



REGULATIONS & SPECIFICATIONS FOR THE 2014 SOUTH AFRICAN MOTORCYCLE ROAD RACING CHAMPIONSHIP

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)**
- b) **Superbike (Unlimited)**

3. AIM OF CHAMPIONSHIP

- a) To declare a 2014 South African Superbike Champion, a South African Supersport Champion and a South African Motorcycle Road Racing Manufacturers Champion.
- b) In addition, recognition shall be given at the end of season to the leading rider in the Superbike class who attains the age of 35, or older, during 2014 (i.e. riders shall be eligible from 01 January of the year in which they turn 35). Such individual shall earn the title of SA Superbike Masters Challenge Winner. In the event of there being sufficient support for the challenge, application may be made to MSA to escalate it to full national championship status as a 'class within a class'.
- c) Refer SSR 82 (i) in respect of the required minimum number of starters.

4. ELIGIBILITY OF COMPETITORS (Refer SSR 1)

All riders shall be in possession of a national competition licence valid for motorcycle circuit racing and issued by MSA.

Supersport

A rider may upgrade to a National licence once he has competed in four Regional events, and obtained his four signatures. However, following the four signatures having been obtained, the licence must also be signed off by the Regional Motorcycle Racing Representative of the rider's particular region (or such person appointed by the MSA Motorcycle Racing Commission), before he/she will be permitted to upgrade to a National licence.

Superbike

Any rider who has taken part in a **minimum of 12 (twelve)** race meetings forming part of the 2012 and/or 2013 SA National Superbike Championships will automatically be eligible to obtain a National Licence valid for the Superbike class in the championship in 2014. **ALL OTHER PROSPECTIVE COMPETITORS** must apply in writing to the MSA Superbike Licence Committee (via MSA Head Office in Johannesburg) for consideration to be issued with a licence to enable them to take part in the championship. Any such application must detail the competitor's motorcycle racing experience and results to date, and be accompanied by relevant documentation in substantiation. Competitors who do not qualify for a licence in terms of one of the aforementioned procedures shall not be eligible to take part in the Superbike class in the 2014 SA Motorcycle Road Racing Championship. The decision to approve or decline a licence for this series shall rest solely with the MSA Superbike Licence Committee. This committee shall be chaired by the MSA Motorcycle Racing Commission President.

5. CHAMPIONSHIP SERIES

- a) The 2014 Motorsport Calendar is available from MSA on request and gives details of the championship events.
- b) Apart from at the first race meeting of the season, no practice is permitted at the circuit hosting the next round of the championship series from the date of the immediately preceding championship round, until the start of official practice as listed in the SR's for the championship

round in question (which shall normally be on the Thursday prior). This clause does not apply to legitimate participation in any bona fide MSA-sanctioned race meeting that forms part of a recognised MSA regional championship series.

- c) The only practice permitted will be as detailed in the SR's for each event.
- d) Where applicable, it shall be compulsory for all competing motorcycles to carry series sponsors' decals (refer GCR's 246 and 247).
- e) Competition numbers will be issued by MSA. Numbers 1-10 in each class shall be reserved for the riders who finished in the top ten positions in the class during the previous year's national championship series. Such numbers that are not taken up will not be re-allocated and will remain unused. All other numbers shall be issued on a 'first come first served' basis following receipt of a written application by MSA.

6. QUALIFYING FOR GRID POSITIONS

- a) Grid positions for Race 1 and Race 2 shall be determined according to each competitor's quickest time set in Qualifying. Competitors who do not set a time in Qualifying will start 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.
- c) Where qualifying times have not been recorded for whatever reason, grid positions will be as per championship point's standings to date, and thereafter by race number for both races.
- d) The starting grid will be arranged in a 4-4-4-4 configuration "in echelon". Each line will be offset. There will be a distance of 9 metres between each row. See SSR 36.

7. NON-QUALIFIERS

If a rider falls outside of the 107% qualification ruling, he will have to apply, in writing, to the Clerk of the Course 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 Clerk of the Course, as to whether the rider is allowed to compete or not.

8. RACE DISTANCE

Each race meeting or round of the championship will normally consist of two separate races of equal length, each being between 24 and 50 kilometres in length. 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.

9. CHAMPIONSHIP POINTS

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

1 st	25 points	6 th	10 points	11 th	5 points
2 nd	20 points	7 th	9 points	12 th	4 points
3 rd	16 points	8 th	8 points	13 th	3 points
4 th	13 points	9 th	7 points	14 th	2 points
5 th	11 points	10 th	6 points	15 th	1 point

- b) The combined points from both classes will be carried forward when scoring the Manufacturer's Championship, subject to a minimum of two manufactures being eligible as per 12.2
- c) **Bonus Points system. The Bonus point system will be communicated by way of circular.**

10. USE OF SPARE MOTORCYCLE

If a motorcycle is damaged to the extent that it is not possible for it to be repaired in the time available, application may be made in writing to the Clerk of the Course to use the **nominated** spare motorcycle, which must be identified by a letter 'T' next to the front race number, and subject to the following conditions:

- a) The spare motorcycle must be in a ready-to-race condition, with a sealed engine and subject to compliance with the tyre rule 12.13.
- b) The spare motorcycle must have been scrutineered by the TC on the day prior to race day.
- c) Under no circumstances may a spare motorcycle be used during the practice day. Penalties will generally not apply when a spare motorcycle is used but the Clerk of the Course shall have the discretion to decide in this regard.

11. GENERAL RULES

- a) The GCR's and SSR's applicable to motorcycle racing must be read and understood in conjunction with these regulations and specifications.
- b) The presence and/or use of generators is prohibited in the pre-race paddock (where applicable) and/or on the grid unless prior permission to the contrary has been granted by the clerk of the course.
- 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 clerk of the course.
- d) The regulations make provision for the use of a pre-race facility (paddock). The clerk of the course 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.
- 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 said officials. 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 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.
- 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) All engines must be adequately sealed by, and to the satisfaction of, the Technical Consultant prior to the start of the first race meeting in which the individual rider takes part. The costs of sealing shall be borne by the respective team or rider. The penalty for not having a sealed engine, or one on which the seal has been broken, shall be automatic exclusion from the event concerned and/or preclusion from participation in one race meeting.
- j) Riders failing to attend riders' briefing, without being excused by the relevant clerk of the course, shall be required to start all races at the event from the back of the grid whereas late arrival to the briefing will incur a Three (3) place penalty.

12. TECHNICAL REGULATIONS AND SPECIFICATIONS

Any amendments to these technical regulations shall only take effect when published in an official MSA circular.

12.1 Eligibility – Motorcycles

- a) To be admitted to the Championship, motorcycles require homologation as per 12.2 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).
- d) All motorcycles must be 4-stroke and sold to the public in South Africa 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 are 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 Consultant has the ultimate authority in respect of decisions regarding the technical legality of any motorcycle.

12.2 Homologation

Motorcycles to be raced in the championship must be homologated by either the FIM or by MSA. Only motorcycles imported into South Africa by the recognised official importer of the specific make, and which comply with these regulations, shall be permitted to take part in the series, subject to compliance with the additional criteria outlined below.

- a) Where FIM homologation is relied upon, the following shall apply:
 - The official importer must have paid to MSA a fee of R25 000 (excl. VAT) in order for its products to be raced in the series. This fee shall be payable annually, prior to the first race meeting of the season. *Note: Where a local importer represents more than one motorcycle brand, any such additional brands may be raced subject to an additional fee of R5 000 (excl. VAT) being paid per additional brand over and above the base fee of R25 000.*
 - The payment of the fee mentioned above will permit those motorcycles imported into SA by the official importer (VIN/chassis numbers to be supplied) that comply with these regulations and that appear in the FIM homologation records for the Stocksport/Superstock/Supersport categories, to be raced.
 - A minimum of 10 motorcycles of the type and specification to be raced must be imported into SA and be available for sale to the general public prior to said motorcycle being raced.
- b) Where a particular brand and model of motorcycle (that complies with these regulations) is not homologated by the FIM, the official South African importers may make application to the MSA Motorcycle Homologation Committee for a local homologation to allow the motorcycle to be raced in the series. In such cases, the following shall apply:
 - The importer concerned shall pay to MSA a homologation fee of R50 000 (excl. VAT), which shall incorporate a fee towards the technical administration of the series.
 - At least 50 examples of the motorcycle concerned must have been imported into SA (proof must be submitted in this regard).
 - The official importer must submit one new motorcycle, chosen by the Technical Consultant, together with a completed Recognition Form 'A', for inspection.
 - The homologation, or otherwise, of the relevant motorcycle shall be at the sole discretion of the MSA Motorcycle Homologation Committee.
 - Should such an application for homologation be refused, 10% of the homologation fee paid shall be retained by MSA and the balance of the fee shall be returned to the applicant.

Any motorcycle homologated under these rules shall be allowed to compete without time limitation subject to continued compliance with the appropriate technical regulations and payment of the required fee to MSA by the relevant official importer for the season in question.

c) Homologation for Privateers

In the event of no accredited manufacturer making an application as per 12.2 above, an application may be made by a competitor in his /her private capacity, provided the owner of the motorcycle can satisfy MSA Circuit Motorcycle Commission that the motorcycle was in South Africa prior to the expiry date of the previous homologation period. In these circumstances the authorisation of homologation is restricted to that particular numbered chassis/engine of the named owner.

In such instances a fee of R3 000 will be levied per application. Chassis or engines homologated by privateers for preceding homologation periods in terms of previous regulations may be extended as well in terms of these regulations.

12.3 Minimum Weights

- a) 600cc, 4-stroke, 4 cylinders (subject to Art 4.29b): Minimum weight - 160kg
- b) 680cc, 4-stroke, 3 cylinders (subject to Art. 4.29b): Minimum weight – 165kg
- c) 750cc, 4-stroke, 2 cylinders (subject to Art 4.29b): Minimum weight - 165kg
- d) 1000cc, 4-stroke, 4 cylinders Minimum weight - 175kg
- e) 1000-1200cc, 4-stroke, 2 cylinders Minimum weight - 165kg
- f) The minimum weights specified shall apply for motorcycles as they come off the track, containing a minimum of 2 litres of fuel.
- g) Any machine found to be underweight at any time during a race meeting shall be excluded from the session/race/race meeting concerned.
- h) 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.

12.4 Number Plate /Number Colours

- a) The allocated number for the rider must appear at least three (3) times on the machine, visible from the front and both sides.
- b) All race numbers need to be legible to officials. In the case of a dispute concerning the legibility of numbers, the decision of the Technical Consultant will be final.

12.5 Fuel

- a) All motorcycles must use pump fuel available to the general public via normal filling stations.
- b) All motorcycles must contain at least two (2) litres of fuel at the end of each qualifying session or race.
- c) Should the Technical Consultant suspect any fuel used to be non-compliant; the onus shall rest on the competitor concerned to prove to the contrary. Failure to do so satisfactorily shall render the competitor concerned liable to be penalised by the clerk of the course.
- d) Separate samples of the fuel used by any competitor may be requested before and/or after a race. These samples must be taken in accordance with the provisions of GCR 240's "Guidelines in respect of fuel sampling".
- e) Notwithstanding the above, the MSA Technical Consultant (in conjunction with the Clerk of the Course) 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.
- f) Refer SSR 67 for additional fuel controls.

12.6 Machine Specifications

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

12.7 Frame Body and Rear Sub-frame

- a) The frame must remain as originally produced by the manufacturer for the homologated machine.
- b) The sides of the frame-body may be covered by a protective part made of composite material. Such protectors must fit the form of the frame.
- c) Nothing can be added to the frame body by welding, or be removed by machining.
- d) All motorcycles must display the manufacturer's vehicle identification number on the frame body (chassis number).
- e) Engine mounting brackets or plates must remain as originally produced by the manufacturer for the homologated machine.
- f) The rear sub-frame may be changed or altered, but the type of material must remain as homologated or be of a higher specific weight.

- g) Bolt-on accessories to the rear sub-frame may be removed.
- h) Additional seat brackets may be added but none may be removed.
- i) The paint scheme is not restricted but polishing the frame body or sub-frame is not allowed.
- j) Luggage hooks may be removed.

12.8 Front Forks

- a) Forks (stanchions, stem, wheel spindle, etc.) must remain as originally produced by the manufacturer for the homologated motorcycle.
- b) Original internal parts of the homologated forks may be modified or changed, subject to a homologated price cap of R20 000 (excl. VAT).
No aftermarket or prototype electronically-controlled suspension parts may be used unless fitted as standard to the production model, in which case they must remain as homologated.
Aftermarket damper kits or valves may be installed (subject to clause 12.8 b) Fork caps may be modified or replaced to allow external adjustment.
Dust seals may be modified, changed or removed provided the fork remains totally oil-sealed.
The original surface finish of the fork tubes (stanchions, fork pipes) must be as per the homologated motorcycle.
- c) Any quality and quantity of oil can be used in the front forks.
- d) 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.
- e) The upper and lower fork clamps (triple clamp, fork bridges) must remain as originally produced by the manufacturer for the homologated machine.
- f) A steering damper may be added or the existing unit may be replaced with an after-market damper.
- g) The steering damper cannot act as a steering-lock limiting device.

12.9 Rear Fork (Swing arm)

- a) Every part of the rear fork must remain as originally produced by the manufacturer for the homologated machine (including rear fork pivot bolt). Axle adjusters may be changed to allow for the use of paddock stands.
- b) 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.

12.10 Rear Suspension Unit

- a) The rear suspension unit (shock absorber) is free of restriction subject to only **homologated** units with a capped retail price of R20 000 (excluding VAT) being allowed, 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.
- b) The rear suspension unit spring may be changed.

12.11 Wheels

- a) Wheels must 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) No modification of the wheel-axles or of any fixing and mounting points for the front and rear brake callipers are authorized.
- d) Spacers can be modified. Modifications to keep spacers in place are permitted.
- e) If the original design includes a cushion drive for the rear wheel, it must remain as originally produced for the homologated machine.

12.12 Brakes

- a) Brake discs must remain as originally produced by the manufacturer for the homologated machine.
- b) Front discs can be floating, using original rotors and mountings.
- c) Front and rear brake callipers (mounts, carriers, hangers) must remain as originally produced by the manufacturer for the homologated machine.
- d) Front and rear master cylinders must remain as originally produced by the manufacturer for the homologated machine.
- e) Front and rear hydraulic brake lines may be replaced with braided hoses. The split of the front brake lines for both front brake callipers 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.

12.13 Tyres

- a) MSA will confirm the details regarding the tyres to be used via official circular.
- b) The onus is on the rider to ensure that his/her tyres are correctly marked.
- c) Notwithstanding the above, if a race or qualifying session is declared as "wet" by the Clerk of the Course within the 60 minutes prior to the commencement of a qualifying session or race, then tyres may be changed to another type approved for wet weather use, at the sole discretion of the Technical Consultant. In the event of conditions improving, competitors may revert to using their marked 'dry weather' tyres. If the practice sessions, 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 Superbike Representative and the TC.
- d) If a competitor deems his tyre/s to be damaged and therefore unsafe to be used, then he/she may make application to the Technical Consultant 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 Technical Consultant. Penalties, if any, will be at the sole discretion of the Clerk of the Course.
- e) Only homologated tyres will be permitted to be used. Any homologated tyre may be used in the racing season during which it is homologated.
- f) The President of the MSA Motorcycle Racing Commission, the Superbike Representative and the MSA Technical Consultant, 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.
- g) In interpreting the use of tyres and/or the changing of tyres and/or safety matters relating to tyres, the Technical Consultant's decision shall be final, and binding on all parties.
- h) Confirmation of homologated tyres will be forwarded to all relevant tyre manufacturers, and will be available to other interested parties, on request, from MSA Head Office. A fee shall be payable to MSA in respect of the homologation of tyres.
- i) All classes shall be limited to the use of two (2) sets of tyres per race meeting as follows
 - a) **Practice session 1:** One set of used tyres, correctly marked from the previous championship round, may be used for the first practice session of the race meeting.
 - b) **Set 1 :** The use of the first set of tyres for the race meeting is reserved for practice session 2, practice session 3 and Qualifying. (This will generally be day 1 of the race meeting)
 - c) **Set 2:** The use of the second set of tyres for the race meeting is reserved for both races 1 and 2. (This will generally be day 2 of the race meeting)

- j) The Clerk of the Course, in consultation with the Technical Consultant, 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.
- k) 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 result in a penalty of a three (3) race meeting ban. Should there be less than 3 race meetings left in the season than 60 points shall be deducted from the respective rider's and manufacturer's standings.
- l) The use of tyre warmers is allowed (refer SSR 2 B).
- m) Any amendments/additions to these tyre rules shall be notified to affected parties by way of an official MSA circular.

12.14 Footrests / 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 or of a folding type, which must incorporate a device to return them to the normal position.
- d) The end of the footrest must have at least an 8 mm 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).

12.15 Handlebars and Hand Controls

- a) Handlebars may be replaced (this does not include the brake master cylinder).
- 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 right-hand side handlebar.
- e) The retaining pin for the brake lever must be safety-wired or otherwise additionally secured.

12.16 Fairing / Bodywork

- a) Fairings, front mudguards and bodywork must appear to be as originally produced by the manufacturer for the homologated machine. The aperture in the fairing through which the fork legs pass may be closed off with plastic or similar material in order to direct the airflow onto the radiator.
- b) Fairing and bodywork may be replaced with exact cosmetic duplicates of the original parts. The material may be changed.
- c) Sizes and dimensions must be the same as for the original parts without any addition or subtraction of design elements.
- d) Windscreens may be replaced.
- e) Motorcycles that were not originally equipped with streamlining are not allowed to add streamlining in any form, with the exception of a lower fairing device, as described in (h) below. This device cannot extend above a line drawn horizontally from axle to axle.
- f) The original combination of instrument/fairing brackets may be replaced. All other fairing brackets may not be altered or replaced.
- g) 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.

- h) The lower fairing has to be constructed to hold, in case of an engine breakdown, at least half of the total oil and engine coolant capacity used in the engine (minimum 5 litres). The lower edge of openings in the fairing must be positioned at least 50mm above the bottom of the fairing.
- i) The lower fairing must incorporate a maximum of two holes of 25mm. These holes must remain closed in dry conditions and must only be opened in wet race conditions as declared by the Clerk of the Course.
- j) Front mudguards must appear as originally supplied by the manufacturer for the homologated machine.
- k) Front mudguards may be replaced with exact cosmetic duplicates of the original parts.
- l) Front mudguards may be spaced upward for increased tyre clearance.
- m) Rear mudguards fixed on the swing arm that incorporate the chain guard may be modified to accommodate larger diameter rear sprockets.
- n) All exposed edges must be rounded.
- o) 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.
- p) The material of the front mudguard may be changed.
- q) Rear mudguards fixed to the swing arm may be replaced with cosmetic duplicates. The material may be changed.
- r) 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).
- s) The silhouette of the motorcycle must remain as produced by the manufacturer.
- t) Closing of the apertures in the fairing is permitted.

12.17 Fuel Tank

- a) As homologated - no modifications are allowed.
- b) Fuel tank petcocks must remain as originally produced by the manufacturer for the homologated machine.
- c) 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.
- d) Fuel tanks must be completely filled, either with fuel cell foam or an alternative material approved by the Technical Consultant.

12.18 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.

12.19 Wiring Harness

- a) The wiring harness must be as originally produced by the manufacturer for the homologated machine, subject to the provisions of clause 12.24.
- b) Cutting of the wiring harness is not allowed but modifying of the harness, subject to written approval by the Technical Consultant, is allowed to facilitate the fitment of approved aftermarket electronic units. OR
- c) The wiring loom may be replaced by the 'kit' wiring harness loom as supplied for the 'kit' ECU model produced or approved by the manufacturer of the motorcycle.

12.20 Battery

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

12.21 Radiator and oil coolers

- a) The radiator must be as homologated, but it may be modified. Additional separate radiator/s may also be added. Any such modifications/additions shall be subject to written approval being obtained from the Technical Consultant.
- b) Only standard oil coolers, as homologated, are permitted (see Art 12.21 d below). Additional oil coolers are not allowed.
- c) The use of any coolant, other than water, is prohibited.
- d) The heat exchanger (oil/water) may be disconnected from the water-cooling system.
- e) Subject to approval by the Technical Consultant, radiator hoses may be replaced and/or modified and/or re-routed.

12.22 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 subject to written approval from the Technical Consultant.

12.23 Carburettors

- a) As homologated - no modifications are allowed.
- b) Carburettor jets slide springs and needles may be replaced.
- c) The slide metering holes may be changed.
- d) Electronic or mechanical enriching devices must remain installed but may be de-activated.
- e) Bell mouths must be as originally produced by the manufacturer for the homologated machine

12.24 Ignition/Engine Control Unit (ECU)

The engine control unit (ECU) must be either:

- a) The original unit as homologated (software/programming may be changed), in which case the original wiring harness must be used, subject to clause 12.19 b); OR
- b) A locally-homologated 'kit' model (produced by, and/or approved by, the motorcycle manufacturer), with its accompanying wiring loom. Alternatively, a special connector may be used to connect the ECU to the original wiring loom. The retail price of the full system (including software) may not be greater than 1.5 times the retail price of the original system.
- c) In addition to option a) above, external ignition and/or injection module/s may be added to the homologated production ECU, but their total combined retail price cannot be higher than the complete ECU kit. These units must be homologated by the MSA Technical Consultant.
- d) The injectors must be standard units as per the homologated motorcycle.
- e) Bell mouths must be as originally produced by the manufacturer for the homologated machine.
- f) Fuel pumps and fuel pressure regulators must remain as homologated. No modifications are permitted.
- g) Lambda sensors, where fitted as standard, may be removed and the units by-passed, subject to approval by the Technical Consultant.

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

12.25 Fuel Supply

- a) Fuel lines may be replaced but the fuel petcock must remain as originally produced by the manufacturer.
- b) 'Quick' connectors or 'dry-break' connectors may be used.
- c) Fuel vent lines may be replaced.
- d) Fuel filters may be added.

12.26 Cylinder head

- a) No modifications are allowed.
- b) No material may be added to, or removed from, the cylinder head.
- c) The cylinder head gasket and base gasket may be changed.
- d) The valves, valve seats, guides, springs and retainers must be as originally produced by the manufacturer for the homologated machine. Any modifications or repairs to the valve seats shall only be permitted where allowed for and specifically detailed in the relevant workshop manual (not tuning manual). No modifications may be made to the valves, even where such modifications are provided for in the relevant workshop manual. Should modifications be approved, Final approval needs to be confirmed by the TC prior to assembly.
- e) Valve spring shims are not allowed unless fitted as standard to the homologated machine.

12.27 Camshaft

No modifications are allowed.

12.28 Cam Sprockets

Modifications are allowed to enable the 'degreeing' of camshafts.

12.29 Crankshaft

No modifications are allowed (including polishing and lightening) to either crankshafts or flywheels.

12.30 Oil Pumps and Oil Lines

- a) No pump modifications are allowed.
- 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.

12.31 Connecting Rods

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

12.32 Pistons

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

12.33 Piston Rings

As homologated - no modifications are allowed.

12.34 Piston Pins and Clips

As homologated - no modifications are allowed.

12.35 Cylinders

As homologated - no modifications are allowed.

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

- a) No modifications are allowed.
- b) Crankcase/gearbox casings, as well as ignition, clutch and generator covers may 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.

12.37 Transmission/Gearbox

- a) No modifications are allowed with the exception of undercutting of gears.
- b) 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 MSA's homologated parts list.
- c) Countershaft sprockets, rear wheel sprockets, chain pitch and size can be changed.

12.38 Clutch

- a) No modifications are allowed.
- b) Only friction and drive discs may be changed, but their number must remain as original.
- c) Clutch springs may be changed.

12.39 Ignition/Engine Control System

See clause 12.24 a), b) and c).

- a) Spark plugs may be replaced
- b) Speed limiting devices may be fitted for the purposes of controlling pit lane speed (recommended)

12.40 Generator/Electric Starter

- a) No modifications are allowed.
- 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 has expired.
- c) The engine must start and turn on its own power when the electric starter has stopped its procedure.

12.41 Exhaust System

- a) Exhaust pipes, silencers and hangers may be modified or changed. Material is free of restriction.
- b) Wrapping of exhaust systems is not allowed except in the area of the rider's foot or an area in contact with the fairing for protection from heat.

12.42 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.

12.43 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).

12.44 The following items may be removed:

- a) Instruments, instrument brackets and associated cables
- b) Horn
- c) License 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 Technical Consultant.

12.45 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, centre and side stands must be removed (fixed brackets must 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 which 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) Protective 'shark fins' must be fitted to prevent the possibility of fingers being trapped between the chain and rear sprocket.
- k) Front brake callipers and brake lever retaining pins must be safety-wired or otherwise additionally secured.
- l) Fuel cap must remain standard.

12.46 Additional Equipment

Additional equipment not on the original homologated motorcycle may not be added. (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 Technical Consultant and/or Clerk of the Course, and only in instances where the footage is required by the television production company and/or race officials.

12.47 Telemetry/Data Logging

Telemetry is not permitted. Data logging is permitted, subject to the units used appearing on the homologated parts list and further subject to the application of an all-inclusive retail price cap of R16 000 (excl. VAT), with an allowance for exchange rate fluctuations. Items such as wheel speed sensors, potentiometers and brake pressure sensors are considered together with the base unit in the calculation of the price cap.

12.48 Technical Infringements

Any serious infringements of the series technical regulations shall generally render the offending rider and/or team liable to the imposition of the maximum penalties provided for in GCR176.

12.49 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.