

2018 CLASSIC TOURING CAR CHAMPIONSHIP

Group 1 Touring Car Championship

TECHNICAL REGULATIONS



Organised by the British Automobile Racing Club

Thruxton Circuit, Andover, Hampshire, SP11 8PN

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Group 1 Touring Car Championship

5 TECHNICAL

5.1. Introduction:

- a. The following technical regulations are set out in accordance with MSA specified format and it should be clearly understood that if the following texts do not clearly state that you can do it, you should adopt the principal that you cannot.
- b. Anything that is not explicitly authorised in writing by the Championship Technical Committee and anything that is not specified either in these regulations or in any Official Championship Bulletin is therefore strictly forbidden and thus will be regarded as a breach of these Technical Regulations and may be penalised as described in section 4. It should be clearly understood that technical regulations will be strictly enforced and any modification, addition, variation, tuning or removal other than specifically permitted in these regulations is prohibited.
- c. Regulations that have changed in substance from the 2017 CTCRC Group 1 Touring Car Championship Technical Regulations are normally indicated by being underlined or highlighted.

~~5.1.1 Technical Queries:~~

~~Any matter affecting Technical Regulations must be put in writing to the Championship Eligibility Scrutineer, as any claim to have received clarifications or rulings on the Regulations must be substantiated by the production, on demand, of written confirmation of such rulings.~~

5.2 Description:

5.2.1 CTCRC Group 1 Touring Car Championship is for competitors participating in saloon cars marketed before 1st January 1983 of which more than 5000 examples were manufactured in any 12-month period during the overall production run and/or were homologated by the FIA for competition in Group One category for production cars prior to that date

5.2.2 Eligibility:

- a. All cars are subject to approval of their eligibility by the Championship Organisers.
- b. Cars not complying with these regulations may be eligible subject to Championship Organisers approval
- c. The following cars are eligible for this championship.
 - i) Cars complying with BARC/CTCRC Classic and Historic Touring Car regulations.
 - ii) Jaguar XJ12 four door.
- d. Cars complying with BARC/CTCRC Classic and Historic Touring Car regulations will have their class determined by actual capacity.
- e. The responsibility to prove eligibility is that of the Competitor at all times. For clarification of a Competitor refer to the MSA Yearbook 2018 section (B) Nomenclature & Definitions.
- f. Proof of a vehicles' eligibility may be substantiated by production of a Historic Technical Passport (HTP) or Homologation papers stamped by the ASN. These documents, where issued, for that vehicle and these must be available for inspection when required.
- g. Where no such paperwork is available, the Competitor must produce written confirmation from the CTCRC Committee as to the eligibility of the vehicle model in question.
- h. The Championship Organisers in conjunction with a Licensed Eligibility Scrutineer shall determine matters as to the eligibility and the implementation which may involve photographing any part of the vehicle and performing electrical diagnostics at the scrutineer's discretion.

5.2.3 Unless specifically permitted in these regulations all components must be to original Manufacturers specification.

5.2.4 **Class Structure:**

5.2.4.1 Cars will run in six classes based on production capacity excluding permitted overbore:

Class A	Over 3551cc
Class B	2501 – 3550cc
Class C	1601 – 2500cc
Class D	1301 – 1600cc
Class E	0 – 1300cc

5.2.4.2 **Invitation Competitors**

- a. Competitors with Vehicles not complying with these regulations may be invited to compete subject to Championship Organisers approval.
- b. Vehicles that, whilst not strictly adhering to the regulations, have been prepared sympathetically to the spirit of the championship and with Championship Organisers approval, may be invited to race under observation.
- c. Competitors wishing to race as **Invitation** must submit a written specification of their vehicle, to the Co-ordinator. It must detail all areas where the vehicle does not comply with these regulations. This specification shall be made available to the eligibility scrutineers for pre and post event checks.
- d. **Invitation** vehicles will be invited by the Championship Organisers on a race by race and individual vehicle basis. The vehicle must not deviate from the specification submitted, unless such changes are approved by the Championship Organisers. Any approval may be withdrawn at any time by the Championship Organisers.
- e. **Invitation** competitors will not be eligible for:
 - i. Podium recognition
 - ii. Championship award / trophies
 - ii. Championship points.

5.2.5. **Presentation:**

- a. At the start of each free practice, qualifying session or race, the cars must be presented to a high standard and must be clean and in good order. The Championship Organisers reserve the right to forbid cars not meeting this requirement from taking part.
- b. Presentation of a vehicle for scrutineering is a declaration by the Competitor that the vehicle is eligible for that event.

5.2.6. **Technical Checking:**

- a. The Championship Eligibility Scrutineer / Championship Organisers reserve the right to inspect, test, measure, seal or impound any component fitted to or used in conjunction with any car registered in the Championship either personally or through a nominated representative. The costs of such checking shall be borne by the CTCRC but the CTCRC shall not be liable for the costs of stripping or reassembly of vehicles after the checks have been carried out. This will be the sole responsibility of the Competitor. Exceptions to this may include appeal / protest according to the MSA Yearbook **2018**.
- b. Any vehicle inspected following qualification or race and found to be in breach of the 2016 Technical Regulations or a breach of the procedure surrounding the Technical Regulations will be the subject of a report to the Clerk of the Course.
- c. A car found to be ineligible for the championship must race only in the invitation class and no points will be scored until the vehicle conforms to the regulations.
- d. Any component sealed by an MSA Licensed Scrutineer must remain sealed and may not be tampered with in any way. In the event of a seal needing to be broken for repair or replacement, prior to doing so the Championship Eligibility Scrutineer must be informed in writing and approve the seal being broken. Re-sealing by an MSA Licenced Scrutineer will take place after technical checks have been made at the next race meeting.

- e. If a vehicle/component is sealed for subsequent technical examination the Championship Eligibility Scrutineer, within the applicable time limit, will state to the Competitor/Competitor that he will examine the vehicle/component on a stated date and time and at a specified location and the sealed items must be made available for his inspection. These arrangements are not negotiable. If a vehicle/component is not made available for an eligibility examination as required by the Championship Eligibility Scrutineer, it will be considered as ineligible and will be reported as such to the Clerk of the Course for the application of penalties laid down under MSA Regulations and these Championship Regulations.

~~5.2.7 Technical Passport:~~

- ~~a. All Competitors are issued with a Technical Passport. This is used to record information relating to that car during the season.~~
- ~~b. The Competitor is responsible for the safe keeping of the passport, which shall be carried in the car at all times.~~
- ~~c. All cars are issued with a Technical Passport wallet.~~
- ~~d. No car is permitted to take part in an Event unless the Technical Passport is available for inspection and is a true reflection of the vehicle details.~~
- ~~e. The only person authorised to make changes to the details of the Technical Passport is the Championship Eligibility Scrutineer or his appointed representative. Missing Technical Passports will be the subject of a report to the Clerk of the Course.~~
- ~~f. Missing Technical Passports will be the subject of a report to the Clerk of the Course.~~
- ~~g. Details contained within the Technical Passport must be submitted by the Competitor at the time of CTCRC Membership Registration. A Registration will not be accepted without submission of the relevant details.~~

5.3 Safety Requirements:

- 5.3.1. All MSA Yearbook **2018**, Section K, Competitor Safety Criteria Regulations, apply as relevant unless stated herein.

5.3.2 Safety Roll-Over Structures: - (K 1 to K1.8) applies

- a. All vehicles must be fitted with a safety roll-over bar complying with MSA requirements as specified in Section K except for vehicles of Periods A - E inclusive. MSA Yearbook **2018**, Regulation (Q)19.14.1 applies.
- b. Interior fittings, trim and bodywork may be locally modified to allow fitting of the safety roll-over structure and any door bars.

5.3.3 Fire Extinguisher: (K3 to K3.5 applies)

- a. All vehicles must be equipped with a fire extinguisher. MSA Yearbook **2018** Regulation, Q 19.14.7 applies
- b. The fire extinguisher must not be disarmed in any Parc Fermé area without the specific permission of the Championship Eligibility Scrutineer. Any Competitor that is found with a disarmed fire extinguisher in Parc Fermé for whatever reason will be penalised.
- c. The following information must be clearly displayed on each fire extinguisher:
 - i) Type of extinguishant
 - ii) Weight or volume of extinguishant
- d. It is recommended that the following information is clearly displayed on each fire extinguisher:
 - i) Capacity
 - ii) Service date of extinguisher, it is recommended that it should be less than 2 years since the filling date or the last service date.
- e. During Events all extinguisher systems must be in the 'ARMED' condition (i.e. be capable of being operated without the removal of any safety device) at all times while competing or practising, including post-Event scrutineering.

- f. The external triggering point must be positioned close to the circuit breaker (or combined with it) and must be marked by the letter "E" in red inside a white circle of at least 10cm diameter with a red edge in accordance with MSA Yearbook 2018, Regulation (K)3.2.2

5.3.4. Main External Circuit Breaker:

- a. An external circuit breaker is mandatory, MSA Yearbook 2018 Regulation K 8.1 to K8.5 applies.
- b. Technical Regulation 5.3.4 a. is not mandatory for cars of pre 01/01/66 construction but is recommended
- c. The switch location must be identified by a Red Spark on a white edged blue triangle with a base of at least 12cm. and the 'On' and 'Off' positions clearly marked.
- d. The circuit breaker when 'operated' must isolate all electrical circuits, data loggers, transponders, etc.
- e. When the circuit breaker is 'operated' there must be no power source capable of keeping the engine running.
- f. The switch location must be identified by a Red Spark on a white edged blue triangle with a base of at least 12cm.
- g. The triggering system for the circuit breaker should be situated at the lower part of the windscreen mounting, preferably on the driver's side or below the rear window.
- h. On cars of Periods A to F (pre-1977) the triggering system may be mounted approximately vertically below the line of the scuttle on the driver's side.

5.3.5 Lights:

Lights detailed in Championship Regulations 5.10.5 must be in working order throughout the entire Event.

5.3.6 Seat and Seat Mounting:(K 2.2. applies)

- a. The Driver's Seat and Seat Mounting shall comply with the MSA Yearbook 2018 Regulation (K) 2.2 and (K) 2.3
- b. It is recommended that the Driver's seat is a racing seat with a current FIA homologation.
- c. Additional seat padding is permitted to a maximum of 50mm. Any additional padding or covering placed on the seat must be fire retardant to FIA standard 8855-1999.
- d. The seat mountings shall be appropriate to the seat fitted (and complying with FIA Article 253.16) must be used.

5.3.7 Seat Belts: (K 2.1. applies)

- a. Mandatory use of seat belts, except for Vehicles constructed in Periods A to E. MSA Yearbook 2018 regulation Q19.14.2 applies.
- b. Where Vehicles constructed in Periods A to E have seat belts fitted, the seat belts must comply with Championship Regulation 5.3.7 c. to 5.3.6 f. inclusive.
- c. The Driver's seat belts must have a current FIA homologation.
- d. It is mandatory to use seat belts, with a minimum 'four point' configuration. Complying with the MSA Yearbook 2018, Regulation (K) 2.1.2.
- e. Seat belts must be correctly adjusted at all times during events: (Two shoulder straps and one lap strap, with four anchorage points on the chassis/body shell or roll over bar of the vehicle)

5.3.8 Race Clothing: (K9.1 and K9.3 applies)

- a. Competitors are strongly advised to wear flame resistant, socks, underwear and balaclava.
- b. Flame resistant gloves and shoes are mandatory. MSA Yearbook 2018 Regulation Q10.1. (c) applies.

5.3.9 Crash Helmet.

Crash helmets must comply with the requirements of MSA Yearbook 2018 (K 10.1 to K10.4 applies).

5.3.10 FHR.

Mandatory for all forms of circuit racing with the exception of period defined vehicles (pre-1977), which will remain as a recommendation. MSA Yearbook 2018 (Q) 10.1.e. applies.

5.4 General Technical Requirements and Exceptions:

- a. All vehicles must comply with MSA General Technical Regulations and the relevant parts of Sections J & Q of the MSA Yearbook 2018 except where specified below.
- b. Vehicles may be brought up to any series production specifications for that model prior to 1st January 1983. For the avoidance of doubt, 'model' shall mean a vehicle of the same body shell shape, size, specification and silhouette.
- c. Any component listed on the MSA, FIA/FISA (or national equivalent for foreign cars) homologation papers for use in Group One during the series production of that model may be substituted for the original production component provided that the substitute part was in production or homologated prior to 1st January 1983. The responsibility to prove eligibility is that of the Competitor at all times
- d. No component may be substituted which serves to alter the shape or size of the body shell and/or panels themselves or increases the capacity of the engine beyond that which was in production or homologated prior to 1st January 1983. Full details of optional equipment must be submitted to the CTCRC for possible inclusion on a vehicle by vehicle basis prior to that item of equipment being fitted.
- e. Fixing components such as nuts, screws, washers, lock washers; spring washers, etc. are free and may be upgraded.
- f. It is permitted to repair faulty threads by the use of Keen Inserts/ Helicoils. Where thread inserts are utilised the original thread diameter and pitch must be respected.
- g. Within these Technical Regulations the word "standard", "original" or "pattern Part" used as a description of components is to be interpreted as: "The specified component from the factory or the manufacturers or importers parts list, prior to 1st January 1983. for the model or engine shown on the entry form or registration form.
- h. Advertising on vehicles is subject to requirements set out in MSA Yearbook 2018 Regulation H29.1.2 & H29.1.3.
- i. Competitors registering do so in the full knowledge that CTCRC reserves the right to require the Eligibility Scrutineer to carry out, record and enforce eligibility checks which may include the sealing of component(s) for subsequent checking. The costs of such checking shall be borne by the CTCRC but the CTCRC shall not be liable for the costs of stripping or reassembly of vehicles after the checks have been carried out.
- J. No modifications are permitted beyond the repair or adjustment processes specified by the factory or the manufacturer". Eligibility checking will be by comparison to spare parts supplied by the manufacturer's official agent.
- k. "Free" as referred to in these Technical Regulations shall mean be interpreted as "within the limitations imposed by the MSA Yearbook 2018 Regulations".

5.5. Chassis:

- a. The chassis as produced by the manufacturer with the original material must be retained in all aspects in respect of material, thickness & contour except as allowed in Championship Regulations 5.5 b and 5.5 d.
- b. Strengthening of the chassis in the interest of safety, by the addition of material is permitted.
- c. Lightening or reducing of chassis, or chassis member strength, is prohibited.
- d. Seam welding is permitted

5.5.1 Towing eyes / straps

- a. Must be a contrasting colour to the surrounding area (usually either Day-Glo red or yellow) and must respect the requirements of MSA Yearbook 2018 (Q19.1.3).
- b. In addition to 5.5.6 a. it is strongly recommended that all cars must, wherever possible, be equipped with two front and two rear towing eyes positioned equally either side of the longitudinal centre-line. They must be clearly visible, marked with an arrow and the word "tow" and the wire painted in yellow, red or orange to contrast with the vehicle colour scheme.

The towing eyes must be made of at least 6mm diameter steel wire rope with a 6x19 wire core, each which must have a breaking-strain of at least 2 tons. Each towing eye must allow the passage of a cylinder with a diameter of 60 mm, situated 25mm forward of the adjacent bodywork - 100 mm above and below this hole must retain clearance to enable the recovery crews to attach straps and shackles.

The towing eye must be fixed to a structural part of the chassis with a minimum of M12 fixings, the inner part must be flexible in order for the towing eye to be retracted inside the bodywork profile. A "pull-cord" must be attached to the towing eye to enable the marshals to access the wire loop. The end attached to the chassis may be either 'thimble' or 'open-loop' style.

5.6 Bodywork and dimensions:

5.6.1 General:

- a. Bodywork must be complete and standard in shape, material and thickness on all exterior surfaces unless detailed otherwise in Championship Regulations 5.6.1 b. to 5.6.1 d. inclusive.
- b. Where original materials are unobtainable, local repairs of adequate strength may be made using modern equivalents.
- c. Replacement of panels with non-original material is prohibited except as detailed in Championship Regulation 5.6.1 d.
- d. The bonnet, front wings, bumpers, nosecone, boot lid and boot spoilers may be replaced with fibreglass replicas of standard shape.
- e. The fibreglass replicas detailed in Championship Regulation 5.6.1d. must be fitted such that the original part could be refitted without modification.
- f. It is only permitted to make holes in bulkheads for the passage of cables, fuel, water, oil, hydraulic, instrument or fire extinguisher lines.
- g. All redundant holes must be covered with a non- flammable material.

5.6.2 Interior:

- a. Floor carpets, under felt, sound deadening, headlining, front and rear parcel shelves, centre consoles, the front passenger seat, rear seats and trim in the boot/luggage compartment may be removed.
- b. All internal panels and subassemblies must remain as originally manufactured. Strengthening is permitted
- c. Battery trays and their supports may be removed.
- d. The dashboard must be retained as originally manufactured in original material.
- e. Instrumentation is free.
- f. The interior door trim must be retained in original or other non-flammable material.
- g. Window operating controls may be removed. If window operating controls are retained it is permissible to change electrically operated windows to manual winding operation.
- h. Vehicles must be fitted with at least one interior rear – view mirror. The fitment of a wide angle interior rear view mirror is recommended.
- i. Driver's seat is free providing Championship Regulation 5.3.6 is respected. The driver must be located entirely to one side of the centre line of the car. Local modifications are permitted for the purposes of secure and safe mounting
- j. Heaters and interior ventilation systems may be removed.
- k. Foot controls and their linkages are free except that the foot operated surface of the brake pedal must be located no more than 4" (100mm) forward or rearward of the original production position.

5.6.3 Exterior:

- a. Reworking or modification to exterior bodywork is prohibited but any part of the arch/wing pressing folded into the wheel arch may be deformed, but not removed, to give clearance to the tyres.
- b. The original boot and bonnet fasteners may be removed.
- c. The original bonnet and boot shut lines must be as in production.

- d. External decorative trim may be removed. Bumpers may be removed provided that in the event of their removal, all supporting devices and brackets as would otherwise protrude beyond the bodywork, are also removed
- e. Radiator grill slats must not be removed unless they are less than 1" apart, if so alternate slats may be removed.
- f. Window material for side and rear windows is free subject to prevailing MSA regulations. All original window mounting hardware (i.e. mounting rubbers, sliders, guides, quarter-lights and other externally visible features) must be retained.
- g. The original mirrors may be removed but vehicles must be fitted with at least one externally mounted rear view mirror in accordance with MSA Yearbook 2018 section Q19.15.1
- h. Forward facing fog lights mounted in, or under, the front bumper may be removed. Internal bodywork or trim behind the original fog light locations may be modified solely to allow the fitment of ducting from the original fog light locations to the front brake discs. The cross-sectional area of the ducting to each front brake disc must not exceed 50cm².
- i. Rover P6 may use the export model Federal bonnet.
- j. Vauxhall Firenza may use Droop snoot front.
- k. Jaguar XJS may use later style body kit

5.6.4 Silhouette:

Bodywork must be complete and standard in shape and silhouette. Any item below the centreline of the wheel must not project beyond a line drawn at 45 degrees to the horizontal and tangential to the bodywork (not including over-riders).

5.6.5 Ground clearance:

- a. Minimum ground clearance is 100mm (4") excluding exhausts and silencers.
- b. Jaguar XJ series and Lotus Cortina Mk2 do not have to achieve the required ground clearance at the outer ends of the lower front suspension arms.
- c. Will be measured with the Driver on board (wearing his complete racing apparel),
- d. Will be measured with the car and Driver in the condition in which they cross the Finish Line or at any other time during an Event and without the removal of any solid or fluid matter including fuel.
- e. Ride height will be measured on any reasonably flat surface as deemed by the Championship Eligibility Scrutineer or his nominated representative. In the event of any discrepancy the circuit designated flat patch will be used to make any final judgement

5.7 Engine:

5.7.1 All engine components are free providing the requirements of Championship Regulation Section 5.7 are respected

5.7.2 Cylinder Block:

- a. The original standard production cylinder block may be used.
- b. It is permitted to use an alternative cylinder block, manufactured to the same original production specification, including but not limited to material, bore, number of main bearings and number of main bearing fasteners.
- c. It is permitted to remove metal from the cylinder block.
- d. It is permitted to re-bore the standard size cylinder block up to a maximum of plus 0.065". (1.651mm)
- e. Rover SD1 may use a cross-bolted block.

5.7.3 Crankshaft:

- a. The crankshaft is free, provided that Championship Regulation 5.7.3 b., 5.7.3 c. are respected.
- b. The original stroke of the crankshaft must be retained.
- c. The original number of crankshaft bearings must be retained.

5.7.4 Cylinder head(s):

- a. The original standard production cylinder head(s) may be used.
- b. It is permitted to use an alternative cylinder head(s) manufactured to the same original production specification.
- c. The alternative cylinder head(s) shall be manufactured from the same material, have the same number of valves, ports and plugs, same plug angle, valve angle/port configuration and operating type as the original standard production cylinder head(s).
- d. The alternative cylinder head(s) shall fix directly onto the original standard production cylinder block without any modification.
- e. It is permitted to remove metal from cylinder head(s).

5.7.5 Camshafts:

Camshafts, camshaft bearings and drive systems are free, provided that they remain in their original positions and remain the sole means of operating the valves.

5.7.6 Location:

The engine location, and locating points, must remain as specified and supplied by the manufacturer for the particular model entered in the championship.

5.7.7 Radiators:

- a. Radiators are free but must remain in their original location.
- b. The fitting of additional water radiators is permitted provided they are located within the periphery of the bodywork.
- c. The fitting of additional oil coolers is permitted provided they are located within the periphery of the bodywork.
- d. Modification of the cooling system is permitted to facilitate the installation of items detailed in Championship Regulation 5.7.7 b. to 5.7.7 c. inclusive.

5.7.8 Induction Systems:

- a. The manufacturers' standard fitted induction system must be retained unless modifications are permitted within the Championship Regulations
- b. Carburettors
 - i. Carburettors and their linkages are free within the limitation that the total number of chokes must not exceed the maximum number of chokes fitted in production or homologated for Appendix 'J' Group One. Except as detailed in 5.7.7.c. ii to iv inclusive.
 - ii. Period carburation is permitted with approval from the Championship Organisers.
 - iii. Where period carburation is fitted to a vehicle the class allocation and minimum permitted weight for that vehicle will be determined by the Championship Organisers.
 - iv. The Championship Organisers reserve the right to withdraw permission to use period carburation or to modify either class allocation or minimum weight at any time.
- c. Motorcycle carburettors are not permitted.
- d. Inlet trumpets are not permitted to have automatically controlled adjustment.
- e. It is permitted to remove air filter and air filter boxes.
- f. Air ducting/ trunking is free provided it does not extend beyond the periphery of the bodywork and compliance with Championship Regulation 5.7.8 g. Is respected
- g. A single round hole with the diameter no greater than 102mm or two round holes with diameters no greater than 77mm may be made in the radiator support panel for induction air ducting/trunking to pass through.
- h. Anti-surge pipes are permitted.
- i. Return pipes from the carburettor/injection system are permitted.
- j. Inlet and exhaust manifolds are free. The exhaust system is free subject to MSA requirements.

5.7.9 Fuel injection:

- a. Is only permitted if fitted in production or homologated in Appendix 'J' Group one prior to 1st January 1983.
- b. Must employ the original, production method of triggering and operation.
- c. The original plenum chamber must be retained intact but the entry duct and/or flange may be modified as detailed in Championship Regulation 5.7.9 c. i) to 5.7.9 c. iii) inclusive.
 - i) Enlarged in cross section area, associated throttle valve(s) being free except for the original number being maintained,
 - ii) Extended upstream by the addition of metal and/or separate trunking not extending beyond the periphery of the bodywork,
 - iii) Reduced in length by removal metal upstream (not downstream) of the original entry to the main plenum chamber or entry to the first branch pipe, whichever is the further upstream.

5.7.10 Forced induction:

- a. Forced induction is not permitted unless either fitted in production or homologated in F.I.A. Appendix 'J' Group One before 1st January 1983.
- b. Cars using forced induction will be subject to an equivalency factor of 1.4:1.
- c. It is not permitted to have any method of adjusting the boost pressure setting manually from within the driver compartment.
- d. It is not permitted to adjust the boost pressure during a race.
- e. The boost pressure setting is free.
- f. When fitting of a turbocharger is permitted by these regulations it shall be the standard production or homologated component and must not be modified.

5.7.11 Rotary engine cars:

- a. The induction timing is free and therefore the dimension of the induction port which controls its opening and closing point may be modified by removal and addition of material. In all other respects the port must remain as homologated.
- b. The engine capacity will be determined by using an equivalency factor of 2:1.
- c. Rotary engine cars fitted with injection in production may use a carburettor with no more than two chokes.

5.7.12 Ignition:

- a. The ignition system is free, provided that Championship Regulation 5.7.12 b. to 5.7.12 h. Inclusive are respected.
- b. the original firing order must not be changed.
- c. The distributor may be fitted with an after-market spark triggering device.
- d. The distributor must remain in its original position.
- e. The distributor must maintain its original function.
- f. Any additional system which processes information acquired from the ambient conditions and/or the engine is not permitted.
- g. The distributor must be the only means of determining ignition advance and retard and must continue to distribute the high tension spark.
- ~~h. Rover SD1 may use a DTA spark control device triggered using a hall effect trigger in the distributor but over 3,000 rpm there must be no advance curve i.e. the amount of advance must be constant at all times over 3,000rpm. For scrutineering purposes, a connection lead suitable for connection to a laptop computer must be fitted at all times.~~

5.7.13 Lubrication:

Dry sump oil lubrication systems are **not** permitted.

- 5.7.14 To allow for scrutineer's wire seals, every installed engine must have 1.6mm (1/16in) holes drilled in at least two adjacent sump bolts and two adjacent rocker/cam cover bolts. Engines may be sealed at any time by a Licensed Eligibility Scrutineer and only by written permission in advance from the Championship Organisers or a Licensed Eligibility Scrutineer may seals be broken.

5.8 Suspension:

5.8.1 General:

Suspension type as fitted by the manufacturer must remain unaltered.

5.8.2 Suspension Components:

- a. With the exception of springs, Championship Regulation 5.8.5, shock absorbers, Championship Regulation 5.8.6, anti-roll bars, Championship Regulation 5.8.7 and suspension bushes, Championship Regulation 5.8.8 the original suspension components (or pattern parts to the manufacturer's original specification) must be employed in their original positions.
- b. It is not permitted to fit any additional suspension components, only the number originally fitted by the manufacturer is permitted.
- c. It is permitted to strengthen Suspension components (Refer to Championship Regulation 5.8.2.)

5.8.3 Suspension mounting points:

- a. The original suspension mounting points shall be used.
- b. It is not permitted to modify the original location / dimensions of suspension mounting points.
- c. It is permitted to strengthen suspension mounting points providing that Championship Regulation 5.8.3.b. is respected.

5.8.4 Track Control Arms:

- a. Track control arms may only be modified locally for the sole purpose of adjusting the track control arm length.
- b. The use of a track rod end joint, at one end only, of the Track Control Arm to achieve length adjustment is permitted.

5.8.5 Springs:

- a. Suspension springs are free providing that Championship Regulations 5.8.5.b. and 5.8.5.e. are respected.
- b. The original operating principle as fitted by the manufacturer, (coil, leaf, torsion) shall be employed.
- c. No more than the original number of springs as fitted by the manufacturer are permitted.
- d. Spring caps are free.
- e. spring platforms may be adjustable.

5.8.6 Shock Absorbers:

- a. Shock Absorbers are free providing that Championship Regulation 5.8.6.b. to 5.8.6.f. inclusive are respected.
- b. The original operating principle, as fitted by the manufacturer, (hydraulic, friction, lever or telescopic) must be employed.
- c. No more than the original number of shock absorbers, as fitted by the manufacturer are permitted.
- d. Shock absorbers must be mounted on the original mounting / fixing points.
- e. A telescopic damper may be converted to a coil-over damper and the redundant coil spring removed.
- f. The top mounting on a Macpherson Strut top is free but Championship Regulation 5.8.6.d. must be respected.

5.8.7 Anti roll bars:

- a. Anti-roll bars, are free providing they fit directly on to the original body/chassis mounting points and the mobile suspension units.
- b. Additional anti roll bars, anti-tramp bars, panhard rods, watts linkages, lowering blocks and their mountings may be added.

5.8.8 **Suspension bushes:**

- a. Suspension bushes are free providing the original production bush can be replaced in its original position without modification to the bush housing.
- b. It is permitted to machine circlip retaining grooves to locate replacement suspension bushes.
- c. It is permitted to replace Suspension bushes with spherical bearings.

5.9 **Transmission:**

- a. Vehicles must use either the original production type of gearbox or the homologated alternative.
- b. The gearbox must remain in the original position.
- c. Gear levers and gear shift mechanisms are free but must employ the original method of operation, shift pattern and body shell aperture.
- d. Cars originally produced with no manual gearbox option may use any four speed gearbox from the period.
- e. Gearboxes and transaxles with rapidly interchangeable ratios or proprietary racing gearboxes are prohibited.
- f. Sequential gearboxes and/or traction control devices are prohibited.
- g. The maximum number of forward gear ratios is four unless supplied as original equipment.
- h. It is permitted to fit an additional overdrive gearbox
- i. Gear ratios and final drive ratios are free.
- j. Drive shafts and prop shafts must be made of metallic material but otherwise are free.
- k. Mechanical limited slip or torque biasing differentials are permitted.
- l. The rear axle must remain in its original position.
- m. The rear axle casing must be the original standard production component.
- n. It is permitted to locally modify the rear axle.
- o. Where a differential casing is removable from an axle casing the differential casing must be regarded as part of the original axle casing and is covered by the Championship regulations. 5.9.m. and 5.9.n.
- p. 3rd Generation Chevrolet Camaro may use an aftermarket Torque Arm on the rear axle instead of the original standard production item.
- q. Vauxhall Firenza, Vauxhall Magnum and Hillman Avenger may use a Ford English axle but the axle casing must be modified to pick up the recipient vehicle's standard suspension location mounts.
- r. Mazda RX3, RX4 and RX7 may use a Ford type 9 Gearbox with iron case.
- s. Jaguar XJ12 may use a Getrag 5 speed manual gearbox from the period with only 4 gears operational or a 4 speed manual gearbox from any other production Jaguar, of, or prior to the period.
- t. Rover P6B may use a Rover SDI 4 speed gearbox.
- u. Avenger may use a Ford Type E "Rocket" gearbox with iron case

5.9.1 **Traction Control:**

Any form of traction control (other than as detailed in 5.9 k.) is prohibited unless fitted "as standard" in production by the manufacturer.

5.10. **Electrical:**

5.10.1 Electrical equipment is free provided that Championship Regulation 5.10.2 to 5.10.5 inclusive are respected.

5.10.2 **Vehicle Onboard Starter:**

Engines are to be started at all times by the Vehicle Onboard Starter except that the use of an external portable slave battery is permitted to aid start up only in the paddock, assembly area, pit lane and on the grid.

5.10.3 **Battery:**

- a. The battery and starter motor must be capable of performing a number of repetitive starts.

- b. The battery make is free.
- c. The Battery position and orientation is free within MSA Yearbook 2018 Regulations, (J) 5.14.1 to (J) 5.14.7 applies.

5.10.4 **Charging Circuit:**

- a. Use of the 12-volt (nominal) 'standard' generator, is compulsory.
- b. The Charging Circuit must be connected and operational all times whilst the Engine is running or the wheels are driven

5.10.5 **Lights:**

- a. All cars must be fitted with the following: -
 - i) A minimum of two forward facing main headlights.
 - ii) A minimum of two rear facing red tail lights.
 - iii) A minimum of two rear facing red brake lights.
 - iv) A rear facing red high intensity fog light (or two where two are fitted as standard equipment by the vehicle manufacturer in question) MSA Yearbook 2018, Section (K) 5. applies.
- b. Lights detailed in Championship Regulation 5.10.5 a. iii) must be operated only by the brake pedal and without a delay.
- c. Lights detailed in Championship Regulation 5.10.5 a. iv) must not be operated by the brake pedal.
- d. It is not permitted to tint or paint the front or rear lighting units.
- e. All lights detailed in Regulation 5.10.5 a. must be in working order throughout the entire Event and must be able to be switched on by the Driver when seated normally in the car.
- f. All light lenses must be complete and standard in shape, material and thickness.
- g. It is permitted to add clear protective headlight covers.

5.10.6 An operative front windscreen wiper must be fitted and in full working order throughout the entire Event. MSA Yearbook 2018, Regulation (Q) 19.15.3. applies.

5.11 **Brakes:**

- a. Brake systems are free provided that Championship Regulation 5.11 b. to 5.11 f. inclusive are respected.
- b. Carbon disks are prohibited, unless fitted in production in which case they must be to production specification.
- c. ABS systems are prohibited, unless fitted in production in which case they must be to production specification.
- d. Cars with single circuit braking must be fitted with an operational hand brake.
- e. Cars fitted with dual circuit braking are not required to have a handbrake fitted.
- f. Modification or removal of brake back plates is permitted.
- g. Ducting for the purpose of cooling brakes or removing dust is permitted provided it is not visible outside the car and serves no other purpose and if beneath the car does not project beyond a line drawn at 45 degrees to the horizontal and tangential to the bodywork (not including over riders).

5.12 **Wheels / Steering:**

5.12.1 **Wheels:**

- a. Road wheel material is free.
- b. Split rims are not permitted.
- c. Road wheels must be fastened to their hubs by the original number of studs/bolts.
- d. Road wheels must be the original diameter as supplied for that particular vehicle except for 5.12.4

5.12.2 **Wheel width:**

Maximum permitted wheel rim widths are: -

Class A 8.0"

Class B	7.0"
Class C	6.5"
Class D	6.0"
Class E	5.5"
Class F	5.0"

5.12.3 BMW CSL and Rover P6 may use 15" diameter wheels.

5.12.4 Jaguar Wheels:

- Jaguar XJ6/12 may use 16" wheels but there must be no brake disc or calliper size increase beyond which a 15" wheel cannot be fitted.
- It is the responsibility of the competitor to ensure a 15" wheel is available at all events for eligibility testing.

5.12.5 Chevrolet Camaro Wheels:

- Chevrolet Camaro may use 16" wheels but there must be no brake disc or calliper size increase beyond which a 15" wheel cannot be fitted.
- It is the responsibility of the competitor to ensure a 15" wheel is available at all events for eligibility testing.

5.12.6 **Hubs:**

Wheel hubs are free.

5.12.7 **Steering:**

- Steering wheel type is free providing MSA Yearbook 2018 Regulation (J) 5.7.1. and 5.7.2. is respected.
- Steering columns are free.

5.13 **Tyres:**

- It is only permitted to use tyres complying with Regulations 5.13 b. to 5.13h. inclusive.
- Tyres must be listed by the tyre manufacturer as medium, or harder, for saloon car circuit applications. Soft compounds are not permitted.
- No modification to tread pattern or tread depth by cutting is allowed.
- It is permitted to use any Tyre from MSA Yearbook 2018 (L)4 List 1A. List 1B. List 1C
- ~~The only permitted tyres from MSA Yearbook 2018 (L)4 List 1B are;~~

~~Dunlop Direzza DZ03G
 Toyo Proxes R888
 Toyo Proxes R888R
 Toyo Proxes R1R
 Yokohama A048-R
 Yokohama A032-R
 Dunlop D84J
 Dunlop D83J
 Kumho ECSTA V700~~

In addition to 5.13.d. the following tyres are permitted: -

Dunlop CR65
 Dunlop Direzza 02G
 Dunlop Direzza 03G
 Dunlop D93J (in 10" diameter only).

- For clarification the tyres detailed in Regulation 5.13 d. are MSA (L)4 List 1B and therefore MSA List (L)4 1A regulations relating to wear bars and tread depth do not apply.
- All tyres must have an aspect ratio (profile) of 50% or greater.

5.14. **Weights:**

5.14.1 **General:**

- The principle is to equalise the performance of the car and Driver combination. The minimum car/Driver weights excluding any success ballast, at the completion of every

qualifying session and race must be in accordance with Championship Regulation 5.14.2 regardless of laps completed.

- b. It is forbidden to add any liquid(s) or other material(s) to the car, or to substitute any part(s) for a heavier one during qualifying session or race.
- c. If a Car loses a part during qualifying or a race, the weight of that part may be taken into account during eligibility checks. Following consultation, the Championship Eligibility Scrutineer will determine whether any lost part should be taken into account.
- d. The re-distribution of weight in the car, by reducing the gauge or section of material in any component and by adding ballast or increasing material elsewhere, is not permitted. Weight may only be removed within the limits of the modifications detailed within these regulations

5.14.2 Minimum weight:

- a. The minimum weight is "in the condition in which the vehicle and the Competitor (wearing his complete racing apparel, scrutineered Race Suit, boots, gloves and helmet) including minimum Weight Ballast where applicable, (see Championship Regulation 5.14.4 crosses the finish line or at any other time during qualifying or race and without the addition or removal of any solid or fluid matter". For the purpose of the Regulation, qualifying or race is deemed to include any transfer to a place of post event scrutiny as directed by an official.
- b. All cars must comply with minimum weights as listed excluding any success ballast

5.14.2.1 Minimum weights are by production capacity (not homologated capacity) after applying equivalency factor.

0 -1000cc	745kg	2601 - 2700cc	1074kg	4301 - 4400cc	1341kg
1001 - 1100cc	765kg	2701 - 2800cc	1091kg	4401 - 4500cc	1355kg
1101 - 1200cc	785kg	2801 - 2900cc	1108kg	4501 - 4600cc	1369kg
1201 - 1300cc	805kg	2901 - 3000cc	1125kg	4601 - 4700cc	1383kg
1301 - 1400cc	825kg	3001 - 3100cc	1141kg	4701 - 4800cc	1397kg
1401 - 1500cc	845kg	3101 - 3200cc	1157kg	4801 - 4900cc	1411kg
1501 - 1600cc	865kg	3201 - 3300cc	1173kg	4901 - 5000cc	1425kg
1601 - 1700cc	885kg	3301 - 3400cc	1189kg	5001 - 5100cc	1439kg
1701 - 1800cc	905kg	3401 - 3500cc	1205kg	5101 - 5200cc	1449kg
1801 -1900cc	925kg	3501 - 3600cc	1221kg	5201 - 5300cc	1461kg
1901 - 2000cc	945kg	3601 - 3700cc	1237kg	5301 - 5400cc	1473kg
2001 - 2100cc	964kg	3701 - 3800cc	1253kg	5401 - 5500cc	1485kg
2101 - 2200cc	983kg	3801 - 3900cc	1269kg	5501 - 5600cc	1497kg
2201 - 2300cc	1002kg	3901 - 4000cc	1285kg	5601 - 5700cc	1509kg
2301 - 2400cc	1021kg	4001 - 4100cc	1299kg	5701 - 5800cc	1521kg
2401 - 2500cc	1040kg	4101 - 4200cc	1313kg	5801 - 5900cc	1533kg
2501 - 2600cc	1057kg	4201 - 4300cc	1327kg	5901 - 6000cc	1545kg

5.14.2.2 Engine capacities exceeding 6000cc: - add 10kg per 100cc. Therefore, 7000cc minimum weight = 1645kg

5.14.2.3 All cars must comply with these championship weight limits irrespective of the year of manufacture and any other championship regulations or waivers.

5.14.2.4 1275cc British Leyland Mini's are to run at or above the minimum homologated weight of the Mini 1275GT

5.14.3 Ballast:

- a. Ballast required to achieve the minimum weight or success ballast as a performance equalisation measure must only be added inside the car on the front and/or rear passenger foot well.
- b. It is the competitor's responsibility to provide and fit their own ballast if it is required, and to ensure that ballast is fitted in a safe manner.

- c. Ballast must be attached to the shell/chassis via at least 4 mounting points using bolts with a minimum diameter of 8mm each with steel counter plates of at least 400 sq mm surface area and 3mm thickness. Ballast mountings must include provision for the fitting of scrutineer's wire seals.
- d. The total weight of "minimum weight" or "success ballast" carried must be declared, in writing to the Championship Eligibility Scrutineer and/or his appointed representative and be in position, at all times during practice and racing.

5.14.4 Minimum weight ballast:

- a. It is permitted to carry ballast to achieve minimum weight.
- b. The minimum weight ballast shall be carried in addition to and shall not form any part of Success Ballast weight as defined in Championship Regulation 5.14.2

5.14.5 Success Ballast:

- a. Any vehicle may be required to carry success ballast as a performance equalisation measure. Such success ballast will be specified by the Technical Committee based upon the performance of the car in competition.
- b. The Technical Committee reserves the right to review the weight handicaps at any time during the Championship.
- c. The success ballast handicap is carried in addition to the 'Base' weight of the car as defined in Championship Regulation 5.14.2.
- d. Competitors will be informed by official bulletin of the amount of weight they must carry.
- e. The maximum success ballast allocated shall be 150kg.
- f. Any vehicle which fails to carry the success ballast specified by the Technical Committee will automatically be deemed not to comply with the Technical Regulations.

5.14.6 Compliance with Championship Regulation 5.14.2 and 5.14.5 will be checked prior to removal of fuel samples.

5.15 Fuel Tank / Fuel:

5.15.1 Fuel Tank:

- a. Fuel tanks are free subject to compliance with MSA Yearbook 2018 requirements.
- b. Hatchback cars with an under-floor spare wheel well may remove the spare wheel well for the sole purpose of the fitting of a fuel tank under the boot floor. A steel plate of at least the thickness of the metal removed must cover the aperture remaining.

5.15.2 Fuel:

- a. Only 'Pump' fuel as defined in Section (B) Nomenclature & Definitions of the MSA yearbook 2018 is allowed.
- b. An MSA approved additive is permitted.
- c. Refuelling is not permitted during qualifying, on the starting grid or during a race.

5.15.3 Fuel pumps are free subject to compliance with MSA Yearbook 2018 requirements.



5.16 Silencing / Exhaust:

- a. All cars must conform to the current MSA noise requirements as detailed in the MSA Yearbook 2018 regulations J5.17 & J5.18.
- b. Silencers are free subject to compliance with Championship Regulation 5.16 a.
- c. The exhaust system is free subject to compliance with the MSA Yearbook 2018 Regulation J5.16.

5.17 Numbers and Championship Decals:

- a. Only competition numbers allocated by the CTCRC Registrar are to be displayed. They must be displayed in accordance with MSA Yearbook 2018 regulation J4 and remain as allocated until the end of the season.

- b. Competitors must display competition numbers on a CTCRC number background. CTCRC decals and those of the series sponsors, promoters and the BARC are required to be displayed in an un-obscured position in accordance with the following table.

Item		Placement
CTCRC Number Background (round or square)		One on each front door, one on the bonnet
CTCRC "classictouringcars.com" sunstrip	TBC	Top of Rear windscreen
Series Sponsor Sunstrip	TBC	Top of front windscreen
Series Sponsor logos (if required - TBC)	TBC	One on each side of the car (front wing, rear door or rear quarter)
BARC Logo		One on each side of the car (front wing, rear door or rear quarter)
Class Weight and Class Letter (40mm White lettering)	e.g. 950kg A	One on each of the rear side windows

- c. Decals shall be fitted as issued. They may not be cut or otherwise defaced or deformed without prior approval from the Championship Organisers.
- d. Non CTCRC approved decals such as, but not restricted to, other clubs and other championship/series decals are not to be displayed on vehicles. These should be removed or covered up.
- e. A Touring Car, Touring Car re-creation or a car running in period livery is only required to display the CTCRC "classictouringcars.com" sun strip.
- f. Points will ONLY be awarded to competitors correctly displaying the required decals
- g. One set of Decals may be obtained from the CTCRC nominated supplier free of charge. A charge may be levied for any extra decals required.
- h. 5.17 f. & g. are only applicable to current fully paid up, Racing members of the CTCRC

5. **APPENDICES**

The following Commercial Undertakings are not subject to the Judicial procedures of either the Championship Stewards and/or the MSA/MSG.

6.1 The Classic Touring Car Championship is aimed at providing close racing for a wide variety of cars and it must remain a non-contact sport at all times. The Organisers acknowledge that racing incidents do happen, however there will be no acceptance of any aggressive driving of any kind. In accordance with the MSA regulations penalties will be applied to drivers who do not comply with this principle. Competitors are reminded that the majority of these cars are getting rare, to that extent parts are getting to be harder to find and most of these cars are not run on big budgets. Therefore, you are requested race accordingly, remembering this is club racing and it should be an enjoyable experience for everyone involved.

6.1.1 Social Media

Drivers and their supporters are reminded about the use of social media. Regulation 6.1.1.2 of the Championship Regulations clearly states the position and anyone found in breach of 6.1.1.2 will be dealt with accordingly. A negative or derisory comment on social media can be seen instantly by a large number of people. This may include one or more of our sponsors, hence the need for restraint. There can be, and have been, serious consequences caused by the misuse of social media. Therefore, if a driver considers that they have a genuine issue that needs resolution they should use the appropriate channel either the Championship Co-ordinator or Championship Committee

6.1.1.1

Anyone posting anything derogatory, defamatory, insulting, unfavourable or disrespectful in relation to the Championship or Series – including any of its participants, officials, partners or supporters – in any form of Social Media, would be dealt with in the same manner as if he comments had been published in the traditional print/broadcast media. In the worst instance this could mean exclusion from the championship/series, in the least it will be a deduction of points.

NB: for the avoidance of doubt the MSA may of course take any action as it considers appropriate, in addition to any action taken by the Championship Stewards.

6.2 Race Organisers and Contacts:

BARC, Thruxton Circuit, Andover, Hampshire, SP11 8PN

Contact: David Wheadon

Tel: 01264 882209

Email: dwheadon@barc.net

Drivers Representative:

Contact: Andy Johnson

Tel: 07814 052142

Email: andy.johnson@classictouringcars.com

Championship Eligibility Scrutineer:

Contact: John Wardle

Tel: (mob) (0044)7581859085

Email: johnwardlescrutineer@outlook.com