



## 2018 Lotus Cup Europe – Technical Regulations

### 1. TECHNICAL REGULATIONS

#### 1.1. General Description:

- 1.1.1. Lotus Cup Europe is open to vehicles complying with applicable FIA/MSA technical regulations.

Specifically:

**Seat belts** will comply with FIA Appendix J Art 253, Art. 6

**Fire extinguishers** will comply with FIA Technical list 6 or 16

**Roll cages** comply with either FIA Appendix J Art 253 or Appendix J Art 259 or homologated for FIA use or have National ASN approval.

**Fuel tanks** will comply with FT3-1999 as a minimum standard

- 1.1.2. Race Groups: Competitors will be appointed to a group upon registration (i.e. which Race Group they are entered).
- 1.1.3. The series is open to cars that comply with the four groups laid out below. All cars must be approved by the organisers. Any new components released by Lotus Cars must be accepted for use in the series before competitors use them, if Lotus are unable to supply a part the organisers may permit an alternative. The organisers will notify competitors by sending an official bulletin.
- 1.1.4. It should be clearly understood that unless a modification or removal/change of an item is specifically permitted by these regulations, that any modification or removal/change or repositioning of an item is prohibited.

#### 2. GROUPS:

There will be four groups for Lotus Exige, Elise, 211, 340R, Europa or Evora GT4. Groups are defined based on the type of car. The basic principal of this is as follows:

##### 2.1. Group - Production

- 2.1.1. For Series 1 and 2 Elises with a maximum hub power of 155bhp (measured by LoTRDC) and minimum combined weight of driver and car of 815kg. Also open to standard series 2 Exige and 111r Toyota NA engined cars with a maximum hub power of 175bhp (measured by LoTRDC). The Elise S3 is permitted with the Lotus Cup Europe spec map and a maximum hub power of 185bhp (measured by LoTRDC).

##### 2.2. Group - 2-Eleven

- 2.2.1. For 2-Eleven cars up to a maximum of 250bhp at the hubs (measure by LoTRDC) with a minimum weight of 815KG including driver.

##### 2.3. Group - Lotus Open – For Elise S1, Elise S2, Elise S3, Exige S1, Exige S2, 340R.

- 2.3.1. For all Elise, Exige, and 340R variants not fitting into other groups. With a maximum power at the hubs of 260bhp (measured by LoTRDC) and with a maximum power to weight of 285.7bhp/tonne including driver.

##### 2.4. Group – V6 Cup

- 2.4.1. For all factory specification Evora GT4 race cars. With a maximum power at the hubs of 360bhp (measured by LoTRDC) and with a maximum power to weight of 285.7bhp/tonne including driver. Also for factory specification Exige V6 race cars with a maximum power at the hubs of 340bhp (measured by LoTRDC) and with a maximum power to weight of 285.7bhp/tonne including driver.



## 2018 Lotus Cup Europe – Technical Regulations

### 2.5. Group: Production

#### 2.5.1. Series 1 and 2 Elise with Rover engine

##### 2.5.1.1. Chassis: Production

2.5.1.1.1. The construction type, design and material must remain as standard. This includes the sub frame.

2.5.1.1.2. No additional bracing/supports may be added.

##### 2.5.1.2. Bodywork: Production

2.5.1.2.1. All cars must retain the standard road car's profile, and be maintained to a high standard of finish, whilst it's understandable that damage may occur during a weekend, it's important that this is rectified before the next meeting. This is important to keep the image and profile of the series.

2.5.1.2.2. LoTRDC reserves the right to overrule any part that is felt to be outside the spirit of the series. If in any doubt about what is/is not acceptable, the onus is on the entrant to ask first.

2.5.1.2.3. All body panels must remain as standard production in size, shape, profile and material (i.e. Pre-preg GRP, Kevlar and Carbon fibre are not permitted).

2.5.1.2.4. Side scoops may be fitted, but must not protrude further than the side profile of the car. Only series 1 style side scoops are permitted on series 1 cars, and series 2 style on series 2 cars. Material is free.

2.5.1.2.5. Side scoop inner vents may be removed but the external holes in the clam must be standard size and profile. No clam material may be removed.

2.5.1.2.6. S1 Elise 'Sport 160' style rear wing may be fitted and material is free.

2.5.1.2.7. A small Front Spoiler/splitter that's within the profile of the car as shown in section 3.4 may be fitted and material is free.

2.5.1.2.8. Under trays must not exceed overall dimensions of the standard part. Ducts and holes within the tray may be relocated. Material is free.

2.5.1.2.9. Rear diffuser may be extended rearwards protruding no more than 50mm from the rear bodywork (measured from the rear clam where the diffuser is attached at the rear) and complying with the ground clearance rules in 2.6.1.5. Material is free.

2.5.1.2.10. The clam under rear grills (fog and reverse lights) may be removed however the grill must remain.

2.5.1.2.11. The body behind the number plate can be removed to an area no larger than a standard number plate (520mm x 130mm). If a hole is created it should be covered in mesh.

2.5.1.2.12. Wheel arch liners may be removed and the inner lip of the wheel arch reduced to allow tyre clearance.

2.5.1.2.13. Heater matrix, blower fan and ducting to distribution flap may be removed.

2.5.1.2.14. Interior must remain as standard with the exception of required items to meet FIA regulations. The passenger seat may be removed. The following items may also be removed; carpets, roof lining, coin tray, rear speaker pods, sun visors, sill pads (S1 only), passenger foot rest, dashboard infill panels, handbrake cover and gear lever cover.



## 2018 Lotus Cup Europe – Technical Regulations

- 2.5.1.2.15. Steering wheel and steering wheel bosses may be replaced with a suitable FIA compliant alternative.
- 2.5.1.2.16. Glass must remain as E marked glass with the exception of the rear screen which may be replaced with a polycarbonate version. Glass side windows must be covered in an anti-shatter film.
- 2.5.1.2.17. Front windows can be replaced with Polycarbonate alternative. However, it is clearly understood that if the organisers ask for the window to be replaced due to its condition or quality this must be accepted or a Glass window as referred to in 2.5.12.16 must be fitted.
- 2.5.1.2.18. Side windows can be replaced with Polycarbonate or Perspex alternatives, this can include sliders. Broken or damaged windows will not be permitted.
- 2.5.1.2.19. Heated front screens are permitted and/or aftermarket electric fans may be installed to replace the standard heater.
- 2.5.1.2.20. An appropriate red warning light must be fitted to comply with FIA regulations.
- 2.5.1.2.21. Supplementary gauges may be added such as oil temperature and pressure.
- 2.5.1.2.22. There should be substantial towing eyes securely fixed to the main structure of the vehicle, front and rear, within the confines of the body to enable the vehicle to be moved. Towing eyes should have a minimum internal diameter of 60mm. Towing eyes/towing points should be painted a contrasting bright color (Day-Glo red, orange or yellow). Q 19.1.3
- 2.5.1.2.23. Bonnet and boot lid fastenings and hinges may be modified or replaced.
- 2.5.1.2.24. The boot bulkhead may be modified to allow easier access to the engine (i.e. fitting an access panel), however it should remain a solid divide between boot and engine bay with only the standard factory designed holes. Cars converted from multi throttle bodied Elise derivatives (e.g. Sport 190) must have a boot divider and floor installed to replicate a standard boot.
- 2.5.1.2.25. Headlamps, front direction indicators and side repeaters including associated mountings may be removed and replaced by a cover in the original profile. However, if all front lights are removed two driving lamps must be fitted and be in effective working condition.
- 2.5.1.3. **Engine:** **Production**
- 2.5.1.3.1. Must not exceed a maximum power output of 155bhp at the hubs. LoTRDC may adjust the max power by giving two weeks' notice before any round.
- 2.5.1.3.2. The power limit must be strictly adhered too – LoTRDC advise all drivers that their cars **MUST** be under this maximum as there will be no excuses should they be found to exceed them.
- 2.5.1.3.3. As per MSA regulations including J 5.4.1-3 (engines), J 5.10.1-2 (cooling), J 5.12.1 (oil systems), J 5.13.1-7 (fuel systems).
- 2.5.1.3.4. Engine must retain the standard inlet plenum (either plastic or VVC style alloy versions).
- 2.5.1.3.5. Engine must retain the standard single throttle body in un-modified form (MGF TF 52mm is permitted) – Multiple throttle bodies are not permitted.
- 2.5.1.3.6. Aftermarket 421 exhaust manifolds are permitted.



## 2018 Lotus Cup Europe – Technical Regulations

- 2.5.1.3.7. Exhaust system after the manifold are free, although MSA regulations should of course be observed as 5.1.
- 2.5.1.3.8. Compression ratio must remain standard.
- 2.5.1.3.9. Engine rods, pistons and crankshaft may be balanced - however no materials may be added (e.g. no heavy metal crank inserts) or removed (beyond balancing) and the components themselves must be standard parts as fitted to either the VVC, sport 160 or standard Elise K engines. If, in renewing the bottom end, any parts are replaced by new items - they must be the exact specification/profile and material of the original parts in the appropriate derivative. Forged pistons are permitted.
- 2.5.1.3.10. Heads are free but standard hydraulic tappets/followers must be retained and valve, valve guide, valve seat and valve spring dimensions limited to standard rover items as fitted to standard, VVC or VHPD heads.
- 2.5.1.3.11. Cams are free.
- 2.5.1.3.12. Heads may be ported and polished and intake manifold may be matched to the head.
- 2.5.1.3.13. Cams are free but standard hydraulic tappets/followers must be retained and valve and valve spring dimensions limited to standard rover items as fitted to standard, VVC or VHPD heads.
- 2.5.1.3.14. Vernier cam pulleys are permitted.
- 2.5.1.3.15. Air filters/induction is free up to the single throttle body.
- 2.5.1.3.16. Swept volume must remain standard (i.e. below 1800cc).
- 2.5.1.3.17. A Baffle may be fitted to the sump.
- 2.5.1.3.18. Addition of a water/oil or air/oil cooler is permitted.
- 2.5.1.3.19. Engine water cooling system is free (e.g. use of a remote thermostat, removal of cabin heater pipe work, up rated radiator, up rated cooling fans, up rated water pump)
- 2.5.1.3.20. Up rated engine, gearbox and clutch slave cylinder mounts are permitted.
- 2.5.1.3.21. Additional heat shielding may be added within the engine bay.
- 2.5.1.3.22. Alternator make is free but must be installed in standard position and working. Ducting or a fan may be added to the alternator but modification of bodywork or under tray is not permitted.
- 2.5.1.3.23. Crank accessory pulley is free.
- 2.5.1.3.24. Addition of a remote thermostat/PRRT is permitted.
- 2.5.1.3.25. Engine & Gear box oil coolers are permitted.
- 2.5.1.3.26. Lightweight flywheels are permitted, but must retain the standard clutch mounts and starter ring.
- 2.5.1.3.27. Clutch must remain standard pattern (AP or other upgraded clutch are permitted if same type as OEM).



## 2018 Lotus Cup Europe – Technical Regulations

2.5.1.3.28. Throttle cable to pedal linkage, gear selector cables and clutch hose may be replaced by up rated versions and rerouted. Quick shift gear stick is also permitted.

2.5.1.4. **Suspensions:** **Production**

2.5.1.4.1. It is strongly recommended that all cars have upgraded rear toe link kits (A111D0127S or equivalent).

2.5.1.4.2. All wishbones/bushes/ball-joints/uprights/bearings must be as standard.

2.5.1.4.3. Uprights and steering arms may be modified to achieve more camber.

2.5.1.4.4. Dampers may be changed for single way adjustable (no remote canister types) and may have either bushed or spherical joints. All parts must be fitted directly to the original mounting points with no adaptor parts other than changes in mounting bush sizes.

2.5.1.4.5. Spring rates are free including use of helper springs.

2.5.1.4.6. Front anti roll bar may be replaced by an uprated one using the same design and mounts to original. No additional anti roll bars can be added (i.e. rears etc)

2.5.1.4.7. Must retain original steering rack. Quicker ratio pinion is allowed.

2.5.1.4.8. Steering arms may be changed from OEM but must retain standard Ackermann and upright/wishbone mountings both physically and geometrically.

2.5.1.5. **Ride Height and Ground Clearance:** **Production**

2.5.1.5.1. See diagram 3.3 in appendices showing illustration of where ride height should be observed on the vehicle.

2.5.1.5.2. Ride height - no part of the car between all 4 wheel centers (excluding mud flaps) may be below 100mm.

2.5.1.5.3. Ground clearance - no part of the car (excluding mud flaps) should be below 80mm.

2.5.1.5.4. No cockpit or remote external suspension adjustment devices are permitted. No form of active suspension including magnetic dampers is permitted.

2.5.1.5.5. Ride height and ground clearance measurements will be taken whilst driver is in the vehicle.

2.5.1.6. **Transmission:** **Production**

2.5.1.6.1. Ratios are free, but must be standard production item (after-market gear kits are not permitted).

2.5.1.6.2. LSD's are permitted.

2.5.1.7. **Electrics:** **Production**

2.5.1.7.1. As per MSA regulation J 5.14.1-7 (electrical systems).

2.5.1.7.2. Aftermarket and reprogrammed Engine Control Units (ECU) are permitted.

2.5.1.7.3. All ECU's must contain only one map.



## 2018 Lotus Cup Europe – Technical Regulations

- 2.5.1.7.4. If an aftermarket ECU is fitted drivers must make available to Series Eligibility Scrutineer the hardware and software required to interrogate the vehicles ECU. If this is not made available, the ECU may be sealed and the driver may not be permitted to race.
- 2.5.1.7.5. Battery size & type is free but must remain in the standard location and be capable of starting the car multiple times without external assistance.
- 2.5.1.7.6. Vehicle immobiliser and alarm system may be removed.
- 2.5.1.7.7. Original wiring looms may be modified to accept MSA/FIA approved/recommended safety equipment and other permitted electrical equipment including but not limited to ECU, lap timers, radio equipment, data loggers and pressure sensors.
- 2.5.1.8. **Brakes:** **Production**
- 2.5.1.8.1. Discs are free (steel or iron only – bells are free). However, the bell may not be thickened beyond 13mm.
- 2.5.1.8.2. Pads are free.
- 2.5.1.8.3. Calipers must remain standard (AP two pot fronts and Brembo sliding caliper rears).
- 2.5.1.8.4. Master cylinder must remain standard (single dual circuit item).
- 2.5.1.8.5. Brake flexible hoses are free (stainless steel braided recommended).
- 2.5.1.8.6. Fluid must be DOT 4 or 5.1.
- 2.5.1.8.7. Brake disk shields may be removed.
- 2.5.1.8.8. Ducting to the front brakes may be added but must not involve modification of bodywork.
- 2.5.1.9. **Wheels:** **Production**
- 2.5.1.9.1. Elise S1 max rim size front 7J15 min ET10 and rear 8J16 min ET10.
- 2.5.1.9.2. Elise S2 (K series) max rim size front 7J16 min ET30 and rear 8J17 min ET18.
- 2.5.1.9.3. All Wheels must be of metal construction with the exception of the use of Magnesium wheels which are not permitted. Multi-piece wheels are not permitted.
- 2.5.1.9.4. Wheel spacers or any other method of changing the track of the vehicle are not permitted.
- 2.5.1.10. **Tyres:** **Production**
- 2.5.1.10.1. As supplied control tyre:
- |                             |                             |
|-----------------------------|-----------------------------|
| Avon ZZR                    |                             |
| Series 1                    | Series 2                    |
| 195/50R15 – (code - 14457M) | 195/50R16 – (code - 14949M) |
| 225/45R16 – (code - 14462M) | 225/45R17 – (code - 14466M) |
- 2.5.1.10.2. No modifications to the tyres in any way, (any tyres suspected of being treated/modified will be excluded from the meeting).
- 2.5.1.10.3. It is not permitted to fill tyres with nitrogen.



## 2018 Lotus Cup Europe – Technical Regulations

2.5.1.10.4. Tyres must have not less than 1.6mm of tread remaining at the start of an event.

2.5.1.10.5. Tyres must be purchased from the official series supplier: Avon Tyres Motorsport, Bath Road, Melksham, Wiltshire SN12 8AA or their approved supplier.

2.5.1.11. **Weights:** **Production**

2.5.1.11.1. Minimum weight of the vehicle including the driver is **815kg**.

As an example;

- If a driver weighs 75kg the vehicle alone should weigh at least 740kg.
- If a driver weighs 95kg the vehicle alone should weigh at least 720kg.

2.5.1.11.2. This weight is the minimum the car and driver combined must be in race trim after either a race or qualifying session as defined in J 5.15.1-5 (weight/ballast).

2.5.1.11.3. It is forbidden to use ballast to make up the weight (as in no lightening of the car then ballasting them back up).

2.5.1.11.4. Success Ballast - Will be applied to drivers finishing 1st or 2<sup>nd</sup> in Production on the final classification in the first and second races at each race weekend. 1st place in a race will carry 30kg ballast, 2nd place 15kg ballast. Two 1st places will carry 60kg ballast, Two 2nd places will carry 30kg ballast while a 1st and 2nd place will carry 45kg. The ballast must be carried for qualifying and the first two races only at the following race weekend that the driver takes part in qualifying. The entire success ballast must be carried regardless of the weight combination of vehicle and driver. Ballast will be supplied by LoTRDC Ltd and must be securely bolted into the existing passenger seat mounts of the car.

2.5.1.11.5. Cars may have additional weight added to their minimum weights depending on vehicle specification. Current penalties are detailed in section 3.1.1.

2.5.1.12. **Fuel Tank/Fuel:** **Production**

2.5.1.12.1. Fuel must comply with Art 252, Art 9.

2.5.1.12.2. The fuel tank will comply with FT3-1999 as a minimum standard.

2.5.1.12.3. Fuel lines are free.

2.5.1.12.4. The ProAlloy motorsport fuel filler neck assembly – part number LOTRDC001 is permitted.

2.5.1.12.5. All cars must have a minimum of 3L of fuel remaining in the tank at race finish.

2.5.1.12.6. Charcoal canister may be removed but a one way or rollover valve, venting to a safe area, must be fitted.

### 2.5.2. **Series 2 Elise and Exige with Toyota Engines**

2.5.2.1. **Chassis:** **Production**

2.5.2.1.1. The construction type, design and material must remain as standard. This includes the sub frame.

2.5.2.1.2. No additional bracing/supports can be added with exception of a rear chassis brace kit (LOTAC05377).



## 2018 Lotus Cup Europe – Technical Regulations

### 2.5.2.2. **Bodywork:**

### Production

- 2.5.2.2.1. All cars must retain the standard road car's profile, and be maintained to a high standard of finish, whilst it's understandable that damage may occur during a weekend, it's important that this is rectified before the next meeting. This is important to keep the image and profile of the series.
- 2.5.2.2.2. LoTRDC reserves the right to overrule any part that is felt to be outside the spirit of the series. If in any doubt about what is/is not acceptable, the onus is on the entrant to ask first.
- 2.5.2.2.3. All body panels must remain as standard production in size, shape, profile and material (i.e. Pre-prep GRP, Kevlar and Carbon fibre are not permitted).
- 2.5.2.2.4. Exige and 111R S2 must remain as standard including, but not limited to, all body panels.
- 2.5.2.2.5. Interior must remain as standard with the exception of required items to meet FIA regulations. The passenger seat may be removed.
- 2.5.2.2.6. Steering wheel and steering wheel bosses may be replaced with a suitable FIA compliant alternative.
- 2.5.2.2.7. Glass must remain as E marked glass with the exception of the rear screen which may be replaced with a polycarbonate version. Glass side windows must be covered in an anti-shatter film.
- 2.5.2.2.8. Front windows can be replaced with Polycarbonate alternative. However, it is clearly understood that if the organisers ask for the window to be replaced due to its condition or quality this must be accepted or a Glass window as referred to in 2.5.2.2.7 must be fitted.
- 2.5.2.2.9. Side windows can be replaced with Polycarbonate or Perspex alternatives, this can include sliders. Broken or damaged windows will not be permitted.
- 2.5.2.2.10. An appropriate red warning light must be fitted to comply with FIA regulations.
- 2.5.2.2.11. Supplementary gauges may be added such as oil temperature and pressure.
- 2.5.2.2.12. There should be substantial towing eyes securely fixed to the main structure of the vehicle, front and rear, within the confines of the body to enable the vehicle to be moved. Towing eyes should have a minimum internal diameter of 60mm. Towing eyes/towing points should be painted a contrasting bright color (Day-Glo red, orange or yellow). Q 19.1.3
- 2.5.2.2.13. Headlamps, front direction indicators and side repeaters including associated mountings may be removed and replaced by a cover in the original profile. However, if all front lights are removed two driving lamps must be fitted and be in effective working condition.
- 2.5.2.2.14. Please check with the series eligibility adviser that the exact part you intend to fit is permitted if you are in any doubt over any of the above.

### 2.5.2.3. **Engine:**

### Production

- 2.5.2.3.1. Must not exceed a maximum power output of 175bhp at the hubs. LoTRDC may adjust the max power by giving two weeks' notice before any round.





## 2018 Lotus Cup Europe – Technical Regulations

- 2.5.2.3.2. The power limit must be strictly adhered too – LoTRDC advise all drivers that their cars MUST be under this maximum as there will be no excuses should they be found to exceed them.
- 2.5.2.3.3. As per MSA regulations including J 5.4.1-3 (engines), J 5.10.1-2 (cooling), J 5.12.1 (oil systems), J 5.13.1-7 (fuel systems).
- 2.5.2.3.4. No engine modifications permitted including but not limited to airbox and exhaust system with the exception of the exhaust silencer which may be changed and a baffled sump which is permitted. The vehicle should remain as standard.
- 2.5.2.3.5. Alternator make is free but must be installed in standard position and working. Ducting or a fan may be added to the alternator but modification of bodywork or under tray is not permitted.
- 2.5.2.3.6. Additional heat shielding may be added within the engine bay.
- 2.5.2.3.7. MSA regulations should be observed as 5.1.
- 2.5.2.4. **Suspensions:** **Production**
- 2.5.2.4.1. It is strongly recommended that all cars have upgraded rear toe link kits (A111D0127S or equivalent). It is recommended that cars are additionally fitted with rear chassis brace kit (LOTAC05377).
- 2.5.2.4.2. All wishbones/bushes/ball-joints/uprights/bearings must be as standard.
- 2.5.2.4.3. Uprights and steering arms may be modified to achieve more camber.
- 2.5.2.4.4. Dampers may be changed for single way adjustable (no remote canister types) and may have either bushed or spherical joints. All parts must be fitted directly to the original mounting points with no adaptor parts other than changes in mounting bush sizes.
- 2.5.2.4.5. Spring rates are free including use of helper springs.
- 2.5.2.4.6. Front anti roll bar may be replaced by an uprated one using the same design and mounts to original. No additional anti roll bars can be added (i.e. rears etc)
- 2.5.2.4.7. Must retain original steering rack. Quicker ratio pinion is allowed.
- 2.5.2.4.8. Steering arms may be changed from OEM but must retain standard Ackermann and upright/wishbone mountings both physically and geometrically.
- 2.5.2.5. **Ride Height and Ground Clearance:** **Production**
- 2.5.2.5.1. See diagram 3.3 in appendices showing illustration of where ride height should be observed on the vehicle.
- 2.5.2.5.2. Ride height - no part of the car between all 4 wheel centers (excluding mud flaps) may be below 100mm.
- 2.5.2.5.3. Ground clearance - no part of the car (excluding mud flaps) should be below 80mm.
- 2.5.2.5.4. Ride height and ground clearance measurements will be taken whilst driver is in the vehicle.
- 2.5.2.5.5. No cockpit or remote external suspension adjustment devices are permitted. No form of active suspension including magnetic dampers is permitted.



## 2018 Lotus Cup Europe – Technical Regulations

- 2.5.2.6. **Transmission:** **Production**
- 2.5.2.6.1. No transmission modifications permitted including but not limited to gearbox (including gear ratios). Gear box oil coolers are permitted.
- 2.5.2.6.2. LSDs are permitted.
- 2.5.2.7. **Electrics:** **Production**
- 2.5.2.7.1. As per MSA regulation J 5.14.1-7 (electrical systems).
- 2.5.2.7.2. Aftermarket and reprogrammed Engine Control Units (ECU) are not permitted.
- 2.5.2.7.3. The organisers may swap ECU's between cars in this class or supply a standard ECU for fitment at their discretion.
- 2.5.2.7.4. Lotus ECU reflash is permitted of T4 and T4E Lotus track upgrade.
- This relates to;
- T4 and T4e ECU - Track Upgraded  
Part No. - ALS3M0215F, ALS3M0244F  
Applications - S2 (Toyota) naturally aspirated cars  
ECU with cam switch optimised for track use, moving switch point to high lift cam from 6200 rpm to 5750 rpm. All other functionality of the original ECU programme remain, preserving the full European emissions compliance of the vehicle.
- 2.5.2.7.5. Battery size & type is free but must remain in the standard location and be capable of starting the car multiple times without external assistance.
- 2.5.2.7.6. Original wiring looms may be modified to accept MSA/FIA approved/recommended safety equipment and other permitted electrical equipment including but not limited to lap timers, radio equipment, data loggers and pressure sensors.
- 2.5.2.8. **Brakes:** **Production**
- 2.5.2.8.1. Discs are free (steel or iron only – bells are free). However, the bell may not be thickened beyond 13mm.
- 2.5.2.8.2. Pads are free.
- 2.5.2.8.3. Calipers must remain standard (AP two pot fronts and Brembo sliding caliper rears).
- 2.5.2.8.4. Master cylinder must remain standard (single dual circuit item).
- 2.5.2.8.5. Brake flexible hoses are free (stainless steel braided recommended).
- 2.5.2.8.6. Fluid must be DOT 4 or 5.1.
- 2.5.2.9. **Wheels:** **Production**
- 2.5.2.9.1. Max rim size front 7J16 min ET30 and rear 8J17 min ET35.
- 2.5.2.9.2. All Wheels must be of metal construction with the exception of the use of Magnesium wheels which are not permitted. Multi-piece wheels are not permitted.
- 2.5.2.9.3. Wheel spacers or any other method of changing the track of the vehicle are not permitted.



## 2018 Lotus Cup Europe – Technical Regulations

### 2.5.2.10. Tyres: Production

#### 2.5.2.10.1. As supplied control tyre:

Avon ZZR  
195/50R16 – (code - 14949M)  
225/45R17 – (code - 14466M)

2.5.2.10.2. No modifications to the tyres in any way, (any tyres suspected of being treated/modified will be excluded from the meeting).

2.5.2.10.3. It is not permitted to fill tyres with nitrogen.

2.5.2.10.4. Tyres must have not less than 1.6mm of tread remaining at the start of an event.

2.5.2.10.5. Tyres must be purchased from the official series supplier: Avon Tyres Motorsport, Bath Road, Melksham, Wiltshire SN12 8AA or their approved supplier.

### 2.5.2.11. Weights: Production

2.5.2.11.1. Minimum weight of the elise 111r cars including the driver is **935kg**.

As an example;

- If a driver weighs 75kg the vehicle alone should weigh at least 860kg.
- If a driver weighs 95kg the vehicle alone should weigh at least 840kg.

2.5.2.11.2. Minimum weight of the Exige cars including the driver is **950kg**.

As an example;

- If a driver weighs 75kg the vehicle alone should weigh at least 875kg.
- If a driver weighs 95kg the vehicle alone should weigh at least 855kg.

2.5.2.11.3. This weight is the minimum the car and driver combined must be in race trim after either a race or qualifying session as defined in J 5.15.1-5 (weight/ballast).

2.5.2.11.4. It is forbidden to use ballast to make up the weight (as in no lightening of the car then ballasting them back up).

2.5.2.11.5. Success Ballast - Will be applied to drivers finishing 1st or 2nd in Production on the final classification in the first and second races at each race weekend. 1st place in a race will carry 30kg ballast, 2nd place 15kg ballast. Two 1st places will carry 60kg ballast, Two 2nd places will carry 30kg ballast while a 1st and 2nd place will carry 45kg. The ballast must be carried for qualifying and the first two races only at the following race weekend that the driver takes part in qualifying. The entire success ballast must be carried regardless of the weight combination of vehicle and driver. Ballast will be supplied by LoTRDC Ltd and must be securely bolted into the existing passenger seat mounts of the car.

2.5.2.11.6. Cars will have additional weight added to their minimum weights depending on vehicle specification. Current penalties are detailed in section 3.1.1.

### 2.5.2.12. Fuel Tank/Fuel: Production

2.5.2.12.1. Fuel must comply with Art 252, Art 9

2.5.2.12.2. The fuel tank will comply with FT3-1999 as a minimum standard.



## 2018 Lotus Cup Europe – Technical Regulations

- 2.5.2.12.3. All cars must have a minimum of 3L of fuel remaining in the tank at race finish.
- 2.5.2.12.4. The ProAlloy motorsport fuel filler neck assembly – part number LOTRDC001 is permitted.
- 2.5.2.12.5. Charcoal canister may be removed but a one way or rollover valve, venting to a safe area, must be fitted.

### 2.5.3. Series 3 Elise with Toyota Supercharged Engines

#### 2.5.3.1. **Chassis:** **Production**

- 2.5.3.1.1. The construction type, design and material must remain as standard. This includes the sub frame.
- 2.5.3.1.2. No additional bracing/supports can be added with exception of a rear chassis brace kit (LOTAC05377).

#### 2.5.3.2. **Bodywork:** **Production**

- 2.5.3.2.1. All cars must retain the standard road car's profile, and be maintained to a high standard of finish, whilst it's understandable that damage may occur during a weekend, it's important that this is rectified before the next meeting. This is important to keep the image and profile of the series.
- 2.5.3.2.2. LoTRDC reserves the right to overrule any part that is felt to be outside the spirit of the series. If in any doubt about what is/is not acceptable, the onus is on the entrant to ask first.
- 2.5.3.2.3. All body panels must remain as standard production in size, shape, profile and material.
- 2.5.3.2.4. Elise S3 must remain as standard including, but not limited to, all body panels. The Lotus Racing body kit or the Elise-Shop body kit part no. LOTRDCES1 is permitted on all versions of the Elise S3, cup or not. The front spoiler, barge boards, diffuser and rear spoiler that are part of these body kits can be run individually or as the full kit. Where the alternative Elise-Shop kit is used the individual parts must be of the profile, size and weight of the original kit.
- 2.5.3.2.5. Interior must remain as standard with the exception of required items to meet FIA regulations. The passenger seat may be removed.
- 2.5.3.2.6. Steering wheel and steering wheel bosses may be replaced with a suitable FIA compliant alternative.
- 2.5.3.2.7. Glass must remain as E marked glass with the exception of the rear screen which may be replaced with a polycarbonate version. Glass side windows must be covered in an anti-shatter film.
- 2.5.3.2.8. Front windows can be replaced with Polycarbonate alternative. However, it is clearly understood that if the organisers ask for the window to be replaced due to its condition or quality this must be accepted or a Glass window as referred to in 2.5.2.2.7 must be fitted.
- 2.5.3.2.9. Side windows can be replaced with Polycarbonate or Perspex alternatives, this can include sliders. Broken or damaged windows will not be permitted.
- 2.5.3.2.10. An appropriate red warning light must be fitted to comply with FIA regulations.
- 2.5.3.2.11. Supplementary gauges may be added such as oil temperature and pressure.



## 2018 Lotus Cup Europe – Technical Regulations

- 2.5.3.2.12. There should be substantial towing eyes securely fixed to the main structure of the vehicle, front and rear, within the confines of the body to enable the vehicle to be moved. Towing eyes should have a minimum internal diameter of 60mm. Towing eyes/towing points should be painted a contrasting bright color (Day-Glo red, orange or yellow). Q 19.1.3
- 2.5.3.2.13. Headlamps, front direction indicators and side repeaters including associated mountings may be removed and replaced by a cover in the original profile. However, if all front lights are removed two driving lamps must be fitted and be in effective working condition.
- 2.5.3.2.14. Please check with the series eligibility adviser that the exact part you intend to fit is permitted if you are in any doubt over any of the above.

### 2.5.3.3. **Engine:** **Production**

- 2.5.3.3.1. Must not exceed a maximum power output of 185bhp at the hubs. LoTRDC may adjust the max power by giving two weeks' notice before any round.
- 2.5.3.3.2. The power limit must be strictly adhered too – LoTRDC advise all drivers that their cars MUST be under this maximum as there will be no excuses should they be found to exceed them.
- 2.5.3.3.3. As per MSA regulations including J 5.4.1-3 (engines), J 5.10.1-2 (cooling), J 5.12.1 (oil systems), J 5.13.1-7 (fuel systems).
- 2.5.3.3.4. No engine modifications permitted from that supplied by the factory including but not limited to airbox and exhaust system with the exception of the exhaust silencer which may be changed and a baffled sump which is permitted. The vehicle should remain as standard.
- 2.5.3.3.5. Additional heat shielding may be added within the engine bay.
- 2.5.3.3.6. MSA regulations should be observed as 5.1.

### 2.5.3.4. **Suspensions:** **Production**

- 2.5.3.4.1. It is strongly recommended that all cars have upgraded rear toe link kits (A111D0127S or equivalent). It is recommended that cars are additionally fitted with rear chassis brace kit (LOTAC05377).
- 2.5.3.4.2. All wishbones/bushes/ball-joints/ bearings must be as standard.
- 2.5.3.4.3. Uprights may be modified to achieve more camber.
- 2.5.3.4.4. Dampers may be changed for single way adjustable (no remote canister types) and may have either bushed or spherical joints. All parts must be fitted directly to the original mounting points with no adaptor parts other than changes in mounting bush sizes.
- 2.5.3.4.5. Spring rates are free including use of helper springs.
- 2.5.3.4.6. Front anti roll bar may be replaced by an uprated one using the same design and mounts to original. No additional anti roll bars can be added (i.e. rears etc)
- 2.5.3.4.7. Must retain original steering rack. Quicker ratio pinion is allowed.
- 2.5.3.4.8. Steering arms may be changed from OEM but must retain standard ackerman and upright/wishbone mountings both physically and geometrically.



## 2018 Lotus Cup Europe – Technical Regulations

- 2.5.3.5. **Ride Height and Ground Clearance:** **Production**
- 2.5.3.5.1. See diagram 3.3 in appendices showing illustration of where ride height should be observed on the vehicle.
- 2.5.3.5.2. Ride height - no part of the car between all 4 wheel centers (excluding mud flaps) may be below 100mm.
- 2.5.3.5.3. Ground clearance - no part of the car (excluding mud flaps) should be below 80mm.
- 2.5.3.5.4. Ride height and ground clearance measurements will be taken whilst driver is in the vehicle.
- 2.5.3.5.5. No cockpit or remote external suspension adjustment devices are permitted. No form of active suspension including magnetic dampers is permitted.
- 2.5.3.6. **Transmission:** **Production**
- 2.5.3.6.1. No transmission modifications permitted including but not limited to gearbox (including gear ratios). Gear box oil coolers are permitted.
- 2.5.3.6.2. LSDs are permitted.
- 2.5.3.7. **Electrics:** **Production**
- 2.5.3.7.1. As per MSA regulation J 5.14.1-7 (electrical systems).
- 2.5.3.7.2. Aftermarket and reprogrammed Engine Control Units (ECU) are not permitted.
- 2.5.3.7.3. The Lotus Cup Europe specification map must be used.
- 2.5.3.7.4. The organisers may swap ECU's between cars in this class or supply a standard ECU for fitment at their discretion.
- 2.5.3.7.5. Battery size & type is free but must remain in the standard location and be capable of starting the car multiple times without external assistance.
- 2.5.3.7.6. Original wiring looms may be modified to accept MSA/FIA approved/recommended safety equipment and other permitted electrical equipment including but not limited to lap timers, radio equipment, data loggers and pressure sensors.
- 2.5.3.8. **Brakes:** **Production**
- 2.5.3.8.1. Discs are free (steel or iron only – bells are free). However, the bell may not be thickened beyond 13mm.
- 2.5.3.8.2. Pads are free.
- 2.5.3.8.3. Calipers must remain standard (AP two pot fronts and Brembo sliding caliper rears).
- 2.5.3.8.4. Master cylinder must remain standard (single dual circuit item).
- 2.5.3.8.5. Brake flexible hoses are free (stainless steel braided recommended).
- 2.5.3.8.6. Fluid must be DOT 4 or 5.1.
- 2.5.3.9. **Wheels:** **Production**
- 2.5.3.9.1. Max rim size front 7J16 min ET30 and rear 8J17 min ET35.



## 2018 Lotus Cup Europe – Technical Regulations

- 2.5.3.9.2. All Wheels must be of metal construction with the exception of the use of Magnesium wheels which are not permitted. Multi-piece wheels are not permitted.
- 2.5.3.9.3. Wheel spacers or any other method of changing the track of the vehicle are not permitted.
- 2.5.3.10. **Tyres:** **Production**
- 2.5.3.10.1. As supplied control tyre:
- Avon ZZR  
195/50R16 – (code - 14949M)  
225/45R17 – (code - 14466M)
- 2.5.3.10.2. No modifications to the tyres in any way, (any tyres suspected of being treated/modified will be excluded from the meeting).
- 2.5.3.10.3. It is not permitted to fill tyres with nitrogen.
- 2.5.3.10.4. Tyres must have not less than 1.6mm of tread remaining at the start of an event.
- 2.5.3.10.5. Tyres must be purchased from the official series supplier: Avon Tyres Motorsport, Bath Road, Melksham, Wiltshire SN12 8AA or their approved supplier.
- 2.5.3.11. **Weights:** **Production**
- 2.5.3.11.1. Minimum weight of the Elise S3 cars including the driver is 1025kg.
- 2.5.3.11.2. This weight is the minimum the car and driver combined must be in race trim after either a race or qualifying session as defined in J 5.15.1-5 (weight/ballast).
- 2.5.3.11.3. It is forbidden to use ballast to make up the weight (as in no lightening of the car then ballasting them back up).
- 2.5.3.11.4. Success Ballast - Will be applied to drivers finishing 1st or 2nd in Production on the final classification in the first and second races at each race weekend. 1st place in a race will carry 30kg ballast, 2nd place 15kg ballast. Two 1st places will carry 60kg ballast, Two 2nd places will carry 30kg ballast while a 1st and 2nd place will carry 45kg. The ballast must be carried for qualifying and the first two races only at the following race weekend that the driver takes part in qualifying. The entire success ballast must be carried regardless of the weight combination of vehicle and driver. Ballast will be supplied by LoTRDC Ltd and must be securely bolted into the existing passenger seat mounts of the car.
- 2.5.3.11.5. Cars will have additional weight added to their minimum weights depending on vehicle specification. Current penalties are detailed in section 3.1.1.
- 2.5.3.11.6. Elise 250 derivatives will have an additional 10kg added to the minimum weight giving a minimum weight including the driver of 1035kg.
- 2.5.3.12. **Fuel Tank/Fuel:** **Production**
- 2.5.3.12.1. Fuel must comply with Art 252, Art 9
- 2.5.3.12.2. The fuel tank will comply with FT3-1999 as a minimum standard.
- 2.5.3.12.3. All cars must have a minimum of 3L of fuel remaining in the tank at race finish.



## 2018 Lotus Cup Europe – Technical Regulations

2.5.3.12.4. The ProAlloy motorsport fuel filler neck assembly – part number LOTRDC001 is permitted.

2.5.3.12.5. Charcoal canister may be removed but a one way or rollover valve, venting to a safe area, must be fitted.

### 2.6. Group: 2-Eleven

**2.6.1. Chassis:** **2-Eleven**

2.6.1.1. The construction type, design and material must remain as standard. This includes the sub frame.

2.6.1.2. No additional bracing/supports can be added, including any stiffening of the rear sub frame. No method of adding stiffness to the chassis and/or subframe is permitted. Only the use of Lotus manufactured and supplied rear track control arm and structural under tray kit (both types) is permitted. The under tray may be modified to allow access to alternative sequential gear boxes. Provided it is solely for the purpose of access and not for increased stiffness/performance.

2.6.1.3. It is recommended that cars are fitted with full GT4 specification roll cage. Part Number – A127A0058F

**2.6.2. Bodywork:** **2-Eleven**

2.6.2.1. All cars must retain the standard road car's profile, and be maintained to a high standard of finish, whilst it's understandable that damage may occur during a weekend, it's important that this is rectified before the next meeting. This is important to keep the image and profile of the series.

2.6.2.2. LoTRDC reserves the right to overrule any part that is felt to be outside the spirit of the series. If in any doubt about what is/is not acceptable, the onus is on the entrant to ask first.

2.6.2.3. Vehicles must be fitted with standard Lotus supplied bodywork or non OEM bodywork of the same external dimensions and material of the lotus supplied part.

2.6.2.4. Interior is free. This includes but is not limited to dashes and the positioning of switches.

2.6.2.5. Battery size & type is free and can be moved as long as it is securely mounted and covered.

2.6.2.6. A removable steering wheel may be fitted to replace standard component, a spacer may be used.

2.6.2.7. The passenger seat, mounts and seatbelts may be removed.

2.6.2.8. The windscreen may be modified or removed to aid vision. The original rigid tonneau cover can be replaced by a replacement of the same external dimensions of the original.

2.6.2.9. There should be substantial towing eyes securely fixed to the main structure of the vehicle, front and rear, within the confines of the body to enable the vehicle to be moved. Towing eyes should have a minimum internal diameter of 60mm. Towing eyes/towing points should be painted a contrasting bright color (Day-Glo red, orange or yellow).  
Q19.1.3

2.6.2.10. Carbon fibre front clamshell, body sides, rear bumper are not permitted all other panels are free.





## 2018 Lotus Cup Europe – Technical Regulations

- 2.6.2.11. All body grills may be removed. If removing side intake grills the body work may be fettled to no less than the material thickness of the panel.
- 2.6.2.12. Plastic arch liners may be added for protection to inner wheel arch.
- 2.6.2.13. Lotus Aero Pack comprising adjustable carbon fibre single element rear wing, wing end plates for which material is free but must remain to the original dimensions and extended front splitter is permitted. No modification, including but not limited to the mounting points, the wing or splitter, be it standard or Aero Pack, is permitted. If fitted wing end plates must be a minimum of 10mm thick with a maximum thickness of 30mm, with rounded corners.
- 2.6.2.14. All vehicles must be fitted with rear view side mirrors.
- 2.6.2.15. All vehicles must be fitted with Lotus 2-Eleven brake lights and rear fog lights (the latter complying with FIA regulations).
- 2.6.2.16. Headlamps, front direction indicators and side repeaters including associated mountings are optional. However, if all front lights are removed two driving lamps must be fitted and be in effective working condition.
- 2.6.2.17. The front 'side ducts' may be blanked for improved aerodynamics.
- 2.6.2.18. A hose ducting fresh air from the front and rear of the vehicle to the front and rear brakes is permitted however no external bodywork modification are permitted to achieve this.
- 2.6.2.19. Front and rear clamshells may be modified solely for the purpose of ease of removal. No other changes are permitted.
- 2.6.2.20. A front gurney of 20mm maximum height can be added around front edge of radiator outlet. A gurney may also be added to the rear wing with a maximum height of 20mm.
- 2.6.2.21. The rear wing height must not exceed 1100mm measured from the ground to the top of the wing including a gurney if fitted. (excluding end plates).
- 2.6.3. Engine: 2 Eleven**
- 2.6.3.1. No engine modification is permitted including, but not limited to, engine control unit mapping and engine internal components.
- 2.6.3.2. Exhaust silencer is free.
- 2.6.3.3. Exhaust manifolds are restricted to the standard 211 part reference A120E6331S or the GT4 upgrade manifold part number ALS3E0281F.
- 2.6.3.4. Lotus 2-ELEVEN 260PS ECM upgrade is permitted, part number "ALS3M0352F ECM, 260PS UPGRADE, 2-ELEVEN". The Lotus 270 GT4 upgrade (comprising GT4 ECU, GT4 pulley and GT4 exhaust manifold) is permitted but cars must not exceed the stated maximum power in 2.6.3.5. The organisers may swap ECU's between cars in this class or supply a standard ECU for fitment at their discretion.
- 2.6.3.5. Vehicle power is limited to 250bhp at the hubs. LoTRDC may adjust the max power by giving two weeks' notice before any round.
- 2.6.3.6. The power limit must be strictly adhered too – LoTRDC advise all drivers that their cars MUST be under this maximum as there will be no excuses should they be found to exceed them.



## 2018 Lotus Cup Europe – Technical Regulations

- 2.6.3.7. The compressor pulley must not be smaller than 76.5mm measured from the outer teeth to outer teeth – see Appendix 3.5 and must not be modified in any way.
- 2.6.3.8. The crank shaft pulley must be the standard Lotus part reference A120E6198S and must not be modified in any way.
- 2.6.3.9. Vehicles may be fitted with an additional oil temperature and pressure gauge.
- 2.6.3.10. Air filter and housing is free.
- 2.6.3.11. Vehicles may be fitted with the Lotus supplied Twin Air/Oil Coolers. Laminova oil coolers for gear box and engine are permitted. A baffled sump is permitted.
- 2.6.3.12. Lotus supplied lightweight fly wheel is permitted.
- 2.6.3.13. Mesh may be added to front and rear of Air/Oil cooler.
- 2.6.3.14. Additional heat shielding may be added within the engine bay.
- 2.6.3.15. A Dry Sump System may be fitted.
- 2.6.3.16. Lotus engine mount upgrade is permitted, part numbers:

ALS3E0264F Engine Mount, Front, Bush, Upgrade  
ALS3E0265F Engine Mount, Rear, Bush, Upgrade

### **2.6.4. Suspensions:** **2-Eleven**

- 2.6.4.1. Damper make is free but may only be a maximum of two way adjustable.
- 2.6.4.2. Front damper brackets to the chassis may be replaced by the Lotus adjustable mount to raise or lower the upper damper mounting point.
- 2.6.4.3. Springs are free including the use of helper springs.
- 2.6.4.4. Vehicles may be fitted with polyurethane or nylatron suspension bushes.
- 2.6.4.5. Upgraded inner rear toe links may be fitted however mounting points must be the same as standard.
- 2.6.4.6. The Front Anti-Roll Bar and related components for mounting are free however no modifications are permitted to the chassis, uprights or wishbones to aid fitting. The Anti-Roll Bar may only be adjusted mechanically and for clarity may not be cockpit adjustable or electronically adjustable. No Rear Anti-Roll Bar is permitted.

### **2.6.5. Ride Height and Ground Clearance:** **2-Eleven**

- 2.6.5.1. See diagram 3.3 in appendices showing illustration of where ride height should be observed on the vehicle.
- 2.6.5.2. No part of the car between all 4 wheel centres (excluding mud flaps) may be below 85mm.
- 2.6.5.3. No part of the car (excluding mud flaps) should be below 65mm.
- 2.6.5.4. Ride height and ground clearance measurements will be taken whilst driver is in the vehicle.



## 2018 Lotus Cup Europe – Technical Regulations

- 2.6.5.5. No cockpit or remote external suspension adjustment devices are permitted. No form of active suspension including magnetic dampers is permitted.
- 2.6.6. Transmission: 2-Eleven**
- 2.6.6.1. Any modification is prohibited, with the exception of fitment of the Lotus or third party clutch and third party optional gear sets.
- 2.6.6.2. An alternative sequential gearbox with 6 gears may be fitted in replacement to the original gearbox. A 30kg weight penalty will be applied for all cars fitted with a sequential gearbox. Paddle shifts are permitted.
- 2.6.6.3. A gearbox oil cooler is permitted.
- 2.6.6.4. Engine mounts that fit to the gearbox may be changed to accommodate the gearbox. No lowering of the engine or gearbox is permitted. The right hand engine mount must remain as standard.
- 2.6.6.5. LSDs are permitted.
- 2.6.7. Electrics: 2-Eleven**
- 2.6.7.1. Any modification is prohibited with the exception of modifications required for fitment of a battery isolation switch (mechanical or electrical type), Lotus supplied Anderson Plug External Connector and Cables, Accusump oil accumulator and associated wiring, fire extinguisher, FIA fuel drain, sensor for oil pressure/temperature and fuel pressure. Modifications can also be made to aid moving the battery.
- 2.6.8. Brakes: 2-Eleven**
- 2.6.8.1. Disks are free (steel or iron only – bells are free). However, the bell may not be thickened beyond 13mm.
- 2.6.8.2. Pads are free.
- 2.6.8.3. Fluid must be DOT 4 or 5.1.
- 2.6.8.4. Callipers are free, but a maximum of 4 pistons on the front callipers and 2 pistons on the rear. No modifications are permitted to the hubs, up rights, steering arms or camber blocks.
- 2.6.8.5. The use of Twin Master Cylinder Braking system ALS3J0174F is permitted and recommended for those wishing to disable the ABS system.
- 2.6.9. Wheels: 2-Eleven**
- 2.6.9.1. Max rim size front 7J16 min ET30 and rear 8J17 min ET35.
- 2.6.9.2. All Wheels must be of metal construction with the exception of the use of Magnesium wheels which are not permitted. Multi-piece wheels are not permitted.
- 2.6.9.3. Wheel spacers or any other method of changing the track of the vehicle is prohibited.
- 2.6.9.4. No centre lock wheels are permitted.
- 2.6.10. Tyres: 2-Eleven**
- 2.6.10.1. As supplied control tyre:



## 2018 Lotus Cup Europe – Technical Regulations

Avon ZZR  
195/50R16 – (code - 14949M)  
225/45R17 – (code - 14466M)

- 2.6.10.2. No modifications to the tyres in any way, (any tyres suspected of being treated/modified will be excluded from the meeting).
- 2.6.10.3. It is not permitted to fill tyres with nitrogen.
- 2.6.10.4. Tyres must have not less than 1.6mm of tread remaining at the start of an event.
- 2.6.10.5. Tyres must be purchased from the official series supplier: Avon Tyres Motorsport, Bath Road, Melksham, Wiltshire SN12 8AA or their approved supplier.

### **2.6.11. Weights:** **2-Eleven**

- 2.6.11.1. Minimum weight of the vehicle including the driver is **815kg**.

As an example;

- If a driver weighs 75kg the vehicle alone should weigh at least 740kg.
- If a driver weighs 95kg the vehicle alone should weigh at least 720kg.

- 2.6.11.2. This weight is the minimum the car and driver combined must be in race trim after either a race or qualifying session as defined in J 5.15.1-5 (weight/ballast).
- 2.6.11.3. It is forbidden to use ballast to make up the weight (as in no lightening of the car then ballasting them back up).
- 2.6.11.4. Ballast may only be applied under direction from LoTRDC and where required shall be securely fixed in accordance with J 5.15.1-5.
- 2.6.11.5. Individual cars will have additional weight added to their minimum weights depending on vehicle specification. Current penalties are detailed in section 3.1.1.

### **2.6.12. Fuel Tank/Fuel:** **2-Eleven**

- 2.6.12.1. Fuel must comply with Art 252, Art 9
- 2.6.12.2. The fuel tank will comply with FT3-1999 as a minimum standard.
- 2.6.12.3. All cars must have a minimum of 3L of fuel remaining in the tank at race finish.
- 2.6.12.4. The Pro Alloy motorsport fuel filler neck assembly – part number LoTRDC001 is permitted.

## **2.7. Group: Lotus Open**

### **2.7.1. Chassis:** **Lotus Open**

- 2.7.1.1. The construction type, design and material must remain as standard. This includes the sub frame.
- 2.7.1.2. No additional bracing/supports can be added, including any stiffening of the rear sub frame. No method of adding stiffness to the chassis and/or subframe is permitted. Only the use of Lotus manufactured and supplied rear track control arm and structural under tray kit (both types) is permitted.

### **2.7.2. Bodywork & Interior:** **Lotus Open**



## 2018 Lotus Cup Europe – Technical Regulations

- 2.7.2.1. All cars must retain the standard road car's profile, and be maintained to a high standard of finish, whilst it's understandable that damage may occur during a weekend, it's important that this is rectified before the next meeting. This is important to keep the image and profile of the series.
- 2.7.2.2. LoTRDC reserves the right to overrule any part that is felt to be outside the spirit of the series. If in any doubt about what is/is not acceptable, the onus is on the entrant to ask first.
- 2.7.2.3. Vehicles must be fitted with standard Lotus supplied bodywork or non OEM bodywork of the same external dimensions and material of the lotus supplied part.
- 2.7.2.4. *Permitted body modifications are:*
- 2.7.2.4.1. Front splitters may be fitted within the width of the bodywork, (excluding wing mirrors) and may project a maximum of 30mm beyond the bodywork and follow in plain view the profile of the front clamshell including original splitter. The original front splitter may be removed. An additional front spoiler as shown in section 3.4 may also be fitted but must also comply with ground clearance rules in 2.5.5. Material is free.
- 2.7.2.4.2. Undertrays must not exceed overall dimensions of the standard part. Ducts and holes within the tray may be relocated and material is free. No additional fins allowed on undertray. Flat floor/side skirts to a maximum width of 168cm between the wheels.
- 2.7.2.4.3. Extended rear diffuser protruding no more than 80mm from the periphery of the rear bodywork and complying with the ground clearance rules in 2.9.5 are permitted. Material is free.
- 2.7.2.4.4. S1 Elise 'Sport 160' style rear wing or a single element rear wing may be fitted to the maximum width of 1400mm (maximum of 1300mm on Exige S2) and have a maximum rear dimension not exceeding the original length of the car excluding any diffuser. All parts of the wing must be below 1200mm (1100mm on Exige S2) measuring from the ground to the highest point of the wing and have a maximum cord length of 300mm. End plates are allowed (one each end) but must be no larger than 320x200mm with rounded corners and a minimum thickness of 10mm and maximum thickness of 30mm, max of 20mm gurney also allowed. Material is free.
- 2.7.2.4.5. Side scoops may be fitted, but must not protrude further than the side profile of the car (not including any additional side skirts). Material is free. Side scoop inner vents may be removed but the external holes in the clam must be standard size and profile.
- 2.7.2.4.6. A "boost tube" is permitted on 340r cars. Material is free.
- 2.7.2.4.7. A "roof scoop" is permitted. Material is free.
- 2.7.2.4.8. The clam under rear grills (fog and reverse lights) may be removed however the grill must remain.
- 2.7.2.4.9. The body behind the number plate can be removed to an area not in excess of 520mm x 130mm allowing a standard number plate to be affixed.
- 2.7.2.4.10. On the Exige S2, Elise S2 & Elise S3 a hole may be cut in the rear clam between the two inner rear lights. The rear exhaust grills and number plate plinth may be removed. If a hole is created it must be covered in mesh.
- 2.7.2.4.11. Carbon fibre body panels are permitted where Lotus currently provide a factory option.
- 2.7.2.4.12. Wheel arch liners may be removed and the inner lip of the wheel arch reduced to



## 2018 Lotus Cup Europe – Technical Regulations

allow tyre clearance.

- 2.7.2.4.13. The boot/engine bay divider may be removed or modified.
- 2.7.2.4.14. Rear bulkhead may be removed and replaced with a solid metallic sheet. It is essential that this is carried out in such a way that the passenger cabin is sealed from the engine compartment.
- 2.7.2.4.15. Front 'ducts' can be opened up to enhance cooling if the duct shape is present in the std moulding. They cannot be made larger than the std moulding.
- 2.7.2.4.16. Headlamps, front direction indicators and side repeaters including associated mountings are optional. However, if all front lights are removed two driving lamps must be fitted and be in effective working condition.
- 2.7.2.4.17. Rear tailgate can be replaced with lightweight version. This part can be removable so gas strut and hinges can be removed. Material is free.
- 2.7.2.5. Interior may be removed and replaced as required within MSA requirements. Material is free. This includes the removal of, but is not limited to: Passenger seat, seat belts, electric window motors.
- 2.7.2.6. Sequential gear level mechanism, not to be confused with a sequential gearbox, can be fitted.
- 2.7.2.7. Side windows can be replaced with Polycarbonate or Perspex alternatives, this can include sliders.
- 2.7.2.8. Front windscreens may be replaced with Polycarbonate alternatives.
- 2.7.2.9. Wing mirrors are free.
- 2.7.2.10. A hose ducting fresh air from the front and rear of the vehicle to the front and rear brakes is permitted however no external bodywork modification are permitted to achieve this.
- 2.7.2.11. Front and rear clamshells may be modified solely for the purpose of ease of removal. No other changes are permitted unless specified.
- 2.7.2.12. 20mm front gurney can be added around front edge of radiator outlet.
- 2.7.2.13. Additional heat shielding may be added within the engine bay.

### **2.7.3. Engine:** Lotus Open

- 2.7.3.1. Power must not exceed a maximum power output of 260BHP at the hubs as measured by LoTRDC. LoTRDC may adjust the max power by giving two weeks' notice before any round.
- 2.7.3.2. Toyota engines must remain original i.e. Toyota 2ZZ-GE (189bhp flywheel) or 2ZZ-GZE (equipped with an Eaton MP62 supercharger and intercooler). Alternative super charger and intercooler/charge systems are permitted.
- 2.7.3.3. Toyota engine cars are not permitted any engine modifications including, but not limited to engine internal components. With the exception of the exhaust system and engine ECU, air filter, baffled sump, cams and mapping which are all free.
- 2.7.3.4. Cars will be accepted with an engine that was originally fitted and supplied as standard by Lotus cars. These cars may be accepted into the Lotus Open group by invite if they have a super charger fitted, taking into account the full specification of the car. For



## 2018 Lotus Cup Europe – Technical Regulations

clarification it is permitted to run a Toyota engine in a car originally supplied with a K series engine. Normally aspirated non-original engines up to 2.3litre, may be accepted into the Lotus Open group by invite, taking into account the full specification of the car.

- 2.7.3.5. Engine & Gear box oil coolers are permitted.
- 2.7.3.6. Vehicles may be fitted with Twin Air/Oil coolers. Laminova oil coolers for gear box and engine are permitted. A baffled sump &/or a dry sump is permitted. Additional gauges are permitted.
- 2.7.4. Suspensions:** **Lotus Open**
- 2.7.4.1. Damper make is free but may only be a maximum of two way adjustable.
- 2.7.4.2. Front damper brackets to the chassis may be replaced by the Lotus adjustable mount to raise or lower the upper damper mounting point.
- 2.7.4.3. Springs are free including the use of helper springs.
- 2.7.4.4. Vehicles may be fitted with polyurethane or nylatron suspension bushes.
- 2.7.4.5. Rear anti roll bars are not permitted.
- 2.7.4.6. Up rated inner rear toe links may be fitted however mounting points must be the same as standard. Front upper wishbones and steering arms can be as factory supplied to Lotus Exige or Lotus 211.
- 2.7.5. Ride Height and Ground Clearance:** **Lotus Open**
- 2.7.5.1. See diagram 3.3 in appendices showing illustration of where ride height should be observed on the vehicle.
- 2.7.5.2. No part of the car between all 4 wheel centres (excluding mud flaps) may be below 95mm.
- 2.7.5.3. No part of the car (excluding mud flaps) should be below 65mm.
- 2.7.5.4. Ride height and ground clearance measurements will be taken whilst driver is in the vehicle.
- 2.7.5.5. No cockpit or remote external remote suspension adjustment devices are permitted. No form of active suspension including magnetic dampers is permitted.
- 2.7.6. Transmission:** **Lotus Open**
- 2.7.6.1. Gearbox with a maximum of 6 gears and clutch are free if standard H pattern.
- 2.7.6.2. A sequential gearbox with 6 gears may be fitted in replacement to the original gearbox. A 30kg weight penalty will be applied to all cars with a sequential gearbox. Paddle shift is permitted.
- 2.7.6.3. On Exige S2 engine mounts that fit to the gearbox may be changed to accommodate the gearbox. No lowering of the engine or gearbox is permitted. The right hand engine mount must remain as standard.
- 2.7.6.4. LSDs are permitted. Gearbox oil coolers and engine mounts are free.
- 2.7.7. Electrics:** **Lotus Open**



## 2018 Lotus Cup Europe – Technical Regulations

- 2.7.7.1. Electrics are free but must be as per MSA regulation J5.14.1-7 (electrical systems).
- 2.7.7.2. All ECU's must contain only one map. If an aftermarket ECU is fitted drivers must make available to Series Eligibility Scrutineer the hardware and software required to interrogate the vehicles ECU. If this is not made available the ECU may be sealed and the driver may not be permitted to race.
- 2.7.8. Brakes:** Lotus Open
- 2.7.8.1. Disks are free (steel or iron only – bells are free). However, the bell may not be thickened beyond 13mm.
- 2.7.8.2. Pads are free.
- 2.7.8.3. Fluid must be DOT 4 or 5.1.
- 2.7.8.4. Callipers are free, but a maximum of 4 pistons on the front callipers and 2 pistons on the rear. No modifications are permitted to the hubs, up rights, steering arms or camber blocks.
- 2.7.8.5. The use of Lotus Twin Master Cylinder Braking system ALS3J0174F is permitted and recommended for those wishing to disable the ABS system.
- 2.7.9. Wheels:** Lotus Open
- 2.7.9.1. Wheel offsets must be the same as the original offsets for the relevant production model. For Exige S2 max rim size is – front 7J16 and rear 8J17 min ET35.
- 2.7.9.2. All Wheels must be of metal construction with the exception of the use of Magnesium wheels which are not permitted. Multi-piece wheels are not permitted.
- 2.7.9.3. Wheel spacers or any other method of changing the track of the vehicle is prohibited.
- 2.7.9.4. No centre lock wheels are permitted.
- 2.7.9.5. Wheel diameter on each axle must remain as per the original dimensions for the production car i.e S2 Exige Front 16", Rear 17". Increasing or decreasing wheel size from other Lotus vehicles is not permitted, including fitting Front wheel on Rear or Rear Wheel on Front.
- 2.7.10. Tyres:** Lotus Open
- 2.7.10.1. As supplied control tyre:
- Avon ZZR
  - 195/50R15 – (code - 14457M)
  - 195/50R16 – (code - 14949M)
  - 225/45R16 – (code - 14462M)
  - 225/45R17 – (code - 14466M)
- 2.7.10.2. No modifications to the tyres in any way, (any tyres suspected of being treated/modified will be excluded from the meeting).
- 2.7.10.3. It is not permitted to fill tyres with nitrogen.
- 2.7.10.4. Tyres must be purchased from the official series supplier: Avon Tyres Motorsport, Bath Road, Melksham, Wiltshire SN12 8AA or their approved supplier.
- 2.7.11. Weights:** Lotus Open





## 2018 Lotus Cup Europe – Technical Regulations

- 2.7.11.1. The Lotus Open Group is based on power to weight with a maximum of 285.7 bhp per tonne. LoTRDC may adjust the power to weight by giving two weeks' notice before any round. Thus for example:-
- A Vehicle with 240bhp must weigh no less than 840Kg
  - A Vehicle with 230bhp must weigh no less than 805Kg
  - A vehicle with 220bhp must weigh no less than 770Kg
- 2.7.11.2. This weight is the minimum the car and driver combined must be in race trim after either a race or qualifying session.
- 2.7.11.3. It is forbidden to use ballast to make up the weight (as in no lightening of the car then ballasting them back up).
- 2.7.11.4. Ballast may only be applied under direction from LoTRDC and where required shall be securely fixed in accordance with J.5.15.1-5.
- 2.7.11.5. Individual cars will have additional weight added to their minimum weights depending on vehicle specification. Current penalties are detailed in section 3.1.1.
- 2.7.12. Fuel Tank/Fuel:** Lotus Open
- 2.7.12.1. Fuel must comply with Art 252, Art 9
- 2.7.12.2. The fuel tank will comply with FT3-1999 as a minimum standard.
- 2.7.12.3. All cars must have a minimum of 3L of fuel remaining in the tank at race finish.
- 2.7.12.4. The Pro Alloy motorsport fuel filler neck assembly – part number LoTRDC001 is permitted,
- 2.8. Group: V6 Cup**
- 2.8.1. Chassis:** V6 Cup (Evora)
- 2.8.1.1. The construction type, design and material must remain as standard production or Lotus specification for both the chassis and front sub frame.
- 2.8.1.2. The rear sub frame may be lightened and stiffened however no modifications can be made to the mounting point of any component fitted to the sub frame with the exception of the lower rear wishbone mounting point which can be moved 10mm outwards on both sides on the standard rear sub frame to match the GT4 specification. The basic design must remain as per the standard car.
- 2.8.2. Bodywork:** V6 Cup (Evora)
- 2.8.2.1. RHD or LHD only, no centre drive vehicles.
- 2.8.2.2. All cars must retain the standard road car's profile or Evora Cup/GT4/GTC (including aero pack, and be maintained to a high standard of finish, whilst it's understandable that damage may occur during a weekend, it's important that this is rectified before the next meeting. This is important to keep the image and profile of the series.
- 2.8.2.3. The organisers reserve the right to overrule any part that is felt to be outside the spirit of the series. If in any doubt about what is/is not acceptable, the onus is on the entrant to ask first.



## 2018 Lotus Cup Europe – Technical Regulations

- 2.8.2.4. Vehicles must be fitted with standard Lotus supplied bodywork or non OEM bodywork of the same internal and external dimensions and material of the lotus supplied part.
- 2.8.2.5. Carbon Panels, where available from Lotus may be fitted. This includes, but not limited to, Carbon Roof, Carbon A Panels, Carbon Cosmetic Panel, Carbon Tailgate, Carbon doors (GT2 and GTE types), Carbon Rear Wing, Carbon Roof Scoop.
- 2.8.2.6. The wheel spats as fitted to the Evora GTC car are permitted.
- 2.8.2.7. Polycarbonate or Perspex side windows are permitted.
- 2.8.2.8. Front windscreens may be replaced with Polycarbonate alternatives.
- 2.8.2.9. The GT4 Carbon rear diffusers or standard Lotus diffusers are permitted, no other types are allowed.
- 2.8.2.10. The additional side intake vents as utilised on the GT4 Evora maybe fitted to the standard rear clamshell. The rear bumper may also but cut away in the same manner as the GT4 car to provide additional engine bay cooling.
- 2.8.2.11. Headlamps, front direction indicators and side repeaters including associated mountings are optional. However, if all front lights are removed two driving lamps must be fitted and be in effective working condition.
- 2.8.2.12. A hose ducting fresh air from the front and rear of the vehicle to the front and rear brakes is permitted however no external bodywork modification are permitted to achieve this.
- 2.8.2.13. A gurney flap may be added to the rear wing with a maximum height of 20mm.
- 2.8.2.14. Front and rear clamshells may be modified solely for the purpose of ease of removal. No other changes are permitted.
- 2.8.2.15. The rear clam, rear bumper, doors and engine cover may be non OEM. However, they must retain the original external profile and material but thickness is free.
- 2.8.3. Engine: V6 Cup (Evora)**
- 2.8.3.1. The original Engine must be maintained as supplied from the factory including Evora NA and Evora GT4. It is not permitted to use any form of charge cooling.
- 2.8.3.2. Evora power must not exceed a maximum power output of 360BHP at the hubs as measured by LoTRDC. LoTRDC may adjust the max power by giving two weeks' notice before any round.
- 2.8.3.3. Lotus engine mount upgrade is permitted, part numbers:
- |           |                                  |
|-----------|----------------------------------|
| ALS5E0171 | ENGINE MOUNT, FRT, POLYURATHANE  |
| ALS5E0172 | ENGINE MOUNT, REAR, POLYURATHANE |
| ALS5E0173 | ENGINE MOUNT, LH, POLYURATHANE   |
- 2.8.3.4. Lotus Variable Traction Control is permitted.
- 2.8.3.5. Lotus Dry Sump (ALS5E0174) or Lotus Baffled Sump (ALS5E0149) are permitted.
- 2.8.3.6. Air filter and housing is free.
- 2.8.3.7. The crankshaft pulley must not be modified in any way from the standard component. Part number (A132E6198S).



## 2018 Lotus Cup Europe – Technical Regulations

- 2.8.3.8. The compressor pulley must not be smaller than 65.0mm measured from the outer teeth to outer teeth – see Appendix 3.5 and must not be modified in any way.
- 2.8.3.9. The vehicle ECU must remain as standard fitment, both Pectel and Lotus. Only standard Lotus Calibrations may be used.
- 2.8.3.10. The organisers may swap ECU's between cars in this class or supply a standard ECU for fitment at their discretion.
- 2.8.3.11. Exhaust manifolds must be a Lotus supplied component. However, the rear silencer is free.
- 2.8.3.12. Additional engine sensors may be fitted however permission but must be made in writing to the series before undertaking this.

### **2.8.4. Transmission:** V6 Cup (Evora)

- 2.8.4.1. Standard H Pattern gearboxes can run either the Lotus Sports Ratios or standard Gear ratios.
- 2.8.4.2. The Lotus Xtrac sequential gearbox may be fitted in replacement to the original gearbox. The Lotus GT4 engine mounts may be fitted in conjunction with the sequential gearbox. For clarity ratios may be changed.
- 2.8.4.3. A Paddle shift system is permitted.
- 2.8.4.4. LSDs are permitted.

### **2.8.5. Suspensions:** V6 Cup (Evora)

- 2.8.5.1. Damper make is free but may only be a maximum of two way adjustable.
- 2.8.5.2. Front and rear damper mounting brackets to the subframes must remain as standard or may be replaced by the Lotus GT4 mounts to aid access for adjustment purpose.
- 2.8.5.3. Springs are free including the use of helper springs.
- 2.8.5.4. Vehicles may be fitted with either standard wishbones or the Lotus wishbones with cross axis joints as fitted to the Evora GT4 car.

### **2.8.6. Ride Height and Ground Clearance:** V6 Cup (Evora)

- 2.8.6.1. See diagram 3.3 in appendices showing illustration of where ride height should be observed on the vehicle.
- 2.8.6.2. No part of the car between all 4 wheel centres (excluding mud flaps) may be below 95mm.
- 2.8.6.3. No part of the car (excluding mud flaps) should be below 65mm.
- 2.8.6.4. Ride height and ground clearance measurements will be taken whilst driver is in the vehicle.
- 2.8.6.5. No cockpit or external suspension adjustment devices are permitted. No form of active suspension including magnetic dampers is permitted.

### **2.8.7. Brakes:** V6 Cup (Evora)



## 2018 Lotus Cup Europe – Technical Regulations

- 2.8.7.1. Disks are free (steel or iron only – bells are free). However the bell may not be thickened beyond 13mm.
- 2.8.7.2. Pads are free.
- 2.8.7.3. Fluid must be DOT 4 or 5.1.
- 2.8.7.4. Callipers are free, but a maximum of 6 pistons on the front callipers and 4 pistons on the rear. No modifications are permitted to the hubs, uprights, steering arms or camber adjustment. The Lotus Evora camber adjustment restraint system is recommended.
- 2.8.7.5. The use of Twin Master Cylinder Braking systems is permitted and recommended for those wishing to disable the ABS system.
- 2.8.7.6. Lotus Race ABS kit (ALS5J0163) is permitted.

### **2.8.8. Wheels:** **V6 Cup (Evora)**

- 2.8.8.1. Max rim size front 8.5J18 min ET52 and rear 10J18 min ET60 for non wide body cars or front 10J18 min ET40 and rear 12J18 min ET45 for GTC arched cars.
- 2.8.8.2. All Wheels must be of metal construction with the exception of the use of Magnesium wheels which are not permitted. Multi-piece wheels are not permitted.
- 2.8.8.3. Wheel spacers or any other method of changing the track of the vehicle is prohibited.

### **2.8.9. Tyres:** **V6 Cup (Evora)**

- 2.8.9.1. As supplied control tyre:  
  
Avon ZZR  
225/40R18 – (code - 14469M)  
265/35R18 – (code - 15672M)
- 2.8.9.2. Tyres must be purchased from the official series supplier: Avon Tyres Motorsport, Bath Road, Melksham, Wiltshire SN12 8AA or their approved supplier.
- 2.8.9.3. No modifications to the tyres in any way, (any tyres suspected of being treated/modified will be excluded from the meeting).
- 2.8.9.4. It is not permitted to fill tyres with nitrogen

### **2.8.10. Weights:** **V6 Cup (Evora)**

- 2.8.10.1 The Evora is based on power to weight with a maximum of 285.7 bhp per tonne. With a minimum weight of 1100kg. LoTRDC may adjust the power to weight by giving two weeks' notice before any round.
- 2.8.10.2 This weight is the minimum the car and driver combined must be in race trim after either a race or qualifying session as defined in J 5.15.1-5 (weight/ballast).
- 2.8.10.3 It is forbidden to use ballast to make up the weight (as in no lightening of the car then ballasting them back up).
- 2.8.10.4 Ballast may only be applied under direction from the organisers and where required shall be securely fixed in accordance with J 5.15.1-5.
- 2.8.10.5 Individual cars will have additional weight added to their minimum weights depending on vehicle specification. Current penalties are detailed in section 3.1.1.



## 2018 Lotus Cup Europe – Technical Regulations

- 2.8.11. Fuel Tank/Fuel:** **V6 Cup (Evora)**
- 2.8.11.1. Fuel must comply with Art 252, Art 9
  - 2.8.11.2. The fuel tank will comply with FT3-1999 as a minimum standard.
  - 2.8.11.3. All cars must have a minimum of 3L of fuel remaining in the tank at race finish.
- 2.8.12. Chassis:** **V6 Cup (Exige)**
- 2.8.12.1. Only originally built Lotus Exige V6 Cup R or Exige V6 Cup upgraded to Exige V6 Cup R specification by Lotus if carrying a Lotus Motorsport/Lotus Build Plate or certificate of upgrade are permitted. An exception may be given to other Exige V6 if upgrade has been checked and approved by Lotus Cars and LoTRDC.
- 2.8.13. Bodywork & Interior:** **V6 Cup (Exige)**
- 2.8.13.1. No bodywork modifications to the originally built Lotus Exige V6 Cup R or Exige V6 Cup upgraded to Exige V6 Cup R specification.
  - 2.8.13.2. The use of a gurney flap on the rear wing is permitted with a maximum height of 20mm.
  - 2.8.13.3. Seats, harnesses, steering wheel and safety equipment is free but must meet FIA regulations.
  - 2.8.13.4. A hose ducting fresh air from the front and rear of the vehicle to the front and rear brakes is permitted however no external bodywork modification are permitted to achieve this.
  - 2.8.13.5. Front and rear clamshells may be modified solely for the purpose of ease of removal. No other changes are permitted.
- 2.8.14. Engine:** **V6 Cup (Exige)**
- 2.8.14.1. No engine modifications to the originally built Lotus Exige V6 Cup R or Exige V6 Cup upgraded to Exige V6 Cup R specification.
  - 2.8.14.2. Exige power must not exceed a maximum power output of 340BHP at the hubs as measured by LoTRDC. LoTRDC may adjust the max power by giving two weeks' notice before any round.
  - 2.8.14.3. The vehicle ECU must remain as standard fitment. Only standard Lotus Calibrations may be used.
  - 2.8.14.4. The organisers may swap ECU's between cars in this class or supply a standard ECU for fitment at their discretion.
  - 2.8.14.5. Additional engine sensors may be fitted however permission must be made in writing to the series before undertaking this.
  - 2.8.14.6. Exhaust manifolds must be a Lotus supplied component. However, the rear silencer is free.
- 2.8.15. Transmission:** **V6 Cup (Exige)**
- 2.8.15.1. Standard H Pattern gearboxes can run either the Lotus Sports Ratios or standard Gear ratios.



## 2018 Lotus Cup Europe – Technical Regulations

2.8.15.2. The Lotus Xtrac sequential gearbox may be fitted in replacement to the original gearbox. The Lotus GT4 engine mounts may be fitted in conjunction with the sequential gearbox. A 30kg weight penalty will be applied to all cars with a sequential gearbox. Ratios are free with the sequential gear box.

### **2.8.16. Suspensions:** **V6 Cup (Exige)**

2.8.16.1. Dampers may only be a maximum of two way adjustable and must be the standard Lotus components as fitted from new. These may be revalved to suit individual driving styles.

2.8.16.2. Springs are free including the use of helper springs.

2.8.16.3. All other suspension components must remain as standard Lotus supplied.

2.8.16.4. Lotus supplied anti-roll bars are permitted – part numbers A703C0001F and A703D0001F.

2.8.16.5. Vehicles may be fitted with either the standard Lotus suspension bushes or the Nitron Racing Systems Ltd suspension bearing kits. Part numbers LP010179\_FR (Front) and LP010179\_RR (Rear). The spherical joints within the rear hub carriers (A132D6006F) may be changed for an alternative component. No modification is permitted to the hub carrier itself.

### **2.8.17. Ride Height and Ground Clearance:** **V6 Cup (Exige)**

2.8.17.1. See diagram 3.3 in appendices showing illustration of where ride height should be observed on the vehicle.

2.8.17.2. No part of the car between all 4 wheel centres (excluding mud flaps) may be below 95mm.

2.8.17.3. No part of the car (excluding mud flaps) should be below 65mm.

2.8.17.4. Ride height and ground clearance measurements will be taken whilst driver is in the vehicle.

2.8.17.5. No cockpit or remote external suspension adjustment devices are permitted. No form of active suspension including magnetic dampers is permitted.

### **2.8.18. Brakes:** **V6 Cup (Exige)**

2.8.18.1. Disks are free (steel or iron only – bells are free). However, the bell may not be thickened beyond 13mm.

2.8.18.2. Pads are free.

2.8.18.3. Race ABS is not permitted.

2.8.18.4. A twin master cylinder pedal box is not permitted.

2.8.18.5. Fluid must be DOT 4 or 5.1.

2.8.18.6. Callipers must remain as standard Lotus fitment. No modifications are permitted to the hubs, uprights, steering arms or camber adjustment.

### **2.8.19. Wheels:** **V6 Cup (Exige)**

2.8.19.1. Max rim size front 7.5J17 min ET26 and rear 9.5J18 min ET35.



## 2018 Lotus Cup Europe – Technical Regulations

- 2.8.19.2. All Wheels must be of metal construction with the exception of the use of Magnesium wheels which are not permitted. Multi-piece wheels are not permitted.
- 2.8.19.3. Wheels spacers or any other method of changing the track of the vehicle is prohibited.
- 2.8.19.4. No centre lock wheels are permitted.

### **2.8.20. Tyres:** **V6 Cup (Exige)**

Avon ZZR  
215/40R17 – (code - 14464M)  
265/35R18 – (code - 15672M)

- 2.8.20.1. No modifications to the tyres in any way, (any tyres suspected of being treated/modified will be excluded from the meeting).
- 2.8.20.2. Tyres must be purchased from the official series supplier: Avon Tyres Motorsport, Bath Road, Melksham, Wiltshire SN12 8AA or their approved supplier.
- 2.8.20.3. It is not permitted to fill tyres with nitrogen

### **2.8.21. Weights:** **V6 Cup (Exige)**

- 2.8.21.1 The Exige (V6 Cup) is based on power to weight with a maximum of 285.7 bhp per tonne. With a minimum weight of 1050kg. LoTRDC may adjust the power to weight by giving two weeks' notice before any round.
- 2.8.21.2 This weight is the minimum the car and driver combined must be in race trim after either a race or qualifying session as defined in J 5.15.1-5 (weight/ballast).
- 2.8.21.3 It is forbidden to use ballast to make up the weight (as in no lightening of the car then ballasting them back up).
- 2.8.21.4 Ballast may only be applied under direction from the organisers and where required shall be securely fixed in accordance with J 5.15.1-5.
- 2.8.21.5 Individual cars will have additional weight added to their minimum weights depending on vehicle specification. Current penalties are detailed in section 3.1.1.

### **2.8.22. Fuel Tank/Fuel:** **V6 Cup (Exige)**

- 2.8.22.1. Fuel must comply with Art 252, Art 9
- 2.8.22.2. The fuel tank will comply with FT3-1999 as a minimum standard.
- 2.8.22.3. All cars must have a minimum of 3L of fuel remaining in the tank at race finish.

## **2.9. Numbers/Decals for all Groups**

**2.9.1.** FIA Regulations apply regarding competition numbers and backgrounds which must be displayed to the satisfaction of the Timekeepers.

**2.9.2.** Series livery will be provided by the LoTRDC for display on all cars for;

- Sill panel series sponsor logos (both sides)
- Door cards (both sides) with one set of numbers
- LoTRDC decals (both sides)



## 2018 Lotus Cup Europe – Technical Regulations

- MSVR decals (both sides)
- Windscreen sun visor
- Front number panel
- Rear number plate

Other series decals as from time to time may be required.

**2.9.3.** Series livery will be positioned as numbered and defined in 3.2.

**2.9.4.** Drivers will be required to display three series sponsor logos on race suits.

**2.9.5.** LoTRDC will supply one set of series livery. Replacement vinyl can be purchased at events.

**2.9.6.** Competitors will not be allowed to display sponsor logos (e.g. tyre manufacturers) which conflict with series sponsor logos without prior written consent from the series co-ordinator.

### **2.10. Trade Support Vehicle Decals**

**2.10.1.** Series decals will be provided and may be fixed to series trade support vehicles if wished.

**2.10.2.** Trade support vehicles should not display sponsor logos which conflict with Series sponsor logos when in the Lotus Cup Europe Paddock.

**2.10.3.** Advertising and sponsorship on all race cars, trucks or overalls of any competitor entering the Lotus Cup Europe must conform to the MSA Bluebook definitions of legality and decency. Competitors will be asked to remove any signage that might be deemed offensive or inappropriate. Competitors are encouraged to seek the permission of the series organizers in cases where there is uncertainty.



## 2018 Lotus Cup Europe – Technical Regulations

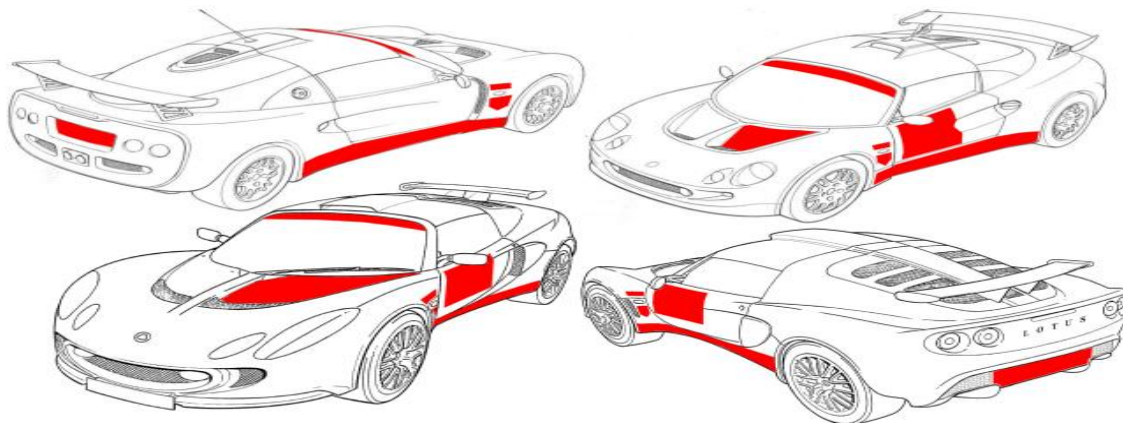
### 3. APPENDICIES

#### 3.1. Weight Penalties

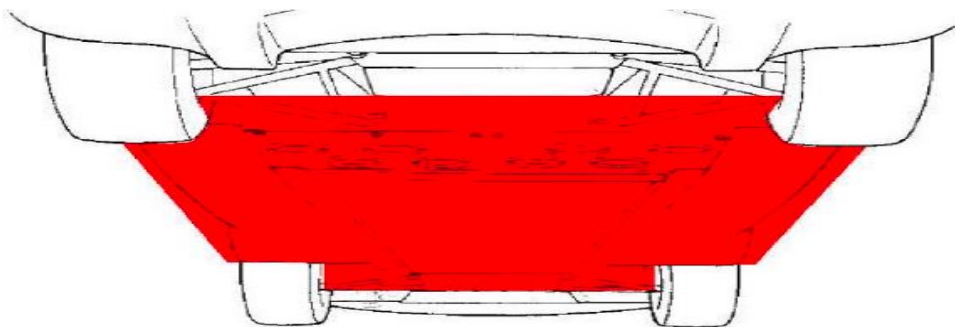
##### 3.1.1. Groups: 2-Eleven, Exige Cup, Lotus Open & V6 Cup (Exige V6 only – does not apply to Evora)

3.1.1.1. Sequential Gearbox Minimum Weight + 30kg

#### 3.2. Series Livery Placement



#### 3.3. Ride height measurement area

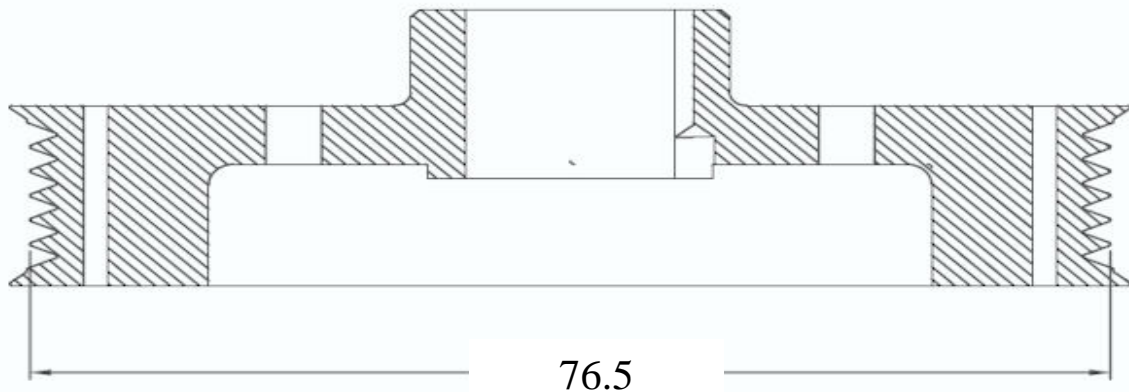


#### 3.4. Permitted Front Spoilers Examples



#### 3.5. Two Eleven Compressor pulley measurement

## 2018 Lotus Cup Europe – Technical Regulations



### 3.6. Intellectual, Commercial, Merchandising and Sponsorship Rights

The Intellectual, Commercial, Merchandising and Sponsorship Rights of the Lotus Cup Europe series are the property of LoTRDC Ltd and may not be assigned to any other party or person without their written agreement.

### 3.7. Television

- 3.7.1.** LoTRDC Ltd, retain exclusive broadcasting, recording, cable, satellite, digital, video, games, internet and interactive rights and rights to all other mediums to film and record the participation of the driver, entrant, sponsor and any other team member in the events and activities throughout the season and to assign or otherwise deal with such surrender of his/her rights (if any) in such matters, which may then be used at the series promoter's discretion.
- 3.7.2.** No on-board cameras will be permitted except by permission of the series organisers. Competitors fitting on-board cameras may also require permission of the circuit management to film and should be prepared to pay any fee required by the circuit if it is deemed that the filming is of a commercial nature. In the event that permission is given for a competitor to fit an on-board camera in his/her race car, the positioning and fitting of the equipment must be approved by the Eligibility Scrutineer prior to that car going on track. It will be mandatory to carry on-board cameras provided by the organisers production company or LoTRDC Ltd if required.
- 3.7.3.** No sponsorship decals may be carried on the dashboard or in any position that may be visible from an in-car camera without the express permission of the series organisers.