



## **MACHINE SPECIFICATIONS-ISSUE FEBUARY 2025. (Replaces all earlier specifications)**

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### **BRITISH HISTORIC RACING CLUB**

## **MACHINE SPECIFICATIONS-ISSUE FEBUARY 2025.**

### **1/ 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 and components of European and American manufacture only unless indicated in a particular class specification. (AGM 11/12). These rules define the additional requirements necessary to compete in 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 period. 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 redesigned 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" 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. 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".

## **2/ RULES APPLYING TO ALL CLASSES**

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

**STREAMLINING**-No streamlining other than small period looking fly screens on post 1948 to 1963 solos and pre 1959 sidecars, full period type streamlining allowed only in the three wheel/specials/clubman's/bantams/Ducati and BEARS classes.

**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. The bore and stroke of the engine must be clearly stamped on the crankcase or stamped on to a metal plate and securely fixed to the crankcase.

**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 minimum of 70 series profile.

**WHEELS**-For solo classes the maximum rim width is WM3 excepting Solo Motorcycles over 500cc to 1962, which may use rim widths as recommended by tyre manufacturers to accept 130 section tyres. (AGM 11/10) Also the F1 BEARS class.

**FUEL**-Any commercially available pump fuel, leaded, unleaded, super unleaded or lead replacement up to Avgas 100LL specification or Diesel, Leaded petrolmixtures up to 102 RON 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 Pre war machine. An orange day-glow disc (minimum 3" diameter) must be affixed on or immediately adjacent to the Racing Number Plate on both sides of any machine using methanol.

**OIL CONTAINMENT**-All 4 stroke machines. 2&3 wheels plus parade bikes (PR6), to be fitted with oil catch trays. (AGM 12/18)

**ON ROAD LEGAL MACHINES THE FOLLOWING PARTS MUST BE REMOVED**-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)

## **4/ SOLO PRE 1949 CLASS (31a,b,c,d)**

**(31a)** 250cc

**(31b)** 350cc

**(31c)** 500cc

**(31d)** Over 500cc

**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** - Duel 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. **Note of special interest.** Vincent Girder Forks (Girdraulics) are accepted within the girder fork class. (AGM 11/17)

## **5/ SOLO PRE 1973 SPECIALS & CLUBMAN TWO STROKES PRE 1968**

Motor vehicles and components of European and American manufacture only and parts of a type manufactured up to the end of December 1972 are eligible. The specials must be of a type built 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.

**CARBURETTOR**-Left hand and right hand Amal 11s's may be used. Smooth bores are not permitted. Mikuni VM carbs will be permitted in the pre-'73 class (AGM Nov 2023)

**CYLINDER HEAD**-Triumph engines -10 stud head may be used.

**WHEELS**-Solo Motorcycles over 500cc to 1962 may use rim widths as recommended by tyre manufacturers to accept 130 section tyres. (AGM 11/10)

**GEARBOX**-The Indian Enfield 5 speed gearbox is allowed as a replacement for the Albion 4 speed. Gear change has to remain on the right hand side and the 5 speed logo removed. (AGM 11/15)

**Sub class: (PRE 1973 SOLO's Up to 250cc (03a,r), 251-350cc (05a,r), 351-500cc (06a,r), Over 500cc (10a,r) Classes, 4-speed, Drum brake, Four Stroke)** (AGM 11-16) (AGM 12/18) Factory "road production" based machines of British European and American manufacture, and parts of a type manufactured up to the end of December 1972. Typical production based "mix and match" specials of a type built during the period e.g. Triton, Tribsa, Norbsa, Trifield are all eligible and indeed encouraged.

**FRAME**-Any period factory standard or period aftermarket or special or replica as per BHRC pre-73 rules.

**ENGINE**-Strictly "factory production" based. Manufacturer nominal standard bore/stroke for the type. Commercially re-manufactured/replica engine parts are permitted, but must nominally be "bolt-on" interchangeable with the originals.

**CYCLE PARTS**-Any period type "factory production" forks wheels brakes that were available during the period may be used, any manufacture origin. **BRAKES**- Period DRUM brakes only, of period "factory production" type, any manufacturer origin. Period type modifications permitted.

**GEARBOX**-Strictly four speed, original or reproduction. Pre-unit engines may be mix-matched with gearboxes of other manufacturer origin: e.g. BSA engine, Triumph gearbox etc. Note: Royal Enfield 250 (Drum braked, (Unit construction)) exception to 4-speed gearbox requirement (AGM 12/18) **Sub class note**-4-speed drum brake machines run in the same championship classes all other pre 73 machines. But please be sure to enter any races under the correct entry code ( eg 03v, 05v, 07v , 10v etc) In order that your participation can be easily recognised.

## **6/ SOLO PRE 1963 CLASS (04a,r)** (r = rigid)

**GENERAL**-Purpose built GP machines, period production based and special built race machines of the period are all eligible for this class. The above to include for example

Tritons/TriBSA/NortonAJS/NortonG50/Various Velocette specials and many others that raced in the period. FOR ELIGIBILITY the rider/owner must provide proof to the eligibility team that a similar machine did race in the period. (AGM 11/12) 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 un finned 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. **Note:** Production Based pre-62 501-unlimited specials are eligible to enter and score championship points in the pre-62 501-unlimited class. The specials must be of a type built and raced during the period pre-62 period, e.g. Triton, TriBSA etc., and built using production manufactured parts of the period, no one off GP parts will be allowed. (AGM 11/09)

**GEARBOX**-The Indian Enfield 5 speed gearbox is allowed as a replacement for the Albion 4 speed. Gear change has to remain on the right hand side and the 5 speed logo removed. (AGM 11/15)

## **7/SIDECAR OUTFITS PRE 1959 (15a,b,c)**

**(15a) Up to 750cc.**

**(15b) Over 750cc**

**(15c) Single cylinder**

It is compulsory that all sidecars in Sidecar Outfits Unlimited to 1958 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. Machines made up from non Japanese parts made prior to the cut off date are allowed in this class. (AGM 11/12). All 3 wheel rims must be of a minimum 18" diameter. Two brake drums of contemporary design may be built into one hub centre.

### **8/ PRE 1987 BEARS SIDECAR OUTFITS(18a,b,c)** (Amended AGM 11/16)

It is compulsory that all sidecars in B.E.A.R.S Sidecar outfits to 1986 MUST be fitted with an effective lanyard type cut out. Such outfits conform to the specification that a sidecar machine is a solo motorcycle that was available over the counter in the period which a sidecar has been attached and the machine must be able to be ridden as a solo if required. A cut-off date of 31 December 1986 on all motorcycles. Only motorcycles manufactured in Great Britain, the United States of America and mainland Europe are eligible. (With the exclusion of 'Bimota' or any other mark when employing ineligible engines.)

### **STANDARD CLASS ENGINES(18a,b)**

#### **(18a) 750cc.**

May be tuned in any way with the following exceptions; Must not exceed 1000cc\*, Can not include any components unavailable before the cut-off date (including engine blocks). Fuel injection and ECU systems can only be of a sort fitted to a standard BEARs-eligible motorcycle and are interchangeable between makes. The bore and stroke must appear on the outside of the engine.

\*NB: The 1000cc limit is waived for twins and triples and the original 1300cc ACU limit for those engines only. (AGM 11/17)

**FRAME**-Made by the same manufacture as the engine. Some leeway is allowed for a similar frame, different year. Additional bracing and modifications to frame geometry allowed. Frame loop to remain intact, i.e. no cutting away lower frame rails etc. Fabrication of lower sub frame allowed to fix sidecars to bikes manufactured without lower rails IE; Laverda Twins, BMW K100/K75

**FORKS**-Must be of a type fitted to the bike when it left the manufacturers. Upside down forks not allowed. Forks from any BEARs eligible bike allowed. Fork brace allowed. Similar looking forks that were manufactured later than the 1986 cut-off date i.e.: BMW K100 with integral fork brace are not allowed.

**SWINGING ARM**-Must be kept but suspension can be made rigid. Complete new rear sub-frame "hard tail" not allowed.

**YOKES**-Custom made/modified to bring about suitable trail allowed.

**EXHAUST**-Must follow the standard route for that motorcycle, must employ standard 'header' pipes. Silencer 'can end' is free. Must conform to ACU noise regulations.

**WHEELS**-Only Pre 1987, BEARs-eligible wheels allowed. (AGM 11/16) NB: All Pre 1987 sidecar outfits under 500cc may use 16" wheels\* (AGM 11/17) The use of tubes in tyres is optional. (AGM 11/17) Wheels may be painted (AGM 11/17)

**CARBURETTORS**-Any BEARs-eligible carburettors or throttle body's allowed.

**BRAKES**-Any BEARs eligible discs/callipers are allowed. Only one caliper per disc.

**BATTERY**-Must be fitted in original position.

**FUEL**-All post 1972 outfits must use pump petrol, pre 1973 outfits may use methanol.

**WHEELS**-Can only be of a type fitted to any BEARs eligible motorcycle and be of a minimum diameter 17".

**SIDECAR SPECIFICATION**-The minimum diameter of the sidecar wheel is 17"\*. Sidecar must bolt to the bike as in the Pre 1959 event. Streamlining restricted to a small nose cone. Sidecar brake not allowed. Sidecar chassis must be made of steel tube or box section and conform to B2/B3 ACU Handbook regulations. Aluminium frames not allowed. Track 800mm minimum, 1105mm maximum. The distance measured from the centre of the track left by the rear wheel to the centre of the track left by the sidecar wheel. The ground clearance measured over the entire length and width

of the vehicle race ready, fully loaded with rider, passenger ^ fuel must not be less than 65mm with the handlebars on a straight position. No device is permitted to reduce the 65mm ground clearance during the course of the event.

#### **GENERAL**

**FUEL TANK**-must be of a standard motorcycle tank type and be in the stock position.

**TYRES**-Slicks and cut slicks are not allowed. Any moulded tyres allowed with a maximum width of 140mm. Spacing away of rear wheel from centre line of the motorcycle is not allowed. (AGM 11/16)

**ELIGIBILITY**-Any doubts as to eligibility refer to the BHRC committee before building. (All BHRC Pre 1959 outfits are eligible for this event.)

#### **HOT ROD CLASS(18c)**

As standard class with the following exceptions,

**ELECTRONICS**-Any ignition, ECU, fuel injection system allowed.

**ENGINE**-Later K series engine blocks may be fitted, max 1300cc (as long as they are declared as such for noise testing and program purposes). All BMW K series bikes must employ the eight valve head. The bore and stroke must appear on the outside of the engine and must be correct.

**FUEL TANK**-May be located on the sidecar platform but the original tank must be fitted to the motorcycle, unmodified and in the standard position.

**BATTERY**-May be fitted in a safe location within the outfit.

**EXHAUST**-Free, including headers but must comply with all ACU noise regulations.

**ELIGIBILITY**-Any doubts as to eligibility refer to BHRC committee before building.

#### **9/ PRE 1973 THREE-WHEELERS(16a,b,c)**

It is compulsory that all sidecars/three-wheelers in Sidecar based 3 wheelers up to 750cc to 1972 and Sidecar Based 3 wheelers to 1973 (not B3 cyclecars) MUST be fitted with an effective lanyard type cut out. British Historic Racing Club 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**-Sidecar based 3 wheelers up to 750cc to 1972 - Motor vehicles and components of European and American manufacture only, up to 2 cylinders, 2 valves per cylinder, up to 750cc. ii) Japanese pre 1982 up to 750cc air or liquid cooled.

**CHASSIS**-as per current pre 72, front exit style only.AGM 11/16) iii) European pre 1982 up to 750cc air cooled. (Chassis type as per current pre 72, front exit style only.AGM 11/16) iv) Sidecar Based 3 wheelers to 1973 - Engines to be of European and American manufacture only - unlimited.

**CYLINDER HEAD**-Triumph engines -10 stud head may be used.

**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 inside rim width of 5.5" (140mm). Tyres should be of a type or similar to those available in the period and are restricted to a maximum contact width with the track of 5.5" (140mm). Tyres must have a manufacturer's moulded tread pattern. Modern low profile slicks, or hand cut slicks are not permitted on any wheel.

**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 II's 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. **Notes of special interest:** Formula 125 Sidecars (F125) are eligible to run with Event 16 (750 Sidecars). (AGM 11/17) 16" Sidecar Championship. At the end of the season a trophy is to be awarded to the first sidecar outfit with 16" front and rear wheels. (AGM 11/09)

### **10/ B3 CYCLECARS(17a)**

Cycle cars will have to comply with the above but as these machines are usually a one-off type, the Three-wheeler Specification Sub-Committee for approval will judge them on their merit. 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.

### **11/ MORGANS(17c)**

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

### **12/ SIDECAR OUTFITS CUBS CLASS (28a)**

Four stroke 500cc parallel twins and 600cc single cylinder. Donor machine: Must be a parallel twin four stroke of not more than 500cc or a single cylinder four stroke of not more than 600cc. Country of origin is open and the bike must be manufactured at least 25 years before the current date. NB; Bikes which are after the cut-off date but which are the same model and offer no performance advantage are allowed. Bike must have been mass produced.

**ENGINE**-Tuning is allowed, must be naturally aspirated.

**FRAME**-Made by the same manufacturer as the engine, (some leeway allowed for similar frame different year). Main frame loop to remain intact. Bracing allowed. Rear sub-frame can be modified.

**FORKS**-Must be of a type fitted to the bike when it was manufactured. No USD forks. Must be age related and from a mass produced road bike. Max stanchion diameter 41mm. Fork brace allowed.

**SWINGING ARM**-Must be kept but rigid struts can replace the suspension units.

**EXHAUST**-Free choice, no more than 105db.

**WHEELS**-Minimum 16 inch dia. Must be from an age related road bike.

**CARBURETTORS**-Must be from a CUBS eligible bike.

**BRAKES**-One caliper per disc for twin discs, two calipers for a single disc. Must be from an age related road bike. Disc diameter not more than K series BMW. Single "pot" calipers only. FUEL - Pump fuel only.

**BATTERY**-Can be fitted in a location at the builder's discretion. Must be firmly held in place.

**SIDECAR SPECIFICATION**-As BEARS but with 16 inch minimum diameter wheel.

**IGNITION**-Free choice.

**YOKES**-Can be modified or constructed from scratch

**TYRES**-Must be treaded, no wider than 140mm.

**FUEL TANK**-Can be fitted in a location at the builder's discretion. Must be firmly held in place.

### **13/ SOLO DUCATI SINGLE CYLINDER CHAMPIONSHIP(12a,b)**

(12a) Up to 250cc

(12b) Up to 500cc

The championship is open to single cylinder up to 500cc Ducati solo motorcycles manufacture prior to 1977. It is open to bikes that are currently racing in England and Europe that do not conform to our events 2a, 2b and 3b, although the later can enter this championship. The class will be policed by our existing Ducati riders. (AGM 11/13).

**GENERAL**-The machine must be based upon Ducati narrow case or wide case single cylinder motorcycles manufactured up to December 1976 (when production ceased).

**FRAMES** – Frames must be as produced by the manufacturers although after market frame kits of the period such as, Harris, Spondon etc. that were raced in the period are allowed. Alloy frames with proven period use only are allowed.

**FORKS and SWINGING ARM**-The period look of fork, fork yokes and swinging arms must be maintained. The maximum diameter of fork stanchions is 35mm. The use of upside down fork prohibited.

**CARBURETTORS**-Any carburettor produced in the period may be used as an “as used basis”.

**ENGINES**-The external appearance of all engine components must be maintained as per the original engine manufactures specification, unless it can be conclusively shown that the external modifications made are from within the relevant period. The internal specification of all engines is free from restriction, but the machines must be entered in the correct capacity class.

**BRAKES**-Any single disc or drum brake available in the period can be used on an as used basis. The period look of the bike should be maintained.

**GEARBOX**-There is no restriction on the gearbox internals.

**INSTRUMENT and CONTROLS**-Must be of a type used in the period.

**FUEL** – As of BHRC standing regulations but excluding methanol.

#### **14/ SOLO BSA BANTAMS-125cc(11a)**

**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.

**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 air-cooled, not liquid cooled).

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

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

**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.

**FORKS**-No modern ‘upside down’ forks may be used, although original Bantam upside-down forks are permitted.

**TANK**-Must be mounted in normal position on machine.

**FUEL**-Only Petrol or Avgas 100LL mixture to be used. ACU standing regulations for road racing machines apply (where applicable).

#### **SOLO BSA BANTAMS- 175cc(11a)**

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

**ENGINE**-Modifications to engine or gearbox are allowed, provided that conditions (a) to (i) 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.
- FRAME**-Must retain Bantam main loop, but may be modified.
- WHEELS**-Must retain wire-spoke wheels.
- BRAKES**-Front Brake: No restrictions, except Wavy or Carbon Fibre discs not permitted. Rear Brake: Must retain Bantam hub (may be modified).
- FORKS**-No modern 'upside down' forks may be used, although original Bantam upside-down forks are permitted.
- TANK**-Must be mounted in normal position on machine.
- FUEL**-Only Petrol or Avgas 100LL mixture to be used.
- CARBURETTOR**-Size: 38mm maximum, circular bore only.
- ACU standing regulations for road racing machines apply (where applicable).
- Any rider winning the Bantam Championship on a 175cc machine must progress to 125 thereafter.

## **15/ SOLO B.E.A.R.S. British European and American Race Series (13a,b,c,d)**

### **GENERAL**

Machines MUST be derived from a Production Road Going motorcycle freely available to the public prior to 31st December 1985. No motorcycle derived from any form of original competition motorcycle will be eligible. All components must be British, European or American unless otherwise stated. There will be separate class championships for Standard Class and Specials Class Machines.

### **STANDARD CLASS**

Three class championships

**(13a)** 751cc to unlimited (Formula 1)

**(13b)** 501cc to 750cc (Formula 2)

**(13c)** Up to 500cc (Formula 3)

**(13d)** Open to 1300cc (Formula 4)

**STANDARD CLASS FRAME**-A frame from a BEARS eligible road-going production motorcycle. Additional bracing and modifications to frame geometry allowed. Tanks, fairings and other bodywork must be of a type or style as used prior to 1986. Japanese style fairings and seats not eligible.

**STANDARD CLASS ENGINES**-May be tuned in any way with the following exceptions; cannot include any major components of a type unavailable before the cut-off date (including engine blocks). Fuel injection and ECU systems can only be of OEM type as originally fitted. Normal after market electronic ignition systems permissible with no engine management capability beyond simple rpm based ignition curve. Quick shifters not permitted. (for clarification, any machine fitted with modern non original after market fuel injection &/or engine management system will run in Specials class. Particular ref to BMW K100 aftermarket systems available )

**SPECIALS CLASS (13d)**-single championship iv)

**SPECIALS CLASS FRAMES**-Free choice of frame, specials welcome as long as they are constructed to a type/design typically used before the cut-off date. Frames must be constructed from steel tube. (Anyone building a new frame should submit the design to the eligibility team prior to starting to build/modify same). Typical frames used in Formula 1, 2 and 3 series, Battle of Twins and Sound of Singles racing Pre 1986 are eligible. Seats, tanks, fairings and other bodywork must be of a type or style as used prior to 1986. Japanese style fairings and seats not eligible.

## **ALL CLASSES**

**FORKS**-No 'upside down' forks will be allowed. Hub centre steering type forks as used prior to 1986 will be eligible.

**BRAKES**-No four-pot callipers and no Floating Disc's unless fitted to the original road machine that the bike was derived from.

**BRAKE MASTER CYLINDERS**-In addition to British, European and American master cylinders of the period, Japanese master cylinders of a type available prior to 1986 are eligible.

**WHEELS/TYRES**-Treaded tyres only, no wet type tyres allowed. The use of tyre warmers will not be allowed. All BEARS machines can utilise either 17" or 18" wheels due to availability problems regarding many popular wheels used 'in the period'. Many early magnesium (Dymag, Campagnolo etc), wheels are now in poor metallurgical condition and the Astralite wheels, a popular contemporary are no longer available. A wide choice of 17" wheels and tyres are readily available at much more attractive prices. The maximum tyre width at the rear is 160mm.

**CARBURETTORS**-British, European and American carburettors of any type available prior to 1986 are eligible. Japanese Round-slide, Mikuni and Keihin carburettors will be eligible.

**Notes of special interest:** Dispensation for the Norton Interpol 2 and derivatives to run as a production machine(AGM 11/16).. Std Class F2, or, if anything other than standard Interpol 2 chassis/configuration, then class will be "Specials Class" F4.

## **16/ SOLO MZ "Supa/ 5" formula (11m) (AGM 11/17)**

Open to MZ TS250 series machines TS 250/1 (Supa/ 5s and four speed TS250) Excluded are the later "ETZ" machines).

**SPECIFICATION**-Lights/ glass to be removed, the shell retained. Rear lights may be removed.

**SILENCER**-Original silencer to be used - shortened to comply with ACU requirements.

**WHEELS**-Wheel rims to be original spec (rear may be to 17" to allow for tyre choice).

**BRAKES**-Front brake may be modified or replaced for period drum type i.e. twin leading shoe.

**SUSPENSION**-Front Sliders/stanchion standard, springs to suit rider, rear units to suit rider.

**CARBURETTOR**-Original carburettor with standard bore, air filter optional.

**HANDLEBARS**-to original mounts i.e. no clip ons.

**CONTROL LEVERS**-to riders choice.

**MUDGUARDS**-to original specification but free choice of materials - i.e. plastic/ alloy.

**AIRBOX**-Side panels to be retained. Rear chain guard optional.

## **17/ SOLO JAPANESE & EUROPEAN SOLO MOTORCYCLES PRE 82 (14a,b,c,d)**

250/350 classes added to reflect actual classes that have evolved since 2014

### **CLASSES**

**(14a)** Up to 250cc

**(14b)** 251 to 350cc

**(14c)** 351 to 500cc TO 31/12/1981. (AGM 11/14)

**(14d)** 501cc to 998cc TO 31/12/1981. (AGM 11/16).

**Roadster based machines of any Japanese manufacture with a maximum capacity of 998cc and available up to 31/12/81.**

**CAPACITY & TYPE**-Air cooled engines up to 998cc two or four stroke design. (AGM 11/16).

**ENGINE**-Any internal modifications allowed but profile of engine to look standard.

**FRAME**-Original manufacture or period faithful after market / replica frames used in the period.

**BRAKES**-Any period faithful drum, single or twin caliper discs in use up to the cut of date.

**WHEELS**-18 or 19 inch only, wired spoke or period cast including faithful replica, maximum rim size WM4. **FORKS**: Any type that were available in the period.

**CARBURETTOR**-Any carburettor available in the period.

**TYRES**-No wet weather or slick tyres allowed. Must conform to ACU standing regulations for road racing club events.

**APPEARANCE**-The appearance and style of the machine must be in period. Bikes can be raced faired or unfaired.

### **18/ FORMULA 750cc SOLO CLASS (08a)**

All machines to conform to the B.E.A.R.S. (British European and American Series) specification agreed at the AGM of 11/13. Maximum engine capacity 750cc.

### **19/ SOLO 125cc 4-STROKE CLASS (23a)**

To include all production air cooled 125cc 4-stroke bikes of any year ( including “made yesterday in China” )

#### **SPECIFICATION**

**ENGINE**-Any 4 stroke air cooled production based engine up to 125cc. Any internal modifications permitted.

**FRAME**-Production based. Any manufacturer. (Any modifications permissible, but must retain an original OEM primary frame element. i.e. Headstock & spine/cradle or beam as applicable. Fuel Tank must be in “normal motorcycle” position).

**BRAKES**-Any disc and caliper or drum brake.

**WHEELS**-Any 17, 18 or 19 inch spoked, cast or alloy.

**FORKS**-Any telescopic type including upside down type.

**CARBURETTOR**-Any carburettor(s) available. Fuel injection only if of an original production fitment type.

**TYRES**-To conform to ACU standing regulations for road racing club events. (no slicks or wet weather tyres allowed).

**FUEL**-Pump petrol, maximum octane as per BHRC standing regulations.

**EXHAUST**-Free range to comply with current ACU noise regulations.

**APPEARANCE**-Can be raced in standard road trim or any level of “race/customised trim” as desired. Faired or unfaired. Classic-period-styled machines greatly encouraged. **NOTE:** Allowable re-bore accepted. The aim is to create a very low cost racing class. It is hoped that machines prepared for this class would be in accordance with this ethos.

**ELIGIBILITY**-Any doubts as to eligibility refer to BHRC committee before building. Note: this is specifically for “street/production roadster-based machines” as available to public/learner drivers etc. It specifically is NOT for any “Off-shelf Factory Race Machines”.

### **20/ SOLO 150cc 4-STROKE CLASS (23d)(ref AGM 2023 )**

150cc 4 stroke machines are confirmed as a championship category in their own right. Essentially, big bore 125 based conversions. Includes any original 150cc types.

**OTHER SPECIFICATIONS**-as per 125 4-stroke class .

**21/ SOLO 125cc 2-STROKE CLASS (23b)** (New Class ref AGM Jan 2020) To include all “street production” air-cooled and liquid-cooled 125cc 2-stroke bikes.

#### **SPECIFICATION**

**ENGINE**-Any 2 stroke air or liquid-cooled “street” production based engine up to 125cc. Internal modifications permitted.

**OTHER SPECIFICATIONS**-as per 125 4-stroke production class, but with specific exception of 150cc oversize which is not allowed. Note: this is specifically for “street/production roadster-based machines” as available to public/learner drivers etc. It specifically is NOT for any “Off-shelf Factory Race Machines”.

### **22/ SOLO OPEN PRE ‘86 125cc CLASS (23c)(ref AGM 11/17)**

Open to all 125cc machines. Specification; Cut off date - 31st December 1985 (Includes any “factory catalogue/off-shelf race machine type”).

#### **SPECIFICATION**

**ENGINE**-Any engine in use before the cut of date.

**FRAME**-Any frame that was produced before the cut off date, standard or after-market or replica thereof.

**FORKS**-Any type available in the period.

**WHEELS**-Any wheels - spoked or cast or fabricated alloy of a type available within period.

**BRAKES** - Any type that was in use before the cut of date.

**CARBURETTOR**-Any carburettor available in the period.

**TYRES**-No wet weather or slick tyres allowed. Must conform to ACU standing regulations for road racing club events.

### **23/ SOLO PRE 1990 Class (26a,b,d,e,f)**

classes reduced from 7 to 5 classes, class details updated, certain new machines permitted in “sports class, Specification revised).

### **1980'S PRODUCTION BASED BIKES.**

This is for solo motorcycles of any country that could be purchased from dealers for use on the roads. No purpose “factory-built” racing or grand prix bikes allowed. The nominal cut off date of manufacture 31st December 1989. (NB. Bikes may be eligible if manufactured post 1989 provided there have been no significant changes to the chassis or engine used )

**SPORTS CLASS (26a)**-Machines 2 stroke machines up to 350cc four stroke multi to 400cc, twins to 650cc, singles – open capacity.

**SUPER SPORTS 600 (26b)**-Multi-Cylinder to 600cc, (twins to 750cc)(2-stroke to 400cc) (aircooled and liquid cooled).

**SUPERBIKE 1 (26d)**-Up to 750cc Aircooled Multi, twins to 1000cc.

**SUPERBIKE 2 (26e)**-750 Liquid-Cooled Multi, & twins to 1000cc(no change). (note: specific air/oil cooled machines are classed as liquid cooled. eg GSXR Suzuki).

**SUPERBIKE 3 (26f)**-751-1300cc. (combines air & liquid cooled, previous was separated). Air cooled or Liquid-cooled machines to 751cc to 1300cc available in the period.

### **SPECIFICATION**

(all above classes) All bikes must be derived from standard road bikes of the period, no GP or factory race bikes permitted, all to be based on street machines available to the public in the period.

**FRAME**-the frame must be either original with no tampering to the original frame number, or period-typical specials/after market type. Bracing to the frame is allowed, of the type used within the period. After market swinging arms, available in the period allowed. After market frames such e.g. Harris, Spondon, self-built specials allowed as long as of a type typical of period or available within the period. The onus is on the rider to provide evidence of this.

**BODYWORK**-Must be original, or of a type that was typical of the period.

**WHEELS**-All wheels to be of a type available in the period.

**ENGINES**-Any internal modifications allowed, profile of the engine to look standard.

**CARBURETTORS**-Any carburettor available in the period allowed.

**FORKS**-Any standard or after-market available in the period allowed up to 43mm in size. No inverted types permitted unless shown to have been original factory fitment on the particular model pre 1990 (e.g. Ducati 851, Kawasaki ZXR400).

**REAR SUSPENSION**-Any original or after-market of the period allowed.

**TYRES**-No wet weather, slicks or cut slicks allowed. Tyres must conform to ACU standing regulations for road racing club events.

**APPEARANCE**-The appearance and style of the machine must be in period. Bikes can be raced faired or un faired.

### **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 Technical Inspector will note any doubtful items. In the cases of flagrant or continued breach of the "Machine Specification" the matter will be reported to the

BHRC Committee, who will take what action they deem necessary to prevent entry of such machine at future events

#### **24/ SOLO SUPERMONO CLASS (22a)**

Type of eligible machine shall be broadly in line with Supermono GB specification/requirements, (i.e. engine based criteria, Four stroke single cylinder manufactured on or after 1st January 1976 (no modern replica's of pre 1976 machines). However , with the following exceptions may differ from direct "Supermono GB" regs:-

1/ Supermono "Clubman" and "Evo" classes shall both be eligible, but run as a single class within BHRC – events.

2/ machines may be raced faired or unfaired.

3/ Handlebars: clip-ons are not mandatory. Both Clip-on bars or regular top-yoke mounted type bars are allowed.

4/ standard framed or modified or special framed machines allowed.

5/ Tyres - Must be treaded. No Slicks. No cut slicks. No Wets.No Warmers.

#### **25/ SOLO BHRC 500 Twins Class (51a)**

For "Stock-based" carburettor machines, or "specials", based on "4-stroke twin street engines" available from the 1990's era.

Specifically included machines/engine donors are are CB500 1993-2003 Drum & Disc brake Models, CBF500 model to 2008, Suzuki GS500 1989-2004 Kawasaki Gpz500 1987-2004, / ER500 1997-2006. Others may be added upon request/approval.

Frame & chassis: stock, or free mix & match of period cycle parts, including period type after-market or special-built frames.

Earlier engined "specials" machines running with more "modern" chassis components typical of the 90's era will be eligible to run.

Engine tuning and modifications permitted within capacity. This is not a "controlled class".

Tyres - Must be treaded. No Slicks. No cut slicks. No Wets. No Warmers.

Bodywork:- can be any stock-based oem bodywork. Non oem bodywork restricted to either naked machine, or after market "bikini style ". No after market "full race" fairings.

#### **26/ SOLO BEARS '96 CLASS (52a,b,c,d)**

New British European American Class, Incorporates Hinckley Triumph Class, proposals of AGM 2023).

Predominantly aimed at Street/Sport-Tourer based machines derived from a Production Road Going motorcycle freely available to the public prior to 31st December 1996.

Machines remaining substantially technically unchanged beyond the nominal cut-off date may be permitted as eligible "date run ons". (e.g.: including but not limited to various carburettor Hinckley Triumphs, air-cooled Ducati's, & Oil-Head BMWs.)

There will be separate class championships for "Standard Class" and "Specials/Super sports Class" Machines. .

The classes are (admittedly) slightly proscriptive in terms of certain game changing machines separated from more "cooking types". Examples of machines given, but this is not exhaustive.

All machines may be raced as oem faired, or semi-faired or un faired.

#### **STANDARD CLASS**

No motorcycle derived from any form of original competition motorcycle will be eligible in standard class.

#### **GENERAL**

May include certain non BEA components such as were oem fitted to many period BEA Machines (E.g. including but not limited to Showa forks /suspension/ Mikuni based Carbs etc ) as available in the period

**FRAME**-Made by the same manufacturer/model as the engine. Leeway is allowed for a similar frame, different year. Additional bracing and modifications to frame geometry allowed. After-market parts of a type available or typical during the period will be permitted.

Mix & match of period chassis components (eg forks/wheels/brakes) permissible.

**ENGINES**-May be tuned in any way with the following exceptions; cannot include any major components of a type unavailable before the cut-off date. Fuel injection and ECU systems can only be of OEM type as originally fitted. Normal after-market electronic ignition systems permissible with no engine management capability beyond the original oem system. Quick shifters not permitted.

**CARBURETTORS**-May be BEA origin or non BEA origin, but must be of a type available in the period.

**BRAKES**-four-pot callipers and floating discs are permitted whether oem fitment, or fitted as an upgrade

**TYRES**-Treaded Tyres **No wets, slicks or cut slicks allowed.** Tyres must conform to ACU standing regulations for road racing club events. **The use of tyre warmers not permitted.**

### **There are 4 standard class categories**

52a. Standard Class Up to 750cc e.g. Hinckley Triumph 750 Daytona, 750 Trident, Trident Sprint, Ducati Monster 600/750 & any other period aircooled Ducati, Moto Guzzi 650/750 small-block, BMW K75.

52b. Standard Class Up to 1000cc e.g. Hinckley Triumph Trident Sprint, 900 Daytona and Trophy, Daytona 1000, Ducati Monster 900 & any other period aircooled Ducati, BMW K100 & K1.

52c. Standard Class Up to 1300cc eg. Hinckley Triumph 1200 Trophy and Daytona, BMW k1100, BMW R1100/RS, Moto Guzzi 1100 Sport.

52d. Supersports & Specials class to 1300cc

Supersports: – all “stock” liquid cooled Ducatis of period designated in this class (e.g. Ducati 748, 888, 916). (Others may be permitted at committee discretion) Specials :- Any machine with a BEA period based engine, oem or special. Free reign on chassis construction, cycle parts, brakes, wheels, fueling system ... components of which may be BEA origin or otherwise, but should be of a type as available in period

**27/ SOLO PRE 2000 PRODUCTION BASED BIKES (29 a,b,c).** Class Introduced ref AGM 11/24,

#### **SPECIFICATION**

Bikes must be derived from standard road bikes of the period, no GP or factory race bikes permitted, all to be based on street machines available to the public in the period.

There will be 3 classes for solo motorcycles of any country that could be purchased from dealers for use on the roads. The nominal cut off date of manufacture 31st December 1999. Bikes may be eligible if manufactured post 1999 provided there has been no significant changes to the chassis or engine used. (e.g. class 29a: Suzuki SV650 "curvy/carb" models permitted 1999-2002, but not later fuel injected "pointy"models")

**29a. SPORTS CLASS**-Machines : 2 stroke machines up to 350cc, 4 stroke multi to 400cc, Liquid cooled Twins to 650cc, air cooled twins to 800cc, singles unlimited.

**29b. SUPER SPORTS**-600: multi-cylinder to 600cc, twins to 750cc.

**29c. SUPERBIKE**-Multi to 750cc, triples to 960cc, twins to 1000cc.

**FRAME**-The frame must be either original with no tampering to the original frame number, or period-typical specials/after market type. Bracing of the frame is allowed of the type used within the period. After market frames such e.g. Harris, Spondon, self-built specials are allowed as long as they were available within the period.

**FORKS**-Any standard or after market available in the period allowed up to 43mm in size. No inverted types permitted unless shown to have been original factory fitment on the particular model pre 2000.

Regular or inverted type forks permitted provided of a type available in the period. Internals free of restriction.

**SWINGING ARMS**-After market swinging arms available in the period are allowed.

**REAR SUSPENSION**-Any original or after-market of the period are allowed.

**TYRES**-No wets, slicks or cut slicks allowed they must conform to current ACU Standing Regulations for road racing club events.

**BODYWORK**-Must be original, or of a type that was typical of the period.

**WHEELS**-All wheels to be of a type available in the period.

**ENGINES**-Any internal modifications are allowed, profile of the engine to look standard.

**CARBURETTORS**-Any carburettor available in the period are allowed.

Fuel Injection systems only original OEM system for the engine in question as fitted in the period

**APPEARANCE**-The appearance and style of the machine must be in period.

Bikes can be raced faired or UN-faired.

### **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 Technical Inspector will note any doubtful items. In the cases of flagrant or continued breach of the "Machine Specification" the matter will be reported to the BHRC Committee, who will take what action they deem necessary to prevent entry of such machine at future events.

***At inception date Nov 2024, this is a new exploratory class for BHRC. Details of above rules may be subject to revision at discretion of BHRC.***