



2021

MSA National Standing Supplementary Regulations

Global Touring Car and SupaCup Championships



Version 3

19 May 2021

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## REVIEW AND AMENDMENTS

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

### AMENDMENT RECORD

<i>Modified SSR / ART</i>	<i>Date applicable</i>	<i>Date of Publication</i>	<i>Clarifications</i>
<b>ART 12.7</b>	<b>Immediate</b>	<b>19 May 2021</b>	<b>Deleted</b>
<b>ART 12.8</b>	<b>Immediate</b>	<b>19 May 2021</b>	<b>Deleted</b>
<b>ART 12.9</b>	<b>Immediate</b>	<b>19 May 2021</b>	<b>Deleted</b>
<b>ART 17.2.1</b>	<b>Immediate</b>	<b>19 May 2021</b>	<b>Item Deleted</b>
<b>ART 21.1.2</b>	<b>Immediate</b>	<b>19 May 2021</b>	<b>Regulation Added</b>
<b>ART 21.4</b>	<b>Immediate</b>	<b>19 May 2021</b>	<b>Regulation Added</b>
<b>ART 28.5</b>	<b>Immediate</b>	<b>10 March 2021</b>	<b>Amended GCR Reference</b>

## PART 1: SPORTING REGULATIONS

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## 1. GENERAL

- 1.1 All matters pertaining to the conduct of GTC and SupaCup Championship Meetings and the operation and recognition of GTC cars and SupaCup cars will be regulated by these Rules.
- 1.2 The Rules are subject to the general authority of MSA and, in a case where any such provision is in direct conflict with any rule of MSA, the GTC Championship SSRs shall prevail unless clearly stated to the contrary.
- 1.3 Unless expressly authorised by these Rules, no interpretation, modification or change to anything whatsoever at all, referred to in these Rules is permitted. Unless otherwise and implicitly stated, all rules that imply the nomenclature, GTC will also apply to SupaCup as they are envisaged as one series, albeit with different technical regulations.
- 1.4 **Ignorance of these Rules provides no excuse from the observance of these Rules. Notwithstanding GCR 176, if a competitor is found not to comply with any Rule, it shall be no defence to claim that no sporting or performance advantage was obtained.**

## 2. DEFINITIONS

- 2.1 Controllers – defined as the GTC Management Team.
- 2.2 Technical Controllers – the Technical Consultants (GCR167) appointed by GTC and SupaCup to monitor conformance to the regulations, hereinafter TC.  
For ease of communication the common meaning of Controller or Technical Controller shall be applied. Refer Part 1: Sporting Regulations art 23.  
Reserved
- 2.3 Starter: A starter is defined as outlined in GCR 230 and is the applicable definition to be used when reading this regulation.
- 2.4 A driver classified as a starter in terms of GCR 230 shall remain a starter for the duration of the race meeting concerned, regardless of attrition during the individual races.
- 2.5 A “competitor” in terms of GCR 230, for the purpose of the Global Touring Car Championship, is considered to be a car/driver combination, and in the case where two or more drivers are mandatory for any particular race, the car/drivers in combination will constitute only one competitor.
- 2.6 Deviations:  
Should a specific model of car not be able to comply with the regulations as published for a technical reason, the entrant may apply for a deviation to the rule, based on sound technical grounds. The application will be considered by the TC’s in consultation with the Controllers, and if approved will be published as a deviation for all cars of the make/model. The TC’s decision will be final.
- 2.7 Dispensations:  
Should a specific car not be able to comply with the regulations as published for a temporary technical reason, such as parts unavailability, temporary crash repairs, etc, the entrant may apply for a dispensation, based on sound technical grounds. The application, in writing, fully detailing the dispensation sought, will be considered by the Controllers, and if approved will be published as a dispensation for a specific car for one event only. The TC's decision will be final.

- 2.8 Technical Passport (TP)  
A document prepared for each car which contains all the technical details including deviations and upgrades for the specific car. The document is car specific and remains with the car for the life of the car.

### **3. AIM OF THE CHAMPIONSHIP**

- 3.1 To declare a Global Touring Car Driver Champion as well as a GTC SupaCup Champion and a SupaCup Masters Champion (which will not carry SA Championship status).
- 3.2 To declare a Global Touring Car Manufacturer Champion.
- 3.3 Masters entries will be accepted for drivers who are the age of 40 years or older, no separate points scoring will be for this class and their participants will accrue points as per the SupaCup system.
- 3.4 The classification of such competitors into classes shall be at the sole discretion of the controllers.
- 3.5 A separate podium event will be held for the Masters top 3 finishes.
- 3.6 Competitors in GTC shall score points as per these regulations for the Global Touring Car Driver and Manufacturer Championship, as well as the SupaCup Driver Championship.
- 3.7 Both Championships shall score points separately according to a scale of points determined by the controllers as per art 12.5

### **4. REGULATIONS**

- 4.1 All GTC races will be held under the General Competition Rules (GCR's) and Standing Supplementary Regulations (SSR's) of MSA, as well as the Supplementary Regulations (SR's) as issued by the promoters.

### **5. ELIGIBILITY OF DRIVERS AND CARS**

- 5.1 The GTC and SupaCup Championships will be open to cars complying with the Global Touring Car Championship Standing Supplementary Regulations (SSR's).
- 5.2 Organisers may not accept any car which does not comply with the Global Touring Car Championship SSR's, and which has not been accepted for Global Touring Car Racing by the controllers.
- 5.3 No Global Touring Car Championship event may be combined with other events unless specifically permitted by the controllers.
- 5.4 All other prospective new competitors in the series must obtain the prior written approval of the GTC and SupaCup controllers in order to be issued with the necessary competition licenses by MSA and this will be assessed on a case-by-case basis in consultation with MSA. Such approval shall not be unreasonably withheld.
- 5.5 The driver/car combination that qualifies must race as such, without any change to that combination.

- 5.6 Entrants must quote, on the entry form, the competition number of the car he/she will drive, when entering for a GTC National Championship race meeting.
- 5.7 It is forbidden for drivers/teams to make use of 'spare' cars during a championship event. The issued chassis/safety cage number allotted to each car will be used as a control measure. Category TCs will be responsible for affixing numbers to the roll cages in an area that they deem feasible.
- 5.8 A car driven in a championship race shall have only one nominated driver whose name shall appear on the entry form, unless the SR's of the event allows a change of driver or car, or requires two or more drivers for a specific race meeting. Refer GCR's 99 (vii), 152 (viii), 238.
- 5.9 Only the entered driver may drive the car in the official qualifying session/sessions and races.

## **6. COMPETITION NUMBERS**

- 6.1 Refer GCR 246, GCR 247(i) and 248. SSR 4.
- 6.2 All GTC cars entered for a national championship race meeting *must* be fitted with a competition number, which will be supplied by the GTC Management Team. All GTC and SupaCup numbers will be allocated by VW Motorsport, contact Desiree Jacoby – desiree.jacoby@vwsa.co.za.
- 6.3 Competition numbers must be displayed on each side of the vehicle:
  - 6.3.1 On the rear side windows, with the driver's name below the number.
  - 6.3.2 The colour of the number must be "Day-Glo Yellow" for GTC and "Day-Glo Orange" for SupaCup cars.
  - 6.3.3 The text height must be 200mm.
  - 6.3.4 Font must be Helvetica Bold Condensed.
- 6.4 Front Windscreen:
  - 6.4.1 The competition number must be displayed on the left top corner of the front windscreen
  - 6.4.2 The text height must be 150mm.
  - 6.4.3 Font must be Helvetica Bold Condensed.
- 6.5 Rear window:
  - 6.5.1 The competition number must be displayed on the upper area of the top right hand corner driver's side of the rear window.
  - 6.5.2 The text height must be 150mm.
  - 6.5.3 Font must be Helvetica Bold Condensed.
  - 6.5.4 On-board driver information, must be approved by GTC as per template to be supplied. No variation is permitted to their size, information or placement.

## **7. SPONSORSHIP REQUIREMENTS**

- 7.1 Series sponsorship and advertising material must be affixed in the specified positions as stipulated in these regulations or in an MSA Circular.

- 7.2 Competitors are reminded that, in terms of GCR 246, those who do not display the advertising material and numbers as required will not be allowed to compete, unless they get written approval from the Controllers.
- 7.3 All Advertising material and decals may not be defaced, modified or cut in anyway.
- 7.4 All competitors entered in the GTC or SupaCup Championship have to display all advertising of all series sponsors in the allocated areas for the full duration of the Championship, only on the written approval of the Controllers will a competitor be waived of this ruling.
- 7.5 The following areas of the race cars remain for the sole use of the Controllers:
  - 7.5.1 Front and rear windscreens (top).
  - 7.5.2 Front and rear number plates.
  - 7.5.3 Left and right-side sill panel in its entirety.

## **8. NAMING RIGHTS SPONSORSHIP**

- 8.1 Unless a competitor has written approval obtained from the Controllers which allows the competitor to replace the Naming Rights Sponsorship requirements, the Competitor must:
  - 8.1.1 Display the branding on the front and rear top windscreen positions.
  - 8.1.2 Use the supplied cloth badge to be affixed on their race overalls on the right breast pocket 100mm x 40mm area.
  - 8.1.3 The official series sponsor cap must be worn during interviews and Podium ceremonies.

## **9. SERIES FUEL SPONSORSHIP**

GTC reserves the right to appoint a fuel supplier, currently the supplier is AMTECH 110 octane fuel. SupaCup cars are mandated to use pump fuel as specified in the event SRs and will be determined by coastal or highveld circuits – refer to the 2021 SupaCup Recognition Form, Article 18.3

## **10. TYRE SPONSORSHIP**

The competitor must:

- 10.1 Use the specified Dunlop race tyres sourced from Automotive Technology Specialists (Pty) Ltd only.
- 10.2 Display the supplied Dunlop branding as determined before race 1 of the series.
- 10.3 Use the supplied Dunlop badge to be affixed on their race overalls on the left sleeve.

## **11. DRIVERS NAME**

- 11.1 Every competitor is to display the surname of the driver on both rear side windows.
- 11.2 A minimum font height of 100mm high is to be used and printed in Helvetica Boldtext.
- 11.3 The lettering is to be white only.
- 11.4 The driver's name is to be placed on the bottom of each rear side window.

## 12. CHAMPIONSHIP DETAILS

- 12.1 The GTC Driver's Championship shall be open to drivers participating in the GTC Championship and there will be only one GTC Champion and SupaCup Champion for the season.
- 12.2 The respective Championship winners shall be the drivers accumulating the greatest number of points during the season in the respective Championships.
- 12.3 The Championship dates and venues are as per the MSA Motorsport Calendar or as stipulated in a MSA Circular.
- 12.4 All races will be taken into account in determining the championship.
- 12.5 Points will be scored in the individual races (not race meetings) on the following basis:
- |                  |   |           |
|------------------|---|-----------|
| 1 <sup>st</sup>  | - | 20 points |
| 2 <sup>nd</sup>  | - | 17 points |
| 3 <sup>rd</sup>  | - | 14 points |
| 4 <sup>th</sup>  | - | 12 points |
| 5 <sup>th</sup>  | - | 10 points |
| 6 <sup>th</sup>  | - | 8 points  |
| 7 <sup>th</sup>  | - | 6 points  |
| 8 <sup>th</sup>  | - | 4 points  |
| 9 <sup>th</sup>  | - | 2 points  |
| 10 <sup>th</sup> | - | 1 point   |
- 12.6 A point will be awarded for pole position of race 1 as well as fastest lap in both heats.
- ~~12.7 In a long distance race, points for fastest lap will be doubled~~
- ~~12.8 Where applicable, longer races will be either 30 minutes or 40 minutes plus 1 lap and communicated to competitors in the event regulations (SR's).~~
- ~~12.9 The controllers reserve the right to allow a 3<sup>rd</sup> race at a date and venue to be approved, for the SupaCup entries to race for double points in a long distance race without the GTC cars present.~~
- ~~NOTE: In line with the change above, there will be no double points awarded for longer races. This also applies to fastest lap. Points will therefore be scored the same in longer races as they are in sprint races.~~
- 12.10 The controllers (GTC) reserve the right to award a cash prize to the winner of the GTC Drivers Championship. In the event that such prize is to be awarded the value thereof will be announced and communicated to competitors by the end of September each year by means of an MSA Circular.

## 13. MANUFACTURERS CHAMPIONSHIP

- 13.1 Points towards this championship will be scored in the GTC Championship only.
- 13.2 Only the first two (2) cars of any marque will score points in a class.
- 13.3 Points will be scored according to actual finishing position only, i.e. if one marque fills the first six places in a race no points will be allocated for 3rd, 4th, 5th and 6th places with the next placed manufacturer scoring 7th place points.

Points will be scored, for the GTC class (not race meetings) on the following basis:

1 <sup>st</sup>	-	20 points
2 <sup>nd</sup>	-	17 points
3 <sup>rd</sup>	-	14 points
4 <sup>th</sup>	-	12 points
5 <sup>th</sup>	-	10 points
6 <sup>th</sup>	-	8 points
7 <sup>th</sup>	-	6 points
8 <sup>th</sup>	-	4 points
9 <sup>th</sup>	-	2 points
10 <sup>th</sup>	-	1 point

13.4 Should at least 2 other brands join SupaCup, the Manufacturer's Championship will begin to be scored as above.

#### **14. SEPARATION OF TIES**

14.1 The competitor with the greater number of first places in all championship races (not race meetings) will be declared the champion.

14.2 If this does not resolve the tie then the greater number of second positions, then third positions and so on will be used to resolve the tie.

14.3 If a tie still remains, MSA (in consultation with the Controllers) will declare a winner on such basis as it deems fit.

#### **15. TIMING TRANSPONDER**

The timing transponder as supplied by the Organisers (Refer GCR 71 & 72) must be used, and fitted in the specified place. All timing transponders to be fitted on the left-hand side of the car to the upright portion of the main roll bar. It must be visible from outside and height to be in the centre of the side windows. Note: no drilling into or welding onto the main rollbar. Use clamps.

#### **16. SAFETY APPAREL AND EQUIPMENT**

16.1 Refer to GTC SSR's Part 2 art 10.

#### **17. QUALIFYING AND RACES**

17.1 There may be a one, two or 3 race format races at each race meeting, except where force majeure dictates otherwise.

17.2 Races (not events)

17.2.1 in general, race 1 shall not be less than 12 laps or 40 kilometres in length, whichever is the lesser; Race 2 will adopt longer races (refer to 12.9) as determined by the controllers.

17.2.2 will be a rolling start with the exception of the single long-distance race for SupaCup cars, which will be a standing start.

- 17.2.3 however, when, the Controllers and / or TC's, due to tyre degradation and safety concerns deem it fit (in consultation with the CoC) to reduce the length of the individual session or race, they may do so.
  - 17.2.4 A Competitor is required to maintain his grid position until such time as the lights have been extinguished failing which, he will be deemed to have jumped the start and shall have a 30 second penalty added to his race time. Should any car not be within 1 car length of the car in front, he will be deemed to be either baulking or have a technical problem and may be passed.
  - 17.2.5 SupaCup front row competitors will keep a reasonable distance behind the GTC field, so that the starting lights may be reset and extinguished to start their race.
- 17.3 The controllers reserve the right to have one long distance race instead of 2 shorter heats. Where one sprint race and 1 long distance race are scheduled, points will remain as per 12.5.
  - 17.4 The Organisers must allocate at least one hour of practice sessions prior to the commencement of official qualifying.
  - 17.5 Any vehicle not displaying the specified decals in the correct positions may be precluded from participation or excluded by the Clerk of the Course, acting on the recommendation of the controllers.
  - 17.6 The addition of liquid (be it fuel, water or any such liquid) or mass to a car during qualifying is expressly forbidden and contravention of this regulation will result in the offending competitor's recorded times being disallowed.
  - 17.7 All cars must report for weighing before entering the pits during or after qualifying and all races. Failure to weigh on the official weigh bridge shall result in the offending competitor's recorded times being disallowed. Refer art 21.2.
  - 17.8 Competitors found to be under the weight limit will be allowed one 'Joker' per year on condition that the weight was less than 2kgs below the minimum. For a second offence a 5 place penalty will be applied and thereafter exclusion.
  - 17.9 Global Touring Car Championship grids will be formulated as follows:
    - 17.9.1 The fastest car in qualifying shall start from pole position in race 1 for each of their respective classes.
    - 17.9.2 Second fastest will start from second position and so forth down to the last car of each class.
    - 17.9.3 Each class shall have its own grid positions and other classes will not be in between.
    - 17.9.4 Race 1 grid will be formed up according to the times established in official qualifying including penalties, and cars shall be grouped according to Class.
    - 17.9.5 If a GTC car fails to establish a qualifying time or establishes a time which will put him in the middle of the SupaCup class he shall be allocated a slot at the rear of his class. The race 2 grid will be determined by reversing 60% (rounded down) of the finishing order of race 1, excluding penalties. Competitors who did not finish race 1 or did not start race 1 will start behind the reversed grid in race 2. This rule will apply to GTC and SupaCup in their respective classes. In the event of a longer race being scheduled for race 2, the entire grid will be reversed.

17.10 RESERVED

17.11 GTC will qualify in a separate session from SupaCup.

**18. SAFETY CAR**

In addition to MSA Circuit Racing SSR 45, the CoC has the right to order the intervention of the Safety Car at any time. Should this occur, cars will follow the Safety Car in single file, maintaining their positions until the Safety Car is withdrawn and the lead car has passed the start/finish line.

**19. RESERVED**

**20. PRACTICE/TESTING**

20.1 No circuit may be used or hired for practice/testing in the week prior to the scheduled championship race meeting at the particular circuit, until the start of official practice as detailed in the SR's for the event in question. In clarification, if official practice commences on a Friday morning, the circuit is not available for practice or testing for all GTC and SupaCup teams from midnight on the previous Thursday, a clear seven days beforehand.

The penalty of exclusion will be automatically applied for any breach of this rule, unless express permission has been granted by the controllers who will notify all competitors of this permission and the reasons thereof.

20.2 The Controllers may permit alternative practice arrangements ON WRITTEN APPLICATION.

**21. BALANCE OF PERFORMANCE**

**21.1 BOOST CONTROL**

The TC's reserve the right to monitor and control the maximum boost pressure on all forced induction engines, regardless of the maximum boost pressure specified for the make or model in the relevant homologation documentation. Each team is responsible for controlling the boost pressure its competing car produces, which must be below that specified by the TC's for the car in question. Note that SupaCup cars use ECUs which are locked and controlled by VW Motorsport.

**21.1.1 GTC BOOST MONITOR METHOD**

The data logging system supplied by GTC in the Life system, or any other system specified by GTC, will be the sole measure of boost considered for technical compliance for the particular vehicle it is fitted to at the time. The boost pressures as recorded are the only pressures that will be considered when checking boost pressure conformity. Boost pressure must be within the specified limits at all times from pit lane exit to pit lane entry during qualifying and racing.

- i. Boost pressure will be determined as follows:
  - a) A 3-second rolling average logged at 50 Hz will be calculated to measure maximum absolute manifold pressure compliance.
  - b) Additional external boost monitors may be fitted if the TC's require such.
  - c) The TC's may calibrate boost pressure sensors fitted on the cars if required.
- ii. The maximum absolute manifold boost pressure may be changed in a bulletin issued not later than seven days prior to the race meeting, should conditions require such.
- iii. TC decision will be final.

### 21.1.2 BOOST LIMITS

#### i. GTC

The maximum absolute manifold pressure as measured on the Life Data logging system, or any other data logging system as specified by GTC, shall not exceed the following:

All GTC cars: 2100 mBar in qualifying and race mode **except for Round 3 of the 2021 MSA National GTC Championship (28-29 May 2021 - Extreme Festival Event) where the boost limit will be 2150 mBar in qualifying and race mode.**

### 21.1.3 PENALTIES

The penalty for exceeding the manifold boost pressure limit, or for no data recorded is:

- i. In qualifying: drop 5 grid places for race 1 start.
- ii. In a race: 20 seconds added to race time.
- iii. A Joker system will be applied in the GTC class. Each entry gets three Jokers for the year. A Joker allows an over-boost of 30 mBar in a race or qualifying, as measured on the Life Data Logging system, or any other boost logger system specified by GTC. The TC will record Jokers used.
- v. TC decisions will be final.

## 21.2 **WEIGHT CONTROL**

The TC's will use the allocation of appropriate base mass to each make and model of vehicle accepted for the series to control the race performance of that model. The TC's reserve the right to vary base mass at reasonable intervals to ensure all competitors have the opportunity to be competitive. MSA will publish the initial information in this regard before the start of each season and publish variations seven (7) days before each race meeting, as it considers necessary.

The weight of the car as raced must be not less than that stipulated below. Should a change be envisaged it will be published by MSA Circular.

The specified minimum weight includes the driver and all safety equipment, fuel, lubricants and coolant. At any time during a race meeting (except practice) a car may be weighed and, if found to be below the required minimum weight, all qualifying lap times recorded prior to, or following, weighing will be cancelled. Any car found to be underweight, following a race shall be excluded from the results of that race.

The official scale used at each circuit will be the sole weight measurement for the event. Minimum weight must be no less than that specified for the vehicle.

Ballast: It is permitted to complete the weight of the car by the addition of one or several units of ballast, provided that they are strong unitary blocks, fixed by means of tools, and must be able to take dia. 2mm seal cables, and are placed on the floor of the cockpit or the luggage compartment. The ballast must be attached to the shell/chassis with M8 grade 8.8 bolts, and counter plates. The minimum area of contact between shell/chassis and counter plate is 40cm<sup>2</sup> for each fixing point.

Ballast may only be fitted in the space allocated behind the driver's seat in SupaCup.

Minimum weights are as follows:

**GTC** - **1370 kg**  
**SUPACUP** - **1230kg**

### 21.3 ECU CONTROLS

#### 21.3.1 Ignition Timing

**GTC:**

The maximum ignition angle, **ignFinalPri1** (LifeView), shall apply as follows:

VW/Audi: ignFinalPri1 = 16 degrees

BMW: ignFinalPri1 = 14 degrees

**SupaCup:** as per map locked in ECU

#### 21.3.2 Ignition Offset:

**GTC:**

The following **Crank Reference Tooth Angle (ATDC)** (LifeCal) will apply:

VW/Audi: Crank Reference Tooth Angle = 291.50 degrees

BMW: Crank Reference Tooth Angle = 258.00 degrees

#### 21.3.3 Engine rpm limit:

**GTC:**

The engine rpm limit will be **7200** rpm maximum, as set and recorded on the Life ECU and data logger system. This is the "hard" limiter called Limiters - Rev Cut in Lifecal.

The following parameters apply:

Limiters - Rev Cut - Engine Speed Measure = AVERAGED

Limiters - Rev Cut - Engine Speed = 7200rpm

Limiters - Rev Cut - Engine Speed Hysteresis = 0

Limiters - Rev Cut - Instant Fuel Cut = YES

Limiters - Rev Cut - Instant Ignition Cut = YES

Limiters - Rev Cut - Omit Ignition Cut = NO

#### 21.3.4 Anti-lag control:

**GTC:**

The following ECU anti-lag parameters are mandatory for GTC cars:

Calibration Switches - Anti Lag Calibration Select - "OFF" (all cells to be set to "OFF")

Calibration Switches - ALS Enable Switch - "OFF" (all cells to be set to "OFF")

Anti-lag System - overall enable - "DISABLED"

#### 21.3.5 Traction Control:

**GTC:**

Traction control is not allowed. Only the following Life Racing ECU options may be activated:

K - knock control

G - gearbox control

I - direct injection

E - drive by wire

All wheel speed sensors shall be disconnected and non-functional during qualifying and races.

#### 21.3.6 Boost Map Calibration: GTC:

**LifeCal -> IO Configuration -> Pin Assignments**

Inputs: Manifold Absolute Pressure 1A - AN #08 (GEN)

Inputs: Manifold Absolute Pressure 1B – Not Connected

Inputs: Manifold Absolute Pressure 2A - Not Connected

Inputs: Manifold Absolute Pressure 2B – Not Connected

**LifeCal -> Sensors -> Defined Sensors and Trip Setups -> Barometric absolute pressure**

**i) Barometric Pressure Sensor**

Default sensor reading: 2000 mBar

**ii) Key-on**

Enable: ENABLED

Source: MAP 1A

Delay: 2000 ms

Minimum reading: 770 mBar

Maximum reading: 1100 mBar

Stability: 30 mBar

- Barometer Absolute Pressure (BAP) settings for the **2020 2021** season will be as follows:
  - 980 mBar – Killarney, Aldo Scribante, Dezzi Raceway, East London
  - 830 mBar – Zwartkops Raceway, Kyalami, Red Star Raceway, Phakisa
- The Barometer Absolute Pressure (BAP) reading will be set by adjusting the linearisation graph of the Manifold Absolute Pressure Sensor 1A on all GTC cars at a specified time each day of an event.
- Each team will nominate a representative who will carry out this function together with the TC.
- Once the Barometric Absolute Pressure (BAP) reading is set, the calibration of the Manifold Absolute Pressure Sensor 1A may not be changed in any way unless instructed to do so by the TC, whose decision is final.
- **The settings may be checked for drift and reset by the TC's through the day.**

**LifeCal -> Sensors -> Defined Sensors and Trip Setups -> Manifold Absolute Pressure:**

**i) Manifold Absolute Pressure Sensor 1A**

Input Configuration: 5V

Default Voltage High: 4.90V

Default Voltage Low: 0.10V

Filter Constant: 95.00%

Failure Rate: 100.00%/s

Recovery Rate: 20.00%/s

Linearisation:

- the Manifold Absolute Pressure Sensor 1A linearisation graph must be linear with a slope of 1000mBar/Volt and the graph must pass through the Barometer Absolute Pressure (BAP) value as detailed above for the relevant circuit being used.
- The **MAP** values may be calibrated by a GTC pressure calibration jig. All GTC Life Data Logging systems must read the same pressure values as the GTC pressure calibration jig readout.

**ii) Manifold Absolute Pressure Sensor 1B**

Linearisation - All values set to Zero

**iii) Manifold Absolute Pressure Sensor 2A**

Linearisation - All values set to Zero

**iv) Manifold Absolute Pressure Sensor 2B**

Linearisation - All values set to Zero

### 21.3.7 Push to Pass:

For SupaCup Only: The Push to Pass strategy may be altered by the Technical Working Group and will be published as a Bulletin on the official Notice Board on the Friday of each event.

Push to Pass MAY NOT be used on the first lap of any races, including restarts where the original grid is used.

Push to Pass may also not be used in Practice sessions 1, 3 and Qualifying.

### 21.3.8 Penalties for all ECU control transgressions:

The penalty for exceeding the specified limits are:

- i) In qualifying: drop 5 grid places for race 1 start.
- ii) In a race: 20 seconds added to race time.

### 21.4 Car 37, BMW, Lee Thompson will have the following additional Balance of Performance parameters for the rest of the 2021 racing season:

- IgnFinalPri1 = 16° in 5th and 6th gears only.

All other parameters to remain as they are in art 21. Balance of Performance parameters may be changed should circumstances require.

Refer to art 21.1.3 iii.

- two Jokers used at Zwartkops will be cancelled as a result of the BoP.

## 22. DATA LOGGING AND DATA SHARING POLICY

### 22.1 Data Logging

#### 22.1.1 GTC:

All GTC competitors are required to use the Life data logger as part of the Life ECU system or any other system specified by GTC to record the required data during qualifying and the races. The required data is GPS car speed, engine rpm, throttle position, absolute inlet manifold boost pressure and ignition timing to equalise performance. More channels may be recorded for the competitor's own use. Additional data may be requested by the TC's.

#### 22.1.1 Reserved

22.1.2 The onus is on competitors to ensure that credible, unmanipulated data is available to the TC's. Competitors not ensuring data availability and not complying with the necessary requirements for fitting data loggers as instructed, and ensuring that boost sensor tubes are not in any way blocked, leaking or kinked and that power supply is sufficient and download cables for computer data systems are available, will be considered not to be in compliance with the series technical regulations, such competitors will be penalised accordingly. For not being able to supply complete and correct data when required to do so – 20 seconds will be added to the competitor's race time for the first offence. Additional penalties may be applied, BASED ON THE TCs RECOMMENDATION to the CoC.

22.1.3 Competitors may not remove their race vehicles from parc fermé after the last race of the day until they have completed all checks, including data downloading, and have been cleared by the TC's. Failure to comply with any of the above conditions will result in a penalty as per GCR 177.

### 22.2 Data Sharing

22.2.1 All data from practice 1 to the final heat, collected by or on behalf of GTC including without limitation all data from in-car cameras shall be made available to GTC.

22.2.2 The TC's may disclose the data to third parties for any reasonable purpose.

22.2.3 All data collected excluding in-car camera footage, is available to all competitors with the permission of the TC's. Data will be made available after the last practice session

on Friday or before qualifying if also held on the Friday and at the end of race day. Each competitor will upload logged car data by wi-fi or memory stick to the allocated electronic data sharing system (eg: Dropbox), where other competitors can download. Uploading must be done directly after the final session (practice or qualifying) on Friday, and directly after the last race. Uploading includes competitors who did not finish. Competitors who fail to upload data timeously may be penalised by the CoC at the next event if needs be.

- 22.2.4 For SupaCup Only: Competitors will be allowed access to the data of the fastest lap set in each practice and qualifying session. Race Data will not be shared. The competitor whose data is shared with fellow competitors may choose the fastest lap data from anybody he or she chooses in that particular session. It is the responsibility of that competitor (Fastest in that session) to come and inform the Data Technician of who's data they request. This must be requested from the Data Technician within 30 minutes after that session. Where competitors are part of a larger team, the data will be supplied on a memory stick once only. This data will only be available at the end of Day 1 and where Qualifying is on Day 2, the data will be available after Qualifying before the start of Race 1.

## **23. TECHNICAL CONTROLLER (TC)**

- 23.1 Technical Consultant/s (TC's) nominated by GTC will attend Global Touring Car Championship races to ensure compliance of all technical aspects. SupaCup TCs will be provided by Volkswagen Motorsport. These names will be supplied on an MSA Circular.
- 23.2 For the Technical Consultant's duties and powers see GCR 167.
- 23.3 The TC's will do pre-race scrutineering via a walk around and will document all findings.
- 23.4 There will be no requirement for the Global Touring Car Championship competitors to have cars scrutineered by the scrutineer of the day as per the SR's.
- 23.5 The TC's and not the Clerk of Course, other than through a protest where the CoC has the right, will check what he/she feels is needed during race meetings.
- 23.6 The TC's will manage all the technical aspects.
- 23.7 The TC will be responsible for scrutineering and will have full authority over the Chief Scrutineer, and is declared to have non-protestable powers to determine any safety related matter concerning the cars and associated equipment, including but not limited to driver's apparel.

## **24. DRIVER CONDUCT OFFICIAL**

- 24.1 A Driver Conduct Official shall be appointed by the Controllers and confirmed by MSA circular.
- 24.2 All hearings emanating from reports received, either from competitors or officials, shall be heard by the DCO on the day of the race, unless a lack of credible video footage or time constraints make it not viable. Should this be the case, it must be heard in the week following the race meeting on a day and time to be advised.
- 24.3 The DCO, following the hearing, will make the final decision and can issue any penalty against a competitor who breaches the driver conduct standards, rules and regulations.
- 24.4 Only drivers involved in the incident may be present, although witnesses may be introduced if they actually witnessed the event. Testimony and advice from team managers, parents, entrants

etc. will not be entertained and they will be excluded from the hearings. Ideally, evidence from the drivers directly involved in the incident, together with the video footage will be the only evidence considered.

## **25. DRIVING STANDARDS / DRIVER CONDUCT DRIVER CONDUCT GUIDELINES**

The clear objective is that all racing will take place on the paved circuit. Contact of any nature, including so called rubbing, is highly undesirable during racing in the series. From race meeting to race meeting, any race damage must be repaired to a good standard and the controllers reserve the right to refuse to allow poorly presented cars to compete. The controllers reserve the right to carry out vehicle inspections both pre and post race and are at liberty to request explanations as to the origin of any apparent damage. The aim is to ensure fast, competitive motorsport, where drivers use their skills to win races and championships on the track. The situations dealt with herein, relate to the behaviour of drivers in very competitive situations. The document is aimed at influencing drivers to race competitively but without destroying their own and/or other competitors' vehicles.

**This document is not applicable to dealing with issues such as:**

- 25.1 the ignoring of flag signals, or
- 25.2 the cutting of corners, or other similar contraventions of regulations cited in the MSA Handbook, for which there are clear remedies that will be dealt with by the CoC. Driving behaviour will be strictly monitored by the Driver Conduct Official (the DCO), both at the circuit and through the medium of film footage following the race meeting.

### **ENTERING THE CORNER (PHASE 1)**

Two or more cars entering the zone of a corner together it will be expected that each driver will exit the corner without contact. Neither overly aggressive overtaking nor excessively defensive driving will be tolerated.

The lead car may enter the braking area in whichever way he or she wishes (inside, middle or outside) provided he or she does not have a vehicle close behind to the rear, to the left or right, i.e. a vehicle in **"close proximity"**.

**"Close proximity" - It is normal for a challenging car to be in close proximity, by being at least one car length behind to the inside or outside of the lead car i.e. front bumper behind centre/B pillar of the lead car, to the left or right or being directly behind. The lead car may choose either left or right of the centre line of the circuit, before entering the braking area when he has a car in close proximity.**

The lead car may not change direction to block the challenger while the front bumper of the challenger is ahead of the rear bumper of the lead car in a straight line, particularly before the start of the braking area. The changing of direction by the lead car in the braking area is prohibited as this would lead to "baulking" of the challenger, and any resultant contact between the two vehicles would be deemed the fault of the lead car. If by the end of the braking area at the turning point in a straight line the challenging car is alongside the lead car ('alongside' being nose of challenger next to front door of leader inside or outside) it becomes the duty of both drivers to prevent crowding of each other to the inside or outside of the track throughout the entire corner.

### **MIDDLE OF CORNER (PHASE 2)**

If the challenger is on the inside line in the braking area at the turning point and his front bumper is behind the centre of the leader (B pillar) he will withdraw and forfeit the corner to the lead driver to take his normal line.

It must be remembered that the lead car has to and will, turn with the aim of apexing unless the challenger is alongside in the braking area or at the turning point.

If, from the turning point, the lead car stretches the lead to the apex and the challenger's front bumper is behind the centre (B pillar) of the lead car, the challenger will withdraw and allow the lead car a normal racing line, any contact made by the challenger on the lead car behind the B pillar will be deemed to be the challenger's fault.

Any bumping of the lead car from the back on the rear bumper is the fault of the challenger; furthermore the bumping of the lead car behind the B pillar by the challenger is also the fault of the challenger, if the lead car was abiding by the above rules.

The 'Y' or 'T' bone by a challenger on the lead car would be a clear indication of the challenger coming in too fast and stopping against the leader whilst he is turning into a corner. This indicates a clear intention of driving the lead car off the circuit or a seriously over-aggressive move, and will be deemed the fault of the challenger provided the lead car abided by the rules above.

The onus for a clean and clear overtaking manoeuvre lies with the challenger as he/she has a clear view of what is in front and the knowledge of the anticipated line that the lead car should or would take through the corner unless the lead car makes a premature or sudden direction change in the braking area, which would then be the fault of the lead car.

### **EXITING THE CORNER (PHASE 3)**

From the "apex" out, the inner car will take extra care not to drift wide under power forcing the outer car wide and ultimately off the circuit at the exit. This is exaggerated in front wheel drive cars and those drivers should exercise extra caution.

The challenger should exercise extra caution to avoid contact, by applying brakes or taking extreme evasive action. If there is no evidence of evasive action this will certainly count against the challenger.

### **THE PROCESS OF REVIEWING INCIDENTS AND APPLYING PENALTIES**

Incident reports must be in the hands of the DCO within 30 minutes of the finish of the race concerned. However, the DCO after consultation with race officials may request further incident reports outside of this time limit.

Driving incidents will only be dealt with in terms of this document if they are the subject of:

- an incident report from one or more competing driver/s; or
- an incident report from an official on the day or appointed observers.

Reports from other sources may be reviewed, but the DCO shall not be obliged to consider and treat the subject as an incident in terms of this document.

It is mandatory for all cars (both GTC and SupaCup) to have front and rear facing cameras, safely mounted in their cars. The front facing camera must have at least 1/3<sup>rd</sup> of the screen showing the position of the steering wheel and thereby, the drivers left hand position. Once the steering wheel has been centered, coloured tape is to be placed on the top (12 o'clock position) on order for the DCO to observe steering wheel positions and changes. The onus is on each driver/team to ensure that the cameras are working and switched on before each race.

A suitable viewing system must be supplied by drivers who will present their evidence on a laptop at least, no evidence from the camera viewfinder will be considered. If the incident cannot be resolved on the day, a copy of the footage must be supplied to the DCO, on a memory stick in order for it to be recorded for later viewing. A lack of video evidence will not substantiate any evidence being led.

The DCO has the power to act on incidents and apply penalties through the Clerk of the Course during race meetings, between races and at any time following a race meeting commensurate with evidence becoming available. All penalties will be applied through the appointed clerk of the course and shall be confirmed in writing.

Prior to the application of penalties, drivers will be given the opportunity to attend a hearing. This hearing will be held in terms of GCR 176, negating the presence of the CoC. Drivers will make themselves available for the hearing at a time and place nominated by the DCO. A hearing will be considered to have properly taken place, and penalties may be imposed, even if the driver/drivers concerned fail to appear, provided that the DCO is satisfied that the driver/s were properly notified. The DCO will, at his sole discretion, allow some flexibility in the timing of hearings. Findings, and any resultant penalties, will be advised to the competitor/s verbally and will be confirmed in writing by the clerk of the course.

Competitors involved in incidents are required to remain at the circuit until the incident under review has been dealt with and finalised

- 25.3 The following driving standards and conduct will apply:
- 25.3.1 Any competitor found guilty of a first offence will be given at least a three (3) place penalty.
  - 25.3.2 A second offense will carry a penalty of 5 places. Multiple offenses (three (3) or more) will receive a penalty of exclusion.
  - 25.3.3 Further breaches may receive a ban for multiple races. This will be at the discretion of the DCO.
  - 25.3.4 Blocking and Weaving: any competitor found to have deliberately blocked another competitor shall be subject to the same penalties as prescribed in articles 25.7.1, 25.7.2 or 25.7.3
  - 25.3.5 The lead driver may make one direction change leading to a corner, if he has another car in close proximity. Any further direction changes will be considered weaving or baulking.

## **26. GENERAL COMPLIANCE**

All competing vehicles must comply with all the Global Touring Car Championship Supplementary Regulations (as published and, where applicable, amended by official MSA Circulars) at all times during official practice, official qualifying sessions and all races for a National Championship race meeting, from the time they leave their pit garages, until the time they stop and turn off their engines in parc fermé.

## **27. PENALTIES FOR TECHNICAL INFRINGEMENTS (NON-CONFORMANCE)**

Where any car, or the data recorded by that car, is found not to comply with the applicable Specifications and/or Regulations, the following penalties will apply: The driver concerned shall be penalised as per GCR 177 (qualifying, or race). If there is concern that the contravention existed for more than one session, or the entire race meeting, details of such a penalty must be stipulated by the Technical Consultant to the Clerk of the Course. Refer GCR 176.

**28. AMENDMENTS AND ALTERATIONS TO THESE REGULATIONS**

- 28.1 MSA, in consultation with the Controllers, reserves the right to amend, alter or introduce additional regulations and/or specifications if deemed necessary.
- 28.2 Such amendment, alteration or additional regulations and/or specifications shall only be in force following publication in an official MSA circular or bulletin.
- 28.3 All technical regulations shall remain the same for a duration of five (5) years unless the changes are for Safety, Reliability, Lowering of Costs and or all stakeholders agree to the technical changes to these Regulations.
- 28.4 The Controllers or the TC's may undertake balance of performance reviews from time to time and should a perceived imbalance arise then such imbalance may be referred to the Technical Working Group for review and any subsequent recommendation. This balance of performance review will only use data collected during race weekends from onboard car data loggers (which is available to all competitors).
- 28.5 The controllers have the right to appoint a RACE DIRECTOR, who will be used to investigate matters requiring hearings as envisaged by GCR 175, his written submission will be made official by the CoC.

**29. OFFICIAL NOTICE BOARD**

All official notices shall be placed on the official notice board as per the GCR's and SSR's. Notices issued on the GTC official WhatsApp group, will be accepted as having been placed on an official notice board.