



# FIM EUROPE VINTAGE HILL CLIMB TECHNICAL REGULATIONS 2023



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## **VCRR 031T 1.0 GENERAL**

EVERYTHING THAT IS NOT AUTHORISED AND PRESCRIBED IN THESE RULES IS STRICTLY FORBIDDEN

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

## **VCRR 031T 2.0 VINTAGE CLASSES**

### **Class 1 (Classic)**

Solo motorcycles up to 250 ccm 2-stroke, air cooled only. Solo motorcycles up to 350 ccm 4-stroke with max. 2 cylinders. Both up to 31/12/1977 models.

### **Class 2 (Classic)**

Solo motorcycles 2-stroke, air cooled only up to 500 ccm . Solo motorcycles 4-stroke, up to 500 ccm. Both up to 31/12/1980 models.

### **Class 3 (Classic)**

Solo motorcycles 2-stroke over 500 ccm with max. 3 cylinders, up to 31/12/1980 models. Solo motorcycles 4-stroke over 500 ccm, up to 31/12/1980 models.

### **Class 4 (125 GP)**

Solo motorcycles up to 125 ccm 2-stroke, up to 31/12/1990 models.

### **Class 5 (250 GP)**

Solo motorcycles up to 250 ccm 2-stroke, up to 31/12/1990 models

Solo motorcycles up to 350 ccm 2-stroke, up to 31/12/1984 models.

### **Class 5 Classic 500:**

Solo motorcycles up to 250 ccm 4-stroke, up to 31/12/1990 models.

Solo motorcycles up to 500 ccm 4-stroke, up to 31/12/1984 models.

### **Class 6 (Classic 750)**

Solo motorcycles up to 500 ccm 2-stroke, up to 31/12/1990 models.

Solo motorcycles up to 750 ccm 4-stroke, up to 31/12/1990 models.

### **Class 7 (Classic Superbike)**

Solo motorcycles up to 750 ccm 2-stroke up to 31/12/1990 models.

Solo motorcycles over 750 ccm up to 1200 ccm, 4-stroke, up to 31/12/1990 models.

### **Class 8a (Sidecars)**

Sidecars up to 31/12/1975 models. Air cooled two-stroke and four-stroke engines up to 750ccm.

The engines installed in the sidecar, must have been raced or sold commercially in Europe prior to 31/12/1975.

### **Class 8b (Sidecars)**

Sidecars up to 31/12/1978 models. Four-stroke engines up to 1000ccm. Two-stroke engines up to 750ccm.

The engines installed in the sidecar, must have been raced or sold commercially in Europe prior to 31/12/1978.

### **Class 8c (Sidecars)**

Racing sidecars, F1 and F2 sidecars up to 31/12/1990. No engines with fuel injection permitted. Maximum displacement 1100ccm.

The engines installed in the sidecar, must have been raced or sold commercially in Europe prior to 31/12/1990.

**For Sidecars classes: Essential for the classification is the year of manufacture of the engine. If engines have been built for continuous years but construction remained unaltered throughout the series, engines will be classified by the year of manufacture of the first of the series.**

### **Class 9a (Classic special open)**

Solo motorcycles 2-stroke open, 4-stroke open, but no pressure charging by compressor or supercharger permitted, up to 31/12/1984 models.

### **Class 9b (Classic Special Open up to 1990)**

Solo motorcycles 2-stroke open, 4-stroke open, but no pressure charging by compressor or supercharger permitted, from 1/1/1985, up to 31/12/1990 models.

**VCRR 031T 5.0 must absolutely be considered!**

## **VCRR 031T 3.0 ENGINE**

### **VCRR 031T 3.1 GENERAL**

- a) Engine tuning is free. The engine must be of a type, raced or been available pre or in the last construction year, considering the motorcycle type in the related class.
- b) Engines must be naturally aspirated.
- c) It is mandatory to preserve the particularities of the series models such as the number of cylinders, the number of camshafts and valves, the number of gear ratios.
- d) Engines must use the original castings or close replicas and retain the outside appearance of the original manufacturer. It is permitted to adapt the external casings when using non-original ignition systems and/or fitting oil coolers.
- e) The effective cubic capacity can only vary to the data originally provided on the data sheet by a maximum of 10%, if an enlargement of the cylinder bore was necessary due to wear and/or missing original parts. Any other form of capacity enhancement or false declaration is strictly forbidden.
- f) The cylinder block, cylinder head and cylinder head cover must correspond to the original model of the engine.
- g) Billet cylinder heads and blocks are prohibited.
- h) Cast big blocks are prohibited.

- i) The bore and stroke dimensions will be engraved (not pencilled) on the right side of the crankcase. (Bore x Stroke in mm, i.e. 75.0 x 53.0).
- j) 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 or titanium. Covers made of plastics and composite materials are not permitted. Material and minimum thickness will be: stainless steel (3mm), aluminium (4mm), fixed on three points from class 5 onwards for 4-stroke engines only.
- k) All engine breather pipes must lead to an easy-to-handle catch tank with a volume of at least 500ccm.
- l) All oil drain plugs, oil sump, oil filler plugs, oil dipsticks and fastening screws for oil lines must be safety wired, using min. 0.6mm stainless steel safety lock wire to prevent oil spillage.

### **VCRR 031T 3.2 GEARBOX & CLUTCH**

- a) The gearbox and clutch must be of a type raced or available pre or in the last construction year, considering the motorcycle type, in the related class.
- b) Exposed primary drive trains must have shield(s) fitted for the protection of driver and passenger.
- c) The original clutch can be changed or replaced.
- d) No power source (i.e. hydraulic or electric) can be used for clutch operation, if not installed in the original motorcycle.
- e) The clutch system (in oil bath or dry) and its actuation are free.
- f) Anti-hopping (slipper clutch) systems are permitted starting from class 4.
- g) All drain, sump and filler plugs must be safety wired, using at least 0,6 mm annealed stainless wire, to prevent oil spillage.
- h) All gearbox breather pipes must lead into a catch tank.

### **VCRR 031T 3.3 TRANSMISSIONS**

- a) All gears, shafts, shift drums and shift forks are free.
- b) The gearbox output sprocket must be covered by a metal guard.
- c) A metal casing housing must completely cover the primary chain on motorcycles with a separate gear box.
- d) A solid protective cover (shark fin) must be fixed to the swing arm, and must always cover the opening between the lower chain run, swing arm and rear wheel sprocket, irrespective of the rear wheel position.

### **VCRR 031T 3.4 CARBURETORS**

- a) Carburetors must be of a type raced or available pre or in the last construction year, considering the motorcycle type, in the related class.
- b) Fuel injection is only permitted in class 9a and 9b.
- c) Flat slide carburetors can only be fitted starting from class 4.
- d) The original Injection system is permitted and may not be replaced by any other type.
- e) Air box can be removed and carburetors can be re-jetted (all classes).

- f) TPS: Sensors in the carburetors throttle called the throttle position sensors that communicate with the engine management system are forbidden.

### **VCRR 031T 3.5 IGNITION SYSTEM & KILL SWITCH**

- a) Modern ignition systems may be used but restricted to those with a two-dimensional advance curve. Ignition systems using throttle position sensors are not permitted.
- b) An ignition breaker switch connected by a cord attached to the driver's wrist must be fitted as a safety measure in the event of the driver parting company with the motorcycle. The system needs to interrupt the primary circuit and stop the engine as well as the fuel pump (if existing) instantly. The cord needs to be flexible, if a coiled cord is used, it must not be longer than 1m in emerged state.

### **VCRR 031T 3.6 EXHAUST SYSTEMS**

- a) The appearance of the exhaust system must match the style of the period in which the motorcycle was built, and has always to comply with the noise limits of the respective event.
- b) For safety reasons, the edges of the exhaust outlet(s) should be rounded to avoid sharp edges.
- c) Screws and nuts must fix the exhaust silencer bracket. "Zeus" quick couplings are not allowed.
- d) The exhaust system outlet should be approximately horizontal.

### **VCRR 031T 3.7 RADIATORS and COOLING SYSTEMS**

- a) All classes: Water and oil radiators and oil filters are free.
- b) The oil cooler must not be mounted on or above the rear fender.
- c) The radiator lines connected to the engine can be changed.
- d) The use of quick-release couplings for oil lines is not permitted.
- e) The appearance of the front, rear and side profiles of the machine must conform to the approved form after the addition of additional radiators or oil coolers.
- f) The only permitted liquid engine coolant for the water-cooling system is water without additives.

## **VCRR 031T 4.0 FRAME, FORKS & SUSPENSION**

### **VCRR 031T 4.1 GENERAL**

- a) The frame, forks and suspension must be of a type and style raced or available pre or in the last construction year, considering the motorcycle type, in the related class.
- b) Replica aftermarket frames should be faithful replicas both in appearance and dimensions.

#### **VCRR 031T 4.2 SWING ARMS**

- a) The period look of swinging arms must be maintained.
- b) Period style bracing is permitted.
- c) Aftermarket or original swing arms may be used in chassis/swing arm combinations documented to be used in period.
- d) Reinforcing dowels may be permitted, but additional trusses are not allowed. The material must be of the period.

#### **VCRR 031T 4.3 FUEL TANK**

- a) Carbon fibre is not allowed for tank construction.
- b) Glass fibre fuel tanks are permitted.
- c) The fuel tank must be mounted with at least 2 screws, minimum thread diameter 6 mm.

#### **VCRR 031T 4.4 BRAKES**

- a) The braking system (disc or drum brake) must be the same as on the original motorcycle.
- b) Starting from class 4 the use of separate brake fluid reservoirs is allowed.
- c) Either manufacturers original fitment or period alternative brakes are permitted.
- d) The rear brake master cylinder can be modified or replaced.
- e) Rotors must be circular in shape; wave discs are forbidden.
- f) Only brake discs of ferrous material are allowed.
- g) Carbon fibre/ceramic brake discs are forbidden.
- h) Quick couplers on brake lines are forbidden.
- i) The brake pads, shoes and brake lines are free.
- j) The fixing of the calipers on the fork as well as the stoppers of brake pad must be safety wired.
- k) Brake levers/pedals are free.
- l) Brake caliper pistons are limited to a maximum of four pistons in each caliper.

#### **VCRR 031T 4.5      WHEELS**

- a) Wheels must be of a type raced or been available pre or in the last construction year, considering the motorcycle type in the related class.
- b) Carbon wheels are forbidden.
- c) Magnesium, aluminium alloy and steel spoke wheels are all authorised if they are of classic and period appearance.

#### **VCRR 031T 4.6      TYRES**

- a) The use of warmers is allowed in the box and the pit lane for all categories.
- b) Slick tyres are only permitted in class 8b and 8c.
- c) Hand cut and wet tyres are forbidden in all classes.

#### **VCRR 031T 4.7      BODYWORK and APPEARANCE**

- a) This outline taken from front, rear and both sides must accurately represent a period silhouette and is a crucial part of eligibility.
- b) Appropriate single seat covers and/or race bodywork in the original dimensions and outline are authorised.
- c) A belly pan must be installed under the engine and incorporate at least a single opening of 20 mm diameter in the front lower area. This hole must remain sealed in dry conditions and must be opened only in wet race conditions as declared by the Race Director. The belly pan must be able to hold the entire oil content of the engine in case of an engine breakdown.

#### **VCRR 031T 4.8      INSTRUMENTS and CONTROLS**

- a) Must be of a type and style used in the period in which the motorcycle was built.
- b) Digital temperature or voltage gauges are acceptable.
- c) Lap timers are permitted.
- d) Quick shifters are not allowed.
- e) Handlebars and hand controls:
  - 1) Handle bars may be replaced.
  - 2) Handle bars and hand controls may be relocated.
  - 3) Throttle grip can be modified or substituted.
  - 4) Throttle controls must be self-closing when not held by the hand.
  - 5) Throttle assembly and associated cables can be modified or replaced.
  - 6) Clutch and brake lever may be exchanged by an after-market model.
  - 7) Switches can be changed but electric starter switch (if existing) and engine stop switch must be located on the handle bars.
  - 8) Welding of handle bars is not allowed.
  - 9) The use of titanium, carbon fibre, Kevlar® or carbon composite materials for handlebars is forbidden.
  - 10) The use of titanium for nuts and screws is allowed.
  - 11) Handlebar ends must be plugged with a solid material or rubber covered.
  - 12) The minimum angle of rotation of the steering stem on each side of the centre line or mid position must be of 15°.



- 13) In any position of the handlebars /steering stem, the front wheel, tyre and mudguard must maintain a minimum gap of 10 mm to the bodywork and radiator(s).
  - 14) 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.
  - 15) All handlebar levers must be ball-ended (diameter of this ball should be at least 16 mm). This ball can also be flattened, the minimum thickness of the flattened part should be 14 mm and the edges must be rounded. These ends must be permanently fixed and form an integral part of the lever.
  - 16) Each control lever must be mounted on an independent pivot.
- f) Foot Rests and Foot Controls:
- 1) The use of titanium, carbon fibre, Kevlar or carbon composite materials for foot rests and foot controls is forbidden.
  - 2) The use of titanium and aluminium alloys for nuts and screws is allowed.
  - 3) Foot rests, hangers/brackets and hardware may be replaced and relocated but the hangers / brackets must be mounted to the frame at the original mounting points.
  - 4) Gear shift must remain operated manually by foot.
  - 5) Foot rests may be rigidly mounted or a folding type which must incorporate a device to return them to the normal position.
  - 6) The end of the foot rests must be rounded.
  - 7) Non-folding footrests must have an end (plug) which is permanently fixed, made of plastic, Teflon or an equivalent type material (Alloy), and must be rounded. The plug surface must be designed to reach the widest possible area in order to decrease the risk of injuries to the rider in the case of an accident. The Chief Technical Officer has the right to refuse any solution not satisfying this safety purpose.
  - 8) The rear brake lever, if pivoted on the footrest axis, must work under all circumstances, such as the footrest being bent or deformed.
  - 9) A thumb operated rear brake solution is allowed, but there must remain a functioning foot operated rear brake lever. In case of a dispute, the decision of the Chief Technical Officer is final.

#### **VCRR 031T 4.9      STARTING NUMBERS & PLATES**

- a) All machines must display number plates on the front and both sides. The plates should be 230mm high by 280mm wide. A sufficient space, in the mentioned dimensions, on the fairing can be used as a number plate as well.
- b) Numbers assigned by the promoters/organizers have to be used. It is the responsibility of the rider, to purchase the regarding numbers. It is not the organizers duty, to provide starting number stickers.
- c) The starting number needs to be clearly visible, with a stroke width of at least 2,5 cm.

## **VCRR 031T 5.0 RESTRICTIONS of CONSTRUCTIONS**

- a) All motorcycles except classes 9a and 9b must keep their original shape and way of construction, like they were raced, or have been available in the period of the related class.
- b) If things like wheel size, fork, brake system, caliper, frame, swingarm, etc. have been changed or modified, it is compulsory, that all used parts have been available or raced pre or in the last construction year in the related class. Further, upper mentioned restrictions have to be considered. The proof of the construction year of all changed parts must be provided at every technical inspection and in the case of a protest. If changed parts do not fit into the construction period of the related class, the motorcycle will be ranged into class 9a or 9b. In every case it is essential, that the parts, used for modifications have been raced, or been available pre the 31.12.1990. If Motorcycles have been modified with parts, that have been constructed, been raced or been available past the 31.12.1990, they have no permission to race. The rebuilding of original parts and wear parts (brake pads, clutch disks, ...) as well as tyres and batteries are excluded from this rule.

## **VCRR 031T 6.0 MODEL YEARS**

Construction year means the year, where the first working model of the motorcycle has been built, including pilot run models. Later produced models built in an unaltered way of construction will be classified to the first construction year. Considering this, younger models than ones been constructed later than the latest model year of the related class, are not allowed to race in this class. The latest models are the 31.12.1990 ones. The proof of the construction year of the motorcycle has to be provided at every technical inspection and in the case of protest.

This regulations are approved by the FIM-E Vintage Commission.

This regulations can be downloaded at: <https://www.fim-europe.com/vintage/> on.

This are the only valid regulations. Any other existing versions loose their validity, since the day, this version becomes published..

Cases of dispute are discussed within the English version of these regulations.