



# REGULATIONS AND SPECIFICATIONS FOR THE 2021 SOUTH AFRICAN NATIONAL CIRCUIT MOTORCYCLE RACING CHAMPIONSHIP

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## **SPORTING REGULATIONS**

### **1. Controllers**

MSA may delegate the normal administration of the series to an approved body, at its sole discretion.

### **2. Championship Classes**

The championship shall be open to the following classes:

- a) Supersport (600cc 4-cylinder / 680cc 3-cylinder / 750cc twin cylinder) – open to riders deemed by MSA to have suitable previous racing experience from the year of their 15th birthday – see SSR 1.
- b) South Africa Superbike (Over 750cc up to 1000cc 4-cylinder / Over 850cc up to 1300cc Twin and V4 Cylinder) – open to riders deemed by MSA to have suitable previous racing experience from 01 January of the year in which they turn 18 years old.
- c) South Africa Superbike Masters (Over 750cc up to 1100cc 4-cylinder / Over 850cc up to 1300cc twin and V4 cylinder) – open to riders from 01 January of the year in which they turn 35 years old.

### **3. Aim of the Championship**

- a) To declare a South African National Champion in the Superbike and Supersport classes mentioned in Art. 2a and 2b, subject to there being at least 6 starters in the relevant class – refer SSR 82 (i).
- b) To declare an Interprovincial Masters Champion, subject to there being at least 6 starters in the relevant class.
- c) To declare a South African Motorcycle Circuit Racing Manufacturers Champion.

### **4. Eligibility of Competitors and Manufacturers**

- a) All National Championship riders shall be in possession of a national competition licence valid for motorcycle circuit racing and issued by MSA. MSA shall grant or withhold approval based on the rider's previous racing experience.

### **5. Championship Series**

- a) The Motorsport Calendar is available from MSA and gives details of the championship events.
- b) The only practice permitted will be as detailed in the SRs for each event.
- c) Where applicable, it shall be compulsory for all competing motorcycles to carry series sponsors' decals (refer GCR's 246 and 247).
- d) Competition numbers will be issued by MSA. Numbers 1, 2 & 3 will be reserved for the rider who finished in these positions in the Superbike and Supersport class during the previous year's national championship series. Such numbers that are not taken up will not be re-allocated. All other numbers shall be issued on a 'first come first served' basis with consideration of riders number use history, following receipt of a written application to MSA and followed by a written confirmation of the number allocated by MSA. All numbers not taken up 7 (seven) days prior to the start of the first round of the championship will be released for use by MSA.
- e) Permitted podium attire will consist of the competitor's race leathers, worn zipped up and race boots. Crash helmet and gloves are optional. Sunglasses may be worn but not allowed to cover any series cap branding. Team attire is not permitted. Podium attendees will be required to wear series sponsors accessories, such as caps, as directed by the promoter. An exception will be made for Championship winners on the podium of the race in which they achieve this accolade.

## 6. Qualifying and grid positions

- a) Grid positions for Race 1&2, in all classes shall be determined according to each competitor's quickest time set during the official Qualifying Practice (QP) sessions held on the day preceding the races or as otherwise indicated on the official program for the event. Competitors who do not set a time during the official qualifying session will start Race 1 from the back of the grid, subject to the provisions of Article 7 below.
- b) It is the competitor's responsibility to know his/her grid position prior to forming up on the grid. Delaying of the start due to indecision relating to grid positions shall render the competitor/s concerned liable to be moved to the back of the grid or excluded from the race concerned, at the discretion of the Clerk of the Course (CoC).
- c) Where qualifying times have not been recorded for whatever reason, at the discretion of the Clerk of the Course (CoC) grid positions for Race 1&2 will be as per championship point's standings to date.
- d) The starting grid will be arranged in a 3-3-3-3 configuration "in echelon". Each line will be offset. There will be a distance of 9 meters between each row. See SSR 36.

## 7. Non-qualifiers

If a rider falls outside of the 110% qualification ruling, he will have to apply, in writing, to the CoC within 30 minutes of the qualifying session having ended, stating his reasons as to why he should be allowed to compete. The final decision will rest with the CoC, as to whether the rider is allowed to compete or not.

## 8. Race distance

Each race meeting or round of the championship will consist of one or two separate races (dependent on class). Notwithstanding the above, if for reasons of force majeure it is not possible for all the races originally scheduled to take place at a meeting, refer to the provisions of GCR 273. To determine the actual distance parameters for a race, refer to SSR 82 iv).

## 9. Championship points

All races will count towards the final championship standings. Points will be scored as follows:

|                 |           |                  |           |                  |          |
|-----------------|-----------|------------------|-----------|------------------|----------|
| 1 <sup>st</sup> | 25 Points | 6 <sup>th</sup>  | 10 Points | 11 <sup>th</sup> | 5 Points |
| 2 <sup>nd</sup> | 20 Points | 7 <sup>th</sup>  | 9 Points  | 12 <sup>th</sup> | 4 Points |
| 3 <sup>rd</sup> | 16 Points | 8 <sup>th</sup>  | 8 Points  | 13 <sup>th</sup> | 3 Points |
| 4 <sup>th</sup> | 13 Points | 9 <sup>th</sup>  | 7 Points  | 14 <sup>th</sup> | 2 Points |
| 5 <sup>th</sup> | 11 Points | 10 <sup>th</sup> | 6 Points  | 15 <sup>th</sup> | 1 Point  |

## 10. Use of spare motorcycle

- a) Use of a spare motorcycle is not allowed.
- b) During the entire duration of the event, each rider can only use one (1) complete motorcycle, as presented for scrutineering, with the frame clearly identified using the manufacturer VIN number.
- c) A spare motorcycle may only be used for parts.
- d) The spare motorcycle will not be allowed in the pit area during the event, or before the rider / team has requested and received authorisation for its use from the TC or COC.
- e) If motorcycle is rebuilt during an event it must be inspected / scrutineered by the TC for safety checks before its use.

## 11. General rules

- a) The GCRs and SSRs applicable to motorcycle racing must be read and understood in conjunction with these regulations and specifications.
- b) Generators are NOT allowed on the starting grid.
- c) Fluid containers other than for drinks or clear water are prohibited in the pre-race paddock (where applicable) and/or on the grid unless prior permission to the contrary has been granted by the CoC.
- d) The regulations make provision for the use of a pre-race facility (paddock). The CoC shall have the discretion to decide whether or not to make use of such a facility at a particular event and shall advise his intentions in this regard during Riders' Briefing.
- e) Access to the parc fermé is limited to the rider plus two (2) assistants. Failure to adhere to this requirement may result in the exclusion of the offending rider. No motorcycle may be removed from parc fermé or the podium parking without permission and must remain there until instruction is given by the TC or COC. Failure to comply with this rule may result in exclusion of the offending rider.
- f) Any requested technical inspections must commence within 20 minutes of the request being made by the relevant official/s, unless permission to the contrary has been granted by TC and COC. Failure to comply in this regard, and/or any action that may interfere with the conducting of a technical inspection or cause it to be delayed unnecessarily, may result in the exclusion of the rider concerned.
- g) Any act by any member of any team including the rider, that threatens the timeous starting of a race, or that causes a race start to be delayed, may result in the associated rider being penalised to start at the back of the grid or disqualified.
- h) Any interference by any member of any team with the timing personnel and/or their equipment, may lead to the associated rider being penalised.
- i) The TC or COC may instruct any team or competitor to present their motorcycle at any time for the purposes of sealing the engine. Failure to do so will result in disqualification until such time as the request is adhered to.
- j) Riders, team manager and or managing crew chief failing to attend Event Riders Briefing, without being excused by the CoC, shall be required to start all races at the event from the back of the grid.
- k) Any matter/s not relevant to the Event / riders briefing must be submitted in writing to the promoters for further discussion.

## 12. Numbers and Number Plates

The background & number colours are as follows:

- South Africa Superbike & Masters, RED background and WHITE numbers
- Supersport, WHITE background with BLACK numbers

Guidelines for the sizes for all the front numbers are:      Minimum height = 140mm  
Minimum width = 80mm  
Minimum stroke = 25mm  
Minimum space  
Between numbers = 10mm

Guidelines for the sizes for all the side numbers are:      Minimum height = 100mm  
Minimum width = 70mm  
Minimum stroke = 20mm  
Minimum space  
Between numbers = 10mm

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

- a) Once on the front, either in the center of the fairing or slightly off to one side. The number must be centered on the background with no advertising within 25 mm in all directions.
- b) Once on each side of the fairing or seat. The number must be centered on the background. Any change to this position must be pre-approved a minimum of 2 weeks before the first race by the TC.
- c) The numbers must use clear, eligible fonts. All digits must be of standard form.
- d) No outlines.
- e) Numbers cannot overlap.
- f) In case of a dispute concerning the legibility of numbers, the decision of the TC will be final.

### **13. TECHNICAL REGULATIONS AND SPECIFICATIONS**

- a) Any amendments to these technical regulations shall only take effect when published in an official MSA circular.
- b) Any competitor found to be in breach of these technical regulations will be subject to the provisions of GCR 176.
- c) The TC and COC may, at their sole discretion, call on external specialists for additional consulting.
- d) If a change to a part or a system is not specifically allowed in any of the following articles then it must remain as originally produced by the manufacturer for the homologated machine.
- e) Engines may be requested to be sealed or marked by the TC prior to the 2021 season.
- f) The seal or marking may be photographically recorded. Any attempt made to remove the seal will damage it irreparably. The onus is on the rider to ensure the seal remains intact at all times. The seal may only be removed with written approval of the appointed national TC for the series. If a seal is removed without permission the competitor may be disqualified.
- g) An alternate to OEM, aftermarket approved accessories list, will be issued. Only approved aftermarket accessories where allowed in the rules can be used.
- h) On bike video recording equipment must be allowed to be placed onto all motorcycles by the promoter for official ASB usage. Riders may use their own on board equipment if they wish to do so.

#### **13.1 Eligibility – Motorcycles**

- a) To be admitted to the championship, motorcycles require homologation as per 13.2 below.
- b) All motorcycles must comply in all respects with all the requirements of the applicable regulations.
- c) The appearance from both the front and the rear, and the profile, of all 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.
- d) All motorcycles must be 4-stroke, normally aspirated and sold to the public for road use.
- e) All components, unless expressly stated to the contrary in these regulations, must remain as originally produced and homologated by the manufacturer, or must be aftermarket components homologated locally (where the use of such aftermarket components is permitted in terms of the regulations).
- f) The competitor is responsible for producing specifications and other material (e.g. the service or owner's manual) to prove the legality of his/her motorcycle. Legality can also be proved by way of comparisons with similar OEM parts.
- g) The appointed MSA Technical Committee and or the COC have the ultimate authority in respect of decisions regarding the technical legality of any motorcycle.

#### **13.2 Homologation**

- a) Motorcycles to be raced in the championship must be homologated by the MSA at its sole discretion. Only motorcycles which comply with these regulations, shall be permitted to take part in the series, subject to compliance with the additional criteria outlined below:

- b) The prevailing retail price (VAT inclusive) of the motorcycle to the general public through official dealer outlets shall not exceed:
- South Africa Superbike class & Superbike Masters - R 490 000.00
  - Supersport class – R260 000.00
- The price cap may be adjusted in the event of exchange rate fluctuations.

### **13.3 Minimum Weights**

- a) 600cc, 4-stroke, 4 cylinders minimum weight - 161kg
- b) 680cc, 4-stroke, 3 cylinders minimum weight - 161kg
- c) 750cc to 1000cc, 4-stroke, 4 cylinders minimum weight - 170kg
- d) 1000cc to 1300cc, 4-stroke, 2 or V4 cylinders minimum weight - 180kg
- e) The minimum weights specified shall apply for motorcycles as they come off the track with no fluids added.
- f) At any time during the event, the weight of the whole motorcycle (including the tank and its contents) must not be less than the minimum weight.
- g) Any machine found to be underweight at any time during the event shall be excluded from the session/race/race meeting concerned.
- h) The use of ballast is allowed to stay over the minimum weight limit and may be required due to a handicap system. The use of ballast and weight handicap must be declared to the TC during scrutineering.
- i) The minimum weights may be reviewed during the season. Any amendments to the minimum weights will be published by MSA in an official circular/bulletin.

### **13.4 Fuel**

- a) All motorcycles must use pump fuel available to the general public via normal filling stations or, if made available, promotor supplied fuel.
- b) Should the TC or COC suspect any fuel used to be non-compliant the onus shall rest on the competitor concerned to prove to the contrary. Failure to satisfactorily do so shall render the competitor concerned liable to be penalised by the CoC.
- c) Notwithstanding the above, the TC and COC may request the use of a controlled fuel no later than 30 minutes prior to the start of a race. Failure to use the controlled fuel when requested shall result in the competitor concerned being prevented from starting the race in question and/or being excluded from the race meeting.
- d) Refer SSR 67 for additional fuel controls.

### **13.5 Frame Body and Sub frames**

- a) The main frame body must be the originally fitted and homologated part with no modification allowed.
- b) Holes may be drilled on the frame only to fix approved components (i.e. fairing brackets, steering damper mount and sensors).
- c) 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.
- d) Crash protectors may be fitted to the frame using existing points or pressed into the ends of wheel axles. Without exception the axles cannot be modified.
- e) Nothing else may be added or removed from the frame.
- f) All motorcycles must display the manufacturer's vehicle identification number on the frame body (chassis number).
- g) Engine mounting brackets or plates must remain as originally produced by the manufacturer for the homologated machine.
- h) The front sub/fairing mount frame may be changed or altered or replaced.
- i) The rear sub-frame may be changed or altered or replaced.

- j) Additional seat brackets may be added, non-stressed protruding brackets may be removed if they do not affect the safety of the construction or assembly. Bolt-on accessories to the rear sub-frame may be removed.
- k) The paint scheme is not restricted but polishing the frame body or sub-frame is not allowed.

### 13.6 Suspension General

Electronic Suspension:

- a) No aftermarket or prototype electronically controlled suspensions may be used. Electronically controlled suspension may only be used if already present on the production model of the homologated motorcycle.
- b) The electronically controlled valves must remain as homologated. The shims, spacers and fork/shock springs not connected with these valves can be changed.
- c) The ECU for the electronic suspension must remain as homologated and cannot receive any motorcycle track position or sector information: the suspension cannot be adjusted relative to the track position.
- d) The electronic interface between the rider and the suspension must remain as on the homologated motorcycle. It is allowed to remove or disable this interface.
- e) The original suspension system must work safely in the event of an electronic failure.
- f) Electro magnetic fluid systems which change the viscosity of the suspension fluid(s) during operation are not permitted.
- g) Electronic controlled steering damper cannot be used if not installed on the homologated model for road use. If used it must remain as per the homologated unit.

### 13.7 Front Forks

- a) Forks (stanchions, wheel spindle, upper and lower crown, etc.) must remain as originally produced by the manufacturer for the homologated motorcycle.
- b) The upper and lower fork clamps (triple clamp) may be changed, however if not already on the series pre-approved aftermarket parts accessories list an application must be made in writing to the TC requesting authorisation to use alternate triple clamps.
- c) Steering stem pivot position must remain in the homologated position (as supplied on the production bike). If the standard bike has inserts then the orientation/position of the original insert may be changed but the insert cannot be replaced or modified.
- d) Mechanical forks: Original internal parts of the homologated forks may be modified or changed. Approved aftermarket damper kits or valves may be installed.
- e) Electronic forks: The electronic front suspension may be replaced with a mechanical system from a similar homologated model from the same manufacturer.
- f) Electronic forks may have their complete internal parts (including all electronic control) replaced with an approved conventional damping system and it will be considered as a mechanical fork.
- g) Fork caps on the mechanical forks may only be modified or replaced to allow external adjustment. (This does not include the mechanical fork leg that is part of the homologated electronic fork set).
- h) Dust seals may be changed provided the fork remains totally oil-sealed.
- i) Any quality and quantity of oil can be used in the front forks.
- j) The height and position of the front fork in relation to the fork crowns is free, subject to inspection and approval by the TC on safety grounds.
- k) A steering damper may be added or the existing unit may be replaced with an aftermarket damper. The steering damper cannot act as a steering lock limiting device.
- l) Bump stops may be removed.
- m) Removal of peening on shim retainer is allowed.

### 13.8 Rear Fork / Swing arm

- a) The rear fork must be the originally fitted and homologated part with no modification allowed.

- b) Rear fork pivot bolt must be the originally fitted part with no modification allowed.
- c) Rear swing arm pivot position must remain in the homologated position (as supplied on the homologated production bike) If the standard bike has inserts then the orientation/position of the original insert may be changed but the insert cannot be replaced or modified. A solid protective cover (shark fin) shall be fixed to the swing arm and must always cover the lower chain run, swing arm and wheel sprocket, irrespective of the position of the rear wheel.
- d) 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.
- e) The sides of the swing arm may be protected by a pvc or composite cover.

### 13.9 Rear Suspension Unit

- a) Mechanical suspension: Rear suspension unit and spring may be changed.
- b) Electronic suspension: If the standard system has no facility for ride height adjustment the standard shock may be modified to allow shock length changes if no hydraulic parts are modified. The electronic shock absorber can be replaced with a mechanical one.
- c) Ride height spacers are permitted.
- d) Removal of peening on shim retainer is allowed.
- e) Mechanical suspension: Rear suspension unit and spring may be changed.

### 13.10 Wheels

- a) Wheels must either:

#### *For South Africa Superbike & Superbike Masters*

- Remain as originally produced by the manufacturer for the homologated machine at the time of sale into the dealer/distributor network.
- Locally manufactured carbon composite wheels are allowed.

#### *For Supersport*

- Remain as originally produced by the manufacturer for the homologated machine at the time of sale into the dealer/distributor network.

- b) The speedometer drive may be removed and replaced with a spacer.
- c) OEM wheels may be over-painted but the original finish cannot be removed.
- d) A non-slip coating/treatment may be applied to the bead area of the rim.
- e) No modifications of the wheel-axles or of any fixing and mounting points for the front and rear brake calipers are authorised.
- f) Spacers can be modified. Modifications to keep spacers in place are permitted.
- g) If the original design includes a cushion drive for the rear wheel, it must remain as originally produced for the homologated machine.

### 13.11 Brakes

- a) Brake discs can be aftermarket type, but the disc diameter must remain as homologated.
- b) Front discs can be floating, using original rotors and mountings.
- c) Front and rear brake calipers (mounts, carriers, hangers) must remain as originally produced by the manufacturer for the homologated machine. The caliper may not be spaced from its original mounting point.
- d) Front and rear master cylinders may be changed for aftermarket items.
- e) Front and rear hydraulic brake lines may be replaced with braided hoses. The split of the front brake lines for both front brake calipers must be made above the lower fork bridge.
- f) Front and rear brake pads may be changed. Brake pad locking pins may be modified to a quick-change type. Brake pad locking pins must be lock-wired or otherwise additionally secured. Pins may be changed to the race-drilled type.
- g) Additional air scoops or ducts are not allowed.

- h) The antilock brake system (ABS) can be disconnected and its ECU can be dismantled. The ABS rotor can be deleted, modified or replaced.
- i) Motorcycles must be equipped with brake lever protection, intended to protect the brake lever from being accidentally activated. Composite guards are not permitted. FIM approved guards will be permitted without regard to the material. The TC has the right to refuse any guard not satisfying this purpose.

### 13.12 Tyres General

- a) The official tyre brand and compounds to be used is the Bridgestone R11 medium.
- b) Tyre use will be limited to a maximum of 2 (two) sets of tyres per race meeting. Only official marked tyres may be used on race day, qualifying and warm-up. Free practice one is open and any unmarked tyre can be used. From qualifying session one, to the end of warm-up, one set of marked tyres must be used. For race one and race two, the second set of marked tyres must be used.
- c) The onus is on the competitor to ensure that their tyres are officially and correctly marked before exiting onto the circuit. Competitors will not be allowed to exit pit lane without officially marked tyres.
- d) Notwithstanding the above, if a race or qualifying session is declared as "wet" by the CoC, within the 60 minutes prior to the commencement of a qualifying session or races, then tyres may be changed to another type approved for wet weather use, at the sole discretion of the TC. In the event of conditions improving, competitors may revert to using their marked 'dry weather' tyres. If the practice session and qualifying session and races are all 'wet' then the normal tyre quantity limitations shall be in force subject to "d)" below. If the sessions vary between 'wet' and 'dry' then the use of tyres shall be decided upon by the COC in consultation with the TC.
- e) If a competitor deems his tyre/s to be damaged and therefore unsafe to be used, then he/she may make an application to the TC for permission to change the damaged tyre/s. The changed tyre/s must be of the same make, type and compound as, and be of similar wear to, the damaged tyre/s. Selection of the tyre/s to be used is at the sole discretion of the TC. Penalties, if any, will be at the sole discretion of the CoC.
- f) Only the official approved tyres will be permitted to be used at all SA National Circuit Race events.
- g) The President of the MSA Motorcycle Racing Commission, COC and the TC, shall, at their sole discretion, accept, rescind or decline a request for homologation of tyres. They shall also have the overriding authority to make a ruling in respect of any dispute regarding the eligibility of tyres.
- h) In interpreting the use of tyres and/or the changing of tyres and/or safety matters relating to tyres, the TC's and COC's decision shall be final, and binding on all parties.
- i) The COC, in consultation with the TC, may request the exchange of tyres between riders providing that the tyres are of the same make, compound and size and providing that such exchange is made prior to official qualifying and in sufficient time to allow the changing of said tyres.
- j) Infringement of ANY tyre rule shall result in the offending rider, as a minimum, being excluded from the results of the race concerned and/or sent to the back of the grid for the ensuing race, together with the imposition of a 30 second time penalty. The penalty for more serious infringements shall generally be a three (3) race meeting ban. Should there be less than 3 race meetings left in the season, 60 points shall be deducted from the respective rider's and manufacturer's standings.
- k) The use of tyre warmers is allowed (refer SSR 2 B).
- l) Any amendments/additions to these tyre rules shall be notified to affected parties by way of an official MSA circular.
- m) Only medium compound will be permitted.
- n) Teams and competitors are to ensure that tyres are fitted in the correct rotational direction.
- o) The onus is on the rider to ensure they have sufficient wet weather tyres on hand.
- p) Wet-weather tyres must be the official series brand supplier tyre, quantity is unrestricted.

- q) Any modification or treatment of any tyre (cutting, grooving) is forbidden.
- r) The dry-weather tyres used in the qualifying practices, warm-up and race must be marked with the supplied adhesive sticker.
- s) Tyres can be purchased/collected from the Official Suppliers race tyre sales program.

### **13.13 Footrests and foot controls**

- a) Footrests may be relocated but their brackets must be mounted to the frame at the original mounting points.
- b) Foot control linkages may be modified only to allow the inversion of the gear selection pattern. The original mounting points must remain. Their two original points of fixture (on foot controls and on the shift shaft) must be maintained.
- c) Footrests may be rigidly mounted.
- d) The end of the footrest must have at least an 8mm solid spherical radius.
- e) Non-folding steel footrests must have an end (plug) which is permanently fixed, made of plastic, Teflon or an equivalent type material (minimum radius 8 mm).

### **13.14 Handlebars and Hand Controls**

- a) Handlebars may be replaced.
- b) Handlebars and hand controls may be relocated.
- c) Clutch and brake levers may be exchanged for after-market items. The use of a remote adjuster for the front brake is permitted but it must be capable of operation by the rider with both hands on the grips.
- d) Electric starter switches and engine stop switches must be located on the handlebar.
- e) Motorcycles must be fitted with a functional ignition kill switch or button mounted on the right-hand handlebar (within reach of the hand while on the hand grips) that is capable of stopping a running engine. The button must be RED.
- f) Switches may be changed.
- g) The retaining pin for the brake lever must be safety-wired or otherwise additionally secured.
- h) Clutch lever guards may be fitted at the discretion of the rider.
- i) Motorcycles must be equipped with brake lever protection, intended to protect the handlebar brake lever from being accidentally activated in case of collision with another motorcycle.

### **13.15 Fairing / Bodywork**

- a) Fairings, front mudguards and bodywork must appear to be as originally produced by the manufacturer for the homologated machine.
- b) Fairing and bodywork may be replaced with exact cosmetic duplicates of the original parts. The material may be changed. The use of carbon fiber or carbon composite materials is not allowed. Specific reinforcements in Kevlar or carbon are allowed locally around holes or stressed areas.
- c) Sizes and dimensions must be the same as for the original parts, with a tolerance of +-10mm, without any addition or subtraction of design elements.
- d) Motorcycles may be equipped with a radiator shroud (inner ducts) to improve the air stream towards the radiator but the appearance of the front, the rear and the profile of the motorcycle must not be changed.
- e) Windscreens may be replaced.
- f) 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) below. This device cannot extend above a line drawn horizontally from axle to axle.
- g) The original combination of instrument/fairing brackets may be replaced. All other fairing brackets may not be altered or replaced.
- h) The original air ducts running between the fairing and the air box may be changed but the size of the opening in the fairing leading to the duct may be no larger than on the homologated motorcycle. The material may be changed. All original deflectors and/or panels within the air

ducts and chassis must remain in place and in the same positions as on the homologated motorcycle.

- i) The lower fairing has to be constructed to hold, in case of an engine breakdown, at least half of the total oil and engine coolant capacity used in the engine (minimum 5 liters). The lower edge of openings in the fairing must be positioned at least 50mm above the bottom of the fairing.
- j) The lower fairing must incorporate a maximum of two holes of 25mm. These holes must remain closed in dry conditions and must only be opened in wet race conditions as declared by the CoC.
- k) Front mudguards must appear as originally supplied by the manufacturer for the homologated machine.
- l) Front mudguards may be replaced with exact cosmetic duplicates of the original parts.
- m) Front mudguards may be spaced upward for increased tyre clearance.
- n) Rear mudguards fixed on the swing arm that incorporate the chain guard may be modified to accommodate larger diameter rear sprockets.
- o) All exposed edges must be rounded.
- p) Minimal changes are allowed to permit the use of an elevator (stand) for wheel changes and it is permitted to add a small plastic protective cone to the frame or engine.
- q) The material of the front mudguard may be changed.
- r) Rear mudguards fixed to the swing arm may be replaced with cosmetic duplicates. The material may be changed. A chain guard on top of the swing arm may be removed as long as it is not incorporated into the rear mudguard.
- s) The existing rear mudguard under the seat may be removed. A mudguard may be fitted directly onto the swing arm (it may not cover more than 120 degrees of the wheel).
- t) The silhouette of the motorcycle must remain as produced by the manufacturer.
- u) Closing of the apertures in the fairing is permitted.

#### **13.16 Fuel Tank**

- a) Must be the originally fitted and homologated part with no modifications allowed.
- b) 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.
- c) Fuel tanks may be filled, either with fuel cell foam or an alternative material approved by the TC.
- d) Fuel caps may be changed. Fuel caps when closed must be leak proof. Additionally, they must be securely locked to prevent accidental opening at any time.

#### **13.17 Seat**

- a) Seats, seat bases and associated bodywork may be replaced with parts of similar appearance to the items originally produced by the manufacturer for the homologated machine.
- b) The top portion of the rear bodywork around the seat may be modified to a solo seat.
- c) The appearance from both front rear, and the profile, must conform to the homologated shape.
- d) The seat/rear cowl replacement must allow for proper number display.
- e) All exposed edges must be rounded.
- f) Same materials as the fairings must be used.

#### **13.18 Radiator and oil coolers**

- a) The radiator may be modified. Additional separate radiator/s may also be added. Maximum price cap of Euro 920.00.
- b) Only standard oil coolers, as homologated are permitted. Additional oil coolers are not allowed.

- c) The use of any coolant is permitted provided it is a non-Glycol type and the composition is confirmed by the competitor with the presentation of a supporting MSDS certificate, all Glycol based products are prohibited.
- d) The heat exchanger (oil/water) may be disconnected from the water-cooling system.
- e) Subject to approval by the TC, radiator hoses may be replaced and/or modified and/or re-routed.

### 13.19 Air Box

- a) The air box must remain as originally produced by the manufacturer on the homologated machine, but the air box drains must be sealed.
- b) The air filter element may be removed or replaced by any other filter.
- c) All motorcycles must have a closed breather system. The oil breather line must be connected and discharge into the air box.
- d) The emission control system (EPA) may be removed or modified.

### 13.20 Electrics and Electronics

- a) The Ignition / Engine Control System (ECU) engine control system (ECU) must be either:
  - The original system as homologated, with no change of software/firmware or with a change of software/firmware.
  - Any aftermarket ECU and any aftermarket wiring harness can be used.
- b) Lambda sensors, where fitted as standard, may be removed or modified.
- c) The Key/ignition lock may be relocated, replaced or removed.
- d) Electric cables, harness, connectors, battery and switches are free.
- e) Dash board is free. If used as part of a data logging solution application of price cap applies as per Art: 13.20 item k. If standalone subject to the application of an all-inclusive retail price cap of an amount of Euro 1140.00, with an allowance for exchange rate fluctuations.
- f) Central unit (ECU) may be relocated.
- g) Resistors/load may be added to replace the parts of the electrical system that have been removed (including lights and lambda sensors), to prevent ECU errors.
- h) *For Supersport:*
  - External after-market traction control modules may be added on motorcycles not equipped with this as a standard feature.
  - External Quick-Shift Modules may be fitted, interrupting ignition, injectors or providing a signal to the ECU.
  - Downshift "Blip" is allowed.
- i) The use of telemetry is not permitted.
- j) Data logging is permitted subject to the application of an all-inclusive retail price cap of an amount of Euro 2875.00 with an allowance for exchange rate fluctuations. Items such as wheel speed sensors, potentiometers and brake pressure sensors etc. are considered together with the base unit in the calculation of the price cap.

Note: The TC and COC shall have the overriding authority in respect of any dispute regarding the eligibility or legality of the ignition/electrical system.

### 13.21 Fuel Supply

- a) Fuel pump and fuel pressure regulator must be the originally fitted and homologated part with no modification allowed.
- b) The fuel pressure must be as homologated.
- c) Fuel lines from the fuel tank to the delivery pipe assembly (excluded) may be replaced and must be located in such a way that they are protected from crash damage.
- d) Quick' connectors or 'dry-break' connectors may be used.

- e) Fuel vent lines may be replaced.
- f) Fuel filters may be added.
- g) One-way valves must be fitted on the fuel vent lines leading to the breather box.

### **13.22 Injection System**

- a) The original homologated fuel injection system must be used without any modification.
- b) The fuel injectors must be stock and unaltered from the original specification and manufacture.
- c) Air Funnels must remain as originally produced by the manufacturer for the homologated motorcycle.
- d) Butterfly valves cannot be changed or modified.
- e) All the parts of the variable intake tract device must remain and operate exactly as homologated. They cannot be added if not fitted to the homologated machine.
- f) Air and air/fuel mixture can go to the combustion chamber exclusively through the throttle body butterflies.
- g) Electronically controlled throttle valves, known as “ride-by-wire”, may only be used if the homologated model is equipped with the same system.

### **13.23 Cylinder head**

- a) Cylinder head must be the originally fitted and homologated part. The following modifications are allowed:
- b) Original homologated valves may be modified.
- c) No material may be added to or removed from the cylinder head other than as described in this document.
- d) The cylinder head gasket may be changed.
- e) Original valve seats must be used, but modifications are allowed to the shape.
- f) The guides, springs and retainers must be as originally produced by the manufacturer for the homologated machine.
- g) Valve spring shims are not allowed unless fitted as standard to the homologated machine.
- h) The shim buckets / tappets must remain as homologated.
- i) The exhaust air bleed system must be blocked and the external fittings on the cam cover(s) may be replaced by plates.

### **13.24 Camshaft**

No modifications are allowed must be as homologated.

### **13.25 Cam Sprockets**

- a) No dimensional modifications are allowed.
- b) Degreering of cams is allowed.
- c) Slotting of cam gears is allowed for degreering purposes.
- d) Pressed cam sprockets maybe replaced with an adjustable boss cam sprocket.

### **13.26 Crankshaft**

- a) No modifications (including polishing and lightening) are allowed to either crankshafts or flywheels.
- b) The balance shaft must remain in place and no modifications are allowed.

### **13.27 Oil Pumps and Oil Lines**

- a) No pump modifications are allowed. Oil pump must be as fitted to the homologated machine.
- b) Oil lines may be modified or replaced.
- c) Oil lines containing positive pressure, if replaced, must be of metal reinforced construction with swaged or threaded connectors.

### **13.28 Connecting Rods**

As homologated - no modifications are allowed (including polishing, changing the shape or lightening).

### **13.29 Pistons**

As homologated - no modifications are allowed (including polishing and lightening).

### **13.30 Piston Rings**

As homologated - no modifications are allowed.

### **13.31 Piston Pins and Clips**

As homologated - no modifications are allowed.

### **13.32 Cylinders and Transmission Casings**

- a) As homologated - no modifications are allowed.
- b) No material may be added or removed from the cylinder and / or casings.
- c) No sharp edges may be chamfered.
- d) The gasket surface must be visually identical to a stock motorcycle.

### **13.33 Crankcase and all other Engine Casings**

- a) No modifications are allowed.
- b) Crankcase/gearbox casings, as well as ignition, clutch and generator covers should be protected by additional means i.e. protective covers made of carbon / Kevlar or similar composites. The fitment of such additional protection is highly recommended.
- c) Engine case guards may be installed in the form of strengthened engine side covers. These covers must be constructed of the same material and be no lighter in weight than the standard item.
- d) The original crankcase covers may be modified subject to the position and dimensions of the covered parts remaining unchanged.
- e) Crankcases must remain as homologated. No modifications are allowed (including painting, polishing and lightening).
- f) It is not allowed to add a pump used to create a vacuum in the crankcase.
- g) If a vacuum pump is installed on the homologated motorcycle then it may be used only as homologated.

### **13.34 Transmission/Gearbox**

- a) Additions to the gearbox or selector mechanisms are not permitted, with the exception that 'quick-shift' systems are permitted. Such systems must either be as fitted to the homologated motorcycle or aftermarket systems that appear on FIM or MSA's homologated parts list.
- b) Countershaft sprockets, rear wheel sprockets, chain pitch and size can be changed.
- c) The undercutting of the gears is allowed for safety purposes.
- d) The primary drive gear ratio must remain as homologated.
- e) The sprocket cover may be modified or eliminated.
- f) Chain guard, as long as it is not incorporated in the rear fender, may be removed.

### **13.35 Clutch**

- a) The original clutch inner assembly may be modified or replaced with an aftermarket clutch, also including back torque limiting capabilities (slipper type) subject to the application of an

all-inclusive retail price cap of an amount of Euro 1140.00 subject to exchange rate fluctuations.

- b) Clutch system (wet or dry type) and the method of operation (by cable or hydraulic) must remain as homologated.
- c) Friction and drive discs may be changed but their number must remain as original.
- d) Clutch springs may be changed.

#### **13.36 Spark plugs**

Spark plugs may be replaced.

#### **13.37 Generator/Electric Starter**

- a) No modifications are allowed to rotors, stators or wiring.
- b) The electric starter must operate normally and must always be able to start the engine during the event and until such time as the time limit for protests have expired.
- c) The engine must start and turn on its own power when the electric starter has stopped its procedure.

#### **13.38 Exhaust System**

Exhaust pipes, headers, silencers and hangers may be modified or replaced with aftermarket alternatives.

#### **13.39 Fasteners**

- a) 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.
- b) Fasteners may be drilled only for safety-wire but intentional weight-saving modifications are not allowed.
- c) Fairing/bodywork fasteners may be changed to a 'quick-disconnect' type.
- d) Aluminium fasteners may only be used in non-structural locations.

#### **13.40 The following items may be altered from those fitted to the homologated motorcycle, or replaced:**

- a) Any type of lubrication, brake or suspension fluid may be used.
- b) Any type of spark plugs (and plug caps) may be used.
- c) Any tyre inner tube (if fitted) or inflation valves may be used.
- d) Wheel balance weights may be discarded, changed or added to.
- e) Gaskets and gasket materials.
- f) Painted external surface finishes and decals.
- g) Bearings may be changed but their type and construction must remain as homologated.
- h) The radiator overflow bottle may be replaced, subject to compliance with Art. 12.45 (h).
- i) Any brake pads may be used.

#### **13.41 The following items MAY be removed:**

- a) Instruments, instrument brackets and associated cables
- b) Horn
- c) Licence plate bracket
- d) Toolbox
- e) Tachometer
- f) Speedometer
- g) Radiator fan
- h) Passenger foot rests

- i) Passenger grab rails
- j) Chain guard as long as it is not incorporated in the rear fender
- k) Bolt-on accessories on the rear sub-frame
- l) Thermostat
- m) Noise reduction flaps in the inlet tract, subject to prior approval from the TC.

**13.42 The following requirements MUST be complied with:**

- a) All motorcycles must be equipped with functional ignition kill switch or a button mounted on the handlebars, within reach of the hands while on the hand-grips and that is capable of stopping a running engine.
- b) Throttle controls must be self-closing when not held by the hand.
- c) Safety bars, center and side stands must be removed (fixed brackets can remain).
- d) All drain plugs must be wired. External oil filter(s) and screws, plugs and bolts that enter an oil cavity must be safety-wired, as must the oil filler cap.
- e) Where breather or overflow pipes are fitted they must discharge via existing outlets.
- f) The original closed breather system must be retained. No direct atmospheric emission is permitted.
- g) Where an oil breather pipe is fitted, the outlet must discharge into a catch tank located in an easily accessible position and must be emptied before the start of a practice session or race.
- h) The minimum size of any such catch tank shall be 250cc for gearbox breather pipes and 500cc for engine breather pipes.
- i) Headlamps, rear lamps, mirrors and turn indicators must be removed, but the profile and frontal appearance, including the turn indicator shape where this is moulded into the fairing, must be retained. Any openings left by the removal of items must be covered by a suitable material.
- j) Front brake calipers and brake lever retaining pins must be safety-wired or otherwise additionally secured.
- k) Protective race helmets MUST BE Snell, Dot, JIS or ECE Approved and must be double D ring.

**13.43 Additional Equipment**

Additional equipment not on the original homologated motorcycle may not be added with the exception stated (i.e. data acquisition, computers, recording equipment, etc.). The only exceptions to this rule are that the use of on-board lap timers is allowed, and on-board cameras or similar devices may be used subject to the sealing of said units at scrutineering. These seals must remain intact for the duration of the event, and for one hour following the completion of the last race of the event for the class concerned. The seals may only be broken with the express approval of the TC and/or CoC, and only in instances where the footage is required by the television production company and/or race officials.

**13.44 Non-Compliant Parts/Components**

Any part/component found not to comply with the regulations, and which is incapable of being brought back into specification in a permitted manner, may be confiscated and retained by MSA to prevent its continued use in events.