



The Federation of Motor Sports Clubs of India

2017
Two Wheeler Technical Regulations
DRAG RACING

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INTRODUCTION

- 1) These rules including the technical regulations, schedules and appendices contained herein, shall govern all competitions in which a two wheeler (as hereinafter defined) may take part, organized in the territory of the FMSCI under an organizing permit issued by it for other than FIM Championship events. These rules shall be valid from 5th December 2016.
- 2) These rules have been drawn up for the proper and equitable conduct of motor sports and are based on the International Sporting Code and the Sporting Code of the FMSCI. Some of the text comprises additions and adoptions drawn up in India to suit local conditions local competitions and local two-wheelers.
- 3) In so far as they do not conflict with these rules, the supplementary regulations and official instructions applicable to a competition shall be deemed to form part of these rules.
- 4) The FMSCI has the right to grant an exemption from these rules to suit special conditions or to enable unusual features to be included in the competition and must be specified in the supplementary regulations.
- 5) International events run under an International Permit issued by the FMSCI must comply with the International Sporting Code as usual. Only refer to these rules in respect of any matter not covered by the Code.
- 6) Unless otherwise stated, compliance with all regulations in this publication governing groups and classes, safety requirements, lists, technical specifications and definitions is MANDATORY.
- 7) Changes on consideration of SAFETY MAY BE IMPLEMENTED IMMEDIATELY. All other changes will be implemented after a notice period, which will be decided by the FMSCI council on a case to case basis. The council of the FMSCI, may in its own discretion, authorize immediate implementation if deemed necessary or advisable.
- 8) Approval of a two wheeler or a component or its homologation is an indication of its acceptance solely for the purpose of these regulations and is not to be taken as a guarantee or warranty as to the standard of its design or manufacture or its fitness or suitability for any use to which it may be put.
- 9) Questions or requests for clarification or advice on these technical regulations should be made in writing to the chairman, Technical Regulations commission and forwarded to him through the Secretariat. Only those replies / interpretations signed by him will be valid.
- 10) These technical regulations have been compiled for both safety and eligibility and form the basis of all motor sports in the territory of the FMSCI. They must be studied by Constructors, Tuners, Competitors, Organizers, Scrutineers, Stewards and all others involved with the administration and conduct of motor sports in the territory of the FMSCI in order to ensure total compliance.
- 11) Read these regulations carefully. Unless these regulations specifically permit variations and / or modifications and / or additional work of any type to be carried out, the same is expressly forbidden. In other words, unless these regulations state that you can do it... YOU CANNOT.

1.1 Groups

All two wheelers shall be grouped as follows :

1.1.1 Group SUPER SPORT

All solo two-wheelers whether series production, specials or otherwise, Indian or imported.

1.1.2 Group SUPER SPORT INDIAN

All solo two-wheelers manufactured / assembled in India, homologated with FMSCI but modified within the frame work of the regulations listed.

1.2 Classes

All Indian two - wheelers other than SUPER SPORT, will be divided into the following classes according to the Cubic Capacity of their engines.

1.2.2 Motorcycles

2 Stroke:

- upto 130 cc
- 131 – 165 cc
- 350 cc and above

4 Stroke:

- Open classes, no restriction of number of cylinders:
- upto 165 cc
- 166 – 225 cc
- 226 – 360 cc
- 361 – 550 cc
- 551 – 850 cc
- 851 – 1050 cc
- 1051 cc and above
- Single / Twin 551 – 850 cc
- Unrestricted class

1.2.3 A vehicle may be homologated and entered only in the class under which it falls, as detailed above.

Unless otherwise specified in special provisions imposed by the FMSCI for a certain category of events, organizers are not bound to include all the above mentioned classes in the supplementary regulations.

NO CLASS CAN BE SUB-DIVIDED.

2.1 Two-Wheeler

A two wheeler is a two wheeled vehicle making only one track on the ground, propelled by an engine and designed essentially to carry one rider and may be another passenger.

2.1.1 Motorcycle

A two wheeler with both the wheel-rims having a diameter not less than 400mm and using a clutch (centrifugal or manual) and a gearbox (manual, variomatic or auto gear) which offers more than a single speed transmission ratio (stepped or stepless) between engine and rear wheel.

2.1.2 Scooter

A two wheeler with both wheel-rims having a diameter less than 400mm and having a free/open space in front of the seat for the passage of rider's legs.

2.1.3 Indian Two Wheeler

A two-wheeler manufactured in India and is available for sale to the public through the normal commercial outlets of the manufacturer in a minimum of two hundred (200) numbers of identical examples within a period of twelve (12) consecutive months. The two-wheeler may be wholly or partially manufactured and / or assembled in India from Indian and/ or imported components.

2.1.4 Model of two – wheeler

A two wheeler belonging to a production series distinguishable by a specific conception and external general lines of body work and by an identical mechanical construction of the engine and the transmission to the wheels.

2.1.5 Original Equipment of Manufacturer (OEM)

All components of a motorcycle that are supplied by the manufacturer as original fitment and homologated with the FMSCI. Wherever "OE" is mentioned, it pertains to the make/model of the motorcycle entered.

2.1.6 Indian component

A component manufactured in India and / or a component imported by the manufacturer of an Indian two wheeler and fitted as 'original equipment' (OE) on the vehicle. This definition also includes any component not fitted by the manufacturer as Original Equipment (OE) provided such component is manufactured in India in a minimum of 2500 nos. within a period of 12 consecutive months and is freely available for sale to the public as an aftermarket direct replacement through normal commercial outlets. It shall have the same function as that of the OE component it replaces.

The FMSCI may waive the minimum production requirement should circumstances so warrant.

2.1.7 Definition of "FREE"

Wherever the word "FREE" is used in these regulations, without any attached conditions, it is permitted to use any Indian or imported component which may be specially made, the specifications of which are unrestricted in any manner, subject only to conditions of general prescriptions.

2.2 Homologation

It is the official certification made by the FMSCI that a minimum number of two hundred (200) Indian two-wheelers of specific model have been made on series production basis to justify classification. All two-wheelers that conform to the definition of Indian two-wheeler will be required to be homologated with the FMSCI to be eligible to compete in any National event in India. Once homologated the vehicle's homologation will continue to stay valid up to 5 years after the discontinuation of that model. Indian two wheelers which have been homologated with FIM will automatically be homologated with the FMSCI. All FIM homologated two wheelers are automatically accepted by the FMSCI.

2.2.1 Homologation Form

A form containing all technical data required for homologation and identification of the said two-wheeler.

- (i) The presentation of homologation form at scrutiny and / or at the start may be required by the organizers who will be entitled to refuse the participation of the entrant in the event of non-presentation.
- (ii) In case of any doubt remaining after checking of a competing two wheeler against its homologation form, the scrutineer may refer to either the workshop manual or the spare parts catalogue published by the manufacturer of the two-wheeler
- (iii) In case of lack of sufficient technical specifications, scrutineers may carry out direct scrutineering by comparison with the said part obtained from the manufacturer or his authorized dealer.

The FMSCI homologation form consists of the following:

1. A basic form giving technical specifications of the basic model
2. Additional sheets describing 'homologation extensions' which can be variants, errata or evolutions which may be issued from time to time.

(a) Variants (VF)

These are supply variants (more than one supplier providing the same part to the Manufacturer, where the purchaser does not have any choice).

(b) Variants(VO)

These are options offered by the Manufacturer through the normal commercial outlets.

(c) Interchange of parts within Variants

Where the manufacturer has used similar parts in their variants, it is permitted to interchange the parts between variants as long as they are dimensionally and functionally the same.

(d) Erratum (ER)

Cancels an incorrect piece of information previously furnished by the manufacturer / constructor and replaces it by a corrected one.

(e) Evolution (ET)

Characterizes modifications made on a permanent basis to the basic model where there is complete cessation of the production of the two wheeler in its old form.

(f) Evolution (ES)

Sporting evolution characterized by modification made on a permanent basis intended to render a model more competitive.

2.2.2 For Evolution (ET) changes, any component which is homologated as ET evolution is freely interchangeable within the same model without any modification, as allowed for Variant (VF) or Variant (VO).

3.1 General Conditions

In respect of all two wheelers, the drive shall be transmitted to the ground only through the rear wheel of the machine.

To reduce the torque in the steering, it is allowed to displace the front wheel and rear wheel leaving a maximum width of 75 mm between them (refer definition of two-wheeler `One Track`).

The following items shall Not be altered from a homologated two wheelers unless otherwise stated.

- a) Type of engine
- b) Numbers of cylinder /s
- c) The material and casting of the crankcase, cylinder, cylinder-head and the gear box shell
- d) Position of the cylinder/s and head/s relative to the crankcase and
- e) Its construction material

Gussets or tubes may be added or removed with loosing the strength of the chassis

3.2 General Prescription

The General Prescriptions given below must be adhered to while making any modifications / changes in the two wheeler. The two wheeler in the form as sold by the manufacturer must undergo necessary changes where its construction is contradictory to the definitions as laid down in Chapter 1. Modification / changes if required for safety purpose as laid down further in this chapter must also be carried out to make the two wheeler take part in the concerned competition.

Measurement of capacity

The capacity of each engine cylinder is calculated by the geometric formula which gives the volume of a cylinder, the diameter is represented by the bore, and the height by the space swept by the piston from its highest to lowest point:

$$\text{Capacity} = \frac{D^2 \times 3.1416 \times C}{4}$$

where D = Bore(in cms) and C = Stroke (in cms)

3.2.1 Number Plates

Number plates (where applicable) must be three in number and may be oval or rectangular in shape. They may be made from rigid and solid material (plastic or fiberglass) and should measure not less than 285 mm x 235mm. The plates must not be curved more than 50 mm out of the true plane. One plate must be fixed to the front, inclined not more than 30 degrees rearwards from the vertical. The others must be placed vertically on each side of the machine, facing outward. They must be fixed in such a manner as to be clearly visible and they must not be masked by any part of the machine or by the rider when seated in the riding manner. In case of separate plates, a space of equivalent size of the bodywork can be painted with matt colors or fixed. The figures must be clearly legible and the background painted with

matt colors to avoid reflection from sunlight. The minimum dimensions of the number letters are:

Height of the figure	140 mm
Width of the figure	080 mm
Width of the Stroke	025 mm
Space between the two figures	015 mm

The English form of letters should be used. The space of a least 5 cms must be left free all round the number plates in which no advertising may appear. Any other number or marking on the machine that may be confused with the competition number plate must be removed before the start of the competition. The side number plate must be positioned above a horizontal line drawn through the rear wheel spindle and front edge of the plate must be behind a vertical line drawn 200 mm to the rear of the rider's footrest. The space between the numbers may be perforated on the number plate. Machines with number plates which do not conform to the above listed specifications shall not be passed by the Technical Steward. The Chief Time Keeper may direct the removal of any other number not connected with the competition number, if in his opinion, the presence of the number could prejudice the operation of timing and scoring. The color of the number and background must be of light and dark contrasting colours respectively. The competition numbers may be painted on the bike and must be clearly legible/visible. No design fonts are allowed. The size of numerals must conform to Art.3.2.1

3.2.2 Starting Devices

Starting devices are not obligatory for two wheelers in Drag events or for machines used for world record attempts.

3.2.3 Exhaust Pipes

The extremity of the exhaust pipes for all two wheelers must not pass the vertical tangent of the rear tyre. The end to the exhaust pipe, over a minimum distance of 30mm must be horizontal and parallel to the central axis of the two wheeler with a tolerance of +/-10 degrees. Exhaust fumes must be discharged, towards the rear, but not in the manner as to raise dust, foul the tyres or brakes or - directly on the track or cause inconvenience to the other rider.

3.2.4 Control Levers

For all type of two wheeler all handlebar levers (Clutch, Brake etc.,) must be in principle ball-ended. The diameter of this ball should be at least 19 mm. This ball can also be flattened, but in that case the edges must be rounded with minimum thickness of this flattened part being 14mm. These ends must be permanently fixed and form an integral part of the lever. The maximum length of control levers measured from the pivot point to the extremity of the ball must not exceed 200mm. Each control lever if pivoted on the footrest axis must work under all circumstances, such as the footrest being bent or deformed. The handlebar lever must be mounted to swivel, so that at no time can the rider's fingers be trapped between the lever and the handlebars. Each lever must be mounted on an independent pivot. The end of the levers when closed must not be situated closer than 40mm to the furthest extremity of the handlebar.

Gear levers are allowed to be cut.

3.2.5 Throttle controls

For all two wheelers, throttle controls must be self closing when not held by the hand.

3.2.6 Handlebars

The minimum angle of rotation of the handlebar on each side of the centerline or mid position must be 20 degrees. Stops, other than steering dampers must be fitted to ensure a minimum clearance of 30mm between the handlebar with levers and the tank when on full lock to prevent trapping the rider's fingers. The handlebar grips must be not longer than 150mm and must be attached to the ends of the handlebars. Exposed handlebar end must be plugged with a solid material or they be rubber covered.

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

3.2.6.1 For Drag Racing

The extreme width of the handlebars shall not be less than 500 mm. Whatever the position of the handlebars, the front wheel should not make contact with any part of the streamlining.

3.2.7 Footrests

The footrests of the rider must be placed in front of the vertical line passing through the centre of the rear wheel. They must be positioned to give easy access to any control pedal without the rider having to lift his foot off the footrest in order to operate the pedal. The ends of the footrests must be rubber covered or rounded off with a spherical radius of not less than 8 mm. Strengthening of OE footrest is allowed. The decision of the scrutineer is final.

3.2.7.1 For Drag Racing Footrests may be relocated & must not be positioned more than 100 mm above a straight line passing through the centre of the wheels when the motorcycle is normally loaded. Rear foot peg and assembly's, clamps must be removed.

3.2.7.2 Radiator coolant

Any glycol coolants are prohibited, plain water without any additives has to be used.

3.2.7.3 All motorcycle to be fitted with front brake & clutch lever protectors. Highly recommended for 2017. To be reviewed for 2018.

3.2.8 Chains

The locking clips on the connecting links, where fitted, must be tight fitting and fitted in the forward correct direction.

3.2.9 Chain Guards

If the primary transmission is exposed, it must be fitted with a guard as safety measure designed in such a manner that under no circumstances can the rider come in to accidental contact with the transmission parts.

3.2.9.1 For Drag Racing

No guard shall be permitted over the secondary chain except at the bottom of the secondary Chain where the chain comes in contact with the sprocket -should be fitted.

3.2.10 Inclination and Suspension

It must be possible for all two wheelers not being loaded to be inclined to an angle of 50 degrees from the vertical without any part of it other than the tyres coming in to contact with the ground.

3.2.11 Streamlining

Streamlining may be used for events and must comply with the following regulations:

- a) The front wheel, with the exception of the tyre must be visible from either side
- b) There must be no streamlining forward of a straight line drawn vertically through the front edge of the front tyre.
- c) There must be no streamlining to the rear of a straight line drawn vertically through the rear edge of the rear tyre. The rim of the rear wheel must be clearly visible for the 180 degrees of its circumference to a vertical line through the rear axle. No part of the machine other than the mudguard, may project to the rear of a straight line drawn vertically through the exterior edge of the rear tyre.
- d) Normal mudguards are not considered as streamlining.
- e) No part of the seat or saddle or anything to the rear of these must be more than 900 mm above ground when the motorcycle is not loaded.
- f) There must be a working clearance between the streamlining and extremities of the handlebar, whatever the position of the handlebar.

3.2.12 Stands

For drag racing fitting of stands of any kind is not permitted.

3.2.13 Rear view mirrors

Rear view mirrors shall not be permitted for all drag racing. However, original foldable mirrors may be used.

3.2.14 Mudguards

Mudguards may be removed for drag racing only. If it is not removed then the following rules will apply. Mudguards must project laterally beyond the tyres on each side.

3.2.14.1 Front Mudguard

The front mudguard must cover at least 100 degrees of the circumference of wheel. The angle formed by a line drawn from the front edge of the mudguard to the centre of the wheel and one drawn horizontally through the centre of the wheel must be between 45 degrees and 60 degrees. The angle formed by two lines, one drawn from the rear edge of the mudguard to the centre of the wheel and one drawn horizontally through the centre of the wheel shall not exceed 20 degrees. It is permitted to strengthen the existing front mudguard and / or brackets.

3.2.15 Horns

For drag racing any kind of horns not permitted, if fitted must be disconnected / non-functional.

3.2.15.1 Kill Switch

All motorcycles must be equipped with an electrical contact which disconnects all electricity to the engine (**applicable with effect from 1/7/2017**).

3.2.16 Brakes

All two wheelers must be equipped with one efficient brake operating on each wheel, operated independently and concentrically with the wheel.

3.2.17 Wheel rims / discs spokes

The motorcycle must be equipped with a front and rear wheel made for a motorcycle. In the case of Indian motorcycles, the wheels may be replaced with wheels of a size between 16-18 inches (both inclusive), if not fitted with the original sized wheels. The rear rim should not be more than 50 mm narrower than the contact surface of the rear tyre. Replacement wheels are permitted front and rear of the same size as homologated. Any modification (see Art. 4.2.5.7) to the rim or spokes of an integral wheel (cast, moulded, riveted) as supplied by the manufacturer or of a traditional detachable rim, other than for spokes, valves or security bolts is prohibited except for tyre retention screws sometimes used to prevent tyre movement relative to the rim. If rim is modified for these purposes, bolts, screws, etc must be fitted.

All wheel spokes should be taut and intact.

3.2.18 Tyres

The tyres should be in sound condition, with no signs of perishing or cracking and with no cuts on the side walls and tread surface. Motorcycles with top speed exceeding 200 km/h should have front tyres with at least 'V'-rating or be of road racing type. Tyre speed rating should be above the top speed of the motorcycle. In controlled tyre events where tyres are supplied by the organizers, tyre regulations as specified in event supplementary regulation shall be followed.

3.2.19 For Drag Racing

- (a) The surface of the tyre can be smooth (i.e. Without treads / grooves-slick) or treaded.
- (b) The tread pattern is unrestricted
- (c) If treaded, the safe minimum depth of the tyre tread must be at least 2.5 mm at the pre-event scrutiny. In the classes upto 80cc, this minimum depth is 1.5. mm.
- (d) The surface of the slick tyre must contain 3 or more hollows at 120 degrees intervals or less, indicating the limit of wear on the centre and shoulder areas of the tyre. The safe minimum depth of the tyre tread must be at least 2.5 mm at the pre-event scrutiny. In the class upto 80cc this minimum depth is 1.5 mm. When at least two of these hollows become worn on different parts of the periphery, the tyre must no longer be used.

3.3 Fuel

Free - Only Petrol may be used

In the case of Unrestricted classes, Supercharging/Turbocharging/Nitrous Oxide (any one) is allowed.

3.4 Equipment and protective clothing

3.4.1 Helmets

Crash Helmets

Crash helmets of standard design and construction must be used by competitors in all events. Competitors must ensure that helmets worn are suitable for the type of the event entered. The user must ensure that the crash helmet is in a serviceable condition, that it fits properly and that is secured properly. Only helmets designed for road racing is permitted, motorcross type helmets are forbidden. Repairs of any kind are forbidden including stitching of double "D" rings. Helmets to be maintained as supplied by the manufacturer. The decision of the scrutineer/ Technical delegate is final.

Helmets must be of the full face type and conform to one of the recognized international standards as mentioned below :

- Europe: ECE 22-05 'P'
- Japan: JIS T 8133:2000, JIS T 8133:2007
- USA: SNELL M 2005, SNELL M 2010 "

Sharing of helmets is strictly forbidden.

Competitors must wear crash helmets at all times during training, practice, qualifying and competition.

Fit and security

To ensure satisfactory fit and security of your helmet, proceed as follows

- a) Obtain correct size by measuring the crown of your head
- b) Check that there is no side to side movement ; a helmet should fit snugly without causing discomfort.
- c) Tighten straps securely - the chin strap must be under tension at all times; ensure therefore that the strip cannot slip. Chin cups are prohibited.
- d) With head forward, attempt to pull up the back of the helmet to ensure helmet cannot be removed this way. Ensure you can see clearly over each shoulder.
- e) Make sure nothing impedes your breathing in the helmet. And never cover your nose or mouth.
- f) Never wear a scarf, tie or other loose clothing which could come loose and possibly cause an accident.
- g) Ensure that the visor can be opened with one gloved hand.
- h) Satisfy yourself that the back of the helmet provides protection for your neck.

Condition and care of helmets

- a) The user himself must bear the prime responsibility for ensuring that his helmet is fit for the purpose intended, since significant damage to the helmet may have been sustained without this being apparent to the Scrutineer.
- b) It is strongly recommended that the competitor buy the best possible helmet he can (the best is not necessarily the most expensive). A helmet bag should always be used.
- c) There must be no alteration to the structure of a helmet. Where a radio is fitted this should only be done in accordance with the helmet manufacturer's instructions.
- d) Repainting of helmets, affixing stickers thereon or drilling holes is not advisable as this may weaken the structure of the helmet; such weakening may not be visually apparent.

As there are specialized helmets to suit various disciplines of motor sports, competitors are advised to use the type applicable to the event in which they compete.

It is recommended that the helmets are replaced after three years after purchase, irrespective of use they have been put to. The fastening of the chin strap must only be by buckles / clips.

Use of plastic interlocking connects is prohibited.

- e) Use only a weak solution of soft soap and water to clean the interior and exterior of the helmet ; do not get the interior too wet.;
- f) The helmet should be stored, preferably in a helmet bag, in a cool dry place away from sunlight when not in use.
- g) A good helmet, properly cared for, is one very important link in a long chain of safety measures. Do not allow it to become the weak link. Do not rely on others. You are responsible for your own safety. Do not, through your own fault, become a grave burden to others.

NOTE : Total protection can never be given by any headgear and the best of crash helmets may not entirely prevent head injury or death in a severe accident. Helmet users must understand that helmets are deliberately constructed so that the energy of severe blow will be absorbed by the helmet and thereby partially destroy it. The damage may not be readily apparent; it is recommended that therefore that any helmet receiving a blow in an accident is replaced. This must be the responsibility of the of the helmet user, who will have been aware of the circumstances under which the helmet was struck. It is neither possible nor reasonable to expect the scrutineer, in every case, to observe significant damage. Where there is any doubt the helmet's fitness, the Chief Scrutineer is empowered to reject the same. It is the competitor himself who must ensure that the helmet which he uses is fully fit for its purpose. It is clear that this is a small insurance to pay for one's life. The competitor must also consider that, should he survive an accident, but receive head injuries having knowingly used a previously damaged helmet, he could be placing enormous burden of care upon his family.

Mounting of camera on the helmet is strictly forbidden. In case of mounting of cameras on the bike, the mounting points, brackets etc. should be specifically mentioned to the Scrutineers during pre-event scrutiny and approved by the Scrutineers.

Unauthorised mounting of foreign objects to helmets

Under no circumstances may objects (including cameras) be mounted or attached to the helmet of the rider unless express permission has been provided by the manufacturer of the helmet. This permission should be available for inspection by the scrutineer / technical delegate at the Event

3.4.2 Gloves

The rider must wear full leather competition gloves meant for road racing / drag racing

3.4.3 Footwear

The rider must wear footwear of leather meant for road racing / Drag racing to provide complete protection above the ankles.

3.4.4. Clothing

3.4.4.1 For Drag Racing

The rider must wear a one piece or two piece complete suit of leather of at least 1.2 mm in thickness (on all parts of the suit) or of similar material or suit able thickness. Two piece leather suit must have interlocking zip mechanism between the upper and lower suit. Synthetic materials which may melt and which could harm a rider's skin shall not be used. The following areas are recommended to be padded with at least a double layer of leather or enclosed plastic foam of at least 8mm thick ; Shoulders, Elbows, both sides of the torso and hip joint, the back of the torso, knees.

Use of a back protector separately or built into the leather suit is compulsory for Pro Stock and Super Sport Indian classes

The use of chest protector is highly recommended.

3.4.5 Ponchos

Ponchos of any kind shall not be worn for drag racing.

3.4.6 Locking devices

Front and rear axle and swing arm should be secured with self lock nuts or locking pins.

3.4.7 Engine Sealing

A hole must be made to use wire sealing for the engine. This is applicable w.e.f. 1/7/2017.

This chapter describes the specific technical regulations and permitted modifications as applicable to different groups for two wheelers as defined in Chapter 1. - Whatever modifications have been carried out, the rider must at all times have easy access to all controls without having to remove his hands and feet from the handlebar and footrest respectively.

4.2.3 List of free items for Group : SUPER SPORT INDIAN

1. Controls
2. Control cables,
3. Mudguards,
4. Handlebars and mounting points,
5. Foot rests and mountings,
6. Pedals,
7. Fasteners
8. Hoses.
9. Spark plugs, holders, ignition cables, batteries, rectifiers, CDI/ECU and wiring harness.
10. All bearings, bushings and spacers
11. Steering dampers
12. Tachometers (Rev-counters), Navigation instruments, Temperature gauge.
13. All gaskets, oil seals
14. All Springs
15. Fuel filters, petrol cocks
16. All manifolds
17. Resonators
18. Secondary drive sprockets,
19. Exhaust system
20. Seats
21. Streamlining
22. Fuel Tanks: As long as they are made out of metal. And positioned between the handle bar and the riders seat.
23. CAM & CAM shaft/s drive sprockets
24. Valves
25. Throttle Body
26. Injectors
27. Chains
28. Carburettor

4.2.4 Permitted additional engine modifications for SUPER SPORT INDIAN

- 1) For Two Strokes: The shapes and sizes of the ports are FREE. The number of ports per cylinder/s shall not be altered. The bridge separating the bridged ports shall not be removed. The disc valves and inlet ports may be modified.
- 2) For four strokes: The shapes and sizes of the ports are FREE. The number of valves shall not be altered. The shape of the valve may be altered by removal of material only.
- 3) All engines are permitted to be over-bored to a maximum of 1mm over the standard size, and they must remain within the cubic capacity of the class entered. It is

permitted to insert a cast iron sleeve or hard coat the cylinder for the purpose of re-use only

- 4) Only pistons conforming to the definition of **Indian component** are permitted in original or modified form. Modification is allowed by way of removal of material only. The onus of proof lies with the competitor & team.
- 5) The cylinder/s, cylinder head/s shall be as supplied by the manufacturer. Material may be removed by machining only. Addition of material is prohibited. The method of cooling shall not be altered.
- 6) For 2 strokes: It is permitted to match the entry points from the crankcase to the transfer ports by removal of material only. Dowell pins to locate the cylinder to the crankcase is permitted.
- 7) No modifications is permitted on the crankshaft assembly, except for normal maintenance which includes replacement of connecting rods, pins, bearing etc. A change in weight (+/- 3%) of the crankshaft assembly, due to replacement of bearings, is permitted.
- 8) Supercharging / turbo charging is forbidden.
- 9) Modification to the Cam chain tensioner and its components is permitted.
- 10) Any Indian component radiator may be used in original or modified form.
- 11) fuel pump, and sensors: Any Indian component in original or modified form, NO additional fuel pump & sensors permitted.
- 12) Any combination of Indian component ignition assembly (includes contact breakers, ignition coils, magnetos, alternators, stator plates, electronic ignitions) may be used in original or modified form. Magneto flywheel assemblies may be lightened and balanced.
- 13) The clutch basket including primary gear and clutch centre may be lightened and balanced. Any Indian component clutch plates (pressure and friction) may be used.
- 14) The secondary drive ratio may be altered.
- 15) Auto lube equipment / battery may be removed.
- 16) Reed valves are FREE.
- 17) For Two & four Strokes the Cylinder barrel and head may be interchanged between different model variants of the homologated vehicles from the same manufacturer.

4.2.5 Permitted modification to Chassis / Suspension / Brakes Group : SUPER SPORT INDIAN

1. Front suspension

Any Indian component fork/triple clamp assembly may be used in original or modified form. Fork travel / damping may be altered. Piston rod bolt is FREE. In case of Earls suspension, the length of the swinging arm may be altered, the shock absorber mounting points may be altered. All shock absorbers shall be Indian components in original or modified form. T-Stem and Triple clamp may be freely modified.

2. Rear suspension

The swinging arm may be strengthened by addition of material only. The length of the swinging arm may be altered. The shock absorber mounting points may be altered. The pivot point of the swinging arm with respect to the frame shall not be altered. All shock absorbers shall be Indian components in original or modified form.

3. Brakes

Front Brake: The fitment of disc brakes is permitted and highly recommended for non OEM motorcycles. Any combination disc brake assembly may be used in original or modified form. Disc brake assemblies are FREE.

Rear Brake: Any combination of Indian component brake assembly may be used in original or modified form. It is permitted to change from disc brake to drum brake or vice versa.

4. Wheels / Tyres

The size and type of the wheels are free. Only Indian component wheels, rims, hubs and spokes may be used in original or modified form. The size of the tyres are free. Only Indian component tyres that are manufactured in India are permitted.

Where the manufacturer has used imported tyres as OE in a certain class of motorcycle, the same (Brand, Size, Tread pattern and Compound) may be used for that class of Motorcycles only.

5. Frame

Struts, clamps for attachment of components such as air filters, tool boxes, mudguards battery carriers etc. which as a result of strip down to racing trim, having become totally unloaded and stress free, may be removed. Reinforcement or replacement with aluminium alloy of the frame by the addition/ replacement of extra frame members will be permitted without compromising its basic structural design and rigidity / integrity. Modifications required for fitment of different seat / fuel tank are allowed subject to the above.

6. Any component of chassis, suspension, - and bodywork deemed to be unnecessary for drag racing / competition and eligibility may be freely removed, provided that the removal of such component/s does not endanger the safety of the two wheeler or the rider.
7. Drilling of holes on any part of the front wheel, brake, drum, hub or its component parts is permitted provided such modifications do not compromise the structural integrity of the components.

Drilling of holes in other parts of the motorcycle's structural components (Frame, swing arms etc.) prohibited with effect from 1/7/2017.

4.3 Specific technical regulations for Group SUPER SPORT INDIAN

Two wheelers in group SUPER SOPRT INDIAN are eligible to compete with the modifications and conditions authorized as listed below, in addition to those permitted in group PRO STOCK but within the limits laid down under chapter 3 "Common Technical Regulations". Articles 4.2.1 and 4.2.2 are applicable in this group also.

4.3.1 List of Free items for Group SUPER SPORT INDIAN in addition to those mentioned above.

1. Wheels, tyres, hubs, axles
2. Chains and chain adjusters
3. All types of ignitions (including coils, contact - breakers, magnetos, alternators, capacitor discharge & transistorized ignitions)
4. Fuel tanks, As long as they are made out of metal and positioned between the handle bar and the riders seat.
5. Shock absorbers, all dampers
6. All instruments

7. Crank shaft assemblies (includes crankshaft, connecting rod/s, crank pins).
Piston/s, Pin/s, Lock/s, Ring/s.
8. Components of the braking system (includes brake pads, brake linings, shoes, master cylinders, rotors, calipers)
9. Gears and gear ratios are FREE. The maximum number of speeds shall be six(6).
10. Valves, number of valves, valve springs, retainers, locks, rocker arms, push-rods, cam-shaft/s and timing gear.
11. The components of the primary drive (crank pinion gears or sprockets and ratios)./ The method of drive shall not be altered from chain to gear or belt or vice versa.
12. The components of the clutch system (includes clutch basket, pressure and friction plates). The type of clutch shall not be altered from wet to dry or vice versa).
13. The method and components of the front suspension (includes fork assemblies, steering head assemblies, rake and trail)
14. The method and components of the rear suspension (includes swinging arm). However, the pivot point of the swinging arm with respect to the frame shall not be altered.
15. Method of induction.
16. Chassis - Indian Component only. The onus of proof lies with the competitor & TEAM .
17. Radiator

4.3.2 Permitted additional engine modifications for Group SUPER SPORT INDIAN

- 1) The number of ports per cylinder/s, cylinder head/s may be altered.
- 2) The material and castings of the cylinder/s and cylinder head/s are FREE, as long as they are made in India. Additional studs on the cylinder/s cylinder head/s are permitted. The PCD of the crank case may be altered.
- 3) Crankcase / gearbox shell: Material may be added by welding or removed by machining only. For 2 strokes, primary compression ratio may be altered.
- 4) The bore & stroke of the engine may be altered
- 5) The method of cooling may be altered from air cooling to liquid cooling.

4.4 Specific regulations for two wheelers Group SUPER SPORT

Provided it complies with regulations listed under Classification of two wheelers and common technical regulations, there is no restriction on the make, design or type of two wheeler that may be driven in competition held under these regulations, save as may be provided in the supplementary regulations.

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