



2019 2CV UK HYBRID Technical Regulations

Version 1 - 2019

1 SPORTING REGULATIONS - GENERAL

1.1 GENERAL:

- 1.1.1 This class is intended for European and multi class racing and it is NOT to be allowed to compete in Classic 2CV Racing Club Championship Races in the UK .

1.2 REFUELLING:

- a) Re-fuelling must be carried out using an MSA compliant system. For all UK Hybrid cars it is mandatory that an unmodified (save as to the length of the breather tube below) Classic 2CV Racing Club Limited supplied "Tuff Jug" model number TJ1 or its successor, clearly marked by the manufacturer (Fair Trails Enterprises or it's successors), modified filler neck and cap is the only system used. The breather tube inside the Tuff Jug shall be at least 60cm in length.
- The filler cap shall be securely in place at any time the car is on the circuit, failure to ensure this could result in the car being black flagged.
- There is strictly no decanting of fuel from one container to another at any time. Random inspections to ensure compliance will take place. A maximum of two tuff jugs may be used during a refuelling stop.
- Tuff Jugs shall have the car number that they are used with clearly identified on both sides of the jug in numerals not less than 100mm high.
- b) Refuelling may not be used in such a way as to increase the fuel flow rate over that engendered by gravity and non-assisted airflow. The Organisers reserve the right to instruct the team to modify their refuelling procedures and failure to comply with such instruction may lead to exclusion from the event.
- c) The team member who actually refuels the car during a pit stop must wear fireproof overalls, gloves, balaclava and goggles. In addition a fire extinguisher must be adjacent to another team member also dressed in fireproof overalls, gloves and balaclava during the refuelling process in case it is needed to be used.
- d) All competitors should note that smoking is not permitted in the garages, pit lane or on the pit wall at any time during the event. This rule also applies to electronic cigarettes. All team members and guests must be made aware of this restriction and failure to comply will lead to immediate exclusion for the car concerned.
- e) Each team must provide a suitable foam fire extinguisher.

2.1 Introduction:

Unless specified here, all Technical Regulations stated in the 2018, and when published 2019, Classic 2CV Racing Club CHAMPIONSHIP SPORTING AND TECHNICAL REGULATIONS apply absolutely.

2.2 General Description:

These regulations are designed to allow for European Endurance racing a UK Hybrid car, which is essentially a Classic 2CV Racing Club Limited 'Club' Class car fitted with a twin cylinder motorcycle engine from a BMW R1100RS, R1100RT, R1100R or R1100GS donor bike (R1100S is not allowed) and where front brakes and gearbox are free.

All Technical Regulations that apply to Club class cars also apply to UK Hybrid class cars unless they are explicitly over ruled in these regulations.

2.3 Engine:

2.3.1 General engine regulations

2.3.1.1 The engine shall be a standard 2 cylinder horizontally opposed air cooled BMW unit taken from a BMW R1100RS, R1100RT, R1100R or R1100GS donor bike (R1100S is not allowed). The following components are assumed to be part of the engine for the purpose of these regulations:

- Crankcase, barrels and cylinder head assembly and all engine covers attached in the standard bike.
- Alternator
- Throttle bodies and injectors
- ECU and all sensors (timing, air temperature, throttle position, oil temperature, lambda and CO potentiometer)
- Motronic and starter relays
- Ignition coil

2.3.1.2 Absolutely no engine modifications are allowed except as follows.

2.3.1.3 Flywheel

The lighter (later) type 2CV flywheel shall be used in conjunction with a diaphragm type clutch. It is permissible to lighten a standard flywheel by machining. The 5 flywheel mounting holes must be carefully machined to suit M11 flywheel bolts and the PCD of the bolt holes in the end of the crankshaft. An adaptor boss will be required to attach the 2CV flywheel to the BMW crankshaft, see Illustration A.

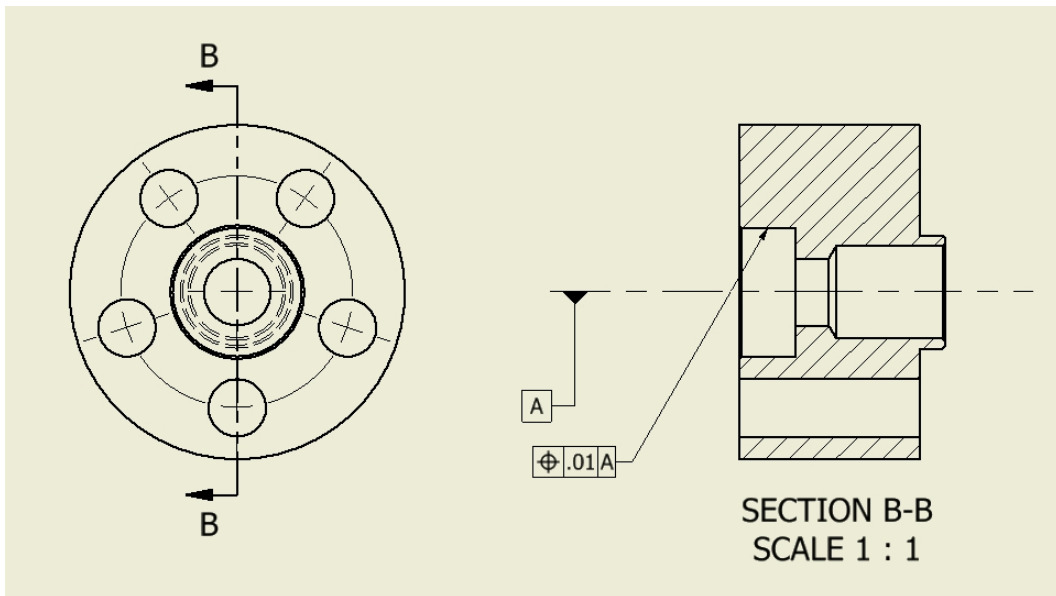


Illustration A

2.3.1.4 **Engine Inspection Seal**

It is compulsory that the crank case halves have a bolt with a hole drilled across its diameter fitted, capable of having a scrutineers wire seal fitted.

2.3.2 **Prohibited Modifications**

With the exception of the items detailed in 2.3.1 it is expressly forbidden to machine, mill, grind, polish, weld, modify or otherwise adapt engine parts to achieve the stated parameters, or for any other reason, including surface finishing.

It is expressly forbidden to fit parts from BMW R1100S engines irrespective of whether or not they fit without modification.

2.3.3 **Location and mounting**

2.3.3.1 The engine shall be located in front of the gearbox

2.3.3.2 The method of mounting the engine is free.

2.3.3.3 [It is permissible to modify the foremost chassis crossmember to aid engine installation.](#)

2.3.4 **Induction Systems**

2.3.4.1 Standard throttle bodies and injectors from a BMW R1100 series bike must be used. It is not permitted to modify either the injectors or throttle bodies in any way.

2.3.4.2 Throttle bodies must be connected to the engine using a modified inlet manifold.

2.3.4.3 The standard BMW pressure regulator must be used. It is permitted to remove the original plastic pipes and replace them with rubber fuel hose to SAE J30 R9 specification.

2.3.4.4 An air restrictor to class specification described in Illustration B must be installed on the inlet side of each throttle body. The size of the restrictor has increased from 30mm as in 2018 regulations to 34.9mm.

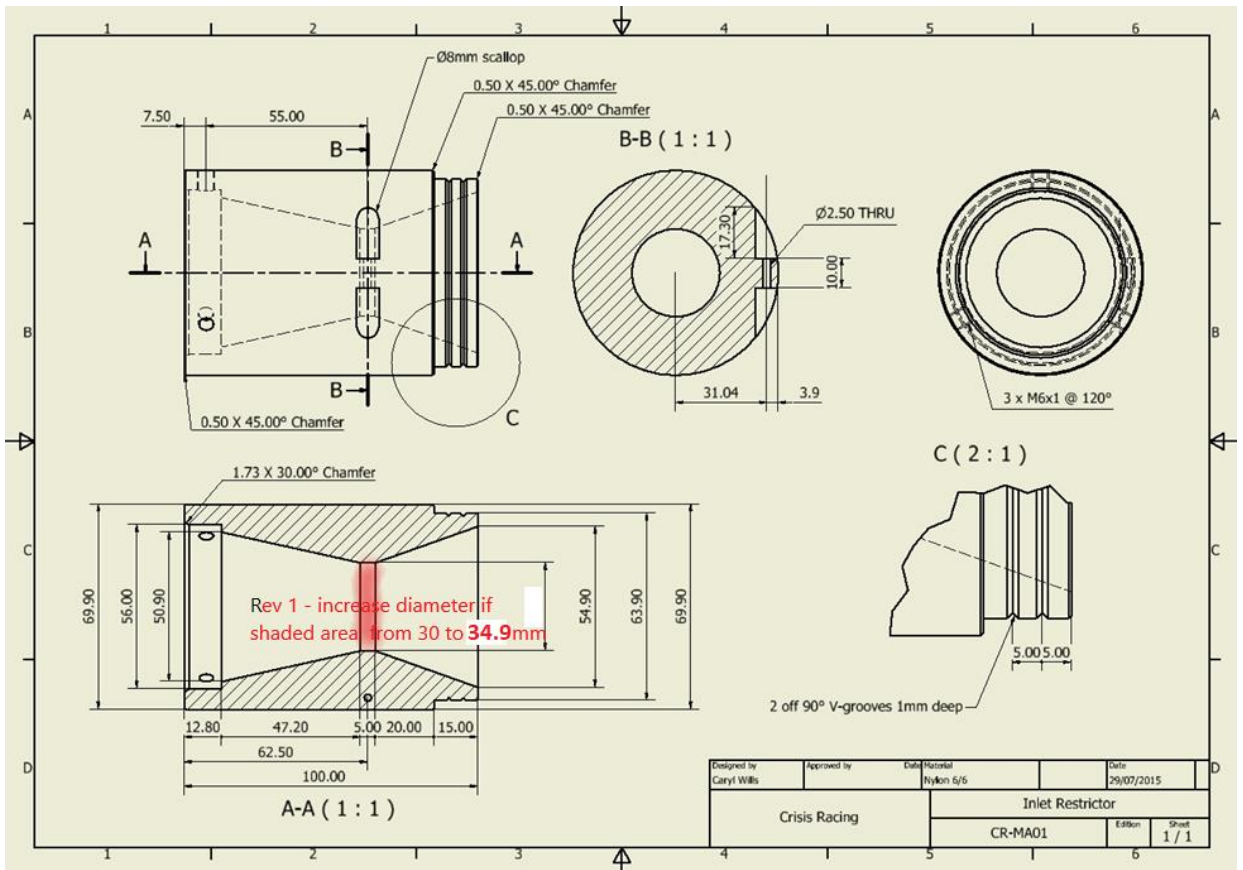


Illustration B

2.3.4.5

Both throttle bodies must be drilled as shown in Illustration C to allow the restrictor to be wired and sealed to the throttle body.

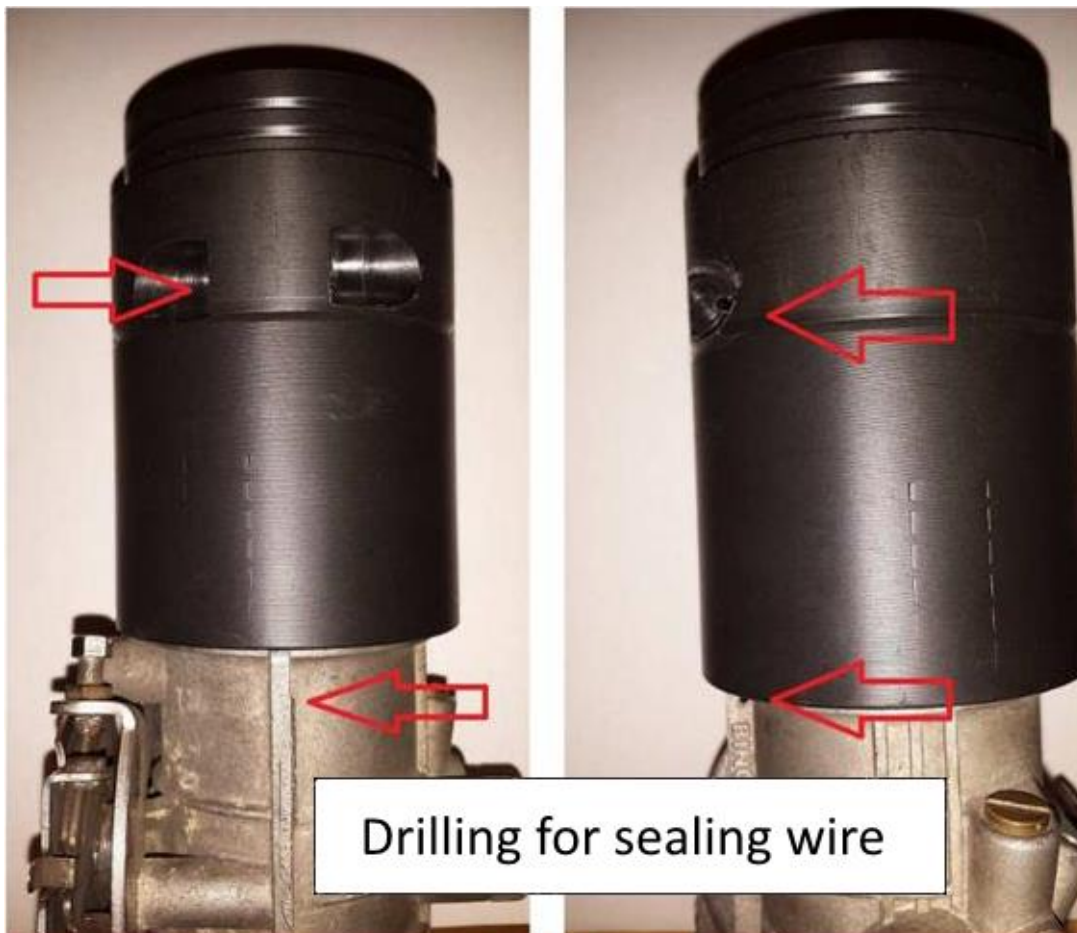


Illustration C

2.3.5

Exhaust Systems

2.3.5.1

An exhaust system comprising left and right hand exhaust headers, 2 into 1 collector and swan neck must be fitted.

2.3.5.2

Silencers are free.

2.3.5.3

The exhaust gases shall be expelled behind the mid-point of the wheelbase of the vehicle.

2.3.5.4

The exhaust system shall comply with MSA Regulation **J5.16**.

2.3.6

Ignition Systems

2.3.6.1

The BMW ignition system must be retained. No modifications to the standard BMW ECU are permitted.

2.3.6.2

The Eligibility Scrutineer retains the right to exchange the ECU unit for another held by him during any event.

2.3.6.3

Any HT lead is permitted.

2.3.6.4

Any 14mm commercially available spark plug is permitted.

2.3.7

Fuel Delivery Systems

2.3.7.1

It is permissible to install in-line fuel filters and water traps.

2.3.7.2

It is permissible to replace the standard fuel line with an alternative type or material of the same internal diameter.

2.3.7.3

Low pressure pump, high pressure pump and swirl pot are all free.

2.4

Transmissions:

Free to include the means of operating the gearbox and to allow openings into the bulkhead as required to safely locate the transmission

2.5 Brakes:

Front Brakes are free and can be located inboard or outboard .

2.6 Wheels and Tyres

2.6.1 Steel and alloy wheels 14" or 15" are permitted,

2.6.2 Tyres will have a maximum width of 175mm

2.6.3 Suitable construction wheel adaptors to convert from 3 stud to 4 or 5 stud are permitted

2.6.4 Cars may only use Road Tyres, which are "E" marked compliant with MSA Regulation L. All tyres must be listed on MSA Approved List 1A or have been listed on MSA Approved List 1A tyres within the past 3 years.

2.6.5 The use of tyre heating/heat retention devices is prohibited, as is the use of compound softening fluids.

2.7 Weight:

2.7.1 Cars shall have a minimum weight of **615kg** including a full tank of fuel and exclusive of driver at all times during and at completion of practice and racing.

2.8 Fuel Tank / Fuel:

2.8.1 Types

2.8.1.1 The fuel tank shall be a Citroen 2CV6 standard production plastic item with a maximum capacity of 25 litres.

2.8.1.2 It is permissible to fit a vent to the fuel filler neck to enable compliance with MSA Regulation **K14.1.2**.

2.8.1.3 Alternative sender units or modifications to the tank are not permitted.

2.8.1.4 A club supplied endurance filling neck and cap must be fitted. The cap shall be fitted to the body by a flexible tether.

2.8.2 Locations

The fuel tank shall be located in the manufacturer's intended position between the chassis legs at the rear of the vehicle.

2.8.3 Fuel

Standard pump fuel shall be used as defined as petrol in the **Section B**, Nomenclature and Definitions of the MSA Yearbook.

2.8.4 Filler Cap

A filler cap shall be fitted that complies with Section **K14.1.2**. of the MSA Yearbook.