



2025

## Club Standing Supplementary Regulations

### Northern Regions Lotus Challenge Club Championship



Version 1

1 January 2025

## REVIEW AND AMENDMENTS

Motorsport South Africa (MSA) will periodically review these rules and will present the revised version to all members for agreement to publish the updated version.

Amendments and updates to the rules will be recorded in the Amendment Record, detailing the updated version, date of approval of the amendment and a short summary of the amendment.

## AMENDMENT RECORD

<i>Modified SSR / Art</i>	<i>Date Applicable</i>	<i>Date of Publication</i>	<i>Clarifications</i>

## CONTROLLERS OF THE CHAMPIONSHIP

The controllers of the championship shall be the MSA Northern Regions Motorsport Committee, which may delegate certain authorities and responsibilities to the Lotus Register of South Africa. In these regulations, any reference to "Committee" shall mean the Racing Committee (RC) of the Lotus Register of South Africa and/or a member of the (RC) as applicable.

## DOMICILE

The Championship is open to all holders of a valid MSA competition license.

## DISCLAIMER

Drivers race entirely at their own risk. The safety equipment specified in these regulations, whether in respect of the vehicle or the driver, is regarded as the necessary minimum to be used or applied. It is the driver's responsibility to always use the best safety equipment at all times.

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## 1. INTRODUCTION

1.1. The Lotus Challenge Racing Club Championship is a series of race events aimed at attracting wide participation by owners of Lotus 7 type cars and replicas. Previous race experience is not a requirement, and new competitors are most welcome. Track day experience for new entrants in a Lotus is advised to ensure the safety of the new entrant, as well as the rest of the competitors.

## 2. CHAMPIONSHIPS & TROPHIES

2.1. To be eligible for championship points and to receive trophies at individual race meetings a competitor must be a paid up member or affiliate member of The Lotus Register of South Africa (TLR) as well as paid the compulsory racers levy of R550 per annum. This is payable by all competitors and will be administered by the treasurer of (TLR). Racers who join after 50% of the races have been completed will pay 50% for the remaining races. No refund will be paid if a racer does not compete in all the events.

2.2. The TLR Club Membership and Racers levy is to be paid to The Lotus Register bank account.

2.3. Banking Details:

2.3.1. Bank	Nedbank Isando
2.3.2. Branch Code	196142
2.3.3. Account Number	1961277530
2.3.4. Account Holder Name	Lotus Register
2.3.5. Reference:	(Name & TLR Club Mem) and (Name & "RACE")

### 3. Northern Regions Lotus Challenge Racing Club Championship

#### 3.1. Objective

- 3.1.1. The objective is to drive as fast as possible to have the lowest race time over the required race total distance.
- 3.1.2. A club level competition, with event trophies as well as overall championship floating trophies at the end of the season.

#### 3.2. Championship:

- 3.2.1. The Northern Regions Lotus Challenge Racing Club Champion will be the overall winner from Classes B or L based on accumulated points from the respective Class. Should there be a tie, then the greater number of Class wins followed by second positions and, if required, third positions etc, will be considered to break the tie.
- 3.2.2. Class winner championship trophies will be awarded to drivers accumulating the most points within:
  - 3.2.2.1. Class B – Scratch
  - 3.2.2.2. Class L – Scratch

#### 3.3. Points System

- 3.3.1. There will be three races per event (no qualifying). Number of laps will be determined by the event organiser.
- 3.3.2. Should an event schedule more than three races, only the first three will count towards all applicable championships.
- 3.3.3. Points per race heat in respect of both Classes shall be awarded as follows:

	Points																				
Position	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Participants > 5	22	19	16	14	12	11	10	9	8	7	6	5	4	3	2	1	1	1	1	1	0
Participants = 5	19	16	14	12	11																
Participants = 4	16	14	12	11																	
Participants = 3	14	12	11																		
Participants = 2	12	11																			
Participants = 1	11																				

- 3.3.4. The number of participants in a class shall be determined by the total number of unique participants in all heats for the day.

- 3.3.5. Per Class, the Driver with the fastest lap on the day, will be awarded 1 bonus point.
- 3.3.6. Drivers sharing a car at the same race meeting will be counted as one car only. Individual points scored will not be affected. Points earned in one Class may not be carried over into another Class, but all points earned will be combined in the Rookie, Masters and Northern Regions Club Championships.
- 3.3.7. For championship events at circuits outside the Northern Regions area, (excluding Red Star Raceway) a competitor who participates by commencing a lap, whether in practice (official or unofficial) or in a race, will be awarded an extra 16 (sixteen) points towards all Championships except Index of Performance.
- 3.3.8. For championship events at circuits outside the Northern Regions area, (excluding Red Star Raceway) points will be scored as per 3.3.3 above (Participants >5).
- 3.3.9. All races will be championship races. The points from three race heats from any event will be discarded if the number of events for the year exceeds 6 (Six). Events not entered are eligible to be discarded. Points discarded will not include any away race bonus points. Any points lost due to exclusion as a result of any infringements may not be discarded. Discarded heats for the Index of Performance championship need not be the same as Northern regions club championship.
- 3.4. Subject to the number of competitors exceeding the minima stipulated in the organizer's regulations for the day, the trophies shall be awarded per event as follows:
  - 3.4.1. Class B    1<sup>st</sup>            2<sup>nd</sup>            3<sup>rd</sup>
  - 3.4.2. Class L    1<sup>st</sup>            2<sup>nd</sup>            3<sup>rd</sup>
- 3.5. Awards per event shall be determined as follows:
  - 3.5.1. Classes B, and L – the highest number of laps at the lowest total race time across the three heats will determine the winner and subsequent positions in each Class.
  - 3.5.2. In the event a driver is disqualified or is not classified as a finisher, the race time and laps completed will be discarded.
  - 3.5.3. All championship race heats to be a minimum of 19kms in length. Race heats shortened by the race organizer, or CoC, will still count as championship heats.

## **4. Northern Regions Lotus Challenge Racing Club Rookie Championship**

### **4.1. Objective**

4.1.1. The objective is to drive as fast as possible to have the lowest race time over the total race distance.

4.1.2. A club level competition, with an overall championship floating trophy at the end of the season.

### **4.2. Championship**

4.2.1.1. The Northern Regions Lotus Challenge Racing Club Rookie Champion will be the overall winner from Classes B or L based on accumulated points from the respective Class. Should there be a tie, then the greater number of class wins followed by second positions and, if required, third positions etc, will be considered to break the tie.

4.2.1.2. To qualify as a Rookie a driver must have previously raced less than 3 events in Lotus Challenge Racing.

4.2.1.3. The Rookie champion will be the driver who scored the most points in the season, regardless the Class/s raced in.

### **4.3. Points system**

4.3.1. Same as Northern Regions Lotus Challenge Racing Club Championship.

## 5. Northern Regions Lotus Challenge Racing Club Masters Championship

### 5.1. Objective

- 5.1.1. The objective is to drive as fast as possible to have the lowest race time over the required race total distance.
- 5.1.2. A club level competition, with an overall championship floating trophy at the end of the season.

### 5.2. Championship

- 5.2.1. The Northern Regions Lotus Challenge Racing Club Masters Champion will be the overall winner from Classes B or L based on accumulated points from the respective Class. Should there be a tie, then the greater number of Class wins followed by second positions and, if required, third positions etc, will be considered to break the tie.
- 5.2.2. To qualify for the Master Championship, a driver must be 50 years and older.
- 5.2.3. A driver will qualify for the Masters Championship from the day they turn 50 – only points scored after this date will contribute to the total points score in the Master Championship for that year.
- 5.2.4. The Masters Champion will be the driver who scored the most points in the season, regardless the Class/s raced in.

### 5.3. Points system

- 5.3.1. Same as Northern Regions Lotus Challenge Racing Club Championship.



## 6. Northern Regions Lotus Challenge Racing Club Index Of Performance Championship

### 6.1. Objective

- 6.1.1. The Northern Regions Lotus Challenge Racing Club Index of Performance Champion will be the most consistent driver with the best average vs best lap time ratio.
- 6.1.2. A club level competition, with an overall championship floating trophy at the end of the season.

### 6.2. Championship

- 6.2.1. The Index of Performance championship is applicable to Class B and Class L.
- 6.2.2. The Index of Performance championship will be scored and administered by the club's racing scorekeeper.
- 6.2.3. Points will be awarded per race and the racer with the highest total at the end of the race season will be declared the champion.
- 6.2.4. Tie breaker – Average % for all events followed by most wins.
- 6.2.5. Index of Performance will only apply to official Lotus Challenge races.

### 6.3. Points system

- 6.3.1. Points per race heat in respect of both Classes shall be awarded as follows:

Position	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Points	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

- 6.3.2. To qualify for points, the racer must be classified as a finisher in terms of the standard MSA rules.
- 6.3.3. A disqualification will be considered a non-finisher.
- 6.3.4. Discarding of points – Same rule as per Northern Region Championship will apply. The discarded heats need not be the same heats discarded for the NR Championship.
- 6.3.5. All points scored by a driver, regardless of whether he changed Classes during the course of a season, will count towards the overall championship.

### 6.4. Index of Performance calculation:

- 6.4.1. The official results sheets will be used to calculate the Index of Performance.

- 6.4.2. Index of Performance will be a racer's fastest lap in the race divided by his/her average lap time during the race, expressed as a percentage. Theoretical maximum is 100%. The racer with the highest percentage will be declared the winner.
- 6.4.3. Average lap time will be total race time divided by number of laps. A 0,3 sec per grid Line behind overall pole position will be subtracted from each racer's overall race time, to compensate for relative starting positions.
- 6.4.4. In the event of a Safety Car or Red Flag, the results of that race become null and void.

## **7. Northern Regions Lotus Challenge Racing Team Club Championship**

### **7.1. Objective**

- 7.1.1. The objective is as a team to drive as fast as possible to have the lowest race time over the required race total distance.
- 7.1.2. A club level competition, with an overall championship floating trophy at the end of the season.

### **7.2. Championship**

- 7.2.1. The Northern Regions Lotus Challenge Racing Team Club Champion will be the overall team winner from Classes B and/or L based on the summation of accumulated points of each driver within the team from their respective Class. Should there be a tie, then the greater number of Class wins followed by second positions and, if required, third positions etc, will be considered to break the tie.
- 7.2.2. A team shall consist of exactly two drivers and may be made up of drivers from separate classes.
- 7.2.3. Team pairings as well as a team name must be communicated to the race committee in writing in order to qualify and may be entered at any point in the season.
- 7.2.4. A driver is only allowed to participate within a single team at a time.
- 7.2.5. Drivers are allowed to switch teams mid-season, however all points accumulated by the driver switching teams will be discarded.

### **7.3. Points System**

- 7.3.1. Overall points within the Northern Regions Lotus Challenge Racing Team Club Championship will be calculated through the addition of the following to create an overall team score:
  - 7.3.1.1.1. Race points earned from the Northern Regions Lotus Challenge Racing Club Championship for each driver. This includes drop rounds, bonus points and all other

considerations towards the Northern Regions Lotus Challenge Racing Club Championship.

- 7.3.1.1.2. Each team will earn an additional 10 points per driver per event, provided both drivers compete in that event. Participation is defined as having competed in any of the three heats.
- 7.3.1.1.3. Each team will earn an additional 10 points per driver per event for each driver eligible to compete within the Northern Regions Lotus Challenge Racing Club Rookie Championship. Participation is defined as having competed in any of the three heats.
- 7.3.1.2. Note that race points will fluctuate based on drop rounds at the end of the year, in the same way that the individual championship operates.

## 8. CONDUCT OF SERIES & EVENTS

### 8.1. Competition Licenses

- 8.1.1. Competitors require, as a minimum, a “Club” level circuit racing competition license for Classes B, L and X which is obtainable from Motorsport South Africa (MSA).

### 8.2. Scrutineering & eligibility to compete

- 8.2.1. All competitor vehicles must be presented to, and approved by, the circuit Scrutineers prior to participation in any event.
- 8.2.2. Should a Class change be required, the vehicle must be inspected for conformity in the new Class prior to any event.
- 8.2.3. All vehicles must comply with the specifications stipulated herein, as well as the Annual Safety Inspection sheet. All vehicles must comply in full with the stipulated specifications of the Class in which they are entered, save that:
  - 8.2.3.1. In the event of any non-compliance by the agreement of all competitors in that Class together with a member of the (RC) is deemed immaterial to the performance or safety of the non-compliant vehicle, that vehicle shall be allowed to compete in that Class for that race meeting only and shall be eligible for inclusion in the results of the event and championship points; and
  - 8.2.3.2. If no agreement is reached according to the foregoing, a (RC) member may permit the vehicle to compete “by invitation” but be excluded from the event results and the earning of championship points for that class.
- 8.2.4. Vehicles must be made available for technical inspections at any time during a race day. Should a participant’s vehicle be found non-compliant with the technical regulations of the Class in which they are competing, that participant will be, in consultation with the (CoC), excluded from the day’s results and subject to disciplinary action which could result in further penalties being applied.
- 8.2.5. Decals indicating the positioning of Fire extinguishers, Cut-off switches and towing points must be fitted as per MSA regulations.
- 8.2.6. Prior to participating in its first event for the season and, after any serious contact incident, or material modification, a competitor’s vehicle must be presented for, and pass, a series inspection conducted by the series compliance officer, (TC) or (RC).

8.2.7. The (RC) may from time-to-time develop for adoption additional monitoring standards, guidelines, requirements, and/or procedures which it will then apply at its sole discretion.

### **8.3. Starting Grid Positions**

#### **8.3.1. Race 1**

8.3.1.1. Grid is determined by the fastest lap of the last race of the previous round.

8.3.1.2. For the first heat of the season only, the grid will be determined based on Class championship standings from the previous season.

8.3.1.3. For the first heat of the season only, new/rookie driver positions will be determined through random draw and placed after the grid determined from above.

8.3.1.4. For drivers not having completed a valid lap in the last race of the previous round in the current season, their current championship position will be used to determine their grid position and placed after those who have completed a valid lap in the previous round. Thereafter any new racers will be placed behind them in that class.

8.3.1.5. Should a driver have competed in the previous round, but not be competing in the current round, their position will be disregarded in formation of the grid.

#### **8.3.2. Race 2**

8.3.2.1. Grid is determined by the fastest lap of Race 1.

8.3.2.2. For drivers not having completed a valid lap in Race 1, current championship position will be used to determine grid position after those who have set valid laps in Race 1.

#### **8.3.3. Race 3**

8.3.3.1. Grid is determined by the fastest lap of Race 2.

8.3.3.2. For drivers not having completed a valid lap in Race 2, current championship position will be used to determine grid position after those who have set valid laps in Race 2.

8.3.4. Classes will be grouped together separated by a minimum of 4 open grid positions.

8.3.5. The grid position of the fastest competitor in each class will be on the Pole position side of the grid.

8.3.6. Order will be Class B then Class L but may be altered by the (RC/TC) based on the relative speed of entrants in the different classes.

8.3.7. Should there be class X or P entries the (RC) / (TC) will decide on the Class grid order based on performance potential of cars.

8.3.8. Competitors who switch Classes during a racing event, must comply fully with that Class's eligibility requirement, the grid position will be allocated as per 8.3.1., 8.3.2. or 8.3.3. above as applicable.

#### **8.4. Driver Conduct**

8.4.1. It is incumbent upon all competitors to refrain from reckless and dangerous driving which might constitute a danger to themselves and/or other competitors.

8.4.2. All on track incidents must be reported to the Clerk of the course (CoC) in writing on an Incident Report and Stewards of the Day for investigation and establishment of any penalties applicable.

8.4.3. The (RC) may introduce a card system to control driver behaviour.

#### **8.5. New Competitors**

8.5.1. New competitors will be required to identify themselves by the attachment of a ribbon trailing behind the car. The ribbon will be red, white or yellow, 30mm wide and 1 meter in length and be supplied by the competitor.

8.5.2. This is a requirement for the first 2 race events for any new competitors and will be reviewed thereafter by the (RC).

8.5.3. Prior to competing in their first event, competitors must:

8.5.3.1. Present their vehicle to the series (TC) for inspection.

8.5.3.2. Complete the Rookie Questionnaire.

8.5.3.3. Be a paid-up member of the TLR or TLR affiliated club.

8.5.3.4. Have paid the compulsory racers levy.

8.5.3.5. Have a valid MSA competition License.

8.5.3.6. Complete and handover to the (RC) a signed copy of the TLR Indemnity Form.

#### **8.6. Disputes**

8.6.1. Competitor attention is drawn to Parts IX and X of the MSA General Competition Rules & Appendixes in respect of Protests and Appeals.

#### **8.7. Racing Representative (RR), Race Committee (RC) and Technical Consultant (TC)**

8.7.1. It is a requirement that, as per the TLR Constitution, a (RC) be announced for the duration of the Race season.

- 8.7.2. A (TC) may be appointed at the sole discretion of the (RR) at any time during the racing season. The (TC) compensation must be agreed with the racers at large as well as the funding model.
- 8.7.3. Expenses incurred by (RC) members to perform their duties will be refunded in the sole discretion of the TLR (RR).
- 8.7.4. The (TC) / (RC) shall get to know and operate within the bounds of the MSA General Competition Rules and circuit racing rule books.
  - 8.7.4.1. Represent the TLR and act as a liaison between competitors and race officials.
  - 8.7.4.2. Ensure that the rules of the Class are applied and adhered to by all competitors.
  - 8.7.4.3. Act as a consultant to the Clerk of Course (CoC) and Stewards of the Day.
  - 8.7.4.4. Where rules are transgressed, it is the duty of the (TC) / (RC) to report these to the (CoC) for a ruling.
  - 8.7.4.5. Perform eligibility checks as appropriate.

## **8.8. Voting rights**

- 8.8.1. The (RC) may from time to time do surveys amongst racers or require voting on specific matters or rules relating to the series.
- 8.8.2. Voting rights will be limited to TLR members who have raced in the current or the previous season and the current (RC) members.
- 8.8.3. Racers eligible to vote in terms of 8.8.2 must be paid up members of The Lotus Register and racers levy must have been paid in full.
- 8.8.4. Voting or surveys may be done in person at a meeting or by means any form of acceptable electronic, social media or online voting. In the event of electronic vote or survey, no proxies will be used.
- 8.8.5. A quorum shall be constituted when 66% of eligible voters participate in the survey or vote.
- 8.8.6. (51%) of votes counted shall constitute a majority.
- 8.8.7. In the event of a tie the TLR (RR) will have the casting vote.

## 9. VEHICLE ELIGIBILITY - ALL CLASSES

### 9.1. General

- 9.1.1. The general rule-of-thumb applies – *“If it is not in the Regulations, it is NOT allowed”*.
- 9.1.2. Always seek clarity and approval from (RC) of any ‘out of the norm’ or unclarified aspect of the regulations.
- 9.1.3. It is recorded that only Lotus Seven-type vehicles are eligible to race in the Lotus Challenge, and the (RC) may, from time to time at its discretion or by amendment to these regulations, or by Bulletin, permit departures from Vehicle Eligibility to the extent that such departures serve not to present a safety risk.
- 9.1.4. If requested, all electronic data (Data logger and/or video footage) must be made available to (RC) / (TC) or any official for investigation purposes.

### 9.2. Wheels and Tyres

- 9.2.1. Tyres for Classes B and L shall be marked as follows:
  - 9.2.1.1. Each set of tyres will be marked with one set of numbers using the TLR branding kit.
  - 9.2.1.2. Two-digit Tyre Set Number e.g. “10” or “20” (set 1 or set 2 of 2020).
  - 9.2.1.3. Two-digit Car Number (00 – 99).
  - 9.2.1.4. An LCR logo will be positioned between these two sets of numbers.
- 9.2.2. Tyres must be presented to the (RC) / (TC) for branding at an agreed time and place prior to competition (tyres thus branded but not used are still considered as part of a competitor’s tyre allowance).
- 9.2.3. Competitors are to comply with the marking / branding system stipulated by the (RC) for the regulation of the tyres used.
- 9.2.4. Tyres that are branded must be used by the allocated driver for any vehicle changes within or change to another Class.
- 9.2.5. The competitor must sign the tyre branding register. The onus is on the competitor to verify and confirm the branding is correct.
- 9.2.6. Rims restricted to 15” Diameter and a maximum width of 7”. Split rims are not allowed. The rims must be fitted with a minimum of 4 mounting bolts.
- 9.2.7. Tyre Manufacturer:
  - 9.2.7.1. Dunlop. “Type R”. Size: 195-55-15. Compound: H1.



9.2.7.2. Supplier: ATS Motorsport, Unit 7 Limeroc Business Park, Knoppieslaagte 385-Jr, Centurion, 0157.

- 9.2.8. Tyres are limited to 2 sets per competitor per season (i.e. 8 tyres), (or as might be determined by the (RC) under abnormal circumstances, this will be communicated to competitors by means of a bulletin).
- 9.2.9. Tyres must have a minimum of 1mm depth of tread measured across 80% of the tread surface at the completion of any racing event. Transgressions shall result in a loss of championship points for that heat and/or relegation to the rear of the grid as applicable for the next heat or race.
- 9.2.10. Tyres damaged because of on-track incidents or because of failure (blowouts, etc.) may be replaced at the discretion of the (RC) upon their receipt of a written request (See Appendix E – Two Tyre Rule).

### **9.3. Racing Numbers & Logos**

- 9.3.1. All Class B and Class L vehicles will carry the Lotus Challenge Racing supplied backing decals and numbers and Class identification colour strips as designated for the series. A minimum of three numbers must be placed on the vehicle, one on either side of the bonnet or passenger side cover, and 1 on the Nosecone. Placing one on the rear of the Vehicle is recommended, but optional.
- 9.3.2. For Class X and Class P, the backing size must be a minimum of 300mm High and 370mm Wide, Race number and Class letter font must be min size 180mm high x130mm wide. Class letter 180mm high x 65mm wide.
- 9.3.3. The (RC) or race organizers may, from time-to-time, determine the positioning, size and quantity of series sponsor logos.
- 9.3.4. Transgressions may result in a loss of points for the event concerned and the withholding of sponsor product if applicable.
- 9.3.5. Numbers will be allocated to a driver by the (RC) and must be used by the driver in all Lotus Challenge events.
- 9.3.6. If a driver has not used his allocated race number for 1 Season, that number will become free for any other competitor to use. Each Competitor has the right to reserve his current Number for another Season, by requesting this in writing to the (RC).

### **9.4. Roll cages and side impact protection.**

- 9.4.1. All vehicles must be fitted with an approved Rollover Cage.

- 9.4.2. Unless equipped with a Rollover Cage approved and certified by the FIA for use on that type of vehicle, vehicles must conform to the minimum specification detailed in Appendix C.
- 9.4.3. All vehicles must be fitted with approved side impact protection as detailed in Appendix D.
- 9.4.4. It is recommended that an approved passenger side impact beam be fitted on cars with the fuel tank in the passenger compartment.

## **9.5. Other**

- 9.5.1. The use of nitrous oxide is not allowed.
- 9.5.2. No four-wheel drive is allowed.
- 9.5.3. No anti-lock braking systems are allowed.
- 9.5.4. Use of tyre warmers are not allowed.
- 9.5.5. All Vehicles are required to be fitted with a silencer that will ensure that the noise generated will be compliant with MSA noise regulations.
- 9.5.6. Particular attention must be paid to the construction and assembly quality of the exhaust system and its fixings. Adequate supporting structures must be in place and all welds must be of good quality.
- 9.5.7. The use of any form of intake air cooling inside or in front of the air intake system is not allowed. E.g. dry ice in the airbox.
- 9.5.8. Only body panels and non-structural components may be manufactured from composite materials e.g. carbon fiber and fiberglass. unless specifically not allowed by Class rules (Wheels are considered to be a structural component).
- 9.5.9. The use of Titanium, Kevlar and other exotic materials is not allowed.
- 9.5.10. Competitors need to inform the (RC) in advance of any changes to their equipment or to alert them if they require their services.
- 9.5.11. Unleaded pump fuel with a maximum Octane Rating of (95) must be used in all Classes. The use of any form of octane booster or any fuel additive is not allowed.
- 9.5.12. All vehicles must be fitted with an approved fire extinguisher minimum of 1.5kg. Plastic mounting brackets are not allowed. The use of approved plumbed in extinguisher systems is recommended.
- 9.5.13. Only reciprocating 4-cylinder engines are allowed.
- 9.5.14. Except for Class X, no forced induction is allowed.
- 9.5.15. Except for Class X, only "H" pattern gearboxes are allowed.
- 9.5.16. The use of water injection is not allowed.
- 9.5.17. Fuel cooling is not allowed.
- 9.5.18. In-car communication (Car-to-Car and Car-to-Pit) is not allowed.

9.5.19. Indicated towing points must be provided front and rear.

9.5.20. Competitors need to inform the (RC) in advance of any changes to their equipment or to alert them if they require their services.

## **10. VEHICLE ELIGIBILITY – CLASS B**

### **10.1. Purpose & Description**

10.1.1. Class B is a full race car Class with controlled standard engine and tyres as well as limitations on other components.

10.1.2. Participants shall compete for the “Ron Slyper Trophy”.

### **10.2. Seven Meter Rule**

10.2.1. Vehicle must conform to the Seven-meter rule i.e. vehicles must appear as fair representations of the models upon which they are based when viewed from a distance of 7 meters.

10.2.2. The placement of the engine, gearbox and differential must be consistent with the original design concept of the vehicle upon which it is based.

### **10.3. Vehicle Dimensions**

10.3.1. The maximum track permissible for vehicles competing in any Class is 1780mm measured at the outside edge of the tyre including the bulge made where the tyre contacts the ground, unless specified differently in the Class specific regulations.

10.3.2. The maximum length for these vehicles is 3400mm.

10.3.3. No part of the power unit may protrude outside of the normal engine bay other than necessitated by certain types of carburettors and/or air filters and exhaust manifold.

10.3.4. The distance in plan of the centreline of the crankshaft to the centreline of the car shall not exceed 100mm.

10.3.5. The distance in plan of the centreline of the nose of the differential to the centreline of the car shall not exceed 50mm.

## 10.4. Body Work

- 10.4.1. Only body panels and non-structural components may be manufactured from composite materials. From 2026 Carbon Fibre (CF) is also not allowed. The use of Titanium, Kevlar and other exotic materials is not allowed.
- 10.4.2. Except in respect of components clearly stipulated in these regulations, aerodynamic aids designed to promote down-force or constitute an aerodynamic advantage, are not allowed.
- 10.4.3. Cladding is allowed on the underside of the vehicles.
- 10.4.4. Nothing is allowed on the underside of the vehicle that, as may be determined by the (RC), serves as a splitter, diffuser, or similar aerodynamic aid.
- 10.4.5. The area above the petrol tank must be completely covered by means of an aluminium cover, secured at its perimeter, to reduce fuel spillage in the event of an accident. The use of any other material shall be subject to the approval of the (RC). Should fuel tanks be positioned within the passenger compartment, they will be isolated from the driver by means of a firewall or be enclosed within a separate metal container which will prevent fuel spillage onto the driver or into the driver's compartment, a drain hole of at least 12mm must be made in the floor as far away from the exhaust as practically possible.
- 10.4.6. When fuel cells are fitted behind the rear passenger compartment firewall they must be fitted above or in front of the rear axle, but may not protrude past the rear of the diff. Any tank fitted behind the rear axle must be completely drained of fuel. Bladder tanks are highly recommended.
- 10.4.7. The fuel tank must be fitted with an appropriate breather pipe which must include a one-way roll-over vent valve to prevent fuel spillage in case of a roll-over.
- 10.4.8. Airboxes which are designed to induce a ram effect and protrude beyond the bodywork are not allowed.
- 10.4.9. Air intake scoops (that supply air for combustion purposes) that are positioned on the nose or bonnet must be of similar shape and no greater size than that detailed in Appendix B. Any other option used must comply with the inlet dimensions of Appendix B. Class specific requirements need to be adhered to.
- 10.4.10. NACA type intakes are allowed but must comply with the inlet dimensions of Appendix B.
- 10.4.11. The passenger compartment may be covered from the scuttle rearwards.
- 10.4.12. All wheels must be covered. Cycle fenders are allowed on the front wheels and must cover the full width of the tyre tread and cover a minimum of 100 degrees of the wheel circumference.

Should a cycle fender mounting bracket break during an event, the damaged fender/s may be removed for the remainder of the event but must be repaired by the following race meeting.

- 10.4.13. Rear fenders must cover the area from the chassis bodywork to the outer edge of the rear tyre, must attach to the chassis cladding directly and cover a minimum of 180 degrees of the wheel circumference. Holes are allowed in either the front or rear surfaces of the rear fenders with a maximum total cross-sectional area of 13500sq.mm per side.
- 10.4.14. No elements may be removed from any part of the chassis or bodywork if deemed to be detrimental to the structural integrity of the vehicle.
- 10.4.15. If no taillights are fitted, a minimum of one red rain light must be fitted. The driver must be able to switch the rain light on when strapped into the seat. The light must be positioned above the lowest point of the rear body work or rear fender.

### **10.5. Minimum weight**

- 10.5.1. During any racing event the combined weight of the car, including driver, helmet, race wear, and whatsoever fluids may be in the vehicle at the time of weighing must equal or exceed 640 kgs.
- 10.5.2. Any weight required to be added to attain the minimum weight may be distributed anywhere within the confines of the chassis frame in the plane of the lower tubes and must be attached in a safe and secure manner.
- 10.5.3. If the facility is available, all cars will be weighed after each qualifying and race heat.
- 10.5.4. In the event, mobile scales are used or any other forced limitation, the (RC) / (TC) may opt to select random cars for weight checks.

### **10.6. Engine**

- 10.6.1. Engines are limited to 1600cc Toyota 4AGE 20V series (Black or Silver top). Intermixing of parts from the two engine types is allowed, providing ALL other requirements listed below are complied with.
- 10.6.2. Save as expressly allowed or modified by this section, the engine specifications must remain as per the manufacturers' standard and be consistent with the FIA Homologation document No, A-5607 dated 01 October 1999 – available upon request.
- 10.6.3. The valve train - including valves, valve grind angles, springs, retainers and followers - must remain to manufacturer's standard specifications.
- 10.6.4. The stroke shall be standard as per the manufacturer's standard specification for that specific engine block.

- 10.6.5. The Piston may not protrude above the gasket surface of the cylinder block. (Measured on the machined portion on the top outer surface of the piston crown, with that piston at TDC).
- 10.6.6. The compression ratio shall not exceed 10.7:1 and the individual effective combustion chamber volume shall not be less than 41.0 cc, gasket & piston crown included. It is allowed to remove material from the piston crown or combustion chamber to achieve this.
- 10.6.7. Boring of cylinders is allowed to a maximum of .5mm (0.020 inch) as long as the piston is the relevant manufacturer's production component, available off the shelf, and manufactured for that specific engine block. Forged and TRD pistons are not allowed.
- 10.6.8. The crankshaft and conrods must be standard production components. Balancing is allowed, but one conrod must remain untouched (polishing is not allowed). Manufacturer identification marks may not be removed. Steel crankshafts (incl. Standard 4AGZ – supercharged) are not allowed. Material may only be removed for balancing purposes in the designated areas. The total mass of the conrod assembly is not to be less than 475 grams (measured without bearing shells but with standard bolts and nuts).
- 10.6.9. Knife edging of the crankshaft is not allowed.
- 10.6.10. Undersize grinding of crank to 1mm below the standard sizes of 48mm and 42mm for Mains & big ends respectively are allowed.
- 10.6.11. Engine and component assembly bolts are unrestricted.
- 10.6.12. The original Toyota 4AGE flywheel may be balanced and or lightened. Aluminium or remanufactured flywheels are not allowed.
- 10.6.13. The standard pressure plate must be retained.
- 10.6.14. A Copper button clutch plate is allowed.
- 10.6.15. Normal induction must be by way of a single fuel injector per cylinder only. Standard throttle bodies with a butterfly size not exceeding 45mm must be used.
- 10.6.16. The maximum length from the outermost gasket flange of the throttle body to the gasket flange of the cylinder head (including a Manufacturer's specification gasket), may not exceed 150mm. All air used for combustion must flow through the entire throttle body.
- 10.6.17. Adjustable fuel pressure regulator is allowed.
- 10.6.18. Ram tubes are NOT restricted.
- 10.6.19. Fuel injectors must be Standard Toyota 4AGE 20v and capable of identification by part number.
- 10.6.20. Air intake or filtration system as per Appendix B.

- 10.6.21. Intake and exhaust port dimensions are free however metal may not be added to the existing port.
- 10.6.22. The exhaust system is free but must comply with MSA noise regulations.
- 10.6.23. Dry sump Lubrication is not allowed.
- 10.6.24. The sump pan may be modified and baffled.
- 10.6.25. A properly functioning alternator is required to be fitted. Engine must be able to start with an onboard battery. Assisted starting with a secondary battery in pits, to save onboard battery is allowed. The alternator is not required to be fitted to or driven by the engine.
- 10.6.26. Drilled bolts/nuts are to be fitted to the camshaft cover so that the cylinder head may be sealed upon assembly, drilled bolts can be used to seal the sump, but are not compulsory. Competitors must have their engines inspected and sealed to show compliance with these requirements, an inspection fee of R500.00 will be payable to the official doing the inspection. Competitors are encouraged to have their engines inspected at premises of the official where the required tools will be available to complete the assembly. To compensate the official should he be required to travel there will be a traveling fee of R300 per hour plus the current published AA rate per km plus toll fees for the distance travelled.
- 10.6.27. Unopened (import) engines can be sealed with limited inspection; Cam shafts must be measured, and dyno checks may be performed to verify performance is in line with other Class B cars.
- 10.6.28. To allow head changes at the track during race meetings, a spare cylinder head which has been completely measured and sealed would be acceptable as if it was the original head used during the engine build. If necessary, the head can be checked with all the engines of the race series to see which engines the head can be used on.
- 10.6.29. The sealing tag may not be broken for any reason without the express consent of the (TC) / (RC). The (TC) / (RC) can insist on being present at the breaking of the seal to perform an inspection and should the seal be broken without the (TC) / (RC) being present or engine be found to be illegal all points awarded for the current season since the last inspection will be forfeited.
- 10.6.30. Crank pulley is unrestricted.
- 10.6.31. Head gasket must be standard Toyota 4AGE 20v or aftermarket head gaskets conforming to O.E.M specifications – TRD head gasket not allowed.
- 10.6.32. Spark plugs are not restricted.
- 10.6.33. An oil cooler is allowed.

- 10.6.34. Water injection is not allowed.
- 10.6.35. The piston and gudgeon pin may not be modified save that material may be removed from the piston balance tabs for balancing purposes only. All 3 piston rings must be fitted. Non-OEM rings are allowed provided they were manufactured for this engine to OEM specification.
- 10.6.36. The standard camshafts are to be fitted and may not be modified in any way. The following dimensions are applicable.
- 10.6.37. The cam lobes to conform to the following dimensions.
  - 10.6.37.1. Inlet Min Dia                      32.0 mm  $\pm$  0.1 mm
  - 10.6.37.2. Inlet Max Dia                      40.5 mm  $\pm$  0.1 mm
  - 10.6.37.3. Exhaust Min Dia                  32.2 mm  $\pm$  0.1 mm
  - 10.6.37.4. Exhaust Max Dia                40.2 mm  $\pm$  0.1 mm
  - 10.6.37.5. Maximum lift – Inlet            8.5 mm  $\pm$  0.2 mm
  - 10.6.37.6. Maximum lift – Exhaust        8.1 mm  $\pm$  0.2 mm
- 10.6.38. The use of Vernier Cam pulleys, off-set dowel pins or offset keys in the cam drive system is not allowed. Locating items of all cam pulleys must be installed and conform to the manufacturer's original specification and non-adjustable by any means.
- 10.6.39. Cylinder Head may be skimmed but the compression ratio per rule 6.7.6 must be maintained.
- 10.6.40. Cylinder head may be gas flowed, which includes valve guide protrusion being removed. (Refer rule 9.6.3 above). The inlet manifold porting may be ground to match those of the cylinder head.

## **10.7. Engine management (ECU)**

- 10.7.1. Choice of engine management system is unrestricted.
  - 10.7.1.1. For 2026 the intention is to reduce/restrict the number of ECU's allowed so pls check with (RC) before buying new in 2025
- 10.7.2. No traction-control, or similar system of electronic intervention is allowed.
- 10.7.3. Launch control (stand alone or built into ECU) must be disabled if an ECU has launch control functionality. (RC)/ (TC) will have the power to request the ECU map and check.

## **10.8. Gearbox**

- 10.8.1. Straight cut gears and / or dog engagement are not allowed.
- 10.8.2. Maximum of five forward gears.
- 10.8.3. Standard synchro rings may be replaced by steel rings.



- 10.8.4. Bearings may be replaced by heavy duty items.
- 10.8.5. Any standard Toyota T50 or Ford Type 9 gearbox can be used. Any other standard gearbox must be agreed with the (RC) in writing for documentation purposes. Allowance to use this gearbox will not be unreasonably withheld.
- 10.8.6. The use of a 6-speed box, with the engagement of one forward gear blocked, is allowed. The gear engagement must be mechanically blocked, and it must not be possible for the driver to remove the block from within the car, whilst driving. The mechanical block must be presented to and approved by the (RC).

## **10.9. Differential**

- 10.9.1. Choice of differential type is unrestricted.

## **10.10. Suspension**

- 10.10.1. All cars shall have a double wishbone front suspension.
- 10.10.2. Any rear suspension design is allowed.
- 10.10.3. All spherical bearings used between wishbones and uprights in single shear must have a captive washer to ensure the joint is not lost in the event of a spherical joint failure.
- 10.10.4. All rod ends must have a locking nut or physical fixing.
- 10.10.5. Rod ends may not be bent or deformed in any way.
- 10.10.6. Rod ends/spherical bearings may not have any free play.
- 10.10.7. Shock absorber damping shall be by conventional gas/hydraulic means only. Remote canisters are allowed. Allowed adjustability shall be only by manual means and limited to spring platform height and bump and rebound control. (maximum 2 way adjustable only per damper).
  - 10.10.7.1. For 2026 the intention is to reduce/restrict the choice of shocks allowed so pls check with (RC) before buying new in 2025.
- 10.10.8. No part of the car may be lower than 40mm from the ground, such as a protruding sump, gearbox or skid plate (excluding nuts and bolts).
- 10.10.9. Should a car fail the ride height test as a result of damage incurred in an on track incident the (TC) / (RC) may at their sole discretion allow for 5mm tolerance on the above measurements.
- 10.10.10. Anti roll bars shall not be driver adjustable.
- 10.10.11. Damping of the anti-roll bar mechanism is not allowed other than the standard suspension shock absorbers.

### **10.11. Brakes**

- 10.11.1. Only fixed brake disks are allowed, the disks may be vented or solid and can be cross drilled or slotted. No floating disks are allowed.
- 10.11.2. Only one calliper per wheel and maximum of four pot callipers allowed.

### **10.12. Windscreen & Lights**

- 10.12.1. Vehicles may run without windscreens, headlamps, taillights, and brake lights.
- 10.12.2. If the windscreen is removed, use of an air deflector is allowed.
- 10.12.3. A minimum of one red rain light must be fitted. The driver must be able to switch the rain light on when strapped into the seat. The light must be positioned above the lowest point of the rear body work or rear fender.

## **11. VEHICLE ELIGIBILITY - CLASS L**

### **11.1. Purpose & Description**

- 11.1.1. The only vehicles eligible for this Class are replicas of the Lotus 7 manufactured in South Africa based in principle on the Locost book by Ron Champion "Build your own sports car for as little as £250".
- 11.1.2. Participants shall compete for the "Locost Club Trophy".

### **11.2. Seven Meter Rule**

- 11.2.1. All vehicles must conform to the Seven-meter rule i.e. vehicles must appear as fair representations of the models upon which they are based when viewed from a distance of 7 meters.
- 11.2.2. The placement of the engine, gearbox and differential must be consistent with the original design concept of the vehicle upon which it is based.

### **11.3. Vehicle dimensions**

- 11.3.1. No part of the power unit may protrude outside of the normal engine bay.
- 11.3.2. The maximum width of any bodywork forward of the centreline of the front wheels is 600mm, the minimum height of bodywork at the centreline of the front wheels is 600mm, no bodywork must protrude more than 300mm forward of the tyre on the front wheel.
- 11.3.3. The maximum overall length is 3400 mm.

- 11.3.4. The maximum allowed wheel track front and rear is 1700mm measured at the outside edge of the tyre including the bulge made where the tyre contacts the ground. The cockpit width must be 1067mm +-5mm.
- 11.3.5. The distance in plan of the centreline of the crankshaft to the centreline of the car shall not exceed 100mm
- 11.3.6. The distance in plan of the centreline of the nose of the differential to the centreline of the car shall not exceed 50mm.

#### **11.4. Bodywork**

- 11.4.1. Except in respect of components clearly stipulated in these regulations, aerodynamic aids designed to promote down-force or constitute an aerodynamic advantage, are not allowed.
- 11.4.2. Cladding is allowed on the underside of the vehicles.
- 11.4.3. Nothing is allowed on the underside of the vehicle that, as may be determined by the (RC), serves as a splitter, diffuser, or similar aerodynamic aid.
- 11.4.4. The area above the petrol tank must be completely covered by means of an aluminium cover, secured at its perimeter, to reduce fuel spillage in the event of an accident. The use of any other material shall be subject to the approval of the (RC). Should fuel tanks be positioned within the passenger compartment, they will be isolated from the driver by means of a firewall or be enclosed within a separate metal container which will prevent fuel spillage onto the driver or into the driver's compartment, a drain hole of at least 12mm must be made in the floor as far away from the exhaust as practically possible.
- 11.4.5. When Fuel cells are fitted behind the rear passenger compartment firewall they must be fitted above or in front of the rear axle, but may not protrude past the rear of the diff. Any tank fitted behind the rear axle must be completely drained of fuel. Bladder tanks are highly recommended.
- 11.4.6. The fuel tank must be fitted with an appropriate breather pipe which must include a one-way roll-over vent valve to prevent fuel spillage in case of a roll-over.
- 11.4.7. Airboxes which are designed to induce a ram effect and protrude beyond the bodywork are not allowed.
- 11.4.8. One or two bonnet vents or sets of louvers allowed with a maximum combined area of 600 sq cm on the rearward part of the bonnet and supplied by a race committee approved supplier. The vents of louvers should be placed to only allow air to exit, and not in any way feed air into

the induction system. Where a vent is a plain cutout on the bonnet, mesh should be fitted. It is not recommended to have these vent/s on the driver side of the bonnet.

- 11.4.9. Air intake scoops - refer Appendix B, bullet 1.4.
- 11.4.10. No elements may be removed from any part of the chassis or bodywork if deemed to be detrimental to the structural integrity of the vehicle.
- 11.4.11. Kevlar, carbon fibre and titanium materials are not allowed.
- 11.4.12. Nosecone may only extend to the bottom of the chassis, a lower nosecone intake scoop is allowed but may not protrude below the bottom of the chassis.
- 11.4.13. All wheels must be covered. Front wheel arches/fenders must not protrude further forward than the front tyre and must cover the full width of the tyre tread and at least 100 degrees of the wheel circumference, no vents, louvers or similar holes are allowed in wheel arches.
- 11.4.14. Rear fenders must cover the area from the chassis bodywork to the outer edge of the rear tyre, must attach to the chassis cladding directly and cover a minimum of 180 degrees of the wheel circumference.
- 11.4.15. A duct through the front of the rear fender will be allowed exclusively for rear brake cooling purposes. The maximum total cross-sectional area of 13500sq.mm per side. Only one duct is allowed per rear fender and is available from the (RC) or approved supplier.
- 11.4.16. The engine and transmission must be fully enclosed by the standard bodywork, exhaust system may protrude through the bodywork without the need for any cover but must be a reasonably close fit. Air filters or any part of the induction system must not protrude outside of the bodywork. One bonnet scoop allowed and supplied by an approved supplier. No other intakes, scoops, ducts or holes are allowed in any part of the bodywork other than is standard with the commercially available Locost book bodywork or equivalent. Where bonnets are fitted that do not have the bulge to clear oil filter caps, the standard intake scoop may be fitted in reverse direction to allow for clearance of the oil filler and cam cover assembly. Bodywork is to have separate main pieces of at least nosecone, bonnet, scuttle, rear panel and the four wheel arches.
- 11.4.17. The construction of the transmission tunnel must be sufficient to restrain a broken prop shaft.

## **11.5. Interior**

- 11.5.1. The vehicle must have 2 standard size seats. Only a fire extinguisher, battery, ballast and any roll bar bracing may impinge upon passenger space. No loose carpets or other items may be present

in the vehicle. The passenger area must always remain open, covers of any description are not allowed.

11.5.2. The fuel tank may be moved to the passenger compartment behind the passenger seat providing all other safety requirements for such a move are met. In this case a cover is mandatory but only covering the tank. Passenger seat can be moved forward by as much as 130mm to accommodate this. It is recommended that the passenger seat be adequately supported to avoid placing pressure on the fuel tank.

### **11.6. Minimum weight**

11.6.1. During any racing event the combined weight of the car, including driver, helmet, racewear and whatsoever fluids may be in the vehicle at the time of weighing must equal or exceed 650kg.

11.6.2. Any ballast weights used to achieve the minimum weight must be placed in the passenger side of the cockpit area, and must be attached in a safe, secure manner.

11.6.3. If the facility is available, all cars will be weighed after each qualifying and race heat.

11.6.4. In the event, mobile scales are used or any other forced limitation, the (RC) / (TC) may opt to select random cars for weight checks.

### **11.7. Engine**

11.7.1. Engine will be limited to the 1600cc Ford Rocam engine, as was produced in South Africa, standard flywheel and clutch assembly will be used. Standard clutch plates with bonded material, or 4 puck button clutches with sprung centres are allowed. The crank and flywheel may be cut to allow fitment of a standard Ford Sierra pilot bearing, but no cutting to reduce weight will be allowed.

11.7.2. The sub assembly must be standard, no balancing of any kind allowed.

11.7.3. The bore and stroke shall be standard as per the manufacturers' specification for that specific engine block.

11.7.4. No component of the engine, as supplied, may be disassembled or removed from the engine and no modification may be made to any component of the engine (unless allowed for elsewhere in these regulations). Should an engine rebuild be needed, standard replacement components can be fitted, but components may not be left out.

11.7.5. A Class L control camshaft may be used. This cam will be available from the (RC) approved supplier.

- 11.7.6. The use of Vernier Cam pulleys, off-set dowel pins or offset keys in the cam drive system is not allowed. Locating items of all cam pulleys must be installed and conform to the manufacturer's original specification and non-adjustable by any means.
- 11.7.7. The induction system, comprising all components from the throttle body to the cylinder head inclusive, will be standard as supplied with the engine, no modifications to these are allowed. The standard idle valve and MAP sensors may be removed and blanked off to reduce the likelihood of cracking of the plastic intake manifold. The throttle body will be the standard one as supplied with the SA version Rocam engine, with a 46mm diameter opening.
- 11.7.8. Intake system before the throttle body is unrestricted.
- 11.7.9. The exhaust system is unrestricted but must comply with MSA noise regulations.
- 11.7.10. A properly functioning alternator is required to be fitted to the engine, driven from the front crank pulley.
- 11.7.11. At least two drilled bolts must be fitted to cam cover and sump so that the top and bottom end may be sealed. Seals will be installed during annual safety inspection day or by special arrangement by (TC) / (RC).
- 11.7.12. The sealing tag may not be broken for any reason without the express consent of the (TC) / (RC). The (TC) / (RC) can insist on being present at the breaking of the seal to perform an inspection and should the seal be broken without the (TC) / (RC) being present or engine be found to be illegal all points awarded for the current season since the last inspection will be forfeited.
- 11.7.13. All cars must do a representative dyno run before the 1<sup>st</sup> race of the season at the facility designated by the (RC).
- 11.7.14. If/whenever a head is removed from an engine for whatever reason, a new dyno run graph will be required at the same facility and a new seal needs to be installed by (TC) / (RC).
- 11.7.15. Maximum engine performance for the Rocam engine as measured on a specified dyno as agreed to from time to time:
  - 11.7.15.1. Maximum Power 60 Kw Maximum Torque 110 Nm.at Gauteng altitude.
  - 11.7.15.2. The correct dyno correction factor for air temperature and pressure must be used
  - 11.7.15.3. Dyno run must be done with the air filter removed. Accelerator butterfly must be fully open at maximum throttle.
  - 11.7.15.4. Any engine making more power needs to be detuned.
  - 11.7.15.5. RPM will be HARD limited by ECU at 7000 rev's per minute.
  - 11.7.15.6. ECU maps and signed dyno sheet must be provided to the Lotus Challenge (RR) for future checks.

- 11.7.15.7. Class L competitors may request and receive a copy of any other Class L competitor's dyno chart and ECU map.
- 11.7.16. The sump pan may be modified and baffled.
- 11.7.17. To protect the engine in case of losing the fanbelt, a supplementary electric water pump is allowed but the fully functional original mechanical water pump MUST remain in place. The (RC) / (TC) may request for power to the electrical water pump to be disconnected at any time before any session for the duration of the session.

## **11.8. Engine management**

- 11.8.1. Engine Management electronics (ECU) will either be;
  - 11.8.1.1. Perfect Power XMSL or XMS4A/XMS5A as supplied by Perfect Power or its dealers.
  - 11.8.1.2. Spitronic Venus3 Advance ECU as supplied by Spitronic or its dealers.
- 11.8.2. Cars may be dyno'd and sealed by (RC) / (TC) or appointed agent should any concerns be raised in writing with the (TC) / (RC) that an engine produces more power than the equivalent engines in the Class.
- 11.8.3. ECU seals may be inspected at any time during a race meeting (practice or racing). In the event of any seal being broken, or bearing evidence of having been tampered with, the competitor concerned may be excluded from the race meeting. The onus is on the competitor to ensure all his/her seals are always intact and to immediately report any broken or damaged seals to the (TC) / (RC).
- 11.8.4. The sealing tag may not be broken for any reason without the express consent of the (TC) / (RC). The (TC) / (RC) can insist on being present at the breaking of the seal to perform an inspection and should the seal be broken without the (TC) / (RC) being present or engine be found to be illegal all points awarded for the current season since the last inspection will be forfeited.
- 11.8.5. If the ECU has a multiple map feature, all maps must be identical.
- 11.8.6. ECU maps changes for coastal races are allowed but original maps saved during dyno run must be restored after the event.

## **11.9. Gearbox**

- 11.9.1. Except for special allowances as contemplated in 11.9.3. transmission is a standard Ford 4 or 5 speed cast iron gearbox, only standard Ford ratios and gears as fitted in the chosen gearbox are allowed, straight cut or sequential gearboxes are disallowed.

11.9.1.1. Synchro rings for the gearboxes may be replaced with uprated rings for 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> gear.

11.9.2. Except for special allowances as contemplated in 11.9.3. bellhousing is standard Ford cast iron.

Modifications may be made to the bellhousing sides to be able to locate the gearbox and engine further back into the chassis, as well as holes for clutch hydraulic pipes entering and exiting the bellhousing. No extensive lightening allowed (example of drilling multiple holes in the bellhousing).

11.9.3. Special allowance

11.9.3.1. For 2023 up until the end of the 2025 seasons, gearboxes and bellhousing will be open to allow for the testing and evaluation of different gearboxes. The intention is to give competitors a more robust, reliable gearbox option(s) that saves money in the long run. This special Allowance on Gearboxes will only be allowed on condition that any proposed gearbox to be used, is motivated to the (RC) with all relevant technical information, and approved by the (RC) prior to fitment and use, and that performance detail and usage feedback is provided to the (RC).

11.9.3.2. Some of the criteria for evaluation will be that the proposed gearbox should be an off the shelf commercially available 4 or 5 speed H-pattern gearbox, fitting inside a Locost chassis without main chassis modifications. Modifications are only allowed to gearbox mounting points, bellhousing (including allowing an adaptor plate), and gearbox input shaft. During this period bell housings, starters, clutch and pressure plates will be open for the approved gearboxes, except that no extensive lightening be allowed (example of drilling multiple holes in the bellhousing).

## **11.10. Differential**

11.10.1. Differentials will be restricted to Ford Escort, Capri, Cortina, Sierra or Sapphire differential with ratios within the ranges of (3.32 - 4.11).

11.10.2. Locked or Limited Slip Differentials of any type not allowed.

## **11.11. Suspension**

11.11.1. The suspension is unrestricted except that the front dampers and springs must be placed in the air flow, all suspension mountings to the chassis must be through rubber or polyurethane bushes.



- 11.11.2. Front and rear shocks will be the steel bodied Gaz GP (130 / 90) range with 300 lb springs fitted to the front and 200lbs springs fitted to the rear. No modifications to the shocks or springs allowed. Shock mounts to be rubber bushed.
- 11.11.3. Suspension should be free to travel through their full range of movement without interference from any other source.
- 11.11.4. No rose joints/spherical bearings will be allowed on the chassis attachment points of the suspension arms. For cost and safety reasons, rose joints may be used for the attachment points of wishbones to uprights front and rear, as well as on the steering rack replacing the track rod ends.
- 11.11.5. Anti-roll bars may be fitted front and/or rear. The use of spherical rod ends and rose joints is allowable for anti-roll bar links.
- 11.11.6. Bolting should be Grade 8.8 minimum throughout.
- 11.11.7. Front and rear uprights material to be as per specified donor cars, or if custom manufactured, only mild steel material will be allowed.
- 11.11.8. Minimum ground clearance with the driver normally seated and the car not artificially raised under the sump or other lowest point protruding under the car is 40mm, and chassis minimum ground clearance at its lowest point is 105mm excluding bolts and nuts sticking out under the body.

#### **11.12. Brakes**

- 11.12.1. Brake callipers are restricted to one calliper per wheel.
- 11.12.2. For disk brakes, only single piston callipers commercially available as standard on the following SA vehicles can be used front and rear: Ford Escort, Capri, Cortina, Sierra, Sapphire, Bantam VW Golf, Jetta, Polo.
- 11.12.3. Front discs may not be cross-drilled or grooved in any way, pad material restricted to commercially available 'road-use'.
- 11.12.4. Rear disks may be grooved and/or dimpled, but not cross drilled.
- 11.12.5. Brake bias adjustment is allowed but must not be adjustable by the driver whilst normally seated.

#### **11.13. Windscreen & Lights**

- 11.13.1. Vehicles may run without windscreens, headlamps and indicators.
- 11.13.2. An air deflector is allowed.

11.13.3. Two rear brake lights must be fitted and be functional.

11.13.4. A minimum of one taillight needs to be functioning as a rain light.

## 12. VEHICLE ELIGIBILITY - CLASS X

- 12.1. For the purposes of accommodating as many competitors as reasonably possible, competitors may be allowed to compete by invitation only at the discretion of the (RC).
- 12.2. Vehicles competing by invitation shall not be eligible for inclusion in the results of any championship Class or for championship points and shall be classified separately.
- 12.3. A competitor or vehicle which has competed in a Lotus Challenge championship Class previously may not elect to compete by invitation without the written agreement of the (RC) /(TC).
- 12.4. In applying their discretion when considering permitting a vehicle to compete by invitation, the (RC) shall give due regard to the following:
  - 12.4.1. The performance potential of the vehicle – it being a principle for competing by invitation that the potential or proven performance of the vehicle shall not be such that it might be reasonably capable of bettering the prevailing Class B lap record +1 second at the relevant circuit.
  - 12.4.2. Vehicles must conform to ALL safety requirements, including roll over protection applicable to the series.
  - 12.4.3. Allowed vehicles must comply substantially with the provisions of Vehicle Eligibility all Classes, General, Seven-meter rule, Vehicle dimensions, Drivetrain and Other.
  - 12.4.4. Engine capacity shall under no circumstances exceed 2050 cc.
- 12.5. Vehicles accepted for participation by invitation will be allocated grid positions at discretion of (RC) / (TC).
- 12.6. As might be generally applicable, participants by invitation shall comply with Conduct of Series & Events.
- 12.7. Acceptance for participation by invitation in any instance shall not serve to commit and/or bind the (RC) to permit participation by invitation in any further or future event and permission to participate by invitation may be withdrawn by the (RC) at any time without notice or warning.
- 12.8. Participation in Class X by any competitor is limited to a maximum of 3 Events (Race Meetings) after which it is expected that the competitor enters one of the existing Championship Classes. The (RC) may use its own discretion to extend the number of events in the case of non-regular racers.

- 12.9. Guidelines and parameters governing eligibility for participation by invitation may be amended or supplemented at any time by issue of a Lotus Challenge Bulletin which shall then be read in conjunction with these regulations.

### **13. VEHICLE ELIGIBILITY – CLASS P (Prototype)**

- 13.1. For the purposes of establishing any new Class or to propose different engines, drive trains or tyres for existing Classes, competitors may be allowed to enter and compete by invitation only, at the discretion of the (RC). The vehicle entered would be classified as a prototype which should be based on the specification envisaged for that new Class or new configuration of existing Class. Focus must be given to long-term sustainability and affordability of such Class.
- 13.2. Such invitation will only be entertained on receipt by the (RC) of a written specification proposal for such a Class or change, an investigation into the number of members prepared to invest in such a Class or change and result in a written approval to construct and enter such prototype in the race series.
- 13.3. The (RC) will evaluate and either approve or decline the application to enter a car in Class P for evaluation purposes within 30 days of receiving such application.
- 13.4. Competitors are advised to first get approval before building and to do sufficient homework and test prior to entering the car in a race.
- 13.5. Evaluation period must start within 6 months of approval. The approval will lapse if no written request to extend is received from the competitor.
- 13.6. Evaluation period may not exceed a period of 12 months.
- 13.7. Only one example of the proposed prototype may be entered for evaluation.
- 13.8. By allowing the car to be run as a prototype, the (RC) is under no obligation to approve the proposal.
- 13.9. The purpose of the evaluation period is to showcase and demonstrate the viability of the proposal and not for testing and development.
- 13.10. The competitor accepts full responsibility for the costs incurred and may not have any claim against the (RC) or The Lotus Register if his proposal is not approved.
- 13.11. Vehicles competing by invitation shall not be eligible for inclusion in the results of any championship Class or for championship points.
- 13.12. In applying their discretion when considering such a proposal and thereafter permitting a vehicle to compete by invitation, the (RC) shall give due regard to the following:

- 13.12.1. The General performance should not be faster than 3 seconds per lap below (faster than) the prevailing Class B lap record.
- 13.12.2. The complexity and cost of building a typical car to such a specification should be such that it could potentially attract at least 6 regular participants and encourage migration from the other Classes.
- 13.12.3. Vehicles accepted for participation by invitation will be allocated grid positions at the discretion of (RC) / (TC).
- 13.12.4. Vehicles must conform to the safety requirements, including roll over protection applicable to the series.

## APPENDIX A - SAFETY LIST

### 1. Roll-over protection

#### 1.1. Compulsory all Classes

- 1.1.1. Six (6) Point Roll cage, FIA approved or to specifications described in Appendix C, Item 1.
- 1.1.2. Side impact beam, as described in Appendix D.
- 1.1.3. A head restraint must be fitted which must measure a minimum of 10cm x 10cm and be situated not more than 5cm behind the driver's head. The design of the head restraint is free. Head must be capable of restraining a 17kg mass decelerating at 5g. (FIA Appendix K).
- 1.1.4. There must be clearance of at least 5cm between the top of the driver's helmet and the top of the rollover cage main hoop.

#### 1.2. Recommended

- 1.2.1. It is recommended that an approved passenger side impact beam be fitted on cars that have their fuel tank mounted in the passenger compartment.
- 1.2.2. Fitment of roll cage padding to the roll cage main hoop, roof diagonal and drivers side rail to every part of the roll cage that might reasonably come into contact with drivers' helmet or arms in impact is recommended.

### 2. Fire Extinguisher

#### 2.1. Compulsory all Classes

- 2.1.1. Fire extinguisher of 1.5-kilogram minimum extinguishant capacity must be fitted. Proof of service or purchase must be furnished in accordance with MSA regulation GCR 257. (service interval 12 months).
- 2.1.2. Fire extinguisher to be within reach of driver with harness done up.
- 2.1.3. It is allowed to remove the passenger seat to allow optimal placement of the extinguisher. Specific Class rules may override this rule.
- 2.1.4. A decal should be positioned to show the marshals the location of the extinguisher.
- 2.1.5. Plastic mounting brackets are not allowed.
- 2.1.6. The extinguisher must be mounted in a position where it may be reached or activate from outside the car.

## **2.2. Recommended all Classes**

- 2.2.1. An approved, plumbed in extinguisher system for driver's & engine compartment protection is highly recommended.

## **3. Suspension**

### **3.1. Compulsory all Classes**

- 3.1.1. Where Triumph-type uprights are used on vehicles, it is required that the trunnion be replaced with a spherical joint. This has additional benefits in terms of suspension geometry. The modification must be properly engineered with a sleeve welded to the trunnion point to ensure structural strength.
- 3.1.2. Where a Ford or other type of upright is used, and an extension is used to reduce ride height this extension must be properly/professionally welded to the upright.
- 3.1.3. Suspension bushes/spherical joints to be in good condition and free of play.
- 3.1.4. Suspension should be free to travel through a full range of movement without interference.
- 3.1.5. Welds on suspension arms to be of good quality and continuous around all joints.
- 3.1.6. Bolting should be Grade 8.8 minimum throughout.

## **4. Chassis**

### **4.1. Compulsory all Classes**

- 4.1.1. Steel hoops or welded in the centre tunnel to be fitted to restrain a broken prop shaft.
- 4.1.2. Modified / strengthened steering rack mounting bracket on all older Birkin's.
- 4.1.3. No structural members which may be deemed to affect the integrity of the car shall be removed from a chassis for any reason whatsoever.

- 4.1.4. No grub screws on round steering shafts allowed.
- 4.1.5. All tubes to be in good condition and tubes that should be straight must be straight.
- 4.1.6. Mounting points for suspension, engine, gearbox, safety belt and steering rack to be adequately supported.
- 4.1.7. All welds to be of good quality.

#### **4.2. Recommended all Classes**

- 4.2.1. On Birkin cars fitted with independent rear suspension, it is recommended the mounting points of the differential support structure to the chassis be inspected for cracks regularly and if found to be cracked, a strengthening repair be carried out.

### **5. Wheel Studs**

#### **5.1. Compulsory all Classes**

- 5.1.1. Wheel nuts should have at least 1.5 x diameter's engagement with studs. Closed nuts are not allowed.

### **6. Brakes**

#### **6.1. Compulsory all Classes**

- 6.1.1. Brake callipers to be attached to suspension using Grade 8.8 or better bolts.
- 6.1.2. Brake discs should not show evidence of structural cracking.
- 6.1.3. Brake hoses should be in good condition and must not rub against moving parts such as wheels, tires or the ground.
- 6.1.4. Brake fluid to be replaced at least yearly and should appear clean and be uncontaminated. The level of brake fluid should be within limits before every race.
- 6.1.5. Brake pads must have at least 3mm of friction material left before every race.
- 6.1.6. Dual circuit brakes are to be fitted to all cars.

### **7. Fuel system**

#### **Compulsory all Classes**

- 7.1. Fuel lines should be in good condition and well removed from moving objects and heat sources such as exhaust systems.
- 7.2. Fuel should not be able to drip onto exhaust or distributor.
- 7.3. The tank is to be partitioned in such a way that fuel cannot spill onto the driver in the event of an accident (Firewall).

- 7.4. All fuel lines going through the cockpit are to be steel or steel braided.
- 7.5. Fuel tanks in the cockpit area to be isolated from the driver with a suitable firewall.
- 7.6. If the fuel tank is in the cockpit area a 12mm minimum hole to be drilled in the floor as far away from the exhaust as possible to allow any fuel spilled to drain away.
- 7.7. Fuel tank to be in good condition.
- 7.8. Fuel tank to be adequately mounted.
- 7.9. Plastic tanks or fuel cells are strongly recommended. Only professionally made bladder tanks are allowed to be fitted behind the rear axle.
- 7.10. Grommets are to be fitted where flexible hoses go through body panels.
- 7.11. All joins in pipes are to be supported.
- 7.12. Fuel vent lines to be fitted with one way roll-over vent valves.

## **8. Electrical system**

### **Compulsory all Classes**

- 8.1. Battery cut-off switches to be accessible to marshals from outside the car as well as being accessible to the driver when fully belted into the car.
- 8.2. A decal should show the position of the cut-off switch and the direction to turn the power off.
- 8.3. Batteries to be securely mounted and covered if mounted in the driver area.
- 8.4. Wiring to be in good condition and connections should be insulated.
- 8.5. Grommets should be fitted where wiring goes through metal panels.
- 8.6. When the Battery cut-off is switched off, it must completely cut ALL electric power and the engine must stop.

## **9. Clothing**

### **Compulsory all Classes**

- 9.1. Fire Retardant Racing overalls to be worn by all competitors.
- 9.2. Fire retardant shoes and gloves to be worn by all competitors.
- 9.3. Correctly fitted Head And Neck Support device (H.A.N.S) is mandatory.
- 9.4. Fire retardant Balaclava to be worn by all competitors.
- 9.5. Helmets are to be worn by all competitors and must be in good condition.

### **Recommended all Classes**

- 9.6. All Helmets must be approved for circuit car racing with either SFi 24.1 (2015), Fia 8860-2010, Fia 8859-2015, Snell SA or SAH ratings. – compulsory from 2019.

## 10. Seat Belts

### Compulsory all Classes

- 10.1. Safety belts/harnesses five or six Point, including Crotch strap shall be fitted in accordance with the requirements of the MSA safety commission.
- 10.2. The harness must be in good condition and securely mounted to well-supported areas of the chassis.
- 10.3. All belts must be within the expiry date. Per MSA the expiry date can be extended by up to 5 years providing the belts are in good condition. All belts must have the Hologram, and the expiry on the manufacturer's label must be clearly visible.
- 10.4. The harnesses shoulder strap mounting points MUST be in accordance with the recommendations of the Head And Neck Support device manufacturer.
- 10.5. Head And Neck Support device may not be modified in any way. The original manufacturer's hardware fittings may not be removed or replaced.
- 10.6. The use of arm restraints is mandatory.
- 10.7. Arm restraints are not required to be made from fire resistant/retardant material. They shall be mounted on one end to the driver restraint lap belt and the other end to the arm or wrist. The minimum width for the portion of the arm restraint that wraps around the arm or wrist shall be 1 3/4 inches (4.4 cm) minimum. The lap belt end shall be mounted in such a manner as to prevent the arm from traveling outside of the driver's compartment. Each arm may have a separate strap, or the restraint may have a "Y" configuration, with only one attachment to the lap belt. Any loose webbing end shall incorporate a design method to prevent the strap from completely pulling out of any hardware (d-rings, 3-bar slide, etc.).

### Recommended all Classes

- 10.8. Additional side netting (on either side of the driver) can be used.
- 10.9. The use of Head And Neck Support device specific seat belts with 2" shoulder straps is recommended.
- 10.10. Competitors are recommended to replace complete belt sets after being involved in accidents.

## 11. Seats

### Compulsory

- 11.1. For all composite seats: (Fiberglass or Carbon fiber).
- 11.2. Unless the seat is mounted on a dedicated and integrated base (Caterham style seat) the following will apply:
  - 11.2.1. There must be an adequate steel structure under the seat to support the composite seat



- 11.2.1.1. The cavity (open area between seat back and chassis cladding) behind the seat must be filled with expanding Polyurethane foam with a minimum density of 38kg/m<sup>3</sup> to the full width of the seat
- 11.2.1.2. All seat belt locator openings must have no sharp edges and anti-chafing strips fitted.
- 11.2.1.3. The seatbelt must follow the natural “straight” line between the top seatbelt mounting points and the driver shoulder – The seatbelt must not be deflected by the holes in the seat.

### **Recommended**

- 11.3. The following composite seat recommended minimums:
  - 11.3.1. Four layers of fiberglass chopped strand matting to a minimum thickness of 4mm, OR
  - 11.3.2. One layer of fiberglass woven mat sandwiched between two layers of fiberglass chopped strand matting, minimum thickness 3mm,
  - 11.3.3. Carbon fiber and fiberglass woven matting to a thickness of 2mm.
  - 11.3.4. Steel plate of minimum 1.6mm centred under the lowest point of the seat welded or bolted between seat rails or chassis members.

## **12. Other**

### **Compulsory all Classes**

- 12.1. All cars shall, at a minimum, have 2 mirrors or single panoramic mirror not shorter than 200mm, positioned such as to have an unobstructed view behind the car.
- 12.2. Sump, gearbox and diff drain plugs, oil filters and any probes or threaded fittings, shall be safety-wired in place.
- 12.3. Indicated towing points are to be provided front and rear.
- 12.4. No loose carpets or other items shall be present in the car.
- 12.5. No cars shall take part in a practice or race on a tarred circuit with an open-ended pipe in any way connected with the lubrication system, sump, catch tank or other oil reservoir. All such pipes shall terminate in a metal or plastic container of at least 2000ml capacity, firmly secured to the vehicle. This container must be translucent or, in the case of a metal container, be fitted with a translucent "window" for checking the level of the contents. These containers shall be empty at the start of the race.
- 12.6. The use of anti-freeze in the cooling system is forbidden.
- 12.7. The competitor is advised to read the FIA “Common regulations competitors: Safety” document (Appendix K) for additional information regarding safety equipment.

## APPENDIX B - Inlet Ducts and Scoops

### Inlet Ducts or Scoops

An inlet duct or air scoop (the sole purpose of which is to supply air to the engine for combustion purposes), as detailed below is allowed to be fitted to the nose only.

#### 1. Types of Duct

##### 1.1. Protruding scoop (refer Figure 1)

- 1.1.1. The maximum dimensions of the opening or air inlet is 180mm wide by 45mm high. 8100sq. mm.
- 1.1.2. The maximum height allowed is 57mm measured from the highest point of the scoop to the surrounding bodywork closest to the scoop.
- 1.1.3. The maximum width is not restricted if the aperture does not exceed the dimensions in 1.1.1. above.
- 1.1.4. The length is limited to 350mm.
- 1.1.5. The sizes mentioned in 1.1.1. above are for a single duct. If more than one duct is used, their individual areas must be added up, and that total may not exceed 8100sq. mm.

##### 1.2. NACA Duct (refer Figure 2)

- 1.2.1. The maximum dimensions of the opening or air inlet is 180mm wide by 45mm deep - 8100sq. mm.
- 1.2.2. The maximum depth allowable is 57mm.
- 1.2.3. The length is limited to 350mm.
- 1.2.4. The maximum width of the duct is 180mm.
- 1.2.5. The sizes mentioned in 1.2.1. above are for a single duct. If more than one duct is used, their individual areas must be added up, and that Total may not exceed 8100sq. mm.

##### 1.3. Concealed

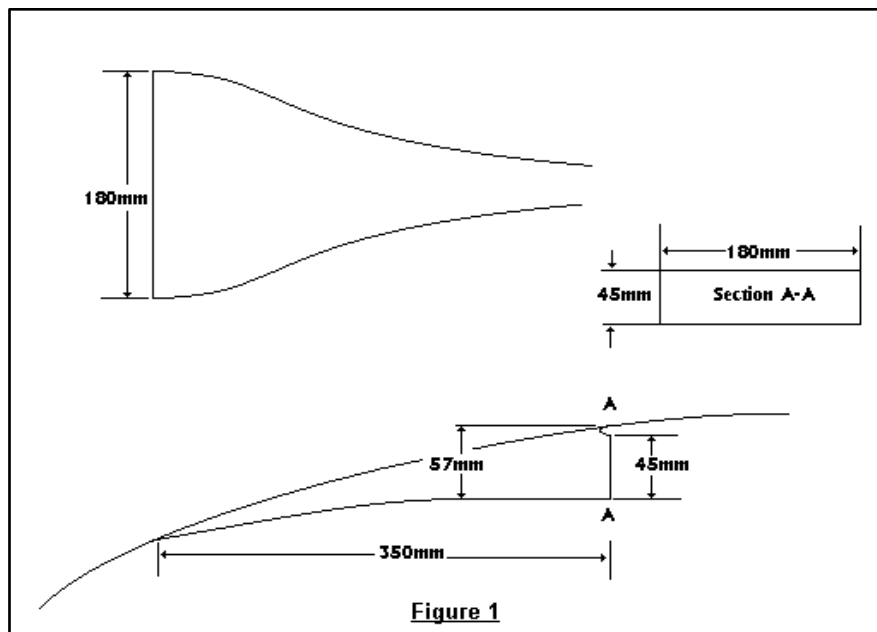
- 1.3.1. The maximum dimensions of the opening or air inlet 180mm wide by 45mm deep, or a total area not exceeding 8100sq. mm.

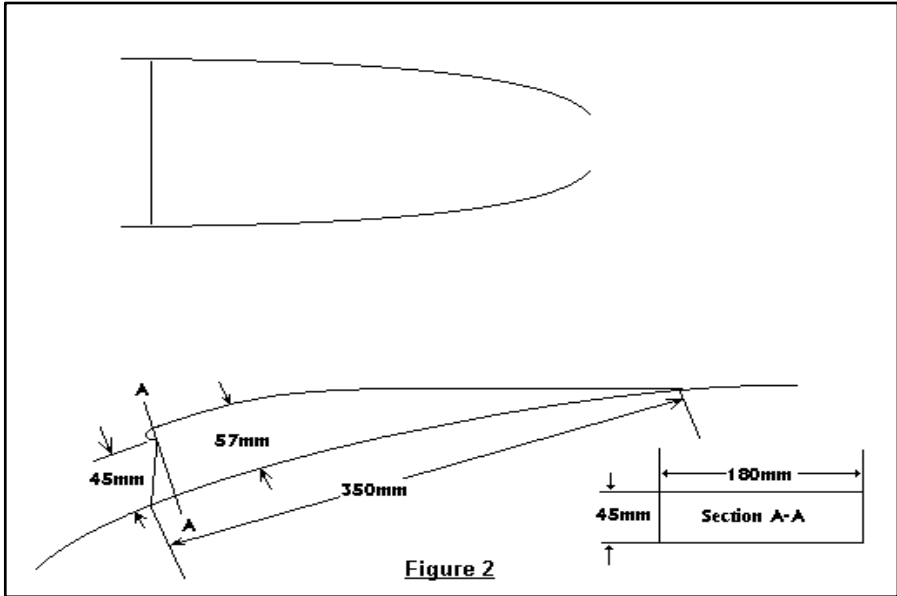
##### 1.4. Class L scoop

- 1.4.1. Only one bonnet scoop is allowed available from the (RC) or approved supplier.

## 2. Exceptions

- 2.1.1. Should any duct, scoop or air box fall outside the definitions and sizes listed above, adequate and timely written representation requesting consideration for approval must be made to the (RC) who shall determine the eligibility of the duct at their discretion.
- 2.1.2. No duct will be allowed should the area of the aperture be greater than 8100 sq. mm.
- 2.1.3. Air scoops or ducts mounted below the nose, and supplying or extracting air for cooling or other reasons may not be wider than the chassis at their furthestmost forward mounting point, nor extend below the chassis frame, but will fall under Items 10 and 11 of the Regulations and Specifications for the Lotus Challenge.





## APPENDIX C - Roll over protection

### 1. Roll cage specification applicable to all Classes

- 1.1. All cars must be equipped with a roll cage consisting, at a minimum, of a structural framework made up of:
  - 1.2. a main rollbar, and
  - 1.3. a front rollbar, and
  - 1.4. their connecting members, and
  - 1.5. one diagonal member, and
  - 1.6. backstays, and
  - 1.7. a minimum of 6 mounting points, and
  - 1.8. all generally configured in accordance with Figure 1.

Unless fitted with an FIA certified and approved Roll Cage (minimum of 6 mounting points) for use on that type of vehicle (The original identification plate must be attached), the following minimum specification detailed below is applicable to all. Roll cages supplied by Caterham U.K., Birkin S.A. and Locost S.A. are acceptable.

### 2. Main roll cage structure: (Refer Figure 1 below)

- 2.1. Two safety rollover structures (front and rear) are mandatory.
- 2.2. The rear structure tubing must be straight and vertical when viewed from the side, front or rear of the car. When fitted to an enclosed car (e.g. Exige), it must follow the internal contour of the bodyshell as close as possible. It must have at least 1 diagonal brace, left to right, lowest point at the base plate on the passenger side of the vehicle.
- 2.3. The front structure must be separated by a minimum of 600 mm from the rear structure, measured at its nearest point. It should loosely follow the profile of a standard windscreen as fitted to a road going "Seven" or the internal bodyshell if fitted to an enclosed car. The vertical tubes must be straight and can have a maximum of 1 bend on their lower part.
- 2.4. The front structure must be connected to the rear structure by tubes attached near the top outer bends of the forward and rear main structures on both sides of the car.
- 2.5. At least 1 diagonal member must connect the front & rear rollover structures, its front connection must be at the driver's side. These connections must be at the same location as the side tube joints This

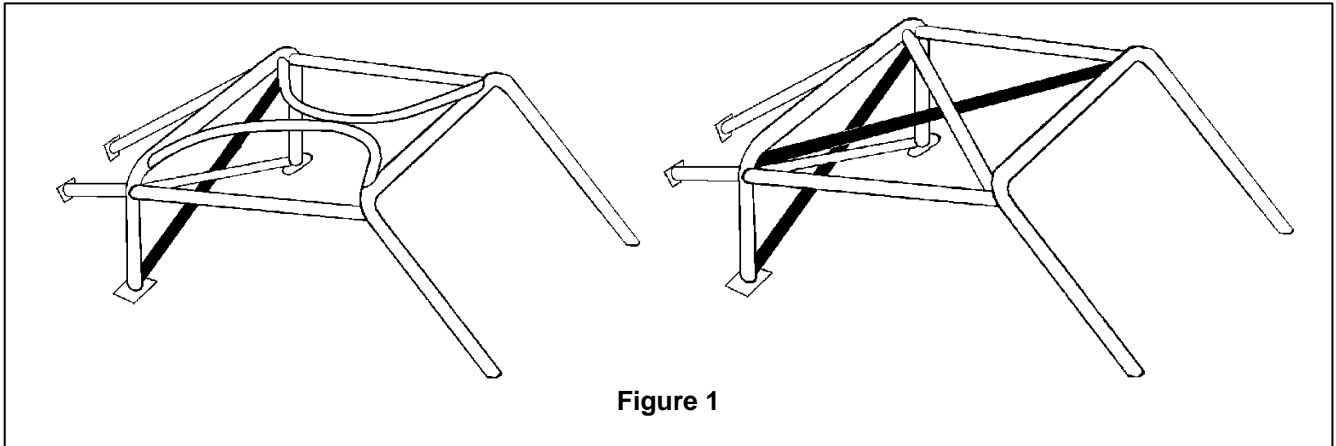
member may be replaced by two curved tubes (U shaped) the legs of each “U” must attach at the attachment points of the side tubes connecting the front and rear roll structures and the base of the “U” must meet on the longitudinal centreline of the roll structure.

- 2.6. Two backstays must be fitted, these must meet the main rear rollover structure at the side tube joints. For certain types of enclosed cars these backstays may be omitted with the approval of the and circuit scrutineers. The rear of these stays must be located on the factory mounting points for Sevens.
- 2.7. The base plates for the main Rollover structures must be made from at least 3mm steel plate. Mount plates for the backstays must be at least 2mm.
- 2.8. If not forming part of the seat construction, a head restraint must be fitted to the roll cage, of minimum dimensions 100x100mm and positioned so that the driver's head cannot move past it under rearward forces or get trapped between the roll bar and head restraint. The driver's head should be within 50mm of it when normally seated.
- 2.9. The forward & rear safety rollover structures must be symmetrical about the lengthwise centreline of the car.
- 2.10. The forward & rear structures must have at least one 5mm hole drilled through to enable tubing wall thickness to be verified.
- 2.11. The forward and rear rollover safety structures must be made in one piece without joints. Their construction must be smooth and even, without ripples or cracks. The centreline bend radius must be a minimum of 3 times the tube Dia.
- 2.12. The areas within the roll cage structure shall remain entirely open and shall not, when viewed from any angle, be covered with, or supplemented by, any additional material which, as might be determined by the (RC), might serve, or be intended to serve, as an aerodynamic aid.
- 2.13. The top of the driver's helmet may not be less than 50mm below the top edges of the two roll over structures. Any extension added to the main structure to facilitate this, may not be higher than 100mm above the main roll hoop.
- 2.14. It is recommended that roll cage tubes within 150mm of the driver's helmet are covered with a suitable energy absorbing material.
- 2.15. The tubes may not carry fluids.

### **3. Tubing Specifications**

- 3.1. All compulsory elements of the roll cage structures shall be - Cold drawn unalloyed carbon steel.
- 3.2. Minimum dia. 38mm.
- 3.3. Min wall thickness x 2mm.

- 3.4. All bolts securing the roll cage must be at least grade 8.8".
- 3.5. Optional reinforcing members may be fitted (shaded items in fig. 1) but none may extend forward of the front roll hoop although an additional diagonal brace within the top of the roll cage is recommended.
- 3.6. Side-intrusion bars may be fitted external to the chassis and/or incorporated into the roll cage structure but may not extend further forward than the front of the driver foot well.



## APPENDIX D - Side impact protection

### 1. Side Impact specification, applicable to all Lotus 7 type vehicles.

1.1. All Lotus 7 type cars must be equipped with externally mounted side impact protection bars consisting of a structure mounted on the outside and, at minimum, to the driver's side of the vehicle and generally configured in accordance with Figure 1. Although option 2 is the preferred and recommended configuration, the utilization of one, or a combination of, options 1, 2 or 3 is allowed. This requirement is in addition to any existing internally fitted side impact protection.

#### 1.2. Main structure: (Refer Figure 1 below)

1.2.1. One tubular side impact bar mounted to the chassis frame at a minimum of three points along the side of the vehicle. Two of these points may be attached to the existing roll-cage structure. Tubing to be cold drawn unalloyed steel. Minimum of 31mm diameter and 2mm wall thickness. Spacing between the tubing and chassis/cladding to be either 0 to 30mm, or 200 to 300mm. The structure may be removable.

#### 1.3. Mounting points to be, from rear to front:

1.3.1. Rear roll-over hoop maximum 150mm above base mount (a mount point can be sandwiched between the vehicle chassis and the rear roll hoop mount base plate) Minimum fastener size 10mm.

1.3.2. This point is an optional point and does not have to be included in the structure. Located about 50mm below the point where the angled trailing arm mount tube, the cockpit side rail "elbow rail" and the curved tube from the backrest/shock mount point are joined. Recommended minimum fastener size 8mm.

1.3.3. At the down tube which links the dashboard frame tubing to the lower chassis longeron tube. A minimum of 150mm and a maximum of 300mm from the bottom of the lower chassis longeron tube. Or, on roll-cages that mount to the chassis in this area, the lower mounting point of the forward roll hoop. Minimum fastener size 8mm.

1.3.4. At the furthest forward footwell/cockpit bulkhead vertical tube, a Maximum of 100mm from the bottom of the lower chassis longeron tube. Minimum fastener size 10mm.

1.3.5. An additional tube from point C to a point in the area where the lower trailing arm is mounted to the chassis is allowed.



Cars fitted with side impact bars that form an integral part of the roll-cage structure (e.g. Caterham), need only install a footwell side impact bar, utilizing mounting points C & D as shown in option 3 of figure 1 below.

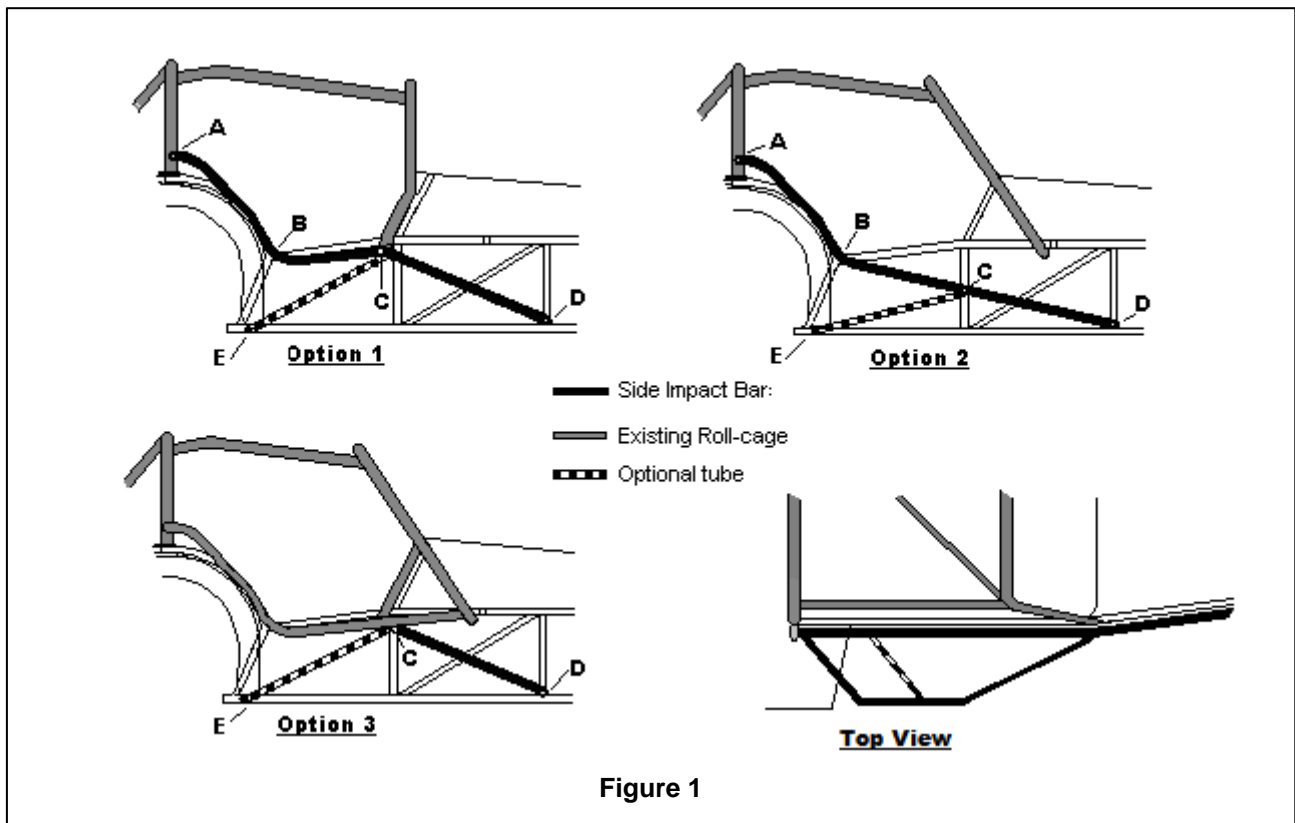


Figure 1

### **Interpretation and Application**

The following represents the (RC)'s interpretation of the so-called "two-tyre" rule and its application in the context of the allowed number of tyres that a competitor may use during the course of a single season.

#### **1. Intent of Rule**

- 1.1. The rule was introduced for the purpose of containing costs and, by implication, to require that competitors 'manage' the longevity of their tyres through considered and disciplined husbandry of their tyre allocation through appropriate driving and set-up practices.
- 1.2. The (RC) believes these principles must guide their interpretation and application of the rule.

#### **2. Number of allowed tyres:**

- 2.1. The so-called "two-tyre" or "two-set" rule might be more properly described as the "eight-tyre" rule as competitors are allowed to use up to eight branded tyres during the season.
- 2.2. Four tyres are branded as "set-one" and four as "set-two", but there is no limitation upon the combination of tyres from within these two "sets" that may be used during the season which therefore allows competitors to mix-and-match their branded tyres irrespective of the "set" from within which each of the tyres may be drawn.
- 2.3. This interpretation would permit, for example, the utilization during the season of six front tyres and two rear tyres rather than the more 'conventional' four / four split.

#### **3. Branded tyres are allocated by driver and not by car:**

- 3.1. Our championships are for drivers and not for vehicles.
- 3.2. If a competitor changes vehicles during a season for whatever reason (temporarily or permanently), the driver remains 'tied' to the tyres that might have already been branded and must use those (or those of the remaining allowed allocation) on the replacement vehicle to remain eligible for classification in the race results and championship points.
- 3.3. In the case of a driver changing Classes during a season, he starts in that Class as if he had never raced before and his full allocation of 8 tyres is available. He must inform the (RC) of which branded tyres he will use going forward in that Class and have his decision recorded.

#### **4. Replacement of Damaged Tyres:**

- 4.1. Under certain circumstances and upon written request, the (RC) has the discretion to permit the replacement of a 'damaged' tyre with one of fundamentally similar remaining life.
- 4.2. This discretion is interpreted as being for the purpose of dealing solely with extraordinary tyre damage caused in circumstances that are clearly distinct from those that might relate to driver or set-up error (e.g., sidewall damage from impact or accident might justify discretionary replacement).
- 4.3. Therefore, this discretionary replacement is not available in circumstances where a tyre has sustained an uneven pattern of wear (e.g. through poor set-up) or has been flat-spotted or has been punctured because of driver going off track (e.g. through poor driving).
- 4.4. While it might be conceivably claimed that a flat-spot has resulted in consequence to the conduct of another driver (e.g. in reaction to someone else's accident), this will be viewed by the race-committee as (to use a golfing analogy) "rub-of-the-green" and, therefore, not good grounds for replacement.
- 4.5. By example, and for the purposes of clarity, a tyre which has sustained accidental and extraordinary damage as described above may be replaced at the discretion of the (RC) with one of fundamentally similar remaining life. But, if the damaged tyre for which replacement is sought has also been flat-spotted (say, to the extent that canvas is exposed rendering it unsafe on those grounds alone) replacement of that tyre becomes impossible on the grounds that the replacement tyre (in order to have fundamentally similar remaining life) would also carry the same flat-spot damage and, therefore, be unsafe for racing.
- 4.6. If, by the preceding example, replacement of the damaged tyre becomes impossible and the driver has exhausted his full allocation of eight tyres for the season, the driver may continue to race on substitute tyres but will have become ineligible for classification within the results and for championship points.
- 4.7. By reference to the foregoing intent of the so-called "two-tyre" rule, the committee believes this interpretation and application of the damaged tyre provision to be consistent with the objective of promoting prudent tyre use in a manner that is fair to all competitors.