels, etc can be granted by a homologation update.

- In case of homologation modification update, the manufacturer must send a notice to the FIM CCR Secretariat. The deadline for receiving requests for homologation update is 30 days before the first race of the new model that will be used in competition.

- With the formal notice, the manufacturer is required to send the Homologation forms 1, 2 and 3, together with all relating documentation about the product update (the drawings of the old and new products /parts, etc.) including a statement from which VIN-Number on the Product update is applicable, to the FIM CCR Secretariat, both in paper and electronic form.

- Only motorcycles, which have higher VIN number than the ones stated by the manufacturer are allowed to race using the new updated parts.

- The minimum production quantities valid for a homologation modification update are the same quantities as for new motorcycle homologation.

- The FIM will charge half of the homologation fee for an extension of a homologation or a homologation update.

- All forms requested and necessary for the homologation modification update must arrive at the FIM CCR Secretariat not later than 30 days before the modified parts will be used in competition.

- The FIM will withdraw the homologation if these rules are not respected.

2.9.7 Carburation Instruments for Superbikes

- The carburation instruments must be use un-modified either as the original homologated carburation instrument or as the homologated optional carburation instrument.

- The only modifications allowed to the original or optional homologated carburation instruments are jets, needles, throttle valves, fuel injectors and bell mouths.

- The original manufacturer must use the following criteria for the designing and making of the optional homologated carburation instruments:

a) There is no limit for the intake size of an engine equipped either by carburettors or fuel injection systems.
b) The optional carburettor / injector body material must remain the same as used on the original homologated carburation instruments.
c) A minimum number of optional carburation instruments must be available as spare parts and be included in the manufacturer's racing parts lists. All manufacturers must have a minimum of 15 sets available through traditional distributorships worldwide for the life of the homologation. The price to the public of the optional carburation instruments must not exceed twice the manufacturers suggested retail price of the original homologated carburation instrument in the country of origin. This price must be indicated on the Homologation Form.
d) The motorcycle manufacturer may submit only one optional carburation instrument for each model at the time of homologation.
e) The motorcycle manufacturer must supply a sample set of the original and optional carburation instruments to the FIM for use as comparison samples at the World Superbike events.
f) The motorcycle manufacturer must provide evidence that the minimum of 15 sets of optional carburation instruments have been manufactured.
g) The optional carburation instruments must be available for at least three years after the homologation date.
h) The carburation instrument homologation will be valid for the same period as the homologated motorcycle.
i) An additional model of optional carburation instruments may be homologated during the life of the machine's homologation. These carburation instruments must meet the same requirements as the original modified instruments. This is to allow development after the original homologation.

- The optional carburation instruments may only be homologated at the same time as a new homologation. [see number i) above for additional optional carburation instruments]

2.10 FUEL, OIL AND COOLANTS

All motorcycles must be fuelled with unleaded petrol, as this term is generally understood.

2.10.1 Physical properties for unleaded fuel

2.10.1.1 Unleaded petrol must comply with the FIM specification.

2.10.1.2 Unleaded petrol will comply with the FIM specification if:

(a) It has the following characteristics:

Property	Units	Min.	Max.	Test Method
RON		95.0	102.0	ISO 5164
MON		85.0	90.0	ISO 5163
Oxygen	% m/m		2.7	ASTM D 5622 ASTM D 4815 (1)
Nitrogen	% m/m		0.2	ASTM D 4629
Benzene	% v/v		1.0	EN 238
RVP	kPa		90	EN 12
Lead	g/l		0.005	EN 237
Density at 15°C	kg/m^3	720.0	**775.0**	ASTM D 4052
Oxidation stability	minutes	360		ASTM D 525
Existent gum	mg/100 ml		5.0	EN ISO 6246
Sulphur	mg/kg		**50**	ASTM D 5453
Copper corrosion	rating		C1	ISO 2160
Distillation:				
E at 70°C	% v/v	**22**	50.0	ISO 3405
E at 100°C	% v/v	46.0	71.0	ISO 3405
E at 150°C	% v/v	75.0		ISO 3405
Final Boiling Point	°C		**210**	ISO 3405
Residue	% v/v		2.0	ISO 3405
Appearance	Clear and bright		Visual Inspection	

Property	Units	Min.	Max.	Test method
Olefins	% v/v		18.0	ASTM D 1319 (2)
Aromatics	% v/v		**35.0**	ASTM D 1319 (2)
Total diolefins	% m/m		1.0	GCMS/ HPLC

Notes:

(1) GC/MS methods may also be applied to fully deconvolute the GC trace.

(2) The above maximum values for olefins and aromatics are corrected for fuel oxygenate content according to clause 13.2 of ASTM D 1319:1998.

The test method for olefins and aromatics of two stroke mixtures will be gas chromatography. In the case of a dispute, the test method given in the EN 228:2000 standard will be used.

(b) The total of individual hydrocarbon components present at concentrations of less than 5% m/m must constitute at least 30% m/m of the fuel. The test method will be gas chromatography and/or GC/MS.

(c) The total concentration of naphthenes, olefins and aromatics classified by carbon number must not exceed the values given in the following table:

% (m/m)	C4	C5	C6	C7	C8	C9+
Naphthenes	0	5	10	10	10	10
Olefins	5	20	20	15	10	10
Aromatics	-	-	1.2	35	35	30

The total concentration of bicyclic naphthenes and bicyclic olefins may not be higher than 1% (m/m). The test method used will be gas chromatography.

(d) Only the following oxygenates are permitted:

methanol, ethanol, iso-propyl alcohol, iso-butyl alcohol, methyl tertiary butyl ether, ethyl tertiary butyl ether, tertiary amyl methyl ether, di-isopropyl ether, n-propyl alcohol, tertiary-butyl alcohol, n-butyl alcohol, secondary-butyl alcohol

(e) Manganese is not permitted in concentrations above 0.005 g/l. For the present this is solely to cover possible minor contamination by other fuels. The fuel will contain no substance that is capable of an exothermic reaction in the absence of external oxygen.

Lead replacement petrols, although basically free of lead, are not an alternative to the use of unleaded petrol. Such petrols may contain unacceptable additives not consistent with the FIM Fuel Regulations.

2.10.3 Air

Only ambient air may be mixed with the fuel as an oxidant.

2.10.4 Primary Tests

2.10.4.1 The FIM may require tests of fuels to be administered before, or at the time of delivery to, an event at which such fuels are to be used.

2.10.4.2 The FIM may request any person or organisation, being a potential supplier of fuel, to submit a sample for testing for conformity with the fuel specifications.

2.10.5 Fuel Sampling and Testing

1) The FIM Technical Delegate has the sole responsibility for the administration and supervision during the taking of fuel samples.

2) Motorcycles selected for fuel controls will usually be amongst the first three finishers, and will be directed to the "parc fermé" and the fuel tanks removed for weight controls.

3) Other finishers will be chosen at random for fuel controls. A Technical Steward will be posted at the entrance to the pit box of the selected team.

   Fuel sampling may take place in the pit box or in the ‘’parc fermé’’.

4) The fuel to be tested will be transferred into two bottles (2 samples of maximum 1ltr each), marked "A" and "B" and identified by reference to the machine from which the sample was taken. The bottles will be closed, sealed and labelled FIM Technical Delegate.

5) Only new bottles will be used for the fuel samples and only new materials will be used to transfer the fuel.

6) The Fuel Sample Declaration form will be filled out immediately, containing all information as shown in the example sheet, including the riders and machines identity, date and place of fuel sampling. A responsible team member will sign this declaration, after verifying that all the information is correct.

7) Sample "A" will be sent to the FIM appointed laboratory, accompanied by a copy of the Fuel Sample Declaration form. Costs for the analyses of sample "A" will be paid by FIM.

8) Sample "B" will be handed over to the FIM for safeguarding in case of protests and/or requirement of a counter-expertise by the FIM appointed laboratory. Costs for the analyses of sample "B" will be paid by the team concerned.

9) Both samples will be transported by an authorised courier.

10) The laboratory must deliver the results of the fuel sample analyses to the FIM, as soon as possible after receipt of the samples, and before the Friday evening of the following event.

11) In the case of non-conformity, the laboratory must notify, as soon as practical after receipt of the results, the FIM, the International Jury and the rider/team representative concerned.

    Within 48 hours of the receipt of the notification of the results of the laboratory test of sample "A", the team must notify the FIM and the International Jury, if counter-expertise is required (or not required) for sample "B".

    Failure of the sample to correspond to the FIM fuel specifications will automatically result in the disqualification of the competitor. The result of the competitor's fuel sample analysis ("A" or "B" sample) more favourable to the competitor will be taken into account.

2.10.6 Fuel Storage

When the fuel is supplied by the Organiser, there must be officially designated and controlled fuel storage areas. Outside these areas, fuel may only be stored in metal containers.

A maximum of 60 litres of fuel stored in a sealable can, is allowed in the competitor's pit. A quick-fill installation (i.e. fuel tower) for refuelling is allowed.

The officially designated storage and supply area must be in conformity with the building criteria. Fire fighting equipment, protective devices and staff must conform to the requirements imposed by the local authorities and by-laws.

The organiser must have fire extinguishers of a size and type approved by the local by-laws, available to each competitor in the pit area.

2.10.7 Coolants

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

2.11 PROTECTIVE CLOTHING AND HELMETS

2.11.1 Riders must wear a complete leather suit with additional leather padding or other protection on the principal contact points, knees, elbows, musters, hips etc.

2.11.2 Linings or undergarments must not be made of a synthetic material which might melt and cause damage to the riders' skin.

2.11.3 Riders must also wear leather gloves and boots, which with the suit provides complete coverage from the neck down.

2.11.4 Leather substitute materials may be used, providing they have been checked by the Chief Technical Steward.

2.11.5 Use of a back protector is highly recommended.

2.11.6 Riders must wear a helmet which is in good condition, provides a good fit and is properly fastened.

2.11.7 Helmets must be of the full face type and conform to one of the recognised international standards:

- Europe ECE 22-05 ‘P’
- Japan JIS T 8133 : 2000
- USA SNELL M 2005

2.11.7 Visors must be made of a shatterproof material.

2.11.8 Disposable "tear-offs" are permitted.

2.11.9 Any question concerning the suitability or condition of the riders clothing and/or helmet shall be decided by the FIM Technical Delegate/Chief Technical Steward, who may, if he so wishes, consult with the manufacturers of the product before making a final decision.

2.12 PROCEDURES FOR TECHNICAL CONTROL

The team is at all times responsible for his machine.

2.12.1 The Chief Technical Steward must be in attendance for an event at least 1 hour before the technical verifications are due to begin. He must inform the Clerk of the Course, the Jury President and the FIM Technical Delegate of his arrival.

2.12.2 The Chief Technical Steward must ensure that all Technical Stewards, appointed for the event, carry out their duties in a proper manner.

2.12.3 The Chief Technical Steward shall appoint the Technical Stewards to individual posts for the race, practices and final control.

2.12.4 Technical inspections will only be carried out when the technical specification form of the motorcycle has been distributed by the Organiser (before/during the preliminary controls).

2.12.5 One rider, or his mechanic, must be present with the machine for Technical control within the time limits stated in the Supplementary Regulations. The maximum number of persons present at the technical verification will be the rider, plus two others. In addition, the Team Manager will also be allowed.

2.12.6 The FIM Technical Delegate/Chief Technical Steward must inform the International Jury of the results of the Technical control. The FIM Technical Delegate/Chief Technical Steward will then draw up a list of accepted machines and submit this list to the Clerk of the Course.

2.12.7 The FIM Technical Delegate/Chief Technical Steward has the right to inspect any part of the motorcycle at any time of the event.

2.12.8 Any rider failing to report as required below may be disqualified from the meeting. The International Jury may forbid, any team who does not comply with the rules, or any rider who can be a danger to other participants or to spectators, to take part in the practice sessions or in the races.

2.12.9 The Technical control must be carried out in accordance with the procedure and times fixed in the Supplementary Regulations of the event.

2.12.10 The FIM Technical Delegate/Chief Technical Steward will refuse any machine that does not have a correctly-positioned positive transponder attachment. The transponder must be fixed to the motorcycle in the position and orientation as shown in the Timekeeping information given to teams pre-season and available at each event. Positive attachment of the transponder bracket consists of a minimum of tie-wraps, but preferably by screw or rivet. Velcro or adhesive alone will not be accepted. The transponder retaining clip must also be secured by a tie-wrap.

2.12.11 The rider or mechanic must present a clean motorcycle and in conformity to the FIM rules. He must also present a duly filled in and confirmed technical card.

2.12.12 An overall inspection of the motorcycle must be carried out in conformity with the FIM rules. Accepted motorcycles will be marked with paint or a sticker.

FIM Technical Delegate/Chief Technical Steward has the final authority in case of a dispute on the conformity of the parts in question and for acceptance thereof.

2.12.13 The rider is permitted to use whichever motorcycle he chooses from the accepted motorcycles.

2.12.14 Before each practice the Technical Steward must confirm that the motorcycle has passed the Technical control by checking the Technical control sticker before the motorcycles go on the track.

2.12.15 Only accepted motorcycles may be used in a race and practice. A change of motorcycle is accepted in accordance with the prescriptions of the sporting appendix.

2.12.16 All machines must be controlled before they are placed in the closed park area. Only one (1) motorcycle per team qualified for the race is accepted in the closed park area.

2.12.17 Approximately 30 minutes after the Technical control has been completed, the FIM Technical Delegate/Chief Technical Steward must submit to the International Jury list of accepted motorcycles and riders in the individual classes.

2.12.18 If a motorcycle is involved in an accident, the FIM Technical Delegate/Chief Technical Steward must check the machine, together with the helmet and clothing of the rider involved, to ensure that no defect of a serious nature has occurred.

If a machine was stopped with a black flag with orange disc, the FIM Technical Delegate/Chief Technical Steward must check the machine.

In both cases, it is the responsibility of the team to present the machine (together with helmet and clothing of the fallen rider) for this re-examination in case they wish to continue.

If the helmet is clearly defective, the Chief Technical Steward must retain this helmet. The organiser must send this helmet, together with the accident and medical report (and pictures and video, if available) to the Federation of the rider. If there are head injuries stated in the medical report, the helmet then must be sent to a neutral institute for examination.

2.12.19 The rider must present his equipment. The helmet must be marked. Contracted teams may present their equipment for Technical control in their team's pit box.

2.12.20 The team may present several motorcycles for the Technical control.

2.12.21 Noise should be checked by random choice during practice as well as after the race. On request of rider, team or mechanic, noise of their own motorcycles can be checked at any time during the event.

2.12.22 Weight should be checked by random choice during practices as well as after the race.

The random weight check during practices will be held with minimum disturbance to the riders. The weight scales will be placed in the pit-lane. The actual place is decided by the FIM Technical Delegate/Chief Technical Steward.

On request of rider, team or mechanic, weight and noise of their own motorcycles can be checked at any time during the event.

2.13 VERIFICATION GUIDELINES FOR TECHNICAL STEWARDS

2.13.1 Verification

- Make sure all necessary measures and administrative equipment are in place at least 1 hour before the Technical control (see separate list) is due to open (time mentioned in the Supplementary Regulations).

- Decide who is doing what and note decisions. "Efficiency" must be the watchword. Always keep cheerful and remember the reasons for Technical controls: SAFETY AND FAIRNESS.

- Be well informed. Make sure your FMN has supplied you with all technical "updates" that may have been issued subsequent to the printing of the Technical Regulations. Copies of all homologation documents must be in your possession.

- Inspection must take place under cover with a large enough area (min. surface 100 sq. metres).

- Weighing apparatus must be accurate and practical. The scale must be certified in the current year.

- Rules regarding noise level and measurement must be respected.

All machines will be required for weight and/or noise check at the pre-race technical inspection.

The scales and noise meter will be available to the teams or riders for pre-race checking in the technical Technical control area.

Noise test must take place in a clear area adjacent to the Technical control at least 5 metres from any possible noise reflecting obstruction.

The riders and teams must be aware that the weight and noise will be controlled at random during practice in the pit-lane, at the end of dry Superpole and at the end of each race.

Claiming that the noise and weight were not officially controlled before the race will not be grounds for appeal. Conformity of the rules is the responsibility of the rider and the team (or the participants).

The FIM Technical Delegate/Chief Technical Steward reserve the right to spot check the weight and noise of any machines on pit row during free practice and official practice. This can occur at any time during the free practice and in the first forty minutes of any official (timed) practice. This will be carried out with the least possible inconvenience to the rider or the team.

Machines arriving later than the first free practice must be controlled in the technical control area.

At the conclusion of the inspections, a small sticker or coloured mark will be placed on the frame indicating that the machine had passed inspection

The FIM Technical Delegate/Chief Technical Steward must re-inspect any machine that has been involved in an accident.

The Technical Stewards must be available, based on instructions from the FIM Technical Delegate/Chief Technical Steward, to re-inspect any motorcycle for compliance during the meeting.

2.13.2 Preparations, procedures

At each circuit, an area must be designated as the Technical control Area. In this area, under the control of the FIM Technical Delegate/Chief Technical Steward, suitable equipment will be available to conduct proper inspections.

The Technical control will be carried out in accordance with the schedule set out in the Supplementary Regulations.

Technical Stewards must be available throughout the entire event to check motorcycles and equipment as required by the FIM Technical Delegate/Chief Technical Steward.

Presentation of a machine will be deemed as an implicit statement of conformity with the technical regulations.

The Technical Stewards must inspect the motorcycles for obvious safety omissions.

The Technical Stewards must inspect that the motorcycle conforms to all technical rules laid out in the Regulations.

During the technical inspection in the closed park the mechanics must assist with the inspections. A maximum of four (4) team members per rider is allowed in the closed park during the post-race technical inspection. Downloading of data is allowed in the closed park.

Representatives of the tyre manufacturers are allowed in the closed park.

2) Practice

– **Dry Practice**

Every machine used in free or official practice may be checked.

The minimum checks are weight and noise. The FIM Technical Delegate/Chief Technical Steward may request other checks.

– **Wet practice**

The FIM Technical Delegate/Chief Technical Steward may perform certain checks during/after a wet pracice.

3) Final inspection at the end of the race

Machines may be checked at least for the following compliance points:

– Weight: The weight will be checked in the condition that the machine has finished the race. No elements can be added to the machine, neither fuel, oil, water nor tyres.

– Noise: compliance with max noise limit

– Carburettors/throttle bodies + injectors:
Measurement and inspection of both inlet and outlet tract and injection I homologation points

– Engine: Engine(s), chosen at random, may be checked internally for capacity and compliance with Art. 2.4 (Superbike), Art. 2.6 (Superproduction) and Art. 2.7 (Superstock).

The FIM Technical Delegate/Chief Technical Steward may require a team to provide parts or samples, as he may deem necessary to confirm compliance with the rules.

4) Appointment and attendance

The Technical Stewards must be present and available during the opening hours of the Technical control area. FIM Technical Delegate/Chief Technical Steward will instruct the Technical Stewards to verify motorcycles for compliance with technical and safety rules.

5) Administration day/ Technical control:

For all contracted teams — min. 6 people

Tasks: Inspection of machine safety, clothing and helmets
(NOISE AND WEIGHT CONTROL)

For all non-contracted teams: — min. 3 people
The inspection will take place in the technical Technical control area

Task: Inspection machine safety, clothing and helmets
(NOISE AND WEIGHT CONTROL)

Administration tasks: — 1 person

a) Thursday/Friday:

Technical control: free practice, qualifying and official qualifying sessions

Task: Inspection of machine safety: Noise and Weight: — 6 people

Inspection of crashed machines and Technical controls — 2 People

Administration tasks: — 1 person

b) Saturday/Sunday: Technical control during race day

Before race: safety checks on start grid: — as required
After race: Technical control noise weight and carburation instruments — 6 people

Displacement checks — 2 people

Administration — 1 person

NOTE: This is the required minimum of Technical Stewards. The number may of course be higher.

All final verification points to be decided in co-operation with the International Jury President and the FIM Technical Delegate/Chief Technical Steward. Post-race checks are under extreme pressure. It is important to be very well organised.

Chief Technical Steward must report to the Jury after the verifications.

6) Minimîum Equipment list

– Revolution meter
– Sound meter and calibrator
– Slide caliper
– Depth gauge
– Steel measuring tape
– Seals
– Weighing apparatus (scales) with calibration weights
– Tools for measuring engine capacity
– Tools for measuring valve lift
– Weighing apparatus for investigation of valve weights
– Colour for marking parts
– Magnet for materials testing
– Computer to read homologation CD-Rom

Documents list

– Regulations of the CURRENT YEAR
– Supplementary Regulations
– Homologation documents
– CD-Rom with homologations
– Technical control forms
– Writing materials

OFFICIAL FIM SPECIFICATION DECLARATION

All sections must be completed by the Technical Steward in the presence of the rider or rider's representative.

Particulars of the Event: _____

Title of the event: _____ IMN N°: _____
Place: _____ Date of the event: _____

Particulars of the Rider: _____

Rider's Name: _____ Rider's first name: _____
Nationality: _____ Date of birth: _____
Rider's Licence N°: _____ Medical examination: _____

Section 1	**1st Machine**	**2nd Machine**
(1 FMN Senior Technical Steward + 1 Assistant)		
Administration		
Equipment and protective clothing		
Helmet (Standard + No.)		
Machine (Make + Type)		
Bore and Stroke		
Frame No.		
Section 2		
(1 FMN Senior Technical Steward + 1 Assistant)		
Noise dB/A		
Ignition cut-out alternator		
Section 3		
(1 FMN Senior Technical Steward + 1 Assistant)		
Fire retardant material		
Weight		
Fuel tank with fix points		
Oil catch tank		
Breather system (4-stroke)		
Section 4		
(1 FMN Senior Technical Steward + 1 Assistant)		
Brakes/Tyres		
Bearing (Wheels, steering unit)		
Number + Plates		
Fairing		
Throttle control		
Oil drain/Filler plugs, etc. wired		
Ground clearance		

OFFICIAL FIM SPECIFICATION DECLARATION

(Sections V and VI apply to Superbike, Superproduction and Superstock machines only)

Section 5 – Homologation	**1st Machine**	**2nd Machine**
(2 FMN Senior Technical Stewards)		
Original material type: Cylinder(s)		
Cylinder head(s), Crankcase,		
Gearbox shell and		
Fuel tank		
Clutch wet/dry		
Induction and exhaust system Number of valves and/or ports		
Fuel injection, manifold type (only if homologated).		
Frame, front forks, rear swing arm and linkage		
Streamlining, fairing, rear parts, mudguards		
Section 6		
(2 FMN Senior Technical Stewards)		
Carburettor/Injector choke size		
Breather system		

Comments: _____

_____

_____

_____

Name of Technical Steward: _____

International Official's Licence N°: _____

Acceptance of a machine for competition does not preclude the possibility of further post-race control to ensure compliance with the competition Technical rules.

Acceptance stamp of
Technical Steward

I hereby declare that the
information given above
is accurate in every respect

Signature: _____ Rider's signature: _____

2.14 NOISE CONTROL

Noise limits in force

Noise will be controlled to: Max. 107 dB/A measured at a mean piston speed of 11 m/sec. The fixed RPM specified in Art. 2.12.6 may be used.

2.14.1 With the microphone placed at 50 cm from the exhaust pipe at an angle of 45° measured from the centre-line of the exhaust end and at the height of the exhaust pipe, but at least 20 cm above the ground. If this is not possible, the measurement can be taken at 45° upwards.

2.14.2 During a noise test, machines not equipped with a gear box neutral must be placed on a stand.

2.14.3 The silencers will be marked when they are checked and it is not allowed to change them after the verification, except for any spare silencer which has also been checked and marked.

2.14.4 The rider shall keep his engine running out of gear and shall increase the engine speed until it reaches the specified Revolutions Per Minute (RPM). Measurements must be taken when the specified RPM is reached.

2.14.5 The RPM depends upon the mean piston speed corresponding to the stroke of the engine.

The RPM will be given by the relationship:

$$N = \frac{30{,}000 \times cm}{l}$$

in which N = prescribed RPM of engine
cm = fixed mean piston speed in m/s
l = stroke in mm

2.14.6 Noise control

Due to the similarity of the piston stroke in different engine configurations within the capacity classes, the noise test will be conducted at a fixed RPM. For reference only, the mean piston speed at which the noise test is conducted, is calculated at 11 m/sec.

	2 cylinders	3 cylinders	4 cylinders
Up to 750cc	5,500 RPM	6,000 RPM	7,000 RPM
Over 750cc	5,000 RPM	5,000 RPM	5,500 RPM

2.14.7 The noise level for engines with more than one cylinder will be measured on each exhaust end.

2.14.8 A machine which does not comply with the noise limits may be presented several times at pre-race control.

2.14.9 The surrounding noise should not exceed 90 dB/A within a 5 metres radius from the power source during tests.

2.14.10 Apparatus for noise control must be to international standard IEC 651, Type 1 or Type 2.

The sound level meter must be equipped with a calibrator for control and adjustment of the meter during periods of use.

2.14.11 The "slow response" setting must always be used.

2.14.12 Due to the influence of temperature on noise tests, all figures are correct at 20°C. For tests taken at temperatures below 10°C there will be a + 1 dB/A tolerance and for tests below 0°C, a + 2 dB/A tolerance.

2.14.13 Noise control after the competition

In a competition which requires a final examination of machines before the results are announced, this examination must include a noise control measurement of at least the first three machines listed in the final classification of each class and/or category. At this final test, there will be a 3 dB/A tolerance.

2.14.14 Noise control during a competition

In a competition which requires noise control tests during the event, machines must comply with the noise limits without the tolerance in Art. 2.14.

2.15 GUIDELINES FOR USE OF SOUND LEVEL METERS

2.15.1 The Noise Control Officer (NCO) must arrive in sufficient time for discussions with the Technical Delegate and other Technical Stewards in order that a suitable test site and testing policy can be agreed.

2.15.2 Sound level measuring equipment must include a compatible calibrator, which must be used immediately before testing begins and always just prior to a re-test if a disciplinary sanction may be imposed.

Two sets of equipment must be available in case of failure of tachometer, sound level meter or calibrator during technical control.

2.15.3 Before testing, the NCO should if possible liaise with a maximum of two holders of FIM Sponsor's or Manufacturer's licences, or team managers, who have noise test equipment including calibrators, in order to agree the accuracy of the official sound level meter.

2.15.4 Tests should not take place in rain or excessively damp conditions. Machines considered excessively noisy must be individually tested if conditions allow.

2.15.5 In other than moderate wind, machines should face forward in the wind direction. (Mechanical noise will blow forward, away from microphone).

2.15.6 'Slow' meter response must be used.

2.15.7 'A' weighted setting on sound level meter.

2.15.8 Always round down meter reading, that is: 107.9 dB/A = 107 dB/A.

2.15.9 Correction

Type 1 meter :	deduct 1 dB/A
Type 2 meter :	deduct 2 dB/A

2.15.10 Ambient temperature

Below 10° Celsius:	deduct 1 dB/A
Below 0° Celsius :	deduct 2 dB/A

All tolerances are accumulative. Action and decisions will be taken after discussions with the FIM Technical Delegate/Chief Technical Steward.

3. DISCIPLINARY AND ARBITRATION CODE

The regulations will be defined by the "FIM DISCIPLINARY AND ARBITRATION CODE".

4. CIRCUIT STANDARDS

Circuit standards will be defined by the “FIM STANDARDS FOR ROAD RACING CIRCUITS" (SRRC).

5. MEDICAL CODE

The regulations will be defined by the “FIM MEDICAL CODE”.

ANTI-DOPING CODE

The regulations will be defined by the “FIM ANTI-DOPING CODE”.

FIM ROAD RACING ENDURANCE WORLD CHAMPIONSHIP

FUEL SAMPLES TAKEN ON ….. /….. / ….. FOR LABORATORY ANALYSIS

	Sample Can "A"	
RACE N°:	Can Label N°	Can Seal N°
	Sample Can "B"	
TEAM:	Can Label N°	Can Seal N°

MOTORCYCLE MAKE: _____

TEAM: _____

The above listed details refer to fuel samples taken from the fuel tank of the motorcycle specified after the race whilst in the Check Area for a period of 60 minutes pending any protest.

Sample "A" will go to the laboratory appointed by the FIM for analysis. Sample "B" will be safeguarded by the FIM in case a counter-expertise is required.

As a responsible member of the team named on this sheet, I,

(print name): _____

have controlled the serial numbers of can seals and serial numbers of can labels and hereby certify the accuracy of the listed information.

Time: _____ _____

(Signature)

Position in team: _____

(OWNER/MANAGER/MECHANIC)

DIAGRAM 1

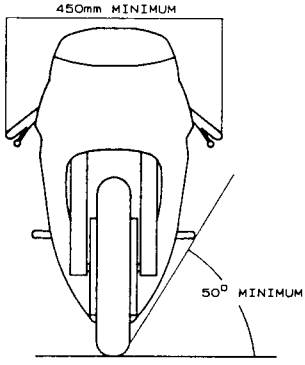


DIAGRAM 2

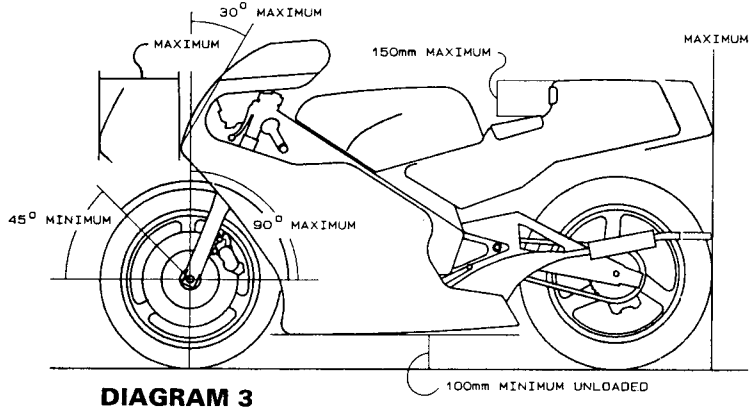
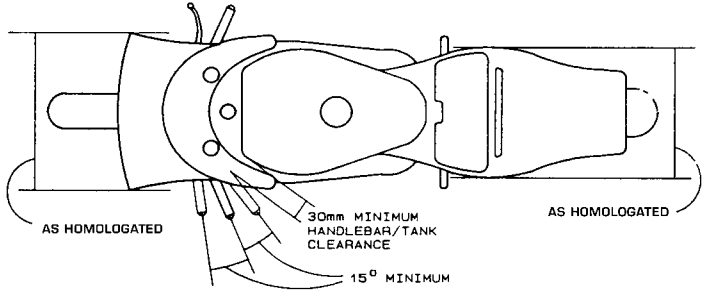
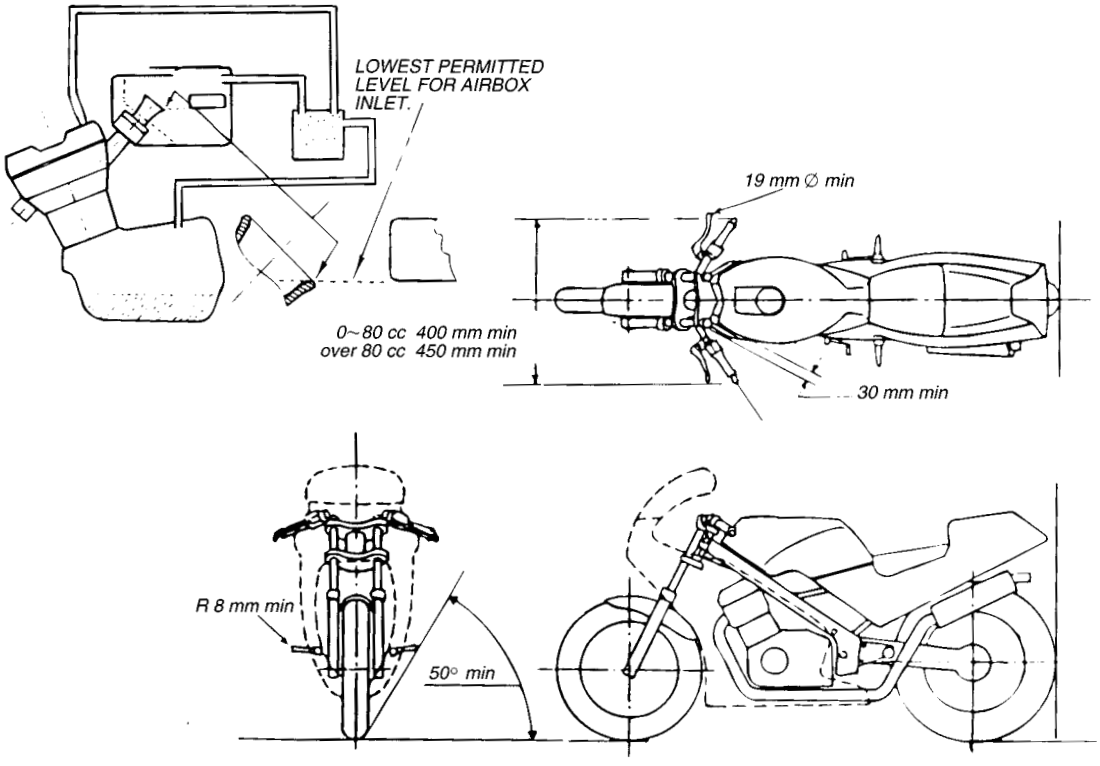


DIAGRAM 3

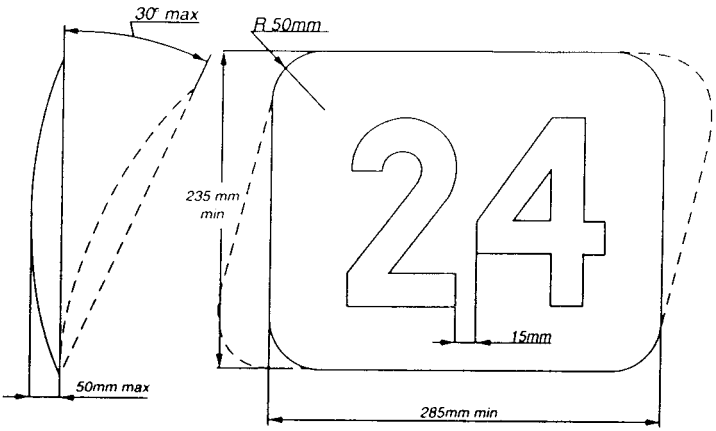


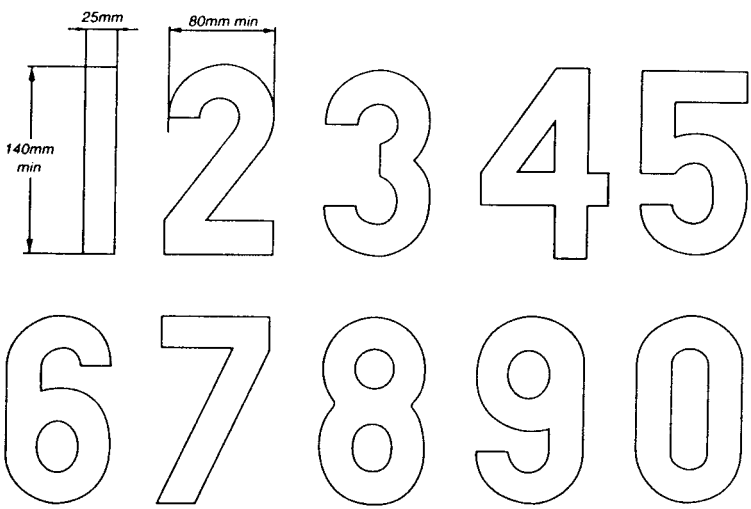
CLOSED ENGINE BREATHER SYSTEM:



Fluid Retention Area
Lip

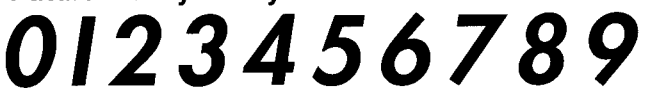
NUMBERS/NUMEROS O





Futura Heavy

Futura Heavy Italicy



Univers Bold

Univers Bold Italic

Oliver Med.

Oliver Med. Italic

Franklin Gothic

Franklin Gothic Italic

TEN FITTING TESTS FOR HELMETS
DIX TESTS D'ADAPTATION POUR LES CASQUES

1. *Obtain correct size by measuring the crown of the head*
   Avoir la bonne grandeur en mesurant le sommet de la tête

2. *Check there is no side to side movement*
   Vérifier qu'il n'y ait pas de déplacement d'un côté à l'autre

3. *Tighten strap securely*
   Serrer solidement la jugulaire

4. *With head forward, attempt to pull up back of helmet to ensure helmet cannot be removed this way*
   Tête en avant, essayer de soulever le casque pour s'assurer qu'il ne peut pas être enlevé de cette façon

5. *Check ability to see clearly over shoulder*
   Vérifier si vous pouvez voir clairement par-dessus l'épaule

6. *Make sure nothing impedes your breathing in the helmet and never cover your nose or mouth*
   S'assurer que rien ne gêne votre respiration dans le casque et ne jamais couvrir le nez ou la bouche

7. *Never wind scarf around neck so that air is stopped from entering the helmet. Never wear scarf under the retention strap*
   Ne jamais enrouler une écharpe autour du cou, car cela empêche l'air d'entrer dans le casque. Ne jamais porter d'écharpe sous la jugulaire

8. *Ensure that visor can be opened with one gloved hand*
   S'assurer que la visière peut être ouverte avec une main gantée

9. *Satisfy yourself that the back of your helmet is designed to protect your neck*
   S'assurer que l'arrière de votre casque a une forme telle qu'il vous protège la nuque

10. *Always buy the best you can afford*
    Toujours acheter le meilleur que vous pouvez vous offrir

INTERNATIONAL HELMETS STANDARDS
NORMES INTERNATIONALES DES CASQUES

ECE 22 - 05 "P" (EUROPE)
The ECE mark consists of a circle surrounding the letter E followed by the distinguishing number of the country which has granted approval.

E1 for Germany, **E2** for France, **E3** for Italy, **E4** for Netherlands, **E5** for Sweden, **E6** for Belgium, **E7** for Hungary, **E8** for Czeck Republic, **E9** for Spain, **E10** for Yugoslavia, **E11** for UK, **E12** for Austria, **E13** for Luxembourg, **E14** for Switzerland, **E15** (- vacant), **E16** for Norway, **E17** for Finland, **E18** for Denmark, **E19** for Roumania,**E20** for Poland, **E21** for Portugal, **E22** for the Russian Federation, **E23** for Greece, **E24** for Ireland, **E25** for Croatia, **E26** for Slovenia, **E27** for Slovakia, **E28** for Bielo Russia, **E29** for Estonia, **E30** (- vacant), **E31** for Bosnia and Herzegovina, **E32** for Letonie, **E34** for Bulgaria, **E37** for Turkey, **E40** for Macedonia, **E43** for Japan, **E44** (- vacant), **E45** for Australia, **E46** for Ukraine, **E47** for South Africa, **E48** New Zealand.

Below the letter **E**, the **approval** number should always begin with 05. Below the approval number is the serial production number. (Label on retention system or comfort interior).

(JAPAN) JIS T 8133 : 2000
(Label affixed inside the helmet).

(USA) M2005
(Label affixed inside the helmet).

For more details consult the F.I.M. Technical Rulebook