

2022 HONDA BRITISH TALENT CUP

SPORTING AND TECHNICAL REGULATIONS

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[TO BE READ IN CONJUNCTION WITH THE 2022 MCRCB YEARBOOK]

PLEASE NOTE: The Promoter/Organiser reserves the right to issue amendments to this document from time to time.

MSVR
MOTORSPORT VISION RACING

5.4 BRITISH TALENT CUP TECHNICAL REGULATIONS

The following rules are intended to permit limited changes to the homologated motorcycle in the interests of safety and improved competition.

EVERYTHING THAT IS NOT AUTHORISED AND PRESCRIBED IN THESE REGULATIONS IS STRICTLY FORBIDDEN.

If a change to a part or system is not specifically allowed in any of the following articles, then it is forbidden.

The only model homologated is Honda NSF 250 R (Type MR03). All machines must be normally aspirated. All motorcycles must comply in every respect with all the requirements for road racing as specified in these Technical Regulations, unless they are already equipped as such on the homologated model.

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

5.4.1 **Motorcycle specifications**

All parts and systems not specifically mentioned in the following articles must remain as originally produced by the manufacturer for the homologated motorcycle.

5.4.2 **Displacement capacities**

The following engine configurations comprise this class

Honda NSF 250 R 4-stroke 1 cylinder

5.4.3 **Minimum Weight**

Minimum total weight of Motorcycle + Rider: 148 kg with the machines with its fuel tank in place and the rider dressed as to race, including helmet.

A limit to the amount of ballast that may be fixed to the machines of the lightest riders will be imposed: For safety reasons and to promote new, young riders to the class, a limit to the amount of ballast that may be fixed to the machines of the lightest riders will be imposed; the maximum machine only weight limit is 90 kg.

Subject to the above and at any time of the event, the weight of the whole machine (including the tank and its contents) and rider, must not be lower than the minimum weight.

During the final technical inspection at the end of the race, the selected motorcycles and riders will be weighed in the condition they finished the

race, and the established weight limit must be met in this condition. Nothing may be added to the motorcycle. This includes all fluids.

During the practice and qualifying sessions, riders may be asked to submit their motorcycle to a weight control. In all cases the rider must comply with this request.

The use of ballast is allowed to stay over the minimum weight limit and may be required due to the handicap system. The use of ballast and weight handicap must be declared to the Chief Technical Officer at the preliminary checks.

5.4.4 **Number and Background Colours**

See MCRCB General Technical Regulations (G-3.29).

In case of dispute concerning legibility of numbers, the decision of MCRCB will be final.

5.4.5 **Fuel**

Only MCRCB Control Fuel is permitted for all practice and race.

5.4.6 **Tyres**

Only tyres from the official tyre supplier may be used in this class and each team must sign a contract with that supplier

The tyre specifications available at each event will be determined by the Championship Promoter. Only homologated tyres in each event are permitted.

5.4.7 **Engine**

- a) At any time, the Chief Technical Officer, under the supervision of Race Direction, may request a team that the engine used during a Qualifying Practice (QP) to be sealed and checked after the completion of the meeting. This request must be submitted at any moment during the event and the team has the right to work in the engine maintenance until two (2) hours after this notification. This maintenance must be done with a technical steward present. At the end of this maintenance, the engine will be resealed.

5.4.7.1 **Fuel Injection System**

- a) The original homologated fuel injection system must be used without any modification.
- b) The fuel injectors must be stock and unaltered from the original specification and manufacture.
- c) Air Funnels must remain as originally produced by the manufacturer for the homologated motorcycle.
- d) Butterfly valves cannot be changed or modified.
- e) Air and air/fuel mixture must go to the combustion chamber exclusively through the throttle body.

- f) Electronically controlled throttle valves, known as 'ride-by-wire', cannot be used.

5.4.7.2 **Cylinder Head**

- a) Must be the originally fitted and homologated part with no modification allowed.
- b) The valves, valve seats, guides, springs, tappets, oil seals, shims, cotter valve, rocker arms, spring base and spring retainers must be as originally produced and in the original position as supplied by the manufacturer of the homologated motorcycle.
- c) Only normal maintenance interventions as prescribed by the Manufacturer in the service manual of the motorcycle are authorized.
- d) Valve spring shims are not allowed.

5.4.7.3 **Camshafts**

Must be the originally fitted and homologated part with no modification allowed.

5.4.7.4 **Cam sprockets**

- a) Must be the originally fitted and homologated part with no modification allowed.
- b) The cam chain and tensioner must remain as homologated.

5.4.7.5 **Cylinder**

Must be the originally fitted and homologated part with no modification. The cylinder must be used in conjunction with standard homologated head and base gaskets.

5.4.7.6 **Pistons**

Must be the originally fitted and homologated part with no modification allowed.

5.4.7.7 **Piston rings**

Must be the originally fitted and homologated part with no modification allowed.

5.4.7.8 **Piston pin and clips**

Must be the originally fitted and homologated part with no modification allowed.

5.4.7.9 **Connecting rod**

Must be the originally fitted and homologated part with no modification allowed.

5.4.7.10 **Crankshaft**

Must be the originally fitted and homologated part with no modification allowed.

5.4.7.11 **Crankcase/Gearbox housing**

- a) Crankcases must remain as homologated. No modifications are allowed (including painting, polishing and lightening).
- b) It is not allowed to add a pump used to create a vacuum in the crankcase.

5.4.7.11.1 **Lateral covers and protection**

- a) Lateral (side) covers may not be altered, modified or replaced.
- b) All lateral covers/engine cases containing oil and which could be in contact with the ground during a crash, must be protected by a second cover made from metal, such as aluminium alloy, stainless steel, steel, titanium or composite material.

- c) The secondary cover must cover a minimum of 1/3 of the original cover. It must have no sharp edges to damage the track surface.
- d) Plates or crash bars made from aluminium or steel also are permitted in addition to these covers. All of these devices must be designed to be resistant against sudden shocks, abrasions and crash damage.
- e) MCRCB approved covers will be permitted without regard of the material.
- f) These covers must be fixed properly and securely with a minimum of three (3) case cover screws that also mount the original covers/engine cases to the crankcases.
- g) Oil containing engine covers must be secured with steel bolts.
- h) The Chief Technical Officer has the right to refuse any cover not satisfying this safety purpose.

5.4.7.12 **Transmission/Gearbox**

- a) Must be the originally fitted and homologated part with no modifications allowed.
- b) Quick-shift systems are allowed (including wire and potentiometer).
- c) Countershaft sprocket, rear wheel sprocket, rear sprocket carrier hub, chain pitch and size may be changed.

5.4.7.13 **Clutch**

- a) The clutch centre must be the originally fitted and homologated part with no modification allowed.
- b) The clutch basket may be changed to one from the BSB BTC approved parts list.
- c) Friction and drive discs may be changed, but their number must remain as original.
- d) Helical clutch springs may be changed, but only the non-helical clutch springs can be eliminated.

5.4.7.14 **Oil Pumps and Oil Lines**

Must be the originally fitted and homologated part with no modification allowed.

5.4.7.15 **Radiator and cooling system**

- a) The only liquid engine coolants permitted is water.
- b) The water radiator must be the originally fitted and homologated part with no modification allowed.
- c) Protective meshes may be added in front of the water radiator.
- d) The cooling system hoses and catch tanks may be changed.
- e) Radiator cap is free.

5.4.7.16 **Air Box**

- a) The air box (and its included ram-air intake) must remain as originally produced by the manufacturer on the homologated motorcycle.
- b) The air filter element may be modified or replaced but must be mounted in the original position. This element cannot be used to modify the air flow inside/outside the airbox.
- c) The air box drains must be sealed.
- d) All motorcycles must have a closed breather system. All the oil breather lines must be connected, may pass through an oil catch tank and must exclusively discharge in the airbox.
- e) No heat protection may be attached to the airbox.

5.4.7.17 **Fuel supply**

- a) Fuel pump and fuel pressure regulator must remain as homologated.
- b) The fuel pressure must be as homologated.
- c) Fuel lines from the fuel tank to the delivery pipe assembly (excluded) may be replaced and must be located in such a way that they are protected from crash damage.
- d) Quick connectors or dry break connectors may be used.
- e) Fuel vent lines may be replaced.
- f) Fuel filters may be added.

5.4.7.18 **Exhaust System**

- a) Exhaust pipes and silencers must be standard.
- b) For safety reasons, the exposed edges of the exhaust pipe outlet must be rounded to avoid any sharp edges.
- c) 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.
- d) Coating of exhaust systems is not allowed.

5.4.7.19 **Sound limits in force**

Noise will be controlled at: Max. 107 dB/a measured in a static test at 5.500rpm (with a 3 dB/A tolerance after the race only).

In a competition which requires a final examination of machines before the results are announced, this examination can include a noise control measurement of at least the first three machines listed in the final classification. At this final test, there will be a 3 dB/a tolerance. There is also an equipment tolerance of 2 dB/A, the actual maximum reading before a practice or race is 109 dB/A and after the race or practice being 112 dB/A.

5.4.8 **Electrics and Electronics**

5.4.8.1 **Ignition/Engine Control System (ECU)**

- a) Central unit (ECU) must be the originally fitted and homologated part with no modification allowed.
- b) It isn't allowed to add injection modules that modify the inputs/outputs of the Central unit (ECU).
- c) The software used to modify the ECU must be the originally produced by the manufacturer for the homologated motorcycle.
- d) The parameters that the software itself provides for adjustment, cannot be extended and/or exceeded under any circumstances.
- e) The Chief Technical Officer could, at its discretion, download and analyse the files and maps of the Central Unit (ECU).
- f) During an event the Chief Technical Officer has the right to ask a team to substitute their ECU with the sample received from the Manufacturer. The change has to be done before Sunday warm up.
- g) The data logging system is free. The data logger may not act to control any strategy or setting in the ECU. The logger may not automate these setting changes. The maximum number of inputs by external sensors allowed are:
 - 1) Position and speed by GPS

- 2) Engine temperature (water)
 - 3) Lambda signal
 - 4) TPS signal
 - 5) Engine RPM
 - 6) Rear Wheel speed
 - 7) Front Wheel speed
 - 8) Front brake pressure
 - 9) Rear brake pressure
 - 10) Front fork position
 - 11) Rear damper position
- h) The addition of a device for infrared (IR) transmission of a signal between the racing rider and his team, used exclusively for lap timing, is allowed.
 - i) The addition of a GPS unit for lap timing/scoring purposes is allowed.
 - j) Telemetry is not allowed.
 - k) Harness must be the originally fitted and homologated part with no modification allowed except:
 - a) Modifications are only allowed for data download proposal (Datalogger).
 - b) These modifications must be authorized by the Chief Technical Officer.
 - c) Map Selector and Pit-limiter switches are considered homologated parts of the harness.
 - l) The original temp meter and tachometer may be altered, replaced or eliminated. It can be replaced only by a unit specified in the BSB BTC Authorised parts list. Display/s for lap-timing and gear selection purposes only can be added.
 - m) The standard sensors of the ECU, cannot be changed, modified or eliminated.
 - n) Spark plug may be replaced.
 - o) A battery can be installed and connected.

5.4.8.2 **Generators, alternator, electric starter**

- a) The generator (ACG) must be the originally fitted and homologated part with no modification allowed.
- b) The stator must be fitted in its original position and without offsetting.

5.4.9 **Main frame**

During the entire duration of the event, each rider can only use one (1) complete motorcycle, as presented for Technical Control, with the frame clearly identified with a seal. In case the frame needs to be replaced the rider or the team must request the use of a spare frame to the Chief Technical Officer.

The rebuilt motorcycle must be inspected before its use by the technical stewards for safety checks and a new seal will be placed on the motorcycle frame.

5.4.9.1 **Frame body and Rear sub frame**

- a) The frame must remain as originally produced by the manufacturer for the homologated motorcycle.

- b) Holes may be drilled on the frame only to fix approved components (i.e. fairing brackets, steering damper mount, sensors).
- c) The sides of the frame-body may be covered by a protective part made of a composite material. These protectors must fit the form of the frame, but they must leave an empty place to add the technical control sticker close to the right side of the pivot frame.
- d) Crash protectors may be fitted to the frame, using existing points, or pressed into the ends of the wheel axes.
- e) Nothing else may be added or removed from the frame body.
- f) All motorcycles should display a vehicle identification number (chassis number).
- g) Engine mounting brackets or plates must remain as originally produced by the manufacturer for the homologated motorcycle.
- h) Rear sub frame may be changed or altered, to allow different riders, but the type of material must remain as homologated, or material of a higher specific weight.
- i) Additional seat brackets may be added, non-stressed protruding brackets may be removed if they do not affect the safety of the construction or assembly. Bolt-on accessories to the rear sub-frame may be removed.
- j) The paint scheme is not restricted but polishing the frame body or sub frame is allowed with the sole aim of improving its aesthetics.

5.4.9.2 **Front Forks**

- a) Forks (stanchions, stem, wheel spindle, upper and lower crown, etc.) must remain as originally produced by the manufacturer for the homologated motorcycle.
- b) The upper and lower fork clamps (triple clamp, fork bridges) must remain as originally produced by the manufacturer on the homologated motorcycle.
- c) Steering stem pivot position must remain in the homologated position (as supplied on the production bike).
- d) The steering damper may be eliminated or replaced with an after-market damper.
- e) The steering damper cannot act as a steering lock limiting device.
- f) Fork caps cannot be modified or replaced.
- g) Dust seals may be modified, changed or removed if the fork remains totally oil-sealed.
- h) The springs of the homologated forks may be modified or changed. Any quantity and quality of oil can be used. The original surface finish of the fork tubes (stanchions, fork pipes) cannot be changed. Additional surface treatments are not allowed.
- i) The inner parts of the cartridges can be modified or replaced using a kit from the BSB BTC Authorised parts list. The external aspect cannot be modified, except adding holes, or enlarging existing holes.

5.4.9.3 **Rear fork (Swingarm)**

- a) The rear fork must remain as originally produced by the manufacturer for the homologated motorcycle. The paint scheme is not restricted but polishing the swingarm is allowed with the sole aim of improving its aesthetics.

- b) Rear fork pivot bolt must remain as originally produced by the manufacturer for the homologated motorcycle.
- c) Rear swingarm pivot position must remain as originally produced by the manufacturer for the homologated motorcycle.
- d) A solid protective cover (shark fin) shall be fixed to the swing-arm, and must always cover the opening between the lower chain run, swing-arm and the rear wheel sprocket, irrespective of the position of the rear wheel.
- e) Rear wheel stand brackets may be added in the original position. Brackets must have rounded edges (with a large radius).
- f) The sides of the swing-arm may be covered by a protective part made of a composite material or thin vinyl cover. These protectors must fit the form of the swing-arm.
- g) A Carbon Fibre or Fibre glass swingarm mounted mudguard ('Hugger') may be used. It must be securely fixed in place but cannot be bonded to the surface.

5.4.9.4 **Rear suspension unit**

- a) Rear suspension unit (shock absorber) can be replaced with a part from the BSB BTC Authorised Parts list. The original attachments to the frame and rear fork (swing arm and linkage) must be as homologated.
- b) All the rear suspension linkage parts must remain as originally produced by the manufacturer for the homologated motorcycle.
- c) Rear suspension spring may be changed. Any quantity and quality of oil can be used.
- d) The inner valves and piston of the hydraulic components can be modified or replaced.
- e) The total length of the shock absorber must remain between the limits recommended by the manufacturer for the homologated motorcycle (Max. length between the mounting hole centres is 312mm).

5.4.9.5 **Wheels**

- a) Wheels can be changed or modified, but the only material allowed is aluminium alloy.
- b) The only permitted wheel rim sizes are:
Front 2.50" x 17"
Rear 3.50" x 17"
- c) A non-slip coating / treatment may be applied to the bead area of the rim.
- d) Wheel axles, bearings and wheel spacers may be modified or replaced.
- e) The use of titanium and light alloys in the construction of the wheel axes is forbidden.
- f) Wheel balance weights may be discarded, changed or added to.
- g) Aluminium or steel inflation valves are compulsory. Angled valves are recommended.
- h) The use of any device on the wheel to adjust the tyre pressure whilst on track is prohibited.

5.4.9.6 **Brakes**

- a) Brake discs may be replaced by aftermarket discs which comply with following requirements:
 - i. Brake discs must retain the same material as the homologated disc and carrier or Steel (max. carbon content 2.1 wt%).

- ii. The outside diameter of the front brake disc must be between 290 and 300 mm.
- iii. The thickness is limited to 5.5 mm.
- b) The front and rear brake caliper must remain as originally homologated.
- c) In order to reduce the transfer of heat to the hydraulic fluid it is permitted to add metallic shims to the calipers, between the pads and the caliper.
- d) The front and rear master cylinder may be changed with parts listed in the MCRCB BTC Approved parts list. Front and rear brake fluid reservoirs may be changed with aftermarket products.
- e) Front and rear hydraulic brake lines may be changed.
- f) Front and rear brake pads may be changed.
- g) Additional air scoops or ducts are not allowed.
- h) Motorcycles must be equipped with brake lever protection, intended to protect the handlebar brake lever from being accidentally activated in case of collision with another motorcycle. Composite guards are not permitted. FIM approved guards will be permitted without regard of the material. The Chief Technical Officer has the right to refuse any guard not satisfying this safety purpose.

5.4.9.7 **Handlebars and hand controls**

- a) Handlebars may be replaced.
- b) Handlebars and hand controls may be relocated.
- c) Throttle controls must be self-closing when not held by the hand.
- d) Throttle assembly and associated cables may be modified or replaced but the connection to the throttle body and to the throttle controls must remain as on the homologated motorcycle. Cable operated throttles (grip assembly) must be equipped with both an opening and a closing cable.
- e) Clutch and brake lever may be replaced with an after-market model. An adjuster to the brake lever is allowed.
- f) Motorcycles must be equipped with a functional ignition kill switch or button mounted on the left or right hand handlebar (within reach of the hand while on the hand grips) that is capable of stopping a running engine. The button or switch must be RED.

5.4.9.8 **Foot rest/Foot controls**

- a) Foot rests, hangers/brackets and hardware may be replaced and relocated but the hangers/brackets must be mounted to their original frame mounting points.
- b) Foot controls; gear shift and rear brake must remain operated manually by foot.
- c) Foot rests may be rigidly mounted or a folding type which must incorporate a device to return them to the normal position.
- d) The end of the foot rest must have at least an 8 mm solid spherical radius.
- e) Non folding footrests must have an end (plug) which is permanently fixed, made of aluminium, plastic, Teflon® or an equivalent type material (minimum radius 8mm). The plug surface must be designed to reach the widest possible area. The Chief Technical Officer has the right to refuse any plug not satisfying this safety aim.

5.4.9.9 Fuel tank

- a) Fuel tank must be an exact cosmetic replica of the one as originally produced by the manufacturer for the homologated motorcycle and be the same weight or heavier. It must be made of Aluminium and conform to the MCRCB General Technical Regulations.
- b) All fuel tanks must be completely filled with fire retardant material (open-celled mesh, i.e. Explosafe).
- c) Fuel tank breather pipes must be fitted with non-return valves that discharge into a catch tank with a minimum volume of 200cc made of a suitable material. The original catch tank can be changed.
- d) Fuel cap must remain as originally produced by the manufacturer for the homologated motorcycle. Fuel cap when closed must be leak proof.
- e) A rider spacer/pad may be fitted to the rear of the tank with no permanent adhesive. It may be constructed of foam padding or composite material.
- f) The sides of the fuel tank may be protected with a cover made of a composite material. These covers must fit the shape of the fuel tank.

5.4.9.10 Frame Body and Rear Sub Frame

- a) Fairing and bodywork may be replaced with exact cosmetic duplicates of the original parts, but must appear to be as originally produced by the manufacturer for the homologated motorcycle, with slight differences due to the different manufacturers (different pieces mix, fixing points, etc.). The material may be changed. The use of carbon fibre or carbon composite materials is not allowed. Specific reinforcements in Kevlar® or carbon are allowed locally around holes and stressed areas.
- b) For all bodywork paint and decal design is free.
- c) Overall size and dimensions must be the same as the original part, with a tolerance of +10mm, respecting the design and features of the homologated fairing as far as possible. The overall width of the frontal area may be +25mm maximum. The decision of the Chief Technical Officer is final.
- d) Wind screen may be replaced with an aftermarket product. The height of the windscreen can be raised from standard, The screen cannot be lower than stock and a maximum of 30 mm higher than stock as measured from/to the upper fork bridge. The screen must conform to the same profile from the front as the original. From a top view the length of the windscreen may be shortened by 25mm to allow clearance for the rider. The edge of the screen must have no sharp edges.
- e) Fairing brackets may be altered or replaced.
- f) The lower fairing must to be constructed to hold, in case of an engine breakdown minimum 2.5 litres. The lower edge of all the openings in the fairing must be positioned at least 70 mm above the bottom of the fairing.
- g) The upper edge of the rear transverse wall of the lower fairing must be at least 70 mm above the bottom. The angle between this wall and the floor must be $\leq 90^\circ$.
- h) Motorcycles may be equipped with a radiator shroud (inner ducts) to improve the air stream towards the radiator but the appearance of the front, the rear and the profile of the motorcycle must not be changed.

- i) The lower fairing must not incorporate any drain holes.
- j) Front mudguards may be replaced with a cosmetic duplicate of the original parts and may be spaced upward for increased tyre clearance.

5.6.9.11 **Seat**

- a) Seat, seat base and associated bodywork may be replaced. The appearance from front, rear and profile must conform to the homologated shape. The length of the seat bodywork can be modified to allow taller riders.
- b) No part of the motorcycle may be behind a line drawn vertically at the edge of the rear tyre.
- c) The seat unit shall have a maximum height of the (approximately) vertical section behind the rider's seating position of 150 mm. The measurement will be taken at a 90° angle to the upper surface of the flat base at the rider's seating position, excluding any seat pad or covering.
- d) Same materials as fairings must be used (article 5.4.8.10.a).
- e) All exposed edges must be rounded.

5.4.9.12 **Fasteners**

- a) Standard fasteners may be replaced with fasteners of any material and design but titanium fasteners cannot be used. The strength and design must be equal to or exceed the strength of the standard fastener.
- b) Fasteners may be drilled for safety wire, but intentional weight-reduction modifications are not allowed.
- c) Thread repair using inserts of different material such as helicoils and timeserts is allowed.
- d) Aluminium fasteners may only be used in non-structural locations.

5.4.9.13 **Rear Safety Light**

All motorcycles must have a functioning red light mounted at the rear of the machine to be used in rain or low visibility conditions as instructed by Race Control. The team must ensure that the light is switched on whenever a rain tyre is fitted on the motorcycle and/or when any practice or race is declared "wet" by Race Control.

The light must be able to be switched on by the rider from a handlebar mounted switch.

Lights must comply with the following:

- a) lighting direction must be parallel to the machine centre line (motorcycle running direction), and clearly visible from the rear at least 15 degrees to both left and right sides of the machine centre line.
- b) mounted on the seat/rear bodywork approximately on the machine centre line, in a position approved by the Chief Technical Officer. In case of dispute over the mounting position or visibility, the decision of the Chief Technical Officer will be final.
- c) power output/luminosity equivalent to approximately: 10 – 15W (incandescent) 0.6 – 1.8 W (LED).
- d) the switch must be accessible.
- e) rain light power supply may be separated from the motorcycle main wiring and battery.

5.4.10 The following items MAY be altered or replaced from those fitted to the homologated motorcycle:

- a) Any type of lubrication, brake or suspension fluid may be used.
- b) Painted external surface finishes and decals.
- c) Material for brackets connecting non original parts (fairing, instruments, etc.) to the frame (or engine) cannot be made from titanium or fibre reinforced composites.
- d) Protective covers for the frame, etc. may be made in other materials if these parts do not replace original parts mounted on the homologated model.

5.4.11 The following items MAY BE removed

- a) Bolt-on accessories on a rear sub frame.

5.4.12 General Items

5.4.12.1 Materials

The use of titanium in the construction of the frame, the front forks, the handlebars, the swing-arms, the swing-arm spindles and the wheel spindles is forbidden. For wheel spindles, the use of light alloys is also forbidden. The use of titanium alloy nuts and bolts isn't allowed in this class.

- a) Titanium test to be performed on the track: magnetic test (titanium is not magnetic).
- b) The 3 % nitric acid test (titanium does not react. If metal is steel, the drop will leave a black spot).
- c) Specific weight of titanium alloys is between 4.5 and 5.0 kg/dm³ vs., over 7.48 kg/dm³ of steel and can be ascertained by weighing the part and measuring its volume in a calibrated glass filled with water (intake valve, rocker, connecting rod, etc.)
- d) In case of doubt, the test must take place at a Material Testing Laboratory.

5.4.12.2 Handlebars and Control Levers

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

The minimum angle of rotation of the steering on each side of the centre line or mid position must be of 15°.

Whatever the position of the handlebars, the front wheel, tyre and the mudguard must maintain a minimum gap of 10 mm.

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

Repair by welding of light alloy handlebars is prohibited.

Composite handlebars are not allowed.

All handlebar levers (clutch, brake, etc.) must be ball ended (diameter of this ball to be at least 16 mm). This ball can also be flattened, but in any case the

edges must be rounded (minimum thickness of this flattened part 14 mm). These ends must be permanently fixed and form an integral part of the lever.

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

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

Modified rider controls will be considered for the mobility challenged subject to a report by the Medical director, the Chief Technical Officers decision is final.

Clutch lever may have a guard fitted equivalent to a brake lever guard.

5.4.12.3 **Compulsory safety items**

- a) All drain plugs must be lock wired (safety wired). External oil filter(s), screws and bolts that enter an oil cavity must be safety wired (i.e. on crankcases). The oil filter may optionally have a secondary retention mechanism.
- b) Where breather or overflow pipes are fitted they must discharge via existing outlets. The original closed system must be retained: no direct atmospheric emission is permitted.

5.4.12.4 **Tyres**

Tyres may be replaced from those fitted to the homologated motorcycle. Only tyres distributed by the Official supplier at the event are authorized. The tread pattern (if present) must be made exclusively by the manufacturer when producing the tyre.

5.4.12.5 **The use of tyre warmers is allowed.**

5.4.12.6 **Use of tyres**

The competitors shall only use tyres distributed by the Official Supplier during the event.

For each event, all tyres must be made of the same quality and shall be strictly identical.

During qualifying practices and race(s), rear tyres may be required to be marked with tyre stickers (see Art. 5.4.6).

The Chief Technical Officer may, at this discretion, require the exchange of one (1) or more competitors' tyres for a tyre sample under his control. The tyres exchanged remain under his/her control and he/she can exchange them for the ones of another competitor.

5.4.12.7 **Ballast**

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

The ballast must be made of solid metallic piece/s, firmly and securely connected, either through an adapter or directly to the main frame or engine,

with a minimum of two (2) steel bolts (min. 8 mm diameter, 8.8 grade or over). Other equivalent technical solutions must be submitted to the Chief Technical Officer for his/her approval.

Fuel in the fuel tank can be used as ballast. Nevertheless, the verified weight may never fall below the required minimum weight.

5.4.12.8 **Homologated Parts**

Homologated parts are the OEM parts supplied fitted to the machine during manufacture and as delivered. Unless stated otherwise these parts may not be remade, refinished, treated, coated or modified in any way.