

2017 CITROEN C1 CHALLENGE
SPORTING & TECHNICAL REGULATIONS



Organised by the British Automobile Racing Club
In association with C1 Racing Club

Thruxton Circuit, Andover, Hampshire, SP11 8PN

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SPORTING REGULATIONS

1 General Regulations

1.1 Title & Jurisdiction

The Absolute Alignment C1 Challenge is organised and administered by the British Automobile Racing Club (BARC) and promoted by them, in accordance with the General Regulations of the Royal Automobile Club Motor Sports Association (incorporating the provisions of the International Sporting Code of the FIA) and these Championship Regulations.

MSA Series Permit No.: RS2017 / t.b.c.
Race Status: Clubman
MSA Championship Grade: Grade C

1.2 Officials

1.2.1 Co-ordinator: David Wheadon

1.2.2 Licensed Eligibility Scrutineer: Keith Auld

1.2.3 Series Stewards:
Bill Coombs
Dennis Carter
Dale Wells
Guy Woodward

Any three of the Series Stewards may sit to make a decision. In accordance with (G) 2.7, Series Stewards may only adjudicate on any disputes, irregularities or appeals arising from the approved Series regulations. Under (G) 2.7.1, Series Stewards are also empowered to consider any request from the Series co-ordinator to penalise any Competitor for any breach of Series regulations after holding a formal hearing to impose a penalty in accordance with C.2.1.1 (subject to the rights of appeal provided for in Section C). Under (W) 2.2.1, the Series Stewards can only adjudicate upon any disputes, irregularities or appeals arising from the approved Series Regulations. They are also empowered to consider any request from the Series Co-ordinator to penalise any Competitor for breach of Series Regulations and after holding a formal hearing, to impose a penalty in accordance with C.2.1, subject to the rights of appeal to the MSC provided in Section C.

1.2.4 Series Clerk of the Course: N / A

1.2.5 Series Principle: Philip Myatt

1.3 Competitor Eligibility

1.3.1 Entrants must:

- a) be current members of the BARC and
- b) be Registered for the Series and
- c) be in possession of a valid MSA Entrants Licences.

1.3.2 Drivers and Entrant/Drivers must:

- a) be current racing members of the BARC and
- b) be Registered for the Series and
- c) be in possession of valid Competition (Racing) National B status Licence, as a minimum or
- d) a professional driver, in possession of a valid Licence (featuring an E.U. flag) and medical, issued by the ASN of a member country of the European Union, or comparable country. ((H)26.2.1, applies).

If participation in the Series requires absence from education a driver, in full time school education is required to have the approval of their head teacher and a letter stating such approval from their school in order to fulfil registration for the Series. A driver shall not take

time out of their education to participate in motor sport without the prior written approval of their education establishment.

1.3.3 All necessary documentation must be presented for checking at all rounds when signing-on. This will include both the competition licence and club membership card.

1.4 **Registration**

1.4.1 All competitors must register for the Series by returning the Registration Form with the Registration Fee to the Co-ordinator prior to the closing date for entries for the first round being entered.

1.4.2 The Registration Fee is £50 and should be paid direct to the C1 Racing Club

1.4.3 Registration numbers issued will be the permanent Competition numbers for the Series season.

1.5 **Series Events**

The Series is scheduled to be contested over four Events as follows:

Events	Date	Circuit	Organising Club (Centre)
1	6/7 May	Snetterton 300	BARC
2	22/23 July	Pembrey	BARC
3	9/10 September	Cadwell Park	BARC
4	21/22 October	Spa	2CVRT

With further invitation events planned.

1.6 **Scoring**

1.6.1 Points will not be awarded to Competitors as this is a Series and not a Championship.

1.6.2 Competitors not registered for the Series may be permitted on an individual round basis and:

- will be deemed "Guest Competitors"
- will be allowed to take their place on the podium and qualify for any Event awards
- must comply with the eligibility criteria as prescribed in article 1.3 above, with the exception of 1.3.1 (a) & b)) and 1.3.2 (a) & b)) as appropriate.
- Must pay a 'single race membership' fee to the C1 Series Organisers.

1.7 **Awards**

1.7.1 All awards are to be provided by the Organisers.

Per Event: A garland will be presented to the winner of each race.

Series: A trophy will be awarded to the overall Series winner.

1.7.2 Presentations

Awards will be presented at the end of each Event and/or at the end of the Series at the designated presentation ceremony. Attendance at any such ceremony is mandatory and failure to attend may result in the loss of all awards.

1.7.3 Entertainment Tax Liability

Prize money and Bonuses shall be posted to the Entrants within thirty days of the results being declared final after each Event. In accordance with current government legislation, the BARC is legally obliged to withhold tax at the basic rate on all payments to non-UK resident sportsmen/women and account to HMRC using form FEU1, the quarterly return of payments made to non-resident entertainers and sportsmen/women. That is, those persons who do not have a normal permanent residence in the UK and the UK does not include the Isle of Man, Channel Islands or Eire. This means that, as the organiser, the BARC is required to deduct tax at the current rate applicable from any such payments they may make to non-UK residents. Under certain circumstances, it may be possible for competitors to enter into an agreement with the Inland Revenue to limit the tax withheld. Any application for such an arrangement must be made in writing and not later than 30 days before the payment is due.

For further information contact:

HMRC Personal Tax International, Foreign Entertainers Unit, St John's House, Merton Road, Liverpool L75 1BB, Tel: 01514 726488, Fax: 01514 726483.

- 1.7.4 Title to all Trophies
If Provisional Results or Series Tables are revised after any presentations and these revisions affect the distribution of awards the Competitors concerned must return them to the organisers in good condition within 7 days.

2 SERIES EVENT MEETINGS & RACE PROCEDURES

2.1 Entries

- 2.1.1 Competitors are responsible for sending in correct and complete entries with the correct entry fee prior to the closing date for entries before each Event.
- 2.1.2 Incorrect or incomplete entries (Including driver to be nominated entries) are to be held in abeyance until they are complete and correct and the date of receipt for acceptance of entry purposes shall be the date on which the Meeting Organiser receives the missing or corrected information or fee.
- 2.1.3 Any withdrawal of Entry or Driver/Car changes made after acceptance of any entry must be notified to the Meeting Organisers in writing. D25.1.13 applies.
- 2.1.4 The Entry Fee for each event shall be specified in the SRs and on the entry form.
- 2.1.5 Reserves will be listed in the Final List of Entries published with Final Instructions or in a Bulletin.

2.2 Briefings

Organisers should notify Competitors of the times and locations for all briefings in the Final Instructions for the meetings. Competitors must attend all briefings.

2.3 Qualification Practice

- 2.3.1 Should any Practice session be disrupted the Clerk of the Course shall not be obliged to resume or re-run the session, the decision of the Clerk of the Course shall be final.
- 2.3.2 Each driver shall complete a minimum of 3 laps in the car to be raced and in the correct session, in order to qualify (MSA Regulations Q4.5).

2.4 Races

Should any race be disrupted the Clerk of the Course shall not be obliged to resume or re-run the race ((Q) 5.4) in addition article 1.6.4 above applies.

2.5 Starts

- 2.5.1 All cars will be released to form up on the grid prior to the start in formation as specified on the grid sheet.
- 2.5.2 The start will be via a Standing start. The countdown procedure and audible warning sequence prior to the start of the race shall be:-

	Signal	Instruction
1.	1 minute	Start engines and clear the grid.
2.	30 Seconds	Be prepared for start of Green Flag Lap
3.	Green Flag	Complete one lap of the circuit and reform into grid positions
4.	5 Seconds	The grid is complete
5.	The red lights will be switched on five seconds after the 5 second board is withdrawn and will be extinguished between 2 and 7 seconds later to indicate the start of the	

	race.
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- 2.5.3 Any car removed from the grid or driven into the pits on the Green Flag lap shall be held in the pit lane and may start the race after the last car to take the start from the grid has passed the start-line or pit lane exit, whichever is later.
- 2.5.4 Any driver unable to start the Green Flag/Pace lap or start is required to indicate their situation as per MSA Regulation Q12.13.2. In addition any driver unable to maintain their grid position on the Green Flag Lap, to the extent that all other cars are ahead of them, may complete the Green Flag lap but must remain at the rear of the last row of the grid but ahead of any cars to be started with a time delay.
- 2.5.5 In the event of any starting lights failure the Starter will revert to use of the National Flag once all competitors have been advised of the fact
- 2.5.6 The Organisers reserve the right to amend this start procedure via a bulletin issued to all competitors. This may involve changing the method of starting and/or the countdown procedure leading up to the start signal being given.
- 2.6 **Session Red Flag**
- 2.6.1 Should the need arise to stop any race or practice, red lights will be switched on at the start line and red flags will be displayed at the start line and at all Marshals Signalling Points around the Circuit.
- This is the signal for all drivers to cease circulating at racing speeds, to slow to a safe and reasonable pace and to return to the pit lane, during practice, and to the starting grid area, during a race, unless otherwise directed by officials.
- 2.6.2 Cars may not enter the Pits unless directed to do so or repairs are necessary. Work on cars already in the Pits must cease when a race is stopped and may only continue under the control of a Scrutineer. Cars in the Pits may not re-join the grid.
- 2.6.3 All Competitors who are able to take part in any restarted race may do so in accordance with Q5.4 and Q5.5
- 2.7 **Pits, Paddock & Pit lane Safety**
- 2.7.1 Pits & Paddock: Competitors must ensure that the MSA, Circuit Management and Organising Club Safety Regulations are complied with at all times. In addition any paddock plan issued by the Organisers must be complied with and the minimum amount of space should be used when setting up.
- 2.7.2 Pit lane: The outer lane or lanes are to be kept unobstructed to allow safe passage of cars at all times. The onus shall be on all Drivers to take all due care and respect the pit lane speed limits. No-one under the age of 16 is permitted access to the pit lane unless they are the holder of an MSA Junior Race licence
- 2.7.3 Refuelling: May only be carried out in accordance with the MSA General Regulations, the Organising Club Regulations, Circuit Management Regulations and the SRs or Final Instructions issued for each Circuit/Meeting.
- 2.7.4 Speed Limit Pit Lane Speed Limit will be 60 kph.
- 2.8 **Race Finishes**
After taking the Chequered Flag drivers are required to:
- I. progressively and safely slow down
 - II. remain behind any competitors ahead of them,
 - III. return to the Pit Lane Entrance/Paddock Entrance as instructed,

- IV. comply with any directions given by Marshals or Officials
- V. keep their helmets on and harnesses done up while on the circuit or in the pit lane
- VI. place their car into the Parc Fermé where it must remain until released by the Series Eligibility Scrutineer or his deputy
- VII. Attend any podium presentation that may be required

2.9 **Results**

All Practice Timesheets, Grids, Race Results are to be deemed Provisional until all vehicles are released by Scrutineers after Post Practice/Race Scrutineering and/or after completion of any Judicial or Technical Procedures. (MSA regulation D26.3)

2.10 **Timing Modules**

It is the Competitors responsibility to ensure that a working transponder is fitted to the vehicle in accordance with (Q) 12.2.1. No electronic equipment may be placed within five metres of any official timing line and any breach of this may result in the confiscation of the equipment concerned.

2.11 **Qualification Races**

If any event is oversubscribed the Organising Club may at their discretion run Qualification Races details of which will be published in Final Instructions for the event.

2.12 **Operation of Safety Car**

The Safety Car will be brought into operation and run in accordance with Section Q, Appendix 2 of the MSA General Regulations.

2.13 **On-board Cameras**

2.13.1 Cameras may be fitted to vehicles provided that the camera fitment is approved by the Scrutineer and that any footage obtained is not for commercial use. The Clerk of the Course, Stewards and C1 Series Organisers may make use of any such footage in reaching their decisions on any judicial matters or for any other purpose.

2.13.2 The C1 Series Organisers reserve the right to supply and fit cameras to competitor's cars. The footage will belong to the C1 Series Organisers and may be made available to the competitor at the C1 Series Organisers sole discretion.

3 **SPECIFIC SERIES REGULATIONS:**

3.1 Where it is planned to hold two Series races, only one qualifying session will be scheduled of thirty minutes. The fastest time set in qualifying will set the grid for the first race and the result of the first race will set the grid for the second race with and non-classified competitors starting from the back of the grid in reverse order of retirement.

3.2 The standard minimum scheduled race distance shall be 120 minutes whenever practicable but should any race distance be reduced at the discretion of the Clerk of the Course or Stewards of the Meeting, it shall still count as a full round.

3.3 A driver may only race the car in which he/she set a Qualifying time and no replacement cars are permitted.

3.4 These races are deemed to be "endurance races" and hence in compliance with GR Q6 with the exception that:

- I. For 2 hour and 4 hour duration events no more than four drivers may share a car.
- II. Each car must make at least three pit stops during the race during the pit stop window defined in the Special Regulations for each race.

3.5 The use of tyre heating/heat retention devices, tyre treatments and compounds is prohibited.

- 3.6 Where entries received exceed the number permitted to start a race, the Organisers will accept a maximum number of entries equal to that number. Any further entries will be ordered as nominated reserves based upon date of receipt of entry. Such reserves are to be nominated on the final list of entries published with Final Instructions or in an Event Bulletin. All reserves will practice and replace withdrawn or retired entries in reserve number order irrespective of class. If a reserve is given grid places prior to issue of the first Grid Sheets for an event the times set in Practice shall determine their grid position. If a reserve is given a place after publication of the grid sheet and prior to cars being collected in the official assembly area then they will be placed at the rear of the grid and will be started without any time delay. Otherwise, they will be held in the pit-lane and be released to start the race after the last car to start the green flag lap or last car to take the start has passed the start line or pit-lane exit, whichever is the later. Such approval to start must be obtained from the Clerk of the Course.

4 PENALTIES:

All penalties will be in accordance with Section C of the current MSA Yearbook and these Regulations.

4.1 **Infringements of Technical Regulations:**

4.1.1 Arising from post practice Scrutineering or Judicial Action:
Minimum Penalty: The provisions of MSA Regulations: C3.3.

4.1.2 Arising from post-race Scrutineering or Judicial Action:
Minimum Penalty: The provisions of MSA Regulations: C3.5.1 (a) and (b).

For infringements deemed to be of a more serious nature the Clerk of the Course may invoke the provisions of Regulation C3.5.1 (c). However if the Clerk of the Course believes that there is some mitigation surrounding the infringement then C3.5.1 (c) need not be implemented.

4.2 All infringements of non-technical MSA Regulations and the Sporting Regulations will be dealt with in accordance with these Series Regulations and the General Regulations of the MSA

4.3 **Additional specific Series penalties:**

4.3.1 Any Competitor adjudged to have made a false start or breached any part of the start procedure will be penalised by means of a thirty second penalty being added to his total race time.

4.3.2 Breaches of 2.7.5 will usually be dealt with by a fine of up to £10 per k.p.h. above the limit in qualifying and by means of a "drive through" penalty during races.

4.3.3 Any Competitor excluded from the results of an Event will not be allowed to count the score as part of any dropped scores

4.3.4 Any Competitor may be called before the Series Stewards who at their discretion may take further action against the Competitor. This may include, but is not limited to, the loss of Series points, a fine to a maximum of £10,000 or exclusion from part or all of the Series.

4.3.5 The Clerk of the Course may impose a "Stop / Go" or "Drive through" penalty for a breach of regulations, in accordance with Q 12.6.

4.3.6 Any vehicle not carrying the mandatory Series decals will be subject to a fine of £100 for the first infringement and then £500 for any subsequent infringement.

TECHNICAL REGULATIONS

5 Introduction

The following Technical Regulations are set out in accordance with the MSA specified format and it should be clearly understood that if the following texts do not clearly specify that you can do it you should work on the principle that you cannot. For the benefit of all competitors this approach will be strictly enforced. For the purposes of these regulations, modification means any change in the design, material, shape, dimension and / or surface finish of any component except for basic manufacturing processes, normal wear and published service or repair procedures.

Where it is deemed appropriate by the C1 Series Organisers, financial penalties may be applied to any transgressions of these rules. Serious or persistent transgression could result in a competitor not been allowed to enter any future races.

The C1 Series Organisers reserve the right to accept or decline entries without stated justification.

6 General Description

The following regulations are for competitors participating in standard production pre 30 April 2014 Citroen C1 998cc 3 door saloon vehicles in the 2017 Absolute Alignment C1 Challenge race series.

The class was conceived as a low cost form of motorsport. It is intended as a racing formula for the continued use and enjoyment of the C1 where driving skills and car control are of paramount importance and where technical development is strictly prohibited.

7 Safety Requirements

7.1 The following Articles of MSA Appendix K Safety Criteria Regulations will apply: K1, K1.2.1, K1.3.1 - 4, K5, K6, K8, K9, K10, K13 & K14.

7.2 A plumbed in fire extinguisher that complies with MSA Regulations is mandatory (Q19.14.7).(4 litre minimum recommended.)

7.3 For cars racing before Jan1st 2017 a steel roll cage complying with the MSA Yearbook must be installed. The roll cage must be fitted with door bars to both sides of the car at hip level. For cars first raced after January 1st 2017 the roll cage must be a Safety Devices standard bolt in cage in one of the following 3 configurations:

Configuration 1

SD Part Number	Description
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RBC052 3SSU	Front roll cage with windscreen reinforcement bar for unique single door bars, no roof cross.
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RBC052 5SSU	Rear roll cage, single fixed diagonal for single door bars, no roof cross.
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RBC052 DSUN	Unique single door bar, near side (left hand side).
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RBC052 DSUO	Unique single door bar, off side (right hand side).
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RBC052 SB	Rear strut brace/harness mount.
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Configuration 2

SD Part Number	Description
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RBC052 3SXU	Front roll cage with windscreen reinforcement bar for unique single door bars, with roof cross diagonals.
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RBC052 5XSU	Rear roll cage, single fixed diagonal for single door bars and roof cross.
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RBC052 DSUN	Unique single door bar, near side (left hand side).
RBC052 DSUO	Unique single door bar, off side (right hand side).
RBC052 SB	Rear strut brace/harness mount.

Configuration 3

SD Part Number	Description
RBC052 3SXX	Front roll cage with windscreen reinforcement bar for cross door bars and roof cross.
RBC052 5SXU	Rear roll cage, cross diagonal, lower backstays, for roof cross and cross door bars.
RBC052 DXUN	Cross door bar, near side (left hand side).
RBC052 DXUO	Cross door bar, off side (right hand side).
RBC052 SB	Rear strut brace/harness mount.

Padding dangerous points of the roll-bar with MSA compliant padding is recommended in order to prevent injury.

- 7.4 Rear harness straps are to be mounted on a roll cage harness bar to conform to MSA and seat harness manufacturers regulations.
- 7.5 FiA homologated seat belts are mandatory (Q19.14.2). Particular attention should be given to seat belt angles and anchorage. See FIA 253-42.
- 7.6 It is mandatory to use a harness with a minimum of 5 fixing points, where at least one fixing point is designed to prevent the driver from sliding forward and under the lap straps. Harnesses must be suitable for use with a Frontal Head Restraint (FHR) device and be properly installed in the car in accordance with the manufacturer's installation instructions. Installation guidance can also be found in the FiA publication 'Guide for the use of HANS® in international motor sport'.

8 General Technical Requirements and Exceptions

The following Technical Regulations are set out in accordance with the MSA specified format and it should be clearly understood that if the following texts do not clearly specify that a modification can be made to the car, then that modification is not permitted. The fact that some modifications are mentioned as prohibited does not imply that others are allowed. If any doubt exists about the legality or acceptability of any modification, then please request clarification from the Eligibility Scrutineer or the C1 Series Organisers **prior** to any work being undertaken.

8.1 Definition of terms

- 8.1.1 **STANDARD:** The word 'standard' used within these technical regulations as a description of components is to be interpreted as per 'Standard Part' defined in Section B – Nomenclature & definitions in the MSA Blue Book. Checking will be by comparison to spare parts supplied by the manufacturer's official agent, comparison to standard parts or by any other means necessary to ensure compliance.
Standard Part: *Is a part, the specification, features, location and method of operation of a part are as provided when new by the motor manufacturer for the model and date of car as shown on the entry form.*
- 8.1.2 **STANDARD PATTERN:** The phrase 'standard pattern' used within these technical regulations as a description of components is to be interpreted as per 'Standard Pattern Part' defined in Section B – Nomenclature & definitions in the MSA Blue Book. Checking will be by comparison to standard pattern part or any other means necessary to ensure compliance.
Standard Pattern Part: *A replacement part that has a similar form shape and features as the standard part and is made using similar materials and manufacturing processes e.g. a standard part*

manufactured by a non-original equipment supplier that is fully interchangeable with the standard part.

- 8.2 The car must be of sound construction, in good mechanical condition and well maintained in accordance with MSA General Technical Regulations (Sections J & Q) as appropriate. It must have a current MOT certificate. It must be presented in good order. All inspection areas e.g. engine, gearbox, suspension components, etc. must be in a clean condition.
- 8.3 All cars must have a championship log book and this must be presented at Scrutineering at every race meeting. These will be filled in and updated throughout the year. Defects need to be rectified on a timescale to be agreed with the Scrutineer and/or the C1 Series Organisers.
- 8.4 The C1 Series Organisers reserve the right to require any competitor to remove any part, or assembly of parts, from the car to be compared and checked against a standard or pattern part or assembly of parts. The C1 Series Organisers will, where appropriate, supply a replacement permitted part or assembly of parts which must be used until the Organisers determine the legality of the parts that have been removed. Any non-compliance will be dealt with under normal MSA technical rules for infringement. Additional fines to those applied by the MSA may be applied by the organisers for infringements. The competitor will be liable for all costs relating to the exchange parts.
- 8.5 The C1 Series Organisers reserve the right to exchange any part or assembly of parts on the car for standard ones at any time during a race meeting on any competing car.

9 Chassis

- 9.1 A standard Citroen C1 3 door vehicle must be used. LHD or RHD is permitted.
- 9.2 No part of the monocoque shell shall be removed, modified or added to. For the avoidance of doubt this includes any welding to stiffen or otherwise modify the shell.

10 Bodywork

10.1 General

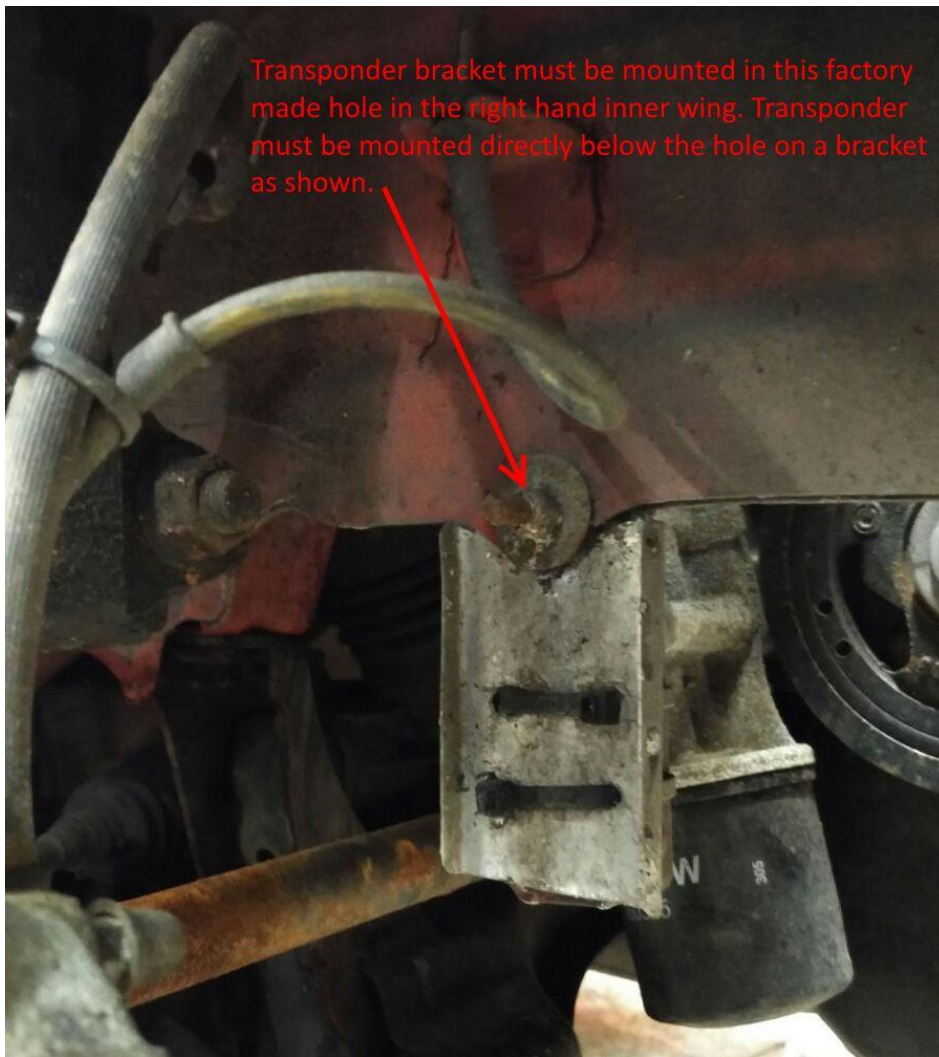
- 10.1.1 It shall be the intention, at all times, to preserve a standard external appearance to the cars.
- 10.1.2 All doors must be fitted with original lock fittings and operating mechanisms, and must be kept unlocked during any practice or competition. If the vehicle is fitted with central locking, the central locking fuse (Fuse F2 – second one down on RHS of instrument housing) must be removed.

10.2 Interior

- 10.2.1 No part of the interior which is an integral part of the monocoque shell may be removed, modified or added to except the drilling of 12 x 25mm holes in the sills to accommodate the welded roll cage feet.
- 10.2.2 The cups spot welded to the top of the suspension towers must be removed to accommodate the roll cage backstay feet.
- 10.2.3 The front bulkhead must comply with the requirements of the MSA Yearbook. Two holes may be drilled to allow the cable pulls to pass through. Two holes may be drilled to allow the battery to master switch cables to pass through. These 4 holes must be fitted with grommets and ensure the fire protection integrity of the bulkhead. A further hole may be drilled to accommodate the fire extinguisher pipe.
- 10.2.4 Interior trim, fittings, courtesy light and passenger seats may be removed except as specified below. The dashboard must remain fitted with the radio, all heater controls, lights and switches must

remain fully operational as intended by the manufacturer. A close fitting slot cut-out in the dashboard is permitted to facilitate the fitting of the roll cage. The centre console and handbrake surround must also be fitted. The internal door trims must be fitted but may be modified to facilitate clearance on the roll cage door bars.

- 10.2.5 The driver's seat must be fitted in the manufacturers intended position using the original seat fixing points.
- 10.2.6 Adjustable seat rails may be fitted. They must comply with MSA regulation K.2.2.1.
- 10.2.7 The original pedal box with original pedals must be fitted in its original position, using the standard mountings. It is permissible to add extension plates to the pedals. The maximum size of the pedal extensions is 120mm high x 80mm wide x 4mm thick.
- 10.2.8 An aluminium floor plate of maximum dimensions 650mm x 500mm x 3mm may be installed to the driver's side foot well. Ballast must not be fitted underneath this plate.
- 10.2.9 If a rev counter is not fitted as standard equipment, a standard Citroen C1, Peugeot 107 or Toyota Aygo rev counter may be fitted.
- 10.2.10 An Aim Solo GPS lap timer (CLSolo-K1) may be fitted. The fitting of any other additional instrumentation, data loggers, or switches and wiring is not permitted including battery powered or removable devices.
- 10.3 **Exterior**
- 10.3.1 No panel may be cut, drilled or in any other way modified other than those detailed in these regulations.
- 10.3.2 3 rear view mirrors must be fitted as a minimum (1 interior and 2 exterior). A wide angle interior mirror is recommended. External mirrors must all be standard unmodified C1 mirror assemblies fitted in the manufacturers intended position.
- 10.3.3 All mirrors must provide a view to the rear of the car and must not be adjusted to provide an aerodynamic advantage.
- 10.3.4 All elements of the standard front and rear bumper assemblies must be present. The front bumper may have a slot cut into it on each side to facilitate the fitting of the optional spot lights detailed below in 14.2.2. It may also have a slot cut into it on each side to facilitate fitting wire tow straps under MSA regulation Q. 19.1.3(b).
- 10.3.5 The bonnet must be secured by the standard catch and optionally 2 supplementary locking pins or straps conforming to MSA regulation Q.19.2.6.
- 10.3.6 The windscreen must be of HPR laminated glass.
- 10.3.7 The standard toughened glass side and rear windows must be retained.
- 10.3.8 FIA approved window film must be fitted to the inside of all side and rear windows.
- 10.3.9 The standard window winding mechanism (electric or manual) must be retained and must be fully operational.
- 10.3.10 All body panels must be standard or standard pattern parts.
- 10.3.11 The mandatory TSL lap timing transponder must be fitted to the front inner wing in the position shown below:



It is recommended that the +ve feed to the transponder is taken from the blue wire from the ignition switch.

- 10.3.12 Extra fasteners and strengthening plates (maximum size 1mm thick x 30mm x 80mm) are allowed to be fitted, one to each side, to the outside of the junction between the front wings and the front bumper.
- 10.3.13 A mandatory guard supplied by the C1 Series Organisers must be fitted to the underside of the floor pan to protect the brake and fuel pipes as they exit the engine bay.
- 10.4 **Silhouette**
- 10.4.1 The original silhouette must be maintained, except the variation caused by the fitment of the C1 Series Organisers approved front driving lights (see 14.2.2) and/or the fitting of wire towing straps in accordance with MSA regulation Q.19.1.3(b).
- 10.5 **Ground Clearance**
- 10.5.1 Ground clearance must comply with the requirements of the MSA Yearbook. For the purposes of this regulation bottom front strut brace and exhaust are considered to be part of the car and are subject to the same ground clearance rules.
- 10.5.2 The minimum height of the car will be measured without driver from the ground to the highest part of the front and rear wheel arches and must conform to the minimum measurements in the following table:

Suspension type	Front height	Rear height
Gaz Adjustable Shock Absorbers	570mm	590mm
Bilstein B12 Sport Kit	560mm	580mm
Apex lowering springs	550mm	580mm

11 Engine

11.1 General engine regulations

The engine must be a standard 3 cylinder Citroen, Peugeot or Toyota unit, engine type code 1KR-FE, not exceeding 998cc. No engine modifications are allowed whatsoever. The fitting of standard pattern parts is not allowed unless expressly allowed in the following regulations.

11.2 Camshaft

No modifications to the standard camshaft are allowed whatsoever.

11.3 Crankshaft

No modifications to the standard crankshaft are allowed whatsoever.

11.4 Flywheel

No modifications to the standard flywheel are allowed whatsoever.

11.5 Clutch

The standard or standard pattern Citroen clutch and pressure plate must be used.

11.6 Cylinder Dimensions

No modifications to the standard cylinder block are allowed whatsoever.

11.7 Cylinder Heads

No modifications to the standard cylinder heads are allowed whatsoever.

11.8 Valve Gear

No modifications to the standard valve gear are allowed whatsoever.

11.9 Pistons

No modifications to the standard pistons are allowed whatsoever.

11.10 Lubrication System

No modifications to the standard lubrication system are allowed whatsoever.

11.11 Engine Inspection Seal

Should it be necessary for an engine to be inspected, 2 bolts at the front of the sump and 2 bolts at the front of the rocker cover will be replaced by club supplied drilled bolts. The 2 sump bolts will be wired together and sealed by the Eligibility Scrutineer. The 2 rocker cover bolts will be wired together and sealed by the Eligibility Scrutineer. The engine will be made available for inspection as prescribed by MSA rules.

The following photographs show the location of the sump and rocker cover bolts:



11.12 Air Conditioning

If fitted as standard the air conditioning compressor and associated pipework may be removed.

11.13 Location

The engine must be located in the manufacturer's original position by the manufacturer's intended method.

11.14 Cooling Systems

11.14.1 No modifications to the standard cooling system are allowed whatsoever.

11.14.2 The water pump must be the OEM part, must not be modified in any way and the impellor must be present and working as the manufacturer intended.

11.14.3 The auxiliary belt must have all 6 ribs present. Only the following part numbers from the specified suppliers may be used:

Citroen	EuroCarParts	GSF	Andrew Page
5750 QJ	202772925	134RE0600	6PK853
5750 QK			

11.15 Induction Systems

No modifications to the standard induction system are allowed whatsoever. This includes that the use of standard or standard pattern air filters is mandatory. The use of free flow type filters is not permitted. Only the following part numbers from the specified suppliers may be used:

Citroen	EuroCarParts	GSF	Andrew Page
1444 XA	Bosch 502820047 or Mann 502820049 or Crossland 502820048	122PC0921 (Mann)	C2610 (Mann)

11.16 Exhaust Systems

11.16.1 No modifications to the standard exhaust system are allowed whatsoever. Catalytic converter removal is not permitted.

11.16.2 Only the following part numbers from the specified suppliers may be used:

Part	Citroen	EuroCarParts	GSF	Andrew Page
Catalytic Converter	0342 L5 or 0342 K8	724540520	215PC1489	BM91263H
Centre pipe	1717 CY	706540181	220PC0050	CN548K
Rear silencer	1730 JF or 1730 HO	705730271	252PC0099	CN549J

11.17 Ignition Systems

11.17.1 No modifications or additions to the standard ignition system are allowed whatsoever. The Engine Management Systems (ECU) must be totally standard.

11.17.2 It is mandatory to use standard or standard pattern spark plugs with the following part numbers, Denso K20HR-U11, Bosch FR8 SC+ or Bosch FR7 SE.

11.18 **Fuel Delivery Systems**

11.18.1 The manufacturer's entire fuel delivery system must be retained unmodified.

11.18.2 The use of alternative fuel pumps or pressure regulation equipment is prohibited.

11.19 **Prohibited Modifications**

With the exception of the items detailed it is expressly forbidden to machine, mill, grind, polish, weld, modify or otherwise adapt parts in any way whatsoever.

12 **Suspensions**

12.1 **Permitted Modifications**

12.1.1 For the 2017 race season Gaz dampers and springs as supplied by the C1 Series Organisers will be allowed. For the 2018 race season and beyond, the Gaz dampers and springs will not be allowed.

12.1.2 Adjustable ride height is permitted when Gaz dampers are used, but not when other dampers and springs are used. The ground clearance specified in 10.5.2 must always be satisfied.

12.1.3 Dampers must be either standard or standard pattern fitment. Only the following part numbers from the specified suppliers may be used:

Part	Citroen	EuroCarParts	GSF	Bilstein
Front left strut	5202 SA	635540342	455PC0941	22-235459
Front right strut	5202 SC	635540392	455PC0951	22-235466
Rear damper	5206 EG	635540285	513PC0580	19-235479

12.1.4 If Gaz dampers are being used, they must be fitted with coil-over springs supplied by the C1 Series Organisers. For those cars using dampers from the list in 12.1.3 the following springs must be used. For cars using Bilstein dampers, they must use Bilstein springs.

Part	Citroen	EuroCarParts	Bilstein	Apex
Front spring	5002 HN	974540151	10-22-008-01-22	70-4200
Rear spring	5102 N6			

12.1.5 Upper and/or lower front strut braces are permitted.

12.1.6 C1 Series Organisers supplied lower front wishbones may be used.

12.1.7 Rear "Toe in/out" may be adjusted by the use of 2 shims on the bottom 2 mounting bolts and 2 shims on either (but not both) of the front or rear 2 mounting bolts and must be fitted between the rear suspension cross member and the wheel bearing hub assembly. The maximum shim thickness is defined as follows:

Shim Position	Max Thickness
Bottom 2 mounting bolts (camber)	2.00mm
Front 2 mounting bolts (toe out)	0.125mm
Rear 2 mounting bolts (toe in)	0.125mm

12.1.8 No other modifications are allowed.

12.2 **Prohibited Modifications**

12.2.1 No modifications to the suspension, mounting points, rubber bushes, shock absorbers, springs or wheel alignment geometry are allowed other than from the consequences of changes by those specified in 12.1.1 to 12.1.8.

13 Transmissions

13.1 The transmission must be the standard OEM fitment with type code 20TT, C550 or C551. It must be housed (in the case of clutch and gear train) within the standard alloy OEM gearbox housing/bell housing and mounted in the manufacturer's intended position.

13.2 Permitted Modifications

13.2.1 C1 series organiser supplied extended drive shafts must be used when C1 series organiser supplied wishbones are fitted.

13.2.2 The standard Citroen C1 gear ratios and differential ratio must be used.

The following gear ratios are fitted to the standard Citroen C1 gearbox:

	2005-2011	2011-2014
First	3.545	3.545
Second	1.913	1.913
Third	1.310	1.160
Fourth	1.027	0.970
Fifth	0.850	0.800
Diff	3.550	3.550

13.3 No other modifications or changes are allowed to the transmission assemblies or components.

14 Electrics

14.1 General

14.1.1 The standard C1 electrical system must be retained. It is not permissible to modify the wiring loom or its ancillaries except for the following:

- Air bag firing mechanism must be removed.
- Wires for additional optional front spot lights if fitted.
- The switch on the back of the master cut-out switch must be introduced into the blue wire from the ignition switch.

14.2 Exterior lighting

14.2.1 All standard lights (front and rear side lights, 3 brake lights, front and rear indicators, dip and main beam headlights) must all be present and working.

14.2.2 Standard or standard pattern light units must be used. HID, LED and upgraded H4 bulbs are permitted. One pair of Masai (SKU 8-REC-4-LED-40W-Com-6012) LED spot lights may be fitted using the mandatory fitting bracket supplied by the C1 Series Organisers.

14.3 Rear Fog Light

14.3.1 Rear fog light/lights must be fitted in the position defined by MSA Regulations. The reversing light may be converted to a red bulb to achieve this.

14.3.2 Additional wiring may be fitted to link the rear fog light to the reversing light or the links in the reversing light may be altered so the reversing light is illuminated when the rear fog light circuit is active.

14.4 Batteries

14.4.1 The 12 volt battery must be equivalent in size, weight and amp hours as the original manufacturer's battery, fitted in the standard position and must be firmly secured.

14.5 **Alternator**

14.5.1 A functioning standard OEM specification alternator must be fitted. No modifications are allowed to the alternator, its drive mechanism or electrical circuits.

14.5.2 The auxiliary belt must have sufficient tension to make the alternator function as intended by the manufacturer.

14.6 **Windscreen Wipers**

14.6.1 Front and rear windscreen wipers and washers must be fitted and fully operational. No modifications are allowed to the windscreen wiper blade, windscreen wiper mechanism or windscreen washer system.

15 **Brakes**

15.1 Standard or standard pattern brake pads must be used. Friction material is free.

15.2 It is permitted to disable the ABS by removal of the relevant fuse from the fuse box.

15.3 Standard or standard pattern brake discs must be used. Brake discs with any friction surface grooves, holes, slots or other performance enhancing features are prohibited.

15.4 It is not permissible to modify the brake pipes. Standard rubber brake hoses may be replaced by braided hoses.

15.5 The standard handbrake must remain in the manufacturers intended position and be fully operational.

16 **Wheels / Steering**

16.1 Other than the extended track rod kit available from C1 Series Organisers no modifications of any kind are allowed to the steering system.

16.2 The standard steering wheel may be used. An MSA approved alternative steering wheel and quick release boss is permitted.

16.3 The standard horn must be fitted and working.

16.4 Both the drivers and passenger airbag must be disabled or removed.

16.5 Wheel spacers are not permitted.

16.6 Standard wheel bolts must be used, wheel studs are not permitted.

16.7 Standard offset OE 4.5J x 14ET39 steel Citroen C1 wheels must be used.

17 **Tyres**

17.1 **Specifications**

17.1.1 The permitted size is 155-55 X 14

17.1.2 All tyres must have a tread depth of at least 1.00mm across 75% of the tread when the car is presented at pre-race scrutineering and in the forming up area before racing.

17.1.3 Chemical tyre preparations, including softeners are prohibited.

17.1.4 Tyre planing/shaving is permitted.

17.2 **Nominated Manufacturer**

17.2.1 All tyres used in practice and competition must be Nankang AS1 of the standard production compound and branded with the C1 Series Organiser's mark on the sidewall.

18 **Weight**

18.1 Cars must have a minimum weight of 895kg, inclusive of driver.

18.2 If ballast is required it must be fitted to a tray made from a single flat sheet of mild steel plate at least 3mm thick in accordance with MSA regulation J.5.15. The tray must be attached to the 4 passenger seat mounting points using OEM seat mounting bolts.

19 **Fuel Tank / Fuel**

19.1 **Fuel Tank**

19.1.1 The fuel tank must be a Citroen C1 standard production item with a maximum capacity of 35 litres fitted in the manufacturer's original position.

19.1.2 Modifications to the fuel tank, sender unit, fuel pump and pressure regulator are not permitted.

19.1.3 The fuel pump cover panel must allow access to the fuel pump and pressure regulator.

19.2 **Filler Cap**

19.2.1 A filler cap must be fitted that complies with Section **K14.1.2** of the MSA Yearbook. The standard lockable filler cap may be replaced by a non-lockable one supplied by the C1 Series Organisers.

19.3 **Tank Guard**

19.3.1 A fuel tank guard supplied by the C1 Series Organisers must be fitted in the location specified.

19.4 **Fuel**

19.4.1 Only petrol as defined in Section B Nomenclature & Definitions, Pump Fuel a) section of the MSA Yearbook for the current year and complying with, BSEN228 may be used. The use of additives is prohibited.

20 **Numbers and Championship Decals**

20.1 **Positions**

20.1.1 To be eligible to compete in this event all vehicles must carry a BARC Shield on each side in an unobscured position when viewed from a direct side elevation (assuming decals are available at the meeting signing-on). Failure to have these in place at scrutineering will render the car ineligible.

20.1.2 Race numbers must be located in the intended position as required by Section Q 11.4 of the MSA Yearbook.

20.1.3 Competitors must locate, unmodified and in the intended orientation the decals of the Championship sponsors and associates on the cars, in the following positions:

Sponsor	Sticker location
Absolute Alignment	At the top of the front windscreen.
Nankang Tyres	Front and rear number plate.

21 **Miscellaneous**

21.1 Towing eyes must be fitted front & rear and must comply with Q.19.1.3.

22 **Commercial Undertakings**

22.1 In addition to any other membership, registration for the series with the C1 Racing Club is one of the conditions for entry to any event for all drivers.