



## REGULATIONS & SPECIFICATIONS FOR THE 2017 SOUTH AFRICAN MOTORCYCLE CIRCUIT RACING CHAMPIONSHIP

Version 2 (14.12.2016)

### 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) **Super600 (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 15<sup>th</sup> birthday – see SSR 1
- b) **SuperGP (1000cc 4-cylinder / 1300cc Twin 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) **SuperJunior (KTM 390 one make formula)** – open to riders from 01 January of the year in which they turn 13 years old, until the end of the year in which they turn 17 years old

### INTERPROVINCIAL CHALLENGE

- d) **SuperMasters (Maximum 1000cc 4-cylinder / 1300cc twin cylinder)** – open to riders from 01 January of the year in which they turn 30 years old

### 3. AIM OF CHAMPIONSHIP

- a) To declare a South African national champion in each of the classes mentioned in clause 2 above, subject to there being at least 10 starters in the relevant class – refer SSR 82 (i).
- b) 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. All Interprovincial riders shall be in possession of a regional licence valid for motorcycle circuit racing issued by MSA.  
Riders who have not held such a licence during at least one of the past three (3) years shall be required to apply to MSA for approval to be issued with the necessary licence. MSA shall grant or withhold approval based on the rider's previous racing experience.
- b) All National and Interprovincial riders must have paid the Entry Fee and Stewardship, Safety and Scrutineering Levy specific to their class of entry.
- c) Manufacturers entering the Championship classes who comply with clauses 12.1 and 12.2 and have paid the annual manufacturer Participation and Promotion Fee as set out by the promoter are eligible to score National Manufacturer points.

### 5. CHAMPIONSHIP SERIES

- a) The Motorsport Calendar is available from MSA 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. This clause does not apply to legitimate participation in any bona fide MSA-sanctioned race meeting that forms part of a recognised MSA sub or regional championship series.
- c) The only practice permitted will be as detailed in the SRs 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 the Super600 and SuperGP classes 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. All other numbers shall

be issued on a 'first come first served' basis 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.

**6. QUALIFYING FOR GRID POSITIONS**

- a) Grid positions for Race 1 in all classes shall be determined according to each competitor's quickest time set during the official qualifying session held on the day preceding the races or as otherwise indicated on the official programme 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) Grid positions for Race 2 in all classes shall be determined according to each competitor's second quickest lap time set during the official qualifying session held on the day preceding the races or as otherwise indicated on the official programme for the event. Competitors who do not set a second quickest lap time during the official qualifying session will start Race 2 from the back of the grid, subject to the provisions of Article 7 below.
- c) 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.
- d) Where qualifying times have not been recorded for whatever reason, grid positions for Race 1 will be as per championship point's standings to date, and thereafter by race number. The grid positions for Race 2 shall be as per the finishing order of Race 1.
- e) 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 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 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

Only the points scored in the SuperGP class will count towards the Manufacturers Championship.

**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 must be made in writing to the Clerk of the Course and the Technical Consultant, together with proof in support of this application, 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 have passed pre-event scrutineering, and be in a ready-to-race condition, with a sealed engine
- b) Use of the spare motorcycle (as a whole machine) shall require that the rider concerned shall be required to start the race/s concerned from pit lane.
- c) Under no circumstances may a spare motorcycle be used during practice or official qualifying for set-up purposes. Offenders shall be precluded from taking any further part in the event in question.
- d) Any removal of parts from the spare motorcycle will render it non-eligible to be used as a spare motorcycle during the event in question.
- e) The wheels and tyres of the damaged motorcycle must be transferred to the spare motorcycle prior to its use as a spare motorcycle as per 10b) above.

**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 for use with tyre warmers are allowed on the start grid unless the Clerk of the Course issues an instruction to the contrary.
- 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. No motorcycle may be removed from *parc fermé* without permission from the TC or the Clerk of the Course.  
The podium presentation area is determined to be part of *parc fermé* and motorcycles must remain there until given instructions by the TC or the Clerk of the Course.  
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 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 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.
- 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 National TC 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 failing to attend Riders' Briefing, without being excused by the Clerk of the Course, shall be required to start all races at the event from the back of the grid. Only riders may attend riders briefing.
- k) Any matter/s not relevant to riders briefing must be submitted in writing to the promoters for further discussion.

**12. TECHNICAL REGULATIONS AND SPECIFICATIONS**

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

Any competitor found to be in breach of these technical regulations will be subject to the provisions of GCR 176.

The TC may, at his sole discretion, call on external specialists for additional consulting.

### **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, normally aspirated 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 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 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)
  - 1) The motorcycle must be homologated by the FIM for Stocksport / Superstock / Supersport racing.
  - 2) The prevailing retail price (VAT inclusive) of the motorcycle to the general public through official dealer outlets shall not exceed R 200 000 in the case of the Super600 class or R 350 000 in the case of the SuperGP and SuperMasters classes. Said price caps may be adjusted in the event of significant exchange rate fluctuations.
  - 3) 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 Racing Commission 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 R55 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 homologation document supplied by MSA for inspection.
  - The homologation, or otherwise, of the relevant motorcycle shall be at the sole discretion of the MSA Motorcycle Racing Commission.
  - 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 (parts a and b above) 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.

### **12.3 Minimum Weights**

- a) 375cc, 4-stroke, 1 cylinder: Minimum weight - 147kg
- b) 600cc, 4-stroke, 4 cylinders: Minimum weight - 160kg
- c) 680cc, 4-stroke, 3 cylinders: Minimum weight – 165kg
- d) 750cc, 4-stroke, 2 cylinders: Minimum weight - 165kg
- e) 1000cc, 4-stroke, 4 cylinders Minimum weight - 175kg
- f) 1000-1300cc, 4-stroke, 2 cylinders Minimum weight - 189kg
- g) The minimum weights specified shall apply for motorcycles as they come off the track, containing a minimum of 2 litres of fuel.
- h) Any machine found to be underweight at any time during a race meeting shall be excluded from the session/race/race meeting concerned.
- 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.

### **12.4 Race Numbers**

- a) Race numbers must appear on the front of all motorcycles, as well as both sides. The front number must be clearly legible from a distance of 50 metres.
- b) There is no restriction on the font, or design of race numbers, provided they comply with the legibility requirements as per (a) above. Ideally the individual numbers must be a bright primary colour outlined in black to improve the overall visibility and effect.
- c) The appointed Technical Consultant/s shall have the ultimate authority to make a ruling as to race numbers' compliance with the legibility requirements and the onus rests on the rider/team to ensure that race numbers can be easily read by spectators and race officials.
- d) No triple digit numbers shall be allowed except for 'guest' riders.

### **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 satisfactorily do so 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.

#### **12.7.1 Engine (All classes)**

- a) Engines may be officially sealed or marked by the MSA Technical Consultant prior to competition. 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.

#### **12.7.2 Frame Body and Rear Sub-frame (All classes)**

- 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 for an aftermarket unit or altered, but the type of material and dimensions must remain as homologated or be of a higher specific weight. The motorcycle must still comply with the minimum weight rule 12.3)
- 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) Front forks, as well as the upper and lower fork clamps (triple clamp / fork bridges), must remain as originally produced by the manufacturer for the homologated motorcycle, subject to the following permitted deviations by class:

### SuperJunior

- The air gap in the front fork may be altered.

### Super600

- Shims and springs are free of restriction.

### SuperGP / SuperMasters

- Original internal parts of the homologated forks may be modified or changed, provided that no electronic parts or software may be used where same is not fitted to the homologated motorcycle.
- Aftermarket damper kits or valves may be installed.
- Fork caps may be modified or replaced to allow external adjustment.
- Alternate fork cartridge kits may be fitted.

- b) For all classes, the following shall apply:
  - Dust seals may be changed provided 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, subject to inspection and approval by the Technical Consultant on safety grounds.
  - A steering damper may be added or the existing unit may be replaced with an after-market damper except in the SuperJunior class.
  - The steering damper cannot act as a steering-lock limiting device.
  - Bump stops may be removed except in the SuperJunior class.
  - Removal of peening on shim retainer is allowed except in the SuperJunior class.

## **12.9 Rear Fork / Swing arm (All classes)**

- 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 bolted to the rear fork. Brackets must have rounded edges (with a large radius). Fastening screws must be recessed.

- c) Protective “shark fins” must be fitted to motorcycles where the drive train runs beneath the swing arm. Chains that run through the swing arm do not need “shark fins”.

#### **12.10 Rear Suspension Unit**

- a) For the SuperGP, SuperMasters and Super600 classes, the rear suspension unit (shock absorber) is free of restriction (to clarify, the original suspension unit may be modified as an alternative to being 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.
- b) For the SuperJunior class (refer clause 12.45(L), the rear suspension unit (shock absorber) and original attachments must remain as per that fitted to the motorcycle as original equipment.
- c) For all classes, the original attachments to the frame and rear fork (swing arm) as homologated must be used.
- d) For all classes, except SuperJunior, ride height spacers are permitted.
- e) For all classes, except SuperJunior, removal of peening on shim retainer is allowed

#### **12.11 Wheels (All classes)**

- 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 calipers 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 (All classes except where stated to the contrary)**

- a) Brake discs can be aftermarket type (Brembo Preferred) 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 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, except in the SuperJunior class where the brake lines must remain standard. 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) In the SuperJunior class, the ABS module and pump must be in place and operational. The ABS sensor may be relocated on the rear swing arm.
- i) KTM Power Part front brake levers must be fitted in the SuperJunior class.

#### **12.13 Tyres (All classes)**

- a) MSA will confirm the details regarding the tyres to be used via official circular and/or via the official tyre order forms issued to riders.
- b) Marked tyres must be used for all qualifying sessions and races. 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 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 Race Director and the Technical Consultant.

- 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 promoter 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) All classes shall be limited to the use of two (2) sets of tyres per race meeting. The same sets of tyres must be used for the official timed qualifying session and both races.  
Set 1(one) will be issued pre-marked for qualifying and race 1.  
Set 2(two) will be issued pre-marked for race 2.
- i) 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.
- 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) Where compounds are specified, these will be the only ones permitted.
- n) The onus is on the rider to ensure that his/her tyres are correctly marked.
- o) Teams are to ensure that tyres are fitted in the correct rotational direction.
- p) The onus is on the rider to ensure they have sufficient wet weather tyres at all times.

#### **12.14 Footrests / Foot Controls (All classes)**

- 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 (All classes)**

- 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.
- f) Brake and clutch lever guards may be fitted at the discretion of the rider.

**12.16 Fairing / Bodywork (All classes)**

- a) Fairings, front mudguards and bodywork must appear to be as originally produced by the manufacturer for the homologated machine except in the SuperJunior class who must use Omega Fibreglass fairings only (without modifications). 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 except in the SuperJunior class who must use Omega Fibreglass fairings only (without modifications). The material may be changed except in the SuperJunior class.
- 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 except in the SuperJunior class but the size of the opening in the fairing leading to the duct may be no larger than on the homologated motorcycle except in the SuperJunior class. The material may be changed except in the SuperJunior class. 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.
- 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. A chain guard on top of the swing arm may be removed as long as it is not incorporated into the rear mudguard.
- r) The existing rear mudguard under the seat may be removed. A mudguard may be fitted directly onto the swingarm (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 (All classes)**

- 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 (All classes)**

- 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) For the SuperJunior and Super600 classes, the original wiring harness must remain standard as homologated.
- b) For the SuperGP and SuperMasters classes, the following is permitted (see clause 12.24 below):

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 The wiring harness 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 (All classes)**

Aftermarket batteries are allowed providing they are of the same dimensions and specifications as the original battery and fit correctly in the battery box as fitted to the original machine.

**12.21 Radiator and oil coolers (All classes)**

- 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 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 Technical Consultant, radiator hoses may be replaced and/or modified and/or re-routed.

**12.22 Air Box (All classes)**

- 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 (All classes)**

- 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)**

##### **SuperGP/SuperMasters classes**

- a) The original unit as homologated (software/programming) may be altered, the original wiring harness must be used and an external fuelling and ignition module may be used.
- b) A locally-homologated 'kit' model (produced by, and/or approved by, the motorcycle manufacturer), may also be used 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.

##### **Super 600 class**

- d) The standard ECU as fitted to the homologated motorcycle may be flashed (change to software). A fuel control unit may be added to the unmodified standard wiring harness.

##### **SuperJunior**

- e) Ignition/ECU is to remain as per the standard production motorcycle. No modifications are permitted.

##### **All classes**

- f) 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**

##### **SuperJunior class**

- a) All elements of the fuel supply system must remain standard.

##### **All other classes**

- 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.
- e) Fuel pumps and fuel pressure regulators must remain standard.
- f) The injectors must be standard units as per the homologated motorcycle.
- g) Bell mouths must be as originally produced by the manufacturer for the homologated machine.
- h) One way valves must be fitted on the fuel vent lines leading to the breather box.

#### **12.26 Cylinder head**

- a) No modifications are allowed whatsoever
- b) No material may be added to, or removed from the cylinder head.
- c) The cylinder head gasket may be changed, except for in the SuperJunior class where it must remain standard.

- 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.
- e) Valve spring shims are not allowed unless fitted as standard to the homologated machine.

**12.27 Camshaft (All classes)**

No modifications are allowed.

**12.28 Cam Sprockets (All classes)**

- a) No dimensional modifications are allowed.
- b) Degreeing of cams is allowed, except in the SuperJunior class.
- c) Slotting of cam gears is allowed for degreeing purposes, except in the SuperJunior class.

**12.29 Crankshaft (All classes)**

- 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.

**12.30 Oil Pumps and Oil Lines (All classes)**

- 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.

**12.31 Connecting Rods (All classes)**

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

**12.32 Pistons (All classes)**

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

**12.33 Piston Rings (All classes)**

As homologated - no modifications are allowed.

**12.34 Piston Pins and Clips (All classes)**

As homologated - no modifications are allowed.

**12.35 Cylinders and Transmission Casings (All classes)**

- 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.

**12.36 Crankcase and all other Engine Casings (All classes)**

- 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.

- 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.

**12.37 Transmission/Gearbox**

- a) For the SuperJunior class, no modifications are allowed to be made to the gearbox. Only KTM Power part sprockets are allowed, either 42 or 45 teeth only.

The primary drive gear ratio must remain as homologated.

- b) For all other classes:
  - 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.
  - Countershaft sprockets, rear wheel sprockets, chain pitch and size can be changed.
  - The undercutting of the gears is allowed for safety purposes.
  - The primary drive gear ratio must remain as homologated
  - The sprocket cover may be modified or eliminated.
  - Chain guard, as long as it is not incorporated in the rear fender, may be removed.

**12.38 Clutch (All classes)**

- a) No modifications are allowed.
- b) Only friction and drive discs may be changed (except in the SuperJunior class), but their number must remain as original.
- c) Clutch springs may be changed, except in the SuperJunior class.
- d) No additional spacers may be added.

**12.39 Spark plugs**

- a) Spark plugs may be replaced.

**12.40 Generator/Electric Starter (All classes)**

- 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 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, headers, silencers and hangers may be modified or replaced with aftermarket alternatives in all classes except SuperJunior.
- b) In the SuperJunior class, only the original exhaust system or the manufacturer specified alternative may be used.

**12.42 Fasteners (All classes)**

- 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 (All**

**classes):**

- 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.

**12.44 The following items MAY be removed (All classes):**

- 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 (All classes):**

- 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 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.
- l) With respect to the SuperJunior class, non-serviceable or sealed parts may not be modified or serviced and must be replaced with the specific OEM part.

**12.46 Additional Equipment (All classes)**

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**

- a) The use of telemetry is not permitted in any of the classes.
- b) Data logging is permitted only in the SuperGP and SuperMasters classes, 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 an amount of R20 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 Non-Compliant Parts/Components (All classes)**

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.