

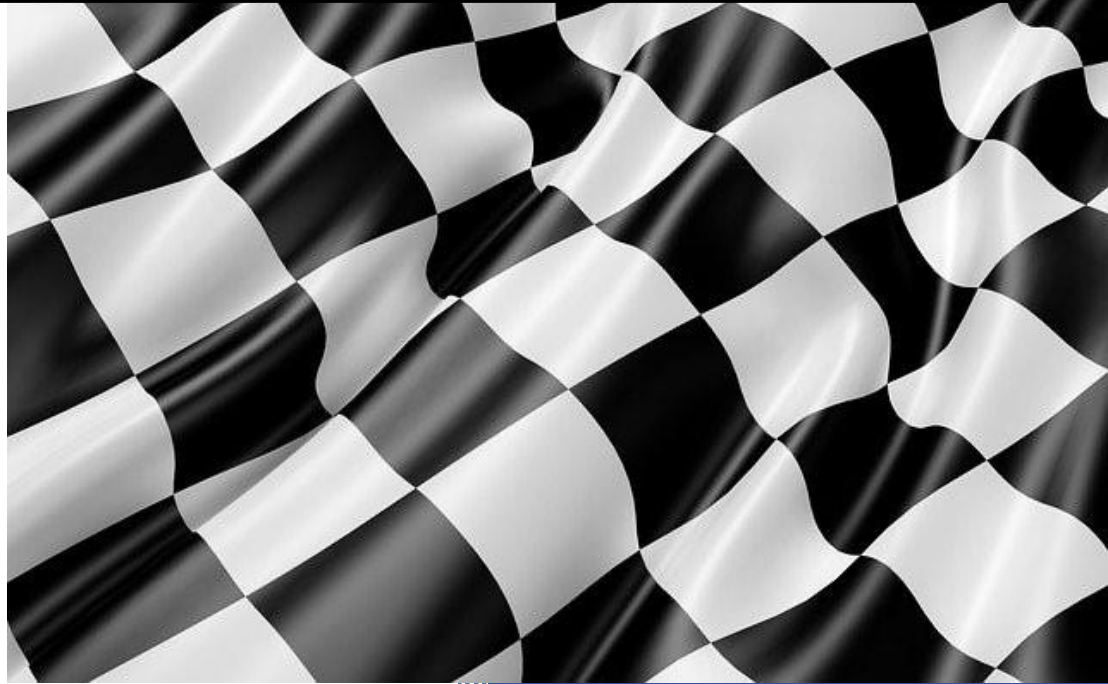


***Formula* SUPERCARS**

2021

Club Standing Supplementary Regulations

WPMC Supercar Championship



Version 1

1 January 2021

Ref: 162377/144

REVIEW AND AMENDMENTS

ANY proposed / desired changes to these Championship Regulations must be submitted to the Controllers for approval. The Controllers reserve the right to introduce new Regulations and / or amend existing Regulations with the approval of Motorsport South Africa (MSA).

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. The new version of the rules will be published by MSA at least seven (7) days prior to the next event being held unless a shorter notice period is approved by MSA.

AMENDMENT RECORD

<i>Modified Rule Number</i>	<i>Date Applicable</i>	<i>Date of Publication</i>	<i>Clarifications</i>

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FORMULA SUPERCAR MISSION STATEMENT

TO PROMOTE EQUAL, AFFORDABLE, FUN RACING

TO ACHIEVE THIS WE WILL:

- * Ensure equal continuity of cars-first same as last
- * Ensure that money doesn't influence results
- * Ensure that changes to specifications will only be for safety and financial control reasons
- * Ensure continuity of ideas, it may be necessary to limit the number of changes to the committee.

All race meetings shall be held under the 2021 Motorsport South Africa (MSA) General Competition Rules (GCR's), Standing Supplementary Regulations (SSR's), these Club Regulations, the event Supplementary Regulations (SR's) issued by the promoters / organisers and any APPLICABLE Circulars of MSA.

Anything not specifically permitted is disallowed, and is to be regarded as illegal. Transgressions could therefore result in exclusion from the results as provided for in the MSA 2021 handbook regardless of whether any advantage is gained or not.

1. AIM OF THE CHAMPIONSHIP

- 1.1 This is a Club status championship.
- 1.2 The aim of the championship will be to declare a Western Province Motor Club Formula Supercars Overall Champion for 2021 and class champions as applicable.
- 1.3 The Western Province Motor Club Sporting Committee, in its sole discretion, is responsible for declaring the winner of each championship or to withhold such declaration.

2. CONTROLLERS

The Controllers of the Championship will be the Sporting Committee of the Western Province Motor Club (herein referred to as Sportcom), who have delegated the management, control and day to day running to the Formula Supercar Committee.

3. REGULATIONS

- 3.1 All qualifying races will be held under these rules, the General Competition Rules (GCR's) and Standing Supplementary Regulations (SSR's) of Motorsport South Africa (MSA) and all of the Standing Regulations and the Supplementary Regulations issued by the WPMC.
- 3.2 No rule is intended to exist in a vacuum; each rule should be read in the context of all rules. If there are two possible interpretations to a rule, and one interpretation conflicts with another rule, or makes another rule meaningless, that interpretation will be rejected in favour of an interpretation that is not in conflict with any other rule or makes another rule meaningless.
- 3.3 If a specific rule or latitude is not found in these regulations, whether stated it is or is not allowed, that will mean it is not allowed. The MSA GCR's or SSR's, as applicable, will then apply.
- 3.4 The Controllers reserve the right to amend these rules at their discretion. Any recommendations to amend the rules by the sub section committee will only become effective when approved by the WPMC Sportcom.
- 3.5 All and any notice or circulars in respect of this championship will be notified to all competitors in an electronic format (email or similar). Any notice or circular will be notified no less than 7 (seven) days prior to any race meeting. The onus is on the Competitor to ensure that he has familiarized himself with such a notice.

4. ELIGIBILITY

- 4.1 The Championship is open to:
 - a) Paid up members of good standing of the WPMC; and who are
 - b) Holders of a valid MSA competition licence; and who are
 - c) Paid up members of the Formula Supercars sub-section, as applicable.

- 4.2 Competitors are only eligible to score points from the time that they became members of good standing of the WPMC and the sub section.
- 4.3 Invite drivers are welcome to race and are eligible for trophies on the day but will not be eligible to score points in the championship.
- 4.4 Vehicles competing in the championship shall comply with these rules, the General Competition Rules (GCR's) and Standing Supplementary Regulations (SSR's) of Motorsport South Africa (MSA) and all of the Standing Regulations and the Supplementary Regulations issued by the WPMC.

5. NUMBER OF EVENTS

- 5.1 The **2021** Motorsport Calendar and Races per Category as published by the WPMC gives details of all championship event race dates.
- 5.2 A minimum of 6 race meetings shall be run for a champion to be declared. Should less than 6 race meetings be held, then the championship shall be null and void.

6. NEW DRIVERS

Track day experience is advised to ensure the safety of the new entrant as well as the rest of the competitors. The Committee may require that an on-track assessment and theoretical presentation be attended prior to a first race entry is accepted.

7. CLASSES

- 7.1 The formula will be raced in three classes – GOLD, SILVER and BRONZE.
- 7.2 Class allocation will be done at the beginning of each season by the Supercar committee. Its decision will be based on the positions obtained by each competitor driver over his/her best race results in the previous 2 race meetings (including qualifying).
- 7.3 The committee may require a driver to change classes during the championship year. Should this be necessary, its decision will be made along the same lines as above but based on the latest 4 (four) race meetings.
- 7.4 A new driver will race in the GOLD class for a minimum of 2 (two) race meetings, after which the committee may decide to change his/her class for that season. The driver will however be eligible for points from his/her first race meeting onwards.
- 7.5 A competitor can only move down a class when permission is obtained from the committee.
- 7.6 For safety purposes, the Supercar Committee reserves the right to prevent a competitor from taking part in any meeting if a lap time of 1min: 30 secs cannot be posted by that competitor under normal dry conditions.

8. CHAMPIONSHIP EVENTS

- 8.1 All qualifying races will be those set out by the Formula Supercar Committee.
- 8.2 For the year 2021 this will include all Formula Supercar races as per the W.P.M.C calendar (to be confirmed by the means of a circular). There will be a minimum of 6 race meetings to count. A possibility of 2 (two) "away" races will count towards the Supercar championship.
- 8.3 To be eligible for championship points, drivers will have to be valid W.P.M.C members.
- 8.4 To be eligible for championship points, drivers will have to be in possession of valid Motor Sport South Africa (MSA) license.
- 8.5 To be eligible for championship points, cars will have to be in possession of valid FSC Technical Qualification Sticker.

- 8.6 A Formula Supercar Association fee of R 400.00 (four hundred rand) will need to be paid in full in order to compete in the series, and shall be paid before the competitor can receive the **2021** FSC Technical Qualification Sticker.

9. COMPETITION NUMBERS, NAMES & SPONSORS ADVERTISING & VEHICLE PRESENTATION / STANDARDS (APPENDIX B REFERS)

- 9.1 Competition numbers are to be displayed on right and left side door area, left front top corner of the windscreen. Competition numbers will be size and script as decided on by the committee. (Refer to Appendix B)
- 9.2 The driver's name will appear on both left and right-side windows.
- 9.3 The driver's name and car number will be shown on the rear bulkhead.
- 9.4 All vehicles are required to carry the Formula Supercar series sponsor or sponsors' decals (as supplied) on the top portion of the front windscreen and back window, both front fenders, bumpers and / or as otherwise required by the sponsor and the controllers. No other signage or decals may be carried on these areas. Permission may be granted by the supercar committee to carry signage on these areas if not taken up by a series sponsor. Contingency and day/minor sponsors' decals will be placed on the bottom sills between the jacking points on each side of the car or otherwise stated by the Supercar committee. If there is conflicting advertising, permission not to display such decals must be sought from the Supercar Committee. The granting of such permission may result in the competitor forfeiting such sponsors' monies payable on race day or away races. The controllers will have the right to require a competitor to bring his vehicle into compliance with the approved visual standards (to be defined by means of a circular). Competitors not complying with these requirements will be precluded from participating in any further events until the vehicle complies.

10. STARTING PROCEDURE, GRID POSITIONS AND PRACTICE

- 10.1 All drivers and their cars must be in the allotted Supercar pit area 30 min before the start of the qualifying session & may not be removed from the Supercar pit area for the duration of the meeting, without permission from the Supercar Technical Controller (TC) or a Supercar committee member.
- 10.2 Number of starters: In order for a timed trial or race to qualify for championship status, a minimum of 8 (eight) vehicles must take to the track for the timed trial or be on the grid for the start of the race or time trial.
- 10.3 Classes will qualify regardless of the number of starters in the class, provided that the timed trial or race qualified in terms of the championship status in 5a above.
- 10.4 All vehicles leaving the track after the start of timed trials or a race MUST enter the pit area via the weighbridge. Should this not be possible, the driver must request the assistance of an official to accompany him and his vehicle to the weighbridge area, before proceeding back to the official Supercar pit area.
- 10.5 The start will be a standing start, with single grid positions. With the approval of the Clerk of Course and stewards. A rolling start can be substituted for the standing start, should this be deemed necessary due to circumstances prevailing on any race day.
- 10.6 The starting positions for the first race on any race day will be the result of timed trials, with the driver posting the fastest time being placed in pole position and the rest of the field grid behind him, from the second fastest time to the slowest. In the case of timed trials being cancelled or not taking place for any reason, the grid positions for the first race of that day will be according to the latest Formula Supercars Club Championship point standings. (Regardless of the class of the competitor).

- 10.7 The 2nd (second) heat starting positions will be according to a partial reverse grid procedure. The first 6 drivers in heat 1 whose fastest lap time falls within 102% or less of the fastest lap time set in heat 1 will become part of the reverse grid. The order of the reversed grid will be determined as follows: The driver with the slowest lap time in the 102% category starts 1st (first) on the grid, the 2nd (second) slowest lap time in 2nd (second) position and so on back until the last person in the 102% category. The winner of heat 1 has to start at the back of the 102% category. The remaining drivers take their grid positions behind the 102% category in the finishing order of heat 1.
- The controllers, in the interest of safety and competitive racing, may request the grid order and spacing. Should changes to the grid become necessary, these will be made in conjunction with the Clerk of the Course and stewards.
- 10.8 Time trials (qualifying) will be deemed as a race. To be classified as a finisher, the competitor must have completed one full lap.

11. **POINTS / SCORING**

- 11.1 Points will be scored for limited trials (qualifying) and for qualifying races.
- 11.2 The maximum number of points scored for any one timed trial or race will be equal to the number of starters for the particular timed trial or race.
- 11.3 A starter is classified as such, only after completing at least 1 (one) timed lap of the circuit.
- 11.4 The winner of the timed trial (fastest timed lap) or race (first across the finishing line after completing the required number of laps) will receive the maximum number of points (equal to the number of starters).
- 11.5 Each successive placing will receive one point less than the placing ahead.
- 11.6 A bonus point will be awarded to:
- a) The driver that qualifies on pole
 - b) The driver that wins a (race) heat
 - c) The driver that has the fastest lap per (race) heat

EXAMPLE:

We have 15 starters. The winner receives 15 points plus 1 bonus point, 2nd- 14points, 3rd- 13points, 4th- 12point, etc. All starters will receive at least one point, provided paragraph 5c above has been complied with. The driver that posted the fastest time in the heat (excluding qualifying) gains a bonus point.

- The competitor with the greatest number of points on the day will be declared the winner of the day. In the event of someone being excluded all the Competitors behind him will receive (one) point more. Any non-finishers will still get one point, provided that they complete at least one timed lap as per 5.c).
- The Formula Supercar Club Champion of the season, in each class, will be the competitor with the greatest number of points scored for the season.
- If there is a tie, then this will be resolved by the competitor with the highest number of placing points. E.g. Competitors with the most firsts, if this does not resolve the tie, then the highest number of fastest laps (excluding qualifying), then the highest number of seconds and so on. In the event that the above does not resolve a tie, the shortest combined race-time for heat 1 and 2 wins.
- The 3 (three) lowest scored heats. (Any combination of heats and this can include qualifying) will be dropped when the full season has been raced, excepting if you were excluded. This will include any bonus points that make the total for the heat. Excluded results may **NOT** be dropped (GCR 234i refers.) Should a timed trial or race be cancelled, it will **NOT** count as a result which may be dropped.
- In order to be classified as a finisher, a car must complete no less than 66.6% of the race distance under its own power.

- The official scored results of every race meeting will be notified in an electronic format, 1 (one) week after the race meeting, and will become final 14 (fourteen) days, thereafter GCR141 x a and b and GCR 279 refers.

12. DRIVER CONDUCT AND DISCIPLINE

- 12.1 Driver conduct will be as per MSA 2021 handbook.
- 12.2 Drivers will be informed at the drivers' briefing whether or not a "white line rule", (as per SSR 50 i: i)), is in effect for that day's race meeting. If so, it will not apply to the first and the last lap of any race and will only apply to two corners (turn one and turn five) The leading car in any group entering a controlled white line corner must remain on the outside of the line.
- 12.3 Attendance at drivers briefing is compulsory for all drivers. Drivers Roll-call and briefing will be held in the Supercar pit area 30 minutes before qualifying – A driver may nominate a representative to attend the drivers briefing on his behalf. Drivers not attending or failing to nominate a representative will be fined R200.00 (two hundred rand).
- 12.4 A driver making contact with another vehicle behind the B pillar, will be responsible for any incident thus arising. This incident will not be made a racing incident.
- 12.5 If a driver is involved in an incident which is not deemed by the Clerk of the Course to be a racing incident that driver shall be issued with a yellow card which will be enforced for the next two race meetings.
- 12.6 The yellow card will be represented with a yellow decal placed on the car's rear window.
- 12.7 If the driver is again involved in an incident where he is deemed to be the guilty party he/she will be issued a red card he/she will forfeit 5 points for that race meeting.
- 12.8 Drivers are to note that a maximum speed of 40 km/h is allowed in the pit area/s.

13. ELIGIBILITY OF VEHICLES

- 13.1 Only vehicles built or repaired, solely from the components specified and authorized by Supercar Committee, will be eligible. The controllers reserve the right to notify the use of an alternative part or component.
- 13.2 No modification or alteration to or removal of any component in any part or whole, is allowed from the vehicle supplied unless permitted elsewhere in these regulations.
- 13.3 All vehicles will be subject to maximum power, maximum torque and minimum weight restrictions, as prescribed and monitored.
- 13.4 For any performance changes required, there will have to be a 75% yes vote by Formula Supercar drivers that have participated in the last three events. (Safety items will be with immediate effect but subject to 7 days' notice.)

14. TECHNICAL

- 14.1 Technical rulings are final. Should any changes to technical specifications become necessary, these will be on an official Formula Supercars notification and be signed off by the controllers.
- 14.2 The controllers will conduct random checks to ensure that cars comply with the technical specifications as set out in these rules. The controllers have the discretion to co-opt any suitably qualified person or persons to assist in these random checks.

15. TECHNICAL SPECIFICATIONS

N.B. Any transgressions in respect of these technical specifications will result in exclusion. GCR 176 will be applied.

15.1 WEIGHT

- a) Will be not less than 895 kilograms, including the driver in race apparel, as weighed in the holding area (on the scale of the day) after completion of all timed trials and races. Failure to weigh will attract the same penalty as underweight.
- b) No eating or drinking is allowed until weighing has been completed.
- c) If ballast is required, it must be bolted to the chassis in front of the driver's seat in the bolting position provided.
- d) The penalty for underweight is exclusion. If a piece of car or body has been lost during the race or time trial the part may be recovered and included in the weight. (This will be decided by the Supercar Technical Consultant).
- e) A vehicle that breaks down must enter the pits via the weight bridge and comply with the weight requirements.
- f) A vehicle that has been damaged as a result of an accident and is not mobile, because of the accident, as verified by the TC will not be required to pass via the weight bridge.

15.2 TYRES

- a) Only tyres allowed are the ones approved by the committee in writing. A maximum of 1 (one) new tyre may be used every race meeting except for the first Formula Supercar event meeting of the year, when 4 (four) new tyres are permitted.
- b) Each competitor will hand over for impound, 3 used tyres on rims at the end of each race day. These tyres MUST have been used by that competitor for that particular day's race meeting. The tyres will be identified with the competitor's name and race number, and retained until the next race meeting.
- c) These same 3 used tyres will be handed back to competitors at the start of the next race meeting, and MUST be used by the competitor for that race meeting. Tyres may not be changed during the course of a race meeting, i.e. the four tyres on the car at the start of the race meeting will be used for the whole day's racing. Controls in this regard will be carried out on race day.
- d) Should a tyre or tyres be damaged or otherwise become unsafe or unfit for use during the course of a race meeting, the Technical Consultant must be informed and he alone will decide whether or not a tyre or tyres may be changed.
- e) PENALTY FOR NOT HANDING-IN / OR NOT USING THE 3 USED TYRES FROM A PREVIOUS RACE MEETING: Notwithstanding the provision of (6 b) of these regulations will require completing a minimum of 6 laps during the timed trials for that day, and will start at the back of the grid for the first race of that day. - Starting at the back of the grid shall not imply an exclusion - the Competitor or effected party will not be able to score more than 1 point for timed trials.
- f) Should a driver be starting their first race during the season (i.e. not on the first race meeting), the driver may start with 4 new tyres.
- g) The designated wet tyre will be the Dunlop intermediate tyre and must be fitted and used directionally correct – Compliance will be checked by the FSC TC

15.3 FUEL

- a) Fuel type and Octane Level is open, provided the resulting octane level does not exceed 102.6 octane.
- b) The use of oxygenates is prohibited.
- c) Should Standard unleaded 95 octane pump fuel be used, it must be in conjunction with an octane booster (only as stipulated and supplied by the Supercar Committee). For the 2021 season, the approved octane booster is NF 6 RON.
- d) The controllers' reserve the right to introduce controlled fuel and to take whatever steps may become necessary from time to time.

- e) In a further effort to curtail possible infringements, the controllers may give permission to carry out fuel testing/sampling and analysis. All procedures will be carried out in terms of GCR240. A minimum of 5 liters of fuel must remain in the vehicle tank at the end of any timed trial or race.

15.4 POWER

- a) The maximum power output will be 135 kW / 222 N.M to be measured at the rear wheel and converted at the flywheel. This will be officially measured on a dyno specified by the Supercar Committee.
- b) Ignition timing position is free.
- c) There will be no comeback against the dyno operators/owners or the controllers in the event of damage while a vehicle is being run on the dyno.
- d) Dyno runs will be conducted according to the following procedure:
The dyno is to be operated by an independent operator as far as possible, but in any case, the operator is to be approved by the controllers. All runs will be conducted in 4th gear 1 to 1 ratio.
 - i) Fit 205/R60/15 controllers skimmed Goodyear wheels and tyres to the rear axle.
 - ii) The tyre pressure is to be checked and set to 2 bars.
 - iii) Mount controllers' +/- 50KG weight to chassis tube above fuel tank and fit the controllers' temperature probe within 50mm of the air cleaner.
 - iv) The warm-up session before any power runs will be 2 minutes, timed by the Supercar TC with a stopwatch.
 - v) Set dyno to inertia reading, run up to 6,500 RPM, do not record but make sure readings are working on dyno (are constant readings).
 - vi) All power runs will be recorded up to a maximum of 7,150 RPM and not faster than 195 km/h.
 - vii) 1st Power reading completed, stop engine, record both kW and torque readings. All power runs readings will be taken from above 5000 RPM to 7150 RPM.
 - viii) 2nd Power reading as above but must be completed within 5 minutes of 1st run.
 - ix) 3rd Power reading as above but must be completed within 5 minutes of 2nd run.
 - x) Add up all 3 kW readings and divide by 3.
 - xi) Add up all 3 torque readings and divide by 3
- e) Cars Identified for a dyno run during or after a race meeting will be run on the dyno immediately following the race meeting and/or must be run within four (4) days of the meeting at which it was identified.
 Cars will be run from cold in the manner described in above dyno procedure.
- f) Ignition timing and cam timing may be checked after timed trials and recorded. If it becomes necessary to check settings, the Technical Consultant, must be notified so that it can be rechecked and noted.

15.5 ENGINES

- a) Only 2 litre Opel 8 valve engines, with 2.0E round port cylinder heads are permitted. The 1800 Opel block may be used and bored out to accommodate 2 litre pistons. Blocks may be sleeved.
- b) It is acknowledged that the below specifications may produce an output greater than that permitted in d). Should this occur, the engine MUST be detuned to the required power limits as set out in d).
- c) N.B. Modifications other than those listed herein are not permitted.

15.6 BORE AND PISTONS

- a) Piston make and Manufacturer is open.
- b) Bore size - Standard 86.0mm
- c) First oversize - Oversize Pistons to 86.5mm

- d) Second oversize - Oversize Pistons 87.0mm

To check cc's in block, wind piston down 5mm from top dead centre.

Minimum cc's for (1)	32.00c
Minimum cc's for (2)	33.20c
Minimum cc's for (3)	34.40cc

Minimum cc's = Average for all four pistons (CC all 4 pistons add together and divide by 4)

If the cc's are too little, then the only machining allowed is to the piston bowl floor and crown to adjust the deck height. Pistons may be decked on the crown to a maximum of 0.57mm protrusion above block height.

15.7 HEAD GASKET

- a) Minimum compressed thickness 1,2mm.
- b) Volume calculation for 87,0mm bore:
- c) $4,375 \times 4.375 \times 22/7 \times 0,12 = 7,21875\text{cc}$
- d) Minimum volume = 7,0cc

15.8 CYLINDER HEAD

- a) Machining may be done by any engineering works and is controlled by the Supercar TC.
- b) Supercar TC will supply a certificate which must be completed by the engineering works that machined the head and signed by the car driver/owner. This Certificate hereunder noted as Appendix D.
- c) This certificate must be supplied to the Supercar TC before said car will be eligible to race; should this cylinder head have been re-machined from the original certification issued by Mike Rabeling Engineering.
- d) The job number of the Engineering works will be stamped on the cylinder head by the engineering works which has completed the certificate.
- e) For record and control purposes the specifications must be recorded by the Supercar TC for every cylinder head.
- f) The cylinder head currently in use by the competitor must be recorded in the competitors scrutineering log book.

For control purposes, the following must be recorded:

- Minimum head thickness from standard top face of head 92.5m. A maximum of 0.5mm may be removed from top face but this will and must be reported to and recorded by the Technical Consultant.
- Minimum cc's in combustion chambers is 36.4cc's in cylinder head. No machining is permitted in the combustion chambers other than the valve seats.
- Inlet manifold as specified by the Supercar committee and matched 10mm deep on inlet manifold side and 25mm deep on head side.
- Intake port diameter 36,5mm maximum.
- Valve Seats: New Valve Seats may be fitted to prolong the lifespan of the cylinder head.
- Valves: Valve manufacturer type is open, but the overall length and diameter of valve must to conform to either of the below dimensions:

Standard Opel Valves

Part numbers:

Inlet GMT T29106 Exhaust T T291162

OR

Vera replacement valves

Part number:

Inlet 79259 Exhaust 79258

OR

Osvat valves

Part Number:

Inlet 1393 Exhaust 1396

Only one item out of the 3 (three) cc's above (i.e. cc's in block, head gasket and combustion chamber) may be less than 0,5% of the value listed, and the sum of all 3 (three) relating to that engine may not be less than the total below:

Therefore	86,0mm bore	=	75.40cc's
	86.5mm bore	=	76.60cc's
	87.0mm bore	=	77.80cc's

- g) Pistons may protrude a maximum average of 0,57mm above block height. This is calculated by measuring all four pistons at front and rear in line with the gudgeon pin. The 8 (eight) measurements are added up and divided by 8 (eight).

15.9 PISTON RINGS

Make and type are free.

15.10 CRANKSHAFT

- a) The only permitted crankshafts will be the Opel 2 litre 8 valve or 16 valve crankshafts.
- b) The standard Opel timing disc may be removed.
- c) Balancing allowed only to achieve balance and not to lighten.

15.11 CONRODS

- a) Make and type are free.
- b) Conrod Length must conform to standard length of the Opel 2 litre 8 valve conrods.
- c) Balancing allowed only to achieve balance and not to lighten.
- d) ARP bolts are allowed.

15.12 PISTONS

Pistons may be balanced.

15.13 FLYWHEEL AND CLUTCH ASSEMBLY

As specified by the Supercar committee.

- a) The revised single plate clutch: OA 002 (Quartermaster
- b) or AP clutch plates (Part No CP4429-16 FM4)
- c) or any other clutch assembly as supplied by the Supercar Committee
- d) Flywheel Weight to be a minimum of 4.0 kg after any machining has been done.

15.14 GEARBOX

Standard Getrag 240, 5 speed gearboxes, with external gearshift. Gear ratios: 1st: 3.717, 2nd: 2.019, 3rd: 1.316, 4th: 1.000, 5th: 0.804, or Standard Toyota 21R 5 speed gearbox.

The use of a BMW E series shifter mechanism is also permitted. The adapter housing for this shifter mechanism is supplied by the Supercar committee.

15.15 DIFFERENTIAL

Gearmax 4.11 ratio with limited slip as per Gearmax specifications.
Maximum slippage (hot) 100Nm.

15.16 CAMSHAFT

- a) Only the Supercar AST31 Kent Grind camshaft is allowed.
- b) Vernier cam pulleys may be used as per the specification of the Supercar committee.

15.17 VALVE SPRINGS

Standard Opel valve springs, as specified by the Supercar committee with alloy retainers or standard springs, retainer caps and cotters, or a mixture of the above parts allowed.

15.18 CARBURETTORS

- a) No machining or modification is allowed.
- b) Air filter foams as supplied, no thinning out or cutting allowed. Air filter material and bridge is allowed as supplied by the manufacturer, as it does not enhance the performance.
- c) Carburetor jetting cover butterfly nuts are to be drilled through 2 (two) and sealed by the appointed Technical Consultant (TC).
- d) Specifications:

Weber	:	45mm D.C.O.E.
Main jets	:	Jet Size is free
Air jets	:	Jet size is free
Emulsion	:	F16
Choke sizes	:	36

15.19 SPARK PLUGS

Make and type of Spark Plug is free

15.20 OIL & FUEL FILTERS

Make and type of Oil and Fuel Filters are free

15.21 INLET MANIFOLD

As originally fitted by OAD & specified by the Supercar committee.

15.22 WINDSCREEN

- FRONT: Only standard glass or minimum of 5mm clear polycarbonate.
- OTHERS: All other windows must be of 2mm clear polycarbonate. Driver side window permitted, provided it does not cover more than one third of the opening length-ways across the bottom sill.

15.23 INSTRUMENTATION DASHBOARD, REV. COUNTER

The rev. counter, if used, is to be positioned either on the right-hand side or in the centre of the dashboard. It may incorporate a shift light. Switches and brake bias may be extended, but not relocated to suit the driver. Make of gauges and switches is free. The dashboard panel must remain in its original location (as manufactured) and may not be moved closer to the driver.

15.24 BODYWORK

- a) Only the fiberglass body shell as supplied by the committee-approved supplier, and specified in Appendix B may be used.
- b) Extra aluminum finishing off strips and rubber seals are permitted, provided that the controllers is satisfied that there is no advantage gained in performance. Crash damage may be repaired, but exterior dimensions, shapes and profiles must remain unaltered. Temporary repairs affected at the track on race day that do not conform to the aforesaid will be allowed, but for that one race meeting only.
- c) The rear window stiffener-brace as specified by the Supercar committee must be used.
- d) The gaps between the body-shell & the front firewall as well as the gap between the body-shell & the rear firewall must be closed with fire-retardant sponge.
- e) Only the bottom 4 bolts and the rear top 2 bolts have to be used to secure the body to the chassis.
- f) The rear of the body shell may be mounted to chassis. Optional

15.25 SAFETY NET

Compulsory on the inside of the roof and the driver's side and must comply with Formula Supercars specifications. Drop-down or lift-up type allowed.

15.26 REAR TOW HOOK

Only the Bolt-on Canvas Type rear tow hook as supplied by Formula Supercars is allowed, no metal rear tow hooks may be used.

15.27 PROPSHAFT

One piece, tube only. 75mm to 87mm steel or stainless steel.

15.28 SPOILER

Front bumper/spoiler – Fiberglass - only as supplied by the Supercar committee.

15.29 ALL SUSPENSION ARMS

21	OD	schedule 80	+/- 0,5mm
<i>OR</i>			
26, 6	OD	3mm wall thickness	+/- 0,5mm

15.30 ONE WAY VALVE IN VACUUM LINE BOOSTER

Optional

15.31 VERTICAL CHASSIS, FRONT WISHBONE SUPPORT

48	OD x 3mm wall thickness plus/minus 0,5mm
48	OD x 2mm wall thickness plus/minus 0,5mm

15.32 FRONT ANTI-ROLL BAR

Connector: Aluminium with thicker suspension arm 26.6 OD Steel with thinner suspension arm.

15.33 THE VERTICAL TOP FRONT CHASSIS TO TOP SUPPORT ARM

50 x 25 x 3mm or 50 x 25 x 2mm

15.34 TRAMP ROD TO CHASSIS CONNECTORS

Chassis #1-7 50 x 25 x 2 with 3mm gusset

After that 50 x 25 x 2 rectangular

15.35 SUSPENSION SETTINGS

On car, where adjustable are free within specifications - see Appendix A.

15.36 DIFF TOE

0° Straight-ahead or toe-out.

CAMBER +/- ¼°

15.37 REAR TRAMP ROD LENGTH

910mm +/-5mm

15.38 SPRINGS

Front 8" x 650 lbs coil wire +/- 13,2mm

Rear 8" x 350 lbs coil wire +/- 11mm

15.39 REARVIEW MIRRORS

Free (optional)

15.40 BRAKES

- a) Only pads supplied by the Supercar committee may be used.
- b) Optional: 100mm diameter front brake air ducting.
- c) Only the new type rear brake (disk) system is permitted and legal.
- d) Further, the old 23/19 master cylinder / booster combination or the new 23/23 combination or the new 23/19 combination system is permitted.
- e) **Braided hoses** are permitted.
- f) **Brake Pads:**
Only the following brake pads will be permitted:
Ferodo:
Front: FDB710
Rear: FDB328

15.41 EXHAUST

As supplied by the Supercar committee via Powerflow Saltriver.

15.42 BONNET MOUNTINGS

The rear bonnet mounting posts welded to the chassis may be replaced by threaded posts extending through the upper chassis tube.

15.43 REAR WING

- a) As supplied by Formula Supercars and is to be bolted to the mounting plates provided on the chassis. The rear bolts may be replaced by 8mm steel pins drilled to accept quick release clips.
- b) No alteration to the size or position of the holes in the chassis mounting plates is permitted.

- c) The height of the rear wing may not be changed from the original design specification. The height when measured from the top of the upper rear chassis member to centre of the leading edge of the rear wing should be 320mm with an allowed variance of 15mm up or down.
- d) The screws used to secure the rear wing to the two vertical aluminum uprights may be replaced with bolts & nuts.
- e) A single hole in the body must be cut to allow measuring of wing height.

15.44 CHASSIS

- a) Only the original design Supercar chassis design may be used.
- b) Major chassis repairs – These must be carried out by a Supercar committee approved technician.
- c) Structural chassis, frame or roll-cage repairs must be inspected and approved by the Supercar TC before being allowed to compete in the Supercar championship.
- d) Any newly built Supercar chassis must be inspected for structural integrity and dimensions, and approved by the Supercar TC before being allowed to compete in the Supercar championship.

15.45 SHOCK ABSORBERS

The only shock absorbers that are permitted are those that were supplied according to specifications from GT Shocks CC and fitted by Owen Ashley Auto Developments at the time that the Supercar was built; or any other shock absorber as approved and supplied by the Supercar Committee. Replacement shock absorbers must be purchased from GT Shocks CC- (Part Number for front and rear is GTS 007-SC) - Each batch of shock absorbers produced by GT Shocks CC has a unique number and can be traced back on the GT Shocks CC database

Basic dimensions of the shock absorber in mm (without top mounting) is as follows:

- | | | |
|----|------------------|---|
| 1) | Body length | 193 (measure from top of body to centre of bottom mounting) |
| 2) | Extended length | 298.5 – excluding thread on rod |
| 3) | Collapsed length | 202.0 – excluding thread on rod |
| 4) | Top end (rod) | M10 x 14mm long |
| 5) | Bottom end | dia16x30 |

15.46 RADIATORS

The only radiators that are permitted are the standard one as supplied at inception by OAD, or type as approved and supplied by the Formula Supercars committee:

- Radiator Goldwagen Code A5406 Rad A17B1 VW Caddy Radiator
- Expansion Bottle Goeiehoop Onderdele Code WB.VW103006 Water Bottle Golf
- Cap Goeiehoop Onderdele Code VW103451 Cap Expansion Tank.

15.47 FUEL PUMPS

Facet Fuel Pump 40242 as supplied by Formula Supercar Committee
Goeie Hoop Onderdele Code PP.FED.FP40242 Universal 12V Fuel Pump

16. TECHNICAL INSPECTION

- 16.1 Formula Supercars may be checked at any time during race day, for legality by the appointed Technical Committee members or official MSA Scrutineer. Internal checks will be subject to GCR 254. If a car is required to be stripped, the driver must provide a mechanic to do the necessary tasks as directed, or else a mechanic will be appointed on his behalf. The mechanic will be paid by the competing driver.

16.2 Through a random selection process, a minimum of 3 (three) cars will be checked for technical compliance after each heat, including timed trials.

17. SPARE CAR

No spare car is allowed. Drivers are only permitted to compete in the car that they qualified in for that race meeting.

18. MINIMUM PENALTIES FOR TECHNICAL INFRINGEMENT:

Unless otherwise stated herein, GCR 176 will apply to any infringement.

- First penalty - exclusion from that day's race meeting only.
- Second penalty - penalized to the full extent of the MSA handbook including GCR 176.

19. LAP TIMERS & CAMERAS

- 19.1 The specified lap timer to be used is the Alfano. Models: Fun & Fun V2, or any other lap timer that is approved in writing by the committee should the specified lap timer not be available.
- 19.2 No other form of telemetry device can be installed or used, even on unofficial practice days. If a competitor is caught using such a device, the car will be impounded by either the Supercar Committee or the Technical committee member, the penalty for this infringement will be that the offending driver loses his highest 2 points scored during the season.
- 19.3 Onboard camera(s) are allowed

20. WET RACING

- 20.1 When required, A WET Race will be declared by the Supercar Committee.
- 20.2 Supercars are not suitable for wet weather racing. The Supercar committee may negotiate a change of program with the organizers/officials of the day, should it appear that the weather conditions may clear later.
- 20.3 A rain light as supplied by the Supercar Committee is compulsory for wet weather racing. These are to be fitted to the rear of the body and to be switched ON to the flashing mode during a WET timed qualifying session and / or race. Failure to fit the light or for it to be switched on will result in the driver not being able to start the heat or being excluded from the results for that session or race.
- 20.4 Demisting of the windscreen is only permitted via flexible ducting or pipes through the driver's side window opening or quarter window. No additional holes may be made in the left, front, rear windows or bodywork for the purposes of routing demisting pipes.
- 20.5 Designated WET tyres must be fitted for a declared WET race.

21. ACCEPTANCE OF THE REGULATIONS

Each driver will sign a document confirming receipt and acceptance of these rules and Regulations before competing in any Formula Supercar race, championship or series.

22. VOTING

Should a vote by members be required, only drivers are allowed to vote.

Should a vote by members be required, only one vote per car will be allowed.

23. **SPARE PARTS**

In the event that a member has been found to purchase any items from this list from an alternate supplier, the sanction imposed shall be determined by the Supercar Committee, and their decision shall be final.

The following spare parts may only be purchased by the Supercar Club:

Front Bumper	Octane Booster
Tramp Rods	Panhard Rods
Wishbone – Left and Right	Castor Rods
Front and Rear Light Decals	Windscreen Decal
Door Panel Stickers	Front Bumper Support Ply Boards
Air Filters	Rear Brake Disks
Cam Shafts	

Aluminum Adapter Plates and Eye plates can be purchased directly from Vulcan Steel – part numbers listed under Woodwork Specialists

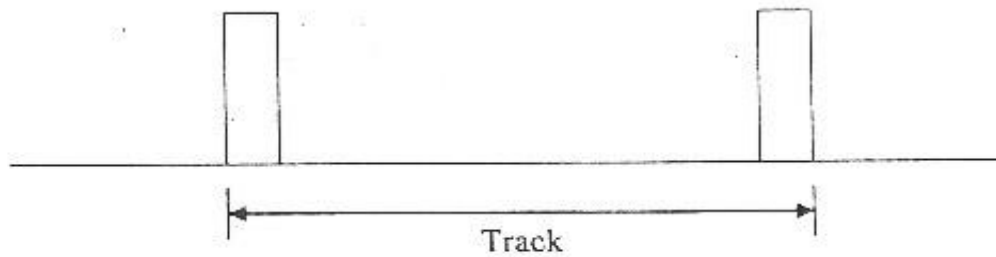
THIS LIST MAY BE AMENDED BY THE SUPERCAR COMMITTEE AT ANY TIME AND WILL BE COMMUNICATED TO MEMBERS.

24. **SOCIAL MEDIA**

Social media, including, but not restricted to, Facebook, Instagram, Twitter, WhatsApp etc. is a powerful and wide-reaching medium for the expression of views and opinions, and the sharing of photographs and video. As such, competitors should be aware that their conduct on social media regarding the Formula Supercar Championship, WPMC, its drivers and sponsors should reflect the impact social media has. If a competitor is considered to have brought the Championship and/or WPMC into disrepute in the opinion of the Championship Controllers, they may be subject to a penalty or disqualification from the championship. Additionally, competitors are reminded that the Motorsport SA monitor social media and any remarks that are deemed to bring the sport into disrepute can lead to penalties. For clarity, it is accepted that crashes are an inevitable feature of motor-racing and the posting on social media of imagery containing a crash does not bring motorsport into disrepute, but competitors are reminded that careless associated comments may do.

25. APPENDIX A

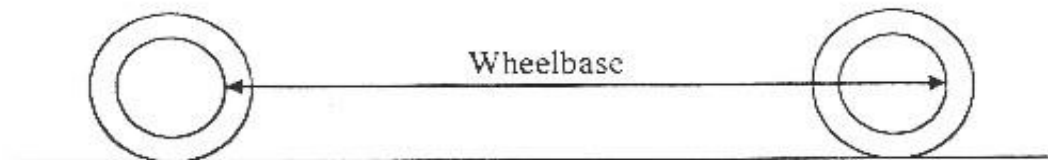
Appendix A



Front track: 1715 ± 25 mm.

Rear track: 1750 ± 15 mm

Tracks are to be measured at ground level at the widest point of rim/tyre with 90° square.



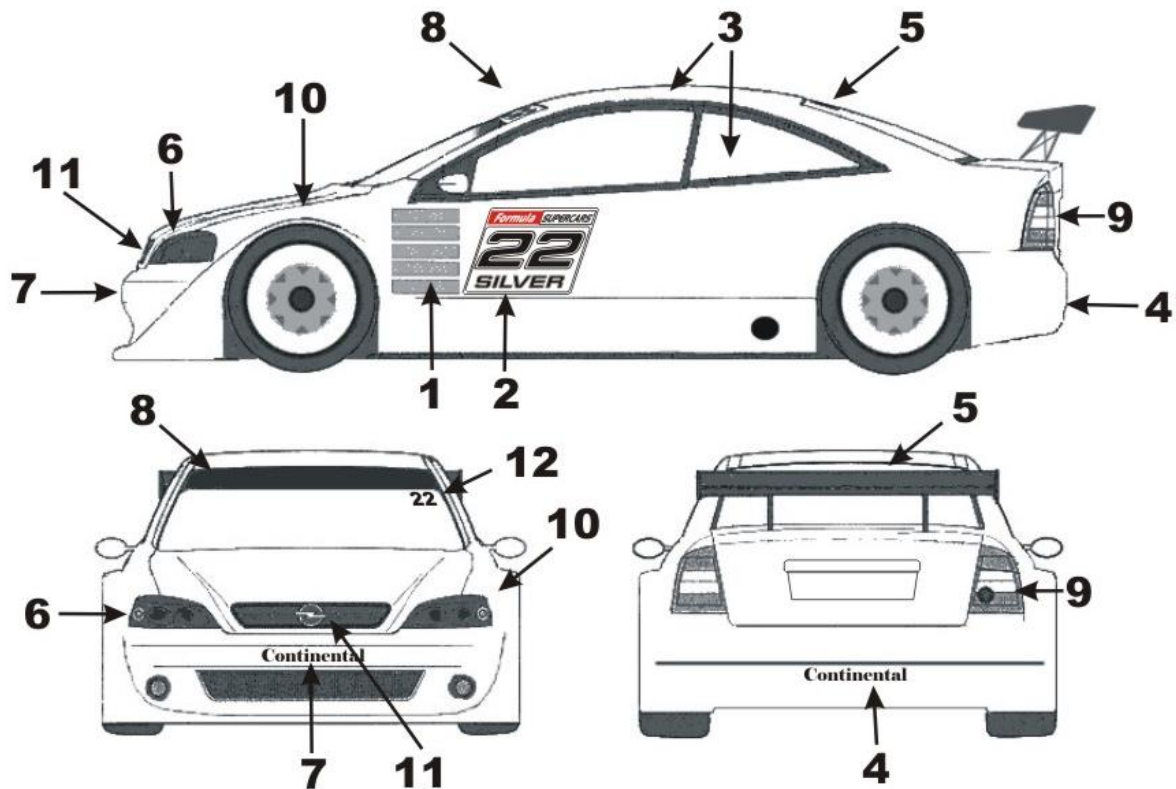
Wheelbase: Maximum: 2530 mm

Minimum: 2510 mm

To measure wheelbase, face steering wheels straight ahead. Measure from front of front rim to front of rear rim on both sides of car. Add the two measurements and divide by two.

Formula SUPERCARS

New Bodyshell 3-view



1. Support Sponsors Decals:

Location: Forward portion of door panel – both sides

Dimensions: as supplied by Supercars Club only

2. Formula Logo & Car Number

Location: Centre forward portion of door panel – both sides

Dimensions & Font: as supplied by Supercars Club only

3. Drivers Name :

Location: as pictured

Dimensions: (White 100mm high letters)

4. Rear Bumper Sponsors decal – Tyre Brand in use

Location: centre of rear bumper

Dimensions: as supplied by Supercars Club only

5. Rear window top band – Sponsors decal:

Location: Top portion of rear windscreen

Dimensions: as supplied by Supercars Club only

6. Front headlights

Location: Front headlight areas on bodyshell (left & right)

Dimensions: as supplied by Supercars Club only

7. Front Sponsors decal – Tyre Brand in use

Location: centre of front bumper

Dimensions: as supplied by Supercars Club only

8. Front Windscreen top band – Sponsors decal: Makita

Location: Top portion of front windscreen, full width

Dimensions: as supplied by Supercars Club only

9. Rear tail lights

Location: Rear tail light moldings on bodyshell (left & right)

Dimensions: as supplied by Supercars Club only

10. Front fenders – reserved for series sponsors

Location: left & right fender area above wheel arch.

Dimensions: as supplied by Supercars Club only

11. Front grille & badge

Location: Front grille moulded area in bodyshell

Dimensions: as supplied by Supercars Club only

12. Car Number on Windscreen

Location: Upper left corner of front windscreen (passenger side)

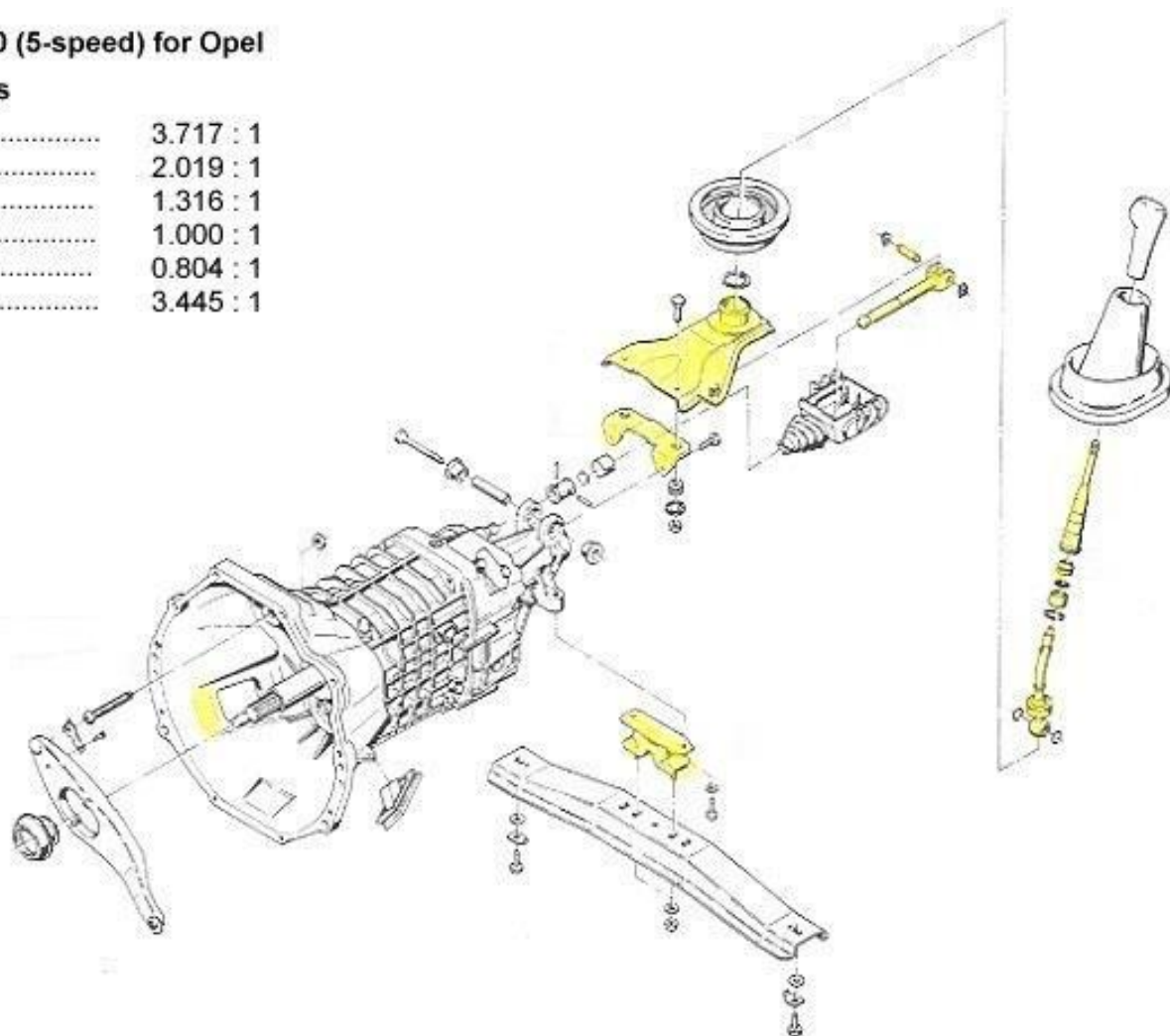
Dimensions & Font: As per GSR

27. APPENDIX C

Getrag 240 (5-speed) for Opel

Gear ratios

First	3.717 : 1
Second	2.019 : 1
Third	1.316 : 1
Fourth	1.000 : 1
Fifth	0.804 : 1
Reverse	3.445 : 1



28. **APPENDIX D**
CYLINDER HEAD ENGINEERING COMPLIANCE CERTIFICATE



Formula Supercars South Africa
Killarney International Raceway, Potsdam Road, Cape Town
www.formulasupercars.co.za

DRIVER DETAILS

: DATE

- | | |
|--------------------------|------------------------|
| 1. FSC MEMBER NAME: | 2. FSC MEMBER SURNAME: |
| 3. CAR NUMBER AND CLASS: | 4. MEMBERS SIGNATURE: |

ENGINEERING WORKS DETAILS

- | | |
|----------------------|---------------------------|
| 5. COMPANY NAME: | |
| 6. PHYSICAL ADDRESS: | |
| 6A. TEL NO: () | 6B. EMAIL ADDRESS: |
| 7A. ENGINEER NAME : | 7B. ENGINEERS CONTACT NO: |

CERTIFICATION OF OPEL 8V HEAD - MACHINED ACCORDING TO FORMULA SUPERCAR REGULATIONS

RULES TO COMPLY TO:

For control purposes, the following must be recorded:

Minimum head thickness from standard top face of head 92.5mm. A maximum of 0.5mm may be removed from top face but this will have to be reported to and recorded by the Technical Consultant.
Minimum cc's in combustion chambers is 36.4cc's in cylinder head. No machining is permitted in the combustion chambers other than the valve seats.
Inlet manifold as specified by the Supercar committee and matched 10mm deep on inlet manifold side and 25mm deep on head side.
Intake port diameter 36.5mm maximum.
Valves: Valve manufacturer type is open, but the overall length and diameter of valve must conform to either of the below dimensions:

Standard Opel Valves

Part numbers:
Inlet GMT T29106 Exhaust T T291162
Or

Vera replacement valves

Part number:
Inlet 79259 Exhaust 79258
Or

Osvat valves

Part Number:
Inlet 1393 Exhaust 1396

SECTION D : CONFIRMATION

I, the Authorised Signatory of the above-mentioned Engineering Works hereby confirm that the cylinder head with the below J/C number stamped into the casing, has been machined according to the technical specifications of Formula Supercars as noted above.

JOB CARD NO:

SIGNED:

SIGNATORY NAME:

DESIGNATION:

DATE:

Committee: G. Williams (Chairman); H.W. Barlow (Vice-Chairman), B. Evans, R. McCarthy, J. Grundlingh