



## REGULATIONS AND SPECIFICATIONS FOR THE 2020 SAES ENDURANCE SERIES

**Version 5 – 27 August 2020**

<i>Modified SSR / ART</i>	<i>Date applicable</i>	<i>Date of Publication</i>	<i>Clarifications</i>
ART 2	Immediate Effect	26.08.2020	Date Change
ART 6.1	Immediate effect	26.08.2020	Class Amendment
ART 12.2	Immediate Effect	26.08.2020	Rule Amendment
ART 16.3	Immediate Effect	26.08.2020	Wording Amendment
APPENDIX A POINT E	Immediate Effect	26.08.2020	Wording Added
APPENDIX F POINT 4	Immediate Effect	26.08.2020	Wording Amendment
APPENDIX F POINT 7	Immediate Effect	26.08.2020	Wording Amendment
ART 6.1	Immediate Effect	30.07.2020	Class Amendment
ART 2	Immediate effect	11.06.2020	Date Changes
ART 6.4	Immediate effect	11.06.2020	Class E Wording amended
ART 6.4	Immediate effect	19.06.2020	Class F Wording amended

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In addition to the Supplementary Regulations issued for various events, these rules and regulations will apply as if they form part of said Supplementary Regulations:

### **1. Eligibility.**

- 1.1. The 2020 SAES South African Endurance Series is open by invitation to Production Saloon cars, Production Sports Cars, GT Cars and Sports Racing Cars, all being closed wheel vehicles complying with technical regulations as published by MSA, the FIA or as determined as eligible by the Organisers from time to time.
- 1.2. Drivers are required to hold the minimum of an MSA Regional Drivers Licence to compete in the SAES Endurance Series.
- 1.3. The aim of the Series will be to declare an overall SAES Endurance Champion and an overall SAES Endurance Index of Performance Champion
- 1.4. Class winners will be as listed in rules 6.1, 6.2, 6.3, 6.4 and 6.5.

## 2. Events.

The Calendar for the 2020 South African Endurance Series as issued by MSA is **provisionally**:

Circuit	Domicile	Distance	Date
2. Zwartkops	Pretoria	4 Hour	18 <sup>th</sup> July 2020
3. Aldo Scribante	Port Elizabeth	4 Hour	15 <sup>th</sup> August 2020
4. East London	East London	4 Hour	5 <sup>th</sup> September 2020
5. Dezzi Raceway	Port Shepstone	4 Hour	24 <sup>th</sup> October 2020
6. Killarney	Cape Town	9 Hour	5 <sup>th</sup> December 2020

## 3. Entries.

3.1 The entry fee for events is R1500.00 per advertised hour of event duration.

3.2 All entry fees include MSA fees and transponder fees for one car and 10 entrance tickets.

Entry fees must be sent to:

SAES (Pty) Ltd

Po Box 590

Pinegowrie 2123

[roger@afriod.co.za](mailto:roger@afriod.co.za)

Banking Details:

Bank: First National Bank

Acc No: 62739097667

Branch: 256755

Swift: FIRZAJJ

The entry and closing dates for entries will be advised before each event.

## 4. Teams and Drivers.

4.1 A minimum of two and a maximum of four drivers per car/entry are allowed for all events.

4.2 All entered drivers per entry must each drive for a **minimum** total of 12 minutes per hour of the total advertised race length. i.e. 48 minutes in a 4 hour race and 84 minutes in a 7 hour race. Failure to comply with this minimum time per driver shall result in a penalty calculated by subtracting 3 laps per minute shortfall from the team's total number of laps for up to a total of 5 minutes (i.e. a total of 15 laps). Should a team exceed the 5 minutes total shortfall per driver the team will lose all finishing place points and will gain only 1 point for finishing the race. Should a driver suffer a mechanical breakdown or any other misfortune during a race, the time taken to recover and or repair the car will be included in that drivers total time.

4.3 Each Entry must have a Team Manager who may not be a driver.

4.4 A driver may drive for only one entry during an event.

4.5 An Entry may be comprised of a maximum of 4 drivers, 1 Team Manager and 5 Pit crew. Additional persons may be utilized within the pit garage at the team's own circuit entry costs.

## 5. Tyres.

5.1. Tyre type and size and the number thereof are free except in Classes A, D, E & V where slick tyres may not be used.

## 6. Classes.

Classes are based on the declared capacity on the entry form.

### 6.1 Saloon Cars:

Class A 0 to 1999cc. – Restricted and on application. No slick tyres and no forced induction engines.

Class B 0 to 1999cc – Slick tyres and manufacturer produced forced induction engines may be used.

Class C 2000 cc and above. Open technical regulations on application.

**Class H 0 to 1400cc – Slick Tyres and manufacturer produced forced induction engines may be used.**

Class GTC Technical Regulations as per 2020 MSA GTC Regulations.

Class GTC SupaCup Technical Regulations as per 2020 MSA GTC SupaCup Regulations

## 6.2 Sports Racing Cars:

Class S Up to 2999 cc.

Class T 3000 cc and above

Class V Up to 2000cc.No slick tyres and no forced induction engines allowed.

## 6.3 Production GT Cars:

GT3SA. Cars complying in spirit with FIA GT3 regulations as determined by SAES.

GT4SA. Cars complying in spirit with FIA GT4 regulations as determined by SAES.

GT5SA. GT type Cars not complying in spirit with FIA GT3 and GT4 regulations but accepted by SAES as a GT type car.

## 6.4 Production Sports Cars.

Class D 0 to 1999cc – No slick tyres and no forced induction allowed.

Class E 2000 to 3999cc –Backdraft cars as per Appendix F of these regulations.

Class F Production Sports Cars which do not comply with Class D and E Regulations.

## 6.5 Prototype Sports Racing Cars-Converted Single Seaters not meeting the specifications of Sports Racing Cars.

Class N Up to 2999 cc

Class O 3000 cc and above.

SAES retains the sole right to determine which cars fall into this class.

6.6 The penalty for a false declaration will be exclusion from an event.

6.7 Vehicles with forced induction and all Rotary engine vehicles will be subject to an equivalency factor of 1.4 by which their actual capacity will be multiplied to determine a capacity for classing purposes. This rule does not apply to 6.1 Class B.

6.8 Forced induction Rotary engines will be subject to an equivalency factor of 2.0

6.9 Within Class E Backdraft will run a class Championship for Backdraft cars complying with Appendix F. SAES will apply the Backdraft Championship Regulations and score the Backdraft Championship.

## 7. Scoring.

7.1. Points will be awarded as per Appendix B of these regulations.

7.2 For inclusion in the Overall, Index and Class Championship scoring a driver must have finished and scored in not less than three rounds of the 2020 Championship.

7.3 The Index of Performance target lap time is determined by taking the two fastest laps set by a car during a race and dividing the total of those two fastest laps by 2 to achieve a smoothed target lap time. This time is then used to calculate which entry came closest to its overall race time based on the target time.

## 8. Trophies per Race Meeting.

Overall:

1<sup>st</sup> overall

2<sup>nd</sup> overall

3<sup>rd</sup> overall

Index of Performance:

1<sup>st</sup> overall, 2<sup>nd</sup> Overall, 3<sup>rd</sup> Overall

Classes:

1<sup>st</sup> to 3<sup>rd</sup> depending on the number of entries.

## 9. Qualification as a Finisher.

9.1. A vehicle must cross the finishing line under its own power on the circuit after the chequered flag has been shown to qualify as a finisher. A vehicle may not be pushed at any time by any means during an event except

by track officials except where the vehicle has reached the pit entry line and may be pushed by personnel authorised to be on the pit lane.

- 9.2. A vehicle must complete 70% of its class winner's race distance to qualify as a finisher.
- 9.3. Race distance will be defined as the number of laps completed by the leading vehicle in each class. Should there be only one vehicle or should only one car in a class finish, the organisers will determine a class race distance based on 70% of a race distance calculated by using the historical lap times of a car in that class.

## 10. In-car timing and Data Logging.

In car timing is and data logging is permitted.

## 11. In-car communications.

In car communication (ship to shore) is compulsory except in classes A and V where it is recommended.

## 12. Qualifying.

- 12.1. Qualification times will only be taken from the official qualifying session for the event. Only one driver is required to qualify a vehicle unless otherwise advised in the event SRs.

12.2. Vehicles failing to qualify in the official session will start from the Pit Lane exit once the field has crossed the pit exit line on the 1<sup>st</sup> Lap.

- 12.3. A minimum qualifying time may be applied.

## 13. Safety Car

- 13.1. A Safety Car may be used as described in **Appendix E** of these regulations.
- 13.2. Pit stops are allowed during a Safety Car period.

## 14. Red Flag.

- 14.1. Vehicles will be stopped on the circuit start grid in race position unless stated otherwise by race control.
- 14.2. Drivers may take refreshments during a red flag stop but must remain in the vehicle.
- 14.3. Vehicle may not be worked on during a red flag stop but windscreens or visors may be cleaned.
- 14.4. Vehicles may not enter or exit the pits during a red flag stop.
- 14.5. A TWO minute board will be shown to signal a rolling restart behind a safety car.

## 15. Fuel.

- 15.1. A maximum of 100L on board fuel capacity is permitted unless a car has a greater fuel capacity as homologated by the FIA. Entrants must supply the organisers with the relevant FIA Homologation Document or Number so as to verify the fuel capacity of the car. Entrants not complying with any part of Rule 15 may be excluded.
- 15.2. Only Petrol and Diesel based fuels as specified by MSA GCR240 are allowed. Octane boosters specified as in GCR240 are allowed.

## 16. Refuelling.

- 16.1. Only refuelling equipment as specified in Appendix A of these regulations may be used.
- 16.2. A maximum of 5 crew members may refuel a car whilst the car is on Pit Road only at any times before or during an event.
- 16.3. Drivers may **not** remain in a vehicle or conduct a driver change during refuelling. Only a fully cladded crew member or driver attired as per rule 16.7 may assist in the changeover of an incoming or outgoing driver.
- 16.4. Each entry must have a minimum of five 9kg dry powder or equivalent fire extinguishers. Four of these must be placed within easy reach of the refuelling crew on the pit lane and the fifth, with its safety pin deactivated, must be held by a crew member and faced towards a refuelling operation. All fire-extinguishers must carry a current sold by date or a current service date.
- 16.5. The vehicle engine must be shut down during refuelling and may not be started until refuelling is complete.
- 16.6. A wet blanket must be placed over the wheel or exhaust area closest to the vehicles fuel intake point. The blanket must be of suitable size to cover the vehicle wheel or exposed exhaust area.

- 16.7 All refuelling crew shall be attired with a fire proof balaclava, fire proof gloves, a full face crash helmet and a fire proof suit or overall. The crash helmet visor must be closed when refuelling.
- 16.8 The refuelling crew shall be comprised of one crew member holding a readied fire-extinguisher as in 16.4; one holding the refuelling device and one manning the shut off valve on the refuelling rig, if used. The shut off valve must be manned at all times during the refuelling process.
- 16.9 No refuelling is allowed in the Pit Garage.
- 16.10 No work of any nature is allowed on the vehicle whilst it is being refuelled.
- 16.11 Vehicles may be refuelled by gravity feed only.
- 16.12 Bulk fuel may not be stored in the Pit Garage or Pit Front at any time.
- 16.13 The refilling of fuel rigs with electric pumps is not permitted unless the equipment complies with FIA standards otherwise only manual or air pressure pumps may be used.
- 16.14 No booms may cross the pit lane at a height of less than 1.90 meters.
- 16.15 Fuel spillage of any nature will subject the vehicle to a drive through penalty.
- 16.16 All cars must be connected to an earth point whilst refuelling.
- 16.17 Contravention on any of the above items will be penalised by penalties of up to and including exclusion from the event.
- 16.18. Class A & V cars may only be refuelled by means of fuel churns as listed in Appendix A of the 2020 MSA SAES National Championship Endurance regulations.

## **17. Pit Lane.**

- 17.1 Only 5 technicians are allowed to work on a car whilst it is stationary in front of the Pit Garage on Pit Lane.
- 17.2 Drivers and Team Managers may be part of the 5 technicians but not in addition to.
- 17.3 Wheels may be changed on the Pit Lane.
- 17.4 Fluids and lubricants may be checked and topped up on the Pit Lane.
- 17.5 No mechanical or electrical work may be carried out on the pit lane. Brief checks may be carried out but should work be required the vehicle must be pushed into its pit garage before any work can commence. Contravention of this rule may lead to a drive through penalty.
- 17.6 Vehicles may not be push started during the race and the penalty for doing so is a drive through penalty.
- 17.7 Vehicles leaving the pit area may be assisted with a push by crew if it is attempting to pull off under its own power.
- 17.8 The Pit Lane Director only will enforce any instructions received from the C.O.C.
- 17.9 **The Pit Lane Director will only communicate with the Team Manager**

## **18. Pit Garage.**

- 18.1 Car engines may be started in the Pit Garage with the sole intent of removing the car from the pit garage
- 18.2 There is no restriction on how many people may work on a car in a Pit Garage.
- 18.3 No fuel may be stored in the Pit Garage.
- 18.4 No smoking, alcohol or children under the age of 16 (sixteen) is/are permitted in the Pit Garage at any time.
- 18.5 If any major components are changed during the race approval must be obtained from a Scrutineer to rejoin the race after inspection of the repair.
- 18.6 Only persons wearing an accredited wrist band may enter the pit garage or pit service apron during an event.
- 18.7 All cars must use an environmental mat when in the pit garage or the pit lane as per Appendix D of these regulations.

## **19. Pit Wall.**

- 19.1 When the pit lane entrance is open only persons carrying a Pit Crew accreditation lanyard are allowed on the pit wall area during a race, free practise and qualifying sessions.

## **20. Race Start and Finish Procedure.**

- 20.1 Race starts will be conducted by way of a rolling start unless otherwise stated in the event SRs.
- 20.2 The Pit Lane will be opened Fifteen Minutes, or as specified otherwise in the event SRs, prior to the scheduled start of the race.
- 20.3 The pit lane exit will close Five minutes before the official race start and will reopen at the race start
- 20.4 GCR272 (iii) will not be applied for the last lap of the race.

## **21. Out-side Assistance.**

- 21.1 In the event of a vehicle breaking down on the circuit, no outside assistance is permitted other than by the track officials who may move the vehicle to a safe position or position the vehicle for towing the vehicle back to the pits. Such assistance may be used to restart the engine.
- 21.2 A vehicle may only be returned to the pit area by means of it being towed behind a support vehicle by means of a tow strap. A roll back or trailer may be used to return the vehicle to the pits during a race if directed by race officials.
- 21.3 Only the driver is permitted to make repairs outside of the designated pit area during a race
- 21.4 No refuelling or replenishment of fluids or lubricants is allowed on the circuit.
- 21.5 The penalty for non-compliance of any of any of Rule 21 is possible exclusion.

## **22. Lighting.**

- 22.1 All vehicles will be required to have the following lights operating at scrutineering and during an event as per 22.2, 22.5, 22.6 and 22.7.
- 22.2 Two operating Headlamps mounted in their original positions or as per 22.4. A headlamp may contain a multiplication of elements within the same housing.
- 22.3 A maximum of two additional front facing spotlights may be fitted.
- 22.4 Unless original equipment, no front facing lamp, as in 22.2 and 22.3 above, may be fitted so that the top of the lamp protrudes above a line drawn from the front of the cockpit area or the base of a wind screen to the highest forward part of the cars bodywork forward of the cockpit area with the exception of Lotus Seven type vehicles which may have their headlamps fitted in their traditional position. Any extra lamps as in 22.3 on this type of vehicle must be fitted lower than the two headlamps. No lamp may exceed 200mm in lens diameter or length.
- 22.5 Two operating tail lamps except classes N, O, S, T, and V where only operating one tail lamp is mandatory.
- 22.6 One operating Brake Light is required.
- 22.7 Front and rear working indicators as and if originally fitted to the vehicle.
- 22.8 A maximum of two small forward facing recognition lights may be fitted. These may be of any colour except Red. If strip lights are used they may not be more than 150mm in length.
- 22.9 Lights must be turned on when advised by race officials by way of a LIGHTS ON board which will be displayed at the start line for 3 Laps.
- 22.10 Vehicles which do not display the operating lights as specified in Rule 22 will be black flagged during an event and must return to the pits to repair any faults or damage.
- 22.11 No additional light may be added to a vehicle during an event.
- 22.12 No rear facing white coloured light is permitted.

## **23. Communications and Timing.**

- 23.1 All events will operate as an internet based system and there will be no paper records.
- 23.2 Teams must be equipped with the necessary Lap Tops, PCs etc to log onto the internet or wi-fi to follow the progress of the event and to receive instructions.
- 23.3 Screens will update as soon as the system allows.
- 23.4 Each driver shall have a separate timing transponder which must be changed at every driver change during practice sessions and the race.
- 23.5 Transponders may not be fitted to a driver's helmet.

## **24. Car Recognition.**

- 24.1 A vehicle will retain the same number for a season. The number 1 (one) is reserved for the previous seasons Series winner.
- 24.2 It is compulsory to fit a decal either side of a vehicle showing each drivers name and each drivers Country of Domicile.
- 24.3 The organisers reserve the right to fit sponsors decals to a car.

## **25. Silencing.**

- 25.1 It is compulsory that cars do not exceed an exhaust noise level measured and set as per SAES Appendix C where stated in an events regulations. Silencers are not compulsory fitment.

## 26. Tow Straps.

26.1 All cars must be fitted with front and rear tow hooks or straps. Should a tow point not be available during a recovery the recovery crew will attach their towing equipment to any convenient point on a car and any ensuing damage will be for the responsibility of the entrant.

## 27. Drivers Apparel.

27.1 All drivers' apparel must be presented at scrutineering for examination. Race suits must comply with a minimum LEVEL 3 as specified in MSA GCR239. GCR239 will apply to all safety items.

## 28. Bodywork.

28.1 Cars may not take part in a qualifying session or a race without any part of the bodywork as presented at scrutineering.

## 29. Documentation & Scrutineering.

29.1 Documentation, scrutineering and qualifying will take place on Friday before the Saturday of each event unless advised otherwise in the event SRs.

29.2 Failure to attend Drivers Briefing by the Team Manager and all drivers will result in a drive through penalty for the Team concerned within the first five laps of the race.

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# SA Endurance Series 2020 Appendix A

## Refuelling Systems

### A. FIA Approved Single and Twin Nozzle Systems.

The refuel systems must carry a current FIA Label of Approval as per Appendix 252-7 which is available on the FIA website as a download. **It is the responsibility of the entrant to prove that the system is FIA approved.**

### B. Non FIA Approved Fuel Rigs with a standalone Tank.

1. Only a single refuelling hose of a maximum of 38mm I.D. may be used.
2. The fuel delivery hose to the car must be fitted with a shutoff nozzle with a maximum of 33mm I.D. at its exit into the car fuel tank entry port.
3. All hosing used must be to S.A.B.S fuel hose standards.
4. The maximum refill storage tank capacity is 200L.
5. The top of the storage tank may not be higher than 2000mm from the ground.
6. The maximum diameter of the fuel storage may not exceed 1000mm.
7. The fuel storage tank must be fitted with a vent pipe on top of the storage tank. The vent pipe shall be of a minimum 13mm internal diameter and 1000mm in length. The top of the vent pipe will be fitted with a flame trap.
8. A manually operated shut off valve shall be fitted between the outlet hose or pipe directly at the tank.
9. The fuel rig must be earthed at all times via a minimum 10mm earthing cable.

### C. FIA and Other Approved Fuel Churns.

1. FIA approved and other churns supplied manufacturers which are SAES approved may be used.

### D. Non FIA Approved Fuel Churns.

Non FIA approved by SAES may be used as long as they meet the requirements of SAES Scrutineers as follows:

1. The churn may not hold more than 30L
2. The churn outlet nozzle must be a minimum length of 200mm and the internal diameter of the delivery nozzle may not exceed 33mm.

3. The churn must be fitted with a shut off valve on the delivery hose.

**E. GTC Series Approved Refuelling Systems.**

1. Dry-Break refuelling systems as approved by the controllers of the MSA GTC Series and as approved by SAES officials, may be used.

No other fuel systems will be allowed unless approved by SAES scrutineers.

### **SA Endurance Series 2020 Appendix B**

#### **Points scoring all Events**

Appendix B	2020
Position	Points
1	50
2	40
3	35
4	30
5	28
6	26
7	24
8	22
9	20
10	18
11	16
12	15
13	14
14	13
15	12
16	11
17	10
18	9
19	8
20	7
21	6
22	5
23	4
24	3
25	2
Finish	1

### **SA Endurance Series 2020 Appendix C**

#### **SOUND MEASUREMENT**



1.1 The measurement of sound levels will be made by placing the microphone at a distance of 50cm from the end of the exhaust pipe at a 45° angle and at the level of the exhaust outlet.

1.2 In the case of rear engine Sports and GT cars, the same test procedure as above may be carried out by placing the microphone at a distance of 2m from the end of the exhaust pipe at a 45° angle and at the level of the exhaust outlet.

1.3 Where more than one exhaust outlet is present on the machine, the test must be repeated for each exhaust outlet and the highest reading will be the representative reading.

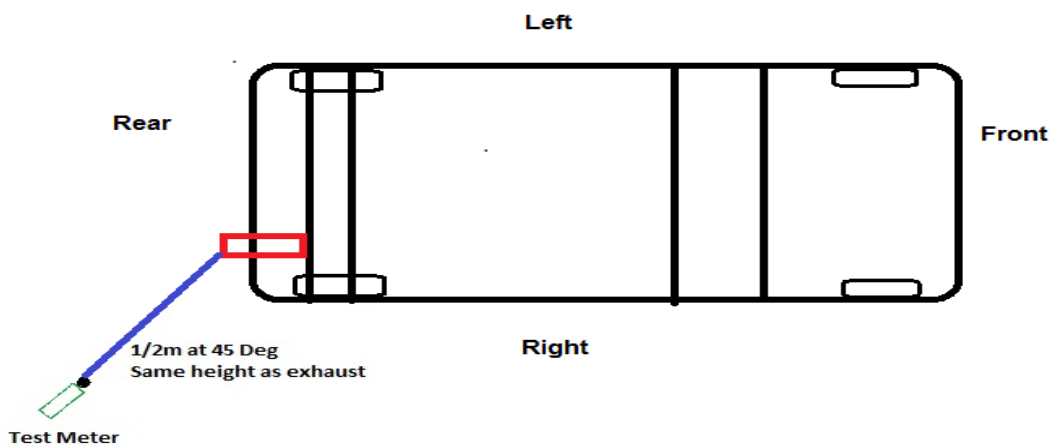
1.4 In circumstances where the exhaust outlet is not immediately available or accessible, the test may be conducted at a distance of 2 meters from the centreline of the vehicle with the microphone at the same height as the exhaust outlet.

1.5 Background noise should be at least 10 dB (A) below the measured level. It is necessary that there is a minimum of 20 meters radius open flat space around the vehicle. Where possible, measurements must be taken as close as possible to the vehicle, at the defined distance to avoid background noise.

1.6 The static sound level limit at is 108dBA at the ½m test and 99dBA at the 2m test.

1.7 A drive by sound test may be conducted at a maximum sound level of 96dBA

1.8 Engines must be revved to 75% of the maximum (red line) limit for the test.



## SA Endurance Series 2020 Appendix D

### Environmental Mats

1. Environmental mats must be composed of an absorbent upper part (top) and an impermeable part underside (bottom). Use of mats (or other effective ground protecting devices/systems) is compulsory wherever work on vehicles is allowed by the organisers.
2. The whole area underneath the vehicle, where there is the prime probability of fluid spills, must be covered with a ground protecting sheet or environmental mat.
3. In combination with the environmental Mats or ground sheets, other ground protecting systems like fluid absorbent material, oil spill kits, etc. can be used to clear spillages. These materials must be disposed of in a hazardous waste container.
4. Under no circumstances may these mats be disposed of in a standard refuse bin. A hazardous waste container must be available at a designated point. Any damaged mats MUST be disposed of in this container. Alternatively, the soiled mats can be placed in a sealed plastic container for disposal by a hazardous waste disposal company.
- 5 **For use on a concrete, tiles or closed surface a non-absorbent groundsheet is considered adequate for use as an environmental mat.**

6. If required, absorbent environmental mats are available from MSA offices.

## SA Endurance Series 2020 Appendix E

### Safety Car Procedures

The basis for this document is a speedy reaction to and recovery of broken race cars during open practice, qualifying and endurance race conditions.

1. The Safety Car (SC), first, and a Course Car (CC), second, are deployed from the Pit lane for an incident in conjunction with a Recovery Vehicle (RV). The CourseCar will have a SAES Official on board. The SC will pick up the first competing car behind it on the circuit and not necessarily the lead car. The vehicles exit CC followed by SC and RV
2. Full circuit SC boards and yellow flags will be deployed at the same time as 1 above on instruction from the CoC.
3. On arrival at the incident the SC will continue to proceed around the circuit. The CC Official will decide at the incident whether the vehicle or vehicles involved in the incident can be recovered to the pits or alternately moved to a place of safety. Once the incident is cleared the CC & RV will return to the Pit Exit area.
4. The SC will proceed around the circuit and may pass the CC & RV when it re-enters the circuit to return to the pit area.
5. The SC will only switch off its lights for a restart when the RV and CC have entered the pit area under instruction from the CoC as follows:
  - A) Zwartkops. If the RV and CC have entered the pits prior to the Safety Car reaching Turn 5.
  - B) East London. The Esses.
  - C) Phakisa TBA
  - D) PE TBA
  - E) Killarney TBA
  - F) Dezzi TBA
6. The SC boards will be removed once the SC has exited the circuit and no car may overtake another prior to the Start/Finish line where a green flag will be waved.
7. Cars that have entered the pits during the SC period may only rejoin the circuit at a safe pace and proceed to the back of the SC "train". Should the SC "train" be passing the pit lane exit when a competitor wants to exit the pit lane the competitor must be held until the last SC "train" car has passed the pit exit and then released.
8. Should the pit straight area be blocked by debris from an incident, the SC may use the pit lane to avoid that section of the circuit during the SC period at the discretion of the CoC.
9. Once the SC lights have been switched off competitors may not weave behind the SC but must maintain a single line of vehicles until the restart.
10. Should the SC come up behind a slow moving competitor during the SC period that competitor must be taken as a slow moving vehicle with a white flag displayed by the marshals and it must take up position at the rear of Safety Car "train" after being passed by the SC and all other competitors.
11. Non compliance with any of the above by competitors may result in a drive through penalty.

## SA Endurance Series 2020 Appendix F

### Technical Regulations for the 2020 Backdraft Roadster Championship.

#### 1.0 Engine:

- 1.1 All engines will be built at the TR-Tec facility at Prospecton Natal.
- 1.2 All engines are sealed and may not be opened.
- 1.3 The engine is controlled by a sealed Dicktator management system and not be opened or remapped.
- 1.4 Teams are responsible for the freight of replacement engines to and from TR-Tec.

#### 2.0 Gearbox:

- 2.1 The gearbox as fitted is a BMW 5 Speed diesel gearbox and no alternatives may be fitted.
- 2.2 All gearboxes are sealed and may not be opened.

2.3 All gearboxes will be built and or rebuilt by Tr-Tec

### 3.0 Differentials:

- 3.1 A limited slip type differential is fitted.
- 3.2 Differential ratios may not be changed.
- 3.3 All differentials are sealed and may not be opened.
- 3.4 All differentials will be built and or rebuilt by Tr-Tec.

### 4.0 Suspension:

- 4.1 All suspension components are supplied by Tr-Tec and may not be changed to any alternate component unless otherwise specified.
- 4.2 Camber, castor and toe settings may be adjusted within the components supplied and no mounting points may be changed.
- 4.3 Shockabsorbers must remain BDR Shockabsorbers as supplied by Tr-Tec.
- 4.4 Spring rates and dimensions are free subject to the spring fitting its original position.
- 4.5 Minimum ride height must remain within 25mm above or below the standard front ride height of 130mm as measured at front end of the lower chassis rail and 180mm as measured at the rear end of the lower chassis rail.
  - Minimum Front: 105mm
  - Maximum Front: 155mm
  - Minimum Rear: 155mm
  - Maximum Rear: 205mm

### 5.0 Electrical:

- 5.1 All lights as fitted and as supplied by Tr-Tec must be operational at all times.
- 5.2 Two additional front spot lamps may be fitted.

### 6.0 Wheels and Tyres:

- 6.1 Only tyres specified by Tr-Tec from time to time may be used.
- 6.2 There is no limited to the number of tyres used.
- 6.3 The wheel rims shall remain as supplied by Tr-Tec and may not be changed.
- 6.4 Only Centre Nut wheel nuts supplied by Tr-Tec may be used.

### 7.0 Brakes:

- 7.1 All brake components as supplied by TR-TEC may not be changed unless otherwise specified.
- 7.2 Brake Pad type and material is free as long as the replacement brake pads fit the TR TEC brake calipers supplied

### 8.0 Race Procedure:

7.1 Two compulsory self timed pit stops must be taken during a race. The first of these may not be within the first 30 minutes of the race and the second may not be taken within the last 30 minutes of the race. These compulsory pit stops may be taken under a yellow flag period and cars may be refuelled and drivers may be changed during the compulsory pit stops

### 9.0 General:

- 9.1 Tr-Tec will provide a Technical Officer who will operate under the auspices of the SAES technical personnel.