



## BRITISH HISTORIC RACING - VMCC LTD MACHINE SPECIFICATION - ISSUE 02/2006

### GENERAL

Subject and subordinate to ACU Standard Regulations for Road Racing. Every machine must comply in every way to the ACU Standing Regulations and Specifications. All classes will be open for entry using motor vehicles of European and American manufacture only. These rules define the additional requirements necessary to compete in VMCC Ltd Road Racing Events.

### IN PARTICULAR NOTE:

- 1 All major engine, gearbox and frame components must be of a type manufactured in the year of the machine. The use of later components updates the bike.
- 2 It is impossible to lay down hard and fast rules as to what can and cannot be altered, replaced or re-designed and still harder to enforce them; but it is hoped that members and others preparing racing machines will interpret the following in the right spirit.
- 3 The object of the Machine Specification is to try and preserve machines used for Vintage speed events so that they appear, as far as possible, as per their original specification - "in order that a new generation can marvel".
- 4 Parts, especially internal engine parts, have to be replaced from time to time and it is obvious that adaptations have to be made and non-standard items fitted; but any external components should be in keeping with the rest of the machine and consistent with safety.
- 5 There may be isolated cases where the original specification appears contrary to the Machine Specification i.e. there was a magneto in the vintage period with rotating magnets. Obviously, these are "exceptions to prove the rule".

### RULES APPLYING TO ALL CLASSES

Only parts of a type manufactured before the cut off year may be used.

**STREAMLINING** - SOLOS - Streamlining allowed if supported by proven documentation of factory produced or exact replica. No after market fairings allowed. No dustbin fairings allowed. SIDECARS - No streamlining allowed other than small period looking fly screens on Pre '59 Sidecars (Event 8). Full period type streamlining allowed only in the Three-wheel classes (Events 9A & 9B).

**CAPACITY** - Machines with standard stroke may still be run in their original capacity class providing that the cylinder bore of the machine does not exceed .060" over the standard bore. If the bore is further increased and / or the stroke is increased then the machine must run in the appropriate capacity class.

**TYRES** - Tyres must conform to current ACU Regulations, be in serviceable condition and be of such a width as can be fitted without modification to the frame or forks subject to a maximum width of 130mm and to a minimum of 70 series profile.

**WHEELS** - For solo classes the maximum rim width is WM3.

**FUEL** - Any commercially available pump fuel (unleaded, leaded, super unleaded or lead replacement up to Avgas 100LL specification or Diesel) may be used. The addition of any lead replacement additive approved by the Federation of British Historic Vehicle Clubs is permitted. Methanol may be used in any class of machine. An orange day-glow disc (minimum 3 inches diameter) must be affixed on or immediately adjacent to the Racing Number Plate on both sides of any machine using methanol.

### ON ROAD LEGAL MACHINES THE FOLLOWING PARTS MUST BE REMOVED;

1. Front registration plates
2. Pillion footrests
3. Side and centre stands
4. Rear stand (if retained, must be securely wired)
5. Headlight and rear glasses to be removed (if retained must be taped and bulbs removed)

### PRE 1935 CLASS (UP TO 31-12-34)

**FRAME AND FORKS** - modifications to engine plates and strengthening allowed.

**TANK** - Steel, copper or brass, quick release fixings only as used before 1935.

**MUDGUARDS** - Must be metal and if alloy must be painted to match machine in general. If alloy rear guard, it is advisable to fit strengthening strips on the underside.

**HANDLEBARS** - One-piece handlebars, not "Ace type", clipped to steering head yoke, not direct to forks.

**CONTROLS** - Foot change attachments for gears, positive or non-positive, are permitted if mounted externally to original gearbox. The fitting of a post 1934 gearbox end cover with positive stop mechanism is not permitted.

**HUBS** - Of a design in use before 1935. Two leading shoe conversions not permitted but, if desired, 2 brake drums of contemporary (pre-1935 design) may be built into one hub centre. Air scoops and lightened back plate and drums are allowed. In the interest of safety all brake anchor fixings must be adequate in section and securely attached.

**WHEEL RIMS** - Must be steel of a size available before 1935. In view of a ban at some tracks, beaded edge rims are not permitted.

**ENGINE** - All main castings to be of a design and of a material in use before 1935. External modifications which materially alter the original appearance will not be permitted - e.g. extra fining on barrel / head, repositioning magneto and drive, alteration to induction layout as in conversion to down draught.

**CLUTCH & GEARBOX** - All main castings to be of a design and of a material in use before 1935 (see controls re foot-change).

**EXHAUST SYSTEM** - The exhaust system must comply with ACU regulations and noise controls and be in keeping with the period appearance of the machine.

**CARBURETTOR** - Genuine carburettors of any make or type, plus standard needle-type Amal (type M.6 etc., pre Monobloc). Track type 27 carburettors may be used.

**MAGNETO** - Any magneto except rotating magnet type.

### PRE 1949 CLASS (UP TO 31.12.48)

**HANDLEBARS, CONTROLS, WHEELS, GEARBOXES, FRAMES, FORKS AND TANKS** - should be of original type. Gearboxes restricted to a maximum of 4 gears.

**ENGINE** - Must be of a make and type originally fitted by the manufacturer; all major components must be of the year in question.

**WHEEL RIMS** - All machines produced before 1.1.37 must have steel rims. Alloy rims may be fitted to racing machines produced after 1.1.37. Rims must be at least 19" diameter on machines produced before 1.1.37. 18" rims may be used on later machines.

**MUDGUARDS** - Must be metal and if alloy must be painted to match machine in general. If alloy rear guard, it is advisable to fit strengthening strips on the underside.

**SEATS** - Dual seats may only be fitted to machines produced after 1.1.45.

**CARBURETTOR** - Only early 2-piece Amal, TT Amal and track Amal may be fitted. Remote needle (RN) type TT Amal may be fitted from 1.1.37.

**IGNITION** - Rotating magnet magnetos may not be used unless fitted as original equipment.

**REV COUNTERS** - Contemporary and Small Electronic Round Analogue types may be used. Digital types may not be used.

**HUBS** - Must be of a type fitted by the manufacturer with the machine. No dual brakes permitted on solos unless original specification.

### **PRE 1973 SPECIALS & CLUBMANS (UP TO 31.12.72)**

European machines and parts of a type manufactured up to the end of December 1972 are eligible. The specials must be of a type built of European parts e.g. Triton etc. Period streamlining may be fitted. Factory built specials and small factory runs e.g. Royal Enfield GP5, Dunstall Norton etc. are eligible. The specification, appearance and suitability of machines will need the approval of the committee. They must have received and approved details of a special for it to be eligible for championship points.

**SUPERCHARGERS** - The use of superchargers is permitted subject to prior approval of the individual machine specification by the VMCC Eligibility Committee. Guards must be fitted in accordance with Drag Race Standing Regulations.

**CARBURETTOR** - Left hand and right hand Amal IIs's may be used. Smooth bores are not permitted.

### **PRE 1963 CLASS (UP TO 31.12.62)**

**GENERAL** - The engine, gearbox and their mountings, clutch, frame, forks, rear suspension, hubs and brakes shall be readily identifiable as being of a type produced by the original manufacturer in that period. External, easily seen, modifications of a minor nature only shall be permitted. Any internal, unseen, modifications shall be permitted.

**CARBURETTOR** - These must be of a type available in the period the machine was built. Amal GP types may only be fitted to a machine built from 1.1.49. Where a remote float chamber is used it must be of a type available when the machine was built.

**IGNITION** - Only magnetos may be used which are of a type available when the machine was built. All visible ignition components must be of a type available when the machine was built.

**MUDGUARDS** - Mudguards are not compulsory but must comply with ACU Regulations if fitted. Both mudguards must be made of a material used in the period and be adequately supported.

**FUEL & OIL TANKS** - The tanks must be of a type and size similar to those fitted by the original manufacturer to that model of that year.

**SEAT** - Seats must be in keeping with the machine's period and general appearance.

**EXHAUST SYSTEM** - The exhaust system must comply with ACU regulations and noise controls and be in keeping with the general appearance of the machine.

**FRONT SUSPENSION** - If fork gaiters are fitted they must be black; modern plastic dust excluders shall not be permitted.

**REAR SUSPENSION** - Rear suspension units must be similar in appearance to those originally fitted - blue painted and / or Girling gas units with remote reservoirs may not be used. Girling black unfinned units may be used if they are similar in appearance to those originally fitted.

**WHEELS** - Any steel or alloy rims are permissible if they are 18", 19", 20" or 21" diameter. It is permissible to use smaller rims than those fitted by the manufacturer in the period. It is also permissible to use smaller rims than 18" if they were originally fitted by the manufacturer in the period. The drilling of brake drums is not recommended. Brake torque arms should be of steel or duralumin if fitted originally.

**HANDLEBARS** - Clip-on or Ace type handlebars or any handlebar made from more than one piece of material may only be used on machines with swinging arm rear suspension, unless it can be proved that handlebars of these types were fitted as standard on the original machine. Handlebar mounted controls must be of a type similar to those available during the period of the machine's manufacture. No dogleg type levers and only period type twist grips are allowed.

**REV COUNTERS** - Contemporary and Small Electronic Round Analogue types may be used. Digital types may not be used.

**BATTERY** - If the battery is fitted in a prominent position it must be externally similar to those available during the period of the machine's manufacture. A modern battery may be used if it is fitted in an inconspicuous position.

**GENERAL FINISH** - Any type of paintwork may be used if it is of a reasonable colour and is in keeping with the period of the machine's manufacture. The use of inappropriate badges, stickers, transfers and other characters will not be permitted. A reasonable level of neatness and cleanliness is required of all machines.

### **PRE 1959 SIDECAR OUTFITS (UP TO 31.12.58)**

It is compulsory that all sidecars in Events 8 **MUST** be fitted with an effective lanyard type cut out.

Such outfits conform to the specification that a sidecar machine is a solo motorcycle to which a sidecar has been attached, and the machine must be able to be ridden as a solo if required.

All 3 wheel rims must be of a minimum 18" diameter. Two brake drums of contemporary design may be built into one hub centre.

### **PRE 1973 THREE-WHEELERS (UP TO 31.12.72)**

It is compulsory that all sidecars/threewheelers in Events 9A & 9B (not B3 cyclecars) **MUST** be fitted with an effective lanyard type cut out.

British Historic Racing - VMCC Ltd wishes to encourage the building and racing of genuine 'type' outfits of the Pre 1973 era. All machines must comply with the ACU regulations for Road Racing and the Machine Specification and in all cases the engine, gearbox, hubs and ancillary parts must be of a type available before December 31 1972.

**ENGINE - Event 9A** - Engines to be of European manufacture, up to 2 cylinders, 2 valves per cylinder, up to 750cc. **Event 9B** - Engines to be of European manufacture - unlimited.

**CHASSIS** - Must be of a type recognised to be of the period and of tubular construction, either bolted or welded to form an integral unit. All handholds must be of a closed loop type. All suspension must be of a type available in the period.

**WHEELS** - Any steel or alloy wheels, in keeping with the period, are permissible subject to a maximum width of 5½". Tyres are restricted to a maximum width of 165mm and to a minimum of 70 series profile (e.g. 165 x 70 x 10)

**STREAMLINING** - Period style fairings and streamlining are allowed. All bodywork must ensure passenger protection from wheels, chains etc.

**BRAKES** - Any period type system of cable, rod or hydraulic operation is allowed. There must be 2 independently operated systems.

**BATTERIES, FUEL & OIL TANKS** - To be securely mounted and adequately protected to avoid spillage.

**IGNITION** - Magneto, coil or electronic ignition system may be used but if it is the latter then it should be in an inconspicuous place.

**CARBURETTORS** - Any make of period carburettor may be used.

Left hand and right hand Amal IIs may be used. Smooth bores are not permitted.

**REV COUNTER** - Any period rev counter may be used.

**GENERAL FINISH** - Any type of paintwork may be used if it is of a reasonable colour and is in keeping with the period of the machine's manufacture.

The use of inappropriate badges, stickers, transfers and other characters will not be permitted. A reasonable level of neatness and cleanliness is required of all machines. A machine of poor appearance or inferior construction may be excluded at the Three-Wheeler Specification Sub-committee's discretion.

### **B3 CYCLECARS**

B3 cycle cars will have to comply with the above but as these machines are usually a one-off type, they will be judged on their merit by the Three-wheeler Specification Sub-Committee for approval. Riders intending to race in this class must submit a detailed specification to the Three-wheeler Specification Sub-Committee for approval and registration before any entry will be accepted.

**Neither the rider nor the passenger may be attached to the machine in any way.**

### **MORGANS**

Morgan three-wheelers must comply with the Morgan Three-wheeler Club Racing Specification.

#### **STANDARD CLASS**

**CHASSIS** - Original in layout and dimensions, with standard track. Twins must have original or pattern type lugs, with round-section tubing of original dimensions.

**BODY** - Production original or replica of same in similar materials on a timber frame. GRP panels are not allowed.

**BRAKES** - Type original to model, with standard mechanical actuation.

**TRANSMISSION** - Original or pattern type bevel box plus two chains or normal gearbox plus one chain. Ratios may be altered but additional gearboxes and gears are not allowed. The gearbox or bevel box must be applicable to the model of the car.

**SUSPENSION** - Front - Original Morgan layout. Rear - Forks and quarter-elliptical springs as original. Shock absorbers of contemporary type acceptable.

**WHEELS** - Front and rear - Morgan original type or closely similar spoked 18" or 19" with steel rims. Front and rear wheels need not be the same size. Maximum rim width WM3.

**TYRES** - Legal for road use.

**MUDGUARDS** - Must be Morgan original type or closely similar, with valence to body.

**SILENCERS** - Must be complete and efficient.

**ELECTRICS / LIGHTING** - Must have head, side and tail lights all in working order. Electric generator must be in working order. Non-programmable electronic ignition is permitted if housed in components of a type available when the machine was produced.

**ENGINE** (must be mounted in normal position in all cases) - Twin Morgan's must be fitted with twin engines of the type fitted between 1910 and 1946. Two-speeders and three-speeders must have engines appropriate to their type. Racing JAP R and S engines not permitted. Ford Morgan's must have Ford 8 or 10 engines of the E93A series.

**TUNING** - One touring carburettor as original and normal camshafts. Ford 10s may have 8 heads. JAPs and Matchless may have domed pistons. No fuel injection or superchargers. No further tuning allowed. Concentric carburettors are not allowed.

**FUEL** - Any commercially available pump fuel (Leaded, Unleaded, LS, Super Unleaded, Lead Replacement Petrol up to AVGAS 100LL spec or Diesel) may be used. The addition of any Lead Replacement Additive approved by the Federation of British Historic Vehicle Clubs is permitted.

**STEERING** - As original.

#### **TOURING MODIFIED CLASS**

**CHASSIS** - As in standard but with a maximum of 50" between centre pins and a minimum of 3" ground clearance fully laden.

**BODY** - As in Standard.

**BRAKES** - Drum type, hydraulic optional. Single leading shoe. 8" maximum diameter drums on hydraulics.

**TRANSMISSION** - As in standard.

**SUSPENSION** - As in standard. Rear forks may be strengthened and hoop over rear wheel is allowed. Spring ratings may be altered.

**WHEELS** - As in standard.

**TYRES** - As in standard.

**MUDGUARDS** - Must be at least the width of the front tyres and cover a minimum of 100 degrees of the circumference.

**SILENCER** - As in standard.

**ELECTRIC / LIGHTING** - As in standard.

**ENGINE** (must be mounted in normal position in all cases) - Twin Morgan's must be fitted with twin engines of the type fitted between 1910 and 1946. Racing JAP R and S engines not permitted. Ford Morgan's must have Ford 8 or 10 engines of the E93A series.

**TUNING** - Unlimited tuning allowed as long as it does not alter the basic design and external appearance of the engine. Vee-twins to have a maximum capacity of 1100cc plus 0.060 inch rebore. One single-choke carburettor per cylinder may be fitted. No fuel injection or superchargers allowed. Concentric carburettors are not allowed.

**FUEL** - As in standard.

**STEERING** - As original

#### **RACING CLASS**

**CHASSIS** - As in Touring Modified, but with no minimum ground-clearance specification.

**BODY** - Metal panels on a wood frame. No tubular body framework allowed. Must resemble catalogue three-wheeler Morgan model or a pre-war racing three-wheeler Morgan. See Note 1.

**BRAKES** - Drum type, hydraulic optional. Single leading shoe.

**TRANSMISSION** - Original or pattern type bevel box on 2 speeders must utilise two chains. Gearboxes on 3 speeders must be original or pattern type and utilise one chain. Ratios may be altered and a maximum of 4 speeds may be used.

**SUSPENSION** - As in Touring Modified.

**WHEELS** - Front and rear - Morgan original type or closely similar spoked 18" or 19" with steel rims. Front and rear wheels need not be the same size.

**TYRES** - Free subject to the rules of the meeting.

**MUDGUARDS** - Optional.

**SILENCERS** - Optional, subject to the rules of the meeting

**ELECTRICS / LIGHTING** - As in standard but electric generator and lighting system optional.

**ENGINE** (must be mounted in the normal position in all cases) - Twins may have any V twin engine closely similar to those made by JAP, Matchless, Blackburne, MAG or Anzani. Ford as in Standard, except that 100E engines may also be used. Period style single-cylinder engines may be fitted. See note 2.

**TUNING** - Unlimited tuning allowed as long as it does not alter the basic design and external appearance of the engine. There is a maximum capacity of 1300cc. One single-choke carburettor per cylinder may be fitted. Ford engines may use overhead inlet valves operated from a single camshaft in the original position. Mechanically driven supercharger of period type permitted. Concentric carburettors are not allowed.

**FUEL** - As in standard, plus Methanol may be used for this class. (An orange day-glo disc, minimum 3" diameter must be affixed to, or immediately adjacent to, the racing number plate on both sides of the machine using Methanol.)

**STEERING** - Standard principle of operation.

**Note 1** SPECIAL BODIES: Present racing Morgans exempt from this rule are: The Cyril Hale Morgan, the Pedley Morgan, the Guy Greaves Morgan,

the ex-Tom Rhodes racer and the ex-works trials car WP6271. Those Morgans fitted with special size wheels by the works are to be included in the Touring Modified Class.

**Note 2** The 60 degree engine raced by Mr. Chas Reynolds up to the end of the 1998 season is allowed to be used.

**Note 3** A 4th Class, known as Driver's Class, to effect temporary cover for machines not currently complying with the Sporting Formula. This class is determined by the scrutiny of the Eligibility Scrutineer and the Competition Secretary.

**Note 4** Darmons are to be treated in the same way as Morgans.

**Note 5** Any visible major part fitted from a motor manufacturer other than Morgan must be period to the vehicle.

**Note 6** In the event of a challenge, interpretation or application of this formula, an ad hoc meeting of the competing drivers will be held at the meeting, to discuss the challenge or interpretation. The Competition Secretary will make a determination exercising his/her discretion in the best interest of the MTWC. Notwithstanding any decisions made previously, the Competition Secretary's decision is final.

**Note 7** HISTORIC MORGAN BASED THREE-WHEELED SPECIALS

To qualify, cars must have been built and used prior to the introduction of the Sporting Formula in 1965. The relevant Specials must be approved by the Eligibility Scrutineer and the Competition Secretary, and must compete only in approved events. They will be placed in a class to be determined by the scrutiny of the Eligibility Secretary and the Competition Secretary.

## BSA BANTAMS

### 125cc

1. **CAPACITY:** All machines will be of 125cc. Oversize pistons to +2mm are allowed on any engine, and 58mm long stroke engines (normally 52mm bore) are allowed to use up to and including 55mm pistons, allowing use of modern available equipment.

2. **ENGINE:** Modifications to engine or gearbox are allowed, provided that conditions (a) to (e) below are met: -

(a) Bantam crankcases must be used.

(b) Disc valve induction is prohibited.

(c) Pressurised fuel injection is prohibited.

(d) Only BSA close ratio and BSA normal ratios gears or exact copies (e.g. AA Snell ) to be used. Maximum number of gears: Three

(e) Only standard cylinder barrel to be used, but may be modified internally. (Alloy Todd and BTW copies deemed to be standard but to remain aircooled, not liquid cooled)

3. **FRAME:** Must retain Bantam main loop, but may be modified.

4. **WHEELS:** Must retain wire-spoke wheels

5. **BRAKES:** Front brake - No restrictions, except Wavy or Carbon Fibre discs not permitted. Rear brake - Bantam rear hub to be retained but may be modified.

6. **FORKS:** No modern 'upside down' forks may be used, although original Bantam upside-down forks are permitted.

7. **TANK:** Must be mounted in normal position on machine.

8. **FUEL:** Only Petrol or Avgas 100LL mixture to be used.

9. ACU standing regulations for road racing machines apply (where applicable).

### 175cc

1. **CAPACITY:** All machines will be of 190cc capacity maximum.

2. **ENGINE:** Modifications to engine or gearbox are allowed, provided that conditions (a) to (j) below are met: -

(a) Bantam crankcases must be used, and remain externally unchanged, except for increasing stud centres to 60mm, on 52 and 55mm versions.

(b) Stroke to remain standard (58mm)

(c) Disc valve and Reed valve induction is prohibited.

(d) Pressurised fuel injection is prohibited.

(e) Only BSA close ratio and BSA normal ratios gears or exact copies (e.g. AA Snell ) to be used. Maximum number of gears: three if close ratio, and four if normal road ratios

(f) Only standard cylinder barrel to be used, but may be modified internally. (Alloy Todd and BTW copies deemed to be standard but to remain externally unchanged )

(g) Cylinder stud centres not to exceed 60mm

(h) Water-cooling prohibited

(i) Ignition to be fixed timing. (i.e. not advancing or retarding type), however Ducati Energer and PVL straight line (max 4deg retard are allowed)

(j) Exhaust power valves prohibited.

3. **FRAME:** Must retain Bantam main loop, but may be modified.

4. **WHEELS:** Must retain wire-spoke wheels.

5. **BRAKES:** Front Brake: No restrictions, except Wavy or Carbon Fibre discs not permitted. Rear Brake: Must retain Bantam hub (may be modified)

6. **FORKS:** No modern 'upside down' forks may be used, although original Bantam upside-down forks are permitted.

7. **TANK:** Must be mounted in normal position on machine.

8. **FUEL:** Only Petrol or Avgas 100LL mixture to be used.

9. **CARBURETTOR:** Size: 38mm maximum, circular bore only.

10. ACU standing regulations for road racing machines apply (where applicable).

11. Any rider winning the Bantam Championship on a 175cc machine must progress to 125 thereafter

## ONUS OF PROOF

In all cases embracing "borderline" parts the onus of proof of eligibility of the machine or parts shall rest with the Entrant / Rider. The Scrutineer will note any doubtful items. In the cases of flagrant or continued breach of the "Machine Specification" the matter will be reported to the Committee, who will take what action they deem necessary to prevent entry of such machine at future events.

Any three members of the Committee shall, on the day, have the power to exclude any machine not complying with the "Machine Specification".