

2005 Powertrain Caterham Challenge Regulations

Issued by the BRSCC: Friday, 11 February 2005

Issue No: One

Powertrain Caterham Challenge Regulations 2005

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INTRODUCTION

The Powertrain Caterham Challenge in association with Autosport is the pinnacle of the Surrey-based sports car manufacturer's varied and exciting motor sport activities in the UK, and has a fresh new look for 2005.

Backed by engine manufacturer Powertrain Limited, a sister company to MG Rover, and the UK's leading motorsport journal, Autosport, the championship provides spectators – both trackside and watching on satellite TV around the world – with thrilling entertainment unrivalled on the domestic racing scene.

At the heart of the series are the Caterham R400 and – joining the championship for the first time in 2005 – the Roadsport A. Though outwardly recognisable as having as its basis in Colin Chapman's timeless Lotus 7 design, the Caterham has over many years of refinement and evolution become a very different and much more sophisticated sports car.

Under the bonnet of the R400 is a naturally aspirated MG XPOWER 1.8-litre, 16-valve engine which develops 200bhp at 7900rpm, delivered to the rear wheels via a six-speed manual gearbox. The Roadsport A features a 1.6-litre MG XPOWER engine delivering 133bhp at 7000rpm, and is also equipped with a six-speed gearbox.

In 2005 the Powertrain Caterham Challenge will feature on the bill of six/seven promoted race meetings – including F3/GT dates – with twin races at each; one will be a 15-minute Sprint race, the other a 30-minute Feature event. There are separate class championships for drivers of both the R400 and the Roadsport A.

Among the innovations for 2005 are a new Avon all-weather tyre for both the R400 and the Roadsport A.

The 2004 Powertrain Caterham R400 Challenge Champion was Luke Stevens;

Team Parker Racing won the teams award.

The 2004 Caterham Roadsport A Champion was James Bromley.

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1 SPORTING REGULATIONS – GENERAL

1.1 TITLE & JURISDICTION

The **2005 Powertrain Caterham** Challenge is organised and administrated by the BRITISH RACING AND SPORTS CAR CLUB (BRSCC) in accordance with the General **Regulations of the Motor Sports Association (incorporating the provisions of the International Sporting Code of the FIA)** and these Championship Regulations.

MSA Championship Permit No: CHR05072

Race Status: **National B**

MSA Championship Grade: C

The BRSCC reserve the right to amend or vary the Sporting Regulations in accordance with MSA Regulation B.8.4.(c) at any time before or during the Championship and further issue additional statements concerning the Regulations from time to time, subject to MSA approval, and all such statements will be issued by Championship Bulletin to the MSA and to all registered competitors by email or by post to the address detailed on the Registration Form, or by delivery to the competitor by hand. It is a condition of entry into the championship that all competitors, teams, team members and persons associated with any of the above agree to be bound by the Regulations including any amendments, variations or statements relating thereto.

1.2 OFFICIALS

1.2.1 CO-ORDINATOR:

Ros Jones

Caterham Motorsport Co-ordinator

3 Mitchem Close

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1.2.2 ELIGIBILITY SCRUTINEER:

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- 1.2.3. CHAMPIONSHIP STEWARDS:
J Ward, T Iddon, D Wells R Smith & D Walton
Any three Championship Stewards will constitute a quorum. In the event of any of the Championship Stewards listed above being unavailable or being unable to consider any particular matter due to a perceived conflict of interest, the organisers reserve the right to appoint an alternative Championship Steward or, if deemed to be necessary, more than one alternative Championship Steward.

1.3 COMPETITOR ELIGIBILITY

- 1.3.1 Entrants must be in possession of a valid 2005 MSA Entrants Licence.
- 1.3.2 Drivers and Entrant Drivers must be fully paid up valid membership card holding members of the BRSCC, be registered for the Championship and be in possession of a valid MSA Competition (Racing) National B or above licences.
Or as the events have been inscribed on the FIA "National Event Authorised Foreign Participation" (NEAFP) Calendar Non MSA licence holders (E2.21.4.) will be deemed "Guest Drivers" (SEE 1.6.4).
- 1.3.3 All Drivers must be fully registered for the 2005 Powertrain Caterham Challenge in order to be eligible to take part in any of the races forming this championship. Unregistered drivers will not be permitted to qualify or take part in any of these events.
- 1.3.4 All necessary documentation must be presented for checking at all rounds when signing-on.
- 1.3.5 Competitors must ensure that their cars comply with the conditions of eligibility and safety throughout qualifying and racing.

1.4 REGISTRATION

- 1.4.1 All drivers must register with the co-ordinator not less than 1 week before practice of the first round being entered for the championship by returning the registration form enclosed to the Co-ordinator. If an entrant wishes to nominate more than one driver during the course of the season he must complete one registration form for each driver.
- 1.4.2 A registration fee of £600 for the R400 Class and £350 for the Roadsport A Class is payable for this championship in respect of each vehicle. Cheques should be made payable to CATERHAM CARS LIMITED and be sent with the registration form to the Co-ordinator. Teams may register Hire Cars for the championship, the fee for which is £600 for the R400 Class and £350 for the Roadsport A Class payable to CATERHAM CARS LTD. Hire drivers taking part in these vehicles must still send completed registration forms and information to the co-ordinator at least one week before the round that they wish to enter .
- 1.4.3 Registrations will be accepted from 1 January 2005 until 1 week before practice of the final round. The organisers and promoters of the championship reserve the right to refuse to accept registrations at their discretion.
- 1.4.4 Registration numbers will be permanent competition numbers for the championship. Numbers will be allocated on request using a first come first served basis until the end of February 2005 within the category 2-49 (R400) and 50-99 (Roadsport A). From 1st March competition numbers will be allocated by the co-ordinator.

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1.5 CHAMPIONSHIP ROUNDS

The **Powertrain Caterham Challenge** will be contested over **12** rounds, dates and venues as follows:

Rnds	Date		Venue	DH	Club
1/2	02-Apr	03-Apr	Donington Park	X	BRSCC
3/4	23-Apr	24-Apr	Oulton Park	X	BRSCC
5/6	04-Jun	05-Jun	Thruxton	X	BRSCC
7/8	17-Jul	17-Jul	Snetterton	X	BRSCC
9/10	23 Sep	25 Sep	Brands Hatch TBC	X	BRSCC
11/12	08-Oct	09-Oct	Silverstone	X	BRSCC

DH = Double Header.

At each meeting race one, the sprint race, will be of 15 mins duration and race two, the feature race, will be of 30 mins duration.

1.6 SCORING

1.6.1 Points will be awarded to all registered competitors **in each Class** listed as classified finishers who will score points as follows:

1st	20 points	11th	9
2nd	18	12th	8
3rd	17	13th	7
4th	16	14th	6
5th	15	15th	5
6th	14	16th	4
7th	13	17th	3
8th	12	18th	2
9th	11	All other classified finishers	1 point
10th	10		

1 additional point will be awarded for fastest qualifying lap and 1 additional point will be awarded for fastest race lap

In the event of a Double Header, both races will be eligible to score full points and be eligible for trophies and prizes.

1.6.2 The totals from all rounds held of the championship, less two, will determine the final Championship points and positions.

1.6.3 Ties will be resolved according to J 3.4 of the current MSA Yearbook.

1.6.4 The organisers reserve the right to invite "Guest Drivers" to take part in any round or number of rounds, however these drivers will not be eligible to score Championship points in any event they take part in.

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1.7 AWARDS

1.7.1 There will be prizes provided by the sponsors and distributed to drivers in the **Powertrain Caterham Challenge** as follows:

1.7.2 Trophies will be given for 1st, 2nd & 3rd place winners **in each class**.

1.7.3 End of the season awards **in the form of parts vouchers** will be funded by Caterham Cars and presented as follows:

<u>R400</u>		<u>Roadsport A</u>	
<u>1st</u>	<u>£2000</u>	<u>1st</u>	<u>£1000</u>
<u>2nd</u>	<u>£1000</u>	<u>2nd</u>	<u>£500</u>
<u>3rd</u>	<u>£500</u>	<u>3rd</u>	<u>£250</u>

Trophies will be awarded to the first three drivers **in each class** in the championship.

1.7.4 BONUSSES:

Per Round: The organisers reserve the right to add bonus awards during the course of the season.

1.7.5 PRESENTATIONS:

Garlands and trophies will be provided for each meeting (as applicable) and shall be presented at the end of each round/event. All prize money will normally be posted to the entrants within 14 days of the event.

Competitors shall be obliged to attend all prize giving ceremonies for which the race meeting and championship organisers give adequate notice of the dates, times and venues for the same in their final instructions or bulletins.

1.7.6 ENTERTAINMENT TAX LIABILITY:

In accordance with current Government Legislation, the Organisers of every round are legally obliged to withhold tax at the current basic rate on all payments to non-UK resident sportsmen/sportswomen. That is, those persons who do not have a normal permanent residence in the UK. The UK does not include the Isle of Man, Channel Isles or Eire.

This means that the Organisers of every round are required to deduct tax at the relevant rate, from such payments they may make to non-UK residents. Under certain circumstances, it is possible for competitors to enter into an agreement with the Inland Revenue to limit tax withheld. Any application for such an arrangement must be made in writing and not later than 30 days before their payment is due. For further information contact: - The Inland Revenue, Foreign Entertainers Unit, 1 Princes Gate, Solihull, West Midlands, B91 3SA Tel: 0121 6062861 Fax: 0121 6062865.

1.7.7 TITLE TO ALL TROPHIES:

In the event of any Provisional Results being revised after any provisional presentations and such revisions affect the distribution of any awards the competitors concerned must return such awards to the BRSCC in good condition within 7 days.

2. SPORTING REGULATIONS - JUDICIAL PROCEDURES

2.1 ROUNDS - In accordance with Section O of the current MSA Yearbook

2.2 CHAMPIONSHIP

In accordance with Section O of the current MSA Yearbook.

In the case of exclusion for sporting infringements such exclusions may not be used for discount purposes when determining championship points. In addition, drivers who receive race bans or are otherwise precluded from taking part in any race due to direct disciplinary action by the officers of the meeting or this championship, may not use such missed races for discard purposes when determining championship points.

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3. SPORTING REGULATIONS – CHAMPIONSHIP RACE MEETINGS AND RACE PROCEDURES

3.1 ENTRIES

- 3.1.1 Competitors are responsible for sending in correct and complete entries with the correct entry fees prior to the entry closing date, which shall be 14 days before every round.
- 3.1.2 Incorrect or incomplete entries (including driver to be nominated entries) are to be held in abeyance until they are complete and correct. The date of receipt for acceptance of entry purposes shall be the date on which the Secretary of the Meeting receives the missing or corrected information or fee.
- 3.1.3 Any withdrawal of Entry or Driver/Car changes made after the acceptance of any entry must be notified to the Secretary of the Meeting in writing. If Driver/Vehicle changes are made after publication of Entry Lists with Final Instructions the competitor concerned must apply for approval of acceptance by the stewards of the meeting before signing on.
- 3.1.4 The Maximum entry fee for every round shall be as stipulated in the Supplementary Regulations plus any late entry surcharge imposed by the club.
- 3.1.5 In the event of any rounds being oversubscribed the Organising Clubs in liaison with the coordinator / organiser may at their discretion run Qualification Races. For Qualification Race procedures see 3.13 of these regulations.
- 3.1.6 Reserves are to be nominated on the final list of entries published with Final Instructions or Amendment Sheet Bulletins. All Reserves will practice and replace withdrawn or retired entries Reserve Number order irrespective of class. If Reserves are given Grid Places prior to issue of the first Grid Sheets for any round the times set in Practice shall determine their grid positions. If Reserves are given places after publication of the grid sheet and prior to cars being collected in the Official "Assembly Areas" they will be placed at the rear of the Grid and be started without any time delay. Otherwise, they will be held in the Pitlane 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 startline or pitlane exit, whichever is the later. Such approval to start MUST be obtained from the Clerk of the Course.

3.2 BRIEFINGS

Organisers will notify competitors of the times and locations for all briefings in the Final Instructions for all meetings, competitors must attend all briefings.

3.3 PRACTICE

- 3.3.1 The minimum period of practice to be as specified in the MSA Regulations in respect of circuit lengths.
- 3.3.2 Should any practice session be disrupted the Clerk of the Course shall not be obliged to resume the session or re-run sessions to achieve the championship/series criteria and the decision of the Clerk of the Course shall be final.
- 3.3.3. Should the need arise to stop any practice, RED LIGHTS will be switched on at the Start Line and RED FLAGS will be displayed at the start line and at all other Marshal 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 return to the pit lane unless directed by officials not to do so.

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3.4 QUALIFICATION

Each driver should complete a minimum of 3 laps practice in the car to be raced and in the correct session in order to qualify for selection and order of precedence as set out in the MSA regulations J4.4. The Clerk of the Course and or Stewards of the meeting shall have the right to exclude any driver whose practice times or racing are considered unsatisfactory as per MSA Regulation J 4.4.3.

The standard minimum scheduled distance for the qualifying session shall be 15 minutes duration this will establish the grid for race one, the sprint race. The grid for race two, the feature race, shall be determined by the finishing positions of race one

3.5 RACES

3.5.1 The standard minimum scheduled distance of race one, the sprint race, shall be 15 minutes. The standard minimum scheduled distance of race two, the feature race, shall be 30 minutes. If any race distance is reduced at the discretion of the Clerk of the Course or Stewards of the Meeting, championship points will be awarded on the following scale:

between 60-100% of originally intended race distance, full points

25-59%, half points

less than 25%, no points

Where a race has been stopped and restarted, the total number of laps run during each section of the race shall be taken into account for the purposes of determining the percentages above.

3.6 STARTS

3.6.1 All race start countdowns are to have a minimum elapsed period of 3 minutes from the time all cars are released to form up the grid to the start of the Green Flag lap(s) in the formation as specified on the Track Licence for the Circuit.

3.6.2 The Countdown procedures shall be:

Standing Starts:

1 minute to start of Green Flag lap - Start Engines/Clear Grid.

30 Seconds - Visible and audible warnings for the start of Green Flag lap.

3.6.3 The use of tyre heating/heat retention devices, tyre treatments and compounds is prohibited on the grid.

3.6.4 Any cars removed from the grid after the 1-minute stage or driven into the pits on Green Flag shall be held in the pit lane. They 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 the later.

3.6.5 Any drivers unable to start the Green Flag lap or start are required to indicate their situation as per MSA Regulation J 13.10.2. Any drivers unable to maintain grid positions on the Green Flag to the extent that all other cars are ahead of them may complete the Green Flag Lap. They MUST remain at the rear of the last row of the grid but ahead of any cars to be started with a time delay.

3.6.6 Excessive weaving to warm-up tyres using more than 50% of the track width and falling back in order to accelerate and practice starts, is prohibited.

3.6.7 A 5 Second Board will be shown to indicate that the Grid is complete. The red lights will be switched on five seconds after the board is withdrawn. In the event that the starting lights fail the Starter will revert to using the National Flag.

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3.7 RACE STOPS

3.7.1 Should the need arise to stop any race, 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 starting grid area, which will automatically become a Parc Fermé area.

Cars may not enter the pits unless directed to do so. Work on cars already in the pits must cease when a race is stopped.

3.7.2 Case A – Less than two laps completed by the race leader.
The Race will be null and void. The race will restart from the original grid positions. Competitors unable to take the restart may be replaced by reserves who will start at the back of the grid in reserve order. The length of the restarted race will be determined by the Clerk of the Course.

3.7.3 Case B – More than two laps completed by the race leader but less than **50%**
The Race will restart from the grid set out in the finishing order of part one (as per J5.4.4) The result of the race will be the finishing order at the end of part 2. The length of the restarted race will be determined by the Clerk of the Course.

3.7.4 If the race had to be stopped after the leader had completed more than **50%** of the race distance, it shall not be restarted and the results will be declared in accordance with MSA Regulation J 5.4.4.

3.8 RE-SCRUTINY

All vehicles reported involved in contact incidents during races or practice must be re-presented to the Scrutineers before continuing in the races or practice.

3.9 PITS AND PITLANE SAFETY

3.9.1 PITS: Entrants must ensure that the MSA, Circuit Management and Organising Club Safety Regulations are complied with at all times.

3.9.2 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 due care and drive at minimum speeds in the Pit Lanes.

3.9.3 REFUELLING: May only be carried out in accordance with the MSA J 14 Regulations, Circuit Management Regulations and SR's or Final Instructions issued for every meeting.

3.10 RACE FINISHES

The drivers will be notified of the progress of the race in the following way:
When there is 5 minutes remaining, drivers will be shown a 5 minute board. The leader and the whole field will then be shown a last lap board. On completion of the last lap, the chequered flag will be shown.

After taking the Chequered Flag drivers are required to progressively and safely slow down. Remain behind any competitors ahead of them, return to the pit lane entrance as instructed, comply with any directions given by marshals or officials and to keep their helmets on and harnesses done up while on the circuit or pit lane.

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3.11 RESULTS

All practice time sheets, grids and race results are deemed to be provisional until all vehicles are released by scrutineers after post practice/post race scrutineering and/or after completion of any judicial or technical procedures.

3.12 TIMING MODULES

3.12.1 All competitors will be required to fit Electronic Self Identification Modules to their cars for the purposes of accurate timing. Holders for these and detailed fitting instructions will be issued with the transponders and it will be the responsibility of the competitor to fit these in the car in the position and manner specified. The Modules must be in place and functioning correctly for all Championship qualifying practice sessions and races. The setting and servicing of these items must only be carried out by properly authorised MSA licensed Timekeepers. Competitors will be charged by the timing company for replacement of the Modules due to misuse or loss at any time during the season.

3.12.2 Competitors may not place electronic timing equipment within five metres of the official Start, Finish or any other official timing lines at any event or test session/day. Any such equipment placed within these zones will be removed.

3.13 QUALIFICATION RACES

In the event of the need for any qualification races, the procedures will be as published in the Final Instructions for the events concerned.

3.14 OPERATION OF SAFETY CAR

3.14.1 The Safety car will be brought into operation to neutralise a race upon the sole decision of the Clerk of the Course.

3.14.2 It is anticipated that in most cases the Safety Car will join and exit via the pit lane and that the Safety Car boards will be shown initially from the startline, if for safety reasons either of these procedures are to be varied a specific drivers and observers briefing will be given at the event, detailing the exact procedure to be used.

3.14.3 On the order from the clerk of the Course, the Safety Car will join the circuit with its revolving lights on, regardless of where the race leader is.

3.14.4 When the order is given to deploy the Safety Car a stationary yellow flag and "SC" board will be displayed at the start finish line, subsequently at each flag post, as the Safety Car approaches their sector. A second yellow flag may be used at those points where additional hazards are present. At circuits where the Safety Car is deployed from a location other than the pit lane exit see (3.14.2) above.

3.14.5 Flashing yellow lights may also be used at the startline and at other points around the circuit.

3.14.6 Each time the Safety Car passes a flag point the yellow flag will be waved continuously while the Safety Car and all competing cars following it remain in the section between this point and the next flag point.

3.14.7 All competing cars, when notified of the Safety Car intervention (by the flag signals, SC boards, or by any another means) will reduce speed and line up behind the Safety Car, no more than 5 car lengths apart, and maintaining the same speed as it. Overtaking or overlapping of any other competing car during a Safety Car intervention is forbidden. Overtaking of a Safety Car is forbidden unless the particular competitor concerned is signalled to overtake the Safety Car by the observer in the Safety Car.

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- 3.14.8 When ordered to do so by the Clerk of the Course, the observer in the Safety Car will wave past any cars between the Safety Car and the race leader. These cars will continue at a reduced speed and without overtaking until they reach the line of cars behind the Safety Car.
- 3.14.9 While the Safety Car is in operation competing cars may stop at their pit, but may not rejoin the track while the Safety Car and the line of Cars following it are passing the Pit Exit. A car rejoining the track will proceed at reduced speed and without overtaking until it reaches the end of the line of cars behind the safety.
- 3.14.10 The Safety Car will remain in operation until at least all competing cars on the circuit are lined up behind it.
- 3.14.11 When the Clerk of the Course calls in the Safety Car it will extinguish the yellow flashing lights prior to exiting the circuit. (It is recommended that the minimum of 25% of a lap for circuits over 2 miles, and 50% of a lap for circuits under 2 miles should be completed with the lights extinguished.
- 3.14.12 Following the withdrawal of the Safety Car and prior to the passing of the green flag, the race leader will maintain the pace.
- 3.14.13 When the Safety Car pulls off the Circuit a green flag will be waved at the start line and / or the green light shown. Overtaking remains strictly forbidden until the car passes the green flag at the start line. All flag posts will withdraw their yellow flag and "SC" board, in race direction rotation and replace them with a stationary green flag for one lap.
- 3.14.14 Each lap covered while the Safety car is in service will be counted as race lap.

4 SPORTING REGULATIONS – CHAMPIONSHIP RACE PENALTIES

4.1 INFRINGEMENTS OF TECHNICAL REGULATIONS

4.1.1 Arising from post practice scrutineering or judicial action:

Minimum penalty: As laid down in MSA Regulation O 3.3

4.1.2 Arising from post race scrutineering or judicial action:

Minimum penalty: The provisions of MSA Regulation O 3.5.1 (a) and (b)

For infringements deemed to be of a more serious nature or a deliberate attempt to gain an advantage the Clerk of the Course and/or Stewards of the Meeting are to invoke the provisions of Regulation O 3.5.1 (c)

4.1.3 ADDITIONAL SPECIFIC CHAMPIONSHIP PENALTIES

The Stewards of the Championship reserve the right to impose further penalties on competitors found to have transgressed any of the technical regulations up to the following levels:

Exclusion from the championship of any competitor who is penalised three times for technical infringements during the course of one season.

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4.2 INFRINGEMENTS OF NON TECHNICAL MSA REGULATIONS AND THE SPORTING REGULATIONS ISSUED FOR THE CHAMPIONSHIP

4.2.1 Any driver deemed by the Stewards of the Championship to have brought the promoter (Caterham Cars) the championship or the sport into disrepute through his or her behaviour or actions, wherever this may be, may be subject to disciplinary measures imposed by the Stewards of the Championship including points penalties, mandatory driving assessment, instruction, race bans or exclusion from the Championship.

4.2.2 Additional Specific Championship Penalties

Single Qualifying Session, Single Race.

At any meeting, event, official qualifying or race, where any competitor shall be found guilty of any of the following offences, they shall forfeit all points in the championship gained solely at that event to that point during the event and shall be ineligible to score any points for the remainder of that event.

Multiple Qualifying/Multiple Race.

In the case of double header races or multi-races, where an offence below is committed during any qualifying session(s) or the first race, then points gained for the qualifying session(s) and the first race will be forfeited. Where an offence occurs during any subsequent race then the points solely gained for that race shall be forfeit.

Should two separate offences be committed, then all points shall be forfeited for that whole event, irrespective of the timing of the offence committed at that event. Where a "double header" event take place at the same venue over a weekend and is conducted as two separate race days then this regulation shall only apply to each day individually.

The offences are;

- a Reckless or dangerous driving in the course of a meeting. (see O.1.1.5)
- b Careless driving in the course of a meeting (see O.1.1.6.)

4.2.3 In order to maintain standards of conduct, the Championship Coordinator will monitor all Officials/Observers reports of adverse behaviour at race meetings. If any individual is included on two such reports during one racing season he will receive written warning from the Championship Coordinator that his driving/behaviour is to be specifically observed at future race meetings. Any adverse reports during this period of observation could result in official MSA action and will result in a Championship Stewards' enquiry, with possible loss of Championship points and refusal of further race entries.

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5. TECHNICAL REGULATIONS

5.1 INTRODUCTION

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 specify that you can do it, you should work on the principle that you cannot. All references to the MSA Yearbook (blue book) relate to the current edition.

5.1.1 SCRUTINEERING

The official MSA Eligibility Scrutineer or his appointed deputy will be attending rounds of the championship and he is available to provide advice as well as ensuring that the regulations are strictly enforced to ensure fair play.

All Powertrain Caterham Challenge cars must comply with the requirements as laid down in the Technical regulations at all times, whether during official practice or racing and it is the Entrant's responsibility to ensure all such requirements are met. Any infringement of the Technical Regulations will render the competitor liable to penalties as set out in Section 4 of these regulations.

Technical checks may be carried out before, during and after practice and again at the end of the race. The Eligibility Scrutineer or his appointed deputy is empowered to undertake any form of technical verification procedure that he deems necessary and may order the removal of parts from the car, substitution of standard parts, or for the car to be otherwise dismantled in order to carry out inspection. This specifically includes the substitution of parts at random and the Scrutineer has the right to swap components from car to car.

Cars may be taken back to Caterham Cars after any race meeting for full technical examination.

The Eligibility Scrutineer or his appointed deputy reserves the right to check any suspect part directly with a standard part as supplied by Caterham Cars Ltd. Suspect parts that might need to be removed for checking elsewhere will be marked by official MSA approved seals and a certificate of sealing will be handed to the competitor or his agent. This certificate will detail the seals and the precautions that need to be taken to keep the seals intact. Should the competitor or his agent not be present whilst his car is being dismantled for checking, no dispute over his vehicle or its components will be entertained. All costs will be borne by the competitor.

It is a condition of the championship that any vehicle may be selected for an engine power test by the Eligibility Scrutineer or his appointed deputy immediately after a race or timed practice and its brake horsepower measured over a representative range of engine speeds. The organisers cannot be held responsible for mechanical damage to engines and transmissions when under test. However such tests will not put the cars through any stresses beyond normal design limitations.

Although the co-ordinator and technical personnel from Caterham Cars are happy to advise competitors on rules and regulations, they are not empowered to give any kind of judgement regarding the eligibility of cars.

Finally, don't forget that although your Scrutineer is happy to speak to you about these regulations, it is extremely discourteous to contact him after 10.00pm.

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Issued by the BRSCC: Friday, 11 February 2005

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5.2 GENERAL DESCRIPTION

The **Powertrain Caterham Challenge** is a one make racing Championship for competitors using **either R400 or Roadsport A specification race** cars.

All Roadsport A cars must remain road legal with the exception of removal of some but not all lighting equipment as specified in section 5.10.1. It is not permissible to update an existing road car to **these** unique specifications.

New cars are supplied to competitors in CKD form and must be assembled as per the detailed instructions provided by Caterham. No modifications whatsoever are allowed from the basic specification except those described below.

These regulations include certain optional enhancements and cars may run without these optional modifications providing that they conform to the weight limit - if necessary by adding ballast.

5.2.2 EXAMINATION OF VEHICLES

The organisers (in addition to any other powers they may have under these Regulations) reserve the right before or after any race in the championship/series to designate any one or more of the competing cars for special eligibility scrutineering. Upon such election being made the competitor shall immediately place the car under the control of the organisers and be deemed to have permitted all such scrutineering, examination and testing as the organisers may responsibly require to undertake. The organisers have the right to:

- a Examine the car at the circuit for such period as they may reasonably require and take fuel samples and/or
- b Retain the car for detailed examination at premises chosen by the organisers. If the organisers elect to retain the car they shall make it available for collection by the competitor at least seven days prior to the qualification session for the next race in the championship/series unless the car is found to be in breach of these regulations and/or
- c Seal the car and its components in such a manner as they may choose and require the competitor at their own expense to present the car at any other premises chosen by the organisers for detailed examination within a specified period and/or remove the car by transporter at no expense to the competitor to an appointed location. The competitor will be advised in writing of the time, date and location of the subsequent testing or eligibility examination.

The overseen stripping of the engine or any required component will be undertaken by the competitor and/or mechanic/technician nominated by the competitor.

The organisers reserve the right to re-inspect vehicles at any time during the course of the season, should there have been a regulation infringement or circuit incident.

Competitors will be personally and solely responsible for ensuring that their cars comply with their registration details and with these regulations for each event at which they are entered. Failure to comply in either respect will be a breach of these regulations and will be deemed ineligible. Queries concerning eligibility should be referred in writing to the series Eligibility Scrutineer at least seven days prior to an event entered, to permit a ruling in advance of any meeting at which it is intended to compete.

Tests to establish the power output of any car's engine may be carried out by the organisers or their representatives. Such power testing will be carried out using the championship engine builder's dynamometer equipment.

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5.3 SAFETY REQUIREMENTS

All cars must conform to the general and competition regulations of the MSA Ltd, which define minimum safety requirements for racing purposes. All cars must conform to these regulations before they can be accepted for either racing or official practice. You should refer to the current MSA Ltd Yearbook sections E12, J(C) and Q Safety Requirements.

A Caterham Cars supplied FIA approved full rollover cage (Caterham part number 79133 or 79133U) must be fitted to all R400 cars without further modification and must be bolted, not welded in place.

Roadsport A cars must be fitted with one of the following Caterham roll cages part no: 79131, 79131U or 79131T. The cage must be bolted in place without modification not welded.

The cage incorporates a head restraint to Q13, which must be covered with some form of padding. In the event that the head restraint provided by Caterham Cars is incorrectly positioned for the driver, the design of the head restraint is free providing that it conforms to MSA Ltd requirements as laid down in Q13.

Fitment of Caterham roll cage padding (part no: 79136) to the rollcage main rear hoop, roof diagonal or curved roof tube and drivers side cant rail is mandatory

Use of Caterham supplied rear wheel protection bar (part no: 77851/96) is mandatory in the R400 Class.

In Roadsport A use of either Caterham supplied rear wheel protection bar (Part no. 77851-96) or side impact / rear wheel protection bar (Part no. 77856) is mandatory.

In Roadsport A use of Caterham side intrusion bar is permitted in conjunction with rear wheel protection bar (Part no. 77851-96) but not mandatory.

The bolt-in cockpit stiffening wishbone, if supplied, may not be removed or its fastenings loosened.

A six point full harness safety belt must be fitted complying with MSA regulations. Belts designed to pick up on the correct points on the chassis are available from Caterham Cars. The use of arm restraints is mandatory and these are also available from Caterham. Competitors are recommended to replace complete belt sets involved in accidents.

The car must be fitted with 2.25 Litre capacity plumbed in fire extinguisher to MSA specification Q3.1.2(a). This system must be capable of being operated from both inside and outside the car, and must include nozzles directed into both the engine compartment and the interior. This extinguisher may be relocated from its standard position in the passenger foot well to the boot, provided that it is securely bolted in place. The fire extinguisher pull of a plumbed in system must be marked by a black 'E' on a red circle.

Under MSA and FIA regulations, fire extinguishers need to be recertified every two years. If your car is two years old this year, it is likely that your extinguisher will require this.

We recommend sending it to Lifeline Systems in Coventry for servicing and approval. The cost is £16.54 plus return carriage (£12) and VAT in both cases.

To arrange return, please contact Jim or Tracey at Lifeline directly on 02476 712999; address: Burnstall Road, Coventry, CV5 6BU.

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An electrical master switch to Q8 capable of isolating the battery and ignition systems must be fitted in such a position that it can be operated from both inside and outside the car. The switch and wiring provided allows it to be located on the centre of the scuttle. It is not mandatory to use a Caterham supplied switch.

The electrical cut out must be marked by a red 'spark' on a blue triangle.

The ignition switch 'OFF' position must be marked.

The battery must be located within the engine bay and its terminals must be protected by non conductive covers. The earth lead must be clearly marked in yellow. MSA regulations require that only the battery master switch and an electrically operated fire extinguisher may be connected to the battery.

The rear bulkhead behind the driver and over the petrol tank must be made flameproof to JC 20.1.1.

All R400 race cars are provided with a safety fuel cell, the use of which is mandatory. This must be mounted in the specified position and the fuel filler vent and screw type cap must comply with Q6. Competitors are reminded that safety cells first used in the **1999** Superlight R Championship will require re-validation prior to **use in overseas events in the 2005** season. **Roadsport A cars are not required to have a fuel cell but can be upgraded to this specification.**

A high intensity rear light must be fitted.

You should also refer to section Q9 concerning overalls and Q10 for crash helmets. The wearing of balaclavas and flameproof gloves are mandatory in BRSCC championships. The wearing of open faced helmets in this championship is prohibited.

Use of an FIA approved HANS Device is only permitted if the device is installed in accordance with FIA regulations. Competitors attention is drawn to the FIA Institute "Guidance for use of HANS in international motorsport" available on the FIA website. Competitors must present their car complete with HANS device, fitted seat including notification of the seat position if mounted on sliding runners, compatible helmet, and compatible 6 point harness to Arch Manufacturing, Caterhams chassis supplier, to allow any necessary chassis modifications to the upper seat belt anchorages to be made. Competitors should note that chassis modifications will be refused unless supporting paperwork is supplied to specify the correct locations of the upper seat belt anchorages. Modifications will also be refused unless a 6 point safety harnesses and helmet approved for use with the HANS device are presented. A charge will be made to modify the chassis and proof of modification will be issued by Arch Manufacturing. Competitors may be asked to prove FIA compliance of their HANS device and to present their proof of modification paperwork at scrutineering.

All chassis are manufactured with towing eyes (J(C) 20.1.3) front and rear and these should be clearly marked with an arrow in a contrasting colour.

All chassis are manufactured with aluminium honeycomb side impact protection which must not be removed.

The dry sump oil tank breather must vent into a transparent catch tank which complies with J(C) 20.9.2 and J(C) 20.9.3.

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5.4 GENERAL TECHNICAL REQUIREMENTS AND EXCEPTIONS

This is a one make formula and all cars are to be in identical specification with the exception of the adjustments permitted by these regulations.

No standard components can be modified, substituted, relocated or changed in any way except those specified herein.

If in the light of experience safety related changes to these regulations are necessary, competitors will be given at least 10 days notice to effect modifications.

All vehicles must comply with MSA General Technical Regulations contained within Sections E & J of the current MSA Yearbook.

It is recommended that any space between the drivers seat back and the seat back bulkhead is filled with twin pack seat foam

5.5 CHASSIS (SEE CHASSIS/BODYWORK)

5.6 CHASSIS/BODYWORK

All R400 cars eligible for this Championship must use the specifically designed and manufactured bespoke chassis (part number CRD98R) or its left hand drive equivalent. Cars must race with a wind deflector, simplified dashboard, cycle wings and a high intensity rear light.

All Roadsport A cars eligible for this championship must be built using one of the following chassis: CRD98RK, CRD01.5RK, CRD02RR OR CRD03RR

All vehicles must have a section aluminium sideskin removed from the lower section to expose the chassis member on both sides to allow for ride height to be measured. This must be at the front most section, where the chassis rails meet the chassis **cross** member. This must measure 30mm x 30mm.

All cars must use Perspex wind deflector (Part no. 76064)

5.6.1 MODIFICATIONS PERMITTED

GENERAL:

A revised stronger top wishbone rear mounting was introduced for the 1999 season and older chassis can be fitted with this part. The modification must be carried out by Arch Motors.

Fitment of Caterham lowered drivers floorpan (part no: 76470) is permitted using steel rivets vertically and aluminium rivets horizontally but cockpit floor bracing tubes must be retained.

INTERIOR:

The driving seat is free but it is important to note that the driver's helmeted head must be at least 5cm below the top of the rollover bar when normally seated.

It is permitted to cut slots into the seat back aluminium panel to allow the shoulder straps of the seat belts to be fitted underneath the harness tube rather than above.

EXTERIOR:

The positioning and size of the exterior mirrors is free provided they conform to MSA requirements fitted.

Caterham stainless steel protectors may be fitted to the rear wings.

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R400 race cars are equipped with aluminium boot and tonneau covers, Use of these covers is mandatory. Existing Superlight R race cars must be upgraded using package part number TUR2003 or its left hand drive equivalent.

These parts are prohibited for Roadsport A.

A short undertray designed to protect the crankshaft pulley and belt is available from Caterham Cars (part number 70113) but not mandatory. No other undertrays are permitted. It is permitted to cut a hole in the tray to allow use of the MST transponder.

SILHOUETTE:

No modifications allowed.

5.6.2 MODIFICATIONS PROHIBITED

GENERAL:

The standard Caterham supplied chassis must be used unmodified in any way and strengthening or stiffening by whatever means is expressly forbidden, other than those specified in 5.6.1. Only the honeycomb panels permitted in these regulations may be fitted. These should not be bonded into place, but can be riveted to the aluminium floor, not the chassis rails.

INTERIOR:

Do not attempt to add any extra stiffness to the chassis frame. The Eligibility Scrutineer or his deputy reserves the right to select cars to be returned to the Caterham Cars factory to have torsional stiffness measured. Should there be any deviation from accepted production tolerances the assumption will be made that modifications have been made and that chassis will not be permitted to race again, notwithstanding the application of any penalties.

The bolt in the cockpit stiffening wishbone may not be removed or its fastenings loosened.

Removal of the drivers side honeycomb panels (part no: 76817 and 76818) is prohibited unless Caterham lowered floor (part no: 76470) is fitted.

Fitment of passenger side aluminium honeycomb panels is prohibited.

Fitment of a carbon fibre dashboard is prohibited.

EXTERIOR:

It is not permitted to drill any holes into or to modify the outer skin or inner panelling of the car except where specified in the assembly instructions.

Wings and nosecone must remain in glass fibre as standard and the substitution of aluminium or carbon fibre items even though available from Caterham is not permitted.

Fitment of carbon fibre rear wings protectors is prohibited.

SILHOUETTE:

No modifications are permitted. In particular the front wing location must be bonded or bolted as designed by Caterham Cars. The leading edge of the wing to the centreline of the front arm of the wingstay must be 65mm +/- 10mm.

GROUND CLEARANCE:

Ride height may be adjusted subject to a minimum ground clearance measured from the lowest point on the chassis side rails underneath the second suspension leg excluding bolts, screws, nuts and rivet heads with the driver normally seated in the car.

The minimum ground clearance for the R400 Class is 110mm.

The minimum ground clearance for the Roadsport A Class is 120mm.

All vehicles which arrive in Parc ferme after either qualifying or race with flat tyre/s may be excluded for contravention of the above regulation.

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5.7 ENGINES

Only Caterham race specification **133 bhp 1.6 litre Roadsport A engines built by Caterham or rebuilt by Minister Racing Engines and** 200 bhp 1.8 litre **R400** engines built and sealed by Minister Racing Engines are eligible for this championship. **R400** Engines must have the original gold Caterham cam cover inserts fitted at all times.

It is mandatory of all engines to be fitted with Caterham dry sump lubrication.

The engines of pre 2000 Superlight R race cars which have not been upgraded to roller barrel induction must be modified by the official race builders, Minister Racing Engines.

In the event of an engine failure or wear, the engine must be returned Minister Racing Engines, to be rebuilt and resealed. It is the competitor's responsibility to return his engine, fully kitted, to Minister Racing Engines and to pay the cost of the rebuild. Caterham Cars have provided Minister Racing Engines with spare engines that may be purchased or hired.

5.7.1 PERMITTED MODIFICATIONS

Caterham supplied roller barrel support struts are mandatory. Part numbers 73455 (front) and 73457 (rear).

The fitment of a highline dry sump pick up pipe (Part number 75716) is mandatory
The fitment of revised dry sump idler pulley (Part number 75664) is permitted and recommended.

An alternative dry sump belt tensioner mechanism was introduced into the Superlight R championship in 2000. Both the earlier and later versions are permitted.

The fitment of a remote oil pressure sender is optional and available under Caterham package number OS01.

Both standard Rover big end bearings and revised Caterham specification bearings (Part number 73474) are permitted.

Fitment of oil cooler kit package number OC06 is mandatory.

Use of alternative Caterham oil filter adaptor (Part number: 70216) and oil cooler hoses is permitted when available.

Fitment of cylinder head blanking pins (Part number MREK26) is permitted.

Fitment of baffle plate (Part number CAT/500/SL) is permitted.

It is permitted to use cap head bolts to secure the engine mounting brackets to the rubber engine mountings.

Fitment of Caterham supplied piston/rod assembly Part No: LFF 101260A is permitted in Roadsport Class A.

No other modifications are permitted.

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5.7.2 PROHIBITED MODIFICATIONS

No modification to the Caterham specification engine other than those specified in these regulations are permitted. All engines must confirm to the specification held by the championship Scrutineer and Minister Engines.

It is strictly forbidden for a competitor to modify, remove or substitute any component or part of the engine or any of its ancillaries, nor should the MSA seals be removed or tampered with. Should these seals be damaged or removed for whatever reason except under the direction of the MSA scrutineer or Official championship engine builder, Minister Racing Engines, the car should not be raced or practised until the MSA scrutineer or Official championship engine builder, Minister Racing Engines, has inspected the engine and refitted the correct seals. The scrutineer or his appointed deputy may require that the engine be removed and taken to Minister Racing Engines to be power tested, the costs of which will be borne by the competitor. If considered necessary, the engine will be dismantled for inspection and the cost of this, and subsequent rebuild, will be borne by the competitor. All instances of broken seals are logged and reported to the championship organiser. Suspect engines are most likely to be subjected to strip and inspection at the competitor's costs.

It is prohibited to make any connection to the outlets on both the air pressure sensor and the fuel pressure regulator. In addition, it is prohibited to connect these outlets to each other.

The throttle potentiometer and its fixings must remain standard and in the original position.

Cam sprocket, crank sprockets and cam belt must remain standard and in original positions.

It is prohibited for competitors to make any modifications to the oil pressure relief mechanism.

All engine rebuilds or the fitment of updated components must be carried out by Caterham Cars or championship engine builder, Minister Racing Engines, who will refit the appropriate seals before engines are returned to competitors.

5.7.3 LOCATION:

On no account must the engine be relocated within the chassis and only the standard Caterham engine mounting brackets and rubbers are permitted. Revised engine mounting rubbers featuring an internal restraint system (*part number BM382FS*) were made available by Caterham Cars during the course of the 2000 season, the fitment of these is permitted. External engine mounting restraints are no longer mandatory.

A revised bolt (Part number: BMCH10X100) to hold the right engine mounting bracket and dry sump pump cradle onto the side of the block is permitted.

5.7.4 COOLING SYSTEM:

Use of triple parts radiator Caterham Part number 73159 is mandatory **in both classes.**

In R400 Class use of ECU control cooling fan kit (Package number CF01) is mandatory and the cooling fan must be operational at the end of each race.

Removal of the thermostat is mandatory **in both Classes.**

Connection of the cooling system bypass circuit is mandatory **in both Classes.**

In both Classes fitment of Caterham stone guard part number 77778 between the radiator and the grille is mandatory.

It is permitted to fit a dashboard mounted manually operated cooling fan switch on Roadsport A cars.

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In cooler conditions tape should be applied to the radiator or nose cone to maintain an engine water temperature of between 65°C and 75°C. Higher temperatures will compromise both the performance and reliability of the engine.

Use of the Caterham supplied silicon cooling hoses is permitted.

No other modifications are permitted.

5.7.5 INDUCTION SYSTEM:

A roller barrel induction system was made mandatory on the Superlight R for the 2000 season and all older engines **competing in the R400 Class** must be returned to Minister racing engines for modification.

In the R400 Class a revised throttle linkage to operate the roller barrel induction system part number. **UTQ001 is permitted and recommended to enhance reliability. Competitors should note that the revised parts must be installed by Minister Racing Engines and cannot be installed at a race meeting.**

The Roadsport A induction system must remain standard and un-modified.

The Caterham supplied throttle pedal clasp bush is permitted (Part number 74127).

A throttle pedal stop must be used and whilst the design of this is free, Caterham part number 74128 is available but not mandatory.

No other modifications are permitted.

5.7.6 EXHAUST SYSTEM:

The following sets of exhaust primary pipes are both legal **in the R400 Class only**:

Cylinder No 1	CSP 625 or CSP 662
Cylinder No 2	CSP 626 or CSP 663
Cylinder No 3	CSP 627 or CSP 664
Cylinder No 4	CSP 628 or CSP 665

Primary Pipes CSP 653/4/5/6 are suitable for use with the latest competition starter motor 70270 and all previous starter motors.

Either external or internal modifications by means of application of additional material or by a manufacturing / coating process are prohibited.

5.7.7 IGNITION SYSTEM:

In the R400 Class a Caterham/Minister Racing Engines developed management system is mandatory and unchanged for the **2005 season**.

In the R400 Class only Champion RC6YCC spark plugs are permitted.

In the Roadsport A Class the MEMS management system with Caterham supplied ignition map is mandatory.

In the Roadsport A Class spark plugs part no: BCP7ES are mandatory and on EU3 spark plugs GSP66527 (alternative no: NLP 100290) are mandatory

The ECUs are **security** protected and must not be removed or tampered with or substituted except by the eligibility scrutineer or designated persons.

No other modifications are permitted.

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5.7.8 FUEL DELIVERY SYSTEM:

In Roadsport A Class the MEMS management system with Caterham supplied fuel map is mandatory.

A Caterham/Minister Racing Engines developed management system is mandatory and unchanged for the **2005 R400 Class**

The fuel pump may be moved from its standard location. The standard item as supplied by Caterham Cars must be used. Competitors should note that the performance of the fuel pump will be impaired if it is allowed to run without fuel available to pump. To ensure reliable operation it is recommended that the pump be replaced at least once per season.

Use of the standard non-adjustable fuel pressure regulator is mandatory. With the engine at the correct operating temperature, and the engine idling, **and the manifold vacuum pipe disconnected on Roadsport A cars** the fuel pressure in the fuel rail shall be 3.0 BAR + or - 0.15 BAR. Cars found to have fuel pressure outside these limits will be considered illegal.

Revised fuel rails featuring Schrader valves for fuel pressure measurements are legal when available.

The fuel tank vent must be installed to prevent spillage through the breather system.

No other modifications are permitted.

5.8 SUSPENSION:

The front "widetrack" suspension is comprised of double unequal length wishbones and an anti-roll bar and features Bilstein competition dampers and coil springs. The De Dion rear suspension is located by a lower A-frame and outboard longitudinal Watts linkages.

R400 race cars **must use** front dampers (Part no: 74504), rear dampers (Part no: 74505) and rear tender springs (part no: 74541). An upgrade package (Part no: SUR2003) is available to update existing Superlight R race cars and use of the dampers and tender springs is mandatory.

Roadsport A cars must use front damper (Part no. 74501) and rear damper (Part no. 74502)

Front dampers must be fitted with the main body fixed to the chassis (upside down). Rear dampers must be fitted with the main body fixed to the De Dion tube (right way up).

No modifications to the suspension supplied will be allowed and all pick up points must remain unchanged from standard.

R400 race cars are equipped with mandatory revised front stub axles, wheel bearings and aluminium hubs. An upgrade package (Part no: HUR2003) is available to update existing Superlight R race cars and is mandatory. **Roadsport A cars may use these parts but they are not mandatory.**

A revised stronger and wider De Dion tube was introduced in 2002. This tube is mandatory for the **2005 Powertrain Caterham Challenge**. The revised version can be identified as it has only one mounting per side for the dampers and retains the same part number (79028) as the previous version.

De Dion tubes should be changed as a matter of course following an accident. Furthermore it is recommended that tubes are regularly inspected for damage. Failure to tighten damper securing bolts to the threaded bushes may result in the bush being torn out of the tube.

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5.8.1 MODIFICATIONS PERMITTED:

Ride height may be adjusted using the damper spring seats subject to the minimum ride height requirements detailed in section 5.6.2.

It is permissible to adjust front camber to a maximum of 3° (negative) and castor angles by means of the adjustable length top wishbone provided and by shimming the lower wishbone with washers.

No modification can be made to the De Dion tube except that shims may be inserted to adjust camber to a maximum of 3° (negative) and toe angles as required.

Front and rear coil springs are free provided that they must be single rate linear items within the limits specified below. They must mount in the same positions as standard and be made of steel.

In the R400 Class only one spring may be fitted to each front damper. Rear dampers must be fitted with both the mandatory tender spring and a linear rate primary spring.

In the Roadsport A Class only one spring may be fitted to each front and damper.

It is permitted to substitute cap head bolts to secure the front spring / damper assembly to the chassis.

Front and primary rear spring rates limits **in both Classes** are as follows:

Maximum: 300lb per inch displacement

Minimum: 180lb per inch displacement

The following Caterham supplied front anti roll bars are permitted:

Diameter	Colour Code	Part Number
18 mm	Green	75556
? "	Red	75561
$\frac{9}{16}$ "	Blue	75559
$\frac{1}{2}$ "	Orange	75552

The front anti roll bar may be removed but if fitted must be properly connected.

Only a $\frac{1}{2}$ " diameter Caterham supplied rear anti roll bar is permitted.

It is permitted to remove or disconnect the rear anti-roll bar.

Revised 'A' frame kit (Package number SUR2001) is permitted.

5.8.2 MODIFICATIONS PROHIBITED:

No other modifications whatsoever are permitted to the car's suspension and suspension components must not be modified in any way nor may suspension pick up points be changed.

It is specifically prohibited to cut down the damper bump stops.

The rear tender spring (Part no: 74541) must be fitted **at all times on all R400 cars**

5.8.3 WHEELBASE AND TRACK:

Wheelbase:	2225 mm
Front Track:	1336 mm
Rear Track:	1346 mm
Overall Length:	3100 mm
Overall Width:	1575 mm

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A tolerance of plus or minus 5mm is permitted to account for dimension changes caused by permitted suspension adjustment.

5.9 TRANSMISSION:

The standard 6 speed transmission specification including gearbox, belltank-housing, clutch, axle and differential must be retained and fitted according to standard specification.

All cars must run with the ZF limited slip differential.

In the R400 Class 30° angle differential ramps, ground to Caterham specification to reduce preload are mandatory.

In the Roadsport A Class 45° angle differential ramps with standard ZF preload are mandatory.

5.9.1 MODIFICATIONS PERMITTED:

The limited slip mechanism can be fitted with shims to enhance static break-off torque to compensate for worn items to or adjust to driver preference. These shims are available from Caterham Cars under part number 77005 (0.005") and part number 77010 (0.010")

Use of both the standard ratio clutch pedal (Part number 74410A) and the high ratio clutch pedal (Part number 74400) is permitted.

A clutch stop may be fitted and the design is free. Caterham supply a suitable part under part number 74128.

Use of either the Ford derived Caterham specification gearlever (Part no: 72291A) and the Quaife alternatives (Part no: 72300 & 73449 set in either standard or quick shift mode are permitted.

The design and make of the gear knob is free.

The following upgraded parts have been introduced and are permitted:

Second gear	Part number: 70043U
Third gear	Part number: 70045R
Fifth gear	Part number: 70040U
Layshaft	Part number: 70065U
Selector operating collar and pin	Part number: 70023U
Selector to gearbox adaptor	Part number: 70099U

The following upgraded parts may be introduced during the **2005** season and are permitted:

First / second selector fork	Part Number: 70058U
Third / fourth selector fork	Part number: 70059U
Fifth /Sixth selector fork	Part number: 70060U

It will be permitted to fit any further upgraded parts during the season if introduced by Caterham Cars.

Wire locking of the selector rod pins and drain plug is permitted.

Use of two roll-pins to fix the selector mechanism to the selector rod is permitted.

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5.9.2 MODIFICATIONS PROHIBITED:

Use of a Superlight R 500 flywheel (Part no: 73406A) is prohibited.

Use of clutch centre plate part number 72602R is mandatory.

Use of clutch cover plate part number 72603R is mandatory.

Competitors should note that these 2 parts are sold together as a kit part number 72604KIT.

It is specifically prohibited to fit steel baulk rings and blocker bars in the Caterham six-speed gearbox.

Mis-assembly of standard parts, particularly with respect to synchromesh mechanism, is prohibited.

It is prohibited to modify the propshaft.

No other modifications are permitted.

5.9.3 TRANSMISSION AND DRIVE RATIOS:

In both Classes use of the race specification Caterham six speed (Part number 70000RA or 70000USR) fitted with the following ratios is mandatory.

First	2.69 : 1
Second	2.01 : 1
Third	1.59 : 1
Fourth	1.32 : 1
Fifth	1.13 : 1
Sixth	1.00 : 1

In the Roadsport A use a 3.92:1 ratio final drive ratio is mandatory.

In the R400 Class use of a 3.62:1 final drive ratio is mandatory. Competitors should note that the R400 uses a different ratio to the previous Superlight R. Use of the previous 3.38 ratio is prohibited

5.10 ELECTRICS

Cars may use road going or racing wiring looms with the following part numbers

Main race vehicle looms for standard instruments	Part no: 70078-I
Main race vehicle loom for Stack display	Part no: 71178-I
Main road vehicle loom for standard instruments	Part no: 71257 or 51257
Main road vehicle loom for Stack display	Part no; 71236STD or 51236ST
Engine loom	Part no: 73414
<u>Main race vehicle loom (R400 only)</u>	<u>Part no: 72414</u>
<u>Instrument loom for std instruments (R400 only)</u>	<u>Part no: 71244G</u>
<u>Instrumentation loom for Stack display</u>	<u>Part no: 71244S</u>

Competitors are advised to change the engine loom at least once per season to ensure electrical reliability.

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In both Classes the standard instrumentation may be replaced by a Stack triangular integrated display unit.

In Roadsport A Class the standard vehicle loom may be replaced by Caterham vehicle loom Part No: 51236ST specifically designed to connect to a Stack triangular integrated display unit. Alternatively a Stack supplied loom may be used to connect the triangular integrated display unit to the vehicle.

In the R400 Class the standard vehicle loom may be replaced by the Caterham vehicle looms Part Nos: 71178-1 or 72414 or 73414 specifically designed to connect directly to the Stack triangular integrated display unit. Alternatively a Stack supplied loom may be used to connect the triangular integrated display unit to the vehicle

In both Classes Stack only data logging and Stack only video logging systems are permitted.

All Competitors running Stack data/video logging systems must supply the Championship Scrutineer with the **authorisation** code and PIN number to allow the logging system to be read.

In Roadsport A Class is permitted to remove or de-activate the steering lock. The specification of the ignition and starter switch is free and it may be positioned on the dashboard.

The inertia cut out switch may be removed but if in place must be working.

All power feed to the vehicle and engine looms **must be** connected via the battery master switch **with the exception of an electrically operated fire extinguish system.**

5.10.1 EXTERIOR LIGHTING:
Roadsport A cars must be equipped with operational rear light clusters mounted in their correct position on the rear wings.

5.10.2 REAR HIGH INTENSITY LIGHT:
Fitment of a rear high intensity light is mandatory. It is permitted to fit an LED light to the roll cage provided it conforms to MSA regulations instead of the standard part. **In addition, Roadsport A cars may fit a standard Caterham high intensity light in place of the standard reverse lamp.**

5.10.3 BATTERY:
The battery position and battery itself are free provided it is securely located within the engine compartment.

5.10.4 ALTERNATOR:
The standard alternator must remain fixed, unmodified standard and working.

5.10.5 STARTER MOTOR:
It is mandatory to use one of following Caterham supplied starter motors:

Fitted as standard to road cars pre 2000	Part number:NB/26656
Fitted as standard to road cars post 2000	Part number:70264
Race specification pre 2004	Part number:70265
Race specification 2004 on	Part number: 70270 *
* Used with revised spacer	Part number: 70271

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5.11 BRAKES

The braking system consists of discs at all four wheels and incorporates split hydraulic circuits for safety. The car as supplied includes an adjustable brake pressure limiting valve so that balance can be adjusted to the driver's preference. Race type reservoir caps must be fitted to the master cylinder.

5.11.1 MODIFICATIONS PERMITTED: Brake friction materials are free.

Fitment of race specification brake master cylinder (Part no: 77176) is permitted **in both classes**

Fitment of shims washers to the standard master cylinder **in the Roadsport A Class** or an adjustment bolt to limit 'dead' travel is permitted.

Use of standard brake pedal (Part no: 74221A) or the high ratio brake pedal (Part no: 77198A) is permitted.

The following updated brake system packages are **permitted in the R400 Class only.**

Package number: MB 01
Package number: MB 04
Package number: MB 08
Package number: MB 09

In addition the following alternative front 4 pot calipers are **permitted in the R400 Class only.**

Part No: 77196
Part No: 77197

Cars using solid rear brake pipes connected to callipers part no: 67032328/9 may be fitted with braided stainless steel hoses part nos: 77201L and 77201R

A single brake limiting valve can be fitted to the rear circuit. The make and design of the valve is free.

5.11.2 MODIFICATIONS PROHIBITED:

Fitment of more than one brake limiting valve is prohibited.

Fitment of the limiting valve in front brake system is prohibited

5.12 WHEELS AND STEERING

All cars must use the matching wheels front and rear. If the rear wheels Part No:77298 are fitted they must be used in conjunction front wheels part no: 77296.

<u>Roadsport A (front)</u>	<u>77393 (6" x 13") or 77393B (6" x 13") or 77296 (6" x 13")</u>
<u>Roadsport A (Rear)</u>	<u>77393 (6" x 13") or 77393B (6" x 13") or 77296 (6" x 13") or 77298 (8" x 13")</u>
<u>R400 (Front)</u>	<u>77296 (6" x 13")</u>
<u>R400 (Rear)</u>	<u>77298 (8" x 13")</u>

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5.12.1 PERMITTED OPTIONS:

The following steering rack assemblies are permitted:

Standard width standard speed rack	Part No: 75615A*
Widetrack standard speed race	Part No: 75608A
Standard width quick (22%) rack	Part No: 75605A*
Widetrack quick (22%) rack	Part No: 75604A

*Must be used in conjunction with rack extensions Part No: 74081

The steering wheel is free.

It is permitted to fit Caterham quick release upper steering column (Part number 75030A)

It is permitted to raise the height of the steering rack by using one or more spacer shims, part number 75607.

5.12.2 PROHIBITED MODIFICATIONS

The standard steering mechanism must be used without modification other than those detailed in 5.12.1

5.12.3 CONSTRUCTION AND MATERIALS:

No changes are permitted except as specified in these regulations.

5.12.4 DIMENSIONS:

All dimensions must remain within manufacturer's specification, except where permitted within these regulations. See section 5.8.3

5.13 TYRES

5.13.1 SPECIFICATION:

All cars must run on **treaded** tyres of the following sizes:

Front: 175/55R13

Rear: 205/55R13

Use of tyre pressure limiting valves is prohibited.

Use of tyre heating and heat retention devices is prohibited.

Use of tyre treatment compounds is prohibited.

Tyre buffing is prohibited

5.13.2 NOMINATED MANUFACTURER:

Use of the following Cooper-Avon Racing **CR500** tyres is mandatory:

Contract No. 12312 175/55R13

Contract No. 12313 205/55R13

5.14 MINIMUM WEIGHT LIMIT

In both Classes the car without driver must at all times, weigh not less than 510 Kg. Competitors are recommended to weigh their cars and add sufficient ballast to allow for loss of bodywork during racing and / or variations in readings given by the weighbridges at individual circuits. Remember that it is the reading recorded by the circuit weighbridge on race day which counts.

The minimum weight limit including driver (including helmet, suit, gloves & overall) is 600 Kg.

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Drivers lighter than 90 kgs may need to add ballast.

Ballast must be securely bolted to the cockpit floor of the left hand side of the car. **Additional holes may be drilled to achieve this.**

Substitution of alternative, non standard, lightweight fasteners is specially prohibited.

5.15 FUEL TANK AND FUEL

5.15.1 TYPE OF FUEL TANK:

In Roadsport A Class the standard Caterham fuel tank may be used in conjunction with Caterham fuel tank protection kit (Package no: T104) or alternatively a fuel cell as used in the R400 may be substituted.

In the R400 Class the standard safety fuel cell (part no: 73014) fitted in box (part no: 73015) must be retained unless it is replaced by 55 litre tank (part number 73014/55) fitted in box (part number 73015/55) and must be fitted with a screw type cap. Please note that the **fuel cell** has a life expectancy of 5 years and must be replaced or returned to the manufacturer (ATL) for revalidation after this period **if it is to be used in overseas events.**

5.15.2 LOCATION OF THE FUEL TANK:

The tank must be located in its standard position at the rear of the car.

5.15.3 FUEL:

All cars must run on pump fuel as defined by the MSA.

5.16 SILENCING

Use of **a** Caterham Silencer is mandatory. Performance of this silencer will degrade with use and accident damage. It is the competitors responsibility to ensure that their car always complies with the noise limits which are strictly enforced at many circuits.

5.17 COMPETITION NUMBERS/DECALS

5.17.1 Positioning of Decals: Competition numbers must be positioned so as to be clearly visible from above and from the side, as per MSA regulations under E11.3.11. In particular, side facing numbers wrapped across the bonnet side are not acceptable as they cannot clearly be read by the timekeepers.

The correct number squares must be used showing the championship title mounted on the nosecone and on each body side. Trade and sponsorship decals must be carried at all times and competitors will be notified of these before the first round. All cars must carry BRSCC decals.

5.17.2 Supply of Decals: Championship decals are available from the championship co-ordinator though competitors must provide their own racing numbers. BRSCC shields are obtainable directly from the BRSCC, one of which must be displayed on each side of the car at all times.

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6. APPENDICES

6.1 RACE ORGANISING CLUB AND CONTACTS

The Following Commercial **Undertakings** are not subject to the Judicial Procedures of either the Championship Stewards and/or the MS A/MS.

Centre:

Contact Details:

BRSCC H.Q.

Homesdale Business Centre, Platt Industrial Estate
Maidstone Road, Borough Green
Kent, TN15 8JL
Tel: 01732 780100
Fax: 01732 885783
www.brsc.co.uk

6.1.2 Useful Contacts

BRDC

Silverstone, Towcester
Northants NN12 8TN
Tel: 01327 850931

BARC

Thruxton Race Circuit
Thruxton, Andover
Hants SP11 8PN
Tel: 01264 882200

Caterham Cars
(factory)

Jez Coates

Unit 2 Kennet Road
Dartford, Kent
DA1 4QN
Tel: 01322 625800
jezc@caterham.co.uk

Motor Sports
Association Ltd

Motor Sports House
Riverside Park, Colnbrook
Slough SL3 9HG
Tel: 01753 765000

Scrutineer

Ian Billett

12 Cedar Close
Lancing
West Sussex
BN15 8PY
01903 765354
07890 623094 mobile
Email ibillett@aol.com

Minister Racing
Engines Ltd

Graham Fuller

Unit G, 17 Revenge Rd
Albarn Industrial Estate
Lordswood, Chatham
Kent ME5 8UD
Tel: 01634 682577
Fax 01634 684674
info@minister-power.com

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Cooper Avon Tyres

Robert Meaton
Trevor Swettenham

Bath Road
Melksham
Wilts SN12 8AA
Tel: 01225 703101
Fax 01225 707443

6.2 COMMERCIAL UNDERTAKINGS

6.2.1 VEHICLE PRESENTATION

The presentation of the car is fundamental to the profile of the championship/series its sponsors and its audience. Therefore in considering whether to permit any car to race, at any point during the season, the organisers will regard as paramount the presentation of the car. In taking into account its appearance inherent in which is the standard of its presentation (including interior) they may exclude any car which they consider may prejudice the reputation of the championship/series or is otherwise unacceptable.

This will include where the car is presented at a race event bearing accident damage sustained at a previous event and which has not been subject to the completion of a full and proper repair. Note: A double header can be regarded as one event for the purposes of this regulation.

It will not be mandatory to wear the black and silver Caterham race overalls although their use is strongly encouraged. Competitors wearing non-Caterham overalls may be supplied with championship sponsor badges and will be required to display these on their race overalls. Made to measure Stand 21 race suits are available from the Caterham parts department.

On-circuit promotional activities: Competitors will be issued with championship sponsor decals and number squares. These must be displayed correctly positioned in order for the competitor to be eligible for points.

Television coverage: Competitors accept that in car television cameras may be fitted to their cars at any race or official practice session for a race as part of the promotion for the championship without charge. On no account should advertising be carried on cars in the cockpit area.

6.2.2 ADVERTISING/GLASS

- A All glass areas must remain clear and unobstructed by decals/advertising or any other obstruction unless these regulations specify different or approved by the BRSCC/Championship Co-ordinator.
- B The only exception being the rear side windows that should have the drivers' surname and championship class (if any), clearly displayed in simple bold type, unless these championship regulations specify a different option.
- C All surfaces, which have not been claimed for stickers by the Championship, its sponsors or used for the application of starting numbers, are free for use. The Championship Co-ordinator must approve conflicting sponsor's stickers in advance and the position, size and colours (if approved) will be at the discretion of the Championship Co-ordinator.

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Championship Registration Form

Name of driver

Driver's address

Telephone numbers

Daytime

Evening

Mobile

Email address

Driver's date of birth

Licence grade & nr

Nationality

BRSCC members nr

Entrant's name

(if different to above)

Entrant's address

(if applicable)

I agree to abide by all rules and regulations laid down in the 2005 Powertrain Caterham Challenge Sporting and Technical Regulations, including any amendments or clarifications that may be made by the organisers during the course of the season and to observe all rules and regulations of the MSALtd.

I enclose a cheque made out to Caterham Cars Limited for £600 (R400), £350 (Roadsport A) and I undertake to inform the co-ordinator if the car is sold or if I cease participation in the Powertrain Caterham Challenge. I understand that this registration cannot be assigned and that I will notify the co-ordinator of any changes to the foregoing information.

Signature driver

Signature entrant

(if applicable)

Please state preferred competition number from 2 - 49 (R400). From 50-99 (Roadsport A). Numbers will be allocated on a 'first come first served basis.

Caterham Motorsport Administration Office, 3 Mitchem Close, West Kingsdown, Sevenoaks TN15 6HR